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Market Engineering Research for the Generic Pharmaceutical Market in Taiwan, 1997-2007

Brief Market Overview

Overview

The healthcare industry in Taiwan is unique in that it recognizes Chinese medications, physicians, and care facilities as being equal to the western methodology. After China, Taiwan has the largest traditional Chinese medicine (TCM) market in Asia. However, the TCM market in the country stood at only 12.5 percent of the total western medicine market in Taiwan in 2001.

The pharmaceutical market in Taiwan is dominated by large multinational companies. Although patented drug manufacturers comprised only 30 percent of the total pharmaceutical manufacturers in Taiwan, they controlled about 70 percent of the revenues in 2001. As most of the local companies lack the technology and funding of the large multinational companies, they often opt to focus on producing generic products.

The Taiwan generic pharmaceutical market is mature. Growth has slowed down during the recent years due to the saturated market. Despite the potential opportunities presented by the Bureau of National Health Insurance's (BNHI) new policy of limiting hospital budgets that is to be implemented in July 2002, Frost & Sullivan does not predict a significant growth in the generic market. This is due to the lack of initiative of generic manufacturers to focus on specialty products like cardiovascular and diabetes drugs, in addition to creating brand awareness about their products.

14. INDEPENDENT MARKET RESEARCH REPORT (Cont'd)**Definitions**

All revenues in this study are presented in U.S. dollars. Figure 7-1 shows currency conversion rates of NT\$ to \$1 for the generic pharmaceutical market in Taiwan from 1997 to 2007.

Figure 7-1

Generic Pharmaceutical Market: Conversion Rate of NT\$ to \$1 (Taiwan), 1997-2007

Year	Conversion Rate (NT\$ to \$1.00)
1997	27.9
1998	34.4
1999	32.1
2000	30.9
2001	34.9
2002-2007	34.0

Source: Frost & Sullivan

14. INDEPENDENT MARKET RESEARCH REPORT (Cont'd)**Generic Pharmaceutical Market in Taiwan****Challenges Facing the Market**

Figure 7-2 shows the challenges facing the Taiwan generic pharmaceutical market.

Figure 7-2

Generic Pharmaceutical Market: Impact of Industry Challenges (Taiwan), 2002-2007

Challenge	1-2 Years	3-4 Years	5-6 Years
Highly competitive market intensifies pricing competition	High	High	High
Yearly price revisions by BNHI narrows bottom lines	High	High	High
Implementation of good manufacturing practices (GMP) results in higher manufacturing cost	High	High	High
Fast maturing market causes high barriers to entry	High	High	Medium

Source: Frost & Sullivan

Highly Competitive Market Intensifies Pricing Competition

Due to the nature of the generic pharmaceutical market, a lack of specialization or differentiation means that the price becomes the main competitive factor. Additionally, many market participants are undercutting each other in order to gain more customers. The impact of this challenge is expected to remain high throughout the forecast period as the generic market environment in Taiwan remains highly competitive.

Yearly Price Revisions by BNHI Narrows Bottom Lines

In Taiwan, manufacturers need to ensure that products are listed with the BNHI as approximately 96.0 percent of the Taiwanese population is covered under this insurance scheme. However, since its implementation, the BNHI had been facing financial burdens due to huge medical expenses. Due to shortage of funds, the BNHI is finding it difficult to meet the government objective of providing adequate healthcare service to its people. In July 2002, BNHI is expected to impose even tighter regulations by compelling manufacturers to provide yearly price revisions for products to continue to be listed. Additionally, it would allocate only a fixed annual amount to hospitals for drug purchases. It is expected that most

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hospitals would try to control drug consumption by demanding lower prices for drugs. This would directly impact market prices, hence affecting manufacturers' bottom lines.

Implementation of Good Manufacturing Practices (GMP) Results in Higher Manufacturing Cost

The government has identified biomedicine as one of the key areas that can contribute to the development of the country in the next 10 years. Part of the plan is to encourage innovations and development of high quality products among local manufacturers. One of the government's programs involves compulsory GMP status for generic drug manufacturers. The implementation of GMP is likely to improve the quality of the product it is likely to result in additional cost. Already the market is forcing the prices down; hence, these additional expenses will only further burden generic manufacturers.

Fast Maturing Market Causes High Barriers to Entry

Currently, there are about 100 companies competing in the Taiwan generic pharmaceutical market. The high market concentration is partly due to the relatively loose regulations for obtaining manufacturing licenses in the past. Consequently, this led to a situation where most of the manufacturers targeted the same segment, leading to saturation. Thus, high barriers to entry now characterize this market. However, its impact is likely to soften by the end of the forecast period.

14. INDEPENDENT MARKET RESEARCH REPORT (Cont'd)**Market Engineering Measurement Analysis**

Chart 7.1 shows the Market Engineering measurements of the Taiwan generic pharmaceutical market.

Chart 7.1

Generic Pharmaceutical Market: Market Engineering Measurements (Taiwan), 2001

Measurement Name	Measurement	Trend
Market age	Mature	N/A
Revenues (2001)	\$203.2 million	Increasing
Potential revenues (2007)	\$247.4 million	---
Current market growth rate (2001)	3.7%	Increasing
Forecast period market growth rate (2001-2007)	4.0%	---
Price sensitivity	High	
Competitors (active market competitors in 2001)	30	Stable
Companies entering the market	---	---
Companies exiting the market	None	---
Market concentration (percent of 2001 market controlled by top three competitors)	89.9%	Stable

Source: Frost & Sullivan

The generic pharmaceutical market in Taiwan is considered mature with relatively low growth rate when compared to most Asian countries. The industry is saturated with over 100 generic pharmaceutical companies competing in the market. The top three manufacturers control nearly 90 percent of the market.

The government is attempting to boost the local pharmaceutical industry by indirectly providing opportunities for generic drugs to be used in hospitals. However, the majority of the manufacturers do not have products required by hospitals. They usually focus on general products such as OTC drugs and antibiotics. Those that do have specialty products are not campaigning as aggressively as their multinational counterparts. Therefore, unless the generic manufacturers are able to develop specialty products, the government's attempts would be a lost opportunity.

14. INDEPENDENT MARKET RESEARCH REPORT (Cont'd)**Market Drivers**

Figure 7-3 shows the market drivers of the Taiwan generic pharmaceutical market.

Figure 7-3

Generic Pharmaceutical Market: Market Drivers Ranked in Order of Impact (Taiwan), 2002-2007

Rank	Driver	1-2 Years	3-4 Years	5-6 Years
1	Tighter price control on ethical drugs favors entry of generic products in hospitals	High	High	High
2	Emerging markets especially for lifestyle diseases provides additional market revenue	High	High	High
3	Product listing provides market access for generic products	High	High	High
4	Aging population drives demand for health supplement products	Medium	Medium	Medium
5	Increased health awareness boosts demand for healthcare supplements	Medium	Low	Low

Source: Frost & Sullivan

Tighter Price Control on Ethical Drugs Favors Entry for Generic Products in Hospitals

Multinational companies are competing aggressively in the hospital market. As mentioned earlier, BNHI had been experiencing financial difficulties and several measures were implemented to minimize the problem. In addition to putting pressure on multinational companies to lower drug prices, listing requirements for patented drugs that have generic substitutes are tightened. Hence, the government is trying to encourage use of less expensive generic products wherever possible, providing more opportunities for generic manufacturers to expand coverage in the hospitals market.

Emerging Markets Especially for Lifestyle Diseases Provides Additional Market Revenues

In the last few years, Taiwan recorded high incidence of lifestyle diseases such as diabetes and hypertension. This trend drives demand for drugs to treat these diseases. Many opportunities are present in the specialty therapeutic areas, for example, in diabetes

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medication. However, although many older sulfonylureas are available, only few generic biguanides are offered. Hence, if the manufacturers could develop generic forms of the specialty drugs, the demand for the drugs is likely to make the market grow further.

Product Listing Provides Market Access for Generic Products

Under BNHI's policy, products listed in the List of Medicine for Use are reimbursable under the national insurance scheme. Since the national insurance scheme covers approximately 92 percent of the population, the products listed will gain access to the market, driving demand for products.

Aging Population Drives Demand for Health Supplement Products

It is estimated that in 2006, 12 percent of the population will be aged over 55 years. As people grow older, they would require additional supplements to maintain their health. Hence, the aging population in Taiwan is likely to increase demand for quality healthcare supplements.

Increased Health Awareness Boosts Demand for Healthcare Supplements

Taiwan is one of the more developed nations in Asia. Its development brought with it a change in lifestyles. People are becoming aware of the importance of a healthy lifestyle, creating demand for healthcare supplements.

14. INDEPENDENT MARKET RESEARCH REPORT (Cont'd)**Market Restraints**

Figure 7-4 shows the market restraints of the Taiwan generic pharmaceutical market.

Figure 7-4

Generic Pharmaceutical Market: Market Restraints Ranked in Order of Impact (Taiwan), 2002-2007

Rank	Restraints	1-2 Years	3-4 Years	5-6 Years
1	BNHI fund-restructuring limits hospital spending for drugs	High	High	High
2	Long product registration process delays product entry into the market	High	High	Medium
3	Price wars among players reduces market attractiveness	High	Medium	Medium

Source: Frost & Sullivan

BNHI Fund Restructuring Limits Hospital Spending for Drugs

The BNHI is trying to limit healthcare reimbursements and has recently restructured its policies. One such policy is to allocate a fixed budget to hospitals for drug purchases. Thus, hospital administrators need to carefully evaluate drugs they choose to avoid exceeding the budget. Consequently, pharmaceutical companies must be able to emphasize on product advantages in order to be selected. Manufacturers must compete in terms of pricing for generic products, which results in reduced potential profit margins.

Long Product Registration Process Delays Product Entry into the Market

The government implements strict control over pharmaceutical product registrations. Manufacturers must first apply through the Ministry of Health. After the application is approved, manufacturing companies must pass GMP inspection. The next step is to conduct clinical trials in the country. Finally, the drug must go through a human body simulation trial. The whole registration process could take approximately two years; a faster registration would take about one and a half years. This long registration process delays product entry into the market, and thus, revenue growth.

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Price Wars among Generic Players Reduces Market Attractiveness

The main selling point of generic drugs is that they are less expensive than their branded counterparts. However, there is not much cost difference when comparing one generic drug to the other. Therefore, in order to gain sales volume, generic manufacturers outdo each other in slashing prices, which often results in lower bottom lines.

Government Regulations

The Taiwan BNHI introduced a policy in April 2001 to reduce the government's healthcare spending. The policy introduced a revised pricing scheme for products listed under the List of Medicine that are covered by the BNHI. The bureau based the drug prices on surveys of current pharmaceutical prices. In addition, the plan introduced a grouping system for generic and long-term drugs. Price setting by the BNHI is designed to allow bioequivalent and non-bioequivalent generic products to be priced at 90 percent and 80 percent of the original product prices, respectively.

Another step taken by the government to cut its healthcare spending is to implement fixed budgets for drug reimbursements in hospitals. This new policy will replace the "Black Hole" under Article 49 of the NHI Law, which states that BNHI will reimburse the drugs at cost for purchases by medical facilities. Under the new law, hospitals are allocated certain budgets for drug reimbursements. Hence, it is likely to encourage hospitals to purchase generic products whenever possible. The new law is likely to take effect in July 2002.

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Revenue Forecasts (1997-2007)

Figure 7-5 and Chart 7.2 show historical and projected revenues of the Taiwan generic pharmaceutical market.

Figure 7-5

Generic Pharmaceutical Market: Revenue Forecasts (Taiwan), 1997-2007

Year	Revenues (\$ Million)	Revenue Growth Rate (%)
1997	180.9	---
1998	186.9	2.9
1999	191.7	3.1
2000	197.9	3.2
2001	203.2	3.7
2002	208.9	2.8
2003	215.2	3.0
2004	222.1	3.2
2005	229.6	3.4
2006	237.9	3.6
2007	247.4	4.0

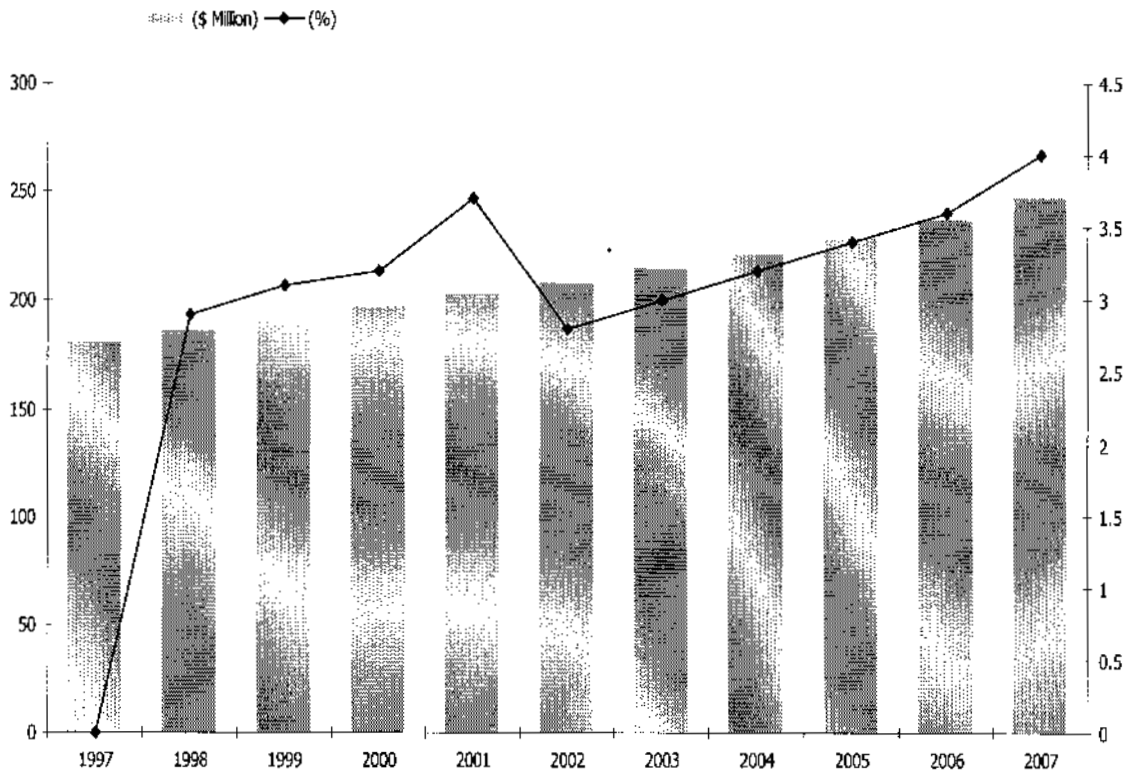
Compound Annual Growth Rate (2001-2007): 3.3%

Note: All figures are rounded; the base year is 2001. Source: Frost & Sullivan

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Chart 7.2

Generic Pharmaceutical Market: Revenue Forecasts (Taiwan), 1997-2007



Note: All figures are rounded; the base year is 2001. Source: Frost & Sullivan

The generic pharmaceutical market in Taiwan was valued at \$203.2 million in 2001 with a growth rate of 3.7 percent. Frost & Sullivan predicts low growth rates during the forecast period as the market is already saturated. In addition, despite the manufacturers' awareness regarding opportunities in specialty drug segments, very few companies have made efforts to produce generic versions of these drugs. The high investment cost involved in production is likely the main concern that is deterring manufacturers from developing these products.

The market is projected to have positive but low growth rates during the forecast period. The CAGR is estimated at 3.3 percent for the period from 2001 to 2007. The market is anticipated to reach \$247.4 million by 2007.

14. INDEPENDENT MARKET RESEARCH REPORT (Cont'd)**Distribution Trends**

Figure 7-6 shows the distribution trends in the generic pharmaceutical market in Taiwan.

Figure 7-6

Generic Pharmaceutical Market: Distribution Channel Trends of Major Market Participants (Taiwan), 2001

Distribution Channel	Percent of Revenues	02/01Trend
Clinics/GPs	35.0	Up
Government hospitals	30.0	Stable
Private hospitals	25.0	Stable
Retail pharmacies	10.0	Down
TOTAL	100.0	

Note: All figures are rounded; the base year is 2001. Source: Frost & Sullivan

Generic manufacturers in Taiwan usually have their own distribution arm. Very few would use distribution companies such as Zuellig and Diethlem to handle logistics. The main distribution channels in Taiwan are clinics/GPs and government hospitals accounting for about 65 percent of the revenues generated. The private and retail pharmacies accounted for the remaining 35 percent revenues.

Pricing Trends

Prices of drugs listed under the List of Use for Medicine are controlled by the BNHI. The bureau controls prices to take control of drug reimbursement expenditures. As per BNHI specifications, prices of products listed need to be revised every year.

14. INDEPENDENT MARKET RESEARCH REPORT (Cont'd)**Competitive Structure**

Figure 7-7 shows the competitive structure of the Taiwan generic pharmaceutical market.

Figure 7-7

Generic Pharmaceutical Market: Competitive Structure (Taiwan), 2001

Number of Companies in the Market	Approximately 100, major companies 30
Types of Competitors	Local manufacturers
Distribution Structure	In-house distribution (self-distribution)
Tiers of Competition	3 Tiers: Tier 1: YSP and China Chemicals-74.8% Tier 2: Standard Chemicals-15.1% Tier 3: Chi Seng, Pan Bio, YF Chemicals, etc.-10.1%
Notable Acquisitions, Mergers	None
Key End-User Groups	General practitioners Public hospitals
Competitive Factors	Quality-Implementing GMP is essential Price Listing in NHI provides competitive edge

Source: Frost & Sullivan

The Taiwan generic pharmaceutical market comprised three tiers in 2001. The first tier was occupied by Yung Shin Pharmaceutical Industries Company Ltd. and China Chemicals having a combined market share of 74.8 percent. The second tier consisted of Standard Chemicals with 15.1 percent market share. The remaining 10.1 percent of the market was shared by other manufacturers such as Chi Seng, Pan Bio, YF Chemicals, etc. Key end-user groups were general practitioners and public hospitals. Important competitive factors in the market included having good quality products, competitive pricing, and product listing in the List of Medicine for Use.

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Market Share Analysis

Figure 7-8 and Chart 7.3 show market share analysis of the generic pharmaceutical market in Taiwan.

Figure 7-8

Generic Pharmaceutical Market: Market Shares of Major Participants (Taiwan), 2001

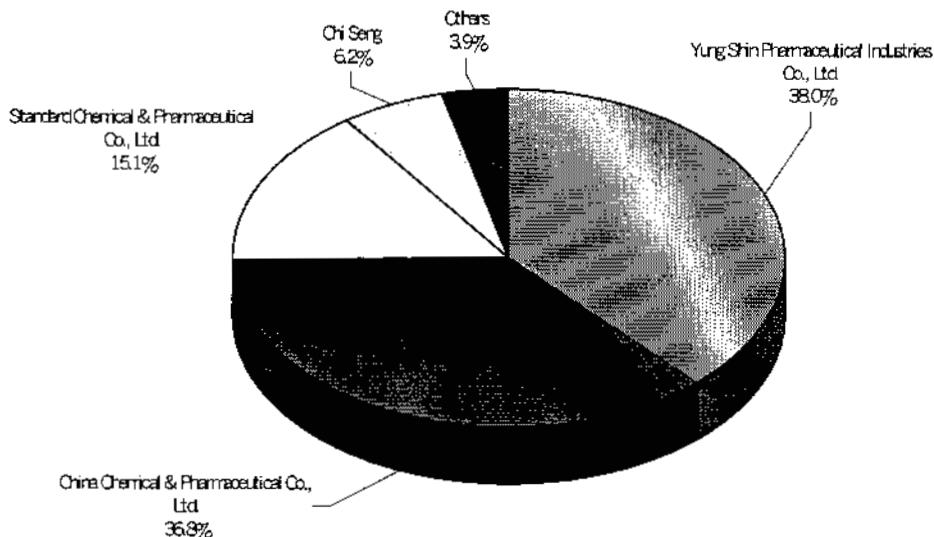
Company	2001 (%)	01/00 Trend
Yung Shin Pharmaceutical Industries Co., Ltd.	38.0	Stable
China Chemical & Pharmaceutical Co., Ltd.	36.8	Down
Standard Chemical & Pharmaceutical Co., Ltd.	15.1	Up
Chi Seng	6.2	Up
Others	3.9	Up
TOTAL	100.0	

Others include Pan Biotic, YF Chemicals, Sintong, Pei Li, Chung Mei, etc.

Note: All figures are rounded; the base year is 2001. Source: Frost & Sullivan

Chart 7.3

Generic Pharmaceutical Market: Market Shares of Major Participants (Taiwan), 2001



Others include Pan Biotic, YF Chemicals, Sintong, Pei Li, Chung Mei, etc.

Note: All figures are rounded; the base year is 2001. Source: Frost & Sullivan

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Yung Shin Pharmaceutical Industries Company Ltd. (YSP Taiwan) is the largest domestic pharmaceutical manufacturer in Taiwan, holding approximately 4.0 percent of the total pharmaceutical market in the country. However, it held about 38.0 percent of the generic market in 2001. In addition to manufacturing its own products, YSP Taiwan also distributes products of some multinational companies such as AstraZeneca and Merck Sharp & Dohme. Since its establishment in 1952, YSP Taiwan grew tremendously, expanding market reach overseas. Currently, it has invested in manufacturing and distribution operations in China, the U.S., and Southeast Asia.

China Chemical & Pharmaceutical Company Ltd. followed closely with 36.8 percent market share in 2001. This company also has extensive generic product lines in addition to distributing drugs for Sankyo Co. Ltd., Roussel-Morishita Co. Ltd., Janssen Pharmaceutica NV, Akzo Nobel, and other multinational companies.

Standard Chemical & Pharmaceutical Company Ltd. ranked third with 15.1 percent market share. The company concentrates more on generic specialty drugs such as circulatory system drugs and tropic hormones and related synthetic drugs. Frost & Sullivan predicts that this company can greatly benefit from the government's enforcement of fixed hospital budgets and pricing control policies as they have an extensive specialty product range.

Other manufacturers such as Taiwan Pan Biotic, and YF Chemicals held the remaining 10.1 percent of the market.

Product Analysis

Figure 7-9 shows the top five classes in the Taiwan generic pharmaceutical market.

Figure 7-9

Generic Pharmaceutical Market: Top 5 Classes (Taiwan), 2001

Drug Class
Antibiotic
Gastrointestinal
Cold and cough preparation
Health supplement products
Antihypertensive/Cardiovascular

Source: Frost & Sullivan

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In 2001, antibiotics topped the most popular product list in Taiwan. The market for this therapeutic drug is considered saturated as all large generic manufacturers in the country produce antibiotics. Hence, manufacturers should look into other therapeutic areas, especially for specialty drugs, as the government is limiting hospital budgets starting July 2002.

Strategic Recommendations

Focus on Specialty Drugs to Capture the Hospital Market

The hospital market is mainly dominated by ethical products manufactured by multinational companies. One of the reasons for this is the lack of generic versions of specialty drugs, which are required by hospitals, for instance, diabetes, cardiovascular, or cancer products. Hence, if the generic manufacturers can invest and develop products in these categories, they could increase their share in the hospital market, especially since the BNHI will soon be limiting funds for hospitals.

Identify Emerging Drugs Market to Gain the First Mover Advantage

The common practice in the generic pharmaceutical industry in Taiwan is to manufacture popular products. This "me too" concept has saturated some therapeutic segments such as antibiotics and cold and cough preparations. Hence, manufacturers selling products in those therapeutic areas compete on prices and continue to lower profit margins. Rather than competing in the saturated markets, it would be beneficial if the manufacturers can identify emerging therapeutic drug markets such as cardiovascular and cancer, which are the top two causes of death in Taiwan. Therefore, they can claim first-mover advantages and secure loyalty among end-users.

Conduct Aggressive Marketing Campaigns to Boost Brand Awareness

Though generic products are copies of branded blockbusters, manufacturers need to create awareness among the general practitioners, clinics, retail pharmacies, and hospitals for sales. Competing on the basis of price alone could affect bottom lines; hence, there should be other ways to maintain market share. Aggressive promotional and awareness campaigns targeted at end-users can be conducted to ensure customer loyalty.

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Establish a Good Database System to Focus on High Turnover Products

Generic manufacturers need to identify products that have highest turnover for the company. This is beneficial as the marketing and sales team can focus on promoting those products aggressively rather than promote all products of the company at the same time. In addition, separate marketing campaigns are needed to accomplish sales objectives in each target market; thus, trying different approaches to public hospitals, private hospitals, and GPs/clinics could prove to be beneficial. This could ensure greater success in marketing products.

8

Brief Overview of the Pharmaceutical Markets in Cambodia, Myanmar, and Vietnam

Market Overview

The pharmaceutical markets in Cambodia, Myanmar, and Vietnam are at their infancy stage. Market potential of these markets is yet unexplored as these countries are just beginning to recover politically and economically. The huge opportunity in these countries is represented by double-digit growth rates of the pharmaceutical markets, ranging from 10 to 15 percent in each of the countries.

In keeping with the growth potential in these countries, pharmaceutical giants such as Pfizer and Roche Pharmaceuticals are already setting up shops here. Their lead is being followed by several smaller generic companies from India, South Korea, and Taiwan. All of these manufacturers are getting ready to seize opportunities once they arise.

The Cambodian Pharmaceutical Market

The Cambodian pharmaceutical market was estimated at \$40 million in 2000 and catered to a general population of 10 million. About 70 percent of the total market value in 2000 was contributed by oral drugs and injectable products. There is room for tremendous growth in this country as the healthcare sector is still evolving. The ministry of health is the largest purchaser of drugs and medical supplies; however, the private sector is also growing. Importation of drugs is limited to companies that are licensed by the Ministry of Health. However, large black market of smuggled pharmaceuticals exists in Cambodia that often cause problems due to the low quality goods offered therein. The Cambodian Government is

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striving to improve its public healthcare sector. A budget of \$399.4 million was allocated for a five-year development effort from 1996 to 2000.

The major areas of activities during those years included:

- Strengthening health system management
- Development of human resources
- Environmental health
- Diarrhea and cholera disease control
- Tuberculosis control
- Prevention and control of malaria
- Control of dengue hemorrhagic fever
- Institutional strengthening and family health improvement through birth spacing

Despite the relatively small size of the pharmaceutical market in Cambodia, the under-developed market holds much potential for growth. Demands for drugs in every therapeutic area are present as the country is still shaping itself from the political and economical collapse in the recent past. As the population continues to have limited purchasing power, the potential for quality generic products is high. Manufacturers would want to target government hospitals, as the Ministry of Health is the largest purchaser of pharmaceutical drugs.

The Pharmaceutical Market in Myanmar

Myanmar underwent political, economical, and social changes in late 1988. Various economic reforms were passed such as decentralizing control, encouraging private sector growth, eliminating price controls, and allowing direct foreign investment in the country. One of the steps taken by the government to improve the quality of life of its population is the establishment of the National Health Committee (NHC) whose task is to develop policies affecting healthcare matters in the country.

One of the accomplishments of the NHC is initiation of the Myanmar Essential Drug Project in December 1988. The main objective was to provide supply of drugs listed as essential drugs. The project was considered a success, as 118 out of the 131 townships in Myanmar

14. INDEPENDENT MARKET RESEARCH REPORT *(Cont'd)*

adopted the project by 1995. The Essential Drug Project also encourages local manufactures to produce drugs listed as essential.

Other successful activities were the publication of a National Drug Formulary in 1989 and formulation of the National Drug Law in 1993 to regulate, control, and authorize imports of pharmaceuticals and vaccines in Myanmar. In addition, the Essential Drug Project is also likely to emphasize on local drug productions that meet good manufacturing practice standards.

In 1993, the NHC formulated the National Health Policy, which was implemented with the co-operation of joint ventures, private sector, and non-governmental organizations (NGO). The purpose of the National Health Project is to enable every citizen to attain full life-expectancy and ensure that every citizen is free from disease.

Thus, government efforts towards enhancing quality of life of its population present opportunities for pharmaceutical manufacturers. As the people and Government in Myanmar still have limited purchasing power, generic products are likely to thrive in this country.

The Pharmaceutical Market in Vietnam

The Vietnam pharmaceutical market was estimated at \$390 million in 2000. Despite the relatively small market size compared to its 77.7 million population, the growth rate was estimated at 11.4 percent in year 2000. Prior to 1997, the market had been growing at a robust rate of 25 percent. However, the regional financial crisis in 1998 resulted in currency depreciation and affected purchasing power of the population. However, this reduced spending power of the population also created demand for generic products, which cost less than patented drugs.

Market growth is expected to improve during the forecast period. The country's economic condition is projected to improve and along with better economic conditions, lifestyle changes are also expected. Hence, increased demand for several types of medications such as cardiovascular drugs, alimentary tract and metabolism drugs, and anti-infectives is forecast. The market is projected to increase to \$764 million in 2007 at the CAGR of 10.1 percent from 2001 to 2007.

14. INDEPENDENT MARKET RESEARCH REPORT (Cont'd)

Figure 8-1 shows historical and projected generic pharmaceutical market size in Vietnam from 1997 to 2007.

Figure 8-1

Generic Pharmaceutical Market: Historical and Projected Revenue (Vietnam), 1997-2007

Year	Revenues (\$ Million)	Revenue Growth Rate (%)
1997	330	---
1998	350	6.1
1999	350	0.0
2000	390	11.4
2001	430	10.3
2002	475	10.5
2003	522	9.9
2004	574	10.0
2005	631	10.0
2006	695	10.0
2007	764	10.0

Compound Annual Growth Rate (2001-2007): 10.1%

Note: All figures are rounded; the base year is 2001. Source: Frost & Sullivan

Overall, the Vietnam pharmaceutical market is showing an upward trend. Drug consumption increased from a per capita consumption of \$3.6 in 1996 to \$5.1 in year 2000. This is also parallel with the increase in per capita GDP of \$257 in 1996 to \$400 in 2000.

In 2000, there were approximately 90 state-owned pharmaceutical companies, over 100 domestic private manufacturers, 13 wholly owned foreign companies, 212 foreign company registrations, and 90 representative offices. This shows the general positive sentiment regarding the market in Vietnam.

Opportunities in Vietnam are present for the following therapeutic areas:

- Alimentary tract and metabolism including vitamins
- General anti-infectives
- Cardiovascular

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- Central nervous system
- Musculoskeletal system
- Dermatological
- Respiratory system

An important consideration for manufacturers to market products in Vietnam is the fact that 80 percent of the population lives in the rural areas; hence, distribution would be a big challenge. Manufacturers need to decide on whether they want to handle total market coverage or concentrate marketing activities on select cities alone.