Financial Sustainability of Universal Healthcare and Its Reform: The Case of Taiwan

Guang-Xu Wang
School of Sociology and Social Policy
University of Nottingham, UK
Tel: 44-(0)7863121699 E-mail: guangxu.wang@gmail.com

Abstract

Since Taiwan adopted its National Health Insurance (NHI) scheme in 1995, it has achieved low-cost, high-efficiency performance, with a satisfaction rate as high as 80 percent on average. However, the imbalance between expenditure and revenue has resulted in a cycle of unsustainable spending which also caused the subsequent necessary reforms and political confrontations in Taiwan. This paper aims to focus on three overlapping themes of the experience of Taiwan's NHI financial sustainability: (1) the rationale and achievements of the programme so far, along with the growing pains it has encountered in financial sustainability; (2) the factors leading to the financial crisis and the major reform proposals since 1998; (3) the political obstructions, governance capability and government strategies to promote the NHI reform. Obviously, the issue of the financial sustainability of the healthcare operation is always unfinished business. It can be anticipated that the lesson from Taiwan's experience will provide an interesting comparison to other traditional and renowned welfare systems around the world.

Keywords: National Health Insurance (NHI), Financial sustainability, Governance ability, Health reform

1. The Nature of Sustaining Healthcare

Healthcare system is no doubt a necessary part of welfare system for taking care of people's health in modern industrial societies. How to maintain a healthcare system efficiently and effectively is one of the most significant missions. As recommended by previous literature, it is clear that the healthcare system will suffer from the social upheaval of population structure; especially tens of millions of postwar baby boomers will be streaming to retirement before 2010, and available labour forces will never again be so large in our lifetimes in the near future (Hewitt, 2002; Coleman, 2006; Jackson, 2006; Schulz, 2006). In other words, this historical shift means that the population reconstruction will result either in the expansion of essential health demands or the shortage crisis of labour population which is the main source of taxation. In order to provide sufficient healthcare services, the erosion of tax base will lead to government's financial deadlock, and will also generate the dilemma between healthcare maintenance and financial sustainability. As figure 1 shows, the trend of average total expenditure on health as a percentage of GDP not only in the OECD countries but also in Taiwan is gradually increasing in the past two decades. The total average expenditure on health can be predicted as a trend of continuously steady growth in the near future and the finance deficit is a bottomless pit.

Insert Figure 1 Here

In order to sustain healthcare system, many governments have taken action to cope with the stalemate between unlimited needs and limited financial capability (Brown and Amelung, 1999; Giaimo, 2001; Anderson, Forgner, Johns and Reinhardt, 2006; Chen and Kwon, 2006, 2008). However, political calculations are too often a footnote in healthcare reform proposals (Hackey, 1998; Moran, 1999). Healthcare provision touches everyone's life and it placed serious conditions on unilateral cost-cutting strategies by either the state or employers. Healthcare reform is always a crucial junction in political stability because the system always creates broad constituencies or other countervailing actors to check governments' effort at one-side cost-shifting (Bonoli, 2001; Giaimo, 2001; Rhodes, 2001). According to past studies, numerous proposals did look very good on paper or practice in technical aspect, but unfortunately, some of them have been rejected by one opponent: political feasibility (Oberlander, 2003: 392). In consequence government policies toward to healthcare sustainability have become central to political controversies concerning the welfare state (Moran, 1999), with politicians vying with one another to reassure the electorate that healthcare system is safe in their hands.

Like any private/public welfare system, Taiwan's healthcare system, National Health Insurance (hereafter NHI), has had its share of problems, but little doubt that the country's considerable accomplishment in universal healthcare system and the action for financial sustainability has been facing similar difficulties (Lu and Hsiao, 2003). This paper attempts to examine the NHI's operation experience in the past decade, in particular focuses on the issue of financial sustainability. Three main questions are addressed in this paper: what are the factors to lead Taiwan's NHI to an unsustainable situation? What kind of efforts which Taiwan government has promoted to manage the healthcare financial risk? What are the obstructions for promoting these reforms?

2. Overview of Taiwan's NHI and Its Financial System

From more than two decades of the venerable economic miracle (Note 1) and the political democratisation (Note 2), Taiwan established its universal healthcare system designed in the characteristics such as compulsory enrolment, single public player (Bureau of National Health Insurance, hereafter BNHI), and contribution shared by employer, employee and government (Note 3). The NHI is not only wide-range scope of the people's livelihood engineering in Taiwan but also the product by integrating previous healthcare systems and public-private health markets into a universal service provisional system (Note 4). With concerning the motivation of the transformation in the comprehensive welfare provision, only with the coming of democratic regime in the year 1987 and thereafter did the KMT government extended exiting welfare state arrangements to farmers, the poor, the handicapped and the rest of the population (Note 5). The NHI seen as the panacea to rescue the KMT government's ominous political situation was the product of the political competition in Taiwan in early 1990s.

Although the NHI is the product of the political competition, it is not a hasty work at all. In order to conduct the NHI, the KMT government employed numerous leading domestic and international experts in the planning process and made an effort of about half decade (Chen, 2005). Furthermore, the KMT government conducted its new NHI to achieve two essential objectives: providing equal access to health care for all citizens and controlling total health expending to a reasonable level (CEPD, 1990). Since its implementation in 1995, Taiwan's NHI has achieved a low-cost (Note 6), high-efficiency performance, with a satisfaction rate as high as 80% on average. Moreover, Taiwan's NHI offers free choice of providers for its citizens and free choice of practice modes for providers (Note 7). The lack of waiting list and stable administrative costs may also enable the NHI more workable up to now. Thus, the impressive coup of Taiwan's NHI has attracted word-wide attention (Note 8). For instance, in 2000, the *Economist* (2000) ranked Taiwan's NHI as the NO. 2 intelligence units' in world health ranking, the *journal of Health Affairs* had a specific issue on discussion of the performance of Taiwan NHI (2003), and Professor Paul Krugman (2005) wrote a commentary "Pride, Prejudice, Insurance" of Taiwan's NHI in *New York Times* on 7th November, 2005.

According to figure 2, the NHI can be seen as a triangle governance regime between the BNHI, the insured and providers. First, regarding the role of the single public player and its responsibilities, the BNHI is the only body authorised to levy the premiums and negotiate the payments with the providers in the NHI. Furthermore, the BNHI, of course, is the intermediary between the insured and the providers and has the imperium to facilitate communications between the insured and providers. In addition, the BNHI is responsible for system planning, promotion, implementation, supervision, research and development, manpower development, information management and auditing (BNHI, 2007b: 6). To manage BNHI's work effectively and improve operating efficiency, six branches were set up to directly handle underwriting operations: insurance premium collection, review and payment of medical claims and management of NHI-contracted medical care institutions. This is also the reason that the BNHI always suffers from close attention in the NHI's operational process.

Insert Figure 2 Here

Second, in order to maintain the operation sustainably, not only the premiums are levied for the NHI but also the insured has to be requested to pay the co-payment when visiting doctors. In the NHI, the enrolment is mandatory to ensure adequate risk pooling and the broad-based collection of funds to finance the NHI. Furthermore, the NHI benefits are comprehensive in taking care of the inhabitants' essential demands (Note 9). Third, the providers have responsibilities to provide high quality healthcare service to the insured under the contracts with the BNHI. Thus, the medical behaviour, expenditure and ways of estimating payments are under the constraint of these contracts. This is the BNHI's most powerful weapon in negotiating with these providers, especially in order to maintain the service quality and restrain the medical cost. However, the providers also have professional medical knowledge which leads them to stand on a dominant position of the informational asymmetric negotiation game. Finally, according to former experience, the insured and providers usually organise and mobilise in order to impact on policy outcomes. It can be predicted that these interest groups and

interest-delegated politicians always cause political conflicts or deadlocks in the policy-making or reform processes.

The BNHI is not the only administrative sector involved in the NHI's operation. In fact, the Department of Health (hereafter DoH) of the Executive Yuan is the leader dominating the health policy domain and supervising the performance of the BNHI. Despite the fact that the DoH has more public power in decision-making than the BNHI, the DoH is compelled to face the request of more political responsibilities in the NHI. In addition, under the DoH, the NHI Supervisory Committee (NHISC), the NHI Disputes Mediation Committee (NHIDM) and the NHI Expenditure Negotiation Committee (NHIENC) and the NHI Task Force are important components as well as the BNHI. In particular, the NHISC is the most important intermediary which permits social associations, employers and providers have the chance to communicate each other in public sectors under the NHI Act. Moreover, the NHIDM is a neutral and quasi public sector which can mediate the dispute between the insured and providers. Similarly, in order to negotiate the payments for providers under the Global Budget Payment (hereafter GBP) system, the NHIENC was composed of delegates indentified by the provider and the BNHI since 1999.

In order to provide the public with convenient and comprehensive medical care, the NHI services include Western medicine, Chinese medicine, dental care and hospital care as well as preventive health and child delivery services to meet the public's diverse medical needs. In terms of facilities, in 2006, there were 18,045 NHI-contracted medical care institutions or 91.23% of all medical care institutions in Taiwan (see table 1). In addition there were 4,068 NHI-contracted pharmacies in 2006. Thus, the comprehensive NHI benefit package and broad-distributed facilities have largely equalised people's financial access to health services.

Insert Table 1 Here

It should be apparent from the above that running a huge universal healthcare system is not an easy task, therefore the operation should be supported by sustained financial status. The financial flow of the NHI can be separated in three parts (see figure 3). In brief, in order to sustain the balance of revenue and expenditure, the six categories premium scheme is run by the BNHI to levy premiums from all inhabitants and the insured, the employer and the government have responsibilities to share the contributions. After collecting premiums, the BNHI has to evaluate the performance of providers in health provisions and negotiate the payments with four provider sectors under the regulations of the GBP system. In addition, the co-payment system is run for cost containment as well.

Insert Figure 3 Here

With regard to more details of the income side, the BNHI is responsible for collecting premium from health insurance subscribers. The main source of income for the programme is the six categories premium system with the premium rate of 4.55% of salary (Note 10). Moreover, the NHI is financed on a pay-as-you-go basis with the income-based premiums typical of social insurance systems. Also, the premium is shared by the insured, insuring agencies and government subsides at 38%, 37% and 25% respectively in 2007 (BNHI, 2007b: 9). In addition, it is worthy to noting that to embody the ideas of NHI social relief, premium contribution rates differ among six different categories of population insured (see table 2) and government also plays a crucial role to provide financial subsidy which includes 10 percent of insurance premium for waged workers, 40 percent for self-employed workers and community workers, 70 percent for farmers and fishermen, and 100 percent for military servicemen, retired soldiers and low-income families to the NHI.

Insert Table 2 Here

The second main source of income is the co-payment system which attempts to share the cost of healthcare utilisation and reduce unreasonable utilisation rates. Regular office visits have a modest co-payment, from which poor households are exempt. In other words, co-payments are levied on each component of a treatment and the BNHI introduced a reasonable volume standard for outpatient visit coupled with a sliding fee schedule for visits above the volume standard. The co-payment system also intends to encourage the public to visit community clinics for mild conditions and to refer to a tertiary hospital only if advanced examinations and treatment are needed.

In the expenditure side, the GBP payment system is the most important institutional design of the NHI for cost containment. According to the NHI Act, it imposed GBP system in order to fix the yearly budget, but in early days, the NHI paid medical fees to healthcare provider on a "fee for service (FFS)" basis at uniform, national fee schedules. Medical services are scaled according to "their resource-based points of value", which are then calculated into fees. The price of the point is annually negotiated between the BNHI and the health providers.

Like all open-ended health insurance systems relying on FFS payment of providers, Taiwan's NHI has experienced rapid increases in the volume of services, which, in turn, has led to charges of suppliers-induced demand for services, many of which may not medically necessary (Cheng, 2003: 67). In order to restrain the gradually raising expenditure, Taiwan government also moved to set up separate global budgets and medical care quality indexes for dental service, Chinese medicine, office visits at clinics and finally hospital outpatient and inpatient service from 1998 to 2002. To ensure the sustainable operation of the NHI, the GBP system has created not only a communicative platform for payment negotiation but also a self-regulation and inter-monitor environment to in the professional healthcare associations. In other words, the GBP system is a co-governance and responsibility-sharing regime for cost containment between the BNHI and providers.

3. Financial Crisis to Sustain the NHI's

The NHI has become one of the most important essential safeguards for Taiwan inhabitants' health status and the ruling party has the responsibility to maintain the operation of the NHI. In Taiwan's traditional society, or can be mentioned under the Confucian culture background, under the patriarchal governance logic, people perceive the government as their parents, and hope that the government could effectively provide for their essential needs. The NHI's implementation that concerns the welfare of all inhabitants in Taiwan has become an important determinant for maintaining governmental legitimacy. Since 1995, the issue of the NHI has become one of the most important political themes in every important election and whoever the ruling party is, the policy target of the NHI operation is that let people pay least money and get most benefits under a comprehensive benefit package (Aspalter, 2002; Wong, 2004; Chen and Wang, 2006). However, since the sweeping of the 1997 Asian Financial Crisis, the sluggish rate of economic growth led to a heavy financial burden to Taiwan government and the progressively increase of aging population (Note 11) was a serious cause of the ascending health expenditure.

Insert Figure 4 Here

In fact, the government's financial capacity to maintain the NHI has gradually worsened from 1998 (Note 12) (see figure 4). In order to restrain the financial expenditure, the reform of the payment system aiming to provide a thorough structural improvement of the NHI cost containment and the governmental governance capability from the "fee for service" to the "global budget" was already fully implemented, and to promote the co-governance mechanism in cost containment between the government and healthcare organisations (Chen and Wang, 2006). Nevertheless, although the GBP system controls the NHI's expenditure under the policy environment of common-property resources (Hurley and Card, 1996; Ostrom, 1990), the NHI's deficit is still getting worse and has not been solved by now.

In the cause of avoiding the same financial crisis situation in the NHI of the KMT government, the DDP government launched a "comprehensive physical examination" for the current NHI from 2000 to 2001. In this report, the reasons of increased spending on the NHI can be indicated in the subsequent facts divided in three levels (see table 3). First, with regard to the structure level, the raising rate of aging population and the development of new and costly medical technological treatments are irresistible and unalterable tendencies and these two structural factors have resulted in Taiwan government invests more resource to sustain the operation of the NHI.

Insert Table 3 Here

Second, in regard to the meso-level, or can be said as institutional level, in order to cope with the essential healthcare needs of the public, the most important problem in financial sustainability is the imbalance between revenues and expenditures. The imbalanced problem was caused by three possible institutional factors on income and expenditure sides. The first is current premium system cannot reflect the real national and family income and it caused poor influence on the redistributions of poor and rich people. In order words, this financing system levies the premium on salary-basis caused the unfair premium rate among the six categories insured and ignored the difference between salary income and total income. Also, institutional design of comprehensive coverage was a crucial burden to financial sustainability and the universal coverage also leaded to the arduous problem of cost containment. Moreover, the current premium system also has leaded to the conflict on the issue of sharing governmental subsidy between central and local governments. In 2001, two biggest cities in Taiwan, Taipei and Kaohsiung, had accumulated numerous debts on the contributions of premium. On the other hand, the payment system of FFS has resulted in excessive services and waste of medical resources (Cheng, 2003: 61-67; Chang and Hung, 2008: 107).

Third, in individual level, the most crucial factor is the NHI has leaded the change of the patients', doctors' and the drug industries' behaviour. More specifically, the NHI with comprehensive coverage and compulsory enrolment mechanism has resulted in high healthcare utilisation rates. It also provides more opportunities for

hospitals and drug industries to collaborate to make exorbitant profits and damage service quality under the operation of the NHI. Thus, to sum up, the major reason for the negative financial phenomenon is that both cost containment and financing mechanism of the current NHI were incapable to resolve the vicious circle.

4. The Strategies to Manage the Financial Crisis

Financial sustainability requires adequate revenues or income and the control of cost. In order to resolve previous problems and sustain the NHI finance, the DDP government launched another huge reform plan for the current NHI from 2001 to 2004. In 2001, the director of the DoH invited numerous leading scholars to involve in the project of the "second generation of the NHI reform" (hereafter 2G-NHI). The project attempted to use more systematic methods to evaluate the drawbacks of the current NHI in financial sustainability and constructed a progressive NHI with some resolutions in order to restrain the expenditure and increase the revenue in a reasonable level and in particular enhance the co-governance mechanism and civil participations in the NHI policy domain. In the report, the possible strategies for increasing financial sustainability through combining the past policies and new plans can be categorised in three dimensions (see table 4). The first is to change the contribution rate of premium and increase the revenue on the income side. The second is the endeavour to reduce the healthcare spending on the expenditure side. The third is the attempt to reduce the comprehensive coverage of current NHI. It is very clear that the government was unwilling to apply the strategy to reduce the healthcare coverage; because this policy would damage the poor's benefits and it can be predicted that the public's anticipated psychology cannot accept coverage reduce.

Insert Table 4 Here

In order to avoid possible social upheavals in reform, the DoH has applied three ways to reduce the cost of health services before promoting the proposals of income side. First, the DoH turned to adopt the proposal to ask the local governments to reimburse the accumulated debts and the administrative court adjudicated a reasonable result which the local governments were imposed to pay the accumulated debts in 2004. Second, the expenditure of drugs occupied numerous amount of part in total health spending; the DoH and the BNHI took actions to solve the drug price gap since 2003. Furthermore, the proposals of regular drug price survey and setting a price limit have gotten positive impact on cost containment. Third, and also the most important proposals of cost containment, no doubt is the adoption of the GBP system which has been testified that the GBP system has been an effective policy for the control of healthcare expenditure in many OECD and Asian countries (Chu, 1992; Wolfe and Moran, 1993; Redmon, 1995; Hsueh, Lee and Huang, 2004; Chang and Hung, 2008).

As has been mentioned above, in order to contain the growth utilisation rate of health services in a reasonable and sustainable scope, the DoH had attempted to set up separate global budgets under the regulation of the NHI Act since 1998 and has run the GBP system in all kinds of health services sector by sector from 2002. The transformation process did not suffer from serious confrontations from the providers because these providers had been aware of the fact that the implementation of the GBP system is not only a necessary strategy for Taiwan government to restrain the health expenditure but also all citizens' wish which the insured prefers the reform proposals for cost containment rather than expanding premiums (Chen and Wang, 2006). Naturally, the implementation of the GBP system attempts to limit the providers' behaviours of which unlimitedly expand the volume of services and provide too much medical unnecessary treatments (Chang, 2006). According to the NHI annual statistics, overuse and misuse of health services may constitute up to a third of the NHI's total expenditure. However, the institutional change of the NHI payment system will change the original allocation of resources among healthcare organizations to a common pool environment and it has become a negotiating leverage between the government and providers or within providers. Moreover, if every healthcare organization maximises its individual self-interest under the limited budget, then the whole system will become overloaded and decline every provider's "point of value". It is often argued that the government can control the impending financial crisis, but it also not only transfers the administrative and coordinative cost to providers but also leads healthcare organizations to face the "tragedy of commons" (Hardin, 1968) under the governance mechanism, by the employment of a global budget. Thus, the implementation of the GBP system should be still concerned more about the difficulties of the competition behaviour among multiple providers, collaborative interaction and responsibility-sharing between the BNHI and the healthcare associations.

Let us concern more about the reform proposals of the income side. However, the 2G-NHI financing scheme which has substantial impacts on most of the people, employers and the healthcare organisations is a significantly tricky issue to promote. Another case for increasing co-payment and premium adjustment is a factual lesson for the attempt to promote redistributive-effective policy. For instance, the public satisfaction rate of the NHI reached a specific low level from 2002 to 2003, the reason is because the BNHI and the DoH

attempted to use administrative discretion delegated by the NHI Act to introduce the double raise scheme to increase the revenue and co-payment of the NHI whilst the financial status of the NHI is in an tight level (Chen and Wang, 2006; Wong, 2004). After the double raise scheme was announced, the public, NGOs, congressmen, mass media, and the healthcare organisations boycotted the implementation of this new scheme and caused a serious of ominous political conflicts(Note 13) at once (Chen and Wang, 2006). Thus, with regard to the new financing scheme in the 2G-NHI reform project, there should be numerous stakeholders want to involve in the planning and formation process to advocate their own interests. Particularly, the new financing scheme will lead to the redistributive effects of wealth and it is clear that the policy will result in the populations of beneficiary and victim. In order to pre-evaluate the political feasibility of the policy planning process, the research team of the 2G-NHI reform project was carrying out a survey specifically coped with the policy formation process (Liu, Chen, Hsiao and Lin, 2005). However, this proposal has not been passed in Taiwan's congress so far. The essential difference of the NHI premium systems between the first generation and second generation can be demonstrated in table 5.

Insert Table 5 Here

Obviously, healthcare reform is more of political than pure technical issue and maintenance of a universal healthcare system leads to the dilemma between sustainable provision and governmental legitimacy. First, Taiwan's NHI inherits the historical and institutional legacies, and is expected to maintain the legitimacy of the government by efficiently allocating healthcare resources through a whole service delivery network for the people. In addition the opinion of the public and mass media, the healthcare organisations are one of the most important and powerful stakeholders as well in the NHI policy domain. Moreover, Taiwan's healthcare organisations comprise a vast enterprise with varied interests, well-organised, and have information asymmetry with the state and citizens in the health service delivery. Thus the governmental capability for health insurance service and delivery will be influenced by its financial condition, political structure, information asymmetry in health service, as well as the interests of healthcare organisations. Therefore, the institutional change of the NHI financing scheme will change the original resource allocation and the contribution rates of the people and employees. In other words, the policy making and implementation process of all efforts to increasing financial sustainability should be embedded in a complicated policy environment among resource-exchange stakeholders and various interests.

To sum up, in order to maintain the comprehensive benefit NHI, the critical financial crisis was caused and any financial adjustment efforts always lead to sensitive political problems. There is no doubt that health domain is a policy of social welfare, but one that is highly influenced by politics (Weissert and Weissert, 1996). Most policy processes in modern society open for various participants and the phenomenon facilitates democratic participation and flexibility. The challenge for public managers is how to create efficient and effective relationship which can help to manage policy process. The government should find the ways to reduce the transformation cost and control the failure risk under the more fragmented environment.

5. Conclusion

An old Chinese saying mentions that "money is not everything, but without money, we cannot do anything". Taiwan's NHI could be anticipated in debt of NT$ 500 hundred millions (10 hundred millions Great British Pounds) in the end of 2008 (China times, 2008) and the need of effective maintenance of the NHI has leaded itself become a hot potato rather than crown jewel. In order to collect public opinion about this issue, four NHI citizen forums were taken place in 2005 and the conclusion of the forums is "no premiums raise, no benefits reduce and the government has duty to maintain the NHI" (DoH, 2005). Despite the fact that the public gave an absolute answer to reject any possible proposals of premium raise or coverage reduce; experience leads us to think that it is impossible for people to eat a "king-size burger" via paying the price of a "basic burger". In other words, it also means that financial sustainability and health coverage and quality is a trade-off issue and all possible reform has to mobilise public opinion and support because it touches everyone's life. As a matter of fact, numerous attempts have already been carried out to find a most reasonable way to resolve financial crisis of national healthcare systems, but ultimately any threshold on heath spending or revenue raise will be a political judgment. Pressure to spend more will continue, so the aim is not to define a rational end point but rather than a feasible means which are possible to be implemented in a complex political environment.

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Notes

Note 1. According to official statistical report, the Taiwan's economic growth rates ware over 10% per year on average during the economic progressive period since 1980s.

Note 2. In the late 1970s and early 1980s, the opposite movement developed into a quasi-party, challenging the ruling party, Kuomintang, long before the fall of martial Act in 1987. As a consequence, the Taiwan government announced the termination of the military Act and presently not only the establishment of the Democratic Progressive Party (DPP) in 1986 but also the dissolution of newspaper-regulations caused Taiwan quickly to transform into a full-fledged democracy (Aspalter, 2002: 4). In 1996, it was the first time that the people in Taiwan could vote for the presidential candidates directly. In 2000, on the one hand, the ruling party,

Kuomintang lost the presidential election and transferred a great amount of administrative power in the field of finance, policy administration, business and, of course, social affairs, to the DDP (Aspalter, 2002: 4).

Note 3. The development of Taiwan's universal healthcare system has been mainly explained by two perspectives: the developmental state and democratisation. First, the viewpoint of developmental state claims that the NHI as a universal welfare system is an instrument for pursing economic growth (Ku, 1997; Gough, 2001). Second, the NHI was one of the hottest issues in every competitive election in Taiwan since terminating the Military Act in 1987 (Aspalter, 2002; Wong, 2004).

Note 4. The NHI combined four previous insurance systems: the Labour insurance in 1950, the Government Employee insurance in 1958, the Farmer insurance in 1985, and the Low Income Householder insurance in 1990.

Note 5. Just 8 million of the population were covered by one of the insurance systems, and almost 11.52 million citizens were not insured by the protective umbrella of the insurance systems before 1995 (Chen, 2005; Chen and Wang, 2006).

Note 6. The administrative cost was only 1.7% of all expenditure in 2007 (BNHI, 2007b).

Note 7. In 2007, there were 18,540 healthcare providers contracted with the BNHI, representing 91.75% of all providers (BNHI, 2007b).

Note 8. In spite of the fact that Taiwan's NHI has reached high achievements comparing with other countries around the world (Economist, 2000), it has still received little attention from the international health academic community up to now. The reason may be because Taiwan is not a member of the World Health Organisation (WHO) or the Organisation for Cooperation and Development (OECD), which provide worldwide data and analysis for health policymakers or scholars around the world (Editor, 2003: 60).

Note 9. The benefit package includes inpatient care, outpatient care, emergency care, dental care, Chinese medicine care, pharmaceutical care, home health care, psychiatric care, corrective surgery for congenital mal-formation, peritoneoscopic examination, cholecystectomy, knife, physio therapy, MRI, child delivery, pap smear, physical examination, pre-and post natal examination and baby examination (BNHI, internet homepage, accessed date: 26/11/2008).

Note 10. From the inception of the NHI to August 2002, the premium rate was 4.25%. In September, 2002 the premium rate was adjusted to the current rate 4.55% (BNHI, 2007b: 9).

Note 11. The aging population (percent population over 65) was 4 % in 1980, 6% in 1990, 9% in 2000 and 10% in 2007 (CEPD, 2007). The upwards trend is still steadily increasing.

Note 12. It is the first time that the expenditure of the NHI is more than the revenue and the deficit of the NHI is almost NT$bn 20 up to now.

Note 13. This event not only caused the opposite party to protest against the new scheme in the congress but also leaded to the lowest satisfaction rate (under 60%) of the NHI (BNHI, 2007a).

Appendix: Abbreviations

2G-NHI	Second generation of the NHI reform
BNHI	Bureau of National Health Insurance
CEPD	Council For Economic Planning And Development
DDP	Democratic Progressive Party
DoH	Department of Health
FFS	Fee for Service
GBP	Global Budget Payment System
KMT	Kuomintang, or can be called Chinese Nationalist Party
NHI	National Health Insurance
NHIDM	NHI Disputes Mediation Committee
NHIENC	NHI Expenditure Negotiation Committee
NHISC	NHI Supervisory Committee
OECD	Organisation for Economic Co-operation and Development

Table 1. Number of NHI contracted hospitals and clinics

	Total	Hospital	Clinics	Chinese Medicine Hospitals	Chinese Medicine Clinics	Dental Clinics
Total Medical care institutions	19,780	509	10,169	24	2,984	6,094
NHI-contracted medical care institutions	18,045	508	9,040	23	2,614	5,860
Proportions contracted	91.23%	99.80%	88.90%	95.83%	87.60%	96.16%

Source: BNHI, 2007b: 7

Table 2. The NHI contribution rate

	Category of the Insurance		Contribution Rate (%)		
			Insured	Group Insurance Unit	Government
Category 1	Government employees, Enlisted military personal, public office holders	The insured/ dependents	30	70	0
	Personal in private schools	The insured/ dependents	30	35	35
	Employees of publicly or privately owned enterprises or institutions	The insured/ dependents	30	60	10
	Employer, Self-employed owned of business, Independently practicing professional personal	The insured/ dependents	100	0	0
Category 2	Members of occupational unions Alien seamen	The insured/ dependents	60	0	40
Category 3	Farmers, Fishermen, Members of the Irrigation Association	The insured/ dependents	30	0	70
Category 4	Conscripted military personal	The insured	0	0	100
Category 5	Low-income households	Members	0	0	100
Category 6	Veterans	The insured	0	0	100
	Householder representative of survivors of veterans	Dependents	30	0	70
	Other regional population	The insured/ dependents	60	0	40

Source: BNHI, 2007b: 10

Table 3. Factors lead to the high healthcare spending in the NHI

Dimensions	Factors	Influences
Macro-level	The change of population structure	The raising rate of aging population has leaded to decreasing premium distributions and increasing healthcare utilisation rates.
	The development of new medical technologies	The developments of new and costly medical technologies, ex. heart, liver, and bone marrow transplants or gamma radiation, have resulted in higher spending of treatments.
Meso-level	The institutional design of premium system	Current premium system can not reflect the real national and family income, and the six categories premium system has caused the unfair load of contributions.
	The institutional design of payment system	Cost containment problem of FFS system is the most important factor lead to the big burden of finance.
	The institutional design of comprehensive coverage	The institutional design of comprehensive coverage expenses too much revenues of the NHI.
	The institutional design of sharing subsidy between central and local governments	The local governments, in particular Taipei and Kaohsiung city, do not want to share the subsidy of governmental contributions of the NHI premium and have accumulated a lot of debts.
Micro-level	The health services of utilisation rates of patients	Hospital-shopping or so-called moral hazard behaviour of the insured has resulted in high healthcare use rates
	The practice behaviour of doctors	Under FFS system, the provider responses by expanding volume of services, reducing resources for each unit of service, and profiting from sale of products and services not covered by the NHI.
	The price gap of drug	Drug price black hole has leaded the drug price gap and serious overmedication of patients, including the inhibitions.

Source: summarised from DoH, 2001

Table 4. Major proposals for improving the financial sustainability from 1998 to 2008

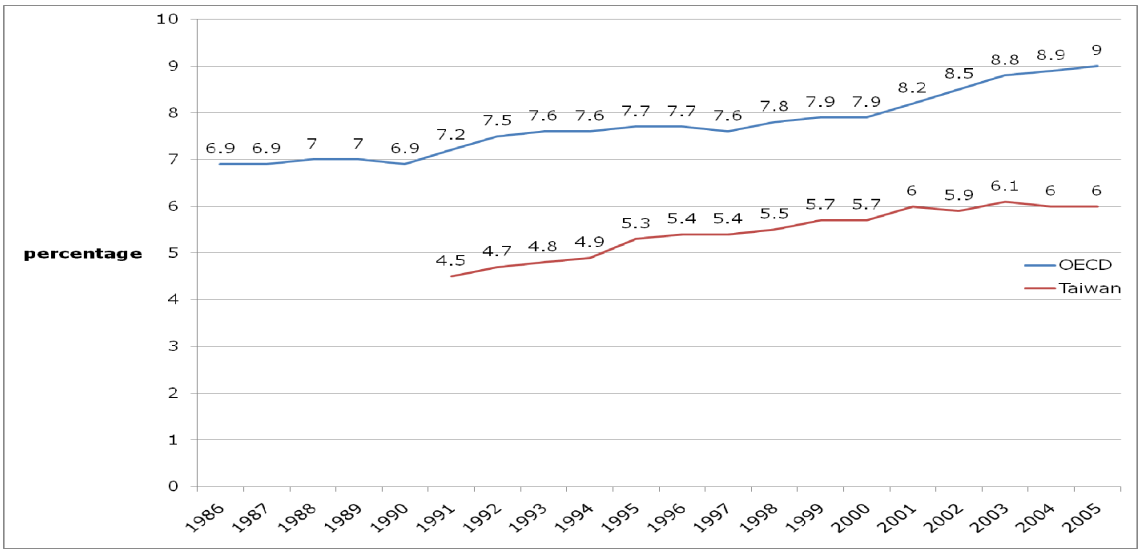
Strategies	Proposals	Policy Targets	Beneficiary	Victim	Level
Increasing income	2G-NHI financing scheme, announced in 2004	Reconstructing the premium and contribution rate and increase the financing capability.	The BNHI, the poor, and people whose main income is salary	The rich, and people who has multiple income sources	The amendatory act
	Double raise scheme, announced in 2002	Cost containment and raising premium, especially restrain the over-utilisation rate of healthcare resources	The BNHI	The insured	executive command
Cost containment	Strengthening global budget payment system, adopted since 1998 and fully implemented in 2002	Cost containment, especially is a mean to modify the FFS	The BNHI	The providers	executive command
	The administrative litigation to local governments, 2004	Clarifying the responsibility and pursing the payments	The BNHI	Local governments	NA
	Regular medicine price survey and new drug price policy, announced in 2001	Reducing the drug price gap and decreasing the expenditure	The BNHI	The drug industries and hospitals	executive command
Reducing coverage	No suitable proposal	NA	NA	NA	NA

Source: summarised from DoH, 2004

Table 5. Contrast of major issues between current and 2G-NHI financing schemes

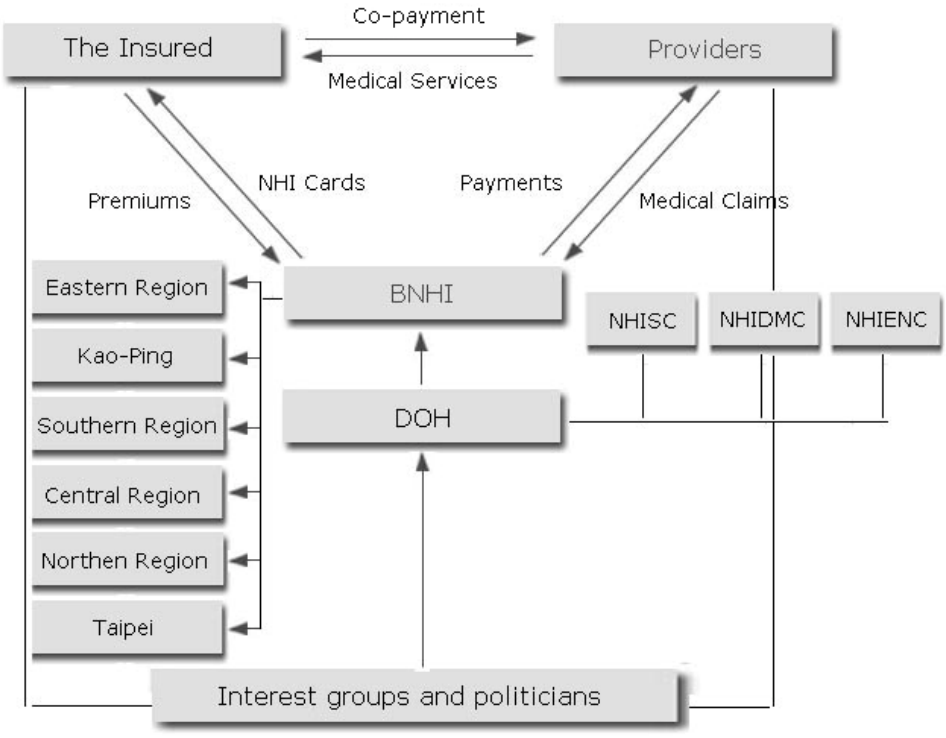
Major issue	The current NHI financing scheme	The 2G-NHI financing scheme
Classification of the insured	■ Six categories and fourteen subcategories	■ No more classification
Funding base for the calculation of premiums	■ The employee: wages or salaries ■ The employer and self-employed: business incomes ■ Independently practicing professionals and technicians: incomes from professional practices ■ Members of occupational unions who have no fixed employers: self-reported incomes ■ Members of Farmers' Associations and Fishermen's Associations: a fixed premium announced by the government	■ Premiums are calculated on the basis of the taxable incomes of the insured's household, including wages, bonuses, allowances, subsidies, etc.
Methods of collecting premiums	■ The employee: premiums are deducted from the payroll by the employer. ■ Non-employee: premiums are collected through unions or associations to which they belong.	■ The employee: as current system but pre-deducted with a hypothetical contribution rate. ■ Non-employee: premiums are directly paid by the insured through financial institutes like banks or cooperatives.
Difference between the top and the bottom limits of premiums	■ The maximum insurable income is 8.3 times the amount of the minimum insurable incomes.	■ The table of insurable incomes is abolished. ■ Top and bottom limits of NHI premiums are set up.
Shares of premiums among the employee, the employer and the government	■ Current sharing of total premiums is 40 percent by employees, 32 percent by employers, and 28 percent by the government.	■ Shares of premiums from the employee and the government are fixed ■ Any increases or decreases in medical benefits are closely linked to the premiums paid by the insured.

Source: Chen et al, 2006: 11.



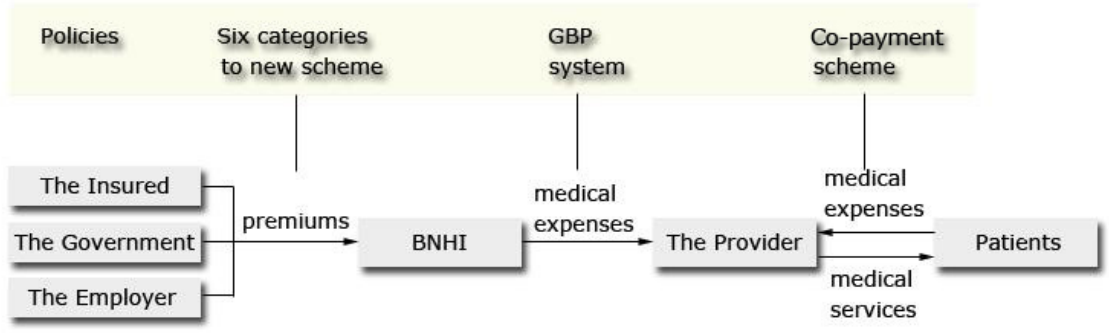
Source: summarised from OECD Health data 2008 and DoH, 2006

Figure 1. Average expenditure on health as % of GDP in OECD countries and Taiwan



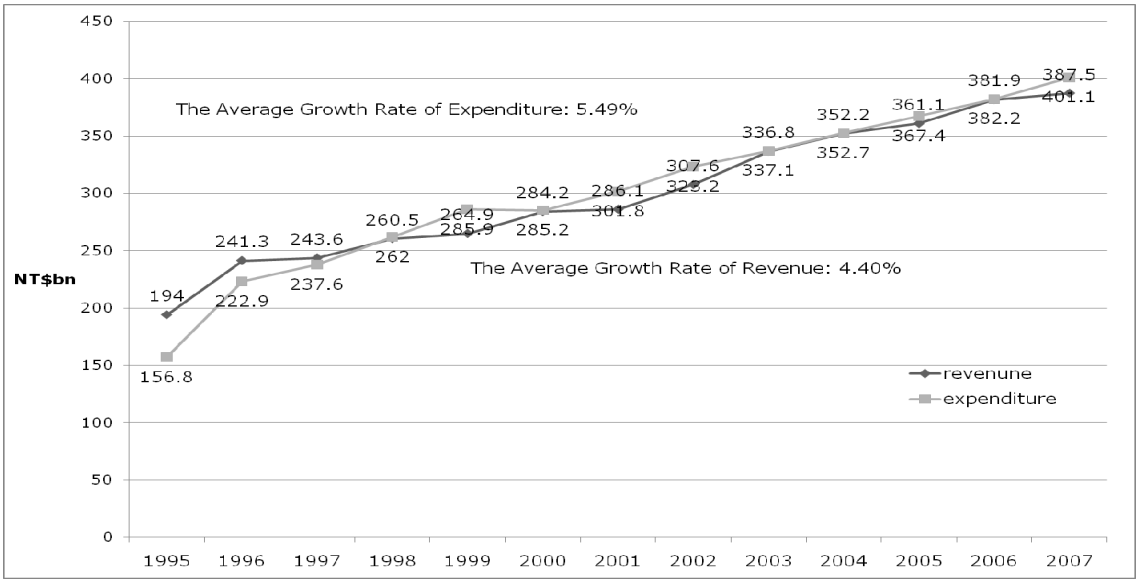
Source: modified from BNHI, 2007b

Figure 2. Flow of healthcare system under the NHI



Source: the author

Figure 3. The financial flow of the NHI



Source: summarised from BNHI, 2007c

Figure 4. The tendency of NHI financial status from 1995 to 2007