6.1 Conclusions for the Main Research Problem

After analyzing the primary data, the following conclusions can be drawn with reference to reasons for strategic alliances, impact of strategic alliances and the hindrances for strategic alliance between Indian and foreign pharmaceutical companies. However the expected outcome of these factors differs from company to company.

6.1.1 Conclusions Relating to Reasons for Strategic Alliance between Indian and Foreign Pharmaceutical Companies:

- **Strengthen product portfolio**

  This research work has indicated that for Indian pharmaceutical companies a driving factor for the formation of Strategic alliances between Indian and foreign pharmaceutical companies is the need to strengthen the existing product portfolio of Indian companies. Mueller (2007) had identified this as a reason for strategic alliances among pharmaceutical companies. Dr. Reddy’s which started off as an API and bulk drugs manufacturing company is foraying today into the biosimilar segments, with an alliance with Merck Serono to co develop new molecules for the oncology segment.

- **Establish new brands abroad**

  Primary research indicates that Indian pharmaceutical companies look at strategic alliances with foreign pharmaceutical companies, to establish their products and brands in the foreign market. This is also substantiated by Pradhan (2007). Ipca has entered into a strategic alliance
with Heritage Pharmaceuticals (USA) for the development, supply and marketing of generic pharmaceutical products to the US prescription drug market.

- **Launch new product lines**

Research indicates that Indian companies seek alliances with foreign pharmaceutical firms to enable them launch new products in the market. Alliances help companies launch product faster to meet the growing demands. Panacea Biotech’s alliance with Kremers Urban (USA) includes launch of 11 high barrier generic compounds, the first one being Tacrolimus capsules.

- **Enter global emerging markets**

Expanding the market by entering new emerging markets is a strong driver for Indian pharmaceutical companies to form strategic alliances with foreign pharmaceutical companies. Pradhan (2007), Parvatiyar and Gupta(1998), Smith (2000) have indicated this to be a key reason for strategic alliances. Indoco Remedies and Aspen have inked an alliance to supply ophthalmic products for 30 emerging markets in 2012. Dr Reddy’s and GSK have entered into an alliance to develop & market branded generics for emerging market

- **Enter regulated markets**

Indian pharmaceutical companies consider entry into regulated market like US, UK, European Union as the third most important reason which drives strategic alliances between Indian and foreign pharmaceutical companies. This is also evidenced by the fact that many Indian pharmaceutical companies have acquired pharmaceutical companies in the desired markets and created their own subsidiaries. Cipla’s alliance with Watson pharma (USA) focused on 60 generic products to be developed and launched in the US market.
• **Establish distribution channels abroad**

The need to establish new distribution channels in foreign market which will eventually help in marketing the products, drives strategic alliances between Indian and foreign pharmaceutical companies. Parvatiyar and Gupta (1994) have established this as a key reason for alliances.

• **Access new technology**

Research indicates that Indian pharmaceutical companies consider gaining access to new technology as a reason that can drive strategic alliances between Indian and foreign pharmaceutical companies. Greene (2007), Smith (2000), Chaturvedi and Chataway (2006), concluded that one of the key motivators for strategic alliances between firms is to access new technology.

• **Undertake collaborative R&D**

Indian companies consider collaborative R&D as a driver for strategic alliances between Indian and foreign pharmaceutical companies. Narula and Dunning (1998), have indicated that collaborative R&D encourages Alliances. However this reason may not hold good for all Indian pharmaceutical companies, as R&D costs in India are much lower and not all Indian pharmaceutical companies have the orientation towards R&D. DRL has launched a drug discovery program by creation Dr. Reddy’s Research Foundation in 1992, to boost R&D. The first NCE that came out of India was a molecule called DRF-2725, which was licensed out to Nova Nordisk for trials and was launched in 2011.
• *Obtain USFDA approved manufacturing facilities*

Pharmaceutical companies in India look at strategic alliances with foreign pharmaceutical companies to gain access to USFDA approved manufacturing facilities. Although Greene (2007) and Pradhan and Abraham (2005) indicated this to be a driver, it is not a very strong driving force among Indian pharmaceutical companies and may be limited to firm specific driver.

• *Cost minimization*

Research indicates that cost minimization is a factor that can influence the formation of strategic alliances between Indian and foreign pharmaceutical companies. However not all pharmaceutical companies consider this to be a driving factor especially with reference to the Indian pharmaceutical companies.

• *Achieve operational synergy*

Achieving operational synergy may be a reason for strategic alliances between two firms, however with respect to Indian and foreign pharmaceutical companies, this is not a strong driving factor for Indian pharmaceutical companies to look at strategic alliances with foreign pharmaceutical companies.

• *Achieve quality management*

Gaining knowledge on quality related aspects and managing overall quality is a driver for strategic alliances. However with respect to Indian pharmaceutical companies, this is not a very critical driver for strategic alliances with foreign pharmaceutical companies.
• **Achieve market position**

This research has indicated that achieving high market position is a key factor which drives Indian pharmaceutical companies to form strategic alliances with foreign pharmaceutical companies. This also stems from the fact that achieving high market position is a growth objective of a company, and strategic alliances can help achieve high growth objectives. Companies like Ranbaxy, Piramal lifescience, Glenmark, Sun Pharma, DRL, APL and Lupin have achieved high market positions over the years.

• **Achieve financial power**

The need to have adequate financial power through high profits is a strong driver for Indian pharmaceutical companies to form strategic alliances with foreign pharmaceutical companies. Cipla and Ranbaxy have become top pharmaceutical companies in India thanks to many alliances which has helped them gain higher sales turnover, which has helped them gather high financial power.

• **Enhance company image**

This research indicates that Indian pharmaceutical companies feel that the primary reason for strategic alliances between Indian and foreign pharmaceutical companies is the need to enhance the company image and score on competitive advantage. This will eventually influence the profitability and stocks of the Indian pharmaceutical companies.

**6.1.2 Conclusions Relating to Impact of Strategic Alliance**

Analysis of the primary data from Indian pharmaceutical companies indicate that strategic alliances between Indian and foreign companies has a direct impact on new patent filing and new product launches from Indian pharmaceutical companies.
• Strategic alliances and introduction of new patents from Indian pharmaceutical companies

The response from the Indian companies indicates that there is a strong impact of strategic alliances with foreign pharmaceutical companies on the introduction of new patents by the Indian pharmaceutical companies. Nerkar and Roberts (2004) and Mueller (2007), have established that strategic alliances have a positive effect on the launch of patented molecules among pharmaceutical companies. Indian pharmaceutical companies undertaking various activities like manufacturing, R&D, contract manufacturing and distribution and across size of company, have implied impact of strategic alliance with foreign pharmaceutical companies on new patents from Indian pharmaceutical companies.

• Strategic alliances and launch of generic products abroad

This research indicates that there is a strong impact of strategic alliances with foreign pharmaceutical companies on the launch of generic products abroad in foreign markets. Gehl Sampath (2005), established the contribution of strategic alliances on launch of generic molecules abroad. Companies like Cipla, Ranbaxy, Lupin and Glenmark have made their mark in the international market with high quality generics which were marketed abroad through a number of strategic alliances. Here are a few more alliances in recent times.
- Strides Arcolab Ltd. and GSK to supply of drugs for semi-regulated markets
- Torrent Pharmaceuticals and AstraZeneca Supply of 18 products for various markets
- Strides Arcolab Ltd. and Pfizer to supply of 67 generic drugs to Pfizer with focus on oncology

• Strategic alliances and launch of generic products in domestic market

This study indicates that the Indian pharmaceutical companies of varying sizes find that strategic alliances between Indian and foreign pharmaceuticals impact the launch of generic products in the domestic market. However, research indicates that the impact on the launch of
generic products in India is moderately attributed to strategic alliances between Indian and foreign pharmaceutical companies.

- **Strategic alliances and enhanced product portfolio**

This research indicates that Indian pharmaceutical companies across various pharmaceutical activities like manufacturing R&D, contract manufacturing and distribution, feel the impact of strategic alliances with foreign pharmaceutical companies on their portfolios positively.

- **Strategic alliances and access to regulated markets**

Primary research indicates that strategic alliances between Indian and foreign pharmaceutical companies have a positive influence in helping Indian pharmaceutical companies gain access into regulated markets like US and Europe. Greene (2007) and Gehl Sampath (2005), have established a strong influence of strategic alliances on access to new markets both regulated and emerging. Osmotica Pharmaceutical Corp. has announced a strategic alliance agreement between Panacea Biotec and Osmotica Kft. for the research, development and commercialization of brand and generic products in the United States and key strategic markets across the globe.

- **Strategic alliances and investment in sales and marketing**

Primary research indicates that strategic alliances between Indian and foreign pharmaceutical companies have a considerable impact in enhancing marketing capability, across all sizes, types and activities of the Indian pharmaceutical company. Chitoor, Ray and Sarkar (2008) indicated that alliances enhance investment capabilities among organizations.

Lupin has signed a deal with Eli Lilly for anti-diabetic drugs. Under the deal, Lupin will market and distribute the entire range of Huminsulin brand of Eli Lilly in India and Nepal. Lupin will
deploy 300 sales representatives from its formulations business to promote the product and will also provide education to physicians and patients.

- **Strategic alliances and access to foreign distribution network.**

Primary research indicates that strategic alliances between Indian and foreign pharmaceutical companies have considerably influenced Indian companies, of different sizes, activities and types, to gain access into distribution channels in foreign market. Strategic alliances between Indian and foreign pharmaceutical companies have helped gain access to channels in foreign markets like – Africa, Latin America, Asia Pacific and other regions.

- **Strategic alliances and access to new technology**

Primary research indicates that strategic alliances between Indian and foreign pharmaceutical companies have no impact on the acquisition of new technology by Indian pharmaceutical companies. Alliances that have occurred before 1999, are predominantly driven by manufacturing needs which in turn are technology related. In the current scenario, Indian pharmaceutical companies are not undertaking alliances with foreign pharmaceutical companies with only technology based reasons. Across all the pharmaceutical companies in the study, both with respect to turnover and type of activity undertaken, the companies indicate that there is no great impact of alliances on the technology related aspects.

The recent alliance between DxTech and Piramal indicates just that aspect. The alliance includes a license and development agreement relating to DxTech’s proprietary technology to establish a joint venture between the companies for the marketing and sales of the commercial product.

- **Strategic alliances and achieving R&D capability**

Primary research indicates that strategic alliances between Indian and foreign pharmaceutical companies have helped Indian companies achieve R&D capability. Indian pharmaceutical companies are moving from traditional manufacturing related activities towards R&D and
research and strategic alliances are proving to be one of the routes that companies are resorting to.

- Glenmark has entered into an alliance with Forest Laboratories for R&D in Asthma and lung infection areas
- Piramal Research is collaborating with Merck for cancer research

In this study across various types of Indian companies the alliances have helped in the development of R&D capability. This is also the case for companies with varying types of activity. Indian companies involved in contract manufacturing and distribution are not really impacted with R&D capability enhancement through alliances. Strong manufacturing based and R&D companies are undertaking alliances which will help them develop their R&D. Most companies who seek out alliances for R&D purposes are in the high turnover category. Literature references that have corroborated this are, Linton and Corrado (2007), Kiran and Mishra (2009), Bower and Sulej (2007), Gehl Sampath (2005).

- **Strategic alliances and GMP compliant production capacities**

Primary research indicates that strategic alliances between Indian and foreign pharmaceutical companies have an impact on Indian companies gain GMP compliant capacities. Indian pharmaceutical companies have modern manufacturing facilities which have been used to produce generic drugs through reverse engineering processes. There are more than 175 USFDA and nearly 90 UK-MHRA approved manufacturing facilities in India. Indian pharmaceutical companies have been undertaking exports to both regulated and emerging markets. Parvatiyar and Gupta (1994) and Gehl Sampath (2005) have acknowledged the impact of strategic alliances on modern, GMP compliant manufacturing facilities. In this study Indian pharmaceutical companies have confirmed that strategic alliances have helped them develop regulatory compliant facilities in India. This is true for different types of Indian companies, with differing activities and turnover. However companies not involved in production related activities like those involved in R&D, distribution are not really concerned with acquiring regulatory approvals for their facilities.
• **Strategic alliances and access to information**

Primary research indicates that strategic alliances between Indian and foreign pharmaceutical companies have helped Indian companies gain access to information.

One key benefit that alliancing companies enjoy is the access to information. Indian pharmaceutical companies have not been innovators. The technologies and various developments are documented and upgraded in developed nations like Europe and US. When these nations outsource activities to Indian pharmaceutical companies, there is a need for harmonization of processes and protocols between the two entities. This calls for sharing of data and information, upgradation of processes and methodologies which gives way for shared information, beneficial to both the companies. Although there is scope for information sharing, the extent would depend on the kind of enterprise. The information is more relevant in companies undertaking outsourced R&D activities, in comparison to companies involved in distribution activities.

The study indicates high data and information exchange in clinical research, R&D and manufacturing companies. Companies involved in R&D and clinical research have to exchange a lot of information between the alliancing firms. In addition the parent company involved in the alliance would transfer both tacit and practical knowledge to the other company.

• **Strategic alliances and cost optimization**

Primary research indicates that strategic alliances between Indian and foreign pharmaceutical companies have no impact on the cost optimisation in the manufacturing activities of Indian pharmaceutical companies.

Aurobindo Pharma has entered into alliance with AstraZeneca and Pfizer for the supply of generic drugs for developed and emerging markets. Novartis has entered into an alliance with Torrent Pharmaceuticals for contract manufacturing of formulations. It is a well
known fact that drug manufacture is economical in India in comparison to manufacturing costs in the developed countries. High costs of drugs and the constant pressure to reduce drug costs have encouraged foreign pharmaceutical companies to look out for options to bring down costs. Indian pharmaceutical companies, with reverse engineering and technical knowledge have developed drug manufacturing facilities of international standards.

From Indian company’s point of view, there is no impact of the strategic alliance on the optimization of costs. This result is the same across Indian pharmaceutical companies of different type, different activities and different turnover.

• Strategic alliances and achieving operational synergy

Primary research indicates that Indian pharmaceutical companies have no implication on operational synergy due to strategic alliances between Indian and foreign pharmaceutical companies.

Literature indicates that strategic alliance helps in economy of scale due to downsizing and reduction in duplicity of work. Synergy can be achieved by understanding the many processes which are specific to a particular organization and processes which are being duplicated in both the organization. Common inputs, production process and facility, support function and distribution channels are some of the factors that can be common to the alliancing firms. Similarly patented process, customer contacts, sales process, product lines are some of the factors that are specific to a particular organization, which may remain unique. Understanding the duplicating functions and sorting them can help organizations release resources which can be utilized in other areas, thereby enhancing both productivity and profitability.

The study indicates that although there is a considerable scope to achieve operational synergy, Indian pharmaceutical companies do not view achieving operational synergy between the alliancing company as a strong outcome of strategic alliance between Indian and foreign pharmaceutical company. Across all types of Indian pharmaceutical companies and
Indian companies performing different pharmaceutical related activities, operational synergy is not seen as an outcome of strategic alliance.

- Strategic alliances and quality management

Primary research indicates that strategic alliances between Indian and foreign pharmaceutical companies have no impact on cost optimisation in their manufacturing activities for Indian companies.

One of the impact that alliances with foreign pharmaceutical have had on Indian pharmaceutical companies is the change in their quality management systems. Complying with GMP and regulatory needs is a compulsory norm for Indian pharmaceutical companies involved in exports to regulated countries. The Central Drugs Standard Control Organization, Ministry of Health and Family Welfare controls information on the regulatory requirement in India. Chaudhuri(2005), mentions that small pharmaceutical companies find it difficult to adhere to GMP standards as the investments for upgrading the production facilities and maintaining them is substantially high. Upto 1970, Schedule M of India’s Drug and Cosmetic was in place. In 1991 after TRIPS and GATT, emphasis and awareness for the need of GMP in pharmaceutical manufacturing was highlighted. Small and medium size enterprises are still in the process of adopting GMPs.

Many Indian companies have adopted quality management process as they were involved in exporting the drugs to foreign countries which were following GMP practices.

The study indicates that pharmaceutical companies involved in API and formulations have been benefitted by strategic alliance to gather the technology to upgrade their manufacturing facilities to become quality compliant. However there is no direct correlation between strategic alliances and the enhanced quality procedures of Indian pharmaceutical companies. There are many factors like US FDA regulations, changes in the Schedule M which are more relevant and compelling reasons for companies to upgrade themselves and open up new markets for their products.
• **Strategic alliances and increased market share**

Many pharmaceutical companies have increased their market shares over the years due to enhanced economic activities, which has increased their turnover and in turn increased their market share. Companies actively involved in enhancing their portfolio through strategic alliances have steadily increased their presence in the Indian pharmaceutical market.

• **Strategic alliances and increased overall profitability**

Primary research indicates that strategic alliances between Indian and foreign pharmaceutical companies have helped Indian companies achieve overall profitability.

The profitability of the Indian pharmaceutical company is dependent on the overall turnover of the companies. In the last decade, Indian pharmaceutical companies have increased their profits many folds. This has been achieved by many activities like increased market penetration, enhanced products, diversified activities etc. Many of these activities are direct consequences of strategic alliances with many foreign pharmaceutical companies.

In 2005, Cadila Healthcare earned profits of 192 cr, which grew to 657.5cr in 2012, Lupin grew from 180cr to 804.37cr, DRL increased their profits from 21.1cr to 912.4cr, Cipla grew from 445.6 to 1123.96 and Sun Pharma from 668 to 1927.98 cr. *(collated from quarterly economic times reports.)*

In the study Indian pharmaceutical companies indicate a strong impact on the company’s profitability which is attributed to the alliances between foreign pharmaceutical companies. Across all Indian pharmaceutical companies of various types, activities and turnover, the Indian pharmaceutical companies feel a positive relation between strategic alliances and profitability. This is also evident from the fact that the top 10 Indian pharmaceutical companies have high turnover and profitability and also have undertaken maximum number of alliances in the last decade.
Strategic alliances and brand building

Primary research indicates that strategic alliances between Indian and foreign pharmaceutical companies have helped Indian companies enhance their brand value.

Brand name and goodwill are two elements that is crucial for a pharmaceutical firm. Many Indian pharmaceutical companies have built strong brands and image for themselves in the international market. Indian companies were well known for their manufacturing capabilities thanks to reverse engineering methods adopted by them. This competency and adherence to Indian regulations built a strong domestic market. International markets required stringent adherence to international regulations and norms. Indian pharmaceutical companies started to concentrate on getting FDA approved manufacturing sites and ventured into international alliances which helped them build credibility and gain recognition.

In the current study, companies with high turnover have indicated that strategic alliances with foreign pharmaceutical companies have helped them establish new brands and generate a brand name. Brands are an advantage for any organization, as they differentiate the organizations. In pharmaceutical industry, since new products are introduced frequently, a brand ensures recall which in turn ensures high revenues. Hence it is the endeavor of every pharmaceutical organization to create brands and ensure a constant stream of revenue for the organization. Cost efficiency, diversified portfolio, economic drivers, and domestic presence makes Indian pharmaceutical companies a brand in itself. This is further intensified by the alliances which have helped them become international in their activities and approach.

Strategic alliances and acquiring superior managerial skills

Primary research indicates that strategic alliances between Indian and foreign pharmaceutical companies have helped Indian companies acquire superior managerial skills.

Technical industrial like pharmaceutical is dependent on people and process for its long term success. Gaining knowledge on a specific activity in the pharmaceutical company involves
extensive training and on the job experience. Thus highly trained and qualified employees are an asset to the organization which adds to the competitive advantage quotient of the organization. Although Indian pharmaceutical companies have been recruiting qualified scientists in the pharmaceutical sector, knowledge on regulations, audits, internationalization, processes are critical to every organization. One of the positive outcomes of strategic alliance between Indian and foreign pharmaceutical companies is the focus on training and technical competency of the staff. In addition to management of technical aspects, there is critical roles with reference to handling foreign delegation, auditors, inspectors and managing staff performance in a different cultural environment.

The current study indicates that alliances between Indian and foreign pharmaceutical companies have indeed helped the develop management skills among the Indian companies. Across all companies of differing turnover, strategic alliances have influenced the acquisition of superior management skills among the managers which has added to the competitive advantage of the Indian organization.

Strategic alliances between Indian and foreign pharmaceutical companies impact the following aspects of business namely: Product Marketing Technology Manufacturing and Competitive advantage

Strategic alliances between Indian and foreign pharmaceutical companies impact many aspects of the business for Indian pharmaceutical companies. The impact is high in activities relating to new products, marketing and enhanced technology. Moderate impact is seen in case of manufacturing related activities and the aspects relating to competitive advantage of Indian pharmaceutical firms.
6.1.3 Conclusions Relating to Hindrances for Strategic Alliance

The fallout of the alliance between Biocon and Pfizer indicates that it is just not sufficient to look out for alliancing partners and have an alliance. Many things can go wrong in the alliance. The alliance is an expensive process involving time and resource and it is necessary that the objective of the alliance be met. There are many factors which hinder the formation and successful progress of an alliance with a foreign pharmaceutical company. For a successful progress these aspects need to be identified and monitored.

In this study the respondents consider lack of policies, guidelines and governmental support as a key deterrent for the formation of strategic alliances between Indian and foreign pharmaceutical companies.

- **External : Lack of information**

It is not easy to get information of various companies and their work and competencies which will encourage prospective alliance partners to approach each other. This is a real hindrance. Even if the information is known, there is no scope for due diligence from the government or any centralized body which can be a reference. In certain European countries, specific details of the organization, with details of their product lines, pipelines and current areas of work along with the areas where they seek for alliance is maintained and updated. This approach is worth emulating as the background of the companies can also be verified, thus helping build trust and increasing the rates of success for the alliance.

In this study the respondents consider the lack of information as a strong factor which impedes the formation of strategic alliance between Indian and foreign pharmaceutical companies.

- **External : Governmental policies**

Companies indicate that there is no involvement of the government in alliances between Indian and foreign pharmaceutical countries. In case of failure of the alliance, neither of the
companies can fall back to anybody for arbitration. Alliances are built on trust, many a times the trust is breached and the companies will be at loggerheads with reference to shared resources. Since the risks involved are high in alliance with a both Indian and a foreign company, a lack of centralized body which regulates and monitors the alliance is expected. Lack of such a body can prove to be a deterrent for alliance formation.

In this study the respondents consider lack of policies, guidelines and governmental support as a key deterrent for the formation of strategic alliances between Indian and foreign pharmaceutical companies.

- **Internal: Unclear objectives**

Many companies have undertaken alliances riding the “me too” wave, or just to outplay their competition without much thought given to the ultimate objectives and deliverables of a particular partnership. If the objective of alliances is not clear then the alliance cannot be monitored which can lead to misunderstanding and confusion in both the organizations. Alliance agreements are normally written down documents with a specific time frame. For instance:

- Sun Pharma – Merck, for developing, manufacturing and marketing branded generics across emerging markets.
- Cadila Healthcare – Abbott, wherein Cadila will license 24 branded generics to Abbott for 15 emerging markets
- Biocon – Bristol Myers Squibb, for partnership in the research space with focus on discovery and development of NCEs

In the study the respondents indicate that clear objective goes a long way in determining the success of a partnership.
• **Internal: Lack of communication**

Many alliances fall out before their reach their objectives. One of the reasons for this is the lack of communication with the parties involved. Alliances involve the coming together of two firms whose background, culture, countries of origin are different. Open communication can help a lot to quell many of the negative aspects as resolution process can be fast and effective.

In the current study, the respondents indicate that lack of communication does cause fractures in the alliance which can ultimately lead to failure to achieve the objectives.

• **Internal: Non monitoring of alliances**

Pharmaceutical companies who have successful alliance outcomes have a team of staff who monitor the progress of the alliance. Generally, alliances between pharmaceutical companies are a strategic decision, which has clear outcome expectation. Dedicated personnel monitoring the progress of the strategy and its outcomes can provide inputs of the progress of the alliance so that corrective actions can be taken.

In this study the respondents indicate that it is critical to monitor the alliance progress and the success of the alliance is dependent how close the top management is involved in the alliance and its progress.

• **Internal: Lack of trust**

Trust is an important factor which determines the success of an alliance. If the alliancing companies have clearly stated alliance objectives, then to achieve the objectives both the parties have to trust each other. If there is even an inkling of doubt that one firm is misusing the resources of another firm then the alliance will lead to bad vibes which can ultimately result in alliance fallout. The objectives that govern the alliance are more often than not very
sensitive and the proprietary asset of the firm. For instance, marketing a new product or conducting R&D for a NCE are activities which are based on trust factor.

The respondents in the study have indicated strongly that lack of trust is a serious threat to the success of any alliance. Trust can be built by communication, interactions, transparency and clarity on the objectives of both the alliancing companies.

6.2 Recommendations for Indian Pharmaceutical Companies Undertaking Strategic Alliances

Based on the study and analyses of strategic alliance between Indian and foreign pharmaceutical companies, the following strategic orientation can be adopted for Indian pharmaceutical companies. The recommendations are categorized into three types: based on turnover, based on activities undertaken by the pharmaceutical companies and based on the types of pharmaceutical companies.

6.2.1 Based on Turnover:

Small pharmaceutical companies
- Concentrate on meeting stringent regulatory norm specified by USFDA, GMP etc. This will help generate new avenue for growth by entering into contract manufacturing for MNCs.
- Develop and upgrade the manufacturing facilities both for capacity enhancement and quality related aspects, this will open up opportunities

Middle tier pharmaceutical companies
- Generic sales particularly to foreign market is a large business segment with scope to grow, Indian pharmaceutical companies should make use of this growth phase. Getting
into alliances with MNCs whose drugs are expected to go off patent, can be an approach. This will help in enhancing the capacity of middle tier companies and help them to reach new market and increase their turnover.

- Concentrate on enhancing their production capacities to be able to take advantage of the growing demand for cheaper drugs. This can be achieved by undertaking collaborations with firms both in India and abroad.

- Gain expertise in regulatory requirement across the world, to develop the necessary competency to cater to all the market across the world. This can be achieved by alliance with a partner with adequate market specific experience and knowledge in regulatory requirement and is in compliance.

**Large pharmaceutical companies**

- Current Indian skill set is in synthetic chemistry. There is scope for growth in area like new lead molecule new target in new area like medicinal biology and protein chemistry. High level of research and new drug development can be achieved with collaboration with MNC.

- Concentrate effort in BioPharma for both regulated and non regulated markets. Indian pharmaceutical companies can enter into collaboration with BioPharma companies to develop new products. This will take top pharmaceutical companies towards innovation.

6.2.2 Based on Type of Activities Undertaken

**Manufacturing :**

- Develop international grade of manufacturing facilities which can meet stringent regulatory requirements.

- Undertake alliances with Indian and foreign pharmaceutical firms to utilize the capacity to the fullest and undertake contract manufacturing
R&D:

- Develop strategic alliances with research oriented pharmaceutical companies to access latest advancements in science and technology.
- Provide contract research facilities to other pharmaceutical firms

Contract manufacturing:

- Develop manufacturing capacities to high standards to enable international companies get into alliances
- Focus on meeting stringent regulatory norms both domestic and international
- Enhance production capacities to meet the requirement of the off patent drugs

6.2.3 Based on Type of Company:

Active Pharmaceutical Ingredient Manufacturing:

- Develop capabilities to move upwards the value chain towards the manufacturing of formulations and specialty drugs. Can be achieved by alliances and self development.
- Concentrate on alliances with different pharmaceutical companies to supply and develop new API molecules with the growing demand in the market

Formulations:

- Adopt competencies to move towards specialty drugs and R&D. This can be achieved through alliances with suitable partner
- Invest in R&D
- Invest in development of facilities to meet stringent regulations thereby enhancing prospects in domestic and international market
Clinical Research:

- Develop competencies to meet regulatory requirements across the world to enable more scope of clinical research in India.

Strategies for long term success of alliance

- Alliance should be well thought out and directly should be linked to growth objective.
- Alliances should have a clear monitoring at every stage with roles and responsibilities defined.
- Communication should be focused on both internally and with the alliancing partner.
- Trust is developed slowly, and can be enhanced with successful alliances for various aspects.

Suggestions

- Government needs to initiate a database of each company about the current alliances and the core competency of each company to help prospective alliances select right alliancing partners.

6.3. Future Research Directions

This research work delving on aspects of strategic alliances between Indian and foreign pharmaceutical companies, throws fresh insights into many areas like: reasons for the alliance formation, impact of the strategic alliance and hindrances for alliance success. This is not an exhaustive work, but adds to the already existing literature by reiterating some aspects. However, the research has some limitations which can be a future course for in-depth research. They are as follows:
• The study has indicated that product related factors of strengthening product portfolio, launching new brands in foreign market and launching new products influence strategic alliance formation. However these are not very strong factors. There may be some specific product related factors which are influential. Future research can throw some more light in this direction.

• The marketing related factors of accessing new global emerging markets and regulated markets and distribution channel abroad may not be the only factors, that encourage alliance formation. There is scope for future research to identify more factors that influence strategic alliances between Indian and foreign pharmaceutical companies.

• Future research can throw light on other technological reasons for strategic alliance. This research study indicates a collaborative R&D to be a significant driver for alliances.

• Although manufacturing related reasons drive strategic alliances between Indian and foreign pharmaceutical companies, the research does not indicate their strong influence. Future research can identify other manufacturing related factors that can influence strategic alliances between Indian and foreign pharmaceutical companies.

• Future research can be directed towards identifying more competitive factors which influence alliance formation between Indian and foreign pharmaceutical companies.

• The current research identifies only 5 areas where the impact of strategic alliances are observed namely: products, marketing, technology, manufacturing and gaining competitive advantage. Strategic alliances have impact on many more aspects of the organization like employees, customers, other alliances etc which are not covered in their research. This can be a future scope of study as this will give the entire picture of the strategic alliance and its impact.

• The factor undertaken in the 5 aspects which are investigated here are not necessarily the only factors that are impacted by strategic alliances. There are other factors which can be influenced by alliances and this is a scope for future research.

• Future research can analyse the other hindrances for the alliance like employee related aspects, training and learning related aspects and market related aspects.