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# Healthcare reform in mainland China: The relationship of healthcare reform and economic development in Chinese rural and urban areas

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**Healthcare reform in mainland China: The relationship of healthcare reform and  
economic development in Chinese rural and urban areas**

by

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in partial fulfillment of the requirements for the degree of  
**MASTER OF ARTS**

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## ABSTRACT

A healthcare system is a major part of any social system that plays a vital role in both developed and developing countries. It is the system that supports our health, environment, life expectancy, and hygiene. A successful healthcare system can bring positive impact to society. For the last few decades, most developed countries have had an organized healthcare system to provide sufficient medical resources to patients. This helps to increase life expectancy and improve hygiene. On the other hand, a better healthcare system also brings negative consequences for the society because an aging population becomes a topic of controversy around the world. Mainland China, the most populous country in the world, has gradually become a superpower in Asia. The Chinese government invests a large amount of its financial resources for economic development, often neglecting the healthcare system. This makes healthcare a controversial topic in Asia. The Chinese healthcare system received criticisms for failing to improve the quality of healthcare services and professionalism in the field during the healthcare reform of the 1990s. The early healthcare reforms and local healthcare insurance schemes in the 1990s supported patients and workers from several provinces, but the gap between urban and rural areas was widened after the 1990s. The outbreak of SARS in 2003 tested the effectiveness of the Chinese healthcare system at the start of millennium. The system was unable to maintain equal access among those in the upper, middle, and working classes in the social structure. The results of healthcare reform in the 1990s and early 2000s demonstrated that the system is unable to support its citizens. Thus, it is important to re-evaluate the healthcare system and public policy in mainland China.

## CHAPTER 1

### OVERVIEW/INTRODUCTION

The quality of healthcare is a primary concern for both developed and developing countries around the world, but it is especially critical for most of the Third World countries and for mainland China, Vietnam, Russia, and many others. The quality of healthcare is also an indicator of whether the country is qualified to provide sufficient resources for its citizens. Nevertheless, the healthcare system is always associated with politics, economics, and the humanities. In fact, people do not realize the important relationships among these subjects. With the intertwining relationship of politics, economics, and humanities, the arguments concerning healthcare become more complicated and controversial.

Mainland China, a powerful developing country, is facing the challenges of changing life expectancy, the one child policy, and an aging population. With better healthcare services, people have longer life expectancy, which means that the elderly are more likely to become a burden for the younger generation. This is because their children will be responsible for supplying their living expenses and healthcare payments. Thus, it is important to examine the pros and cons of providing a better healthcare system. Nevertheless, the Chinese healthcare system was subject to criticism for many years when SARS (*Severe acute respiratory syndrome*) and H1N1 became pandemics in mainland China (Qiu, 2003).

At its worst, the Chinese healthcare system was associated with chaotic management, inexperienced medical staffing, and poor financial investments by the

Chinese national government. A healthcare reform is necessary in the current Chinese society. The citizens of China are demanding a higher level of healthcare service, a service which supports members of all social classes and offers equal access to healthcare facilities. The examples of SARS and H1N1 disease demonstrate the inadaptability of the Chinese healthcare system. When these diseases attacked the country, the citizens were not able to receive treatments. The breakouts took place in both urban and rural areas, but it is the responsibility of the Chinese government to determine and judge the necessity of healthcare reforms in each area.

There are many reasons to explain the shortcomings of the healthcare system, such as insufficient healthcare insurance coverage, the lack of a universal healthcare policy, and an aging population. Furthermore, the issues of aging population and healthcare insurance are two problems that the Chinese government has yet to solve since adopting an insufficient healthcare system after the communist party gained control of mainland China in 1949. According to Wong, Lo, and Tang (2006), the current system faces the difficulties of decentralization, traditional medicine, local political structure, and increasing demand from citizens in both urban and rural areas. The public or government-supported healthcare organizations have provided medical facilities to large populations of peasants and workers, but the quality remains controversial.

As mainland China developed in the past decade, the Chinese national government attempted to build its reputation by holding well-known events, such as the EXPO in 2010 (Shanghai) and Olympics in 2008 (Beijing). The government hosted these events in the hopes that people would come to know China for more than simply communism and its troubled past. As technology progresses and industry grows steadily

in mainland China, the living standards improve as well. However, concerns related to healthcare service, wealth disparity, and the aging population remain in modern Chinese society. As previously mentioned, the healthcare organizations have provided medical resources to large rural populations from lower living standards, but the quality of these resources is lower than that of urban areas.

The other factor that has added to the healthcare disparity in mainland China is the income gap between the poor and the wealthy. As wealthy families migrate to the urban areas (e.g., Shanghai, Beijing, Shenzhen, and Guangzhou), poor families remain in the rural areas. Most of the poor families from rural areas are not able to afford better healthcare resources because their financial situation does not allow them to pay for more expensive medical services. This is a significant obstacle for most of the families in rural areas. In fact, more than fifty percent of the Chinese population is from rural or suburban areas. According to the statistics from the Institute for Integrated Rural Development (Hong-Kong), the Chinese population overall numbered approximately 1.3 billion at the beginning of the 21st century but the Chinese population in rural or suburban areas is more than 800 million (63.78 percent of the total Chinese population). This number indicates that under current conditions, more than half of the Chinese population is unable to afford their healthcare services and facilities.

However, Chinese demographics have changed rapidly in the last few years. The urban population has grown steadily, while the rural and suburban populations have begun to decrease. This condition indicates that it is time for change in Chinese society. First, the current Chinese citizens are wealthier than in the past and most Chinese citizens are able to afford the higher cost of living in urban areas. This also indicates that more

Chinese citizens have better access to the higher quality of healthcare service that is available in urban areas. Second, if more residents migrate from rural to urban areas the government agencies and public healthcare departments would provide more medical resources to the local hospitals in urban areas. Thus, the imbalance would continue to grow if the national government is not able to establish a more comprehensive healthcare policy to cover the needs (social welfare, medical insurance, and healthcare service in public hospitals) for patients from rural areas. This will be of utmost importance for the national government to improve within the next decades if serious pandemic diseases (such as SARS and H1N1) attack mainland China again in the future.

## CHAPTER 2

### LITERATURE REVIEW

#### National GDP (Gross Domestic Product) and Healthcare Investment

Compared to the other developing countries in Asia (see Table 2-1), mainland China has the greatest capacity to improve the quality and service of its healthcare system. First of all, the annual GDP (Gross Domestic Product) in mainland China has been growing steadily from 2000 to 2011. This has allowed China to have less financial burden on social structures, such as transportation and education. With this annual GDP growth and increase in profits, the Chinese government has a greater ability to improve its healthcare.

According to Tina Aridas (April, 2010), mainland China and India are two countries projected to be economic powerhouses in the future. The Chinese GDP growth rate has ranged from 8.4 to 10 percent between 2000 and 2010. This steady growth supports the Chinese government and helps it to better its political, economic, and public administration systems. Although the Chinese annual GDP growth rate declined since its peak of 13 percent in 2007 to 8.7 percent in 2009, the government expects the GDP growth rate to increase during next decade. Because of the increase of GDP rates over the last few decades, the Chinese economy has grown and surpassed that of Japan, becoming the second most powerful economic system in the world.

This combination of powerful economy and a large workforce creates opportunity because it entices foreign companies to invest in China. The other economic advantage that China possesses is the large but cheap labor in suburban areas, which brings foreign

businesses that employ the workforce and establish large factories. As a result, this brings more markets to mainland China, and along with it more opportunities for the Chinese government to improve the quality of other social structures for citizens, including the healthcare system. Unfortunately, it is a challenge for the Chinese government to make improvements and reform the healthcare system. With a large population, the standard of living of suburban areas and urban areas can be very different. For those in the lower social class, it is more difficult to afford healthcare services. According to Chinese journalist Hong-Qing Zhang (H. Zhang, 2005), the Chinese healthcare reform cannot be considered a success of the Chinese government because of its many flaws. The author discusses that in Chairman Mao's period the Chinese government invested three percent of the annual GDP in healthcare facilities and organizations. Compared to contemporary GDP investment, three percent is a very low investment. However, at this time Chinese society was suffering from the turmoil of the Cold War and Cultural Revolution. As a result, they possessed lower standards for healthcare resources than they do today. The chaotic condition of the Cultural Revolution forced Chinese citizens to live with lower standards; most of the citizens were not able to afford the luxuries of higher education, quality food, or access to better healthcare services. The central idea of the Cultural Revolution was focused on the clash of a middle class that wanted a democratic system of government and the working class, which consisted mostly of peasants, who desired equality and were less educated and unable to better themselves in Chinese society. As a result, they did not see the need of a healthcare system as necessary and critical. On the other hand, Mr. Zhang's (H. Zhang, 2005) investigation also utilizes statistics from WHO (the World Health Organization) that describe the healthcare investments of WHO

member nations. According to his investigation, Chinese healthcare improvements ranked 188th out of 191 WHO member countries.

**Table 2-1 Differences in healthcare developments and living conditions between major developed countries and developing countries**

	Average GDP per person (USD)	Birth rate (per 1000)	Mortality rate (per 1000)	Infant mortality rate (per 1000)	Average life expectancy (Years)
Sweden	\$24,830	13	12	4.8	78
Japan	\$31,450	10	7	4.3	79
United States	\$24,750	15	9	8.0	76
Australia	\$17,510	15	7	6.1	78
Mainland China	\$490	18	6	44	69
Brazil	\$3,020	25	8	58	66
India	\$290	29	9	74	60

#### Comparisons With Other Countries—Chinese Economy and the GINI Coefficient

Since the 1980s, the Chinese economy has begun to grow exponentially and rapidly, making China one of the most economically powerful developing countries in

the world. Theoretically, the Chinese government should have more opportunities to provide better healthcare resources, improve healthcare quality, and invest in superior healthcare facilities because of their annual GDP growth. Nevertheless, the Chinese government spends most of its money on social structures, business trades, and building up its reputation in the world. Zhang (H. Zhang, 2005) also explains that the most significant issue for Chinese healthcare reform is that not enough of the GDP is allocated towards healthcare on a per-citizen basis. For comparison, American citizens spend five thousand US dollars per year for healthcare, but the average amount of GDP of each Chinese citizen pays is only one thousand US dollars.

As a result, the growth of Chinese GDP has been increasing within the last few decades. However, the differences of living standards between urban and suburban areas are appallingly and notoriously unbalanced. The gap between urban and suburban areas in mainland China is always a controversial issue in Asia. The impression of modern China (also known as “New China”) is always associated with metropolitan areas as Shanghai, Beijing, Shenzhen, Guangzhou, and Nanjing. These large cities represent the new image of modern China.

Nevertheless, a study shows that the gap between urban and suburban areas will increase within the next ten years. According to the article by Ran Zhang (R. Zhang, 2005), the Gini coefficient in mainland China reached as high as 0.5 in 2004, passing the international standard of 0.4 established by the United Nations. The Gini coefficient represents the balance between the poor and rich, as well as average income in the society. If the Gini coefficient is higher, this means a larger gap between the upper class and lower class. These extremes can be found in most Chinese urban and suburban areas

(see Figure 2-1). As a result, the poor are extremely poor, while the rich are extremely rich.



**Figure 2-1 The figure demonstrates that the gap between rich and poor has widened in mainland China**

The healthcare system in most of the suburban areas is always a primary concern for the Chinese government, as healthcare providers are not able to offer adequate medical resources. The major causes of this unbalanced condition are the different focuses for various cities (*Different cities, different focuses*, Han Xiang Wu, 2006). The Chinese government invests a large amount of the annual budget to improve the quality of healthcare in metropolitan areas, but the needs of qualified healthcare services have been ignored by local and national governments. This is the major cause of the unbalanced condition of suburban, rural, and urban areas, but the Chinese government is not able to solve the inequality among the areas.

Moreover, according to Zhang's study (H. Zhang, 2005), statistics demonstrate the unbalanced healthcare investments from the national government between urban and suburban areas. For the annual healthcare budget in 2000, the Chinese government spent

77.5 % in urban areas and only 22.5 % in suburban and rural areas. Nevertheless, the quality of healthcare services in suburban and rural areas has remained the same in the last decade. Indeed, his investigation has demonstrated three primary issues with the Chinese government that explain the problems of the Chinese healthcare system and solutions to them: the relationship between healthcare systems and politics in mainland China, the idea of “Westernization,” and the relationships among the healthcare system, economics, and marketing strategies.

### Politics and history

First, Zhang (H. Zhang, 2005) explains the relationship between healthcare systems and politics in mainland China. Although it is a country with a powerful communist government, he argues that China has failed to represent the fundamental principle of communism, which is the equality of all citizens in the society. In his opinion, the idea of communism focuses on equal rights because communism was a powerful tool in breaking down the tyrannical system of the Russian Czar in the late 19<sup>th</sup> century. On the other hand, the Chinese government has failed to respond to the disparity in healthcare conditions among urban, suburban, and rural areas. Thus Zhang (H. Zhang, 2005) believes that the solution is not a collaboration of healthcare and politics.

However, the major concern of the Chinese communist system is not only the disparity between social classes, but also the social development in the Chinese society. For example, the relationship between Chinese healthcare and politics relies on the effectiveness of health delivery, health policy, and the national social welfare plan. In a study of Shanghai, Claudia Sussmuth-Dyckerhoff and Jin Wang (2010) discuss the

reactions to and responses of healthcare services in public hospitals from Chinese patients:

The country also lacks an effective primary care system. As a result, patients often find it difficult to access to care. Among those who can get treatment, dissatisfaction is high. Patients frequently complain that health care is too expensive, that most health facilities are in bad condition, and that the services delivered are poor. Furthermore, the population is aging, and the prevalence of “modern” chronic diseases is rising.

The next issue is related to the concept of “Westernization.” Westernization is the process that mainland China (e.g., Shanghai, Beijing, and Shenzhen) has utilized the most over the last two decades to steadily develop. Some Chinese healthcare officials believe that the best method to solve the glaring healthcare issues in China is through the process of “Westernization.” However, the healthcare system does not share similarities with other social structures. In contrast with the healthcare system, social structures are associated with annual budgets, building materials, and locations. The healthcare system, however, is related to the quality of services, experience of each physician, healthcare resources and policy, and the political system. The process of improving healthcare can be time-consuming because it pertains to human lives, living conditions, and life expectancies.

According to Zhang’s investigation (H. Zhang, 2005), the Chinese healthcare system cannot be “Westernized.” Instead, it must be suitable for Chinese politics, citizens, living conditions, and environments. Zhang’s investigation, for example,

demonstrates that the annual healthcare budget per person is around 5,000 US dollars in the United States, but the annual GDP per person is only around 1,000 US dollars in mainland China. Because of this, Zhang does not believe the method of “Westernization” should be applied to the Chinese healthcare system.

The last issue is the relationship among the healthcare system, economics, and marketing strategies. Zhang (H. Zhang, 2005) suggests that the gap in healthcare organizations between urban and rural areas is associated with the economy and local markets. Citizens in the metropolitan areas are more likely to search for better living conditions and more healthcare resources to increase life expectancy. In the early 1960s, the Chinese government suffered from the “Cultural Revolution,” which emphasized the importance of agricultural industry, although it was originally intended to be a period for the betterment of living conditions in suburban and rural areas.

In the 21<sup>st</sup> century, efforts and investments have been redirected to metropolitan areas because the agricultural industry is no longer a part of mainstream business. Thus, the focus has been switched. The study also presents important data to explain the gap between the larger and smaller healthcare organizations; eighty percent of the healthcare investment goes to urban areas, while thirty percent of *this* investment supports large healthcare organizations.

Mr. Zhang’s investigation (H. Zhang, 2005) demonstrates the pessimistic viewpoint that most Chinese citizens hold regarding healthcare reform. Another investigation by Han and Huang (2006) is comparatively more optimistic than Zhang’s study. The authors begin with a negative perspective on the Chinese healthcare system. Their perspective is similar to that of Zhang’s study (H. Zhang, 2005), but the later

investigation demonstrates new trends for Chinese healthcare improvements. Their first investigation sought to validate the claim made by the vice president of the National Social Development Research Department, Mr. Jian-Feng Ge, who believes that the strategy of combining healthcare facilities and marketing strategies is a mistake in Chinese society because it would lead to disparity between urban and rural areas.

The current strategy allows the improvement of healthcare organizations in larger cities, but the quality of healthcare in smaller cities has decreased. As a result, treatments in different areas are not identical. The other issue raised in the article is based on investments in Chinese public healthcare. Government in China pays approximately seventeen percent of healthcare costs, while government in the United States covers more than forty-five percent of healthcare costs. The major factor that causes the gap between these countries is the annual budget, because the Chinese government has filled the budget with urban developments and the betterment of social structures. Without an adequate annual budgetary investment from the national government, it is not possible to achieve the objective of healthcare improvements in Chinese rural areas.

#### The demographic challenge in mainland China

According to England (2005), “As China transforms its command economy to a market economy, medical care is becoming more costly for workers and retirees, and fewer workers have the high level of health benefits that once prevailed in the state-owned enterprise sector” (p. 97). England’s investigation demonstrates that the state-owned enterprise sector is shrinking in modern China, and the opportunity for healthcare benefits for retirees in urban areas is also shrinking. As a result, the Chinese government

opted to learn new healthcare models from other countries to improve the situation of the Chinese healthcare system.

England's investigation demonstrates the importance of the new healthcare reforms since the mid-1990s in modern China, explaining how various areas have launched projects to monitor healthcare expenses and reforms. For example, he mentions that the "three rivers project" of the cities of Jiujiang and Zhengjiang, inspired by the healthcare schemes in Singapore, was the first step in supporting the expansion of healthcare coverage for workers that all employers can afford. The other objective for this project focuses on cutting the cost of healthcare facilities in state-owned enterprises, such as public hospitals and other public healthcare institutions. By the end of 2003, the experiments in Jiujiang and Zhengjiang were successful enough that the Chinese government applied the policy in fifty different cities. While it helped improve healthcare services and facilities in both urban and rural areas of China, the project still had some issues. In some rural areas, for example, workers and elders are encouraged to have free diagnosis and tests for tuberculosis in local hospitals, but those hospitals do not provide treatments for the patients. England's perspective demonstrates the pros and cons for the new healthcare reform in mainland China since the mid-1990s. Although Chinese healthcare reform is not complete, he offers important statistics on infant mortality rates to affirm the achievement of Chinese healthcare reform. In the period before 1949, the infant mortality rate was at 200 per 1,000 infants, but the numbers declined to 193 per 1,000 in 1954 and to 81 in 1958. Within two decades, Chinese healthcare demonstrated significant improvement with the decline in infant mortality rate. However, the government did not consistently provide healthcare improvements in the 1960s and

during the reform era. In 1981, the infant mortality rate was 35 per 1,000, but the rate was 32 per 1,000 in 2000 (see Table 2-2). The government failed to make significant changes and improvements in healthcare during the reform era in the 1980s.

**Table 2-2 Difference in mortality rate (per 1,000) newborn infants between rural areas and urban areas**

	2000	2001	2002	2003	2004
The mortality rate of newborn infants (per 1000)	22.8	21.4	20.7	18.0	15.4
Urban	9.5	10.6	9.7	8.9	8.4
Rural	25.8	23.9	23.2	20.1	17.3
The mortality of infants (per 1000)	32.2	30.0	29.2	25.5	21.5
Urban	11.8	13.6	12.2	11.3	10.1
Rural	37.0	33.8	33.1	28.7	24.6

Compared to other resources provided by Chinese authors, England (2005)

provides a neutral perspective, concerning the success and failure of healthcare reforms

in modern China (see Table 2-3). After several attempts at improving healthcare, the Chinese government established new healthcare insurance policies guaranteeing all Chinese citizens equal access to healthcare facilities and treatments. According to Wong, Lo, and Tang (2006), there are several general models for healthcare insurance in mainland China, such as “the three-phase passage model” (“the three river project”), “the combined boards model,” and “the three-fund management model.” All of these models were successful in that they were able to support a large number of patients. However, they fell short because they were not able to benefit each individual sufficiently.

**Table 2-3 Comparison of hospitalization services between urban and rural areas**

	Urban Areas	Rural Areas
Percentage of hospitalization	4.2	3.4
Average days of hospitalization	18.1	10.2
Percentage for those patients who should be hospitalized, but they do not accept the treatments	27.8	30.3

#### Urban Migration and the Future of Chinese Healthcare

The other major challenge in modern China is related to the migration from rural areas to urban areas. According to Zhao (2012), the author demonstrates that the urban Chinese population exceeded the rural Chinese population in 2011. Citizens in urban

areas comprise 51.27 percent of the total population. However, the report also predicts that more than four hundred million of the rural residents will migrate to urban areas by 2030. Under such circumstances, Chinese society would cease to be an agriculture-based country. Thus, it becomes very difficult for the Chinese government to determine if it is necessary to invest with more money to improve living standards in rural areas.

The Chinese national government established “corporate healthcare service” in the early 1980s, but it did not see as much success as was expected after the Chinese national government reformed the agricultural industry in most of the rural and suburban areas. Many healthcare institutions or communities collapsed in the early 1980s because most of the rural residents were not able to pay for their own healthcare spending under the policy of corporate healthcare service. In addition, the collapse of healthcare institutions in the rural areas meant that the basic infrastructure for disease prevention was not there to support the rural residents. Thus, these conditions led to more infectious and pandemic diseases in some rural areas.

The urban migration is another area of focus for the national government in the development of urban areas. At the same time, the national government has neglected improvements in the rural areas. The high number of migrants in urban areas also helps to explain the higher demands of healthcare facilities for patients in public hospitals. Thus, it is important for the Chinese national government to alter existing healthcare plans. Wong, Lo, and Tang (2006) explain the urban healthcare reform in China: “At the macro level, China’s transition to a socialist market economy has brought decreased reliance on state funding, decentralization of public health services, increased autonomy of health facilities, increased freedom of movement of health workers, decreased political control,

and changes in rural health services” (p. 144). This passage substantiates the legitimacy of healthcare reform in mainland China, but it also demonstrates that the Chinese national government intervenes too much in Chinese healthcare services; urban healthcare services receive more financial assistance, and rural healthcare conditions remain poor.

Before discussing healthcare developments and public policies in mainland China, it is important to mention the prospective plans for Chinese healthcare reform before the end of 2020. Although these plans and coverage programs are not prevalent in mainland China at this time, they will eventually become the most comprehensive healthcare plans for patients by 2020. According to Ho (2011), five goals must be met to initiate Chinese healthcare reform within the next ten years. The author predicts that these improvements can help all Chinese citizens have equal access to healthcare services in public institutions. The five major goals are:

1. The achievement of coverage through existing health coverage programs (Urban Resident Basic Medical Insurance, Urban Employee Basic Medical Insurance, New Cooperative Rural Medical Scheme, and Medical Assistance) for more than 90 percent of the population, and a promise that the value of these program benefits will reach at least RMB 120 per person per year.
2. The government has also prioritized the provision of a formulary of essential drugs (which is tricky because hospitals rely on drugs for a large majority of their revenues).
3. An upgrading of primary health delivery.
4. Greater parity between rural and urban public health services.

5. Initiation of the public hospital pilots.

(Ho, 2011)

## CHAPTER 3

### DATA AND RESEARCH

#### “The Three-Phase Passage Model”

According to Wong, Lo, and Tang (2006), “The Three-Phase Passage Model” (“The Three River Project”) has three phases in which the insured are required to pay medical bills. Each phase uses different payment methods, but each phase has similar characteristics.

In phase one, the insured are required to set up a medical account that pays for medical expenses; when the insured visits hospital for treatment or examination, they can then draw money from this medical account to pay medical bills. The second phase is called “self-payment”; it also requires the insured to pay for their medical expenses, but differs slightly from the first phase. For instance, if a personal medical account is running low and the insured is unable to pay the full medical bill, the insured person is required to pay off the bill. Additional costs are assessed according to a set percentage of annual income. The last phase, referred to as “co-payment,” evolves from the second phase and is related to social welfare (also known as the “Socially Pooled Fund”). In this case, when the insured’s salary percentage is unable to cover the medical expense, the excess amount would be paid from the Socially Pooled Fund.

Zhenjiang and Jiujiang were the two earliest areas to experiment with this model in 1994. However, Zhenjiang provided other types of health insurance, such as a pooling scheme for high medical expenses as a result of serious illness; for the hospitalization of children of staff, workers, and students; supplemental health insurance for special

illnesses; supplemental health insurance for hospitalization; medical subsidies for public servants; supplemental healthcare for model workers, experts, and graduate students; and social medical relief (Wong, Lo, and Tang, 2006, p. 36). Despite improvements of health insurance in the Zhenjiang area, these insurance plans applied only to workers and peasants from mainland China. The insurance plan was not granted to foreign workers or those from Taiwan, Macau, and Hong Kong. Although the insurance plan could not be used by foreign workers and others from Taiwan, Macau, and Hong Kong, Zhenjiang had 418,000 participants in their Basic Health Insurance—which was approximately 95 percent of the working population in 2002 (Wong, Lo, and Tang, 2006, p. 38).

The next two models are “The Combined Boards Model” and “The Three-Fund Management Model”; they have similar characteristics with “The Three-Phase Passage Model” but differ slightly from each other.

“The Combined Boards Model”

With the “The Combined Boards Model,” health insurance is available to different types of participants. The word “combined” describes the variety of different Boards for the health insurance scheme. Shenzhen and Hainan are two cities that have experimented with this model; it was not a nationwide insurance scheme. The model had two forms of cover: a comprehensive health insurance, and hospitalization insurance. According to Wong, Lo, and Tang (2006, p. 38), these two insurance schemes were applied to different groups of people.

The comprehensive health insurance plan was intended for the following groups: the first plan was for incumbent workers, the second for retirees, and the third for

workers as prescribed by Chinese local government. For these insurance plans and options, these differing groups should apply to Shenzhen's Household Registration (Chinese Local Residency), which explains that the plan's eligibility was only available within regional areas. "The Hospitalization Insurance" (the second insurance scheme) was established for workers and retirees who did not have Shenzhen household registration and for workers with Shenzhen household registration who received unemployment benefits (p. 39). The most critical, but controversial, issue of "The Combined Boards Model" was very similar to the "Three Phase-Passage Model" in that it only allowed participants with local household registration and employment certificate to apply. Consequently workers from Hong-Kong, Taiwan, and Macau couldn't participate in Shenzhen's basic health insurance.

According to Wong, Lo, and Tang (2006, p. 42), interviews were held with the Shenzhen Social-Security-Administration Bureau and Shenzhen Health Bureau in 2003. The government officers found that Shenzhen's basic health insurance had been extended and applied to private healthcare sectors, but the insurance plan did not cover family members of workers with Shenzhen household registration. This condition was challenging for both the Chinese national government and the Shenzhen local government because it was not applicable for government institutions to be socially and financially responsible for the large population in the Shenzhen area. However, workers who did not have a Shenzhen household registration now have the opportunity to participate in the comprehensive health insurance plan. The health insurance plan improvements benefited several groups of people, such as workers from rural areas, unemployed workers, and low-income workers from rural areas. Compared to workers

and employers from Hong-Kong, Taiwan, and Macau, these worker groups had greater difficulties affording healthcare facilities because they often had larger family groups, more children, and more physical working conditions. Thus, the improvements enabled them to achieve a better life quality as well as allow access to better medical facilities and healthcare resources.

#### “The Three-Fund Management Model”

The second insurance plan was called “The Three-Fund Management Model” and operated in Qingdao and Yantai of Shandong district during the mid-1990s. According to Wong, Lo, and Tang (2006, p. 42), workers were separated into three different personal accounts: socially pooled fund, personal medical fund, and hiring-unit adjustment fund. Each personal account has its own responsibility to provide a social welfare and healthcare fund for workers; the socially pooled fund was for serious illness, the personal medical fund for minor illness, and the hiring-unit adjustment fund was primarily a medical subsidy. Compared to “The Three-Phase Passage Model” and “The Combined Boards Model,” “The Three-Fund Management Model” was applied during the transition from earlier healthcare services to the new healthcare services in the 1990s of the healthcare reform era.

According to Wong, Lo, and Tang (2006, p. 43), all hiring units and their workers were required to participate in basic health insurance; these include state-owned enterprises, collectively owned enterprises, foreign investment enterprises, enterprises funded by overseas Chinese from Hong-Kong, Taiwan, and Macau, and all other forms of private enterprises. In addition, the basic health insurance of Qingdao and Yantai allowed

workers with urban or rural household registration who worked in township organizations to join the healthcare insurance plan, and the insurance scheme advantages could also be applied to retirees. The insurance plan was based on rules of efficiency and fairness for both incumbent and retired workers. The plan stipulated the monthly amount that should be transferred to the medical account and covered the healthcare expenses of workers. There are two formulas to calculate the monthly amount and medical account (Wong, Lo, and Tang, 2006, p. 44):

Incumbent workers:

Age coefficient\* (Age of the worker – 17) + coefficient of wages on which insurance premium is based\* base on which monthly insurance premium is calculated + base on which monthly insurance premium is calculated \* 2%

Retired workers:

Age coefficient\* (age of the retired worker – 17) + pension coefficient\* total amount of pension each month

The basic health insurance plan disadvantaged patients with serious illness or major injury. For instance, it did not fully cover the newly insured; the Socially Pooled Fund would pay only fifty percent of healthcare expenses. This was a primary concern for patients from the working or lower social classes because they were unable to afford the healthcare facilities or receive medical treatment, but the situation would change after paying insurance for more than a year. According to Wong, Lo, and Tang (2006, p. 45), this basic health insurance also did not cover maternity or work-related injuries. The

basic health insurance also did not cover workers who had work-related injuries, where most workers with basic health insurance needed to pay for their medical expenses.

There was one exceptional situation to prevent this condition—social security schemes for maternity and work-related injury. This was supported by the Socially Pooled Fund. Workers who had participated in the social security schemes for maternity and work-related injury could receive benefits from these schemes and medical expenses would be paid by the Socially Pooled Fund. Nonetheless, the principal idea was to support workers and other people with lower incomes to participate in the basic health insurance and social security schemes of Qingdao and Yantai.

#### Shanghai's "Pooling Scheme of Serious Illnesses"

The next level of healthcare reform in mainland China was the "Pooling Scheme of Serious Illnesses," which took place in the major city of Shanghai. With the last two decades' solid growth of economic power, Shanghai had greater opportunities to improve social healthcare services than other urban or rural areas in mainland China.

Consequently, Shanghai's government established healthcare reform for serious illnesses between 1996 and 2000, conducting healthcare reform in three different phases.

According to Wong, Lo, and Tang (2006, p. 46), Shanghai's local government instituted three different plans to support the effectiveness of healthcare services in the city. The Socially Pooled Fund for Serious Illnesses Hospitalization in Shanghai was established in 1996. The Socially Pooled Fund for Emergency and Outpatient Services was established in the following year, and finally the Social Fund was established in 1998 for retirees who need emergency or outpatient services.

With these three different insurance schemes, almost half of medical costs were supported by the Socially Pooled Fund. With various types of healthcare insurance plans and schemes, the last step was the implementation of a national healthcare policy, basic health insurance, and a comprehensive social health insurance scheme. To be more effective within China's healthcare system, the local healthcare insurance scheme needs to be implemented along with the national healthcare policy, as it would be more reliable and responsible for patients from both rural and urban areas. For example, traditional healthcare insurance does not sponsor workers without household registration in certain areas, but it is not equitable for those employees who work in the area. These new healthcare schemes in certain provinces can provide a healthcare service for those types of workers, but other provinces only provide limited facilities. As a result, it is significant for the Chinese government to establish a national healthcare insurance to maintain the balance for healthcare facilities in both rural and urban areas.

### Healthcare Challenges in the Early 21st Century

After establishing differing healthcare insurance schemes, the next challenge was healthcare in the new millennium. According to Wagstaff, Lindelow, Wang, and Zhang (2009), the principal issue for the Chinese healthcare system was related to society's health inequalities, which increased as China's economy grew over the last decade. The major reasons for health inequalities are associated with the income inequalities of patients from different social classes, which is also the gap between China's rural and urban areas. The challenges for China's healthcare system as the millennium turned reflected the healthcare reform of different provinces between the late 1980s and 1990s,

but the challenges also demonstrated that large numbers of China's population lacked any insurance cover.

During the SARS outbreak of 2003, China was criticized for poor healthcare services and facilities, which became an important factor for China's healthcare providers to reevaluate and reexamine the efficiency of their healthcare services. In the past, the Chinese government had successfully reduced the nation's maternal mortality ratio (MMR) from 1,500 per 10,000 in 1950 to 100 per 10,000 in 1980. These statistics demonstrated the progress of healthcare improvements, but this was only part of mainland China's mortality rate. Other outcomes demonstrated the serious conditions and challenges for the Chinese healthcare system at the start of the new millennium.

Communicable disease mortality in mainland China grew between 2000 and 2003. However, SARS proved to be the major determinant to challenge the higher mortality rate. Malaria and tuberculosis are two further communicable diseases that could be used to examine the legitimacy of the Chinese healthcare system. According to Wagstaff, Lindelow, Wang, and Zhang (2009), although the Chinese healthcare system enabled tuberculosis prevalence to fall at an annual average rate of 2.8 percent, most neighboring countries (such as Indonesia, Malaysia, Vietnam, and the Lao People's Democratic Republic) reduced this mortality rate faster than in mainland China. These countries also achieved higher healthcare standards for communicable disease prevalence.

Malaria and tuberculosis are two major communicable diseases that can be used to examine improvements in the Chinese healthcare system during the last few decades, but these diseases demonstrated the slow progress and lower quality of services in

mainland China. Nevertheless, the Chinese government has invested financially in improved healthcare facilities and services to support patients from both rural and urban areas. According to statistics from Wagstaff and Lindelow (2009), the mortality rate of communicable diseases was comparatively higher in the early 2000s. For example, the arrival of AIDS, the 2003 SARS outbreak, hydrophobia, and viral hepatitis were major challenges to the Chinese healthcare system, but these diseases and their treatment failures also caused a growth in the mortality rate. The other cause of higher mortality rates in early 2000s were the health inequalities between rural and urban areas. For example, children from central and western areas tended to suffer more from malnutrition than did those from eastern provinces who were generally healthier and wealthier.

Malnutrition in the metropolitan areas has fallen steadily in the last few decades, but the conditions in the countryside did not demonstrate a similar trend. Wagstaff and Lindelow (2009, p. 18) present data from the China Health and Nutrition Survey demonstrating the inequalities between urban and rural areas in mainland China, in that the percentage of child malnutrition was higher than other early 21st century international standards. The result of higher child malnutrition also caused higher infant mortality rates in rural areas, because malnutrition did not encourage the mental and physical development of young children. It is challenging to maintain a higher quality of healthcare services if food resources are below the average living standards.

The challenge and poor conditions of healthcare services demonstrated that healthcare reform from the late 1980s to 1990s was not completely successful for rural areas because the focus of those developments was based on the conditions of urban areas. The outbreak of SARS in 2003 demonstrated that China's healthcare system was

not able to control the pandemic effectively because the healthcare system was not able to provide a national policy to maintain the quality of healthcare services.

### Central Goals and Data Analysis

Most local governments established their healthcare models to realize the demands of residents and households, but the national government does not cooperate with local governments. For example, Shanghai's public health system provides a high quality of healthcare service, so that patients from rural areas may visit the city's public health organizations for medical treatment. The challenge is that Shanghai's healthcare policy provides most benefits for local residents, but the system provides only limited resources for workers from other areas. That is, the healthcare policy can only be applied to healthcare services in Shanghai, but the policy cannot apply to other households. With the inequalities of the healthcare system and malnutrition in rural areas, government spending is another factor causing inequality among different areas.

Improving the quality of a healthcare system needs more patience and time to find a suitable outcome. It is necessary for the Chinese government to establish a national healthcare policy alongside the local healthcare systems that guarantees the equity of healthcare facilities for each citizen (see Table 3-1 for data on the development of healthcare in rural China).

There are several central goals to examine and develop healthcare services over the longer term: (1) A comprehensive national healthcare policy and insurance is required. (2) Annual budgets for healthcare development and health insurance need to be

increased. (3) Healthcare services efficiency in both rural and urban areas needs improvement. (4) The gap between rural and urban areas should be narrowed.

**Table 3-1 Development of rural healthcare services from 1985 to 2005**

	1985	1995	2001	2005
Rural healthcare communities	47387	51797	48090	40907
Numbers of hospital beds	720619	733064	740060	678240
Healthcare providers	905871	1051752	1168932	1012006
Healthcare technicians	784070	918870	1027941	870500
Rural healthcare communities per 1000 people: Numbers of hospital beds	0.86	0.81	0.81	0.78
Rural healthcare communities per 1,000 people: Healthcare providers	1.09	1.71	1.28	1.16

To examine the central goals' legitimacy, three books have been selected as major references and more than twenty academic journals have been referred to for this investigation. In addition, case study 2 (The Quest to Improve Chinese Healthcare: Some Fundamental Issues; Lee, Ng, & Zhang, 2011) and case study 1 (A Dilemma of Chinese Healthcare Reform: How to Re-define Government Roles?; Wang, 2009) to validate the central goals for this analysis.

### Case Study 1

Wang (2009) establishes several issues to explore how the Chinese government needs to improve and what solutions might be required in the future: (1) adverse incentives and hospital economics; (2) distorted physician's behavior under a poorly designed salary scheme; (3) ineffective supervision; (4) limited coverage and low reimbursement rate; and (5) low competition and limited choice. In his case study, the author discusses how the percentage of public hospital income coming from the government decreased from 17 percent in 1985 to 7 percent in 1999. This percentage drop demonstrated the consequences of China's economic growth, in that more healthcare incentives and budgets from the national government were reduced. Within these few years, the Chinese national government spent most of its investment to develop social structures in the urban areas.

The author discusses the increase of user fees and drug sales that have increased from 26 percent to 37 percent, and from 39 percent to 50 percent, respectively, between 1985 and 1999. One problem relates to hospital profits. Wang (2009) points out that

expensive high-tech diagnosis has been used more frequently over the last decade, but patients from lower-income classes are unable to afford these high-tech healthcare diagnoses. Additionally, increased numbers of physicians are resorting to expensive medicine or treatment for major prescriptions. Thus, again it is more difficult for people with lower income (peasants and workers) to afford these.

A second problem is related to the behavior of physicians. Compared with other Asian countries, Chinese physicians have comparatively lower income and compensation. With this lower income, China's physicians and hospitals provide expensive high-tech diagnosis and prescribe expensive drugs to the patients, enabling the hospital organizations to make more profit than annual expectations. According to Wang (2009), this type of compensation has transformed both physicians and healthcare providers into "salesmen." In the last few decades, a number of Chinese hospital organizations have been criticized for offering expensive healthcare services to all patients, with healthcare gradually becoming a "business."

The third problem is ineffective supervision. The author criticizes the Chinese government's ineffective supervision because the government and healthcare system are unable to establish a successful external monitoring system to examine the quality of healthcare services. Wang (2009) also claims that ineffective governmental supervision eventually led to malpractice, misuse of drugs, and abuse of the high-technology diagnosis machines.

A further level of healthcare issues is related to limited coverage and low reimbursement rates. The author mentions that the absence of the national government from healthcare insurance decisionmaking has become a common issue for both public

and private hospitals in mainland China, but the issue has also created a situation of incomplete coverage for individual patients. Wang (2009) states “the government’s absence from healthcare insurance also caused many problems on the demand side of healthcare in China. Coverage is incomplete, as almost everyone has a basic insurance coverage but not everyone has sufficient coverage.” The healthcare insurance scheme is not balanced between urban and rural residents. The healthcare insurance scheme reimbursement rate for urban residents is approximately 50 percent, but for rural residents only 30 percent.

The scheme demonstrates that the gap between rural and urban healthcare systems has not been successfully solved by the Chinese national government. The major reason is that the national government cannot guarantee to all Chinese citizens equal access to a healthcare system, because the annual budget would surpass the national government’s capacity. The last issue from Wang’s investigation (2009) is low competition. Compared with other countries, China’s national government has a monopoly to control and monitor the progress of health insurance and healthcare development, so it is not easy for companies to establish commercial health insurance schemes. As Wang (2009) states in the study:

Any possible transformation in the medical insurance market depends on the government’s recognition of the problems and its initiatives to reform.

This quantitative study demonstrates the ideas that the Chinese national government is mainland China’s healthcare system primary decisionmaker, but the Chinese government does not provide sufficient resources to guarantee equal access for

all Chinese residents or provide comprehensive healthcare insurance schemes. It should also be the national government's responsibility to stimulate the healthcare market and increase social welfare for all Chinese citizens. At the end of his study Wang (2009) proposes two ideas to solve the healthcare crisis in mainland China as his investigations show how to improve healthcare policy implications for all patients:

There are two options that will allow the state-owned hospitals to reduce or eliminate the tension between market and government forces and for the government to relieve itself of the immense burden imposed by the huge number of state-owned hospitals. The first solution is proprietary reform based on changing the hospital's ownership. In other words, some state-owned hospitals should become privatized. The second solution is to separate the government from state-owned hospitals' management and operation, while making state-owned hospitals function as independent entities, with a self-governance structure and autonomous power that is monitored by the government. These two options are not mutually exclusive, but could be employed simultaneously. (H. Wang, 2009, pp. 598-604)

## Case Study 2

The second case study (Lee, Ng, & Zhang, 2007) relates to the fundamental issues of China's healthcare system. The authors discuss problems and issues for residents with diverse socioeconomic backgrounds. The case study's purpose also relates to the quality, affordability, and accessibility of China's healthcare services, but it's conducted in a

qualitative manner. According to the authors, China's Ministry of Health directed improvements for the healthcare system between the 1950s and early 2000s, but the organization also demonstrated several key issues facing China's healthcare systems.

The first issue relates to mainland China's limited medical resources. The organization argued that the public healthcare system could not provide sufficient resource for 1.3 billion Chinese because the Chinese healthcare sector is only two percent of the world's healthcare expenditure. The percentage of healthcare expenditure is related to the percentage of annual GDP, which is below five percent in mainland China. The Chinese healthcare system has failed to develop major improvements in the last decade because the annual budgets and investments are far below the demand for healthcare.

The second issue is related to healthcare services for outpatients and inpatients. In mainland China, most public healthcare services, drugs, and healthcare providers are used by outpatients, but the public healthcare sector is unable to provide sufficient resources for inpatients with chronic or acute disease. This inability to provide a suitable healthcare service for inpatients has led to increased controversy in mainland China.

The third problem is the current healthcare insurance. With new establishments and policies for healthcare insurance, the Chinese government is unable to guarantee equal rights for patients such that all citizens should be covered through the different types of medical insurance.

The last problem is the market-driven healthcare organization, which has been widely discussed in the last few years. According to the case study, the authors made the following statement:

It is suggested that the development of market-driven healthcare organizations is largely a consequence of the relatively under-allocation of funding by the government compared to other countries (the MoH pointed out that only 17 percent of healthcare expenditures were funded by the government, which was considered low among other developing countries, such as Mexico and Thailand). This situation led to increasing reliance on self-financed insurance schemes and individuals' financial resources.

Complicating the problem (especially financially) is the hospitals' ineffective management system. While hospital medical fees have increased drastically in the recent years, accessibility by patients seems to have deteriorated as a consequence of increased medical fees. Low-income individuals simply cannot afford such market-based medical fees.

(Lee, Ng, & Zhang, 2007, p. 419)

From this statement, the authors demonstrate the idea that public hospitals have an ineffective management system to deal with financial resources and financed insurance schemes. With increased financial burdens for low-income patients, the equity of healthcare services becomes a critical challenge for low-income patients because they cannot afford expensive healthcare facilities. The major issue in the current healthcare market for low-income patients is related to high-tech diagnosis and expensive drug subscriptions from physicians that Wang (2009) also explained in his case study. The major trend of the healthcare services is related to these errors, but the cost of the healthcare services can be reduced if public hospital organizations stop offering these

expensive treatments to low-income patients. This would also be a first step to achieve the condition of equal access to healthcare services and facilities in Chinese society.

On the other hand, the case study also demonstrates the new social medical insurance scheme in mainland China, which becomes a first step towards healthcare reform. According to the case study, the authors discuss how the new medical insurance system could help participants reduce the costs of healthcare services and improve efficiency for healthcare systems so that more low-income patients could benefit from the medical insurance reform:

To standardize medical services and reduce costs, the government promotes basic medical insurance system reform, medical and healthcare system, pharmaceuticals production and distribution systems. Information about these schemes is disseminated to participants, including details about medications, medical consultations, medical services and facilities covered by the national basic medical insurance scheme. Efforts are made to ensure that the insured benefit from basic medical services, unreasonable medical expenses are prevented and enhancing the basic medical insurance fund's efficiency. (Lee, Ng, & Zhang, 2007, p. 420)

The case study suggests two eventual developments for healthcare systems in mainland China. The first is the "quality improvement system," and the second is the "performance measurement system." The focus for these two developmental models is aimed at improving the effectiveness of China's healthcare services. The authors have used the framework from Griffiths et al. (2005) to judge the healthcare programs:

1. health protection,
2. health improvement, and
3. health service delivery and quality.

These frameworks can encourage China's healthcare system to improve the quality improvement systems because the "quality" of healthcare services is always a primary concern in most public hospital organizations. With these frameworks, it is most likely that the Chinese government could monitor health service delivery and the quality of healthcare systems. The national government could apply these frameworks with national medical insurance, which guarantees equity for all patients from both the high income and low income social classes. The other development is called the "performance measurement system."

The authors explain the idea of a balanced scorecard (BSC) as a framework to support the objectives and goals for healthcare organizations. The BSC can help healthcare organizations work out what improvements are needed for a higher quality and efficiency of healthcare services and facilities. The article demonstrates the critical ideas that a successful BSC can also support healthcare organizations to achieve high-level quality targets and improve services. The following quote explains the function and effectiveness of a BSC in a healthcare organization:

Furthermore, BSC has the potential to facilitate quality improvement at different organizational levels to enable congruence of interests and measures, while maintaining links with high-level quality targets. Radnor

and Lovell (2003), in their study of BSC use among UK healthcare organizations, showed that successful BSC implementation could provide significant benefits for meeting national targets for better transparency, clarity and accountability for the stakeholders, including public and patients. Furthermore, this management tool allows the focus to measure long-term qualitative targets while the traditional financial reporting system is biased towards short-term measures. (Lee, Ng, & Zhang, 2007, p. 422)

To conclude, the case study provides data yielding more information regarding structural issues, medical insurance schemes, and development of successful healthcare systems. The authors used information from several healthcare organizations to discuss the needs for successful healthcare reform in mainland China, but the system requires more attention from the national government. The MoH arguments demonstrate the key points of healthcare organizations' shortcomings in mainland China, in that healthcare providers should cooperate with the national government to establish a more comprehensive healthcare reform. Finally, the case study discusses developments for quality improvement systems and performance measurement systems for healthcare services, although the authors consider the BSC as the primary tool to monitor and improve the quality of healthcare services. Thus, it offers more opportunity for Chinese healthcare reform to achieve improved success in the near future.

## CHAPTER 4

### RESULTS AND DISCUSSIONS

The study demonstrates the importance of maintaining the balance of healthcare services between urban and rural areas in mainland China, as well as examining the accomplishments of Chinese healthcare reform in both areas. The references and case studies have described the success and failure of the Chinese healthcare system in the last few decades. Thus, there are four central goals that the healthcare reform seeks to accomplish: (1) establishing comprehensive national healthcare and insurance policies to support various types of healthcare service for all citizens and residents; (2) increasing annual budgets for healthcare development and better health insurance, to guarantee coverage for patients; (3) achieving efficiency of healthcare delivery in both rural and urban areas, so the national government can resolve financial challenges and improve services; and (4) narrowing the income gap between rural and urban areas by providing more social welfare for people who work in rural areas.

#### Central Goal 1

The first central goal states the need of a comprehensive national healthcare policy. From two case studies by Wang (2009) and by Lee, Ng, and Zhang (2007), the problems with the Chinese healthcare policy are related to the imbalance between urban and rural areas. The studies also demonstrate the responsibility of establishing a comprehensive national healthcare policy for all citizens, which guarantees equal access to healthcare services. This responsibility is necessary and lies with the government. For example, if a worker from the rural area gets injured at the workplace, he or she does not

need to visit the public healthcare sectors in large cities because the rural healthcare services can provide adequate medical facilities for his or her treatments. However, the comprehensive national healthcare policy should support patients with low income to help alleviate their financial burdens.

A comprehensive national healthcare policy can support the workers from rural areas who move to urban areas for employments. If they are injured or ill, the comprehensive national healthcare policy would allow them to have the same access to healthcare services as the local household registrations. Wong, Lo, and Tang (2006) describe the expectations regarding the healthcare reform put on the government by Chinese citizens:

Using four criteria (i.e., coverage, consumer choice, portability, cost control), this study finds that the new healthcare system has certain merits. Undoubtedly, more people in the urban areas now gain access to healthcare services following the healthcare reform. The current Basic Health Insurance scheme is intended to cover all urban employers and employees, and all enterprises, state administrative departments, institutions and other organizations, and their staff members and workers are obliged to pay the basic medical insurance premiums. Further, the medical insurance program gives patients a choice of doctor and provides for portability of benefits. This provision is particularly important to the economic development of China as labor mobility is enhanced by the ability of workers to carry their benefits from one place to another. As the central government has taken over from enterprises the responsibility for health insurance, collectivism has been partially preserved through redistributory “risk pooling” Last but not

least, the Basic Health Insurance scheme has partially controlled escalating health costs, stabilizing the rising trend of health spending. (Wong, Lo, and Tang, 2006, pp. 140-141)

From the statement by Wong, Lo, and Tang (2006), Chinese healthcare reform is improving support to the patients, allowing them more options for healthcare service. The basic health insurance scheme is making progress. Thus the first central goal of the study is legitimate.

#### Central goal 2

The second central goal is related to the increase of annual budgetary expenditures for healthcare development and health insurance. With both a lower annual healthcare budget and percentage of GDP investment, the Chinese national government cannot achieve the desired level of healthcare services for all Chinese citizens. If the national government establishes more annual budgets for healthcare developments, it is better for the government to temporarily cease the development of social structures and prevent more financial burdens for itself. In this case, the financial burdens and annual budgets can be balanced.

On the other hand, health insurance is another plan for the government to invest with more annual healthcare budgets. According to Wagstaff, Lindelow, Wang, and Zhang (2009), there are different methods for improving the healthcare system in both the short and the long term. For reform in the short term, the book discusses several possible options to reform the Chinese healthcare system for both health insurance and healthcare

delivery, but the most notable options are acquiring “more resources for NRCMS (New Rural Cooperative Medical Scheme) and fairer burden sharing,” “enhancing governance and regulation,” and “improving performance through a shift to demand-side financing.” The government has increased the subsidy for the “New rural cooperative medical scheme” in the last five years because it believes this increase can support the balance between rural and urban areas. Wagstaff and Lindelow (2009) use the following explanation to discuss the increase of government budgets and subsidies to improve the equity of NRCMS:

Raising NRCMS revenues is likely therefore to require increased government subsidies, including additional spending by the central government. There is also scope to increase equity in the subsidies to NRCMS. Central government subsidies could be targeted more tightly on poorer provinces; and steps could be taken to increase equity within provinces by sharing the costs of supporting NRCMS more fairly, perhaps by pooling at the provincial level or through a provincial-level solidarity scheme. (Wagstaff, Lindelow, Wang, & Zhang 2009, p. 73)

“Enhancing governance and regulation” (Wagstaff, Lindelow, Wang, & Zhang (2009) and “improving performance through a shift to demand-side financing” (Wagstaff, Lindelow, Wang, & Zhang (2009) can also allow the government to achieve the goal of increasing annual budgets and subsidies. With larger healthcare budgets, the government can help healthcare organizations (e.g., hospitals and community healthcare centers) to improve the quality of services. The healthcare providers can assure the hospital visitors

that a higher quality of healthcare services can be delivered to each patient with a more reasonable cost if the government can fairly distribute the healthcare subsidies and budgets to rural healthcare organizations. The governance and regulation can be done with larger budgets and subsidies because the government can regulate the effectiveness and efficiency of healthcare services in public healthcare organizations. However, smaller budgets and subsidies for healthcare developments will make these achievements incomplete for another healthcare reform in mainland China. As a result, from the academic resources, the second central goal of this study is valid.

### Central Goal 3

The third central goal is related to improving efficiency for healthcare services in both rural and urban areas. In contrast to the second central goal, the third central goal needs increased healthcare budgets and subsidies to improve the efficiency of healthcare services. According to Wagstaff, Lindelow, Wang, and Zhang (2009), the major goal for healthcare providers in improving the efficiency of healthcare services in both rural and urban areas is “improving skills and professionalism in public health.” Chinese healthcare services had been heavily criticized in the SARS outbreak in 2003 because the healthcare providers lacked systematic training skills and professionalism in the healthcare field.

The international criticisms eventually caused the national government to bring more healthcare reform to improve the quality of services. According to Huang (2003), the critical conditions in the SARS outbreak had become a major challenge to the Chinese healthcare system in both rural and urban areas. On the other hand, the author points out that the primary issue for the Chinese healthcare system is related to the social-

political crisis. The study demonstrates the adverse impact on the Chinese government's reputation gained during the SARS outbreak because the government had failed to solve and control the pandemic conditions. The author explains his investigation through the statement:

As a matter of fact, prior to the SARS outbreak, public health had become the least of the concerns of Chinese leaders. Compared to an economic issue a public health problem often needs an attention-focusing event (e.g., a large-scale outbreak of a contagious disease) to be finally recognized, defined, and formally addressed. Not surprisingly, SARS did not raise the eyebrows of top decisionmakers until it had already developed into a nationwide epidemic. (Huang, 2003, p. 36)

This statement demonstrates the poor efficiency of Chinese healthcare services before the SARS outbreak. However, the author suspects the inaction of the national government was probably the major cause of the higher mortality rate and number of cases arising in rural and urban areas during the SARS outbreak. On the other hand, the condition was related to the inexperience and unprofessionalism of healthcare providers because the SARS outbreak was not expected to cause such a high mortality rate with modern healthcare technology in mainland China. Nevertheless, it is critical for the Chinese healthcare system to improve the skills and professionalism needed to achieve better healthcare. The authors of

Wagstaff, Lindelow, Wang, and Zhang(2009) have discussed the influences and efficiency for improving skills and professionalism in the public health field:

The move to a model in which most staff in public health institutions are competitively selected, contracted on consistent terms, and provided effective in-service training and clear career paths would help produce a more cohesive public health cadre and facilitate the building of a strong professional ethos. (Wagstaff, Lindelow, Wang, & Zhang, 2009, p. 77)

The excerpt from Wagstaff, Lindelow, Wang, and Zhang (2009) demonstrates the importance for the Chinese healthcare system to improve the healthcare skills and professionalism in the country (see Table 4-1). Better skills and professionalism can also lead to better quality of healthcare services; thus the efficiency of healthcare delivery also can be improved at the moment. If the efficiency of healthcare services can be improved in rural areas, patients with lower income do not have to visit the hospitals in larger urban areas and spend more money for advanced medical treatments when they are sick or injured. The method to solve the issues for healthcare skills and professionalism is establishing different types of medical training programs at medical schools, healthcare communities, and hospitals.

The Chinese healthcare education program follows the British model (Wang, 2007), which is a complicated and time-consuming process for medical students, but it is also the only solution to improve the skills and professionalism for each physician and healthcare provider. Wang (2007) points out that each qualified physician needs to spend at least eight years of study after passing an exam after high school education, but graduates from medical school need to serve as assistants for three years before they are eligible for the certification examination. The process is stricter in the modern Chinese

healthcare system than in the past because the national government and national health department have the responsibility to guarantee the quality and experience of each healthcare provider and to a level of healthcare service that is at a guaranteed level.

From the resources and data, the third central goal of the study is valid, but the efficiency of healthcare services and healthcare skills and professionalism should be considered as the top priorities for the national government to establish the new solutions.

**Table 4-1 Disparity in uses of healthcare services and facilities between urban and rural areas**

	Urban Areas	Rural Areas
Numbers of hospital visits in two weeks	118.1 per 1000	139.2 per 1000
Percentage of non-hospital visits	48.9%	45.8%

#### Central Goal 4

The last central goal states that the gap of healthcare services between the rural and urban areas should be narrowed. The population in rural areas is always associated with lower income and poor living conditions because they do not have as many employment areas as the larger urban areas. On the other hand, the inequality of national government distributions and investments also demonstrate that the developments for rural areas have been neglected. As the Chinese economy and market value in the last

two decades has grown, so has the gap between rural and urban areas. The inequality of government spending becomes the major concern for Chinese citizens in the rural areas because they do not have similar social welfare programs as the citizens from large urban areas. The social welfare program is directly related to the benefits for each citizen, but it also serves as the indicator to determine if the national government has equally distributed the spending of healthcare system. Wagstaff, Lindelow, Wang, and Zhang (2009) compare the disparity among Gansu provinces, Shanghai, and Tianjin. The statistics demonstrates the inequality of both financial and healthcare distributions. The authors (Wagstaff, Lindelow, Wang, & Zhang, 2009) have explained the ideas through the following paragraph:

The focus of government spending on cities was reinforced by large geographic inequalities in health outlays. Thus government health spending in Gansu, one of China's poorest provinces, amounted to just Y 46 per person in 2003; while spending in Shanghai and Tianjin, two of China's richest provinces, amounted to Y 218 and Y 153, respectively. This is despite the fact that Gansu had much worse health indicators than either Shanghai or Tianjin. (Wagstaff, Lindelow, Wang, & Zhang, 2009, p. 30)

The paragraph above explains the major gap between urban areas (Shanghai and Tianjin) and rural areas (Gansu), with healthcare spending much lower in the rural areas. The study also indicates two major factors in Gansu provinces. The first factor is related to the living conditions among Gansu provinces, Shanghai, and Tianjin. In Gansu provinces, people usually have lower standards of living because they have much lower income, but Shanghai gradually became an economic power in mainland China (Ji & Liu,

2005). On the other hand, the national government and the Shanghai local government made the decision that Shanghai will become one of the major international cities before 2020.

With these current developments, urban areas are growing steadily but rural areas remain undeveloped. The second factor is the healthcare indicator in both rural and urban areas. With less economic development in rural areas, the local government has less opportunity to improve their healthcare systems; the Chinese national government needs to recognize the issue of development in rural areas and shift the focus. As the economy grows in mainland China, the gap between the quality of healthcare services and living conditions is widened.

The Chinese national government decided to establish a series of healthcare reforms and implement new policies to support the Chinese healthcare systems in rural areas in the early 21<sup>st</sup> century. According to Wagstaff, Lindelow, Wang, and Zhang (2009, p. 33), the national government has established new healthcare reform initiatives and has encouraged several local governments in rural areas to implement these new policies. Eventually, the government designed several healthcare schemes to guarantee equity of healthcare services for patients with rural household registration or lower income. The New Rural Cooperative Medical Scheme (established in 2003) is one of the most successful models in changing the healthcare services for patients. After this discussion and analysis, the fourth central goal of the study is legitimate.

## CHAPTER 5

### CONCLUSION

The objective of this research is mainly focused on the gap in healthcare services between Chinese urban and rural areas for people with lower income and rural household registration. The research discusses several new schemes for healthcare insurance, social welfare, and models established by the Chinese national government from the 1990s to the early 2000s. The research has analyzed five major publications and nearly twenty academic articles to support the study of healthcare developments in rural and urban areas in mainland China after the 1990s. The study also demonstrates the relationship between healthcare (e.g., health insurance schemes) and current economic (e.g., percentage of annual GDP investments) developments, which bring both positive and negative consequences that influence Chinese healthcare reform.

As the national economy develops in modern Chinese society, the gap between rural and urban areas has widened. The major concern for the national government is the limited financial resources available to support both public healthcare organizations and social structures within the major cities (e.g., Shanghai, Beijing, Tianjin, and Shenzhen) at the same time. Wang's investigation (2009) introduces the critical idea that healthcare reform requires participation and recognition of the nature of the problem from the national government. With financial support from the national government, the results of the healthcare reform will be more successful.

This study of *Healthcare reform in mainland China- The relationship of healthcare reform and economic development in Chinese rural and urban areas* also

proposes several hypotheses to examine the possible solutions derived from theories, data, and schemes from major publications to bring about healthcare reform in the future. In addition, the quality of healthcare services is always related to the living conditions of certain areas. People from large urban areas would be most likely to have higher standards of living conditions and better healthcare facilities. The current healthcare insurance and medical schemes allow employees with lower income to afford healthcare services and medical treatments. Local governments established “The three-phase passage model,” “The combined boards model,” “The three-fund management model,” and “The pooling scheme for serious illnesses” from Shanghai. These different types of insurance schemes have helped employees with lower income. However, these healthcare schemes have some limitations for workers and employees because patients with different household registrations may not have the same benefits as people with local household registrations.

The next level of healthcare development is related to the quality of services in Chinese rural areas because large numbers of healthcare organizations in rural areas have failed to provide sufficient healthcare resources and medical treatments for patients. For example, patients need to visit hospitals in urban areas for treatments requiring advanced technological analysis and drug subscriptions. According to Wang (2009), the healthcare monopoly of the Chinese national government is the major cause for low competition and limited resources. Because of these issues, healthcare providers are unable to establish better healthcare services in rural areas. The central goals introduce possible achievements that the Chinese government could utilize to improve healthcare services in rural areas. With the explanations and cited resources from other case studies and

publications, the central goals describe current healthcare conditions and future expectations for improvements.

The third and fourth central goals are the most critical targets because they are related to the gap in healthcare resources between urban and rural areas, as well as the efficiency of healthcare delivery. The third central goal discusses the failure of the Chinese healthcare system in the SARS outbreak of 2003, but the case is also related to the lack of skills and professionalism in public health (Wagstaff, Lindelow, Wang, & Zhang, 2009, p. 77). With the development of skills and professionalism in the healthcare field, services provided by the healthcare system can be improved. In addition, the resources also demonstrate several perspectives stating that the gap between rural and urban Chinese areas should be narrowed, but it is a challenge for the Chinese national government to balance investments in both social structures and healthcare developments at the same time. In conclusion, the national government needs to consider the improvement of healthcare as the major goal in the future because its citizens require higher living conditions to build a better society.

With a large population, it is difficult for the Chinese national government to control the quality of healthcare services and health policies. As shown in the previous sections, the Chinese government needs to establish a more comprehensive healthcare strategy to cover health benefits for all citizens. However, the government must consider people from the working class with lower income as the primary target. Developing a legitimate healthcare strategy is always a concern for a democratic country, but it is less challenging for a government with a strong central power like mainland China. From the statistics provided in the tables contained in this thesis, it is not difficult to understand the

progress of the Chinese healthcare system. Nevertheless, the rate of progress has been slowing down since the late 1980s. The national government spends only a very small amount of national GDP to support improvements of the healthcare system each year. The second chapter of this study has demonstrated the critical condition of the Chinese healthcare system. For example, rankings from WHO describe the lack of healthcare improvements from the Chinese national government. As one of the most powerful developing countries in the world, mainland China has received both negative and positive responses to their healthcare system. The positive responses are related to the inexpensive drug prescriptions and large number of healthcare providers. Criticisms are concerned with the quality and inefficiency of healthcare services, condition of hygiene, and professionalism of healthcare providers. Thus, it is important for the Chinese national government to develop a series of reforms to change the quality of healthcare services in Chinese rural areas.

Statistics from the Gallup survey (*Chinese Economy Climbs, but Struggles to Spread Wealth*, 2009; see Appendix C) provide the mean annual income before paying taxes for both urban and rural areas. From 1997 to 2008, mean annual salaries increased from 14,000 RMB in urban areas to 34,852 RMB, whereas mean annual incomes in rural areas increased from 8,000 RMB to 15,143 RMB. Both urban and rural areas experienced income growth within the last fifteen years, but wealth has not spread through rural and suburban areas. The availability of affordable healthcare services depends on the income of each family, which determines who has access to better-quality healthcare services in mainland China. The present study demonstrates the critical condition of healthcare

services in modern Chinese society because the Chinese national government has the responsibility of supporting citizens with more comprehensive healthcare policies.

This study also presents an analysis of the Chinese healthcare system and living conditions in mainland China. From my personal experiences, this research study has helped me to understand different perspectives. As an international student, I lived in Shanghai from 2001 to 2006, and regularly visit Shanghai for long breaks.

First, as is true for other Taiwanese citizens without local residency registration in Shanghai, we usually need to visit the “worldwide medical center” (Huashan Hospital) or “international medical care center” (Shanghai First People’s Hospital) to receive medical or physical treatments if we are ill or injured. The major differences between these facilities and the local hospitals lie in the quality of medical equipment and the environment. These hospitals usually have a better quality of medical equipment and a cleaner environment, but the quality of physicians and medicines are the same as those available from the local facilities. On the other hand, the medical fees charged by these hospitals are twice as large as the same services provided by the local facilities.

This disparity between the local and international hospitals occurs because most foreigners or visitors are willing to pay more to receive better healthcare services in mainland China. In addition, this also demonstrates the disparity between the people who can afford more expensive healthcare delivery and those who cannot afford to pay their own medical bills. My experiences are that most Chinese hospitals are able to provide a high quality of healthcare services, but a major concern is the ability to afford to pay off medical bills. If the serious problems associated with poverty can be resolved gradually

in mainland China, more people would have equality of access to better healthcare services.

The second observation is related to the perspectives and impressions of foreign visitors. The Chinese national government has spent much time during the last decade to rebuild the reputation of a new Chinese society; thus the concern over the “first impression” by foreign visitors becomes critically important in most of the major cities. This process is not only related to perceptions of healthcare services, but it is also applied to most structures in the society. However, most showcase developments in major cities require funding that is provided by customers spending more money. These developments also include public goods and most of the high-quality healthcare services. They support the effort to help people achieve better living conditions, but these benefits belong only to people whose social class rankings are higher than middle class in Chinese society.

This study has addressed relationships among social disparity, inequality, poverty, an aging population, and poor healthcare delivery in mainland China, but social disparity is the major factor underlying all of these problems. The social gap is larger than I had expected, as demonstrated by the Gini coefficient, which demonstrates the presence of different living standards in each area of the country. Although living conditions are better now than earlier in the 21<sup>st</sup> century when I visited mainland China for the first time, it will be a challenging process for the national government to improve healthcare services and mitigate social disparity within the next few decades.

## APPENDIX A

HEALTHCARE DEVELOPMENT IN MAINLAND CHINA FROM WHO (WORLD  
HEALTH ORGANIZATION)

## China's health sector development

With limited resources, China has made significant strides in healthcare over the past half a century. But it still has a long way to go.

Large disparities in healthcare exist across geographical localities and socio-economic groups — and these disparities are growing at a time of significant transition and transformation, as China's economic boom benefits millions but also leaves millions behind. China's poor and vulnerable, particularly in rural areas, benefit little from public spending on health. In poor regions, the authorities provide fewer and lower quality services, and individuals end up paying a higher share of the costs out of their own pockets. For many, healthcare is not even an option — it is simply unaffordable.

Indeed illness is often a ticket to financial ruin. Surveys estimate that between 30 to 50 per cent of China's poor are driven into entrenched poverty by costs related to illness and injury. Many simply refuse treatment. Some 75 per cent of rural residents and 56 per cent of urban residents cite being unable to afford the bills as the reason why people refuse hospital care following a doctor's referral.

Health-related responsibilities are spread across many ministries and government agencies in China, in addition to the China's Ministry of Health. This creates a health system with broad political foundations. But it also makes it difficult and costly to develop policies on health that are consistent from ministry to ministry and based on

common principles. In addition, health financing in China, both public and private, is biased towards treatment rather than the more cost-effective approach of prevention.

WHO China's Health Sector Development team works with the Chinese government to improve China's health system. Specifically, this work emphasizes the benefits of adopting health policies that are based on evidence and capable of giving China's poor fairer access to essential health services.

What has been achieved so far

China's experience during the 2003 SARS outbreak resulted in a rapid expansion of the government's role in public health, especially in areas such as disease surveillance and the prevention and control of infectious diseases. WHO has played a key role in working with, and supporting, the government's efforts to address healthcare disparities between urban and rural areas — including the issuance of a report on the Government's New Rural Cooperative Medical Schemes (RCMS).

More recently, WHO has worked closely with the United Nations Health Partners' Group and the China's Ministry of Health to produce a report called the Health Situation Assessment. The report summarizes China's recent achievements, analyses the challenges and proposes a set of strategic priorities for Chinese health officials. These include fostering equity in the public health system, raising efficiency and quality in health services, and building a better system of accountability and enforcement in health.

In 2005, the State Council's Development Research Council (DRC) issued an insightful report, supported by WHO, on the progress of China's healthcare reform process. The report used candid language and a stark assessment of the many challenges

that remain when it comes to implementing healthcare reform — and it generated a national debate on the future of China's healthcare system, ensuring that this issue is very high indeed on the political and social agenda.

With the Chinese Ministry of Health and the UK's Department for International Development (DFID), WHO is also supporting the implementation of a Health Policy Support Project. The project aims to strengthen the ability of policy makers to use evidence to develop and implement fairer health policies. It also aims to build the capacity of local researchers and experts to generate the sort of evidence needed for developing health policies targeting the poor and vulnerable. In particular, the project will improve the capacity of provincial and sub-provincial health officials to develop and implement policies capable of wiping out the inequities inherent in the present health system.

#### Future goals and challenges

China needs a strong vision to give its population a fairer access to healthcare. The government is working to improve quality and efficiency in the health service, reform health financing and develop policy-making systems that are capable of focusing on evidence and the needs of the poor. A cross-ministerial approach is required to coordinate both general and specific policies related to health — for example, on road safety, blood safety, food safety and drug safety. Finally, the government needs to make the health system more accountable and better able to enforce laws and regulations that affect people's health. WHO is keen to play a key role in supporting these efforts in the years to come.

Through the Health Policy Support Project, WHO delivers and facilitates the delivery of international advisory and technical assistance to promote evidence-based pro-poor health policy in China. Specifically, WHO has been facilitating the sharing of relevant international knowledge and experience in developing and implementing pro-poor health policy, and has been designing tailored training and technical assistance programs and knowledge management support.

In its effort to promote pro-poor health policy in China, WHO also supports the State Council's DRC in outlining priorities for health policy in China. The DRC is expected to launch an influential report on these priorities later this year to follow on from its 2005 report. In addition, WHO supports the DRC in developing a report on rural health, also expected to be released in 2006.

Under the umbrella of the WHO macroeconomic and health initiative, WHO — jointly with the DRC — is also developing a report on China's experience in recognizing health as a crucial ingredient in promoting social and economic development. Other important policy research projects launched under the macroeconomics and health initiative in China — implemented jointly with the National Development and Reform Commission, National Health Economic Institute, Beijing University and others — focus on a) exploring the linkages between health reforms and the public finance systems, b) analyzing health inequities in the context of subnational health accounts, and c) optimizing public resource allocation for healthcare in rural areas.

Completing earlier macroeconomics and health initiatives, WHO is planning to disseminate in China a report on international lessons learnt in putting health squarely on

the agenda of governments around the world (both English and Chinese versions are forthcoming).

Retrieved from: <http://www.wpro.who.int/china/sites/hsd/achievements.htm>

## APPENDIX B

## CHINESE LIKELY WELCOME HEALTHCARE REFORMS—

“MORE THAN THREE IN FOUR RURAL RESIDENTS WORRIED ABOUT  
MEDICAL BILLS,” SURVEY FROM GALLUP ORGANIZATION (2009)

April 20, 2009

Chinese Likely Welcome Healthcare Reforms

More than three in four rural residents worried about medical bills

by Julie Ray

WASHINGTON, D.C. -- China's announcement of major health reforms this month is likely welcome news for many Chinese who fear a serious illness could drain their life's savings. A November 2008 Gallup Poll showed Chinese worry more about having enough money to pay medical costs than they do about having enough for retirement, their children's education, or to maintain their living standards.

While the plan's details are still emerging, the government aims to provide basic health coverage and insurance to more than 90% of the country's 1.3 billion citizens and build thousands of hospitals and clinics in the next three years. According to the Xinhua news agency, by 2020, China's basic healthcare system will be able to provide "safe, effective, convenient, and affordable health services" to all urban and rural residents.

China health care

State insurance plans will cover more medical expenses over time, but in the near-term, high out-of-pocket health costs that have beleaguered Chinese consumers will remain. Average residents currently pay at least half of their medical fees. Poor coverage,

in tandem with soaring costs, has forced consumers to save for care or forego it. In Gallup's 2006 survey in China, saving for sickness or injury (64%) and retirement (63%) were residents' top reported savings goals.

While more than two in three Chinese in 2008 said they are very (31%) or moderately (37%) worried about being unable to pay medical costs for a serious illness, this fear is most acute among rural Chinese, who make up a majority of the country's population. Rural Chinese were generally more likely than urban Chinese to worry about each of the financial matters tested, and slightly more than three in four (76%) expressed worry about paying medical costs.

Availability of quality care, particularly in rural areas, is another challenge the government is attempting to tackle through its reform. In addition to constructing 29,000 township hospitals and upgrading 5,000 others, the government aims to ensure every Chinese village has a clinic in the next three years. China also pledged to train more than 1 million village and community doctors. Whether such measures will improve residents' views of their local services remains to be seen. Nearly 6 in 10 Chinese (59%) told Gallup they are satisfied with the availability of quality healthcare in their communities, but across East Asia, only Mongolians are less satisfied (45%).

#### Bottom Line

Above all other financial matters, healthcare costs troubled Chinese most when Gallup surveyed them in November, and their worries have likely only intensified in the current global economic climate. China's much-anticipated health reform may deliver a much-needed boost to the country's economy and encourage sustainable growth. The lack

of an adequate social safety net has been driving Chinese consumers to save when their government needs them to spend. Perhaps one of the biggest challenges for China's government, aside from implementing its plans, will be convincing consumers the net is big enough to catch them.

### Survey Methods

Results are based on face-to-face and telephone interviews with approximately 4,383 adults, aged 15 and older, conducted in November 2008 in China. For results based on the total sample of Chinese adults, one can say with 95% confidence that the maximum margin of sampling error is  $\pm 2.2$  percentage points. Surveys conducted in Mongolia, Japan, Hong Kong, South Korea, and Taiwan between September and December 2008, with maximum margin of sampling error ranging between  $\pm 3.6$  and  $\pm 4.3$  percentage points. In addition to sampling error, question wording and practical difficulties in conducting surveys can introduce error or bias into the findings of public opinion polls.

Retrieved from: <http://www.gallup.com/poll/117475/chinese-likely-welcome-healthcare-reforms.aspx>

## APPENDIX C

CHINESE ECONOMY CLIMBS, BUT STRUGGLES TO SPREAD WEALTH,  
SURVEY FROM GALLUP ORGANIZATION (2009)

May, 21<sup>st</sup> 2009

Chinese Economy Climbs, but Struggles to Spread Wealth

By Ian T. Brown and Tao Wu

This is the first in a two-part series on the race for global influence between China and the U.S. The first part assesses perceptions of Chinese economic strength and explores the growing gap between Chinese income in urban and rural areas. The second part presents approval ratings of Chinese and American leadership in more than 145 countries.

WASHINGTON, D.C. -- Americans once expected Japan would overtake the U.S. as the richest, most advanced nation in the world. Now it is China. Gallup finds that the proportion of Americans who think China is the world's leading economic power has quadrupled between 2000 and 2009. Amid the global economic slowdown, the Chinese economy has continued to grow, while the U.S. economy struggles to recover. However, in China, this relative economic prosperity is offset by a widening wealth gap between its urban residents and its rural majority.

Americans Eye China

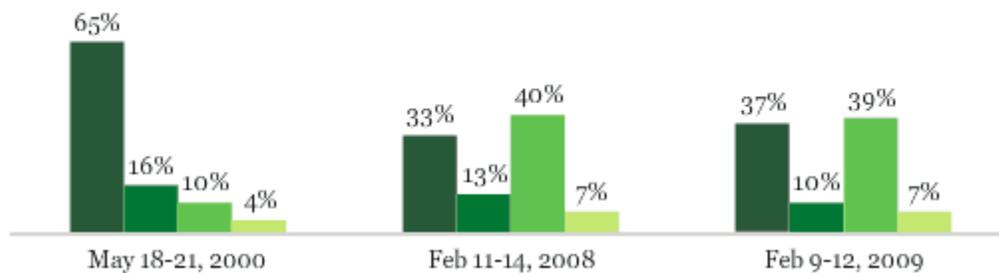
China's GDP growth has been staggering in recent years. In absolute terms, the U.S. economy is still nearly four times the size of China's, but the balance is shifting. With consistently high levels of growth, China's GDP is projected to surpass that of the U.S. in the next 20 to 30 years (though it is unclear how the global economic slowdown will affect projections).

Overshadowed by China's boom, perceptions of America's economic supremacy fell among Americans between 2000 and 2009. In May 2000, when the U.S. economy itself was booming, Gallup asked Americans who they thought the world's leading economic power is, and 65% of Americans said the United States. That number fell to 33% in February 2008, and rose only slightly to 37% in February 2009. Forty percent of American respondents in 2008 and 39% in 2009 said China is the world's leading economic power (China and the United States were statistically tied in 2009).

#### *American Opinions on the World's Leading Economic Power "Today"*

Which one of the following do you think is the leading economic power in the world today -- [The United States, the European Union, Russia, China, Japan, India]?

■ United States   ■ Japan   ■ China   ■ European Union



GALLUP POLL

In 2009, while Americans were more likely to say the United States will be the leading economic power in 20 years, 34% of Americans still said China would be. This figure is down from 44% in 2008, but still more than double the 15% in 2000.

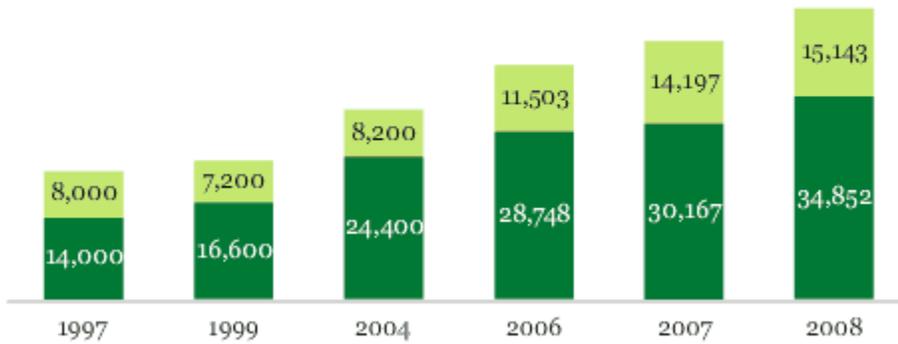
### Urban vs. Rural China: Widening Economic Inequality

China's economy is not invincible or without its problems. GDP growth is projected to slow for 2009, and recover only some in 2010. Further, China's rapid growth has generated a widening wealth gap between the country's urban and rural residents. Between 1997 and 2008, Gallup data show that reported annual rural household incomes grew by roughly 7,100 RMB. Reported annual urban household incomes grew by roughly 20,800 RMB during the same period.

#### *Widening Gap Between Urban and Rural Chinese Incomes*

Average annual household income before taxes in RMB

■ Urban ■ Rural



GALLUP POLL

In addition to the slower income growth, rural Chinese face less developed public infrastructure than their urban counterparts. Also, education and healthcare systems are less available and of poorer quality, leading millions of rural Chinese to relocate to the city in search of better public services and economic opportunity. Last December, a China Daily contributor argued that investment in public infrastructure was a key to overcoming economic recession in China.

## China Aspires to Global Prominence

During April's G20 meeting in London, China tacitly made it known to the world that they consider the G2 — China and the United States — the world's true decision-making duo. Long a passive participant in global summits, China is now positioning itself to be an economic giant, and as such, enhancing its reputation as a major international player.

## Survey Methods

Results are based on telephone interviews with 1,022 national adults, aged 18 and older, conducted Feb. 9-12, 2009, in the United States. For results based on the total sample of national adults, one can say with 95% confidence that the maximum margin of sampling error is  $\pm 3$  percentage points. Interviews are conducted with respondents on landline telephones (for respondents with a landline telephone) and cellular phones (for respondents who are cell phone only).

Results are based on face-to-face and telephone interviews with approximately 4,383 adults, aged 15 and older, conducted in November 2008 in China. For results based on the total sample of Chinese adults, one can say with 95% confidence that the maximum margin of sampling error is  $\pm 2.2$  percentage points.

In addition to sampling error, question wording and practical difficulties in conducting surveys can introduce error or bias into the findings of public opinion polls.

Retrieved from: <http://www.gallup.com/poll/118567/chinese-economy-climbs-struggles-spread-wealth.aspx>

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