

MULTINATIONAL PHARMACEUTICAL INVESTMENT IN ASIA:
IMPLICATIONS FOR VIETNAM

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The pharmaceutical industry is one of the most lucrative industries in the world. The emergence of foreign pharmaceutical companies in Asia is a very hot prospect for both the companies and the countries. Examining Japan's and Singapore's pharmaceutical industries, the two largest in Asia, provides insights into the strengths and weaknesses other countries and foreign companies should consider. Furthermore, comparing these characteristics with Vietnam's will provide insight into how Vietnam can be a contender as a host country to foreign pharmaceutical companies.

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INTRODUCTION

People have used medicine for thousands of years to treat the ailing. As our world becomes increasingly global, methods of treatment also blend cross-culturally. Aside from traditional medications, modern medications such as antibiotics have proliferated all parts of the world.¹ Today, modern medicine is even used in most remote areas of the world, and is often times recommended by developing countries' government agencies over traditional methods. Therefore it is not striking to see the pharmaceutical industry as one of the top global industries. A testament to the pharmaceutical industry's prominence is the fact that most of the competitive multinational pharmaceutical companies are "eyeing" the emerging markets of developing countries. Furthermore, the growth of the global pharmaceutical industry has been astounding within the past thirty years, and has yet to show signs of slowing growth. For example, the world pharmaceutical market in 1975 was approximately \$30 billion; today it is more than \$300 billion.² There are several reasons for this: continual research and development, untapped markets, various modes of production possibilities and the increasing global demand. One of the younger global markets is the Southeast Asian market. With the increasing population, growing economies and newly forming government policies favoring transnational corporations, pharmaceuticals must consider this part of the world as the "hottest" new area of investment if continued profit is the goal of these companies.

Asia is in a unique position as a market for several reasons. First, there is a large spectrum in how developed individual nations are. From Japan to Vietnam, there is a disparity in their position as global competitors. Second, each country has unique

¹ The difference between traditional and modern is that modern medicine is made through synthetic means.

qualities that allow them to be niche competitors. These qualities vary, but can include natural resources, skilled labor, geographical location, and market demand. Third, Asia represents a fairly untapped market for pharmaceutical industries in comparison to other industries such as textiles and electronics. Not only does Asia have a large consumer market; it has the potential of being an efficient and profitable area of investment.

² W Mattson, Global Pharma 20/20. Pharmaceutical Marketing in 21st Century (New York: Haworth Press, 1996) 3-18; hereafter cited as: Global Pharma.

OBJECTIVE & METHODS:

Framework & Aims of this Study

The impetus to study this topic is a result of my interest in Vietnam, medicine and international business. After spending three months working at a trading company in Vietnam, I found that this country is definitely living up to its name as the next economic Asian tiger. I also studied this topic because medicine is one of human's basic needs along with food and shelter. Lastly, the huge influential power pharmaceuticals exert on various aspects of society intrigues me as well. It is my hope that this study will provide some reasons as to why Vietnam should make itself amenable to the international pharmaceuticals as well as why pharmaceutical multinationals should seriously consider investing in Vietnam now.

Therefore, in this thesis I aim:

- To highlight the current trends of pharmaceutical industry investment, with emphasize the top multinationals. The areas of focus are: the regions of investment concentration, the direction research and development is taking, and the current and future market.
- To highlight the strengths and weaknesses of various Asian countries as host countries to the pharmaceutical industry and to indicate areas Vietnam should enhance and strengthen to become a competitive host country.
- To present specific case studies that will exemplify issues that need to be considered by Vietnam and interested pharmaceutical corporations.

The content of this thesis is largely based on my analysis and findings of statistics, trends, case studies of the pharmaceutical industry trends and the comparison of various aspects of four Asian countries with emphasis on Vietnam.

THE PHARMACEUTICAL INDUSTRY

Selection of Countries

The selected countries, from "most developed" pharmaceutical market to "least" are: Japan, Singapore and Vietnam. Each of these countries were selected on the basis of their stage in economic development and how developed their pharmaceutical markets were. The factors of development that I considered were: skilled labor, technology transfer, infrastructure, governmental policies and other strategic advantages offered to pharmaceutical industries that invest there. Since Japan is only second to the U.S. in its pharmaceutical industry size, this country serves as an example of the most advanced stage in pharmaceutical industry development. Although Singapore's drug industry is smaller, it is one of the more developed nations among the ASEAN members. The strengths and weaknesses of these countries' pharmaceutical industries will be compared to Vietnam to provide insight into future steps Vietnam should take in order to become an attractive host country. A more detailed explanation of the reasoning for selecting these countries will follow.

The trends of the global drug market

If one examined the pharmaceutical market of thirty years ago, she would find that regions that had the largest sales, largest amount of R & D and the largest pharmaceutical companies were the United States, Europe (particularly Germany and France), and Japan. Hot growth prospects considered at the time were Japan, Latin America, and the Middle East. Today, Europe, North America, and Japan are still the fiercest competitors. However, other parts of Asia aside from Japan have become the new hot growth prospects. Moreover, Mattson et al. believe that in twenty years, China

will be included among the ranks of the leading global market countries.³ Regardless of the home country of the top global companies, these companies have operations in many parts of the world.

These observations and forecasts suggest that companies should consider Asia as the place of investment. In examining the formidable pharmaceutical industry and its seemingly never-ending growth, there are distinctive features distinguishing the pharmaceutical industry. First, pharmaceutical products are highly patented since the success of a single drug can be the life or death of a drug company. The success of Viagra illustrates this point; it helped make Pfizer's stocks become one of the most lucrative in the 1998 stock market. Second, pharmaceutical products' demand usually is not dependent upon price because medicine is a good that is inelastic, because people will always need their health. Third, in this highly cutthroat industry, successful companies have relied on innovation to distinguish themselves from their competitors. Furthermore, Thomas' study showed a strong correlation among the international competitiveness of a nation's drug industry, innovations, and its ability to meet the needs of the global market (Table 1).⁴

³ Ibid.

<i>Nation</i>	<i>World Market Share 1985</i>	<i>External Share 1985</i>	<i>Number of Firms That Innovate</i>	<i>Number of Firms That Innovate per R&D</i>	<i>% Discovery, Global</i>	<i>% Discovery Local</i>
U.S.A	43.3	19.1	20.1	3.6	44	28
Switzerland	8.0	7.4	3.1	2.2	38	41
U.K.	7.4	5.8	5.8	4.8	51	25
Germany	10.2	6.2	13.2	5.9	18	49
France	4.1	1.0	15.6	13.0	13	60
Italy	2.5	.5	20.1	26.8	10	75
Japan	20.2	.1	27.5	12.2	9	77
Sweden	1.0	.7	2.9	9.7	38	32
Netherlands	0.6	.4	3.1	10.3	33	35

Source: Thomas (1992)

Thomas' results showed that at first glance Japan's 20% world market share seems formidable. However, examining Japan's miniscule external shares (0.1%) and weak global discovery (9%) shows that the growth of its drug industry is limited to its national borders. On the contrary, other countries, which are more global in vision, have the potential to become stronger global competitors. With the exception of Japan, whose strong protectionist policies render their drug companies to locate primarily in the home market, the most competitive countries also have the most external shares. External shares is defined as the sales that firms of a given nation achieved outside that nation's borders as a share of pharmaceutical sales in all external markets. Additionally, it is evident that the strategies taken by the global competitive countries are diverse. However, an attribute shared among the top global competitors is the tendency to innovate primarily global products. Global products are defined as new drugs that diffuse

⁴ L Thomas, "Industrial Policy and International Competitiveness, Competitive Strategies in the

to at least six nations, out of a maximum possible twelve nations measured for this study. This further supports the notion that not only is innovation crucial, the need to meet the demands of the global market is equally important.

Although it may not be hard for drug corporations to accept the importance of innovation, it is difficult for companies to have the resources needed for global innovation. A study found the size of the firm to be important, because it takes an average \$260 million (some estimates exceed \$300 million) to produce a marketable drug that will take eight to twelve years to produce.⁵ Consequently, it is nearly impossible for pharmaceutical industries in developing nations to compete with the industries of countries such as the United States that have such large capital. Hence the rationale that developing drug industries need the investments of large transnational companies in order to strengthen themselves. The strong correlation between competitive performance and globalization of pharmaceutical companies indicates that there is technology transfer and introduction of different ways of knowing and doing.

Furthermore, transnational corporations also benefit from investment in newly emerging markets because of “first mover” benefits, increasing number of consumers, and the possibility to trade with other countries. Based on the predictions that Asian countries have strong growing industries, it is not a stretch to include pharmaceutical industry among this prediction. This leads into the idea that the strong companies take the initiative to invest in Asia. However, there will be investment variation among the Asian countries by leading companies, partly due to the countries' spectrum of how complete and well-developed the industrial base and infrastructure is, how educated the

Pharmaceutical Market (Washington DC: AEI Press, 1992)

skilled workers are, and how stable economic system is. These factors should be considered by pharmaceuticals that plan to invest in Asia.

Concerns of investing in developing nations of Asia.

The three most common protests corporations have against investing in developing nations are the over-hyped drug market, the lack of guarantee of intellectual property and unregulated drug quality. After the wake of the Asian economic “crisis” analysts were quick to judge the downfall of Asia. Indeed the facts of less-than-expected sales can disappoint investors. Some suggest that business forecasters have overestimated or over-hyped Asia’s potentials. However, pharmaceutical investors should not be discouraged from committing to Asia, because this region is “bouncing back” from the economic crisis. Consider this anecdotal observation, if Asia was not influential in the global market, then the economies on the other side of the Pacific Ocean would have not experienced the rippling effects of the crisis. This observation would suggest that Asia is *not* an “over-hyped” market, and it would be a major loss to any corporation that would not consider it a location of investment. The Economist Intelligence Unit was quoted in a recent article attributing this same economic crisis to the region’s healthcare market dramatic transformation. The EIU’s study reported that global pharmaceutical companies must change their strategies in Asia, since its pharmaceutical market nose-dived. Before the crisis East Asia, with half the world’s population, seemed the ideal place to invest for future growth and the major pharmaceutical were looking at the region as their future nest egg. Although East Asia,

⁵ R Rogowsky, Competitive Strategies in the Pharmaceutical Industry, ed. R Helms (Washington DC: AEI Press, 1996) 155-164.

excluding Japan, represents only 8% of the global pharmaceutical market, it is expected to be the largest consumers on Western medicine by 2010. The study concluded by recommending local investment, but not imports.⁶

Many developing countries do not have an established effective policy to protect intellectual property. This has lent many nations the notoriety of pirating and has deterred many companies that deal with high technology to look elsewhere for investment location. The pharmaceutical trade is no different from the technological trade in its need to protect its R & D. It is understood that the maintenance of quality and integrity requires the enactment of stringent national regulation. Granted, many developing countries do not have established patent protection laws as the United States, but this does not suggest that the developing countries oppose these protection laws. If this were the case, then these countries would be turning away the opportunity to introduce high technology into their economy.

These issues are hindrances to the globalization of the pharmaceutical industry. However, like many other global issues these requires international intervention. International patent laws and international drug quality regulations can prevent such concerns. International provisions have been established; for instance, the 1883 Convention of Paris has made patents a stable international system. This is duly efficient, because it is as wasteful for an American to duplicate research already done by a German and vice versa.⁷ Due to the international character of the patent system, it is common for a single firm to control a drug patent in all major countries, but not all countries abide by

⁶ G Platt, "Pharmaceutical firms told to shift Asian strategies," Asian Weekly, 17 November 1998, sec. Finance: 2A.

these rules, particularly developing countries. However, with the increasing pressures of countries to become global, they are compelled to conform to certain international norms. Aside from the policies that have been created by nations with established pharmaceutical industry, developing nations have come together to create provisions to enhance cooperation and industrialization. Examples of such efforts include the Lima Declaration and Plan of Action on Industrial Development and Cooperation for the negotiation of the relocation of productive facilities from the developed to the developing world. Other international efforts are being made to design and implement a broad strategy relating to pharmaceuticals. The World Health Organization (WHO), the United Nations Council on Trade and Development (UNCTAD) and UNIDO have recently formed a Joint Task Force to implement under the auspices of the United Nations Action Program on Economic Cooperation (UNAPEC).⁸

Based upon international pressures, developing countries that plan to attract transnational drug companies should consider the detrimental effects caused to countries that have disregarded international standards on intellectual property. For example, one of the United States largest drug company, Pfizer, invested millions of dollars and a decade to develop Diflucan, an anti-fungal agent. However, upon the introduction of the drug onto the market in 1990, an identical drug was produced in Spain and exported to Chile and Venezuela, and Pfizer could do little. Like many developing countries today, Spanish law at the time granted “process” patents for the way a drug was created not for the drug itself. In fact, Brazil and Argentina do not allow life-sustaining drugs to be

⁷ E Kitch, “The Political Economy of Innovation in Drugs and Drug Regulation Reform,” The International Supply of Medicine, ed. R Helms (Washington, DC: American Enterprise Institute, 1980) 71-85.

patented. Experiences such as these have prompted the 1993 GATT agreement on world trade to include rules on trade-related intellectual property (TRIPs). Under these rules, drugs such as Diflucan are protected for 20 years, including the time to develop the drugs. Additionally, the companies have sole control over who is allowed to produce the drugs. Most opponents of this law argue that patent holders come from rich countries such as the US, Japan, and Germany, and that this law would further exploit poorer developing countries. Since patent holders will have control over drug pricing, there are concerns that the prices are over inflated and unable to be met by people from developing countries.⁹ However, I believe it is wise for developing countries such as Vietnam to adopt TRIPs before other developing countries do, because it will benefit the nation's reputation and further the amount of foreign investment.

The last concern for investing in developing nations is the lack of skilled labor and resources. Foreign companies should consider various ways of distribution and production to ameliorate this concern. My proposed four stage plan for long term investment is outlined in figure 2.

Stage 1 Manufacturer sells to wholesalers and other middlemen.

Stage 2 Naming a local company as sole distributor. The local company has the responsibility of handling regulatory activities and other local issues.

Stage 3 Set an office for a region in a capital city that is responsible for several neighboring countries.

Stage 4 Regional office is responsible for R&D as well as distribution of drugs.

Figure 2

⁸ S Lall, The Growth of the Pharmaceutical Industry in Developing Countries: Problems and Prospects, (New York: United Nations, 1978.)

My proposed four stages of investment will gauge the commitment a company may have for investment in a country, with stage 4 being the highest level of commitment. As will be mentioned in later sections, the more the number of companies that are in the more advanced stages of investment the more mature is the host country's pharmaceutical industry.

Despite the aforementioned concerns the benefits from investments in Asia more than outweigh the risks. For example, we could consider the strength of Japan and the "tiger" countries such as Singapore, Taiwan, and South Korea, and the influential ASEAN nations. Also, one cannot forget the formidable economic player China is anticipated to be. Lastly, for those transnational drug companies who have foresight and are enterprising, they will find the younger emerging "tigers" such as Vietnam the key to long term success. The leading pharmaceutical corporations seem to follow the philosophy, "Scientific progress involves high risks, but can reap fruitful rewards." Thus, investment in Vietnam, despite the consideration of the "roadblocks" to entering the Vietnamese pharmaceutical market, should result in long term profits for the foreign companies and Vietnam. With the wide range of Asian countries, the question that should be addressed is where to locate the investment. In the following sections, I will highlight the strengths and weakness each country has, and ultimately explain why Vietnam is a serious competitor for the ideal pharmaceutical host country.

⁹ "Intellectual property---is theft," The Economist, 1994 v330 n 7847, 72(2).

COUNTRY ANALYSIS

Although it may be tempting to lump all Asian countries into one entity for sake of efficiency, but this can result in dire business investment. Therefore, it is better to understand there are certain things that overlap among the various countries, but there are also things that distinguish these countries. An example of something that potential pharmaceutical investors should understand about the Asian market is the different ways medicine and health services are provided to patients, and the various types of medication aside from western medicine that is used in Asian society. In the following section I will examine the selected countries' overview and business environment, with emphasis on issues that pertain to the pharmaceutical industry. It is not my intent that this is the end-all statement to the issue of the pharmaceutical potentials of these countries. Rather, it is my goal that this analysis will incite future more detailed studies to support or refute my proposed ideas.

Japan

This country serves as an example to Vietnam as a country with a highly developed pharmaceutical industry. In fact, Japan has the most developed pharmaceutical industry among all Asian countries. Furthermore, Japan's pharmaceutical industry has been considered an "equal" competitor among the Western Europe's and the United States' pharmaceutical industries since the 1960s. The most recent data shows that Japan is only second to the United States in size of the pharmaceutical market.¹⁰ The success of this country's pharmaceutical industry is a culmination of its innovations, its large consumer market, and its globalizations.

¹⁰ Global Pharma.

Japan's established economy allows for the growth of the pharmaceutical industry. The success of the economy can be attributed to Japan's government-industry cooperation, a strong work ethic, mastery of high technology, and a comparatively small defense allocation (roughly 1% of GDP) have helped this country advance with extraordinary rapidity to the rank of second most powerful economy in the world. One notable characteristic of the economy is the collaboration of manufacturers, suppliers, and distributors in closely knit groups called "keiretsu". However, within the past decade, this seemingly invincible economy is beginning to show its weakness. For instance, one of the basic feature has been the guarantee of lifetime employment for a substantial portion of the urban labor force; which appears to be eroding. Another weakness of Japan's economy is its lack of natural resources. Therefore, although industry is the most important sector of the economy, it is heavily dependent on imported raw materials and fuels, which results in higher costs.

Reflecting on Japan's past economic record, it is simple to understand why their pharmaceutical industry is successful. Consider Japan's remarkable economic rise, for three decades overall real economic growth had been spectacular: a 10% average in the 1960s, a 5% average in the 1970s, and a 4% average in the 1980s.¹¹ The strength of Japan's overall growth suggests there was commitment to investment as well as production. As noted before, investment is crucial to innovation, a integral part of a successful pharmaceutical industry. Interestingly, when the growth slowed markedly in 1992-95, some analysts attributed the slowed growth to over-investment during the late 1980s and contractionary domestic policies intended to wring speculative excesses from the stock and real estate markets. Growth picked up to 3.9% in 1996, largely a reflection

of stimulative fiscal and monetary policies as well as low rates of inflation. But in 1997 growth fell back to 1%. As a result of the expansionary fiscal policies and declining tax revenues due to the recession, Japan has one of the largest budget deficits as a percent of GDP among the industrialized countries.

A dynamic industry is important sector of the Japanese economy, because of its contribution to GNP as well as trade. There are several key industries, including pharmaceuticals and bio-industry that are given extra attention and support by the government. The pharmaceutical industry and bioindustry experienced strong growth in the late 1980s. Pharmaceuticals production grew an estimated 8 percent in 1989 because of increased expenditures by Japan's rapidly aging population. Leading producers actively developed new drugs, such as those for degenerative and geriatric diseases, and also internationalized operations. Pharmaceutical companies were establishing tripolar networks connecting Japan, the United States, and Western Europe to coordinate product development. They also increased merger and acquisition activity overseas.

Pharmaceuticals is only one aspect of biotechnology research and development, which is progressing steadily. Human hormones and proteins for pharmaceutical products were sought through genetic recombination using bacteria. However, the government cautions Japanese producers, however, against optimism regarding biotechnology and bioindustry. The research race both in Japan and abroad intensified in the 1980s, leading to patent disputes and forcing some companies to abandon research. Also, researchers began to realize that such drug development continually showed new complexities, requiring more technical breakthroughs than first imagined. Yet despite these problems, research and development, especially in leading companies, was still expected to be successful and to

¹¹ CIA Factbook, March 21, 1999

end in product commercialization in the mid-term. An increasing number of “best-selling” drugs found have come from Japanese laboratories. Sankyo, which vies with Takeda for the top spot in Japan, invented the anti-cholesterol drug pravastatin. It is the largest selling drug in Japan (worth over YEN 100 billion per year); it is also the second largest earner for Bristol-Meyers Squibb, which distributes the drug outside Japan under the tradename Pravachol. Yamanouchi, the third largest pharmaceutical company in Japan, makes Merck’s fourth biggest worldwide seller, and an anti-stomach ulcer drug, Pepcide.¹²

The government plays a crucial role in supporting the global pharmaceutical activities such as international research alliances. For example, Japan's Ministry of International Trade and Industry (MITI) has primary responsibilities for formulating and implementing international trade policy, arbiting industrial problems and disputes, and regulating. A major objective of the ministry has been to strengthen the country's industrial base. This has been accomplished by providing industries with administrative guidance and other direction, both formal and informal, on modernization, technology, investments in new plants and equipment, and domestic and foreign competition. The close relationship between MITI and Japanese industry has led to foreign trade policy that often complements the ministry's efforts to strengthen domestic manufacturing interests. For example, it supports global activities such as alliances among Japanese and foreign pharmaceutical companies. Moreover, MITI is an effective governmental organization, because it has a flexible overarching capability. This is evident by the observation that MITI has been responsible not only in the areas of exports and imports

¹² “Too small to compete: drugs in Japan,” The Economist, 1994 335:7911, 65(2); hereafter cited as: TSMC.

but also for all domestic industries and businesses not specifically covered by other ministries in the areas of investment in plant and equipment, pollution control, energy and power, some aspects of foreign economic assistance, and consumer complaints. This span has allowed MITI to integrate conflicting policies, such as those on pollution control and export competitiveness, to minimize damage to export industries. Vietnam should consider a governmental agency that is capable of a such a wide variety of tasks.

Despite Japan's established government agencies and the industry's established market; there are many limiting factors to Japan's potential as the ideal host country for transnational pharmaceuticals. The pharmaceutical market crowding, limited resources and trading policies that inhibit trade among other Asian countries render Japan as a limiting site for a multinational pharmaceutical corporation. Japan strongly believes in the need to promote exports and Japan's self-image as a "processing nation." A processing nation must import raw materials but is able to pay for the imports by adding value to them and exporting some of the output. The theory behind Japan's goal to be a processing nation is the belief that nations grow stronger economically by moving up the industrial ladder to produce products with greater value added to the basic inputs. However, rather than letting markets accomplish this movement on their own, the Japanese government feels the economy should be guided in this direction through industrial policy. Furthermore, this "processing" theory suggests that Japan relies too heavily on protectionism, and this may be a deterrent to many foreign pharmaceutical corporations.

Aside from the government's and indigenous corporations' contribution to the strength of the pharmaceutical industry, the Japanese market demand for pharmaceutical

goods is crucial as well. Examining Japan's health care will provide insight as to how modern medicine is used by consumers. A person who becomes ill in Japan has a number of options. One may visit a Buddhist temple or Shinto shrine, or send a family member in his or her place. There are numerous folk remedies, including hot spring baths and chemical and herbal over-the-counter medications. A person may seek the assistance of traditional healers, such as herbalists, masseurs, and acupuncturists. However, modern biomedicine dominated Japanese medical care in the postwar period.

The good public health services and universal medical insurance provided by the government allow easier access to modern medications. Consider the wide range of locations where a patient might obtain medicine. In the early 1990s, there were more than 1,000 mental hospitals, 8,700 general hospitals, and 1,000 comprehensive hospitals. In addition, 79,000 clinics offered primarily out-patient services, and there were 48,000 dental clinics. Most physicians and hospitals sold medicine directly to patients, but there were 36,000 pharmacies where patients could purchase synthetic or herbal medication.¹³ Indeed, Japan has a large drug market, and this proved by Japan's health expenditures. National health expenditures rose from about ¥1 trillion (for value of the yen--see Glossary) in 1965 to nearly ¥20 trillion in 1989, or from slightly more than 5 percent to more than 6 percent of Japan's national income.

However, foreign pharmaceutical corporations should not be too quick to assume that the Japanese drug market is similar to the United States' or European markets. For example, there are more eastern-medicine professionals than western-medicine practitioners. In the early 1990s, there were nearly 191,400 physicians, 66,800 dentists,

¹³ http://dir.yahoo.com/Regional/Countries/Japan/Country_Guides/Japan March 18, 1999

and 333,000 nurses, but more than 200,000 people licensed to practiced massage, acupuncture, moxibustion, and other East Asian therapeutic methods. Since around 1900, Chinese-style herbalists have been required to be licensed medical doctors. Training was professionalized and, except for East Asian healers, was based on a biomedical model of disease. However, the practice of biomedicine was influenced as well by Japanese social organization and cultural expectations concerning education, the organization of the workplace, and social relations of status and dependency, decision-making styles, and ideas about the human body, causes of illness, gender, individualism, and privacy. Anthropologist Emiko Ohnuki-Tierney notes that "daily hygienic behavior and its underlying concepts, which are perceived and expressed in terms of biomedical germ theory, in fact are directly tied to the basic Japanese symbolic structure." The different outlook Japan has on health will affect how modern medicine medication is consumed.

The differences between the Japanese drug market and the western countries' can be seen by the different ways the drug companies are operating. Unlike western industries, the Japanese firms are less likely to form huge conglomerates such as Glaxo-Wellcome. Furthermore, it seems that despite the fact that it is the second largest market (\$75 billion/year), it is also considered one of the most fragmented and unprofitable. Japan's largest drug company, Takeda, is ranked 18th in the world based on capital with \$10 billion. This is a minute amount when comparing the United States' \$53 billion Merck. Aside from protectionist policies, another reason for the Japanese drug industry shortcomings is the difference in how medicine is practiced. Japan's medical tradition has grown out of China's, with its emphasis on prevention rather than cure, and constant, low-level intervention with "tonics" rather than acute treatment with potent bio-

chemicals. Japanese doctors, whose salaries are partly linked to the quantity of medication they prescribe, can commonly prescribe ten or more drugs. However, the Ministry of Health and Welfare has been cutting costs by limiting the coverage on drugs and doctors' salaries are being unlinked from the quantity of drugs they prescribe. Also, the MHW is cutting prices with an average price cut of 6% in 1996.¹⁴

Singapore

Although Singapore does not have a large pharmaceutical industry as Japan, it is considered a popular location for foreign pharmaceutical companies. This is because of Singapore's open policy toward foreign investment, its highly educated work force, its reputable patent laws, and its connection to various countries through alliances like ASEAN. The foresight of Singapore's government has resulted in one of the fastest growing economies. Pharmaceuticals and biotechnology are among the most actively promoted foreign activities by the Singapore government.¹⁵

¹⁴ TSMC 7911: 65-67.

¹⁵ Doing Business in Singapore (USA: Price Waterhouse, 1992.)

Singapore was one of the first developing countries to open up to multinational companies in the 1960s and 1970s. The result: Singapore is way ahead of the global game among Southeast Asian countries. Although Singapore is often grouped with the dragons of East Asia- the newly industrialized economies of Hong Kong, Taiwan and South Korea- but its distinguishing export orientation depends on MNC investments, rather than local entrepreneurs or local capital inputs. Therein lies its strengths as well as its weakness for long term foreign pharmaceutical investments. Singapore began export-oriented industrialization immediately after separation from Malaysia in 1965. The key strategy was vigorous promotion of foreign direct investments to achieve rapid export-oriented industrialization. The legal and institutional framework for this policy was quickly set up within the first few years. The Economic Expansion Incentives Act of 1967 provided a structure of fiscal incentives for foreign investors, the main one being a tax-free holiday of up to ten years for “pioneer” activities. Government agencies were revamped to launch an aggressive investment promotion drive overseas and to provide the infrastructure and facilities needed by MNCs. At the same time, import substitution policies were quickly dismantled and import tariffs removed. During the 1980s, the government focused on high value-added products made by technology intensive industries. Furthermore, an array of fiscal and other incentives was also put in place, emphasizing activities such as research and development, and information technology.¹⁶ Through these activities, pharmaceuticals and biotechnology were among the new industries introduced in the 1980s.

¹⁶ S Natarajan and TJ Miang, The Impact of MNC Investments in Malaysia, Singapore & Thailand, (Singapore: Institute of Southeast Asian Studies, 1992.)

The Singaporean highly educated and skilled labor force attracts foreign drug companies in addition to the open trade policy. Based upon the study conducted by Natarajan et al., the Singaporean labor force has high qualifications, and gains great respect from foreign companies. Interviews of the MNC executives showed that they were satisfied with the quality of the Singaporean labor force. The data showed that MNCs have increasingly cut down on the number of expatriates from the parent company and have used local personnel to run their Singapore operations. This is indicative of the Singaporean labor force's comparable skills to expatriates. Unfortunately, the labor force at the operator level has several disadvantages. Among the concerns is the inadequate education level of operator workers, with the majority having less than six years of primary education. Furthermore, there is a shortage of labor; with a workforce of 1.2 million, Singapore has found the need to hire foreign workers or contract out their production.

The highly developed infrastructure is another attractive strength of Singapore. The study showed the country's utilities and telecommunications were reasonably priced and of excellent quality. However, MNCs expressed concerns that lease charges and land costs were higher than neighboring countries due to scarce industrial land. The Changi airport was highly rated for its efficiency and amenable services. As for seaports, Singapore has emerged as the leading hub and transshipment port in the region. In addition to its natural advantage of strategic location, Singapore has continually upgraded and expanded its facilities to meet the burgeoning needs of trade.

Although Singapore has the most liberal policy towards foreign investment, this has caused the country to rely on foreigners. This can be truly devastating when

multinational companies decide to leave because it is no longer profitable due to the labor and raw material costs, the shortage of labor and limiting land. Therefore a broader economic strategy that promotes domestic and foreign companies may lessen the reliance on MNCs. However, Singapore has yet to show signs of these concerns. Rather, major drug companies such as Merck, Upjohn and Schering have continued to expand in Singapore despite the recent economic crisis. Singapore's latest tax break for research and development expenses has brought about significant investments from various high-technological industries, including pharmaceuticals. Economic Development Board chairman Philip Yeo said: "Effective from Jan 1, 1999, companies will be able to claim tax deduction for contract R&D expenses involving any of the 22 approved research and tertiary institutions." He also added the approved list will focus on high-tech areas such as cell and molecular biology, bioprocessing and microelectronics.¹⁷ US-based Pharmacia & Upjohn, the 17th largest drug company in the world with 30,000 employees worldwide is among the companies that have taken advantage of this tax break.

Pharmacia & Upjohn recently expanded its business in Singapore beyond a distribution center. Singapore will be the location of Pharmacia & Upjohn's Asia-Pacific drug development center; and it is expected to at least double the region's contributions to group turnover in five to 10 years. The drug company's Singapore drug development center will be responsible for: developing antibiotics, treatments for cancers, infectious diseases and the central nervous system; coordinating and managing drug trials carried out in all Asia-Pacific countries, except Japan; helping the group roll out new products in the region earlier and bring in higher revenues; and developing data at an early stage and put in registration applications to various governments. According to Goran Ando,

¹⁷ E Rahita "Tax claims for R&D work cover more bodies." Singapore Business Times 16 March 1999: 3.

executive vice-president and president for research and development, Pharmacia & Upjohn will spend "tens of millions of US dollars" a year on research and development in the region over the next five years, he said. "The more successful the Singapore center is, the higher will be its R&D investment. And I expect it to grow very fast."¹⁸ However, the amount that will be invested in the center is still unknown. "Our total R&D budget in pharmaceuticals is US\$ 950 million (S\$ 1.6 billion) a year. How much of that will end up here, I have no idea. The more successful the center is, the more will be done here."

¹⁹Furthermore, the company aims to shorten the time-lag of new drug launches from two years to closer to zero. This will allow Asian consumers access to all drugs just like their western counterparts and increase the company's revenues.

Singapore's aggressive recruitment of high technological industries has proven to be successful thus far. The case of Pharmacia & Upjohn showed that tax incentives and other open policies toward foreign investors could bring in billions of dollars into the country. Singapore seems to have truly embraced the global economic theory that open trade can be profit for the entire nation. However, Singapore's success will be limited in the long run, due to its limited resources and labor. Furthermore, as other Asian-Pacific countries, which do not have the limitation of an island nation, become more economically stable, technologically advanced and increased skilled labor, MNCs will look to these countries as a better place of investment.

¹⁸ Yeow Pei Lin. "US drug firm sets up Singapore regional center" The Straits Times 16 March 1999.

Vietnam

Although Vietnam is far behind Japan and Singapore in infrastructure, economics, governmental policies and other aspects, it is a very promising nation for economic growth. Vietnam came late into the game of capitalism. While the other two countries started earlier this century, Vietnam began its economic renovation, *doi moi*, in 1986. Furthermore, the US embargo that significantly obstructed Vietnam's economy was only recently lifted 6 years ago. Therefore, despite Vietnam's seemingly small changes and "milestones" when comparing to Japan and Singapore of today, is truly impressive rapid transformation. Mark Gillon, one of the top foreign consultants in the country, suggests that the potential of Vietnam is tremendous, that the country will surpass Thailand or Malaysia. "Hong Kong and Singapore were in first and way ahead, while China is big, but Vietnam is going to grow in a major way. The Vietnamese know exactly what they want and many know how to get it."²⁰ Other foreign investors have also observed this and the number of foreign investment have increased dramatically. Although pharmaceuticals may be wary of entering this new market due to the copious risks, but taking a wait-and-see approach may be even riskier, given the tangible advantages that early comers gain in emerging economies.

Economic Background: Doi Moi's progress

Vietnam's current economic situation is in the implementation phase of *doi moi*. With the aims of becoming a free market, the country has embraced various policies from other countries that have been successful. For example, from Singapore, Vietnam has enacted a body of liberal foreign investment law, which has already resulted in over \$10

¹⁹ Rahita Elias, "Tax claims for R&D work cover more bodies," Singapore Business Times 16 March 1999 3.

billion of pledged foreign investment. Additionally, similar to Japan, it has adopted the idea of an industrial master plan; Mitsubishi designed such a plan for Vietnam's automobile industry in the early 1990s. Despite the nickname "a tiger on a bicycle", due to huge obstacles such as insufficient industrial infrastructure, Vietnam's immense potentials are being realized. The dramatic changes in Vietnam's economy can be attributed to the government's commitment to *doi moi*. Examining the state of the economy prior to and during the economic renovation will allow one to appreciate these dramatic changes.

²⁰ C Engholm, Doing Business in the New Vietnam, New Jersey: Prentice Hall 1995.

Since 1976, the year of reunification for the country, Vietnam's economy has been centrally run and guided by five-year plans. Prior to Doi Moi of 1986, economic reforms focused on the agricultural sector and heavy industry to stimulate production. Furthermore, with the concern of loss of autonomy, the government never allowed liberalizing reforms to last for long. Instead, there have been cycles of reform and retrenchment since the early 1980s. Additionally, close central control and poor management of the economy led to a decline in industrial and agricultural production. Thus, the stagnant growth, a severe shortage of food, deficit budgets, soaring inflation and chronic trade imbalances compelled the government to make dramatic changes. The Sixth National Congress of Vietnam's Communist Party, held in December 1986, initiated an overall economic renovation policy. Popularly known as Doi Moi the policy aimed at making the country self-sufficient in food production and improving the standard of living of the people. The core of Doi Moi was to reduce state intervention in business and to open the country to foreign investment.

In the effort to develop a multi-sector economy with the state sector playing the lead role, many conflicts have arisen. The problems revolve primarily around the lack of support private industries receive from the government, the unstructured law system and the underdeveloped infrastructure. Furthermore, many of the reforms still favor government-run operations, such as prioritizing loan availability for state-owned enterprises (SOEs) and favoring foreign/government joint ventures and trade. Among the reform policies proposed is equitisation, a concept in which SOEs sell shares of the company to its workers and to the public, with the state in most cases retaining a 20-30%

share of the company.²¹ However, the process has been slow, stemming from several reasons: Vietnam's commitment to ensure that the state sector plays the leading role and reluctance on the management's part to face the inconstancies of a market-driven economy. Merging SOEs, is the second proposed method to reduce government operations. Unfortunately, the debts accrued by SOEs have far outweighed its turnover. The government sector debts since 1995 amounted to a staggering \$25 billion, which was 20% greater than SOEs' turnover. Despite the fact SOEs currently account for 44% of Vietnam's GNP, up from 32% in 1991, they are not growing on their own merits. Rather the figures are inflated by participation in joint ventures with foreign investors.²²

On the flip side of the suffering state sector, the fledgling private sector has dramatically increased its share of Vietnam's GDP. According to Murray Hiebert, there are an estimated 350,000 small private businesses, employing less than 20-30 workers, that sprung up in the past five years. In Ho Chi Minh City, Vietnam's economic hub, private enterprises accounted for 44% of the city's output in 1991. In Hanoi, the private sector controlled 67% of the city's trade, services and restaurant facilities. Unfortunately, government obstacles and discrimination have hampered further private industry growth. For instance, private enterprises often face discrimination when finding capital. State-run banks reserve 86% of their credit for state enterprises, at least one-third of which incur losses and are saddled with bad debts. When the private companies do receive bank loans they are charged with 4.5-6% a month- state companies pay 2.7% or less. Due to the shortage of credit, most private companies turn to friends, relatives or Vietnamese overseas, who charge as much as 10-12% a month!

²¹ "State Sector Blues," *Vietnam Economic Times*, August 1997: 18-19.

²² M Hiebert, *Vietnam Notebook*, (Far Eastern Economic Review, 1994.)

The government recognizes the capital shortage problem, and has relaxed its policies towards foreign ventures. However, foreign investors are frustrated and discouraged by the ambiguities of the trading laws. As Vietnam transforms into a market-directed economy, there have been reforms in Vietnam's judiciary and civil service since "doi moi" was introduced in 1986. The Commercial Trade Law of 1998 is the latest attempt to provide explicit regulations, but has yet to show any effect on trade. The law is suppose to apply to the majority of traders in Vietnam and will apply when traders are dealing both with fellow traders and with consumers. However, the legislation is vague and because it is interpreted and enforced locally, it is subject to a wide array of interpretations. The difficulty of regulating interpretations to clarify the vagaries of the law is another concern. Despite these troubles in reform, the government has shown concerted effort in opening its doors to foreign investors. Perhaps Vietnam can benefit from re-evaluating which foreign industry investment it should attract.

WHY SHOULD VIETNAM CONSIDER THE PHARMACEUTICAL INDUSTRY AS ONE OF ITS STAR INDUSTRIES?

As mentioned in the previous sections the global pharmaceutical industry is a profitable industry, and would bring in much needed capital. Japan and Singapore have benefited in numerous ways from supporting this industry in their own country. Currently, Vietnam's government has not given the pharmaceutical industry the same attention it has with industries such as consumer electronics textiles. Aside from the increase influx of cash flow, the pharmaceutical industry can contribute to the country in many ways other industries cannot. Perhaps the pharmaceutical industry is not given the focus that it is due, because of insufficient resources such as capital and skilled labor. However, foreign pharmaceuticals can assist the domestic industry in these aspects and more. An examination into Vietnam's current pharmaceutical situation will explain how foreign investment will boost the domestic industry and ultimately the entire economy.

Import growth Year	Total import value (US(USDollar))	Growth rate (percent)
1990	61,360,379	
1991	84,079,171	+ 37.025
1992	106,989,137	+ 27.248
1993	132,379,418	+ 23.731
1994	236,319,688	+ 78.516
1995	280,052,114	+ 18.505
1996	349,409,000	+ 24.765
1997	387,096,000	+ 10.785
1998	400,000,000	+ 3.333

(estimates) Medicine industry's production and trade records Order Unit Figures Comparison reached estimated in 1997 for 1998 (percent)

1 Total output value VND mil.	1,405,807	1,600,000	113.8
2 Production turnover VND mil.	1,385,036	1,700,000	122
3 Total export value US(USDollar)	1,000	11,627	13,000 111.8
4 Total import value US(USDollar)	1,000	387,096	400,000 103.3
5 Funds used for buying US(USDollar)	5.2	5.7	109.6

Source: Vietnam Pharmaceutical Management Department 1999

Domestic Pharmaceutical Market -current problems & future considerations

The market demand for medicine is steadily growing in Vietnam. According to a report by the Ministry of Health, funds used for buying medicine by Vietnamese increased in recent years, from USD0.3 per capita in 1990 to USD0.5 in 1991, USD5.2 in 1997 and USD5.7 in 1998.²³ According to the Ministry of Public Health, pharmaceuticals consumption in Vietnam is estimated to grow by 25%/y. Per capita expenditure for pharmaceuticals is forecast to rise to between \$ 8-10/y by the year 2000.²⁴ The increase shows that people's health care services have improved remarkably. It was also reported that only USD1.5 out of the USD 5.7 was used for buying domestically made medicines.²⁵ It is apparent that imported medicine dominate the market, due to several disadvantages that include lack of capital, limited production, and lack of legal policies. Entry of foreign investors will accelerate the development of Vietnam's pharmaceutical industry.

Statistics by the Vietnam Pharmaceutical Management Department reveal that the turnover reaped from domestically produced medicines was estimated to reach VND1.7 trillion in 1998 while the relevant import turnover was USD400 million (roughly VND5.2 trillion). There are currently 213 foreign medicine suppliers coming from 30 different countries which have been licensed to operate in Vietnam, accounting for 70 percent of the domestic medicine market and the remaining 30 percent is occupied by 150 Vietnamese enterprises.²⁶ This data further supports the notion that foreign medicine is overwhelming domestic goods and may suppress the domestic industry from growing.

²³ "Medicine industry needs medicine," Vietnam Economic News 8 February 1999.

²⁴ "Chemical industry in Vietnam," Chemical Business Newsbase 11 August 1998.

²⁵ "Medicine industry needs medicine," Vietnam Economic News.

²⁶ Ibid.

Some suggest this is a result of an underdeveloped domestic medicine manufacturing industry. Of the eight pharmaceutical firms in Vietnam that have achieved GMP (Good Manufacturing Practice) standards for their entire plants and production lines, only three companies are wholly domestically owned. The three local firms are Dong Thap Pharmaceutical Company, Hau Giang Pharmaceutical Factory and Mebipha.²⁷

The introduction of foreign pharmaceutical companies into Vietnam through joint ventures, etc. benefits both domestic and foreign drug industries. Foreign pharmaceutical corporations can transfer technology and know-how. Additionally MNCs can fulfill the needs of capital, which is the greatest problem according to deputy general director of the Vietnam Pharmaceutical Corporation, Tran Tuu. He stated that only 30 out of the 150 medicine production enterprises are operating with a capital of over VND100 billion and many producers have a capital ranging from VND1 to VND10 billion each. Eliminating problems of capital shortages will boost product quality and quantity; which otherwise hinders domestic companies from buying new machinery and other material facilities that are necessary. Moreover, without capital, they cannot implement effective advertising campaigns for their products. This is duly needed to promote the consumption of domestic medicine over foreign-made medicine. Although there is some foreign commitment to Vietnam, many are only representative offices. There are 20 foreign capitalized projects involved in medicine production, including 12 JVs and eight 100 percent foreign invested projects, which have been licensed by the Ministry of Planning and Investment (MPI). Only six of these are in operation and the remainder are in the construction stage or preparing to start production.

²⁷ "Eight pharmaceutical firms win GMP standards," The Saigon Times Daily, 24 February 1999.

According to a number of experts, the second problem- the incomplete operational structure of the domestic medicine industry- causes shortcomings in drug development and production and be unable to bring its potential into play in the local market. Funds annually used for buying antibiotics for in-patients in Vietnam account for 33 percent of total capital spent on medicines sold domestically (according to statistics by the Treatment Department under the Ministry of Health), while the country's antibiotics production industry has almost been neglected. It is regrettable that this is a result of material shortages. Only six to seven percent of the demand for materials used in producing antibiotics in Vietnam (300 - 350 tons per year) is able to be met by Woopyung-Mekopha, a JV between Central Pharmaceutical Enterprise 4 and Woopyung Company (South Korea), the exclusive establishment producing materials used for manufacturing antibiotics in Vietnam. Moreover, the price to buy local materials for manufacturing antibiotics is higher than that offered in the international market. Head of the Vietnam Pharmaceutical Management Department, Nguyen Vi Ninh, said: "The industry producing materials used in manufacturing medicines in Vietnam is so small scaled and its support industries such as micro-biology and petro-chemistry are also in the same situation."

Due to the shortage of domestic medicine, the reliance on foreign medicine has been reported up to 70% of the market. The market has been highly vied for by foreign imports due to the increase consumption of medicine. Vietnam licensed 221 foreign pharmaceuticals companies to sell their products in this country so far. The Ministry of

Public Health officially registered 3088 foreign products (2802 end-use products and 286 raw materials).²⁸

Directors of many medicine production enterprises said there are so many other reasons why the domestic medicine market is overwhelmed by foreign made goods with the notable reason being that the government has yet to issue a relevant law. Due to this, domestic medicine manufacturers operate arbitrarily according to their own capabilities, without consistent control from decisive authorities, resulting in improper investment in different production activities. Some enterprises imitate product designs of each other. As a consequence, many enterprises produce the same products, resulting in stockpiles. A director said: "Without a law, medicine traders and manufacturers do not fear violations."

Authorities acknowledge the need to issue a law on medicine trading and production operations and are actively preparing for this. The Vietnam Pharmaceutical Management Department plans to submit to the Ministry of Health a draft law in June 1999 and then to the National Assembly in 2000. The Vietnamese medicine market is predicted to have a potential turnover of (USDollar) 1.5 - 2 billion in the future. To satisfy the demand, the domestic medicine industry must increase its operations by 15 - 20 times over the current level. Accordingly, the Ministry of Health has set up an overall plan to develop Vietnam's medicine industry for the period from 1996 to 2010. The overall plan includes smaller plans for the antibiotics industry and those for developing the medicine supply network, which have been approved by specialists from the ministries of Health and Planning and Investment. These plans are estimated to be completed soon for submitting to the government for approval. Under this greatly anticipated project, USD150 million will be invested in centrally controlled enterprises in

²⁸ "Chemical industry in Vietnam," Chemical Business Newsbase, 11 August 1998.

the first phase (1998 - 2005). The capital will be used for constructing material production factories and upgrading several production lines. Hence, serving the development of the domestic medicine industry in the future.

Although this proposal will improve the current pharmaceutical situation, it is apparent the government does not have a large agenda for Vietnam' pharmaceutical industry. If this campaign only increases production of antibiotics and enhances the medicine supply network, it will be difficult to expect a pharmaceutical industry that can rival Singapore's or Japan's in the future. However, Vietnam should consider a multi-pronged mission that augments its drug industry beyond the realm of generic antibiotic production. A pharmaceutical industry that is able to satisfy domestic medicine needs, become the distributing center for other countries and perform R&D, shall bring in capital and technology transfer that other "favored" industries cannot. For example, the skills and wages gained from the textile industry is far less than those of a highly developed pharmaceutical industry. Based on the analysis of the Ministry of Health it is apparent that the drug industry must rely on foreign investment in the form of joint ventures and wholly owned companies to stimulate the growth of the industry. Thus, Vietnam should adopt policies similar to those of Japan and Singapore to attract foreign investors.

Foreign Pharmaceutical Investment in Vietnam-current problems & future considerations

To develop effective incentives for foreign pharmaceutical investors, consideration should be partly based on the current situation of foreign pharmaceutical investment in Vietnam. The pharmaceutical industry has so far attracted 12 joint venture and nine 100% foreign-owned projects with a total pledged investment of about

US(USDollar) 150 million. Eight pharmaceutical companies have achieved the ASEAN's Good Manufacturing Practice (GMP) Standard. (Figure 3). Acquiring the GMP standard, these companies will enjoy favorable conditions to produce medicines for export. They are given priority in bidding for the supply of medicines for national drug programs and essential medicines for hospitals.

DOMESTIC & FOREIGN PHARMACEUTICAL INVESTMENTS IN VIETNAM with the ASEAN's Good Manufacture Practice Standard		
Domestic Firms	100% Foreign-owned Firms	Joint Ventures
Dong Thap Pharmaceutical Co.	Hisamitsu	Sanofi Pharma VN
Hau Gian Pharmaceutical Factory	Novartis	Rhone Poulenc Rorer
Mebipha	Rohto Mentholatum	

Source: THE SAIGON TIMES DAILY 2/24/99

Despite their difficulties, many pharmaceutical producers have maintained production and developed long-term strategies for the future. The three greatest problems facing current foreign pharmaceutical investors are the convoluted legal structure, deficient resources, and an underdeveloped infrastructure. Foreign pharmaceutical investment have shown losses in the first few years of start up. However, many pharmaceutical JVs have shown signs of growth as their turnover is increasing year after year, thus reducing losses.

Sanofi & its struggle to start from ground zero

Speaking with the Saigon Times Weekly on September 8, 1998, Antonio Rizzotti, director general of the Sanofi Pharma joint venture (JV), admitted, "Since its establishment in 1993, Sanofi Pharma has not earned a penny. In 1994, the venture incurred a loss of VND19.25 billion and VND7.34 billion last year. The figure this year

is estimated to be VND5.94 billion." Why have pharmaceutical producers faced losses? Discussing the cause of Sanofi's loss, director general Rizzotti affirmed, "Not only Sanofi, but also almost all other Vietnam-foreign JVs have posted losses during their start-up years." He attributed his company's loss to high "marketing, advertising, training and production costs, and land rent." The business "has invested US(USDollar) 150,000 to develop an ISO9000 quality control system in a major drive to export its products to the world market," he said. "These expenses are acceptable as they are not too big in such a venture. If we had not spent as much as we have, Sanofi could have shut down." Sanofi's loss might have resulted from the production and trading of Sanofi-imitated products in the country. Mr. Thai Hy Dien, finance and administration manager of Sanofi, said his enterprise is producing KIM, a traditional medicated oil product of Central Pharmaceutical Enterprise No. 23, the local partner in the venture. However, another pharmaceutical company counterfeited KIM by marketing a medicated oil under the brand name of VIM, even exporting it to Russia. Although Russian authorities have seized the fake product, Sanofi has not been able to sell KIM in the Russian market. "Sanofi has incurred a loss of VND15 billion, accounting for about 20% of the firm's estimated sales in 1998," said Sanofi's Dien. "The devaluation of the dong against the U.S. dollar has resulted in a 13% increase in staff salaries and has boosted other expenses, such as land rent, as Sanofi has to make all payments in dollars." Sanofi's figures show that the firm's total sales were VND14.5 billion in 1994 and grew to VND40.9 billion last year. If it has not lost the Russian market, its losses may drop to VND5 billion this year.²⁹

²⁹"Vietnam- To Weather Tough Times," The Saigon Times Magazine 24October 1998.

Rhone Poulenc Rorer face unfair disadvantages created by the VN government.

Rhone-Poulenc of France recently celebrates its 60th year of operation in Vietnam, one of the longest foreign companies operating in the country. It began supplying pharmaceuticals in 1938 to the Vietnamese. Rhone-Poulenc recently expanded its operation in 1998 to include a pharmaceutical plant into operation in HCMC, following by the opening of the Rhone-Poulenc Agro Vietnam plant in Dong Nai Province's Bien Hoa City. Rhone-Poulenc, which reported sales of FF90 billion in 1997, now has some 300 employees in HCMC and Hanoi. It is apparent that Rhone-Poulenc is committed to more than the financial state of its Vietnamese operation, they have donated money to the preservation of Vietnamese culture. The Rhone-Poulenc Foundation provided financial and technical support worth 1 million USD for the preservation of Hien Lam Cac Pavillion, a more than 100-year-old architectural work built by the Nguyen dynasty in the former capital of Hue.³⁰ These generous acts exemplify good foreign investment models.

Despite Rhone-Poulenc Rorer Co. Ltd. Long term establishment in Vietnam, it has also faced financial woes partly because it has invested US(USDollar) 10 million to build a factory that meets the ASEAN's Good Manufacturing Practice (GMP) standards. Mr. Duong Quang Trung, board chairman of Rhone-Poulenc Rorer, said that with international standard technology and big depreciation costs, his company cannot make profits during the first years of operations. "My company's factory is currently operating at 30% of capacity due to fierce competition from many foreign firms," the deputy director of Woo Pyung Mekophar, Bui Chi Kinh, said. "Prices of foreign-made products

³⁰ "Rhone-Poulenc reaffirms presence in Vietnam," The Saigon Times Daily 17 December 1998.

are 15%-20% lower than Woo Pyung Mekophar's production costs. In addition, medicine prices on the world market have been falling, especially since early this year. In 1996, the price of Amoxicilline was only US(USDollar) 70 per kilogram, but it has now plunged to US(USDollar) 40. The import tax on pharmaceutical materials is also too high. Dane salt accounts for 22% of the production cost, but it is subject to a 5% import tax. Therefore, my company's domestic sales are slow due to the high prices of its products." Rhone Poulenc Rorer is focusing on manufacturing new products and cutting imports to weather tough times, said management.³¹

³¹"Vietnam- To Weather Tough Times," The Saigon Times Magazine 24 October 1998.

CONCLUSION

It is interesting to note that the weakness of the two most developed pharmaceutical industries in Asia revolve around issues beyond the control of their governments. The main weaknesses of Japan and Singapore result from their geography; they are island nations, which consequently limits their resources and labor. On the other hand, one of Vietnam's strategic strengths lies in the fact an entire side of the nation faces the South China Sea rendering the country several ideal trading ports. According to Gerald Fry, professor of International Studies at the University of Oregon, Vietnam has three major strategic ports lining the country from the north-Hai Phong, central-Danang, and south-Ho Chi Minh City. These ports would make Vietnam an attractive location as a distribution center for a pharmaceutical country in Asia. Furthermore, the area of the country and its population is far greater than Singapore or Japan, thus it is not of much concern labor shortage or land shortage.

On the reverse side, Vietnam's policies toward business and foreign investment are a great deterrent for many people. Its convoluted laws make Vietnam a risky investment. Moreover, the government has not consistently implemented its laws. In fact, the government has been known to favor state-owned enterprises, then domestic enterprises, and finally foreign companies. For example, foreign business are not allowed to rent the low floors at commercial high-rises, which are the most lucrative sites in the cities.³² Additionally, the Vietnamese tax system allows for imported equipment to be taxed, resulting in higher costs of production. Companies that build plants and other capital do not enjoy tax break incentives. Other problems revolve around the lack of control by the government. The Vietnamese law has inadequate protection for patented

goods. Thus, there are a number of local drug makers that have produced products that directly copy the packaging of foreign-made ones. For example, Sedocardine is imitated from French Sedocarena, a reason for market disorders and consumers' confusion. Bigger problems are spotlighted from the side of foreign pharmaceutical firms now operating in Vietnam. Many international pharmaceutical companies have entered this market such as Lyka and Cipla (India), Gateway and Smith Kline Beecham (Australia), Samchungdang, Konlon, Pharmavit and Gedeon Richter (Hungary), Roche, Rhone Poulenc and Roussel (France), plus drugs either imported from Taiwan, Hong Kong, China and many others via official channels by companies with legal status or brought into Vietnam in luggage, through unofficial channels, or made by foreign JVs, with 70 percent of materials and production lines imported. As a result of such complicated origins, drug prices are flexible and uncontrollable. Depending on how the drug was imported, the price differential is normally 20-25 percent.

It is apparent that the roadblocks to Vietnam as a potential location of foreign pharmaceutical investment revolve around its laws. If the government is able to swiftly amend its laws to protect its consumers from fraudulent drugs and entice investors with tax incentives, reliable patent protection, and fair treatment, it is hopeful that Vietnam can surpass other SE Asian countries as the location of investment. If Vietnam is to rival countries such as Japan and Singapore, it must reform several laws and policies. The suggested reforms are:

- 1.) Identify the pharmaceutical industry as one of the top industries to promote by the country.
- 2.) Create a body of administration similar to the United States' FDA that is capable of regulating the quality of drugs in the country.

³² D Tan, "Vietnam- Problems and Proposal," The Saigon Times Magazine, 18 Jan 1999.

- 3.) Create and strictly enforce patent laws that protect research and development of new drugs.
- 4.) Create incentives through tax breaks that would entice foreign pharmaceutical investment.
- 5.) Eliminate policies that favor state-owned enterprises.

At the rate Vietnam has been changing, it will not be a surprise to see these reforms implemented. However, the authorities must focus on consistency as well as swift change in order for Vietnam to be a reliable host country. Considering Vietnam's geographical advantage, large workforce, rich resources and burgeoning economy, a more effective law and tax system will make the country a strong contender as a potential host country for pharmaceutical companies.

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