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A dilemma of Chinese healthcare reform: How to re-define government roles?☆

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ABSTRACT

This paper discusses the government's roles in the healthcare sector in China. The paper begins with an introduction to the Chinese healthcare sector (supply and demand side) and to the current government's roles. It then reviews the recent transformation of the healthcare sector, with an emphasis on the change in the government's roles and the problems resulting from this transformation. The following is an examination of the latest healthcare reform policies and an exploration of pending government roles. Contrary to the opinion that problems existing in Chinese healthcare are primarily caused by market failure, this paper argues that the historically ambiguous and inappropriate roles of government in the provision of health care should be reexamined. This paper concludes that the most important issue facing the Chinese healthcare sector is finding the optimal balance between market and government.

1. Introduction

The Chinese government officially initiated a new round reform in 2006. As the major decision-maker holding the power to effect swift and radical changes, the Chinese government encountered a range of interrelated issues, including the redefinition and transition of the role of the government in the healthcare sector. The transition provides China with an opportunity to radically improve the coverage and performance of its healthcare sector.

China has learned some lessons from previous domestic and international attempts to reform healthcare. In the planned economy era, government paternalism was predominant. The healthcare reform beginning from the late 1980s was characterized by abrupt government reduction in the health care sector and reliance on market-provided care. Today, critics attribute the problems of the healthcare sector to the introduction of market mechanisms and market failure (Ge & Gong, 2007). These critics argue that reverting to a greater government role would be the best solution to these problems. However, the question remains as to how the government's role should be defined. China is currently standing at a crossroads.

2. Healthcare sector configuration and reform: Challenges facing China

This section is an overview of the provision of health care services and demand for healthcare in China.

2.1. Healthcare delivery and the government's roles

State-owned hospitals operated by central or local governments are the backbone of the Chinese health service delivery system. There are plentiful small-scale private institutions and clinics, yet non-state involvement in healthcare service supply remains

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limited. Although the number of state-owned institutions is nearly 50% of the total, these institutions provide more than 90% of health resources and account for an overwhelming market share.

In 2007, state-owned hospitals accounted for 2.995 million out of 3.701 million beds in medical institutions, with a bed utilization rate in state-owned hospitals of 73.8%. State-owned hospitals accounted for 4.557 million out of a total of 5.907 million health care employees. Additionally, there were 2.429 billion inpatient visits to state-owned hospitals, compared to 468 million visits to private institutions and clinics, and there were a total of 87 million outpatient visits to state-owned hospitals, in contrast to the 2.9 million reported for private institutions and clinics (Yearbook of Chinese Health Statistics, 2008).

The Chinese government has direct control over the management and operation of state-owned hospitals, and these hospitals have little autonomy. Hospitals' presidents and other chief leaders, who are appointed by the government and hold administrative titles, have a low turnover rate than their counterparts in the private sector. Although the government strictly regulates service fees and salaries, state-owned hospitals are permitted to offer performance-based salaries to their staff. These performance-based salaries are derived from the number of patients seen, the number of beds used, etc. In other words, the government determines the number and positions of hospital staff, but the hospital presidents have the power to select subordinates. In the meantime, the government undertakes supervisory responsibilities.

2.2. The consumer side of healthcare

Institutionally, the basic social medical insurance system in China consists of three schemes: Basic Social Medical Insurance for Urban Employees, which has been running since 1998; New Rural Cooperative Medical Insurance Scheme, which was launched in 2003; and Basic Social Medical Insurance for Urban Residents, which began pilot testing in selected cities in 2007.[1] Currently, most consumers mainly rely on the basic social medical insurance to pay for their health care bills. Although the New Rural Cooperative Medical Insurance Scheme and the Basic Social Medical Insurance for Urban Residents were only recently established, they have been rapidly expanding into both urban and rural areas. In contrast, commercial health insurance has lagged behind, with extremely low market shares. By 2007, there were 180 millions people covered by Social Basic Medical Insurance for Urban Employers (Chinese Social Insurance Development Report, 2007), while 810 millions joined New Cooperative Medical Insurance by 2008 (Chinese Health Reform and Developmenet Report, 2008). Commercial health insurance only accounted for 7.6% of the total market share, and it mainly served upper class individuals (Yearbook of Chinese Health Statistics, 2008). Moreover, commercial health insurance categories have been, and remain, quite limited. Catastrophic disease insurance applies only to certain critical diseases such as cancer; medical reimbursement insurance reimburses fees incurred from medical services and related drugs, and medical allowance insurance only covers bed utilization fees and accommodation fees during hospitalization.

The Chinese government has announced a goal of achieving universal coverage of basic social medical insurance, and aims at reaching 90% penetration by 2011. The Chinese government will enforce the three medical insurance schemes and has established government departments responsible for their operation, such as collecting insurance premiums, managing funds, and reimbursing healthcare services. The government will even continuously pay the healthcare schemes for rural and urban residents. Lately, a few commercial insurance corporations have played a role in funding and managing the New Rural Cooperative Medical Insurance in some areas. Although their role is very limited, it shows that the government is at least considering the involvement of commercial insurance corporations.

2.3. An international perspective

Weidenbaum (1990) asserts that the government might play a role in the healthcare service sector as an insurer, a purchaser, an employer, a sponsor, a planner, and a regulator. However, the government's role in the healthcare sector varies from country to country.

In the United States, the market mechanism is overwhelming. Private hospitals are major health service providers, while there are relatively few state-owned hospitals. Hospitals owned by the federal government are mainly military hospitals. Other public hospitals, including university-affiliated hospitals and state and municipal hospitals, account for approximately 25% of total hospitals, 18% of inpatient services, and 23% of outpatient services, respectively (Fast Facts of American Hospital Association, 2008). Public hospitals had been seen shut down, merged, or privatized at a rapid rate in the late 1990s. In fact, 1% public hospitals closes every year and 2% become privately managed. The government takes full financial responsibility for public hospitals, but it has no direct management over them. Meanwhile, the government is primarily responsible for the overall planning, registration, physician licensing, and external monitoring of public hospitals (Jonas, 2003). The federal government also administers a few national health insurance programs, including Medicare, Medicaid, and the State Children's Health Insurance Program.

The British government establishes and subsidizes public hospitals. The tax-based National Health System was established to provide free medical service to all citizens (Wu, 2003). However, there is no social medical insurance plan in the UK. In the past two decades, most healthcare reform efforts have concentrated on public hospital reform, yet British healthcare reform has been introducing an increasing number of market mechanisms, such as internal competition between public hospitals and social investment in public hospitals (NHS Foundation Trust, 2008).

[1] See Appendix A for a more detailed introduction to Chinese basic social medical insurance.

In comparison, the Chinese government has been engaged in both establishing and managing state-owned hospitals and administering a social medical insurance system. The market has remained undeveloped, however, as the Chinese government has played a dominant role in both the production and distribution of health care.

The government's role in the healthcare sector varies across countries. It is crucial to fully consider a country's specific circumstances in order to correct both market and government failure. In the next section, I provide a historical review of the evolution of the Chinese healthcare sector and I examine specific dynamics of the Chinese healthcare sector.

3. The historical evolution of the Chinese healthcare sector

Healthcare expenditures in China were increased from 1978 to 2002. Aggregate health expenditure increased from 11.02 billion RMB in 1978 to 56.84 billion RMB in 2002, which was a fivefold increase at an annual rate of 17.86%. Meanwhile, the annual GDP growth rate was 15.05% during the same period. In fact, health care expenditures increased by 20% more than the GDP (Ge & Gong, 2007). In 2006, an individual's out-of-pocket payment was the primary component of their healthcare expenses, accounting for 49.3% of the total amount spent. The government and social inputs were 18.1% and 32.6%, respectively. These social inputs include contributions from employers, private enterprise, university contributions, and the like. What are the reasons for the increase in health expenditures and the immense individual contribution?

Under its highly centralized planning system, the Chinese government established state-owned hospitals serving all Chinese people and retained firm administrative control over these hospitals. To guarantee a nonprofit and inexpensive supply of basic medical service for all people, the government enacted a strictly regulated pricing system. The government priced medical services below marginal cost, and it was fully responsible for the resulting hospital deficit. As a result, state-owned hospitals had no motivation to pursue profit. Physicians had fixed compensation allocated by the planned system. Though compensation was rather limited, the salary level among physicians was so homogenous that they were not motivated to seek profit.

Almost all urban employees had access to certain free medical services,[2] while rural residents were also able to receive free medical services through the Rural Cooperative Healthcare System.[3] During the planned economics era, the paternalist administration system helped to maintain equality and improve the overall population's health. However, this paternalism produced low efficiency in resource utilization by state-owned hospitals. Health care providers did not have strong incentives to work hard. Meanwhile, because medical services were very cheap or almost free, abuses of drugs in urban areas were an important issue. There were no measures for controlling expenses or for monitoring the over-prescription of drugs. This resulted in immense financial burdens for the government and for employers.

Since the early 1980s, economic reform of the health care system has caused some fundamental transformations in China. To eliminate the financial burdens and to be consistent with the overall economic reform, the government drastically reduced its financial commitment to the healthcare sector.

The Chinese government's subsidy is no longer sufficient for state-owned hospitals, which are now required to sustain themselves. However, the government has still retained a significant amount of administrative power over the hospitals, especially in appointing their presidents and regulating pricing and basic salary schemes. The government has allowed state-owned hospitals to cover operation expenses mainly by high-tech services and drugs. During the planned economics era, profit margins were zero. However, profit margins have increased steadily since China's economic reform. In fact, there has been at least 15% on Western medicines and 30% on traditional Chinese medicines added-up over their wholesale prices. Some high-technology diagnostics such as Computed Tomography (CT) scans have been charged at market rates. For example, compared with a consultation fee that ranges from 3 RMB to 10 RMB in Beijing, CT scanning is priced at 310 RMB–400 RMB. The government has silently permitted state-owned hospitals to retain the profit they earned and to offer performance-based bonuses to their staffs beyond their basic salaries.

When the market economy was first implemented, the prices of many raw materials for health services began to increase, which increased the cost of state-owned hospitals. As the average social wage level increased significantly, physicians began to request that their compensation be reexamined. The institution of a market economy has forced hospitals to adapt to the dramatically changing healthcare environment. As a result, deficit-ridden state-owned hospitals have to focus on making profits.

Since the economic reform, several medical services are no longer free for urban residents. Instead, the Basic Social Medical Insurance System for Urban Employees, funded by contributions from both employees and their employers, has been developed to cover urban employees. Meanwhile, the unemployment rate has increased. Those who have become unemployed have been excluded from the urban employees' social medical insurance and were left without any social medical insurance until the year 2007, when the Basic Social Medical Insurance for Urban Residents appeared, which covers urban people with no medical insurance. Social medical insurance refers to the government-provided insurance plans, whereas commercial insurance refers to insurance plans purchased from the private sector. Though it had functioned well for many years, the traditional Rural Cooperative Medical Insurance also collapsed with the demise of the People's Commune System.[4] The rural healthcare system was not restored until 2003.

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[2] Under the planned economy, the unemployment rate was kept at an extremely low level in urban China.

[3] Rural Cooperative Healthcare System was a spontaneous collective health risk sharing mechanism based on the People's Commune System where the participants worked in. Under the Rural Cooperative Health Care System, individuals' contributions were collected into one account operating at the commune level to purchase services from village physicians (bare-foot doctor), who was also working in the Commune.

[4] People's commune system was a working unit comprised of certain rural households. People's commune was responsible for collecting and operating a healthcare fund. The commune system was replaced by a household contract responsibility system since 1980s. As a result, the collective account of the healthcare fund lost its base.

Despite the economic reform, commercial health insurance has remained undeveloped in China. The limited insurance categories and high premiums have deterred the uninsured from purchasing commercial insurance. Hence, the urban unemployed and rural residents who had no medical insurance have become the most vulnerable population.

Due to public criticism concerning the government's negligence over the people's medical insurance, the government has been looking for ways to establish a social medical insurance system and to subsidize insurance premiums for urban and rural residents. For rural residents, the central and local governments' premium subsidies increased from 20 RMB per capita per year in 2003, when the scheme was started, to 80 RMB per capita per year in 2008. Although it appears to be still quite limited, this amounts to a fourfold increase within four years. The Social Medical Insurance Scheme for Urban Residents, which started from 2007, is still in its nascent stage. Currently, the government subsidy ranges from 40 RMB to 80 RMB per capita, depending on the region's economic status and the social vulnerability of population groups. The government also undertakes a lot of routine tasks, including collecting premiums, reimbursing services, managing funds, reining in expenditures, etc.

Since the economic reform, it appears that the government has retreated from supplying healthcare and has introduced some market mechanism. However, the market mechanism is too inexperienced to provide all of the services previously provided by the government. In addition, the market is still strictly subject to government administration. This is essentially different from government intervention that targets market failures in some countries with an experienced market economy. The ambiguous government position has produced numerous problems in the healthcare sector, predominately through permitting the state-owned hospitals' profit-seeking behavior and increasing the vulnerability of the uninsured. These are just the roots of public criticisms regarding the healthcare sector, especially the “expensiveness” of Chinese healthcare.

4. Major problems of the current healthcare system and the latest healthcare reform

We follow the supply–demand division used above to frame a discussion of the major problems existing in the Chinese healthcare sector. The “administered market mechanism” that emerged from the post-planning reform has created state-owned hospitals with a number of distortions.

4.1. Adverse incentives and hospital economics

Eggleston and Yip (2004) showed that the average percentage of Chinese state-owned hospital income from government sources shrank from 17% in 1985 to 7% in 1999. Consequently, the decrease in government subsidies has caused a significant reliance of state-owned hospitals upon non-state revenues, primarily in the form of user fees and drug sales. In fact, an increasing percentage of income between 1985 and 1999 came from user fees (26 to 37%) and the sale of drugs (39% to 50%). Although the past five years have witnessed a slight increase in government subsidies, income from drug sales and medical services have been major ways of hospital cross-financing in China.

	Government subsidy %	Drug income %	Medical services %
2002	10.2	43	44.2
2003	8.8	43.4	45.1
2004	12.8	40.3	44.6

Source: Health Statistics (2002–2005) Chinese Ministry of Health.

Greater autonomy in revenue generation has not been accompanied by better performance of hospitals. The reliance on user charges for financing has driven the hospitals' focus from health improvement to profit-seeking. Cost-effective generics have been substituted by expensive equivalents, and expensive high-tech diagnoses have been utilized more frequently, though unnecessarily. Therefore, there is an issue with the incentive compatibility of the contracts. Doctors currently have an incentive to prescribe expensive drugs, as revenues from these expensive drugs go directly to the hospital. Consequently, the hospital will give the doctor a higher bonus or a raise as a reward for the increase in revenues. This contributes to the continuously soaring health expenditures, which makes healthcare less affordable for low-income citizens.

4.2. Distorted physician's behavior under a poorly designed salary scheme

With a low basic salary, the components of Chinese physician's compensation have largely changed. The percentage of the basic salary provided by the government has decreased to approximately 30%, while other compensation components, such as performance-related bonuses and incentives for physicians, have increased significantly. The bonuses distributed by the hospitals have been largely dependent on hospitals' profits, which are driven by the sales of profitable medical services and drugs. As such, physicians have been sharing the same interests as hospitals, resorting to providing profitable services and drugs, which are primarily high-tech diagnoses.

This type of compensation scheme has transformed some physicians from health care providers into health care “salesmen.” The overuse of high-tech services and high-price drugs has contributed to the healthcare expenditure escalation in China during the past several decades.

4.3. Ineffective supervision

On the one hand, the Chinese government's self-interests have been aligned with the state-owned hospitals' interests. For example, all presidents of a state-owned hospital hold administrative titles equivalent to governmental officials, while the performance of a state-owned hospital is an important criterion for evaluating the performance of a government official who is responsible for monitoring that hospital. On the other hand, the government has to be responsible for hospital supervision on behalf of its citizens. The two roles the government has been playing – a player in the game with strong self-interests and a referee who should be fair and impartial – have conflicting identities. Consequently, an effective external monitoring system has not been established. Malpractice, misuse of drugs, and supplier-induced over-utilization of pharmaceuticals are becoming increasingly common.

What roles have the Chinese government played in state-owned hospitals? Instead of being a responsible subsidy provider or supervisor, the government has retained its administrative role inherited from the planned economy era. The state-owned hospitals have never functioned as independent entities with autonomous development planning and decision-making power. In effect, the hospitals are being micro-managed by government bureaucrats. Moreover, private hospitals have been implicitly subjected to discrimination. The government's ambiguously defined role serves as a barrier to hospital sector development in China. The government's absence from healthcare insurance has also caused many problems on the demand side of health care in China. Coverage is incomplete, as almost everyone has basic coverage but not everyone has sufficient coverage.

4.4. Limited coverage, low reimbursement rate

A significant proportion of the population has had no medical insurance of any form until recently. Although the social medical insurance system consisting of three schemes is widely expanding, universal coverage has not been achieved. This might be solved by 2020, which is the government's promised deadline for universal coverage of basic social medical insurance. The reimbursement rates have also been far from satisfactory, especially in the schemes for urban residents (50%) and rural residents (30–40%), primarily due to the low level of insurance premiums. In essence, the government's limited fiscal budget and its low value of social welfare inevitably determine the low level of insurance premiums. In other words, the government does not intend to provide sufficient health care to everyone; if the government did this, then the costs of health care would increase beyond the government's capacity to pay.

4.5. Low competition, limited choices

Competition in the medical insurance market in China is limited due to the government's monopoly power. Although commercial health insurance exits, it is not prominent in the market. Commercial health insurance has been fundamentally undeveloped not only in terms of market share but also in terms of insurance types. There are very few choices available to potential insurance buyers. Without competition, social medical plans can hardly be improved due to the lack of inherent developmental forces. Any possible transformation in the medical insurance market depends on the government's recognition of the problems and its initiatives to reform (Du, 2007).

5. New healthcare reform

The past three decades have witnessed several government-initiated transformations in the healthcare sector. The problems caused by the previous inappropriate and incoherent government roles and policies continue. Public criticisms regarding the high costs of healthcare have urged the latest healthcare reform in China. Chinese policymakers have recently proposed several directions for healthcare reform. The draft plan is featured with a clear principle that the government's involvement will be increased and more state resources will be invested.

Regarding the government's provision of medical service, the new draft plan revealed the reform principles as:

> "Healthcare service delivery system should be based on the principle that state-owned medical institutions take leading roles and private ones make a supplementary role. A national basic healthcare delivery system will be established to cover both urban and rural areas in China. Government will put more investments into urban community hospitals and rural healthcare networks that are responsible for primary care and will act as gate-keeper…." (Healthcare Reform Draft Plan, 2008, pp.4).

A few more strategies are also listed in the draft plan, including increasing the government subsidy, eliminating the hospitals' profit-driven incentive, and eliminating government administration of state-owned medical institutions. However, the problem of providing the right incentives to pursue cost-cutting measures remains. The second strategy requires the government to determine the annual budget for state-owned hospitals, while the hospitals transfer profits to the government. Medical services will be priced through a government-guided pricing system (Healthcare Reform Plan, 2008).

By 2011, three social medical insurance schemes will cover at least 90% of all Chinese population. The government will contribute to establishing the rural health care network. Again, the government's provision of health care is based on basic coverage, rather than a more encompassing health insurance plan. The development of commercial health insurance is thus crucial to the long-term growth of the health care sector.

> "Establish a social medical security system that is mainly underpinned by basic social medical insurance and supplemented by commercial health insurance to cover rural and urban China. This basic social medical insurance system aims at universal coverage and guarantees basic health services firstly, and gradually improves insurance capacity. Develop commercial health insurance, and branch out commercial health insurance product ranges to cater to diversified demand" (Healthcare Reform Plan, 2008, pp.5–6).

Some policies are still conceptual "directions" without explicit implementation strategies, but increased investment from the central budget and more government duties can be expected. Changes are imminent.

6. Policy implications and concluding remarks

The new healthcare reform plan represents significant progress and constitutes a remarkable achievement in reexamining government roles. Since the issues of costs and limited medical insurance coverage are critical in the current Chinese healthcare sector, the government's investment in vulnerable groups and its efforts to guarantee basic health care to the general population are definitely encouraging. However, judging from the new healthcare reform plan, government paternalism continues to linger. Although the plan includes measures for having the private sector play a supplementary role, and for ending government administration of state-owned hospitals, the procedures for undertaking such policies remain unclear.

Redefining the government's role is essentially a matter of determining the optimal balance between market and government. This paper is not radically in favor of the market mechanism, but it does caution against an omnipotent government that continuously drives the market out. Considering the current situation of a strong government and a weak market for healthcare sector in China, it is important for the government to develop the market, to maintain a smoothly functioning system, and to integrate and optimize market and government forces.

Increasing the government's role of financing and supervising a new healthcare reform plan is crucial to the establishing a responsible yet balanced government role in the healthcare sector. First and foremost, the government should make it possible for even the poorest citizen to attain basic health care. Such a policy is warranted both on the grounds of equity and efficiency, considering the possibly disastrous external costs of epidemics, disabilities, and so on. In the meantime, the Chinese government should impose less administrative interventions on state-owned hospitals and eliminate routine tasks of social medical insurance. However, the government should simultaneously foster a market where the right incentives are established to maximize social welfare. It is suggested that:

a. 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.
b. Is it necessary to involve commercial insurance? Generally, any form of social medical insurance can neither provide complete coverage nor satisfy everyone's preferences. While Pareto optimality may not be achieved, we can at least pursue a Pareto Improvement (Diamond, 1992; Wilson, 1997). In China, social medical insurance schemes will prevail based on the new healthcare reform plan. However, allowing certain commercial health insurance in the market would help achieve a Pareto improvement. In the last few years, commercial insurance companies have already started to undertake some of the insurance fund operation and management tasks of New Rural Cooperative Medical Insurance. It is expected that a comprehensive health insurance system based on a few widely available government-provided insurance schemes, with some form of private insurance supplementing certain subpopulations, will work most efficiently to attain the goal of universal health protection.

Appendix A

Type of insurance	Financing	Reimbursements	Penetration status
Basic medical insurance for urban employees	Employee 2% of salary Employer 6% of salary	Around 70%	180 M (year 2007)
Basic medical insurance for urban residents	Individual (self-employed, unemployed, other uncovered); family and government	Around 50%	79 cities in pilot stage (year 2007)
Rural medical cooperative medical scheme	Government and individual	Around 30–40%	810 millions (year 2008)
Commercial health insurance	Individual (mostly upper middle class)	No official data	Covered less than 7.6% (year 2007)

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