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Assessing the key factors driving the growth of the pharmaceutical industry

The global pharmaceutical industry is expanding at a brisk pace with projections for world growth to be 8% year on year until 2009 (see IMS). This article assesses the key factors driving this growth. In order to do so, it applies theories of internationalisation which help point to the reasons behind this growth and uses industry specific data to support the main view points. The industry is of particular interest in that now firms are starting to globalise to improve skills and research capability, rather than focus on low cost production as is often the case in other industries, including automobiles and electronics

Introduction

Drug makers have tripled their spending on US marketing over the past decade according to Bloomberg (August 2007). Much of the expansion into global markets has been attributed to liberalisation in the industry as well as a decline in government action towards misleading advertisements. The global market is dominated by the US, accounting for 34% of global growth, though this is down from 60% five years ago. The rebalancing of the global market is favouring China and India (see table one), though European countries still figure strongly in the global market.

Reasons for growth

According to Porter (1990), political and economic changes can lead to increased demand conditions for products. Demand conditions are one important component of Porter’s Diamond. This work has been seen as an important addition to the political, social, technological and economic factors (PEST) which have often been used to scan the changes taking place in the business environment.
It is evident in the US that there is an increasing demand for healthcare products due to an increasing ageing population and government funds can no longer pay for these costs. According to Jaffe (2007), the US spends 16% of GDP on healthcare, up from 6% in 1960 and spending is expected to increase by another 4% by 2020.

Other countries, including Japan, Hong Kong and Western Europe, are also experiencing an ageing population and falling birth rate (see Lassere, 2007). Japan spends 6% of its GDP on healthcare, though people tend to live a little longer than those in the US, possibly because of diet and lifestyle. It is predicted that almost half of females will live until their 90s in Hong Kong (see The Standard, August 2007).

For other countries, such as the US and UK, greater life expectancy will depend on diet, exercise and a positive attitude to life and increasing knowledge, according to Jaffe (2006). Indeed government have a further role in the industry in that government can organise campaigns and information to promote good health in society. In years to come, it is also likely that China will experience an ageing population due to the one child policy. The ageing population will result in greater demand for drugs such as statins, therefore social and demographic factors are extremely important in explaining success in the global pharmaceutical industry.

Political factors are also important. Of late, governments are trying to open up the pharmaceutical sector in many countries in order to reduce its cost burden. The ageing population combined with lower taxes to attract more FDI has led to a shortfall in revenue for government. In many industrialised countries, including the US, the government purchases over 45% of drugs. The market is being deregulated to allow foreign drugs to compete. This, in turn, may lead to lower prices and help reduce the health budgets for many countries.

The UK is considering this option and there is much scope for this, particularly in the field of over the counter medicines and generics where companies from India, for example, are offering cheaper products. However this will only occur in established markets and where drugs comply with the requirements of the medicines act. This illustrates the importance of legal factors in the industry, as medicines act approval is compulsory in the US, Japan and Europe, as well as complying with the World Health Organisation requirements. In addition, the rules on patent protection from the World Trade Organisation need to be adhered to. Despite this, there is a problem of counterfeit production, however, some relaxation of the rules has been allowed in the case of exporting Aids drugs to Africa for example.

Protectionism still remains

In some cases the pharmaceutical industry remains protectionist at the high value end. For example, the UK government recently announced a £1.3 billion fund to link research based companies to the National Health Service. For prescribed drugs and drugs supplied to hospitals there has been little competition and it is more in the over the counter markets where global competition is beginning to take place. However, this may extend to other markets due to cost pressures imposed on hospitals.

Research in the pharmaceutical industry is also important and tends to support the increasing activity of alliances and mergers where knowledge can be shared. Hassan (2007), for example, shows that large pharmaceutical firms often acquire small firms for strategic reasons and markets react positively to this. Mergers tend to be more popular than acquisitions as this allows firms to continue to develop new products, as well as allowing for the opportunity of entering new markets more quickly than establishing a subsidiary. Alliances ensure the greatest pool of talent will be used in the development stage, though alliances also involve high negotiation costs and a greater level of uncertainty than is the case for subsidiaries for example (see Buckley, 1985).

On average around 30 new drugs come out per year and there are over 100 in the development stage as far as the global pharmaceutical industry is concerned (see IMS). Drugs dominating the market have been in the fields of cancer, arthritis, statins, diabetes and Aids of late. With an increase in competition and global players, research is becoming more important as the product life cycle speeds up (see Vernon, 1966).

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Porter (1990) also showed that factor conditions are also important in explaining international production. Factor conditions in the US are such that there is a skilled labour supply quickly than establishing a subsidiary. Alliances allow for the opportunity of entering new markets more quickly than establishing a subsidiary. Alliances ensure the greatest pool of talent will be used in the development stage, though alliances also involve high negotiation costs and a greater level of uncertainty than is the case for subsidiaries for example (see Buckley, 1985).

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Porter’s approach to analysing the global environment also includes related supporting industries which are left out by traditional PEST analysis. This includes infrastructure available in the industry of a particular country. Governments have increasingly focused on encouraging clusters and science and technology parks offering shared facilities and experience, as well as government support. UK examples in the pharmaceutical industry include Oxford and Cambridge, where various industrial links and universities are widely available. The importance of clustering in enhancing research and development is well documented in the work of Cook (1995), for example.

Strategy, structure and rivalry are the last focus of the Diamond. With regards to the pharmaceutical industry, there has been an emergence of new players in the generic sector, particularly from India and China. However, the high value end of the market is dominated by Western firms and to ensure adequate expertise for research, there have been many mergers, such as the merger of GSK.

Alternative Models explaining the changing environment

Dunning’s OLI model (1993) has often been associated with the Diamond. Zhang and Zhong (2005) links the two models and refers to the ‘Porter Dunnings Diamond’. Firstly, OLI factors include ownership factors such as technology and management skills which are crucial in explaining why many pharmaceutical firms are globalising in order to achieve the maximum of these capabilities. Maximising economies of scale and capital are other ownership advantages that are incorporated in the motivations of global pharmaceutical firms.

Location factors include the importance of labour and skill, as well as the importance of operating in markets with favourable income and growth rates; these factors are similar to demand conditions and factor conditions in the Porter Diamond model. Dunnings also introduces access to resources which are also important in the pharmaceutical sector. Often firms in sectors such as pharmaceuticals, chemicals and the gas industry globalise in order to improve on their stock of raw materials to be used in global production and this factor has a part to play in explaining why the pharmaceutical sector is becoming more global.
Tariff reductions are also included in location factors and this helps explain why global trade is expanding, although the pharmaceutical sector is still very much subject to specific country regulations. Lastly, government incentives help encourage globalisation in the sector and are another location advantage and explain why firms such as GSK have more operations in Singapore where the government is offering low taxes and other forms of government support.

Lastly, with regards to Dunning’s model, are internalisation advantages. These include the wide variety of contractual arrangements now existing in international business as shown in Floyd (2002).

Firms are now starting to engage in mergers and acquisitions, as well as traditionally exporting products in the pharmaceutical industry. Many examples of this were discussed earlier in the article. Firms are also engaging in strategic alliances to help share research costs and some firms are establishing subsidiaries globally to spread the brand, as well as to maintain full control of their research base.

**Conclusion**

It has been shown there are main driving factors that are influencing the pharmaceutical industry to become more global. These factors were explained by the use of data and various models of internationalisation. Research and development was found to be particularly important in this sector, as well as the role of government from a regulation point of view. The future for the pharmaceutical industry seems positive and much future growth is predicted on a global scale. Demographic factors were also found to be important, as an ageing population is supporting the development of particular drugs.

The future will very much depend on the extent to which governments allow the industry to open up, as well as creating more global standards of regulation. This is likely to take time, though increased knowledge and the power of the internet in both sales and providing information will help to open up the industry further in the future.

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**References**


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