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Strategic Management Practices and Organizational Performance of the Listed Pharmaceutical Companies in Bangladesh

Alam, Md. Noor

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Strategic Management Practices and Organizational Performance of the Listed Pharmaceutical Companies in Bangladesh

Ph.D. DISSERTATION

By
Md. Noor Alam

Institute of Bangladesh Studies
Rajshahi University
Rajshahi

December 2015

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Ph.D. DISSERTATION

BY
Md. Noor Alam
Ph.D. Fellow
Session: 2011-12
Institute of Bangladesh Studies
Rajshahi University

Supervisor
Professor Dr. Abhinaya Chandra Saha
Department of Accounting and Information Systems
University of Rajshahi
Rajshahi

Institute of Bangladesh Studies
Rajshahi University
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Strategic Management Practices and Organizational Performance of the Listed Pharmaceutical Companies in Bangladesh

By
Md. Noor Alam

A Dissertation
Submitted to the Institute of Bangladesh Studies, Rajshahi University in Partial Fulfillment of the Requirements for the Degree of

Doctor of Philosophy
in
Management

Institute of Bangladesh Studies
Rajshahi University, Rajshahi
Bangladesh

DECLARATION

I do hereby declare that the dissertation entitled "***Strategic Management Practices and Organizational Performance of the Listed Pharmaceutical Companies in Bangladesh"*** submitted to the Institute of Bangladesh Studies, University of Rajshahi, as part of the requirements for the degree of Doctor of Philosophy in management is my original work. No part of it, in any form, has been submitted to any other University or Institute for any degree, diploma, or for other similar purposes. All the information derived from the published and unpublished works of other authors have been acknowledged, and references have been cited.

Rajshahi
December 2015

Md. Noor Alam
Ph.D. Fellow
2011-12 Session
Institute of Bangladesh Studies
University of Rajshahi
Bangladesh

CERTIFICATE

I have the pleasure to certify that the dissertation entitled *"**Strategic Management Practices and Organizational Performance of the Listed Pharmaceutical Companies in Bangladesh**"* is an original work of Md. Noor Alam. The research has been conducted under my academic guidance and supervision. He has made distinct contribution to the field of Management through this fundamental work. To the best of my knowledge, this dissertation or any part of it has not been submitted to any other university for any degree. I have gone through the draft and final version of the dissertation and found it satisfactory for submission to the Institute of Bangladesh Studies, University of Rajshahi, in partial fulfillment of the requirements for the degree of Doctor of Philosophy in Management.

Rajshahi
December 2015

Professor Dr. Abhinaya Chandra Saha
Department of Accounting and Information Systems
University of Rajshahi, Rajshahi

ACKNOWLEDGEMENT

It is indeed a matter of great satisfaction that I have completed the dissertation within the stipulated time. At the outset, I express my deep sense of gratitude to almighty Allah, who has given me patience, ability and opportunity. I received unbelievable support and encouragement from a number of academicians while writing this dissertation. I am grateful to all of them.

First, I would like to express my heartiest gratitude to Professor Dr. Abhinaya Chandra Saha, Department of Accounting and Information Systems and Ex-Director, Institute of Business Administration (IBA), Department of Accounting and Information System, University of Rajshahi, Rajshahi, who has supervised my study for the past three years. His scholarly supervision, untiring guidance, easy-going attitude and sympathetic co-operation at all stages of this study made the research and writing of dissertation pleasant and easy. No amount of words can express my gratitude to him.

Specially, I express my indebtness to Professor Dr. Swarochis Sarker, Director of IBS, Dr. M. Zainul Abedin, Professor of Economics, Professor Dr. M. Zakir Hossain, Dr. Mustafa Kamal, Dr. Mohammad Nazimul Hoq, Dr. M. Kamruzzaman who took classes in course work and helped me in enriching my knowledge and changing my attitudes towards proper ways of doing research. I am grateful to all of my teachers of this University, who lectured in course work.

For my field survey, I am indebted to Dr. Golam Sadik, Professor, Department of Pharmacy, University of Rajshahi, Rajshahi who has extended his sincere cooperation to contact with the senior executives of the selected pharmaceutical companies. I also thank all the respondents who participated in my field survey. Without their help this study might not have been completed.

I like to express gratitude to the Institute of Bangladesh Studies (IBS), Rajshahi University, for providing me with all kinds of academic support and financial assistance for the work, without which this research work would not have been possible. I feel grateful to The Government of the Peoples' Republic of Bangladesh for granting me deputation without which this research work would have been simply

impossible. For the same I am indebted to the Directorate of Secondary and Higher Education and Ministry of Education, Bangladesh.

I am thankful to the officers and other staff of IBS Library, Central Library, Rajshahi University. I am also thankful to the fellows of different batches particularly session-2011/12 of IBS for supporting and inspiring me.

I have no word to express my deep sense of gratitude to my mother Mrs. Raufunnessa for her inspiration, encouragement, and sacrifice. I am indebted to my wife, Nafruma Irtiza, who suffered a lot during my long period of deep engagement with this study but offered me all kinds of help, co-operation and inspiration. I am also indebted to my brothers, sisters, father-in-law, mother-in-law whose love and affection inspired me to complete the study. I cannot forget thanking my son Jayed Ariyan who sacrificed paternal caress during my study. With all my heart, I dedicate this dissertation to my family.

Rajshahi **(Md. Noor Alam)**
December 2015

ABSTRACT

Strategic management helps the organizations to undertake appropriate policy or strategy which will best fit its resources and capabilities. It mainly focuses on the question of why some organizations succeed and others fail. Research in the field of strategic management is rare in developing and less developed countries, though this field is increasing rapidly in developed countries. This research attempts to study strategic management practices with special reference to Pharmaceutical industry in Bangladesh.

Pharmaceutical sector is one of the most developed hi-tech manufacturing industries in Bangladesh. Although, Bangladesh has achieved remarkable success in pharmaceutical industry in the last several years, this sector has been facing many internal and external challenges. The huge size of the companies, generic drug manufacturers, health-care organizations, the cost of Active Pharmaceutical Ingredients (API), Research and Developments (R&D), aggressive marketing of competitors, quality issues and compliance with the national and international regulations present many organizational and managerial challenges. To successfully proceed in this competitive market, every organization must take proper policy and strategy among the alternatives which ultimately best impact the organizational performance. Therefore, this study aims at exploring how strategic management is being practiced in pharmaceutical companies and to what extent such practices influence the organizational performance.

The specific objectives of this research are to assess the growth and development of Pharmaceutical Industries in Bangladesh; to explore the major characteristics of formulation of strategies at different levels of the listed pharmaceutical companies in Bangladesh; to identify the nature of internal factors like strengths and weaknesses and external factors like threats and opportunities that influence the strategic management practices; to identify the nature and extent of implementing the strategies followed by pharmaceutical companies in Bangladesh; and to analyze the impact of strategic management practices on the organizational performance of the listed pharmaceutical companies.

Total five companies have been selected for this study among the ten listed companies. Both quantitative and qualitative data have been used for this study. Required data have been collected from both the primary and secondary sources. Primary data were collected through questionnaire survey method and secondary data were gathered from the annual reports and Dhaka Stock Exchange (DSE), Bangladesh Association of Pharmaceutical Industry (BAPI) and Directorate of Drug Authority (DDA).

This research found that growth rate of pharmaceutical industry was 14.6% in last ten years. The Growth of this sector accelerates employment creation, government revenue and helps to provide a better standard of living to the local people. Pharmaceutical market was dominated by MNCs. - now it shifted to local companies which enjoy about 90% of market share. The country is now almost a self-sufficient in its pharmaceuticals products as 97% of the total drug demand is met by local manufacturers.

All the sample companies have formal corporate, business and functional level plans. It is revealed that Board of Directors is involved in formulation of vision and mission statement of all the sample companies. Besides this, corporate level management, Business level manager, corporate planning department and Functional level manager also are involved in different extent to make the organizational strategy. It is found that all types of plan update yearly. Among the analytical tools/techniques, this research found that PEST and SWOT analysis had higher influence on the formulation of company strategies.

The strength factors which influence the formulation of company strategies are brand name, good manufacturing process, delivery system, working environment and use of up-to-date technology, total quality management, product innovations, corporate leadership, professional skill of the employee and research and development. Among the weakness factors, it revealed that the lack of Active Pharmaceutical Ingredients (API) facilities is highly significant for the pharmaceutical companies. Increase of income of people, health awareness of people, modern technology, increasing of private hospital, current economic growth, increase of literacy of people, member of LDC and Current WTO-TRIPS Agreement, govt. drug rules and policy, present export/import policy and govt. industrial policy were most reported opportunities factors for sample companies. The threat factors which influence the pharmaceutical activities are

unethical marketing of competitor, political instability, high rate of interest, lack of power supply, high corporate tax, price of raw materials, govt. drug rules and policy, WTOTRIPS agreement after 2015, lack of API park, local competitors, lack of modern technology and new entrants.

No company has been merged with another company and has made turnarounds, divestiture or elimination of any important operation during last ten years. Only one company has made joint venture business and another company had made acquisitions during last ten years. All the companies considered management of quality as a strategic issue to a great extent. The business and functional level strategies such as product/market growth strategies, R & D strategies, marketing strategies, Human Resource Strategies have been assessed in this study.

Among the product/market growth strategies, introducing existing products in new markets was found as the highest level of consideration followed by new products in existing markets, existing products in current markets and new products in new markets. Health awareness programs, free sample distribution to doctors, ethical marketing, regular contact with the doctor, corporate social responsibility and special reward for employee were identified important marketing strategies for the sample companies. The Human Resource Strategies which were found as important factor in this study were- appropriately sized workforce, skilled employee, formal job duties, closely monitoring system, attractive wage system, using performance appraisals, training programmed and the promotion system of the company.

This study focuses on organizational performance of the pharmaceutical companies which includes the liquidity determinants, activity focus, profitability indicators, leverage and growth output. Overall, all the financial performance ratios of the sample companies are satisfactory but statistically significant variations were found in all the ratios over the years. This research examined the correlation between the strategic management factors and organizational performance of the sample companies. The result found that the strength factors, opportunity factors, product/market growth strategies, R & D strategies, marketing strategies, human resource strategies are positively correlated with organizational performance. On the other hand, quality

management strategies, weakness factors and threat factors are negatively correlated with organizational performance.

This study has several implications to the strategic management practices. Firstly, this study has discussed the overall strategic management characteristics of the pharmaceutical industry in Bangladesh and will allow all level managers (corporate, business and functional) to compare their strategic management characteristics with other organization. Secondly, this study examined the internal and external factors environmental factors which may impact on the strategic management practices and performances of the organization. Finally, this study finding can be useful for professionals others who want to expand their business into pharmaceutical industry by helping them understand different aspects of this industry.

LIST OF ABBREVIATIONS

API	Active Pharmaceutical Ingredients
BBS	Bangladesh Bureau of Statistics
BCG	Boston Consulting Group
BPC	Bangladesh Pharmacy Council
BPL	Beximco Pharmaceuticals Limited
CV	Co-efficient of Variation
DSE	Dhaka Stock Exchange
GDP	Gross Domestic Products
GSKB	GlaxoSmithKline, Bangladesh
IMS	International Marketing Services
IPIL	IBN Sina Pharmaceutical Industry Limited
LDC	Least Developed Country
PEST	Political Economic Social and Technological
R&D	Research and Development
RL	Reneta Limited
SD	Standard Deviation
SPL	Square Pharmaceuticals Limited
SPSS	Statistical Package for the Social Science
SWOT	Strength Weakness Opportunity and Threat
TRIPS	Trade Related Aspects of Intellectual Property Rights
WTO	World Trade Organization

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Chapter One
INTRODUCTION

1.1 Introduction

Business environment is becoming more challenging and competitive than before in the globalization integration era. Organizations of all types and sizes are acutely facing this changing situation externally and internally. Furthermore, how to cope with these ambiguities environment and how to achieve competitiveness and desired level of performance is a vital challenge for every organization. Companies have to take appropriate policy and actions to cope with these challenges. Strategic management is such a crucial element that helps the organizations to undertake proper policy or strategy which will best fit its resources and capabilities. Strategic management generally addresses the question of why some organizations succeed or fail, and it covers the causes for company's success or failure (Porter, 1991). Research in the field of strategic management is increasing rapidly in developed country. But research in this field in developing and less developed countries particularly in Bangladesh is very limited. This research attempts to study strategic management practices with special reference to Pharmaceutical industry in Bangladesh.

Pharmaceutical sector is one of the most developed hi-tech manufacturing industries in Bangladesh. This industry has gone through a transformation in the last 30 years. Professional knowledge, expertise and innovative ideas of the pharmacists working in this sector have been the key factors for such transformation. Beginning in the 1950s, a few multinationals and local entrepreneurs set up manufacturing facilities in the then East-Pakistan. Now over 245 registered companies produce medicines in Bangladesh out of which 164 are truly operational (Abdullah and Shamsher, 2011).The pharmaceutical industry started growing in the country with the adoption of the 1982 drug policy. In the following years, the industry received generous policy support and financial assistance in the form of subsidy to ensure its steady growth. Taking advantage of the favorable government patronage and later the World Trade Organization's (WTO) waiver of patent rights under Agreement on Trade Related Aspects of Intellectual Property Rights (TRIPS) on generic drugs, as a Least Developed

Country (LDC), the country's pharmaceutical sector achieved phenomenal growth in the last two decades. The industry transformed itself from an import based to an export based one (Habib and Alam, 2011).The industry contributes about 1% of the total Gross Domestic Production (GDP). The domestic market of pharmaceutical products has shown a tremendous growth over the last three years. According to International Marketing Service (IMS) report, the retail sales of this sector in the domestic market achieved 23.6% growth in 2011 following 23.8% and 16.8% growth in 2010 and 2009 respectively (IMS, 2011). About 97% of the total requirement of medicines is produced by the local companies and the rest 3% is imported. The imported drugs mainly comprise of the cancer drugs, vaccines for viral diseases and hormones etc. (Bangladesh Pharmacy Council, 2011).

1.2 Statement of the Problem

The development of the field of strategic management within the last two decades has been dramatic (Hoskisson et al, 1999) and it is growing every day. Strategic management has been treated as one of the effective management tools to strengthen organization performance through effective decision making and systematic strategic formulation and implementation. The success of the organization normally concerns the organization’s senior management and strategic management process such as how they choose their strategies and what are the processes that allow organizations to establish themselves successfully in business. Organizations succeed if their strategies are appropriate for the circumstances they face (Wheelen and Hunger, 2000). The application of strategic management in business for various sectors has long been adopted as a response to market demand and changing of technology.

However, Strategic management is especially important in the pharmaceutical industry on two counts. Firstly, the pharmaceutical companies tend to be market oriented and proactive by emphasizing the advantage of their pharmaceutical products and they try to build strong brand names and create long-term loyalty to final customers (Corstjens, 1991). Secondly, strategic management is necessary to adapt to the increasingly competitive business environment. Pharmaceutical companies have to face many internal and external challenges to ensure effective business operation. The external challenges come from competitors, generic drug manufacturers and health-care organizations. In addition to that there are internal challenges to decrease the cost of

sales, Research and Developments (R&D), marketing, and to ensure compliance with the national and international regulations (Kesic, 2009).

Although, Bangladesh has achieved remarkable success in pharmaceutical industry in the last several years, this sector has been facing many challenges in fact. The huge size of the companies, complexities of their processes and technologies used for this industry present many organizational and managerial challenges. Since Bangladeshi pharmaceutical companies have already entered into international market they have to compete with the world leading companies. The world pharmaceutical market is very much competitive. Pharmaceutical sector's international competitiveness can be determined by four factors: manufacturing costs, workforce, business environment, and market. Considering, these factors Bangladeshi firms have obstacles to overcome to become globally competitive (The World Bank, 2008). Some manufacturing costs are less than world averages, but some are higher since the local pharmaceutical industry is not backward-integrated. About 80% of the Active Pharmaceutical Ingredients (API) are to be imported. This results in higher manufacturer cost. The workforce significantly lags global averages and pharmaceuticals are a "brain-intensive industry." At the same time, the quality of drugs available domestically varies significantly. Some firms are producing world class quality drugs while others are producing drugs of a lower quality (Habib and Alam, 2011). The government and regulatory environment do not appear to be conducive to producing the safest, most effective and accessible drugs. Some macro factors favor success while others are less decisive. To successfully proceed into the local and global marketplace in this competitive market, every organization must plan strategically. Since no organization has unlimited resources, strategists must decide which strategy benefit the firm most among the alternative (Fred, 1997).

One important thing is that Local demand of pharmaceutical products is rising very fast because of increasing awareness of healthcare, per capita income, growing government's expenditure in this sector and emergence of private healthcare service. In five years time, the domestic demand for pharmaceutical products is projected to increase to at least US $1.88 billion from existing US$ 585 million (Ala, 2010). The industry will have to meet this local demand and cope with the challenges facing in changing environment and also maintain the current growth, and even improve its

position in the international market. It can be done by proper application of strategic management practices in the firm since it is based on the belief that an organization should continually monitor internal and external events and shape the strategy as needed. Strategic management gives the organization strong influence towards firms' success. The importance of strategic management in a firm can be found by looking at the relationship between strategic management and organizational performance as it gives positive influence, especially in its earnings to the large firms (David, 2003). Against the backdrop of the above stated issues, problems and importance of strategic management in organizations, this study aims at exploring how strategic management is being practiced in pharmaceutical companies and to what extent such practices influence the organizational performance.

1.3 Research Objectives

Core Objective: The main objective of the study is to explore the strategic management practices at different levels of organization and the impact of such practices on organizational performance of the listed pharmaceutical companies in Bangladesh.

Specific Objectives:

To attain the main objective the following specific objectives are formulated:

1. To assess the growth and development of pharmaceutical industries in Bangladesh;
2. To explore the major characteristics of formulating the strategies at different levels of the listed pharmaceutical companies in Bangladesh;
3. To identify the nature of internal factors like strengths and weaknesses and external factors like threats and opportunities that influence the strategic management practices;
4. To identify the nature and extent of implementing the strategies followed by the listed pharmaceutical companies in Bangladesh;
5. To evaluate the impact of strategic management practices on the organizational performance of the listed pharmaceutical companies.

1.4 Review of the Related Literature

In order to understand the implications of the different concepts and also to identify the areas already explored and to find out the areas unexplored so far and to make an in depth study, a review of related literature is of paramount importance. The relevant

studies are reviewed here focusing their objectives, methodology followed, hypothesis tested, concluding remarks, and limitations thereon.

Abdullah and Shamsher (2011) studied on "A Study on the Impact of PEST Analysis on the Pharmaceutical Sector: The Bangladesh Context". They had an endeavor to analyze the pharmaceutical sector of Bangladesh using the framework of PEST (Political, Economic, Social, and Technological). PEST analysis of any industry sector investigates the important factors that are affecting the industry and influencing the companies operating in that sector. Both the primary and secondary information were used to conduct this research. This study brought to light the current state of the sector its progress and its problems. This report analyzed the existing laws, legislations, and government policies which stand to affect the sector directly and indirectly.

Habib and Alam (2011), in their paper titled **"**Business Analysis of Pharmaceutical Firms in Bangladesh: Problems and Prospects**"** attempted to investigate the scenario of pharmaceutical industry and to identify the major problems of marketing, exporting, production and operations, quality control in the pharmaceutical sector. They proposed some recommendations to overcome these problems. They also identified the prospects of pharmaceutical industry in Bangladesh. The study was conducted by both primary and secondary data on ten leading pharmaceutical in Bangladesh. They highlighted marketing problems such as insufficient incentives, high cost of marketing unstable political situation and different types of violence. They also mentioned that foreign competitors with more equipment, technology and plant facilities are threat for local owned firms. But managerial problem like how to develop strategic factors in competitive environment is not explored in this study.

Mahajan and Sharma (2011) studied on "Strategic management aspects of Indian pharmaceutical industry" and analyzed the Pharmaceutical Industry and the strategic alliances in the recent past and what drives these alliances. The objective of this paper was to find out whether marketing strategy changes have taken place in the Indian pharmaceutical industry. The paper also tried to find out the changes by the pharmaceutical companies regarding the 'product' and tries to find out if there was any significant preference towards the marketing strategy changes of the Pharma companies post WTO product patent regime. The study found that majority of Pharma companies surveyed

accepted that changes in marketing strategy had taken place. Introduction of new molecules is the most preferred marketing strategy being pursued by Indian Pharmaceutical companies. A value chain framework had been proposed that analyses the critical capabilities needed along the value chain in the Pharmaceutical Industry, the existing capabilities of the firms and how these alliances are supposed to bridge the capability gap. The authors recommended that advanced strategic management with a strong market orientation focus should be the most important strategic priority of a company that wants to be a successful business performer, to maintain its long-term sustainable growth, competitiveness and assure its long-term development and competitive market position.

Kasapi and Mihiotis (2011) in their study named **"**Management as applied to New Products Penetration in the Competitive Environment of Pharmaceutical Industry**"** fulfilled to analyze, based on M. Porter's five forces model (FFM), what kind of strategies were to be followed regarding the introduction and penetration of new products in the pharmaceutical market taking into consideration the extremely competitive and challenging environment existing around the pharmaceutical industry. In this article, the authors discussed the importance of strategic management practices for new products introduction & growth assessed the competition in the pharmaceutical industry's environment. They developed the history and the characteristics of the World Pharmaceutical Industry, by focusing on the strategic management in the Pharmaceutical Industry. They analyzed how Porter's FFM and SMP can be applied in that sector and focused on the industry's revenues. This study provides a detailed analysis on new pharmaceutical products" lifecycle i.e. drug discovery, development, introduction and subsequently their growth, maturity and decline phase. Finally, the paper concluded by giving advice for all interested managers to overcome old mental models and apply change management taking into consideration that we live in the age of uncertainty and turbulence.

Ala (2010), in his article on "SWOT Analysis of the Pharmaceutical Industry: A Study of selected firms in Bangladesh", evaluated the strength, weakness, opportunities and threats (SWOT) of pharmaceutical industry in Bangladesh. In this paper the researcher tried to find out what types of strength, weakness, opportunities and threats pharmaceuticals face in Bangladesh. He emphasized on the trends of this industries. Both the primary and secondary data were used in this study from five leading pharmaceutical firms. This study also concentrated on identifying the ways to

overcome the challenges weakness of this industry. It also provided some suggestions and recommendations for development of the pharmaceutical industry.

Bishwas (2009) conducted a study on "Corporate Governance of Pharmaceutical Industry in Bangladesh: Issues and Challenges" and examined and evaluated the status of corporate governance in Bangladesh with special emphasis on pharmaceutical industry**.** The study was conducted on four listed pharmaceutical companies in DSE to explore corporate governance concerned with board issue, shareholders issue, community issue, regulators issue and others stakeholders issue. The researcher identified some set of variables to measure the awareness and perception of the shareholders towards corporate governance and stock market in Bangladesh. The most revealing feature of the study is that the stakeholders were not familiars with the meaning of corporate governance and most of the stakeholders were reluctant to attend the AGM as minority shareholders had no or little voice in the AGM. Another revealing finding is that shareholders awareness about dividend right and AGM right were satisfactory, while awareness about information right and voting right was not satisfactory. The study found that the rate of corporate social responsibilities contribution of the listed pharmaceutical companies were not up to the mark. Besides, the employees and bankers of the pharmaceutical companies were highly satisfied with the governance practice of the companies. Finally considering the weakness and challenges of the pharmaceutical industries as well as corporate governance practice measures were recommended for the betterment of this industry.

Nimalathasan (2009) had a study on profitability of Listed Pharmaceutical Companies in Bangladesh. The main objective of the study was to compare (inter and intra) the profitability of pharmaceutical companies. A total of two pharmaceutical (IBN SINAPH & AMBPH) companies were selected and these companies have sufficient credential for being the representative of this industry in terms on investment, sales, earning income, value addition, employment etc. Secondary data were used to measure the indicators which are related to profitability. Here indicators of profitability such as, Gross profit Ratio (GPR); Operating Profit Ratio (OPR); Net profit Ratio (NPR); Return on investment (ROI); Return on Equity(ROE), Return on Capital Employed (ROCE); Return on Equity (ROE) were taken into account for the study. This study concluded that

the profitability of pharmaceutical companies is very much satisfactory as both of the companies meet the standard norms of profitability in terms of investment.

The World Bank (2008) conducted a study on **"**Public and Private Sector Approaches to Improving Pharmaceutical Quality in Bangladesh**"** which was prepared by a team of World Bank staff and consultant led by Kees Kostermans. This study's analysis identified specific policy and institutional options to improve the cost and quality of pharmaceuticals produced in Bangladesh and its competitiveness in the global market. The authors conducted in-depth interviews in Bangladesh with representatives from government, industry, NGOs, international organizations and pharmacists and completed a review of existing literature. This study presented the issues that must be considered to achieve low-cost high-quality drugs benefit society and helps provide pharmaceutical companies in Bangladesh and explored the options that the Government and the local industry could pursue. This paper addressed some issues from a more private sector approach. The existing quality and price of pharmaceuticals were analyzed and alternative mechanisms were explored to improve the quality and cost competitiveness of Bangladesh's pharmaceuticals domestically and internationally. They discussed four factors drive the price and quality competitiveness of pharmaceuticals in Bangladesh. They are-

1. ***Manufacturing Cost.*** Bangladesh has a clear advantage due to low labor costs, while it is at a disadvantage with regards to the largest cost drivers for the pharmaceutical sector

2. ***Workforce Skills.*** Although Bangladesh's pharmaceutical labor costs are approximately 30% less than India's, the industry faces challenges in the technical training required because Bangladesh's educational system lags behind global levels.

3. ***Government and Regulatory Environment.*** The current regulatory environment is protected and under-regulated. Importing drugs is difficult, allowing domestic firms to dominate the market. Due to the power of these firms and the government regulatory agencies' weakness, quality control laws are not strictly enforced.

4. ***Macro Factors.*** Countries tend to have stronger domestic industries when the following characteristics are present: high levels of secondary and tertiary educational enrollment; GDPs greater than $100 billion; populations greater than 100 million; a high manufacturing value added score by the United Nations Industrial Development Organization (UNIDO); and a net positive pharmaceutical balance of trade.

This paper identified five potential mechanisms to improve the quality of drugs available in Bangladesh.

1. ***Export-led improvement.*** Firms tend to improve the quality of drugs that are made for export but not to the drugs made for domestic consumption. This has implications for the domestic market.

2. ***Regulatory-led quality improvement.*** A strict regulatory environment does result in higher drug quality but significant political will is required to enforce the regulations.

3. ***Competition-led improvement.*** There is widespread agreement that firms in economies with liberal trade policies and greater openness show stronger economic growth and overall development performance in the long run.

4. ***Private sector-led improvement.*** In many industries and countries, the private sector has played a role in maintaining and monitoring quality could play a role in this regard.

5. ***Knowledge-transfer-led improvement.*** Most firms in Bangladesh want to provide the highest quality drugs possible. Government and donors should work with firms producing at less than Good Manufacturing Practices (GMP) levels to raise their standards to a minimum acceptable level.

This paper also examined two external forces currently impacting Bangladesh's pharmaceutical sector which can provide opportunities for change. The first is WTO's Trade Related Aspects of Intellectual Property (TRIPS), which grants Bangladesh domestic manufacturing opportunities and limited export advantages. The second force affecting the industry is the rapidly changing international marketplace. Globalization has resulted in an extremely competitive international market with firms seeking low-cost manufacturing sources. This paper concluded with policy and institutional suggestions for Government to improve the price and quality competitiveness of Bangladesh's pharmaceuticals. The recommendations were targeted at improving the domestic market, increasing export potential and taking advantage of TRIPS. The conclusions were preliminary and more analysis was suggested.

Lincoln and Bhattacharjee (2007) in their study examined the structure of the industry, evaluated performance and presented some strategies for further growth of the industry. This paper war prepared mainly on published data and information. Here they

presented the detail production of National and Multinational companies. At the same time they highlighted major provisions of WTO and implementations of TRIPS for Bangladesh. Major provisions included compulsory license should be permitted after consideration of the individual situation in which such license is requested; patents should be available and enjoyable without discrimination as to the place of invention, the field of technology or whether the product is imported produced locally. Some strategies were recommended for the future development of this sector-such as joint R & D activity by the pharmaceutical companies, using various universities and research laboratories of these countries should be initiated without delay. Country quota should be allocated based on the prevailing GDP to undertake research activities.

Pradhan (2006) in her study addressed some questions-they were-What were the trends in the global competitiveness of the Indian pharmaceutical industry? Where did this industry stand when compared to global peers on pharmaceutical value-added, productivity, research and development and trade performance? What were the new strategies that Indian pharmaceutical companies were adopting to become global players?. It was 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 were certain limitations that the government policies need to address, like low productivity and R&D intensity. A host of competitive strategies, like green field direct investment, overseas acquisitions, strategic alliances and contract manufacturing have emerged as favourites to Indian pharmaceutical firms.

Arafin (2005) conducted a study on strategic Management of Jute Mills in Khulna Zone to explore the management pattern and practice of public sector corporations with special reference to Bangladesh Jute Mills Corporation (BJMC). He analyzed the performance of strategic management practice, found out major internal and external factor and identified problem areas of strategic management practices. The researcher discovered that-the sample jute mills was the victim of hostile environment factors such as industry's external environmental factors (socio-cultural, technological, political-legal, and economic) and industry internal factors (management control, production, marketing, and economical). He also found that management failed to forecast these

environments in time and also failed to forecast future changes in government policy in this regard. He recommended that unless management becomes able to forecast the future trends and development in their business and accordingly prepare the strategy to face the future environmental changes, it would not be possible for them to adjust with the changes successfully. And unless the business enterprises are equipped with professionally qualified managerial personnel and utilize strategic management techniques in place of general rules of thumb, it would not be possible for the management to forecast the future at the right time in right perspective. On the other hand, government should also take proper policy, strategy and effective planning for the sustainability of this vital and large industry sector in Bangladesh.

VanDuzer (2003) conducted a study on "TRIPS and the Pharmaceutical Industry in Bangladesh: Towards a National Strategy" through Centre for Policy Dialogue. This program aimed at strengthening institutional capacity in Bangladesh in the area of trade policy analysis, negotiations and implementation. The programme, inter alia, seeks to project the civil society's perspectives on the emerging issues emanating from the process of globalization and liberalization. This paper, seeks to set out the constraints and opportunities that TRIPS patent rules represent for Bangladesh regarding the strategies it may adopt to further develop its national pharmaceutical industry. This paper has focused on the TRIPS framework for patent laws both in Bangladesh and in other countries, and impact of TRIPS compliant national patent laws on the prospects for the development of the Bangladesh pharmaceutical industry and on the scope for Bangladesh to shape its own patent law most effectively to enhance these prospects. By 2016, Bangladesh must meet the challenge of developing a patent law which best reflects its interests while complying with the mandates of the TRIPS Agreement. This paper suggests some of the ways in which this may be done. In general, limiting the scope of patents, setting high thresholds for patentability, creating limited exceptions to exclusive rights and strong compulsory licensing provisions will be needed.

Kabir (2000) conducted a study to identify the strategies for productivity improvement in the face of internal and external business environment. That study was based on extensive desk study of the relevant literature on strategic management and productivity components. Twenty managers from ten organizations were interviewed to gather their opinions as to the appropriate productivity improvement measures in the context of Bangladesh. They have agreed with the suggestion that productivity

improvement strategy need to be developed by top management to which commitment of the employees needs to be ensured. The author mentioned that productivity strategies are developed at the operating level and business level enough scope to present the factual information for consideration. Despite that, every business firm should have its own planning, implementation, control and monitoring through which feedback and corrective action for productivity improvement would come light.

Hasan and Hossain (1998) studied on mistakes in strategy formulation. They indicated that mistakes in formulation of strategy may result in inappropriate strategy for a firm. Human errors are frequently the common causes of mistakes in strategy formulation. They mentioned different types of human errors like bounded vision(failure in the part of decision makers to make use of relevant evidence even when it is clearly placed in front of them), inability in perception of risk (decision makers often do not give adequate attention to some associated risks or ignore them) and groupthink (a mode of thinking that people engage in when they are deeply involved in a cohesive in group, when the members striving for unanimity override their motivation to realistically appraise alternative course of action) . They suggested two ways to overcome human errors while formulating strategies. Firstly, plans must be tested against alternative future risk and the second method may be the use of group decision support system.

Rashid (1998) attempted a study on "Strategy, Structure, Tactics and Size of Organization: A Conceptual Framework. He found that the size of the organization is one of the critical factors in the process of formulating and implementing a strategy. The main objective of that study was to develop a conceptual framework in the nature of relationships between strategy, structure and tactics. Another objective was to identify the applicability of these relationships in an organization. The study had provided the detail description on the four selected variables such as strategy, structure, tactics and size. The relationships are structure followed strategy, strategy followed structure and strategy followed tactics. Knowledge and understanding in the nature of contingency relationship between strategy organizations variable play a vital role in formulating and implementing a strategy. He identified that structure followed strategy is suitable for large organization, strategy followed structure is suitable for medium size organization and strategy followed tactics are suitable for small-scale organization.

Campbell and Alexander (1977) mentioned that many planning sessions result in no new actions, and the plans themselves often end up buries in bottom drawers. They ascertained some causes behind the wrong with strategy or the way of developing strategy. The causes are misuse of objectives that make confusing result in direction less strategy. Firstly, managers are confounded by process. Objectives are interlinked with strategy and with implementation in a way that makes it difficult for an organization to decide where to start. Such confusion about where to begin causes planning paralysis. Secondly, managers expect that planning process will lead to new and improved strategies. But the basic ingredient of a good strategy-insight into how to create value-rarely emerges from planning meetings. Instead, it originates in many varied and hard to control ways, some of which are more implementation than about strategy development. Planning processes are not designed to accumulate the messy process of generating insights and molding them into a winning strategy. The author suggested that a well structured planning is therefore, likely to be ill suited to strategy formulation.

1.5 Research Questions

Research questions have been made for this study instead of research hypothesis. Because, this research investigates a large number of variables that can affect the strategic management practices of Pharmaceutical Industry in Bangladesh and therefore, it is difficult to develop hypotheses for all these variables. The literature review and the major research objectives of this study led to develop six major research questions. These are:

1. How much growth and development have been done in Pharmaceutical industry in Bangladesh?
2. What are the major characteristics of formulating the strategies of the listed Pharmaceutical companies of Bangladesh?
3. What are the internal factors which influence the strategic management practices of Pharmaceutical companies of Bangladesh?
4. What are the external factors which influence the strategic management practices of Pharmaceutical companies of Bangladesh?
5. What are the nature and extent of implementing the strategies followed by the listed Pharmaceutical companies?
6. What is the impact of the strategic management practices on company's performance?

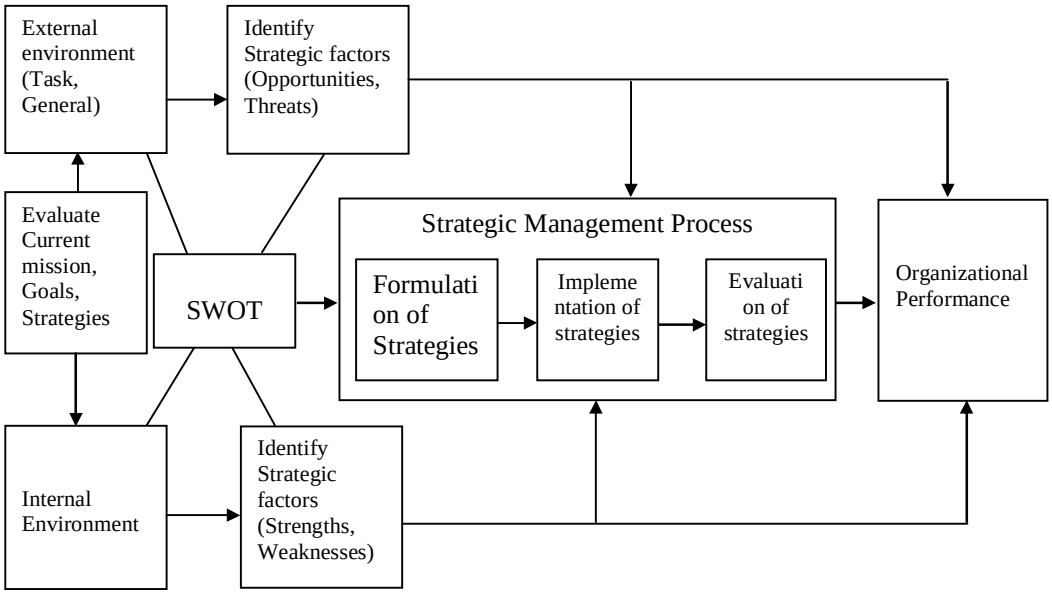
1.6 Justification of the Study

The pharmaceutical industry in Bangladesh is a dynamic growing sector. Listed companies of this sector play a great role to develop this sector. These companies occupy the major portion of total pharmaceuticals market share. The market of pharmaceutical is very competitive and globalized. Strategic management practice is a very important issue of making proper strategy to survive and thrive in competitive environment. Having a lot of importance and potentiality of this sector in national economy, existing literature shows that a few studies have been done focusing on corporate governance, key success factors, problems and challenges in the pharmaceutical industry. But how strategic management is practiced in pharmaceutical sector and what is the effectiveness on organizational performance is still unexplored. However, while the field of strategic management is increasing rapidly in developed countries, theoretical and empirical investigations on this issue in developing countries have remained limited (Haley and Tan 2000). Moreover, there is a need to understand more about the various aspects of strategic management particularly in Bangladesh.

1.7 Conceptual Framework

The conceptual framework developed for this study is designed to identify the strategic management practices in pharmaceutical industries in Bangladesh and to assess the relationship between such practices and organizational performance.

Figure 1.1: Conceptual Framework



Source: Developed by the researcher from Thompson & Strickland (2003), Strategic Management: Concept and Cases and Hill & Jones (2007), Strategic Management: An Integrated Approach.

The key features of the conceptual framework are described below:

First, Pharmaceutical environment can be categorized into two major environments namely the internal environment and the external environment. These two major factors affect the strategic management practices as well as the operations of an organization. **Second**, amongst the external factors affecting organizations important ones are political, economic, social and cultural factors, suppliers, buyers, substitute services, new entrants, competitors and government etc. Major variables of internal environment include organizational culture, management styles, stakeholder's expectations, key capabilities and the key success factors of the organization. **Third,** Strength, Weakness, Opportunity and Threat (SWOT) analytical techniques will be used for scanning the business environment of Pharmaceutical industries. **Fourth,** this framework also identifies the process of organizational mission and strategy for formulation, implementation as well as evaluation at the corporate level, business level and functional level. **Fifth,** this framework shows the relationships between the strategic management practices and organizational performance through acquiring competitive advantage.

1.8 Research Methodology

1.8.1 Nature of the Study

This research is an exploratory in nature. It is exploratory in the sense that the study explored the business environmental factors that influence the strategic management practices. The study also attempts to explore the relationship between strategic management practices and organizational performance.

1.8.2 Types and Sources of Data

Both quantitative and qualitative data have been used for the study. Required data have been collected from both the primary and secondary sources.

1.8.3 Sampling Size and Sampling Method

The Dhaka Stock Exchange (DSE) of Bangladesh divides its listed companies in twenty two groups. The pharmaceutical companies belong to the "Pharmaceutical and Chemical" category where twenty three companies are enlisted with the DSE. Out of that category, ten companies produce medicine and others produce chemical items (as 30.06.2013). Among the ten listed companies eight are local and the rest are

multinational. Total five companies have been selected for this study so that representation can be ensured. The companies have been selected by stratified sampling based on age of the companies. The list of sampled companies is as follows:

Table 1.1: Selection of Sample Company

Age of the Companies	**No. of the Listed Com**	**Name of the Sampled Companies**	**Commencement of Business/ Incorporation***
0-30 Years	3	1. IBN Sina Pharmaceutical Industry Ltd	1983
31-60 Years	6	1. Reneta Ltd.	1972
		2. Beximco Pharmaceuticals Ltd.	1976
		3.Square Pharmaceuticals Ltd.	1958
61-90 Years	1	1.GlaxoSmithKline, Bangladesh	1948
Total	**10**	**5**	

* Source: Dhaka Stock Exchange Annual Report, 2012

A total number of 100 respondents have been taken for this study. Five Managing Directors/ Directors/ Chief Executive Officers in corporate or business level and fifteen employees in functional level were selected purposively from each company. A detailed plan is shown in the following table.

Table 1.2: Selection of Respondents

Category of Respondent	**Company-wise Respondent**	**Total Respondents**	**Types of Sampling**	**Questionnaire Set**
Corporate Level / Business Level (Managing Director/ Director/ Chief Executive Officers)	5	25	Purposive	1
Functional Level (Marketing, Human Resource, Production)	15	75		
Total	**20**	**100**		**1**

1.8.4 Procedures of Data Collection

1.8.4.1 Primary Data

Primary data for this study were collected through questionnaire survey method. The survey has been conducted through personal interviews. This mode of data collection is preferred due to its high response rate as compared to either mail or telephone interview. Further, this mode provides the clarification of questions and increases the chance of the respondents to answer all the questions in the questionnaire. All the interviews were conducted by the researcher to avoid any possible differences in the recording process and to ensure the reliability and validity of the data.

1.8.4.2 Secondary Data

Secondary data mainly have been gathered from the published annual reports and the internet web sites of the pharmaceutical companies, Dhaka Stock Exchange (DSE), Bangladesh Association of Pharmaceutical Industry (BAPI) and Directorate of Drug Authority (DDA). In addition to that authentic books, articles, research papers, published and unpublished documents, magazine, newspaper etc. regarding the strategic management, pharmaceutical industry of Bangladesh and organizational performance have been used as secondary information for this research study.

1.8.5 Questionnaire Development

One set of questionnaire for corporate, business and functional level executives was prepared to collect the primary data. The questionnaire contains both the close ended multiple choice and open ended questions. The questionnaire consists of various variables related to external environment like political, economic, social and cultural factors, suppliers, buyers, new entrants, competitors, company opportunities and threats etc. and internal environmental factors like company ownership, organizational culture, management styles, stakeholder's expectations, company strength and weakness. Five points Rensis Likert Scale has been used in this study ranging as 1-strongly disagree, 2-disagree, 3-neutral, 4-agree and 5-strongly agree.

1.8.6 Pre-test of the Questionnaire and the Final Questionnaire

The questionnaire designed for this study was pre tested with 2 persons of sample pharmaceutical companies who had more than 15 years experience in corporate planning. The pre-test concluded that,

1. The questions were clear, short and easy to understand

2. The format was clear and logical

3. The questionnaire had high credibility

The final questionnaire consists of three major parts (Appendix 2). Part 1 includes the assessment of internal and external environments. Part 2 includes the assessment of the company's mission and vision statements, corporate long term plan and analytical tools/techniques which are used for corporate planning. Part 3 consists of the assessment of corporate, business and functional level strategy followed by the sample companies.

1.8.7 Data processing, Analysis and Presentation

The collected data are arranged and scrutinized carefully on the basis of demonstrable indicator of objectives. The processing steps are: editing, coding and classification. The qualitative data analysis methods have been used to analyze the data that consists of description of events and the quantitative analysis methods have been used to analyze the data that consists of numerical figures. Both the descriptive and inferential statistical methods are used in this study. The descriptive analyses include calculating averages, standard deviation (SD), and minimum, maximum, co-efficient of variation (CV) frequency distribution, and percentage distributions etc. The inferential statistics like Pearson correlation, Cramer's v and khi ($\chi 2$) square test are used to generalize the sample results to the population and its statistical significant value P when it is less than 0.05.

The SPSS (Statistical Package for the Social Science) software is used to analyze both the primary and secondary data. The findings from the quantitative analysis are presented in table, charts, figures and interpretations to make that meaningful and easy to the readers. The interpretations are made by analyzing the results of different quantitative tests.

1.9 Scope of the study

The scope of this study focuses on strategic management issues with special reference to the pharmaceutical industry in Bangladesh. This research explores major characteristics of strategic management practices and determined the internal and

external factors which influence the adoption of such practices in an organization. It also assessed the impact of strategic management practices on the performance of the listed pharmaceutical companies in Bangladesh.

1.10 Chapter Outline

This study aims at exploring the strategic management practices and the impact of such practices on organizational performance of the listed pharmaceutical companies in Bangladesh. The entire study consists of eight chapters.

Chapter 1 Introduction

Chapter 2 Theoretical Framework

Chapter 3 Growth and Development of Pharmaceutical Industries in Bangladesh

Chapter 4 Present Scenario of Formulating the Strategies of the Selected Pharmaceutical Companies

Chapter 5 Influence of Internal and External Factors on Strategic Management Practices

Chapter 6 Implementation of Strategies at Different Levels of Selected Pharmaceutical Companies

Chapter 7 Impact of Strategic Management Practices on Organizational Performance

Chapter 8 Major Findings, Conclusion, Recommendations and Directions for Further Research

1.11 Conclusion

The Bangladesh pharmaceutical market is growing at a fast pace and has a bright future indeed. The contribution of pharmaceuticals companies in Bangladesh to the health sector as well as national economy is encouraging. It is very highly complex industry. However, Repetitive plan or action to solve immediate and future problem and to move along with changing condition is a necessary prerequisite for organizational competitiveness and survival. The application of strategic management practices can help the organizations to enhance their performance through improved effectiveness, efficiency and flexibility. It is hoped that the output of this study will beneficial to all parties concerned while at the same time contribute to the knowledge enhancement in the academic world.

Chapter Two
THEORETICAL FRAMEWORK

2.1 Introduction

This chapter discusses the theoretical concepts in the field of strategic management. It begins with the definition of strategy and analyzing the evolution of strategic management. Then the strategic management process, pattern and level of strategy and strategy formulation system are discussed. This chapter describes the external and internal environmental factors that affect company's strategic management practices. It discusses the major corporate and functional level strategies that a company can adopt. It also focuses on vision, mission, objectives, goals and analytical tools and techniques which help to formulate strategy. Finally, it describes the major performance indicators which are used for this study.

2.2 Definition of Strategy

According to Meyer & Wit (1999), there is no simple answer to the question of what is "strategy". A strategy starts with a concept of how to use effectively the resources of the organization in a changing environment. "A strategy is a unified, comprehensive, and integrated plan that relates the strategic advantages of the firm to the challenges of the environment and that is designed to ensure that the basic objectives of the enterprise are achieved through proper execution by the organization" (Glueck and Jauch, 1984:8). According to Miller and Dess (1996), there are two types of strategies – intended strategy and realized strategy. Intended strategy refers to the plan which focuses on the future while realized strategy refers to those actions which already have been taken.

Mintzberg et al (1998) proposes five P's for the strategy and defines strategy as plan, pattern, ploy, position or perspective. Strategy as "plan" describes strategy as a direction, a guide or course of action into the future. Strategy as "Pattern" views strategy as consistent behavior over time and therefore, the pattern view is looking at its past behavior while the plan view is looking at the future. Thus, the plan view has the intended strategy and the pattern view has the realized strategy. Strategy as a ploy view describes a specific plan to outwit an opponent or competitor. Mintzberg view of strategy as position believes "Strategy is the creation of a unique and valuable position, involving

a different set of activities" (Mintzberg et al, 1998:13) and strategy as perspective view focuses the company's fundamental way of doing things. The perspective view "looks inside the organization, indeed, inside the heads of the strategists, but it also looks up-to the grand vision of the enterprise" (Mintzberg et al, 1998:14).

2.3 The Evolution of Strategic Management

The origin of strategy is related with the study of success in war (Macmillan & Tampoe, 2000). Business has learned from military strategy and many business issues have military parallels. Learning from past mistakes and adopting fresh outlooks is important elements in both military and business situations (White, 2004). Most business decisions were relatively short term in focus and less entrepreneurial in early 1920s (Bourgeois, 1996).With the beginning of the modern companies which tended to focus on long-term plans and financial planning played a major role among senior managers of the organization.

In 1965, Igor Ansoff published his first book titled "corporate strategy" when most of the companies were using long range planning (Hussey, 1998). In the late 1960s companies in the United States underwent many changes such as massive multinational mergers and acquisitions to avoid antitrust laws, which discouraged high market shares in any particular industry. As a result BCG developed a 2×2 market growth/relative market share matrix and developed the concept of the experience curve (Hubbard, 2004). In late 1960s and early 1970s companies had to cope with higher inflation due to high oil prices and they had to introduce cost control methods. During this period the major purpose of the companies was survival rather long term planning. Therefore, in late 1960's long term planning was replaced by corporate planning. Corporate planning addressed the company's long term and short-term goals, scope and growth directions.

After the late 1970's, the interest in strategy shifted its emphasis from a quest of performance to the sources of profitability (Grant, 2002). There was a focus on companies' external environments through the analysis of industry structure and competition. In 1980s Porter's model of competitive analysis and his set of generic strategies and the concept of value chain dominated the area of strategic management. Porter (1980) introduced the model of five competitive forces in a company's environment that influence competition such as threat of new entrants, bargaining

power of firm's suppliers and customers, threats of substitute's products and intensity of rivalry among competing firms.

In the early 1990's the field of strategic management was attracted to the Prahalad & Hamel's (1990) concept of building "core competencies" to achieve sustainable competitive advantage. Prahalad & Hamel (1990) define the core competences as "the collective learning in the organization, especially how to coordinate diverse production skills and integrate multiple streams of technologies".

Thus, in 1990's prominent authors in the strategic management literature field fall in to two main categories in the way they look at strategy, namely the "strategic planning" and the "strategic thinking" approaches. However, Heracleous (1998) identifies the number of different ways that the various authors use the terms of strategic planning and strategic thinking. Liedtka (1998) highlights the importance of strategic planning systems for a company to provide a supportive context for the employees to think strategically. Thus, it is worth noting that companies can have strategic planning systems and also encourage the strategic thinking capabilities within it.

2.4 Strategic Management

Strategic management has dominated the business management literature as well as corporate practice for several decades. There is no single universally agreed definition of strategic management. Over the last two decades, strategic management has been viewed as being where strategic planning is coupled with strategy implementation (Ansoff, 1988). For Steiner (1979), strategic planning, corporate planning, long-range planning, and formal planning are all basically the same. Strategic management can be viewed as a formal planning process allowing the firm to pursue proactive rather than merely reactive strategies (David, 2003).

Strategic management is the process of examining both present and future environments, formulating the organizations objectives, implementing and controlling decisions focused on achieving these objectives in the present and future environments (Miller & Dess, 1996). It is the process whereby managers establish an organization's long-term direction, set specific performance objectives, develop strategies to achieve these objectives in the light of all the relevant internal and external circumstances, and undertake to execute the chosen action plans. (Thompson and Strickland, 2003).

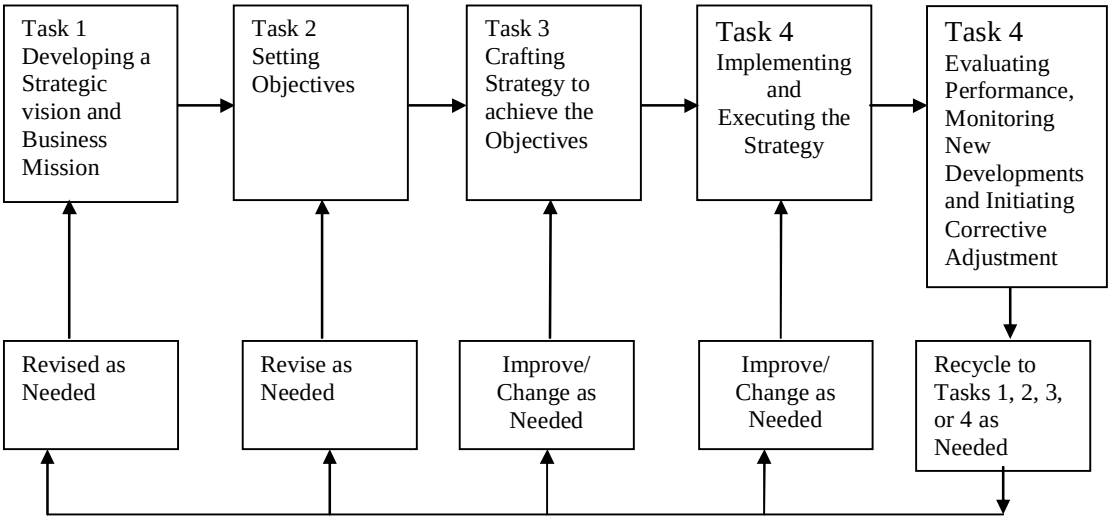
According to Macmillan and Tampoe (2000), strategic management is the process of identifying, choosing and implementing activities that will enhance the long-term performance of an organization by setting direction, and by creating ongoing compatibility between the internal skills and resources of the organization, and the changing external environment within which it operates.

2.5 Strategic Management Process

Many scholars define the strategic management process in different ways. Thompson and Strickland (2003) propose five interrelated tasks of strategic management process. Figure 2.1 displays this process. The five-tasks are:

1. Forming a strategic vision of where the organization is headed-so as to provide long-term direction, delineate what kind of enterprise the company is trying to become, and infuse the organization with a sense of purposeful action.
2. Setting objective- converting the strategic vision into specific performance outcomes for the company to achieve.
3. Crafting a strategy to achieve the desired outcomes.
4. Implementing and executing the chosen strategy efficiently and effectively.
5. Evaluating performance and initiating corrective adjustment in vision, long-term direction, objective, strategy, or execution in light of actual experience, changing conditions, new ideas, and opportunities.

Figure 2.1: The Five Tasks of Strategic Management



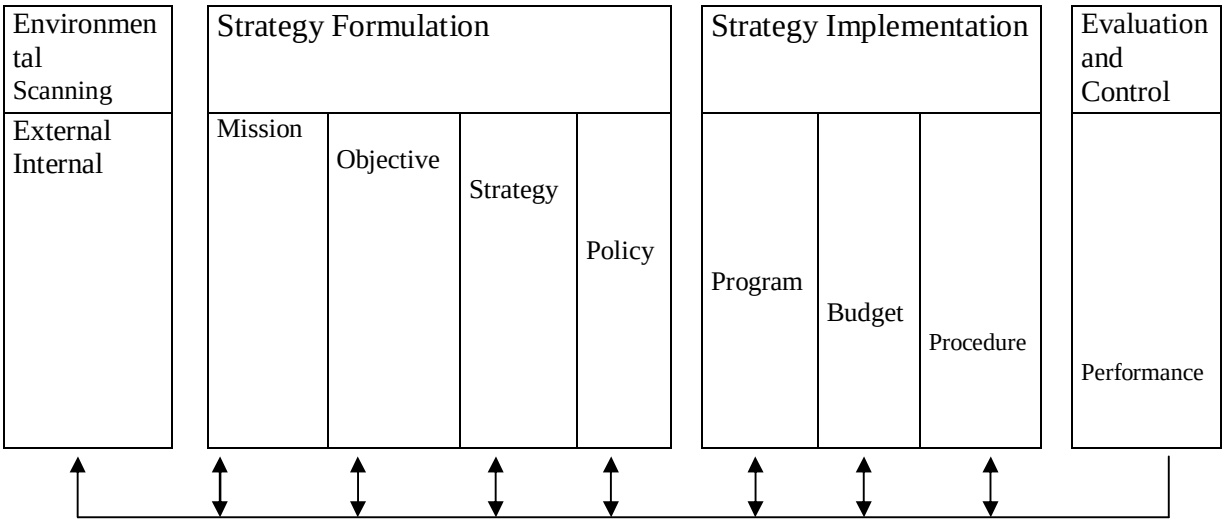
Source: Adapted from Thompson and Strickland (2003),*Strategic Management: Concepts and Cases*, p.7

Wright, Kroll, and Parnell (1998) illustrated a series of steps of strategic management process which to be accomplished by an organization. They proposed six steps to be undertaken:

1. Analyzing the opportunities and threats that exist in the external environment
2. Analyzing the organization's strengths and weaknesses in its internal environment
3. Establishing the organizations' mission and developing its objectives
4. Formulating strategy at each level by matching the organization's strengths and weaknesses with the environment's opportunities and threats
5. Implementing the strategies
6. Engaging in strategic control activities to ensure the organization's objectives are achieved

However, it is important to break down the tasks and processes of strategic management into a logical sequence for better understand. Figure 2.2 displays basic elements of strategic management process in general. Strategy making is an ongoing process, not a one-time event, the notion of a starting point is a purely theoretical one (White, 2004).

Figure 2.2: Strategic Management Model

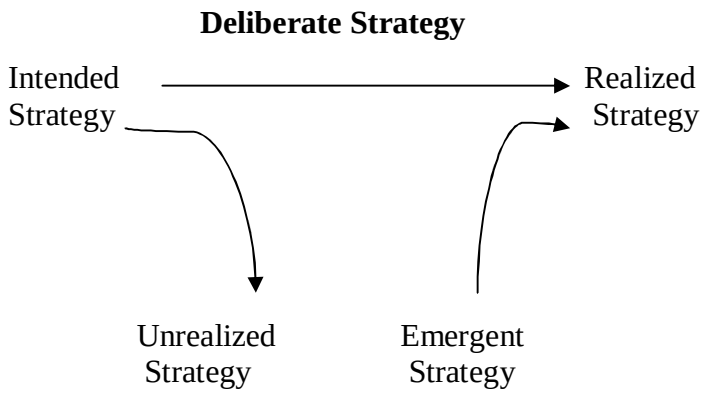


Source: Adapted from Wheelen and Hunger (2000), *Strategic Management and Business Policy*, p. 56.

2.6 Pattern of Strategy

A realized strategy refers to the past and to what the planned strategies have actually put into action (the deliberate strategies) and unplanned or emergent strategies. Figure 2.2 shows the different forms of strategy. According to Mintzberg (1998) many planned strategies are not implemented because of unpredicted changes in the environment (they are unrealized). Emergent strategy represents a realized pattern that was not expressly intended. This strategy is the unplanned responses to unforeseen circumstance. Mintzmerg maintains that emergent strategies are often successful and may be more appropriate than intended strategies. Nevertheless, Harrison and Enz (2005) argued that firm should be involved in intended strategy-creating processes, as well as learn from past decisions and be willing to try new things and change strategic course.

Figure 2.3: Forms of strategy



Source: Adapted from Mintzberg, 1994(b), p.17

2.7 Strategy Formulation System

It is a matter of controversy that whether the process of strategy formulation should be formalized. Several studies (e.g. Bonn, 1996; Coulthard et al, 1996) focused on 4 critical elements of formalized strategic planning, namely environmental scanning, time-line and long-term objectives, strategies and alternatives, and advanced integration of planning systems. Mintzberg (1990) argued that planning and strategy formulation should not be seen as the same process. The strategy formulation requires creativity and intuition. Planning denies the role of emergent strategies and does not produce creativity. His study distinguished strategic planning from strategic thinking, identifying strategic planning as an analytical process and its outcome as a plan while strategic thinking is a synthesizing process and its outcome is an integrated perspective of the enterprise (Mintzberg, 1994b).

2.8 Strategic Planning

According to Grant (2003) companies adopted multiple scenarios planning for their strategic planning practices to respond to the rapid changes in the environments quickly and to also establish vision and mission statements which have a strategic intent. Pearce et al (1987a) define strategic planning as the process of determining the mission, major objectives, strategies, and policies that govern the acquisition and collaboration of resources to achieve organizational goals". O'Regan & Ghobadian (2007) claim strategic planning must include written plans, which cover more than year of activity, have awareness of alternative strategic options, encompass shorter plans for major functional areas, identify future resource requirements, encompass procedures for ongoing monitoring and modification and include the environmental scanning data.

2.8.1 Vision and Mission

Vision and mission statements of a company are the prime step of the strategic management process. According to Hill and Jones (2007), the vision of a company lays out some desired future state; it articulates, often in bold terms, what the company would like to achieve. Thompson & Strickland (2003:6) define strategic vision as a roadmap of a company's future – providing specifics about technology and customer focus, the geographic and product markets to be pursued, the capabilities it plans to develop, and the kind of company that management is trying to create".

A company's mission statement describes what it is that the company does (Hill and Jones, 2007). According to Thompson and Strickland (2003) a company's mission statement is typically focused on its present business scope – "who we are and what we do"; mission statements broadly describe an organization's present capabilities, customer focus, activities and business makeup.

2.8.2 Objectives and Goals

Objectives are an organization's performance targets – the results and outcomes it wants to achieve (Thompson and Strickland, 2003). A goal is a precise and measureable desired future state that a company attempts to realize (Hill and Jones, 2007). Lorange & Vancil (1977:5) differentiate company's objectives and goals by mentioning "an objective is an aspiration to be worked toward in the future and a goal is an achievement to be attained at some future date". Thus, objectives come before the

goals. An objective is timeless and goal is temporal and time phased and intended to be superseded by subsequent goals. Objectives are stated in broad, general terms; goals are much more specific, stated in terms of particular result that will be accomplished by a specified date (Lorange & Vancil, 1977).

2.9 Strategic Thinking

The scholars who think strategy formulation as a strategic thinking process usually believe that strategy formulation is based on an emergent strategy. Minztberg (1994) asserts strategic thinking is about synthesis that involves intuition and creativity that the outcome is an integrated perspective of the organization, a not too precisely articulated vision of direction. Liedtka (1998) captured five essential discrete but, inter related elements in strategic thinking process. The elements of Liedtka's (1998) strategic thinking model are systems perspective, intent focused, thinking in time, hypothesis driven, and intelligent opportunism.

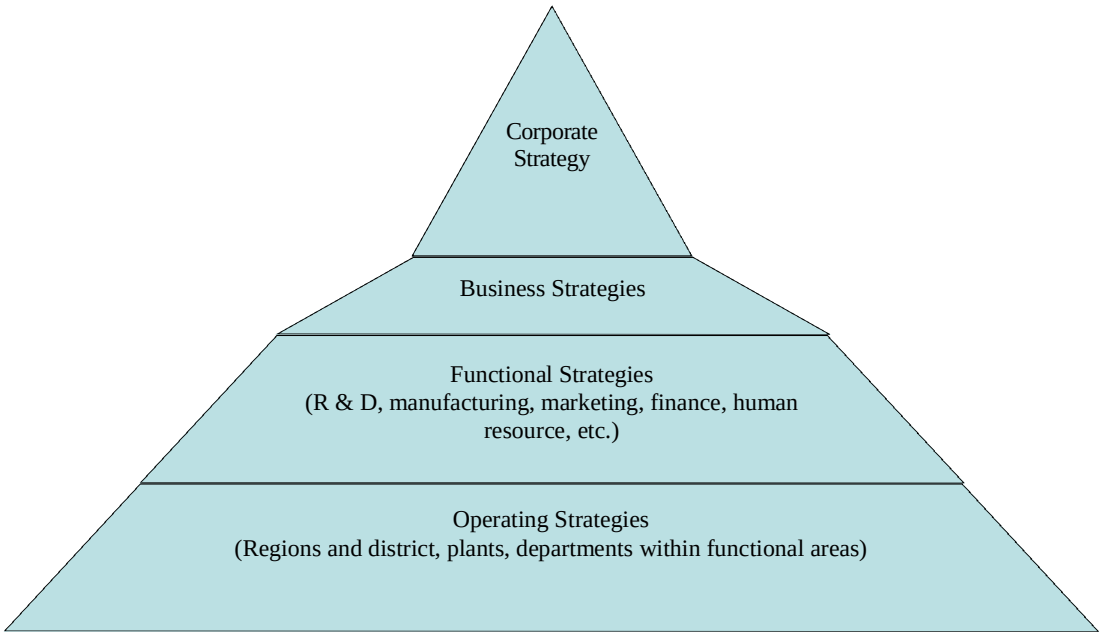
A systems perspective considers a strategic thinker has a mental model about how the World works and this include understanding of both the external & internal context of the organization (Liedtka, 1998). Liedtka (1998) thinks strategic thinking is intent driven. In addition to the intent driven focus there must be room for intelligent opportunism at lower levels to capture the emergent strategies that might better suit the changing environments. Thinking in time considers the importance of understanding the organization's past and current memory to create future. Finally, strategic thinking recognizes it as a hypothesis driven process that deals with hypothesis generating and testing as central activities.

2.10 Levels of Strategy

Generally, strategy is developed at three different levels. They are corporate level strategies, business level strategies and functional level strategies. Thompson & Strickland (2003) added another level of strategy named operating strategies. The corporate strategy is the overall managerial game plan for a diversified company, which considers the big picture of the business in terms of whether to stay, expand or exit the industry. This strategy is under the responsibility of the top management team, supported by corporate strategy staff. The business strategy is normally created from an individual division or business in the organization, which consults each functional area

in the organization (Glueck and Jauch, 1984). The functional strategy is to make business strategy more tangible. Each specific functional unit within a business like R & D, manufacturing, marketing, finance, human resource, etc. has different strategy which is called functional strategy. Operating strategy is created to support the functional and business strategies as well as to achieve the operating-unit objectives. Such strategy is the responsibility of lower level managers in each functional area. Figure 2.4 displays the four levels of strategy of a diversified company.

Figure 2.4: Strategy - Making Pyramid



Source: Adapted from Thompson & Strickland (2003), Strategic Management: Concept and Cases, p.52

The purpose of all strategy levels is to achieve the company objectives, but the specific goals at each level might be different. However, there is no distinction between corporate and business strategy in a single business organization. In a single business organization, only the corporate and functional levels are engaged in strategy formulation (David, 1997).

2.11 Environment Scanning

Environment scanning is the major part of the strategic management process. This analysis plays an important role in the development of strategies as they assist to identify the strength, weakness, opportunities and threats to the organizations. The entire environmental factors can be divided into two major categories namely the external and the internal environments.

2.11.1 External Environments

External Environments helps the organization to identify the opportunities and the threats that exist in the environment. It can be classified into two major parts. These are general environment and industry environment.

2.11.1.1 General Environment

The general environment consists of the some factors which may have a significant impact on the company's strategies. According to Miller and Dess (1996), the trend of same environment can have different effects on different industries and differs significantly for different firms within the same industry. Dess et al (2006) & Hitt et al (1997) divides the general environment into six major dimensions such as demographic, socio-cultural, political/legal, technological, economic, and global.

- ***Political-legal Environments***

Political and legal environments help to expand or limit a company's freedom of action and make the environment more hostile or more supportive of its activities (Hill and Jones, 2007). Johnson & Scholes (1999) identify the most important factors that should be considered by a firm when analyzing its political and legal environments. They are monopolies legislation, environmental protection laws, taxation policy, foreign trade regulations, employment law, and government stability. Wright et al. (1998) noted that in the complex business environment, all aspects of an organization's activities are affected by government policy. It is essential to identify broad trends in government policy and regulation and assess their impact on the business organization to achieve long term success.

- ***Economic Environment***

Economic forecasting is an important element of the environmental scanning in strategic management process. The economic environmental factors greatly influence the strategies and performance various industries and competitors within each industry. Hill and Jones (2007) emphasized on four important economic factors namely growth rate of the economy, interest rate, currency exchange rate and inflation (or deflation rate) that directly affect the business operations. Porter (1991) and Glueck and Jauch (1984) suggest that the factors that will impact on the company in terms of economic environmental analysis include the following: economic stability, taxation, savings,

depreciation, labor market, micro-economic reform, infrastructure, and external policy (that is trade policy, exports and imports development strategy, etc). Organizational functions and strategies are impacted differently by these economic factors.

- ***Technological Environment***

Technological environment is an important factor of general environment. Technological developments affect most products and services as well as processes by which they are created and delivered. According to Hill and Jones (2007), technological change can make established products obsolete overnight and simultaneously create a lot of new product possibilities. Thus, technological change is both creative and destructive- both an opportunity and a threat. Threats come when a company invests a lot of money in Research & Development. There is no assurance that the technology will be accepted, and total investment based on uncertain expectation of future demand for the product is very risky. Opportunities come when technology allows a company to sustain long-term competitive advantage. Therefore, when formulating a strategy one must take into account how willing the company is to take risks and to innovate. However, the rate of technology change varies considerably form one industry to another.

- ***Socio-cultural Environment***

Social attitudes and cultural values constantly evolve and have an immediate effect on business operations For example people now trying to quit from smoking and also trying to have balanced diets as a result of their increased education about healthy activities. This trend has affected the tobacco business companies and the food manufacturers. A dynamic socio-cultural environment significantly influences the demand for an organization's products or services and its strategic decisions. Byars et al. (1996), it is difficult to assess the impact of socio-cultural factors on an organization's objectives. However, it is essential to assess the socio-cultural factors to achieve the organizational goals.

- ***Global Environment***

According to Hitt et al (1997, p 49) the global dimension of the general environment includes "new global markets, existing markets that are changing, important international political events, and critical cultural and institutional characteristics of global markets". Different companies use different global strategies when they do business globally. The study of Johny & George (1993) found that Japanese companies

have more global strategies than American companies and as a result the Japanese companies perform more favorably than the American companies globally.

- ***Demographic Environment***

Demographic factors are the easiest element to analyze in the general environment (Dess et al, 2006). A study conducted by D'souza et al (2007) found that it was important to understand the demographic factors so as to perform well in the business environment. According to Hitt et al (1997) that the major segments which need to be analyzed in demography are population size, age structure, geographic distribution, ethnic mix, income distribution etc. For example, China and India have large markets due to their high populations and as a result we can see large companies trying to move their businesses into those two countries and this illustrates how population size can affect the company strategies and business operations.

Figure 2.5 displays some major issues of general environment. These issues often overlap and developments in one area may influence those in another.

Figure 2.5: Important Factors in the General Environment

Demographic Environment	**Political/Legal Environment**
Ethnic composition Aging of the population Maturity of the baby boom generation Regional changes in population growth and decline	Deregulation Antitrust enforcement Environmental protection laws
Macroeconomic Environment	**Socio-cultural Environment**
Interest rate Exchange rate Budget deficit/surplus Inflation rates Savings rates	Woman in the work force Health fitness awareness Erosion of educational standards Concern for the environment Spread of addictive drugs
Technological Environment	**Global Environment**
Biotechnology Superconductivity Consumer electronics High-definition television technology Process innovation Information superhighway Industrial disasters	Similarity in consumer tastes and preferences Opening of eastern bloc countries Powerful economic alliances Third world debt problems

Source: Miller and Dess (1996), Strategic Management, p. 60

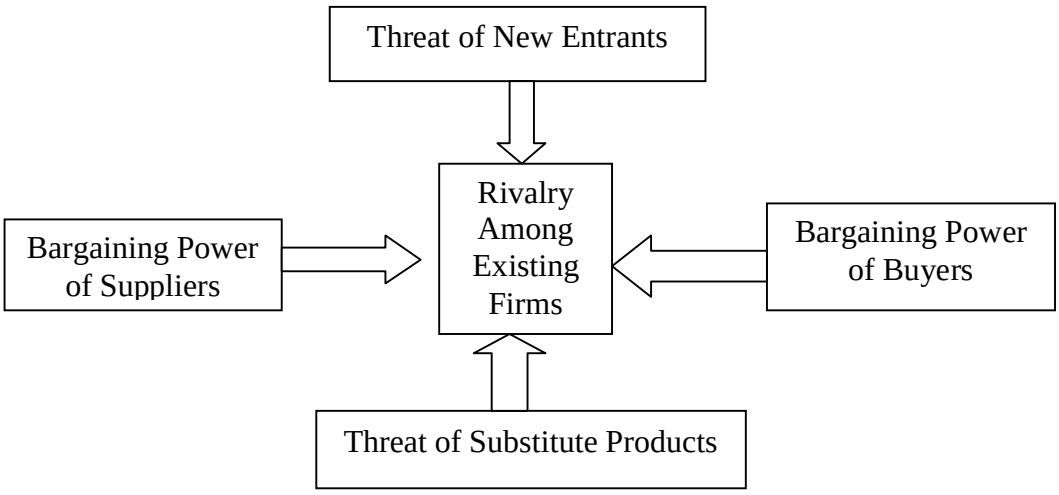
2.11.1.2 Industry Environment

The immediate competitive environment for an enterprise is its industry. In the industry, the companies must analyze their competitors and competitive forces that influence the businesses operations directly or indirectly. Michael E. Porter's five forces model are utilized most commonly for examining the competitive environment. These five basic forces as listed below and portrayed graphically in figure 2.6

- The threat of new entrants
- The bargaining power of suppliers
- The bargaining power of buyers
- The threat of substitute products
- The intensity of rivalry among firms

These forces help to examine the nature and extent of competition and shape the strategies of organization in a particular environment. The analysis of industry environment is important to every company. The collective strength of those five forces determines the ability of company's profits over their competitors. The strongest competitive force or forces determine the profitability of an organization and therefore, companies need think about the impacts of those forces for the company, before formulating the strategies (Porter, 1979)

Figure 2.6: Porter's Five Forces Model



Source: Hill and Jones (2007), Strategic Management: An Integrated Approach, p.47

2.11.2 Internal Environment

Internal environment refers to the means of identifying the strengths to build on and the weaknesses to overcome in formulating strategies (Miller and Dess, 1996). Strategic planners must examine within the organization itself to identify important internal strategic factors. In this section, the internal environmental factors that can affect the strategic management practices of companies will be discussed and these factors include the company ownership, organizational culture, management style, stakeholder expectation, and the company resources and capabilities.

2.11.2.1 Organizational Ownership

The main types of stakeholders' ownership consist of foreigner ownership and local ownership. Porter (1990 & 1991) states that government is one type of ownership in some particular industry sectors. A number of researchers attempted to find the effects of ownership structure (equity structure) on company performance but, failed to identify which ownership structures significantly affect company performances (Porter, 1990).

2.11.2.2 Organizational Culture

According to Thompson and Strickland, company's culture is manifested in the values and business principles that management preaches and practices, in its ethical standards and official policies, in its stakeholder relationships. Barney (1986) in his research found that firms that have valuable, rare, and imperfectly imitable cultures can be a source of sustainable competitive advantage for the firm. The research of Carmeli & Ashler (2004) found a positive relationship between organizational performance and organizational culture. Company strategy and company performance have a close link with company culture. Thus, strategists should consider organizational culture to formulate and implement strategies.

2.11.2.3 Management Style

Poulin & Hackman (2001) state the success of two firms in similar industry can be varied and the two central explanations of such firm level differences in performance were leadership and strategy. Hambrick (1987) said that the strategic success of the firm mainly depend on the fit between the firm's competitive environment and top management team's aptitudes, skills and knowledge base. Thus, leaders' behaviors have a major influence on company success. Managers can adopt different styles to influence

their subordinates and finally to reach the company goals. Robert House (House's path goal theory) identifies four kinds of leadership styles that can motivate subordinates such as directive (focus on getting the job done), supportive (focus on subordinates), participative (give subordinates a say in decision making) and achievement oriented (motivate subordinates to perform at the highest level) behaviors (Wadell et al, 2007).

2.11.2.4 Stakeholder Expectations

Johnson & Scholes (1999:213) define stakeholders as "those individuals or groups who depend on the organization to fulfill their own goals and on whom, in return, the organization depends". According to Nix et al (1990) the concept of organizational stakeholders is becoming increasingly important for organizations and now stakeholder management is becoming an important approach for formulating and implementing organizational strategies. They claim that an organization is an environmentally which address stakeholder concerns have enhanced financial performance. Therefore, the stakeholders of a company can have a great influence on the company's success or failure and it is the management's duty to identify them properly.

2.11.2.5 Resource Base View of the Company (Resources, Capabilities)

The resource based view of the firm is one of the most widely accepted theoretical perspectives in the strategic management field (Newbert, 2007). In the resource based view, a company is understood to be a bundle of assets and capabilities (Hafeez et al, 2002) and these assets and capabilities are known as strategic resources which can provide a competitive advantage for the company (Grant, 2002). Resources can be defined as anything tangible or intangible owned by the firm and firm's resources consist of physical assets (location buildings), intellectual assets (brand name, reputation etc.) and cultural assets (working ethics, empowerment etc.). Capabilities are the abilities to make use of resources to perform some task or activity and competencies are valuable capabilities in terms of "enabling the firm to deliver a fundamental customer benefit (Hafeez et al, 2002).

2.12 Planning Tools and Techniques

There are some tools and techniques which are used frequently to assess the general environment like economy, technology, politic/law, and socio-culture and the internal environment like organization, human, and physical resources. These tools and techniques are also used to formulate the strategy in different level of the organization.

2.12.1 SWOT Analysis

A SWOT analysis is a technique based on listing of all the current strengths and weaknesses of an organization and all the future opportunities and threats perceived in the environment. The study of Stevenson 1989 identified organization's strengths and weaknesses into 5 main groups: organization, personnel, marketing, technical and finance. According to Weihrich (1982), the organization's threats and opportunities can be grouped into 6 areas: economic, social and political, products and technology, demographic, markets and competition, and other factors. Many researchers identify that an organization needs to focus on internal differential strengths and weaknesses by comparing themselves with competitors and key external opportunities and threats (Thompson & Strickland, 2003).

2.12.2 PEST Analysis

PEST analysis can use to analyze the political/legal, economic, social and technological factors in the macro environment that can affect the company and also to identify which of those are more important for the company (Johnson & Scholes, 1999). When PEST analysis is undertaken systematically, the organization will seek data to corroborate the existence of trends and events and will then rate them for their influences on an organization so that the analysis is focused on the most crucial of the trends and events.

2.12.3 Five Forces Analysis

Five forces analysis is most influential and widely used framework for evaluating the industry attractiveness. Porter (2004) identifies the five major forces as suppliers, buyers, competitors, new entrants, and substitutes that control an industry. Thus, the results of Porter's five forces analysis help the company to adopt the most suitable strategies to position themselves well against their competitors in an industry.

Porter (2004:3) stated, "all five competitive forces jointly determine the intensity of industry competition and profitability, and the strongest force or forces become crucial from the point of view of strategy formulation".

2.12.4 Key Success Factors Analysis

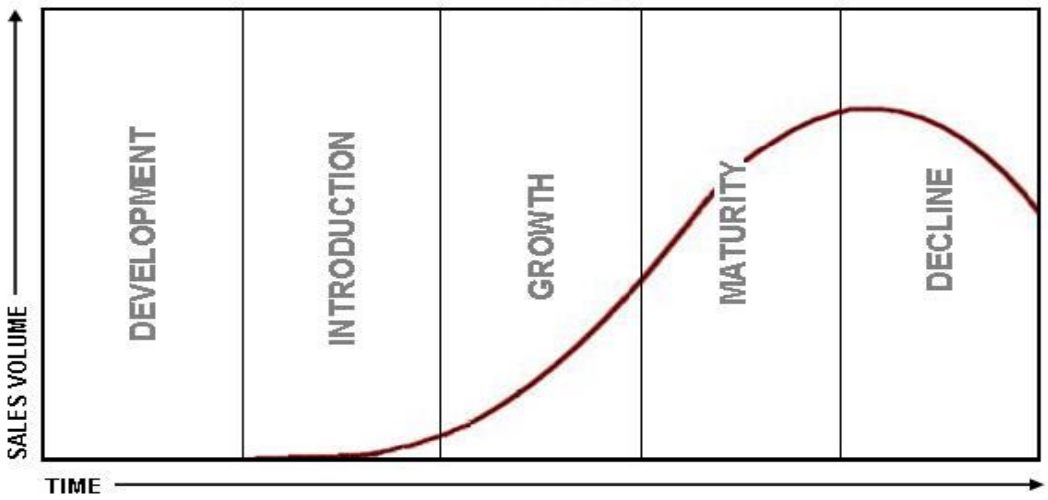
According to Thompson and Strickland (2003:106), Key success factors (KSFs) are "those things that most affect industry members' ability to prosper in the market place- the particular strategy elements, product attributes, resources, competencies, competitive capabilities, and business outcomes that spell the difference between profit and loss and, ultimately, between competitive success or failure." Identifying the key success factors in an industry is important for every company. All firms in the industry must pay close attention to achieve the specific outcomes crucial to market success (Thompson & Strickland, 2003).

2.12.5 Product Life Cycle Analysis

There are endless arguments about the nature of product life cycle; however, most strategists accept that product life cycle does exist in many industries (Pettinger, 1996).

Product life cycle is a powerful technique to evaluate products' position in the market. This life cycle consists of five principal stages. They are introduction, growth, maturity, saturation and decline stages. Each stage will address the product's activities in a different way. For instance, in an introduction stage – the product is placed on the market, but awareness and acceptance are minimal. Sales are quite low and profit is small. On the other hand, in a saturation stage – sales reach and remain on a plateau marked by the level of replacement demand (Thompson & Strickland, 2003)

Figure 2.7: Product Lifecycle



Source: Developed from Coulthard et al. (1996:78)

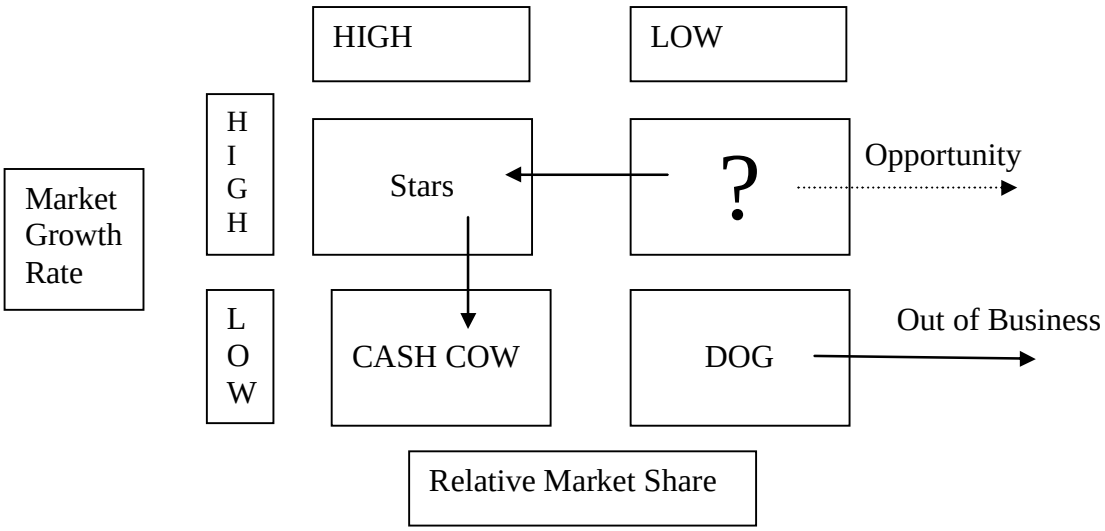
2.12.6 Benchmarking Analysis

According to Thompson & Stickland (2003:134) "benchmarking is the tool that allows a company to determine whether the manner in which it performs particular functions and activities represents industry best practices when both cost and effectiveness are taken into account." This analysis seeks to assess the competences of an organization against the best organization in that industry (Johnson and Scholes, 1999). The purposes of benchmarking are to entail doing cross-company comparisons of how basic functions and processes in the value chain are performed and to take action to improve a company's competitiveness (Thompson & Stickland, 2003).

2.12.7 BCG Product Portfolio Matrix

Boston Consulting Group (BCG) matrix is one of the most well known portfolio planning matrix techniques designed for the multibusiness companies to formulate their strategies (Stacey, 1996). This matrix illustrates four strategic business unit situations or product categories. Figure 2.8 shows the BCG matrix. The vertical dimension of the matrix represents the company's volume growth and the horizontal dimension represents the market share in relation to the share of the leading competitor.

Figure 2.8: BCG Product Portfolio Matrix



Source: Thompson & Strickland (2003), Strategic Management: Concepts and Cases. p. 219.

The BCG recommends taking cash out of the business if product/service is in the cash cows and dogs position. On the other hand, the companies should be able to generate more profit from the star and question marks positions.

2.13 Corporate, Business and Functional Level Strategy

Strategies exist at different levels in an organization and are categorized according to the scope of their coverage. Corporate strategies refer to what businesses the organization will be in and how resources will be allocated among those businesses where as business strategies address how organization competes in a given business.

2.13.1 Diversification Strategies

Corporate diversification has been a central topic in the strategic management over the last three decades (Bowen & Wiersema, 2005). According to Thompson and Strickland (2003, p.325), "diversification becomes an attractive strategy when a company runs out of profitable growth opportunities in its core business". The main purpose of diversification is to increase shareholder's value.

Hill and Jones (2007) divided the diversification strategies into two major areas, namely related diversification and unrelated diversification. Related diversification refers to the strategy of starting a business unit in a new industry which is related to company's existing business units by linking between one or more components of each business unit's value chain (Hill and Jones, 2007). The aim of unrelated diversification is to increase profits by emplaning general organizational competencies in new business units, and to capture the advantages of multipoint competition.

2.13.2 Research and Development Strategies (R&D)

Most of the companies have increased their expenses of Research and Development (R&D) activities during recent years (Scinta, 2007). Bonn (1996) found that organizations take R&D activities for two major reasons:

- One is R&D constitutes an investment for which the appropriate level of funding must be found and
- The second is R&D effort should be directed towards supporting other strategies concerning improvements in products/services to meet corporate growth, market share, and future need.

According to Scinta (2007), research and development activities has a large impact on a company's ability to execute its business and technology strategy.

2.13.3 Turnaround Strategies

Furman & McGahan (2002) define turnaround as a "change in business segment profitability from lowest quintile among all businesses in a specific year to the highest quintile among all the businesses in any subsequent year". According to Thompson and Strickland (2003) turnaround strategies are needed when a business worth rescuing goes into crisis; the objective is to arrest and reverse the sources of competitive and financial weakness as quickly as possible. There are a number of turnaround strategic options available for firms. Thompson and Strickland (2003) propose five turnaround strategic options for achieving successful business-

- Selling off assets to raise cash to save the remaining part of the business.
- Revising the existing strategy
- Launching efforts to boost revenues
- Pursuing cost reduction
- Using a combination of these efforts

2.13.4 Divestment Strategy

Divestment strategies are most likely when a company needs to raise money quickly, or when a business is seen as having a poor strategic fit (Coulter, 1998). Capron et al (2001) define asset divestiture as the partial or complete sale or disposal of physical and organizational assets, shut down of facilities, and reduction of work forces of target or acquirer businesses. The study of Duhaime & Grant (2006) finds that in large diversified companies, corporate divestment decisions were mainly influenced by their business unit's strengths, its relationship to other units in its firm and its parent firm's financial position compared to its competitors. Thompson and Strickland (2003) mention that where retrenchment fails, a part of the business is likely to be sold. They also point out two cases of divestment:

- The successful entrepreneur whose business has grown to a size where she/he has obtained all the benefits they sought and are seeking to sell out.
- Divestments of parts of the business following an acquisition.

2.13.5 Retrenchment Strategy

According to Glueck and Jauch (1988), a retrenchment strategy is used when a company experiences declining profits as a result of economic recession, production inefficiency or competitor innovation. Thompson & Strickland (2003) state that the

company will survive by focusing this strategy on improving efficiency in three aspects: cost reduction (e.g. leasing rather than buying a new asset), asset reduction (e.g. selling anything that is not essential), and revenue generation (e.g. working on the debtor and stock turnover ratios).

2.13.6 International strategy

According to Hitt et al (1997), internationalization is bringing new foreign operations within the boundaries of a firm rather than using arm's length market transactions, and international diversification as expansion across the borders of global regions and countries into different geographic locations, or markets.

Porter (1991) suggest that organizations, which develop their corporate strategy internationally, have to consider issues such as marketing and financial strategies, legal issue, public relations, and industry attractiveness, structure of the organization, culture and people issues. Internationalization of a firm can be seen in a number of different ways such as in international joint ventures, in licensing agreements, in international advertising campaigns, in international trade, exhibitions and multitude of other events and actions etc (Johanson & Vahlne, 1990).

2.13.7 Acquisitions, merger and joint venture strategies

Thompson & Strickland (2003) mention that acquisition, merger, and joint venture strategies are likely to take place when an organization lacks a key success factor for a particular market. A merger is a combination of two companies in which only one company can survive and the merged company goes out of existence, and an acquisition typically refers to one company (the buyer) which purchases the assets or shares of the seller or other assets of value to the seller (Romanek, 2002). Value creation is the most important objective in acquisition as well as the merger processes. Thompson & Stickland (2003), on the other hand, mention that for joint ventures, the organization normally aims to save financial outlays for both joint ventures, increase sales, maintain quality of work, maintain the independence of both joint ventures and allow expansion overseas by using others. Mergers and acquisitions help companies to renew their market position at a speed that cannot be achieved through internal developments. Joint ventures are particularly useful where there are strong reasons against a full merger or acquisition.

2.13.8 Quality Management Strategy

Quality was jointly defined by the American National Standards Institute and The American Society for Quality as the totality of features and characteristics of a product or service that bears on its ability to satisfy given needs (Hill and Jones, 2007). Quality was essential for the survival of both product and service in business world as it can bring about higher customer loyalty, higher market share, higher returns to investors, loyal employees, lower costs, and lesser vulnerability to price competition. They added that quality management has been found to be related to firm financial performance, especially in the long- term. TQM has evolved from the ideas of several quality experts and practices of highly successful companies in the USA and Japan in the 1980s (James, 1993). According to Thompson and Strickland (2003:135), "TQM is a philosophy of managing a set of business practices that emphasizes continuous improvement in all phases of operations, 100 percent accuracy in performing activities, involvement and empowerment of employees at all levels, team based work design, benchmarking, and fully satisfying customer expectations."

2.13.9 Marketing Strategy

The marketing strategy which are discussed in this research study are health awareness programmed, free sample to doctors, ethical marketing, regular contact with the doctor, corporate social responsibility, low price compared to competitor, special reward for employee.

2.13.10 Human Resource Strategy

Human Resource Strategy is very important strategy for business and functional level of an organization. Human Resources are critical for effective organizational functioning. Human Resources management is the set of organizational activities directed attracting developing and maintaining an effective workforce. It takes place within a complex and ever-changing environmental context. The importance of human resources management has grown dramatically in the last two decades. Managers now realize that the effectiveness of HR function has substantial impact on the boom-line performance of the organization (Griffin, 2008). However this research study focuses on some attribute of Human Resource Strategy. They are size of the workforce, the right knowledge and skilled employee, formal job responsibilities, monitoring of

employees activities, compensation, performance appraisals, training programmed, and the promotion system of the employee.

2.14 Corporate Strategy Implementation

According to Hill and Jones (2007:25), “strategic implementation involves the use of organizational design, the process of deciding how a company should create and combine organizational structure, control system, and culture to pursue a business model successfully.” None of strategies that have been carefully formulated by an organization is of much use unless they are implemented (Stacey, 1996).

Wheelen and Hunger (2000) mentioned strategy implementation as a process by which strategies and policies are put into action through the development of programs, budgets, and procedures. Joyce and Wood (2001) suggested the following key factors for successful implementation namely top management communication, involving managers and employees, implementation plans, the quality of the strategy, and the proper planning of resources. Some studies (Glueck and Jauch, 1984; Hill and Jones, 2007) suggest that to be successful in strategy implementation, a company should meet the following criteria:

- Clear responsibility for the successful outcome of planned strategic change should be allocated,
- The number of strategies and availability being pursued at any time should be limited. The ability of the necessary resources to cope with the changes should be seen as a key determinant of strategy and should not be overlooked,
- Necessary action to implement strategies should be identified and planned and again responsibility should be allocated, and
- Strategy evaluation or performance measures should be established and appropriate monitoring and control mechanisms put in place.

2.15 Evaluating Corporate Strategy

Evaluation is a significant part of the strategic management process. Hill and Jones (2007) state that corporate strategy evaluation at the widest level involves seeking answer to the following questions:

- Are the current objectives of the organization appropriate?
- Are the strategies created previously and which are currently being implemented to achieve these objectives still appropriate?
- Do current results confirm or refute previous assumptions about the feasibility of achieving the objectives and the ability of the chosen strategies to achieve the desired results?

Causal linkage between strategies and their success or failure is difficult to measure. Even though there may appear to be a direct correlation between a specific strategy and its results, there are also elements that could have had an impact on the outcome (Viljoen and Dann, 2000). Nevertheless, implemented strategies, at any level of an organization, need to be assessed. David (1997:281-285) suggested three basic activities for evaluating strategies:

- Examining the underlying bases of an organization's strategy
- Comparing expected results with actual results
- Taking corrective actions to ensure that performance conforms to plans

The corporate strategy evaluation helps the management teams to identify the future strategy that could possibly be implemented successfully.

2.16 Organizational Performance

An organization's performance involves identifying outcomes that it wants to achieve, creating plans to achieve those outcomes. A performance criterion is a specific level of performance that is used to evaluate how well the organization is performing on a specific performance attribute. Most studies indicate organizational performance indicators as the organization's financial indicators (Pandey, 1986). Financial analysis offers a system of appraisal and evaluation of a firm's performance and operations; it is the analysis of the financial statement of an enterprise. According to Brigham and Houston (2004), from an investor's standpoint, predicting the future is what financial statement analysis is all about, while from management's standpoint, financial statement analysis is useful both to help anticipate future conditions and, more important, as a starting point for planning actions that will improve the firm's future performance. The analysis of financial statement can be best done by various yardsticks of which, the important is known as ratio or percentage analysis. Ratio analysis is

certainly a very admirable device because it is simple and it has a predictive value. This study mainly focuses on financial performance of the organization which includes the profitability indicators, liquidity determinants, activity focus, leverage and growth output.

2.16.1 Liquidity Determinants

The liquidity determinants are used to measure a company's ability to pay its short-term debts. Lack of liquidity and high degree of liquidity, both are harmful for a firm as lack of sufficient liquidity makes a company poor credit worthiness and excess liquidity makes idle assets which earn nothing (Pandey, 1986). So, a proper balance between lack of liquidity and excess liquidity is very essential to survive in the competitive business environment. Two common ratios are used to indicate the extent of liquidity of a company. They are – (i) current ratio and (ii) quick ratio. Net working capital ratio also is calculated under this category.

2.16.2 Activity Focus

Activity focus (also called turnover ratios) is financial analysis tools used to evaluate the efficiency with which the different assets of a business are managed and utilized. Activity ratios involve a relationship between level of sales and different assets like inventories, fixed asset, current assets, account receivable and others (Brigham and Houston, 2004). Several activity ratios are used to calculate the effectiveness of asset utilization. Among the various activity ratios (i) Inventory Turnover Ratio, (ii) Asset Turnover Ratio, (iii) Fixed Asset Turnover, (iv) Accounts Receivable Turnover Ratio and (v) Working Capital Turnover Ratio have been measured in this study.

2.16.3 Profitability Indicators

Profit is ultimate target for every manufacturing company. Profitability is the net result of a number of policies and decisions. The ratios examined thus far provide useful clues as o the effectiveness of a firm’s operations, but the profitability ratios show the combined effects of liquidity, asset management, and debt on operating results (Brigham and Houston, 2004). Profitability ratio can be measured in various ways. Out of them, Gross profit margin ratio, net profit margin ratio, return on investment, return on assets, return on capital employed are discussed in this study.

2.16.4 Leverage Output

Leverage output (also called solvency ratios) is calculated to judge the long term financial position of the company. These ratios indicate mix of funds provided by owners and lenders (Pandey, 1986). It gives significant information to the present and future long-term creditors, debenture holders, bankers and investors. Debt-equity, Debt to Asset Ratio and Time Interest Earned Ratio are commonly used to measure leverage ratios.

2.17 Chapter Summary

This chapter has discussed the conceptual issues for this research study. First it defined the strategy and analyzed evolution of strategic management that helps to understand some of the conflicting views in the field of strategic management. Then the strategic management process, pattern and level of strategy and strategy formulation system are discussed. There are four levels of strategy identified in a diversified company namely corporate, business, functional, and operational. Strategic management process was divided in to three major parts such as strategic formulation, strategic implementation and evaluation. The environment of the company has been discussed in two categories namely the internal and external environments. External environment consists of two major environments namely the general and competitor environments. General environment is divided into six major dimensions namely demographic, socio-cultural, political/legal, technological, economic, and global environments. The internal environment of a company consists of dimensions such as company ownership, culture, management style, stakeholder expectations, company resources and capabilities. There are a number of analysis tools and techniques frequently used to assess the general environment and internal environment. The most popular tools and techniques include PEST analysis, SWOT analysis, benchmarking analysis, product life cycle analysis, BCG matrix. Under the strategic planning framework, the vision and mission, goals and objectives have been described. The major corporate and functional level strategies are discussed in this chapter which includes diversification, internationalization, acquisitions and mergers, R & D, turnarounds, divestitures strategies, Joint venture and Quality Management, marketing and human resource strategy. Finally, organizational performance measurement indicators have been discussed.

Chapter Three
GROWTH AND DEVELOPMENT OF PHARMACEUTICAL INDUSTRIES IN BANGLADESH

3.1 Introduction

This chapter aims at providing overall growth and development of pharmaceutical industry in Bangladesh. It is also an attempt to find out the present scenario of pharmaceutical industry of the country. This chapter is divided into several sections. Firstly, it describes a brief review of Bangladesh economy and historical overview of pharmaceutical industry. Secondly, it shows the Industry structure, pharmaceutical products, registration system of allopathic drugs, distribution and quality control system of drugs and market of pharmaceutical products. Thirdly, it focuses on contribution to national economy including export, import, employment etc. Fourthly, it describes the potentialities of this industry. A brief conclusion has been drawn at the end.

3.2 A Brief Review of Bangladesh Economy

Bangladesh is predominantly an agrarian economy and categorized as one of the least developed countries in the world. Agricultural income constitutes the main source of domestic demand for manufactured goods and services. Consequently, the growth of the overall economy remains contingent upon satisfactory growth of the agricultural sector. But the limited availability of land, technological backwardness, frequent natural calamities and restricted scope of enhanced value addition import limits on the prospects of rapid agricultural development. Table 3.1 shows the change of structural transformation of broad sectoral shares in GDP from Financial Year (FY) 1980-81 to FY 2011-12

Table 3.1: Trend of Structural Transformation of Broad Sectoral Shares in GDP

(Figure in Percentage)

Sector	1980-81	1990-91	2000-01	2011-12
Agriculture	33.07	29.23	25.03	19.42
Industry	17.31	21.04	26.20	31.13
Service	49.62	49.73	48.77	49.45
Total	100	100	100	100

Source: Bangladesh Economic Review, 2013

It is revealed from the table that the growth of agriculture is inconsistent over the periods. Moreover, the contribution of the sector to the Gross Domestic Product (GDP) has been decreasing day by day. Contribution of agriculture as percentage of GDP was 33.07% in FY 1981-81, whereas, it was 19.42% in FY 2011-12. In last four decades, contribution of agriculture to GDP decreased by 41.27%. It may be noted that agriculture has already been saturated; so Bangladesh has to put emphasis on its industrial development.

In context of the present state of our agricultural sector, the industrial sector has much more scope and potentials for promoting rapid economic development of the country. Many developed and developing countries of the world have adopted the policy of structured shift from agriculture to industry. Like those countries, Bangladesh feels the need for and the urgency of such structural shift towards industry. With this end and for giving continuous emphasis on the industrial sector to Bangladesh economy has been increasing day by day. The contribution of the sector to real GDP was 31.13 % in FY 2011-12, while it was 17.31% in FY1980-81. In the last four decades the contribution of industry to GDP increased by 80%. Among the fifteen sectors identified for computing national income, the broad industry sector includes four sub-sectors- mining & quarrying; manufacturing; construction and electricity, gas and water supply. Among these sub sectors, the contribution of the manufacturing sector is the highest. According to FY 2011-12, the contribution of manufacturing sector to GDP was 18.96%, which was 3.00% higher than that of the previous year (BBS, 2012).

All these indicate that the contribution of industrial sector to the economy is gradually increasing. This upward trend is to be maintained for the sustainable development of this country. Various efforts have been undertaken so far for industrialization of the country, though the contribution of industrial sector to GDP is not up to the mark. However, Bangladesh has been trying to increase the contribution of the industry sector.

3.3 Historical Overview of Pharmaceutical Industries

3.3.1 Pre-Liberation Period

The pharmaceutical sector is treated as one of the fastest growing sectors in Bangladesh. It is very highly developed sector and has been contributing significantly to the national economy for the last two decades. The development of pharmaceutical sector is directly

related with the development of healthcare system and medical education of a country. The history of today's Pharmaceutical development is rooted in the innovation of the ancient medicine which started its journey thousands of years back.

The traditional healthcare systems, which have taken firm roots in Bangladesh and are widely practiced all over the country, are Ayurvedic, Unani and Homeopathic. Ayurvedic system is one of the oldest systems of medicine which has been practiced in this subcontinent for over 3,000 years. Ayurveda, meaning the science of life, is rooted to the social, cultural and philosophical principles that prevailed in India during the period 600 BC to 700 AD (Islam, 2003). The medicinal preparations employed in this system are mainly derived from plant materials and are presented in the form of powders, semi-solid preparations, decoctions, elixirs and distillates. With the Muslim conquest of India (600 AD), Ayurvedic medicine gradually decreased yielding place to Unani Tibbi medicines. Hakim Iskalibus of Greece was the first person to propagate the Unani system of medicine. However, this system flourished only when Arabian and Persian Muslim intellectuals like Al-Razi, Ibne-Sina, Al-Rashid, and others enriched it with newer scientific knowledge and discoveries in the 7th century (Islam 2003). The Unani Tibbi medicine continued developing till the eighteenth century, the inception of British Empire. The Homeopathic system of medicine was invented by the German physician Samuel Hahnemann between 1810 and 1839. India sub-continent accepted this system later. However, Ayurvedic, Unani and Homeopathic-all these traditional systems of medicine are very popular and still fulfilling the great public demand in Bangladesh.

The most popular system, which is recognized as highly advanced system of medicine in Bangladesh and the rest of the world, is Allopathic. The Allopathic system was introduced in the region that comprised Bangladesh during the British Regime. In the beginning, there were only a handful of trained allopathic doctors. With firmer administrative hold over the colony, the British appointed some good English doctors. They introduced some acts and undertook many initiatives during their regime which made substantial development in the health sector of Indian sub-contingent. The table 3.2 is a list of important healthcare activities that stimulated the pace of medicine production along with healthcare activities during the British and Pakistani regime.

Table 3.2: Healthcare Activities during the British and Pakistani Period

Year	Activities
1901	Establishment of Ayurvedic medicine factory Sakti Oushadhalaya in Dhaka.
1912	Full-fledged education and Health Department was created.
1914	Establishment of Sadhana Oushadhalaya in Dhaka.
1919	In the Administrative Reform Act of Montage Chelmsford, the responsibility of health, sanitation and health statistics were bestowed on the provincial government.
1930	Simon Commission recommended the formation of a central health board for coordinating and even development of health services in different provinces.
1930	All India Institute of Hygiene and Public Health was established in Calcutta, the capital of Bengal, with the financial assistance from the Rockefeller Foundation.
1940	The Drug Act of 1940 and its rules formed the on the basis of the country's drug legislation
1943	In the backdrop of Second World War and the famine, the Government of India appointed a committee under the leadership of Sir Joseph Bhore for survey and development of health services. The Bhore Committee Report used the term comprehensive health care for the first time in India in 1946. By comprehensive services, the Bhore Committee meant provision of integrated, preventive, curative and promotional health services to every individual residing in a defined geographic area.
1946	Dhaka Medical College was established. Eastern province Dhaka Medical faced public health problems due to influx of refugees from India and due to out-break of different epidemics for lack of proper hygiene, sanitation and public health facilities such as, preventive health care. However, the provincial government did its best to tackle the situation without much support from the central government
1950	Pakistan Legislative Assembly passed Conscription Act thus making obligatory for doctors to serve in the government health sector.
1953	Establishment of Shahid Suhrawardy Hospital.
1967	Institute of Post Graduate Medicine and Research (IPGMR) was established. (latest name-Bango Bondhu Sheikh Mujibur Rahman Medical University)

Source: Islam (2003), *Banglapedia.*

After the partition of Bengal in 1947, East Pakistan inherited a very small share of the industries of Bengal. The pharmaceutical industry, however, like all other sectors in Bangladesh, was much neglected during Pakistan regime. The number of multinational and local companies was very scanty in East Pakistan. Local companies in those days could hardly contribute in this sector due to lack of resources. Some multinational companies (MNCs) were in total control of the market but most of them had their production facilities in West Pakistan.

3.3.2 Post Liberation Period

With the emergence of Bangladesh in 1971, the country inherited a poor base of pharmaceutical industry since the most of the medicine factories were established in West Pakistan. The budgetary allocation for the health sector was very poor for several years after liberation. Moreover, it was felt that most of the MNCs were exploiting the local buyers with high prices of their medicines and also producing mostly commercially lucrative but "not so important" drugs (Lincoln and Bhattacharjee, 2007). It happened because of ineffective control of the Drug Administration of Government. These resulted in the promulgation of the Drug (control) Ordinance to control manufacturing, import, distribution and sale of drugs (Drug Control Ordinance, 1982)

This scenario totally changed after the incorporation of the Drug Act, 1982. Local companies started to flourish and aided by restriction on purchase of high priced raw materials. At that time, this sector was dependent on import and production of multinational companies. The market share of MNCs was 80% in 1970, whereas of local companies was only 20%. But in 2012, the market share of local companies increased to 80%. Now, this sector is technologically the most developed manufacturing industries in Bangladesh. Government initiatives, drug policy and TRIPS Agreement have helped to flourish this sector. However, various aspects of the growth and development of this pharmaceutical industry are described in different section of this chapter.

3.4 Pharmaceutical Industry Structure

Bangladeshi pharmaceutical firms focus mainly on branded generic final formulations using imported APIs. This industry primarily can be divided into two parts- private sector and public sector. Again, this sector also can be classified on the basis of types of medicine and ownership.

3.4.1 Private Sector

A large number of pharmaceutical industries began to increase in the private sector since the promulgation of the Drug (control) Ordinance 1982. There are four types of manufacturers on the basis of type of drug - Allopathic, Unani, Ayurvedic and Homeopathic. Table 3.3 displays the total number of these manufacturing units of 2002 and 2012. At present, there are 268 Allopathic, 204 Ayurvedic, 268 Unani and 79 Homeopathic drug manufacturing companies in the country. From the table, it is

revealed that among the different types of drug manufacturers, allopathic system has the highest change (27.14%) in number of units-followed by Ayurvedic (26.70%). However, according to DDA, Among the 268 allopathic units only 193 are under active production and others are either closed down or suspended by the DDA due to non-compliance to GMP or drug laws.

Table 3.3: Different Types of Drug Manufacturers

System	2002 (No. of Units)	2012 (No. of Units)	Change (%)
Allopathic	210	268	58 (27.61 %)
Unani	261	268	7 (2.68)
Ayurvedic	161	204	43 (26.70)
Homeopathic	76	79	3 (3.9%)
Total	**708**	**819**	**111 (15.54 %)**

Source: Directorate of Drug Administration

The following table shows the distribution of pharmaceutical companies on the basis of their ownership at the end of December, 2012.

Table 3.4: Distribution of Pharmaceutical Companies on the Basis of Ownership

Types	No. of Companies	% of ownership	No. of Listed companies
Private Limited(Local)	252	94.02	
Private Limited(MNC)	4	1.49	
Public Limited (Local)	8	3.0	10 (8+2)
Public Limited (MNC)	2	0.75	
Government owned	1	0.37	
Total	**268**	**100**	

Source: Directorate of Drug Administration

It is observed from the table 3.4 that out of 268 companies, 252 (99.63%) belong to private sector while only one (0.37%) belongs to public sector. The number of MNCs operating in Bangladesh is 8. Again, only 10 companies (3.75%) of the total are listed with stock exchange of the country including eight local and two MNCs.

3.4.2 Public Sector

There is only one public sector manufacturing company in Bangladesh. The name of the company is Essential Drug Company Ltd (EDCL). It is a 100% State Owned Pharmaceuticals Company and controlled by the Ministry of Health & Family Welfare of Bangladesh. In the year 1962, it was functioning under the then Central Government in the name & style of Government Pharmaceuticals Laboratory (GPL) and subsequently it was renamed as Pharmaceuticals Production Unit (PPU) in the year 1979. For the interest of Public Health & smooth running of the organization, it was registered as a Public Limited Company under the Companies Act-1994. Presently authorized capital of EDCL is Tk.200 Crore and paid up capital is 41.70 Crore of TK. 10 each share (DDA, 2012).

The main objective of EDCL is to manufacture quality drugs at an affordable price & supply to the Government Hospital and other Health Institutions. It has three drug manufacturing units –two of them are at Dhaka and Bogra and the third unit is under the Institute of Public Health (IPH) which produces vaccines and large volume IV (Intravascular) fluids. It produced Drugs & Contraceptive product worth TK.978 million in the financial year 2001-02. The production increased to TK.2965 million in 2010-11 (DDA,2012). In last ten years, the production of EDCL is increased by 203%.

3.5 Pharmaceutical Products in Bangladesh

The Pharmaceutical products can broadly be classified into two categories. These are

a) Patent Medicines

b) Generic Medicines

a) Patent medicines are the products that are invented by the original companies, who have their own research team working in their own laboratories. These products are patented for many years to enjoy the monopoly market. After years of business the formulation is sold in the market so that others can go into mass production.

b) Generic medicines are the products that are produced and distributed in mass scale without patent protection. These are marketed by several companies under different brand name, where the formulation of this product is almost same. Prices of the products under this category are competitive.

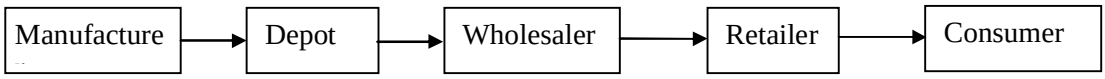
However, Bangladesh pharmaceutical companies mainly produce and market generic medicine. About 85% of the drugs sold in Bangladesh are generics and 15% are patented drugs, where as generic drugs represent about 25% on average of worldwide pharmaceutical sales (Saad, 2012). There are about 450 generics registered in Bangladesh. Out of these 450 generics, 117 are in the controlled category i.e. in the essential drug list and 333 in the decontrolled category. The total number of brands /items that are registered in Bangladesh is currently estimated to be 5,300, while the total number of dosage forms and strengths are 8,300 (DDA). These include a wide range of products from anti-ulcerants, flouroquinolones, anti-rheumatic, non-steroid drugs, non-narcotic analgesics, anti-histamines, and oral anti-diabetic drugs.

3.6 Distribution of Pharmaceutical Products

Prompt and safe distribution and public/private storage facilities to the end should be ensured so that the quality of the products is maintained throughout the whole process and good quality essential drugs are always as available to those who need them.

Physical distribution of pharmaceuticals in Bangladesh has evolved in a unique way. Unlike other countries, Bangladesh pharmaceutical industry is more retail-oriented and bulk of distribution is done by the companies themselves; pharmaceutical companies distribute their products from their own warehouses located in different parts of the country as no professional distribution house is available. Wholesalers play a limited role in this regard since companies supply products to both retailers and wholesalers. Network of large scale pharmaceutical company is as follows.

Distribution channel of pharmaceutical products:



The table 3.5 shows the wholesale and retail registered license holders of 2002 and 2012. There were 1495 wholesale drug license holders and about 37,700 retail license holders in Bangladesh in 2000. At the end of 2012, the number of wholesale drug license holder and retail drug license holders in the country stood at 2202 and 98621 respectively. In last 10 years, wholesale drug license holders have increased by 47% and retail holders by 161%. According to the DDA, out of license holders, there are a lot of unlicensed retailers all over the country which are mainly responsible for marketing sub-standard and spurious drugs.

Table 3.5: Wholesale and Retail Licensed Drug Holders of 2002 and 2012

Item	Total number in 2002	Total number in 2012	Growth (%)
Wholesale Drug License Holders	1495	2202	47
Retail Drug License Holders	37700	98621	161

Source: Directorate of Drug Administration

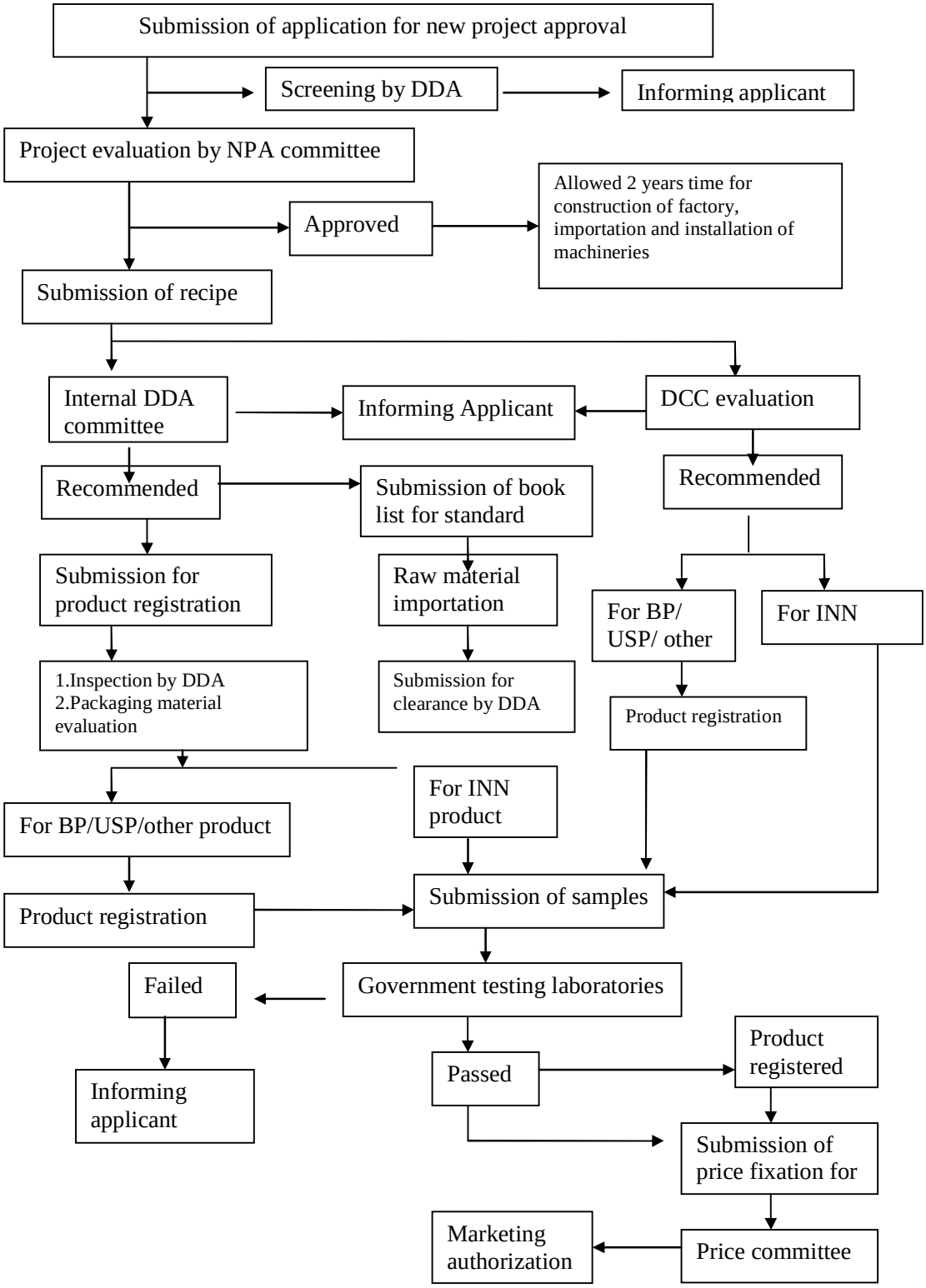
3.7 Association of Pharmaceutical Industries

Bangladesh Association of Pharmaceutical Industries (BAPI) was established in 1972 with 33 member Pharmaceutical Companies. Since then BAPI has been playing a pivotal role in shaping up the industry. Association's members include large, medium, small national and foreign companies. Today, BAPI has 163 pharmaceutical companies as its members. BAPI is the one and only registered and recognized Association of the private sector pharmaceutical companies in Bangladesh. BAPI has been enrolled as member of International Federation of Pharmaceutical Manufacturers Association (IFMPA), Geneva. Though its major activities include upholding interest of the pharmaceutical manufacturers of Bangladesh to the relevant forums, in the last few years BAPI also organized various health awareness programs, campaigns against spurious drugs, exports potentials & problems in Bangladesh etc. In 2003, BAPI organized "Asia Pharma Expo-2003"- one of the major pharma event /exhibition held in this region for the first time. Again in 2005, 2007, 2009, 2011 and in 2013 BAPI organized "Asia Pharma Expo"- which attracted most of the largest stakeholders of pharma and associated industry of Asia & Europe (BAPI, 2012). At Asia Pharma Expo-2013, more than 460 Exhibiting Companies from 32 countries across the world (including Bangladesh, India, Japan, USA, UK, European Union, Gulf region, Taiwan, Korea, Malaysia, Thailand, Singapore, etc.) exhibited their latest technologies and products/services to nearly 9,100 pharma trade professionals who attended the show (BAPI, 2012). Apart from these events and campaign programs, BAPI is also involved in various social activities, like donation of medicines to prime minister's relief fund, flood-effected people, and cyclone affected areas etc.

3.8 Registration of Allopathic Drugs

The process of registration of an allopathic drug consists of some specific and sequential steps developed by the DDA of Bangladesh. The steps are shown in a flowchart below.

Flow Chart 1: Process for Allopathic Drug Registration



Source: Directorate of Drug Administration

The flowchart demonstrates a well-defined set of formalities to be performed by any manufacturer as well as by the DDA.

3.9 Quality Control System of Pharmaceuticals

In order to become a leading export sector, the pharmaceutical industry needs to make significant improvements in quality. Quality for pharmaceutical products is determined by quality of raw materials, quality of manufacturing process and environment and brand perception. There are four mechanisms in place to regulate quality of Bangladesh drugs: the Drug Directorate Administration (DDA), the Drug Testing Laboratory (DTL), bioequivalence laboratories and international certifications.

3.9.1 Drug Directorate Administration

The Directorate General of Drug Administration (DDA) is committed to ensuring the safety, efficacy, and quality of drugs, as well as the relevance and accuracy of product information in Bangladesh. This Directorate is responsible to implement all prevailing Drug Regulations in the country and to regulate all activities related to import, procurement of raw and packing materials, production and import of finished drugs, export, sale, pricing, etc. of all kinds of medicine including those of Ayurvedic, Unani, Herbal and Homoeopathic systems. The Directorate General of Drug Administration monitors and regulates all the activities of these companies (DDA, 2012).

The chief of the Directorate, designated as the Director General, is empowered by the Govt. to act as the Licensing Authority (LA) of drugs. Besides this, a number of Committees, such as Drug Control Committee (DCC), Standing Committee for procurement and import of raw materials and finished drugs, Pricing Committee and a number of other relevant Committees, which comprise of experts, are there to advise the Licensing Authority and to recommend to him matters related to drugs and medicines. The DDA is significantly under-resourced. The DDA has 44 inspectors, 16 located in Dhaka and then almost one per district (30 districts) (DDA, 2012). The inspectors inspect manufacturing facilities on average once every 2 years for their license renewal. Although, with its present set-up and inadequate strength, the DGDA often finds it difficult to carry out it’s very large volume of assigned work but the positive sign is that the DGDA is continuously strengthening its infrastructure.

3.9.2 Drug Testing Laboratories

Drug testing is the most expensive tool in the drug regulatory process, but the only way to prove if a product is counterfeit or substandard. There are two chemical analysis drug testing laboratories in Bangladesh. Each of two reports to different organizations

of the government. One is in Dhaka and reports to the Director of Public Health in the Ministry of Health. The other is in Chittagong and reports to the DDA. These two DTLs are engaged to test numerous drugs introduced by about 200 pharmaceutical companies operating in the domestic sector (DDA, 2012). However, both laboratories are significantly under-resourced. Furthermore, the facilities are not modern and sophisticated enough to carry out different types of tests as required which are becoming more & more stringent day by day.

3.9.3 Bioequivalence Laboratories

Bioequivalence laboratories test the availability of the drug in the blood. They determine drug absorption and elimination rates, and other in vivo effects. The drug needs to be tested for bioequivalence to export into a regulated market and some moderately regulated markets like Tanzania and Malaysia. Bangladesh has no bioequivalence laboratory capabilities. Bangladeshi companies, which want to export their products, send drug samples to an internationally recognized bioequivalence laboratory abroad for testing at a cost of $30,000-$60,000 per drug (The World Bank, 2008).

3.9.4 International Certification

There are several different international manufacturing quality standards to which firms can adhere:

Good Manufacturing Practices (GMP) or Current Good Manufacturing Practices (cGMP) are promoted by the World Health Organization (WHO). They focus on the manufacturing process in order to minimize risk of a faulty final product. GMP will certify a facility (not a drug or an organization) if it meets standards for starting materials, premises, equipment, processes, documentation, training and personal hygiene of staff. There are two bodies in Bangladesh that can give GMP certification: The Government of Bangladesh through the DDA and International Organizations such as UNICEF which requires GMP certification to prequalify a firm for UNICEF purchases. Local DDA inspectors, hampered by lack of training and political pressures, are not as stringent as international inspectors. For example, while the DDA passes 95% of the firms they inspect, UNICEF globally has passed 63% in the past 4 years (The World Bank, 2008).

Besides this, there are some international authority such as United States Food and Drug Administration (USFDA) for USA market, the UK's Medicines and Healthcare products Regulatory Agency (UKMHRA) for Europe market and Therapeutic Goods Administration (TGA) for Australia market. There are several aspects to these approvals. Both final generic drug producers and API producers give product samples to the FDA for chemical analysis and have a full scale plant, process, and production inspection. However, these certificates are considered to access in international market as well as indicator of quality.

3.10 Pricing system of Drug

Price system can be described in two ways – price of 'Essential Drug' and price of 'Non-essential Drug'. 'Essential Drug' is a list of lifesaving drugs decided by the government. At present, there are 117 items in the 'Essential Drug' list. The DDA directly sets the price of 'essential drugs'. Revision of price of these drugs takes place very few and the margin is usually lower for these drugs.

The companies set the price of other drugs known as 'non-essential drugs' though the final price is approved by the DDA. The companies submit new price to the DDA based on (increased) cost of production which the regulatory body scrutinizes. However, they cannot set too high a price. Because, the DDA takes into account the purchasing power of the people as well as the price proposed by other manufacturers for the same generic of drug. Nevertheless, the companies make the bulk of the margin from these 'non-essential drugs'.

3.11 Active Pharmaceutical Ingredients (API) Industrial Park

Active Pharmaceutical Ingredients (API) Industrial Park is the most significant requirement of the pharmaceutical industry. About 80% of the APIs are imported every year due to absence of such park in the country. However, the government has already taken necessary steps to strengthen the pharma sector of Bangladesh by way of establishing API Industrial Park at Gazaria, Munshiganj. A total of 42 industries would be set up under the project expected to cost a total of Tk 331.86 crore (Saad, 2012). It is estimated that cost of APIs will decrease by about 20%, if the API Park is established. It will help increase the local pharmaceutical industry competitiveness to help boost exports as well as decrease drug price in local market.

3.12 Market of Pharmaceutical Products

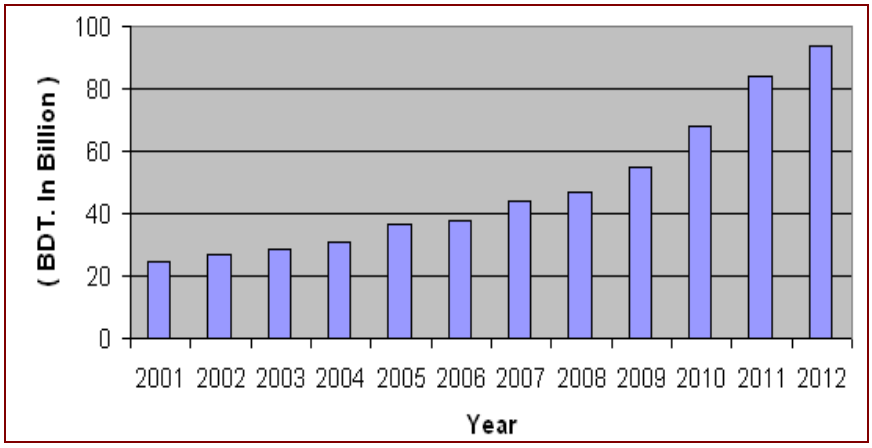
3.12.1 Market size and Growth

The size of the retail market was BDT 1.8 billion in 1982, where as it reached to BDT 94.0 billion in 2012 (IMS report). That means the retail market increased by 52 fold in last three decades. Five years back, the market size was BDT 47.0 billion and 10 years back it was BDT 28.6 billion. Meaning it doubled in 5 years and more than tripled in 10 years. It is evident from the table 6 that retail sales in the domestic market achieved 11.9% growth in 2012 following 23.6%, 23.8%, 16.8% growth in 2011, 2010 and 2009 respectively. The annual average growth rate is 16.6% over the last 5 years and 14.2% over the last 12 years. This steady growth rate demonstrated the success story of this sector. Although the overall sales recorded growth in 2012, the table shows that the growth rate of 2012 declined from 2011 and 2010.

Table 3.6: Market Size and Growth

Year	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	Average
Size (BDT b)	24.5	27	28.6	31.1	36.5	38	44	47	54.9	68	84	94	48.1
Growth (%)	-	10.2	8.6	17.5	17.5	4.1	15.8	6.9	16.8	23.8	23.6	11.9	14.2

Figure 3.1: Market Size of Pharmaceuticals



Source: International Marketing Services (IMS) and Annual Report of Square, 2012

3.12.2 Factors behind Market Growth

From the previous section it is clear that pharmaceutical sector has shown tremendous growth in the last decade. Some factors contributed to the growth of this sector. The table 3.7 shows some selected health indicators for Bangladesh which helped to boost this industry.

Table 3.7: Selected Health Indicators for Bangladesh

Health Indicators	2011	2005	2000
Life Expectancy (Year)	70	66.9	64.7
Govt. Expenditure (% of total Health exp.)	36.6%	34.9%	39.0%
Health expenditure (%of GDP)	3.7%	3.21%	2.82%
GDP per capita (US$)	732	428.8	363.6
Health exp. per capita (US$)	27	13	10
Poverty level	31.5%	40.0%	48.9%

Source: The World Bank (2011), *World Bank Health Indicator*

- From the table it is revealed that life expectancy improved from 64.7 in 2000 to 70 in 2011 which highlights the increased health consciousness among the people.
- Per capita income of the population doubled (from US$ 363.6 in 2010 to US$ 731 in 2011) over the last decade which allowed them to spend more for healthcare. Also per capita health expenditure about tripled (from US$ 10 in 2010 to US$27 in 2011) over the time which indicates people's willingness to spend more to remain healthy (IMS, 2012).
- Medical coverage of population with new hospitals is increasing which helps to boost this sector.
- Emergence of private healthcare service - a number of top class hospitals started operating which includes Apollo Hospitals, Square Hospitals, United Hospitals, Popular Hospitals and others. These hospitals became very popular with the mass population due to their quality service. They have been a major factor contributing to increased healthcare expenditure.
- Although government expenditure did not improve compared to percentage of total healthcare expenditure, there has been increased expenditure in absolute terms. Growth in private expenditure was the primary reason behind fall in Govt. % of expenditure.

3.12.3 Market Share of Local and Multinational Companies

Table 3.8 reveals the market share of Local and Multinational Companies from 1972 to 2012. From the table-8, it is clear that the pharmaceutical market was largely dominated by the MNCs in late 70s. This domination of MNCs has been decreased gradually in the next years. In 1982, there were 166 licensed pharmaceutical manufacturers in the country, but local production was dominated by eight MNCs which manufactured about 62% of the products. Local 158 companies manufactured

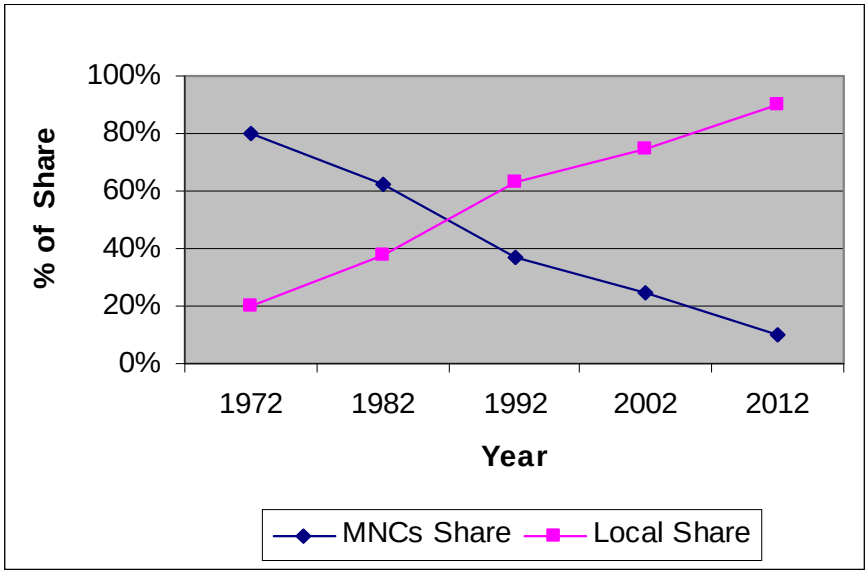
remaining 38% of the products. In 2012 market share of local companies increased to 90%, whereas MNCs decreased to 10%.

Table 3.8: Market Share of Local and Multinational Companies

Year	1972	1982	1992	2002	2012
Market Size (TK in Bill)	1.1	1.8	5.3	27.0	94.0
MNCs Share	80%	62%	37%	25%	10%
Local Share	20%	38%	63%	75%	90%
Total	**100**	**100**	**100**	**100**	**100**

Source: IMS Report and Directorate of Drug Administration

Figure 3.2: Market Share



Source: IMS Report and Directorate of Drug Administration

It can be logically said that local manufacturers are dominating current pharmaceutical industry. Local companies started its growth after promulgation of the 1982 Drug Control Ordinance (updated in 2005). This ordinance bans certain types of drugs from the market, limits the marketing rights of foreign companies and establishes a price control for finished drugs and their raw materials. This resulted in withdrawal of many foreign companies from the market and strong growth in local production.

3.12.4 International Market of Pharmaceutical Products

Pharmaceutical export market can be categorized into three types. Firstly, the stringently regulated markets like USA, EU, UK, Australia, GCC which requires

USFDA, UKMHRA, TGA, cGMP, GCC certifications. Acquiring these certificates involved various expensive steps. Only a few from top ten companies can hardly afford these certifications. Secondly, the mild regulated markets like Singapore, Sri lanka, Vietnam, Philippine which need ACTD formats along with bio equivalence clinical test reports of pharma products and these are critical procedures with time and money consuming factors and many of the mid level companies cannot afford. The final category is the less regulated markets like Myanmer Nepal, Bhutan, Sudan, Kenya which are the only target markets for Bangladesh to explore under the umbrella of AAPU. The products, which are registered by the DG of Drug Registration Authority (DRA), can be easily exported to these countries.

However, Bangladesh started exporting finished formulations to some of the neighboring less-regulated overseas markets like Myanmar, Sri Lanka and Nepal Since the late 80's. In the early 90's few major companies took initiative to explore some of the more-regulated markets like Russia, Ukraine, Georgia and Singapore. Success of marketing in these countries was a major breakthrough for Bangladesh pharmaceutical industries. In the last few years, some of the top listed companies like Square, Beximco, Incepta, ACME etc have obtained accreditation from USFDA, UKMHRA, TGA and GCC and started to export to highly regulated markets like USA, EU, Australia and GCC countries.

Table 3.9: Number of Exporting Country of last 12 Years

Year	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
No. of Countries	17	32	51	62	67	61	67	71	73	83	87	87

Source: Directorate of Drug Administration

Table 3.9 shows the total number of countries to which Bangladesh exports pharmaceutical products in the last 12 years. In 2001, Bangladesh exported its pharmaceutical products to 17 countries which gradually increased in the next years. In 2012, the number of exporting countries stood at 87 all over the world.

Table 3.10: List of Exporting Countries

Asia & Ocenia	Africa	Europe	America
Azerbaijan, Korea, Australia, Afganistan, Macao, Bhutan, Cambodia, Fiji, Hongkong, India, Indonesia, Japan, Jordan, Malyasia, Mongolia, Myanmar, Nepal, Pakistan, PapuaNewGuinea, Philippines, Singapore, Samoa, Srilanka, Saudi Arabia, Soloman Island, Tajikistan, Thailand, UAE, Vietnam, Yeman, Tonga, Kiribati, Yeyman.	Burkina Faso, Botswana, Egypt, Gambia, Ghana, Kenya, Libya, Mauritius, Africa, Morocco, Nigeria, Somalia, South Sudan, Tanzania, Tunisia, Togo, Swaziland, Chad, Seychelles, Guinea, Ethiopia, Liberia.	Austria, Belgium, Denmark, Germany, Italy, Netherlands, Poland, Portugal, Slovenia, Spain, Switzerland, UK, Ukraine.	Belize, Brazil, Colombia, Costi Rica, Chile, Central America, Guatemala, Honduras, Mexico, Nicaragua, Panama, USA, Venezuela.

Source: Directorate of Drug Administration

Table 3.10 displays the list of the 87 countries which import medicine from Bangladesh. It is clear from the table that Bangladesh export its quality products across five continents although it entered into highly regulated markets like USA, UK, Japan, Korea, Australia in the last couple of years and the volume of export is very poor in those countries.

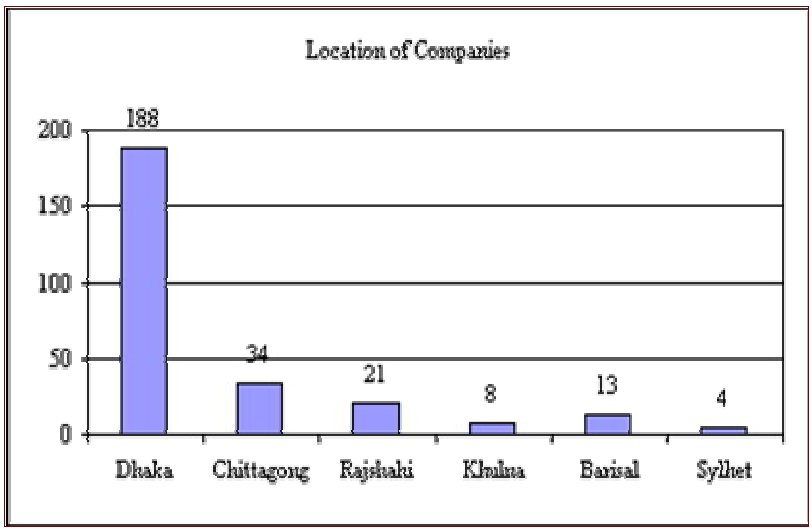
3.12.5 Geographic Location of Pharmaceutical Companies

Table 3.11 displays the geographic location of pharmaceutical companies in Bangladesh as on December31, 2012.

Table 3.11: Geographic Location of Pharmaceutical Companies

	Divisions						
	Dhaka	Chittagong	Rajshahi	Khulna	Barisal	Sylhet	**Toal**
No. Companies	188	34	21	8	13	4	**268**
% of total	70	12.7	7.9	3	4.9	1.5	**100**

Figure 3.3: Location of Companies



Source: Directorate of Drug Administration

It is revealed from the table that pharmaceutical companies mainly concentrated in Dhaka division. Out of 267 registered companies, 187 (70%) are situated in Dhaka divisions. It is mainly because of availability of raw materials (API) at Dhaka market, distribution and marketing, communication facilities and other logistics support to set up a company. 34 (12.7%) pharmaceutical companies are established in Chittagong division, where as Rajshahi and Barisal have 7.9% and 4.9% respectively. Sylhet has the lowest position among the divisions (1.5%).

3.12.6 Division wise Sales Growth Scenario

The recent pharmaceutical market growth is 11.91%. However, the growth is not evenly spread all over the country because of the urbanization and per capita income variation. The table 3.12 displays the division wise market share of 2008 and 2012. It is observed from the table that Dhaka division was, and still is, the dominant market though the market share decreased a bit (42.27% in 2008 to 39.86% in 2012). The main reason for this is the high density of doctor's community in Dhaka division. However, both Chittagong and Rajshahi division are becoming more and more important for the pharma market. These two districts now stand with around 20% share. Specially, among the divisions Rajshahi has increased 5% share in last five years (from 15.78 in 2008 to 20.21 in 2012). Khulna is losing ground, currently standing with 10.82% share, down from 13.93% in 2008. Also, Barisal and Sylhet both have lost market share compared to 2008.

Table 3.12: Market Share of Six divisions

Divisions	2008 (%)	2012 (%)
Dhaka	42.27	39.86
Chittagong	17.11	20.26
Rajshahi	15.78	20.21
Khulna	13.93	10.82
Barisal	5.55	4.96
Sylhet	5.36	3.89
Total	100	100

Source: International Marketing Services, 2012

3.13 Major Players of Pharmaceutical sector

The table 3.13 displays the market size, market share and growth of top 10 companies in Bangladesh. This table shows that Square Pharmaceuticals holds the top market share in the retail market-18.7%, followed by Incepta Pharmaceuticals-9.3%, Beximco Pharmaceuticals -8.8%, Opsonin Pharma 5.1% and Reneta-4.9%. The top five companies held 46.8% market share in 2011. It is slightly more than their 46.2% market holding in 2010. Top 10 companies held 67.7% of the market in 2011. The cumulative market share of ten companies did not change from 2010 level (67.7%). In 2011, top 20 companies grabbed 84.9% of the market share while only 15.1% went to the rest of the companies. Among the top ten, nine are local companies and one is Multinational Company. So, it can be easily said from the numbers that the pharmaceutical sales is concentrated among the local manufacturers.

Table 3.13: Major Players in the retail market

Company	Market size (BDT m)	Growth in 2011	Market share 2011	Market share 2010
Square Pharmaceuticals	15725.8	20.5	18.7	19.2
Incepta Pharmaceuticals	7851.5	28.6	9.3	9.0
Beximco Pharmaceuticals	7415.0	30.5	8.8	8.4
Opsonin Pharma	4275.4	27.2	5.1	4.9
Renata	4.76.8	26.1	4.9	4.8
Eskayef Bangladesh	3980.3	18.9	4.7	4.9
ACI	3578.2	24.9	4.3	4.2
Acme Pharmaceutical	3500.7	13.7	4.2	4.5
Aristopharma	3412.8	26.3	4.1	4.0
Drug International	3070.2	18.9	3.7	3.8
Top 10 Companies	56886.5	23.6	67.7	67.7
Top 20Companies	71382.5	24.1	84.9	84.6
Others Companies	12661.6	20.7	15.1	15.4
Total Sector	**84044.1**	**23.6**		

Source: International Marketing Services, 2012

However, the above table also shows that the market share shifted among the top players. Square Pharma lost 0.5% market share in 2011 (from 19.2% in 2010) while the next four companies gained 1.1% market share in the same period. Growth in local sales of these four companies-Incepta, Beximco, Opsonin and Renata-was 28.1% in 2011, increasing their market share from 27.1% in 2010 to 28.1% in 2011. Last five of the ten companies had 20.54% average growth and lost 0.4% of the market share in 2011.

3.14 Contribution of Pharmaceutical Industries

3.14.1 Healthcare

Medicine is directly related to human life and therefore its manufacturers have immense social responsibility of providing uncompromising efforts at all levels of activities. Pharmaceutical industry in Bangladesh plays a vital role in ensuring the accomplishment of the program for the development of the national healthcare situation of Bangladesh. Pharmaceutical companies either directly or indirectly are contributing largely towards raising the standard of healthcare personnel to gain access to newer products and also to latest drug information. The annual per capita drug consumption in Bangladesh is one of the lowest in the world. With the development of healthcare infrastructure and increase of health awareness and the purchasing capacity of people, this industry is expected to grow at a higher rate in future. Healthy growth is likely to encourage the pharmaceutical companies to introduce new drugs and new research products, while at the same time maintaining a healthy competitiveness in respect of the most essential drugs (Bishwas, 2009).

3.14.2 Employment Generation

The pharmaceutical sector consistently creates job opportunities for highly qualified people. Pharmaceutical is a ‘white collar labour’ intensive sector. A number of steps and activities are involved in the whole process of manufacturing from starting raw material to finished drugs. A good number of Pharmacists, Chemists, Biochemists, Microbiologists, Engineers, IT specialists and other scientists from chemical and biological science are required to deliver the final products. All the ‘white collar labour’ employees are sufficiently available in the country. Total number of employees is 62,298 in 267 allopathic pharmaceutical companies (BBS, 2011). However, the employment in this sector is rising with the increasing of number of organization, capacity of production as well as sales volume.

3.14.3 Linkage with other industries

With the development of pharmaceutical sector, some linkage industries are also thriving. Because pharmaceutical sector is associated or linked with a number of other industries that contribute to flourish this sector. Bangladesh is almost self-sufficient in essential medicine. Its healthy growth support development of auxiliary industries for products like bottle, plastic containers, aluminium collapsible tubes, aluminium pp caps, infusion sets, disposable syringes and corrugated cartoons. Some of these products are also being exported (Bishwas, 2009). Printing, packaging industries and even advertising agencies consider pharmaceutical industry as their major clients and a key driving force for their growth.

3.14.4 Contribution to national exchequer

Pharmaceutical industry is the second highest contributor to the national exchequer after tobacco (IMS, 2012). Usually like other manufacturing organization a pharmaceutical company has to pay some types of fees and duties to the government. These include applicable VAT, corporate tax, export and import duty of raw materials, licensing fee for every pharmaceutical products and manufacturing fee for factory. All types of fees, tax and duties are increasing with the rising of sales volume.

3.14.5 Export Earnings

Pharmaceutical product is relatively a new item to the export basket of Bangladesh. The pharmaceutical export items cover wide range of products of all major therapeutic classes and dosage forms. It includes high technology products like inhaler, suppositories, nasal sprays, injectibles and infusion. Although the export of pharmaceutical products is still in an infant stage, the volume of export is increasing gradually. According to BAPI 33 private pharmaceutical companies have already entered into the export market with their basic materials and finished products. The pharmaceutical sector has demonstrated the capability of exporting its products within a short time. About two decades ago Bangladesh was a drug importing country, now it exports surplus drugs to many countries of the world. Table 3.14 shows the export earnings and growth rates of the pharmaceutical products over the last 12 years.

Table 3.14: Export of Pharmaceutical Products

Year	Local Production (Tk in mill)	Export earnings (Tk in mill)	% of Exported Drugs	Export Growth(%)
2001	20417	311.8	1.5	--
2002	30501	406.9	1.3	31
2003	32384	545.5	1.7	34.1
2004	32858	1400.0	4.2	156
2005	40950	1421.0	3.1	1.5
2006	44457	2520.0	5.7	77.3
2007	51493	2347.0	4.6	-6.8
2008	59296	3131.1	5.3	33.4
2009	70961	3352.1	4.7	7.0
2010	79690	3274.3	4.1	-2.3
2011	123753	4212.2	3.4	28.6
2012	156245	5396.2	3.5	28.1
Average	**61917**	**2360.0**	**3.60**	**35.26**

Source: Directorate of Drug Administration

The overall export earnings of the country from pharmaceuticals reached BDT 5,396.2 million for the year 2012 with a growth rate of 28.1% over the previous year. The average annual percentage of exported drugs and growth is 3.60 and 35 respectively in last 12 years. However, the export growth was not steady across all the years. The table shows that the growth of export dropped to 6.8% in 2007 and 2.3% in 2010. According to the drug administration, it is because of some political problems in 2007 and world economic downturn in 2010. Except these two years where trade slowed down significantly worldwide, pharmaceutical export was robust in all other years. .

3.14.6 Import Trends of Pharmaceutical Products and Raw Materials

3.14.6.1 Import trends of Finished Drugs

Bangladesh is importing the pharmaceutical finished drugs from different countries especially from India and China. Different organizations are involved to import the pharmaceutical products and raw materials. Among them, Novo and Medintis are importing most of the products. Other organizations are- Sanofi, Aventis, Glaxo Smithlin, Sandoz, Novertis etc.

The table 3.15 displays the local production, total amount of import and percentages of imported finished drugs in last 12 years. From the table it is revealed that the amount and percentage of imported medicine fluctuated in different years. In 2004, 2009 and 2010, the imported amount of medicine decreased while the import increased in other years. According to Directorate of Drug Administration, this fluctuation happened due to political unrest, world economic crisis, price of dollar as well as high production of local pharmaceutical companies.

Table 3.15: Import trend of Finished Drugs

Year	Local production (Tk in mill)	Imported Finished Drugs (Tk in mill)	% of imported finished drugs
2001	20417	1881	8.4
2002	30501	2608	7.9
2003	32384	2050	6.0
2004	32858	1866	5.4
2005	40950	2451	5.1
2006	44457	2637	5.4
2007	51493	2824	5.9
2008	59296	2453	4.1
2009	70961	1895	2.7
2010	79690	1710	2.1
2011	123753	5159	4.0
2012	156245	6207	3.8
Average	**61917**	**2811**	**5.0**

Source: Directorate of Drug Administration

The table also shows that local production is increasing very rapidly each year and the percentage of imported medicine is decreasing gradually. In the last 12 years, the average of imported finished drugs was BDT.2811 million and percentage of import was 5%. So, the 95% of demanded medicine was met by the local production. This indicates that dependency on foreign medicine is decreasing and Bangladesh pharmaceutical sector is going to be self-sufficient in near future.

3.14.6.2 Import Trends of Raw Materials

The price of pharmaceutical products is directly involved with the cost of raw materials. Bangladesh largely dependent on import for raw materials although some big companies like Beximco, Square and Gano Shastho have taken up ventures to produce basic chemicals. But the produced amount is very poor compared to total requirements.

Table 3.16: Import of Raw/Packaging Materials

Year	Locally produced raw materials (Tk.in mill)	Imported Raw Materials (Tk.in mill)	% Imported Raw materials	Imported Packing materials
2001	1263	6614	84	1373
2002	1379	7207	83.9	822
2003	1517	7928	83.9	904
2004	1630	5419	76.9	475
2005	1535	6503	80.9	594
2006	1703	6643	79.2	630
2007	1849	7143	79.4	640
2008	2350	7996	77.2	422
2009	3590	8013	69	496
2010	3395	8215	70.1	525
2011	3187	17772	85	5307
2012	3476	27450	88.8	4190
Average	**2240**	**9742**	**80**	**1365**

Source: Directorate of Drug Administration

Table 3.16 shows that the local production, imported raw material and packaging products in the last 12 years. The import of raw materials was highest in 2012 (88.8%) due to increase of local production. Average of locally produced and imported raw materials was BDTk. 2,240 and 9,742 million respectively. It is observed from the table that the local production of raw materials is increasing slowly. On an average about 80% of the raw materials are imported from abroad in last 12 years. However, in case of packing materials, Bangladesh has done a good progress except the last couple of years.

3.15 Potentialities of Pharmaceutical Industries

3.15.1 TRIPS Waiver and Opportunity for Bangladesh

Under the World Trade Organization's Trade-Related Aspects of Intellectual Property Rights (TRIPS), no company of the developed and developing countries can produce or market patented drugs than the companies to whom patent right belongs. But, due to economic and financial constrains, LDC countries have got the exemption from the provision of WTO/TRIPS rule up to 2016 according to the paragraph-6 of Doha declarations.

LDCs countries may produce generic, patent free drugs without license fees, whereas these drugs are patent protected in other countries. This is an opportunity for LDCs like Bangladesh to produce essential drugs for national and international markets.

Among the 50 LDCs, Bangladesh is the only country, which has a strong pharmaceutical manufacturing base (Islam and Khanam, 2009). The rest of the countries do not have sufficient facilities to produce medicine in all formulations and most of the countries are dependent on imports of essential drugs. As an LDC country, Bangladesh is allowed to produces patented products (active ingredients and finished products) and has a permission to export to other LDCs countries until 2016. So, this has created an enormous export opportunity for the pharmaceutical manufacturers of Bangladesh as it is the country today, which can really capitalize the post-2005 opportunities.

3.15.2 Low Production Cost

The entire process of pharmaceutical manufacturing process requires involvement of large number of employees. Bangladesh owns trainable, enthusiastic, hard working and low-cost labor force (even by regional standards) suitable for pharmaceutical industry. The labour cost of Bangladesh is very much cheaper compared to other countries. This is an opportunity to attract new investment in this sector.

3.15.3 Opportunity of Contact and Joint-venture Manufacturing

Due to cost benefit consideration, large pharmaceutical companies of highly regulated countries can easily set up joint-venture projects in Bangladesh. Because, this country has a permission to produce any patented drugs and above all, the production cost is least compared to any other countries in the world.

3.15.4 Health Indicator and Potentials of Future Growth

Table 3.17 compares the health indicators of Bangladesh with other regions of the world. It is clear that Bangladesh is still way behind others regions. Government expenditure proportion in this sector is much lower than that of other regions. It is one possible area where future growth may come from. Moreover, the total health expenditure to GDP ratio and health expenditure per capita of Bangladesh (both of which gradually increased from 2000) is very low in comparison to developed and developing countries. Since the base is still very low, it is expected that the recent growth in the local retail market will continue in future.

Table 3.17: Comparison of Health Indicators with other Regions (2011)

Health Indicators	Bangladesh	World	South Asia	EU	USA
Life Expectancy	70	71	66	81	79
Government % in total Health exp.	36.6%	60.8%	33%	76.1%	48.6%
Health exp. as %of GDP	3.7%	10.03	3.99%	10.31%	16.21%
Health exp. per capita (US$)	27	863.6	863.6	3370.7	7410.2

Source: World Bank, 2012

3.15.5 Other Factors

Some other factors that will also boost the industry growth include:

- increasing number of modern hospitals;
- increasing level of service/treatment provided in the hospitals with improved/more modern diagnostic equipments;
- increasing health consciousness among the people; and
- Growing income level of the people.

3.16 Chapter Summary

Bangladesh, though categorized as LDC, is shifting from an agro-based economy to a more industrialized economy. Pharmaceutical industry has a significant role in boosting economic activity of the country and brings in foreign currency. Growth of the pharmaceutical sector accelerates employment creation, government revenue and helps provide a better standard of living to the local people. It is one of the fastest growing sectors in the country with a double digit growth rate (14.6%) in last ten years.

Pharmaceutical market was dominated by MNCs. - now it shifted to local companies which enjoy about 90% of market share. It is highly concentrated as top 20 companies produce 85% of the revenue. The country is now almost a self-sufficient in its pharmaceuticals products as 96% of the total drug demand is met by local manufacturers. Bangladesh is exporting their pharmaceutical drugs to 87 countries in the world. Recently they have started to export to highly regulated market. Overall export earnings from pharmaceuticals reached BDT 5,396 million for the year 2012 with a growth rate of 28.1%. One of the reasons of such growth is the WTO rules which allow companies of the LDCs including Bangladesh to produce and export essential drugs without maintaining patent till 2016. Other reasons are – government legislative support, increased awareness of healthcare, increase in per capita income, emergence of private healthcare and government's increased expenditure.

Chapter Four
PRESENT SCENARIO OF FORMULATING THE STRATEGIES OF THE SELECTED PHARMACEUTICAL COMPANIES

4.1 Introduction

This chapter investigates the mission, vision, corporate long-term plans, business level and functional level plans of the sample pharmaceutical companies. It also examines to what extent the analytical tools and techniques like PEST analysis, Five forces analysis, SWOT analysis, Key success factors, Benchmarking, BCG service portfolio matrix, General electric matrix and product life cycle analysis influence the formulation of company strategies.

4.2 Mission and Vision Statement of the Sample Companies

4.2.1 Mission Statement

When the question was asked about the company's mission statement, all the interviewed executives of the sample pharmaceutical companies confirmed that they have formal mission statement which is written in the company annual report. The main characteristics of mission statement are shown in the table 4.1.

Table 4.1: Mission Statement of the Sample Companies

Company	Characteristics of Mission Statement
BPL	• Enhancing human health and well being • Providing contemporary and affordable medicines • Manufacturing in full compliance with global quality standards
SPL	• Producing and providing quality & innovative healthcare relief for people • Maintaining ethical standard in business operation • Ensuring benefit to the stakeholders
IBNSINA	• Ensuring the quality and ethical standard • Sustainable growth and development to serve the mankind
GLAXO	• Improving the quality of human life • Enabling people to do more, feel better and live longer
Reneta	• Providing maximum value to the customers and communities

Source: Annual Reports of Selected Companies.

4.2.2 Vision Statement

When the question was asked about the company's vision statement, all the interviewed executives of the sample pharmaceutical companies confirmed that they have formal vision statements which is written in the annual report. The main characteristics of vision statement are shown in the table 4.2

Table 4.2: Characteristics of Vision Statement of the Sample Companies

Company	Characteristics of Vision Statement
BPL	• To become the trusted, admired and successful pharmaceutical company • Strengthening research and development capabilities • Creating partnerships and building presence across the globe.
SPL	• The social well being of the stakeholders • Leading to accretion of wealth through financial and moral gains
IBNSINA	• Becoming a premier specialty pharmaceutical company • Focusing in complementary therapeutic areas • Responsibility toward people of Bangladesh
GLAXO	• Respect for people • Continuous Improvement • Patient focus • Consumer Driven • Transparency • Developing People
Reneta	• Establishing the company among the best of innovative branded generic companies

Source: Annual Reports of Selected Companies

4.2.3 Personnel Involvement in Formulation of Vision and Mission

Table 4.3 reveals that board of directors is involved (100%) in formulation of vision and mission statement of all the sample companies. Besides this, corporate level management also is involved (40%) in GSKB and RL to formulate vision and mission and chairman of the company is involved (40%) in BPL and SPL.

Table 4.3: Personnel Involvement in Formulation of Vision and Mission

Personnel	Name of the company					Total
	BPL	GSKB	IPIL	RL	SPL	
Corporate level management	0 .0%	20 100.0%	0 .0%	20 100.0%	0 .0%	40 40.0%
Board of directors	20 100.0%	20 100.0%	20 100.0%	20 100.0%	20 100.0%	100 100.0%
Business level management						
Corporate planning department						
Chairman of the company	20 100.0%	0 .0%	0 .0%	0 .0%	20 100.0%	40 40.0%
Functional level manager						

Source: Field Survey

4.3 Corporate Level Plan of the Sample Companies

4.3.1 Formulation of Corporate Level Plan

When the question was asked about the company's corporate level plan, all the interviewed executives (100%) of the sample pharmaceutical companies confirmed that they have formal long term plan (Table 4.4).

Table 4.4: Does your company have formal corporate level plan?

Response	Name of the company					Total
	BPL	GSKB	IPIL	RL	SPL	
Yes	20 100.0%	20 100.0%	20 100.0%	20 100.0%	20 100.0%	100 100.0%
No						
Total	20 100.0%	20 100.0%	20 100.0%	20 100.0%	20 100.0%	100 100.0%

Source: Field Survey

4.3.2 Duration of Corporate Level Plans

Table 4.5 describes how often corporate plans are updated by the sample pharmaceutical companies. It was found that two companies named IPIL and RL update their corporate plans yearly. On the other hand, three companies named BPL, GSKB and SPL update the corporate plans for more than one year.

Table 4.5: How often do you update corporate plans?

Duration	Name of the company					Total
	BPL	GSKB	IPIL	RL	SPL	
Monthly						
Quarterly						
Six monthly						
Yearly	0 .0%	0 .0%	20 100.0%	20 100.0%	0 .0%	40 46.0%
More than one year	20 100.0%	20 100.0%	0 .0%	0 .0%	20 100.0%	60 54.0%
Total	20 100.0%	20 100.0%	20 100.0%	20 100.0%	20 100.0%	100 100.0%

Source: Field Survey

4.3.3 Personnel Involvement in the Formulation of Corporate Level Plans

Table 4.6 shows that corporate level management is involved (60%) in formulation of corporate level plans of GSKB, RL and IPIL. Board of directors is involved in BPL, IPIL and SPL. On the other hand, Business level manager and corporate planning department are involved in BPL and SPL for long term-plan formulation.

Table 4.6: Personnel Involvement in the Formulation of Corporate Long term-Plans

Personnel	Name of the company					Total
	BPL	GSKB	IPIL	RL	SPL	
Corporate level management	0 .0%	20 100.0%	20 100.0%	20 100.0%	0 .0%	60 60.0%
Board of directors	20 100.0%	0 .0%	20 100.0%	0 .0%	20 100.0%	60 60.0%
Business level manager	20 100.0%	0 .0%	0 .0%	0 .0%	20 100.0%	40 40.0%
Corporate planning department	20 100.0%	0 .0%	0 .0%	0 .0%	20 100.0%	40 40.0%
Chairman of the company						
Functional level manager						

Source: Field Survey

4.4 Business Level Plans of the Sample Companies

4.4.1 Formulation of Business Level Plans

Table 4.7 shows of the opinions of 100 interviewed executives. When the question was asked about the Business level plans, all the interviewed executives (100%) of the sample pharmaceutical companies confirmed that they have Business level long term plan.

Table 4.7: Does your company prepare Business level long term plan

Response	Name of the company					Total
	BPL	GSKB	IPIL	RL	SPL	
Yes	20 100.0%	20 100.0%	20 100.0%	20 100.0%	20 100.0%	100 100.0%
No						
Total	20 100.0%	20 100.0%	20 100.0%	20 100.0%	20 100.0%	100 100.0%

Source: Field Survey

4.4.2 Duration of Business Level Plans

Table 4.8 describes how often business level plans are updated by the sample pharmaceutical companies. It was found that all the sample companies update their business level plans yearly (93%). On the other hand, BPL updates some of the corporate plans for more than one year (7% of total).

Table 4.8: How often do you update Business level plans?

Duration	Name of the company					Total
	BPL	GSKB	IPIL	RL	SPL	
Monthly						
Quarterly						
Six monthly						
Yearly	13 65.0%	20 100.0%	20 100.0%	20 100.0%	20 100.0%	93 93.0%
More than one year	7 35.0%	0 .0%	0 .0%	0 .0%	0 .0%	7 7.0%
Total	20 100.0%	20 100.0%	20 100.0%	20 100.0%	20 100.0%	100 100.0%

Source: Field Survey

4.4.3 Personnel Involvement in the Formulation of Business Level Plans

Table 4.9 shows that corporate level management is involved in formulation of business level plan of GSKB, RL and IPIL. Board of directors is involved in BPL, IPIL and SPL. Business level manager is involved in business level plan for all the sample companies. On the other hand, corporate planning department is involved only in RL.

Table 4.9: Personnel Involvement in the Formulation of Business Level Plans

Personnel	Name of the company					Total
	BPL	GSKB	IPIL	RL	SPL	
Corporate level management	0 .0%	20 100.0%	20 100.0%	20 100.0%	0 .0%	60 60.0%
Board of directors	20 100.0%	0 .0%	20 100.0%	0 .0%	20 100.0%	60 60.0%
Business level	20 100.0%	20 100.0%	20 100.0%	20 100.0%	20 100.0%	100 100.0%
Corporate planning department	0 .0%	0 .0%	0 .0%	20 100.0%	0 .0%	20 20.0%
Chairman of the company						
Functional level manager						

Source: Field Survey

4.5 Functional Level Plans of the Sample Companies

4.5.1 Formulation of Functional Level Plans

Table 4.10 shows the opinions of 100 interviewed executives. When the question was asked about the functional (Human resource, Production, Marketing, Finance etc.) level plans, all the interviewed executives (100%) of the sample pharmaceutical companies confirmed that they have functional level (Human resource, Production, Marketing, Finance etc.) plans.

Table 4.10: Does your company prepare Functional level plans?

Response	Name of the company					Total
	BPL	GSKB	IPIL	RL	SPL	
Yes	20 100.0%	20 100.0%	20 100.0%	20 100.0%	20 100.0%	100 100.0%
No						
Total	20 100.0%	20 100.0%	20 100.0%	20 100.0%	20 100.0%	100 100.0%

Source: Field Survey

4.5.2 Duration of Functional Level Plans

Table 4.11 shows how often functional level plans are updated by the sample pharmaceutical companies. It was found that, out of five, four companies named BPL, IPIL, RL and SPL update their functional level plans every six month. On the other hand, only one company named GSKB update the corporate plans for more than one year.

Table 4.11: How often do you update Business level plans?

Duration	Name of the company					Total
	BPL	GSKB	IPIL	RL	SPL	
Monthly						
Quarterly						
Six monthly	20 100.0%		20 100.0%	20 100.0%	20 100.0%	80 80.0%
Yearly						
More than one year		20 100.0%				
Total	20 100.0%	20 100.0%	20 100.0%	20 100.0%	20 100.0%	100 100.0%

Source: Field Survey

4.5.3 Personnel Involvement in the Formulation of Functional Level Plans

Table 4.12 shows that two types of people are involved to formulate functional level plan of sample companies. Functional level manager is involved in all the sample companies. On the other hand, Business level management is involved only in BPL, GSKB and SPL.

Table 4.12: Personnel Involvement in the Formulation of Functional Level Plans

Personnel	Name of the company					Total
	BPL	GSKB	IPIL	RL	SPL	
Corporate level management						
Board of directors						
Business level	20 100.0%	20 100.0%	0 .0%	0 .0%	20 100.0%	60 60.0%
Corporate planning department						
Chairman of the company						
Functional level manager	20 100.0%	20 100.0%	20 100.0%	20 100.0%	20 100.0%	100 100.0%

Source: Field Survey

4.6 Organization Culture of the Sample Companies

4.6.1 The Major Characteristics of Company Culture

Table 4.13 summarizes the major characteristics of the organizational cultures in the selected Pharmaceutical Companies. Team spirit (88%), loyalty (84%) and commitment (82%) are the major characteristics among the sample companies reported by the highest number of the respondents. Mutual respect and performance measurement were associated with mainly GSKB and SPL respectively. Family working culture was reported as less (33%) important characteristic of the companies. From the table, it is clear that there is significant difference in the company culture among the selected companies.

Table 4.13: The Major Characteristics of Company Culture

Characteristics	Name of the company					Total	Cramer's V	Sig
	BPL	GSKB	IPIL	RL	SPL			
Commitment	8 40.0%	20 100.0%	18 90.0%	16 80.0%	20 100.0%	82 82.0%	.580	.000
Loyalty	11 55.0%	20 100.0%	20 100.0%	20 100.0%	13 65.0%	84 84.0%	.541	.000
Team spirit	14 70.0%	16 80.0%	18 90.0%	20 100.0%	20 100.0%	88 88.0%	.359	.012
Mutual respect	1 5.0%	20 100.0%	8 40.0%	11 55.0%	10 50.0%	50 50.0%	.610	.000
Participative	12 60.0%	10 50.0%	4 20.0%	12 60.0%	7 35.0%	45 45.0%	.311	.046
Performance measurement	4 20.0%	10 50.0%	8 40.0%	6 30.0%	20 100.0%	48 48.0%	.558	.000
Family working culture	2 10.0%	10 50.0%	0 .0%	17 85.0%	4 20.0%	33 33.0%	.658	.000

Source: Field Survey

4.6.2 The Influence of Company Culture on Company Strategies

Table 4.14 shows the executives' opinions on the influence of company culture on company strategies. It is found in the table that out of 100 interviewed executives, 81% agreed, 13% strongly agreed and 6% was neutral to consider the influence of company culture on company strategies. From the table, it reveals that company culture has an influence on the corporate strategy (mean=4.07). Although, the results found that the cultures in every company has an influence on their company strategies but RL and SPL

had a greater influence on their strategies than the others. The result also shows that there is significant difference in the influence of culture on company strategies.

Table 4.14: The Influence of Company Culture on Company Strategies

Response	Name of the company					Total	χ^2 Test
	BPL	GSKB	IPIL	RL	SPL		
Strongly disagree							
Disagree							
Neutral	2 10.0%	0 .0%	4 20.0%	0 .0%	0 .0%	6 6.0%	24.444[a] df=8 p=.002
Agree	18 90.0%	20 100.0%	14 70.0%	14 70.0%	15 75.0%	81 81.0%	
Strongly agree	0 .0%	0 .0%	2 10.0%	6 30.0%	5 25.0%	13 13.0%	
Total	20 100.0%	20 100.0%	20 100.0%	20 100.0%	20 100.0%	100 100.0%	
Mean	3.90	4.00	3.90	4.30	4.25	4.07	

Source: Field Survey

4.7 Management Styles of the Companies

4.7.1 Key Characteristics of Management Styles

Table 4.15 describes the key characteristics of the management style in the selected Pharmaceutical Companies. The table shows that participatory, collective decisions by the board of directors and decision is made by a committee were the most reported characteristics in their management styles among the sample companies. Although, top to bottom and employee friendly were less reported but top to bottom were associated with mainly one foreign company (GSKB). No sample company had autocratic characteristics in their management styles. From the table, it is also observed that there are no significant differences in the company in case of

participatory management style. But significant difference is observed in case of others management styles.

Table 4.15: Key Characteristics of Management Styles

Characteristics	Name of the company					Total
	BPL	GSKB	IPIL	RL	SPL	
Participatory	19 95.0%	16 80.0%	18 90.0%	20 100.0%	20 100.0%	93 93.0%
Top to bottom	6 30.0%	14 70.0%	2 10.0%	3 15.0%	0 .0%	25 25.0%
Autocratic	0 .0%	0 .0%	0 .0%	0 .0%	0 .0%	0 .0%
Decision is made by a committee	0 .0%	14 70.0%	16 80.0%	13 65.0%	20 100.0%	63 63.0%
Collective decisions by the board of directors	20 100.0%	14 70.0%	18 90.0%	9 45.0%	20 100.0%	81 81.0%
Employee friendly	12 60.0%	10 50.0%	4 20.0%	11 55.0%	3 15.0%	40 40.0%

Source: Field Survey

4.7.2 The Influence of Management Style on Company Strategies

Table 4.16 describes the influence of management style on company strategies. It is clear from the table that the management style of the selected companies had an influence on the company strategies (mean=4.30). However, it is also found that there are significant differences in the influence level of management style on company strategies.

Table 4.16: The Influence of Management Style on Company Strategies

Response	Name of the company					Total	χ^2 Test
	BPL	GSKB	IPIL	RL	SPL		
Not at all influence							
No influence							
Neutral	0 .0%	0 .0%	4 20.0%	0 .0%	2 10.0%	6 6.0%	32.213[a] df=8 p=.000
Influence	7 35.0%	20 100.0%	10 50.0%	10 50.0%	11 55.0%	58 58.0%	
Strongly influence	13 65.0%	0 .0%	6 30.0%	10 50.0%	7 35.0%	36 36.0%	
Total	20 100.0%	20 100.0%	20 100.0%	20 100.0%	20 100.0%	100 100.0%	
Mean	4.65	4.00	4.10	4.50	4.25	4.30	

Source: Field Survey

4.7.3 Significant Problems Faced by the Companies with its Management Style

Table 4.17 shows significant problems faced by the companies with its current management style. Out of 100 interviewed executives of the selected companies, all of them mentioned that they have no significant problems with their current management style.

Table 4.17: Significant Problems Faced by the Companies with its Management Style

Response	Name of the company					Total
	BPL	GSKB	IPIL	RL	SPL	
Yes	0	0	0	0	0	0
No	20 100.0%	20 100.0%	20 100.0%	20 100.0%	20 100.0%	100 100.0%

Source: Field Survey

4.8 The Influence of Stakeholder Expectations on Company Strategies

Table 4.18 describes the influence of the stakeholder expectations on company strategies. It is clear from the table that the stakeholder expectations of the selected companies have a moderate influence on the company strategies (mean=3.49). However, it is also found that there was significant difference in the influence level of management style on company strategies.

Table 4.18: The Stakeholder Expectations Influence on Company Strategies

Response	Name of the company					Total	χ^2 Test
	BPL	GSKB	IPIL	RL	SPL		
Strongly disagree							37.267[a] df=1 P=.000
Disagree	1 5.0%	6 30.0%	0 .0%	0 .0%	2 10.0%	9 9.0%	
Neutral	12 60.0%	8 40.0%	6 30.0%	8 40.0%	7 35.0%	41 41.0%	
Agree	7 35.0%	6 30.0%	12 60.0%	6 30.0%	11 55.0%	42 42.0%	
Strongly agree	0 .0%	0 .0%	2 10.0%	6 30.0%	0 .0%	8 8.0%	
Total	20 100.0%	20 100.0%	20 100.0%	20 100.0%	20 100.0%	100 100.0%	
Mean	3.30	3.00	3.80	3.90	3.45	3.49	

Source: Field Survey

4.9 Analytical Tools and Techniques Influencing the Formulation of Strategies

This section describes to what extent the environment and resource analysis techniques influenced the formulation of corporate strategies of pharmaceutical companies. Among various analytical tools and techniques, the PEST (political, economic, social, technological) analysis, Five forces analysis (supplier, buyer, competitor, new entrant, substitute), SWOT (strengths, weaknesses, opportunities, threats) analysis, Key success factors, Benchmarking, BCG service portfolio matrix, General electric matrix and product life cycle analysis are considered for this study.

4.9.1 Influence of PEST (Political, Economic, Social, Technological) Analysis on Formulation of Strategies

Table 4.19 describes the influence of PEST analysis on company strategies. Out of 100 executives, 25% strongly agreed, 70% agreed, 3% was neutral and 2% disagreed to consider the influence of PEST analysis on company strategies. From the table, it reveals that PEST analysis has a moderate influence on the corporate strategy (mean=3.81). Among the sample companies, IPIL had higher (mean=4.50) influence of PEST analysis on corporate strategies than the other companies. Results also shows that there is significant difference among the sample companies (p=.001) in the influence of PEST analysis on company strategies.

Table 4.19: Influence of PEST Analysis on Formulation of Strategies

Response	Name of the company					Total	χ^2 Test
	BPL	GSKB	IPIL	RL	SPL		
Strongly not influence							32.305[a] df=12 p=.001
No influence	1 5.0%	0 .0%	0 .0%	0 .0%	1 5.0%	2 2.0%	
Neutral	2 10.0%	0 .0%	0 .0%	0 .0%	1 5.0%	3 3.0%	
Influence	13 65.0%	20 100.0%	10 50.0%	10 50.0%	17 85.0%	70 70.0%	
Strongly influence	4 20.0%	0 .0%	10 50.0%	10 50.0%	1 5.0%	25 25.0%	
Total	20 100.0%	20 100.0%	20 100.0%	20 100.0%	20 100.0%	100 100.0%	
Mean	4.00	4.00	4.50	4.50	3.90	3.81	

Source: Field Survey

4.9.2 Influence of Five Forces (Supplier, Buyer, Competitor, New Entrant, Substitute) Analysis on Formulation of Strategies

Table 4.20 shows the influence of five forces analysis on company strategies. Out of 100 executives, 11% strongly agreed, 58% agreed, 28% was neutral and 2% disagreed to consider the influence of PEST analysis on company strategies. From the table, it reveals that five forces analysis has a moderate influence on the corporate strategy (mean=3.78). Among the sample companies, RL has higher (mean=4.50) influence of

five forces analysis on company strategies than the other companies. Results also indicates that there are significant differences among the sample companies (p=.000) in the influence of five forces analysis on company strategies.

Table 4.20: Influence of Five Forces Analysis on Formulation of Strategies

Response	Name of the company					Total	χ^2 Test
	BPL	GSKB	IPIL	RL	SPL		
Strongly Not influence							
No influence	2 10.0%	0 .0%	0 .0%	0 .0%	0 .0%	2 2.0%	121.944[a] df=12 p=.000
Neutral	9 45.0%	20 100.0%	0 .0%	0 .0%	0 .0%	29 29.0%	
Influence	8 40.0%	0 .0%	20 100.0%	10 50.0%	20 100.0%	58 58.0%	
Strongly influence	1 5.0%	0 .0%	0 .0%	10 50.0%	0 .0%	11 11.0%	
Total	20 100.0%	20 100.0%	20 100.0%	20 100.0%	20 100.0%	100 100.0%	
Mean	3.40	3.00	4.00	4.50	4.00	3.78	

Source: Field Survey

4.9.3 Influence of SWOT (Strengths, Weaknesses, Opportunities, Threats) Analysis on Formulation of Strategies

Table 4.21 presents the influence of SWOT analysis (strengths, weaknesses, opportunities, threats) on company strategies. Among the respondents, 25% strongly agreed, 64% agreed and 11% was neutral to consider the influence of SWOT analysis on company strategies. From the table, it reveals that PEST analysis has a influence on the corporate strategy (mean=4.14). Among the sample companies, SPL has higher (mean=5.00) influence of SWOT analysis on corporate strategies than the other companies. There was significant difference among the sample companies (p=.000) in the influence of SWOT analysis on company strategies.

Table 4.21: Influence of SWOT Analysis on Formulation of Strategies

Response	Name of the company					Total	χ^2 Test
	BPL	GSKB	IPIL	RL	SPL		
Strongly not influence							116.534[a] df=8 p=.000
No influence							
Neutral	1 5.0%	0 .0%	0 .0%	10 50.0%	0 .0%	11 11.0%	
Influence	14 70.0%	20 100.0%	20 100.0%	10 50.0%	0 .0%	64 64.0%	
Strongly influence	5 25.0%	0 .0%	0 .0%	0 .0%	20 100.0%	25 25.0%	
Total	20 100.0%	20 100.0%	20 100.0%	20 100.0%	20 100.0%	100 100.0%	
Mean	4.20	4.00	4.00	3.50	5.00	4.14	

Source: Field Survey

4.9.4 Influence of Key Success Factors on Formulation of Strategies

Table 4.22 describes the influence of Key success factors analysis on company strategies. Out of 100 executives, 14% strongly agreed, 55% agreed, 29% was neutral and 2% disagreed to consider the influence of Key success factors analysis on company strategies. From the table, it reveals that Key success factors analysis has a influence on the corporate strategy (mean =3.81). Among the sample companies, RL has higher (mean =4.10) influence of Key success factors analysis on corporate strategies than the other companies. Statistically, significant difference was found in the influence of Key success factors analysis on company strategies (p=.000).

Table 4.22: Influence of Key Success Factors on Formulation of Strategies

Response	Name of the company					Total	χ^2 Test
	BPL	GSKB	IPIL	RL	SPL		
Strongly Not influence							73.886[a] df=12 p=.000
No influence	0 .0%	0 .0%	0 .0%	0 .0%	2 10.0%	2 2.0%	
Neutral	3 15.0%	0 .0%	10 50.0%	2 10.0%	14 70.0%	29 29.0%	
Influence	7 35.0%	20 100.0%	10 50.0%	14 70.0%	4 20.0%	55 55.0%	
Strongly influence	10 50.0%	0 .0%	0 .0%	4 20.0%	0 .0%	14 14.0%	
Total	20 100.0%	20 100.0%	20 100.0%	20 100.0%	20 100.0%	100 100.0%	
Mean	4.35	4.00	3.50	4.10	3.10	3.81	

Source: Field Survey

4.9.5 Influence of Benchmarking on Formulation of Strategies

Table 4.23 shows the influence of benchmarking on company corporate strategies. Out of 100 executives, 3% strongly agreed, 32% agreed, 52% was neutral and 13% disagreed to consider the influence of benchmarking on company corporate strategies. From the table, it reveals that benchmarking has a moderate influence on the corporate strategy (mean=3.25). Among the sample companies, RL has higher (mean=3.80) influence of benchmarking on their corporate strategies than the other companies. Results also found that there was significant difference among the companies in the influence of benchmarking on company strategies (p=.000).

Table 4.23: Influence of Benchmarking on Formulation of Strategies

Response	Name of the company					Total	χ^2 Test
	BPL	GSKB	IPIL	RL	SPL		
Strongly Not influence							35.865[a] df=12 p=.000
No influence	3 15.0%	4 20.0%	5 25.0%	1 5.0%	0 .0%	13 13.0%	
Neutral	9 45.0%	14 70.0%	13 65.0%	3 15.0%	13 65.0%	52 52.0%	
Influence	7 35.0%	1 5.0%	2 10.0%	15 75.0%	7 35.0%	32 32.0%	
Strongly influence	1 5.0%	1 5.0%	0 .0%	1 5.0%	0 .0%	3 3.0%	
Total	20 100.0%	20 100.0%	20 100.0%	20 100.0%	20 100.0%	100 100.0%	
Mean	3.30	2.95	2.85	3.80	3.35	3.25	

Source: Field Survey

4.9.6 Influence of BCG Service Portfolio Matrix on Formulation of Strategies

Table 4.24 shows the influence of BCG service portfolio matrix analysis on company strategies. Out of 100 executives, 25% strongly agreed, 70% agreed, 3% was neutral and 2% disagreed to consider the influence of BCG service portfolio matrix analysis on company strategies. The table reveals that BCG service portfolio matrix analysis has a

moderate influence on the corporate strategy (mean =3.36). Among the sample companies, GSKB had higher (mean=4.25) influence of BCG service portfolio matrix analysis on corporate strategies than the other companies. Statistically, significant difference was found among the sample companies in the influence of BCG service portfolio matrix analysis on company strategies (p=.000).

Table 4.24: Influence of BCG Portfolio Matrix on Formulation of Strategies

Response	**Name of the company**					**Total**	**χ^2 Test**
	BPL	GSKB	IPIL	RL	SPL		
Strongly Not influence							58.031[a] df=12 p=.000
No influence	2 10.0%	0 .0%	7 35.0%	1 5.0%	2 10.0%	12 12.0%	
Neutral	11 55.0%	1 5.0%	12 60.0%	9 45.0%	13 65.0%	46 46.0%	
Influence	7 35.0%	13 65.0%	1 5.0%	10 50.0%	5 25.0%	36 36.0%	
Strongly influence	0 .0%	6 30.0%	0 .0%	0 .0%	0 .0%	6 6.0%	
Total	20 100.0%	20 100.0%	20 100.0%	20 100.0%	20 100.0%	100 100.0%	
Mean	3.35	4.25	2.70	3.45	3.15	3.36	

Source: Field Survey

4.9.7 Influence of General Electric Matrix on Formulation of Strategies

Table 4.25 describes the influence of General electric matrix analysis on company strategies. Out of 100 executives, 23% agreed, 60% was neutral and 17% disagreed to consider the influence of General electric matrix analysis on company strategies. From the table, it reveals that General electric matrix analysis has little influence on the corporate strategy (mean=3.06). Among the sample companies, BPL has higher (mean=3.35) influence of General electric matrix analysis on corporate strategies than the other companies. Results also found that there was significant difference in the influence of General electric matrix analysis on company strategies (p=.000).

Table 4.25: Influence of General Electric Matrix on Formulation of Strategies

Response	Name of the company					Total	χ^2 Test
	BPL	GSKB	IPIL	RL	SPL		
Strongly Not influence							35.004[a] df=8 p=.000
No influence	0 .0%	3 15.0%	10 50.0%	0 .0%	4 20.0%	17 17.0%	
Neutral	13 65.0%	15 75.0%	10 50.0%	10 50.0%	12 60.0%	60 60.0%	
Influence	7 35.0%	2 10.0%	0 .0%	10 50.0%	4 20.0%	23 23.0%	
Strongly influence							
Total	20 100.0%	20 100.0%	20 100.0%	20 100.0%	20 100.0%	100 100.0%	
Mean	3.35	2.95	2.50	3.50	3.00	3.06	

Source: Field Survey

4.9.8 Influence of Product Life Cycle on Formulation of Strategies

Table 4.26 reveals the influence of product life cycle analysis on company strategies. Out of 100 executives, 9% strongly agreed, 52% agreed, 33% was neutral and 6% disagreed to consider the influence of PEST analysis on company strategies. From the table, it reveals that product life cycle analysis has an influence on the corporate strategy (mean=3.64). Among the sample companies, BPL and GSKB has higher (mean=4.20) influence of product life cycle analysis on corporate strategies than the other companies. Results also found that there was significant difference in the influence of product life cycle analysis on company strategies (p=.000).

Table 4.26: Influence of Product Life Cycle on Formulation of Strategies

Response	Name of the company					Total	χ^2 Test
	BPL	GSKB	IPIL	RL	SPL		
Strongly Not influence							54.476[a] df=12 p=.000
No influence	2 10.0%	0 .0%	2 10.0%	0 .0%	2 10.0%	6 6.0%	
Neutral	2 10.0%	1 5.0%	14 70.0%	2 10.0%	14 70.0%	33 33.0%	
Influence	14 70.0%	14 70.0%	4 20.0%	16 80.0%	4 20.0%	52 52.0%	
Strongly influence	2 10.0%	5 25.0%	0 .0%	2 10.0%	0 .0%	9 9.0%	
Total	20 100.0%	20 100.0%	20 100.0%	20 100.0%	20 100.0%	100 100.0%	
Mean	4.20	4.20	3.10	4.00	3.10	3.64	

Source: Field Survey

4.10 Comparative Analysis of Influence of Analytical Tools on Formulation of Company Strategies

Table 4.27: Comparative Analysis of Influence of Analytical Tools on Company Strategies

Analytical Tool	Likert Score	Average	Comments	Rank
PEST analysis	418	4.18	HS	1
SWOT analysis	414	4.14	HS	2
Key success factors	381	3.81	S	3
Five forces analysis	378	3.78	S	4
Product life cycle analysis	364	3.64	S	5
BCG service portfolio matrix	336	3.36	S	6
Benchmarking	325	3.25	S	7
General electric matrix	306	3.06	S	8
Note: HS = Highly Significant (Score 401-500) S = Significant (Score 301-400) INS = Insignificant (Below 301)				

Source: Tables no. 4.19, 4.20, 4.21, 4.22, 4.23, 4.24, 4.25, 4.26.

The table 4.27 displays to what extent the analytical tools/techniques influenced the company strategies. It shows the total scores and ranking as per Likert's five point scale. According to the interviewed executives, PEST analysis has the highly significant influence (score=418) on the company strategies followed by SWOT analysis (score=414). Results also found that key success factors (score=381), five forces analysis (score=378), product life cycle (score=364), BCG service portfolio matrix (score=336), benchmarking (score=325) and General electric matrix (score=306) analysis have significant influences on company strategies. However, among the analytical tools, General electric matrix had the lowest influence on the sample company's strategy.

4.11 Chapter Summary

This chapter reviewed the vision, mission and formulation of long term plan at different level of pharmaceutical companies. It also identified the personnel who are involved in formulation of different strategy. This study found that all the sample companies had

formal corporate, business and functional level long term plan. It revealed that board of directors is involved in formulation of vision and mission statement of all the sample companies. Besides this, corporate level management, Business level manager, corporate planning department and Functional level manager also are involved in different extent to make the organizational strategy. It found that all types of plan updated yearly. It discussed the influence level of analytical tool/techniques that are used to formulate strategy. Among the analytical tools/techniques, this research found that PEST analysis had the highly significant influence on the company strategies followed by SWOT analysis, key success factors, five forces analysis, product life cycle, BCG service portfolio matrix, benchmarking and general electric matrix.

Chapter Five
INFLUENCE OF INTERNAL AND EXTERNAL FACTORS ON STRATEGIC MANAGEMENT PRACTICES

5.1 Introduction

This chapter investigates the major environmental factors that influence the strategic management practices of the Pharmaceutical companies in Bangladesh. It is divided into major four headings. Firstly, it describes the internal environmental factors like strength and weakness that influence the business strategy of pharmaceutical sector. Secondly, it examines opportunities and threats factors that influence pharmaceutical industry. Thirdly, it finds the impact of external environmental factors on business activities. Finally, this chapter evaluates overall SWOT analysis of the pharmaceutical industry.

5.2 Internal Environmental Factors of Pharmaceutical Companies

This section examines to what extent the internal environmental factors influence the pharmaceutical business activities. It is divided into two major parts. These are 1. Strength factors influencing pharmaceutical industry and 2. Weakness factors influencing pharmaceutical industry.

5.2.1 Strength Factors Influencing Pharmaceutical Companies

Under this part the strength factors which impact the business activities of pharmaceutical industry have been discussed. The strength factors which are most reported in this study are:

- Brand name
- Good manufacturing process
- Delivery system
- Research and Development
- Work environment
- Use of up-to-date technology
- Product innovation
- Total quality management
- Own manufactured raw materials
- Corporate leadership
- Professional skill of the employee

5.2.1.1 Brand Name as the Strength of Company

Table 5.1 displays that among 100 interviewed executives of the selected companies, 60% strongly agreed, 28% agreed to consider the brand name as their company strength. On the other hand, only 12% of them were neutral to consider as strength for their company. Among the sample companies, GSKB considered the brand name as greater strength (mean=4.90) than the other companies. Overall, the table ensures that brand name **is** the strength (mean=4.48) of the sample companies. Results also found that there was significant difference in brand name as strength of the sample companies.

Table 5.1: Brand Name as the Strength of Company

Response	Name of the company					Total	χ^2 Test
	BPL	GSKB	IPIL	RL	SPL		
Strongly not strength							19.833[a] df=8 p=.011
Not strength							
Neutral	5 25.0%	1 5.0%	3 15.0%	2 10.0%	1 5.0%	12 12.0%	
Strength	4 20.0%	0 .0%	9 45.0%	7 35.0%	8 40.0%	28 28.0%	
Strongly Strength	11 55.0%	19 95.0%	8 40.0%	11 55.0%	11 55.0%	60 60.0%	
Total	20 100.0%	20 100.0%	20 100.0%	20 100.0%	20 100.0%	100 100.0%	
Average	4.30	4.90	4.25	4.45	4.50	4.48	

Source: Field Survey

5.2.1.2 Good Manufacturing Process as the Strength of Company

Table 5.2 describes that among the interviewed executives of the selected companies, 42% strongly agreed, 40% agreed to consider the good manufacturing process as their company strength. On the other hand, only 18% of them were neutral to consider as strength for their company. Among the sample companies, GSKB considered the good manufacturing process as greater strength (mean=4.65) than the other companies. Overall, the table confirms that good manufacturing process is the strength (mean=4.24) of the sample companies. Significant difference was found in the good manufacturing process as the strength of the sample companies (p=.026).

Table 5.2: Good Manufacturing Process as the Strength of Company

Response	Name of the company					Total	χ^2 Test
	BPL	GSKB	IPIL	RL	SPL		
Strongly not strength							17.464[a] df=8, p=.026
Not strength							
Neutral	5 25.0%	2 10.0%	2 10.0%	6 30.0%	3 15.0%	18 18.0%	
Strength	8 40.0%	3 15.0%	11 55.0%	6 30.0%	12 60.0%	40 40.0%	
Strongly Strength	7 35.0%	15 75.0%	7 35.0%	8 40.0%	5 25.0%	42 42.0%	
Total	20 100.0%	20 100.0%	20 100.0%	20 100.0%	20 100.0%	100 100.0%	
Average	4.10	4.65	4.25	4.10	4.10	4.24	

Source: Field Survey

5.2.1.3 Delivery System as the Strength of Company

Table 5.3 presents that among the respondents of the selected companies, 38% strongly agreed, 41% agreed to consider the delivery system as their company strength. On the other hand, 21% of them did not opine to consider as strength for their company. Out of five, BPL considered the delivery system as greater strength (mean=4.65) than the other companies. However, it can be concluded from the table that the delivery system is definitely the strength (mean=4.17) of the sample companies. Results also found that there was significant difference in the delivery system as the strength of the sample companies.

Table 5.3: Delivery System as the Strength of Company

Response						Total	χ^2 Test
	BPL	GSKB	IPIL	RL	SPL		
Strongly disagree							17.187[a] df=8, p=.028
Disagree							
Neutral	2 10.0%	4 20.0%	2 10.0%	8 40.0%	5 25.0%	21 21.0%	
Agree	6 30.0%	5 25.0%	11 55.0%	8 40.0%	11 55.0%	41 41.0%	
Strongly agree	12 60.0%	11 55.0%	7 35.0%	4 20.0%	4 20.0%	38 38.0%	
Total	20 100.0%	20 100.0%	20 100.0%	20 100.0%	20 100.0%	100 100.0%	
Average	4.50	4.35	4.25	3.80	3.95	4.17	

Source: Field Survey

5.2.1.4 Research and Development as the Strength of Company

Table 5.4 displays that among the interviewed executives of the selected companies, 13% strongly agreed and 47% agreed to consider the Research and Development as their company strength. On the other hand, 30% of them were neutral and 10% disagreed to consider the same. Out of five, SPL considered the Research and Development as greater strength (mean=4.20) than the other companies. From the opinion of executives, it can be said that the Research and Development is moderate strength (mean=3.63) of the pharmaceutical companies. Significant difference was observed in delivery system as the strength of the sample companies (p=.000).

Table 5.4: Research and Development as the Strength of Company

Response	Name of the company					Total	χ^2 Test
	BPL	GSKB	IPIL	RL	SPL		
Strongly disagree							61.526[a] df=12 p=.000
Disagree	2 10.0%	1 5.0%	2 10.0%	3 15.0%	2 10.0%	10 10.0%	
Neutral	4 20.0%	1 5.0%	10 50.0%	13 65.0%	2 10.0%	30 30.0%	
Agree	13 65.0%	18 90.0%	6 30.0%	4 20.0%	6 30.0%	47 47.0%	
Strongly agree	1 5.0%	0 .0%	2 10.0%	0 .0%	10 50.0%	13 13.0%	
Total	20 100.0%	20 100.0%	20 100.0%	20 100.0%	20 100.0%	100 100.0%	
Average	3.65	3.85	3.40	3.05	4.20	3.63	

Source: Field Survey

5.2.1.5 Work Environments as the Strength of Company

Table 5.5 reveals that among the respondents of the pharmaceutical companies, 21% strongly agreed, 66% agreed and 12% of them were neutral and 1% disagreed to consider the work environment as their company strength. From the mean analysis it is clear that the work environment is treated as the strength (mean=4.07) of pharmaceutical industry. Results also indicated that there was significant difference in the work environment as the strength of the sample companies (p=.020).

Table 5.5: Work Environments as the Strength of Company

Response	Name of the company					Total	χ^2 Test
	BPL	GSKB	IPIL	RL	SPL		
Strongly disagree							
Disagree	1 5.0%	0 .0%	0 .0%	0 .0%	0 .0%	1 1.0%	24.004[a] df=12 p=.020
Neutral	4 20.0%	0 .0%	2 10.0%	4 20.0%	2 10.0%	12 12.0%	
Agree	9 45.0%	20 100.0%	16 80.0%	10 50.0%	11 55.0%	66 66.0%	
Strongly agree	6 30.0%	0 .0%	2 10.0%	6 30.0%	7 35.0%	21 21.0%	
Total	20 100.0%	20 100.0%	20 100.0%	20 100.0%	20 100.0%	100 100.0%	
Average	4.00	4.00	4.00	4.10	4.25	4.07	

Source: Field Survey

5.2.1.6 Use of Up-to-date Technology as the Strength of Company

Table 5.6 describes that among the respondents of the selected companies, 32% strongly agreed, 48% agreed to consider the use of up-to-date technology as their strength. On the other hand, 15% of them were neutral and 5% disagreed to consider the same. Out of five, GSKB considered the use of up-to-date technology as greater strength (mean=4.75) than the other companies. From the mean analysis it reveals that the use of up-to-date technology is definitely the strength of the sample companies. Significant difference exists in the use of up-to-date technology (p=.000).

Table 5.6: Use of Up-to-date Technology as the Strength of Company

Response	Name of the company					Total	χ^2 Test
	BPL	GSKB	IPIL	RL	SPL		
Strongly disagree							
Disagree	1 5.0%	0 .0%	2 10.0%	1 5.0%	1 5.0%	5 5.0%	35.104[a] df=12 p=.000
Neutral	3 15.0%	1 5.0%	2 10.0%	6 30.0%	3 15.0%	15 15.0%	
Agree	10 50.0%	3 15.0%	15 75.0%	10 50.0%	10 50.0%	48 48.0%	
Strongly agree	6 30.0%	16 80.0%	1 5.0%	3 15.0%	6 30.0%	32 32.0%	
Total	20 100.0%	20 100.0%	20 100.0%	20 100.0%	20 100.0%	100 100.0%	
Average	4.05	4.75	3.75	3.75	4.05	4.07	

Source: Field Survey

5.2.1.7 Product Innovation as the Strength of Company

Table 5.7 reveals that 29% strongly agreed, 45% agreed, 19% was neutral and 7% disagreed to consider the product innovation as their strength. From the mean analysis it reveals that product innovation is the moderate strength (mean=3.96) of the sample companies. However, out of five companies, GSKB considered the product innovation as greater strength (mean=4.75) than the other companies. Significant difference was found in the product innovation as the strength of company (p=.000).

Table 5.7: Product Innovation as the Strength of Company

Response	Name of the company					Total	χ^2 Test
	BPL	GSKB	IPIL	RL	SPL		
Strongly disagree							42.700[a] df=12 p=.000
Disagree	2 10.0%	0 .0%	2 10.0%	2 10.0%	1 5.0%	7 7.0%	
Neutral	2 10.0%	1 5.0%	4 20.0%	7 35.0%	5 25.0%	19 19.0%	
Agree	8 40.0%	3 15.0%	12 60.0%	11 55.0%	11 55.0%	45 45.0%	
Strongly agree	8 40.0%	16 80.0%	2 10.0%	0 .0%	3 15.0%	29 29.0%	
Total	20 100.0%	20 100.0%	20 100.0%	20 100.0%	20 100.0%	100 100.0%	
Average	4.10	4.75	3.70	3.45	3.80	3.96	

Source: Field Survey

5.2.1.8 Own Manufactured Raw materials as the Strength of Company

Table 5.8 presents that among the respondents of the selected companies, 1% strongly agreed, 7% agreed to consider the own manufactured raw materials as strength of the companies. On the other hand, only 34% of them did not opine, 50% disagreed and 8% strongly disagreed to consider the own manufactured raw materials as strength for their company. As a result from the opinion of executives, it can be said that own manufactured raw materials is not the strength (mean=2.43) of the sample companies. Significant difference was found among the sample companies in the own manufactured raw materials as strength of company (p=.000).

Table 5.8: Own Manufactured Raw Materials as the Strength of Company

Response	Name of the company					Total	χ^2 Test
	BPL	GSKB	IPIL	RL	SPL		
Strongly disagree	2 10.0%	0 .0%	4 20.0%	2 10.0%	0 .0%	8 8.0%	
Disagree	14 70.0%	4 20.0%	14 70.0%	17 85.0%	1 5.0%	50 50.0%	
Neutral,	4 20.0%	16 80.0%	2 10.0%	1 5.0%	11 55.0%	34 34.0%	83.329[a] df=16 p=.000
Agree	0 .0%	0 .0%	0 .0%	0 .0%	7 35.0%	7 7.0%	
Strongly agree	0 .0%	0 .0%	0 .0%	0 .0%	1 5.0%	1 1.0%	
Total	20 100.0%	20 100.0%	20 100.0%	20 100.0%	20 100.0%	100 100.0%	
Average	2.10	2.80	1.90	1.95	3.40	2.43	

Source: Field Survey

5.2.1.9 Total Quality Management as the Strength of Company

Table 5.9 displays that 33% strongly agreed, 42% agreed, 20% was neutral and 5% disagreed to consider the total quality management as their strength. From the mean analysis, it reveals that total quality management is the strength (mean=4.06) of the sample companies. However, out of five companies, GSKB considered the total quality management as greater strength (mean=5.00) than the other companies. Significant difference was found in the total quality management as strength of company.

Table 5.9: Total Quality Management as the Strength of Company

Response	Name of the company					Total	χ^2 Test
	BPL	GSKB	IPIL	RL	SPL		
Strongly disagree							
Not strength	0 .0%	0 .0%	0 .0%	5 25.0%	0 .0%	5 5.0%	93.799[a] df=12 p=.000
Neutral	4 20.0%	0 .0%	3 15.0%	11 55.0%	2 10.0%	20 20.0%	
Strength	12 60.0%	0 .0%	15 75.0%	4 20.0%	11 55.0%	42 42.0%	
Strongly agree	4 20.0%	20 100.0%	2 10.0%	0 .0%	7 35.0%	33 33.0%	
Total	20 100.0%	20 100.0%	20 100.0%	20 100.0%	20 100.0%	100 100.0%	
Average	4.00	5.00	3.95	2.95	4.25	4.03	

Source: Field Survey

5.2.1.10 Corporate Leadership as the Strength of Company

Table 5.10 describes that among the respondents of the selected companies, 25% strongly agreed, 39% agreed to consider the corporate leadership as company strength. On the other hand, 334% of them did not opine and 2% disagreed to consider as strength for their company. From the mean analysis it reveals that the corporate leadership is moderate strength (mean=3.87) of the pharmaceutical companies. However, out of five companies, GSKB considered corporate leadership as greater strength (mean=5.00) than the other companies. Significant difference was found in the corporate leadership as the strength of company (p=.000).

Table 5.10: Corporate Leadership as the Strength of Company

Response	Name of the company					Total	χ^2 Test
	BPL	GSKB	IPIL	RL	SPL		
Strongly disagree							113.007[a] df=12 p=.000
Not strength	0 .0%	0 .0%	2 10.0%	0 .0%	0 .0%	2 2.0%	
Neutral	6 30.0%	0 .0%	16 80.0%	3 15.0%	9 45.0%	34 34.0%	
Strength	12 60.0%	0 .0%	2 10.0%	17 85.0%	8 40.0%	39 39.0%	
Strongly Strength	2 10.0%	20 100.0%	0 .0%	0 .0%	3 15.0%	25 25.0%	
Total	20 100.0%	20 100.0%	20 100.0%	20 100.0%	20 100.0%	100 100.0%	
Average	3.80	5.00	3.00	3.85	3.70	3.87	

Source: Field Survey

5.2.1.11 Professional Skill of the Employee as the Strength of Company

Table 5.11 describes that among the interviewed executives of the selected companies, 11% strongly agreed, 58% agreed to consider the professional skill of the employee as company strength. On the other hand, 31% of them were neutral to consider the same. From the mean analysis it indicates that the professional skill of the employee is moderate strength (mean=3.87) of the pharmaceutical companies. However, out of five companies, GSKB considered the professional skill of the employee as greater strength

(mean=4.00) than the other companies. Significant difference was found in the professional skill of the employee as strength of company (p=.000).

Table 5.11: Professional Skill of the Employee as the Strength of Company

Response	Name of the company					Total	χ^2 Test
	BPL	GSKB	IPIL	RL	SPL		
Strongly disagree							
Disagree							
Neutral	8 40.0%	0 .0%	12 60.0%	6 30.0%	5 25.0%	31 31.0%	28.058[a] df=8 p=.000
Strength	9 45.0%	20 100.0%	8 40.0%	10 50.0%	11 55.0%	58 58.0%	
Strongly Strength	3 15.0%	0 .0%	0 .0%	4 20.0%	4 20.0%	11 11.0%	
Total	20 100.0%	20 100.0%	20 100.0%	20 100.0%	20 100.0%	100 100.0%	
Average	3.75	4.00	3.40	3.90	3.95	3.80	

Source: Field Survey

5.2.2 Weakness Factors Influencing Pharmaceutical Companies

Under this part the weakness factors which impact the business performance of pharmaceutical industry have been discussed. The weakness factors which are discussed in this study are:

- Lack of GMP
- Lack of R&D
- Lack of professional skill
- Lack of managerial leadership
- Lack of modern technology
- Lack of good pharmacist
- Lack of ethical marketing
- Lack of awareness of the stakeholders
- Lack of API weakness
- Lack of capacity utilization
- Lack of wide distribution network

5.2.2.1 Lack of Good Manufacturing Process (GMP) as the Weakness of Company

Table 5.12 reveals that among the interviewed executives of the selected pharmaceutical companies, 67% disagreed and 13% strongly disagreed to consider the lack of GMP as weakness of company. On the other hand, 20% of them did not opine

to consider the lack of GMP as weakness for their company. From the mean analysis it can be said that lack of GMP is not the weakness (mean=2.07) of the sample companies. Significant difference was found among the sample companies (p=.018) in the lack of GMP as the weakness of company.

Table 5.12: Lack of Good Manufacturing Process (GMP) as the Weakness of Company

Response	Name of the company					Total	χ^2 Test
	BPL	GSKB	IPIL	RL	SPL		
Strongly disagree	2 10.0%	3 15.0%	4 20.0%	2 10.0%	2 10.0%	13 13.0%	18.507[a] df=8 p=.018
Disagree	11 55.0%	17 85.0%	16 80.0%	10 50.0%	13 65.0%	67 67.0%	
Neutral,	7 35.0%	0 .0%	0 .0%	8 40.0%	5 25.0%	20 20.0%	
Agree							
Strongly agree							
Total	20 100.0%	20 100.0%	20 100.0%	20 100.0%	20 100.0%	100 100.0%	
Mean	2.25	1.85	1.80	2.30	2.15	2.07	

Source: Field Survey

5.2.2.2 Lack of Research &Development (R & D) as the Weakness of Company

Table 5.13 describes that among the respondents of the selected companies, 81% disagreed and 1% strongly disagreed to consider the lack of Research & Development (R & D) as weakness of the company. On the other hand, 18% of them did not opine to consider as weakness for their company. From the mean analysis it can be concluded that lack of Research & Development is not the weakness (mean=2.17) of the sample pharmaceutical companies. Significant difference was found among the sample companies in the lack of Research & Development as the weakness of company.

Table 5.13: Lack of Research &Development (R & D) as the Weakness of Company

Response	Name of the company					Total	χ^2 Test
	BPL	GSKB	IPIL	RL	SPL		
Strongly disagree	1 5.0%	0 .0%	0 .0%	0 .0%	0 .0%	1 1.0%	20.926[a] df=8 p=.007
Disagree	14 70.0%	20 100.0%	20 100.0%	12 60.0%	15 75.0%	81 81.0%	
Neutral	5 25.0%	0 .0%	0 .0%	8 40.0%	5 25.0%	18 18.0%	
Agree							
Strongly agree							
Total	20 100.0%	20 100.0%	20 100.0%	20 100.0%	20 100.0%	100 100.0%	
Mean	2.20	2.00	2.00	2.40	2.25	2.17	

Source: Field Survey

5.2.2.3 Lack of Professional Skill as the Weakness of Company

Table 5.14 presents the opinions of interviewed executives of the selected companies. It shows that 75% of executives disagreed to consider lack of professional skill as weakness of company. On the other hand, 25% of them were neutral to consider as weakness for their company. The table concluded that lack of professional skill is not the weakness (mean=2.25) of the sample companies. Significant difference was found in the lack of professional skill as the weakness of company (p=.031).

Table 5.14: Lack of Professional Skill as the Weakness of Company

Response	Name of the company					Total	χ^2 Test
	BPL	GSKB	IPIL	RL	SPL		
Strongly disagree							10.667[a] df=4 p=.031
Disagree	13 65.0%	16 80.0%	20 100.0%	12 60.0%	14 70.0%	75 75.0%	
Neutral,	7 35.0%	4 20.0%	0 .0%	8 40.0%	6 30.0%	25 25.0%	
Agree							
Strongly agree							
Total	20 100.0%	20 100.0%	20 100.0%	20 100.0%	20 100.0%	100 100.0%	
Mean	2.35	2.20	2.00	2.40	2.30	2.25	

Source: Field Survey

5.2.2.4 Lack of Managerial Leadership as the Weakness of Company

Table 5.15 reveals that among the interviewed executives of the selected companies, 66% disagreed, 3% strongly disagreed to consider the lack of managerial leadership as weakness of company. On the other hand, 31% of them did not opine to consider as weakness for their company. As a result from the opinion of executives, it can be said that lack of managerial leadership is not the weakness of the sample companies (mean=2.28). Significant difference was found among the sample companies (p=.006) in the lack of managerial leadership as the weakness of company.

Table 5.15: Lack of Managerial Leadership as the Weakness of Company

Response	Name of the company					Total	χ^2 Test
	BPL	GSKB	IPIL	RL	SPL		
Strongly disagree	3 15.0%	0 .0%	0 .0%	0 .0%	0 .0%	3 3.0%	21.632[a] df=8 p=.006
Disagree	10 50.0%	11 55.0%	19 95.0%	13 65.0%	13 65.0%	66 66.0%	
Neutral	7 35.0%	9 45.0%	1 5.0%	7 35.0%	7 35.0%	31 31.0%	
Agree							
Strongly agree							
Total	20 100.0%	20 100.0%	20 100.0%	20 100.0%	20 100.0%	100 100.0%	
Mean	2.20	2.45	2.05	2.35	2.35	2.28	

Source: Field Survey

5.2.2.5 Lack of Modern Technology as the Weakness of Company

Table 5.16 describes that among the respondents of the selected companies, 61% disagreed and 12% strongly disagreed to consider lack of modern technology as weakness of company. On the other hand, only 27% of them did not opine to consider as weakness for their company. From the opinion of executives, it is clear that lack of modern technology is not the weakness of the sample companies (mean=2.15). Significant difference was found among the sample companies (p=.037) in the lack of modern technology as the weakness of company.

Table 5.16: Lack of Modern Technology as the Weakness of Company

Response	Name of the company					Total	χ^2 Test
	BPL	GSKB	IPIL	RL	SPL		
Strongly disagree	2 10.0%	3 15.0%	3 15.0%	2 10.0%	2 10.0%	12 12.0%	16.368[a] df=8 p=.037
Disagree	12 60.0%	13 65.0%	17 85.0%	7 35.0%	12 60.0%	61 61.0%	
Neutral	6 30.0%	4 20.0%	0 .0%	11 55.0%	6 30.0%	27 27.0%	
Agree							
Strongly agree							
Total	20 100.0%	20 100.0%	20 100.0%	20 100.0%	20 100.0%	100 100.0%	
Mean	2.20	2.05	1.85	2.45	2.20	2.15	

Source: Field Survey

5.2.2.6 Lack of Good Pharmacist as the Weakness of Company

Table 5.17 reveals that among the interviewed executives of the selected companies, 72% disagreed, 15% strongly disagreed to consider lack of good pharmacist as weakness of company. On the other hand, 13% of them did not opine to consider as the weakness for their company. As a result from the opinion of executives, it is an evident that lack of good pharmacist definitely is not the weakness of the pharmaceutical companies (mean=1.98). No significant difference was found among the sample companies (p=.214) in the lack of good pharmacist as the weakness of company.

Table 5.17: Lack of Good Pharmacist as the Weakness of Company

Response	Name of the company					Total	χ^2 Test
	BPL	GSKB	IPIL	RL	SPL		
Strongly disagree	3 15.0%	4 20.0%	3 15.0%	3 15.0%	2 10.0%	15 15.0%	10.784[a] df=8 p=.214
Disagree	13 65.0%	16 80.0%	17 85.0%	12 60.0%	14 70.0%	72 72.0%	
Neutral	4 20.0%	0 .0%	0 .0%	5 25.0%	4 20.0%	13 13.0%	
Agree							
Strongly agree							
Total	20 100.0%	20 100.0%	20 100.0%	20 100.0%	20 100.0%	100 100.0%	
Mean	2.05	1.80	1.85	2.10	2.10	1.98	

Source: Field Survey

5.2.2.7 Lack of Ethical Marketing of Competitors as the Weakness of Company

Table 5.18 reveals that among the respondents of the selected companies, 42% disagreed and 15% strongly disagreed to consider the lack of ethical marketing of competitors as weakness of company. On the other hand, 28% of them were neutral, 15% agreed to consider as weakness for their company. As a result from the opinion of executives, it can be said that lack of ethical marketing of competitors is not the weakness of the sample companies (mean=2.43). Significant difference was found in the lack of ethical marketing of competitors as the weakness of company (p=000).

Table 5.18: Lack of Ethical Marketing of Competitors as the Weakness of Company

Response	Name of the company					Total	χ^2 Test
	BPL	GSKB	IPIL	RL	SPL		
Strongly disagree	5 25.0%	3 15.0%	4 20.0%	2 10.0%	1 5.0%	15 15.0%	57.310[a] df=12 p=.000
Disagree	10 50.0%	17 85.0%	0 .0%	5 25.0%	10 50.0%	42 42.0%	
Neutral	5 25.0%	0 .0%	14 70.0%	5 25.0%	4 20.0%	28 28.0%	
Agree	0 .0%	0 .0%	2 10.0%	8 40.0%	5 25.0%	15 15.0%	
Strongly agree							
Total	20 100.0%	20 100.0%	20 100.0%	20 100.0%	20 100.0%	100 100.0%	
Mean	2.00	1.85	2.70	2.95	2.65	2.43	

Source: Field Survey

5.2.2.8 Lack of Awareness of the Stakeholders as the Weakness of Company

Table 5.19 reveals that among the interviewed executives of the selected companies, 64% disagreed and 13% strongly disagreed to consider lack of awareness of the stakeholders as weakness of company. On the other hand, 2% agreed and 21% of them did not opine to consider the lack of awareness as weakness for their company. From the mean analysis it can be concluded that lack of awareness of the stakeholders is not the weakness (mean=2.12) of the sample companies. Significant difference exists in the lack of awareness of the stakeholders as the weakness of company.

Table 5.19: Lack of Awareness of the Stakeholders as the Weakness of Company

Response	Name of the company					Total	χ^2 Test
	BPL	GSKB	IPIL	RL	SPL		
Strongly disagree	5 25.0%	1 5.0%	5 25.0%	0 .0%	2 10.0%	13 13.0%	
Disagree	12 60.0%	14 70.0%	15 75.0%	11 55.0%	12 60.0%	64 64.0%	
Neutral	1 5.0%	5 25.0%	0 .0%	9 45.0%	6 30.0%	21 21.0%	30.045[a] df=12 p=.003
Agree	2 10.0%	0 .0%	0 .0%	0 .0%	0 .0%	2 2.0%	
Strongly agree							
Total	20 100.0%	20 100.0%	20 100.0%	20 100.0%	20 100.0%	100 100.0%	
Mean	2.00	2.20	1.75	2.45	2.20	2.12	

Source: Field Survey

5.2.2.9 Lack of Active Pharmaceutical Ingredients (API) as the Weakness of Company

Table 5.20 reveals that among the respondents of the selected companies, 40% strongly agreed and 51% agreed to consider the lack of Active Pharmaceutical Ingredients (API) as weakness of company. On the other hand, only 4% of them did not opine and 5% disagreed to consider the lack of API as weakness for their company. From the mean analysis it can be concluded that lack of Active Pharmaceutical Ingredients (API) is definitely the weakness (mean=4.26) of the sample pharmaceutical companies. Significant difference was found in the lack of API as the weakness of company.

Table 5.20: Lack of Active Pharmaceutical Ingredients (API) as the Weakness of Company

Response	Name of the company					Total	χ^2 Test
	BPL	GSKB	IPIL	RL	SPL		
Strongly disagree							
Disagree	0 .0%	5 25.0%	0 .0%	0 .0%	0 .0%	5 5.0%	75.966[a] df=12 p=.000
Neutral	0 .0%	4 20.0%	0 .0%	0 .0%	0 .0%	4 4.0%	
Agree	7 35.0%	11 55.0%	2 10.0%	15 75.0%	16 80.0%	51 51.0%	
Strongly agree	13 65.0%	0 .0%	18 90.0%	5 25.0%	4 20.0%	40 40.0%	
Total	20 100.0%	20 100.0%	20 100.0%	20 100.0%	20 100.0%	100 100.0%	
Mean	4.65	3.30	4.90	4.25	4.20	4.26	

Source: Field Survey

5.2.2.10 Lack of Capacity Utilization as the Weakness of Company

Table 5.21 reveals that among the interviewed executives of the selected companies, 14% agreed to consider the lack of capacity utilization as weakness of company. On the other hand, 33% of them did not opine, 45% disagreed and 8% strongly disagreed to consider the lack of capacity utilization as weakness for their company. From the mean analysis it can be said that lack of capacity utilization is not the weakness (mean=2.53) of the sample companies. Significant difference was found among the sample in the lack of capacity utilization as the weakness of company (p=.000).

Table 5.21: Lack of Capacity Utilization as the Weakness of Company

Response	Name of the company					Total	χ^2 Test
	BPL	GSKB	IPIL	RL	SPL		
Strongly disagree	3 15.0%	0 .0%	1 5.0%	3 15.0%	1 5.0%	8 8.0%	75.164[a] df=12 p=.000
Disagree	13 65.0%	0 .0%	0 .0%	15 75.0%	17 85.0%	45 45.0%	
Neutral	4 20.0%	12 60.0%	13 65.0%	2 10.0%	2 10.0%	33 33.0%	
Agree	0 .0%	8 40.0%	6 30.0%	0 .0%	0 .0%	14 14.0%	
Strongly agree							
Total	20 100.0%	20 100.0%	20 100.0%	20 100.0%	20 100.0%	100 100.0%	
Mean	2.05	3.40	3.20	1.95	2.05	2.53	

Source: Field Survey

5.2.2.11 Lack of Wide Distribution Network as the Weakness of Company

Table 5.22 reveals that among the respondents of the selected companies, 5% strongly agreed, and 11% agreed to consider the lack of wide distribution network as a weakness of company. On the other hand, only 81% of them did not opine, 3% disagreed and strongly disagreed to consider as weakness for their company. As a result from the opinion of executives, it can be said that lack of wide distribution network not the weakness of the sample companies. Significant difference was found in the lack of wide distribution network as a weakness of company (p=000).

Table 5.22: Lack of Wide Distribution Network as the Weakness of Company

Response	Name of the company					Total	χ^2 Test
	BPL	GSKB	IPIL	RL	SPL		
Strongly disagree	3 15.0%	0 .0%	0 .0%	0 .0%	0 .0%	3 3.0%	62.379[a] df=12 p=.000
Disagree	14 70.0%	7 35.0%	20 100.0%	20 100.0%	20 100.0%	81 81.0%	
Neutral,	3 15.0%	8 40.0%	0 .0%	0 .0%	0 .0%	11 11.0%	
Agree	0 .0%	5 25.0%	0 .0%	0 .0%	0 .0%	5 5.0%	
Strongly agree							
Total	20 100.0%	20 100.0%	20 100.0%	20 100.0%	20 100.0%	100 100.0%	
Mean	2.00	2.90	2.00	2.00	2.00	2.18	

Source: Field Survey

5.3 External Environmental Factors of Pharmaceutical Companies

This section examines to what extent the external environmental factors influence the pharmaceutical business activities. It is divided into two major parts. These are 1. Opportunities factors influencing pharmaceutical companies and 2. Threats factors influencing pharmaceutical companies.

5.3.1 Opportunity Factors Influencing Pharmaceutical Industry

Under this part the opportunity factors which impact the business activities of pharmaceutical industry have been discussed. The opportunity factors which are most reported by the respondents in this study are:

- Govt. industrial policy
- Present export/import policy
- WTO-TRIPS Agreement
- Increase of literacy of people
- Increase of income of people
- Current economic growth
- Modern technology
- Health awareness of people
- Increasing of private hospital
- Member of LDC
- Govt. drug rules and policy

5.3.1.1 Govt. Industrial Policy as an Opportunity for Company's Operation

Table 5.23 reveals that among the executives of the selected pharmaceutical companies, 12% strongly agreed and 36% agreed to consider govt. industrial policy as an opportunity for their company's operation. On the other hand, 36% of them were neutral and 16% disagreed to consider the same. Out of five companies, RL considered the govt. industrial policy as greater opportunity (mean=4.00) than the other companies. From the opinion of executives, it can be said that govt. industrial policy is moderate opportunity (mean=3.44) of the sample companies. Significant difference was observed in the govt. industrial policy as opportunity of the sample companies.

Table 5.23: Govt. Industrial Policy as an Opportunity for Company's Operation

Response	Name of the company					Total	χ^2 Test
	BPL	GSKB	IPIL	RL	SPL		
Strongly Not Opportunity							46.042[a] df=12 p=.000
Not Opportunity	2 10.0%	2 10.0%	1 5.0%	1 5.0%	10 50.0%	16 16.0%	
Neutral,	12 60.0%	8 40.0%	5 25.0%	4 20.0%	7 35.0%	36 36.0%	
Opportunity	6 30.0%	10 50.0%	8 40.0%	9 45.0%	3 15.0%	36 36.0%	
Strongly Opportunity	0 .0%	0 .0%	6 30.0%	6 30.0%	0 .0%	12 12.0%	
Total	20 100.0%	20 100.0%	20 100.0%	20 100.0%	20 100.0%	100 100.0%	
Mean	3.20	3.40	3.95	4.00	2.65	3.44	

Source: Field Survey

5.3.1.2 Present Export/Import policy as Opportunity for Company's Operation

Table 5.24 describes that among the respondents of the selected companies, 24% strongly agreed and 35% agreed to consider present export/import policies as an opportunity for their business functions. On the other hand, 33% of them were neutral and 8% disagreed to consider the same. From the table, it can be concluded that present export/import policy is moderate opportunity (mean=3.75) of the sample companies. Out of five, SPL considered the present export/import policy as greater opportunity

(mean=4.05) than the other companies. Significant difference was found in the present export/import policy as opportunity of the sample companies (p=.036).

Table 5.24: Present Export/Import policy as Opportunity for Company's Operation

Response	Name of the company					Total	χ^2 Test
	BPL	GSKB	IPIL	RL	SPL		
Strongly Not Opportunity							22.124[a] df=12 p=.036
Not Opportunity	2 10.0%	2 10.0%	3 15.0%	1 5.0%	0 .0%	8 8.0%	
Neutral	9 45.0%	10 50.0%	7 35.0%	4 20.0%	3 15.0%	33 33.0%	
Opportunity	7 35.0%	2 10.0%	4 20.0%	9 45.0%	13 65.0%	35 35.0%	
Strongly Opportunity	2 10.0%	6 30.0%	6 30.0%	6 30.0%	4 20.0%	24 24.0%	
Total	20 100.0%	20 100.0%	20 100.0%	20 100.0%	20 100.0%	100 100.0%	
Mean	3.45	3.60	3.65	4.00	4.05	3.75	

Source: Field Survey

5.3.1.3 Current WTO-TRIPS Agreement as Opportunity for Company's operation

Table 5.25 displays that among the executives of the selected companies, 25% strongly agreed and 36% agreed to consider the current WTO-TRIPS agreement as an opportunity for their business activities. On the other hand, 34% of them were neutral and 5% disagreed to consider the same. Out of five companies, RL considered the current WTO-TRIPS agreement as greater opportunity (mean=4.30) than the other companies. However, it is clear from the table that current WTO-TRIPS agreement is treated as moderate opportunity (mean=3.81) for pharmaceutical companies. Statistically significant difference was observed among the sample companies in the current WTO-TRIPS agreement as an opportunity of the sample companies.

Table 5.25: Current WTO-TRIPS Agreement as Opportunity for Company's Operation

Response	Name of the company					Total	χ^2 Test
	BPL	GSKB	IPIL	RL	SPL		
Strongly Not Opportunity							33.377[a] df=12 p=.001
Not Opportunity	3 15.0%	1 5.0%	1 5.0%	0 .0%	0 .0%	5 5.0%	
Neutral	8 40.0%	14 70.0%	5 25.0%	4 20.0%	3 15.0%	34 34.0%	
Opportunity	4 20.0%	5 25.0%	10 50.0%	6 30.0%	11 55.0%	36 36.0%	
Strongly Opportunity	5 25.0%	0 .0%	4 20.0%	10 50.0%	6 30.0%	25 25.0%	
Total	20 100.0%	20 100.0%	20 100.0%	20 100.0%	20 100.0%	100 100.0%	
Mean	3.55	3.20	3.85	4.30	4.15	3.81	

Source: Field Survey

5.3.1.4 Increase of Literacy of People as Opportunity for company's Operation

Table 5.26 describes that among the interviewed executives of the selected companies, 19% strongly agreed and 73% agreed to consider the increase of literacy of people as an opportunity for their business activities. On the other hand, 8% of them were neutral to consider the same. Out of five, GSKB considered the increase of literacy of people as greater opportunity (mean=4.10) than the other companies. However, the table reveals that the increase of literacy of people is moderate opportunity (mean=3.99) of the pharmaceutical companies. No significant difference was observed in the increase of literacy of people as an opportunity of the sample companies (p=443).

Table 5.26: Increase of Literacy of People as an Opportunity for company's Operation

Response	Name of the company					Total	χ^2 Test
	BPL	GSKB	IPIL	RL	SPL		
Strongly Not Opportunity							12.038[a] df=12 p=.443
Not Opportunity							
Neutral	2 10.0%	0 .0%	2 10.0%	0 .0%	4 20.0%	8 8.0%	
Opportunity	12 60.0%	20 100.0%	16 80.0%	14 70.0%	11 55.0%	73 73.0%	
Strongly Opportunity	6 30.0%	0 .0%	2 10.0%	6 30.0%	5 25.0%	19 19.0%	
Total	20 100.0%	20 100.0%	20 100.0%	20 100.0%	20 100.0%	100 100.0%	
Mean	4.05	4.10	3.90	4.00	3.90	3.99	

Source: Field Survey

5.3.1.5 Increase of Income of People as an Opportunity for Company's Operation

Table 5.27 reveals that among the respondents of the pharmaceutical companies, 46% strongly agreed and 45% agreed to consider the increase of income of the people as an opportunity for their company's operation. On the other hand, 9% of them were neutral to consider the same. Out of five, RL considered the increase of income of people as greater opportunity (mean=4.65) than the other companies. Overall, the table confirms that the increase of income of the people is an opportunity (mean=4.37) for pharmaceutical sector. Statistically significant difference was observed in the increase of income of the people as an opportunity of the sample companies (p=.000).

Table 5.27: Increase of Income of People as an Opportunity for Company's Operation

Response	Name of the company					Total	χ^2 Test
	BPL	GSKB	IPIL	RL	SPL		
Strongly Not Opportunity							30.014[a] df=8 p=.000
Not Opportunity							
Neutral	0 .0%	1 5.0%	1 5.0%	0 .0%	7 35.0%	9 9.0%	
Opportunity	10 50.0%	13 65.0%	12 60.0%	7 35.0%	3 15.0%	45 45.0%	
Strongly Opportunity	10 50.0%	6 30.0%	7 35.0%	13 65.0%	10 50.0%	46 46.0%	
Total	20 100.0%	20 100.0%	20 100.0%	20 100.0%	20 100.0%	100 100.0%	
	4.50	4.25	4.30	4.65	4.15	4.37	

Source: Field Survey

5.3.1.6 Current Economic Growths as an Opportunity for Company's Operation

Table 5.28 presents that among the interviewed executives, 27% strongly agreed and 59% agreed to consider the current economic growth as an opportunity for the pharmaceutical company's operation. On the other hand, 5% of them were neutral, 7% disagreed and 2% strongly disagreed to consider the same. Out of five companies, IPIL considered the current economic growth as greater opportunity (mean=4.30) than the

other companies. From the opinion of the executives, it can be concluded that current economic growth is an opportunity (mean=4.02) of the pharmaceutical sector. There was significant difference in the current economic growth as an opportunity of the sample companies (p=.000).

Table 5.28: Current Economic Growths as an Opportunity for Company's Operation

Response	Name of the company					Total	χ^2 Test
	BPL	GSKB	IPIL	RL	SPL		
Strongly Not Opportunity	1 5.0%	0 .0%	0 .0%	1 5.0%	0 .0%	2 2.0%	48.412[a] df=16 p=.000
Not Opportunity	0 .0%	3 15.0%	0 .0%	2 10.0%	2 10.0%	7 7.0%	
Neutral,	1 5.0%	0 .0%	4 20.0%	0 .0%	0 .0%	5 5.0%	
Opportunity	18 90.0%	17 85.0%	6 30.0%	8 40.0%	10 50.0%	59 59.0%	
Strongly Opportunity	0 .0%	0 .0%	10 50.0%	9 45.0%	8 40.0%	27 27.0%	
Total	20 100.0%	20 100.0%	20 100.0%	20 100.0%	20 100.0%	100 100.0%	
Mean	3.80	3.70	4.30	4.10	4.20	4.02	

Source: Field Survey

5.3.1.7 Modern Technologies as an Opportunity for Company's Operation

Table 6.29 reveals that among the respondents, 37% strongly agreed and 59% agreed to consider the modern technology as an opportunity for their business activities. On the other hand, 1% of them were neutral and 2% disagreed and 1% strongly disagreed to consider the same. Out of five, RL SPL considered modern technology as greater opportunity (mean=4.75) than the other companies. However, it is clear from the table that the modern technology is an opportunity (mean=4.29) of the pharmaceutical companies. Significant difference was observed in the modern technology as an opportunity of the sample companies (p=.001).

Table 5.29: Modern Technologies as an Opportunity for Company's Operation

Response	Name of the company					Total	χ^2 Test
	BPL	GSKB	IPIL	RL	SPL		
Strongly Not Opportunity	0 .0%	0 .0%	0 .0%	1 5.0%	0 .0%	1 1.0%	38.055[a] df=16 p=.001
Not Opportunity	1 5.0%	0 .0%	1 5.0%	0 .0%	0 .0%	2 2.0%	
Neutral,	1 5.0%	0 .0%	0 .0%	0 .0%	0 .0%	1 1.0%	
Opportunity	12 60.0%	20 100.0%	13 65.0%	9 45.0%	5 25.0%	59 59.0%	
Strongly Opportunity	6 30.0%	0 .0%	6 30.0%	10 50.0%	15 75.0%	37 37.0%	
Total	20 100.0%	20 100.0%	20 100.0%	20 100.0%	20 100.0%	100 100.0%	
Mean	4.15	4.00	4.20	4.35	4.75	4.29	

Source: Field Survey

5.3.1.8 Health Awareness of People as an Opportunity for Company's Operation

Table 5.30 displays that among the interviewed executives of the selected companies, 50% strongly agreed and 38% agreed to consider the health awareness of people as an opportunity for their company's operation. On the other hand, 8% of them were neutral and 4% disagreed to consider the same. Out of five, BPL considered health awareness of people as greater opportunity (mean=4.64) than the other companies. From the opinion of executives, it can be said that health awareness of people is moderate opportunity (mean=4.34) of the sample companies. Significant difference was found in health awareness of people as an opportunity of the sample companies.

Table 5.30: Health Awareness of People as Opportunity for Company's Operation

Response	Name of the company					Total	χ^2 Test
	BPL	GSKB	IPIL	RL	SPL		
Strongly Not Opportunity							27.187[a] df=12 p=.007
Not Opportunity	1 5.0%	0 .0%	1 5.0%	1 5.0%	1 5.0%	4 4.0%	
Neutral	0 .0%	0 .0%	0 .0%	5 25.0%	3 15.0%	8 8.0%	
Opportunity	4 20.0%	10 50.0%	8 40.0%	4 20.0%	12 60.0%	38 38.0%	
Strongly Opportunity	15 75.0%	10 50.0%	11 55.0%	10 50.0%	4 20.0%	50 50.0%	
Total	20 100.0%	20 100.0%	20 100.0%	20 100.0%	20 100.0%	100 100.0%	
Mean	4.65	4.50	4.45	4.15	3.95	4.34	

Source: Field Survey

5.3.1.9 Increasing of Private Hospital as an Opportunity for Company's Operation

Table 5.31 shows that among the executives of the selected companies, 37% strongly agreed and 50% agreed to consider the increasing of private hospital as an opportunity for pharmaceutical company's operation. On the other hand, 6% of them were neutral and 4% disagreed to consider the same. Out of five, SPL considered increasing of private hospital as greater opportunity (mean=4.65) than the other companies. However, the table confirms that the increasing of private hospital is treated as an opportunity (mean=4.20) of the pharmaceutical sector. Statistically significant difference was found among the sample in the increasing of private hospital as an opportunity of the sample companies (p=.001).

Table 5.31: Increasing of Private Hospital as an Opportunity for Company's Operation

Response	Name of the company					Total	χ^2 Test
	BPL	GSKB	IPIL	RL	SPL		
Strongly Not Opportunity							32.582[a] df=12 p=.001
Not Opportunity	1 5.0%	1 5.0%	0 .0%	1 5.0%	1 5.0%	4 4.0%	
Neutral	4 20.0%	4 20.0%	1 5.0%	0 .0%	0 .0%	9 9.0%	
Opportunity	13 65.0%	13 65.0%	9 45.0%	11 55.0%	4 20.0%	50 50.0%	
Strongly Opportunity	2 10.0%	2 10.0%	10 50.0%	8 40.0%	15 75.0%	37 37.0%	
Total	20 100.0%	20 100.0%	20 100.0%	20 100.0%	20 100.0%	100 100.0%	
Mean	3.80	3.80	4.45	4.30	4.65	4.20	

Source: Field Survey

5.3.1.10 Member of Least Developed Country (LDC) as an Opportunity for Company's Operation

Table 5.32 displays that among the respondents of the pharmaceutical companies, 26% strongly agreed and 48% agreed to consider the member of LDC as an opportunity for their business functions. On the other hand, 10% of them were

neutral and 13% disagreed 3% to consider the same. Out of five companies, IPIL considered the member of LDC as greater opportunity (mean=4.20) than the other companies. From the opinion of executives, it can be said that member of LDC is moderate opportunity (mean=3.81) of the sample companies. Statistically significant difference exists in the member of LDC as an opportunity of the sample companies (p=.000).

Table 5.32: Member of Least Developed Country (LDC) as an Opportunity for Company's Operation

Response	Name of the company					Total	χ^2 Test
	BPL	GSKB	IPIL	RL	SPL		
Strongly Not Opportunity	1 5.0%	1 5.0%	0 .0%	0 .0%	1 5.0%	3 3.0%	49.167[a] df=16 p=.000
Not Opportunity	0 .0%	11 55.0%	0 .0%	1 5.0%	1 5.0%	13 13.0%	
Neutral,	2 10.0%	1 5.0%	3 15.0%	4 20.0%	0 .0%	10 10.0%	
Opportunity	11 55.0%	7 35.0%	10 50.0%	9 45.0%	11 55.0%	48 48.0%	
Strongly Opportunity	6 30.0%	0 .0%	7 35.0%	6 30.0%	7 35.0%	26 26.0%	
Total	20 100.0%	20 100.0%	20 100.0%	20 100.0%	20 100.0%	100 100.0%	
Mean	4.05	2.70	4.20	4.00	4.10	3.81	

Source: Field Survey

5.3.1.11 Govt. Drug rules and Policy as an Opportunity for Company's Operation

Table 5.33 shows that among the interviewed executives of the selected companies, 12% strongly agreed and 36% agreed to consider the current govt. industrial policy as an opportunity for their business activities. On the other hand, 36% of them were neutral and 16% disagreed to consider the same. Out of five, RL considered govt. industrial policy as greater opportunity (mean=4.00) than the other companies. However, the table reveals that govt. industrial policy is treated as moderate opportunity (mean=3.44) for the pharmaceutical sector of Bangladesh. Significant difference was observed in the govt. industrial policy as an opportunity of the sample companies (p=.000).

Table 5.33: Govt. Drug rules and Policy as an Opportunity for Company's Operation

Response	Name of the company					Total	χ^2 Test
	BPL	GSKB	IPIL	RL	SPL		
Strongly Not Opportunity	0 .0%	2 10.0%	0 .0%	0 .0%	0 .0%	2 2.0%	79.205[a] df=16 p=.000
Not Opportunity	0 .0%	11 55.0%	0 .0%	0 .0%	0 .0%	11 11.0%	
Neutral,	6 30.0%	5 25.0%	3 15.0%	0 .0%	5 25.0%	19 19.0%	
Opportunity	11 55.0%	1 5.0%	7 35.0%	14 70.0%	11 55.0%	44 44.0%	
Strongly Opportunity	3 15.0%	1 5.0%	10 50.0%	6 30.0%	4 20.0%	24 24.0%	
Total	20 100.0%	20 100.0%	20 100.0%	20 100.0%	20 100.0%	100 100.0%	
Mean	3.85	2.40	4.35	4.30	3.95	3.77	

Source: Field Survey

5.3.2 Threat Factors Influencing Pharmaceutical Companies

Under this part the threat factors which influence the business activities of pharmaceutical industry have been discussed. The threat factors which are investigated in this study are:

- New entrants
- Local competitors
- Lack of API Park
- WTOTRIPS agreement after 2015
- High corporate tax
- Political instability
- High rate of interest
- Price of raw material
- Lack of power supply
- Govt. drug rules and policy
- Lack of modern technology
- Unethical marketing of competitor

5.3.2.1 New Entrants as a Threat for Company's Operation

Table 5.34 reveals that among the executives of the pharmaceutical companies, 6% strongly agreed and 30% agreed to consider the new entrant as a threat for their company's operation. On the other hand, 38% of them were neutral, 20% and disagreed

6% strongly disagreed to consider the same. Among five companies, SPL considered the new entrant as greater threat (mean=3.80) than the others. From the opinion of executives, it can be said that new entrant is moderate threat (mean=3.10) of the sample companies. Significant difference was observed among the sample companies in new entrant as a threat of the sample companies (p=.000).

Table 5.34: New Entrants as a Threat for Company's Operation

Response	Name of the company					Total	χ^2 Test
	BPL	GSKB	IPIL	RL	SPL		
Strongly not threat	0 .0%	0 .0%	0 .0%	6 30.0%	0 .0%	6 6.0%	112.386[a] df=16 p=.000
Not threat	2 10.0%	0 .0%	8 40.0%	10 50.0%	0 .0%	20 20.0%	
Neutral	12 60.0%	14 70.0%	4 20.0%	4 20.0%	4 20.0%	38 38.0%	
threat	6 30.0%	0 .0%	8 40.0%	0 .0%	16 80.0%	30 30.0%	
Strongly threat	0 .0%	6 30.0%	0 .0%	0 .0%	0 .0%	6 6.0%	
Total	20 100.0%	20 100.0%	20 100.0%	20 100.0%	20 100.0%	100 100.0%	
Mean	3.20	3.60	3.00	1.90	3.80	3.10	

Source: Field Survey

5.3.2.2 Local Competitors as a Threat for Company's Operation

Table 5.35 reveals that among the interviewed executives, 20% strongly agreed and 34% agreed to consider the local competitors as a threat for their company's operation. On the other hand, 25% of them were neutral and 21% disagreed to consider the same. Out of five sample companies, GSKB considered the local competitors as greater threat (mean=4.60) than the other companies. However, it can be concluded from the table that the local competitors is moderate threat (mean=3.53) for the pharmaceutical companies. There was significant difference in the local competitors as a threat of the sample companies (p=.000).

Table 5.35: Local Competitors as a Threat for Company's Operation

Response	Name of the company					Total	χ^2 Test
	BPL	GSKB	IPIL	RL	SPL		
Strongly not threat							
Not threat	3 15.0%	0 .0%	6 30.0%	12 60.0%	0 .0%	21 21.0%	
Neutral	11 55.0%	0 .0%	4 20.0%	8 40.0%	2 10.0%	25 25.0%	85.451[a] df=16 p=.000
threat	0 .0%	8 40.0%	8 40.0%	0 .0%	18 90.0%	34 34.0%	
Strongly threat	6 30.0%	12 60.0%	2 10.0%	0 .0%	0 .0%	20 20.0%	
Total	20 100.0 %	20 100.0 %	20 100.0 %	20 100.0 %	20 100.0%	100 100.0 %	
Mean	3.45	4.60	3.30	2.40	3.90	3.53	

Source: Field Survey

5.3.2.3 Lack of Active Pharmaceutical Ingredients (API) Park as a Threat for Company's Operation

Table 5.36 reveals that among the respondents of the selected companies, 37% strongly agreed and 22% agreed to consider the lack of API Park as a threat for their company's activities. On the other hand, 25% of them were neutral, 10% disagreed and 6% strongly disagreed to consider the same. Among the companies, SPL considered the lack of API Park as greater threat (mean=4.70) than the others. However, the table confirms that the lack of API Park is a moderate threat (mean=3.74) pharmaceutical industry. Significant difference was found in lack of API Park as a threat of the sample companies.

Table 5.36: Lack of Active Pharmaceutical Ingredients (API) Park as a Threat for Company's Operation

Response	Name of the company					Total	χ^2 Test
	BPL	GSKB	IPIL	RL	SPL		
Strongly not threat	0 .0%	0 .0%	0 .0%	6 30.0%	0 .0%	6 6.0%	
Not threat	0 .0%	4 20.0%	0 .0%	6 30.0%	0 .0%	10 10.0%	
Neutral	1 5.0%	16 80.0%	8 40.0%	0 .0%	0 .0%	25 25.0%	115.151[a] df=16 p=.000
threat	12 60.0%	0 .0%	4 20.0%	0 .0%	6 30.0%	22 22.0%	
Strongly threat	7 35.0%	0 .0%	8 40.0%	8 40.0%	14 70.0%	37 37.0%	
Total	20 100.0%	20 100.0%	20 100.0%	20 100.0%	20 100.0%	100 100.0%	
Mean	4.30	2.80	4.00	2.90	4.70	3.74	

Source: Field Survey

5.3.2.4 WTOTRIPS Agreement after 2015 as a Threat for Company's Operation

Table 5.37 displays that among the respondents of the selected companies, 25% strongly agreed and 48% agreed to consider the WTOTRIPS agreement after 2015 as a threat for their company's operation. On the other hand, 10% of them were neutral and 17% disagreed to consider the same. Out of five, SPL considered WTOTRIPS agreement after 2015 as greater threat (mean=4.65) than the other companies. From the opinion of executives, it can be said that the WTOTRIPS agreement after 2015 is a moderate threat (mean=3.81) of the sample companies. Statistically significant difference was observed in the WTOTRIPS agreement after 2015 as a threat of the sample companies.

Table 5.37: WTOTRIPS Agreement after 2015 as a Threat for Company's Operation

Response	Name of the company					Total	χ^2 Test
	BPL	GSKB	IPIL	RL	SPL		
Strongly not threat							128.997[a] df=12 p=.000
Not threat	1 5.0%	0 .0%	0 .0%	16 80.0%	0 .0%	17 17.0%	
Neutral	0 .0%	10 50.0%	0 .0%	0 .0%	0 .0%	10 10.0%	
threat	13 65.0%	10 50.0%	14 70.0%	4 20.0%	7 35.0%	48 48.0%	
Strongly threat	6 30.0%	0 .0%	6 30.0%	0 .0%	13 65.0%	25 25.0%	
Total	20 100.0%	20 100.0%	20 100.0%	20 100.0%	20 100.0%	100 100.0%	
Mean	4.20	3.50	4.30	2.40	4.65	3.81	

Source: Field Survey

5.3.2.5 High Rate of Corporate Tax as a Threat for Company's Operation

Table 5.38 shows that among the executives of the selected companies, 20% strongly agreed and 59% agreed to consider the high corporate tax rate as threat for their company's operation. On the other hand, 12% of them were neutral and 9% disagreed to consider the same. Out of five, SPL considered the high corporate tax as greater

threat (mean=4.20) than the other companies. However, from the opinion of executives, it is clear that high corporate tax is a moderate threat (mean=3.90) for the pharmaceutical companies. Significant difference was observed in the high corporate tax rate as a threat of the sample companies (p=.000).

Table 5.38: High Rate of Corporate Tax as a Threat for Company's Operation

Response	Name of the company					Total	χ^2 Test
	BPL	GSKB	IPIL	RL	SPL		
Strongly not threat							40.331[a] df=12 p=.000
Not threat	1 5.0%	0 .0%	2 10.0%	6 30.0%	0 .0%	9 9.0%	
Neutral	2 10.0%	4 20.0%	0 .0%	6 30.0%	0 .0%	12 12.0%	
threat	17 85.0%	10 50.0%	12 60.0%	4 20.0%	16 80.0%	59 59.0%	
Strongly threat	0 .0%	6 30.0%	6 30.0%	4 20.0%	4 20.0%	20 20.0%	
Total	20 100.0%	20 100.0%	20 100.0%	20 100.0%	20 100.0%	100 100.0%	
Mean	3.80	4.10	4.10	3.30	4.20	3.90	

Source: Field Survey

5.3.2.6 Political Instability as a Threat for Company's Operation

Table 5.39 reveals that among the interviewed executives of the selected companies, 12% strongly agreed and 36% agreed to consider the political instability as a threat for their company's operation. On the other hand, 36% of them were neutral and 16% disagreed to consider the same. Out of five, BPL considered the political instability as greater threat (mean=4.80) than the other companies. However, the table confirms that the political instability is a threat (mean=4.30) for the pharmaceutical companies of Bangladesh. Significant difference was found in the political instability as threat of the sample companies (p=.001).

Table 5.39: Political Instability as a Threat for Company's Operation

Response	Name of the company					Total	χ^2 Test
	BPL	GSKB	IPIL	RL	SPL		
Strongly not threat							27.467[a] df=8 p=.001
Not threat							
Neutral	0 .0%	4 20.0%	8 40.0%	6 30.0%	0 .0%	18 18.0%	
threat	4 20.0%	6 30.0%	4 20.0%	10 50.0%	10 50.0%	34 34.0%	
Strongly threat	16 80.0%	10 50.0%	8 40.0%	4 20.0%	10 50.0%	48 48.0%	
Total	20 100.0 %	20 100.0 %	20 100.0 %	20 100.0 %	20 100.0 %	100 100.0%	
Mean	4.80	4.30	4.00	3.90	4.50	4.30	

Source: Field Survey

5.3.2.7 High rate of Interest as a Threat for Company's Operation

Table 5.40 displays that among the respondents of the selected companies, 34% strongly agreed and 39% agreed to consider the high rate of interest as a threat for their company's operation. On the other hand, 20% of them were neutral and 4% disagreed to consider the same. Among the companies, BPL considered the high rate of interest as greater threat (mean=4.60) than the other companies. However, it can be concluded from the table that high rate of interest is a threat (mean=4.00) pharmaceutical industry. There was significant difference in the high rate of interest as a threat of the sample companies.

Table 5.40: High rate of Interest as a Threat for Company's Operation

Response	Name of the company					Total	χ^2 Test
	BPL	GSKB	IPIL	RL	SPL		
Strongly not threat							65.429[a] df=12 p=.000
Not threat	1 5.0%	6 30.0%	0 .0%	0 .0%	0 .0%	7 7.0%	
Neutral	2 10.0%	4 20.0%	10 50.0%	4 20.0%	0 .0%	20 20.0%	
threat	1 5.0%	6 30.0%	6 30.0%	10 50.0%	16 80.0%	39 39.0%	
Strongly threat	16 80.0%	4 20.0%	4 20.0%	6 30.0%	4 20.0%	34 34.0%	
Total	20 100.0 %	20 100.0 %	20 100.0 %	20 100.0 %	20 100.0 %	100 100.0%	
Mean	4.60	3.40	3.70	4.10	4.20	4.00	

Source: Field Survey

5.3.2.8 Lack of Power Supply as a Threat for Company's Operation

Table 5.41 reveals that among the interviewed executives of the selected companies, 28% strongly agreed and 46% agreed to consider the lack of power supply as a threat for their company's operation. On the other hand, 20% of them were neutral and 6% disagreed to consider the same. Among the companies, BPL and RL considered the lack of power supply as greater threat (mean=4.30) than the other companies. However, it can be said from the opinion of executives that the lack of power supply is a moderate threat (mean=3.96) of the pharmaceutical industry. There was significant difference in the lack of power supply as a threat of the sample companies.

Table 5.41: Lack of Power Supply as a Threat for Company's Operation

Response	Name of the company					Total	χ^2 Test
	BPL	GSKB	IPIL	RL	SPL		
Strongly not threat							60.174[a] df=12 p=.000
Not threat	0 .0%	6 30.0%	0 .0%	0 .0%	0 .0%	6 6.0%	
Neutral	0 .0%	10 50.0%	6 30.0%	0 .0%	4 20.0%	20 20.0%	
threat	14 70.0%	0 .0%	6 30.0%	14 70.0%	12 60.0%	46 46.0%	
Strongly threat	6 30.0%	4 20.0%	8 40.0%	6 30.0%	4 20.0%	28 28.0%	
Total	20 100.0 %	20 100.0 %	20 100.0 %	20 100.0 %	20 100.0%	100 100.0 %	
Mean	4.30	3.10	4.10	4.30	4.00	3.96	

Source: Field Survey

5.3.2.9 Price of Raw Materials as a Threat for Company's Operation

Table 5.42 displays that among the respondents of the selected companies, 24% strongly agreed and 48% agreed to consider price of raw materials as a threat for their company's operation. On the other hand, 18% of them were neutral and 10% disagreed to consider the same. From the opinion of executives, it can be said that price of raw materials is moderate threat (mean=3.86) of the sample companies. Out of five, SPL considered price of raw materials as greater threat (mean=4.45) than the other companies. Significant difference was observed in price of raw materials as threat of the sample companies.

Table 5.42: Price of Raw Materials as a Threat for Company's Operation

Response	Name of the company					Total	χ^2 Test
	BPL	GSKB	IPIL	RL	SPL		
Strongly not threat							44.681[a] df=12 p=.000
Not threat	0 .0%	0 .0%	4 20.0%	6 30.0%	0 .0%	10 10.0%	
Neutral,	0 .0%	6 30.0%	8 40.0%	4 20.0%	0 .0%	18 18.0%	
threat	13 65.0%	8 40.0%	6 30.0%	10 50.0%	11 55.0%	48 48.0%	
Strongly threat	7 35.0%	6 30.0%	2 10.0%	0 .0%	9 45.0%	24 24.0%	
Total	20 100.0%	20 100.0%	20 100.0%	20 100.0%	20 100.0%	100 100.0%	
Mean	4.35	4.00	3.30	3.20	4.45	3.86	

Source: Field Survey

5.3.2.10 Govt. Drug rules and Policy as a Threat for Company's Operation

Table 5.43 reveals that among the interviewed executives of the selected companies, 10% strongly agreed to consider the govt. drug rules and policy as a threat for their company's activities. On the other hand, 59% of them were neutral and 25% disagreed and 6% strongly disagreed to consider the same. Out of five, GSKB considered the govt. drug rules and policy as greater threat (mean=4.00) than the other companies. From the table, it can be concluded that the govt. drug rules and policy is not a threat (mean=2.83) for the pharmaceutical industry. Statistically significant difference exists in the govt. drug rules and policy as a threat of the sample companies (p=.000).

Table 5.43: Govt. Drug rules and Policy as a Threat for Company's Operation

Response	Name of the company					Total	χ^2 Test
	BPL	GSKB	IPIL	RL	SPL		
Strongly not threat	0 .0%	0 .0%	0 .0%	6 30.0%	0 .0%	6 6.0%	92.854[a] df=12 p=.000
Not threat	0 .0%	0 .0%	8 40.0%	10 50.0%	7 35.0%	25 25.0%	
Neutral	20 100.0%	10 50.0%	12 60.0%	4 20.0%	13 65.0%	59 59.0%	
threat							
Strongly threat	0 .0%	10 50.0%	0 .0%	0 .0%	0 .0%	10 10.0%	
Total	20 100.0%	20 100.0%	20 100.0%	20 100.0%	20 100.0%	100 100.0%	
Mean	3.00	4.00	2.60	1.90	2.65	2.83	

Source: Field Survey

5.3.2.11 Lack of Modern Technology as a Threat for Company's Operation

Table 5.44 reveals that among the respondents of the selected companies, 10% strongly agreed and 33% agreed to consider the lack of modern technology as a threat for their business activities. On the other hand, 37% of them were neutral and 14% disagreed and 6% strongly disagreed to consider the same. Out of five, BPL and GSKB considered the lack of modern technology as greater threat (mean=3.70) than the other companies. From the opinion of executives, it can be said that the lack of modern technology is moderate threat (mean=3.27) for the pharmaceutical sector of Bangladesh. Significant difference was observed in the lack of modern technology as a threat of the sample companies (p=.000).

Table 5.44: Lack of Modern Technology as a Threat for Company's Operation

Response	**Name of the company**					**Total**	**χ^2 Test**
	BPL	GSKB	IPIL	RL	SPL		
Strongly not threat	0 .0%	0 .0%	0 .0%	6 30.0%	0 .0%	6 6.0%	75.654[a] df=16 p=.000
Not threat	0 .0%	0 .0%	6 30.0%	0 .0%	8 40.0%	14 14.0%	
Neutral,	12 60.0%	10 50.0%	4 20.0%	8 40.0%	3 15.0%	37 37.0%	
threat	2 10.0%	6 30.0%	10 50.0%	6 30.0%	9 45.0%	33 33.0%	
Strongly threat	6 30.0%	4 20.0%	0 .0%	0 .0%	0 .0%	10 10.0%	
Total	20 100.0%	20 100.0%	20 100.0%	20 100.0%	20 100.0%	100 100.0%	
Mean	3.70	3.70	3.20	2.70	3.05	3.27	

Source: Field Survey

5.3.2.12 Unethical Marketing of Competitor as a Threat for Company's Operation

Table 5.45 reveals that among the interviewed executives of the selected companies, 45% strongly agreed and 44% agreed to consider the unethical marketing of competitor as a threat for their company's operation. On the other hand, 11% of them were neutral

to consider the same. Out of the sample companies, RL considered the unethical marketing as greater threat (mean=4.50) than the other companies. However, the table confirmed that the unethical marketing of competitor is threat (mean=4.34) for the pharmaceutical companies of Bangladesh. There was significant difference in the unethical marketing of competitor as a threat of the sample companies (p=.001).

Table 5.45: Unethical Marketing of Competitor as a Threat for Company's operation

Response	Name of the company					Total	χ^2 Test
	BPL	GSKB	IPIL	RL	SPL		
Strongly not threat							25.167[a] df=8 p=.001
Not threat							
Neutral,	1 5.0%	6 30.0%	4 20.0%	0 .0%	0 .0%	11 11.0%	
threat	13 65.0%	4 20.0%	4 20.0%	10 50.0%	13 65.0%	44 44.0%	
Strongly threat	6 30.0%	10 50.0%	12 60.0%	10 50.0%	7 35.0%	45 45.0%	
Total	20 100.0%	20 100.0%	20 100.0%	20 100.0%	20 100.0%	100 100.0%	
Mean	4.25	4.20	4.40	4.50	4.35	4.34	

Source: Field Survey

5.4 Impact of External Environment on Company's Operations

5.4.1 Impact of Political Environment on Company's Operations

Table 5.46 displays the current impacts of political environment on different kind of business operations. It was found that the impacts of the political environment were on price of the drug (100%), export/import of the drugs (95%), scope of business (87%), profitability (79%), total quality management (77%), production process (34%), research and development (33%) and marketing system (20%). There was a statistically significant difference in the impact of political environment on company's operations.

Table 5.46: Impact of Political Environment on Company's Operations

Operations	Name of the company					Total	Cramer's V	Sig
	BPL	GSKB	IPIL	RL	SPL			
Price of the drugs	20 100.0%	20 100.0%	20 100.0%	20 100.0%	20 100.0%	100 100.0%	n.a	n.a
Export/import of the drugs	20 100.0%	20 100.0%	20 100.0%	20 100.0%	15 75.0%	95 95.0%	.459	.000
Total quality management	8 40.0%	20 100.0%	17 85.0%	20 100.0%	12 60.0%	77 77.0%	.560	.000
Profitability	19 95.0%	10 50.0%	10 50.0%	20 100.0%	20 100.0%	79 79.0%	.583	.000
Research and development	13 65.0%	10 50.0%	10 50.0%	0 .0%	0 .0%	33 33.0%	.585	.000
Scope of business	11 55.0%	20 100.0%	20 100.0%	20 100.0%	16 80.0%	87 87.0%	.624	.000
Production process	9 45.0%	10 50.0%	0 .0%	0 .0%	15 75.0%	34 34.0%	.624	.000
Marketing system	1 5.0%	0 .0%	6 30.0%	0 .0%	13 65.0%	20 20.0%	.627	.000

Source: Field Survey

5.4.2 Impact of Economic Environment on Company's Operations

Table 5.47 describes the current impacts of economic environment on different kind of business operations. It was found that the impacts of the economic environment were on profitability (94%), scope of business (80%), price of the drug (73%), export/import of the drugs (52%), total quality management (10%) and research and development (8%). There was a statistically significant difference in the impact of economic environment on company's operations.

Table 5.47: Impact of Economic Environment on Company's Operations

Operations	Name of the company					Total	Cramer's V	Sig
	BPL	GSKB	IPIL	RL	SPL			
Price of the drugs	20 100.0%	0 .0%	20 100.0%	20 100.0%	13 65.0%	73 73.0%	.877	.000
Export/import of the drugs	19 95.0%	0 .0%	18 90.0%	0 .0%	15 75.0%	52 52.0%	.860	.000
Total quality management	8 40.0%	0 .0%	2 10.0%	0 .0%	0 .0%	10 10.0%	.516	.000
Profitability	20 100.0%	20 100.0%	20 100.0%	20 100.0%	14 70.0%	94 94.0%	.505	.000
Research and development	6 30.0%	0 .0%	2 10.0%	0 .0%	0 .0%	8 8.0%	.430	.001
Scope of business	8 40.0%	20 100.0%	18 90.0%	20 100.0%	14 70.0%	80 80.0%	.570	.000
Marketing system	-	-	-	-	-	-	-	-

Source: Field Survey

5.4.3 Impact of Bangladeshi Social/Cultural Environment on Company's Operations

Table 5.48 describes the current impacts of the social/cultural environment on different kind of business operations. It was found that the impacts of the social/cultural environment of Bangladesh were on scope of business (74%), marketing system (29%), price of the drug (29%), profitability (12%) and total quality management (10%). There was a statistically significant difference in the impact of Bangladeshi social/cultural environment on company's operations.

Table 5.48: Impact of Bangladeshi Social/Cultural Environment on Company's Operation

Operations	Name of the company					Total	Cramer's V	Sig
	BPL	GSKB	IPIL	RL	SPL			
Price of the drugs	1 5.0%	0 .0%	8 40.0%	20 100.0%	0 .0%	29 29.0%	.849	.000
Export/import of the drugs	-	-	-	-	-	-	-	-
Total quality management	6 30.0%	0 .0%	4 20.0%	0 .0%	0 .0%	10 10.0%	.422	.001
Profitability	6 30.0%	0 .0%	6 30.0%	0 .0%	0 .0%	12 12.0%	.452	.000
Research and development	-	-	-	-	-	-	-	-
Scope of business	20 100.0%	0 .0%	14 70.0%	20 100.0%	20 100.0%	74 74.0%	.884	.000
Production process								
Marketing system	19 95.0%	10 50.0%	0 .0%	0 .0%	0 .0%	29 29.0%	.843	.000

Source: Field Survey

5.4.4 Impact of Technological Environment on Company's Operations

Table 5.49 describes the current impacts of the technological environment on different kind of business operations. It was found that the impacts of the technological environment were on scope of business (100%), total quality management (85%), production process (84%), profitability (66%), research and development (64%), marketing system (38%), price of the drug (38%), and marketing system (37%). There was a statistically significant difference in the impact of technological environment on company's operations.

Table 5.49: Impact of Technological Environment on Company's Operations

Operations	Name of the company					Total	Cramer's V	Sig
	BPL	GSKB	IPIL	RL	SPL			
Price of the drugs	0 .0%	10 50.0%	20 100.0%	0 .0%	8 40.0%	38 38.0%	.764	.000
Export/import of the drugs								
Total quality management	9 45.0%	20 100.0%	20 100.0%	20 100.0%	16 80.0%	85 85.0%	.601	.000
Profitability	19 95.0%	10 50.0%	20 100.0%	0 .0%	17 85.0%	66 66.0%	.788	.000
Research and development	20 100.0%	20 100.0%	6 30.0%	0 .0%	18 90.0%	64 64.0%	.860	.000
Scope of business	20 100.0%	20 100.0%	20 100.0%	20 100.0%	20 100.0%	100 100.0%	n.a.	
Production process	20 100.0%	10 50.0%	14 70.0%	20 100.0%	20 100.0%	84 84.0%	.562	.000
Marketing system	14 70.0%	20 100.0%	3 15.0%	0 .0%	0 .0%	37 37.0%	.843	.000

Source: Field Survey

5.5 Overall SWOT Analysis of Sample Pharmaceutical Companies

5.5.1 Strength Analysis of the Pharmaceutical Companies

The table 5.50 shows the strengths of the sample pharmaceutical companies according to the interviewed executives with their scores and ranking as per Likert's five point scale. The table reveals that brand name ranked top with the score 448 followed by Good manufacturing process (424), Delivery system (417), Working environment and Use of up-to-date technology (407), Total Quality Management (403), Product innovations (396), Corporate leadership (387), Professional skill of the employee (380) and Research and development (363). The table found that own manufactured raw materials is insignificant strength for the sample companies. It can be concluded that the sample companies have several significant strength and management can use these strength to overcome their threats.

Table 5.50: Strength Analysis of the Pharmaceutical Companies

Strength Factors	Sum	Mean	Comments	Rank
Brand name	448	4.48	HS	1
Good manufacturing process	424	4.24	HS	2
Delivery system	417	4.17	HS	3
Working environment	407	4.07	HS	4
Use of up-to-date technology	407	4.07	HS	4
Total Quality Management	403	4.03	HS	5
Product innovations	396	3.96	S	6
Corporate leadership	387	3.87	S	7
Professional skill of the employee	380	3.80	S	8
Research and development	363	3.63	S	9
Own manufactured raw materials	243	2.43	INS	10
Note: HS = Highly Significant (Score 401-500) S = Significant (Score 301-400) INS = Insignificant (Below 301)				

Source: Tables no. 5.1, 5.2, 5.3, 5.4, 5.5, 5.6, 5.7, 5.8, 5.9, 5.1o, 5.11.

5.5.2 Correlation Analysis of Strength Factors of Pharmaceutical Companies

The table depicts correlations among the strengths factors of pharmaceutical industry. It has been found that brand name is positively correlated with all other factors. Good manufacturing process is positively correlated with all other factors except with work environment and own manufactured raw materials. Delivery system is positively correlated with all other factors except with own manufactured raw materials. Research and Development is positively correlated with all other factors except with use of up-to-date technology. Work environment is positively correlated with all other factors except with good manufacturing process, corporate leadership and professional skill of the employee. Use of up-to-date technology is positively correlated with all other factors except with research and development. Product innovation is positively correlated with all other factors. Own manufactured raw material is positively correlated with all other factors except with good manufacturing process and delivery system. Total quality management is positively correlated with all other factors except.

Corporate leadership is positively correlated with all other factors except with work environment. Professional skill of the employee is positively correlated with all other factors except work environment.

Table 5.51: Correlation Analysis of Strength Factors

	1	2	3	4	5	6	7	8	9	10	11
1	1	.087	.016	.116	.133	.116	.064	.062	.260**	.323**	.107
2		1	.144	.161	-.240*	.005	.296**	-.040	.227*	.338**	.370**
3			1	.261**	.062	.046	.394**	-.005	.367**	.152	.182
4				1	.032	-.021	.228*	.292**	.395**	.196	.265**
5					1	.112	.043	.042	.093	-.002	-.231*
6						1	.088	.284**	.327**	.241*	.008
7							1	.084	.553**	.490**	.283**
8								1	.387**	.184	.158
9									1	.469**	.220*
10										1	.389**
11											1

note : 1 = Brand name, 2 = Good manufacturing process, 3 = Delivery system, 4 = Reasearch and Development, 5 = Work environment, 6 = Use of up-to-date technology, 7 = Product innovation, 8 = own manufactured raw materials, 9 = Total quality management, 10 = Corporate leadership and 11 = Professional skill of the employee

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

5.5.3 Weakness Analysis of the Pharmaceutical Companies

The table 5.52 displays the weaknesses of the sample pharmaceutical companies according to the interviewed executives with their scores and ranking as per Likert's five point scale. From the table, it reveals that the lack of Active Pharmaceutical Ingredients (API) facilities is highly significant (score = 426) internal weakness for the pharmaceutical companies. On the other hand, other factors except lack of API facilities are found insignificant weakness for the companies. So management should consider it try to establish own API facilities.

Table 5.52: Weakness Analysis of the Pharmaceutical Companies

Weakness Factors	Score	Mean	Comments	Rank
Lack of API facilities	426	4.26	HS	1
Lack of capacity utilization	253	2.53	INS	2
Lack of ethical marketing	243	2.43	INS	3
Lack of managerial leadership	228	2.58	INS	4
Lack of professional skill	225	2.25	INS	5
Lack of wide distribution network	218	2.18	INS	6
Lack of R &D	217	2.17	INS	7
Lack of modern technology	215	2.15	INS	8
Lack of awareness of stakeholders	212	2.12	INS	9
Lack of GMP	207	2.07	INS	10
Lack of good Pharmacist	198	1.98	INS	11

Source: Tables no. 5.12, 5.13, 5.14, 5.15, 5.16, 5.17, 5.18, 5.19, 5.20, 5.21, 5.22.

5.5.4 Correlation Analysis of Weakness Factors of Pharmaceutical Companies

The table 5.53 depicts correlations among the weakness factors of pharmaceutical industry. It has been found that lack of GMP is positively correlated with all other factors except with lack of API weakness, lack of capacity utilization and lack of wide distribution network. Lack of R&D is positively correlated with all other factors except with lack of professional skill, lack of managerial leadership, lack of awareness of the stakeholders, lack of API weakness, lack of capacity utilization and lack of wide distribution network. Lack of professional skill is positively correlated with all other factors except with lack of R&D, lack of API weakness, lack of capacity utilization and lack of wide distribution network. Lack of managerial leadership is positively correlated with all other factors except with lack of R&D, lack of ethical marketing, lack of API weakness and lack of wide distribution network. Lack of modern technology is positively correlated with all other factors except with lack of awareness of the stakeholders, lack of API weakness, lack of capacity utilization and lack of wide distribution network.

Lack of good pharmacist is positively correlated with all other factors except with lack of capacity utilization and lack of wide distribution network. Lack of ethical marketing

is positively correlated with all other factors except with lack of managerial leadership, lack of capacity utilization and lack of wide distribution network. Lack of awareness of the stakeholders is positively correlated with all other factors except with lack of R&D, lack of modern technology, lack of API weakness, lack of capacity utilization and lack of wide distribution network. Lack of API weakness is negatively correlated with all other factors except with lack of good pharmacist, lack of ethical marketing and lack of API weakness. Lack of capacity utilization is negatively correlated with all other factors except with lack of managerial leadership and lack of wide distribution network. Lack of wide distribution network is negatively correlated with all other factors except with lack of awareness of the stakeholders and lack of capacity utilization.

Table 5.53: Correlation Analysis of Weakness Factors

	1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**
1	1	.079	.456**	.104	.288**	.104	.210*	.197*	-.019	-.226*	-.166
2		1	-.072	-.037	.183	.204*	.073	-.002	-.146	-.240*	-.048
3			1	.226*	.276**	.197	.257**	.254*	-.046	-.202*	-.146
4				1	.413**	.169	-.065	.204*	-.240*	.098	-.001
5					1	.165	.082	-.021	-.303**	-.218*	-.140
6						1	.100	.007	.038	-.181	-.056
7							1	.271**	.242*	-.076	-.211*
8								1	-.065	-.045	.024
9									1	-.156	-.588**
10										1	.358**
11											1

Note: 1=lack of GMP, 2=lack of R&D, 3=lack of professional skill, 4= lack of managerial leadership, 5=lack of modern technology, 6=lack of good pharmacist, 7=lack of ethical marketing, 8=lack of awareness of the stakeholders, 9=lack of API weakness, 10=lack of capacity utilization and 11=lack of wide distribution network.

**Correlation is significant at the 0.01 level (2-tailed).

*Correlation is significant at the 0.05 level (2-tailed).

5.5.5 Opportunity Analysis of Pharmaceutical Companies

The table 5.54 describes the opportunities of the sample pharmaceutical companies according to the interviewed executives with their scores and ranking as per Likert's five point scale. The table shows that Increase of income of people ranked top with the

score 437 followed by Health awareness of people (434), Modern technology (429), Increasing of private hospital (420), Current economic growth (402), Increase of literacy of people (399), Member of LDC and Current WTO-TRIPS Agreement (381), Govt. drug rules and policy (377), Present export/import policy (375) and Govt. industrial policy (344). The table found that own manufactured raw materials is insignificant strength for the sample companies. It can be concluded that the sample companies have several significant opportunities and management of the companies can use these opportunities to enhance their business activities.

Table 5.54: Opportunity Analysis of Pharmaceutical Companies

Opportunity Factors	Score	Mean	Comments	Rank
Increase of income of people	437	4.37	HS	1
Health awareness of people	434	4.34	HS	2
Modern technology	429	4.29	HS	3
Increasing of private hospital	420	4.20	HS	4
Current economic growth	402	4.02	HS	5
Increase of literacy of people	399	3.99	S	6
Current WTO-TRIPS Agreement	381	3.81	S	7
Member of LDC	381	3.81	S	7
Govt. drug rules and policy	377	3.77	S	8
Present export/import policy	375	3.75	S	9
Govt. industrial policy	344	3.44	S	10
Note: HS = Highly Significant (Score 401-500) S = Significant (Score 301-400) INS = Insignificant (Below 301)				

Source: Tables no. 5.23, 5.24, 5.25, 5.26, 5.27, 5.28, 5.29, 5.30, 5.31, 5.32, 3.33.

5.5.6 Correlation Analysis of Opportunities Factors of Pharmaceutical Companies

The table 5.55 displays correlations among the opportunities factors of pharmaceutical industry. It has been found that govt. industrial policy is positively correlated with all other factors except with modern technology, health awareness of people, increasing of private hospital. Present export/import policy is positively correlated with all other factors except with health awareness of people and increasing of private hospital.

Current WTO-TRIPS Agreement is positively correlated with all other factors except with health awareness of people. Increase of literacy of people is positively correlated with all other factors except with increasing of private hospital. Increase of income of people is positively correlated with all other factors except with increasing of private hospital. Modern technology is positively correlated with all other factors except with govt. industrial policy. Health awareness of people is positively correlated with all other factors except with govt. industrial policy, present export/import policy, current WTO-TRIPS Agreement. Increasing of private hospital is positively correlated with all other factors except with govt. industrial policy, present export/import policy, increase of literacy of people, increase of income of people and member of LDC. Current economic growth, member of LDC and govt. drug rules and policy are positively correlated with all other factors.

Table 5.55: Correlation Analysis of Opportunities Factors

	1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**
1	1	.257**	.287**	.097	.238*	.165	-.192	-.169	-.114	.078	.236*
2		1	.332**	.174	.021	.143	.068	-.118	-.029	.148	.113
3			1	.246*	.126	.148	.177	-.139	.057	.528**	.503**
4				1	.364**	.107	.322**	.296**	-.085	.202*	.051
5					1	.181	.166	.205*	-.110	.207*	.257**
6						1	.090	.119	.158	.208*	.345**
7							1	.244*	.062	.340**	.201*
8								1	.037	.077	.010
9									1	-.077	.258**
10										1	.471**
11											1

Note: 1 = Govt. industrial policy, 2 = Present export/import policy, 3 = Current WTO-TRIPS Agreement, 4 = Increase of literacy of people, 5 = Increase of income of people, 6 = Current economic growth, 7 = Modern technology, 8 = Health awareness of people, 9 = Increasing of private hospital, 10 = Member of LDC and 11 = Govt. drug rules and policy

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

5.5.7 Threat Analysis of the Pharmaceutical Companies

The table 5.56 describes the environmental threats of the sample pharmaceutical companies according to the interviewed executives with their scores and ranking as per Likert's five point scale. The table reveals that among the threat factors, Unethical marketing of competitor ranked top with the score 434 followed by Political instability (430), High rate of interest (400), Lack of power supply (396), High corporate tax (390), Price of raw materials (386), WTOTRIPS agreement after 2015 (381), Lack of API Park (374), Local competitors (353), Lack of modern technology (327), New entrants (310) and Govt. drug rules and policy (283). It can be concluded that the sample companies have several significant environmental threats and company management should consider these and try to overcome through proper strategic management practice to retain the current growth of this sector.

Table 5.56: Threat Analysis of the Pharmaceutical Companies

Threat Factors	Score	Mean	Comments	Rank
Unethical marketing of competitor	434	4.34	HS	1
Political instability	430	4.30	HS	2
High rate of interest	400	4.00	S	3
Lack of power supply	396	3.96	S	4
High corporate tax	390	3.90	S	5
Price of raw materials	386	3.86	S	6
WTOTRIPS agreement after 2015	381	3.81	S	7
Lack of API Park	374	3.74	S	8
Local competitors	353	3.53	S	9
Lack of modern technology	327	3.27	S	10
New entrants	310	3.10	S	11
Govt. drug rules and policy	283	2.83	INS	12

Note:
HS = Highly Significant (Score 401-500)
S = Significant (Score 301-400)
INS = Insignificant (Below 301)

Source: Tables no. 5.34, 5.35, 5.36, 5.37, 5.38, 5.39, 5.40, 5.41, 5.42, 5.43, 5.44, 5.45.

5.5.8 Correlation Analysis of Threats Factors of Pharmaceutical Companies

The table 5.57 describes correlations among the threats factors of pharmaceutical industry. It has been found that new entrants, local competitors, high corporate tax and govt. drug rules and policy are positively correlated with all other factors except with high rate of interest and lack of power supply. Lack of API Park is positively correlated with all other factors except with unethical marketing of competitor. High corporate tax is positively correlated with all other factors except with high rate of interest and lack of power supply. High rate of interest is positively correlated with all other factors except with new entrants, local competitors, high corporate tax, govt. drug rules and policy and Lack of modern technology. Lack of power supply is positively correlated with all other factors except with new entrants, local competitors, high corporate tax, govt. drug rules and policy. Lack of modern technology is positively correlated with all other factors except with high rate of interest. Unethical marketing of competitor is positively correlated with all other factors except with lack of API Park. WTOTRIPS agreement after 2015, political instability and price of raw material are positively correlated with all other factors.

Table 5.57: Correlation Analysis of Threats Factors of Pharmaceutical Companies

	1	2	3	4	5	6	7	8	9	10	11	12
1	1	.792**	.512**	.671**	.670**	.605**	-.123	.379**	-.271**	.599**	.502**	.222*
2		1	.339**	.486**	.571**	.475**	-.021	.359**	-.204*	.594**	.443**	.159
3			1	.575**	.624**	.475**	.063	.729**	.144	.067	.177	-.014
4				1	.467**	.381**	.133	.575**	.086	.279**	.326**	.097
5					1	.696**	-.094	.430**	-.092	.504**	.368**	.227*
6						1	.234*	.561**	.144	.530**	.597**	.413**
7							1	.427**	.756**	-.309**	-.033	.149
8								1	.458**	.169	.384**	.125
9									1	-.416**	.036	.307**
10										1	.588**	.190
11											1	.262**
12												1

Note: 1 = New entrants, 2 = Local competitors, 3 = Lack of API Park, 4 = WTOTRIPS agreement after 2015, 5 = High corporate tax, 6 = Political instability, 7 = High rate of interest, 8 = Price of raw material, 9 = Lack of power supply, 10 = Govt. drug rules and policy, 11 = Lack of modern technology and 12= Unethical marketing of competitor.

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

5.6 Chapter Summary

This chapter investigated the major environmental factors that influence the strategic management practices of the Pharmaceutical companies in Bangladesh. The internal factors include strength and weakness and external factors include that influence pharmaceutical industry. Among the strength factors, the result found that Brand name ranked top followed by Good manufacturing process, Delivery system, Working environment and Use of up-to-date technology, Total Quality Management, Product innovations, Corporate leadership, Professional skill of the employee and Research and development. Among the weakness factors, it revealed that the lack of Active Pharmaceutical Ingredients (API) facilities is highly significant for the pharmaceutical companies. According to the interviewed executives of the sample pharmaceutical companies, Increase of income of people ranked top followed by Health awareness of people, Modern technology, Increasing of private hospital, Current economic growth, Increase of literacy of people, Member of LDC and Current WTO-TRIPS Agreement, Govt. drug rules and policy, Present export/import policy and Govt. industrial policy. Among the threat factors, Unethical marketing of competitor ranked top followed by Political instability, High rate of interest, Lack of power supply, High corporate tax, Price of raw materials, Govt. drug rules and policy, WTOTRIPS agreement after 2015, Lack of API Park, Local competitors, Lack of modern technology and New entrants. It also examined the impact of external environmental factors like political, economic, social/cultural, technological factors on business activities.

Chapter Six
IMPLEMETATION OF STRATEGIES AT DIFFERENT LEVELS OF THE SELECTED PHARMACEUTICAL COMPANIES

6.1 Introduction

This chapter investigates the major corporate, business and functional level strategies which are followed by Pharmaceutical Companies in Bangladesh. It discussed the major strategies like product/market growth strategies, Research and Development (R & D) strategies, human resource strategies, marketing strategies, company's international strategies, acquisition, merger, divestiture or elimination, turnarounds and joint venture strategy and quality management of company. It describes the extent of consideration of adopting such strategy in the organization and also report whether there are any significant differences among the selected companies.

6.2 Product/Market Growth Strategies of the Selected Pharmaceutical Companies

The product/market growth strategies which were considered to be investigated for this study are:

- Seeking growth through introducing existing products in current markets
- Seeking growth through introducing existing products into new markets
- Seeking growth through introducing new products into existing markets
- Seeking growth through introducing new products into new markets

6.2.1 Seeking Growth through Introducing Existing Products in Current Markets

Table 6.1 reveals that among the interviewed executives of the selected pharmaceutical companies, 37% strongly agreed and 53% agreed to consider the growth through existing products in existing markets. On the other hand, only 10% of them did not opine to consider the same. The maximum mean (mean=4.65) was found in RL followed by SPL, BPL, GSKB and IPIL which indicate the level of consideration of this strategy. From the opinion of executives, it can be said that the sample companies

consider the growth strategy through existing products in existing markets (mean=4.27). Statistically significant difference was found among the sample companies.

Table 6.1: Seeking Growth through Introducing Existing Products in Current Markets

Response	Name of the company					Total	χ^2 Test
	BPL	GSKB	IPIL	RL	SPL		
Strongly Disagree							28.573[a] df=8 p=.000
Disagree							
Neutral	2 10.0%	2 10.0%	3 15.0%	1 5.0%	2 10.0%	10 10.0%	
Agree	13 65.0%	15 75.0%	15 75.0%	5 25.0%	5 25.0%	53 53.0%	
Strongly Agree	5 25.0%	3 15.0%	2 10.0%	14 70.0%	13 65.0%	37 37.0%	
Total	20 100.0%	20 100.0%	20 100.0%	20 100.0%	20 100.0%	100 100.0%	
Average	4.15	4.05	3.95	4.65	4.55	4.27	

Source: Field Survey

6.2.2 Seeking Growth through Introducing Existing Products into New Markets

The data in Table 6.2 describes that among the respondents of the selected companies, 47% strongly agreed and 47% agreed to consider the growth through introducing existing products into new markets. Only 6% of them did not opine to consider the same. The maximum mean (mean=4.65) was found in BPL followed by RL and SPL, GSKB and IPIL which indicate the level of consideration of this strategy. From the table, it can be said that the sample pharmaceutical companies consider the growth strategy through introducing existing products into new markets (mean=4.41). However, it was also found that there was significant difference among the sample companies.

Table 6.2: Seeking Growth through Introducing Existing Products into New Markets

Response	Name of the company					Total	χ^2 Test
	BPL	GSKB	IPIL	RL	SPL		
Strongly Disagree							
Disagree							
Neutral	2 10.0%	0 .0%	2 10.0%	0 .0%	2 10.0%	6 6.0%	
Agree	7 35.0%	13 65.0%	15 75.0%	8 40.0%	4 20.0%	47 47.0%	20.851[a] df=8 p=.008
Strongly Agree	11 55.0%	7 35.0%	3 15.0%	12 60.0%	14 70.0%	47 47.0%	
Total	20 100.0%	20 100.0%	20 100.0%	20 100.0%	20 100.0%	100 100.0%	
Average	4.65	4.35	4.05	4.60	4.60	4.41	

Source: Field Survey

6.2.3 Seeking Growth through Introducing New Products into Existing Markets

Table 6.3 presents the opinions of the interviewed executives of the selected companies. It shows that 44% strongly agreed and 50% agreed to consider the growth through introducing new products into existing markets. Only 6% of them did not opine to consider the same. The maximum mean (mean=4.65) was found in RL followed by SPL, BPL, GSKB and IPIL which indicate the level of consideration of this strategy. From the table, it can be said that the sample companies consider the growth strategy through introducing new products into existing markets (mean=4.38). From the χ (khi) square test it is clear that significant difference exists among the sample companies.

Table 6.3: Seeking Growth through Introducing New Products into Existing Markets

Response	Name of the company					Total	χ^2 Test
	BPL	GSKB	IPIL	RL	SPL		
Strongly Disagree							
Disagree							
Neutral	2 10.0%	1 5.0%	1 5.0%	1 5.0%	1 5.0%	6 6.0%	26.567[a] df=8 p=.001
Agree	7 35.0%	15 75.0%	17 85.0%	5 25.0%	6 30.0%	50 50.0%	
Strongly Agree	11 55.0%	4 20.0%	2 10.0%	14 70.0%	13 65.0%	44 44.0%	
Total	20 100.0%	20 100.0%	20 100.0%	20 100.0%	20 100.0%	100 100.0%	
Average	4.45	4.15	4.05	4.65	4.60	4.38	

Source: Field Survey

6.2.4 Seeking Growth through Introducing New Products into New Markets

Table 6.4 presents the opinions of the respondents of the selected pharmaceutical companies. It shows that 26% strongly agreed and 43% agreed to consider the growth through introducing new products into new markets. On the other hand, 28% of them did not opine and 3% disagreed to consider the same. The maximum mean (mean=4.65) was found in SPL followed by GSKB, RL, BPL and IPIL which indicate the level of consideration of this strategy. From the table, it can be concluded that the sample companies consider the growth strategy through introducing new products into new markets (mean=3.92). From the χ (khi) square test it is clear that significant difference exists among the sample companies.

Table 6.4: Seeking Growth through Introducing New Products into New Markets

Response	Name of the company					Total	χ^2 Test
	BPL	GSKB	IPIL	RL	SPL		
Strongly Disagree							
Disagree	0 .0%	0 .0%	3 15.0%	0 .0%	0 .0%	3 3.0%	
Neutral	10 50.0%	0 .0%	14 70.0%	2 10.0%	2 10.0%	28 28.0%	62.416[a] df=12 p=.000
Agree	8 40.0%	15 75.0%	3 15.0%	10 50.0%	7 35.0%	43 43.0%	
Strongly Agree	2 10.0%	5 25.0%	0 .0%	8 40.0%	11 55.0%	26 26.0%	
Total	20 100.0%	20 100.0%	20 100.0%	20 100.0%	20 100.0%	100 100.0%	
Average	3.60	4.25	3.00	4.30	4.45	3.92	

Source: Field Survey

6.3 Research and Development (R & D) Strategies of Pharmaceutical Companies

The Research and Development (R & D) strategies which were considered to be investigated for this study are:

- Company's consideration to be highly technology innovative
- Company prefers to seek growth via acquisitions rather than internal R & D
- The emphasis of R& D expenditures is highly applied
- R & D effort tends to avoid high risk activity

6.3.1 Company's Consideration to be Highly Technology Innovative

Table 6.5 presents the opinions of executives of the selected companies. It shows that 36% strongly agreed and 53% agreed to consider their companies to be highly technology innovative. Only 11% of them did not opine to consider the same. The maximum mean (mean=4.70) was found in SPL followed by RL, IPIL, GSKB and BPL which indicate the level of consideration of taking R & D strategy. As a result from the opinion of executives, it can be said that the sample companies consider to be highly technology innovative (mean=4.25). Statistically significant difference was found among the sample companies.

Table 6.5: Company's Consideration to be Highly Technology Innovative

Response	Name of the company					Total	χ^2 Test
	BPL	GSKB	IPIL	RL	SPL		
Strongly Disagree							25.328[a] df=8 p=.001
Disagree							
Neutral	3 15.0%	1 5.0%	2 10.0%	4 20.0%	1 5.0%	11 11.0%	
Agree	14 70.0%	15 75.0%	13 65.0%	7 35.0%	4 20.0%	53 53.0%	
Strongly Agree	3 15.0%	4 20.0%	5 25.0%	9 45.0%	15 75.0%	36 36.0%	
Total	20 100.0%	20 100.0%	20 100.0%	20 100.0%	20 100.0%	100 100.0%	
Average	4.00	4.15	4.15	4.25	4.70	4.25	

Source: Field Survey

6.3.2 Seeking Growth via Acquisitions rather than Internal R & D

Table 6.6 presents the opinions of executives of the selected companies. It shows that 17% strongly disagreed and 41% disagreed to prefer seeking growth via acquisitions rather than internal R & D. On the other hand, 27% of them did not opine and 15% agreed to prefer the same. The maximum mean (mean=3.75) was found in RL followed by GSKB, SPL, BPL and IPIL which indicate the level of consideration of taking R & D strategy. It can be concluded that the sample companies did not prefer to seek growth through internal R & D (mean=2.40). From the χ (khi) square test it is clear that significant difference exists among the sample companies.

Table 6.6: Seeking Growth via Acquisitions rather than Internal R & D

Response	Name of the company					Total	χ^2 Test
	BPL	GSKB	IPIL	RL	SPL		
Strongly Disagree	7 35.0%	0 .0%	10 50.0%	0 .0%	0 .0%	17 17.0%	
Disagree	7 35.0%	8 40.0%	10 50.0%	0 .0%	16 80.0%	41 41.0%	116.945[a] df=12 p=.000
Neutral	6 30.0%	12 60.0%	0 .0%	5 25.0%	4 20.0%	27 27.0%	
Agree	0 .0%	0 .0%	0 .0%	15 75.0%	0 .0%	15 15.0%	
Strongly Agree							
Total	20 100.0%	20 100.0%	20 100.0%	20 100.0%	20 100.0%	100 100.0%	
Average	1.95	2.60	1.50	3.75	2.20	2.40	

Source: Field Survey

6.3.3 The Emphasis of R & D Expenditures is Highly Applied

Table 6.7 presents the opinions of executives of the selected pharmaceutical companies. It shows that 41% strongly disagreed and 38% disagreed to consider R & D expenditures as highly applied. Only 21% of them did not opine to consider the same. The maximum mean (mean=4.70) was found in GSKB followed by SPL, RL, IPIL, and BPL which indicate the level of consideration of taking R & D strategy. From the table, it can be said that the R & D expenditures is highly applied for the sample pharmaceutical companies (mean=4.20). Statistically significant difference was found among the sample companies.

Table 6.7: The Emphasis of R& D Expenditures is Highly Applied

Response	Name of the company					Total	χ^2 Test
	BPL	GSKB	IPIL	RL	SPL		
Strongly Disagree							
Disagree							
Neutral	13 65.0%	1 5.0%	2 10.0%	2 10.0%	3 15.0%	21 21.0%	49.723[a] df=8 p=.000
Agree	7 35.0%	4 20.0%	14 70.0%	8 40.0%	5 25.0%	38 38.0%	
Strongly Agree	0 .0%	15 75.0%	4 20.0%	10 50.0%	12 60.0%	41 41.0%	
Total	20 100.0%	20 100.0%	20 100.0%	20 100.0%	20 100.0%	100 100.0%	
Average	3.35	4.70	4.10	4.40	4.45	4.20	

Source: Field Survey

6.3.4 R & D Effort Tends to Avoid High Risk Activity

Table 6.8 presents the opinions of executives of the selected companies. It shows that 15% strongly disagreed and 46% disagreed to consider R & D effort tends to avoid high risk activity. On the other hand, 38% of them did not opine and only 1% disagreed to consider the same. The maximum mean (mean=4.50) was found in RL followed by SPL, BPL, IPIL and GSKB which indicate the level of consideration of taking R & D strategy. The result revealed that the R & D effort of sample companies tends to avoid high risk activity moderately (mean=3.75). From the χ (khi) square test it is clear that significant difference exists among the sample companies.

Table 6.8: R & D Effort Tends to Avoid High Risk Activity

Response	**Name of the company**					**Total**	**χ^2 Test**
	BPL	GSKB	IPIL	RL	SPL		
Strongly Disagree							48.053[a] df=12 p=.000
Disagree	0 .0%	0 .0%	1 5.0%	0 .0%	0 .0%	1 1.0%	
Neutral	11 55.0%	14 70.0%	10 50.0%	0 .0%	3 15.0%	38 38.0%	
Agree	8 40.0%	6 30.0%	8 40.0%	10 50.0%	14 70.0%	46 46.0%	
Strongly Agree	1 5.0%	0 .0%	1 5.0%	10 50.0%	3 15.0%	15 15.0%	
Total	20 100.0%	20 100.0%	20 100.0%	20 100.0%	20 100.0%	100 100.0%	
Average	3.50	3.30	3.45	4.50	4.00	3.75	

Source: Field Survey

6.4 Marketing Strategies of the Selected Pharmaceutical Companies

The marketing strategies which are considered to be investigated for this study are:

- Health awareness programmed
- Free sample to doctors
- Ethical marketing
- Regular contact with the doctor
- Corporate Social Responsibility
- Low price compared to competitor
- Special reward for employees

6.4.1 Involvement of Health Awareness Programs as Marketing Strategy

Table 6.9 reveals that among the interviewed executives of the selected pharmaceutical companies, 32% strongly agreed and 53% agreed to consider the involvement of health awareness programs as marketing strategy. On the other hand, only 15% of them did not opine to consider the same. The maximum mean (mean=4.50) was found in GSKB followed by IPIL, SPL, BPL, and RL which indicate the level of consideration of taking this marketing strategies. As a result from the opinion of executives, it can be concluded that health awareness programs are important marketing promotion activities for the sample companies that affect their business performance (mean=4.17). Statistically significant difference exists among the sample companies.

Table 6.9: Involvement of Health Awareness Programs as Marketing Strategy

Response	**Name of the company**					**Total**	**χ^2 Test**
	BPL	GSKB	IPIL	RL	SPL		
Not at all Involved							22.497[a] df=8 p=.004
Involved							
Neutral	4 20.0%	0 .0%	0 .0%	8 40.0%	3 15.0%	15 15.0%	
Involved	10 50.0%	10 50.0%	16 80.0%	6 30.0%	11 55.0%	53 53.0%	
Strongly Involved	6 30.0%	10 50.0%	4 20.0%	6 30.0%	6 30.0%	32 32.0%	
Total	20 100.0%	20 100.0%	20 100.0%	20 100.0%	20 100.0%	100 100.0%	
Average	4.10	4.50	4.20	3.90	4.15	4.17	

Source: Field Survey

6.4.2 Free Sample Distribution to Doctors as Marketing Strategy

Table 6.10 reveals that among the respondents of the selected pharmaceutical companies, 40% strongly agreed and 44% agreed to consider the involvement of free sample to doctors as marketing strategy. On the other hand, only 14 15% of them did not opine and only 2% to consider the same. The maximum mean (mean=4.55) was found in SPL followed by IPIL, RL, BPL and GSKB which indicate the level of consideration of taking this marketing strategies. As a result from the opinion of

executives, it can be concluded that free sample distribution to doctors is important marketing promotion activities for the pharmaceutical companies that affect their business performance (mean=4.22). From the χ (khi) square test it is clear that significant difference exists among the sample companies.

Table 6.10: Free sample distribution to Doctors as Marketing Strategy

Response	Name of the company					Total	χ^2 Test
	BPL	GSKB	IPIL	RL	SPL		
Not at all Involved							47.367[a] df=12 p=.000
Involved	0 .0%	2 10.0%	0 .0%	0 .0%	0 .0%	2 2.0%	
Neutral	2 10.0%	10 50.0%	0 .0%	0 .0%	2 10.0%	14 14.0%	
Involved	9 45.0%	8 40.0%	10 50.0%	12 60.0%	5 25.0%	44 44.0%	
Strongly Involved	9 45.0%	0 .0%	10 50.0%	8 40.0%	13 65.0%	40 40.0%	
Total	20 100.0%	20 100.0%	20 100.0%	20 100.0%	20 100.0%	100 100.0%	
Average	4.35	3.30	4.50	4.40	4.55	4.22	

Source: Field Survey

6.4.3 Ethical Marketing as Marketing Strategy

Table 6.11 reveals that among the interviewed executives of the selected pharmaceutical companies, 63% strongly agreed and 22% agreed to consider the involvement of ethical marketing as marketing strategy. On the other hand, only 15% of them did not opine to consider the same. The maximum mean (mean=5.00) was found in GSKB followed by RL, SPL IPIL and BPL which indicate the level of consideration of taking this marketing strategies. It is observed from the table that ethical marketing is an important marketing promotion activity for the sample companies that affect their business operation (mean=4.48). Statistically significant difference exists among the sample companies.

Table 6.11: Ethical Marketing as Marketing Strategy

Response	Name of the company					Total	χ^2 Test
	BPL	GSKB	IPIL	RL	SPL		
Not at all Involved							35.690[a] df=8 p=.000
Involved							
Neutral	5 25.0%	0 .0%	8 40.0%	0 .0%	2 10.0%	15 15.0%	
Involved	9 45.0%	0 .0%	2 10.0%	6 30.0%	5 25.0%	22 22.0%	
Strongly Involved	6 30.0%	20 100.0%	10 50.0%	14 70.0%	13 65.0%	63 63.0%	
Total	20 100.0%	20 100.0%	20 100.0%	20 100.0%	20 100.0%	100 100.0%	
Average	4.05	5.00	4.10	4.70	4.55	4.48	

Source: Field Survey

6.4.4 Regular Contact with the Doctor as Marketing Strategy

Table 6.12 reveals that among the respondents of the selected pharmaceutical companies, 50% strongly agreed and 43% agreed to consider the involvement of regular contact with the doctors as marketing strategy. On the other hand, only 7% of them did not opine to consider the same. The maximum mean (mean=4.75) was found in SPL followed by BPL, RL, IPIL and GSKB which indicate the level of consideration of taking this marketing strategies. As a result from the opinion of executives, it can be concluded that regular contact with the doctor is important marketing promotion activities for the sample companies that affect their business performance (mean=4.43). Statistically significant difference exists among the sample companies.

Table 6.12: Regular Contact with the Doctor as Marketing Strategy

Response	Name of the company					Total	χ^2 Test
	BPL	GSKB	IPIL	RL	SPL		
Not at all Involved							36.696[a] df=8 p=.000
Involved							
Neutral	0 .0%	5 25.0%	2 10.0%	0 .0%	0 .0%	7 7.0%	
Involved	6 30.0%	15 75.0%	10 50.0%	7 35.0%	5 25.0%	43 43.0%	
Strongly Involved	14 70.0%	0 .0%	8 40.0%	13 65.0%	15 75.0%	50 50.0%	
Total	20 100.0%	20 100.0%	20 100.0%	20 100.0%	20 100.0%	100 100.0%	
Average	4.70	3.75	4.30	4.65	4.75	4.43	

Source: Field Survey

6.4.5 Corporate Social Responsibility as Marketing Strategy

Table 6.13 reveals that among the interviewed executives of the selected pharmaceutical companies, 45% strongly agreed and 38% agreed to consider the involvement of corporate social responsibility as marketing strategy. On the other hand, only 12% of them did not opine and 5% disagreed to consider the same. The maximum mean (mean=4.50) was found in SPL followed by GSKB, RL, BPL and IPIL which indicate the level of consideration of taking this marketing strategies. So, it can be said that corporate social responsibility is important marketing promotion activities for the sample companies that affect their business performance (mean=4.23). From the χ (khi) square test it is observed that no significant difference exists among the sample companies.

Table 6.13: Corporate Social Responsibility as Marketing Strategy

Response	**Name of the company**					**Total**	**χ^2 Test**
	BPL	GSKB	IPIL	RL	SPL		
Not at all Involved							18.523[a] df=12 p=.101
Not Involved	2 10.0%	0 .0%	1 5.0%	2 10.0%	0 .0%	5 5.0%	
Neutral	2 10.0%	2 10.0%	5 25.0%	1 5.0%	2 10.0%	12 12.0%	
Involved	6 30.0%	8 40.0%	12 60.0%	6 30.0%	6 30.0%	38 38.0%	
Strongly Involved	10 50.0%	10 50.0%	2 10.0%	11 55.0%	12 60.0%	45 45.0%	
Total	20 100.0%	20 100.0%	20 100.0%	20 100.0%	20 100.0%	100 100.0%	
Average	4.20	4.40	3.75	4.30	4.50	4.23	

Source: Field Survey

6.4.6 Low Price Compared to Competitor's Price Rates

Table 6.14 reveals that among the respondents of the selected pharmaceutical companies, 31% agreed to consider the involvement of low price compared to competitor as marketing strategy. On the other hand, only 37% of them did not opine, 20% opined as not involved and 12% opined as not at all involved to consider the same. The maximum mean (mean=3.50) was found in IPIL followed by, SPL, BPL, RL and

GSKB which indicate the level of consideration of taking this marketing strategies. As a result from the opinion of executives, it can be said that low price compared to competitor is not an important marketing promotion activity for the sample companies that affect their business performance (mean=2.87). From the χ (khi) square test it is clear that significant difference exists among the sample companies.

Table 6.14: Low Price Compared to Competitor's Price Rates

Response	**Name of the company**					**Total**	**χ^2 Test**
	BPL	GSKB	IPIL	RL	SPL		
Not at all Involved	0 .0%	6 30.0%	0 .0%	6 30.0%	0 .0%	12 12.0%	40.546[a] df=12 p=.000
Involved	6 30.0%	6 30.0%	2 10.0%	0 .0%	6 30.0%	20 20.0%	
Neutral	7 35.0%	8 40.0%	6 30.0%	10 50.0%	6 30.0%	37 37.0%	
Involved	7 35.0%	0 .0%	12 60.0%	4 20.0%	8 40.0%	31 31.0%	
Strongly Involved							
Total	20 100.0%	20 100.0%	20 100.0%	20 100.0%	20 100.0%	100 100.0%	
Average	3.05	2.10	3.50	2.60	3.10	2.87	

Source: Field Survey

6.4.7 Special Reward for Employees

Table 6.15 reveals that among the interviewed executives of the selected pharmaceutical companies, 43% strongly agreed and 34% agreed to consider the special reward for employee as marketing strategy. On the other hand, only 18% of them did not opine and 5% was involved to consider the same. The maximum mean (mean=4.55) was found in SPL followed by BPL, IPIL, RL and GSKB which indicate the level of consideration of taking this marketing strategies. So, it is an evident that special reward for employee is important marketing promotion activity for the pharmaceutical companies that affect their business performance (mean=4.15). Statistically significant difference exists among the sample companies.

Table 6.15: Special Reward for Employees

Response	Name of the company					Total	χ^2 Test
	BPL	GSKB	IPIL	RL	SPL		
Not at all Involved							35.644[a] df=12 p=.000
Involved	0 .0%	3 15.0%	0 .0%	2 10.0%	0 .0%	5 5.0%	
Neutral	2 10.0%	9 45.0%	0 .0%	6 30.0%	1 5.0%	18 18.0%	
Involved	6 30.0%	6 30.0%	11 55.0%	4 20.0%	7 35.0%	34 34.0%	
Strongly Involved	12 60.0%	2 10.0%	9 45.0%	8 40.0%	12 60.0%	43 43.0%	
Total	20 100.0%	20 100.0%	20 100.0%	20 100.0%	20 100.0%	100 100.0%	
Average	4.50	3.35	4.45	3.90	4.55	4.15	

Source: Field Survey

6.5 Human Resource Strategies of the Selected Pharmaceutical Companies

The Human Resource Strategies which are considered to be investigated for this study are:

- Appropriate sized workforce for the companies
- Employees with the right knowledge and skill
- Formal job duties of the employees
- Monitoring the daily activities of the employees
- Attracting and retaining the employees by paying a higher wage
- Using performance appraisals to identify new skills
- Arranging training programs
- Promotion system of the companies

6.5.1 Appropriate Sized Workforce for the Companies

Table 6.16 reveals that among the interviewed executives of the selected pharmaceutical companies, 31% strongly agreed and 33% agreed that size of the workforce is appropriate for their company. On the other hand, only 14% of them did not opine, 20% disagreed and 2% strongly disagreed to consider the same. The

maximum mean (mean=4.36) was found in BPL followed by RL, SPL, IPIL, and GSKB which indicate the level of consideration of taking this Human Resource (HR) Strategies. As a result from the opinion of executives, it can be concluded that appropriately sized workforce is an important human resource strategy for the sample companies that affect their business performance (mean=3.71). From the χ (khi) square test it is clear that significant difference exists among the sample companies.

Table 6.16: Appropriate Sized Workforce for the Companies

Response	Name of the company					Total	χ^2 Test
	BPL	GSKB	IPIL	RL	SPL		
Strongly Disagree	0 .0%	2 10.0%	0 .0%	0 .0%	0 .0%	2 2.0%	77.332[a] df=16 p=.000
Disagree	2 10.0%	15 75.0%	1 5.0%	1 5.0%	1 5.0%	20 20.0%	
Neutral	2 10.0%	2 10.0%	5 25.0%	2 10.0%	3 15.0%	14 14.0%	
Agree	4 20.0%	1 5.0%	10 50.0%	6 30.0%	12 60.0%	33 33.0%	
Strongly Agree	12 60.0%	0 .0%	4 20.0%	11 55.0%	4 20.0%	31 31.0%	
Total	20 100.0%	20 100.0%	20 100.0%	20 100.0%	20 100.0%	100 100.0%	
Average	4.36	2.10	3.85	4.35	3.95	3.71	

Source: Field Survey

6.5.2 Employees with the Right Knowledge and Skill

Table 6.17 presents the opinion of the respondents of the selected pharmaceutical companies. 42% of them strongly agreed and 43% agreed that the employees of the companies have the right knowledge and skill. On the other hand, only 8% of them did not opine to and 7% disagreed to consider the same. The maximum mean (mean=4.35) was found in BPL and SPL followed by RL, GSKB and IPIL which indicate the level of consideration of taking this HR Strategies. As a result from the opinion of executives, it is clear recruitment of skilled employee is an important human resource strategy for the sample companies that affect their business operations (mean=4.20). Statistically no significant difference was found among the sample companies.

Table 6.17: Employees with the Right Knowledge and Skill

Response	Name of the company					Total	χ^2 Test
	BPL	GSKB	IPIL	RL	SPL		
Strongly Disagree							
Disagree	1 5.0%	0 .0%	4 20.0%	1 5.0%	1 5.0%	7 7.0%	
Neutral	2 10.0%	1 5.0%	2 10.0%	2 10.0%	1 5.0%	8 8.0%	20.771[a] df=12 p=.054
Agree	6 30.0%	15 75.0%	9 45.0%	5 25.0%	8 40.0%	43 43.0%	
Strongly Agree	11 55.0%	4 20.0%	5 25.0%	12 60.0%	10 50.0%	42 42.0%	
Total	20 100.0%	20 100.0%	20 100.0%	20 100.0%	20 100.0%	100 100.0%	
Average	4.35	4.15	3.75	4.40	4.35	4.20	

Source: Field Survey

6.5.3 Formal Job Duties of the Employees

Table 6.18 presents the interviewed executives. Out of them, 35% strongly agreed and 54% agreed that they have formal job duties so that employees know their responsibilities. On the other hand, only 1% of them did not opine and 1% disagreed to consider the same. The maximum mean (mean=4.60) was found in BPL followed by RL, SPL, GSKB and IPIL which indicate the level of consideration of taking this HR Strategies. As a result from the opinion of executives, it can be concluded that formal job responsibilities is important human resource strategy for the sample companies that affect their business performance (mean=4.23). Statistically significant difference exists among the sample companies.

Table 6.18: Formal Job Duties of the Employees

Response	Name of the company					Total	χ^2 Test
	BPL	GSKB	IPIL	RL	SPL		
Strongly Disagree							
Disagree	0 .0%	0 .0%	0 .0%	1 5.0%	0 .0%	1 1.0%	
Neutral	0 .0%	0 .0%	0 .0%	1 5.0%	0 .0%	1 1.0%	28.772[a] df=12 p=.004
Agree	4 20.0%	14 70.0%	15 75.0%	6 30.0%	15 75.0%	54 54.0%	
Strongly Agree	14 70.0%	4 20.0%	3 15.0%	10 50.0%	4 20.0%	35 35.0%	
Total	20 100.0%	20 100.0%	20 100.0%	20 100.0%	20 100.0%	100 100.0%	
Average	4.60	4.10	4.05	4.25	4.15	4.23	

Source: Field Survey

6.5.4 Monitoring the Daily Activities of the Employees

Table 6.19 shows the opinions of interviewed executives of the selected pharmaceutical companies. Out of them, 54% strongly agreed and 34% agreed that managers closely monitor the day-to-day activities of employees. On the other hand, only 7% of them did not opine and 5% disagreed to consider the same. The maximum mean (mean=4.36) was found in BPL and RL followed by SPL, GSKB and IPIL which indicate the level of consideration of taking this HR Strategies. From the table, it is clear that closely monitoring system is an important human resource strategy which affects day-to-day activities of employees (mean=4.37). Statistically significant difference exists among the sample companies.

Table 6.19: Monitoring the Daily Activities of the Employees

Response	**Name of the company**					**Total**	**χ^2 Test**
	BPL	GSKB	IPIL	RL	SPL		
Strongly Disagree							24.262[a] df=12 p=.019
Disagree	0 .0%	0 .0%	5 25.0%	0 .0%	0 .0%	5 5.0%	
Neutral	1 5.0%	1 5.0%	1 5.0%	2 10.0%	2 10.0%	7 7.0%	
Agree	7 35.0%	9 45.0%	7 35.0%	5 25.0%	6 30.0%	34 34.0%	
Strongly Agree	12 60.0%	10 50.0%	7 35.0%	13 65.0%	12 60.0%	54 54.0%	
Total	20 100.0%	20 100.0%	20 100.0%	20 100.0%	20 100.0%	100 100.0%	
Average	4.55	4.45	3.80	4.55	4.50	4.37	

Source: Field Survey

6.5.5 Attracting and Retaining the Employees by Paying a Higher Wage

Table 6.20 reveals that among the respondents of the selected pharmaceutical companies, 16% strongly agreed and 44% agreed to consider the attracting and retaining employees by paying a higher wage than competitors. On the other hand, only 34% of them did not opine, 4% disagreed and 2% strongly disagreed to consider the same. The maximum mean (mean=4.36) was found in SPL followed by RL, BPL,

GSKB and IPIL which indicate the level of consideration of taking this HR Strategies. As a result from the opinion of executives, it can be concluded that the sample companies try to attract and retain employees by paying a higher wage than competitors (mean=3.68). Statistically significant difference exists among the sample companies.

Table 6.20: Attracting and Retaining the Employees by Paying a Higher Wage

Response	Name of the company					Total	χ^2 Test
	BPL	GSKB	IPIL	RL	SPL		
Strongly Disagree	0 .0%	0 .0%	2 10.0%	0 .0%	0 .0%	2 2.0%	50.672[a] df=16 p=.000
Disagree	0 .0%	0 .0%	4 20.0%	0 .0%	0 .0%	4 4.0%	
Neutral	9 45.0%	10 50.0%	8 40.0%	3 15.0%	4 20.0%	34 34.0%	
Agree	9 45.0%	10 50.0%	6 30.0%	12 60.0%	7 35.0%	44 44.0%	
Strongly Agree	2 10.0%	0 .0%	0 .0%	5 25.0%	9 45.0%	16 16.0%	
Total	20 100.0%	20 100.0%	20 100.0%	20 100.0%	20 100.0%	100 100.0%	
Average	3.65	3.50	2.90	4.10	4.25	3.68	

Source: Field Survey

6.5.6 Using Performance Appraisals to Identify New Skills

Table 6.21 presents that among the interviewed executives of the selected pharmaceutical companies, 36% strongly agreed and 51% agreed to consider using performance appraisals system of the sample companies. On the other hand, only 12% of them did not opine and 1% disagreed to consider the same. The maximum mean (mean=4.55) was found in SPL followed by GSKB, RL, BPL and IPIL which indicate the level of consideration of taking this HR Strategies. So from the table, it is revealed that the sample companies use performance appraisals strategy to help employees identify new skills to develop their business (mean=4.22). Statistically significant difference exists among the sample companies.

Table 6.21: Using Performance Appraisals to Identify New Skills

Response	Name of the company					Total	χ^2 Test
	BPL	GSKB	IPIL	RL	SPL		
Strongly Disagree							
Disagree	0 .0%	0 .0%	1 5.0%	0 .0%	0 .0%	1 1.0%	
Neutral	2 10.0%	2 10.0%	6 30.0%	1 5.0%	1 5.0%	12 12.0%	
Agree	16 80.0%	8 40.0%	9 45.0%	11 55.0%	7 35.0%	51 51.0%	25.703[a] df=12 p=.012
Strongly Agree	2 10.0%	10 50.0%	4 20.0%	8 40.0%	12 60.0%	36 36.0%	
Total	20 100.0%	20 100.0%	20 100.0%	20 100.0%	20 100.0%	100 100.0%	
Average	4.00	4.40	3.80	4.35	4.55	4.22	

Source: Field Survey

6.5.7 Arranging Training Programs

Table 6.22 shows the opinions of executives of the selected pharmaceutical companies. Out of the respondents, 42% strongly agreed and 50% agreed to consider the involvement of their companies in training programmed to develop employee's skill. On the other hand, only 8% of them did not opine to consider the same. The maximum mean (mean=4.36) was found in BPL followed by GSKB, SPL, RL and IPIL which indicate the level of consideration of taking this HR Strategies. So, it can be said that arranging training program is an important human resource strategy for the sample companies (mean=4.34). Statistically no significant difference was found among the sample companies.

Table 6.22: Arranging Training Programs

Response	Name of the company					Total	χ^2 Test
	BPL	GSKB	IPIL	RL	SPL		
Strongly Disagree							
Disagree							
Neutral	1 5.0%	1 5.0%	4 20.0%	1 5.0%	1 5.0%	8 8.0%	11.929[a] df=8 p=.154
Agree	6 30.0%	9 45.0%	10 50.0%	13 65.0%	12 60.0%	50 50.0%	
Strongly Agree	13 65.0%	10 50.0%	6 30.0%	6 30.0%	7 35.0%	42 42.0%	
Total	20 100.0%	20 100.0%	20 100.0%	20 100.0%	20 100.0%	100 100.0%	
Average	4.60	4.45	4.10	4.25	4.30	4.34	

Source: Field Survey

6.5.8 Promotion System of the Sample Companies

Table 6.23 presents opinions of executives of the selected pharmaceutical companies. Among the executives, 19% strongly agreed and 44% agreed that their promotion system is attractive compared to their competitors. On the other hand, only 30% of them did not opine and 7% disagreed to consider the same. The maximum mean (mean=4.15) was found in RL followed by SPL, IPIL, GSKB and BPL which indicate the level of consideration of taking this HR Strategies. As a result from the opinion of executives, it can be concluded that promotion system of the sample companies is important human resource strategy that affect their business performance (mean=3.75). Statistically significant difference exists among the sample companies.

Table 6.23: The Promotion System of the Sample Companies

Response	**Name of the company**					**Total**	**χ^2 Test**
	BPL	GSKB	IPIL	RL	SPL		
Strongly Disagree							37.365[a] df=12 p=.000
Disagree	1 5.0%	0 .0%	3 15.0%	0 .0%	3 15.0%	7 7.0%	
Neutral	10 50.0%	10 50.0%	8 40.0%	2 10.0%	0 .0%	30 30.0%	
Agree	8 40.0%	10 50.0%	4 20.0%	13 65.0%	9 45.0%	44 44.0%	
Strongly Agree	1 5.0%	0 .0%	5 25.0%	5 25.0%	8 40.0%	19 19.0%	
Total	20 100.0%	20 100.0%	20 100.0%	20 100.0%	20 100.0%	100 100.0%	
Average	3.45	3.50	3.55	4.15	4.10	3.75	

Source: Field Survey

6.6 International Strategies of the Sample Pharmaceutical Companies

Corporate planning is conducted on a worldwide
Marketing strategies are developed on a worldwide basis
Company seek foreign markets of existing products

6.6.1 Do you have any international operations?

Table 6.24 shows the response rate of the interviewed executives of the selected pharmaceutical companies. It is clear from the table that all the sample companies have international operations.

Table 6.24: Do you have any international operations?

Response	Name of the company					Total
	BPL	GSKB	IPIL	RL	SPL	
Yes	20 100.0%	20 100.0%	20 100.0%	20 100.0%	20 100.0%	100 100.0%
No	0	0	0	0	0	0
Total	20 100.0%	20 100.0%	20 100.0%	20 100.0%	20 100.0%	100 100.0%

Source: Field Survey

6.6.2 Corporate planning is conducted on a worldwide

Among the interviewed executives of the selected pharmaceutical companies, 24% strongly agreed and 35% agreed that their corporate planning is conducted on a worldwide (Table 6.25). On the other hand, only 15% of them did not opine and 9% disagreed to consider the same. The maximum mean (mean=4.35) was found in RL followed by, SPL, GSKB, BPL and IPIL which indicate the level of consideration of taking this international strategies. As a result from the opinion of executives, it can be said that corporate planning of the sample companies is functioning internationally (mean=3.74). However, statistically significant difference was found among the sample companies.

Table 6.25: Corporate planning is conducted on a worldwide

Response	Name of the company					Total	χ^2 Test
	BPL	GSKB	IPIL	RL	SPL		
Strongly Disagree							
Disagree	1 5.0%	0 .0%	8 40.0%	0 .0%	0 .0%	9 9.0%	
Neutral	11 55.0%	7 35.0%	10 50.0%	0 .0%	4 20.0%	32 32.0%	
Agree	1 5.0%	7 35.0%	2 10.0%	13 65.0%	12 60.0%	35 35.0%	64.477^a df=12 p=.000
Strongly Agree	7 35.0%	6 30.0%	0 .0%	7 35.0%	4 20.0%	24 24.0%	
Total	20 100.0%	20 100.0%	20 100.0%	20 100.0%	20 100.0%	100 100.0%	
Average	3.70	3.95	2.70	4.35	4.00	3.74	

Source: Field Survey

6.6.3 Marketing strategies are developed on a worldwide basis

Table 6.26 shows the opinions of the executives of the selected pharmaceutical companies. Out of them, the strongly agreed and 43% agreed that their marketing strategies are developed on a worldwide basis. On the other hand, only 20% of them did not opine and 11% disagreed to consider the same. The maximum mean (mean=4.30) was found in RL followed by SPL, GSKB, BPL and IPIL which indicate the level of consideration of taking this international strategies. From the table, it is said that marketing strategies of the sample companies are developed on a worldwide basis (mean=3.84). Statistically significant difference exists among the sample companies.

Table 6.26: Marketing strategies are developed on a worldwide basis

Response	Name of the company					Total	χ^2 Test
	BPL	GSKB	IPIL	RL	SPL		
Strongly Disagree							95.611[a] df=12 p=.000
Disagree	1 5.0%	0 .0%	6 30.0%	0 .0%	4 20.0%	11 11.0%	
Neutral	10 50.0%	0 .0%	10 50.0%	0 .0%	0 .0%	20 20.0%	
Agree	2 10.0%	20 100.0%	4 20.0%	14 70.0%	3 15.0%	43 43.0%	
Strongly Agree	7 35.0%	0 .0%	0 .0%	6 30.0%	13 65.0%	26 26.0%	
Total	20 100.0%	20 100.0%	20 100.0%	20 100.0%	20 100.0%	100 100.0%	
Average	3.75	4.00	2.90	4.30	4.25	3.84	

Source: Field Survey

6.6.4 Company seeks foreign markets of existing products

Table 6.27 shows the opinions of the respondents of the selected pharmaceutical companies. Out of them, 17% strongly agreed and 74% agreed that they seek foreign markets in which they can market existing products. On the other hand, only 9% of them did not opine to consider the same. The maximum mean (mean=4.35) was found in RL followed by BPL, SPL, IPIL and GSKB which indicate the level of consideration of taking this international strategies. From the table, it can be concluded that the sample companies seek foreign markets to export the existing products (4.08). Statistically significant difference exists among the sample companies.

Table 6.27: Company seeks foreign markets of existing products

Response	Name of the company					Total	χ^2 Test
	BPL	GSKB	IPIL	RL	SPL		
Strongly Disagree							27.754[a] df=8 p=.001
Disagree							
Neutral	1 5.0%	6 30.0%	2 10.0%	0 .0%	0 .0%	9 9.0%	
Agree	13 65.0%	14 70.0%	18 90.0%	13 65.0%	16 80.0%	74 74.0%	
Strongly Agree	6 30.0%	0 .0%	0 .0%	7 35.0%	4 20.0%	17 17.0%	
Total	20 100.0%	20 100.0%	20 100.0%	20 100.0%	20 100.0%	100 100.0%	
Average	4.25	3.70	3.90	4.35	4.20	4.08	

Source: Field Survey

6.7 Acquisition Strategy of the Sample Companies

When the question was asked about the significant acquisitions made by the company during last ten years, the responses ensured that only one company (GSKB) had made significant acquisitions during last ten years. The details of the respondents are shown in the table 6.28.

Table 6.28: Has your company made any significant acquisition in last ten years?

Response	Name of the company					Total
	BPL	GSKB	IPIL	RL	SPL	
Yes	0 .0%	20 100.0%	0 .0%	0 .0%	0 .0%	20 20.0%
No	20 100.0%	0 .0%	20 100.0%	20 100.0%	20 100.0%	80 80.0%
Total	20 100.0%	20 100.0%	20 100.0%	20 100.0%	20 100.0%	100 100.0%

Source: Field Survey

6.8 Merger Strategy of the Sample Companies

When the question was asked about the merger strategy taken by the company during last ten years, the responses confirmed that no company has merged with another company during last ten years. The details of the respondents are shown in the table 6.29.

Table 6.29: Has your company merged with another company in last ten years?

Response	Name of the company					Total
	BPL	GSKB	IPIL	RL	SPL	
Yes	0 .0%	0 .0%	0 .0%	0 .0%	20 100.0%	20 20.0%
No	20 100.0%	20 100.0%	20 100.0%	20 100.0%	0 .0%	80 80.0%
Total	20 100.0%	20 100.0%	20 100.0%	20 100.0%	20 100.0%	100 100.0%

Source: Field Survey

6.9 Divestment Strategy of the Sample Companies

When the question was asked about the divested or eliminated strategy taken by the company during last ten years, the responses confirmed that no company has divested or eliminated any important operation during last ten years. The details of the respondents are shown in the table 6.30.

Table 6.30: Has your company divested or eliminated any important operation in last ten years?

Response	Name of the company					Total
	BPL	GSKB	IPIL	RL	SPL	
Yes	0 .0%	20 100.0%	0 .0%	0 .0%	0 .0%	20 20.0%
No	20 100.0%	0 .0%	20 100.0%	20 100.0%	20 100.0%	80 80.0%
Total	20 100.0%	20 100.0%	20 100.0%	20 100.0%	20 100.0%	100 100.0%

Source: Field Survey

6.10 Turnarounds Strategy of the Sample Companies

When the question was asked about the significant turnarounds made by the company during last ten years, the responses ensured that no company had made significant turnarounds during last ten years. The details of the respondents are shown in the table 6.31.

Table 6.31: Has your company made any significant turnarounds in last ten years?

Response	Name of the company					Total
	BPL	GSKB	IPIL	RL	SPL	
Yes						
No	20 100.0%	20 100.0%	20 100.0%	20 100.0%	20 100.0%	100 100.0%
Total	20 100.0%	20 100.0%	20 100.0%	20 100.0%	20 100.0%	100 100.0%

Source: Field Survey

6.11 Joint Venture Strategy of the Sample Companies

When the question was asked about the joint venture activities taken by the sample companies during last ten years, the responses confirmed that only one company (RL) has made joint venture business with another company during last ten years. Another four companies have not made joint venture with others. The details of the respondents are shown in the table 6.32.

Table 6.32: Has your company made any joint venture business in last ten years?

Response	Name of the company					Total
	BPL	GSKB	IPIL	RL	SPL	
Yes	0 .0%	0 .0%	0 .0%	20 100.0%	0 .0%	20 20.0%
No	20 100.0%	20 100.0%	20 100.0%	0 .0%	20 100.0%	80 80.0%
Total	20 100.0%	20 100.0%	20 100.0%	20 100.0%	20 100.0%	100 100.0%

Source: Field Survey

6.12 Quality Management of the Sample Companies

Quality Management strategies which are considered to be investigated for this study are:

• Importance of quality management in the company
• Responsibility of employees for the quality improvements
• Role of the senior management for quality improvements

• Special rewards to employees for quality improvements
• Role of employee's training on quality improvements
• Assessment of the quality of product manufacturing processes

6.12.1 Importance of Quality Management for the Company

Table 6.33 presents the opinions of the executives of the selected pharmaceutical companies. Of the executives, 48% strongly agreed and 45% agreed that quality management is an important strategic issue for their company. On the other hand, only 7% of them did not opine to consider the same. The maximum mean (mean=4.75) was found in GSKB followed by SPL, BPL, RL and IPIL which indicate the level of consideration of taking this quality management Strategies. Responses confirmed overall, the sample companies considered management of quality as a strategic issue to a reasonably great extent (mean=4.41) with no statistically significant difference among the companies.

Table 6.33: Importance of Quality Management for the Company

Response	**Name of the company**					**Total**	**χ^2 Test**
	BPL	GSKB	IPIL	RL	SPL		
Strongly disagree							13.952[a] df=8 p=.083
Disagree							
Neutral	2 10.0%	0 .0%	2 10.0%	2 10.0%	1 5.0%	7 7.0%	
Agree	11 55.0%	5 25.0%	12 60.0%	11 55.0%	6 30.0%	45 45.0%	
Strongly agree	7 35.0%	15 75.0%	6 30.0%	7 35.0%	13 65.0%	48 48.0%	
Total	20 100.0%	20 100.0%	20 100.0%	20 100.0%	20 100.0%	100 100.0%	
Average	4.25	4.75	4.20	4.25	4.60	4.41	

Source: Field Survey

6.12.2 Responsibility of Employees for the Quality Improvements

The table 6.34 reveals that out of the executives of the selected pharmaceutical companies, 59% strongly agreed and 29% agreed that quality is the responsibility of everyone in the organization. On the other hand, 10% of them did not opine and 2%

disagreed to consider the same. The maximum mean (mean=4.75) was found in SPL followed by, GSKB, BPL, RL and IPIL which indicate the level of consideration of taking this quality management Strategies. Overall, it can be concluded that the employees of all the sample companies are involved in quality approach (mean=4.45). Significant difference was found in the levels of extent that the employees involved in quality approach.

Table 6.34: Responsibility of Employees for the Quality Improvements

Response	**Name of the company**					**Total**	**χ^2 Test**
	BPL	GSKB	IPIL	RL	SPL		
Strongly disagree							25.296[a] df=12 p=.013
Disagree	1 5.0%	0 .0%	1 5.0%	0 .0%	0 .0%	2 2.0%	
Neutral	1 5.0%	1 5.0%	5 25.0%	2 10.0%	1 5.0%	10 10.0%	
Agree	3 15.0%	5 25.0%	6 30.0%	12 60.0%	3 15.0%	29 29.0%	
Strongly agree	15 75.0%	14 70.0%	8 40.0%	6 30.0%	16 80.0%	59 59.0%	
Total	20 100.0%	20 100.0%	20 100.0%	20 100.0%	20 100.0%	100 100.0%	
Average	4.60	4.65	4.05	4.20	4.75	4.45	

Source: Field Survey

6.12.3 Role of the Senior Management for Quality Improvements

Table 6.35 shows the opinions of the respondents of the selected pharmaceutical companies. Out of them, 43% strongly agreed and 46% agreed that the senior management provides the leadership for continuous quality improvements. On the other hand, 10% of them did not opine and only 1% disagreed to consider the same. The maximum mean (mean=4.60) was found in GSKB followed by BPL, SPL, RL and IPIL which indicate the level of consideration of taking this quality management Strategies. Responses ensured overall, the senior management of the sample companies plays a vital role for continuous quality improvements (mean=4.31). Significant difference was found among the sample companies.

Table 6.35: Role of the Senior Management for Quality Improvements

Response	Name of the company					Total	χ^2 Test
	BPL	GSKB	IPIL	RL	SPL		
Strongly disagree							
Disagree	0 .0%	0 .0%	1 5.0%	0 .0%	0 .0%	1 1.0%	
Neutral	2 10.0%	0 .0%	6 30.0%	1 5.0%	1 5.0%	10 10.0%	
Agree	5 25.0%	8 40.0%	11 55.0%	12 60.0%	10 50.0%	46 46.0%	27.325[a] df=12 p=.007
Strongly agree	13 65.0%	12 60.0%	2 10.0%	7 35.0%	9 45.0%	43 43.0%	
Total	20 100.0%	20 100.0%	20 100.0%	20 100.0%	20 100.0%	100 100.0%	
Average	4.55	4.60	3.70	4.30	4.40	4.31	

Source: Field Survey

6.12.4 Special Rewards to Employees for Quality Improvements

Table 6.36 presents the opinions of the executives of the selected pharmaceutical companies. Out of them, 47% strongly agreed and 38% agreed that the company has special rewards for employees who contribute to quality improvements. On the other hand, 11% of them did not opine and only 4% disagreed to consider the same. The maximum mean (mean=4.55) was found in BPL followed by SPL, RL, GSKB and IPIL which indicate the level of consideration of taking this quality management Strategies. From the table, it can be concluded that the sample companies have special rewards for employees to quality improvements (mean=4.28). Statistically significant difference exists among the companies.

Table 6.36: Special Rewards to Employees for Quality Improvements

Response	Name of the company					Total	χ^2 Test
	BPL	GSKB	IPIL	RL	SPL		
Strongly disagree							
Disagree	0 .0%	0 .0%	4 20.0%	0 .0%	0 .0%	4 4.0%	
Neutral	1 5.0%	4 20.0%	4 20.0%	2 10.0%	0 .0%	11 11.0%	32.708[a] df=12 p=.001
Agree	7 35.0%	4 20.0%	10 50.0%	7 35.0%	10 50.0%	38 38.0%	
Strongly agree	12 60.0%	12 60.0%	2 10.0%	11 55.0%	10 50.0%	47 47.0%	
Total	20 100.0%	20 100.0%	20 100.0%	20 100.0%	20 100.0%	100 100.0%	
Average	4.55	4.40	3.50	4.45	4.50	4.28	

Source: Field Survey

6.12.5 Role of Employee's Training on Quality Improvements

The table 6.37 reveals hat out of the respondents of the selected pharmaceutical companies, 40% strongly agreed and 50% agreed that the company training of employees in quality issues plays an important role. On the other hand, 6% of them did not opine and 4% disagreed to consider the same. The maximum mean (mean=4.60) was found in BPL and GSKB followed by RL, SPL and IPIL which indicate the level of consideration of taking this quality management Strategies. Overall, it can be concluded that the employees training plays an important role in quality issues (mean=4.26). Significant difference was found in the levels of extent that the employees involved in quality approach.

Table 6.37: Role of Employee's Training on Quality Improvements

Response	Name of the company					Total	χ^2 Test
	BPL	GSKB	IPIL	RL	SPL		
Strongly disagree							37.983[a] 12 .000
Disagree	0 .0%	0 .0%	4 20.0%	0 .0%	0 .0%	4 4.0%	
Neutral	2 10.0%	0 .0%	1 5.0%	1 5.0%	2 10.0%	6 6.0%	
Agree	4 20.0%	8 40.0%	14 70.0%	12 60.0%	12 60.0%	50 50.0%	
Strongly agree	14 70.0%	12 60.0%	1 5.0%	7 35.0%	6 30.0%	40 40.0%	
Total	20 100.0%	20 100.0%	20 100.0%	20 100.0%	20 100.0%	100 100.0%	
Average	4.60	4.60	3.60	4.30	4.20	4.26	

Source: Field Survey

6.12.6 Assessment of the Quality of Product Manufacturing Processes

Table 6.38 presents the opinions of the executives of the selected pharmaceutical companies. Out of them, 48% strongly agreed and 39% agreed that company regularly assesses the quality of product manufacturing processes. On the other hand, 10% of them did not opine and only 3% disagreed to consider the same. The maximum mean (mean=4.60) was found in GSKB followed by SPL, BPL, RL and IPIL which indicate

the level of consideration of taking this quality management Strategies. From the opinion of executives, it can be said that the sample pharmaceutical companies assess the quality of product manufacturing processes regularly (mean=4.32). There was no significant difference among the sample companies.

Table 6.38: Assessment of the Quality of Product Manufacturing Processes

Response	Name of the company					Total	χ^2 Test
	BPL	GSKB	IPIL	RL	SPL		
Strongly disagree							12.696[a] df=12 p=.392
Disagree	1 5.0%	0 .0%	2 10.0%	0 .0%	0 .0%	3 3.0%	
Neutral	2 10.0%	0 .0%	3 15.0%	3 15.0%	2 10.0%	10 10.0%	
Agree	6 30.0%	8 40.0%	6 30.0%	11 55.0%	8 40.0%	39 39.0%	
Strongly agree	11 55.0%	12 60.0%	9 45.0%	6 30.0%	10 50.0%	48 48.0%	
Total	20 100.0%	20 100.0%	20 100.0%	20 100.0%	20 100.0%	100 100.0%	
Average	4.35	4.60	4.10	4.15	4.40	4.32	

Source: Field Survey

6.13 Chapter Summary

This chapter investigated the major strategies which are followed by Pharmaceutical Companies in Bangladesh. Four product/market growth strategies were considered for this research. Among them, introducing existing products in new markets was found the highest level of consideration followed by marketing of new products into existing markets, Introducing new products into existing markets, marketing of existing products in existing markets and Introducing new products into new markets. From the opinion of executives, it can be concluded that the sample pharmaceutical companies consider being highly technology innovative. The R & D expenditures of pharmaceutical companies are highly applied. It was observed that health awareness programs, free sample distribution to doctors, ethical marketing, and regular contact with the doctor, corporate social responsibility and special reward for employee are

important marketing promotion strategies for the sample pharmaceutical companies. Appropriately sized workforce, skilled employee, formal job duties, closely monitoring system, attractive wage system, using performance appraisals, training programmed and the promotion system were found as important Human Resource Strategies for of the sample companies. All the selected pharmaceutical companies have international operations. Result found that no company has been merged with another company and has made significant turnarounds, not divested or eliminated any important operation during last ten years. The responses also confirmed that only one company named RL has made joint venture business and another company named GSKB had made significant acquisitions during last ten years. Responses confirmed overall, the sample pharmaceutical companies considered management of quality as a strategic issue to a reasonably great extent.

Chapter Seven
IMPACT OF STRATEGIC MANAGEMENT PRACTICES ON ORGANIZATIONAL PERFORMANCE

7.1 Introduction

This chapter evaluates the impact of strategic management practices on organizational performance. Organization's performance involves identifying outcomes that it wants to achieve through formulating and implementing proper strategies. Impact of strategic management practices on organizational performance of the sample companies is evaluated mainly in four segments like profitability indicators, liquidity determinants, activity focus, and leverage and growth output.

7.2 Liquidity Determinants of the Sample Companies

The liquidity determinants are used to measure a company's ability to pay its short-term debts. It is very important for a company to be able to pay off its short-term liabilities when they fall due. The liquidity determinants are a result of dividing cash and other liquid assets by the short term borrowings and current liabilities. Lack of liquidity and high degree of liquidity, both are harmful for a firm as lack of sufficient liquidity makes a company poor credit worthiness and excess liquidity makes idle assets which earn nothing (Pandey, 1986). So, a proper balance between lack of liquidity and excess liquidity is very essential to survive in the competitive business environment. Two common ratios are used to indicate the extent of liquidity of a company. They are – (i) current ratio and (ii) quick ratio. Net working capital ratio also is calculated under this category.

7.2.1 Current Ratio Analysis

Current ratio is the most widely used ratio which measures a company's short-term ability to pay current liabilities with its current assets. Too high current ratio indicates that the business has excessive investment in current assets and too low current ratio indicates that the business may have difficulty in meeting short run commitment as they measure. Acceptable current ratio depends on the type of the industry. However, as a conventional rule, 2:1 or more is considered as standard norm for current ratio (Pandey, 1986). The current ratio is calculated by dividing current assets by current liabilities:

Crrent Ratio= Current Assets ÷ Current Liabilities

Table 7.1:Current Ratios of the Selected Pharmaceutical Companies

Year	GSKB	BPL	SPL	RL	IPIL
2004	4.56	1.49	1.66	1.60	0.91
2005	4.66	1.40	1.78	1.75	0.86
2006	6.63	1.33	1.44	1.49	0.77
2007	4.64	1.80	1.26	1.38	0.78
2008	2.96	1.10	1.45	1.15	0.83
2009	3.11	2.98	2.05	1.17	0.73
2010	2.59	2.46	1.50	1.11	0.95
2011	2.05	2.70	1.59	0.73	1.03
2012	1.74	2.67	1.58	1.10	1.15
2013	1.69	2.03	2.27	0.79	1.19
Average	3.46	2.00	1.66	1.23	0.92
Max	6.63	2.98	2.27	1.75	1.19
Min	1.69	1.10	1.26	0.73	0.73
Samples Mean	1.85	1.85	1.85	1.85	1.85
SD	1.61	0.67	0.30	0.33	0.16
CV	46.45	33.59	18.36	27.00	17.34

Source: Calculated from annual reports of the sample companies.

Table 7.1 reveals that average current ratio was the highest in GSK at 3.46 and lowest in IPIL at 0.92. The average ratio of GSKB (3.46) and BPL (2.00) is quiet satisfactory as compared with standard norm (2:1) as well as samples mean (1.85). The average ratios of SPL (1.66), RL (1.23) and IPIL (0.92) are below the standard norm as well as below the samples mean which shows the inefficient liquidity management of the companies. The maximum of current ratio was found as the highest level of 6.63 in GSKB followed by BPL, SPL, RL and IPIL which shows the strong position of the companies during the study period. The minimum of the current ratio was observed the highest in GSKB (1.69) followed by SPL, BPL, RL and IPIL that indicates the liquidity crisis of the companies over the period of review. The co-efficient of variation states that variation of current ratio over the years is not satisfactory. However, IPIL (17.34%) had the lowest fluctuation in current ratio among the samples followed by SPL (18.36), RL (27.00%), BPL (33.59%) and GSKB (46.45%).

7.2.2 Quick Ratio Analysis

The quick ratio, also called acid-test ratio, measures a company's ability to meet its short-term obligations using its most liquid assets. An asset is called liquid when it can be converted into cash immediately or reasonably soon at close to their book values. The ratio tells creditors whether the liquid assets could pay all its current liabilities if they came due immediately (Khan and Jain, 1982). Cash is the most liquid asset. Other assets like debtors, bills receivables and marketable securities (temporary quoted investments) are also considered as liquid assets. Generally, quick ratio of 1:1 is considered a satisfactory current financial position for all types of industries. Quick ratio should be used cautiously. Because, it is more penetrating test of liquidity than the current ratio (Pandey, 1986). The quick or acid test ratio is found by deducting inventories from current assets and then dividing the remainder by current liabilities:

Quick ratio = (Current assets – Inventories) ÷ Current liabilities

Table 7.2:Quick Ratios of the Selected Pharmaceutical Companies

Year	GSKB	BPL	SPL	RL	IPIL
2004	1.92	0.65	1.08	0.59	0.46
2005	1.50	0.72	1.19	0.74	0.47
2006	1.46	0.63	0.84	0.52	0.45
2007	1.94	0.89	0.68	0.45	0.48
2008	1.23	0.52	0.65	0.42	0.60
2009	1.69	2.24	1.06	0.40	0.53
2010	1.60	1.67	0.96	0.42	0.71
2011	0.95	1.83	0.95	0.26	0.74
2012	1.00	1.88	0.92	0.44	0.78
2013	1.08	1.48	1.59	0.29	0.76
Average	1.44	1.25	0.99	0.45	0.60
Max	1.94	2.24	1.59	0.74	0.78
Min	0.95	0.52	0.65	0.26	0.45
Samples Mean	0.95	0.95	0.95	0.95	0.95
SD	0.36	0.63	0.27	0.14	0.14
CV	0.25	0.51	0.27	0.31	0.23

Source: Calculated from annual reports of the sample companies.

Table 7.3 states that the samples mean (0.95:1) of quick ratio is lower than the standard (1:1) norm. The table depicts that average quick ratio ranges from 0.44:1 in RPL to 1.44:1 in GSKB. The average quick ratio of GSKB (1.44:1), BPL (1.25:1) and SPL (0.99) is quiet satisfactory as compared with standard norm. The average ratios of RL

(0.45) and IPIL (0.60) are below the standard norm which indicates financial weakness of the companies to meet its most immediate liabilities. The maximum of quick ratio was observed the highest level of 2.24 in BPL followed by GSKB, SPL, RL and IPIL which indicates the strong financial position to pay the short term obligations of the companies during 2004-2013. The minimum of the current ratio was found the highest in GSKB (0.95) followed by SPL, BPL, IPIL and RL that indicates the liquidity crisis during the study period. From the co-efficient of variation it is found that variation of quick ratio of all the sample companies is not in stability position. The table shows that BPL has the highest variation (51%) in quick ratio followed by RL (31%), SPL (27.00%), GSKB (25%) and IPIL (23%).

7.2.3 Net Working Capital Ratio

Net working capital is sometimes used to measure the short-term liquidity of a business. The measurement can also be used to ascertain a general impression about how the company's management utilizes its assets efficiently (Pandey, 1986). Net working capital is defined as current assets minus current liabilities. The following formula is used to calculate the net working capital ratio:

Net Working Capital Ratio = Net Working Capital ÷ Net assets

Table 7.3: Net Working Capital Ratio of the Selected Pharmaceutical Companies

Year	GSKB	BPL	SPL	RL	IPIL
2004	0.69	0.12	0.22	0.34	-0.06
2005	0.68	0.12	0.25	0.32	-0.11
2006	0.63	0.09	0.14	0.29	-0.23
2007	0.63	0.13	0.10	0.19	-0.20
2008	0.66	0.02	0.11	0.10	-0.18
2009	0.71	0.26	0.18	0.10	-0.28
2010	0.75	0.20	0.16	0.07	-0.04
2011	0.69	0.22	0.14	-0.21	0.01
2012	0.65	0.24	0.11	0.04	0.06
2013	0.70	0.20	0.19	-0.15	0.08
Average	0.68	0.16	0.16	0.11	-0.10
Max	0.75	0.26	0.25	0.34	0.08
Min	0.63	0.02	0.10	-0.21	-0.28
Samples Mean	0.20	0.20	0.20	0.20	0.20
SD	0.04	0.08	0.05	0.19	0.13
CV	0.06	0.48	0.31	1.73	-1.30

Source: Calculated from annual reports of the sample companies.

Table 7.5 shows the net working capital ratios for the selected pharmaceutical companies. The sample mean of net working capital ratios is 0.20:1. It is clear from the table that GSKB has the highest (0.68) ratio and it is also greater than the samples mean which ensures proper utilization of net working capital of the company. On the other hand, the average ratio of BPL (0.16), SPL (0.16) and RL (0.11) are lower than the samples mean and even negative in IPIL at (-0.10) which indicates the inability and inadequacy of net working capital to cover net assets of the selected companies during the study period. The maximum of net working capital ratio was found as the highest level of 0.75 in GSKB followed by RL, BPL, SPL, and IPIL which shows the best position over the period of review. The minimum of the net working capital ratio was observed the highest in GSKB (0.63) followed by SPL, BPL, RL and IPIL that indicates the poor utilization of working capital as a whole. The highest stability of net working capital ratio was observed in GSKB evidenced by low level of CV (0.06). But very significant variation is found in other four companies having high level of CV.

7.3 Activity Focus of the Sample Pharmaceutical Companies

Activity ratios (also called turnover ratios) are financial analysis tools used to evaluate the efficiency with which the different assets of a business are managed and utilized. Activity ratios involve a relationship between level of sales and different assets like inventories, fixed asset, current assets, account receivable and others. The proper balance between sales and these assets generally indicates that assets of a business are utilized well (Khan and Jain, 1982). Several activity ratios are used to calculate the effectiveness of asset utilization. Among the various activity ratios (i) Inventory Turnover Ratio, (ii) Asset Turnover Ratio, (iii) Fixed Asset Turnover, (iv) Accounts Receivable Turnover Ratio and (v) Working Capital Turnover Ratio have been calculated to compare the asset management ability of sample pharmaceutical companies.

7.3.1 Inventory Turnover Ratio

The inventory turnover ratio indicates the number of times a firm sells its average inventory in a year. Usually, a high rate of turnover indicates the good inventory management of the company and a low inventory turnover indicate an excessive investment in inventories. But sometimes a high turnover means that the company is going with low level of inventory, resulting in poor service to customer. There is no fixed norm for inventory turnover ratio. Some authors consider that 8 to 9 times of inventory turnover ratio is reasonable for an effective industrial enterprise (Schall and

Halley, 1983; Khan and Jain, 1982; Pandey, 1986)). It is determined by dividing the cost of goods sold by the average inventory.

Table 7.4: Inventory Turnover Ratio of the Selected Pharmaceutical Companies

Year	GSKB	BPL	SPL	RL	IPIL
2004	1.99	1.13	3.26	2.13	6.21
2005	2.09	1.15	2.83	2.21	6.90
2006	2.19	1.15	2.96	1.91	7.10
2007	2.62	1.22	2.72	2.00	9.16
2008	2.77	1.35	2.75	1.88	11.02
2009	3.45	1.59	3.05	1.79	12.85
2010	3.66	1.79	3.24	2.02	16.07
2011	3.69	1.92	3.51	2.15	14.96
2012	3.61	2.07	3.90	2.03	13.06
2013	3.99	2.33	4.84	1.86	11.09
Average	3.01	1.57	3.31	2.00	10.84
Max	3.99	2.33	4.84	2.21	16.07
Min	1.99	1.13	2.72	1.79	6.21
Samples mean	4.15	4.15	4.15	4.15	4.15
SD	0.76	0.44	0.65	0.14	3.45
CV	0.25	0.28	0.20	0.07	0.32

Source: Calculated from annual reports of the sample companies.

Table 7.7 reveals the average Inventory Turnover Ratios of the sample pharmaceutical companies. It is explored from the table that average Inventory Turnover Ratios varies from 1.57 times in BPL to 10.84 times in IPIL. It is found in the table that the average inventory turnover ratios of all the sample companies except IPIL (10.84) are below the standard norm as well as samples mean (4.15) which indicates excessive inventory levels or a slow moving or obsolete inventory. If the obsolete inventories have to be written off, this will adversely affect the working capital and liquidity position of the companies. The maximum of average inventory turnover was found the highest level of 16.07 in IPIL followed by SPL, GSKB, BPL and RL which shows the better inventory management of the companies during the study period. The minimum of the average inventory turnover was observed the highest in IPIL (6.21) followed by SPL, GSKB, RPL and BPL that indicates the highest level of inventory over the period of review. It is observed by the co-efficient of variation analysis that variation of inventory turnover of GSKB (25%), BPL (28%), SPL (20%) and IPIL (32%) are inconsistent while the CV of RL (7%) is rather more satisfactory.

7.3.2 Total Asset Turnover Ratio

The total asset turnover ratio is used to measure the extent of company's ability in generating sales revenue in terms of total assets. The huge amount of sales from a certain amount of resource indicates the high ability of organizational performance. This ratio is computed by dividing net sales by total assets. Generally, 200% or 2 times is considered as a standard norm of total assets turnover ratio suggested by some authors for an industrial organization (Schall and Halley, 1983).

Table 7.5: Total Asset Turnover Ratio

Year	GSKB	BPL	SPL	RL	IPIL
2004	1.15	0.28	0.67	1.37	1.72
2005	1.25	0.30	0.65	1.26	1.84
2006	1.42	0.31	0.72	1.09	1.72
2007	1.49	0.30	0.65	1.18	1.99
2008	1.39	0.27	0.74	0.98	2.05
2009	1.78	0.24	0.75	1.01	2.12
2010	1.66	0.30	0.69	0.99	2.57
2011	1.82	0.34	0.74	0.85	1.79
2012	1.81	0.38	0.76	0.79	1.92
2013	1.69	0.38	0.79	0.69	2.01
Average	1.55	0.31	0.72	1.02	1.97
Max	1.82	0.38	0.79	1.37	2.57
Min	1.15	0.24	0.65	0.69	1.72
Samples mean	1.11	1.11	1.11	1.11	1.11
SD	0.24	0.04	0.05	0.21	0.25
CV	0.16	0.14	0.07	0.21	0.13

Source: Calculated from annual reports of the sample companies.

Table 7.9 depicts that average total asset turnover ratio was the highest in IPIL at 1.97 times and lowest in BPL at 0.31 times and samples mean (1.11times) is lower than standard norm. Among the samples, the ratio of IPIL is satisfactory compared to standard norm. It is seen from the table that the average ratio of GSKB (1.55), BPL (0.31), SPL (0.72) and RL (1.02) are lower than standard norm. The management of these companies should consider options to increase sales and decrease its average total assets to improve this ratio. The maximum of current ratio was found the highest level of 2.57 in IPIL followed by GSKB, RL, SPL and BPL indicating better position of generating sales in terms of total assets over the years. The minimum of the total asset turnover ratio was found the highest in IPIL (1.72) followed by GSKB, RL, SPL, and

BPL over the period of review. The co-efficient of variation states that variation of total asset turnover ratio over the years is inconsistent. From the table, it is clear that SPL (7%) had the lowest fluctuation in total asset turnover ratio among the samples followed by IPIL (13%), BPL (14%), GSKB (16%) and RL (21%).

7.3.3 Fixed Asset Turnover Ratio

The fixed assets turnover ratio measures how effectively the firm uses its fixed asset like land, plant and equipment etc. to generate the sales. According to some authors, the standard norm of fixed assets turnover ratio should be 5 times (Schall and Halley, 1982; Khan and Jain, 1982; Pandey, 1986). This ideal norm is also considered to compare the performance of sampled companies.

Table 7.6: Fixed Asset Turnover

Year	GSKB	BPL	SPL	RL	IPIL
2004	4.49	0.39	1.14	3.27	2.77
2005	4.62	0.45	1.16	2.67	3.00
2006	4.30	0.43	1.10	2.42	2.77
2007	4.72	0.40	1.00	2.17	3.19
2008	5.49	0.34	1.03	1.87	3.59
2009	8.23	0.38	1.08	1.77	3.37
2010	9.87	0.43	1.08	1.67	4.19
2011	9.85	0.50	1.08	1.25	2.57
2012	9.87	0.57	1.01	1.19	2.78
2013	11.55	0.57	1.11	1.02	3.07
Average	7.30	0.44	1.08	1.93	3.13
Max	11.55	0.57	1.16	3.27	4.19
Min	4.30	0.34	1.00	1.02	2.57
Samples mean	2.78	2.78	2.78	2.78	2.78
SD	2.84	0.08	0.05	0.71	0.49
CV	0.39	0.17	0.05	0.37	0.16

Source: Calculated from annual reports of the sample companies.

Table 7.11 reveals the average fixed assets turnover ratios of the sample pharmaceuticals for the study period. It is evident from the table that samples mean (2.78 times) is lower than the standard norm (5 times). The average ratio of GSKB (7.30) is greater than standard norm as well as industry average which indicate effective uses of fixed assets of the company. But the ratios of other four companies i.e. BPL (0.44 times), SPL (1.08 times), RL (1.93 times) and IPIL (3.13 times) are lower than standard norm as well as samples mean. This low level of ratio indicates poor sales volume and ineffective uses of fixed assets of the companies. The maximum of fixed assets turnover ratio was found the

highest level of 11.55 in GSKB followed by IPIL, RL, SPL and BPL which shows the strong position of sales volume in terms of fixed assets during the study period. The minimum of the fixed assets turnover ratio was observed the highest in GSKB (4.30) followed by IPIL, RL, SPL and BPL that indicates the lowest sales volume of the companies over the years. From the co-efficient of variation analysis it is clear that variations of fixed assets turnover ratio over the years is significant. Among the samples, SPL (5%) had the lowest fluctuation in fixed assets turnover ratio followed by IPIL (16%), BPL (17%), RL (37%) and GSKB (39%).

7.3.4 Accounts Receivable Turnover

An organization can sell its products for cash or on credit. Accounts Receivables is created when an organization extends credits to its customers. The accounts receivable turnover ratio measures the ability of a company to collect cash from its credit customers (Schall and Halley, 1983). The high ratio indicates fast ability of cash collections. But too high receivable turnover means that the credit is too tight, causing the loss of sales to good customers (Khan and Jain, 1982).

Debtors or Accounts Receivables Turnover = Credit sales/Debtors

Table 7.7: Accounts Receivable Turnover

Year	GSKB	BPL	SPL	RL	IPIL
2004	10.05	4.00	19.93	11.97	2262.36
2005	8.09	4.27	21.09	9.92	2814.41
2006	10.03	8.61	23.23	9.71	402.11
2007	5.58	7.20	22.92	13.01	4472.79
2008	4.49	7.96	20.56	8.98	1762.66
2009	7.38	7.01	22.55	11.34	1924.50
2010	7.85	7.90	17.44	10.41	1146.55
2011	22.40	8.07	19.86	10.18	1087.52
2012	13.18	7.99	22.42	9.10	973.09
2013	13.39	8.40	27.60	7.66	624.28
Average	10.24	7.14	21.76	10.23	1747.03
Max	22.40	8.61	27.60	13.01	4472.79
Min	4.49	4.00	17.44	7.66	402.11
Samples mean	359	359	359	359	359
SD	5.16	1.66	2.71	1.56	1217.02
CV	0.50	0.23	0.12	0.15	0.70

Source: Calculated from annual reports of the sample companies.

Table 7.13 shows the average accounts receivable turnover ratios of sample pharmaceutical companies. It is found from the table that the average ratio was the highest in IPIL at 1747.03 times and lowest in BPL at 7.14 times. Although the higher

accounts receivable turnover indicates the efficiency of credit sales management but the average ratio of IPIL is too high which may mean the credit of the company is too tight. However, the turnover ratio of GSKB (10.24 times), BPL (7.14 times), SPL (21.76 times), and RL (10.23 times) are somewhat satisfactory during the study period. The maximum of accounts receivable turnover ratio was found the highest level of 4472.79 times in IPIL followed by SPL, GSKB, RL and BPL. The minimum of the accounts receivable turnover ratio was observed the highest in IPIL (402.11 times) followed by SPL, RL, GSKB and BPL over the period of review. The co-efficient of variation states that variation of accounts receivable turnover ratio over the years is not satisfactory. However, SPL (12%) had the lowest fluctuation in accounts receivable turnover ratio among the samples followed by RL (15%), BPL (23%), GSKB (50%) and IPIL (70%).

7.3.5 Working Capital Turnover Ratio

The working capital turnover ratio measures how efficiently a company's management can utilize its net asset to support a given level of sales. Working capital is current assets minus current liabilities. Working capital turnover is calculated by dividing sales by net working capital. A high turnover ratio indicates efficiency of management in using a firm's short-term assets. On the other hand, a low ratio indicates that a business is investing in too many accounts receivable and inventory assets to support its sales, which could eventually lead to an excessive amount of bad debts and obsolete inventory (Pandey, 1986).

Table 7.8: Working Capital Turnover Ratio

Year	GSKB	BPL	SPL	RL	IPIL
2004	1.99	2.96	4.13	6.26	-46.28
2005	2.19	3.35	3.44	5.58	-29.29
2006	2.51	4.46	6.66	6.02	-14.72
2007	2.77	2.78	9.06	9.35	-18.98
2008	2.80	15.43	8.31	16.04	-23.64
2009	3.34	1.06	4.91	16.71	-15.33
2010	3.24	1.76	5.72	24.00	-115.75
2011	4.36	1.75	6.44	-7.07	195.38
2012	5.21	1.81	8.15	25.57	46.45
2013	4.87	2.32	4.81	-7.78	37.09
Average	3.33	3.77	6.16	9.47	1.49
Max	5.21	15.43	9.06	25.57	195.38
Min	1.99	1.06	3.44	-7.78	-115.75
Samples mean	4.84	4.84	4.84	4.84	4.84
SD	1.12	4.21	1.90	11.42	81.28
CV	0.34	1.12	0.31	1.21	54.45

Source: Calculated from annual reports of the sample companies.

Table 7.15 reveals that average working capital turnover ratio was the highest in RL at 9.47 times and lowest in IPIL at 1.49 times. The average ratio of GSKB (3.33 times) and BPL (3.77 times) and IPIL (1.49 times) is lower than samples mean. This low level of turnover ratio indicates poor management of using working capital. The turnover ratio of IPIL is observed negative in most of the years which mean inefficiency of management in using short term assets. The maximum of working capital turnover ratio was found the highest level of 195.38 times in IPIL followed by RL, BPL, SPL and GSKB which shows the strong position of the companies during the study period. The minimum of the working capital turnover ratio was observed the highest in SPL (3.44 times) followed by GSKB, BPL, RL and IPIL that indicates poor position of working capital turnover over the period of review. The co-efficient of variation states that variation of working capital turnover ratio over the years is not satisfactory. However, SPL (31%) had the lowest fluctuation in working capital turnover ratio among the samples followed by GSKB (34%), BPL (112%), RL (121%) and IPIL (544%).

7.4 Profitability Indicators of Sample Companies

The profitability ratios measure the operating profit of an organization. Profit is ultimate target for every manufacturing company. So, manager should regularly evaluate company performance in term of profit. Besides management of the company, the creditors, investors, shareholders, bankers are also interested in the profitability analysis. Profitability ratio can be measured in various ways. Out of them, Gross profit margin ratio, net profit margin ratio, return on investment, return on assets, return on capital employed are discussed in this section.

7.4.1 Gross Profit Margin Ratio

Gross profit margin measures the gross earnings in terms of sales. It reflects the effectiveness and efficiency of management. According to some authors, 20% to 30% is considered as standard norm for gross profit margin ratio in any industrial enterprise (Khan and Jain, 1982; Pandey, 1986). It is computed by dividing the gross profit by sales.

Gross Profit Margin Ratio = (Sales-Cost of goods sold) / Sales

Table 7.9: Gross Profit Margin Ratio

Year	GSKB	BPL	SPL	RL	IPIL
2004	25.89	40.46	40.75	48.39	33.67
2005	21.77	46.84	42.11	48.44	35.40
2006	19.67	46.76	43.09	49.05	36.28
2007	21.56	45.30	41.19	48.74	36.02
2008	24.98	50.06	42.24	50.59	37.96
2009	31.23	47.29	42.76	53.33	38.53
2010	34.20	48.89	42.81	52.75	38.61
2011	28.48	47.99	42.90	52.46	38.72
2012	28.61	47.25	43.57	52.82	38.78
2013	32.67	46.12	43.91	50.71	39.34
Average	26.91	46.70	42.53	50.73	37.33
Max	34.20	50.06	43.91	53.33	39.34
Min	19.67	40.46	40.75	48.39	33.67
Samples mean	40.84	40.84	40.84	40.84	40.84
SD	4.97	2.57	0.99	1.99	1.87
CV	0.19	0.05	0.02	0.03	0.05

Source: Calculated from annual reports of the sample companies.

Table 7.17 shows the average gross profit margin ratio of sample companies. From the table, it is found that the average gross profit margin ratio was the highest in RL at 50.73% and lowest in GSKB at 26.91%. The average ratios of the sample companies as well as samples mean are greater than standard norm (20% to 30%). The trend of gross margin ratios of the pharmaceutical companies is very satisfactory. The maximum of gross profit margin ratio was found the highest level of 53.33% in RL followed by BPL, SPL, IPIL and GSKB which shows the strong position of gross profit margin during the study period. The minimum of the gross profit margin ratio was observed the highest in RL (48.39%) followed by SPL, BPL, IPIL and GSKB that indicates the low profit margin of the companies over the period of review. From the co-efficient of variation analysis, it is clear that the variation of gross profit over the years is negligible except one company (GSKB in 19%) which speaks about the stability of gross earnings of this sector.

7.4.2 Net Profit Margin Ratio

Net profit margin is a very key financial indicator used to evaluate the profitability of a company. Net profit is found when operating expenses, interest and taxes are deducted from the gross profit. The net profit margin ratio is calculated by dividing profit after tax by sales. This margin provides important information about the company's pricing policies, cost structure and management efficiency in manufacturing, administrating and selling of the products (Schall and Halley, 1983). The higher the margin is, the more effective the company is in converting revenue into actual profit.

Net Profit Margin Ratio = Profit after tax/ Sales

Table 7.10: Net Profit Margin Ratios of the Selected Pharmaceutical Companies

Year	GSKB	BPL	SPL	RL	IPIL
2004	14.42	12.25	23.55	10.76	6.40
2005	3.64	14.71	19.14	11.97	6.13
2006	-1.19	12.71	17.37	12.56	3.56
2007	2.83	9.82	16.73	13.26	3.30
2008	7.57	13.60	19.25	14.02	4.11
2009	10.70	12.83	18.21	15.47	3.85
2010	11.29	16.20	18.80	16.73	3.74
2011	5.96	15.19	18.05	16.73	3.13
2012	4.39	14.20	18.48	16.26	3.33
2013	8.06	13.39	19.85	15.92	3.95
Average	6.77	13.49	18.94	14.37	4.15
Max	14.42	16.20	23.55	16.73	6.40
Min	-1.19	9.82	16.73	10.76	3.13
Samples mean	11.54	11.54	11.54	11.54	11.54
SD	4.62	1.77	1.86	2.15	1.16
CV	0.68	0.13	0.10	0.15	0.28

Source: Calculated from annual reports of the sample companies.

Table 7.19 reveals that average net profit margin ratio was the highest in SPL at 18.94% and lowest in IPIL at 4.15%. The average ratio of GSKB (6.77%) and IPIL (4.15) are lower than samples mean (11.54%). Lower position refers to the company's failure to achieve satisfactory return on owner's equity. The maximum of net profit margin ratio was found the highest level of 23.55% in SPL followed by RL, BPL, GSKB and IPIL which shows the strong position of net profit earnings during the study period. The minimum of the net profit margin ratio was observed the highest in SPL (16.73%) followed by RL, BPL, IPIL and GSKB that indicates the lowest position of net earnings of the companies over the years. The co-efficient of variation states that

variation of net profit margin ratio over the years is not satisfactory. Among the companies, SPL (10.00%) had the highest stability in net profit margin ratio followed by BPL (13.00%), RL (15%), IPIL (28%) and GSKB (68%).

7.4.3 Return on Total Asset

The rate of return on total assets, or simply return on assets computed to measure profit after tax against the amount invested in total assets to ascertain whether assets are being utilized properly or not. According to some authors, 10% to 12% rate of return on total assets is considered as standard norm for a profitable organization (Khan and Jain, 1982; Pandey, 1986).

Table 7.11: Return on Total Asset of the Selected Pharmaceutical Companies

Year	GSKB	BPL	SPL	RL	IPIL
2004	16.63	3.44	15.88	14.75	11.01
2005	4.55	4.47	12.54	15.11	11.27
2006	-1.69	3.95	12.43	13.63	6.11
2007	4.22	2.95	10.88	15.59	6.56
2008	10.49	3.68	14.16	13.70	8.43
2009	19.01	3.14	13.74	15.67	8.15
2010	18.71	4.92	13.02	16.59	9.60
2011	10.84	5.20	13.39	14.18	5.61
2012	7.96	5.37	13.98	12.79	6.37
2013	13.66	5.11	15.64	10.91	7.95
Average	10.44	4.22	13.57	14.29	8.11
Max	19.01	5.37	15.88	16.59	11.27
Min	-1.69	2.95	10.88	10.91	5.61
Samples mean	10.13	10.13	10.13	10.13	10.13
SD	6.81	0.91	1.49	1.64	2.01
CV	0.65	0.21	0.11	0.11	0.25

Source: Calculated from annual reports of the sample companies.

Table 7.21 reveals the average return on total asset ratios of sample companies from 2004 to 2013. The average return on total asset ranges from 14.29% in RL to 4.22% in BPL. The average return of BPL (4.22%) and IPIL (8.11%) are below the standard norm as well as samples mean. While the return of others three companies is quite satisfactory and desirable. The maximum of return on total asset ratio was found the highest level of 19.01% in GSKB followed by RL, SPL, IPIL and BPL which shows the strong position of return on total asset of the companies during the study period.

The minimum of the return on total asset ratio was observed the highest in RL (10.91%) followed by SPL, IPIL, BPL and GSKB that indicates the lowest return over the period of review. From the co-efficient of variation analysis, it is found that SPL and RL (11%) had the lowest fluctuation in return on total asset ratio among the samples followed by BPL (21), IPIL (25%), and GSKB (65%).

7.4.4 Return on Capital Employed

Return on Capital Employed is the most independent ratio for measurement of profitability of a company. It reflects the overall efficiency with which capital is used. A rate of return ranging from 11% to 12% on capital employed may be considered as standard for a selected enterprise (Khan and Jain, 1982).

Table 7.12: Return on Capital Employed of the Selected Companies

Year	GSKB	BPL	SPL	RL	IPIL
2004	9.61	7.26	20.67	37.68	25.91
2005	7.89	8.58	22.45	33.67	27.32
2006	-1.13	7.95	23.02	32.90	15.19
2007	8.64	6.34	18.57	37.45	15.54
2008	20.88	8.18	22.12	38.84	21.18
2009	33.94	5.70	18.34	39.38	18.79
2010	35.97	8.67	18.62	40.04	21.25
2011	26.60	9.75	19.10	39.89	11.39
2012	21.74	10.26	19.84	32.20	11.41
2013	30.58	10.07	21.65	32.34	14.82
Average	19.47	8.28	20.44	36.44	18.28
Max	35.97	10.26	23.02	40.04	27.32
Min	-1.13	5.70	18.34	32.20	11.39
Samples mean	20.58	20.58	20.58	20.58	20.58
SD	12.63	1.53	1.78	3.28	5.59
CV	0.65	0.19	0.09	0.09	0.31

Source: Calculated from annual reports of the sample companies.

Table 7.23 reveals that average return on capital employed ratio was the highest in SPL at 36.44% and lowest in BPL at 8.28%. All the sample companies except BPL (8.28%) were maintaining standard norm. It appears from the table that the samples mean of return on capital employed is 20.58% which is very satisfactory in terms of standard norm. The maximum of return on capital employed ratio was found the highest level of 40.04% in RL followed by GSKB, IPIL, SPL and BPL which indicates the highest return on capital employed of the companies during the study period. The minimum of the

return on capital employed ratio was observed the highest in RL (32.20%) followed by SPL, IPIL, BPL and GSKB that shows the lowest return of the companies over the period. The lowest 9% of co-efficient of variation in return on capital employed of SPL and RL indicates that their return on capital over the years was the most stable compared to other selected companies over the period of 2004-2013. Next to SPL and RL, stability in return on capital was found in BPL (19%), followed by IPIL (31%), and GSKB (65%).

7.4.5 Return on Equity

Return on Equity or rate of return on common stockholders' equity is the most important measure of profitability (Khan and Jain, 1982). This ratio shows the relationship between net income and common stockholders' equity. It indicates how well the company has used the resources of owners. The Return on Equity is net profit after taxes divided by shareholder's equity which is given by net worth. Net worth is calculated by subtracting total liabilities from total assets.

Return on Equity = Profit after tax/Net worth (equity)

Table 7.13: Return on Equity of the Selected Pharmaceutical Companies

Year	GSKB	BPL	SPL	RL	IPIL
2004	21.92	6.09	22.55	25.00	19.87
2005	5.96	7.17	18.21	24.88	20.48
2006	-2.23	5.92	17.77	24.65	12.71
2007	5.64	4.28	16.42	26.29	15.72
2008	15.67	5.22	18.82	26.06	22.94
2009	27.80	5.74	17.81	27.34	22.86
2010	29.70	6.58	18.32	28.65	22.35
2011	19.83	7.00	17.67	27.55	8.95
2012	16.42	7.17	17.42	24.60	10.11
2013	29.51	7.10	18.64	22.14	12.37
Average	17.02	6.23	18.36	25.72	16.84
Max	29.70	7.17	22.55	28.65	22.94
Min	-2.23	4.28	16.42	22.14	8.95
Samples mean	16.83	16.83	16.83	16.83	16.83
SD	11.00	0.97	1.62	1.87	5.50
CV	0.65	0.16	0.08	0.07	0.33

Source: Calculated from annual reports of the sample companies.

Table 7.25 presents the average return on equity ratio of sample companies during 2004-2013. It is clear from the table that the average return on equity varies from the highest 25.72% in RL and lowest 6.23% in BPL. The average return on equity of

GSKB (17.02%), SPL (18.36%), RL (25.72%), and IPIL (16.84) should be considered as satisfactory as they are more than samples mean. The maximum of return on equity ratio was found the highest level of 29.70% in GSKB followed by RL, IPIL, SPL and BPL which shows the strong position of the return on equity during the study period. The minimum of the return on equity ratio was observed the highest in RL (22.14%) followed by SPL, IPIL, BPL and GSKB that low return on equity over the period of review. The lowest 9% of co-efficient of variation in return on equity of RL indicated that its return on equity over the years was the most stable compared to other selected companies over the period of 2004-2013. Next to RL, stability in return on equity was found in SPL (8%), followed by BPL (16%), IPIL (33%) and GSKB (65%).

7.4.6 Operating Profit Margin Ratio

The operating profit margin, which is obtained after deducting all operating expenses from gross profit, provides a lot of important information about the firm's profitability, particularly with regard to cost control. It indicates how much cash is thrown off after most of the expenses are met. The higher the ratio, the better is the overall efficiency of the organization. According to some authors, operating profit ranging 4% to 6% is considered as standard norm for the purpose of comparison (Khan and Jain, 1982; Pandey, 1986).

Table 7.14: Operating Profit Margin Ratios of the Selected Pharmaceutical Companies

Year	GSKB	BPL	SPL	RL	IPIL
2004	6.97	20.86	23.09	17.54	8.79
2005	5.32	21.77	25.95	18.64	8.17
2006	-0.71	20.16	24.34	19.08	4.45
2007	4.95	18.20	20.70	21.25	4.05
2008	11.26	24.91	24.12	23.24	5.01
2009	14.28	20.57	20.77	24.65	4.35
2010	14.75	25.20	20.43	25.66	4.89
2011	8.80	25.20	20.69	26.34	4.50
2012	6.38	23.77	22.03	28.30	4.36
2013	8.92	22.16	23.95	27.51	5.22
Average	8.09	22.28	22.61	23.22	5.38
Max	14.75	25.20	25.95	28.30	8.79
Min	-0.71	18.20	20.43	17.54	4.05
Samples mean	16.32	16.32	16.32	16.32	16.32
SD	4.63	2.42	1.95	3.89	1.68
CV	0.57	0.11	0.09	0.17	0.31

Source: Calculated from annual reports of the sample companies.

Table 7.27 presents that average operating profit margin ratio of the sample pharmaceuticals ranges from highest 23.22% in RL and lowest 5.38% in IPIL. The average operating profit margin of all the sample companies is more than standard norm which indicates the efficiency of operation management as well as cost control. The maximum of operating profit margin ratio was found the highest level of 28.30% in RL followed by SPL, BPL, GSKB and IPIL which shows the operating profit margin position of the companies during the study period. The minimum of the operating profit margin ratio was observed the highest in GSKB (1.69) followed by SPL, BPL, RL and IPIL that indicates the lowest profit margin of the companies over the years. The co-efficient of variation states that variation of operating profit margin ratio over the years is not satisfactory. However, SPL (9%) had the lowest fluctuation in operating profit margin ratio among the samples followed by BPL (11%), RL (17%), IPIL (31%) and GSKB (57%). The lowest 9% of co-efficient of variation in operating profit margin of SPL indicated that its operating profit margin over the years was the most stable compared to other selected companies over the period of 2004-2013. Next to SPL, stability in return on equity was found in BPL (11%), followed by RL (17%), IPIL (31%) and GSKB (57%).

7.5 Leverage Output of the Sample Companies

Leverage ratios (also called solvency ratios) are calculated to judge the long term financial position of the company. These ratios indicate mix of funds provided by owners and lenders. As a general rule, there should be an appropriate mix of debt and owners' equity in financing the firm's assets. It gives significant information to the present and future long-term creditors, debenture holders, bankers and investors. Debt-equity, Debt to Asset Ratio and Time Interest Earned Ratio are commonly used to measure leverage ratios.

7.5.1 Debt to Equity Ratio

The debt to equity ratio is the relationship between total debt and total equity which indicates the proportion of assets financed with debt. The higher the debt to equity ratio, the higher the company's financial risk (Khan and Jain, 1982). The standard debt to equity ratio is 2:1. This ratio is calculated by dividing total debt by net worth.

Table 7.15: Debt to Equity Ratios of the Selected Pharmaceutical Companies

Year	GSKB	BPL	SPL	RL	IPIL
2004	0.32	0.77	0.42	0.70	0.80
2005	0.31	0.60	0.45	0.65	0.82
2006	0.32	0.50	0.43	0.81	1.08
2007	0.34	0.45	0.51	0.69	1.40
2008	0.49	0.42	0.33	0.90	1.72
2009	0.46	0.83	0.30	0.74	1.80
2010	0.59	0.34	0.41	0.73	1.33
2011	0.83	0.34	0.32	0.94	0.59
2012	1.06	0.34	0.25	0.92	0.59
2013	1.16	0.39	0.19	1.03	0.56
Average	0.59	0.50	0.36	0.81	1.07
Max	1.16	0.83	0.51	1.03	1.80
Min	0.31	0.34	0.19	0.65	0.56
Samples average	0.67	0.67	0.67	0.67	0.67
SD	0.32	0.18	0.10	0.13	0.47
CV	0.54	0.36	0.28	0.16	0.44

Source: Calculated from annual reports of the sample companies.

Table 7.29 implies that average debt equity ratio ranges from 0.36 in SPL to 1.07 in IPIL. It is evident from the table that none of the sample companies were able to maintain standard norm of debt-equity ratio (2:1) during the period. The ratios were always below the norm which means the claims of creditors are lower than those of owners. It indicates the inefficient financial management of the sample companies. The maximum of debt-equity ratio was found the highest level of 1.80 in IPIL followed by GSKB, , RL, BPL and SPL and the minimum of the debt-equity ratio was observed the highest in RL (0.65) followed by IPIL, BPL, GSKB and SPL over the period of review. From the co-efficient of variation it is clear that significant variation in debt-equity ratio over the years is exist among the sample companies. However, the highest stability in debt-equity ratio was found in RL (0.16) followed by SPL, BPL, IPIL and GSKB.

7.5.2 Debt to Asset Ratio

The debt to assets ratio (D/A) is a leverage ratio used to determine how much debt (a sum of long term and current portion of debt) a company has on its balance sheet relative to total assets. This ratio examines the percent of the company that is financed by debt. Some authors consider that debt to total assets ratio should be 50% for an industrial enterprise (Khan and Jain, 1982).

Table 7.16: Debt to Asset Ratios of the Selected Pharmaceutical Companies

Year	GSKB	BPL	SPL	RL	IPIL
2004	0.24	0.44	0.30	0.410	0.45
2005	0.24	0.38	0.31	0.39	0.45
2006	0.24	0.33	0.30	0.45	0.52
2007	0.25	0.31	0.34	0.41	0.58
2008	0.33	0.29	0.25	0.47	0.63
2009	0.32	0.45	0.23	0.43	0.64
2010	0.37	0.25	0.29	0.42	0.57
2011	0.45	0.26	0.24	0.49	0.37
2012	0.52	0.25	0.20	0.48	0.37
2013	0.54	0.28	0.16	0.51	0.36
Average	0.35	0.32	0.26	0.45	0.49
Max	0.54	0.45	0.34	0.51	0.64
Min	0.24	0.25	0.16	0.39	0.36
Samples average	0.37	0.37	0.37	0.37	0.37
SD	0.12	0.07	0.06	0.04	0.11
CV	0.33	0.23	0.21	0.08	0.22

Source: Calculated from annual reports of the sample companies.

Table 7.31 depicts that average debt to asset ratio of sample companies varied between 0.49 in IPIL and 0.26 in SPL. The average debt to asset ratios of selected companies as well as industry average (0.37) are lower than the standard norm (.50) which indicates less dependency on debt rather than on their own assets for financing their different projects. The maximum of debt to asset ratio was found the highest level of 0.64 in IPIL followed by GSKB, RL, BPL, and SPL which shows the more dependency on debt during the study period. The minimum of the debt to asset ratio was observed the highest in RL (0.39) followed by IPIL, BPL, GSKB and SPL that indicates less dependency on credit over the years. Significant variation was observed among the sample companies from the co-efficient of variation. The highest stability of debt to asset ratio was found in RL evidenced by low level (0.08) of CV followed by SPL (0.21), IPIL (0.22), BPL (0.23) and GSKB (0.33).

7.5.3 Time Interest Earned Ratio

The debt ratio and debt to equity ratio are failed to indicate the firm's ability to pay interest expense. The times-interest-earned ratio is used to test the firm's debt-serving capacity. This ratio is also called the interest-coverage ratio. It measures the number of times EBIT can cover (pay) interest expense. A high interest coverage ratio indicates ease in paying interest expense; a low ratio suggests difficulty (Khan and Jain, 1982).

Time Interest Earned Ratio = Earnings before interest and taxes (EBIT) / Interest charges

Table 7.17: Time Interest Earned Ratios of the Selected Pharmaceutical Companies

Year	GSKB	BPL	SPL	RL	IPIL
2004	139.99	2.91	11.57	10.28	25.08
2005	45.70	3.26	11.30	13.03	82.45
2006	-2.67	2.95	7.71	9.25	22.01
2007	17.17	2.57	4.86	9.37	14.15
2008	25.23	4.00	6.01	8.23	11.10
2009	519.69	3.46	7.71	9.66	10.89
2010	653.17	2.47	10.23	11.12	8.90
2011	110.91	0.35	7.66	7.98	11.46
2012	68.78	3.42	11.08	5.70	18.75
2013	141.76	3.65	28.28	5.61	18.53
Average	171.97	2.90	10.64	9.02	22.33
Max	653.17	4.00	28.28	13.03	82.45
Min	-2.67	0.35	4.86	5.61	8.90
Samples mean	43.37	43.37	43.37	43.37	43.37
SD	226.25	1.02	6.61	2.29	21.79
CV	1.32	0.35	0.62	0.25	0.98

Source: Calculated from annual reports of the sample companies.

Table 7.33 shows the average time interest earned ratio of the sample pharmaceutical companies. It is observed from the table that the average time interest earned ratio was the highest in GSK at 171.97 followed by IPIL (22.33), SPL (10.64), RPL (9.02) and BPL (2.90). Although a higher ratio of time interest earned is desirable; but the ratio of

GSK is too high (171.97) which indicates the company is very conservative in using debt. The ratios of the rest of the companies except BPL were somewhat satisfactory. The maximum of time interest earned ratio was found the highest level of 653.17 in GSK followed by IPIL, SPL, RPL and BPL which shows the strong position of the companies regarding the payment of interest charges during the study period. The minimum of the time interest earned ratio was observed the highest in IPIL (8.90) followed by RPL, SPL, BPL and GSK that indicates the excessive use of debt or inefficient operation over the period of review. The co-efficient of variation states that variation of time interest earned ratio over the years is not satisfactory. However, RPL (25%) had the lowest fluctuation in time interest earned ratio among the samples followed by BPL (35%), SPL (62%), IPIL (98%) and GSK (132%).

7.6 Correlation between the Strategic Management Factors and Organizational Performance of the Sample Companies

This section examines the correlation between the strategic management factors and organizational performance of the sample pharmaceutical companies. The strategic management factors includes strength factors, weakness factors, threat factors, opportunity factors, product/market growth strategies, research and development (R & D) strategies, marketing strategies, human resource strategies, quality management strategies and organizational performance includes only profitability indicators like gross profit margin ratio, net profit margin ratio, return on total asset, return on capital employed, return on equity, operating profit margin ratio.

7.6.1 Correlation between the Strength Factors and Different Profitability Indicators of the Sample Companies

The table 7.35 depicts the correlations between the strengths factors and different profitability indicators of the sample pharmaceutical companies. The table shows that the correlations coefficient between the strengths factors and gross profit margin ratio, net profit margin ratio, return on total asset, return on capital employed, return on equity, operating profit margin ratio are r=0.645, r=0.423, r=0.706, r=0.913, r=0.787 and r=0.661 respectively. This means that there are strong positive correlations between the strengths factors and different profitability indicators of the sample companies. However, the table also indicated the correlations among the different profitability ratios are positive.

Table 7.18: Correlation Matrix of the Strength Factors and Different Profitability Indicators

	1	2	3	4	5	6	7
1	1	.645	.423	.706	.913*	.787	.661
2		1	.651	.099	.289	.100	.854
3			1	.395	.174	.089	.893*
4				1	.853	.912*	.324
5					1	.962**	.347
6						1	.162
7							1

Note:
1. Strength factors 2. Gross profit margin ratio, 3. Net profit margin ratio, 4. Return on total asset, 5. Return on capital employed, 6. Return on equity, 7. Operating profit margin ratio

Source: Calculated from Tables no. 5.12, 5.13, 5.14, 5.15, 5.16, 5.17, 5.18, 5.19, 5.20, 5.21, 5.22, 7.17, 7.19, 7.21, 7.23, 7.25 and 7.27.

*. Correlation is significant at the 0.05 level (2-tailed).

**. Correlation is significant at the 0.01 level (2-tailed).

7.6.2 Correlation between the Weakness Factors and Different Profitability Indicators of the Sample Companies

The table 7.36 displays the correlations between the weakness factors and different profitability indicators of the sample pharmaceutical companies. The table shows that the correlations coefficient between the weakness factors and gross profit margin ratio, net profit margin ratio, return on total asset, return on capital employed, return on equity, operating profit margin ratio are r=-0.742, r=-0.047, r=0.010, r=-0.334, r=-0.230, and r=-0.311 respectively. It can be concluded that the weakness factors are negatively correlated with all other profitability ratios except with return on total asset. So, managements of sample companies should emphasis on how to overcome these weaknesses. However, the table also indicated the correlations among the different profitability ratios are positive.

Table 7.19: Correlation Matrix of the Weakness Factors and Different Profitability Indicators

	1	2	3	4	5	6	7
1	1	-.742	-.047	.010	-.334	-.230	-.311
2		1	.651	.099	.289	.100	.854
3			1	.395	.174	.089	.893*
4				1	.853	.912*	.324
5					1	.962**	.347
6						1	.162
7							1

Note:

1. Weakness factors 2. Gross profit margin ratio, 3. Net profit margin ratio, 4. Return on total asset, 5. Return on capital employed, 6. Return on equity, 7. Operating profit margin ratio.

Source: Calculated from Tables no. 5.1, 5.2, 5.3, 5.4, 5.5, 5.6, 5.7, 5.8, 5.9, 5.10, 5.11, 7.17, 7.19, 7.21, 7.23, 7.25 and 7.27.

*. Correlation is significant at the 0.05 level (2-tailed).

**. Correlation is significant at the 0.01 level (2-tailed).

7.6.3 Correlation between the Opportunity Factors and Different Profitability Indicators

The table 7.37 depicts the correlations between the opportunity factors and different profitability indicators of the sample pharmaceutical companies. The table shows that the correlations coefficient between the opportunity factors and gross profit margin ratio, net profit margin ratio, return on total asset, return on capital employed, return on equity, operating profit margin ratio are r=0.740, r=0.270, r=0.279, r=0.449, r=0.408, and r=0.397 respectively. It can be concluded that there are positive correlations between the opportunity factors and different profitability ratios of the sample companies.

Table 7.20: Correlation Matrix of the Opportunity Factors and Different Profitability Indicators

	1	2	3	4	5	6	7
1	1	.740	.270	.279	.449	.408	.397
2		1	.651	.099	.289	.100	.854
3			1	.395	.174	.089	.893*
4				1	.853	.912*	.324
5					1	.962**	.347
6						1	.162
7							1

Note:
1. Opportunity factors 2. Gross profit margin ratio, 3. Net profit margin ratio, 4. Return on total asset, 5. Return on capital employed, 6. Return on equity, 7. Operating profit margin ratio

Source: Calculated from Tables no. 5.23, 5.24, 5.25, 5.26, 5.27, 5.28, 5.29, 5.30, 5.31, 5.32, 5.33, 7.17, 7.19, 7.21, 7.23, 7.25 and 7.27.

*. Correlation is significant at the 0.05 level (2-tailed).

**. Correlation is significant at the 0.01 level (2-tailed).

7.6.4 Correlation between the Threat Factors and Different Profitability Indicators

The table 7.38 displays the correlations between the threat factors and different profitability indicators of the sample pharmaceutical companies. The table shows that the correlations coefficient between the threat factors and gross profit margin ratio, net profit margin ratio, return on total asset, return on capital employed, return on equity, operating profit margin ratio are r=-0.319, r=0.151, r=-0.478, r=-0.865, r=-0.758 and r=-0.201 respectively. It can be concluded that the threat factors are negatively correlated with all other profitability ratios except with net profit margin ratio. So, managements of sample companies should be careful of the threat factors of external environment.

Table 7.21: Correlation Matrix of the Threat Factors and Different Profitability indicators of the Sample Companies

	1	2	3	4	5	6	7
1	1	-.319	.151	-.478	-.865	-.758	-.201
2		1	.651	.099	.289	.100	.854
3			1	.395	.174	.089	.893*
4				1	.853	.912*	.324
5					1	.962**	.347
6						1	.162
7							1

Note:

1. Threat factors 2. Gross profit margin ratio, 3. Net profit margin ratio, 4. Return on total asset, 5. Return on capital employed, 6. Return on equity, 7. Operating profit margin ratio.

Source: Calculated from Tables no. 5.34, 5.35, 5.36, 5.37, 5.38, 5.39, 5.40, 5.41, 5.42, 5.43, 5.44, 5.45, 7.17, 7.19, 7.21, 7.23, 7.25 and 7.27.

*. Correlation is significant at the 0.05 level (2-tailed).

**. Correlation is significant at the 0.01 level (2-tailed).

7.6.5 Correlation between the Product/market Growth Strategies and Different Profitability Indicators

The table 7.39 depicts the correlations between the product/market growth strategies and different profitability indicators of the sample pharmaceutical companies. The table indicates that the correlations coefficient between the product/market growth strategies and gross profit margin ratio, net profit margin ratio, return on total asset, return on capital employed, return on equity, operating profit margin ratio are r=0.470, r=0.877, r=0.649, r=0.485, r=0.390, and r=0.843 respectively. It is clear that there are positive correlations between the product/market growth strategies and different profitability ratios of the sample companies.

Table 7.22: Correlation Matrix of the Product/market Growth Strategies and Different Profitability Ratios of the Sample Companies

	1	2	3	4	5	6	7
1	1	.470	.877	.649	.485	.390	.843
2		1	.651	.099	.289	.100	.854
3			1	.395	.174	.089	.893*
4				1	.853	.912*	.324
5					1	.962**	.347
6						1	.162
7							1

Note:

1.Product/market Growth Strategies 2. Gross profit margin ratio, 3. Net profit margin ratio, 4. Return on total asset, 5. Return on capital employed, 6. Return on equity, 7. Operating profit margin ratio

Source: Calculated from Tables no. 6.1, 6.2, 6.3, 6.4, 7.17, 7.19, 7.21, 7.23, 7.25 and 7.27.

*. Correlation is significant at the 0.05 level (2-tailed).

**. Correlation is significant at the 0.01 level (2-tailed).

7.6.6 Correlation between the Research and Development (R & D) Strategies and Different Profitability Indicators

The table 7.40 displays the correlations between the R & D strategies and different profitability indicators of the sample pharmaceutical companies. The table reveals that the correlations coefficient between the R & D Strategies and gross profit margin ratio, net profit margin ratio, return on total asset, return on capital employed, return on equity, operating profit margin ratio are r=0.265, r=0.455, r=0.933, r=0.914, r=0.878, and r=0.518 respectively. Overall, it can be concluded that there are positive correlations between the R & D strategies and different profitability ratios of the sample companies. However, strong correlations is found between R & D strategies and return on total asset and return on capital employed.

Table 7.23: Correlation Matrix of the Research and Development (R & D) Strategies and Different Profitability Indicators

	1	2	3	4	5	6	7
1	1	.265	.455	.933*	.914*	.878	.518
2		1	.651	.099	.289	.100	.854
3			1	.395	.174	.089	.893*
4				1	.853	.912*	.324
5					1	.962**	.347
6						1	.162
7							1

Note:

1.Research and Development (R & D) Strategies 2. Gross profit margin ratio, 3. Net profit margin ratio, 4. Return on total asset, 5. Return on capital employed, 6. Return on equity, 7. Operating profit margin ratio

Source: Calculated from Tables no. 6.5, 6.6, 6.7, 6.8, 7.17, 7.19, 7.21, 7.23, 7.25 and 7.27.

*. Correlation is significant at the 0.05 level (2-tailed).

**. Correlation is significant at the 0.01 level (2-tailed).

7.6.7 Correlation between the Marketing Strategies and Different Profitability Indicators

The table 7.41 depicts the correlations between the marketing strategies and different profitability indicators of the sample pharmaceutical companies. The table shows that the correlations coefficient between the marketing strategies and gross profit margin ratio, net profit margin ratio, return on total asset, return on capital employed, return on equity, operating profit margin ratio are r=0.656, r=0.642, r=0.061, r=-0.102, r=-0.095 and r=0.496 respectively. It can be concluded that the marketing strategies are positively correlated with all other profitability ratios except with return on capital employed and return on equity.

Table 7.24: Correlation Matrix of the Marketing Strategies and Different Profitability Indicators

	1	2	3	4	5	6	7
1	1	.656	.642	.061	-.102	-.095	.496
2		1	.651	.099	.289	.100	.854
3			1	.395	.174	.089	.893*
4				1	.853	.912*	.324
5					1	.962**	.347
6						1	.162
7							1

Note:

1.Marketing Strategies 2. Gross profit margin ratio, 3. Net profit margin ratio, 4. Return on total asset, 5. Return on capital employed, 6. Return on equity, 7. Operating profit margin ratio

Source: Calculated from Tables no.6.9, 6.10, 6.11, 6.12, 6.13, 6.14, 6.15, 7.17, 7.19, 7.21, 7.23, 7.25 and 7.27.

*. Correlation is significant at the 0.05 level (2-tailed).

**. Correlation is significant at the 0.01 level (2-tailed).

7.6.8 Correlation between the Human Resource Strategies and Different Profitability Indicators

The table 7.42 depicts the correlations between the human resource strategies and different profitability indicators of the sample pharmaceutical companies. The table shows that the correlations coefficient between the human resource strategies and gross profit margin ratio, net profit margin ratio, return on total asset, return on capital employed, return on equity, operating profit margin ratio are r=0.805, r=0.947, r=0.339, r=0.285, r=0.125, and r=0.990 respectively. It revealed that there are positive correlations between the human resource strategies and different profitability indicators of the sample companies.

Table 7.25: Correlation Matrix of the Human Resource Strategies and Different Profitability Ratios

	1	2	3	4	5	6	7
1	1	.805	.947*	.339	.285	.125	.990**
2		1	.651	.099	.289	.100	.854
3			1	.395	.174	.089	.893*
4				1	.853	.912*	.324
5					1	.962**	.347
6						1	.162
7							1

Note:

1.Human Resource Strategies 2. Gross profit margin ratio, 3. Net profit margin ratio, 4. Return on total asset, 5. Return on capital employed, 6. Return on equity, 7. Operating profit margin ratio

Source: Calculated from Tables no. 6.16, 6.17, 6.18, 6.19, 6.20, 6.21, 6.22, 6.23, 7.17, 7.19, 7.21, 7.23, 7.25 and 7.27.

*. Correlation is significant at the 0.05 level (2-tailed).

**. Correlation is significant at the 0.01 level (2-tailed).

7.6.9 Correlation between the Quality Management Strategies and Different Profitability Indicators

The table 7.43 depicts the correlations between the quality management strategies and different profitability indicators of the sample pharmaceutical companies. The table shows that the correlations coefficient between the quality management strategies and gross profit margin ratio, net profit margin ratio, return on total asset, return on capital employed, return on equity, operating profit margin ratio are r=-0.137, r=0.492, r=0.094, r=-0.159, r=-0.216 and r=0.363 respectively. It revealed from the table that there are positive correlations between the quality management strategies and different profitability ratios of the sample companies except with gross profit margin ratio, return on capital employed and return on equity.

Table 7.26: Correlation Matrix of the Quality Management Strategies and Different Profitability Indicators

	1	2	3	4	5	6	7
1	1	-.137	.492	.094	-.159	-.216	.363
2		1	.651	.099	.289	.100	.854
3			1	.395	.174	.089	.893*
4				1	.853	.912*	.324
5					1	.962**	.347
6						1	.162
7							1

Note:

1.Quality Management Strategies 2. Gross profit margin ratio, 3. Net profit margin ratio, 4. Return on total asset, 5. Return on capital employed, 6. Return on equity, 7. Operating profit margin ratio

Source: Calculated from Tables no. 6.33, 6.34, 6.35, 6.36, 6.37, 6.38, 7.17, 7.19, 7.21, 7.23, 7.25 and 7.27.

*. Correlation is significant at the 0.05 level (2-tailed).

**. Correlation is significant at the 0.01 level (2-tailed).

7.7 Chapter Summary

This chapter assessed the impact of strategic management practices on organizational performance which includes profitability indicators, liquidity determinants, activity focus, leverage output. Among the various activity ratios, Inventory Turnover Ratio, Asset Turnover Ratio, Fixed Asset Turnover, Accounts Receivable Turnover Ratio and Working Capital Turnover Ratio have been calculated to compare the asset management ability of sample pharmaceutical companies. The co-efficient of variation states that variation of total asset turnover ratio, fixed assets turnover ratio, accounts receivable turnover ratio, working capital turnover ratio over the years were not satisfactory. Out of gross profit margin ratio, net profit margin ratio, return on investment, return on assets, return on capital employed are discussed in this chapter. The co-efficient of variation stated that significant variation was found in net profit

margin ratio, return on total asset ratios, return on capital employed ratios, return on equity ratios and the operating profit margin ratios of the samples pharmaceutical companies during the study period. Debt-equity, Debt to Asset Ratio and Time Interest Earned Ratio have been used to measure leverage determinants of pharmaceutical companies. The co-efficient of variation indicates that significant variation in debt-equity, debt-equity time interest earned ratio over the years were existed among the sample companies. This chapter examines the correlation between the strategic management factors and organizational performance of the sample companies. This study found that the strength factors, opportunity factors, product/market growth strategies, R & D strategies, marketing strategies, human resource strategies are positively correlated with organizational performance. On the other hand, quality management strategies, weakness factors and threat factors are negatively correlated with organizational performance.

Chapter Eight
MAJOR FINDINGS, CONCLUSION, RECOMMENDATIONS AND DIRECTIONS FOR FURTHER RESEARCH

8.1 Introduction

This chapter discusses the major findings of this study. The research covers growth and development of pharmaceutical industries in Bangladesh**,** strategic management characteristics of the listed Pharmaceutical companies, internal and external environmental factors which influence the strategic management practices, major strategies followed by Pharmaceutical companies and impact of the strategic management practices on company's performance. Then the recommendations, implications of this study, limitations and further research directions will be stated.

8.2 Major Findings of the Research

This study analyzed the strategic management practices of pharmaceutical companies as well as impact of such practices on organizational performance. This study developed some key research questions instead of hypothesis. Because, the large number of variables that were expected to be investigated in this study and there were no previous studies which investigated strategic management practices in the pharmaceutical industry in Bangladesh. Major six research questions were developed to find answers in this study (in chapter 1) and therefore, the major research finding of this study are discussed under these six major research questions.

8.2.1 Research question 1: Growth and Development of Pharmaceutical Industries in Bangladesh

8.2.1.1 Pharmaceutical Industry Structure

Bangladeshi pharmaceutical firms focus mainly on branded generic final formulations using imported APIs. This industry primarily can be divided into two parts- private sector and public sector. There are four types of manufacturers in private sector namely- Allopathic, Unani, Ayurvedic and Homeopathic. At present, there are 268 Allopathic, 204 Ayurvedic, 268 Unani and 79 Homeopathic drug manufacturing

companies in the country. It is observed that out of 268 companies, 252 (99.63%) belong to private sector while only one (0.37%) belongs to public sector. The number of MNCs operating in Bangladesh is 8. Again, only 10 companies (3.75%) of the total are listed with stock exchange of the country including eight local and two MNCs. There is only one public sector manufacturing company in Bangladesh named Essential Drug Company Ltd (EDCL).

8.2.1.2 Pharmaceutical Products in Bangladesh

The Pharmaceutical products can broadly be classified into two categories. These are a) Patent Medicines b) Generic Medicines. Bangladeshi pharmaceutical companies mainly produce and market generic medicine. About 85% of the drugs sold in Bangladesh are generics and 15% are patented drugs. There are about 450 generics registered in Bangladesh. Out of these 450 generics, 117 are in the controlled category i.e. in the essential drug list and 333 in the decontrolled category.

8.2.1.3 Distribution of Pharmaceutical Products

Bangladesh pharmaceutical industry is more retail-oriented and bulk of distribution is done by the companies themselves. Pharmaceutical companies distribute their products from their own warehouses located in different parts of the country as no professional distribution house is available. There were 1495 wholesale drug license holders and about 37,700 retail license holders in Bangladesh in 2000. At the end of 2012, the number of wholesale drug license holder and retail drug license holders in the country stood at 2202 and 98621 respectively. In last 10 years, wholesale drug license holders have increased by 47% and retail holders by 161%.

8.2.1.4 Quality Control Systems of Pharmaceuticals

There are four mechanisms in place to regulate quality of Bangladeshi drugs. They are the Drug Directorate Administration (DDA), the Drug Testing Laboratory (DTL), bioequivalence laboratories and international certifications. The Directorate General of Drug Administration (DDA) is responsible to implement all prevailing Drug Regulations in the country and to regulate all activities related to import, procurement of raw and packing materials, production and import of finished drugs, export, sale, pricing, etc. of all kinds of medicine including those of Allopathic, Ayurvedic, Unani, Herbal and Homoeopathic systems. There are two Drug Testing Laboratories (DTLs)

which are engaged to test numerous drugs introduced by about 200 pharmaceutical companies operating in the domestic sector. One is in Dhaka and reports to the Director of Public Health in the Ministry of Health. The other is in Chittagong and reports to the DDA. Bioequivalence laboratories test the availability of the drug in the blood. However, surprisingly Bangladesh has no bioequivalence laboratory capabilities. Pharmaceutical companies, which want to export their products, send drug samples to an internationally recognized bioequivalence laboratory abroad for testing. There are several different international manufacturing quality standards. Good Manufacturing Practices (GMP) or Current Good Manufacturing Practices (cGMP) certify a facility (not a drug or an organization) if it meets standards for starting materials, premises, equipment, processes, documentation, training and personal hygiene of staff. There are two bodies in Bangladesh that can give GMP certification: The Government of Bangladesh through the DDA and International Organizations such as UNICEF which requires GMP certification to prequalify a firm for UNICEF purchases.

8.2.1.5 Pricing system of Drug

Price system can be described in two ways – price of 'Essential Drug' and price of 'Non-essential Drug'. At present, there are 117 items in the 'Essential Drug' list. The DDA directly sets the price of 'essential drugs'. The companies set the price of other drugs known as 'non-essential drugs' though the final price is approved by the DDA.

8.2.1.6 Active Pharmaceutical Ingredients (API) Industrial Park

About 80% of the Active Pharmaceutical Ingredients APIs are imported every year due to absence of such park in the country. However, the government has already taken necessary steps of establishing API Industrial Park at Gazaria, Munshiganj which estimated that cost of APIs will decrease by about 20%.

8.2.1.7 Markets of Pharmaceutical Products

8.2.1.7.1 Market size and Growth

The size of the retail market was BDT 1.8 billion in 1982, where as it reached to BDT 94.0 billion in 2012. That means the retail market increased by 52 fold in last three decades. The annual average growth rate is 16.6% over the last 5 years and 14.2% over the last 12 years. This steady growth rate demonstrated the success story of this sector.

8.2.1.7.2 Market Share of Local and Multinational Companies

In 1982, there were 166 licensed pharmaceutical manufacturers in the country, but local production was dominated by eight MNCs which manufactured about 62% of the products. Local 158 companies manufactured remaining 38% of the products. In 2012 market share of local companies increased to 90%, whereas MNCs decreased to 10%.

8.2.1.7.3 International Market of Pharmaceutical Products

Bangladesh started exporting finished formulations to some of the neighboring less-regulated overseas markets like Myanmar, Sri Lanka and Nepal Since the late 80's. In the early 90's few major companies took initiative to explore some of the more-regulated markets like Russia, Ukraine, Georgia and Singapore. In the last few years, some of the top listed companies have obtained accreditation from USFDA, UKMHRA, TGA and GCC and started to export to highly regulated markets like USA, EU, Australia and GCC countries. In 2001, Bangladesh exported its pharmaceutical products to 17 countries which gradually increased in the next years. In 2012, the number of exporting countries stood at 87 all over the world.

8.2.1.7.4 Geographic Location of Pharmaceutical Companies

Pharmaceutical companies are mainly concentrated in Dhaka division. Out of 267 registered companies, 187 (70%) are situated in Dhaka divisions. 34 (12.7%) pharmaceutical companies are established in Chittagong division, where as Rajshahi and Barisal have 7.9% and 4.9% respectively. Sylhet has the lowest position among the divisions (1.5%).

8.2.1.7.5 Division wise Sales Growth Scenario

The recent pharmaceutical market growth is 11.91%. However, the growth is not evenly spread all over the country. Dhaka division was, and still is, the dominant market though the market share decreased a bit (42.27% in 2008 to 39.86% in 2012). The main reason for this is the high density of doctor's community in Dhaka division. However, both Chittagong and Rajshahi division are becoming more and more important for the pharma market. These two divisions now stand with around 20% share. Khulna is losing ground, currently standing with 10.82% share, down from 13.93% in 2008. Barisal and Sylhet both have lost market share compared to 2008.

8.2.1.8 Contribution of Pharmaceutical Industry

Pharmaceutical companies either directly or indirectly are contributing largely towards raising the standard of healthcare personnel to gain access to newer products and also to latest drug information. The pharmaceutical sector consistently creates job opportunities for highly qualified people. Total number of employees is 62,298 in 267 allopathic pharmaceutical companies. This employment is rising with the increasing of number of organization, capacity of production as well as sales volume. With the development of pharmaceutical sector, some linkage industries for products like bottle, plastic containers, aluminium collapsible tubes, aluminium pp caps, infusion sets, disposable syringes and corrugated cartoons are also thriving.

8.2.1.8.1 Export Earnings

In last two decades Bangladesh has shifted from drug importing country to drug surplus country. This study found that 33 private pharmaceutical companies have already entered into the export market with their basic materials and finished products. The overall export earnings of the country from pharmaceuticals reached BDT 5,396.2 million for the year 2012 with a growth rate of 28.1% over the previous year. The average annual percentage of exported drugs and growth was 3.60 and 35 respectively in last 12 years.

8.2.1.8.2 Import Trends of Pharmaceutical Products and Raw Materials

In the last 12 years, the average of imported finished drugs was BDT.2811 million and percentage of import was 5%. So, the 95% of demanded medicine was met by the local production. This indicates that dependency on foreign medicine is decreasing and Bangladesh pharmaceutical sector is going to be self-sufficient in near future. Average of locally produced and imported raw materials were BDTk. 2,240 and 9,742 million respectively. Result found that the local production of raw materials is increasing slowly. On an average about 80% of the raw materials were imported from abroad in last 12 years.

8.2.2 Research Question 2: The major characteristics of formulating the strategies of the listed Pharmaceutical companies of Bangladesh?

8.2.2.1 Mission and Vision Statement of the Sample Companies

All the sample companies have a formal mission and vision statement for their organization. Major characteristics of mission statement include enhancing human health and well being, producing quality & innovative healthcare relief, providing

maximum value to the stakeholders. The main characteristics of vision statement include becoming admired and successful pharmaceutical company, responsibility toward people, the best of innovative branded generic companies, accretion of wealth through financial and moral gains, creating partnerships and building presence across the globe. Board of directors is involved (100%) in formulation of vision and mission statement of all the sample companies. Besides this, corporate level management also is involved in GSKB and RL to formulate vision and mission and chairman of the company is involved in BPL and SPL.

8.2.2.2 Corporate Level Plan

All the sample pharmaceutical companies confirmed that they have formal long term plan. It was found that two companies named IPIL and RL update their corporate plans yearly. On the other hand, three companies named BPL, GSKB and SPL update the corporate plans for more than one year. Corporate level management is involved in formulation of corporate long term-plans of GSKB, RL and IPIL. Board of directors is involved in BPL, IPIL and SPL. On the other hand, Business level manager and corporate planning department are involved in BPL and SPL for long term-plan formulation.

8.2.2.3 Business Level Plan

Business level long term plan was found in all the sample pharmaceutical companies. Two companies named IPIL and RL update their corporate plans yearly. On the other hand, three companies named BPL, GSKB and SPL update the corporate plans for more than one year. Corporate level management is involved in formulation of business level plan of GSKB, RL and IPIL. Board of directors is involved in BPL, IPIL and SPL. Overall, business level manager is involved in business level plan for all the sample companies.

8.2.2.4 Functional Level Plan

All the interviewed executives of the sample pharmaceutical companies confirmed that they have formal functional level (Human resource, Production, Marketing, Finance etc.) plans. Only one company named GSKB updates the corporate plans for more than one year. Other four companies update their functional level plans every six month. Functional level manager is involved to formulate of functional level plans in all the sample companies. On the other hand, Business level management is involved only in BPL, GSKB and SPL.

8.2.2.5 Organizational Culture of the Sample Companies

The most reported characteristics of the organizational cultures in the selected pharmaceutical companies were team spirit (88%), loyalty (84%) and commitment (82%). Mutual respect and performance measurement were associated with mainly GSKB and SPL respectively. Overall, result found that company culture had an influence on the corporate strategy (mean =4.07). Among the sample companies, RL and SPL had a greater influence on their strategies than the others. Statistically significant differences were found in the case of company culture and also in the influence of culture on company strategies.

8.2.2.6 Management Styles of the Sample Companies

The key characteristics of the management style in the selected pharmaceutical companies are participatory, collective decisions by the board of directors and decision is made by a committee, top to bottom and employee friendly. Management style of the selected companies had an influence on the company strategies (mean=4.30). Result found that there were significant differences in the influence level of management style on company strategies. Respondents also mentioned that they had no significant problems with their current management style.

8.2.2.7 Influence of Analytical Tools and Techniques on Formulating the Strategies

The interviewed executives of pharmaceutical companies confirmed that PEST analysis had the most significant influence (score=418) on the company strategies followed by SWOT analysis (score=414), key success factors (score=381), five forces analysis (score=378), product life cycle (score=364), BCG service portfolio matrix (score=336), benchmarking (score=325) and General electric matrix (score=306). Among the sample companies, IPIL had higher (mean=4.50) influence of PEST analysis on corporate strategies than the other companies. RL had higher (mean=4.50) influence of five forces analysis on company strategies than the other companies. SPL had higher (mean=5.00) influence of SWOT analysis on corporate strategies than the other companies. RL had higher (mean=4.10) influence of Key success factors analysis on corporate strategies than the other companies. RL higher (mean=3.80) influence of benchmarking on their corporate strategies than the other companies. GSKB had higher (mean=4.25) influence of BCG service portfolio matrix analysis on corporate strategies

than the other companies. BPL had higher (mean=3.35) influence of General electric matrix analysis on corporate strategies than the other companies. Results also found that there were significant differences in the influence of General electric matrix analysis on company strategies. Among the sample companies, BPL and GSKB had higher (mean=4.20) influence of product life cycle analysis on corporate strategies than the other companies. Results also found that there were significant differences in the influence of analytical tools and techniques on company strategies.

8.2.3 Research question 3: Internal Factors which Influence the Strategic Management Practices of the Selected Pharmaceutical Companies.

8.2.3.1 Strength Factors Influencing Pharmaceutical Companies

Among the strength factors, Brand name ranked top with the score 448 followed by Good manufacturing process (424), Delivery system (417), Working environment and Use of up-to-date technology (407), Total Quality Management (403), Product innovations (396), Corporate leadership (387), Professional skill of the employee (380) and Research and development (363). It can be concluded that the sample companies have several significant strength and management can use these strength to overcome their threats.

8.2.3.2 Weakness Factors Influencing Pharmaceutical Companies

The weakness factors which were discussed in this study are: lack of GMP, lack of R&D, lack of professional skill, lack of managerial leadership, lack of modern technology, lack of good pharmacist, lack of ethical marketing, lack of awareness of the stakeholders, lack of API weakness, lack of capacity utilization and lack of wide distribution network. From the study, it revealed that the lack of Active Pharmaceutical Ingredients (API) facilities is highly significant (score=426) internal weakness for the pharmaceutical companies. On the other hand, other factors except lack of API facilities found insignificant weakness for the pharmaceutical companies.

8.2.4 Research question 4: External Factors which Influence the Strategic Management Practices of Selected Pharmaceutical Companies.

8.2.4.1 Opportunity Factors Influencing Pharmaceutical Companies

Among the opportunity factors, increase of income of people ranked top with the score 437 followed by Health awareness of people (434), Modern technology (429),

Increasing of private hospital (420), Current economic growth (402), Increase of literacy of people (399), Member of LDC and Current WTO-TRIPS Agreement (381), Govt. drug rules and policy (377), Present export/import policy (375) and Govt. industrial policy (344). The result found that own manufactured raw materials is insignificant strength for the sample companies. Out of five companies, RL considered the govt. industrial policy (mean=4.00), the current WTO-TRIPS agreement (mean=4.30), the increase of income of people (mean=4.65), modern technology (mean=4.75) and govt. industrial policy as greater opportunity (mean=4.00) than the other companies. SPL considered the present export/import policy (mean=4.05), modern technology (mean=4.75) and private hospital as greater opportunity (mean=4.65) than the other companies. GSKB considered the increase of literacy of people as greater opportunity (mean=4.10) than the other companies. IPIL considered the current economic growth (mean=4.30) and the member of LDC (mean=4.20) as greater opportunity than the other companies. BPL considered health awareness of people as greater opportunity (mean=4.64) than the other companies.

8.2.4.2 Threat Factors Influencing Pharmaceutical Companies

Among the threat factors, Unethical marketing of competitor ranked top with the score 434 followed by Political instability (430), High rate of interest (400), Lack of power supply (396), High corporate tax (390), Price of raw materials (386), Govt. drug rules and policy (283), WTOTRIPS agreement after 2015 (381), Lack of API Park (374), Local competitors (353), Lack of modern technology (327) and New entrants (310). It can be concluded that the sample companies have several significant environmental threats and company management should consider these and try to overcome through proper strategic management practice to retain the current growth of this sector. Among five companies, SPL considered the new entrant (mean=3.80), the high corporate tax as greater threat (mean=4.20), the lack of API Park (mean=4.70) and WTOTRIPS agreement after 2015 (mean=4.65) as greater threat than the other companies. BPL considered the political instability (mean=4.80), the lack of modern technology (mean=3.70) and the high rate of interest (mean=4.60) as greater threat than the other companies. GSKB considered fluctuation of exchange rate (mean=4.20), the govt. drug rules and policy (mean=4.00) and the local competitors (mean=4.60) as greater threat

than the other companies. RL considered the unethical marketing as greater threat (mean=4.50) than the other companies.

8.2.4.3 Impact of External Environment on Company's Operation

8.2.4.3.1 Impact of Political Environment on Company's Operation

The impacts of the political environment were on price of the drug (100%), export/import of the drugs (95%), scope of business (87%), profitability (79%), total quality management (77%), production process (34%), research and development (33%) and marketing system (20%). There was a statistically significant difference in the impact of political environment on company's operation.

8.2.4.3.2 Impact of Economic Environment on Company's Operation

The current impacts of the economic environment were found on profitability (94%), scope of business (80%), price of the drug (73%), export/import of the drugs (52%), total quality management (10%) and research and development. There was a statistically significant difference in the impact of economic environment on company's operation.

8.2.4.3.3 Impact of Bangladeshi Social/Cultural Environment on Company's Operation

The impacts of social/cultural environment of Bangladesh were found on scope of business (74%), marketing system (29%), price of the drug (29%), profitability (12%) and total quality management (10%). There was a statistically significant difference in the impact of Bangladeshi social/cultural environment on company's operation.

8.2.4.3.4 Impact of Technological Environment on Company's Operation

The current impacts of technological environment were found on scope of business (100%), total quality management (85%), production process (84%), profitability (66%), research and development (64%), marketing system (38%), price of the drug (38%), and marketing system (37%). There was a statistically significant difference in the impact of technological environment on company's operation.

8.2.5 Research question 5: Nature and Extent of Implementing the Strategies Followed by the Listed Pharmaceutical Companies

8.2.5.1 Product/Market Growth Strategies of the Sample Companies

All the sample companies follows four types of product/market growth strategies such as introducing existing products in current markets, existing products in new markets, new products in existing markets and new products in new markets. Among the four product/market growth strategies, Introducing existing products in new markets was found the highest level of consideration (mean=4.41) followed by marketing of new products into existing markets (mean=4.38), Introducing new products into existing markets (mean=4.38), marketing of existing products in current markets (mean=4.27) and Introducing new products into new markets (mean=3.92). Significant differences were observed in the level of consideration among the sample companies. From the opinion of executives, it can be conclude that the sample pharmaceutical companies consider all the strategy mentioned above to enhance their sales as well as market share.

8.2.5.2 Research and Development (R & D) Strategies of the Sample Companies

Four types of Research and Development (R & D) strategies are investigated in this study. These are 1. Company's consideration to be highly technology innovative, 2. Company's growth via acquisitions rather than internal R & D, 3. The emphasis of R & D expenditures is highly applied and 4. R & D effort tends to avoid high risk activity. From the opinion of executives, it can be concluded that the sample pharmaceutical companies consider to be highly technology innovative (mean=4.25). The R & D expenditures of the companies is highly applied (mean=4.20). The sample companies did not prefer to seek growth via acquisitions rather than internal R & D (mean=2.40). The R & D effort of sample companies tends to avoid high risk activity moderately (mean=3.75).

8.2.5.3 Marketing Strategies of the Sample Companies

Among the different marketing strategies, the health awareness programs (mean=4.17), free sample distribution to doctors (mean=4.22), ethical marketing (mean=4.48), regular contact with the doctor (mean=4.43), corporate social responsibility (mean=4.23) and special reward for employee mean=4.15) were reported the important strategies for the sample companies that affect their business performance. Surprisingly, it is found that low price compared to competitor (mean=2.87 is not an

important marketing promotion strategy for the sample companies which actually need for poor people of Bangladesh.

8.2.5.4 Human Resource Strategies of the Sample Companies

The Human Resource Strategies which are considered to be investigated for this study are: size of the workforce, knowledge and skill of the employee, formal job duties, monitoring system, wage system, performance appraisals, training programs and the promotion system of the company. The result found that the sample pharmaceutical companies have appropriate sized workforce (mean=3.71). The recruitment of skilled employee is an important human resource strategy of all the sample companies (mean=4.20). All the companies make formal job duties so that employees know their responsibilities (mean=4.23). They have closely monitoring system which is an important human resource strategy and affects day-to-day activities of employees (mean=4.37). The sample companies try to attract and retain employees by paying a higher wage than competitors (mean=3.68). It is also revealed that the companies use performance appraisals strategy to help employees identify new skills to develop their business (mean=4.22). They arrange training program regularly to develop employee's skill (mean=4.34). Result also found that the promotion system of the sample companies is very attractive compared to others competitors which affect their business performance (mean=3.75).

8.2.5.5 International Strategies of the Sample Companies

All the selected pharmaceutical companies have international operations. Result indicated that corporate planning of the sample companies is conducted on a worldwide (mean=3.74). It is also found that marketing strategies of the sample companies are developed on a worldwide basis (mean=3.84). From the opinions of respondents, it can be concluded that the sample companies seek foreign markets to export the existing products (mean=4.08).

8.2.5.6 Acquisition, Merger, Divested Or Eliminated, Turnarounds and Joint Venture Strategy of the Sample Companies

This study investigated whether the significant acquisitions merger, divested or eliminated, turnarounds and joint venture strategy have been made by the sample pharmaceutical companies during last ten years or not. Among the five companies, only one company had made significant acquisitions during last ten years. No company has merged with another company and has made significant turnarounds during last ten years. The sample

companies did not divest or eliminate any important operation. The responses confirmed that only one company has made joint venture business with another company.

8.2.5.7 Quality Management of the Sample Companies

All the sample companies considered management of quality as a strategic issue to a reasonably great extent (mean=4.41). Result found that quality is the responsibility of everyone in the organization (mean=4.45). The senior management of the sample companies plays a vital role for continuous quality improvements (mean=4.31). The pharmaceutical companies have special rewards for employees who contribute to quality improvements (mean=4.28). The company arranges training programs for quality improvement. Responses ensured that such training of employees in quality issues plays an important role to enhance product quality (mean=4.26). Result also found that the sample pharmaceutical companies assess the quality of product manufacturing processes regularly (mean=4.32). Statistically significant differences were observed regarding all the quality issues among the sample companies.

8.2.6 Research Question 6: Impact of Strategic Management Practices on Organizational Performance

Impact of strategic management practices on organizational performance of the sample companies is evaluated mainly in four segments like liquidity determinants, profitability indicators, activity focus and leverage and growth output.

8.2.6.1 Liquidity Determinant of the Sample Companies

8.2.6.1.1 Current Ratio Analysis

The average Current Ratio of GSKB (3.46) and BPL (2.00) is quite satisfactory as compared with standard norm (2:1) as well as samples mean (1.85). The average ratios of SPL (1.66), RL (1.23) and IPIL (0.92) are below the standard norm as well as the samples mean which shows the inefficient liquidity management of the companies. The co-efficient of variation states that variation of current ratio over the years is not satisfactory. Variation among the current ratios of the sample companies during the study period was significant at 5% level of significance.

8.2.6.1.2 Quick Ratio Analysis

The average quick ratio of GSKB (1.44:1), BPL (1.25:1) and SPL (0.99) is quite satisfactory as compared with standard norm. The average ratios of RL (0.45) and IPIL

(0.60) are below the standard norm which indicates financial weakness of the companies to meet its most immediate liabilities. From the co-efficient of variation it is found that variation of quick ratio of all the sample companies is not in stability position. Result found that BPL has the highest variation (51%) in quick ratio followed by RL (31%), SPL (27.00%), GSKB (25%) and IPIL (23%). Variation among the current ratios of the samples during the study period was significant at 5% level of significance.

8.2.6.1.3 Net Working Capital Ratio

This study found that GSK has highest (0.68) ratio and it is also greater than the samples mean which ensures proper utilization of net working capital of the company. On the other hand, the average ratio of BPL (0.16), SPL (0.16) and RL (0.11) are lower than the samples mean and even negative in IPIL at (-0.10) which indicates the inability and inadequacy of net working capital to cover net assets of the selected companies during the study period. The highest stability of net working capital ratio was observed in GSKB evidenced by low level of CV (0.06). But significant variation is found in other four companies having high level of CV. The variation analysis indicates that there was significant variation existing among the net working capital ratios of the sample pharmaceutical companies.

8.2.6.2 Activity Focus of Sample Companies

8.2.6.2.1 Inventory Turnover Ratio

The average inventory turnover ratios of all the sample companies except IPIL (10.84) are below the standard norm as well as samples mean (4.15) which indicates excessive inventory levels or a slow moving or obsolete inventory. If the obsolete inventories have to be written off, this will adversely affect the working capital and liquidity position of the companies. It is observed by the co-efficient of variation analysis that variation of inventory turnover of GSKB (25%), BPL (28%), SPL (20%) and IPIL (32%) are inconsistent while the CV of RL (7%) is rather satisfactory stability position. Variation among the current ratios of the samples during the study period was significant.

8.2.6.2.2 Total Asset Turnover Ratio

The average total asset turnover ratio was highest in IPIL at 1.97 times and lowest in BPL at 0.31 times. The average ratio of GSKB (1.55), BPL (0.31), SPL (0.72) and RL

(1.02) are lower than standard norm. The management of these companies should consider options to increase sales and decrease its average total assets to improve this ratio. The co-efficient of variation states that variation of total asset turnover ratio over the years is inconsistent. It revealed that SPL (7%) had the lowest fluctuation in total asset turnover ratio among the samples followed by IPIL (13%), BPL (14%), GSKB (16%) and RL (21%). Variation among the total asset turnover ratios of the samples during the study period was significant at 5% level of significance.

8.2.6.2.3 Fixed Asset Turnover Ratio

The average ratio of GSKB (7.30) is greater than standard norm as well as samples mean which indicate effective uses of fixed assets of the company. But the ratios of other four companies i.e. BPL (0.44 times), SPL (1.08 times), RL (1.93 times) and IPIL (3.13 times) are lower than standard norm as well as samples mean. This low level of ratio indicates poor sales volume and ineffective uses of fixed assets of the companies. From the co-efficient of variation analysis it is clear that variations of fixed assets turnover ratio over the years is significant. Among the samples, SPL (5%) had the lowest fluctuation in fixed assets turnover ratio followed by IPIL (16%), BPL (17%), RL (37%) and GSKB (39%). Variation among the fixed assets turnover ratios of the samples during the study period was significant.

8.2.6.2.4 Accounts Receivable Turnover

The average ratio was highest in IPIL at 1747.03 times and lowest in BPL at 7.14 times. Although the higher accounts receivable turnover indicates the efficiency of credit sales management but the average ratio of IPIL is too high which may mean the credit of the company is too tight. However, the turnover ratio of GSKB (10.24 times), BPL (7.14 times), SPL (21.76 times), and RL (10.23 times) are somewhat satisfactory during the study period. The co-efficient of variation states that variation of accounts receivable turnover ratio over the years is not satisfactory. However, SPL (12%) had the lowest fluctuation in accounts receivable turnover ratio among the samples followed by RL (15%), BPL (23%), GSKB (50%) and IPIL (70%). It is evident that variation among the accounts receivable turnover ratios of the samples during the study period was significant.

8.2.6.2.5 Working Capital Turnover Ratio

The average working capital turnover ratio was found highest in RL at 9.47 times and lowest in IPIL at 1.49 times. The average ratio of GSKB (3.33 times) and BPL (3.77 times) and IPIL (1.49 times) are lower than samples mean which indicates poor management of using working capital. The turnover ratio of IPIL is observed negative in most of the years which mean inefficiency of management in using short term assets. The co-efficient of variation states that variation of working capital turnover ratio over the years is not satisfactory. Variation among the working capital turnover ratios of the samples during the study period was significant.

8.2.6.3 Profitability Indicators of Sample Companies

8.2.6.3.1 Gross Profit Margin Ratio

The average gross profit margin ratio was highest in RL at 50.73% and lowest in GSKB at 26.91%. The trend of gross margin ratios of the pharmaceutical companies is very satisfactory. CV indicated that the variation of gross profit over the years is negligible except one company (GSKB in 19%) which speaks about the stability of gross earnings of this sector. Result also found that variation among the gross profit margin ratios of the samples during the study period was significant at 5% level of significance.

8.2.6.3.2 Net Profit Margin Ratio

The study revealed that average net profit margin ratio was highest in SPL at 18.94% and lowest in IPIL at 4.15%. The average ratio of GSKB (6.77%) and IPIL (4.15) are lower than samples mean (11.54%) which refers to the company's failure to achieve satisfactory return on owner's equity. The co-efficient of variation stated that variation of net profit margin ratio over the years is not satisfactory. Among the companies, SPL (10.00%) had the highest stability in net profit margin ratio followed by BPL (13.00%), RL (15%), IPIL (28%) and GSKB (68%). Variation among the net profit margin ratios of the samples during the study period was significant.

8.2.6.3.3 Return on Total Asset

The average return on total asset ranged from 14.29% in RL to 4.22% in BPL. The average return of BPL (4.22%) and IPIL (8.11%) were below the standard norm as well as samples mean. While the return of others three companies is quiet satisfactory and desirable. The co-efficient of variation analysis indicated that SPL and RL (11%) had the lowest fluctuation in return on total asset ratio among the samples followed by BPL

(21), IPIL (25%), and GSKB (65%). Variation among the return on total asset ratios of the samples during the study period was significant.

8.2.6.3.4 Return on Capital Employed

Result found that average return on capital employed ratio was highest in SPL at 36.44% and lowest in BPL at 8.28%. All the sample companies except BPL (8.28%) were maintaining standard norm. The samples mean return on capital employed is 20.58% which is very satisfactory in terms of standard norm. The lowest 9% of co-efficient of variation in return on capital employed of SPL and RL indicates that their return on capital over the years was the most stable compared to other selected companies over the period of 2004-2013. It also revealed that variation among the return on capital employed ratios of the samples during the study period was significant.

8.2.6.3.5 Return on Equity

It was found that the average return on equity varied from highest 25.72% in RL and lowest 6.23% in BPL. The average return on equity of GSKB (17.02%), SPL (18.36%), RL (25.72%), and IPIL (16.84) should be considered as satisfactory as they are more than samples mean. The lowest 9% of co-efficient of variation in return on equity of RL indicated that its return on equity over the years was the most stable compared to other selected companies over the period of 2004-2013. It also found that variation among the return on equity ratios of the samples during the study period was significant.

8.2.6.3.6 Operating Profit Margin Ratio

The average operating profit margin ratio of the sample pharmaceuticals was found highest 23.22% in RL and the lowest 5.38% in IPIL. The average operating profit margins of all the sample companies were more than standard norm which indicates the efficiency of operation management as well as cost control. SPL (9%) had the lowest fluctuation in operating profit margin ratio among the samples followed by BPL (11%), RL (17%), IPIL (31%) and GSK (57%). Variation among the operating profit margin ratios of the samples during the study period was significant.

8.2.6.4 Leverage Output of the Sample Companies

8.2.6.4.1 Debt to Equity Ratio

Average debt equity ratio was found ranges from lowest 0.36 in SPL to the highest 1.07 in IPIL. None of the sample companies was able to maintain the standard norm of debt-

equity ratio (2:1) during the period. The ratios were always below the norm which means the claims of creditors are lower than those of owners. It indicated the inefficient financial management of the sample companies. CV indicated that significant variation in debt-equity ratio over the years was existed among the sample companies.

8.2.6.4.2 Debt to Asset Ratio

The study was found that average debt to asset ratio of sample companies varied between 0.49 in IPIL and 0.26 in SPL. The average debt to asset ratios of selected companies as well as industry average (0.37) are lower than the standard norm (.50) which indicates less dependency on debt rather than on their own assets for financing their different projects. The highest stability of debt to asset ratio was found in RPL evidenced by low level (0.08) of CV followed by SPL (0.21), IPIL (0.22), BPL (0.23) and GSKb (0.33). Variation among the debt to asset ratios of the samples during the study period was significant.

8.2.6.4.3 Time Interest Earned Ratio

The result found that the average time interest earned ratio was the highest in GSK at 171.97 followed by IPIL (22.33), SPL (10.64), RL (9.02) and BPL (2.90). Although a higher ratio of time interest earned is desirable; but the ratio of GSKB is too high (171.97) which indicates the company is very conservative in using debt. The ratios of the rest of the companies except BPL were somewhat satisfactory. The co-efficient of variation states that variation of time interest earned ratio over the years is not satisfactory. Variation among the time interest earned ratios of the samples during the study period was significant at 5% level of significance.

8.2.6.5 Correlation between the Strategic Management Factors and Organizational Performance of the Sample Companies

8.2.6.5.1 Correlation between the Strength Factors and Different Profitability Indicators

This research found that the correlations coefficient between the strengths factors and gross profit margin ratio, net profit margin ratio, return on total asset, return on capital employed, return on equity, operating profit margin ratio are r=0.645, r=0.423, r=0.706, r=0.913, r=0.787 and r=0.661 respectively. This indicates that there are strong positive correlations between the strengths factors and different profitability ratios of the sample companies.

8.2.6.5.2 Correlation between the Weakness Factors and Different Profitability Indicators

The result found that the correlations coefficient between the weakness factors and gross profit margin ratio, net profit margin ratio, return on total asset, return on capital employed, return on equity, operating profit margin ratio are r=-0.742, r=-0.047, r=0.010, r=-0.334, r=-0.230, and r=-0.311 respectively. The weakness factors are negatively correlated with all other profitability ratios except with return on total asset.

8.2.6.5.3 Correlation between the Opportunity Factors and Different Profitability Indicators

It was found that the correlations coefficient between the opportunity factors and gross profit margin ratio, net profit margin ratio, return on total asset, return on capital employed, return on equity, operating profit margin ratio are r=0.740, r=0.270, r=0.279, r=0.449, r=0.408, and r=0.397 respectively. It revealed that there are positive correlations between the opportunity factors and different profitability ratios of the sample companies.

8.2.6.5.4 Correlation between the Threat Factors and Different Profitability Indicators

This study found that the correlations coefficient between the threat factors and gross profit margin ratio, net profit margin ratio, return on total asset, return on capital employed, return on equity, operating profit margin ratio are r=-0.319, r=0.151, r=-0.478, r=-0.865, r=-0.758 and r=-0.201 respectively. It can be concluded that the threat factors are negatively correlated with all other profitability ratios except with net profit margin ratio.

8.2.6.5.5 Correlation between the Product/Market Growth Strategies and Different Profitability Indicators

The correlations coefficient between the product/market growth strategies and gross profit margin ratio, net profit margin ratio, return on total asset, return on capital employed, return on equity, operating profit margin ratio are r=0.470, r=0.877, r=0.649, r=0.485, r=0.390, and r=0.843 respectively. It is clear that there are positive correlations between the product/market growth strategies and different profitability ratios of the sample companies.

8.2.6.5.6 Correlation between the Research and Development (R & D) Strategies and Different Profitability Indicators

The correlations coefficient between the R & D Strategies and gross profit margin ratio, net profit margin ratio, return on total asset, return on capital employed, return on equity, operating profit margin ratio are r=0.265, r=0.455,r=0.933, r=0.914, r=0.878, and r=0.518 respectively. Overall, it can be concluded that there are positive correlations between the R & D strategies and different profitability ratios of the sample companies. Strong correlations are found between R & D strategies and return on total asset and return on capital employed.

8.2.6.5.7 Correlation between the Marketing Strategies and Different Profitability Indicators

The correlations coefficient between the marketing strategies and gross profit margin ratio, net profit margin ratio, return on total asset, return on capital employed, return on equity, operating profit margin ratio are r=0.656, r=0.642, r=0.061, r=-0.102, r=-0.095 and r=0.496 respectively. It can be said that the marketing strategies are positively correlated with all other profitability ratios except with return on capital employed and return on equity.

8.2.6.5.8 Correlation between the Human Resource Strategies and Different Profitability Indicators

The result revealed that the correlations coefficient between the human resource strategies and gross profit margin ratio, net profit margin ratio, return on total asset, return on capital employed, return on equity, operating profit margin ratio are r=0.805, r=0.947, r=0.339, r=0.285, r=0.125, and r=0.990 respectively. It indicated that there are positive correlations between the human resource strategies and different profitability ratios of the sample companies.

8.2.6.5.9 Correlation between the Quality Management Strategies and Different Profitability Indicators

This study that the correlations coefficient between the quality management strategies and gross profit margin ratio, net profit margin ratio, return on total asset, return on capital employed, return on equity, operating profit margin ratio are r=-0.137, r=0.492, r=0.094, r=-0.159, r=-0.216 and r=0.363 respectively. It is clear that positive correlations exist between the quality management strategies and different profitability ratios of the sample companies except with gross profit margin ratio, return on capital employed and return on equity.

8.3 Conclusion

This chapter summarized the major findings of this research according to research questions. First research question of this study was about the growth and development of Pharmaceutical industry in Bangladesh. This study found a significant role of this industry in boosting economic activity of the country, accelerating employment generation, providing a better standard of living to the local people, increasing government revenue and foreign currency. The growth rate of this sector is 14.6% in last ten years. Although, twenty years back, Pharmaceutical market was dominated by Multi National Companies - now it shifted to local companies which enjoy about 90% of market share. The country is now almost a self-sufficient in its pharmaceuticals products as the local companies manufactures 97% of the total drug demand. Second research question was about the present scenario of strategic management practices of Listed Pharmaceutical Companies. This study found that all the sample companies had formal corporate, business and functional level long term plans. It revealed that board of directors is involved in formulation of vision and mission statement of all the sample companies. Besides this, corporate level management, Business level manager, corporate planning department and Functional level manager also are involved in different extent to make the organizational strategy. It found that all types of plan updated yearly. PEST analysis and SWOT analysis were found the most reported analytical techniques which influence the formulation of the company strategies.

Third and fourth research question were about the major environmental factors that influence the strategic management practices of the Pharmaceutical companies in Bangladesh. Brand Name was found the most reported strength factors followed by Good manufacturing process, Delivery system, Working environment and Use of up-to-date technology, Total Quality Management, Product innovations, Corporate leadership, Professional skill of the employee and Research and development. Among the weakness factors, it revealed that the lack of Active Pharmaceutical Ingredients (API) facilities is highly significant for the pharmaceutical companies. Among the opportunity factors, Increase of income of people ranked top followed by Health awareness of people, Modern technology, Increasing of private hospital, Current economic growth, Increase of literacy of people, Member of LDC and Current WTO-TRIPS Agreement, Govt. drug rules and policy, Present export/import policy and Govt. industrial policy. Among the threat factors, Unethical marketing of competitor ranked top followed by Political

instability, High rate of interest, Lack of power supply, High corporate tax, Price of raw materials, Govt. drug rules and policy, WTOTRIPS agreement after 2015, Lack of API Park, Local competitors, Lack of modern technology and New entrants.

Fifth research question was about the major strategies which are followed by Pharmaceutical Companies in Bangladesh. This study found four product/market growth strategies which were considered by the sample companies. They are- existing products in current markets, existing products in new markets, new products in existing markets, and new products in new markets. This study observed that health awareness programs, free sample distribution to doctors, ethical marketing, and regular contact with the doctor, corporate social responsibility and special reward for employee are important marketing promotion strategies for the sample pharmaceutical companies. Result found that appropriately sized workforce, skilled employee, formal job duties, closely monitoring system, attractive wage system, using performance appraisals, training programs and the promotion system were most reported Human Resource Strategies for the sample companies. All the selected pharmaceutical companies have international operations. Result found that no company has merged with another company and has made significant turnarounds, not divested or eliminated any important operation during last ten years. Responses confirmed overall, the sample pharmaceutical companies considered management of quality as a strategic issue to a reasonably great extent.

Sixth research question was about the impact of strategic management practices on organizational performance. This study mainly focused on the liquidity ratios, activity ratios, profitability ratios and leverage ratios. The co-efficient of variation stated that variation of current ratios as well as quick ratios of the sample companies over the years were not satisfactory. Significant variations were found over the years in total asset turnover ratio, fixed assets turnover ratio, accounts receivable turnover ratio, working capital turnover ratio. The co-efficient of variation analysis indicated that significant variation was found in net profit margin ratio, return on total asset ratios, return on capital employed ratios, return on equity ratios and the operating profit margin ratios of the samples pharmaceutical companies during the study period. The variations in the leverage ratios over the years were also found significant among the sample companies. This research also examined the correlation between the strategic management factors and organizational performance of the sample companies. The result revealed that the strength factors, opportunity factors, product/market growth strategies, R & D strategies,

marketing strategies, human resource strategies are positively correlated with organizational performance. On the other hand, quality management strategies, weakness factors and threat factors are negatively correlated with organizational performance.

8.4 Recommendations

8.4.1 Formulation of Proper Strategies for Sample Companies

The Pharmaceutical companies need continuous updating of manifold corporate strategies, tactical strategies, operating strategies in the context global changes. Ultimate goal of each business is to achieve distinct competencies which might be possible through developing competitive advantage in global market by way of cost control, quality development and competitive price rates. For this management should be more vigilant towards changing demand and expectations of the shareholders as well as the entry of new competitors as desired by government. We should also remember the Sustainable Development Goals while determining the strategies for the survival of our pharmaceutical sector.

8.4.2 Raising Ethical Training

Total population of the country is directly related to pharmaceutical companies as they have to intake drugs as and when required. So the pharmaceutical companies should produce quality drugs and introduce ethical training for their employees especially for the medical representatives.

8.4.3 Implementation of API Park

Active Pharmaceutical Ingredients (API) Industrial Park is the most significant requirement of the pharmaceutical industry. About 80% of the APIs are imported every year from India, China Italy and Germany due to absence of such park in the country. Of late the government has already approved a project to establish API Industrial Park at Gazaria, Munshiganj. Now necessary steps should be taken to implement the project within the stipulated time for strengthening the pharma sector of Bangladesh. It is estimated that cost of APIs will decrease by about 20%, if the API Park is established. It will help increase the local pharmaceutical industry competitiveness to help boost exports as well as decrease drug price in local market.

8.4.4 Checking Unethical Marketing for Pharmaceutical Companies

Unethical marketing of competitor is a great threat for every pharmaceutical company. Unethical practice of the companies generally happens through medical representative

with the medical practitioners. It is suggested that a strict code of conduct should be formulated by the both pharmaceutical companies and medical practitioners. Pharmaceutical companies must compel their medical representatives to follow ethical code of conduct.

8.4.5 Strengthening the Directorate of Drug Administration (DDA)

The Directorate of Drug Administration (DDA) is responsible to implement all prevailing Drug Regulations in the country and to regulate all activities related to import, procurement of raw and packing materials, production and import of finished drugs, export, sale, pricing, etc. of all kinds of medicine. Numbers of unregistered pharmacies are increasing day by day that is involved mainly substandard drugs. The DDA is significantly under-resourced. The DDA has 44 inspectors, 16 located in Dhaka and then almost one per district (30 districts). With this resource it is difficult to carry out its very large volume of assigned work. So, the DDA need to be strengthened and provided necessary financial and human resources.

8.4.6 Strengthening the Drug Testing Laboratories

The present facilities of two Drug Testing Laboratories can test only about 4000 samples out of more than 16000 drugs a year. So a large number of drugs are remaining untested which might be hazardous for human health. Moreover, it is very urgent to maintain quality of the drugs as Bangladeshi companies are enjoying increased access to international market. Therefore, some other Drug Testing Laboratories equipped with modern and sophisticated technology should be set up in different areas of the country that will test the sample drugs collected from local market as well as testing new drugs for marketing at home and abroad.

8.4.7 Establishing Bioequivalence Testing Laboratory

Bangladesh has no bioequivalence testing laboratory capabilities. Bangladeshi companies, which want to export their products, have to get a certificate from an internationally recognized bioequivalence laboratory either in Singapore or USA costing about US $30,000-$60,000 per drug. The process is also cumbersome, time-consuming and expensive. If a bio-equivalence testing laboratory of international standard can be established in this country, government could save a huge amount foreign currency.

8.5 Implications of the Study

This study has several implications to the strategic management practices. Firstly, this study has discussed the overall strategic management characteristics of the pharmaceutical industry in Bangladesh and will allow all level managers (corporate, business and functional) to compare their strategic management characteristics with other organization. Secondly, this study examined the internal and external factors environmental factors which may impact on the strategic management practices and performances of the organization. Finally, this study finding can be useful for professionals outside who want to expand their business into pharmaceutical industry by helping them understand different aspects of this industry.

8.6 Limitations of the Study

There are some limitations to this research. Firstly, the population for this research is limited to the Listed Pharmaceutical Companies of DSE in Bangladesh. Secondly, primary data of this study was collected from the respondents in 2014 and secondary data was covered at a particular period of time from 2001 to 2012. So this study only gives detailed insights into a specific situation of that time. Despite these limitations, it is expected that the research will contribute to the study of strategic management as well as pharmaceutical industry in Bangladesh.

8.7 Directions for Further Research

There are number of directions for further research possible to build on this study. Firstly, a similar kind of questionnaire and research approach can be expanded to studies of strategic management in industries other than the pharmaceutical industry in Bangladesh like Banking, Insurance and some other manufacturing industries. Secondly, the major research questions of this study can be redeveloped to investigate the strategic management practices of other industries in Bangladesh. Finally, this research focused on the impact of strategic management practices on organizational performance and could be expanded to investigate impact of such practice on other than performance which has not covered in this study.

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APPENDICES

Appendix 1

Questionnaire for Collecting Data from Directorate of Drug Administration

1.Pharmaceutical Industry Structure (up to 2012)

System	No. of Manufacturing Unit	No. of Units Suspended or Closed	No. of Registered Brands	No. generic drugs	No. of registered Pharmacy
Allopathic					
Unani					
Ayurvedic					
Homeopathic					
Herbal					
Total					

2. How many Multi National Companies are producing pharmaceutical products in Bangladesh?

Ans.

3. Import of Drugs and Raw Materials (2001-2012)

Year	Local Production (tkin mill.)	Imported Finished Drugs(tk.in mill.)	% of Imported Drugs	Locally Produced Raw Materials	Imported Raw Materials (tk.in mill.)	% of Imported Raw materials	Imported Packing materials
2001							
2002							
2003							
2004							
2005							
2006							
2007							
2008							
2009							
2010							
2011							
2012							

4. Production and Export of Finished Drugs

Year	Local Production (tk. In mill.)	Export (tk.in.mill)	% of exported drugs
2001			
2002			
2003			
2004			
2005			
2006			
2007			
2008			
2009			
2010			
2011			
2012			

5. How many items samples should be tested in a year?

Ans.

6. What is the current capacity of the drug testing laboratories?

Ans.

7. Number of exporting country of last 12 years

Ans.

8. Please provide the list of countries where Bangladesh exports pharmaceutical products.

Ans.

9. Division wise sales of pharmaceutical products

Ans.

10. Geographical location of pharmaceutical companies (division wise)

Ans.

Appendix 2

Questionnaire for Top/Middle Level Executives

Dear Respondent,

My name is Md. Noor Alam, a Ph.D. fellow of Institute of Bangladesh Studies in Rajshahi University. I am conducting a study on "Strategic Management Practices and Organizational Performance of the Listed Pharmaceutical Companies in Bangladesh". The main focus of this study is to explore the strategic management practices at different levels of organization and the impact of such practices on organizational performance of the listed pharmaceutical companies in Bangladesh. Yon can be assured that the information you provided will be used for academic research only and will be kept strictly confidential. Please read carefully the directions at the beginning of each section and answer all the questions as accurately as possible. Since this is pure academic work, your earliest response will be highly appreciated.

Thanks & best regards

Md. Noor Alam
Ph.D. Fellow, Session-2011-12
Institute of Bangladesh Studies
Rajshahi University

General Information:

1. Name of the Organization: ……. 2. Name of the respondent: ……

3. Designation: ……. …. 4.Department: …….

5. Total service in this organization? _____Years

6.Educational background: Bachelor/Master Degree in _____ Others degree_____

7. Do you participate in corporate/business planning activities?

☐ Yes ☐No

8. If yes, how long have you been involved in corporate/business planning activities? _____Years

Part One: Assessment of Internal and External Environment Factors

A. Internal Environment Factors

Organization culture of your company

1. Could you please describe the key characteristics of your company's culture? (Please encircle the answer or specify if others, you may select more than one)

   1. Commitment 2. Loyalty 3. Team spirit 4. Mutual respect

   5. Less rigid 6. Participative 7. Performance measurement

   8. Family working culture 9. Others (Please specify) ……

2. To what extent do you agree with the following statement?

   (Please encircle the most appropriate answer)

(1= Strongly disagree, 2=Disagree, 3= Neutral, 4= Agree, 5=Strongly agree)

1	The current culture of our company is satisfactory	1 2 3 4 5
	Our company encourages	
2	the development and implementation of new ideas	1 2 3 4 5
3	communication and co-operation between the departments	1 2 3 4 5
4	an open discussion of conflicts and differences	1 2 3 4 5
5	participative decision-making processes in and between organizational levels	1 2 3 4 5
6	teamwork rather than individual contributions	1 2 3 4 5
7	rewarding system in proportion to the excellence of their performance	1 2 3 4 5

Management styles and Stakeholder expectations of your company

3. Could you please describe your company's key management style? (Please encircle the answer or specify if others, you may select more than one)

   1. Participatory 2. Top to bottom approach 3. Autocratic

   4. Individual performance rather than group performance

   5. Decisions are made by a committee 6. Power motives rather than achievement motives

   7.Collective decisions by the board of directors 8. Employee friendly

   9. Others (Please specify) ..

4. To what extent do you agree with the following statement?

   (Pls. encircle the most appropriate answer)

(1= Strongly disagree, 2=Disagree, 3= Neutral, 4= Agree, 5=Strongly agree)

The company management style impacts the followers's performance and job satisfaction	1 2 3 4 5
The company key management style influence our company strategies	1 2 3 4 5
The stakeholder expectations influence our company strategies	1 2 3 4 5

5. Did your company face any significant problems with its current management style?
   ☐ Yes ☐ No

6. If yes, what are major problems of the current management style?
   Ans.

7. To what extent do you think the following factors are strengths for your company?

   (Please encircle the answers or specify if others)

   (1= Strongly not opportunity, 2= Not opportunity, 3=Neutral, 4= Opportunity, 5= Strongly opportunity)

Brand name	1 2 3 4 5	Product innovation	1 2 3 4 5
Good manufacturing process	1 2 3 4 5	Total quality management	1 2 3 4 5
Delivery system	1 2 3 4 5	Own manufactured raw materials	1 2 3 4 5
Research and Development	1 2 3 4 5	Corporate leadership	1 2 3 4 5
Work environment	1 2 3 4 5	Professional skill of the employee	1 2 3 4 5
Use of up-to-date technology	1 2 3 4 5		

8. To what extent do you think the following factors are weaknesses for your?

   (Please encircle the answers or specify if others)

(1= Strongly not opportunity, 2= Not opportunity, 3=Neutral, 4= Opportunity, 5= Strongly opportunity)

Lack of API facilities	1 2 3 4 5	Lack of R &D	1 2 3 4 5
Lack of capacity utilization	1 2 3 4 5	Lack of modern technology	1 2 3 4 5
Lack of ethical marketing	1 2 3 4 5	Lack of awareness of stakeholders	1 2 3 4 5
Lack of managerial leadership	1 2 3 4 5	Lack of GMP	1 2 3 4 5
Lack of professional skill	1 2 3 4 5	Lack of good Pharmacist	1 2 3 4 5
Lack of wide distribution network	1 2 3 4 5		1 2 3 4 5

B. External Environment Factors

<u>Political, Economic, Social, and Technological environments.</u>

9. Could you please describe the current impacts of the government drug policies, rules and regulations on your company's operations? (Please encircle the answer, you may select more than one)
   1. Missions / goals / objectives 2. Price of the drugs 3. Export/import of drugs
   4. Total quality management 5. Profitability 6. Research and development
   7. Using local/foreign raw materials 8. Marketing system 9. Production processes

10. Could you please describe the current impacts of the Bangladeshi economy on your company's operations? (Please encircle the answer, you may select more than one)
   1. Missions / goals / objectives 2. Price of the drugs 3. Export/import of drugs
   4. Total quality management 5. Profitability 6.Research and development
   7. Scopes of business 8. Capital requirements 9. Using local/foreign raw materials

11. Could you please describe the current impacts of the Bangladeshi social/cultural environment on your company's operations? (Pls. encircle the answer, you may select more than one)
   1. Missions / goals / objectives 2. Price of the drugs 3. Total sales
   4. Total quality management 5. Profitability 6. Marketing system
   7. Export/import of drugs 8. Scopes of business 9. Production processes

12. Could you please describe the current impacts of the new technology on your company's operations? (Pls. encircle the answer, you may select more than one)
   1. Missions / goals / objectives 2. Price of the drugs 3.Capital requirements
   4. Total quality management 5. Profitability 6. Research and development
   7. Marketing system 8. Scopes of business 9. Production processes

13. To what extent do you think the following factors are opportunities for your company's operation?

(1= Strongly not opportunity, 2= Not opportunity, 3=Neutral, 4= Opportunity, 5= Strongly opportunity)

Govt. industrial policy	1	2	3	4	5	Modern technology	1	2	3	4	5
Present export/import policy	1	2	3	4	5	Health awareness of people	1	2	3	4	5
Current WTO-TRIPS Agreement	1	2	3	4	5	Increasing of private hospital	1	2	3	4	5
Increase of literacy of people	1	2	3	4	5	Member of LDC	1	2	3	4	5
Increase of income of people	1	2	3	4	5	Govt. drug rules and policy	1	2	3	4	5
Current economic growth	1	2	3	4	5		1	2	3	4	5

14. To what extent do you think the following factors are threats for your company's operation?

(1= Strongly not threat, 2= Not threat, 3=Neutral, 4= Threat, 5= Strongly threat)

New entrants	1	2	3	4	5	Lack of power supply	1	2	3	4	5
Local competitors						Price of raw materials	1	2	3	4	5
Lack of API Park	1	2	3	4	5	Govt. drug rules and policy	1	2	3	4	5
WTOTRIPS agreement after 2015	1	2	3	4	5	Lack of modern technology	1	2	3	4	5
High corporate tax	1	2	3	4	5	Unethical marketing of competitor	1	2	3	4	5
Political instability	1	2	3	4	5	High rate of interest	1	2	3	4	5

Part Two: Formulation of Mission, Vision, Long-term plans and Analytical Tools

Mission and Vision statements of your company

15. Could you please describe your current company's mission statement?

    Ans.

16. Could you please describe your current company's vision statement?

    Ans.

17. Which of the following personnel are involved in the formulation of vision and mission?

    1. Corporate level management 2.Board of directors 3.Business level managers 4. Corporate planning department 5.Chairman of the company 6.Functional manager

Formulation of Corporate long- term plan of your company

18. Does your company have formal corporate long-term plan?

    ☐ Yes ☐ No (If no, please go to question 21)

19. How often do you update corporate plans? (Please select one of the following)

    ☐ Monthly ☐ Quarterly ☐ Six monthly ☐ Yearly ☐ More than one year

20. Which of the following personnel are involved in the formulation of corporate long term-plans?

    1. Corporate level management 2.Board of directors 3.Business level managers 4. Corporate planning department 5.Chairman of the company 6.Functional manager

Formulation of Business and functional level plan of your company

21. Does your company prepare Business level long term plan?

    ☐ Yes ☐ No (If no, please go to question 24)

22. How often do you update Business level plans? (Please select one of the following)

    ☐ Monthly ☐ Quarterly ☐ Six monthly ☐ Yearly More than once a year

23. Which of the following personnel are involved in the formulation of Business level plan?

    1. Corporate level management 2.Board of directors 3.Business level managers 4. Corporate planning department 5.Chairman of the company 6.Functional level manager

24. Does your company prepare functional level (Human, Production, Marketing, Finance etc.) plans?

    ☐ Yes ☐ No

25. How often do you update functional level plans?

    (Please select one of the following)

    ☐ Monthly ☐ Quarterly ☐ Six monthly ☐ Yearly More than once a year

26. Which of the following personnel are involved in the formulation of functional level plan?

    1. Corporate level management 2.Board of directors 3.Business level managers 4. Corporate planning department 5.Chairman of the company 6.Functional manager

Analytical tools and techniques which influence to formulate company strategies.

27. To what extent have the following analytical tools/ techniques influenced in formulation of your company strategies?

    (1=Not at all influence, 2=No influence, 3= Neutral, 4=Influence, 5= Strongly Influence)

Environment and resource analysis techniques:					
PEST analysis (political, economic, social, technological)	1	2	3	4	5
Five forces analysis (supplier, buyer, competitor, new entrant, substitute)	1	2	3	4	5
SWOT analysis (strengths, weaknesses, opportunities, threats)	1	2	3	4	5
Key success factors	1	2	3	4	5
Product life cycle analysis	1	2	3	4	5
Benchmarking	1	2	3	4	5
BCG service portfolio matrix	1	2	3	4	5
General electric matrix	1	2	3	4	5

Part three: Assessment of different strategies followed by Pharmaceutical Companies and Management of quality

Product/market growth strategies

28. To what extent do you agree or disagree with the following descriptions for product/market growth strategies?

(1= Strongly disagree, 2=Disagree, 3= Neutral, 4= Agree, 5=Strongly agree)

Our company seeks growth through:	1	2	3	4	5
Existing products in existing markets	1	2	3	4	5
Introducing existing products into new markets	1	2	3	4	5
Introducing new products into existing markets	1	2	3	4	5
Introducing new products into new markets	1	2	3	4	5

Research and development (R & D) strategies

(If you do not have any Research and Development strategies please go to question 30)

29. To what extent do you agree or disagree with the following descriptions for the research and development strategies of your company?

(1= Strongly disagree, 2=Disagree, 3= Neutral, 4= Agree, 5=Strongly agree)

Our company considers to be highly technology innovative	1	2	3	4	5
Our company prefers to seek growth via acquisitions rather than internal R & D	1	2	3	4	5
The emphasis of our R& D expenditures is highly applied	1	2	3	4	5
Our R & D effort tends to avoid high risk activity	1	2	3	4	5

Marketing Strategies

30. To what extent do you involved with the following marketing promotion activities that affect your business performance? (Please encircle the most appropriate answer)

(1=Not at all involved, 2= Not involved, 3= Neutral, 4= involved, 5=Strongly involved)

Health awareness programmed	1 2 3 4 5	Corporate Social Responsibility	1 2 3 4 5
Free sample to doctors	1 2 3 4 5	Low price compared to competitor	1 2 3 4 5
Ethical marketing	1 2 3 4 5	Special reward for employee	1 2 3 4 5
Regular contact with the doctor	1 2 3 4 5		

Human Resource Strategies

31. To what extent do you agree or disagree with the following descriptions regarding human resource strategies? (1= Strongly disagree, 2=Disagree, 3= Neutral, 4= Agree, 5=Strongly agree)

This company always has an appropriately sized workforce	1 2 3 4 5
This company has the employee with the right knowledge and skill	1 2 3 4 5
We have formal job duties so that employees know their responsibilities	1 2 3 4 5
Managers closely monitor the day-to-day activities of employees	1 2 3 4 5
We attract and retain employees by paying a higher wage than our competitors	1 2 3 4 5
We use performance appraisals to help employees identify new skills to develop	1 2 3 4 5
We arrange training programmed to develop employees skill	1 2 3 4 5
The promotion system of our company is attractive compared to competitors	1 2 3 4 5

Company's international strategies

(If you do not have any international operations, pls. go to question 34)

32. Do you have any international operations?

☐ Yes ☐ No

If no, are you considering any international operations within the next five years?

☐ Yes ☐ No

33. To what extent do you agree or disagree with the following statements about your company's international strategies? (1= Strongly disagree, 2=Disagree, 3= Neutral, 4= Agree, 5=Strongly agree)

Our corporate planning is conducted on a worldwide basis	1 2 3 4 5
Our marketing strategies are developed on a worldwide basis	1 2 3 4 5
We seek foreign markets in which we can market existing products	1 2 3 4 5

Company's Acquisitio, Merger, Divestiture, Turnaroundand, Joint Ventures strategies

34. Could you please answer the following statements?

1	Has your company made any significant acquisitions in last ten years?	Yes	No	If yes, how many?..
2	Has your company merged with another company in last ten years?	Yes	No	If yes, how many?..
3	Has your company divested, liquidated or eliminated any important operation in last ten years?	Yes	No	If yes, how many?..
4	Has your company made any significant turnarounds in last ten years?	Yes	No	If yes, how many?..
5	Has your company made any joint venture business in last ten years?	Yes	No	If yes, how many?..

Quality management of your company

35. To what extent do you agree or disagree with the following statements?

(1= Strongly disagree, 2=Disagree, 3= Neutral, 4= Agree, 5=Strongly agree)

Quality management is an important strategic issue for our company	1 2 3 4 5
Quality is the responsibility of everyone in the organization	1 2 3 4 5
The senior management provides the leadership for continuous quality improvements	1 2 3 4 5
The company has special rewards for employees who contribute to quality improvements	1 2 3 4 5
The company training of employees in quality issues plays an important role	1 2 3 4 5
Our company regularly assesses the quality of product manufacturing processes	1 2 3 4 5

Thanks for your participation and cordial cooperation in completing this survey.