Payment System Reform in Taiwan:
The Journey of “Silent Revolution” in Align with the “Deliberative Democracy”

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Abstract

Taiwan had introduced a mandatory single-payer National Health Insurance (NHI) program in 1995. To control costs under the fee-for-service (FFS) payment system and to enhance the value of NHI, Global Budget Payment System (GBPS) has been recommended in the NHI plan. However, payment reform is easy to declare but tough to implement. It often failed due to the strong resistance of the providers.

Taiwan has successfully implemented GBPS reform from 1998 to 2002 at various sectors of health care. As the major architect of GBPS reform in Taiwan, I described and analyzed the process of GBPS formulation and implementation thru a model called “silent revolution” in aligning with the “Deliberative Democracy” theory. The analyses were based mainly on my personal “participatory observations” in conjunction with evidences gathered from official documentations, related publications and qualitative interviews with key stakeholders who have ever participated in the GBPS reform process.

The main issue addressed in this paper is: To what extent did the development of the GBPS followed the “deliberative justice” paradigm? To be more specific, I try to evaluate the procedural equity of the GBPS policy making process based the “discourse principle” and related criteria developed by Lu Ann Aday et al. The criteria, including the extent of participation, rational discourse and empowerment, were evaluated by comparing the new model with the traditional experience. The analyses were based mainly on my personal “participatory observations” during payment reform, in conjunction with evidences gathered from official documentations, related publications and qualitative interviews with key stakeholders who have ever participated in the GBPS reform process.

In addition to the promise and the commitment of the providers and regulators, a successful implementation of payment system reform lie on the careful execution of the plan, and continuously evaluation of the system and the adjustment to address the new problems. However, winning the support of the providers is at least the first step toward a successful policy execution. The above experience may shed some light on countries, especially in Asia, which still use FFS as predominated unit of payment and are seeking means to control costs.
Introduction

The National Health Insurance (NHI) program in Taiwan is a mandatory state-operated single payer social insurance system (Chiang, 1997), cover 99% of the eligible population in Taiwan. Since its inception in 1995, NHI has been facing the challenges of rapid increase on health care costs, particularly in 1998; nominal growth rate of NHI costs peaked at 11.4% per year. Many strategies, both on demand-side as well as on supply-side, including a failed attempt to marketize and privatize NHI system or the “the multi-carrier-reform”, thus have been introduced. Among the supply policies, the Global Budget Payment System (GBPS) is the most important payment reform, and was also considered as the most important alternative to resist the multi-carrier reform proposal during the late 1990s (Wong, 2003).

Global budget payment system (GBPS) is a prospective payment system, which usually determines annual budget for a specific sector prospectively thru negotiation (Wolfe, 1993). The provider association on that sector is granted the responsibility of cost control and/or quality improvement in return for maintaining their professional autonomy. Review on the experience in OECD countries has indicated that many OECD countries have achieved cost containment in 1990s by adopting GBPS (1992,1994); although, it may not improve efficiency and may even result in long waiting list, if the budgets are not linked directly to the patient care (Glaser, 1987). Therefore, according to the review by Wiley (1994), case-mix based payment system, such as Prospective Payment System based on DRGs in US or case-mix-based budgeting system, such as in Portugal, Portugal and Australia (Wiley, 1994) have wide applications on the world, to enhance providers’
financial responsibility and efficiency.

Payment system reform, however, is easy to declare but tough to implement particularly in East Asia where fee-for-services are still the predominate unit of payment and medical society holds strong political influence on government. Medical professionals have long traditions to retain their professional autonomy, they tend to hold firmly to the “old tradition”; and may or may not have the motivation for “better change”, particularly for high impact policies. Besides, all reforms have winners and losers; the losers normally fight against the reform quickly in name of “ultimate patient right”. Due to physicians’ prestigious social status in most countries, they often win the game and achieve in the abandon, postpone or modification of the major reform plan, unless the regulator has strong will or is very deterministic; or unless other parties, the possible beneficiaries of the policy, express strong opposition to them. Even if the reform has finally been implemented, providers, with best knowledge on the medical practice, can still find various ways to cope with the regulation that may not always benefit the whole society. The influence of medical professionals on the health policy in Asian countries are no less than or even stronger than the rest of the world. Therefore, the paces of payment system reform are much slower in Asian countries, fee-for-services payment system are still commonly applied to all services and even to hospital sector.

In facing with rapid costs escalation, many countries are interested in implementing GBPS or DRGs-based payment system. However, due to the opposition of providers, the reform actions have been slow, are in vein or still in planning stage. Therefore, to win the support of the stakeholders, particularly of providers is crucial for the implementation of payment reform.
Taiwan is probably the first countries in Asia to implement “explicit” national GBPS on all sectors of health care services, and to pilot testing case payment system. The implementation of GBPS has cut the cost inflation almost half (from more than 10% to 5-6% per year recently) (Lee, 2004). Literature reviews on the empirical studies on impacts of case payment system in Taiwan also indicated that the system reduces length of stay, and use of ancillary tests/procedures and pharmaceuticals without strong evidence of jeopardizing quality of patient care (Lee, Yang, Li, 2005). Therefore, the experience of the payment reforms in Taiwan, although not without problems, is worth noting. The providers in Taiwan, just like their peers on the rest of the world, are in strong opposition to GBPS when NHI launched. Therefore, it is particular interest to know how and why providers finally change their attitude toward implementation of GBPS.

As a scholar, I have devoted in the designing and implementation of NHI payment system reform for fourteen years. From 1991-2002, I have been director of the division of Payment System of Task Force of National Health Insurance (TF-NHI), an organization responsible for the designing, and supervision of the payment system reform of Department of Health (DOH). In that position, I have been major architect of GBPS reform. From 2003-2005, I have been the Chairperson of NHI Health Care Expenditure Negotiation Committee (NHI-HENC), an organization responsible for the negotiation and allocation of the NHI annual global budgets thru collective negotiation among payers, providers, scholars and government. In addition, I have ever served as expert consultant to almost all major payment system reform committees of BNHI, such as GBPS Committees (one for each of four sectors), DRGs Payment Reform Committee,
RBRVS-based Fee Schedule Reform Committee, and Pharmaceutical Payment Reform Committee, etc; Thus I have had great opportunity to design the mechanism on how to change providers’ attitude toward GBPS implementation. Besides, I also have change to closely observe the interactions among key stakeholders, including various providers, payers, BNHI and DOH, during the GBPS implementation.

A key player involved in the reform of the Dental GBPS, Professor Ru-Chenk Kuo from National Taiwan University Hospital, has named the above process as “Silent Revolution”. By “Revolution” he meant that GBPS does change the payment system and providers’ behavior dramatically. Whereas “Silent” referred to the situation in which that GBPS has been implemented smoothly and did not cause too much resistance from the providers.

Reinhardt (1985) has described three mechanisms to set levels of payment for the fee schedules: administratively decreed, negotiations between physicians and third party and market process. Being influenced by previous authoritarian political system, most social insurance decisions in Taiwan were based on governmental decree supplemented by irregular and informal providers’ participation. Government had full control on almost all decisions, including whom to select for participation. It was not until 1980s that the profession associations have more participation on the public policy (Lin, 1997). This highly regulated approach reflects the traditional public health policy and practice, with its emphasis on the public welfare and regulations to protect public health, however it focus less on what communities may view as good for them and more on what public health professionals (or the policy elites in this case) determine community need. The
consequence is that the issues are not adequately addressed, and the capacities of affected populations to ameliorate them are untapped or undermined (Aday et al., 2004). An example in Taiwan’s previous social insurance was the failure of the “price freezing” strategy, the most common cost control strategies been applied previously. The price control strategy in fact resulted in very high outpatient utilization rates (16 visits per person per year) and high inflation (15% per year before NHI enacted) as well (DOH, 1997a), the so called “balloon effect”

In contrast with above “social justice paradigm”, which might result in government failure, the “liberal paradigm”, which promotes individual freedom/autonomy, protects personal privacy, and relies heavily on market competition, often also failed to improve the quantity and quality of production (Rosenau, 2003). To address the above issues, Jurgen Habermas (1995), has introduced a theory of “Deliberative Democracy” to resolve the above conflicts through “rational discourse” of the affected stakeholders. Communication directed toward a mutual understanding between affected parties can best establish the foundations of trust and collaboration needed for solving their common problems despite their potentially different view points (Habermas, 1995, 1996, 2002, 2003, cited by Aday, 2004). The Deliberative Democracy argued that strategic or technical-rational aims of decision makers are unlikely to be achieved unless affected stakeholders have the opportunity to present and have their points of view heard and respected in the process (Aday et al., 2004; Elster, 1998). The “silent revolution” approach in Taiwan, to my knowledge, is consistent with the “Deliberative Democracy” theory mentioned above. In 2005, DOH in Taiwan has announced the 2nd generation NHI reforms. In addition to the reform on the financing and benefit schemes and governance,
enhancing the citizen participation to achieve deliberative democracy is one of the major reform strategies, (Chen et al, 2004). Therefore, the evaluation on the participation of providers in the decision making process is crucial and meaningful for the formulation of the future reform plan.

The major theme addressed in this paper is: To what extent did the development of the GBPS, the silent revolution, followed the “deliberative justice” paradigm? To be more specific, I try to evaluate the procedural equity of the GBPS policy making process based the “discourse principle” and related criteria developed by Lu Ann Aday et al (2004). The criteria, including the extent of participation, rational discourse and empowerment, were evaluated by comparing the new model with the traditional experience based on previous social insurance.

The analyses were based mainly on my personal “participatory observations” thru the above-mentioned experiences, in conjunction with evidences gathered from official documentations, related publications and qualitative interviews with key stakeholders who have ever participated in the GBPS reform process.

By applying the so-called “silent revolution” model, DOH had successfully persuaded providers’ associations to participate in the GBPS reform. These valuable experiences may shed some light on countries, especially in Asia, which still use FFS as predominated unit of payment and are seeking means to control costs.

The first section of this paper highlights the background and design of payment system reform in general and GBPS reform in specific in Taiwan. The second part of this paper delineates the process of “silent revolution” during GBPS implementation. The last
Overview of Taiwan’s NHI Payment System

To reduce the resistance of the providers against NHI, payment system of the NHI was adopted mostly from previous Labor Insurance (LI). The unit of payment was predominated by itemized fee-for-service (FFS) system for outpatient as well as for inpatient. Providers claim their cost based on the NHI Fee Schedules, and on Drug Price List. In order to provide direct incentives for providers to improve the efficiency of health care provision, case payment system has been introduced since 1995 (Liu, 1999, Lee, 2003, Cheng, 2003). Right now 53 cases including 5 in the outpatient department were paid on a per case basis. Annual cost paid by case accounted for 1.96% and 15.25% of the total cost for outpatients and inpatients respectively in 2002 (BNHI, 2004). In addition to FFS and case payment system, chronic mental hospital beds and day care are paid on a per diem basis. Capitation pilot project was introduced to pay the chronic hospitalization and home care of the ventilator- dependent patients (Lee, 2003). Price control and utilization review remained as the most important costs control strategies before GBPS launched.

Issues led to payment reform

The following problems were the major reasons for payment system reform (Lee, 1994; Yaung, 2000; Lee, Yang, Li, 2005): 1. The fee-for-service payment system provides little or no incentive for saving, and encouraged fraud and abuse (Yeh, 2002). 2. Controlling price but failed to control volumes and the intensity of services. 3. Unfair and
inappropriate resource allocation: Fee schedules were inequitable among different specialties and between inpatient and outpatient sectors: certain specialties, such as general surgery, have difficulty in recruiting new physicians (Lee & Lee, 2003b). 4. Drug payment system provide wrong incentive for fraud and abuse to provider due to large mark-up and price variation among drugs of the same ingredients (Huang and Chiang, 2003). 5. Selection and dumping problems of case payment system: the providers have the option to claim on FFS, if it is not profitable. Big hospitals received more severe cases dumped from smaller hospitals. 6. No incentive to improve quality and effectiveness of care under FFS.

**Objectives and strategies of payment system reform (Lee,2003a.; Lee and Li,2005):**

The objectives of NHI payment reform are: 1. To enhance efficiency and quality of the health care provision. 2. To control cost appropriately. 3. To improve the appropriateness of the resource allocation. Payment Reform Strategies of NHI:

The following reform strategies were developed accordingly:

1. **Macro perspectives:**

   Introduce National Health Insurance Global budget to control total NHI expenditures appropriately. Besides, global budget also cap on each sector of services: dental care, traditional medicine, clinics and hospitals.

2. **Micro perspective:**

   a. Reform unit of payment: introduce case payment based on Diagnosis-Related Groups (DRGs), to provide incentives to improve the production efficiency of the health care provision.
b. Adjust price of the NHI Fee schedules and NHI Drug List, to improve the fairness of payment.

c. Reform the structure of the health care system, to improve the allocation efficiency of the health care system.

d. Quality Improvement Initiatives: introduce Performance/Quality-based payment system, to improve the effectiveness/quality of health care delivery and/or the quality of life of the patients.

As mentioned before, NHI failed to control volumes and intensity of the care during the time when payment price was frozen. Even if case payment system is completely implemented in the future, the providers still have the incentive to increase the volume of the admission or outpatient visits. Therefore, the objectives of GBPS are to control cost appropriately, to improve efficiency and quality of health care provision and to enhance professional autonomy. The following section described the design and implementation process of GBPS.

**Design of GBPS**

To fix the “balloon effect” problem resulting from FFS and price control mentioned above, Hsiao and Yaung have recommended to apply GBPS to control NHI costs during the NHI system planning stage in 1989 (CEPD, 1990; Hsiao, Yaung and Lu, 1990). GBPS resolves the conflict of interests between providers (prefer to maximize total expenditures) and consumers (to minimize premium) by bringing them to the negotiation table to solve the problems together. It also allows NHI to use resource more
wisely, efficiently and more effectively by changing the budget allocation among
different sectors or types of health services.

In 1993, an executive report written by the author regarding the organization
arrangement, the framework of global budget negotiation, the budget allocation
mechanism and the implementation strategies, including a GBPS pilot plan at Hsin-Chu
County, was published (Lee and Su, 1992). The above design on GBPS has been written
into National Health Insurance Act, passed in 1994. To maximize the flexibility in
implementation, the NHI Act only specify the organization (NHI-HENC) and process of
global budget negotiation and allocation, the calculation of the conversion factors of the
NHI Fee Schedules, and the phased-in procedure of GBPS. Leave most regulations on
detailed implementation to DOH.

The design of GBPS was described as following (Lee and Su, 1992, Lee and
Liang, 1996; Lee, 2004):

1. Negotiation of Global budget: annual total NHI budget and principle of budget
allocation will be negotiated prospectively by National Health Insurance Health
Expenditures Negotiation Committee, NHI-HENC.

2. Budget allocation: global budget will be allocated to different services sectors and to
six regions (BNHI divided into 6 regions) based on an adjusted-capitation formula to
enhance the equitable access and distribution of health care resources among
different regions. By allocating budget by sectors by regions, the “delegation of
power and responsibility” was achieved so that providers at different sectors/regions
will be more likely to exercise their power and take responsibility to control costs
thru “peer-pressure” or “self-regulation”. Besides, it will also enhance pseudo
competition among regions.

3. Payment methods: providers still claim their reimbursement for services according to the relative weights (in terms of points) showed on the Fee Schedules. Besides, TFNHI recommend that unit of payment (such as case-payment system) should be reformed as soon as possible, to provide the right incentive for the providers to provide cost-effective services.

4. Cost control mechanism: within each sector/region, quarterly conversion factor will be determined retrospectively based on the quarterly budget of each sector/region and the actual volumes of services (total points) claimed by the providers at specific sector at a specific region (formula were showed as below). Besides, TF-NHI recommended that unit of payment reform, which provides carrots rather sticks (such as floating conversion factors or utilization management) should be considered as the most important cost control tools.

\[
CF_{ijk} = \frac{\text{Budget}_{ijk}}{\text{TP}_{ijk}}
\]

\(CF_{ijk}\): conversion factor of sector i at region j in k_{th} quarter

\(\text{Budget}_{ijk}\): Budget of sector i at region j in k_{th} quarter

\(\text{TP}_{ijk}\): Total points (based on Fee Schedules) claimed by sector i at region j in k_{th} quarter

5. Providers at each sector/region share a certain percent of financial risk collectively within that sector/region, when actual costs of ambulatory drugs over-run budget.

6. Co-management and incentive: BNHI contract with providers’ association, to conduct utilization review, to make recommendation on the NHI Fee Schedules and
payment system reform, and to conduct continuous quality improvement thru “co-management”. So the fairness and appropriateness of the reimbursement and professional autonomy will be greatly enhanced. To prevent providers from reducing access or quality of care under global budget payment system, BNHI should monitor the quality of and access to health care regularly. Direct financial incentive should also be provided to encourage professional associations to improve quality of care.

7. Resources re-allocation: the negotiation and allocation of annual global budget allow NHI-HENC to fine-tune the budgets. So the money will be used in a more efficient and effective way. For example, designate budgets can be used to improve the access to care of the insured live at mountain or remote areas, to improve the quality of preventive and chronic care. The saving can be used to improve the quality of primary care, inpatient care or in other needed areas.

The journey of the silent revolution: GBPS planning and implementation:

The regional GBPS pilot project at Hsin-Chu County in 1994, intended to introduce a regional global budget on the spending various sector (hospitals, clinics, dental care and traditional medicine) for all 13 social health insurance policies, in return for a 12% raise on the total social health insurance expenditures (cost per capita has been 12% lower than national average after adjust for age-sex, Lee and Su, 1993). Although all insurers agreed, the reform has finally failed due to disagreement of all the local providers to the GBPS. We have learned from this lesson that never to incorporate various providers with different experiences/interests and perspectives into a GBPS pilot project, because the problems and the possible solutions, which the reform intended to
solve, varied among different sector of medical services. It will be very hard to achieve consensus regarding the reform plan. Besides we have also learned that providers have very limited knowledge on payment system in general let alone GBPS. Major reason of resistance might due to misunderstanding, reluctant to change, rather than the GBPS reform. One of the major misunderstand is to assume that the GBPS been introduced in Taiwan is a “hospital-based budget”. Providers were more familiar with individual hospital global budget in Canada; therefore they tend to argue GBPS will create inefficiency and long waiting list. Hence for a payment reform to be successful, it is important to empower providers to increase their understanding and knowledge on the actual design of the reform.

Consequently, the TF-NHI of DOH decided to pilot test GBPS on a selected sector of services first rather than in a selected region after NHI launched. Dental outpatient care has finally been chosen due to their relative high motivation compared with other sector. Representatives from Taiwan Dental Association (TDA) were invited to DOH on Nov. 1995 to discuss about the eagerness of participation in the pilot project. As not unexpected, their answer was “no” without disagreement. After hours of discussion, TDA finally agreed that we should keep the discussion window open because nothing in GBPS plan cannot be changed, their disagreement will be like against the air. Besides, because they are the first group to participate in the pilot project, it’s very likely that they have the chance to set the game rule and receive some financial incentives in return for their cooperation. The journey of “silent revolution” thus has started from that moment.

A Task Force on Dental Global Budget Payment System (TF-DGBPS) pilot program was established thereafter. To show the respect, the president of TDA was invited as co-chair with the chair of TF-DGBPS, Mr. Han-Chun Yang, the then deputy convener of TF-NHI, to lead the discussion. The members included 12 representative of TDA, representative of DOH and Bureau of National Health Insurance (BNHI), and me, serving as executive secretary. In contrast with previous experience, government officers usually have full control on the policy making. The above arrangements created a new arena that providers and the official can sit-down and openly discuss almost everything and showed respect to each other. The topics been addressed included what issues should be addressed (agenda setting), the perceived problems that dentists facing with NHI (such as price freezing and inequitable fee schedules), the choices among policy alternatives to address them (revising fee schedules, setting income threshold), the framework for global budget negotiation and allocation of regional budgets, the organizational arrangement co-management (division of power and responsibility between BNHI and TDA), cost control, quality assurance/improvement mechanism. provided by the scholars and TF-NHI have easily directed the discussion toward rational decision making. The TF-DGBPS went well and most of the disputes have been settled thru provision of further analysis by TF-NHI, consensus meeting hold by TDA, or in rare occasion by voting (only in TDA, never happen in the TF-DGBPS). After fourteen meetings, TF-DGBPS finally completed an executive report on DGBPS pilot plan on June 1996 which include all the discussion and recommendation regarding the issues mentioned above (DOH,1997B).
Because hospitals also have dental department, they were invited to joint the task force on July 1996. Meanwhile, DOH sponsored a project for TDA to conduct propaganda on DGBPS to all practice dentists at each county (city). Altogether, there were around 1686 dentists (out of 7500 practice dentists) attend the conferences or workshops. Minor revisions on DGBPS pilot plan were made based on information collected from these conferences (Tseng, 2001). Interview with key players who ever participated in TF-DGBPS in 2000 all expressed their gratitude toward this arrangement. The following statement shows one the most comprehensive comment:

“During the past three years, almost all dentists (board members and committee members) of TDA have been mobilized to participate in a variety of activities/meetings; we have learned a lot particularly from the TF-DGBPS meetings. Though we have our own way to check the information; the participation in TF-DGBPS really empowered us, stimulated the kinds of discussion we never have had before, and presented many innovative strategies to solve problems.

Besides, we are more likely than ever, listen to others and figure-out collectively the most acceptable alternatives to solve conflict of interest of dentists from different settings or regions”

(Interview with one TF-DGBPS member in 2000, Tsen, 2001)

“We appreciated that officers of TF-NHI particularly Mr. Yang and professor Lee always accompany us to meet with our fellow dentists from different groups or regions, help to explain DGPS, and to suggest the solution to a variety of problems been raised by our member. Before we have the final vote, our members have full communication, understanding and thorough explanation.”

(Interview with one TF-DGBPS member in 2000, Tsen, 2001)
After thorough discussion, most representatives agreed that TDA should proceed with the actual implementation based on “our plan” (TF-DGBPS pilot plan). Later on the plan received 65% votes (75% if removed 16 abstentions) of the 143 representatives on the 1st annual meeting of 6th secession of representatives of TDA on Jan.11, 1998 (TDA, 1998).

Implementation of GBPS

DGBPS has finally launched on July 1998. Although there were still a few dentists who against the implementation of DGBPS (for politics rather than for NHI), it was noise rather than objection. With the completely support of TDA, the global budget negotiation and implementation went smoothly. The annual growth rate on DGBPS budgets, agreeable upon by the NHI Health Expenditures Negotiation Committee, was 8% and lower than 12% in previous year without global budget. However, TDA still though that it was worthwhile because from then on, TDA gains almost full control on resources allocation including fee schedules, dental resource allocation, quality improvement, guideline development, and utilization management. A self-report mail survey conducted in 1999 (n=2481) showed that dentists have modest level of satisfaction (58-77%) toward the formulation and implementation process of DGBPS (Hui-Hsin Liu, 1999).

“We are very proud of ourselves, because DGBPS really create a win-win situation, in which costs are controlled, we retain our professional autonomy, and most of all, we are able to fulfill our strongest commitment ever to the insured in improving health of the population and value of the money. That’s the really duty of a health professional”
Following the implementation of DGBPS, DOH applied the same strategies and copied the same procedures for traditional medical care, general practitioners, and to hospital sector as well. Therefore GBPS has been launched on traditional medicine on July 2000, to western clinics (general practitioners) on July 2001 and finally to hospitals on July 2002. To foster the impact of GBPS and to solve the financial crisis, a national NHI expenditure target soft budget was set by the NHIHENS in 2001 before all sectors were capped by GBPS (Lee and Lai, 2001). Therefore, hospitals were almost forced to accept the GBPS; otherwise, they would have to take whatever left from the national NHI expenditure target once budgets for the rest of the three sectors have been determined. Therefore, the attitude toward GBPS of TDA, Taiwan Tradition medical Association, and Taiwan Medical Association were more positive than Taiwan Hospital Association. However, in each of the endeavor, DOH and BNHI has not received too much resistance, not to mention about strike or any other stronger opposition.

“We are not entirely satisfied with GBPS, however, in solve the financial crisis of the NHI, we know DOH has no choice but to implement GBPS. Besides, GBPS is required by the NHI act, sooner or latter, DOH will have implement GBPS according to the law. Therefore, I should emphasize that we are not entirely satisfied with GBPS, but we can accept”

(Implied that GBPS is the second best alternative, the first choice of all is without any regulation, in other word Taiwan Hospital Association in fact conditionally passed the plan)
As the results of the GBPS implementation, total NHI costs were controlled within a stable range after 2002, as showed in Table 1. The nominal annual growth rates on costs per capita ranged 3.605- 4.146 % from July 2002 to 2006 (Table 2).
Analysis and discussion

I have described the process that GBPS has been implemented smoothly in Taiwan without causing too much trouble, that’s why we called it “silent revolution”. By “Revolution” it meant that GBPS do change the payment system and providers’ behavior dramatically. Whereas “Silent” referred to the situation that inception of GBPS did not cause too much resistance from the providers.

In the following section, I tried to analyze the event via my personal observation.

First we need to clear why does it happen? Are the providers in Taiwan more compliant to regulation of the government than other countries?

The answer is definitely “no”. Prior to hospital GBPS, BNHI introduce a “volume-related payment scheme” on Jan. 2001, a scheme that reduced the level of payment of outpatient consultation fee if the daily outpatient volume of a hospital exceeding the threshold volume (Lee, 2001). Although the impact is much less than GBPS, Hospitals have exercised strong political power to against its implementation and its further revision. Therefore, the discrepancy on the compliance to regulation can not explain why it happened?

The next questions that people may want to ask is: Why the providers in Taiwan are willing to accept global budget payment system? The possible answers based on my observation are as following (Lee, 2004):

1. To avoid other government intervention: the providers in Taiwan are quite aware that government will take whatever actions to control costs under financial pressure. In stead
of introducing managed competition, or multi-insure system, been proposed in 1996-7 which plan to introduce more insurers to manage the providers (Wong, 2003) or to de-insurance dental and traditional medical care, the providers would rather than choose GBPS to control cost by themselves. Besides, the providers are quite confident on their ability to control costs under FFS.

2. To gain professional autonomy: to reduce the administrative interference from insurer on the decision making of patient care.

3. To be able to solve the long-tem distortion on the medical behaviors created by previous system: most of them deal with the inequitable or inappropriate rules resulting from FFS, Fee Schedules, and Guideline on claim review, and Physician Guideline on Drug Prescriptions.

4. To survive: physicians from clinics (general practitioners, GP) finally realized, by accepting a separate budget, they would have chance to get protection from threatening from hospital competition. In addition, they gain the autonomy to reform their own payment system and Fee Schedules so that they can provide more comprehensive care to attract more patients to GP.

5. No other option: hospital sector is the last one to accept GBPS. If they don’t accept GBPS, they will force to take what ever left from the NHI expenditures target, been set since 2001, after the three smaller sectors have participated in GBPS and lost the chance to negotiate their own budget proactively.

The last questions I would like to answer are: What are the key factors that resulted in successful silent revolution? To what extents do these factors align with the “Deliberative Democracy” paradigm? The results are showed in Table 3 and 4.
Conclusion

We have describe the process in formulation, designing and implementing GBPS in Taiwan, a process we describe as a “silent revolution”, and analyze the process in terms of procedural equity based on the Deliberative Democracy theory. According to the above comparison with the traditional policy making model, we believe that the application of Deliberative Democracy theory does facilitate the smooth implementation of a brand new and complicated policy which is expected to have great impacts on the providers’ behavior. Although this analysis is preliminary, the above experiences have been replicated at different sectors of GBPS implementation and also on the development of Taiwan Relative Value Scales which incorporated participation of 33 specialties/professionals and required participation of various professional associations as well hospitals association. Therefore, it seems to be a feasible model in Taiwan. However, a successful policy implementation required not just the promise of the providers or the commitment of the government and scholars; whether the reform implemented according the plans, or whether the system can evaluate and address the problems continuously are even more important. However, the support of the provider group is at least the first step toward successful execution of the payment system reform
Table 1 Annual growth rate of total and drug cost of NHI, 1997-2004

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<thead>
<tr>
<th>Year</th>
<th>1997</th>
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<tr>
<td>Total costs</td>
<td>261.1</td>
<td>291.0</td>
<td>316.7</td>
<td>326.0</td>
<td>335.5</td>
<td>360.2</td>
<td>376.2</td>
<td>391.8</td>
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<tr>
<td>Growth</td>
<td>7.3%</td>
<td>11.4%</td>
<td>8.8%</td>
<td>2.9%</td>
<td>2.9%</td>
<td>7.4%</td>
<td>4.4%</td>
<td>4.2%</td>
</tr>
<tr>
<td>Drug cost</td>
<td>64.0</td>
<td>72.3</td>
<td>80.4</td>
<td>82.9</td>
<td>84.7</td>
<td>90.6</td>
<td>94.5</td>
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<tr>
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<td>12.9%</td>
<td>11.3%</td>
<td>3.1%</td>
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<tr>
<td>Drug cost%</td>
<td>24.5%</td>
<td>24.8%</td>
<td>25.4%</td>
<td>25.4%</td>
<td>25.3%</td>
<td>25.2%</td>
<td>25.1%</td>
<td>27.9%</td>
</tr>
</tbody>
</table>

Source of data: most data from BNHI (2004c), recent costs/budgets from NHI-HENC

NTD: New Taiwan Dollars, exchange rate of NTD to U.S. Dollars is about 32:1

Table 2 Global Budget Agreements from 2001-2006
- Annual growth rate on cost per capita

<table>
<thead>
<tr>
<th>Year</th>
<th>Aging +MCPI (%)</th>
<th>Adjustments (%)</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(% of total)</td>
<td>(%) of total</td>
<td></td>
</tr>
<tr>
<td>2001</td>
<td>2.21</td>
<td>1.900(46.2)</td>
<td>4.11*</td>
</tr>
<tr>
<td>2002</td>
<td>1.67</td>
<td>2.037(55.0)</td>
<td>3.707*</td>
</tr>
<tr>
<td>2003</td>
<td>1.55</td>
<td>2.349(60.2)</td>
<td>3.899</td>
</tr>
<tr>
<td>2004</td>
<td>0.51</td>
<td>3.303(86.7)</td>
<td>3.813</td>
</tr>
<tr>
<td>2005</td>
<td>1.34</td>
<td>2.265(62.8)</td>
<td>3.605</td>
</tr>
<tr>
<td>2006</td>
<td>0.78</td>
<td>3.366(81.2)</td>
<td>4.146</td>
</tr>
</tbody>
</table>

MCPI: represents Medical Consumers’ Price Index, constructed specifically for global budget negotiation.
1. *Expenditures target
2. Since July 2002 all services are cap by global budgets

Table 3  The analysis of the process of GBPS design and implementation following Deliberative Democracy paradigm: participation

<table>
<thead>
<tr>
<th>Traditional model/before</th>
<th>Indicators of Deliberative Democracy</th>
<th>Silent revolution</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Participation: TF-DGBPS</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>One committee covered all sectors, TDA has only one representative, usually president</td>
<td>Who participate?</td>
<td>12 representatives of TDA: from diff regions and settings (reflect various interests)</td>
</tr>
<tr>
<td>Irregular, by invitation, short</td>
<td>Occasion and duration</td>
<td>Regular meeting, long-term participation</td>
</tr>
<tr>
<td>Only as a invited member</td>
<td>Respect</td>
<td>President of TDA is co-chair, list of representative nominated by TDA</td>
</tr>
<tr>
<td>Usually set by BNHI or DOH Meeting called and dominated by regulators; policy determine by regulator or technical -rational elites</td>
<td>Agenda</td>
<td>Both parties can recommend</td>
</tr>
<tr>
<td>Agenda</td>
<td>Policy making</td>
<td>The members can request for related data, analysis, discussion and select alternatives. Disagreement resolved by choosing the best acceptable alternatives rather than by voting</td>
</tr>
<tr>
<td>The regulator make decision</td>
<td>Implementation decision</td>
<td>TDA make final call for implementation based on the majority voting by representatives of TDA</td>
</tr>
</tbody>
</table>

**Participation-implementation**

(Various level)

| NA | DOH NHI-HENC |
| No delegate committee | BNHI DGBPS committee |
| One payment committee covered all sector, dental care was rarely in the agenda unless agreed by BNHI | BNHI DGBPS committee |
| TDA has less influence on the decision making | BNHI DGBPS committee |
| Loosely NHI committee | TDA DGBPS committee |
| NA | TDA DGBPS |

**TDA**: Taiwan Dental Association, **TF-DGBPS**: Task Force of Dental Global Budget Payment System

**DOH NHI-HENC**: National Health Insurance Health Expenditures Negotiation Committee of Department of Health
### Table 4  The analysis of the process of GBPS design and implementation following Deliberative Democracy paradigm: rational discourse and empowerment

<table>
<thead>
<tr>
<th>Traditional model/before</th>
<th>Indicators of Deliberative Democracy</th>
<th>Silent revolution</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><strong>Rational discourse</strong></td>
<td></td>
</tr>
<tr>
<td>Rarely or only based on weak evidence</td>
<td>Rational discourse</td>
<td>Communication based on evidence: problem identification, choices of alternatives, outcomes projected(simulation)</td>
</tr>
<tr>
<td>Express personal vs. group opinion</td>
<td>Balancing personal and public interest</td>
<td>Consensus reached thru group discussion within TF-DGBPS (public interest) and TDA (group interest)</td>
</tr>
<tr>
<td>NA, usually policy determined by president and a few board members</td>
<td>Democracy</td>
<td>Trigger the democratic communication within TDA at different geographic levels: national association, county/city association and regional alliance</td>
</tr>
<tr>
<td>Not-systematic discussion, least communication</td>
<td>Quality of communication/ mutual understanding</td>
<td>Thorough discussion in average aspects of the complicated plan, mutual understanding</td>
</tr>
<tr>
<td>Lack of trust and hard to cooperate</td>
<td>Trust and collaboration</td>
<td>Easy to build-up, particularly with the presence of third party (scholars)</td>
</tr>
<tr>
<td>The majority party dominate</td>
<td>Decision making</td>
<td>Respect the minor, the advantaged</td>
</tr>
<tr>
<td></td>
<td><strong>Empowerment: role of scholars and regulators</strong></td>
<td></td>
</tr>
<tr>
<td>Limited role in empowering the providers</td>
<td>Empowerment role</td>
<td>Education, persuasion, facilitate decision making and arbitration: provide information, evidence, analysis (need assessment, evaluation and projection)</td>
</tr>
<tr>
<td>NA</td>
<td>Propaganda of the DGBPS</td>
<td>Except the regular educational role, training the leaders of TDA to be the speakers (more convincing)</td>
</tr>
<tr>
<td>Limited role in empowering the providers</td>
<td>Policy analysis</td>
<td>Help TDA to conduct policy analysis regarding the regulation on internal management, payment reform, quality improvement, utilization review, and guideline development, facilitate consensus build-up. Recommendation on establishing database, conduct physicians' and patients' profile analysis</td>
</tr>
<tr>
<td>Limited role in empowering the providers</td>
<td>Management information</td>
<td>Recommendation on methodology to develop Resources-based Dental Relative Value Scales to be used on Fee Schedules modification</td>
</tr>
<tr>
<td>Limited role in empowering the providers</td>
<td>Payment tools</td>
<td></td>
</tr>
</tbody>
</table>
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