

Graduate Business School  
School of Economics and Commercial Law  
Gothenburg University

# THE CHINESE PHARMACEUTICAL MARKET

Facing the Challenge of Chinese Healthcare Reform

The Case of Recip AB's Market Entry in P.R. China

Yibin Wei and Zhen Kang

Graduate Business School  
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Gothenburg, December 1999/12/05

Yibin Wei

Zhen Kang

## Abstract

China has the most quickly expanding and developing economy in the world today. Many Swedish firms have already entered the Chinese market, each of whom have different expectations and results. Other companies, like Recip AB, are on their way to explore and expand world business to China.

Along with the economic reform, China is undergoing a healthcare system reform, which is highly relevant to the case company. A detailed introduction of the healthcare system and the ongoing reform will provide the company with sufficient information for future action in the Chinese healthcare market.

Pharmaceuticals are special products, which are usually highly regulated all over the world. The Chinese pharmaceutical market is conducting a restructuring to separate the function of administration and enterprise, and is anticipating a gigantic development in the near future. The co-operation between the USA, Europe and China will certainly help the Chinese pharmaceutical market to develop on the right track.

Fieldwork was conducted in China in May 1999, and was very fruitful. A market survey for Aminess® was done at 20 hospitals in six Chinese cities. Many interviews with key persons at relevant government offices ensured the validity and reliability of the data collected and used in this paper.

**Key words:** Pharmaceutical market, healthcare reform, China, Recip AB

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# 1. Introduction

The opening chapter briefly presents the background of producing this thesis, which is followed by an introduction of Recip AB and its product portfolios. Next, the current situation of the Chinese healthcare reform and the recent developments of Chinese pharmaceutical market will be generally described. In the fifth section, we put forward the purpose of our thesis. Finally, the problem areas will be targeted.

## 1.1 Research Background

Health economics has become one of the central concepts of the political debate surrounding the healthcare sector in recent years. This debate has often been focused on the necessity of limiting cost increases for health care. However, health economics is not only a matter of saving money. More importantly, it is about the potentials for making healthcare more effective, and of providing more care and health for the money spent.

The demands to limit costs and increase effectiveness also apply to pharmaceuticals. Many countries are rapidly on their way toward implementing similar demands, such as requiring documentation for decisions on whether costs for new pharmaceuticals should be paid for, in part or fully, by the national health insurance systems. Today, pharmaceuticals account for between 8 and 15 percent of total healthcare costs in the industrialised countries.<sup>1</sup> The amount varies from country to country depending on prices, therapeutical traditions and the design of healthcare systems. Public financing of pharmaceutical costs, such as hospital care or surgical operations, are commonly covered in full by national health insurance, but a pharmaceutical that provides an alternative to an operation can involve substantial co-payments for the patient. Despite this, much of the debate on healthcare savings is focused on the cost of pharmaceuticals.

The pharmaceutical industry of the 1990s is facing increasing challenges. New technologies resulting from advances in cellular biology and molecular genetics create the potential for tremendous improvements in healthcare, but at a cost. Helped by technological advances already available to us, people are living longer and the cost of healthcare is rising. Governments are understandably looking for ways of containing or reducing the healthcare bill. Under economic pressures from the government regulation issue for new drug approval as well as cutbacks of the healthcare bill, pharmaceutical companies have to consider developing cost-effective drugs for Medicare to achieve social recognition.

All of these economic factors call for changes in the traditional structure and operation of pharmaceutical companies. From the corporate point of view, pharmaceutical marketing is the most important issue in international development. Many multinational companies (MNCs) are looking for a way to survive through a transfer of resources into the developing areas, which can relatively reduce their production expenditure.

However, for those who want to exploit new markets, it is necessary to gain an understanding of how the new market works. Advance preparation is the best way to challenge the changing business environment and to realise the long-term purpose; achieving maximum profit from the China market.

In this paper, we chose Recip AB, a small Swedish pharmaceutical company, as our case company. Recip AB, for the first time, is launching a new fibre-based drug, *Fiberform*®, into the Chinese market through its Hong Kong-based distributor. Thus, it will be very interesting to identify the current situation of the Chinese healthcare and pharmaceutical markets for both our purpose of study and the future development of the case company.

## 1.2 Brief Introduction of Recip AB and its Core Products

Recip AB is a small Swedish pharmaceutical company with a long history of developing, manufacturing and marketing high-quality pharmaceuticals. Dating back to the early 1940s, Recip AB was first used by the pharmacist Ivar Röing who began manufacturing pharmaceuticals under the name. Several different companies and pharmaceutical corporations have since owned Recip AB. From the early 1960s, Kabi owned Recip, and after a series of mergers it became in the early 1990s a part of the Pharmacia organisation in Årsta, Sweden. As of January 1995, Recip AB is a privately owned company. It revived its 'old' name to emphasise the depth and breadth of its experience. Nowadays, Recip AB not only

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<sup>1</sup> Pharmaceuticals- An economical alternative, Astra

manufactures pharmaceuticals but also develops and markets both non-prescription (OTC) and prescription drugs. The company employs 180 people and has annual sales of 250 million SEK. Recently, Recip AB extended its product range through the acquisition of a small pharmaceutical Swedish company, Trium AB, along with its core product Fiberform®.

Recip AB focuses on the development of pharmaceuticals and drug-related products of known substances. The product range of Recip AB consists primarily of self-medication products, as well as certain specific prescription drugs. These drugs focused on different therapeutic areas. Here we would like to introduce some of their core products.

Fiberform® is a new product of Recip AB developed to treat chronic, acute constipation and other gastrointestinal disorders.

Aminess® is used to supplement the low protein diet of patients with kidney disorders. It contains a well-balanced mixture of eight different essential amino acids.<sup>2</sup>

### 1.3 The Overview of Healthcare System in China

Traditionally in China, the bulk of a patient's medical charges has been reimbursed or paid for by his work unit. The work unit sets aside some of its own money for employee health care and also receives funds from local and central government health and labour authorities. The system was designed to accommodate small groups of work-unit employees, giving them few, and mainly low-cost, treatment options.

Since China launched its open door policy 15 years ago, however, the health care system has begun to feel market pressure. As hospitals become financially accountable, the cost to patients is growing. Though price controls are still in place on most hospital fees for basic operations and procedures, inflation and the proliferation of more advanced and expensive treatments are straining government health care budgets.

China's health care system, like other parts of its economy once based on central planning, is in transition. Over the past two decades, China's universal health care system, a landmark of the socialist system, has been dismantled. Currently, only about 25% of its population can claim some kind of health insurance coverage.<sup>3</sup> It was not until recently that the government launched a series of health policy reforms, with important implications for the pharmaceutical sector. Changes in both insurance schemes and health-care financing could have important implications for medical and pharmaceutical suppliers.

### 1.4 The Potential of Chinese Pharmaceutical Market

China is poised to become one of the world's major pharmaceutical markets. The value of the Chinese pharmaceutical market exceeded \$ 10 billion in 1996, and that number is expected to grow to over \$18 billion by the year 2000.<sup>4</sup> The country's rapid economic expansion and the Chinese government's efforts to demonstrate that China can be an important player in pharmaceutical development are fuelling this growth.

China's increasing population of senior citizens, as well as growing demand in rural areas presents indicating unprecedented opportunities for domestic drug manufacturers. China now has more than 110 million citizens above the age of 60. By year 2000, that Figure is expected to reach 130 million, accounting for 10.6 percent of the nation's total population. China's 864 million rural residents only account for 20 percent of the country's total pharmaceutical consumption. The increase in living standards in rural areas will add to the market potential. The pharmaceutical sector is profitable, accounting for 50 percent of all current and planned health care expenditures, and constituting the largest single share of medical spending.<sup>5</sup>

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<sup>2</sup> Recip AB's Brochure

<sup>3</sup> Li Xuesheng, *China Business Review*; Vol.25, Issue 6, p20, 1998,

<sup>4</sup> Drug information Journal, Vol. 32, p1187, 1998

<sup>5</sup> <http://ce.cei.gov.cn/efor.htm>. China Economy, 19980709.

### **1.4.1 OTC Pharmaceutical Market in China**

For a long time, drugs in China have not been classified into prescription and non-prescription drugs, as the OTC market is not formally structured or supervised. The growing number of Chinese without insurance and the reduction of government reimbursements has forced many people to resort to self-medication. As consumers move toward self-medication, the concept of over-the-counter medicines (OTCs) is emerging in China. The OTC (non-prescription) drug market will be developing quickly in the Asia, with an estimated increase of 101% from 1994 to 2004.<sup>6</sup> The trend toward self-medication that was followed China's healthcare reform is a major driving force behind pharmaceutical companies' involvement in the OTC market.

### **1.4.2 The Future Trends of the Chinese Pharmaceutical Market**

China's pharmaceutical market will grow steadily in 1999. Experts from the Chinese Pharmaceutical Company and officials from the State Economic and Trade Commission agreed that the strong development capacity of enterprises and growing demand would ensure steady growth. They predicted that the output value of the pharmaceutical industry will be 186 billion yuan in 1999, 14 percent higher than in 1998.<sup>7</sup> The commercial sales of medicines are expected to grow by ten percent reaching 120 billion-yuan. The retail sales are expected to grow by 12 percent over 1998 reaching 70 billion-yuan.<sup>8</sup> As a result of the reform in China's medical expense system, the sales of import medicines may fall, but the market shares of products made by foreign-funded enterprises in China will increase. The profits of foreign-funded enterprises will continue to decrease while the sales of China-made name brand medicines will increase.<sup>9</sup> On the other hand, oversupply of pharmaceuticals has become increasingly serious in China.<sup>10</sup> The State Economic and Trade Commission and the State Drug Administration have put a ban on approval of any new projects.<sup>11</sup> Thus, in 1999, the pharmaceutical structure in China will be adjusted according to the State Economic and Trade Commission.

## **1.5 Purpose of Thesis**

The purpose of this thesis is to carry out a general analysis of the transformation of Chinese healthcare system and to gain a better understanding of these changes, particularly in terms of impacts on foreign pharmaceutical companies' business operations in China. The emphasis is on how the foreign pharmaceutical company should examine the Chinese business environment when building its marketing strategy for first-time entry into the Chinese market, especially during the transition from the medical reimbursement system to a Chinese-style medical insurance system. Finally, we will provide the case company, Recip AB, with some recommendations for further development in the Chinese market.

## **1.6 The Main Problem of Thesis**

The main problem for our study is the analysis of the impacts of the changing business environment, current healthcare reform, and the development of a pharmaceutical market in China on the marketing strategies of a foreign pharmaceutical company. In order to solve the main problem, we have further developed it into four sub-problems as follows:

- 1) Analysis of the macro business environment
- 2) Study of Chinese healthcare system (healthcare infrastructure, healthcare financing and healthcare policy)
- 3) Identification of the current situation of the Chinese pharmaceutical market
- 4) Building a marketing strategy for a foreign company (Aminess®)

## **1.7 Research Procedure**

*Figure 1.1 Research procedure*

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<sup>6</sup> China Medpharm Insight, issue 1

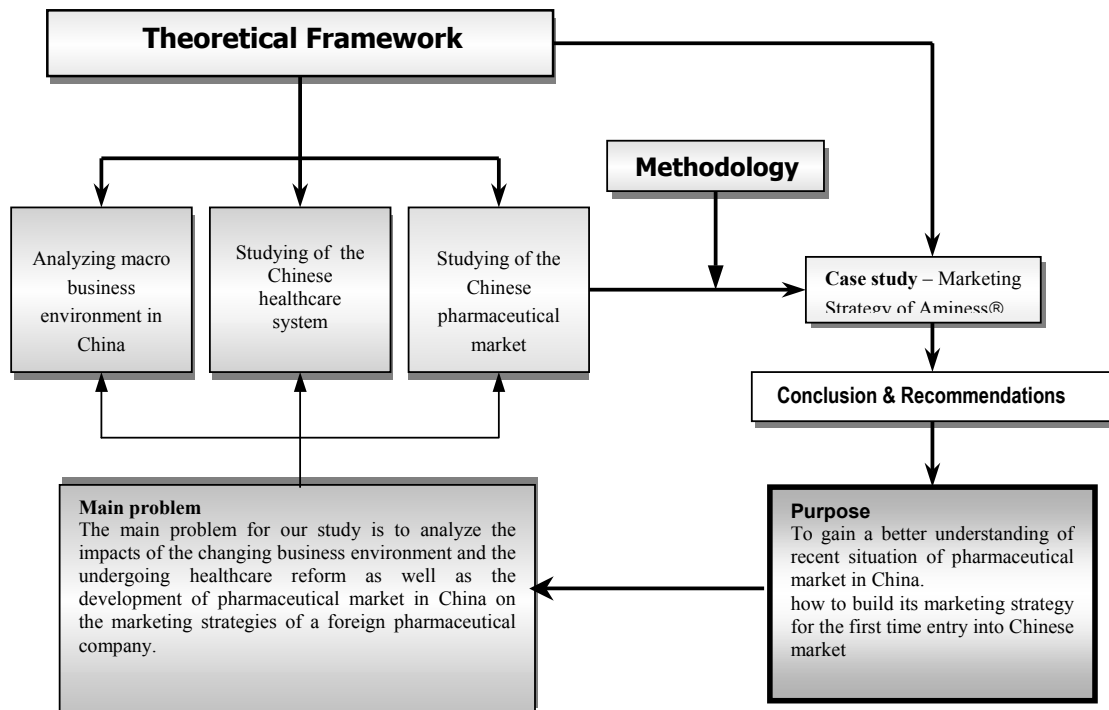
<sup>7</sup> <http://ce.cei.gov.cn/efor.htm>, China Economy, 19981217

<sup>8</sup> <http://ce.cei.gov.cn/efor.htm>, China Economy, 19990107

<sup>9</sup> Ibid,

<sup>10</sup> Yu Mingde, Deputy director of pharmaceutical department of the State Economic and Trade Commission.

<sup>11</sup> <http://ce.cei.gov.cn/efor.htm>, China Economy, 19990208

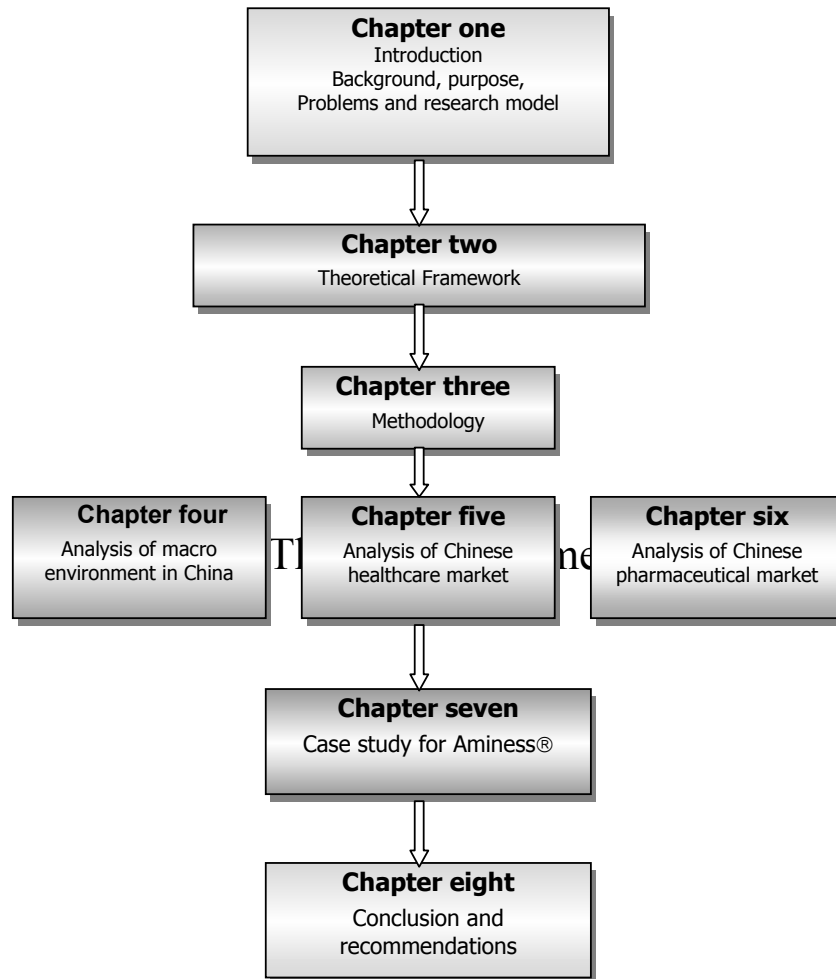


As Figure 1.1 shows our research, based on our thesis began with the identification of the main problem. Following the guidelines presented by the theoretical framework, we will examine and discuss the macro business environment, the Chinese healthcare system and the pharmaceutical market in China in turn. Based on these analyses, a case study will be conducted of one of the case company's main product — Aminess®. Finally some implications and recommendations will be made.

## 1.8 Disposition of the Thesis

This thesis is structured in eight chapters. The first chapter describes the background and purpose of the thesis, and identifies the research problems. The second chapter presents the framework of theoretical references as our research tool for the problem areas. The third chapter focuses on methodology as a basis for our research. The fourth chapter will target the analysis of the Chinese macro-environment. The fifth and sixth chapters particularly address the analysis of the Chinese healthcare / pharmaceutical market. The case study for Recip AB's product, Aminess®, will be discussed in the seventh chapter. Finally, some general conclusions and recommendations for foreign pharmaceutical companies doing business in China will be presented. The thesis structure is shown in Figure 1.2.

Figure 1.2 The disposition of the thesis



This chapter presents a framework of theoretical references, which is considered to be a tool for the analysis of research problems. The institutional network theory (Jansson, 1999) will be used as a general background in analysing the business environment. The marketing theories are based on network strategies (Jansson, 1999), which consist of web strategies, linkage strategies, competitive strategies, and first-mover advantages in combination with the 30Rs of relationship marketing (Gummesson, 1995). These theories are applied to identify a proper marketing strategy for a small Swedish medical company in a dynamic business environment in China.

## 2.1 Institutional Network Theory

The environment of an enterprise encompasses a multitude of economic and non-economic actors and factors. These include customers, suppliers, and government authorities, as well as “intangibles” such as culture, values and attitudes, all of which establish the external institutional set-up of an enterprise. All actions taken by an enterprise are in response to this environment, within which the enterprise finds its profits generated by market opportunities.

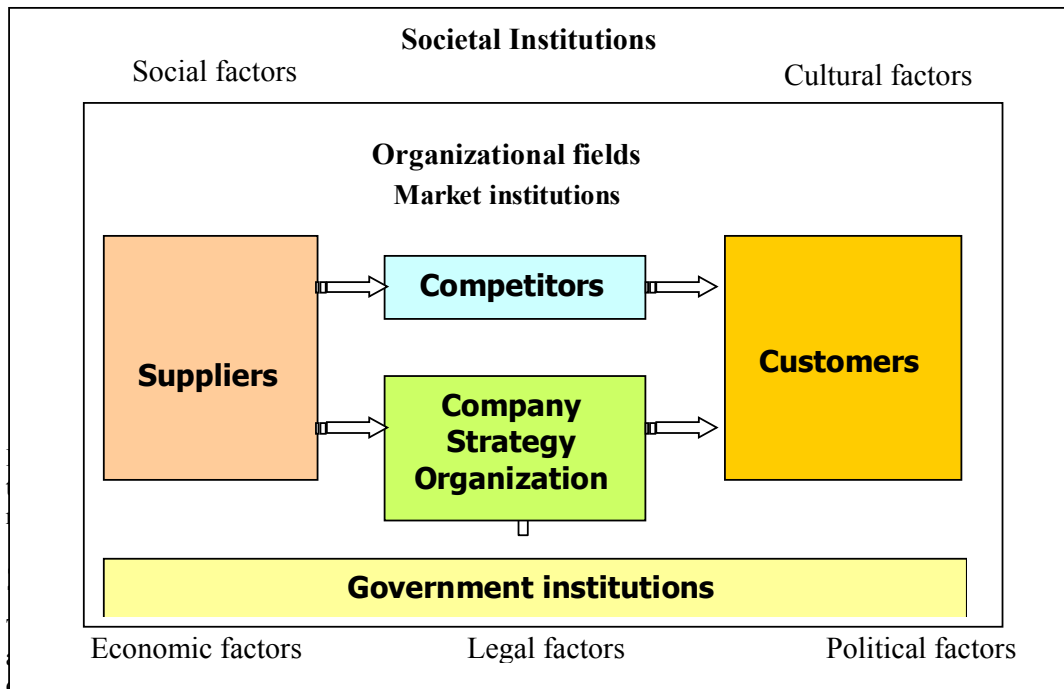
Increasingly, major enterprises in a given industry have comparable technical/functional skills. The competitiveness of enterprises will therefore most often depend on their environmental skills, that is, how well they relate to and learn from their environment. The enterprise with the internal institutional set-up design that best permits optimal response to its external institutional set-up, will be the most competitive enterprise in its industry and thus, in the best position to exploit market opportunities.



## 2.2 The Network-Institutions Model

The institutions networks model is the basis for the analysis of the environment of the multinational company (MNC). This means that institutions and networks influencing the MNC are analysed at two main levels of description: organisation fields in the inner rectangle, and societal sectors in the outer rectangle. These levels correspond to the micro and macro-environments of environmental analysis (Jansson, 1999)

Figure 2.1 Institutional network model



events are more important issues for marketing research. The company needs to understand recent changes in order to alter its business strategy accordingly. Relevant published information is usually gathered, analysed, and interpreted for use in planning.

### 2.2.2 Political Environment

The political segment deals with political progress in a society, and the regulatory framework that shapes codes of conduct. Political trends may have a significant impact on business. The marketing strategist needs to study both domestic and foreign political events, review selected published information to stay aware of political trends, and interpret the information as it relates to the particular company.

### 2.2.3 Legal / Regulatory Environment

Marketing decisions are strongly affected by developments in the legal/regulatory environment. The purpose of government regulation is to protect consumers from unfair business practices and to protect the interests of society against unrestrained business behaviour. Every country is quite different in their political-legal environments. The *Thalidomide* tragedy of the early 1960's may have been the single most important event in the history of the pharmaceutical industry, in so far as the legal/regulatory environment is concerned. The legal and regulatory issues must be assessed as part of the strategic marketing process.

### 2.2.4 Social and Cultural Environment

The social segment focuses on demographics, life-styles, and social values. The purpose of this analysis is to understand shifts in population characteristics and emergence of new life-styles or social values. The cultural environment is composed of institutions and other factors that influence society's basic values,

perceptions, preferences and behaviours. Marketers must be aware of variations in cultural influences across societies within the markets served by the company.<sup>12</sup>

### **2.2.5 Demographic Environment**

The demographic environment is of significant interest to marketers because it involves people, and people make up markets. In any geographic market, population size and growth trends can be used to gauge its broad potential for a wide range of goods and services.<sup>13</sup>

### **2.2.6 Technology Environment**

The technological environment is perhaps the most dramatic force to shape company destiny. New technologies create new markets and opportunities. In addition to understanding the changing technological environment and the way that new technologies can serve customer and human needs, marketers need to work closely with research-and-development people to stimulate more market-oriented research.

### **2.2.7 Internal Environment (Organisational Fields)**

A Company, with a sound marketing management strategy not only focuses on the target market's needs, but also understand its microenvironment factors.

Institutions are central to the MNC's strategy and organisation, which takes into account specific characteristics in influencing both the internal and external institutions of the MNC. The competitiveness of the enterprise is governed by the core function /technical knowledge, the enterprise's knowledge of the business environment and the extent to which the enterprise can design its internal institution to respond effectively to the external institutions.

## **2.3 Network Strategy**

Resources are the basis of competitiveness and thus profitability. The MNC should control and utilise these in the most efficient and proper way in order to establish company routines and to achieve business efficiency and legitimacy. The strengths of a MNC stem from its internal resources and capabilities, but these only constitute strengths if they match environmental conditions. This is the prerequisite of creating sustainable competitive advantages. As illustrated in Figure 2.2, network strategy bridges the gap between the MNC's internal strengths (organisation field) and external opportunities found in its specific business environment (societal field).

*Figure 2.2 The institutional network strategy model*

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<sup>12</sup> Philip Kotler, Principles of Marketing, European Edition, 1996

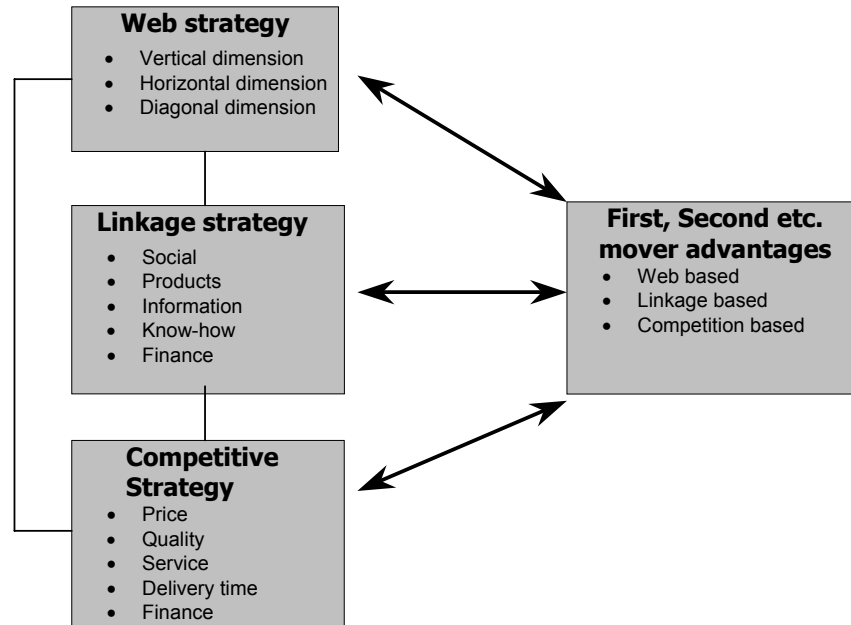
<sup>13</sup> Ibid



Network strategy consists of three basic sub-strategies: the web strategy, the linkage strategy and the competitive strategy (Jansson, 1999). The web strategy describes how the MNC should relate to the whole market network, including buyers, distributors and competitors. The linkage strategy is related to vertical transactions, and concerns how the seller creates connections with the buyer. The competitive strategy concerns the position of the seller in relation to competitors and whether the offer is competitive. This strategy is closely related to horizontal market structures, and can be called “horizontal

competition.” A crucial aspect of strategy is to achieve a first-mover advantage, which is based on and maintained by an efficient mix and sequence of linkages over time.

Figure 2.3 Network strategies



(Source: Jansson, 1999)

### 2.3.1 The Web Strategy

The web strategy refers to how the MNC should utilise the mapped network in its marketing efforts. For example, it addresses which parties to influence in the product/service network, and then, for marketing purpose, which parties should be included in the financial and labour market network. (Jansson, 1999)

### 2.3.2 The Linkage Strategy

There are four major linkages known as: product, information (know-how), social and financial linkages (Jansson, 1999).

Product linkage is the result of basic technological interdependency visible in many industrial relationships. These linkages bind the parties’ different production technologies together. Information linkages are the result of the product linkages, i.e., to have successful dependencies, there should be exchanges of information about different needs and characteristics of the products. Social linkages are a result of interaction between individuals within and outside of companies. For relationships to succeed, firms should emphasise this aspect and maintain as many networks and contacts as possible. This is mainly between the buyer and the seller. Financial linkages are tied to the efficiency of the target market where price is an important factor. The determinant of this factor is the flow of resources between the parties.

Linkage strategies complement competitive strategies in that the amount of resources generated by a company goes hand in hand with the prices allocated. A bond is established between the buyer and the seller. The

commitment grows over time, as the parties become more absorbed in the relationship. The seller's marketing expenses are high to all the contract that need to be cultivated with the buyers, in order to inform, influence, and create trust among each other. Commitment increases after an agreement has been reached, and thus the contract becomes less risky. The relationship is built on a mutual balance of resources so as to minimise the degree of substitution. The stronger the bond, the more dependent the parties are on each other.

### **2.3.2.1 Types of Linkages (Relationships)**

Relationship marketing refers to marketing seen in terms of relationships, networks and interaction. (Gummesson, 1994). An elaboration of relationship marketing as an outcome of this definition has been presented as a specification of thirty relationships. In the 30 R approach (see appendix 2), a distinction is made between four types of relationships. (Gummesson, 1995) The first two are market relationships among suppliers, customers, competitors and others who operate directly in the market. They constitute the core of relationship marketing. The next two types are non-market relationships that indirectly influence the efficiency of market relationships. Mega relationships exist above the market relationships. They provide a platform for market relationships and concern the economy and society in general. Nano relationships exist below the market relationships, and concern the internal operation of an organisation.

### **2.3.3 The Competitive Strategy**

The competitive strategy is more closely related to horizontal competition. The seller offers a technical solution to a buyer's problem. This is often contained in a package consisting of various offers, for example, of hardware in the form of products of a certain quality and software such as service, transfer of know-how and financing. The package is delivered within a specific time at a specific price. It is modelled in such a way that distinguishes it favourably from the competitors' offer. In short, the competitive strategy is a matter of balancing the price, quality and the long-term relationship. It is marketed mainly on the basis of a linkage strategy.

The most satisfactory combination of price and quality is expressed by the term "reliability", which represents high general quality and an adaptation to the technical level of the customer's factory, the skills and knowledge of the workers, and the anticipated price range of the customers. (Jansson, 1994)

### **2.3.4 First-mover Advantages**

As we have discussed above, a crucial part of strategy is finding the most efficient mix and sequence of linkages over time in order to achieve first-mover advantages. First-mover advantages may be achieved either through information linkage, in which the customer is influenced by and dependent upon information from the seller, or through social linkage, with the customer becoming socially committed to the seller. In addition, such advantages may be achieved through product or financial links, in which the customer becomes dependent upon the seller's product and financing. A first-mover advantage can also be achieved through a competitive offer.

The strategy here involves a combination of a linkage mix and a competitive mix, which are interconnected. The linkage mix creates a framework for the transfer of the competitive mix, but is also influenced by what the MNC can offer as a seller. An advanced technical solution far above the customer's present capabilities, for instance, requires a more long-term accumulation of information and social contact networks for the transfer of know-how.

## 2.4 The MNC-Government Network Strategy Model

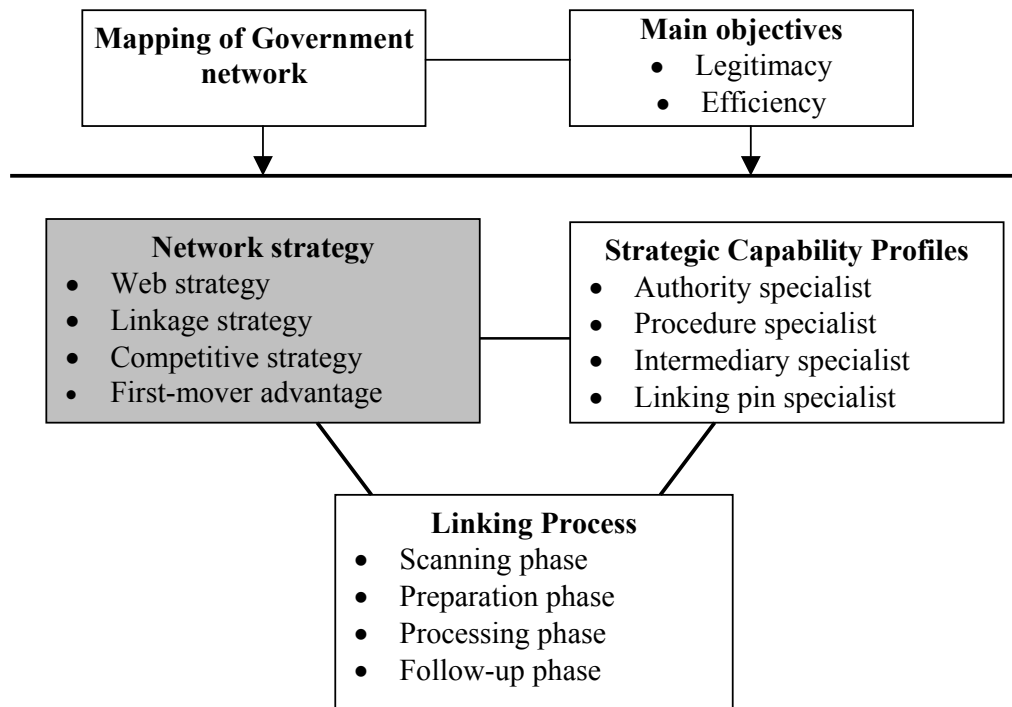
Network strategy concerns how a MNC inter-acts with different kinds of players on the market through network relationships. Since the pharmaceutical market is usually highly regulated, as previously stated, the MNC's marketing strategy should concentrate on government-related organisation field. The MNC-government network strategy model concerns how the MNC acts towards the government network. This is determined both by the ability of the company and the environment in the host country. The relationships in government networks are more direct, long-term, and complex compared to with those in product/service networks.

The main purpose for the MNC to contact the government in the host country is to gain business legitimacy: for instance, to receive licences. Secondary objective is to increase the business operating efficiency or its competitive position in the market. For example, MNC can hasten the legislating process of the favourable laws and regulations by lobbying the government organisations.

The linking process is described as several stages that bridge the gap between the organisations and establish networks between the MNC and government. The establishment stage consists of several phases of a relationship between the MNC and the government. When relationships have been developed and routinised, the parties arrive at the habitual stage. Good care should be taken of a relationship in the follow-up stage in order to keep it in good condition.

The network capacity profiles illustrate a company's specific knowledge about certain authorities used in handling various types of government network linkages. The main object of the authority specialist's capacity profile is to procure a license directly oriented towards the specific needs of the MNC. (Jansson, 1999) Procedure specialists fill a common need for a rational and consistent handling of licenses. Sometimes, an external organisation, such as a trade association, is used to contact administrative or political organisations. In this case, the MNC is classified as an intermediary network specialist.

Figure 2.4 The MNC-government network strategy model

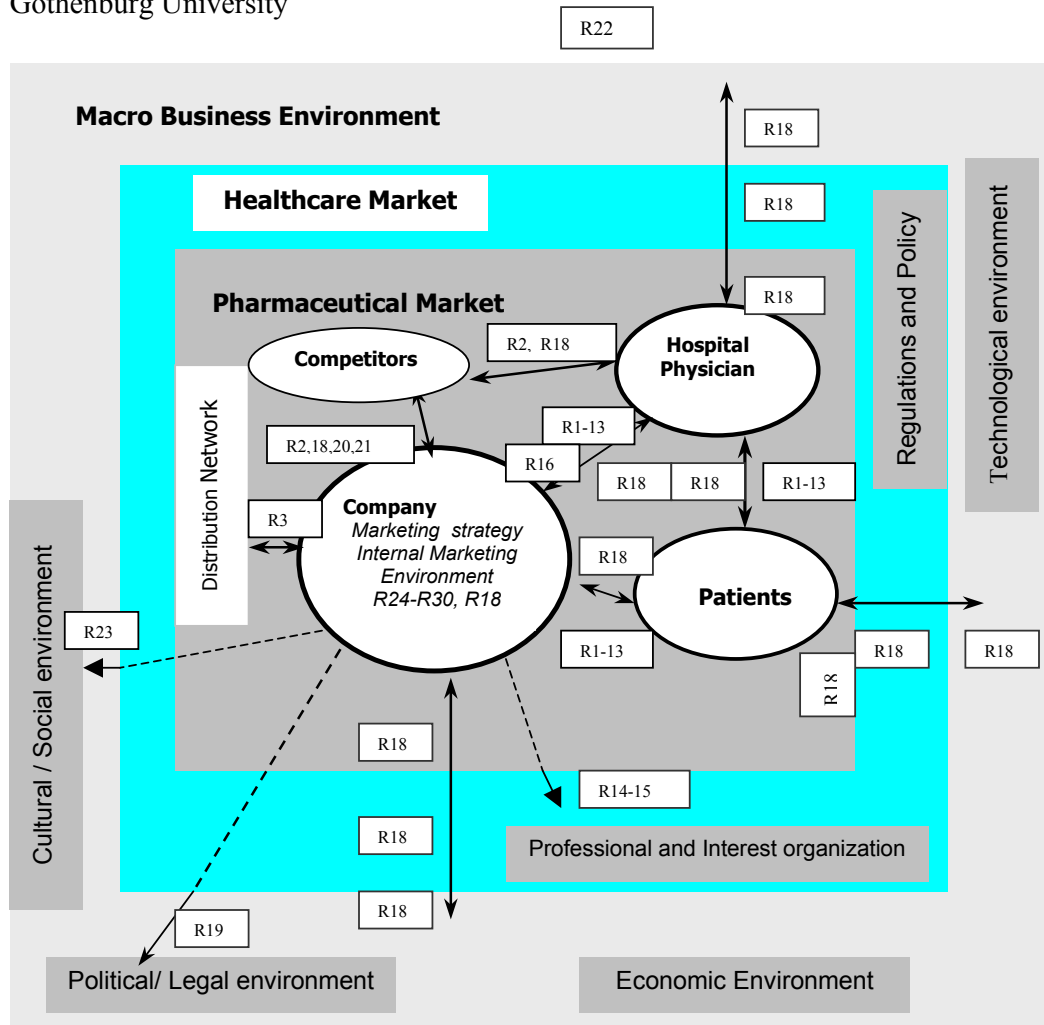


Source: Jansson, 1999

## 2.5 Scientific Research Model

According to the above-mentioned theories, we generate a scientific research model to guide our study, shown in Figure 2.5. The institutional network strategy model, which has its basis in the interactions among the company and the identified institutions, fits perfectly as the corner stone of my research model. It is clearly seen from the scientific research model that the R18 (i.e. a personal or social relationship) exists widely among all the market players, and is considered as the most significant feature when doing business in China. This will be further discussed in the following chapters.

Figure 2.5 Scientific research model



----- No relation with the passing area      \_\_\_\_\_ Have relation with the passing area

### 3. Methodology

This chapter presents our methodology, which mainly focuses on the choice we made during the research. Research strategy, research method, case study design and data collection will be mentioned in this chapter. At the end, we will discuss some potential sources of error and the importance of validity and reliability when we evaluate our research.

#### 3.1 Research Strategy

According to Yin, five research strategies are experimentation, survey, archival analysis, histories and case studies. Each strategy has its own advantages and disadvantages. The choice of which strategy for research depends upon three conditions: 1) The type of research question posed; 2) the extent of control the investigator has over actual behavioural events; 3) the degree of focus on contemporary as opposed to historical phenomena (Yin, 1994, p14). But there are no clear boundaries between the strategies. We concluded that the case study method would be the best way to solve our problems. A case study design is used to gain an in depth understanding of the situation (Marriam, 1998, p19). A case study is preferred when examining contemporary events within their real-life context, when the boundaries between



phenomenon and context are not clearly evident, and when multiple sources of evidence are used. This definition not only helps us to understand case studies but also distinguishes them from other research strategies.

The Chinese healthcare reform and advent of a new medical insurance system in China are new phenomena for a foreign pharmaceutical company entering the Chinese pharmaceutical market. A case study method, which allows the development of research questions during the investigation in China, is most fitting to this case.

## 3.2 Research Method Selection

A case study can be both quantitative and qualitative (Yin, 1994, p.14) Quantitative analysis is more formal and structured, while the qualitative method is employed when one want a total perspective, or when a lot of information about a few units is needed (Marriam, 1998, p.6).

### 3.2.1 Quantitative and Qualitative Approaches

Qualitative investigation employs primarily an inductive research strategy. Words, rather than numbers, are used as descriptors. Quantitative studies are expressed in numbers but can also be quantitatively analysed. In our market analysis and investigation, the researchers should be as open and neutral toward the problem as possible, since we want to focus on insight, interpretation and achieving a holistic view. The quantitative approach was the most appropriate for our case study, whereas a qualitative approach was suitable for our market analysis.

## 3.3 Case Study Design

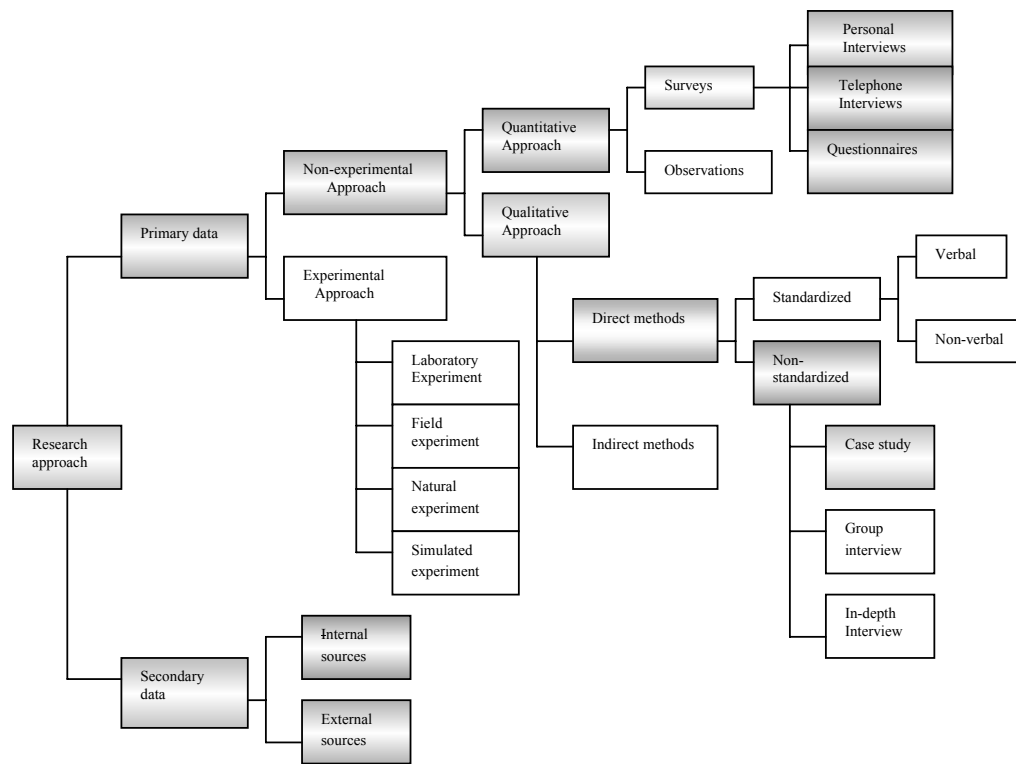
A research design is the logic that links the data to be collected and conclusions to be drawn to the initial questions of a study and guide the investigator in the process of collecting, analysing, and interpreting observation. (Yin, 194, p.46).

In our case, we chose to conduct a single-case study. We build up a basic knowledge for the healthcare reform in China through secondary data. Fieldwork study made it possible to compare and adjust the basic knowledge. Finally we employed the primary data to interpret the findings and make suggestions as to the marketing strategy of a foreign pharmaceutical company entering in the Chinese pharmaceutical market.

## 3.4 Data Collection

Figure 3.1 shows our information sources and collection methods. Among them the highlighted boxed show the methods used for data collection.

Figure 3.1 Information sources and collection methods



Source : Mårtensson R.,1991, Beslutsunderlag i marknadskommunikation, studentlitteratur, Lund

### 3.4.1 Data Sources

There are two general types of marketing data: primary and secondary. Primary data is gathered for research problems through interviews or surveys. Since not much research has been carried out regarding our research questions, we gathered the primary data through interviews and market surveys.

Secondary data are already published data collected for purposes other than the specific research needs at hand. We employed both secondary and primary data as information sources. In our case, secondary data was collected from internal and external sources. Internal data are available from the company brochures and other publications. The external data come from an array of sources such as government publication, trade association data, various books, journals, statistics, yearbooks and other publications in the library of China and Sweden as well as the Internet.

### 3.4.2 Collection Methods

Communications with the correspondents can be made through personal, telephone, or mail interviews. As Table 3.1 shows, each of these interview techniques has pros and cons. We chose personal interviews as well as telephone interviews in our case. Some of the same, more specific, open-ended questions were asked of all participants.

Table 3.1 Communication methods

Evaluation criteria	Personal interview	Mail interview	Phone interview
Cost per unit studied	High	Low	Low
Time required	Fairly short	Long	Short
Administration of field operation	Complicated	Simple	Fairly simple
Risk of non response	Low	High	Moderate
Control over who is replying	Good	Virtually none	Fairly good
Versatility of method	High	None	Moderately high
Possible extent of communication	2-3 hours	5-10 pages	5 –30 minutes
Possibility of special knowledge	Good	Low	Moderate

Source: Lekvall, P. and Wahlbin, C, 1993

### 3.4.3 Population and Sample

In order to be able to conduct a survey, the target population for the research needs to be defined, and the sample size and procedure must be determined. The population is defined as the aggregate of all the elements determined prior to the sample.

In this thesis, the target population is defined as the experts and authoritative persons in the Chinese healthcare and pharmaceutical industry. From this population, the quality of the information will be ensured, and a convenient sample is drawn from some major hospitals in three cities of different sizes.

### 3.4.4 Questionnaires Design

A questionnaire is designed to elicit the information from respondents, and is necessary to reach the targets underlying the research project. This self-administered questionnaire represents the link between the information needed and the data to be collected.

There are several aspects that should be considered when designing a questionnaire. First, the questionnaire should be directly produced from the information needed to ensure that the aggregate answers to questions contribute to the solution of the problems. Second, the group of respondents is able and willing to respond accurately. The respondents should have a clear and unambiguous understanding of question content, and leading and biasing questions should be avoided.

Before starting the interview process with the participants in the Chinese pharmaceutical industry and some hospitals, our questionnaire had to be pre-tested to ensure that the questions were easy to understand, and that nothing important had been forgotten. The questionnaire was pre-tested by the Executive Vice President of Recip AB, who also gave much advice on the content.

## 3.5 Evaluation

When evaluating the research findings, possible measurement errors must be taken into consideration. Errors happen when the numerical scale does

not exactly represent the marketing phenomenon under investigation. Potential sources of error should be paid much attention when estimating the validity and the reliability of a study.

### **3.5.1 Error Sources**

The errors in marketing research can appear in each step of the research process, which may cause devastating results if the potential sources of error are not carefully addressed. These are some potential sources of error as follows (Kinnear & Taylor, 1996):

- *Short-term characteristics of the respondent*: personal factors such as mood, fatigue, and health.
- *Situation factors*: variations in the environment in which the measurements are reached.
- *Data collection factors*: variations in how the questions are administered and in the influence of the interviewing method (e.g. phone call, personal contact, or mail).
- *Measuring instrument factors*: the degree of ambiguity and difficulty of the questions and the ability of the respondent to answer them.
- *Data analysis factors*: errors made in the coding and tabulation process

To systematically evaluate the measurement error inherent in a data collection process, the total error of measurement is separated into two components, namely systematic and random error. Systematic error is a uniform distortion of the measurement. Random error consists of all influences that unsystematically bias the measurement. The concepts of validity and reliability take these two error components into account in estimating the quality of the measurement instrument.

### **3.5.2 Validity**

Validity can be defined as the ability of an instrument to actually measure what it is supposed to. A data-collecting instrument is considered valid if it is free from both systematic and random error.

In our research, a direct contact was made with the respondents in connection with the measure (personal interviews). Thus, we were able to safely determine that the measuring results give an indication of what our research intended to examine. Relatively high contemporaneous validity is possible.

We carefully designed the questionnaire, which was then reviewed, commented upon, modified, and finally approved by the supervisors from the school and company who have experience within the research area. In this way we can ensure the face validity of our research.

Construct validity is establishing that correct theoretical constructs are being linked to the problems and the results of study. When we compare the findings with existing theories the marketing strategies based on Jansson (1994) are relevant to our research problem and analysis of the results of our study.

Content validity is high, since a lot of information was gathered to cover as many dimensions as possible. Personal interview is a very flexible way to gather information. The respondents felt free to express their opinions.

It is necessary to point out that our secondary data was collected from reliable sources and then compared to the primary data. In other words, we tried our best to reach a high validity in our research.

### **3.5.3 Reliability**

Reliability is concerned with the consistency and accuracy of the results. It refers to the extent to which the measurement process is free from random errors. It is a prerequisite for validity. An investigation with good reliability is not affected by whom it is conducting it or by the surrounding circumstance. To some extent, if research is reliable, this means that the same results would be obtained if the research were carried out again under the same circumstances. To increase the reliability of an investigation, the measurement process has to be performed as identically as possible every time to avoid random errors. Techniques to measure reliability are internal consistency, test-retest and alternative forms.

The collection of primary data from interview and survey was compared to secondary data from various sources in order to check the reliability.

## **4. Analysis of Macro Business Environment**

The company must start with an analysis of the marketing environment in searching for opportunities and monitoring threats. The marketing environment consists of all actors and forces that affect the company's ability to transact effectively with its target market. In this chapter, we will draw a general picture of the macro business environment in China, which is relevant to a foreign company's penetration and operation in China.

### **4.1 Social-Cultural Background**

The Chinese culture was influenced by several philosophies, such as Confucianism, Buddhism, Taoism and Maoism. Confucianism is the basis of Chinese society and is reflected in its social organisation, norms and values. The Maoism influence had vital effects during the Cultural Revolution.

#### **4.1.1 Confucianism**

Confucius was an intellectual of humble origins living in China around 500BC. He gained a reputation for wit and wisdom, and in his later life was surrounded by a host of disciples who recorded what we know about his teachings. Confucius' teachings were lessons in practical ethics without any religious content. Confucianism is not a religion but a set of pragmatic rules for daily life derived from what Confucius saw as the lessons of Chinese history. The followings are the key principles of Confucianism:

- *The stability of society is based on unequal relationships between people*

He distinguished the *wu lun*, the five basic relationships (and their corresponding virtues): ruler-object (loyalty), father-son (respect), older brother-younger brother (fidelity), husband-wife (care), and senior friend-junior friend (sincerity). These relationships are based on mutual and complementary obligations. The junior partner owes the senior respect and obedience. The senior owes the junior partner's protection and consideration.

- *The family is the prototype of all social organisations*

A person is not primarily an individual, but rather a member of a family. Children should learn to restrain themselves, to overcome their individuality so as to maintain the harmony in the family. Harmony is achieved through in the maintenance of everybody's "face", in the sense of dignity, self-respect, and prestige. "Losing face", in the sense of being humiliated, is an expression which penetrated the English language from the Chinese. Losing one's dignity in the Chinese tradition is equivalent to losing one's eyes and nose. Social relations should be conducted in such a way that everybody's face is maintained. Paying respect to someone is called "giving face". The Chinese also speak of "giving someone face" in the sense of honour or prestige.

#### **4.1.2 The Maoism Influence and Cultural Revolution**

Mao Tse-Tung was the founder of the People's Republic of China, which was established in 1949. He tried to wipe out Confucianism, though his own rule contained Confucian elements. The ideology of Maoism is to build a society of democracy and equality, where every individual has the right to be the "owner" of his own country.

The Cultural Revolution was a tragic period for the Chinese people and their civilisation. The Cultural Revolution was designed to destroy the culture of pre-Communist China, to shake up the party cadre from their positions of rank and privilege, to punish the cadre for the criticisms that were lodged against Mao's failed Great Leap Forward experiment, and to continue attacks against the intelligentsia. Mao's power reached its apex during this period.

### **4.2 Business Network in China**

As we mentioned above, the Cultural Revolution destroyed the Chinese civilisation and brought the trust between people to its lowest point. Since there is very limited trust among the people, business relationships often grew from social relationships, because people then knew and understood each other first. Social relations were of high significance for a foreign company both in obtaining important information and in influencing Chinese decision-makers. Obtaining information about possible customers and up-coming purchases was commonly viewed as a difficult task. The solution was to somehow obtain access to people who possessed the necessary information. Companies that had good 'Guanxi' (relationship, social network) with the 'right' people were seen as having a big advantage. *Guanxi* is a key concept for understanding social behaviour in China, especially the linkage between interpersonal

relations and the attainment of desirable resources. *Guanxi* entails a strong obligation to do favours for another person, e.g. by providing some kind of scarce resource. There is a strong moral obligation to reciprocate favours. The resources used for exchange between persons may include money, goods, information, status, and services of different kinds. *Guanxi* often goes beyond the relationship between two parties. *Guanxi Wang* (relationship network) refers to transactions between two people, A and C, who are linked by their mutual relationship with a person B, who acts as a facilitator.

It was important to have '*Guanxi*' in order to obtain a deal, but the Chinese respondents especially stressed the importance of subsequently maintaining constant close contact with 'good friends'. It was viewed as very difficult to break into an existing friendship between somebody employed by or representing a foreign producer and the key Chinese employees on the buyer's side.

However, even if the key decision-maker was the friend of another company, it was sometimes possible to win business deals. The reason for this seemed sometimes to be related to personal benefits for the decision-maker (typically that the person would be invited on an inspection tour overseas). The general perception was, however, that if one manages to develop a good personal relationship with the central decision-maker, one has a good chance of winning business deals controlled by this person. In network terms, investments in the social bond with centrally positioned individuals are extremely important.

#### **4.2.1 Negotiation**

The Chinese have a reputation of being tough negotiators, with an ability to lower the marginal cost to the utmost, as well as trying to prolong negotiations to the very last. Methods of negotiation vary from region to region. The northern area, around Beijing, is characterised by a strong central power with strong political implications, which leads to time consuming negotiations. The area around Shanghai is very business oriented, with a high self-esteem among the business people. The southern Chinese centring around Guangzhou have a flair for business. The main sources of difficulties in negotiating with the Chinese are the following:

*The field of experience:* Many problems stem from difficulties in learning the ways of the other. The concept of time for instance, is quite different. The Chinese are known to carry out time consuming negotiations. For the foreign negotiator, who has a scheduled flight back home, it is easy to make a rush agreement. In this situation, there is also a need to learn the principle of patience, which the Chinese frequently adopts to repress any urge to hurry the process along.

*The difference in view due to different economic systems:* The Chinese performance during the negotiations is also greatly affected by its economic system, the bureaucracy and the way their foreign trade system works. Here uncertainty over with precisely whom they should be trying to do business is the crucial point for the negotiator. China has a Ministry of Foreign Trade and Economic Co-operation, which is engaged in foreign trade. With the decentralisation of foreign trade, there are several other ministries that have their own Foreign Trade Organisations, and it is also possible now to negotiate directly with the provincial and city officials. But this situation also causes frustration, as traders feel uncertain whether they are actually speaking with the right organisation or wasting their time.

*Cultural differences:* Cultural aspects are ever-present when negotiating with the Chinese. A striking feature is the extensive Chinese use of rituals. In the Chinese world, with its network of relations and hierarchical steps, the behaviour code lends guidance in how to behave in certain circumstances. To be able to maintain harmony, it is important that everybody follows the roles given by the rituals. This works as a shelter against unpleasant surprises. The concepts of "*face*" and "*Guanxi*", mentioned above, are

also worth considering when negotiating. Chinese have a habit of insisting that the details can be worked out later as long as both sides take a positive attitude towards the spirit of the general principles.

### 4.3 The Political System

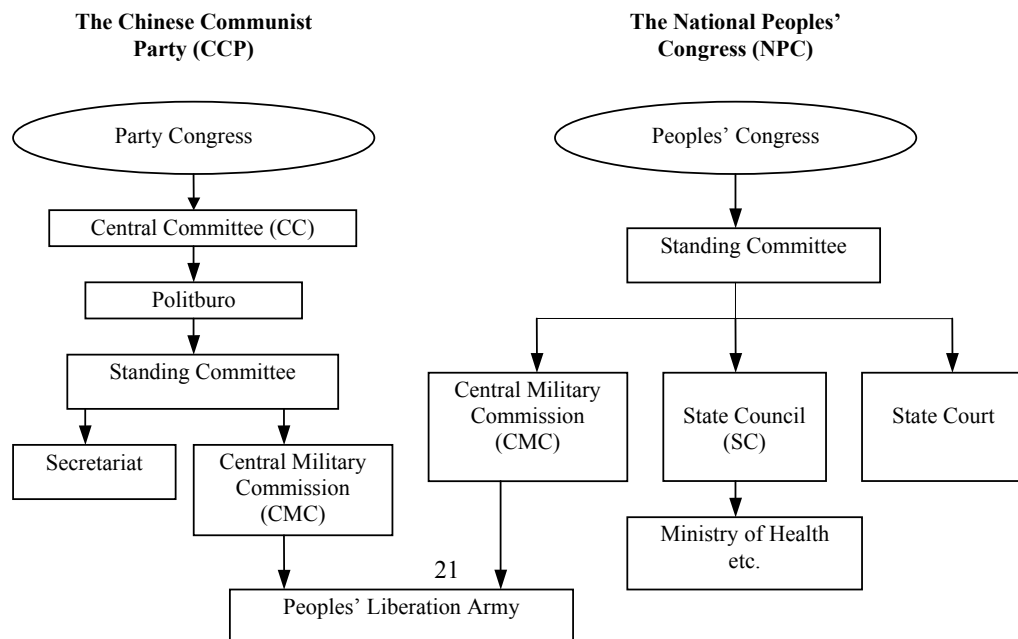
China is the world's most populous country, and the third largest in terms of land area, after Russia and Canada. It is a socialist state governed by four principal levels of government administration: central, provincial (which includes provinces, autonomous regions and four municipalities directly administered under the Central Government), county and township.

China is a socialist state, and its political system is principally a one-party system led by the Chinese Communist Party (CCP). A Central Committee (CC) is elected at each congress to function as the party's executive body. The CC selects a political bureau (Politburo) directed by the party chairman. Jiang Zemin is the current General Secretary of the CCP. The Politburo includes a secretariat, which is responsible for day-to-day affairs, and a Standing Committee, which is the executive body. Those who are members of the Politburo, and especially within the standing committee are the most influential persons in China. The political structure will be illustrated in Figure 4.1. The CCP exists at all levels. Although party membership generally remains an important criterion for holding a senior government position, efforts have been made in recent years to separate the CCP from the government by transferring power from leaders and party politics to institutions.

The National People's Congress (NPC) is the highest body of state power in China. It is composed of deputies selected from Provinces, autonomous regions and municipalities. The NPC's permanent body is the State Council (SC), which is the highest executive organ of state power as well as the highest organ of state administration. It reports directly to the NPC and its members are appointed by the NPC on the recommendation of the central committee of the CCP. Zhu Rongji, known as the economic czar, is the current premier.

The party and government are not separate units, as it seems in Figure 4.1. They are, in fact, interlocked because key members of the party serve important positions in the government. The most tangible link between the party and government is that they share control over the Peoples' Liberation Army (PLA). The president of the PRC pursues the decisions of the NPC and its Standing Committee, and has the power to appoint and remove the premier and vice-premiers, state councillors and ministers. Jiang Zemin is the current president of the PRC.

Figure 4.1 China's Political System





## 4.4 The Legal System

The Chinese legal system is still in its infancy. It is open to interpretation, continuously added to and sometimes even remade entirely. What China primarily intended to create is a legal infrastructure that would appear reliable on paper to foreigners venturing to invest in China. This has further developed, and today there is a relatively well functioning legal structure. In addition, Chinese laws are often inaccessible: some laws are published only in Chinese, and many internal regulations are not published at all. Because the Chinese Economy is evolving more rapidly than its legal system, one can expect a certain degree of discontinuity until the legislation catches up with economic reforms. Regarding joint ventures, there is an abundance of detailed laws, and much more detailed ones. Although the Chinese traditionally have viewed disputes as loss of face and prefer to avoid arbitration all together, foreign parties do have judicial resources to turn to for dispute resolution.

## 4.5 Economic Environment

Between 1979 and 1995, China's GDP increased, on average, by 9.86% annually. From 1992 to 1996, China's GDP increased, on average by 12.1% annually.<sup>14</sup> China has now become the fastest economically developing country in the world. Meanwhile, the Chinese Government has strengthened macro-economic control and kept inflation well under control.

Thus they have provided a "soft landing" for the healthy development of the economy, characterised by high-speed growth and low inflation. China's national economy kept up its rapid growth in 1997: GDP reached RMB 7477.2 billion, up 8.8% from last year.<sup>15</sup> However, China is still a developing country: per capita GNP is less than US\$ 700. There are disparities between the coastal east and the inland west in productivity and distribution. 50 million people are still living in poverty.<sup>16</sup>

In 1998, China was successful in resisting attacks from both the Asian financial turmoil and the unprecedented floods. China's economic growth slowdown ended in the third quarter of 1998 and a new economic growth period began. The economic trend in 1999 is expected to be better than in 1998 and the growth rate could reach 8.6%.<sup>17</sup> China is to continue the policy of expanding its domestic demand.<sup>18</sup> To expend domestic demand, the government will try to jumpstart the consumer market by promoting housing reform and the development of the rural market. The great potential of the country's market demand has not been realised. Also China's high saving rate of 40% can support an investment rate as high as 33%.<sup>19</sup> The country's foreign exchange reserves have now exceeded 140 billion US dollars. In 1999, there will still be a surplus in foreign trade and the inward flow of foreign capital remains fairly large.

In recent years, more and more state-owned enterprises have gone bankrupt. In 1996, according to statistics of the Supreme People's Court, 4,900 enterprises all over China went bankrupt, of which 2,348 were state-owned.<sup>20</sup> Due to these bankruptcies, the number of dismissed and unemployed workers has substantially increased.

Official unemployment Figures at the end of that year gave a Figure of 3.1%, which fails to reflect the reality of the urban picture. China has its own version of new speak job-seekers (referred to as *xiagang*), who continue to rely on the company they used to work for and do not appear in the unemployment Figures. The estimated urban unemployment Figure is between 18 and 20%. This does not include those forced into early retirements, which affects women at the age of 45 and men at 50. These people then have to survive under difficult circumstances, to say the least. Nor does it include the sizeable numbers who still work but do not receive pay. These two categories together are believed to amount to another

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<sup>14</sup> Ibid,

<sup>15</sup> Ibid,

<sup>16</sup> Ibid

<sup>17</sup> Beijing Consul-Tech, China Business and Investment Update, issue 36 , 990110

<sup>18</sup> <http://stup2.cei.gov.cn/sicnet/siccew/emar/htm/d7b00b02.htm>, 990430

<sup>19</sup> Ibid

<sup>20</sup> [http://www.democracy.org.hk/pastweek/97\\_sept/or1.htm](http://www.democracy.org.hk/pastweek/97_sept/or1.htm), 990607

13,000,000, and then there are the young who are entering the workforce at the rate of some 10 to 15,000,000 per year.<sup>21</sup>

In the countryside, the dismantling of collective production has reduced farming in many cases to a family business, often in primitive conditions. The decentralisation of administrative controls has given local bureaucrats enormous power and fostered rampant corruption. Against this background, tens of millions of peasants flooded the cities to look for jobs. There are 2 million of them in Beijing (out of a population of 9 million), 2.5 million in Shanghai and 6 million in Guangdong province.<sup>22</sup>

Like most of the rest of Asia, China is faced with the need to dramatically restructure its economy, knowing that such a move will foster massive social upheaval. Elsewhere in Asia, Japan has given social stability top priority, and so has been unable to pull out of its economic quagmire. Malaysia has sought to detach itself in part from the global economy, in order to avoid both social unrest and difficult economic decisions. China has chosen a third path, taking the necessary steps to reform its economy while dealing with a firm hand, with the ensuing social disruption. China will either have to curtail economic restructuring, potentially sinking into the same stagnation seen in Japan, or it will have to take more draconian steps to control unrest.

## 4.6 Technological Environment

Today's technological environment in China has been greatly improved and new techniques with various industries are being put into process. The demand for foreign technology is constantly growing and the Chinese industries try to modify their techniques to the modern Western standards. Chinese are struggling in their urge to learn and adapt to foreign technology. Most of the joint venture projects with Western firms result in a technology transfer that is highly important for the Chinese R&D progress. Many foreign firms fear the future technology competition from China when a more competitive R&D ambition has been developed. The future technological environment in China will, to a great extent, depend on the output of many joint venture projects already established in China.

## 5. Chinese Healthcare System

In this chapter, we are going to present the historical background and the future development of the Chinese healthcare system (see Figure 2.5). The healthcare reform will receive special emphasis.

### 5.1 Review of Chinese Healthcare System

There are four financing mechanisms for health care in China, each applying to different population groups:

*Insurance for government employees* covers government workers; officials of labour unions; youth and women's leagues; staff of cultural, educational, health and research institutes; and students at approved colleges and universities. About 30 million individuals are covered by this system, which traditionally has reimbursed 100 percent of medical care expenses.

*Insurance for employees of State-owned and collective enterprises* covers roughly 140 million workers and 60 million family members as of the year-end 1997, according to China's Ministry of Health. This system has reimbursed 100 percent of employees' medical costs, and 50 percent of family members' costs.<sup>23</sup> The system has been funded, in name at least, by the enterprises.

*Co-operative insurance schemes for rural areas* cover only about 120 million farmers and town and village enterprise employees. These schemes are funded by local governments, collectives, and individuals, and reimburse participants for 20-80 percent of health care expenses, depending on the funds available in the given locality. CMS plans are growing; by the end of 1997, roughly 12 percent of all farmers were participating. The government's goal is to cover 70 percent of all farmers by 2000.<sup>24</sup>

<sup>21</sup> <http://www.tao.ca/~freedom/FIN/china4.html>, 990607

<sup>22</sup> <http://www3.silas.unsw.edu.au/~greenlft/1995/199/199p20.htm>, 990607

<sup>23</sup> Li Xuesheng; Stuart O Schweitzer, *The China Business Review*; Vol.25, No 6, 1998; p20-23

<sup>24</sup> *Ibid*,

*Self-payment:* In the meantime, however, the 900 million farmers, private-sector employees, and self-employed individuals not covered by any of these health-financing systems must pay the entire cost of health care themselves.<sup>25</sup>

## 5.2 The Driving Forces of the Healthcare Reform

The free healthcare and labour insurance systems, which have been in practice in China for dozens of years, play an important role in guaranteeing workers' health, maintaining the social stability, and promoting economic development. However, in recent years, the drawbacks of the two schemes have become more and more obvious. The government and state-owned enterprise shoulder the majority of the cost of the employees' health care, which imposes a heavy financial burden on the state treasury. The individual workers share little, if any, of the medical expenses, and there is no effective control mechanism of abuse of free healthcare. These result in the rapid increase of medical expenses and waste of medical resources. The coverage of free healthcare and labour insurance systems is narrow. With the development of economy, more and more forms of non state-owned companies are emerging. The workers in foreign invested enterprises, share holding enterprises and private enterprises cannot enjoy basic healthcare under the current scheme of free healthcare and labour insurance.

## 5.3 Chinese Healthcare Reform

In this section, three aspects of the healthcare reform will be discussed: healthcare financing, healthcare infrastructure and drug pricing reform.

### 5.3.1 Healthcare Financing System Reform

Healthcare financing in China is about the changing relationships between government, the private sector and the insurance system.

#### 5.3.1.1 The History of Healthcare Financing System in China

Throughout the 1980s, hospitals relied on government funds and operational revenue to finance these services. The government covered hospital staff and capital costs, including both buildings and capital equipment, and set prices for health services without considering those costs. Prices of diagnostic and other non-pharmaceutical services were thus set far below cost. Governments and enterprises in turn reimbursed hospitals on a fee-for-service basis. Because of these price-setting and reimbursement policies, only pharmaceutical services could produce a profit, typically 15 percent of total sales.<sup>26</sup> Hospitals used government funds and pharmaceutical sales revenue to offset the losses incurred in the provision of non-pharmaceutical services.

Since the late 1980s, the government has gradually reduced its investments in hospitals.<sup>27</sup> From 1978-96, the share of hospital revenues accounted for by government investment decreased by roughly 50 percent nationally.<sup>28</sup> At the same time that governments have cut hospital investments, they raised prices above cost for new services, such as computerised topography (CT), magnetic resonance imaging (MRI) scanners, and other non-pharmaceuticals services, such as surgery, hospital rooms, and physician fees for outpatient visits. But charges for most traditional services still remain below cost.

#### 5.3.1.2 Launch of State Essential Drug List for Reimbursement

To compensate for the reduced government financing, hospitals have had a strong incentive to buy the most advanced equipment and sell as much medicine as possible. Many experts believe that hospitals' heavy

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<sup>25</sup> Ibid,

<sup>26</sup> Ibid,

<sup>27</sup> Ibid,

<sup>28</sup> interview with the president of Beijing Tongren Hospital, 19990514

dependence on revenues from medicines and high-technology services has contributed significantly to soaring health care expenditures. However, to control pharmaceutical expenses, the State Council issued a document in 1996 requiring local health bureau in some pilot cities to collect all pharmaceutical service revenues from government hospitals and then reallocate the money among those hospitals. The hospitals that sold more drugs would not necessarily receive money in proportion to their sales. This measure was intended to eliminate physicians' financial incentive to over-prescribe drugs.

Though overall health care reform and changes in hospital administrative policies will affect Chinese patients in a variety of ways, no government policy affects drug makers more than the government's drug reimbursement rules. In the past, the government health insurance systems reimbursed 100 percent of all drug expenses. But in 1992, the Ministry of Health began developing a State Essential Drug List (SEDL) on which to base reimbursement for medicines prescribed to patients under State insurance plans. Selection criteria included clinical necessity, effectiveness, safety, and consistency between price and effectiveness. The list covers about 50 percent of the medicines currently available on the Chinese market. Local governments have drawn up drug reimbursement lists based on the SEDL, and the central government has done the same for public service medical care.<sup>29</sup>

Public medical care plans do not reimburse expenses for drugs not on the reimbursement lists, regardless of whether the medicines appear on the SEDL. The local governments' own drug reimbursement lists may include up to 10 percent more products and are used to reimburse residents covered by city-based insurance systems. While drugs not on any list can be sold anywhere, consumers cannot be reimbursed by government health insurance systems for them. Thus, these national and local lists are of crucial importance to pharmaceuticals producers, because only payments for listed drugs can be reimbursed by the two State-run insurance systems.

The revised edition of the State Essential Drugs List was made public in China in 1998. A total of 88 drugs in 116 forms are deleted from the older version, accounting for 12.5% of the total number; about 140 drugs in 27 categories are added to the list. As a whole, the new version has more drugs than the previous one. The new version uses the generic names of drugs instead of their brand names. All the blood-derived products in the old list have been replaced by their genetically engineered equivalents.

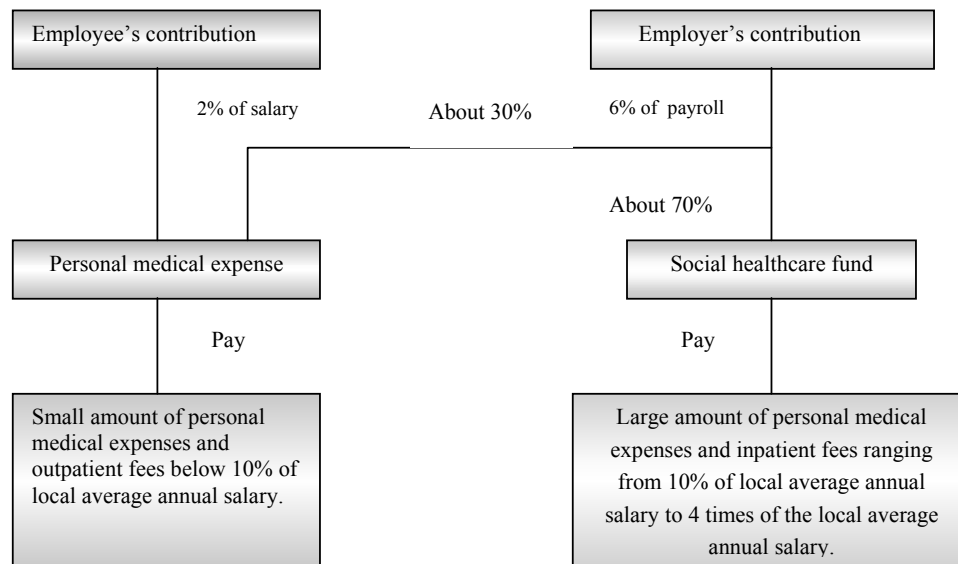
The State Essential Drugs List (SEDL), issued by the Chinese central government, consists of more than 1,000 drugs. It acts as a benchmark for the Chinese provinces to make their own lists of reimbursable drugs. Normally, 90% or more of the drugs in the SEDL should be included in the local lists of reimbursable drugs. The state essential drugs are chosen according to their effectiveness, safety and prices. Generally, these drugs tend to be low to medium-priced, commonly used and fairly effective.

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<sup>29</sup> Li Xuesheng, *China Business Review*; Vol.25, No 6, 1998; p20-23

### 5.3.1.3 New Scheme for Healthcare Insurance in 1999

Figure 5.1 New scheme for healthcare insurance in 1999



Source: China MedPharm Insights, Issue No.32, 1999

In March 1998, the Ministry of State Labour and Social Insurance was established, which marked the formation of the central management system for medical insurance reform. In 1999, on the recent meeting on the reform of medical insurance system, the implementation of a new scheme was announced nationwide (see Figure 5.1). The new system covers all the working units in cities, including enterprises, institutions, organisations and their employees.

The essence of this reform is the same as the pilot reform in Jiujiang and Zhenjiang: that is: to combine a mutual-assistance insurance system financed by a social healthcare fund with a self-insurance arrangement financed by individual medical accounts, with contributions from both employees and employers.

The basic medical insurance fee will be co-contributed by employers and employees. To set up medical funds, employers need to pay 6% equal to the employees' wages and the employees should pay 2% of their standard wages.<sup>30</sup> The ratios can be adjusted according to the development of the economy. The medical insurance fund will be divided into two parts: a social fund and a personal account. The total employee payment and 30% of the employer payment will be put into the personal account, and the other 70% of the employer payment will be used for the social medical fund.<sup>31</sup>

<sup>30</sup> Ying Zi, China Daily, 19981212

<sup>31</sup> China Medipharm Insights, Issue No.32, 1999

Use of the personal account and social fund cannot overlap. The personal account will be used exclusively for the worker him/herself for minor illness. The social fund, on the other hand, will be used uniformly, in the region, county, city or municipality where the workers reside, for the treatment of severe disease.

As it will have a direct bearing on an individual's health care costs, patients covered by the new system are expected to pay more attention to what the doctor prescribes, and may even forego expensive prescriptions for the relatively cheaper drug store equivalent. To some extent, therefore, these health care reforms will impose some controls over prescriptions and create a favourable environment for the burgeoning development of the over-the-counter market.

Retired workers also participate in the medical insurance system reform, but they need not make the 2% personal contribution. Other measures along with the reform include:

- To draft a state basic medical insurance drug list, and medical service standards.
- To control the overall amount of medical expenses
- Workers could select from among several designated hospitals and pharmacies when seeking medical treatment or buying drugs.

### **5.3.2 China's Commercial Medical Insurance Market**

Under the new healthcare system, medical expenses below 10 percent of the local worker's annual income will be reimbursed through a personal account,<sup>32</sup> while higher costs, up to four times the average annual income, will be reimbursed from a social medical fund. Costs above that limit will be the responsibility of patients themselves. This has left large room for the development of commercial medical insurance.

#### **5.3.2.1 Review for Chinese Insurance Market<sup>33</sup>**

Ever since People's Insurance Company of China (PICC), the only insurance organisation in China, resumed normal operations in 1980, China's insurance industry has developed very quickly. At present, there are 24 insurance companies already operating in China, including 13 domestic insurers, 9 foreign funded insurance firms and 2 joint ventures. In addition, there are 3 joint ventures in establishment.

In the year 1997, the insurance premium income increased by 40 percent to reach 108 billion yuan (US\$ 13 billion), and the total assets of insurance companies reached 164.6 billion yuan (US\$ 19.81 billion). The premium income of the People's Insurance Company of China, the China Pacific Insurance Company Ltd. and the Ping An Insurance Company of China accounts for 96.56% of the total Premium. According to World Bank estimates, the insurance premium income will rise to 200-250 billion yuan (US\$ 24-30 billion) in 2000.

There is great potential for the insurance market in China in terms of both insurance penetration and insurance density, according to an analysis by industry experts. As a rule, the higher the GNP, the greater the premium income. The premium income of developed countries accounts for 6% to 12% of the GNP, while that of developing countries accounts for 3% to 4%. In 1997, the premium income of China was 108 billion yuan, while its GNP was 7477.2 billion yuan, accounting for 1.4%. If China is to realise the average insurance penetration of developing countries, that is 3.5%, the premium income of China will reach 261.7 billion yuan. In terms of insurance density, the world's premium income per capita in 1995 was US\$ 357, while China's premium income per capita was US\$ 6.1. If China is to achieve the average premium income of the world for 1995, the premium income of China will reach US\$ 400 billion.

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<sup>32</sup> Wang Ying, China Daily, 19990117

<sup>33</sup> <http://stup2.cei.gov.cn/sicnet/siccew/emar/htm/d7b00b03.htm>, 990524

Table 5.1 Development of China's Insurance Market

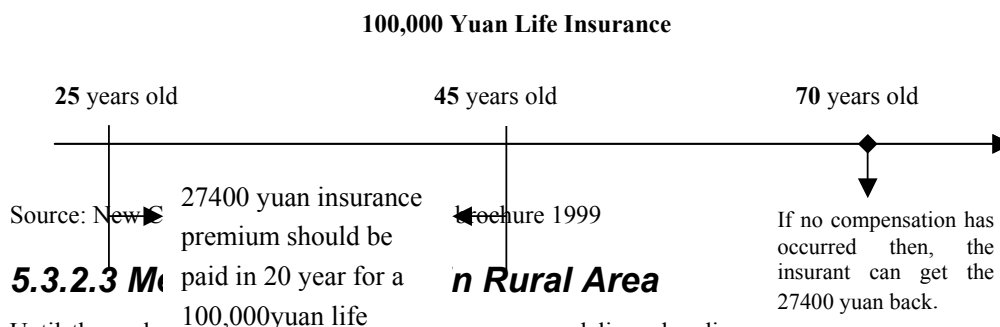
Year	Annual premium	Property premium	Life premium	Claims paid on property	Claims paid on life
1993				137	91
1994	498	336	162	195	101
1995	615.7	421.1	194.2	242	647
1996	756	445	311	259	55
1997	1080	480	600	276	176

### 5.3.2.2 Commercial Medical Insurance in China

China's commercial medical insurance sector is still underdeveloped. In 1996, the total income of commercial medical insurance was 1.3 billion yuan (US\$ 156.6 million), a mere 0.8 per cent of the 170 billion yuan (US\$ 20.5 billion) in total medical service income that year.<sup>34</sup>

Many potential customers dismiss insurance companies because of their high prices. For example, as shown in Figure 5.2, insurance from the New China Life Insurance Co. LTD., covering 10 serious diseases (cancer, chronic renal failure, etc.), costs around 1,370 yuan (US\$171) every year for 20 years for a coverage of 100,000 yuan (US\$12,000). For an average worker with less than 10,000 yuan (US\$1,205) in annual income, the premium is much too high. The insurance companies are mostly loss-making, as a result.<sup>35</sup>

Figure 5.2 100,000 Yuan Life Insurance



### 5.3.2.3 Medical Insurance in Rural Area

Until the early 1980s, rural communes delivered rudimentary medical care to Chinese peasants. But reforms in the 1980s broke up the communes, and according to the World Bank, the socialist "co-operative" medical system has since collapsed in 90% of Chinese villages. Although the authorities have encouraged farmers to plug the healthcare gap by joining medical insurance schemes, the results have so far been disappointing. The ministry of health estimates that only 10-15% of rural inhabitants have medical insurance.

Established in 1994, the WHO pilot project covered 8,7 million people in seven provinces. The aim was to determine whether it was possible to reintroduce collectively funded medical care for China's 900 million rural citizens. Under this project, the individual Chinese peasant's premium would be very modest. At most it would amount to 30 yuan (US\$3.70) per person a year.

By 2010, the government hopes to expand medical insurance coverage to 80% of the rural population, with the WHO sponsored scheme acting as a blueprint for other provinces.<sup>36</sup>

<sup>34</sup> Wu, Yawen, Interview with the New China Life Insurance Co., LTD

<sup>35</sup> Ibid

<sup>36</sup> Tomlinson Richard, British Medical Journal, Vol.317, No.7156, p1616, 980815

### **5.3.3 China's Drug Pricing Reform and Drug Pricing Policy**

Major reform efforts have been under way to correct the existing drug price control regime and pricing system. These policy initiatives are largely perceived as a counteroffensive to chaotic market conditions, price hikes and excessive social medical cost.

#### **5.3.3.1 The Problems in the Chinese Drug Pricing System**

As it has been observed, in recent years China's drug market was in a constant chaos, evidenced by sharp price increases and a state control vacuum for most categories of drugs. Reports of arbitrary pricing by some producers and drugs being marketed at big discounts or with high commission charges were widespread. The escalating unfair competition caused drug price to soar, which to a large extent increased burdens on fiscal budget, corporate and individual expenditure. Furthermore, such practice aggravated the vicious circle of hostile competition, reduced enterprise profitability and handicapped the development of the entire drug industry. As a knock-on effect, unfair competition bred deteriorating social morality. The causes for the above mentioned problem are many and varied.

- *The ill-decided development of production capacity:* Today, the duplication of low-tech drug production is a serious problem. As the production scale for crude drug was kept down and unable to meet the demand, there was an excessive capacity for medicament. Since the beginning of 1980s, the number of drug producers in China mushroomed from around 500 to 6000, out of which 1300 are Joint Ventures.<sup>37</sup> As the overall supply of basic curative drugs exceeds demand, drug producers have engaged in a heavy price war. The philosophy is that to give a big discount, one must set the price high, and marketing can only be successful by giving people big discounts.
- *Chaos in distribution:* The ludicrous returns from the drug marketing business have lured many to this trade: the number of licensed dealerships has rocketed from 2000 before China's reform and opening to the current 160,000.<sup>38</sup> A countless number of wholesale and production businesses are now knocking at the door of medical institutions to sell their products; the magic they offer is a big margin of discount and high commission fees.
- *An imperfect compensation regime within medical institutions:* There is no clear division between medical institutions and drug businesses. As is often the case, cash strapped hospitals have to rely on profits from drug sales to make up for the fund shortage. The higher the drug price, the bigger the mark-up will be. This being the case, some medical staff in hospitals and medical institutions are enticed to include as many drugs as possible in their prescriptions, particularly those expensive and imported drugs.
- *Lack of control on drug consumption:* Under the current medical regime, 90% of all drugs are purchased by medical institutions. Loopholes in the Welfare Medical Program and Payment System removed individual interests from containing medical expenditure. In fact there is insufficient control and restraint on drug pricing.
- *Loose control on drug pricing:* Many new categories of medicine, and especially those produced by non-state-owned enterprises are not included in the control regime. What is worse, control on pricing of most drugs is either ineffective or non-existent.

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<sup>37</sup> Chinese Medical News, Issue 61, 981023

<sup>38</sup> Ibid.



### **5.3.3.2 Basic Contents of China's Drug Pricing Reform**

In order to regulate the drug pricing order and the market practice at large, China began to reform its drug-pricing regime in August 1996. Major policy measures taken to that effect include Interim Measures for Drug Price Management, and A Supplementary Note to the Interim Measures for Drug Price Management issued by the State Planning Commission. Another policy document intended to perfect the pricing mechanism is currently under preparation by the State Planning Commission. The main contents<sup>39</sup> of drug pricing reform in China are:

- The prices of the essential drugs, with monopolised production, broad and large applications, will be set by the government.
- The prices of the majority of drugs will be set by their manufacturers themselves according to the relevant regulations.
- The manufacturers will freely set the prices of a limited number of drugs with low unit prices. Upon introduction, China's pricing controls on drugs have prompted opposition from some Western countries, who have argued that price controls will discourage foreign investment in China. The Chinese government, nevertheless, believes that it is entirely appropriate to tackle the reform of the price control scheme for drugs.

According to the SDPC, the main reasons in introducing price controls on drugs are

- To regulate the market;
- To reduce unfair competition (especially the very high and illegal discounts);
- To reduce the overly proportion of drug sale revenue in the total incomes of hospitals;
- To control upward-spiralling price of imported and joint venture products; and
- To effectively close down some low-quality manufacturers.

### **5.3.3.3 Prospects of Price Reform in China's Drug Market and Medical Service**

In general, the current drug pricing reform was conducted as a counter-offensive to the chaotic market condition, where there is no distinction between medical service and drug sales and the former is dependant on the latter for subsidy. It is believed that to tackle the root cause of various loopholes in the phase of drug production, distribution and consumption and to curb the excessive growth of drug expenditure, co-ordinated reform efforts are needed.

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<sup>39</sup> China MediPharm Insight, Issue 7, 199612

First, the production structure must be readjusted. The fact is that China has a very serious problem of duplicate production with very low technology ingredients. Of the 5600 chemical drug producers nationwide, the most operate small scale productions and use low technology or outdated management methods. Most of these producers do not have their own R&D capacity. Even worse, many producers still use obsolete production techniques in sub-standard working environments. The regulating authorities therefore consider it necessary to tighten control on approval procedures, and to dismiss a number of drug enterprises that do not have core products or minimal scale of production. It has also been decided that drug producers need to go through GMP renovation more quickly. The authorities also made it a priority to encourage enterprises to conduct research on new drugs and to shift the current pattern of imitation so that the technological content of the medical industry may be raised.

Second, efforts to regulate distribution channels must continue. After two years of effort to clarify the market, the chaotic conditions that reigned were corrected, with fewer reports of fake and shoddy drug products. However, problems of market deficiency and drug distribution are still far from being eliminated. Above all, there are still too many dealerships in drug marketing, and many dealers simply do not qualify for doing the business: such dealers operate with a limited number of drugs at excessively high cost. Therefore, a continued effort to consolidate marketing channels and reduce the number of dealerships is desirable. Agencies and chain operations should be encouraged so as to fundamentally change the current situation of too many competing small wholesale dealers driving up costs. Solutions for a better regulated wholesale drug market call for a standardisation of marketing behaviours by drug dealers, as well as the institution of a market environment characterised by orderly competition, scientific management and standard behaviour: one that operates on the principles of socialist market economy.

Third, steady efforts toward a new reward system for medical services and marketing functions must be made. To address the root cause of marketing and pricing confusion, it is important to de-link medical institutions from drug sales subsidies. On the basis of sound planning, the government should devote its financial resources to welfare/non-profit hospitals that serve the lower-middle-income members of society. Financial resources for these government-supported hospitals will mainly come from fiscal subsidies and compensations from medical service charges. Having achieved that, medical institutions should be separated from the drug marketing business. This means that pharmacies run by hospitals should be de-linked from its main business and that profits from drug sales can not be used to subsidise the medical institution. It is hoped that by doing so, the relationship between drug sales income and personal income of medical staff is clarified once and for all.

Fourth, the social security reform must be pushed forward on all fronts. Efforts to reform the social security system need to be quickened: wherever desirable, the proportions of medical expense to be paid by individuals should be raised, and there should be stricter control on drug consumption. One policy calls for allowing patients of the Welfare Medical Plan (which designates specific hospitals to patients) to choose from a short list of designated hospitals so that, it is hoped, with a limited degree of competition, hospitals will be more keen to provide better service to their patients. The new policy also considers the possibility of allowing the patient to purchase prescribed drugs outside the hospital.

### **5.3.4 Healthcare Infrastructure**

There are around 68,000 hospitals and 2.9 million hospital beds in China. 4.39 million people work in the field of health care.<sup>40</sup> Under the centrally planned economic system, the establishment of a hospital is not a response to the demand of the market. It was very popular in China for state-owned enterprise to set up their own hospitals, in order to provide better service for employees and control medical expenses. But today, these hospitals are a big burden to the enterprises.

China's healthcare system faces a double problem: both a deficiency and poor distribution of medical resources. 80% of hospitals and healthcare resources are concentrated in cities.<sup>41</sup> Residents in some poverty-stricken areas still suffer from shortages of medicine and doctors. While big, comprehensive

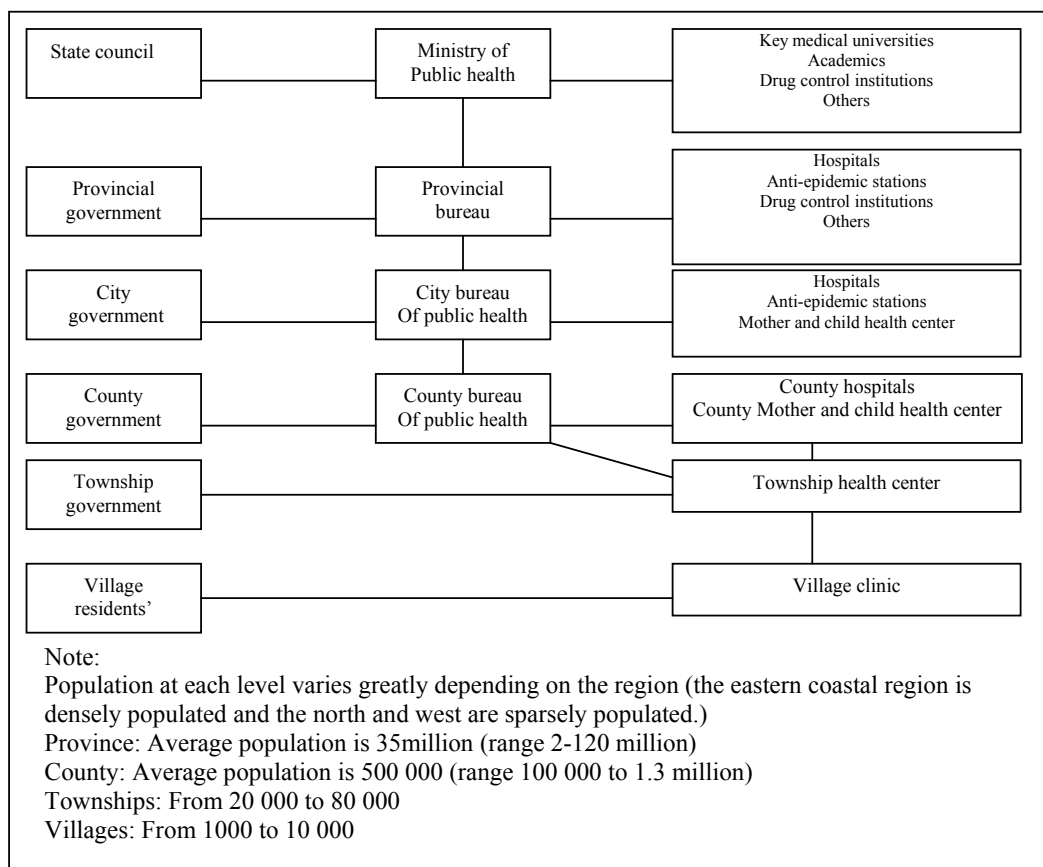
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<sup>40</sup> China Business Operation Newspaper, 19990126

<sup>41</sup> *ibid*,

hospitals are often too crowded to admit patients who need hospitalisation, 50% to 60% of the beds in small and medium-sized hospitals are left idle.<sup>42</sup>

Figure 5.3 Basic health care infrastructure in China



Source: British Medical Journal, Vol.314, Issue.7094, 19970531, p1616

In order to curb waste, the Ministry of Health has decided to initiate a reform that will cause specialists in less efficient, small, local hospitals to receive general training and be able to offer healthcare services in the community. According to China Daily, 64.8% of cases in clinical consultations in the large hospitals could be handled in the community, and 76.8% of hospitalised patients with chronic diseases could be cared for by their families with the help of general practitioners.<sup>43</sup> However, since community medical care is excluded from the State's free medical care coverage and other medical insurance schemes, many Chinese people prefer to go to a big hospital whenever they feel ill. At the same time, a lack of qualified general practitioners is also a problem, because this medical speciality is still not offered at most Chinese medical universities. So far, the Ministry of Health has designated 17 provinces, municipalities and autonomous regions to carry out pilot work focusing on community-based medical care, including Shandong, Tianjin and Beijing.<sup>44</sup>

<sup>42</sup> Zheng Ying, China Daily, 19980414

<sup>43</sup> Ibid

<sup>44</sup> Ibid

Basically, money follows patients, so there are better healthcare infrastructures in areas where more individuals are covered by insurance or in the richer agricultural areas where out of pocket costs are more easily met. This is also influenced by the amount of tax revenue raised locally (obviously more in richer areas) and the priority given to health by the local government. This is well illustrated by the ratio of health expenditure per capita in urban and rural areas; it was 3:1 in 1981 and had risen to 5:1 in 1992.<sup>45</sup> This polarisation has been increased by the new mobility of the peasants: now that the rural infrastructure has improved, wealthier peasants simply bypass the lower level village clinics and township hospitals and go directly to a county or city hospital. This results in underutilization and diminished income of the lower level services, while county and city hospitals are swamped. Occupancy rates of over 90% are the norm at city and provincial hospitals, while county and township hospitals have occupancy rates of 80% and 45% respectively.<sup>46</sup> With so little generated income from user charges, many township hospitals have to rely on a local government subsidies to pay even a living wage to the staff.

## 6. Analysis of Chinese Pharmaceutical Market

The Chinese pharmaceutical market has undergone significant changes over the past several years, promoted in part by the urgent need to reduce escalating health care expenditure. Recent reform measures aimed at cutting the cost of medication include local-level drug reimbursement schemes and the issuance of a National Essential Drugs Bulletin (NEDB). Both act to restrict the numbers and prices of drugs eligible for State reimbursement. Other new regulatory efforts, such as the stricter control of pharmaceutical advertising and the enforcement of Good Manufacturing Practice (GMP) in the local pharmaceutical industry and the coming practice of new OTC system in China, were triggered by Chinese consumers' growing demand for better quality controls for medicine.

### 6.1 The Overview of the Chinese Pharmaceutical Industry

Much of the business world had been enamoured, for a time, with the pharmaceutical industry in China. The reasons for the attraction were many. Most alluring was China's ever-increasing population. Plush state-funded health care reimbursement plans encouraged the sale of medicines. Chinese consumers perceived foreign pharmaceutical products to be of high quality. And the Chinese government was offering significant incentives for outside investment. As a result, China enjoyed a hearty influx of foreign pharmaceutical investments in the late eighties and early nineties. Today, though opportunities in China are still vast, competition is intensifying and the challenges in seizing opportunities are significant.

China has 6,000-8,000 drug manufacturers.<sup>47</sup> Small in size and production scale, they are too fragmented. As the global trend is for major pharmaceutical manufacturers to merge, Chinese enterprises find themselves hardly able to hold their ground against these giants, even in the domestic market. At present,

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<sup>45</sup> Liu Y, Hsiao W, Li Q, Liu X, Ran M, Transformation of China's rural healthcare financing, 1995

<sup>46</sup> *ibid*,

<sup>47</sup> *Yang Chunya* China Daily, 19980509

15 of the top 20 drug-makers in the world have established joint ventures in China,<sup>48</sup> threatening to squeeze their weak Chinese counterparts out of the marketplace. The Chinese government has taken action to restructure the domestic medicine industry and prevent low-level duplication of medicine projects. The commission would not approve new projects to expand the production capacity of medicines on the list, whether they concern State-owned or foreign-funded enterprises; this would help guarantee quality on the market and stem competitive price-cutting. The medicines were selected for listing according to three criteria:<sup>49</sup>

- Less than 60 per cent of production capacity is utilised;
- Market prices are lower than production costs;
- Excessive investment and uncontrolled expansion threatens oversupply on the domestic market.

If they broke the regulation Industrial enterprises would be liable to serious penalties, including deprivation of production licenses or the cancellation of bank loans. SETC is also exploring other means of upgrading the industry, including encouraging enterprises to apply new production technologies to increase quality and reduce costs. Medical enterprises are also being told to step up restructuring to realise economies of scale. The medical department of the SETC will revise and issue product lists as industry guidelines in line with changes in domestic and international markets.

Although the second largest medicine-producer in the world, China itself only originated a meagre 3 per cent of the drugs it manufactures. The situation remains unchanged, even though the manufacture of imitations is becoming increasingly costly following the advent of a series of laws protecting intellectual property in the country.

However, the Chinese Government seems to have realised the problem and is stepping up its efforts to address it. In 1987, China set up a special centre to administer drug research and development, a first step to creating compound medicines of its own. The centre has sponsored 382 drug research projects launched by research institutes, hospitals and pharmaceutical enterprises.<sup>50</sup> Shortage of funds is still a big problem that frustrates all Chinese researchers.

The pharmaceutical sector has achieved great progress in the past two decades and can now meet the huge domestic demand for disease prevention and treatment, family planning, rehabilitation and health care and disaster-preparedness. The quality of China-made medicines has greatly improved. More than 40 kinds of chemical material produced by 25 enterprises have obtained approval from the US Food and Drug

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<sup>48</sup> Ibid

<sup>49</sup> Ye Yongjian, Business Weekly, China Daily 19990307

<sup>50</sup> Yang Chunya, China Daily, 19980509

Administration and US\$1.5 billion worth of chemical materials are exported to 120 countries and regions each year.

By the year 2000, the total output value of China's medical industry will reach RMB 200 billion. It is anticipated that China's large and medium-sized pharmaceutical enterprises and their competitive products will reach the world advanced level of the early 90s, and the medical apparatus and instrument industry will attain the world advanced level of the late 80s.

Efforts will be made to promote the introduction of GMP, GSP, GLP and ISO9000 quality guarantee systems, so that China's basic medicines can be supplied effectively and opportunely, with the required quality, quantity and variety fully ensured, and so that the need of hospitals for conventional medical equipment can be met.

It is planned that the rate of contribution of scientific and technological progress to the growth of the medical industry is to exceed 50%, and the proportion of the output value of new medical products in the total output value of the medical industry is to reach 30%. A shift in focus from the old practice to the research of new medicines will be made, marked mainly by introduction and development to a combination of introduction and creation; a new medicine market system will be built.<sup>51</sup>

## 6.2 The Strategy of Developing the Chinese Medical Industry

*To enhance the quality of economic operations of the medical industry, with attention focused on economic benefits:* The key tasks are to carry out technical transformation of the old enterprises, and to bring about a rational allocation of resources.

*To adjust the structure and regional distribution of the medical industry:* Help in terms of capital input and policy support will be extended to the central and western part of the country, in order to accelerate development. The industrial structure will be improved by vigorously promoting the production of medical apparatus and instruments, sanitary materials, pharmaceutical machinery and medical packaging materials, and by raising their respective proportions in the total output of the medical industry. The product structure will be improved by adjusting the proportions of drugs and preparations. The development of the latter and particularly the development of new products will be expedited.

*To develop big companies and big groups:* Support will be given to medical enterprises that are strong and prosperous; those that have more liabilities than assets, operate in adverse conditions, or cause serious environmental pollution are to be merged or bankrupted. Great efforts will be made to ensure that by 2000 there will be 20 large companies whose sales exceed RMB 5 billion each.

*To open up new areas of development, enlarge the scope of application of products:* for instance, health-care products, nutrimentals and fodder additives.

*To turn the creation of new medical technology into the motivating force of the development of the medical industry, and to make it play the key role in the growth of the medical economy.*

*To set up a group of export-oriented medical enterprises and increase the export of medical products.*

## 6.3 The co-operation with the FDA and European pharmaceutical industry

The future involvement of the U.S. and European pharmaceutical industries in China depends, to a large degree, on how much the Chinese government is willing to scale back its efforts to "prop up" state enterprises and force them to compete in a more open market. Restrictions on what joint ventures can make and sell, duties and price controls on imports, erosion of patent protection, and uneven registration and reimbursement policies all appear to discriminate against non-Chinese companies.

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<sup>51</sup> <http://www.Chinaeco.com>

The Chinese government recognition of the need for Western expertise in developing their indigenous industry will largely shape the environment for pharmaceutical companies in China. Chinese companies may be able to expand production of bulk active ingredients for generic drugs, but will face limited long-term development prospects if the government fails to encourage investment and technology transfer from the West. Such investment may decline if Chinese officials follow through on announced plans to limit future joint ventures and to maintain policies that discriminate against foreign-based enterprises.

Though expansion of Chinese pharmaceutical production may warrant increased inspections from FDA auditors, the agency is involved in several efforts to reduce the scope of its non-U.S. plant inspection program. That would involve more frequent and comprehensive audits of plants that have had difficulties complying with Good Manufacture Practises (GMPs), and fewer visits to facilities without serious problems. It would also decrease the number of product-specific pre-approval inspections in favour of more general plant audits.

## 6.4 Chinese pharmaceutical market

Since the Chinese government adopted an "open door" policy in 1978, spurring foreign investment, China's annual drug sales have grown, on average, 18 percent per year. By the mid-nineties, growth accelerated to more than 20 percent, outpacing the 7-9 percent average growth rates in the United States and Europe. Sales of Western medicines in China are projected to reach \$19 billion by the year 2000.<sup>52</sup>

The total sales volume of drugs in China reached RMB 65 billion yuan in 1995, the drug consumption spending per person being RMB 51.68 yuan. The sales volume of drugs in urban area was RMB 49.3 billion yuan, amounting to 75.85 percent of the total sales volume, the drug consumption spending per person being RMB142 yuan. The sales volume of drugs in rural area was RMB15.7 billion yuan, amounting to 24.15 percent of the total sales volume, the drug consumption spending per person being RMB 17.14 yuan. That shows the remarkable difference between urban area and rural areas.<sup>53</sup>

There are about 1700 wholesale enterprises of drugs and 63850 retail pharmacies in China. Two thirds of retail pharmacies are in cities, in other words, there are too few retail pharmacies in the countryside. The retail volume of drugs accounted for 5 percent of total sales volume in the eighties, and has increased to 15% to 20%.<sup>54</sup>

Furthermore, from 1995 to 2001, the compounded annual growth rate is expected to continue at 20 percent, creating tremendous opportunities for foreign companies and catapulting China into the world's top five pharmaceutical markets. By 2010, sales are expected to reach \$60 billion, and by 2020, analysts anticipate that China will be the world's largest pharmaceutical market.<sup>55</sup> The government is relying on investment to improve the technological level of the pharmaceutical industry and the industry's self-sufficiency. The number of pharmaceutical companies producing Western medicines exceeded 4,000 in 1995. Of those, roughly 2,700 were domestic companies and 1,500 were foreign-invested enterprises. If traditional Chinese drugs and Western pharmaceutical imports are included, the number of companies competing for a market share increases dramatically.<sup>56</sup>

### 6.4.1 Driving Forces for the Growth of Pharmaceutical Market

*Demographically:* China is a pharmaceutical marketer's paradise. Currently the population numbers 1.2 billion and is growing. The 50% market, a prime target of pharmaceutical companies, is also expanding. In 1995, 9 percent of the total population was above age 60, and that percentage is expected to almost triple, to 25 percent by 2050. Paralleling the population growth is a rise in disposable income and general understanding of health care and medicines. During the past several years, China has witnessed a tremendous rise in household income. By the year 2000, more than 34 percent of households will have

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<sup>52</sup> John Flynn, *Pharmaceutical Executive*, Vol.18, No.4, 1998

<sup>53</sup> Hu Shengyu, *China Pharmaceuticals and Medical Instruments*, Vol.10, No.3, 1997, p42

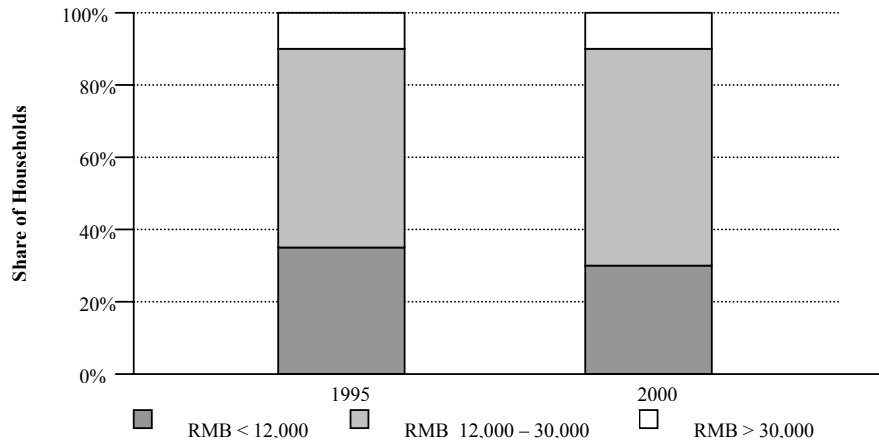
<sup>54</sup> *Ibid*,

<sup>55</sup> John Flynn, *Pharmaceutical Executive*, Vol.18, No.4, 1998, p 56-66

<sup>56</sup> Hu Shengyu, *China Pharmaceuticals and Medical Instruments*, Vol.10, No.3, 1997, p42

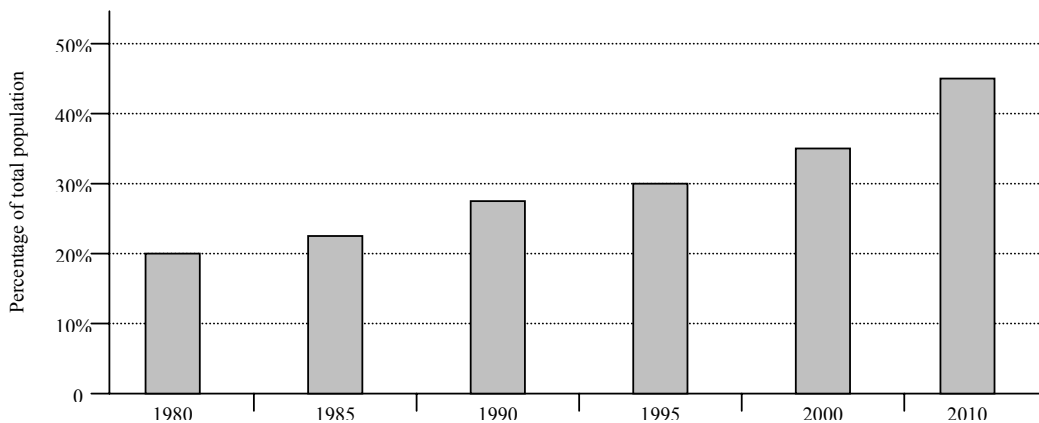
reached the top income bracket in China.<sup>57</sup> As wealth and knowledge increase, so will health consciousness and a willingness to pay, which translate into more drug sales. China has seen an increase in the occurrences and number of diseases. As people have more disposable income, they consume new and different foods, travel more, and have more life- and work pressures. The new food substances and lifestyle changes are causing an increase in illnesses similar to those in a more developed country. China's changing income distribution suggests that increased wealth and health consciousness will translate into more pharmaceutical sales (see Figure 6.1).

Figure 6.1 Changing of annual household income in China



Source: John Flynn, *Pharmaceutical Executive*, Vol.18, No.4, 1998, p 56  
 RMB: Renminbi, Chinese Currency  
 Household income levels (Renminbi) are based on estimates from the National Information Center in China.

Figure 6.2 The



Source: John Flynn, *Pharmaceutical Executive*, Vol.18, No.4, 1998, p 56

Another major demographic driver in the growth of demand for pharmaceuticals is the mass migration to the cities (see Figure 6.2). Urbanisation creates lifestyles that are more conducive to pharmaceutical use, and provides greater access to drugs through retail pharmacies. From 1990 to 1995, the urban population grew at an average of 4.4 percent a year. In 1995, about 30 percent of China's population was living in urban areas, but the experts estimate that the percentage will jump to 35 percent by 2000.<sup>58</sup>

<sup>57</sup> John Flynn, *Pharmaceutical Executive*, Vol.18, No.4, 1998, p 56-66

<sup>58</sup> Ibid



*Strong support from government.* The prime governmental driver behind China's market growth is the Chinese governments' articulated intention to make pharmaceuticals a "pillar" industry in the country, and to expand local portfolios by promoting science and technology in its "Ninth Five-Year Plan".<sup>59</sup>

*Technology transfer.* China wants to become a world-class pharmaceutical player. To that end, China encourages foreign companies to form co-operative research partnerships with local institutions. In 1996, for example, Roche Bioscience and SmithKline Beecham signed joint research agreements with institutions in China. Such collaborations will help advance China's pharmaceutical industry. Research-based co-operation is also evident in joint ventures, which are the primary investment vehicle in China. Overall, joint-venture companies produce roughly 30 percent of the pharmaceutical products sold in China. Liu Cun-Zhao<sup>60</sup>, vice-chairman of the Chinese Pharmaceutical Manufacturers Association, asserts "The import of technology and management methods from joint ventures is the driving force for initiating co-operation in the fields of foreign trade, capital, and technology."

*Increased R&D.* Foreign companies have traditionally found extensive R&D investment discouraging because of the widespread prevalence of generics and piracy in China, coupled with the consumer's inability to pay for expensive medicines. Now, the situation looks more promising as disposable income increases, efforts to stabilise patent protection emerge, and the government promises to focus more on R&D. As part of that promise, China has pledged to significantly increase its investment in the domestic pharmaceutical industry. Specific objectives of that effort are to develop new high-tech drugs, enhance the value of existing medicines, and establish high-tech plants and development centres.

*Expansion into rural areas.* Currently the pharmaceutical market is concentrated primarily in the coastal cities. China's rural labour force remains largely outside the government's health care system. The State Drug Administration of China (SDA), however, is now managing the construction of a retail network in rural China, particularly in the remote and poverty-stricken areas. The goal of the network is to rationalise circulation of pharmaceuticals and guarantee high-quality and safe medicines.

*Social culture.* Cultural factors are also driving the growth of the industry. One strong force is the increasing popularity of Western medicines. Although traditional Chinese medicine continues to be the preferred choice overall, Western medicine has been gaining popularity, particularly among the younger generation. A growing number of Chinese doctors believe Western medicines are beneficial for surgery and for immediate relief of infectious diseases.

*The trend toward self-medication.* Better education, greater disposable income, increased accessibility to retail pharmacies and drugs, and higher exposures to advertising create an environment conducive to self-medication. Recent governmental insurance cutbacks have also forced many people to resort to self-medication.

#### **6.4.2 The OTC Drug Market in China**

One notable aspect of China's OTC drug market is that officially it does not exist. In theory, no drugs--except herbal preparations--are available in China without a doctor's prescription. Government officials believe that Chinese citizens do not possess sufficient understanding of medicines to choose their own drugs wisely. In practice, however, the prescription rule is commonly flouted for OTC drugs. While the unofficial OTC market has always existed, OTC purchases have increased in recent years as consumers have grown wealthier and traditional dependence on work unit-provided health care has decreased.<sup>61</sup>

Currently, few foreign companies are active in China's OTC market. One problem facing foreign companies entering the OTC sector is that Chinese sellers and users are largely unfamiliar with the concept of brand names. Chinese pharmaceuticals are generally sold by their generic name, followed by the name of the factory, e.g. "Aspirin, Beijing No. 1 Pharmaceutical Factory." This lack of awareness

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<sup>59</sup> Chinese Yearbook, 1997

<sup>60</sup> Interviewee, 19990507

<sup>61</sup> Ibid

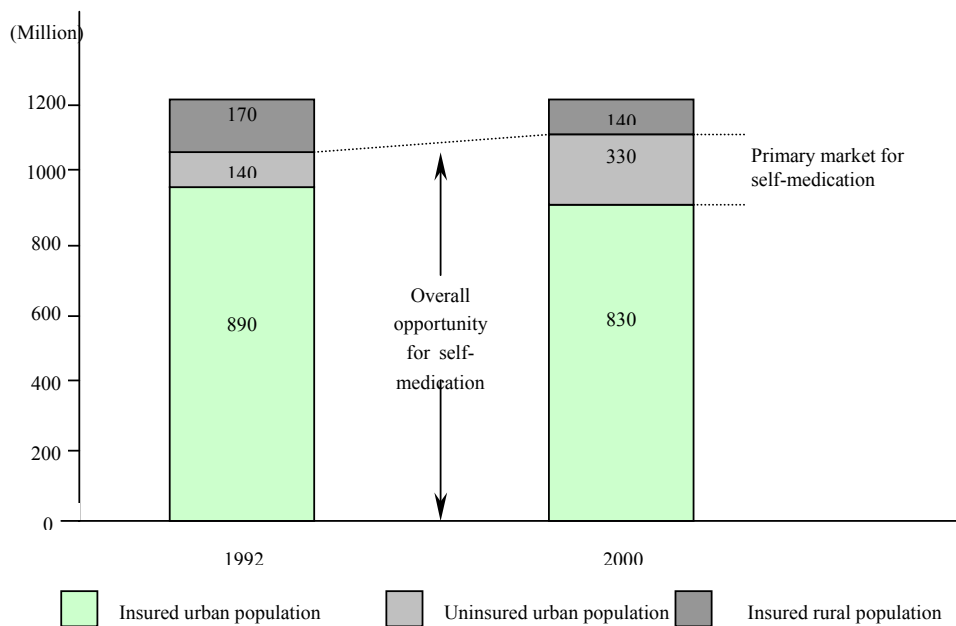
does present opportunities, however. A new entrant faces little established brand competition, and a strongly marketed product can generate a loyal customer base.

Foreign entrants are armed with a further advantage, as their products are perceived as high quality, well packaged, and modern. And, despite prices well above their domestic counterparts, foreign OTC drugs remain cheaper than many prescription drugs. Prices for foreign OTC products are therefore generally within the reach of most urban consumers. To shape demand for their products, most foreign drug companies advertise on Chinese television and in newspapers, distribute sales literature, and sponsor health campaigns and media and health care events. Pharmaceutical ads generally dominate the television airwaves in China.

As with many sub-sectors of the pharmaceutical market, the OTC market has strong regional variations. Products that are available or popular in the North may not be as available in the South or other regions, and vice-versa.<sup>62</sup> For example, Weixian U, a Japanese antacid, is a market leader in Guangzhou, but is virtually unused in Shanghai. Doctors in Beijing often recommend SmithKline Beecham's antacid Tagamet (cimetidine), while physicians in Shanghai and Guangzhou seem to mention it less often. Different sales strategies and the shortcomings of the distribution system often result in products receiving greater consumer use close to home.

Another obstacle facing foreign entrants is the current pharmaceutical reimbursement system, which favours National Essential Drug lists' products. Such lists, designed to limit hospital use of expensive drugs, tend to exclude foreign products if Chinese equivalents are available.

Figure 6.3 Uninsured population growth and OTC potential



Source: John Flynn, *Pharmaceutical Executive*, Vol.18, issue 4, 1998, p56-p66

Since this is usually the case for OTC products, foreign OTC goods were left off the list. Foreign pharmaceutical firms already active in China are lobbying officials to include their products on reimbursement lists, arguing that inclusion is essential if China wishes for them to introduce additional products. But even if foreign OTC drugs are not eligible for reimbursement, the increasing wealth and

<sup>62</sup> Swanson, Mitzi, *China Business Review*, March/April, 1994, Vol.21, No.22, P34

consumer awareness of urban residents should make more individuals both able and willing to purchase foreign OTC products at their own expense.

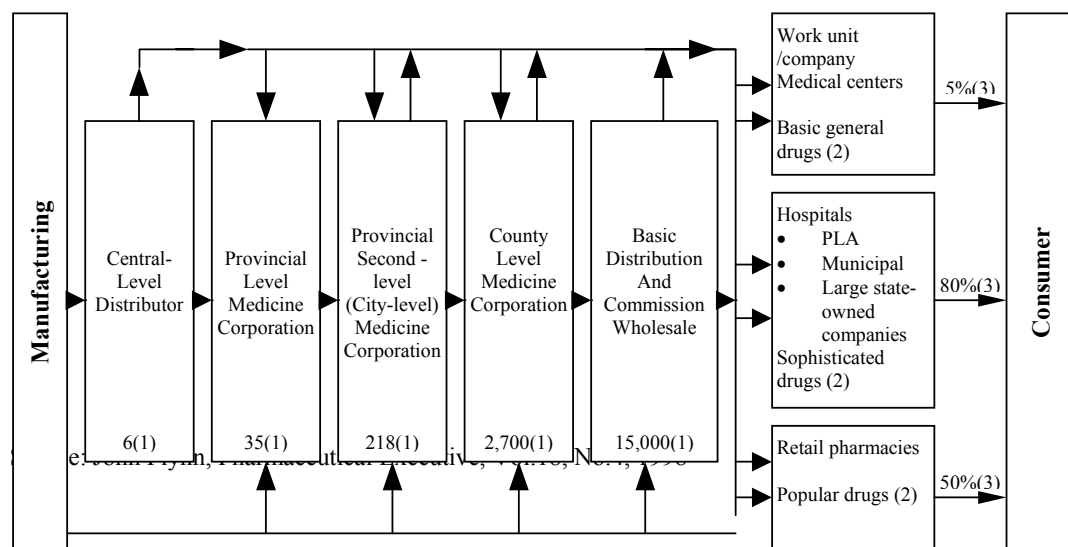
Although China continues to speak of self-sufficiency in basic drug manufacturing and of granting priority to investment in high-tech products, the market for foreign OTC drugs is already established and will continue to grow. The decline in government reimbursement for pharmaceuticals is promoting the paying consumer to the role of decision-maker. Increasingly wealthy and willing to spend their earnings on health care products, Chinese consumers tend to trust foreign OTC products and likely will demand increased choice and access to them in the future (see Figure 6.3). Recent government insurance cutbacks have fuelled the trend toward self-medication. Thus, manufacturers who seize the opportunity and get into the market now can expect good prospects in China's OTC sector.

### 6.5 Pharmaceutical Distribution Channel in China

Drugs are distributed in China through the Chinese-Style channels. Understanding this system is the key to marketing foreign drugs in China. The China National Pharmaceutical Group Corporation (CNPGC) controls the three-tiered distribution system (Figure 6.4, 6.5) At the top of the ladder are national level-1 stations in Beijing, Shanghai, Shenyang, Guangzhou, and Tianjin. These allocate products to provincial level-2 distributors, who in turn sell to county and city level-3 wholesaler-drug stores. A State-determined price mark-up is allowed at each level in the network for both domestic and imported pharmaceuticals. All retail outlets sell a given product for the same price.

At present, this system is still relatively stable. Because the use of pharmaceutical products involves some health risks, State regulations on production and distribution are more carefully enforced than those governing other sectors. But, while it will always exercise some control over pharmaceutical distribution, CNPGC will see its hold on the distribution system weaken as other ministries and large domestic drug manufacturers fight to establish networks in this highly lucrative market. Moreover, while retail prices for products remain determined by the State, hospitals and clinics may now deal directly with suppliers at any distribution level.

Figure 6.4 China's complex pharmaceutical-product delivery system



(1) number of the respective organizations  
 (2) major drugs distributed through the respective outlets  
 (3) share of distribution in value  
 Based on 1996 data

The number of wholesales will be significantly reduced, while the number of retail pharmacies will increase due to the expected increase of self-medication.

Doctors prescribe substance and/or brand name. Pharmacists do not currently substitute.

As more end-users are choosing to buy products from the stations and manufacturers that offer the best delivery conditions, the system is becoming increasingly decentralised. Factories that sell directly to end-users are reaping greater profits by tacking on to the wholesale price the mark-ups normally added at each distribution level. Meanwhile, "New and special drug stores," which were previously the main outlet for limited, expensive, or otherwise special drugs, have seen their role diminish.

Most local producers still tend to rely on the traditional distribution system in order to avoid the transport and bureaucratic headaches associated with independent distribution. Though foreign-invested pharmaceutical manufacturers are permitted to set up distribution and transport systems to retail their own products directly to end-users, these firms also tend to use the traditional distribution network. Many note that distribution through CNPGC enables good access to all end-user levels in all regions, and lessens administrative chores.

Proponents of direct sales, in contrast, point to better sales service and feedback, as well as competitive pricing and higher profit margins. Setting up one's own network, however, requires considerable manpower. Many joint-venture companies combine the two methods, marketing their pharmaceuticals independently in key cities while relying on the three-tiered system to reach purchasers farther afield. Shanghai Squibb, a lone exception, sells almost all its products directly to hospitals, clinics, and retailers.

To ensure that well-heeled customers have access to their OTC products, firms must cultivate good relations with Chinese distributors. Because Chinese pharmacies, which sell only drugs, are actually the last link in the domestic pharmaceutical distribution chain, an extra sales push from a co-operative distributor can make a big difference. At the bottom of the distribution chain, China's vast numbers of small retail stores are difficult to reach individually. Drugstore retailers, who operate without the normal exchange of medical information enjoyed by doctors, are also receptive to advertisements and direct sales information. Effective distributors also visit hospitals and clinics to encourage doctors and sales staff to stock and dispense their products.

## 6.6 Intellectual Property Protection in China

Regulation on Administrative protection of pharmaceuticals was approved by the State Council on December 12, 1992 and promulgated by Decree No. 12 of the State Pharmaceutical Administration on December 19, 1992. These Regulations are formulated with a view to expanding economic and technological co-operation and exchange with foreign countries and providing administrative protection for the lawful rights and interests of the owners of exclusive rights to foreign pharmaceuticals.

The clause states that drugs developed outside of China between January 1, 1987 and December 31, 1992, in countries that have a bilateral trade agreement with China, will automatically be granted administrative protection for 7.5 years. But, the program is being phased out, and companies must apply for the traditional 20-year patent-a process that can be long and arduous.

China, however, is now promising stronger patent protection for high-tech pharmaceuticals. Medical factories and distributors will need permits issued by central government agencies, such as SDA, rather than by local groups. This requirement applies to both domestic and foreign companies. Prior to that change, domestic companies had to acquire permits from local authorities only, which increased the opportunity for corruption and bribery. In addition, China is promising that local and provincial authorities will do a better job of enforcing intellectual property laws by cracking down on companies that lack proper licenses, transfer or lease licenses to drug counterfeits, and use contractors that fail to meet proper requirements.

Another important governmental impediment, from the foreigner's perspective, is renewed government interest in protecting local industry. Competition has increased in recent years, saturating the market with

lower-tech products from both local and foreign players. The government, therefore, wants to discourage any venture that would directly compete with an established product already made in the country. In theory, the government will discourage patents and licenses to foreign products that directly compete with local industry.

Local industry factors also play a huge role in inhibiting the growth of the pharmaceutical market in China. One factor is China's cumbersome registration processes. To manufacture or distribute products, foreign companies must register and apply for product, manufacturing, and sales licenses. The process is time-consuming; it takes an average of two years or more. Also, it is costly, as a company must work through many different levels, from local through national.

## 6.7 The Opportunities and Threats of the Chinese Pharmaceutical Market

China is in the midst of enormous economic expansion that appears to offer considerable opportunities for further development of its \$6 billion pharmaceutical market. All of that economic activity is creating a strong middle class in this land of 1.3 billion people. That, plus a fast-growing elderly population projected at about 130 million over the age of 60 by the year 2000, is forming a major market for modern medicines. To meet those needs, and to demonstrate that the nation can be a major player in an important high-tech field, China's economic plan includes drug development and eventual self-sufficiency as prominent goals.

### 6.7.1 Problems and Challenges

The campaign to build a modern pharmaceutical industry involves efforts to improve and streamline state-operated companies, as well as to encourage U.S. and European companies to establish operations in China through joint ventures (JVs) with domestic companies. Those efforts have created turmoil in China's domestic medical products industry.

Of the more than 4,000 pharmaceutical plants in the country, most are idle or unproductive. A few larger companies have adopted good manufacturing practices (GMPs) and are emerging as leading exporters of bulk active ingredients for generic antibiotics, analgesics, and vitamins.

To further prepare for competition in the world market, Chinese officials are visiting FDA offices to learn more about U.S. regulatory and manufacturing policies.<sup>63</sup> They are also reviewing the new standards for producing and testing pharmaceuticals developed by the International Conference on Harmonisation.

The State Drug Administration of China (SDA) leads current efforts to upgrade China's domestic production capabilities as part of its responsibilities to oversee manufacturing, distribution, and marketing activities of domestic and foreign pharmaceutical operations. There may be 1,000 pharmaceutical JVs in China—the bulk from Hong Kong and Taiwan—and about 100 JVs involving U.S. companies, according to one SPAC report.<sup>64</sup> A few "early birds," including Johnson & Johnson's Janssen subsidiary, Bristol-Myers Squibb, Pharmacia & Upjohn, and SmithKline Beecham, moved in more than a decade ago. The big influx, though, has occurred in the last five years, with all the major multinational companies securing a toehold in China. More recently, Japanese, Indian, and other Asian companies have joined the trend.

Joint-venture arrangements are currently in a state of flux. Until now, the desire for foreign investment prompted the Beijing government to allow Western companies to establish drug finishing and packaging operations. Those JVs generally began as fairly even partnerships, with the Western company bringing in capital and technology and the Chinese partner contributing land and manufacturing facilities. The Chinese partner also brought connections to suppliers, distributors, and the regulatory officials who oversee every aspect of production, registration, and marketing in China.

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<sup>63</sup> Interviewee, Yin Xiaojin, Director of the Department of Technology and Research, China Pharmaceutical University, 19990512

<sup>64</sup> Jill Wechsler, Pharmaceutical Executive, Vol. 17, No. 9, 1997 p20-24

At the same time, JV participants have adopted more modest expectations for business expansion in China. Although they continue to build new plants and seek market approval for new products, they are tempering expansion plans and moderating income projections for a number of reasons. Those factors include:

- *Shaky patent protection*: Despite a U.S.-China agreement in 1992, in the future, to grant 20-year patent protection for new pharmaceuticals, plus seven years of "administrative protection" for products now under development in China, government decisions to register knock-offs have shaken pharmaceutical companies. Companies are also concerned about Chinese production of counterfeit pharmaceuticals, some for export to other Third World nations. Although piracy is less rampant in the pharmaceutical industry than in the recording and software industries, it has made many companies leery of manufacturing new patented products in that market.
- *Distribution difficulties*: Drug distribution in such a huge country involves multiple layers of sellers that vary among regions, provinces, and cities. A report on the pharmaceutical sector in China prepared by the U.S. Department of Commerce's International Trade Administration describes the system as "chaotic and uncertain"; with more than 70,000 drug distribution firms, including 17,000 wholesalers.<sup>65</sup> Personal relations and corruption set the tone, encouraging multiple price hikes and generating uncertainty about whether products ever reach intended purchasers.
- *Cost-containment threat*: In an effort to impose some control over distribution, the Chinese government has proposed a new program to control marginal price increases.<sup>66</sup> This would limit mark-ups allowed for each step in the distribution chain and thus reduce incentives for multiple distribution layers.
- *Health reform uncertainty*: Health care in China has been highly inequitable, with government and state enterprise employees obtaining complete coverage, while most individuals receive very little care. To reduce those disparities and cut the enormous cost of providing health care for millions, Beijing is encouraging the private sector to expand its role in providing health care coverage. As a result, pharmaceutical companies have focused marketing efforts on getting placed on MOH<sup>67</sup>'s "essential" drug lists that ensure reimbursement. Government efforts to privatise the system and regulate medicine prices could alter the arrangement, as could the plan to establish over-the-counter medicines as a product category not covered by government health programs.
- *"Black box" bureaucracy*: Non-Chinese companies express concern about inconsistent and unfair policies for approving new drugs to the market and for adding or deleting products from essential drug lists. New drug registration by SDA may take more than two years, particularly for imports and low priority JV products. In addition, provincial and even municipal governments often review new drugs and make their own decisions about reimbursement.

### 6.7.2 The Future of Chinese Pharmaceutical Market

China's pharmaceutical industry is expected to grow 14 percent to 186 billion yuan in 1998.<sup>68</sup> The State Economic and Trade Commission (SETC) also projected the sector's value added this year at 49 billion yuan, up nine percent, and sales at 120 billion yuan, up 10 percent. But profits will continue to drop to an estimated 250 million yuan. Medicine imports will continue to fall due to China's reform of the existing medical care system, but the fall will slow down. Joint-venture products are expected to increase their market share this year despite dips in profits and sales of domestic products and herbal medicines will also rise.

In 1999, the results of the reform of China's pharmaceutical structure will take hold and there will be mergers and acquisitions among pharmaceutical enterprises. Meanwhile, the oversupply of

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<sup>65</sup> Ibid

<sup>66</sup> <http://www.pharm.com.cn/news/messages/38.htm>, 19990419

<sup>67</sup> Ministry of Health

<sup>68</sup> <http://ce.cei.gov.cn/efor.htm>, 19990331

pharmaceutical products will continue, and prices will remain low. The prices for a number of export pharmaceutical products, which are not marketable overseas and have been put on the domestic market, will be further reduced.

Influenced by the reform of the state medical system, the import of pharmaceutical products by China in 1999 will be slower than in the previous year. The market shares of products made by foreign-funded enterprises will expand further, but profits will drop. The sale of Chinese-made, name-brand drugs will rise steadily. The sale of patented medicines, especially those brought under state protection, will go up. A few will be put on the international market in 2000.<sup>69</sup> The pharmaceutical market in China is developing in the following ten directions:<sup>70</sup>

- Market demand will grow with the momentum of sustained growth thanks to the rise in average age of the population and the rapid development of medical and health services;
- Sales of health care products and medical apparatuses promise tremendous potential. According to statistics, there are 3,000 firms producing health care products in more than 4,000 varieties. They are producing over 350 billion yuan in output value annually;
- Prices of medicines and chemical reagents will rise in a generally stable trend;
- Pharmaceutical firms will gradually integrate into large enterprise groups and shareholding companies;
- Production and operation of medicines will be diversified, with multi-partite participation.
- The retail market will expand. According to statistics, the proportion of retail sales volume of medicines has increased from five to over 15 percent, even 20 to 30 percent in a few areas, over the past years;
- Introduction of the agency system is the demand of the socialist market economy;
- Credit worthiness will play an important role in the trading of medicines;
- The medicine market will develop toward standardisation and will be ruled by law;
- Medicines as commodities will be managed according to different classifications, with dispensaries to be separated from hospitals, and to become commercialised under the control of the pharmaceutical department.

In addition, it was not until recently that the Chinese government launched a series of health policy reforms with important implications for the pharmaceutical sector. Changes in both insurance schemes and health-care financing could have important implications for medical and pharmaceutical suppliers.

## 7. Case Study: Market Strategy for Aminess®

### 7.1 Introduction of Renal Insufficiency

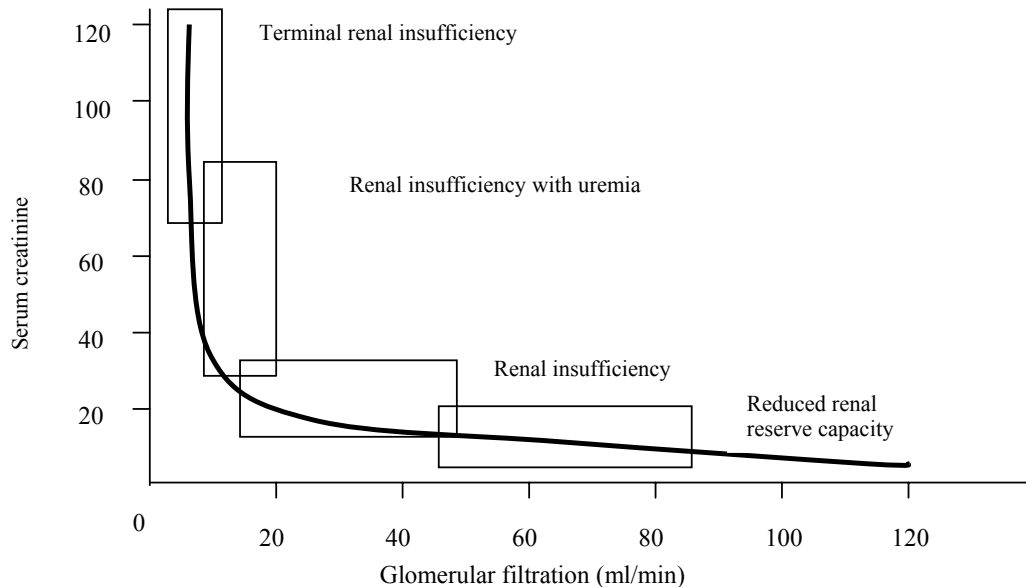
A large number of chronic renal diseases of inflammatory, infectious or metabolic etiology can lead to a progressive deterioration of the renal function. From a clinical perspective, the course of chronic renal insufficiency can be divided into four phases. The first phase is characterised by a reduction in the reserve capacity of the kidney. During this phase, when the glomerular filtration rate (GFR) is reduced to approximately 50% of normal, a minimal retention of various substances is observed and electrolyte and acid-base balance are maintained. During the next phase of renal insufficiency the GFR is reduced further (to 15%-25% of normal), and an accumulation of various substances in the body fluids occurs. When the GFR is reduced to less than 15-25% of normal, manifest renal failure develops and symptoms of uremia appear. During the final phase of terminal renal insufficiency (GFR <3-5% of the normal) renal excretory and homeostatic functions are no longer sufficient to sustain life.

*Figure 7.1 Four phases of chronic renal insufficiency*

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<sup>69</sup> <http://ce.cei.gov.cn/efor.htm>, 19990316

<sup>70</sup> <http://ce.cei.gov.cn/efor.htm>, 19980218



Source: nutrition in chronic renal insufficiency and uremia, Recip AB's brochure

## 7.2 Treatment of Renal Insufficiency in China

One of every 10,000 people in China has chronic kidney disease to some degree and 80% are young and middle aged people.<sup>71</sup> There are two main options open to the clinician at present: renal dialysis or renal transplant. With the development of the renal transplant technique, 90% of the patients who undergo renal transplant can live up to one year and 60% can live up to 5 years.<sup>72</sup>

At present, approximately 40,000 patients in China receive dialysis treatment, but it is known that around 75,000 Chinese patient die each year from chronic kidney disease because of the lack of available dialysis treatment. Each year, the number of dialysis patients in the country increases by about 15 percent.<sup>73</sup>

## 7.3 Overview of the Market Survey

We have conducted a market survey regarding the treatment of renal failure in China and the impact of the changing healthcare policy on the patients' payment ability, as well as the potential promotion and distribution channels of the drugs.

The market survey was conducted in six cities in China, which are Beijing, Tianjin, Dalian, Nanjing, Shanghai and Xiamen. Among them, Beijing, Tianjin and Shanghai are municipalities, Dalian is one of the 14 open cities, Nanjing is the capital of Jiangsu province and finally, Xiamen is a Special Economic Zone. All of these cities are located along the coast, where the economy is relatively developed and any type of qualified health care is offered.

## 7.4 Results and Analysis of the Market Survey

In this section, we will present the results of our survey by going through the items on the questionnaire (see Appendix). Our comments on the results will follow.<sup>74</sup>

### 7.4.1 General Description of the Sample Hospitals

Table 7.1 Number of hospital beds

<sup>71</sup> <http://www.nanfangdaily.com.cn/review/,990528>

<sup>72</sup> Ibid

<sup>73</sup> Gambro magazine, 9808

<sup>74</sup> Note: 1USD=8.29 yuan, so we assume 1 yuan=1kr in our market survey.



	No. of hospitals	In percentage
Less than 300	0	0
301-600	7	35%
601 –800	4	20%
More than 801	9	45%

Table 7.2 Grades of the sample hospital according to China national hospital classification standard

	No. of Hospitals	In percentage
1st Grade	0	0
2 <sup>nd</sup> Grade	2	10%
3 <sup>rd</sup> Grade	18	90%

Table 7.3 Number of dialysis machines in sample hospitals

	No. of Hospitals	In percentage
Less than 5	4	20%
6 - 25	13	65%
26 --50	2	10%
More than 51	1	5%

Table 7.4 Number of patients taking haemodialysis treatment in the sample hospitals

	No. of Hospitals	In percentage
5-19 patients	7	35%
20-29 patients	3	15%
30-50 patients	3	15%
50-100 patients	2	10%
More than 100	5	25%

The questions in this section are designed to provide a general picture of the hospitals visited. Twenty hospitals were visited (see Appendix), in order to achieve a better statistical reliability. As shown in Table 7.1, the hospitals chosen range from medium to large, and are considered to have the possibility and ability to provide the dialysis treatment. Aside from two hospitals in Xiamen, all belong to the highest grade of hospital (Table 7.2). Public hospitals are graded by the state based on size, range and quality of service, staff and specific medical equipment. The highest grades (3A, 3B or 3Special) translate into higher state reimbursement levels, which allow for further investment in medical supplies and equipment.

As shown in Table 7.3, most of the hospitals we surveyed specialise in treatment of renal insufficiency, which is relevant to our study. In total, there are around 1000 renal insufficient patients coming for haemodialysis treatment to these 20 hospitals. The dialyzers are far from fully utilised, due to the fact that the medical service is relatively cheap in China and the hospitals are not very motivated to promote business. On the other hand, as we have discussed in chapter 5.3.4, the unbalanced spread of the healthcare infrastructure in China also partially contributes to this problem.

#### **7.4.2 Healthcare Financing**

Table 7.5 Number of hospitals appointed to insurance programs or medical reimbursement

	No. of Hospitals	In Percentage
Yes	17	85%
No	3	15%

Table 7.6 Financial resources of the renal failure patients

By themselves	
By the government	Beijing > 80%
By social medical insurance	Xiamen 50%-100%
By commercial insurance	Tianjin 5%

Table 7.7 The impacts of the healthcare reform on the payment ability of patients with renal insufficiency

	No. of hospitals	In percentage
More affordable than before	6	30%
Less affordable than before	10	50%
No difference	4	20%
Other	0	0

Table 7.8 Price range of haemodialysis treatment per time

	No. of Hospitals	In percentage
Less than 200 Kr	0	0
201- 400 Kr	5	25%
401- 600 Kr	15	75%
More than 601 Kr	0	0

The questions in the sections concentrate on the financing structure of the healthcare market after reform. According to the new healthcare system, people with social medical insurance can freely choose from among two public hospitals and one community clinic. They can only receive reimbursement by utilising the services from these hospitals, or if they are recommended to other hospitals for specific care. Otherwise, they have to pay the medical bills by themselves. Of the above three non-public hospitals, two belong to the PLA (People’s Liberation Army) and one belongs to the Ministry of Post and Telecommunication. These hospitals are not open to average people. They only provide service for the people in their own system and receive their budget from the state’s annual expenses (see Table7.5).

As shown in Table 7.6, in Xiamen, where the healthcare reform started two years earlier, 50%-100% of the patients in the hospitals we visited are covered by social medical insurance. People are clearly aware of their own rights and responsibilities endowed by the reform. In Beijing and Shanghai, where the healthcare reform is scheduled to start this year, more than 80% of the patients in the hospitals we visited are still paid by the government reimbursement system. As we can see from the results, only 5% of patient in Tianjin are covered by commercial medical insurance. This result presents the reality that the social insurance system still has a long way to go in China. The basic principle of the healthcare reform is “low level, wide coverage”. The problem is that serious diseases, such as cancer or chronic renal insufficiency, which are both time and money consuming, are not totally covered. The average expense level of haemodialysis in China is between 5000 –7000yuan,<sup>75</sup> while the limitation of the social insurance account is 40,000 yuan. There will be a big gap, which has to be covered by either private money or commercial insurance. Furthermore, the renal transplant, which normally costs 200,000 yuan, is far beyond the means of ordinary people.

It is obvious from the survey results (see Table 7.7) that patients claiming to be better off than before are all from small to middle size cities, such as Xiamen, Dalian and Tianjin, while most of the patients in Beijing are claimed to be worse off. This is because Beijing, as the capital of China, has for a long time enjoyed a kind of privilege in the social system, which includes better healthcare subsidies than other areas. Thus, the people in Beijing will become “victims” of the undergoing healthcare reform, while people in other cities are generally considered to be “beneficiaries”. This is the main obstacle to carry out healthcare reform in Beijing.<sup>76</sup>

According to Table 7.8, we can reasonably assume that the average expense for haemodialysis is around 500 yuan. Compared to the annual average income in China, which is 10,000 yuan, this is too much for a

<sup>75</sup> Interview He Rencheng, Chief Executive of Beijing Tongren Hospital

<sup>76</sup> Ibid,

patient to pay out of his/her own pocket. So oral pills, such as Aminess®, which can significantly bring down the frequency of dialysis in a cost-effective way could be in big demand.

### 7.4.3 The Treatment of Chronic Renal Insufficiency in China

Table 7.9 Treatment usually taken in the hospitals for the patients with chronic renal failure

	No. of hospitals	In percentage
Haemodialysis	20	100%
Peritoneal dialysis	9	45%
Conservative treatment	4	20%

Table 7.10 Start point of haemodialysis for chronic renal insufficiency

	No. of hospitals	In percentage
At a GFR over 20 ml/min	0	0
At a GFR between 10-20 ml/min	4	20%
At a GFR between 5-10 ml/min	15	75%
At a GFR below 5 ml/min	3	15%
Other measures for renal function (Determinate Creatinine )	7	35%

Table 7.11 Frequency of undergoing haemodialysis per week for uremia patients

	No. of hospitals	In percentage
Once	1	5%
Twice	9	45%
Three times or over	9	45%
Up to the degree of disease	11	55%

Table 7.12 Necessity of complement essential amino acid during dialysis

	No. of hospitals	In percentage
Unnecessary	2	10%
Necessary: Add amino acid	18	90%

Table 7.13 Common recommendations for the malnutrition problem caused by low protein diet in conservative treatment

	No. of hospitals	In percentage
Supplement essential amino acids	19	95%
Adopt the treatment of TCM	0	0
Other recommendations	1	5%

Table 7.14 Common way to improve malnutrition of the dialyzing patients

	No. of hospitals	In percentage
To infuse the solution of amino acid	1	5%
To take oral Tablets of essential amino	11	55%

acids in combination with low protein diet		
To regulate the reasonable structure of diet	13	65%
Others		

The questions in this section are mainly designed for the case company's interest. As shown in Table 7.10, we found that most doctors in the department of renal disease usually start haemodialysis for chronic renal insufficiency at GFR between 5-10 ml/min. This is partly because most patients come from the countryside, and low living standards makes it difficult for them to go to a doctor. Therefore, diagnosis was delayed. Also, doctors often take the patients' payment capability into consideration. The condition here is very different from the Western countries. As indicated by one of the doctors in Xiamen, most patients receive dialysis according not to the degree of the disease but to their payment ability. This indicates a great need for the cost of chronic renal insufficiency treatment to be brought down dramatically.

According to Table 7.11, the frequency of dialysis highly depends on the degree of the disease, and varies from twice to three times a week, in conformity with the information in Table 7.10.

It is widely accepted in China that it is necessary to complement essential amino acids, even during the period when patients undergo dialysis (see Table 7.12). If we combine the result Table 7.13 with the above, we can see that there is a big potential market for essential amino acids, especially if doctors recommend them as a supplement in different treatment stages. As indicated in Table 7.14, depending on the patients' ability to pay, doctors recommend oral essential amino acids Tablets, and even the latest techniques for treating chronic renal disease, such as EPO.<sup>77</sup>

#### 7.4.4 Product survey

Table 7.15 Competitive product to Aminess®

	No. of hospitals	In percentage
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<sup>77</sup> Wang Reili, Professor of Renal disease department of the General Hospital of Post & Telecommunication

No	11	55%
Yes, Ketosteril®, Beijing Fresenius	9	45 %

Table 7.16 The potential desirability of oral amino acids Tablets in hospitals

	No. of hospitals	In percentage
Desirable	20	100%
Not desirable	0	0

Table 7.17 Anticipated price range of Aminess®

Group1: Self-payment patient

	No. of hospitals	In percentage
Less than 50 SEK/ 100 Tablets	16	80%
51 – 80 SEK / 100 Tablets	0	0
81-120 SEK / 100 Tablets	3	15%
More than 120 SEK/ 100 Tablets, please specify	0	0

Group 2: Medical Payment covered by the social insurance

	No. of hospitals	In percentage
Less than 80 SEK/100 Tablets	13	65%
81- 120 SEK / 100 Tablets	2	10%
121- 150 SEK / 100 Tablets	1	5%
More than 150SEK/100 Tablets, please specify	0	0

Group 3: Medical payment covered by a commercial insurance

	No. of hospitals	In percentage
Less than 100 SEK/100 Tablets	11	55%
101 – 150 SEK / 100 Tablets	0	0
151-200 SEK / 100 Tablets	2	10%
More than 200 SEK/100 Tablets, please specify	0	0

The questions in this section are aimed at achieving a general understanding of the market anticipation of Aminess®. As stated in Table 7.15, Ketosteril®, produced by Beijing Fresenius<sup>78</sup>, is one of the main competitors of Aminess® in the Chinese market. The average selling price of Ketosteril® is 380yuan/100 Tablets. (4-8 t.i.d). Beijing Fresenius has developed strong social contacts with relevant Chinese government offices. For example, they managed to put Ketosteril® into the State Essential Drug List (SEDL), which is very crucial for the survival of all pharmaceutical companies. The information links established are also very helpful to Fresenius. According to our survey results, most of the doctors who have used Ketosteril® on their patients are fairly satisfied with the effect. They feel that Keto acid has many good features, such as ability to reduce the absorption of organic phosphates in the body, to absorb excessive NH<sub>2</sub> in the body, and to enhance the absorption of the high-quality protein of the body. Ketosteril® is, at present, the only drug recognised as having an effect on the control of renal failure. The quality and price are basically acceptable to the market in comparison with the high price of dialysis treatment. In other words, Ketosteril®, as the main competitor of Aminess® in China, has achieved first-mover advantage through its social impactedness and product information impactedness.

As claimed by the producer, the oral Tablet which can help to control chronic renal failure, not only brings down the total cost of the treatment, but also improves the living quality of the patients' lives. It will be widely accepted and welcomed by physicians and patients if its effectiveness is proven (see Table 7.16).

As indicated by Table 7.17, Chinese patients are very sensitive to price. Though high quality is a strong determinant in the purchase decision in China, low price is an even stronger one. The foreign company must understand that although patients have a rigid price range, they are willing to spend a little more for a higher quality product within that price range.

### 7.4.5 Product Promotion Survey

Table 7.18 Available medicine promotion channel in China

	No. of hospitals	In percentage
Promotion from medical company representatives	17	85%
Foreign publications	16	80%
Domestic publications	17	85%
Advertisement	9	45%
Others	2	10%

<sup>78</sup> Beijing Fresenius Pharmaceutical Co. Ltd.: Beijing Fresenius is a joint venture established by the German Company Fresenius and Beijing Pharmaceutical Factory in June 1994. The company, with a total investment of US\$25 million and a floor area of 2,660 sm., is mainly engaged in the production of infusions, compound amino acid injections and fat emulsion injections. The company adopts Fresenius' advanced technology and imports inspection instruments from Italy, Japan, Germany and the US.

Table 7.19 Available promotion channels for the renal failure treatment medicines

	No. of hospitals	In percentage
Foreign publications	16	80%
Domestic publications	17	85%
Domestic pharmaceutical conferences	13	65%
Information exchange with foreign colleagues	10	50%
Information exchange with domestic colleagues	8	40%
Others	2	10%



Table 7.20 Product information in which the doctors are interested

	No. of hospitals	In percentage
Price		
Free trials		
Detailed instruction of the products including the data of pharmacokinatics	4	20%
All of above	16	80%

Table 7.21 Doctors' preferred methods of contact by medical representatives

	No. of hospitals	In percentage
To make phone calls	1	5%
To send product information by post	11	55%
Personal visit	10	50%
Others	2	10%

Table 7.22 Doctors' preferred methods of follow-up by pharmaceutical companies

	No. of hospitals	In percentage
Regular phone call	1	5%
Regularly sending updated information	15	75%
Regularly visiting in your office	11	55%
Social activities (diner party, etc.)	1	5%
Others	5	25%

The questions in this section are geared towards the investigation of the available promotion channels for Aminess®. The marketing of foreign drugs directly to doctors is critical if a foreign company wishes to establish its products over those of local or foreign competitors. As shown in Table 7.18 Chinese doctors are generally receptive to the introduction of new products by pharmaceutical salespeople, and such information passes quickly through the health care grapevine.

As we can see from Table 7.19, publications are identified as the most popular way to target doctors. Compared with other channels, they are cheaper and more efficient. But further investigation regarding the details of the publications should be conducted.

From our market survey, shown in Table 7.20, we found that most doctors are interested in the price of and detailed instructions for a product. Price factors influence doctors' decisions for their patients, and detailed

instructions for the product are the guideline for the doctor's prescription. Since market competition is becoming fierce, personal visits and mailed information about a product are acceptable to doctors in China. The communication from both sides is enhancing the relationship between doctors and pharmaceutical companies.

As indicated in Table 7.21 and 7.22, telephone calls are the least popular method of business promotion. As we stated in 4.2 that personal contact (Guanxi), is considered to be the most important factor in doing business in China; therefore personalised letter or personal visits are preferred.

#### **7.4.6 Product Distribution Channel and Purchase Decision Making**

Table 7.23 Medicine purchasing channel of the sample hospitals

	No. of hospitals	In percentage
Passively receive from the retailer	0	0
Able to make own choice and order from the retailer/producer	5	25%
Both	12	60%
Other	0	0

Table 7.24 Influential factors for decision-making on medicine purchase

	No. of hospitals	In percentage
Price	11	50%
Quality (Effect)	12	60%
Kickbacks	0	0
Personal relationships with the sales person	0	0
All of above	8	40%

The questions in this section are designed to investigate the potential distribution channel and the most influential factors on purchase decision making. While hospitals and pharmacies still place the bulk of orders for pharmaceuticals, Chinese doctors are beginning to play a bigger role in determining which drugs will be stocked. As hospitals are now responsible for their own profits, they have a far greater interest in what is sold and supplied, and tend to give greater weight to doctors' recommendations of which pharmaceuticals to order. Although previously they could only prescribe those drugs available in their local hospital's pharmacy, Chinese doctors now have greater freedom to prescribe the drugs of their choice.

The trade-off between price and quality is always a very crucial problem to solve when creating the marketing strategies. Achieving a balance between price and quality means providing products at the right quality level that also suit the income level of the consumers.

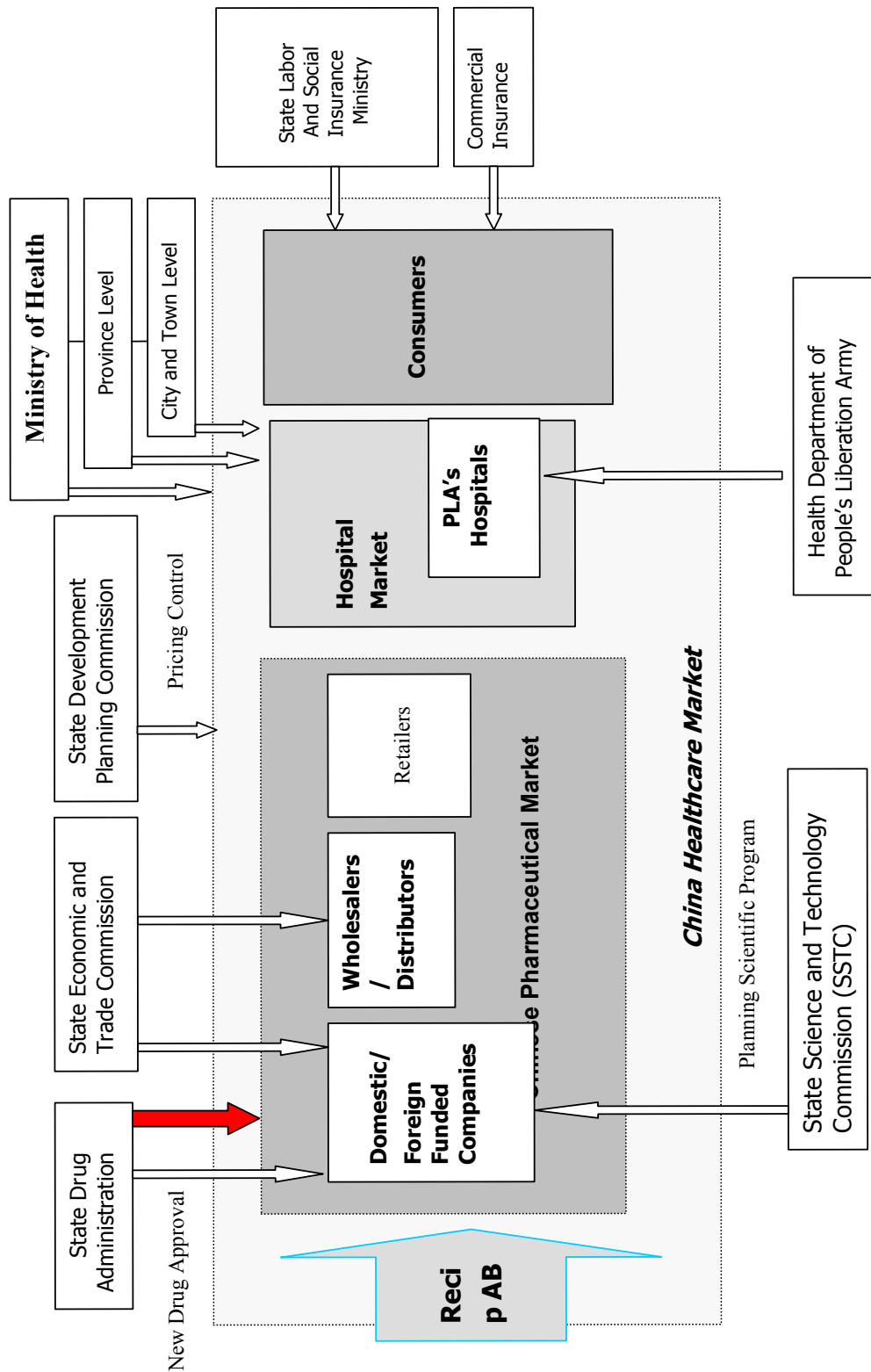
### 7.5 Marketing Strategies for Aminess®

The discussion of marketing strategies for foreign pharmaceutical companies in this section is based on the MNC-government network strategy model of Jansson H. (1999).

#### **7.5.1 Mapping of Government Network**

The relationships between foreign medical companies and the Chinese government are based on the exchanges of material resources, information and communication. A network map of major linkages between the government and MNC is found in Figure 7.2.

Figure 7.2 Mapping of the Chinese government network in healthcare



## **7.5.2 Main Objectives**

As we stated in chapter two, the main objectives for the MNC-government networks are legitimacy and efficiency. Since the pharmaceutical industry is highly regulated, there are many licenses and permission-granting involved in entering the Chinese healthcare/pharmaceutical market. For instance, clinical trials must be done to gather data to support drug registration. Many different authorities have to be contacted in order to get the licenses (see Figure 7.2).

Efficiency can be reached through the MNC-government network. For example, medical companies can influence the government authorities to put their product into the SEDL (State Essential Drug List). Since this list is updated every other year, the earlier the company manages to have their products listed, the more efficient the company will be compared its competitors who is shut outside the list.

## **7.5.3 Strategic Capacity Profiles**

### **7.5.3.1 Authority Specialist**

Since Aminess® is a relatively new product on the Chinese pharmaceutical market, many licenses must be obtained before it can be. These procedures are time-consuming and costly, long-term relationships and a broad contact net are prerequisites of a successful launch. Several government authorities shown in Figure 7.2, such as State Drug Administration, State Economic and Trade Commission, and State Development Planning Commission must be contacted during the launching process. A foreign medical company has to maintain continuous contact with them for the sake of business legitimacy and efficiency.

The degree of linkage specificity in this relationship is high, and switching between authorities is very costly. Although it is profitable to become an authority specialist in the long run, high capital investment at the beginning stage should be noticed.

### **7.5.3.2 Procedure Specialist**

For the common need for a rational and consistent handling of licenses, a procedure specialist is needed, especially the Chinese healthcare and pharmaceutical markets are undergoing a reform. The procedure for applying for certain licences could vary from day to day. Therefore, it is crucial to monitor the pharmaceutical administrative network and adapt to the changes as quickly as possible, to improve the business efficiency and maintain first-mover advantages.

### **7.5.3.3 Intermediary Specialist**

As we stated above, some relationships are very time-consuming and costly to initiate, so it is not always best for a company to set up direct linkages with the authorities by themselves. External organisations could be more cost effective in the case that contact is needed only for a very special purpose. In Recip AB's case, since they are relatively small and new on the Chinese market, it will be easier and cheaper for them to have external professionals handle their contacts with the authorities.

### **7.5.4 Linking Process**

Recip AB's business activity in China is at the establishment stage: a scanning of the market was completed in May 1999 through our market investigation. The company will make their decision based on the information gathered in this thesis. If they finally decide to become involved in the Chinese market, they will enter the next, or preparation phase, in which a suitable person has to be employed to be in charge, and a certain budget has to be established for setting up the necessary contacts.

### **7.5.5 Network Strategy**

#### **7.5.5.1 Web Strategy**

The web strategy refers to how the MNC should relate to the whole market network, including buyers, distributors and competitor. (Jansson, 1999).

Foreign pharmaceutical companies operating in China generally adopt promotional programs similar to those used in other countries, with some modifications. In addition to sales visits, their efforts include seminars, distribution of free samples, and other incentives for doctors at influential hospitals, along with widespread advertising and distribution of promotional literature. A few companies even sponsor Chinese doctors' participation in foreign medical conferences. Some companies also make a point of labelling their products in both Chinese and English. In this way they can cash in on the allure of Western products while ensuring correct usage. The ultimate success of a sales pitch may also depend on good evidence of a particular drug efficacy, such as scientific articles and the results of clinical trials.

Like most physicians around the world, Chinese doctors give primary consideration to a particular drug's efficacy when considering which to prescribe. While Western doctors are apt to consider side effects or dosage requirements, the Chinese are more likely to place price and availability as their next concern. Therefore, foreign drug companies seeking to develop product loyalty in China must ensure that their distributors deliver their products to the sites that have ordered them or that are being targeted for promotions. A hospital that frequently encounters supply disruptions, a common problem in China, will give up ordering the drug and will be a difficult to sign up again. Some joint venture companies have established their own factory-to hospital supply networks to counter this problem, but foreign salespeople may also avoid supply disruptions by forging good relations with local distributors. Once a stable supply is established, sales will usually follow fast.

Local factories, in contrast, spend little on marketing, relying instead on the traditional distribution system and assuming that the huge demand for pharmaceutical products will guarantee sales. They rarely target doctors, preferring to concentrate on the pharmacists and hospital purchasing departments: the people who actually sign the orders.

The distribution system of pharmaceuticals in China is very complex, as shown in Figure 6.4. Specially, foreign medical companies are not allowed to sell their products to the end users without the involvement of a Chinese distributor. So the foreign medical company should establish and maintain a long-term, trust-based relationship with their Chinese distributor. In this relationship, the Chinese distributors contribute expert of the distribution network as well of the business environment in China, while the foreign medical companies provide technological expertise such as an advanced product. In our case, Recip AB is planning to launch Aminess®, a cost-effective medicine for chronic renal diseases, in China. They ought to take an active contact with the central and regional level wholesalers in China to take advantage of their well-developed distribution network, instead of the Hongkong-based distributor they are relying on right now. To do business via Hongkong is an "old fashion" way of doing business in China, not considered to be effective nowadays.

As far as we know, there is only one foreign competitor of Aminess®, Ketosteril® from Fresenius. They have been present on the market for several years, but they are only active in the north of China. They have promoted their products in various ways. So that doctors and patients are well informed and educated. Since Aminess® has basically the same efficacy as Ketosteril, it will be easier for Aminess® to persuade the consumer to accept their product as well. Fresenius has managed to list Ketosteril® on the SEDL, which could be referred to by Recip AB when they apply to put Aminess® on SEDL as well. So the relationship between Recip AB and Fresenius should be both co-operative and competitive.

#### **7.5.5.2 Linkage Strategies**

- *R18: Personal and social linkages.* As explained in our scientific research model, linkages are very important factors to consider in doing business in China, especially the R18, or the personal, social relationship. In China business relationships often start as social relationships. To have good "Guanxi" with the right people is generally considered to be a big advantage. These relation-orientational qualities of business transactions are derived from basic characteristics of Chinese culture, in particular the importance of the family and other relationships. Guanxi is characterised by connections and secure personal ties outside the family or clan. Among Chinese, it is expected that

people who share a common background will instinctively be mutually supportive: People who are from the same place-village, province or region – or who attended the same school, or, better yet, were classmates, or who served in the same organisations are expected to be available to one another (Pye 1985, 293 as referred in Jansson 1994). There are several ways to set up and strengthen relationships in China. The first and most popular way is to increase social interaction by visiting, giving gifts or inviting individuals to important family events and festivals. Second, a person who wants to be introduced or to solicit a favour from another person may use a third person of high social status as an intermediary, thereby opening up a “back door” to that person. A third common strategy to enhance one’s influence over others is face-work. Face is important, as harmony in relations is emphasised and conflicts are seen as socially unacceptable.

- *Product linkage.* Product linkages are also important. The company should not only provide generally high quality products, but also adapt to the host country’s rules and regulations. Pharmaceuticals are highly regulated products all over the world. The norms and regulations practised in China are very different from those of Western countries.

### **7.5.5.3 Competitive Strategies**

The key issue of competitive strategy in China is making an efficient trade-off between quality and price for the specific types of markets. A “reliable” product in such markets is basically one of fairly low cost and of a quality about the same as the one that the market demands. But since medicines are special merchandise used for preventing and curing diseases and safeguarding health. The quality is the most crucial factor in purchasing decisions. As it shows in our market survey, price becomes the second factor, next to quality. People have to borrow money to buy the medicines that could be possibly save their lives. It is estimated that in China 30% of people who live below the official poverty line became poor because of a serious illness.

### **7.5.5.4 First, Second -mover Advantages**

A first-mover advantage is a crucial part of the strategy to shut out competitors through efficient mix and sequences of linkages over time. China is a developing market with many opportunities for foreign investors. The foreign medical company that can correctly niche their products and meets the market demand in a competitive way can obtain first-mover advantage.

In our case, Fresenius has got the first-mover advantage by its earlier entry into the Chinese market, and its well-established network of contact with government authorities and the distributors. We recommend that Recip AB takes the second mover advantage, e.g. to reduce transaction cost by saving the information costs and enforcement costs.

## **8. Conclusion and Recommendations**

Our conclusion and recommendations drawn from the research findings presented in the previous chapter will be put forward in this chapter. Furthermore, according to the requirements of Recip AB, we also present



some recommendations for future marketing strategies for Aminess® in China. .

## 8.1 Conclusion

### **8.1.1 Research Area 1: Institutional Analysis**

The purpose of the institutional analysis is to create a guideline for foreign pharmaceutical companies to understand the basic economical, political, social & cultural and technological conditions in China.

#### **8.1.1.1 Economic Factors**

China has experienced significant economic growth during the last decade, due in large part to the continued implementation of economic reforms started 15 years ago.

Currently, China's economy is weathering the global financial crisis well, but China still faces large challenges in reforming its public administration, state-owned enterprises and weak banking system. As more and more state-owned enterprises went bankrupt, the urban unemployment rate is calculated at around 20%. A lack of proper social insurance and a high unemployment rate will lead to social turmoil, which is considered to be the most crucial potential crisis in China.

It is important not to lose sight of the positive aspects of the economic reforms. They have been responsible for improvements in socioeconomic conditions, education, nutrition, housing, sanitation, and clean water. These have benefited hundreds of millions of people across the country. There is much else which is good: access to basic services is still better than many other countries. Village level healthcare, for instance, is within the reach of almost everyone. There is a safety net for those living below the poverty line, which entitles them to reimbursement of some healthcare costs. A major program to increase township hospital utilisation rates through staff upgrading programs has been introduced nation-wide. State subsidies for health facilities and prevention are targeted to the poorest areas. In fact, the health status indicators of the Chinese population in both rural and urban areas have been improved since 1981. Life expectancy has actually risen from 68 years in 1982 to 70 years in 1995.<sup>79</sup>

#### **8.1.1.2 Political /Legal factors**

An outstanding feature of the Chinese trade regime is that not all existing rules have been published or translated. Some laws are derived internally, which means that they can not be officially accessible. Many internal regulations are not published at all. There have also been plenty of local variations, not consequently interpreted.

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<sup>79</sup> Hesketh, T., British medical journal, Vol.314, Issue 7094, 1997

The Chinese government has a clear desire to improve its image to the rest of the world. It is well aware of the importance of attracting foreign capital to China and improving the investment climate. The general trend in China at present is the decentralisation of decision-making and of the legal interpretation.

The ongoing government restructuring separates the government administration function from the management of state-owned enterprises. This adds to the efficiency of state-owned enterprises, and creates new chances to survive in the market economy.

### **8.1.1.3 Social /Cultural factors**

There were main influences in the development of the Chinese culture. The first one was Confucius, who set up a hierarchical order for the operation of Chinese society for 5000 years. Another was Mao Tse-tung, who initiated the Culture Revolution in the early 60s and destroyed the whole civilisation of the Chinese culture. Trust among the people reached its lowest point during this period, and has not fully recovered until now.

Chinese business culture differs from Western business culture in that "Guanxi" and "face" receive much more emphasis. Lack of personal trust, low information transparency and availability, as well as reciprocity within social relations as the norm, are the reasons behind the importance of interpersonal relationships in the Chinese business culture.

### **8.1.1.4 Technological Factors**

China's presence is massive, imposing, and impossible to ignore. It has the world's largest population, and its oldest culture. China will play a huge role in shaping the emerging scientific advances of the 21st century. Always strong in mathematics, theoretical physics, and observational astronomy, whose practice goes back more than a thousand years, China today is making impressive strides in newer disciplines like molecular biology and computer software. But Chinese science is also undergoing its greatest upheaval in 20 years.

However, most research laboratories are to be turned into business centres dedicated to spurring economic growth. Scientific progress is hindered by an ingrown and cumbersome bureaucracy, lack of funds, the remnants of a massive brain drain of expatriate scientists, and the still-festering conflict over human rights.<sup>80</sup>

## **8.1.2 Research Area 2: Analysis of Chinese Healthcare Market**

Recent healthcare reform influences to great extent the marketing involvement of pharmaceutical companies in China. So new companies like Recip AB faces some potential difficulties.

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<sup>80</sup> Fisher, Arthur, Popular *Science*, Vol. 249 Issue 2, p36, 1996

### **8.1.2.1 The Analysis of Chinese Healthcare Reform**

The medical system reform that began last year in China aims to provide a fair competitive environment for State-owned and foreign-funded medical enterprises. The ongoing reform campaign, through which medical services are intended to be made more available to people, obliges individuals and their work units to shoulder medical expenses jointly, instead of leaving the State to pick up the whole bill.

A national reimbursement list of medicines will be issued in the near future.<sup>81</sup> A committee composed of specialists and scholars from medical fields nation-wide will make out the list, following a careful and scientific assessment process. The reform has made people more cautious in choosing medicines. When buying regular medicines, people tend to favour products manufactured by State enterprises, which have nearly the same quality but much lower prices than those that are imported or made by foreign-funded enterprises.

Before the reform, some foreign-funded manufacturers sold their products at very high prices with the backing of large-scale promotion campaigns. Domestically made medicines with the same chemical composition and effect sold more cheaply. The medical reform will force foreign-funded medical enterprises to lower their prices according to production costs and medical efficacy.

Meanwhile, the industry authority welcomes foreign medical businesses introducing new products with original curative effects to the Chinese market. The Chinese Government will not impose restrictions on the import of some foreign-made medicines.<sup>82</sup> From this perspective, Aminess® still has many opportunities in China since the Chinese government encourages one competition mechanism: the existence of two or three high-quality medical products in the same therapeutic area.

### **8.1.2.2 The Potential of Chinese Commercial Medical Insurance Market**

China's commercial medical insurance sector has been given a strong boost with the adoption of the State basic medical system at the end of last year. The medical reform, which aims at covering basic medical treatment for all urban and township workers nation-wide, had a positive influence on commercial medical insurance by greatly promoting its development.

Sales of new policies covering serious diseases and term insurance snowballed during the first two months this year in several regional areas.<sup>83</sup> The main reason for the increase is that the new medical plan sets tighter controls on what can and cannot be reimbursed. People began to realise they must turn to commercial insurance if they have special medical needs.

The change in people's mentality is very important for promoting the insurance business, because there are some well-off people who are not satisfied with the quality and efficiency of basic medical insurance. Commercial insurers meet their individual needs.<sup>84</sup>

### **8.1.2.3 China's Drug Pricing Reform**

The purpose of regulating medicine prices in China is to pave the way for reform of the country's health-care system. The regulations are aimed at ensuring that major kinds of medicines will remain affordable to ordinary Chinese people even as government subsidies in health-care are

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<sup>81</sup> Ye Yongjian, Business Weekly, ChinaDaily, 19990411

<sup>82</sup> Ding Jianhua, interviewee, Department of Drug Registration in State Drug Administration, 19990520

<sup>83</sup> Wang Ying, Business Weekly, ChinaDaily, 1999530

<sup>84</sup> Ibid,

significantly reduced. Current medicine prices have been pushed up to high levels by kickbacks, which are common practice throughout the health sector. The government will reset prices for commonly used medicines according to their current production and distribution costs.<sup>85</sup>

In the future, prices will be an important factor in decisions on import licenses. If prices are found to be too high, the medicines may not be imported into China. The regulations will be imposed regardless of the ownership structure of the medicine manufacturers. Producers and trading firms will suffer severe punishment, including stiff fines or even closure, if they are caught breaking the new rules on pricing. The new regulation will allow bigger profit margins for medicines that demand high technical inputs. This provision aims to spur domestic medical manufacturers to increase their competitiveness by raising investment in new and high-tech medicines

### **8.1.3 Research Area 3: Analysis of Chinese Pharmaceutical Market**

The purpose of an analysis of the Chinese pharmaceutical market is to provide a general picture of it, and to help foreign medical companies to understand the new regulations and rules in pharmaceutical sector. This is an important issue for Recip AB to consider before entering the Chinese drug market.

#### **8.1.3.1 The Future of the Chinese Pharmaceutical Market**

China's pharmaceutical and medical products markets continue to show enormous promise for foreign companies. With a population nearing 1.3 billion people and an aggressive modernisation effort throughout the country, China will continue to be an important market.

There are over 67,000 hospitals in China serving the county, provincial, military and central governments. Of these, over 13,000 use Western drugs and medical equipment which have traditionally been supplied through state-run medical product distributors.<sup>86</sup> The state-run distribution system is under evaluation in China and will likely have increased freedom to operate autonomously in the near future. Domestic pharmaceutical companies are allowed to sell their drugs directly to hospitals, as can foreign companies that have formed a joint venture with a Chinese partner. Foreign firms importing drugs into China must use a State Trading Entity (STE) and cannot deal directly with hospital administrators.

While China offers vast opportunities for global pharmaceutical companies in search of new opportunities, China's business environment poses increasing challenges over the years. The restructuring of the pharmaceutical administration authorities and the establishment of a new state pharmaceutical control body will inevitably have great impact on and implications for the industry.

Apart from facing the prospect of limits on price margins, pharmaceutical companies now have to surmount the potentially large barrier of being included on the Essential Drugs List and the Reimbursable Drugs List. Moves toward the creation of an OTC drug designation, developments concerning intellectual property protection, product registration as well as a number of new pharmaceutical regulations to be implemented at both central and local levels all stand to have a dramatic impact on the sector overall.

From our analysis of Chinese pharmaceutical market, its speed of development may decline somewhat in 1999. The basic demand for the pharmaceuticals has not changed much due to the influence of macro-economics policy. However, the generic drug market will have more potential. We can demonstrate this from the following reasons:

- China strengthens the macro regulation and control for the structure of medical industry

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<sup>85</sup> Ibid,

<sup>86</sup> *China Medical Market Report* The Golden Triangle Organization, 1998

- The reform of Medical insurance system certainly limits the use of import medicine and expensive joint venture's medicines. At same quality but cheaper generic drug will be more attractive to the Chinese consumers.
- The improvement and launch of the OTC drug system undoubtedly create a good opportunity in Chinese pharmaceutical market.
- The condition of domestic enterprises will be still tough. Fierce competition will result in eliminating the unqualified manufacturers, and the excellent ones are successful. Merger and restructuring is under way.

### ***8.1.3.2 The Implication of the New Regulations in the Pharmaceutical Area***

With the increasing growth of the Chinese pharmaceutical market, the government realised the importance of supervision of pharmaceutical market. They put forward several regulations and reform measures over the past couple of years, especially in the recent period of healthcare reform. The most influential issues for the foreign companies are the decree of Administration Method of Import Pharmaceuticals recently promulgated by the State Drug Administration, and the launch of a new version of registration certificate for import pharmaceuticals.

The Chinese pharmaceutical authority will set up a sound drug supervision mechanism, suitable for a socialist market economy, in three to five years. The establishment of the SDA is one of the major steps in the country's institutional streamlining. It is composed of the former State Pharmaceutical Administration, the drug administration bureau of the Ministry of Health and the supervision department of the State Administration of Traditional Chinese Medicine. The Ministry of Health has also transferred its pharmaceutical testing institutes to the SDA to assist it in law enforcement.

These regulations and measures lie in the fact that the Chinese pharmaceutical authority will reinforce the administration of pharmaceutical market in the future. At the same time, we can see that the Chinese pharmaceutical authority has strong confidence in the healthy development of Chinese pharmaceutical market.

### **8.1.4 Research Area 4: Case Study for Aminess®**

China is a very large and complex market that differs in many aspects from Western markets. To succeed in China, Recip AB must therefore consider the Chinese institutional settings. The Chinese culture is, to a great extent, influenced by the need for Guanxi (relationship), and Recip AB should acknowledge that a stronger network of personal and social relationships would lead to smoother development of business in the country. The legal system in China is characterised by a lack of transparency and inconsistent enforcement, and is in need of modification in order to keep up the pace of the economic growth. However, as China has a tradition of being ruled by man and not by law it is however hard to implement new rules and regulations. Recip AB is going to be affected by the fact that the intellectual property right law has not yet been fully enforced in practice.

The present market of chronic renal failure is very competitive but with huge potential. The available treatment is comparatively expensive, and thus not affordable to the ordinary people. The main characteristic of the healthcare reform is "low level and wide coverage" and the commercial medical insurance market is far from mature, which lead to the problem that most patients with renal failure can not afford to undergo renal transplant or even continuous haemodialysing. These factors provide Recip AB with a good opportunity to market their product Aminess, which is proven to prolong the period of conservative treatment and to even be helpful during haemodialysis. The major competitor of Recip AB in this market is Beijing Fesennius, a China-German joint venture pharmaceutical company, which has marketed a similar product, called Ketosteril, starting about three years ago. They have achieved first-mover advantages through their well-developed networks in China and excellent quality of their products. Recip AB, in this case, has to find it own product niche in the market by setting up similar networks and providing the customer with a better mix of quality and price.

## 8.2 Recommendations

We argue that the Chinese healthcare reform and new regulation for the medicine pricing to some extent push forward the healthy development of the healthcare market. On the other hand, it also protects patients nation-wide and reduces the heavy burden of the Chinese government for healthcare expenditures. Therefore, the situation is unfavourable to Recip AB; particularly, the price of Aminess® seems a little higher than the acceptable level of Chinese consumption (Table 7.17). The pricing strategy for Recip AB becomes the main issue in entering into the Chinese market. Meanwhile, we suggest that Recip AB continues to keep an eye on the further development of Chinese healthcare reform.

At the same time, we argued that the implementation of new pharmaceutical regulations and healthcare reforms to some extent affects the determination of Recip AB's involvement in the Chinese pharmaceutical market. However, the key issue is to obtain the most updated information and follow the market development. The new version of Administration Method of Import Medicines will be Recip AB's focus in the near future. A good preparation of documents for the application of import registration in China will be the crucial first step.

Recip AB, as a small Swedish pharmaceutical company, should always have in mind that social linkage is one of the most important linkages, and can significantly improve the company's efficiency in doing business in China. A representative office is highly recommended for the company to initiate business in the early stage. The main function of the representative office is to collect relevant information, scan the market, establish and maintain social and business relationships, a must in doing business in China.

Product linkages are also very crucial; all the rules and regulations concerning the products practised in the host country should be considered and fulfilled. For a simple example, according to the new rules after the healthcare reform, the highest value for reimbursement should not be over 70 yuan per prescription.<sup>87</sup> Therefore, it is important for the drug manufacturer to have this in mind and change their product package accordingly. Otherwise, their products will seldom be prescribed. Fresenius has packed Ketosteril® into 100 Tablets per package with ten tablets per aluminium plate.

As we mentioned above, the pricing strategy is very critical when entering the Chinese market. Let us take Ketosteril® as an example again: the excellent efficacy has been widely recognised by the doctors we approached. Although the price is considered relatively high compared to our market survey result, according to the doctors we interviewed, the patients normally accepted the prescription without any objections. (Ketosteril® is sold at 380 yuan /100 Tablets, but the market is anticipating a price range at 50-100 yuan /100 Tablets.) In this case, we can say that the competitive strategy for the pharmaceutical products in China is generally different from other consumer goods, in that the price is secondary to product quality. As for the pricing strategy, the competitor price could be used as a reference.

Fresenius entered the Chinese market and started marketing Ketosteril® their oral Tablets for controlling chronic renal failure, in 1994. By establishing wide relationships with the government, Fresenius has successfully managed to put Ketosteril® into SEDL, which is updated once every two years. This means that Fresenius has at least a two-year monopoly in the market. By setting up good

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<sup>87</sup> Lin Bogeng, Physician of Xiamen Zhongshan Hospital

relations with doctors and providing them with the most updated information in the relevant area, Fresenius has achieved information and product impactedness. According to our market survey, Ketosteril® is widely accepted, at least in North China, as a main supplement of amino acid. As for the product quality, there is no qualified domestic competitor, which can compare with Ketosteril®. This leads to a significant competitive advantage for Fresenius in sustaining its position as a market-leader.

Recip AB, which has to face the reality of this market situation, must adopt a second-mover advantage. This means that Recip AB has to find a way to break through the social and information impactedness Fresenius has built up over time. The most important task for Recip AB is to lobby the specialists at Ministry of Health to put Aminess® into the SEDL, in order to compete with Ketosteril®. Aminess® has different composition features from Ketosteril®, which should be specified to the doctors when doing promotion. What the distinctive characteristic of Aminess®, compared to Ketosteril®, is might be the most frequently asked question. As for the price and quality, Ketosteril® could be used as a reference. Superior quality and cheaper prices will definitely bring Recip AB competitive advantages.

### 8.3 Final remarks

In this report we have tried to analyse the current situation of the Chinese healthcare and pharmaceutical market, as well as the current and desirable future situation of Recip AB. The pharmaceutical market in China opens completely new dimensions for a company like Recip AB. The demand for Recip AB's product Aminess® has potential. But Chinese healthcare reform is under way, and new supervision mechanisms of pharmaceutical market are improving. We strongly encourage the company to begin activities in China but as a start, in a cost efficient way. A market survey in China will provide the company with a good start if it can realise its own weaknesses and the different threats that new market presents. Business activities in China have been characterised, by all of our respondents, as extremely time consuming, expensive and relation based, no matter what products they sell. The best strategy for Recip AB is to be aware of the significant factors that affect Chinese business, and remain patient and strong on the market.

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## APPENDIX

### *Appendix 1. The 30Rs of relationship marketing (Gummesson, 1995)*

- Classic market relationships

*R1: The classic dyad: The relationship between the supplier and the customer.*

This is the parent relationship of marketing, the ultimate exchange of value which constitutes the basis of business.

*R2: The classic triad: The drama of the customer-supplier-competitor triangle.*

Competition is a central ingredient of the market economy. In the competition there are relationships between three parties: between the customer and the current supplier, between the customer and the supplier's competitors, and between competitors.

*R3: The classic multidimensional network: physical distribution. The physical distribution*

The physical distribution consists of a network of relationships which is sometimes totally decisive for marketing success.

- Non-classic market relationships

*R4: Relationships via full-time marketers (FTMs) and part-time marketers (PTMs)*

Those who work in marketing and sales departments, FTMs are professional relationship-makers. All others, who perform other main functions but yet influence customer relationships directly or indirectly, are PTMs. There are also contributing FTMs and PTMs outside the organization.

*R5: The service encounter: interaction between the customer and front line personnel*

Production and delivery of services involve the customer in an interactive relationship with the service provider's personnel, often referred to as the moment of truth.

*R6: The many-headed customer and the many-headed supplier*

Marketing to other organizations - industrial marketing or business marketing - often means contacts between many individuals from the supplier's and the customer's organization.

*R7: The relationship to customer's customer*

A condition for success is often the understanding of the customer's customer, and what suppliers can do to help their customers become successful.

*R8: The mental and physical proximity to customers vs. the distant relationship*

In mass marketing, the closeness to the customer is lost and the relationship becomes distant, based on surveys, statistics and written reports.

*R9: The relationship to the dissatisfied customer*

The dissatisfied customer perceives a special type of relationship, more intense than the normal situation, and often badly managed by the provider. The way of handling a complaint - the recovery - can determine the quality of the future relationship.

*R10: The monopoly relationship: the customer or supplier as prisoner*

When competition is inhibited, the customer may be at the mercy of the provider - or the other way around. One of them becomes prisoner.

*R11: The customer as 'member'*

In order to create a long term sustaining relationship, it has become increasingly frequent to enlist customers as members of various marketing programs.

*R12: IT: the electronic relationship*

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An important volume of marketing today takes place through network based on IT. This volume is expected to grow in significance.

*R13: Para-social relationships: relationships to symbols and objects*

Relationships do not only exist to people and physical phenomena, but also to mental images and symbols such as brand names and corporate identities.

*R14: The non-commercial relationship*

This is a relationship between the public sector and citizens / customers, but it also includes voluntary organizations and other activities outside of the profit-based or monetary economy, such as those performed in families.

*R15: The green relationship*

The environmental and health issues have slowly but gradually increased in importance and are creating a new type of customer relationship through legislation, the voice of opinion leading consumers, changing behaviour of consumers and an extension of the customer-supplier relationship to encompass a recycling process.

*R16: The law-based relationship*

A relationship to a customer is sometimes founded primarily on legal contracts and the threat of litigation.

*R17: The criminal network*

Organized crime is built on tight and often impermeable networks guided by an illegal business mission. They exist around the world and are apparently growing but are not observed in marketing theory. These networks can disturb the functioning of a whole market or industry.

- Mega relationship

*R18: Personal and social networks*

The personal and social networks often determine the business networks. In some cultures even, business is solely conducted between friends and friend-of-friends.

*R19: Mega - marketing*

The real customer is not always found in the marketplace. In certain instances, relationship must be sought with governments, legislators, influential individuals and others in order to make marketing feasible on an operational level.

*R20: Alliance changes the market mechanisms*

Alliances mean closer relationships and collaboration between companies. Thus competition is partly curbed but collaboration is necessary to make the market economy work.

*R21: The knowledge relationship*

Knowledge can be the most strategic and critical resource and 'knowledge acquisition' is often the rationale for alliances.

*R22: Mega alliances*

EU (The European Union) and NAFTA (The North America Free Trade Agreement) are example of alliance above the single company and industry. They exist on government and supranational levels.

*R23: The mass media relationship*

The media can be supportive or damaging to marketing and they are particularly influential in forming public opinion. The way of handling the media relationships is often crucial for success or failure.

- Nano relationships

*R24: Market mechanisms are brought inside the company*

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By introducing profit centres in an organisation, a market inside the company is created and internal as well as external relationships of a new kind emerge.

*R25: Inter-functional and inter-hierarchical dependency:*

The relationship between internal customers and internal suppliers. The dependency between the different tiers and departments in a company is seen as a process consisting of relationships between internal customers and internal providers.

*R26: Quality providing a relationship between operations management and marketing*

The modern quality concept has built a bridge between design, manufacturing and other technology-based activities and marketing. It considers the company's internal relationships as well as its relationships to the customers.

*R27: Internal marketing: Relationships with the employee market*

Internal marketing can be seen as part of relationship marketing as it gives indirect and necessary support to the relationships with external customers.

*R28: The two-dimensional matrix relationship*

Organisational matrices are frequent in large corporations, above all in the relationships between product management and sales.

*R29: The relationships to external providers of marketing service*

External providers reinforce the marketing function by supplying a series of services, such as those offered by advertising agencies and market research institutes, but also in the area of sales and distribution.

*R30: The owner and financier relationship*

Owners and other financiers can sometimes determine the conditions under which marketing works. The relationship to them may influence the marketing strategy.

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*Appendix 2. Hospitals Interviewed*

***Tianjin***

The General Hospital of Tianjin Armed Police

***Xiamen***

Xiamen No.1 Hospital  
Xiamen No.174 Hospital  
Xiamen No.2 Hospital  
Xiamen Zhongshan Hospital

***Dalian***

The No.1 Hospital attached to Dalian Medical College  
The No.2 Hospital attached to Dalian Medical College

***Nanjing***

Nanjing Gulou Hospital  
The General Army Hospital of Nanjing Area Command  
The People's Hospital of Jiangsu Province

***Shanghai***

Shanghai Changhai Hospital

***Beijing***

Beijing Fuxing Hospital  
Beijing Hospital  
Beijing No.307 Hospital  
Beijing Red Cross Chaoyang Hospital  
The General Army Hospital of Beijing Area Command  
The General Hospital of the Ministry of Electricity  
The General Hospital of the Ministry of Post and Telecommunications  
The First Affiliated Hospital of Beijing Medical University  
The Third Affiliated Hospital of Beijing Medical University

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*Appendix 3. Market Survey*

The purpose of this survey is to identify the current situation for the treatment of chronic renal failure. It only takes you about 10 to 15 minutes to complete. The survey will be used for experimental research purpose. If you have any further questions, comments or would like to know more information about this research, please don't hesitate to contact with us. Our email addresses are [hqus3191@hqus.gu.se](mailto:hqus3191@hqus.gu.se) and [hqus5009@hqus.gu.se](mailto:hqus5009@hqus.gu.se).

In the following questions, please tick  in the box to choose one or more appropriate answers for each question. You are welcome to give comments wherever you think is proper. Thank you very much for your kind cooperation

Demographics	Age.	Department:
	Gender:	Hospital:
	Occupation:	Location:

• ***Questions regarding general status of the hospital:***

- How many hospital beds are there in your hospital?
  - Less than 300,
  - 301-600
  - 601 –800
  - More than 801
- Which rank does your hospital belong to according to China national hospital classification standard?
  - A Class
  - B Class
  - C Class
- How many dialyzers or dialysis machines are there in your hospital?
  - Less than 5
  - 6 - 25
  - 26 --50
  - More than 51
- How many patients coming for haemodialysis treatment are there in your hospital per day?
  - Less than 20
  - 21 – 40
  - 41 - 60
  - More than 60

• ***Questions regarding patients payment***

- How do your patients pay their medical bills?
  - By themselves  
10% 20% 30% 40%  50% 60% 70% 80% 90% 100%
  - By the government  
10% 20% 30% 40%  50% 60% 70% 80% 90% 100%
  - By social medical insurance



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10% 20% 30% 40% 50% 60% 70% 80% 90% 100%

By commercial insurance

10% 20% 30% 40% 50% 60% 70% 80% 90% 100%

2. Is your hospital one of the appointed hospitals for any insurance programs or medical reimbursement?

Yes

No

3. How is the healthcare reform and price-control affecting the patients with renal insufficiency

The patient will be more affordable than before

The patient will be less affordable than before

No difference

Other \_\_\_\_\_

4. How much does it cost for haemodialysis treatment per time at your hospital now?

Less than 200 Kr

201- 400 Kr

401- 600 Kr

More than 601 Kr

5. What do you think about the future trend of the price of haemodialysis treatment?

More expensive

Become cheaper

No change

Other \_\_\_\_\_

• *Questions regarding the treatment of chronic renal insufficiency*

1. Which treatment is usually taken in your hospital if the patients are diagnosed to have chronic renal insufficiency?

Haemodialysis

Peritoneal dialysis

Other treatments \_\_\_\_\_

2. How often do patients with renal insufficiency and uremia need to undergo hemodialysis per week?

Once

Twice

Three times or over

Up to the degree of disease \_\_\_\_\_

3. As for the malnutrition problem caused by low protein diet in conservative treatment, what do you usually recommend to your patients?

To supplement essential amino acids

To adopt the treatment of Traditional Chinese Medicine

Other recommendations \_\_\_\_\_

4. Which way do you think is the best to improve malnutrition for the dialyzing patients?

To infuse the solution of amino acid

To take oral Tablets of essential amino acids in combination with low protein diet

To regulate the reasonable structure of diet

Others \_\_\_\_\_

• *Questions regarding medicines*

1. As far as your know, are there are any oral Tablets of amino acid in Chinese market, which can help patients to improve the malnutrition that resulted from low-protein diet, and to reduce the frequency of haemodialysis?  
 No  
 Yes, please specify the name of product, and place of origin \_\_\_\_\_
2. If such Tablets were available, would you like to recommend your patient to take such Tablets to avoid malnutrition?  
 Yes  
 No  
 Unnecessary
3. What do you think is the appropriate and acceptable price of the oral Tablets of amino acids for the patients in the following different groups? If the Tablets can supplement human essential amino acid and avoid malnutrition after taking low-protein diet as well as reduce one-third cost of haemodialysis treatments. For instance, if the patient need to take 15-20 Tablets per day

***Group 1: Self-payment patient***

- Less than 50 SEK/ 100 Tablets
- 51 – 80 SEK / 100 Tablets
- 81-120 SEK / 100 Tablets
- More than 120 SEK/ 100 Tablets, please specify \_\_\_\_\_SEK/100 Tablets

***Group 2: Medical Payment covered by the social insurance***

- Less than 80 SEK/ 100 Tablets
- 81- 120 SEK / 100 Tablets
- 121- 150 SEK / 100 Tablets
- More than 150 SEK/ 100 Tablets, please specify \_\_\_\_\_ SEK/100 Tablets

***Group 3: Medical payment covered by a commercial insurance***

- Less than100 SEK/ 100 Tablets
- 101 – 150 SEK / 100 Tablets
- 151-200 SEK / 100 Tablets
- More than 200 SEK/ 100 Tablets, please specify \_\_\_\_\_SEK/100 Tablets

• *Questions regarding promotion*

1. How do you reach the most updated information regarding to the medicines?  
 Promotion from medical company representatives  
 Publications  
 Advertisement  
 Others \_\_\_\_\_
2. In which way are you informed about the development of the renal failure treatment?  
 Publications  
 Conferences  
 Information exchange with colleagues  
 Others \_\_\_\_\_

Graduate Business School  
School of Economics and Commercial Law  
Gothenburg University

3. What kind of information is of your greatest interest to obtain from the pharmaceutical company representative?

- Price
- Free trials
- Detailed instruction of the products including the data of pharmacokinatics
- All of above

4. What is your preferable way when the medical representatives contact you for the first time?

- To make phone calls
- To send product information by post
- Personal visit
- Others \_\_\_\_\_

5. Which way do you like to be followed-up by the pharmaceutical company?

- Regular phone call
- Regularly sending updated information about the products
- Regularly visiting in your office
- Social contacts and activities
- Others \_\_\_\_\_

• *Questions regarding distribution channels*

1. How do your hospital purchase the medicines?

- Passively receive from the retailer
- Able to make own choice and order from the retailer/producer
- Both
- Other \_\_\_\_\_

2. Which factor do you think is the most influential for your decision-making on medicine purchase?

- Price
- Quality (Effect)
- Kickbacks
- Personal relationships with the sales person
- All of above



**Interview questions for SDA (State Drug Administration)**

1. What is the current registration policy regarding import medicines?
2. Is clinical trial still a prerequisite for all import medicines?
3. If clinical trials are needed, what is the procedure?
4. What is the difference between the administrative protection from SDA and the patent protection?
5. What kind of co-operation do we have with the FDA now?
6. To what extent are we going to adapt to the international Good Clinical Practices?

**Interviewing questions in SETC (State Economics and Trade Commission)**

1. Are there any new policies concerning foreign investment in pharmaceutical sector in China?
2. How are the pharmaceutical wholesalers and retailers going to restructure this year?
3. What is the recent structure of China Pharmaceutical Group after the merging of four companies affiliated to State Pharmaceutical Administration?
4. What is the recent situation of Chinese Pharmaceutical industry?
5. What is the basic goal of the Chinese pharmaceutical industry in the near future?

**Interview question for Ministry of Health**

1. What is the driving force behind the health care reform?
2. How does the new health care policy work? What are the main difficulties in enforcing the new healthcare policy?
3. How many people are covered under the new healthcare system? What will happen to those that are not covered?
4. How would the healthcare infrastructure be rationalised; for instance, the big hospitals are overloaded while the medium and small hospitals in the big cities have not been fully utilised?
5. According to the new healthcare policy, the coverage of social insurance should be based on the regional annual average income. How is this figure calculated?

**Interviewing question for commercial insurance company**

1. What is the current policy of your company regarding medical insurance?
2. How may customers subscribe to medical insurance with your company?
3. What are their professional and income characteristics?