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User satisfaction among the three public health insurance schemes in Thailand: A case of Phayao province

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ABSTRACT

This study tries to investigate and compare user satisfaction among the three public health insurance schemes in Thailand: the Civil Servant Medical Benefit Scheme (CSMBS), the Social Health Insurance Scheme (SHIS), and the Universal Coverage scheme (UCS), using a case study of Prayao Province in northern Thailand. 600 questionnaires are collected, 200 for each scheme, and data are analyzed by using an ordered logit model. We find that respondents who have the UCS insurance are more satisfied with their insurance scheme than those who have the CSMBS insurance. However, a statically significant result cannot be attained from a comparison between the CSMBS and the SHIS. Among all factors, the user satisfaction which comes from the free-of-charge aspect of the health care services affects the overall satisfaction levels of each public health insurance scheme the most. The results may imply that among the three groups of public health insurance members, the UCS users are satisfied with their scheme the most. The reason could be related to the lower expectation they have on their scheme and the zero cost-contribution that they do not have to pay. These results can aid as policy guidance for the Thai government to select its priorities if a health care reform is ever needed.

Keywords: public health insurance, universal health care, universal coverage, user satisfaction, Thailand

JEL Classification: H4, H5, I1, I3, O1, O2

1. Introduction

Thailand is one of a few developing countries in the world which provides Universal Health Coverage (UHC)[1] to all its citizens.[2] The public health insurance system in Thailand has been developed for more than four decades. However, the progress came in year 2002, when Thailand could finally provide Universal Coverage Scheme (UCS) for every Thai citizen living in the country. Universal Health Coverage in Thailand is provided through three public insurance or financing schemes: (1) the Civil Servant Medical Benefit Scheme (CSMBS) for civil servants and their dependants (parents, spouse, and two children aged less than 20 years old) as well as pensioners, which covers around 9 percent of the total population; (2) the Social Health Insurance Scheme (SHIS) for individual private employees, but also covers spouse of male beneficiaries for maternity benefit, which covers about 16 percent of the total population; and (3) the Universal Coverage scheme (UCS) for all other Thai nationals, which covers about 75 percent of the total population (Tangcharoensathien et al, 2010). The UCS replaced all previous government-subsidized health insurance schemes prior to 2001, namely, the Voluntary Health Card (VHC) scheme, the Low Income Card (LIC) scheme for the poor, the disabled, the elderly, children aged less than 12 years old, and all other uninsured citizens (Tangcharoensathien et al, 2010). Initially, under the UCS, no patient paid more than 30 baht per visit to accredited hospitals and health centers for in-patient or out-patient care, including drugs. In 2007, the co-payment was abolished and UCS became free. As a result, Thailand was able to make healthcare more accessible to all and reduced the burden of health costs on the poor. Thus, 99.5 percent of the population now has health protection coverage in Thailand (World Bank, 2012).

In Thailand, health and medical care is overseen by the Ministry of Public Health (MOPH), along with several other non-ministerial government agencies, with total national expenditure on health amounting to 4.2 percent of GDP in 2008 (Tangcharoensathien et al, 2010). According to the World Bank, although Thailand achieved universal coverage with relatively low levels of spending on health, it is facing significant challenges, which are inequalities, rising costs, and duplication of resources (World Bank, 2012).

In terms of inequalities, harmonization of the three public health insurance schemes remains an issue of intense debate in the Thai society. Recent studies have found inequities in access to essential care offered by the different health insurance schemes, including differences in benefits packages, payment methods and payment rates, and the provision of expensive drugs and high-cost procedures (HISRO, 2012). For example, spending for the elderly under the CSMBS is four times higher per patient

[1] Definition of Universal Health Coverage (sometimes referred to as universal health care, universal coverage, universal care or social health protection) varies widely, but the main five themes emerge from a systematic review of the literature: access to care or insurance; coverage; an identifiable point-of-entry to the system, a rights-based approach; social and economic risk protection. Although, each definition has a set of limitations, many of these dimensions are overlapping rather than mutually exclusive (Stuckler et al, 2010).

[2] As of 2009, only 44 countries in the world provided Universal Health Care to their citizens. About one-half is classified as high income countries, one-quarter as upper middle income countries, and the final quarter as lower middle income countries (based on the World Bank income classification schema) (Stuckler et al, 2010).

than those eligible only for the UCS (World Bank, 2012). This is because the budget for the UCS (and also the SHIS) is under the "per capitation" model, which pays per head for out-patients and global budget plus diagnosis-related group (DRG) for in-patients plus additional payments for accident and emergency and high cost care (Tangcharoensathien et al, 2010). This "per capitation" model may lead to a reduction in service quality provided by the participated hospitals as there are still some criticisms of the health care quality in UCS and SHIS (HISRO, 2012). Moreover, members have to pre-register with a contractor provider in the district health system they reside in, though in reality there is no choice for UCS members in rural areas. On the other hand, the CSMBS is a fringe benefit to government employees and dependents to compensate relatively lower salary (compared with market rates) in the public sector. It is a tax financed non-contributory scheme. Members in this scheme are generously provided with a wide range of medical services, such as having an access to private room and board, some new technology, and expensive health services and medicines. Members are granted free choice to public providers (access to private sector admission service was limited to life threatening accident and emergency), no pre-registration required. This is because the mode for provider payment is the "fee for service" model, which is a direct disbursement to mostly public providers and DRG for in-patient care with no co-payment or maximum ceiling of service benefit. The public hospitals are directly disbursed by the Comptroller's General Department (CGD) on a monthly basis for out-patient services they provided to CSMBS members. These cashless services have resulted in exponential growth of outpatient expenditure by the scheme (Tangcharoensathien et al, 2010).

For the cost-contribution, only people who are members of the SHIS have to contribute to the SHIS fund under a mandatory tri-partite payroll-tax scheme equally shared by employer, employee, and the government for non-work-related illness and injuries, maternity benefit, cash allowances for disability, old age pension, and death compensation. The mode of provider payment is the "inclusive capitation" for out-patient and in-patient services, plus additional adjusted payments for accident and emergency, high cost care utilization percentile, and high risk adjustment (Tangcharoensathien et al, 2010). Members of SHIS have to pre-register with a public or private competing contractor. Since SHIS requires hospital with more than 100 beds and other specialty requirement as a contractor provider, not many district hospitals can serve as SHIS contractors (Tangcharoensathien et al, 2010). In addition, for some services covered by SHIS, such as costs for dental care, pregnancy, and hemodialysis that go beyond per annum limit, members have to pay for an implicit co-payment themselves. On the other hand, those who are members of CSMBS and UCS do not have to contribute to their funds as they are financed by the general tax revenue.

In terms of rising costs, the World Bank states that because a high share of spending on health is shouldered by the government and the government's health spending as a share of GDP has been increasing due to the growing number of chronic diseases, aging population, etc; it is difficult for the budget to be sustained in the long term (World Bank, 2012). Although, the World Bank admits that the government and other health stakeholders already recognize the growing costs and have put into place some measures to deal with them, such as better payment arrangements, and an increased emphasis on disease prevention and health promotion; there should still be a greater focus on hospital efficiency and more measures to deal with the unequal distribution of health facilities and staff. On the other hand, Tangcharoensathien et al

(2010), a research team from the Ministry of Health, argue that since the general tax revenue is one of the most progressive sources of funding, and the level of total health expenditure to GDP is modest and has not been much changed; it is within the fiscal capacity of the country to afford it in the long term. Tangcharoensathien et al (2010) project that by year 2020, total health expenditure in Thailand will be less than 4.5 percent of GDP. This is due to the Thai government's strategic purchasing, with the application of capitation contracting model as major mode of provider payment for SHIS and UCS. Compared with fee for service reimbursement model, capitation contracting model has a better prospect of long-term cost containment (Tangcharoensathien et al, 2010).

In terms of duplication of resources, although the Ministry of Public Health (MOPH) oversees the whole health care system in the country, each scheme is managed by different government agencies. The CSMBS is managed by the Comptroller's General Department (CGD) of the Ministry of Finance. The SHIS is managed by Social Security Office (SSO) under the Ministry of Labor, while the UCS is managed by the National Health Security Office (NHSO), which is an independent public agency. The World Bank states that since Thailand's health spending is spread across several ministries, government agencies, public insurance schemes, and local governments; this results in duplication and inefficiencies of administrative systems that deal with the country's UHC (World Bank, 2012).

This study aims to investigate and compare user satisfaction among the three public health insurance schemes in Thailand: the Civil Servant Medical Benefit Scheme (CSMBS), the Social Health Insurance Scheme (SHIS), and the Universal Coverage scheme (UCS), using a case study of a province in northern Thailand, Phayao. Phayao was selected because it is one of the authors' home town, it has a great deal of population participating in agricultural sectors, has a relatively low income per capita compared with other provinces in Thailand (NSO, 2011), but is ranked quite high in terms of happiness and subjective well-being levels (ABAC Poll, 2011). The authors collected 600 questionnaires through random sampling method, 200 for each scheme. Results of the study could help the Thai government understand not only the user satisfaction among the three schemes, but also their expectation towards Thailand's UHC system.

2. Literature review

Analysis of Universal Health Coverage (UHC) has been conducted by many disciplines using a variety of methods, ranging from economics, sociology, political sciences, to public health. Of these traditions, four main theoretical positions have been previously identified to explain the expansion of health coverage: pluralist theories, institutional theories, development theories, and class theories (Stuckler et al, 2010). The literature review shows that UHC was typically achieved as part of broader political movements to implement social welfare systems (Stuckler et al, 2010). More than 60 years ago, the Universal Declaration of Human Rights laid the foundations for the right to the highest attainable standard of health. This right is central to the creation of equitable health systems (Backman et al, 2009). Navarro et al (2006) argue that public redistribution in the form of taxation is expected to be lower when society is highly unequal, such that there is less motivation to redistribute wealth. Backman et al (2009) collect globally processed data on 72 indicators for right-to-health features of health systems for 194 countries. They find that these indicators and data provide a basis for

the monitoring of health systems and the progressive realization of the right to health, which are the obligations under common human-rights law.

While equity is a shared goal, UHC may not be sufficient to achieve it. The 1979 Black Report, from the United Kingdom, revealed that in spite of three decades of universal health access, there were substantial and widening inequalities in morbidity and mortality between social classes, which required other means to address beyond healthcare coverage (Black et al, 1980). Stuckler et al (2010) find that two important factors determining public health allocations of tax resources seems to be democratic representation and legal or constitutional mandate to provide UHC. In democratic countries the mass public tends to exert a greater influence on policymakers than in dictatorships. They draw this conclusion based on observations of countries like Germany, the United Kingdom, South Korea, Spain, Portugal, and Taiwan. A legal or constitutional mandate to provide UHC can facilitate the expansion of care because it provides a framework for social mobilization and reflects a re-framing of the debate.

3. Data and Methodology

This study uses 600 questionnaires collected in Phayao province through random sampling method, 200 for each public insurance scheme. The questionnaires are analyzed using an ordered logit model and the marginal effect technique. A general ordered logit model's characteristics can be expressed in the following equation.

$$y_i^* = x'\beta + \varepsilon$$

Where
- y_i^* is a dependent variable
- x' is independent variables
- β is a parameter
- ε is an error term

Since the model is an ordered logit model, the dependent variable has to be divided into ordered levels, therefore:

$$y_i = 0 \quad \text{If} \quad y_i^* \leq 0; \text{Prob}\,(y = 0|x) = \emptyset(-x'\beta)$$
$$y_i = 1 \quad \text{If} \quad 0 < y_i^* \leq \mu_1; \text{Prob}\,(y = 1|x) = \emptyset(\mu_1 - x'\beta) - \emptyset(-x'\beta)$$
$$y_i = 2 \quad \text{If} \quad \mu_1 < y_i^* \leq \mu_2; \text{Prob}\,(y = 2|x) = \emptyset(\mu_2 - x'\beta) - \emptyset(\mu_1 - x'\beta)$$
$$\vdots$$
$$y_i = j \quad \text{If} \quad \mu_{j-1} \leq y^*; \text{Prob}\,(y = j|x) = 1 - \emptyset(\mu_{j-1} - x'\beta)$$

Where
- y_i is a latent variable of y_i^* in the model
- μ is a random variable which is not able to observe

In our model, we set our variables as follows:

$$Y = f(D1, D2, X1, X2, X3, X4, X5, X6)$$

Where Y is the overall satisfaction levels for each public health insurance scheme. In this study, we divide the dependent variable into 11 levels based on the level of satisfaction with each public health insurance scheme, ranging from 0 to 10, when 0 means not satisfied at all, 1 is having 10 percent satisfaction, and 10 is having 100 percent satisfaction.

D1 is a dummy variable for the Social Health Insurance Scheme (SHIS). This dummy variable is used to compare the Civil Servant Medical Benefit Scheme (CSMBS) (value = 0) aginst the SHIS scheme (value = 1).

D2 is a dummy variable for the Universal Coverage Scheme (UCS). This dummy variable is used to compare the Civil Servant Medical Benefit Scheme (CSMBS) (value = 0) against the UCS scheme (value = 1).

X1 is the frequency of using health care services under the entitled scheme in a year.

X2 is 0-11 levels of satisfaction with hospital staff that they have good knowledge and ability to provide health care services, when 0 means not satisfied at all, 1 is having 10 percent satisfaction, and 10 is having 100 percent satisfaction.

X3 is 0-11 levels of satisfaction with the management system of the entitled scheme that its health care management system is appropriate and productive.

X4 is 0-11 levels of satisfaction with credibility of the entitled scheme that users feel safe and confident when receiving the heath care services.

X5 is 0-11 levels of the satisfaction with the benefits received from the entitled scheme.

X6 is 0-11 levels of satisfaction when receiving health care services from the entitled scheme with free of charge.

When interpreting the marginal change of each variable obtained from model, the marginal effect technique has to be used. In the ordered logit model, the marginal effects tell us that at a certain level of Y (such as at levels of 0%, 10%, 20%,…, 100%), if variable X_{ij} changes (increase or decrease) by 1 level (such as 10%), the probability that the respondents would select variable Y at that level is how many percent, which can be derived from:

$$\text{Marginal Effect } (Y = 0) = \frac{\partial \Pr(Y=0)}{\partial X_{ij}}$$

$$\text{Marginal Effect } (Y = 1) = \frac{\partial \Pr(Y=1)}{\partial X_{ij}}.$$

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$$\text{Marginal Effect } (Y = 10) = \frac{\partial \Pr(Y=10)}{\partial X_{ij}}$$

4. Results and Discussions

Descriptive Statistics

From the 600 questionnaires collected, 351 persons are female (58.5%) and 249 persons are male (41.5%). Most questionnaire respondents in the CSMBS (civil servants) are between the ages of 51 – 60 years old (43.5%), married (81%), hold a bachelor's degree or equivalent (81%), have an average income of 20,001 – 30,000 baht per month (32%), use the entitled public health insurance 1 time a year (32.5%), and use the insurance for other illnesses, such as dental care, annual health check, and common flu (28.5%). Most questionnaire respondents in the SHIS (private employees) are between the ages of 21 – 30 years old (50%), single (57%), hold a bachelor's degree or equivalent (86.5%), have an average income of 5,000 – 15,000 baht per month (49%), use the entitled public health insurance 2 times a year (33%), and use the insurance for underlying diseases (27.5%). Most questionnaire respondents in the UCS (residual Thai nationals) are between the ages of 41 – 50 years old (40%), married (69.5%), having elementary school level of education (58.5%), have an average income of 5,000 – 15,000 baht per month (52%), use the entitled public health insurance 1 time a year (47.5%), and use the insurance for underlying diseases (27.5%).

For the level of satisfaction with each variable, we divide the satisfaction score into 11 levels, ranging from 0 to 10, when 0 means not satisfied at all, 1 is having 10 percent satisfaction, and 10 is having 100 percent satisfaction. The average scores are the average of 600 samples. The variable which receives the highest average score is X6 or satisfaction when receiving health care services from the entitled scheme with free-of-charge (74.06%), followed by Y or the overall satisfaction levels for each public health insurance scheme (73.13%), X2 or satisfaction with hospital staff that they have good knowledge and ability to provide health care services (71.83%), X5 or satisfaction with the benefits received from the entitled scheme (71.16%), X3 or satisfaction with the management system of the entitled scheme that its health care management system is appropriate and productive (65.63%), and X4 or satisfaction with credibility of the entitled scheme that users feel safe and confident when receiving the heath care services (60.40%). The average satisfaction score for all 6 variables is 69.36%.

Regression Results

We use the ordered logit model to analyze the data in 7 ways or 7 types as shown in Table 1. Results from the analysis show that in Type 1, which includes all the 600 samples in the model, independent variables that affect the overall satisfaction levels for each public health insurance scheme are the frequency (X1), the credibility (X4), the benefits (X5), and the free-of-charge (X6). However, the variable frequency (X1) has a negative relationship with the dependent variable. In Type 2, which includes only the CSMBS samples in the model, independent variables that affect the overall satisfaction levels for each public health insurance scheme are management (X3) and free-of-charge (X6). In Type 3, which includes only the SHIS samples in the model, independent variables that affect the overall satisfaction levels for each public health insurance scheme are benefits (X5) and free-of-charge (X6). In Type 4, which includes only the UCS samples in the model, independent variables that affect the overall satisfaction levels for each public health insurance scheme are frequency (X1), which gives a negative effect, credibility (X4), benefits (X5) and free-of-charge (X6). In Type 5, which includes all the 600 samples in the model plus both dummy variables,

independent variables that affect the overall satisfaction levels for each public health insurance scheme are the UCS dummy (D2), frequency (X1), which gives a negative effect, credibility (X4), benefits (X5) and free-of-charge (X6). In Type 6, which includes only the CSMBS and SHIS samples (400 samples) in the model plus SHIS dummy variable (D1), independent variables that affect the overall satisfaction levels for each public health insurance scheme are management (X3), credibility (X4), and free-of-charge (X6). In Type 7, which includes only the CSMBS and UCS samples (400 samples) in the model plus UCS dummy variable (D2), independent variables that affect the overall satisfaction levels for each public health insurance scheme are the UCS dummy (D2), management (X3), credibility (X4), and free-of-charge (X6).

TABLE 1. Regression results using the ordered logit model

Dependent Variable Y: the overall satisfaction levels for each public health insurance scheme							
Variable	**Type 1 All**	**Type 2 CSMBS**	**Type 3 SHIS**	**Type 4 UCS**	**Type 5 All + 2Ds**	**Type 6 D1: SHIS**	**Type 7 D2: UCS**
D1: SHIS					.078046	-.001284	
D2: UCS					.30937*		.346984*
X1: frequency	-.044804**	-.013344	-.057963	-.078232**	-.047199**	-.016312	-.017086
X2: staff	-.015877	-.129694	.191249	-.068202	-.014286	.072637	-.044429
X3: management	.098786	.394675**	-.025817	.007007	.097109	.178680*	.236459**
X4: credibility	.196517*	.12965	.023065	.282583**	.197550*	.332717 **	.376184 **
X5: benefits	.492542***	.389440	.684898**	.470166**	.478523***	.010596	.014052
X6: free-of-charge	.783798***	.724987**	.802940***	.752003***	.778063***	.858979***	.847867***
R^2	0.2772	0.2111	0.2541	0.2842	0.2784	0.2276	0.2521
Log likelihood	-832.4952	-291.1888	-269.5133	-251.9285	-831.1480	-578.179	-561.8677
Wald chi^2	251.05	74.46	116.95	64.04	266.08	180.84	146.31
Observations	600	200	200	200	600	400	400

*confidence level 90% ** confidence level 95% *** confidence level 99%

D1 is a dummy variable for the Social Health Insurance Scheme (SHIS); D**2** is a dummy variable for the Universal Coverage Scheme (UCS); **X1** is the frequency of using health care services under the entitled scheme in a year; **X2** is 0-11 levels of satisfaction with hospital staff that they have good knowledge and ability to provide health care services; **X3** is 0-11 levels of satisfaction with the management system of the entitled scheme that its health care management system is appropriate and productive; **X4** is 0-11 levels of satisfaction with credibility of the entitled scheme that users feel safe and confident when receiving the heath care services.; **X5** is 0-11 levels of the satisfaction with the benefits received from the entitled scheme; **X6** is 0-11 levels of satisfaction when receiving health care services from the entitled scheme with free of charge.

To interpret the results, the negative value that the variable frequency (X1) gives could mean that the more often the questionnaire respondents go to hospital, the less satisfied they are with the public health insurance scheme that they are entitled to have. The reason could be that going to a hospital is not a pleasurable activity by nature, so not having to go there at all would be better than having to go there, even though all the hospital costs are covered by the insurance. In all model types, the variable free-of-charge (X6) is statistically significant at very high confidence intervals (95% and 99%). This could mean that among all factors, the user satisfaction which comes from the free-of-charge aspect of the health care services affects the overall satisfaction levels for each public health insurance scheme the most.

An interesting result could be drawn from Type 5 model, which includes all the 600 samples into the model plus both dummy variables. The UCS dummy is positive and statistically significant at 90% confidence interval. This means our respondents who are the UCS members are more satisfied with their insurance scheme than those who are the CSMBS members. This result is confirmed in Type 7 model (includes only the CSMBS and UCS samples (400 samples) in the model plus UCS dummy variable (D2)). However, a statically significant result cannot be attained from the comparison between the CSMBS and the SHIS. We could infer from these results that among the three groups of public health insurance users, the UCS insurance members are satisfied with their scheme the most. This finding is consistent with a previous study by the Health Insurance System Research Office (HISRO) which conducted an exit interview survey of hospital visitors in 2011. The survey results revealed that UCS-entitled visitors reported higher levels of satisfaction than those entitled to the CSMBS or SHIS in all dimensions of responsiveness except choice, which was lowest among UCS members (Pongsupap et al, 2011). The reason behind these results could relate to the expectation of users and cost-contribution that they have to pay. The UCS users seems to have less expectation about the health insurance scheme that they receive since they do not have to pay for any cost-contribution in order to receive it. This is opposite to the CSMBS users who should have higher expectation due to the lower salary that they are compensated (compared with market rates); therefore, they should expect to receive a fringe benefit that has a high value. Also, for the SHIS users, since these users are the only group of people who have to pay for the cost-contribution for their insurance, they are likely to have high expectation and be the least satisfied with their insurance scheme.

Marginal Effects

In terms of the marginal effects, the marginal effects tell us that at a certain level of Y (such as at levels of 0%, 10%, 20%,…, 100%), if variable X_{ij} changes (increase or decrease) by 1 level (such as 10%), the probability that the respondents would select variable Y at that level is how many percent. For the marginal effects when the independent variable is a dummy variable, it can be interpreted that at a certain level of Y, if variable D1 changes from 0 to 1, the probability that the respondents would select variable Y at that level is how many percent.

In this study, the levels of Y range from 0 – 100%, with an increment of 10%. The dummy variables D1 and D2 have values of either 0 or 1. The levels of X1 range from 1 time – 11 times, with an increment of 1 time. The levels of variables X2-X6

range from 0 – 100%, with an increment of 10%. Table 2 shows selected results of the marginal effects from the study. The authors try to select the results which show that they are statistically significant at the highest confidence interval (99%) and also have the highest positive coefficient value. In most model types, when level of Y equals 80%, it gives the highest confidence interval and also positive coefficient value.

For example, in Type 5 model (see Table 2), when Y equals 80%, if the dummy variable D2 changes from CSMBS (0) to UCS (1), the probability that the respondents would select variable Y at level 80% is 4.3%. If the variable frequency (X1) increases by 1 level (1 time), the probability that the respondents would not select variable Y at level 80% is 0.68% since the coefficient value is negative. If the variable credibility (X4) increases by 1 level (10%), the probability that the respondents would select variable Y at level 80% is 2.8%. If the variable benefits (X5) increases by 1 level (10%), the probability that the respondents would select variable Y at level 80% is 6.9%. And if the variable free-of-charge (X6) increases by 1 level (10%), the probability that the respondents would select variable Y at level 80% is 11.2%.

Results of the marginal effects can aid as policy guidance since they can help us select which policy to enact first or last based on the highest confidence interval and the highest positive coefficient value. In this case, it is clear that the free-of-charge aspect (X6) of the public health insurance scheme receives the first priority. This means if the government needs to reduce some health care cost, the government should try to reduce other aspects of it first, before giving up this free-of-charge aspect.

TABLE 2. Selected results of the marginal effects

Variable	**Type 1 All**	**Type 2 CSMBS**	**Type 3 SHIS**	**Type 4 UCS**	**Type 5 All + 2Ds**	**Type 6 D1:SHIS**	**Type 7 D2: UCS**
Level of Y	Y = 80%	Y = 80%	Y = 80%	Y = 100%	Y = 80%	Y = 80%	Y = 90%
D1: SHIS					.011194	-.0002067	
D2: UCS					.043249*		.037629*
X1: frequency	-.006705**	-.002056	-.007694	-.010643**	-.006817**	-.00262	-.001857
X2: staff	-.002365	-.019985	.025387	-.00927	-.002063	.011684	-.004829
X3: management	.014429	.060817*	-.003427	.000953	.014027	.02874*	.025704**
X4: credibility	.028498*	.019978	.003061	.038445*	.028535*	.053519**	.040892**
X5: benefits	.07168***	.06001	.09091**	.06396**	.06912***	.001704	.001527
X6: free-of-charge	.113945***	.111716**	.106588***	.102310***	.112388***	.138172***	.092166***
Observations	600	200	200	200	600	400	400

*confidence level 90% ** confidence level 95% *** confidence level 99%

5. Concluding Remarks

This study finds that the questionnaire respondents who are members of UCS are more satisfied with their insurance scheme than those who are members of CSMBS. However, a statically significant result cannot be attained from a comparison between the CSMBS and the SHIS. Among all factors, the user satisfaction which comes from the free-of-charge aspect of health care services affects the overall satisfaction levels for each public health insurance scheme the most. The results may imply that among the three groups of public health insurance users, the UCS members are satisfied with their scheme the most. The reason could be related to the lower expectation they have on their health insurance scheme and the zero cost-contribution that they do not have to pay. This is opposite to the CSMBS users who should have higher expectation due to the lower salary that they are compensated (compared with market rates); therefore, they should expect to receive a fringe benefit that has a high value. Also, for the SHIS users, since these users are the only group of people who have to pay for the cost-contribution for their insurance, they are likely to have high expectation and be the least satisfied with their insurance scheme. These results can aid as policy guidance for the Thai government to select its priorities if a health care reform is ever needed.

Although, the UCS has greatly improved health equity in Thailand, inequality still exists in benefits and level of expenditure. To harmonize the three public health insurance schemes, the government should try to address inefficiencies across the schemes and streamlining operations by standardizing common features, for example the benefits package, the information system, and the payment method. Evidence on the strengths and weaknesses of each scheme should be generated to inform ongoing and future scheme harmonization (HISRO, 2012).

Another challenge is from the health-care provider side. Surveys by the Health Insurance System Research Office (HISRO) find a low level of satisfaction with the UCS as measured by job satisfaction, work morale, and happiness at 45.7% in 2003 and 39.3% in 2004 (HISRO, 2012). Two reasons why the UCS was not better received were inadequate budget allocations, especially to larger hospitals and those located in the central region, and the negative statements made by the reformists about health-care providers (HISRO, 2012). However, satisfaction rates improved when the National Health Security Office began to address provider concerns, reaching a high of 78.8% in 2010. The sharp rise in the level of satisfaction in 2010 is best explained by the substantial increase in allowances for health-care professionals in district and provincial hospitals in the previous year. From the provider perspective, higher satisfaction with the UCS will require improvements in three areas: better understanding among UCS members of their rights and entitlements, appropriate levels of staffing in relation to workload, and improved health-service capacities for prompt treatment (HISRO, 2012).

The conclusion of this paper strongly supports HISRO (2012) that the path ahead for Universal Health Coverage in Thailand should remain focused on equity, evidence, efficiency, and good governance.

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