

**AN ECONOMIC EVALUATION ON
THE NEW COOPERATIVE MEDICAL SCHEME (NCMS)
FINANCING
—A CASE STUDY OF MEEDU COUNTY,
YUNNAN PROVINCE, CHINA**

The logo of Mahidol University is a large, circular emblem in the background. It features a central golden stupa-like structure on a blue circular field. The emblem is surrounded by a golden border containing Thai script. The author's name, YIYUN ZHANG, is printed in black capital letters across the center of the emblem.

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**A THESIS SUBMITTED IN PARTIAL FULFILLMENT
OF THE REQUIREMENTS FOR THE DEGREE OF
MASTER OF ARTS (HEALTH SOCIAL SCIENCE)
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2008

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Thesis
Entitled

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—A CASE STUDY OF MEEDU COUNTY, YUNNAN PROVINCE, CHINA



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Yiyun Zhang

AN ECONOMIC EVALUATION ON THE COOPERATIVE MEDICAL SCHEME (NCMS) FINANCING—A CASE STUDY OF MEEDU COUNTY, YUNNAN PROVINCE, CHINA

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ABSTRACT

The New Cooperative Medical Scheme (NCMS) has existed since 2003. With the strong political commitment of the Chinese government, NCMS has been pushed to expand in rural China with increased financing and advocacy. However, some problems which have been identified are not yet clearly understood—the cost of publicity and collecting the premium from the villagers, and the refusal of some villagers to participate. These have become barriers to further NCMS expansion. This study looks at the current resource allocation for NCMS financing in a typical agricultural county in southwestern China. Existing data and costing techniques were used to examine the NCMS financing costs. Qualitative strategies were applied to explore why villagers do not participate in NCMS.

In the year 2006, NCMS financing in Meedu County, at the county, township village levels respectively cost 240,086 Yuan, 56,352 Yuan, and 13,888 Yuan in advocacy of villagers. The overall NCMS financing cost of Haibazhuang Village allocated by the three levels was a total of 21,765 Yuan, with the biggest part taken by manpower and monitoring activities at the village level. The unit financing cost per NCMS enrollee was 5.84 Yuan with 4.34 Yuan paid in real money, and 1.50 Yuan consumed without real money payment. The results also reveal the complexity of the villagers' non-enrolling behavior. Reasons for not participating were: 1) the poorest could not afford the 10 Yuan premium; 2) healthy villagers did not see the need to have health insurance; 3) migrant villagers felt they did not benefit from the hometown NCMS; 4) disappointed villagers stopped using the NCMS because of the negative behavior of health service providers; 5) some villagers dropped out as they failed to understand NCMS regulations.

It is highly recommended that the focus be shifted from the horizontal NCMS expansion of pursuing 100% coverage to the vertical NCMS expansion by providing more detailed information to strengthen the enrolled villagers' understanding of NCMS for long-term development.

KEY WORDS: NCMS FINANCING / ADVOCACY / COST /
NON-ENROLLING BEHAVIOR / RURAL CHINA

144 pp.

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LIST OF ABBREVIATIONS

Abbreviation	Term
CMS	Cooperative Medical Scheme
CCMS	Center for China Cooperative Medical Scheme
CNY	New Cooperative Medical Scheme
IEC	Information, Education, and Communication
MOH	Ministry of Health
NCMS	Chinese Yuan
SCLGOPAD	State Council Leading Group Office of Poverty Alleviation and Development
SICMOH	Statistic and Information Center of Ministry of Health
WHO	World Health Organization

CHAPTER 1

INTRODUCTION

1.1 Background

In rural China, the government county hospitals, township health centers, and village clinics have made up the health system from the top (the county level) to the grassroots (the village level) since the early 1950s. Being distant from the modern health facilities of urban cities, villagers are mostly relied on the rural health system to address their general health problems. It was said that “despite a limited number of well-trained professionals and hospital beds” and a small expenditure for health care, “China achieved enviable improvement” on health between 1952 and 1982. (Hsiao, 1995)

However, since 1980s, the marketing economic has been greatly influenced the old rural health system in China. “Irrational prices distorted medical practices which resulted in overuse of drugs and high technology tests”. Especially for the government hospitals, “public control of hospitals and poor management caused inefficiency, waste and poor quality of care”. (Hsiao, 1995) Meanwhile, private sectors and pharmacies become flourishing as new alternatives for villagers. “Self-treatment without physician visit” and “Self-treatment with physician visit” becomes more popular. Though the dominant three-level government hospital system has been maintained, it is not the only choice of the villagers any more. (Liu, et al., 2007)

1.1.1 From CMS to NCMS: Efforts of the Chinese Government for Rural Health

1.1.1.1 CMS

The Cooperative Medical Scheme (**CMS**) started appearing in rural areas of China as early as the 1940's.(Zhou, et al., 1991) Funds were first collected

from villagers on a voluntary basis, and then through welfare funds as agricultural collectives were formed in the mid to late 1950's. With these funds, village health clinics were established, and one or two health workers (barefoot doctors) were paid to provide both preventive and primary care services at the village level. More serious cases were referred to the township health centre. And the county hospital provided care for the most seriously sick patients. Villagers were reimbursed for a fixed percentage of their medical expenses from the collective fund.

At the peak in the mid 1970's, CMS was operated in about 90% of Chinese rural villages. (Lok Sang HO, 1995) However, in the early 1980's, a series of nation-wide reforms brought a transformation of the socio-economic base from the collective level to the household level, combined with management imperfection and corruption problems within CMS, most of these schemes collapsed. (Hsiao & Liu, 1995)

In the following two decades, there had no organized health insurance widely provided to villagers. By 1998, only 9.5% of the villagers were insured (Ministry of Health, 1999). The vast majority of villagers were left behind to be fully responsible for paying health care (based on fee-for-service charging mechanism) out of pocket themselves. (Hsiao, 1995)

Such situation of lacking health protection net of villagers has directly pushed them into the rural vulnerability—being threatened by the vicious circle of being stricken by catastrophic diseases and being trapped in poverty. Consequently, along the line of seeking health care—ability to pay health care—health status, the evident health inequities to villagers have been perceived, with critical comments from both national and international world, urging for the efforts of the Chinese government.

1.1.1.2 NCMS

In 2002, the New Cooperative Medical Scheme (NCMS) which is described as a new health social insurance especially for villagers was established by the Chinese government on a trial basis nationwide.

Based on household, paying 10 Yuan for each member as the individual premium, a rural family could receive 40 Yuan for each member as the government subsidy to enroll NCMS for a whole year, during which reimbursement under certain regulations could be got if any insured family member gets sick.

1.1.1.2.1 New CMS: What is “New”?

Sharing the same name of “Cooperative Medical Scheme”, NCMS is emphasized “new” due to the added government efforts. Comparing with the “old” CMS, which had funds and management budget only from the agricultural collectives, it is the strong financial support from government that makes New CMS to be “new”.

1.1.1.2.1.1 Individual Premium and Government Subsidy

Before 2005, there was a 20-Yuan subsidy from the government to each NCMS enrollee, as long as his/her individual premium is paid. Then, in 2005, the government claimed the decision of accelerating and strengthening NCMS to achieve a wider coverage with greater financial support. Since then, the government subsidy for each enrollee has been double-expanded—there is a 40-Yuan subsidy from the government to each NCMS enrollee. (See Table 1-1)

Table 1-1: Sources of NCMS financing

Financing Sources (Per Enrollee)	Year 2003-Year 2005		Year 2006- Now	
	(CNY)	(%)	(CNY)	(%)
Premium From				
Individual	10	33.3	10	20.0
Subsidy From				
Central Government	10	33.3	20	40.0
Local Government	10	33.3	20	40.0
Total	30	100.0	50	100.0

1.1.1.2.1.2 Reimbursement Fund and Extra Management Budget

Except the subsidy that goes to NCMS enrollees, the government has provided extra budget for NCMS management as well. Such budget responds for staff, capital bases, and consumable materials of NCMS Offices. There is a very clear separation between NCMS reimbursement fund and NCMS management expenditures. Every Yuan in NCMS reimbursement fund is ear-marked—for giving to villagers as reimbursement only, while all the expenditures for NCMS management is financed extra from the local government at the same level.

Supported by the Chinese government, New CMS is hoped to become a sustainable safety-net for villagers. Furthermore, it is thought that through the New CMS, the improved availability, accessibility, and affordability of health care for villagers would finally work on the enhancement of rural health, which had been ignored since the collapse of the old CMS.

1.1.1.2.2 Four Basic Principles Nation-Wide

Being applied in different areas all over China, NCMS is kept as a consistent system under the administration of the Chinese government. From central to local, the NCMS Offices at each level (Central NCMS Office, Provincial NCMS Office, Prefectural NCMS Office, County NCMS Office, and Township NCMS Office) unite the network of NCMS top-down. (See Figure 1-1)

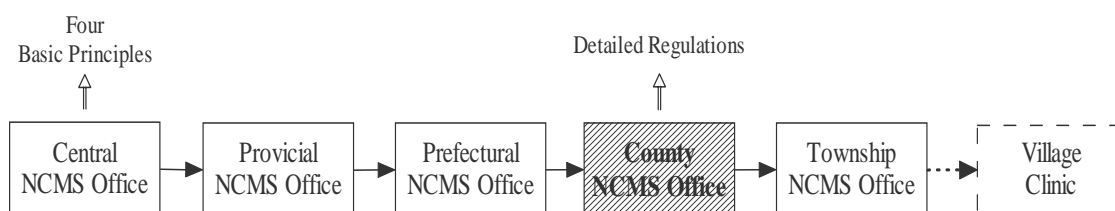


Figure 1-1 : The top-down NCMS network

Though the detailed NCMS regulations are varied county to county, there are four basic principles of NCMS uncompromisingly maintained nation-wide. They are taken as the spirit of NCMS. (CCMS, 2006) (See Table 1-2)

Table 1-2: Four basic principles of NCMS

The four basic NCMS principles
1. Voluntary participation
2. Risk sharing
3. Focusing on catastrophic diseases
4. Government management

First, “voluntary participation”: in the early period of NCMS piloting, it is concerning about the historical disaffection of villagers towards all kinds of compulsory rural taxation that this principle to be claimed. NCMS, which provides public benefits to villagers, should not be perceived as another financial burden of them.

Second, “risk sharing”: by organizing villagers into NCMS, the sick villagers would be financially supported from the collected fund, and the negative consequences (including economic loss) of being sick would be shared among the enrolled members. This is different from the traditional way in rural China to cope with diseases by rural household individually.

Third, “focusing on catastrophic diseases”: it is supposed that NCMS would provide the most essential help to the villagers who are struck by catastrophic diseases. Since catastrophic disease is one of the direct reasons of rural poverty, by enrolling NCMS, the reduced vulnerability to catastrophic disease of villagers might stop the deterioration of the vicious circle between rural poverty and poor health.

Fourth, “government management”: the crucial lessons learnt from the old CMS is to keep the fund with a good financing, managing, and monitoring. To maintain NCMS in a long run, the third party which is independent from the health service providers and customers could avoid or reduce the negative

effects from the imperfect health service market. For NCMS, it is the NCMS offices (within government system) to take the responsibility to be the third party. Detailed reimbursement regulations are made by the NCMS Office at county level, to lead a proper health care provision with adequate quantity and good quality at the provider's side, and to lead a rational health care demand and consumption at the enrollee's side.

1.1.1.2.3 Different Local Regulations County-Based

In spite of the four basic principles, the detail reimbursement regulations that designed county-based are negotiable. They can be adjusted according to the specific local situation county to county, and complemented/modified year to year based on the previous practical experiences.

Normally, the detailed reimbursement regulations include six aspects. They are 1) reimbursed model, 2) authorized health service providers, 3) process of reimbursement, 4) deductible line, co-payment, and ceiling, 5) special reimbursement for hospital delivery, and 6) extra aid to the poor (CCMS, 2006) (See Table 1-3)

Table 1-3: General information of detailed reimbursement regulations:

		Items	Options	
Regulations	1	Reimbursement model	a	IPD reimbursement & Family Account*
			b	OPD reimbursement & IPD reimbursement
			c	IPD reimbursement & partial OPD reimbursement**
			d	IPD reimbursement only
	2	Authorized health service providers	a	Village clinic
			b	Township health center
			c	County hospital
			d	Governmental hospital above county level
	3	Process of reimbursement	a	Immediate reimbursement directly at paying time
			b	Later reimbursement from NCMS office with required documents after payment
	4	Deductible line Co-payment ceiling	a	Ranges according to local situation
	5	Special reimbursement for hospital delivery	a	Reimbursement for natural delivery in township health center
			b	Reimbursement for natural delivery in county hospital
			c	Reimbursement for caesarean section
	6	Extra aid to the poor	a	Free enrollment by support from social welfare department
			b	No deductible line
			c	Extra reimbursement after general reimbursement
	Notes:		<p>*Family Account: a household saving account from a small part of each family member's NCMS premium for the family members' out-patient services reimbursement only.</p> <p>**Partial OPD Reimbursement: the OPD reimbursement only goes to those who utilize health services due to the catastrophic/chronic diseases, like kidney diseases, diabetes, hypertension, etc.</p>	

1.1.1.3 Moving Forward

1.1.1.3.1 Further NCMS Expansion

Following the common theory of social insurance, the collected fund would be stronger as the insurance scheme develops with more members joining in. Meanwhile, the shared risks of each enrolled member would get smaller. Moreover, by enlarging the covered population, negative influences from “Moral Hazard” and “Adverse Selection”, which may be typical and fatal to strike the social insurance, can be effectively reduced.

A national report from the Center for China Cooperative Medical Scheme (CCMS) showed that by 31st, December, 2006, 410 million villagers (47.15% of the total rural population) had enrolled in NCMS, and 1451 counties (about 50.70% of the total) from a total of 2862 counties in China had been covered by NCMS. (See Table 1-4)

Table 1-4: NCMS expansion since 2004

Year	NCMS Enrollees		NCMS Pilot Counties	
	(Million People)	(%)	(Number)	(%)
2004	80.40	10.61	333	11.64
2005	178.80	20.18	678	23.70
2006	410.00	47.15	1451	50.70

However, the Chinese government has planned for further NCMS expansion to nearly all the counties in China by 2008. (Ministry of Health, 2006) In addition, based on the local rural population in each pilot county, the coverage is expected to be increased year by year.

1.1.1.3.2 Challenges Identified

From CMS to NCMS, the government efforts for rural health have been proved. It is undoubted that “the pilot of NCMS in China has been making progress and farmers benefit from the scheme.” (Mao, 2005) However, it is also understandable that “many schemes are relatively young, and need time to develop”. (WHO, 2003)

Along the way of NCMS developing, some big challenges have been identified.

First, the unbalanced benefit distribution between the rich and the poor: according to the 2005 National Survey on NCMS, even with different reimbursement models applied in different counties, it is shown that the group of the relatively rich is the one that receives the most benefit from NCMS (both in terms of utilizing health service and getting reimbursement), while the poor are somehow excluded from NCMS benefit due to their lower household economic basis. (SICMOH¹, 2007)

Second, the limited financial support to alleviate villagers' vulnerability to catastrophic diseases: comparing with the commercial health insurance schemes which request for higher premiums, the low NCMS premium has resulted its low reimbursement. It is widely reported that even with the NCMS enrollment, some villagers experience great difficulties paying the huge hospital bill of treating the catastrophic diseases. Except the small part of the bill that is reimbursed, the bigger part remains self-responded of the villagers. (SICMOH, 2007)

Third, the maintenance of enrollment—a sustainable NCMS financing mechanism: though the high NCMS coverage in most pilot counties has been achieved, the hidden reluctance of the enrolled villagers does exist. It is under the great efforts of the current NCMS advocacy that some villagers enrolled NCMS, but their reluctance is identified. If their reluctance remains but the NCMS advocacy power is reduced, those villagers are easily to be dropped out from NCMS in the future. (SICMOH, 2007)

Fourth, the negative influences from the health service providers: being embedded in the Chinese health care system, NCMS is unavoidably affected by its internal immaturities. The efficiency of the fund is decreased by the negative behavior of the health service providers. Since 1980s, along the on-going transition of the Chinese health care system, the health service provision in China has

1. SICMOH is the Statistic and Information Center of Ministry of Health.

turned disordered. In recently years, without effective regulations from the state level, the negative behavior of the health service providers such as the higher-priced medicine, the unnecessarily disassemble services, the over-induced treatment, and the lower-quality of care have caused broad complains and dissatisfactions. As NCMS has been established since 2003, it has loaded some blames indirectly. Especially for the villagers who are not clear about the separation between NCMS and health service providers, have partially shifted their complains and dissatisfactions towards health service providers to NCMS. (SICMOH, 2007)

Fifth, the conflict between villagers' low awareness of risk sharing and the "voluntary participation" principle: due to the complex historical reasons, the awareness of risk sharing of most Chinese villagers is quite low. But according to the "voluntary participation" principle, they should not be compelled to enroll NCMS against their will. As NCMS is further expanded, how to lead more and more villagers to enroll NCMS within a short period without any forms of compelling has showed a big challenge to NCMS advocacy. (SICMOH, 2007)

Last, the immature NCMS management system: though the consistent national NCMS network is established through NCMS offices at each level top-down. Resource allocation within the management system is not yet optimized. And to take charge in the NCMS fund for the big-sized population, a lot of regulations in details are called for further supplements and modifications. As NCMS expansion moves on, new pilot counties would start exploring NCMS without sufficient experiences on managing. Thus it becomes another challenge that how to make the entire NCMS network run properly after its establishing. (SICMOH, 2007)

1.1.1.3.3 Government Reactions: Strong Political Commitment

The identified challenges have never hesitated the Chinese government to keep its support to NCMS. It responded with a strong political commitment, "NCMS should keep on going, no matter how difficult it turns to be!"

Since the earliest piloting, NCMS has been posited as one of the current priorities of the Chinese government. Besides doubling the government subsidy from 20 Yuan to 40 Yuan for each enrollee in 2005, the government efforts to keep NCMS moving forward are shown in other aspects.

First, the budget related to NCMS is financed by the local government with big priority. Though the top-down national network of NCMS has been established since 2003, by now, the specific budget for running the local NCMS offices is mainly financed by the local government. Even though that some local governments have only a modest overall budget, the financial support for NCMS is still generously provided.

Second, “NCMS development” becomes a core indicator for analyzing the local governance. As long as NCMS is applied in that area, the local governments are required to include the basic information of NCMS development (especially the NCMS coverage and the distributed reimbursement) into most of their important reports. Normally, the achieved progress in NCMS brings the local government a good comment from the upper administrators, while the achievement failure gives pressure and shame.

Third, to gather multiple efforts for NCMS, the Chinese government has united more and more state ministries in taking their related responsibilities to overcome challenges of NCMS development together. At the beginning, there were only three ministries involved—Ministry of Health, Ministry of Civil Affairs, and Ministry of Finance. But since 2005, the involved ministries have been enlarged to seven—besides the remained three ministries, National Development and Reform Commission, Ministry of Agriculture, State Food and Drug Administration, and State Administration of Traditional Chinese Medicine have been newly involved in. It is expected that the united efforts could decompose the complex challenges of NCMS development into manageable fragments, and be dealt with effectively by the most powerful executors.

Moreover, the Annual National NCMS Conferences have been kept year by year. The progresses made and lessons learnt from NCMS have been reviewed for making the future plans and set new target. Besides this, the Chinese government has supported some regular national surveys on NCMS development applying both quantitative and qualitative approaches. At the same time, a number of international workshops on NCMS have been organized to share the insights with the Chinese government from academic research.

1.1.2 Meedu County: Undergoing NCMS Development as an Earliest Pilot

Meedu County is located in Dali Prefecture of Yunnan Province, China, with a rural population of 297924. It administrates 8 townships, with totally 89 villages below. (Meedu County Government, 2006)

Being a national impoverished county², Meedu represents as a typical less-developed county of rural China; being resided by Han and other 22 different ethnic minority groups (which take a proportion of 9.4% of its population), Meedu county represents as a typical minorities-resided county of rural Yunnan. (Meedu County Government, 2006)

Meedu County started applying NCMS since 2003, with its local NCMS network completely established from the County NCMS Office to the Township NCMS Offices, and to the village clinics.

After five years' exploring, Meedu has achieved the NCMS coverage (according to its rural population) of 86.93% in 2006 (see Table 1-5), together with its well-organized local network, Meedu has been set as a national example pilot², for other NCMS newly-applied counties to learn and follow. (Meedu County NCMS Office, 2007)

1. Meedu County has been categorized as one among the 592 national impoverished counties in 1994 by the State Council Leading Group Office of Poverty Alleviation and Development (SCLGOPAD),

2. In 2004, there were 8 counties selected from the total 333 NCMS pilot counties all over China to be set as the national NCMS example counties. Meedu County is one among them.

Table 1-5: Progress of NCMS coverage of Meedu County along its piloting

Year	Rural Population	NCMS Enrollees	NCMS Coverage
			(According To Enrollees) (%)
2003	290611	185843	63.95
2004	292262	215366	73.69
2005	294233	250924	85.28
2006	296913	258102	86.93
2007	297924	278784	93.58

Undergoing the typical process of NCMS development as an earliest pilot, what has happened to Meedu reflects what has happened to other NCMS pilot counties. Thus the lessons learnt from Meedu, both in success and frustration, would shed light to other NCMS pilot counties all over China, for thinking and discussing on a better NCMS development in the future.

1.2 Rationale

1.2.1 NCMS Financing Advocacy

1.2.1.1 Yearly NCMS Financing

As NCMS is run yearly, the NCMS fund is organized as an annual payment system. There are two parts of the NCMS fund—individual premiums and government subsidies. Since the unconditional government subsidy to each NCMS enrollee has been promised, the attention of NCMS financing turns highly focused on collecting premiums from villagers.

In the majority of NCMS pilot counties, there is a certain period set for NCMS financing each year, during which premiums of villagers are collected. As the NCMS coverage has been set higher and higher in the process of NCMS expansion, to recruit enough NCMS enrollees means not only to maintain the previous members, but also to attract new ones. Normally, from the starting point until the day that the

planned coverage is finally achieved, it takes a long time. According to local situation of different area, NCMS financing is set in different seasons with length varied.

As NCMS development goes on, opportunities and challenges of NCMS financing are faced by NCMS pilot counties at the same time. On the one hand, more and more villagers have experienced reimbursement from NCMS and are accepting it and responding with increased enrollment. On the other hand, the ongoing expansion has brought more and more villagers into the recruitment target, which includes a certain number of villagers who have showed a firm refusal to NCMS. To recruit these villagers, more effort is needed.

1.2.1.2 Identified Refusal and Advocating Strategies

Though there are more and more villagers commenting on NCMS with positive words, when talking about NCMS financing, their hesitance on paying the premiums is still obviously identified.

Some most active villagers do go to the NCMS Office themselves for paying the NCMS premiums. However, for the vast majority, even they are not resistant to enroll NCMS, they still behave inactive in paying premiums—these villagers know clearly that the premiums can be easily paid in several ways all-year-round, they prefer staying at home and waiting for NCMS financing teams to visit and collect their premiums. Moreover, nearly in every village, there are several rural families who show a stronger refusal—they just report their decision of not enrolling NCMS and then never listen to any persuasions.

To deal with the identified refusal of villagers, the Chinese government has created the “Advocating Strategies” for NCMS financing. First, the government will encourage villagers who are not yet familiar with NCMS to enroll after key information about NCMS, especially its reimbursed benefit is given; further, the government will attempt to persuade villagers who have shown refusal to enroll NCMS after advocating for alleviating their negative ideas by persuasion.

To apply the “Advocating Strategies” in NCMS financing, it would take a long time and consume a lot of resources. However, the Chinese government has kept on trying it with a strong political commitment. It is considered that only through establishing a real understanding of the NCMS and building up the villagers’ trust in the government would villagers finally be convinced to enroll in the NCMS voluntarily and continuously, and thus form a sustainable NCMS financing in the long term.

1.2.1.3 Struggling Practice at Grass-Root Level

With the strong political commitment of the Chinese government, the “Advocating Strategies” have been applied nation-wide, and the NCMS expansion target does to be achieved year by year as it is planned. However, even with the good expectation of “Advocating Strategies”, it has been widely reported by NCMS financing personnel that NCMS advocacies at grass-root level are struggling, especially when the refusal of villagers is directly faced case by case.

It is not surprising to know that some rural families insist on not enrolling NCMS so firmly even after being visited by NCMS financing personnel more than ten times. It is also not surprising to know such stories that after trying to persuade the reluctant villagers to enroll NCMS for many times but still failed, some grass-root financing personnel are even willing to use the money from their own pocket to pay the premiums for some of those un-enrolled ones in order to get enough “NCMS enrollees” in their charged area to achieve the expected coverage.

Finally, in all the possible ways, the expected NCMS coverage would be achieved by the grass-root NCMS financing personnel, with their immeasurable extra efforts spent.

1.2.2 Viewing from Economics: How Much and How Are Resources Allocated?

The essential importance of financing to any social health insurance scheme is understood with great consensus. And all the efforts from the Chinese

government on “Advocating Strategies” have shown the government’s long-term consideration of NCMS on this point.

For the Chinese government, it should be worth doing so, with enough reasons given from the government angles. However, viewing from economics, the resource allocation following the decision would be basically questioned.

Concerning of the existence of the finite resources and people’s infinite wants, economics believes that a good decision should be made based on comparing the possible alternatives of resource allocation. Thus after every decision is made, economics always asks the basic questions: how much and how are resources allocated? Are they allocated in a appropriate way? If not, how to make the allocation better?

In terms of NCMS financing, economics holds the same view on resource allocation. As the struggling grass-root advocacies are widely reported, the increased attention to NCMS financing cost is also raised. According to common sense of NCMS financing personnel, NCMS financing cost is generally perceived to be high; according to a few existing studies, based on the incomplete statistics and different estimation techniques, NCMS financing cost is reported ranging from 0.6 Yuan to 3.4 Yuan per enrollee. (Cao & Yin, 2006) (Gao, et al., 2007)

With the stories of struggling NCMS financing heard, and with the estimated numbers of NCMS financing cost discussed, the efficiency and effectiveness of resources that allocated to NCMS financing currently is challenged—how much and how are resources allocated to NCMS financing? Is such allocation a good one? If not, what are considered to make it better?

1.2.3 Conducting Economic Evaluation: Effort for Improvement

Evaluation is the process to seek to measure how a change in the way that service is provided affects the expected results. (Smith, et al., 2005) And Economic evaluation is a general term for a number of related techniques which seek to identify,

measure, value and compare the costs and consequences of alternative actions. It is developed as a framework for helping people to uncover the basis for making worthwhile decisions from existed alternatives—whether the right strategies are chosen, and whether the execution are performed properly? Benefited from economic evaluation, either the appropriate services will be adopted, or a mix of suggested technologies and interventions will be applied in adjusting the inappropriate services to achieve the given objective.

Confronted of these questions on NCMS, by conducting economic evaluation, the current choices we hold in allocating resources on NCMS financing advocacy will be examined, with the existing improper and challenges emerged and identified.

As the “opportunity cost” has always been neglected in the practice of government work, as well as in most of the previous research. For this study, the “economic cost” which comprises both “accounting cost” and “opportunity cost” has been applied to reflect the overall “resource allocation” on NCMS financing. And in order to acquire the “economic cost” with the validated precise, accounting tools have been applied along the process of cost calculating.

1.2.4 Transitional NCMS Financing in Meedu County: Typical Model with New Attempts

Meedu County has started its dedicated efforts on NCMS financing advocacy since the very beginning. By 2007, such efforts have been kept for five years already.

With experiences shared among pilot counties, a typical model of NCMS financing that is popular nation-wide has been adopted and maintained in Meedu, while new attempts have been added creatively with some successful local examples. (See Table 1-6)

Table 1-6: NCMS financing model of Meedu in its transitional period (in 2007)

Levels	NCMS Financing			
	Routine Work Institution-Based	Advocacy Activities of Intensive Financing		
		Promoting	Monitoring	Rewarding
County	1) County NCMS Office 2) County Health Bureau 3) County Government	1) advertising board 2) TV financing announcement 3) TV local news 4) IEC materials 5) <i>paper cups</i> * 6) <i>table calendars</i> *	1) working teams 2) stakeholder meetings	1) working subsidies to Township Government 2) achievement bonus to Township Health Center
Township	1) Township NCMS Office 2) Township Health Center 3) Township Government	—	1) working teams 2) stakeholder meetings	1) achievement bonus a) Village Committee b) Village Clinic
Village	1) Village Clinic 2) Village Committee	—	1) working teams <i>a) village-doctor</i> * b) village committee c) sub-village 2) stakeholder meetings	1) achievement bonus to sub-village leaders
Note:	* Paper cups/Table calendars/Working team of village-doctor: they are new attempts of NCMS financing activities in Meedu, while the rest others are adopted from the general model that is popular nation-wide.			

It is believed that through this economic evaluation on NCMS financing in Meedu of the year 2007, the disputed question on NCMS financing cost would be answered based on a typical less-developed rural county in the southwest of China, which is one of the earliest NCMS pilots and is just entering its transitional period of NCMS financing after five years' exploring.

Sharing the findings of this economic evaluation, the cost and cost structure analysis of NCMS financing would give the grassroots NCMS financing personnel some friendly practical guide to make the economy and efficiency savings from their practical work, while some sincere academic insights would be suggested to the higher-level policy makers in considering the future resource allocation more efficient and effective.

Efforts from both are expected to support the NCMS development moving to a higher achievement, which would finally return benefit back to the enhancement of rural health in China.

1.3 Problem Statement

In recent years, with the strong political commitment of the Chinese government, NCMS has been pushed to expand in rural China with increased financing and advocacy. However, some problems about NCMS financing which have been identified are not yet clearly understood—the cost of publicity and collecting the premium from the villagers, and the refusal of some villagers to participate. These have become barriers to further NCMS expansion. From these identified but unclear problems, this study is aimed to conduct a partial economic evaluation to examine whether the worthwhile decision of resource allocation on NCMS financing has been made or not.

1.4 Research Objectives

1.4.1 To calculate NCMS financing cost of Meedu County in 2007, and analyze the cost structure.

1.4.1.1 To calculate the original NCMS financing costs of Meedu County at three rural administrative levels, and analyze the cost structures.

1.4.1.2 To calculate the overall NCMS financing cost of Haibazhuang Village that allocated from three rural administrative levels, and analyze the cost structure.

1.4.1.3 To calculate the unit NCMS financing cost of Haibazhuang Village

1.4.2 To explore reasons underlying the villagers' non-enrolling behavior, under the efforts of NCMS financing advocacies.

1.5 Research Scope

According to the NCMS financing arrangement in Meedu County, the fiscal year of 2006 in this study was set from 1st, November, 2006 to 31st, October, 2007. The accounting data collected have crossed the whole fiscal year.

As the “full economic evaluation” is defined to have the comparison of two or more alternatives, as well as the examination of both costs and consequences of the alternatives. (Drummond et al., 1997) This study is only a “partial economic evaluation” on NCMS financing that centered by “cost-outcome description”, with the comparative “efficacy or effectiveness” out of consideration.

1.5.1 Exclusion of Assessment on the “Impact” of NCMS Financing

Generally, the analyzing of a complete economic evaluation starts from “cost” (resources of input) and ends with “impact” (ultimate achievement), while “output” (what have been done) and “outcome” (what have been achieved) are assessed in the half of the process. In this study, however, only the “outcome” of NCMS financing would be concerned, which is defined as the villagers’ NCMS enrollment. For the further evaluation on the “impact” of NCMS financing which considers about the final enhancement of villagers’ health status by utilizing health care after enrolling NCMS, will run beyond the capacity of this study. (See Figure 1-2)

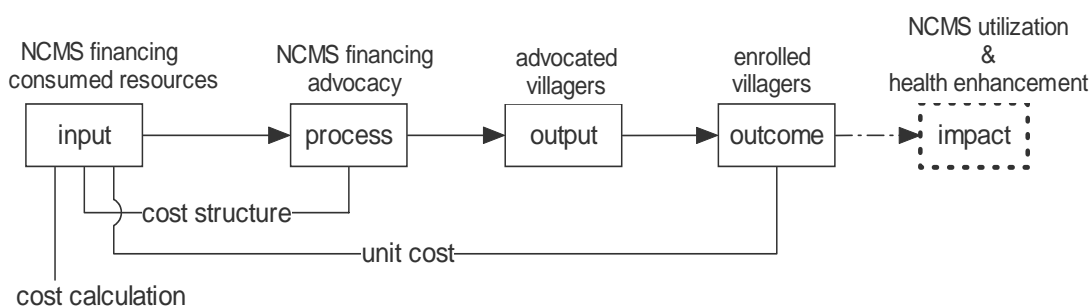


Figure 1-2 : To exclude evaluating the “impact” from this study

1.5.2 No Comparison between Two Alternatives

Since this study is mainly aimed at calculating NCMS financing cost and analyzing the cost structures, only one county, one township, and one village are selected to be studied. Thus no comparisons between two alternatives would be made in this study.

1.6 Research Limitation

1.6.1 Existing data

Multiple efforts will be made for assuring the quality of the collected existing data. But basically relied on the original records (especially the accounting records), the integrity and validity of the existing data do influence the precision of the evaluation.

1.6.2 Estimation

When the existing data is not fully available, rational estimation will be made based on other supportive information obtained. However, it is possible that the accuracy of the estimation is influenced by the distorted information given and the researcher's subjective judgment and assumption.

1.6.3 Generalization

This study selected only one county, one township, and one village. Considering of the different detailed background of each county, township and village, the examined results of this study may be specific under the given local context. Any analogy without careful concerns on the local background in detail may be in danger of hesitate-generalization.

1.7 Operational Definition

- **NCMS financing:** in this study, it means recruiting NCMS enrollees, together with collecting their premiums. Though the broader concept of “NCMS financing” comprises two parts—individual premiums and government subsidies, the

government subsidies are unconditionally promised, thus the attention of NCMS financing is only focused on collecting premiums from villagers.

- **NCMS financing period:** each year, the NCMS financing period in Meedu is set from early August to late October, during these three months, NCMS financing advocacy is intensively conducted, and most of the premiums from villagers are collected.

- **NCMS financing transition:** it stands for a series of on-going local attempts to reduce the NCMS financing cost. In the early years of NCMS piloting, the local government at each level has given the great supports and extra efforts specific for NCMS financing year by year, which has resulted the high NCMS financing cost as well. In the NCMS financing transition, it is expected that by re-arranging NCMS financing to be a routine work within the NCMS network, less government administrative sectors would be involved, thus with less resources consumed.

- **Intensive NCMS financing:** it is the typical old model of NCMS financing before entering transition. In this model, NCMS financing target is mainly achieved by intensifying NCMS advocacy (especially relying on organizing the NCMS working teams, holding the stakeholder meetings, and visiting villagers door-to-door) during the limited financing period.

- **Convenient NCMS financing:** it is the new model of NCMS financing after entering transition. In this model, NCMS financing target is supposed to be achieved by the daily NCMS advocacy and consultations that attached with the daily health care provision at three levels. Through the daily NCMS advocacy and consultation, villagers could be encouraged to pay premiums to enroll NCMS at anytime all-the-year round. Thus without the intensified NCMS advocating, premiums would be collected little by little.

- **Government sector-based NCMS financing advocacy:** it responses to the old model of the “intensive NCMS financing”, in which the government sectors at three levels are the main advocators of NCMS financing.

- **Health sector-based NCMS financing advocacies:** it responds to the new model of the “convenient NCMS financing”, in which the government sectors retreat from the NCMS financing, being replaced by the health sectors at three levels to be the main advocator of NCMS financing.

- **NCMS financing personnel:** it includes all the people who are involved in NCMS financing at the three rural administrative levels.

- **at county level:** they are all the staff of the County NCMS Office, the County Health Bureau Chief, all the members of County NCMS Working Teams.

- **at township level:** they are all the staff of Township NCMS Office, the Township Health Center Chief, some Township Government officers, and all the members of Township NCMS Working Teams.

- **at village level:** they are all the village doctors, all the village committee staff (including all the sub-village leaders), and all the sub-villager health workers.

- **NCMS coverage:** it is a core indicator that used by the Chinese government in measuring NCMS development and NCMS expansion progress.

- **NCMS coverage according to covered counties**

- =the number of NCMS pilot counties / the total number of counties (in the objected area)

- **NCMS coverage according to covered population**

- =NCMS enrollees / the total rural population (of the objected area)

- **Provider’s perspective:** In this study, the “provider” refers to the NCMS financing personnel/advocator, as “NCMS financing advocacy” was considered as the “service” provided by the NCMS financing personnel/advocators and delivered to villagers.

- **Consumer’s perspective:** In this study, the “consumer” refers to the villagers who were advocated for NCMS financing, as “NCMS financing advocacy” was considered as the “service” delivered to villagers by the NCMS financing personnel/advocators.

• **Advocating strategies:** contrasting with the “compelling strategies”, the “advocating strategies” include all the strategies of informing, providing consultation, encouraging, and persuading villagers to pay premiums to enroll NCMS. Advocating strategies are highly recommended to be applied in NCMS financing, while the “compelling strategies” are disapproved by the Chinese government.

• **Non-enrolling behavior:** it is defined to have three forms of the non-enrolling behavior of the villagers towards NCMS financing—1) never enroll NCMS, 2) newly enroll NCMS, 3) once enrolled NCMS, but then dropped out.

• **Three rural administrative levels (three levels):** they are the county level, the township level, and the village level. In rural China, normally, the government system works following the structure of the three rural administrative levels top-down.

• **Grass-root level:** the village level is the grass-root level. Among the three rural administrative levels, the county government makes the general decision, and the township government connects and passes the information to the villages. It is in the villages that the decisions from the upper levels are finally practiced with villagers.

• **Cost structure:** it refers to the composition of the calculated costs. Based on different dimensions, the composition of the calculated costs is analyzed in different ways and is illustrated in percentages.

• **Accounting cost:** it is defined as the consumed resource that has been paid by money.

• **Opportunity cost:** it is defined as the consumed resource without real money payment.

• **Direct cost:** it is defined as the consumed resource that has been paid by specific NCMS budget.

- **Indirect cost:** it is defined as the consumed resource that has been paid by non-NCMS budget.

- **Routine cost:** the resources that are consumed in routine office work in all the involved institutions at three levels in order to support NCMS financing. It has four classified components: 1) staff cost, 2) capital cost, 3) recurrent cost, and 4) overheads.

- **Activity cost:** the resources that are consumed in NCMS financing advocating activities.

- **Promoting cost:** the resources that are consumed in NCMS financing promoting activities, which include 1) advertising board, 2) TV financing announcement, 3) TV local news, 4) IEC materials, 5) NCMS picture paper cups, and 6) NCMS picture table calendars.

- **Monitoring cost:** the resources that are consumed in NCMS financing monitoring activities, which include 1) working teams, and 2) stakeholder meetings.

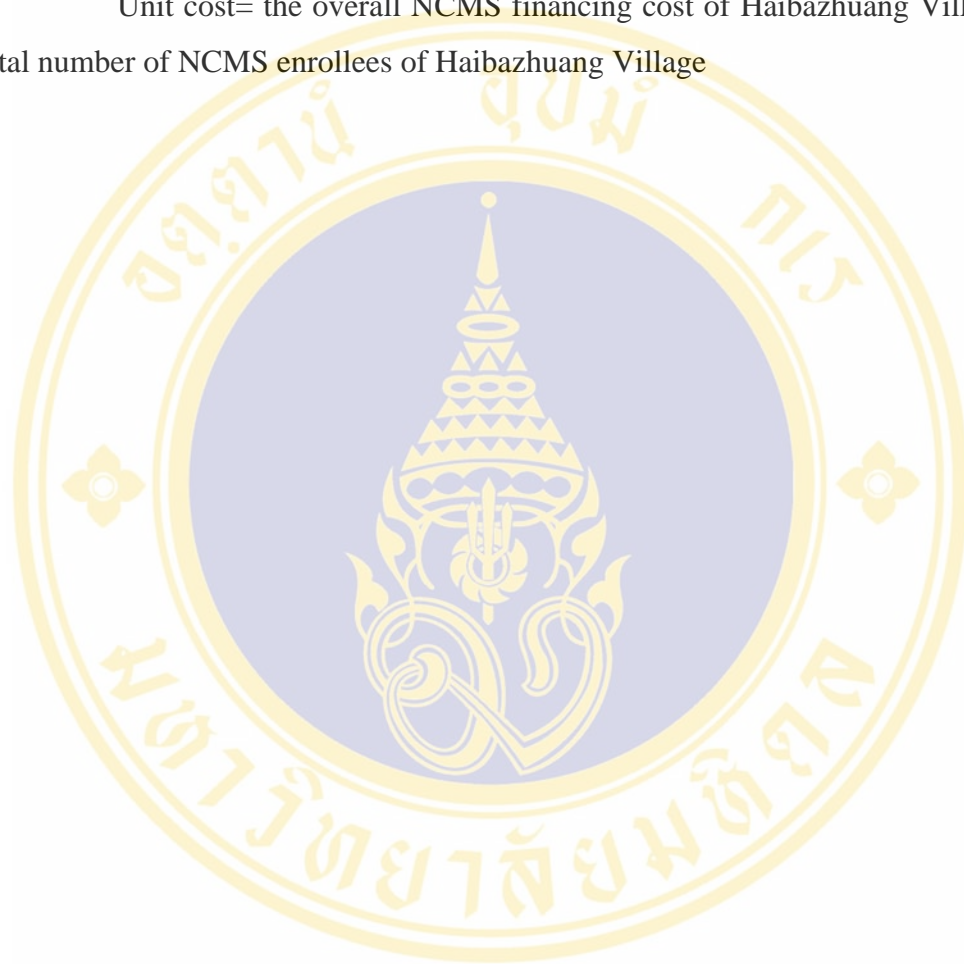
- **Rewarding cost:** the resources that are consumed in NCMS financing rewarding activities, which include 1) working subsidies to the township governments, 2) achievement bonus to the township health centers, 3) achievement bonus to the village committees, 4) achievement bonus to the village clinics, and 5) achievement bonus to the sub-village leaders

- **Original NCMS financing cost (at each rural administrative level):** the sum of the routine cost and the activity cost that are financed independently from each administrative level on NCMS financing.

- **Overall NCMS financing cost of Haibazhuang Village (allocated from three levels):** according to the rural population ratios, to allocate the original costs from the county level, the township level, and the village level to Haibazhuang village. It is the sum of the allocated original costs of three levels.

• **Unit NCMS financing cost of HBZ Village:** according to the number of the enrolled villagers, to divide the overall cost to each NCMS enrollee in Haibazhuang Village. It represents the total resource consumption of recruiting each NCMS enrollee in Haibazhuang Village.

Unit cost= the overall NCMS financing cost of Haibazhuang Village / the total number of NCMS enrollees of Haibazhuang Village



CHAPTER 2

LITERATURE REVIEW AND CONCEPTUAL FRAMEWORK

2.1 Relevant Theories

2.1.1 Financial Management in Public Sectors: Fundamental Concepts and Key Concepts (See Figure 2-1)

2.1.1.1 Fundamental Concepts: Input, Outputs and Outcomes

1) Input

Generally, **input** refers to both the “**primary input**” (cash) which must be converted into something more usable later, and the “**secondary input**” (what the cash buys), which includes all the usable things that are put into a system through some particular process to achieve an expected result.

For the secondary input, which is more frequently used in cost calculating of economic evaluations, it includes:

- ◆ **Staff resource**, which refers to people who directly or indirectly work for delivering services.
- ◆ **Capital resource**, which refers to the buildings, equipments, vehicles, and so on.
- ◆ **Consumable resource**, which refers to the official materials, IEC materials, petrol, food and accommodation during official traveling, and so on.

However, in costing, all the secondary inputs are eventually calculated in monetary units with the given prices to form the “costs”. (Jones, 1996)

2) Output

Output is usually categorized into the “**main output**” which means services delivered through the process of producing, and the “**output for internal**

functions” which serves and supports the process of producing but not directly-perceived from the produced services.

Outputs are not constrained to be expressed only in monetary units, but also in other natural units (such as the units of service produced, a percentage detection or completion ratio in medical services). Depending on the services that produced, different ways of expression could be applied. For example, an operation successfully completed (Jones, 1996)

3) Outcome

Distinguished from “output”, **outcome** means what has been achieved through the services delivered. For example, an operation successfully completed may be only an “output” of services produced by the surgeon, while the operation successfully addressed the cause of patient’s disease is considered as a real “outcome”.

However, in a world that is fully of universal relationships, to absolutely determine what outcome comes from which input seems just not possible. Thus, considering that “the outcome presents both theoretical and practical difficulties”, in measuring, certain assumptions should be given, and certain expressions of outcomes will be chosen in order to make it more practical in an easier way. (Jones, 1996)

4) Impact

Implying the strong effect of the efforts taken to realize the ultimate goal, **impact** refers a further influence or a forceful consequence behind a certain “outcome”. (Jones, 1996) But due to the obvious operational difficulties in measuring, impact is seldom mentioned in quantitative economic evaluations.

2.1.1.2 Key Concepts: Economy, Efficiency and Effectiveness

1) Economy

Economy is concerned with the conversion of the primary input (cash) into the usable secondary inputs (staff, consumables and capital items).

An idea conversion is concerned to be fit for purpose, bought at the lowest possible price, and adequate at the possible minimum quantity. (Jones, 1996)

2) Efficiency

Efficiency is concerned with the conversion of the usable secondary resource into outputs.

Making the best use of existing resources is mainly concerned for the full utilization. However, sometimes efficiency could be increased by the supplemented input. For example, a proper capital expenditure can serve to save the higher staffing costs. (Jones, 1996)

3) Effectiveness

Effectiveness is about ensuring that the efficiently produced outputs are directed to achieve the desired outcomes.

Normally, both quantity and quality dimensions are included in the consideration of effectiveness. (Jones, 1996)

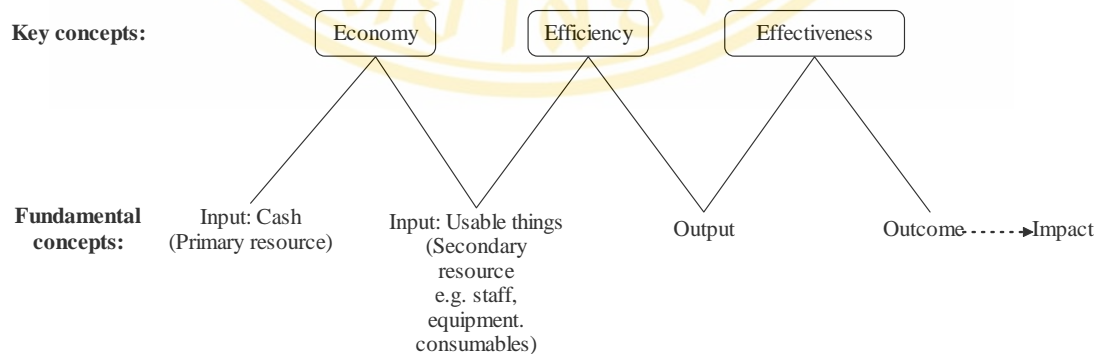


Figure 2-1 : Financial management in public sectors : fundamental concepts and key concepts

Source: Jones B., *Financial Management in the Public Sector*, THE MCGRAW-HILL COMPANIES, 1996

2.1.2 Economic Evaluation

2.1.2.1 Definition of Economic Evaluation

Since Economics always urges people to make choices under the existence of the finite resources and their infinite wants, it is called the “science of choice”. (Brent, 2003)

It is understandable that in the field of health, if it were true that every health expenditure were necessary, it is a fact of life that there are not enough resources to meet every demand. Among all the necessities, there may be some that are more necessary than the others thus should be financed from our limited resources. (Brent, 2003)

Evaluation is the process to seek to measure how a change in the way that service is provided affects the expected results. (Smith, et al., 2005)

Economic evaluation is a general term for a number of related techniques which seek to identify, measure, value and compare the costs and consequences of alternative actions. It develops as a subject to provide a framework for helping people to uncover the basis for making worthwhile decisions from existed alternatives—whether appropriate services have been adopted, or whether there is a mix of technologies and interventions that would better meet the given objectives. (Brent, 2003)

2.1.2.2 Components of Economic Evaluation (See Figure 2-2)

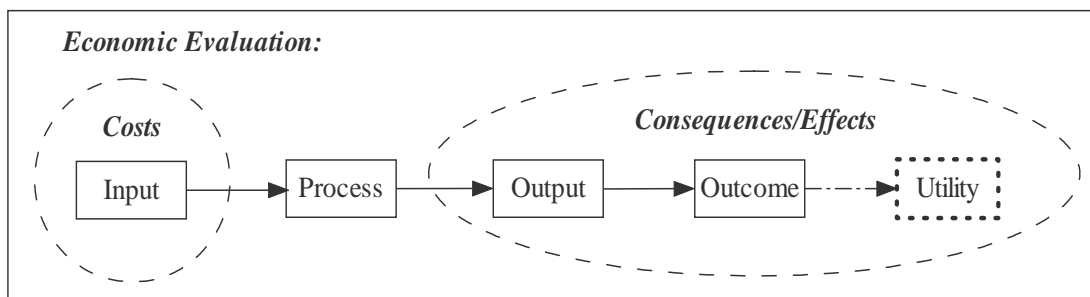


Figure 2-2: Components of economic evaluation

Health care programs take inputs (labor, capital, etc.) and transform them into outputs and outcomes.

In order to aggregate the **inputs**, one usually values the labor and capital using market prices to produce a measure of all the resources taken up in the health care intervention. This aggregate input measure is called “**costs**” and is in monetary units. (Brent, 2003)

The **outputs** and **outcomes**, which are called “**effects**” in the evaluation, can come in different forms and are consequences of interventions. The most obvious output to consider is what the health service immediately works with, and the outcome is what really achieved later. If extending to the estimates of the satisfaction of the effects, a broader measure of effects—“**utilities**”—is applied. Lastly, the output and outcome can be expressed in the same monetary units as the costs, in which case the consequences are called “**benefits**”. (Brent, 2003)

2.1.2.3 Types of Economic Evaluation

2.1.2.3.1 Full and Partial Economic Evaluation

A full economic evaluation requires a positive response to the two questions.

(1) Is there a comparison of two or more alternatives? Without a comparative element, the evaluation serves only to describe either the costs or benefits or both.

(2) Are both costs and consequences of the alternatives examined? Without consideration of both costs and consequences, the evaluation represents a partial economic evaluation either of effectiveness alone or costs alone.

(See Figure 2-3)

		Are both costs and consequences of the alternatives examined?	
		NO	YES
Is there comparison of two or more alternatives?	NO	Only consequences PARTIAL ECONOMIC EVALUATION Outcome description	Only costs PARTIAL ECONOMIC EVALUATION Cost description Cost-outcome description
	YES	PARTIAL ECONOMIC EVALUATION Efficacy or effectiveness evaluation	PARTIAL ECONOMIC EVALUATION Cost analysis FULL ECONOMIC EVALUATION

Figure 2-3 : Full and partial economic evaluation

Source: Drummond et al., (1997)

2.1.2.3.2 Four basic types of economic evaluation

1) Cost minimization

Cost minimization is a method of economic analysis for comparing the costs of different interventions which produce the same outcome. (Fink, 2005)

2) Cost-benefit analysis

Cost-benefit analysis is an economic evaluation technique in which outcomes are expressed in monetary terms. (Fink, 2005)

3) Cost-utility analysis

Cost-utility analysis is an economic evaluation where the outcomes are measured in certain units which capture not just the quantitative but also the qualitative aspects of the outcome, such as quality of life. (Fink, 2005)

4) Cost-effectiveness analysis

Cost-effectiveness is an economic evaluation with outcomes measured in non-monetary units. (Fink, 2005)

2.1.3 Costs

2.1.3.1 Costing and Accounting

1) Costing

Costing is the process of determining the cost of something or doing something. As a branch of management accountancy, it is a useful discipline in establishing how the total costs of goods or services are made up so that it can be more easily seen where economy or efficiency savings might be made. (Drury, 1992)

2) Accounting

Accounting is concerned with providing information that will help decision-makers to make good decisions. It is the process of identifying, measuring and communicating economic information to permit informed judgments and decisions by users of the information.

Concerning the variety of uses of communication information, accounting is categorized into cost accounting, management accounting, and financial accounting.

- **Cost accounting** is concerned with cost accumulation for stock valuation to meet the requirements of external reporting.
- **Management accounting** is concerned with the provision of information to people within the organization to help them make better decisions.
- **Financial accounting** is concerned with the provision of information to external parties outside the organization. (Drury, 1992)

2.1.3.2 Cost objective and Cost Classification

2.1.3.2.1 Cost objective

If the users of accounting information want to know the cost of something, this something is called a **cost objective**. Most cost objects are activities. (Drury, 1992)

By using the three broad categories of cost objectives as stock valuation, decision-making and control, we can establish a useful framework for identifying how costs might be classified. (See Table 2-1)

Table 2-1: Cost objectives and possible cost classifications:

	Cost objective	Possible methods of cost classifications
1	Costs for stock valuation	Period and product costs
		Elements of manufacturing costs
		Job and process costs
2	Costs for decision-making	Cost behavior
		Relevant and irrelevant costs
		Avoidable and unavoidable costs
		Sunk costs
		Opportunity costs
3	Costs for control	Marginal and incremental costs
		Controllable and uncontrollable costs
		Cost behavior

Source: Colin Drury, *Management and Cost Accounting* (Third Edition), CHAPMAN & HALL, 1992

2.1.3.2.2 Cost classification

• Product costs and period costs

Product costs are those costs that are identified with goods purchased or produced for resale. (Drury, 1992)

Period costs are those costs that are not included in the stock valuation and as a result are treated as expenses in the period in which they are incurred. Hence no attempt is made to attach period costs to products for stock valuation purpose. (Drury, 1992)

In manufacturing organization, only manufacturing costs should be included in the calculation of product costs. And non-manufacturing cost is regarded as period costs. In process, the costs of the unsold products are firstly recorded as “asset”, while the costs of products sold are recorded as “expense”, however, both produce and period costs are classified as expenses eventually. (See Figure 2-4)

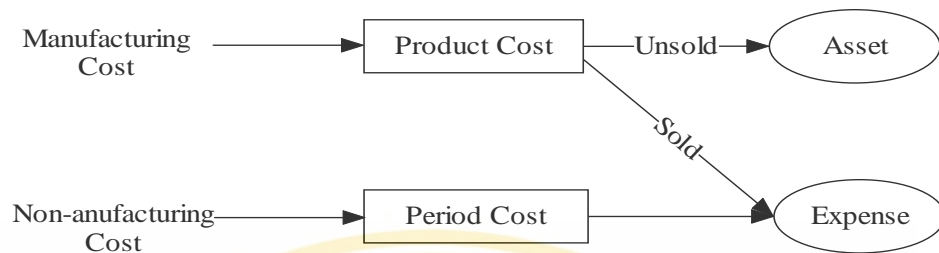


Figure 2-4 : Product Cost and period cost

Source: Colin Drury, *Management and Cost Accounting* (Third Edition),
CHAPMAN & HALL, 1992

- **Elements of manufacturing costs**

In manufacturing organizations the calculation of product costs consists of three elements: direct materials, direct labor and manufacturing overhead.

- **Direct materials** consist of all those materials that can be physically identified with specific product.

- **Direct labor** consists of those labor costs that can be specifically traced to or identified with a particular product.

- **Manufacturing overhead** consists of all manufacturing costs other than direct labor, direct materials and direct expenses. It is therefore includes all indirect manufacturing labor and material costs plus indirect manufacturing expenses.

The distinction between direct and indirect costs depends on the costs objective: **A direct cost** (or to say **primary cost**) is a cost which can be specifically identified with a particular cost objective, while **an indirect cost** cannot. Usually, the direct costs consist of direct labor costs plus direct material costs plus any other direct expenses. (Drury, 1992)

- **Job costs and process costs**

Where each order is unique and requires different amounts of labor material and overhead, the cost of each order must be calculated separately. In a job costing system, according to the specific orders, **the job costs** will be given with a more accurate calculation of product costs.

Where many units of the same product are produced during a period, the cost to a specific order is unnecessary to be separately calculated. In a system of process costing, **the process costs** are assumed to be the average cost per unit multiplied by the number of units ordered. (Drury, 1992)

However, it should be noticed that normally costs derived from the data accumulation system should not be used directly for decision-making purposes. Only the costs that re-classified by decision-making categories can be developed to facilitate an evaluation of various alternative actions.

- **Cost behavior**

Related with cost behavior, costs are classified into **fixed costs, variable costs, semi-fixed costs, and semi-variable costs.**

The distinction between fixed and variable costs must be made relative to the time period under consideration. Normally it is assumed as a one-year period. (Drury, 1992)

- **Relevant and irrelevant costs**

Relevant costs are those future costs that will be changed by a decision, whereas **irrelevant costs** and revenues are those that will not be affected by the decision. (Drury, 1992)

- **Avoidable and unavoidable costs**

Avoidable costs are those costs that may be saved by not adopting a given alternative. It is relevant for decision-making purposes, while **unavoidable costs** are those costs that cannot be saved by not adopting a given alternative. (Drury, 1992)

- **Sunk costs**

Sunk costs are the costs of resources already acquired, thus the total will be unaffected by the choice between various alternatives. They are costs that have been created by a decision made in the past and cannot be changed by any decision made in the future. (Drury, 1992)

- **Opportunity costs**

An **opportunity cost** refers to the biggest sacrifice of benefits by allocating resources for a particular use that is chosen rather than for the other uses that are given up. Sometimes it is necessary for decision-making to impute costs that not requires cash outlays, and these imputed costs are considered as opportunity costs. (Drury, 1992)

- **Marginal and incremental costs**

Incremental costs (also called **differential costs**) are the additional costs that arise from the production of a group of additional units of output, while **marginal costs** represent the additional costs of one extra unit of output. (Drury, 1992)

- **Controllable and uncontrollable costs**

Costs allocated to responsibility centers should be classified according to whether or not they are controllable or non-controllable by the manager of the responsibility center. (Drury, 1992)

A **controllable cost** may be defined as a cost that is reasonably subject to regulation by the manager with whose responsibility that cost is being identified.

If this condition does not hold, then clearly the cost should be classified as a **non-controllable cost** by the manager of the responsibility center. (Drury, 1992)

2.1.3.3 Cost Center, Cost Attribution and Absorption Costing

2.1.3.3.1 Cost Center

A **cost center** refers to any organizational unit, process, activity, good or service to which it is felt useful to ascribe costs. (Jones, 1996)

Generally, in cost attribution, cost centers are classified into production department and (internal) service department:

- A **production department** refers to any unit of the organization which directly contributes to the production of goods or services which are bought by or delivered to an external customer/consumer.

- An **(Internal) service department** refers to any unit of the organization which contributes to supporting the work of production departments by providing a service within the organization. (Jones, 1996)

2.1.3.3.2 Cost attribution

Generally, there are three basic steps in cost attribution:

- **Allocation**

The process of looking at a direct/indirect cost of some sort and placing it in an appropriate cost centre using some obvious criterion.

- **Apportionment**

The process of taking an overhead cost of some sort and dividing it up between a number of cost centers on the basis of some rational criterion.

- **Reapportionment**

The process of taking the total of indirect costs or overheads which have previously been production cost centers on the basis of some rational criterion. (Jones, 1996)

2.1.3.3.3 Absorption costing

Absorption costing is a technique of attributing the total costs of an organization to the various units of goods and service which it produces by a succession of calculations based on records, estimates and judgments.

In this way, the full cost of any good or service may be established within reasonable bounds of accuracy.

The process of absorption costing consists of:

- 1) The allocation of direct and indirect costs to departments.
- 2) The apportionment of overhead costs to departments.
- 3) The reapportionment of the total costs of service departments to the production departments. (Jones, 1996)

2.1.3.4 Cost Estimation

Though it is said that “no costing is perfect”, since there are assumptions, estimations and judgments built into the various processes. However, approaches to the accurate cost estimation are still essential for the validity of expected results. (Jones, 1996)

2.1.3.5 Concerns about Application of Costs Information

Following the principle of **providing the right information to the right people at the right time**, costs information that obtained by direct and indirect observation or communication always plays an active role throughout the processes of planning, controlling, organizing, and communicating, and motivating. Thus better decisions are expected. (Drury, 1992)

2.2 Relevant Research Review

By now, there have been many NCMS related research published, both written in Chinese and in English, by international and domestic scholars.

However, comparing with the English literatures, there are far more Chinese literatures—covering broader concerns with more updated information in the real practice with more details. Moreover, the focuses of the NCMS studies between international scholars and domestic scholars seem to be different. The international scholars trend to analyze the overall situation and comment on efficacy of the related policies, while the domestic scholars prefer to look into the key elements that contained in each step of NCMS in operating.

Insights from both parts are valuable, complementing each other and providing a full picture of thinking from macro to micro.

2.2.1 Macro NCMS Research

2.2.1.1 Research about NCMS Situational Description

To provide a social safety net of health care for members in society (World Bank, 2005), health insurance roles essentially in health care system, and it even extends to other systems with a broader boundary.

Considering that “what happened in the whole health system and with economic system reforms had an impact on health protection system”, and since NCMS is announced as a health insurance for villager with government health financing policies, “it must be embedded in the China’s overall health and economic system context.” (Asian Development Bank, 2002)

In many articles, the disorders of the Chinese health system in a transitional time are frequently mentioned. It is said that after the agriculture reform and the old CMS’ collapse, “China has experienced a decreased supply of rural health workers, increased burden of illness, disintegration of the three-tire medical system, reduced primary health care, an increased demand for hospital medical services”. But at that time, policies of health financing, pricing and organizing were not cooperated, thus “the uncoordinated policies created serious dissonance in the system.” (Liu and Hsiao, 1995)

2.2.1.2 Research about Challenges of NCMS and Suggestions

Commenting on NCMS, though it is widely agreed that “pilot of NCMS in China has been making progress and farmers benefit from the scheme, however, just as WHO mentioned in 2003—“one should realize that many schemes are relatively young, and need time to develop”. (WHO, 2003) The challenges of NCMS from many aspects such as “sustainable financing, management cost, equality, security level, and regulating providers’ behavior” are still waiting for the future improvements. (Mao, 2005)

In detail, “stabilizing and legalizing funding sources, enlarging risk pool, strengthening and purchasing function of the health protection system, strengthening community participation and control, strengthening government role in policy, guidance, technical assistance and organizational supervision” were raised for suggestions addressing existing challenges. And it was suggested that “a ‘one-size-for-all model’ would not be practical all over China—“While the need for some basic health care services in unmet for people in poor areas, there is an increasing demand for hospital insurance coverage in coastal regions.” (Asian Development Bank, 2002)

2.2.1.3 Research about NCMS Related Policy Examining and Exploring

Behind those problems, challenges, and complicities of NCMS, the role of government is traced and highly emphasized. “We argue that without strong government support, China will not be able to reestablish a sustainable rural health insurance system”, and “in process of reviving NCMS, the government should play an active role in subsidizing, guiding, and regulating, and the township government and village should be major executive agencies and administrators.” (Liu, 2004)

As Health Policy and System Research in China mentioned that it requires “research provide scientific evidence of the need to re-examine existing health policies and create more effective policies for the future”. (World Health Organization on behalf of the Special Programme for Research and Training in Tropical Diseases, 2004) Some studies that examined the NCMS related policy have guided the Chinese government to the better exploring; suggestions derived from those previous evaluations have urged the birth of the revised policy. One case study of Donglan County of Guangxi Province (in 1993~1997 as an earliest exploring for the later NCMS) concluded that “this case study reinforces the point that the establishment of a CMS can do little to overcome basic deficiencies in service provision. Such schemes will not solve the problem of access for the poorest households in the absence of specific and effective mechanisms to finance their inclusion.” (Yu, et al., 1998) And later another study about the “distribution of net benefits” within NCMS had pointed out that while the low premium is still an economic barrier for the poorest villagers to participate into the NCMS, the high co-payment is proved to have a significant deterrent effect on the poorer in the use of services in NCMS. (Hong, et al., 2005) Thus, in 2005, the revised policy of NCMS was announced, with the expected improvements of “the more strict management of insurance funds and the enhanced subsidies from local and central government” (Jiang, et al., 2003).

To help develop the more effective NCMS policies in detail at local levels, there are many studies about insurance techniques as well—according to the

socioeconomic background of the given study sites, to evaluate the benefit distribution of different models of reimbursement, to decide a proper level to start refunding, to choose a proper ceiling, and so on. Such studies provide essential economic fundamental information of operating the NCMS fund in detail to the local NCMS offices in real practice step by step.

2.2.2 Research about NCMS Financing in Specific

Due to the time and physical spaces, more articles about detail elements in NCMS have been written in Chinese by domestic scholars. The issue about NCMS financing practice becomes one of the hottest and most essential topics in current situation as NCMS entering the stage of greater expansion. However, while there is a great amount of Chinese articles published, few English literatures have touched this issue in an operational level.

2.2.2.1 Research about Financing Significance

As NCMS moves to its fifth year, more discussions about its efficiency in operating, and sustainability in a long run have been raised. It is expected that through the expanded coverage, the risks would be shared by a greater number of NCMS members, thus the burden of each would be more eased. Moreover, by enlarging the pool, it is effective to deal with the negative influences from “moral hazard” and “adverse selection”.

2.2.2.2 Research about Challenges of NCMS Financing and Tracing for Reasons

Since the NCMS financing require a higher coverage year by year, and in practice, all the premiums are collected one by one directly from villagers' pocket. It is widely perceived and reported that such a work of collecting money is not an easy job.

The biggest difficulty, it is said to be “the low willingness to pay” under the “voluntary principle”. (Jiang, et al., 2003) Some farmers are reluctant to pay premium to join because they afraid of “being cheated if NCMS is not successfully

continued, wasting money if they don't get sick in the coming year, being bothered of the complicated processes of applying insurance, and being treated unfriendly when they use health care and ask for reimbursement". (Zuo, 2005) Thus "without villagers' trust on the government and their supported attitude towards NCMS, under the voluntary principle, to collect the premiums house by house, such difficulties that NCMS staff face are imaginable." Because of the "voluntary principle", it has been emphasized that "any performance that caused compulsory NCMS financing will worsen the relationship between the government and its people. (Long, 2005) Only through educating villagers in patience and advocating them with previous cases that received benefits from NCMS, and clearly explaining NCMS policies could the real willingness to pay of villagers be inspired and lead NCMS financing to a stable and sustainable way." (Liu, 2005) However, in real practice, such "advocacy with patience" consumes a lot of time and money. (Shao, 2007) It is reported that "sometimes, even having been visited for more than ten times, some villagers are still unwilling to pay premiums to join." (Long, 2005) Finally the "village leader may use his own money to pay for the reluctant farmers." (Liu, 2005)

From these identified difficulties, the traditional NCMS financing have been denuded: "even to achieve a given participant rate as 80%, a great amount of staff resources, material resources are spent in TV and radio broadcasting, IEC material distributing, and visiting villages. How the local governments afford such a high cost of NCMS financing in a long run?" (Shao, 2007)

2.2.2.3 Research about Exploring Improvements in NCMS Financing

To overcome the difficulty of villagers' unwillingness to pay, an integrated model of NCMS financing under the advocacy and promotion strategies are recommended to applied. In this model, the three advocated groups (villagers, leaders of local governments, and health providers), the five points of advocating contents (the significance of NCMS, the differences between the old CMS and NCMS, the voluntary principle, the expected benefits from NCMS to defend burden of disease, and the policy information about process of reimbursement), and the six ways of

advocating (a letter to villagers, an IEC material for each rural household, a mobile advocating car, a special program on TV or radio, an advocating blackboard in each village, and a NCMS banner on walls in each village) were included. (Zeng, 2005)

To overcome the difficulty of high costs of NCMS financing, new methods are explored. Collecting premiums at the same time of villagers' receiving reimbursement if they agree, providing NCMS information by doctors during treating, setting more stations to accept NCMS premium at villagers' convenience are some of the reported ways that worth trying. (Wang and Xue, 2005)

2.2.3 Research about Examining Financial Issues of NCMS Financing

Those perceived difficulties also lead to the questions about financial issues of NCMS financing. If through practices, it is said to be a high-cost work, then how much does it cost on earth? And where do these costs come from?

Though by now, not too many research available on this topic, there are still some financial issues related to NCMS financing being studied. Four of them will be briefly summarized as follows:

The first study is about management expenditures of operating the County NCMS office in Meedu County, Yunnan province showed that "the management expenditures are quite high, and the personnel expenditure for fund-raising which includes wage, subsidies for local staff etc. is the highest parts of the total management expenditure of NCMS." (Cui et al., 2006) (See Table 2-2, Table 2-3, Table 2-4)

Table 2-2: The operation costs of Meedu County NCMS Office from 2003-2005

Year	Personnel expenditure (CNY) (%)	Official expenditure (CNY) (%)	Capital depreciation (CNY) (%)	Advocacy expenditure (CNY) (%)	Training & monitoring expenditure (CNY) (%)	Total (CNY) (%)
2003-2004	410,000 (49.2)	290,000 (34.8)	55,000 (6.6)	33,000 (4.0)	45,000 (5.4)	833,000 (100.0)
2004-2005	410,000 (61.3)	161,000 (24.1)	40,000 (6.0)	2,500 (3.8)	3,300 (4.9)	669,000 (100.0)

Table 2-3: The management costs of Meedu County NCMS Office from 2003-2005

Year	Personnel expenditure (CNY) (%)	Official expenditure (CNY) (%)	Capital depreciation (CNY) (%)	Advocacy expenditure (CNY) (%)	Training & monitoring expenditure (CNY) (%)	Total (CNY) (%)
2003-2004	96,000 (26.1)	139,000 (37.8)	55,000 (14.9)	33,000 (9.0)	45,000 (12.2)	368,000 (100.0)
2004-2005	96,000 (30.6)	120 (38.2)	40,000 (12.7)	25,000 (8.6)	33,000 (10.5)	314,000 (100.0)

Table 2-4: The financing costs of Meedu County NCMS Office from 2003-2005

Year	Personnel expenditure (CNY) (%)	Official expenditure (CNY) (%)	Capital depreciation (CNY) (%)	Advocacy expenditure (CNY) (%)	Training & monitoring expenditure (CNY) (%)	Total (CNY) (%)
2003-2004	314,000 (57.8)	151,000 (27.8)	33,000 (6.1)	45,000 (3.3)	543 (100.0)	314,000 (57.8)
2004-2005	314,000 (76.0)	41,000 (9.9)	25,000 (6.1)	33,000 (8.0)	413,000 (100.0)	314,000 (76.0)

The second study is a comparative study about the NCMS operating costs and management costs done in six counties (Linkou, Lindian, Baoqing, Anning, Bingchuan, Meedu) of both Heilongjiang Province and Yunnan Province showed that the total costs which include financing costs, operating costs, and management costs are high, the unit cost per NCMS enrollee varies from 3.00 Yuan to 5.00 Yuan among the studied counties. Suggestions from these finding said such expenditure may become a heavy burden for the local governments, the supporting budget from central government would be essential to help local NCMS offices work better. (Gao, et al., 2006) (See table 2-5)

Table 2-5: Personnel expenditure, NCMS establishing costs, and operation costs of 6 counties in Study 2

	Heilongjiang Province			Yunnan Province			Average
	LK County	LD County	BQ County	AN County	BC County	MD County	
Personnel expenditure, NCMS establishing costs, and operating costs							
Total number of NCMS related personnel	242	104	161	97	125	112	111
Estimated costs for personnel expenditure in NCMS financing (CNY)	145,20	6,240	9,660	5,820	7,500	6,720	7,200
NCMS establishing costs (CNY)	190,000	200,000	250,000	210,000	220,000	200,000	—
Management costs (CNY)	180,000	200,000	100,000	140,000	120,000	150,000	—
NCMS office operating costs (CNY)	374,500	252,000	319,100	329,500	502,700	319,100	—
Total	747,500	652,000	669,100	679,500	842,700	669,100	—
Total number of NCMS enrollees	154,100	180,000	205,400	262,200	240,600	282,100	—
The total unit cost (CNY)	5.77	3.92	3.73	2.81	3.81	2.61	3.78

The third study is also a comparative study. It studies about the costs of establishing NCMS in a new county in 10 counties of 5 provinces (Hubei, Jilin, Yunnan, Zhejiang, and Qinghai). In this study, the costs for NCMS financing is included in the costs of establishing. Without giving included items in detail, the total costs of NCMS financing in Meedu County was reported to be 455 thousand Yuan and its unit cost is calculated to be 1.55 Yuan.(Xiang, et al., 2006) The findings related Meedu County was listed below: (See Table 2-6)

Table 2-6: Findings of NCMS establishing costs of Meedu County in Study 3

Baseline survey (CNY)	Advocacy (CNY)	Official expenditure (CNY)	NCMS Certificate (CNY)	Establishing County NCMS office (CNY)	Total costs of establishing (CNY)	Unit cost (CNY)
20,000	16,550	141,000	100,000	354,000	631,550	2.46

The fourth study is done by the same researchers in the same counties at the same time as the third one, but it is about another topic—the costs of NCMS personnel. In this study, the standard number of NCMS staff is estimated, and then the real number is identified. The costs of NCMS personnel covered both County and Township NCMS Office staff is calculated by the average monthly salary paid for their working. However, considering that these NCMS staff are categorized as government staff, so their salary comes from annual personnel budget of government, thus the researchers pointed out that such costs is taken as the “sunk costs” for NCMS. (Xiang, et al., 2006) The finding related to Meedu County is summarized below (See Table 2-7):

Table 2-7: Findings of NCMS personnel costs of Meedu County in Study 4

Personnel costs	Standard number of staff in estimation	Actual number of staff	Average monthly salary (CNY)	Total salary (million CNY)
County NCMS Office	6	8	1200	1152
Township NCMS Office	8	8	1250	1200
Total	14	16	—	2352

The fifth study is done in Hanjiang District (“District” is the same level as “County”, but more frequently used in urban area) in Jiangsu Province, which is located in the east of China where has a more advanced economic development. (Gao, et al., 2007) To examine the operating costs of NCMS, the NCMS establishing costs in 2004, the financing costs in 2005, and the management costs in 2005 have been studied. (See Table 2-8, Table 2-9, Table 2-10)

Following the statistic number given in tables, unit costs are calculated as well (See Table 2-11), these costs are claimed to be high.

Table 2-8: NCMS establishing costs of Ganjiang District in 2004

NCMS establishing costs (CNY)	District	Township	Total
Computer and software	400,000	218,000	618,000
Staff training	20,000	—	20,000
Official expenditure	50,000	140,000	190,000
NCMS enrollees' notebooks	120,000	—	120,000
Total	590,000	358,000	948,000

Table 2-9: NCMS financing costs of Ganjiang District in 2005

NCMS financing costs (CNY)	District	Township	Village	Total
Meeting expenditure	15,000	30,000	76,000	121,000
Advocacy expenditure	55,000	78,000	62,000	195,000
Monitoring expenditure	8,000	36,000	—	44,000
Compensation of staff	111,000	—	349,000	46,000
NCMS notes expenditure	2,000	13,000	—	15,000
NCMS accounting books expenditure	5,000	19,000	158,000	182,000
Total	196,000	176,000	645,000	1,012,000

Table 2-10: NCMS management costs of Ganjiang District in 2005

NCMS management costs (CNY)	District	Township	Village	Total
Staff salary and compensation	200,000	777,000	168,000	1,145,000
Meeting expenditure	36,000	40,000	38,000	114,000
Official expenditure	50,000	121,000	—	171,000
Monitoring expenditure	50,000	28,000	32,000	110,000
Room renting expenditure	20,000	73,000	—	93,000
Computer care expenditure	20,000	14,000	—	34,000
Guest-acceptance expenditure	50,000	50,000	—	100,000
Total	—	—	—	1,767,000

Table 2-11: Unit costs of NCMS of Ganjiang District

NCMS financing	3.4 (CNY/Enrollee)
NCMS management	5.9 (CNY/Enrollee)
NCMS management of operating	9.5 (CNY/Enrollee)

Summing up, through the five studies, the costs of NCMS are commonly concluded to be high. However, they seem to be not clear enough in details to make a horizontal comparison.

First, the definitions of “NCMS financing costs”, “NCMS management costs”, and “NCMS operating costs” are not shared. Different researchers applied different categories to group NCMS expenditure items differently.

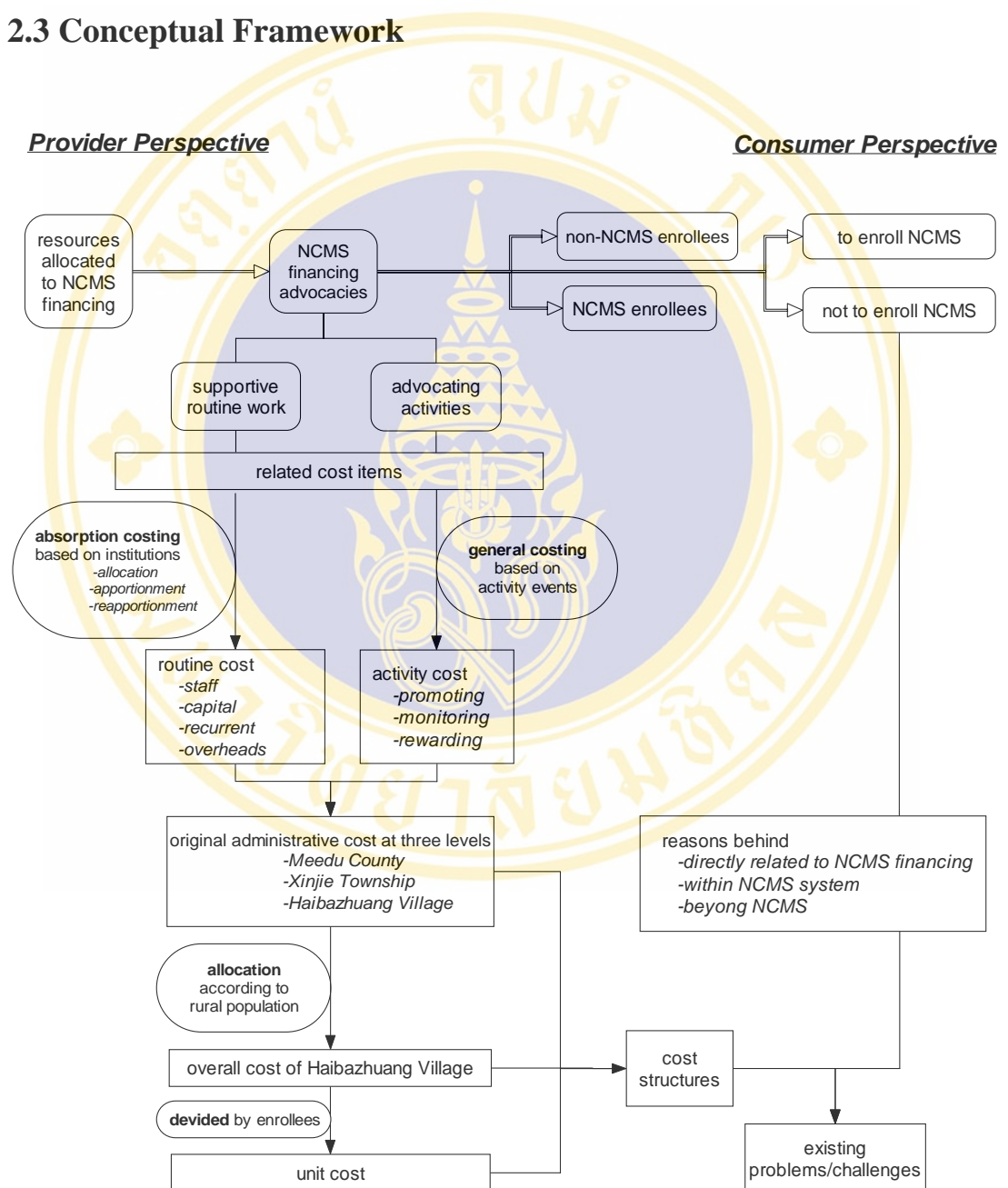
Second, most estimation of costs calculation in these studies is relatively vague under a broad assumption. (For example, in study 2, the expenditure of NCMS staff in doing financing work is calculated by the estimated daily compensation (10 Yuan) multiply the estimated working days (60 days) multiply the estimated number of NCMS staff.)

And the last, such costs are presented only in the form of cost accounting (categorized by expenditure items only). The absence of presentation in the form of management accounting makes the perceived “high costs” lack of operational ways to have economic savings.

Thus, a study of NCMS costs with a clearer definition, an acceptable estimation based on the real situation, and a re-presentation showed in management

accounting form may provide the financial management information of NCMS with some further complement.

2.3 Conceptual Framework



CHAPTER 3

METHODOLOGY

3.1 Research Design

This research has been conducted in Meedu County of Yunnan Province, China, from the early July to early November of 2007.

It is designed as a combined study, using both quantitative and qualitative approaches. Quantitative research methods were employed to collect and analyze data centered with cost items on NCMS financing, from the provider's perspective; while qualitative research methods were applied to explore reasons underlying the villagers' non-enrolling behavior towards NCMS financing, from the customers' point of view, to supplement the calculated numbers on the side of NCMS financing advocators with detailed responses from the villagers. (See Table 3-1)

3.2 Study Site

Meedu County was selected to be the basic study site of this economic evaluation on NCMS financing. There were three administrative levels studied—the county level, the township level, and the village level. It was Meedu County that stood for the county level. And below, Xinjie Township and Haibazhuang Village were selected to stand for the township level and the village level. (See Figure 3-1)

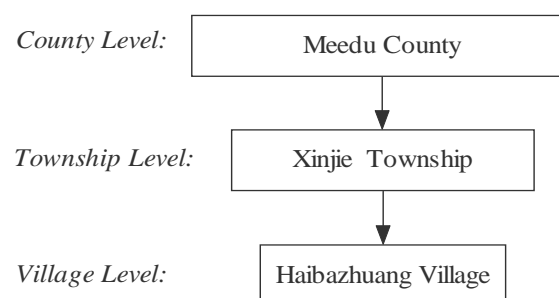


Figure3-1:Study sites selected to stand for the three rural administrative levels

Table 3-1: Detailed research design

General Objective	Specific Objective	Approach	Data Collecting Method	Data Obtained	Data Process	Acquired Result
I) To calculate NCMS financing cost of Meedu county in 2007, and analyze the cost structure.	1) To calculate the original NCMS financing costs and analyze the cost structures at three rural administrative levels	Quantitative approach	1) Existing data collecting 2) Informal inquiry and observation 3) Interview	1) NCMS financing cost items 2) Basic costing information ● Cost allocation ratios ● Cost apportionment ratios ● Cost reapportionment ratios	1) Absorption costing 2) General costing 3) Cost structure analyzing	1) Meedu county 2) Xinjie township 3) Haibazhuang village ● Routine costs ● Activity costs ● Total costs
	2) To calculate the overall NCMS financing cost and analyze the cost structure of Haibazhuang Village	Quantitative approach	—	1) Rural population information: ● Meedu County ● Xinjie Township ● Haibazhuang Village	1) Cost allocation 2) Cost structure analyzing	Overall cost of Haibazhuang Village
	3) To calculate the unit NCMS financing cost of Haibazhuang Village	Quantitative approach	—	1) NCMS enrollees information: ● Haibazhuang Village	1) Cost calculation	Unit cost of Haibazhuang Village
II) To explore reasons underlying the villagers' non-enrolling behavior	—	Qualitative approach	1) Non-participant observation 2) In-depth interview	1) Fieldnotes of observation and in-depth interview	1) Cases selecting 2) Coding	1) Reasons underlying the villagers' non-enrolling behavior revealed from the selected cases

3.2.1 Meedu County (See Figure 3-2)

Meedu County is one among the 20 counties that were chosen to be the earliest pilot counties of NCMS in Yunnan Province since 2003, with a local NCMS network of the County NCMS Office, Township NCMS Offices, and village clinics established completely. In 2004, Meedu was set as one of the 8 national NCMS example counties, exploring practice experiences and providing pilot guidance to other NCMS newly-applied counties.

Meanwhile, Meedu has been categorized as one among the 592 national impoverished counties by the State Council Leading Group Office of Poverty Alleviation and Development (SCLGOPAD) since 1994, representing as a typical less-developed county in rural China.

Located in the west of Yunnan Province, Meedu County has 9.4% of its population as local residents from 22 different ethnic minority groups, representing as a typical minorities-resided county in rural Yunnan.

Meedu County administrates 8 townships and 89 villages. In 2006, it reported the rural population of 297924 from a total of 320611, and the county average rural net income as 1950 Yuan/Villager—1267 Yuan above the national poverty line¹. To travel from Meedu to Kunming (the capital city of Yunnan Province), it takes around 5 hours by bus.

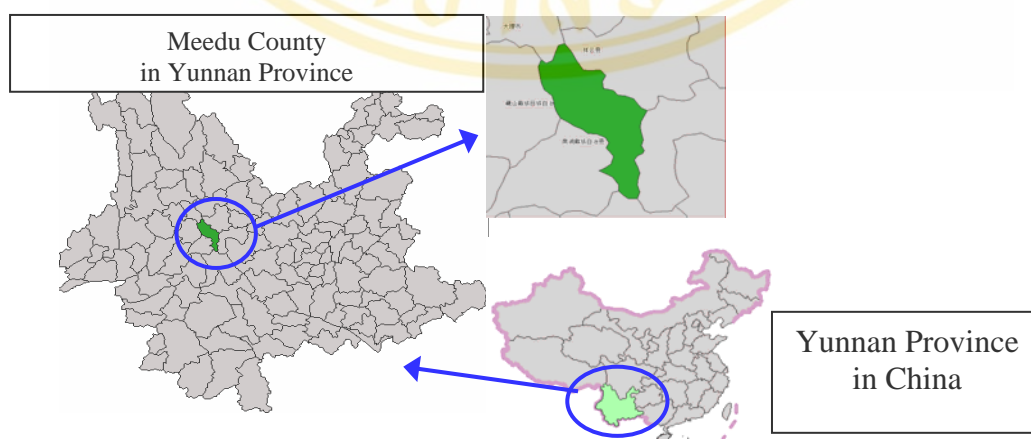


Figure 3-2 : Location of the study site: Meedu County

1. The national rural absolute poverty line of China is 683 Yuan/villager. It was announced in 2005 by the State Council Leading Group Office of Poverty Alleviation and Development.

3.2.2 Xinjie Township

According to the NCMS financing achievement of each Township of Meedu County in the year of 2006, Yinjie Township and Xinjie Township got the middle ranks among the eight townships, with their NCMS coverages mostly close to the average of the whole county. (See Table 3-2) However, in terms of willingness to participate into this study, Xinjie Township provided a much better understanding in sharing its existing financial data that related to NCMS financing, as well as other general convenience. Thus, Xinjie Township was selected to stand for the township level in this study.

Xinjie Township is located in the plain area nearby the Meedu county town. It administrates 12 villages with a convenient transportation connection. Among the eight townships, Xinjie is the second populous township. In 2006, its reported rural population is 50251 from a total of 51940. And it achieved the township average rural net income as 2631 Yuan/Villager, 681 Yuan higher than the average of the whole county.

Table 3-2: NCMS financing achievement of each township of Meedu in 2006

Townships	Rural Population	NCMS Enrollees	NCMS Coverage (According To Enrollees) (%)	Rank
Niujie	19882	18098	91.03	1
Juli	24392	22035	90.34	2
Deju	24083	21246	88.22	3
Yinjie	45332	39368	86.84	4
Xinjie	50017	43377	86.72	5
Meezhi	15813	13640	86.26	6
Hongyan	49299	42249	85.70	7
Meecheng	68095	58089	85.31	8
Total	296913	258102	86.93	—

3.2.3 Haibazhuang Village

According to the NCMS financing achievement of each Village of Xinjie Township in the year of 2006, Haibazhuang Village got the middle rank among the 12 villages, with its NCMS coverage mostly close to the average of the whole township.

(See Table 3-3) Thus, Haibazhuang Village was selected to stand for the village level in this study.

Haibazhuang Village is conveniently located on the national road that passes through Kunming, Dali, and Lincang. It administrates 12 sub-villages. In 2006, Haibazhuang Village reported the rural population of 4087. And its reported average rural net income was 2842 Yuan/Villager, 211 Yuan higher than the average of the whole township.

Table 3-3: NCMS financing achievement of each village of Xinjie in 2006

Villages	Rural Population	NCMS Enrollees	NCMS Coverage (According To Enrollees) (%)	Rank
Liuyi	3476	3237	93.12	1
Taoying	3662	3274	89.40	2
Jingang	3289	2903	88.26	3
Xihe	3408	2996	87.91	4
Donghe	3868	3385	87.51	5
Xizhuang	3616	3158	87.33	6
Haibazhuang	4053	3520	86.85	7
Luodang	4578	3958	86.46	8
Yongxiang	6032	5198	86.17	9
Yongzeng	5086	4350	85.53	10
Xinsheng	3976	3366	84.66	11
Xinjie	4973	4032	81.08	12
Total	50017	43377	86.72	—

3.3 Data Collection

3.3.1 Quantitative Data Collection

3.3.1.1 Collecting Data of Costs (See Table 3-3)

1) The existing financial data was collected from the accounting books, purchasing receipts, and monthly/annual financial reports of the NCMS financing involved institutions at county and township levels¹.

2) Based on observation and informal inquiry, cost items that were missing from the official records were supplemented based on the given information, or based on the researcher's general estimation if the given information was even not available².

1. The reliable accounting records were available only at county level and township level. At village level, lacking of the professional accountants as well as the official regulations, the accounting records of both the Village Committee and the Village Clinic were not kept in a clear track.

2. Most cost data at village level were collected based on observation, informal inquiry, and estimation.

Table 3-4: Collecting Data of Costs

Collected Cost Items	Data Collecting Methods	Data Resources
Routine Cost		
Staff Cost		
1) staff numbers	1) existing data collection	1) monthly financial reports
2) monthly salary of staff	2) informal inquiry	2) inquired information
Capital Cost		
1) list of capital settings	1) existing data collection	1) purchasing receipts
2) purchasing price	2) informal inquiry	2) annual financial reports
3) purchasing date	3) observation	3) inquired information
4) expected years for using		4) estimation
Recurrent Cost		
1) maintenance expenditures	1) existing data collection	1) accounting books
2) monthly payment of office utilities	2) informal inquiry	2) monthly financial reports
3) office supplies expenditures	3) observation	3) inquired information
4) expenditures on coordinating activities and guest arrangement		
Activity Cost		
Promoting Cost		
1) list of promoting items	1) existing data collection	1) accounting books
2) quantity	2) informal inquiry	2) inquired information
3) payment	3) observation	3) estimation
Monitoring Cost		
1) stakeholder meetings	1) existing data collection	1) accounting books
a) meeting times	2) informal inquiry	2) monthly financial reports
d) meeting attendants	3) observation	3) inquired information
c) transportation and accommodation subsidies for attendants		4) estimation
f) meal and snack expenditure		

Table 3-4: Collecting Data of Costs (Continued)

Collected Cost Items	Data Collecting Methods	Data Resources
Monitoring Cost 2) NCMS monitoring working teams a) name list of members of working teams b) days of team working c) monthly salary of team members d) labor and meal subsidies e) transportation expenditures f) payment		
Rewarding Cost 1) rewards	1) existing data collection 2) informal inquiry 3) observation	1) accounting books 2) inquired information

3.3.1.2 Collecting Data of Costing Information (See Table 3-4)

Through observation, informal inquiry, and interview, hints of the resource consumption within the involved institutions were gained. These hints were used for deciding the ratios for allocating/apportioning/reapportioning the obtained cost items in the following steps of absorption costing and general costing.



Table 3-5: Collecting data of costing information	Collected Costing Information	Data Collecting Methods	Data Resources
<i>Absorption costing of routine cost</i>			
<i>A) Allocation</i>			
Allocating staff cost			
1) staff numbers		1) existing data collection	1) annual financial reports
2) working responsibilities		2) informal inquiry	2) inquired information
3) working hours for different responsibilities		3) observation	
Allocating capital cost			
1) payment		1) existing data collection	1) purchasing receipts
2) purchasing date		2) informal inquiry	2) annual financial reports
3) expected years for using		3) observation	3) inquired information
4) benefited offices/staff			4) estimation
Allocating recurrent cost			
1) payment		1) informal inquiry	1) inquired information
2) benefited offices/staff		2) observation	2) estimation
<i>B) Apportionment</i>			
Apportioning costs of the service department offices to each office			
1) organizational structures		1) existing data collection	1) office-building construction document
a) offices of production department		2) informal inquiry	2) inquired information
b) offices of service department		3) observation	3) estimation
2) staff number of each office			
3) physical area of each office			

Table 3-5: Collecting data of costing information (Continued)

Collected Costing Information	Data Collecting Methods	Data Resources
<p>C) Reapportionment Reapportioning the apportioned costs of the service department offices to NCMS involved offices 1) organizational structures a) NCMS-involved offices b) non-NCMS-involved offices 2) staff number of each office 3) physical area of each office</p>	<p>1) existing data collection 2) informal inquiry 3) observation</p>	<p>1) office-building construction document 2) inquired information 3) estimation</p>
<p><u>General costing of activity cost</u> Costing promoting cost 1) payment 2) distribution 3) main objective</p>	<p>1) informal inquiry 2) observation</p>	<p>1) inquired information 2) estimation</p>
<p>Costing monitoring cost 1) stakeholder meetings a) payment b) main objective 2) NCMS monitoring working teams a) payment b) main objective</p>	<p>1) informal inquiry 2) observation</p>	<p>1) inquired information 2) estimation</p>
<p>Costing rewarding cost 1) rewarding standards 2) received institutions</p>	<p>1) existing data collection 2) informal inquiry 3) observation</p>	<p>1) financial reports 2) inquired information</p>

3.3.1.3 Collecting Data of NCMS Enrollees and Rural Populations

1) The numbers of NCMS enrollees of Meedu County, Xinjie Township, and Haibazhuang Village were collected from the official reports of the Meedu County NCMS Office, the Xinjie Township NCMS Office, and the Haibazhuang Village Clinic.

2) The total rural populations of Meedu County, Xinjie Township, and Haibazhuang Village were collected from the annual reports of 2006 of the Meedu County Government, the Xinjie Township Government, and the Haibazhuang Village Committee.

3.3.1.4 Collecting NCMS Background Information

Other local background information about NCMS development, NCMS network, and NCMS financing process, NCMS health care provision, etc. was broadly collected through existing records, observation, informal inquiry, and interview.

3.3.2 Qualitative data collection

3.3.2.1 Collecting Data from the Provider's Side (NCMS Financing Personnel)

3.3.2.1.1 Observation

1) **Observation** was conducted along the entire process of this study. The researcher was presented as a temporary assistant staff of the County NCMS Office, working together with other staff in the office, attending the routine meetings, and observing the daily official works. Meanwhile, the research conducted observation in all the other NCMS involved institutions (the Township NCMS Office, the Township Government, the Village Clinic, and the Village Committee), as well as in most of the NCMS financing advocacy activities (making NCMS TV reports, distributing IEC handouts and NCMS paper cups, organizing stakeholder meetings, sending the monitoring working teams, and giving the rewarding).

Through observation, the local NCMS network, responsibilities and functions of the NCMS offices at each level, the detailed NCMS regulations were learnt. And a good relationship with staff within Meedu NCMS system was gained as well, which greatly benefited the following data collection. Another important benefit was witnessing the live communication between the NCMS staff and the visiting villagers. Those villagers visited the County NCMS Office for applying reimbursement, consulting regulations, complaining dissatisfactions, or asking for financial helps. During the communication, the NCMS staff's responses were observed. Some ideas and stories heard from those visiting villagers were quite interesting, from which the later conducted in-depth interview in the villages was partially inspired. Meanwhile, comments on those visiting cases from the NCMS staff furthered the researcher's understanding about NCMS from the provider's side.

3.3.2.1.2 Interview

On the provider's side, interview was conducted with the NCMS financing personnel. Through interview, the information about the development/application/comments of the detailed NCMS regulations and the expectation/practice/experiences/comments on NCMS financing advocacy were learnt. And some interesting stories between the NCMS financing staff and villagers during NCMS financing advocacy were told. The researcher's confusions emerged in conducting in-depth interview with villagers about the NCMS system were asked as well.

There were a total of 11 informants interviewed on the provider's side. (See Table 3-6)

Table 3-7: Informants of interview on the provider's side

Level	Institution	Informants
County Level		
	County NCMS Office	1 (Chief)
	County Health Bureau	1 (Chief)
Township Level		
	Township NCMS Office	1 (Staff)
	Township Health Center	1 (Chief)
	Township Government	2 (Chief, Deputy Chief)
Village Level		
	Village Clinic	1 (Village Doctor)
	Village Committee	2 (Chief, Staff)
	Sub-villages	2 (Sub-Village Leaders)
Total		11 (persons)

3.3.2.2 Collecting Data from the Customer's Side (Villagers)

3.3.2.2.1 Observation

Non-participant observation was carefully conducted in all the possible aspects of rural life in Meedu related to NCMS, which included the local social/economic/cultural background, local health, health care provision/utilization, NCMS enrollment/reimbursement, and rural production, villagers' daily life, rural families, and communications/relationships between people, etc..

A good understanding of the local context of the villagers' rural life in Meedu County/Xinjie Township/Haibazhuang Village was gained through the observation.

3.3.2.2.2 In-Depth Interview

The in-depth interview with villagers was started after the researcher spent two months staying in Meedu and traveling around its administrated townships and villages.

1) Sampling

■ Selecting Sub-Villages

Since Haibazhuang Village was the selected site in this study to stand for the village level, all the in-depth interviews were conducted there. And

below the village level, three sub-villages were selected from the total of 12 sub-villages according to their NCMS financing achievement (the best, the median, and the worst) of this year. (See Table 3-7)

Table 3-8: Selecting sub-villages to conduct in-depth interview

Selected Sub-Villages	Rural Population	NCMS Enrollees	NCMS Coverage (According To Enrollees) (%)	Rank
Shangmaying	340	333	97.94	Highest
Jiamai	320	291	90.94	Median
Niuzongyi	615	400	65.04	Lowest

■ Interviewing Key Informants

In each sub-village, it was the sub-village leaders who conduct NCMS financing advocacy to villagers door to door during the NCMS financing period. And normally, it was the sub-village leaders who had the relatively complete information about the whole village. Through interviewing the sub-village leaders, some underlying reasons of the villagers' non-enrolling behavior were hypothesized. To link the information obtained from the sub-village leaders and the reviewed literature, the criteria of selecting villagers to be in-depth interview informants was set.

■ Selecting Informants

NCMS is enrolled based on rural households, when selecting informants, to concern about the characteristics of the whole rural family is more important than to concern about the characteristics of the individual villagers alone. Thus it was the rural family to be chosen first, and then the villagers from the selected families to be decided to interview later¹ (normally decided during the visit).

The “non-enrolling behavior” of villagers in the study was defined as 1) villagers who had never enrolled NCMS; 2) villagers who had ever enrolled NCMS, but later dropped out; and 3) villagers who had newly-enrolled NCMS this year.

1. Principally speaking, it is the family member who acted as the decision maker (normally the father, the husband, or the oldest son) in the family to be chosen as informants. However, it is the confronted problem the researcher met that the decision maker of those interviewed families might not be available, and then other family members were interviewed as adjustment.

Besides the grouping of non-enrolling behavior, according to literature review, some other features were also considered for selecting informants. (See Table 3-8)

Table 3-9: Informants selecting criteria

Considered Features	Selecting Informants Based on Grouping	
1. Reluctance expressions (main feature)	A) Never enrolled	B) Once enrolled, then dropped out
		C) Newly enrolled
2. Family economic background	A) Rich	B) Median
		C) Poor
3. Health status of family members	A) Healthy	B) Normal
		C) Sick
4. Main source of family income	A) Farming	B) Small Business
		C) Migrant Working
5. Family size	A) Big	B) Median
		C) Small

The criteria of selecting informants was showed and explained clearly to the sub-villager leaders first. Then the sub-villagers provided a name list with the cases and available in his village that fit the criteria.

Following the criteria, there were a total of 20 rural families recommended by the sub-village leaders. Among the 20 families, 5 were not available at home even after several visits (due to the busy harvest in autumn), while 3 directly refused, 12 rural families finally agreed to participate. The characteristics of the selected 12 rural families were profiled as follow (See Table 3-9).

Table 3-10: Profile of the selecting rural families

Selected Cases	Reluctance Expressions	Economic Background*	Features Profiled			
			Health Status of Members**	Main Source of Income	Family Size***	
Case 1	Never enrolled	Rich	Normal healthy	Migrant working	Median	
Case 2	Never enrolled	Median	Healthy	Farming	Small	
Case 3	Never enrolled	Poor	Healthy	Migrant working	Small	
Case 4	Never enrolled	Poor	Normal healthy	Farming	Big	
Case 5	Once enrolled, Then dropped out Re-enrolled again	Median	Normal healthy	Farming	Median	
Case 6	Once enrolled, Then dropped out	Median	Normal healthy	Farming	Median	
Case 7	Once enrolled, Then dropped out	Poor	Sick	Farming	Median	
Case 8	Newly enrolled	Rich	Healthy	Migrant working	Small	
Case 9	Newly enrolled	Median	Healthy	Farming	Small	
Case 10	Newly enrolled	Median	Sick	Migrant working	Big	
Case 11	Newly enrolled	Poor	Sick	Farming	Small	
Case 12	Newly enrolled	Poor	Sick	Farming	Big	

Note: *Family Economic Background:
 1) Rich: family annual net income \geq 5000Yuan;
 2) Median: 5000Yuan $>$ family annual net income \geq 2000Yuan/person
 3) Poor: family annual net income $<$ 2000Yuan;
****Health Status Of Family Members:**
 According to the self-report of the interviewed villagers
*****Family Size:**
 1) Big: family members \geq 5 persons
 2) Median: 5 persons $>$ family members \geq 3 persons
 3) Small: family members $<$ 3 persons

2) Interview Guideline

Interview guideline was originally developed before entering the field, from the existing literatures, where some reasons of villagers' non-enrolling behavior were hypothesized in previous studies (See APPENDIX ONE). While observation and informal inquiry provided further information for a follow-up revising on guideline, the process of interviewing itself led some adjustments on the guideline according to the live context as well.

3) Confidentiality

Though the topic of this study is not personally sensitive, most of the in-depth interviews were conducted in the villagers' own houses, without the sub-village leaders being aside. In text, to respect the informants' full confidentiality, their real names were replaced by cryptonyms.

3.4 Data Analysis

3.4.1 Quantitative Data Analysis

3.4.1.1 Costing

In this study, the absorption costing method was applied for acquiring NCMS financing routine cost, while the general costing method was applied for acquiring NCMS financing advocacy activity cost.

3.4.1.1.1 Absorption Costing of Routine Cost:

1) Cost Classification

The routine cost is classified into staff cost, capital cost, recurrent cost, and overheads. Following this classification, raw cost items were grouped. (See Table 3-9)

2) Basic Cost Calculation (Allocation/Apportionment)

For all the NCMS financing involved institutions, based on each NCMS financing involved office, the classified cost items were calculated one by one (See Table 3-9). Then the total staff/capital/recurrent costs of each office were acquired. But the overheads were acquired in the next step of "reapportioning apportioned cost of service department offices to each office".

Table 3-11: Cost classification and calculation formula of the routine cost

Items Of Cost Classification	Basic Calculation Formulas	Remarks
1)Staff Cost		
Staff Salary	$S = S_a + S_b + \dots + S_n$	S_a : the sum of monthly salaries of Staff A n : there are N staff in office X
2)Capital Cost		
Office Setting		
Land	$L_x = (TL/TY) \times (S_x/S_T)$	TL : the total cost of the land TY : the expected years for using S_x : the physical area of Office X S_T : the total physical area of the whole building
Building	$B_x = (TB/TY) \times (S_x/S_T)$	TB : the total cost of the building TY : the expected years for using S_x : the physical area of Office X S_T : the total physical area of the whole building
Garden	$G_x = (TG/TY) \times (S_x/S_T)$	TG : the total cost of the garden TY : the expected years for using S_x : the physical area of Office X S_T : the total physical area of the whole building
Office Equipping		
Equipment	$E_x = (TE_a/TY_a) + (TE_b/TY_b) + \dots + (TE_n/TY_n)$	TE_a : the total cost of Equipment A TY_a : the expected years for using of Equipment A n : there are N equipments in this office
Furniture	$F_x = (TF_a/TY_a) + (TF_b/TY_b) + \dots + (TF_n/TY_n)$	TF_a : the total cost of Furniture A TY_a : the expected years for using of Furniture A n : there are N pieces of Furniture in this office
Decoration	$D_x = (TD_a/TY_a) + (TD_b/TY_b) + \dots + (TD_n/TY_n)$	TD_a : the total cost of Decoration A TY_a : the expected years for using of Decoration A n : there are N pieces of Decoration in this office

Table 3-11: Cost classification and calculation formula of the routine cost (Continued)

Items Of Cost Classification	Basic Calculation Formulas	Remarks
3) Recurrent Cost		
Maintenance	$M_X = M_T \times (S_X/S_T)$	M_T : the total cost of maintenance S_X : the physical area of Office X S_T : the total physical area of the whole building
Office Utility		
Tap Water	$TW_x = TW_T \times (NS_x/NS_T)$	TW_T : the total tap water cost NS_x : the number of staff of Office X NS_T : the total number of staff of the institution
Electricity	$E_x = E_T \times (S_x/S_T)$	E_T : the total cost of electricity S_x : the physical area of Office X S_T : the total physical area of the whole building
Internet and Telephone	$IT_x = IT_T / ND_T$	IT_T : the total cost of internet and telephone ND_T : the total number of computers
Mobile-Phone Subsidy	$MS = MS_a + MS_b + \dots + MS_n$	MS_a : the sum of mobile-phone subsidies of Staff A n : there are N staff in this office
Office Supply		
Coal	$C_x = C_T \times (NS_x/NS_T)$	C_T : the total coal cost NS_x : the number of staff of Office X NS_T : the total number of staff of the institution
Drinking Water	$DW_x = DW_T \times (NS_x/NS_T)$	DW_T : the total drinking water cost NS_x : the number of staff of Office X NS_T : the total number of staff of the institution
Newspaper	$NP_x = NP_T \times (NS_x/NS_T)$	NP_T : the total newspaper cost NS_x : the number of staff of Office X NS_T : the total number of staff of the institution
Post Service	$PS_x = PS_T/ND_T$	PS_T : the total cost of post service ND_T : the total number of departments of the institution

Table 3-11: Cost classification and calculation formula of the routine cost (Continued)

Items Of Cost Classification	Basic Calculation Formulas	Remarks
Stationery	$SN_x = SN_T \times (NS_x / NS_T)$	<p>SN_T: the total stationery cost NS_x: the number of staff of Office X NS_T: the total number of staff of the institution</p>
Meeting Snack		
Coordinating Activities and Guest Arrangement		
Meal	$MEAL_x = MEAL_T / ND_T$	<p>$MEAL_T$: the total meal cost ND_T: the total number of departments of the institution</p>
Hotel	$H_x = H_T / ND_T$	<p>H_T: the total hotel cost ND_T: the total number of departments of the institution</p>
Activity	$A_x = A_T / ND_T$	<p>A_T: the total activity cost ND_T: the total number of departments of the institution</p>
Presents	$P_x = P_T / ND_T$	<p>P_T: the total activity cost ND_T: the total number of departments of the institution</p>

3) Cost Apportionment and Reapportionment

Normally, in each NCMS financing involved institution, the Accounting Office and the Management Office belongs to the “service department”. The costs of those “service department” offices should be allocated to all the “production department” offices. (See Figure 3-2) Then the allocated cost from such apportioning and reapportioning was classified as “overheads”.

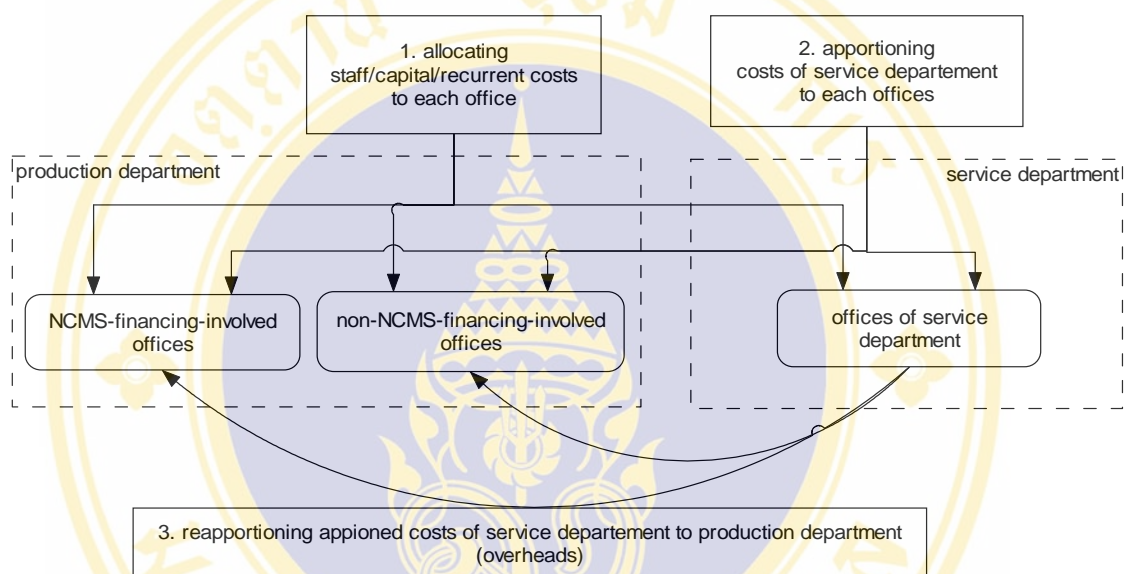


Figure 3-3: Cost apportionment and reapportionment of the “service department” office

4) Acquiring Total Cost of Each Office

By combining the total staff/capital/recurrent costs and the allocated overheads together, the total cost of each NCMS-financing-involved office was acquired.

5) Allocate the Total Routine Cost of Each Office to “NCMS Financing” Task

However, the NCMS financing work was surely not the only task those NCMS-financing-involved offices responded. Thus the total routine cost of each office was further allocated to the particular task of “NCMS financing”, according to the time span of NCMS financing period, as well as the simultaneous tasks the office loaded.

Formula of allocating routine cost to “NCMS financing”:

$$\text{NCMS Financing Routine Cost of Office X} = \text{Total Routine Cost of Office X} * \frac{\text{Months of Office X Involved in NCMS Financing}}{12 \text{ Months}} * \frac{1}{\text{Total Simultaneous Tasks of Office X}}$$

3.4.1.1.2 General Costing of Activity Cost:

The activity cost was aggregated based on each activity event. Each activity event had a clear list of cost items. Since all the activities were conducted for NCMS financing specifically. To costing such activities, it was no need to do apportionment and reapportionment. Thus by simply summing each cost item together, the total cost of each activity of NCMS financing advocacy was acquired.

3.4.1.2 Cost Analysis**1) Original Cost and Cost Structure of Each Rural Administrative Level**

After absorption costing of the routine cost and general costing of the activity cost, at each rural administrative level (county/township/village level), to combine the NCMS financing routine cost and the NCMS financing advocacy activity cost together, the original cost of that level was acquired. And to divide each calculated cost item by the total original cost, the cost structure at each rural administrative level was formed.

Formula:

a) Original Cost at County Level

= County Level Routine Cost + County Level Activity Cost

b) Original Cost at Township Level

= Township Level Routine Cost + Township Level Activity Cost

c) Original Cost at Village Level

= Village Level Routine Cost + Village Level Activity Cost

2) Allover Cost of Haibazhuang Village

After the original costs at county/township/village level were acquired, according to the ratios of rural populations, the original costs at three levels were allocated to Haibazhuang Village¹. Thus the overall cost of Haibazhuang Village was acquired. And to divide each calculated cost item by the overall cost, the cost structure of the overall cost of Haibazhuang Village was formed.

According to the 2006 Government Annual Report, the rural population of Meedu County was 297924; the rural population of Xinjie Township was 50251, and the rural population of Haibazhuang Village was 4087.

Formula:

$$\begin{aligned}
 & \text{Overall Cost of Haibazhuang Village} \\
 &= (\text{Rural Population of Haibazhuang Village/Rural Population of Meedu County}) * \\
 & \quad \text{Original Cost at County Level} \\
 &+ (\text{Rural Population of Haibazhuang Village/Rural Population of Xinjie Township}) * \\
 & \quad \text{Original Cost at Township Level} \\
 &+ (\text{Rural Population of Haibazhuang Village/Rural Population of Haibazhuang} \\
 & \quad \text{Village}) * \text{Original Cost at Village Level} \\
 &= (4087/297924) * \text{Original Cost at County Level} \\
 &+ (4087/50251) * \text{Original Cost at Township Level} \\
 &+ (4087/4087) * \text{Original Cost at Village Level}
 \end{aligned}$$

3) Unit Cost of Haibazhuang Village

After overall cost of Haibazhuang Village was acquired, according to the total number of NCMS enrollees of Haibazhuang Village², the overall cost of

1. The original costs of three levels were allocated to Haibazhuang Village according to the rural population ratios. It is because all the villagers have the potential to be NCMS enrollees, thus all of them are set as target of NCMS financing advocacy. It is assumed that each villager in Haibazhuang Village has received the same NCMS financing advocacy from the county, township, and village level. They “share” the cost of NCMS financing equally.

2. The total number of NCMS enrollees in Haibazhuang Village included both the newly-enrolled villagers, as well as the continuously-enrolled villagers. The separate numbers of each of the two groups was not available. Thus it was assumed here that all the NCMS enrollees of Haibazhuang Village enrolled NCMS this year as their newly-made decision to respond to the NCMS financing advocacy.

Haibazhuang Village was allocated to each NCMS enrollee in this village. Thus the unit cost of NCMS financing in Haibazhuang Village was finally acquired.

According to the 2007 Official Report of NCMS Financing of Meedu County, the total number of NCMS enrollees in Haibazhuang Village was 3728.

Formula:

Unit Cost

= Overall Cost of Haibazhuang Village/Total Number of NCMS Enrollees of Haibazhuang Village

= Overall Cost of Haibazhuang Village/3728

3.4.2 Qualitative Data Analysis

Notes of observation and interviews were first jogged down during or after observing or interviewing. Daily field notes were complemented based on jog notes and collected audio/visual information from phones and voice records after returning from observing or interviewing. And summary notes were regularly organized for field notes management.

From the notes, data were firstly open-coded. And then all the codes were listed. The codes containing similar reasons of villagers' reluctance were grouped. Then one case from each group was selected to report in detail in the Results Chapter. Thus, finally, there were a total of five cases selected; representing five kinds of reasons underlying the villagers' non-enrolling behavior towards NCMS financing that were perceived to be typical in Meedu.

CHAPTER 4

RESULTS

This chapter reports main results of this study by two parts. Based on research objectives, the first part is mainly focused on NCMS financing costs and cost structures from the provider's perspective, while the other part is concentrated on reasons behind villagers' non-enrolling behavior responding to NCMS financing from the customer's point of view.

4.1 NCMS Financing Costs and Cost Structures

Following the process stated in the Methodology Chapter, at each rural administrative level, based on NCMS financing involved institutions and on NCMS financing advocating activities, through absorption costing and general costing, "routine cost" (the cost of institutional routine work to support NCMS financing) and "activity cost" (the cost on implementing NCMS financing advocacies) were acquired by disaggregating and re-aggregating the raw cost items. Then by combining both "routine cost" and "activity cost" together, the NCMS financing costs were obtained. According to the real or non-real money payment of the objected cost items, the costs were differentiated as "accounting cost" and "opportunity cost", while payment from NCMS or non-NCMS budget were sub-classified as "direct cost" and "indirect cost".

Detailed tables of the results in each calculating step are shown in the Appendix (see Appendix II), while the main tables containing the key results are displayed.

4.1.1 Original Costs and Cost Structures at Three Rural Administrative Levels

By combining "routine cost" and "activity cost" of each rural administrative level, the original cost of NCMS financing at county, township, and village levels were obtained.

4.1.1.1 County Level

In China, among the three rural administrative levels, county level is the top level that general local decisions are claimed. Like NCMS, which is operated county-based, all the basic work-plans and leading actions to guide the consistent movement of the whole county are made at this level.

This year, in Meedu County, it was the County NCMS Office that was mainly responsible for making NCMS financing work-plans and initiating leading advocacies, while some suggestions from the County Health Bureau were passed into the decision making as well. Previously, the County Government had organized NCMS financing as the main advocator, but it was since 2007 that the County Government claimed its retreat from most of the involvement in NCMS financing.

From Table 4-1, it was shown that the original cost of NCMS financing at county level was a total of 240,086 Yuan. Its major part (98.4%) was paid by real money, while a small proportion (1.6%) was taken as opportunity cost without real payment. And in terms of supported budget, the biggest part (79.0%) was paid by the County NCMS Office from the specific budget for NCMS, while the rest (19.3%) was paid by other county-leveled institutions (such as County Health Bureau, County TV Station, and County Hospital, etc.) from their own budget that was not related to NCMS.

Table 4-1: Original cost of NCMS financing at county level

Cost Items	Accounting Cost		Opportunity Cost*		Total (CNY) (%)
	Direct (CNY) (%)	Indirect (CNY) (%)	Direct (CNY) (%)	Indirect (CNY) (%)	
Routine Cost					
County NCMS Office	21522 (9.0)	37445 (15.6)	0 (0.0)	0 (0.0)	58967 (24.6)
County Health Bureau	0 (0.0)	9207 (3.8)	0 (0.0)	0 (0.0)	9207 (3.8)
County Government	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
Subtotal	21522 (9.0)	46652 (19.4)	0 (0.0)	0 (0.0)	68174 (28.4)
Activity Cost					
Promoting	3300 (1.4)	26725 (11.1)	3900 (1.6)	0 (0.0)	33925 (14.1)
Monitoring	4665 (1.9)	19687 (8.2)	0 (0.0)	0 (0.0)	24352 (10.1)
Rewarding	113635 (47.3)	0 (0.0)	0 (0.0)	0 (0.0)	113635 (47.3)
Subtotal	121600 (50.6)	46412 (19.3)	3900 (1.6)	0 (0.0)	171912 (71.6)
Total	143122 (59.6)	93064 (38.8)	3900 (1.6)	0 (0.0)	240086 (100.0)

*The detailed standards for estimating the opportunity costs are remarked in Appendix III.

At county level, the lower routine cost (28.4%) and the higher activity costs (71.6%) were also shown in Table 4-1. It was the County NCMS Office that took the most proportion (24.6%) of routine cost, while the rewarding activities took the biggest part (47.3%) of activity cost.

This year, the “zero” routine cost of the County Government was a big feature of NCMS financing transition in Meedu. From interviewing, it was learned that the previous involvement of the County Government had resulted a higher routine cost of NCMS financing at county level, due to its big-sized routine expenditures. Thus since 2007, in order to reduce the financing cost, the County Government had retreated from providing institutional routine support to NCMS financing, which was shown as the “zero” routine cost of the County Government in Table 4-1.

“Since this year, the County Government will retreat from being involved in most NCMS financing advocacies. So the yearly big meetings that previously hosted by the County Government to initiate and end NCMS financing will be canceled, and the County Government Monitoring Working Teams will not be organized. I am attending today’s meeting hosted by the County NCMS Office, just to provide the coordinating convenience for NCMS financing on behalf of the County Government. Instead, for the main efforts, it should be shifted from the government administrative system from now on. Based on the NCMS network, to conduct financing as a routine work rather than a yearly intensive effort, it is the good beginning of the NCMS financing transition, from which the NCMS financing cost is hopefully to be reduced.”

—Deputy Chief A of Meedu County Government

“Compared with previous years, the government staff that involved into NCMS financing are much less this year. Otherwise, at least, there will be the County Government Chief, the Deputy Chief, their drivers, and their secretaries directly involved for three months.”

—Chief of Meedu County NCMS Office

Among the three rural administrative levels, promoting activity was conducted only at county level. However, compared with the high rewarding cost, the promoting cost only took a small part (14.1%). Furthermore, for the total cost of promoting activity, there was only a limited proportion (23.4%) for the direct promoting towards villagers such as “advertising board”, “TV NCMS financing announcement”, “TV local NCMS news”, and “IEC materials”, while the major proportion (76.6%) was occupied by indirect promoting towards NCMS financing personnel, such as “NCMS paper cups” and “NCMS table calendars”. (See Table 4-2)

Table 4-2: Promoting activity cost structure at county level

Cost Items	Accounting Cost		Opportunity cost*		Total (CNY) (%)
	Direct (CNY) (%)	Indirect (CNY) (%)	Direct (CNY) (%)	Indirect (CNY) (%)	
Direct Promoting					
Advertising Board	300 (0.9)	0 (0.0)	1500 (4.4)	0 (0.0)	1800 (5.3)
TV Program: Financing Announcement	0 (0.0)	100 (0.3)	1400 (4.1)	0 (0.0)	1500 (4.4)
TV Program: Local News About NCMS	0 (0.0)	625 (1.8)	1000 (2.9)	0 (0.0)	1625 (4.8)
IEC Materials	3000 (8.8)	0 (0.0)	0 (0.0)	0 (0.0)	3000 (8.8)
Subtotal	3300 (9.7)	725 (2.1)	3900(11.5)	0 (0.0)	7925 (23.4)
Indirect Promoting					
NCMS Paper Cups	0 (0.0)	16000 (47.2)	0 (0.0)	0 (0.0)	16000 (47.2)
NCMS Table Calendar	0 (0.0)	10000 (29.5)	0 (0.0)	0 (0.0)	10000 (29.5)
Subtotal	0 (0.0)	26000 (76.6)	0 (0.0)	0 (0.0)	26000 (76.6)
Total	3300 (9.7)	26725 (78.8)	3900(11.5)	0 (0.0)	33925(100.0)

* The detailed standards for estimating the opportunity costs are remarked in Appendix III.

4.1.1.2 Township Level

As the connecting level, township level is the medium level at which the work-plans of NCMS financing from the upper county level are received and passed to the lower villager level. Through such transmission, the force of action implementation is strengthened by the local administrative power of township-leveled institution.

In Xinjie Township, without specific NCMS budget, the Township NCMS Office has been mostly relied on the Township Health Center by now. Lacked of financial power, the Township NCMS Office only functioned as the implementing office rather than the NCMS financing organizer. Thus, the leading role of advocacy at township level was mainly held by both the Township Health Center and the Township Government this year.

Table 4-3: Original cost of NCMS financing at township level

Cost Items	Accounting Cost		Opportunity cost		Total (CNY) (%)
	Direct (CNY) (%)	Indirect (CNY) (%)	Direct (CNY) (%)	Indirect (CNY) (%)	
Routine Cost					
Township NCMS Office	0 (0.0)	8525 (15.1)	0 (0.0)	0 (0.0)	8525 (15.1)
Township Health Bureau	0 (0.0)	6611 (11.7)	0 (0.0)	0 (0.0)	6611 (11.7)
Township Government	0 (0.0)	18776 (33.3)	0 (0.0)	0 (0.0)	18776 (33.3)
Subtotal	0 (0.0)	33912 (60.2)	0 (0.0)	0 (0.0)	33912 (60.2)
Activity Cost					
Promoting	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
Monitoring	0 (0.0)	9307 (16.5)	0 (0.0)	0 (0.0)	9307 (16.5)
Rewarding	0 (0.0)	13133 (23.3)	0 (0.0)	0 (0.0)	13133 (23.3)
Subtotal	0 (0.0)	22440 (39.8)	0 (0.0)	0 (0.0)	22440 (39.8)
Total	0 (0.0)	56352(100.0)	0 (0.0)	0 (0.0)	56352(100.0)

* The detailed standards for estimating the opportunity costs are remarked in Appendix III.

From Table 4-3, it was shown that the original cost of NCMS financing at township level was a total of 56,352 Yuan. All the costs (100.0%) at the township level were paid by real money from the non-NCMS budget of both the Township Health Center and Township Government. Different from the county level (where the opportunity cost was taken in “promoting activity”) and the village level (where the opportunity cost was mainly taken in the door-to-door “monitoring activity”), it is noted that no opportunity cost was taken at the township level. Because the township has neither the responsibility of organize promoting activity, nor practicing the door-to-door visiting.

At township level, the higher routine cost (60.2%) and the lower activity cost (39.8%) implied the on-going but incomplete NCMS financing transition of Meedu in the current stage. Especially considering of the biggest proportion (33.3%) as the routine cost of the Township Government, the old feature of NCMS financing was revealed—the high government routine cost. In 2007, the Township Government, which has more staff, sub-sectors, coordinating activities, and visitors, didn’t retreat from NCMS financing yet. It still acted as the main advocator at township level, taking NCMS financing as one of its four major tasks during the three-month financing period.

“Tough the County Government has retreated from NCMS financing already, according to the local situation of Xinjie Township, we (Xinjie Township Government) still cannot retreat yet... Together with “the tobacco harvest”, “the garlic seeding”, and “the rural-land ownership renting”, NCMS financing has been posited as another concentrated work of us during August, September, and October... Without our coordinating to every village committee and the Monitoring Working Team, only relied on the Xinjie Township Health Center, it would be impossible for Xinjie Township to achieve the given target of NCMS financing of this year.”

—Chief of Xinjie Township Government

4.1.1.3 Village Level

Village level is the grass-root level where decisions from upper levels are finally practiced with villagers face to face. For NCMS financing, it is at the village level that most premiums are finally collected by sub-village NCMS working teams door to door.

This year, in Haibazhuang Village, the Village Committee loaded the major efforts of NCMS financing. While the doctors of Village Clinic were mainly responsible for NCMS enrollment recording and NCMS regulation consulting, the staff of the Village Committee (especially the sub-village leaders) were responsible for collecting premiums by visiting villagers.



Table 4-4: Original cost of NCMS financing at village level

Cost Items	Accounting Cost		Opportunity cost*		Total (CNY) (%)
	Direct (CNY) (%)	Indirect (CNY) (%)	Direct (CNY) (%)	Indirect (CNY) (%)	
Routine Cost					
Village Clinic	0 (0.0)	1241 (9.0)	0 (0.0)	50 (0.4)	1291 (9.3)
Village Committee	0 (0.0)	3830 (27.6)	0 (0.0)	325 (2.3)	4155 (29.9)
Subtotal	0 (0.0)	5071 (36.5)	0 (0.0)	372 (2.7)	5446 (39.2)
Activity Cost					
Promoting	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
Monitoring	0 (0.0)	2962 (21.3)	0 (0.0)	5150(37.1)	8112 (58.4)
Rewarding	0 (0.0)	330 (2.4)	0 (0.0)	0 (0.0)	330 (2.4)
Subtotal	0 (0.0)	3292 (23.7)	0 (0.0)	5150(37.1)	8442 (60.8)
Total	0 (0.0)	8363 (60.2)	0 (0.0)	5525(39.8)	13888(100.0)

* The detailed standards for estimating the opportunity costs are remarked in Appendix III.

From Table 4-4, it was shown that the original cost of NCMS financing at village level was a total of 13,888 Yuan. Though its major part (60.2%) was paid by real money from the non-NCMS budget of both the Village Clinic and Village Committee, there was a notable proportion of opportunity cost (39.8%) to be absorbed (mostly by the grass-root NCMS financing personnel of Village Committee) as the unpaid labor consumption (except the small part for the free land occupied by village committee and village clinic).

At village level, the activity cost (60.8%) was higher than the routine cost (39.2%). And nearly all the activity cost was taken by the outstanding monitoring cost (58.4%). For monitoring cost, even that the grass-root NCMS financing personnel of the Village Committee had their monthly salaries; such salaries were too modest to reflect their real labor consumption. Thus the labor compensation of them was added in the form of opportunity cost.

4.1.2 Overall Cost and Cost Structure Analysis

According to the ratios of rural population (Haibazhuang Village rural population/Meedu County rural population=4087/297924, Haibazhuang Village rural population/Xinjie Township rural population=4087/50251, Haibazhuang Village rural population/Haibazhuang Village rural population=1), the obtained original NCMS financing costs of the three rural administrative levels were allocated to Haibazhuang Village for acquiring the overall cost of NCMS financing. (See Table B in Appendix II)

Based on different dimensions, by analyzing the overall NCMS financing cost structure in different ways, the features of the overall cost were revealed, from which the general profile of the current resource allocation on NCMS financing of Meedu County was roughly reflected.

Table 4-5: The overall cost financed from three levels with different payment

Cost Items	Accounting Cost		Opportunity cost		Total (CNY) (%)
	Direct (CNY) (%)	Indirect (CNY) (%)	Direct (CNY) (%)	Indirect (CNY) (%)	
County	1963 (9.02)	1277 (5.87)	54 (0.25)	0 (0.00)	3294 (15.13)
Township	0 (0.00)	4583 (21.06)	0 (0.00)	0 (0.00)	4583 (21.06)
Village	0 (0.00)	8363 (38.42)	0 (0.00)	5525 (25.38)	13888 (63.83)
Total	1963 (9.02)	14223 (65.35)	54 (0.25)	5525 (25.38)	21765(100.00)

1) Accounting/Economic, Direct/Indirect Cost

According to the payment and the supported budget of the overall cost, the part that was paid by real money but from non-NCMS budget ranked highest (65.36%), while only a small proportion (9.02%) was directly paid by specific NCMS financing budgets from county level. Meanwhile, there was a notable proportion (25.38%) of the indirect opportunity cost at village level without real money payment. (See Table 4-5)

2) Cost from Three Levels

Among the three rural administrative levels, the biggest proportion of the overall cost was financed from the village level. Though the united efforts of all the three levels were also proved, it was more impressed that converted from the financial power of each level; the grass-root level loaded most (63.81%), while the top level responded least (15.13%). (See Table 4-5)

Table 4-6: The overall routine/activity cost

Cost Items	Accounting Cost		Opportunity cost		Total (CNY) (%)
	Direct (CNY) (%)	Indirect (CNY) (%)	Direct (CNY) (%)	Indirect (CNY) (%)	
Routine	295 (1.36)	8469 (38.91)	0 (0.00)	375 (1.72)	9139 (41.99)
Activity	1686 (7.66)	5754 (26.44)	54 (0.25)	5150 (23.66)	12626 (58.01)
Total	1963 (9.02)	14223 (65.35)	54 (0.25)	5525 (25.38)	21765(100.00)

3) Routine/Activity Cost

The activity cost was higher (58.01%) than the routine cost (41.99%), though the difference was not obvious. On the one hand, the current main approach of the intensified NCMS advocating during the three-month financing period was reflected from the high activity cost. However, on the other hand, the ongoing NCMS financing transition which aimed at reducing NCMS financing cost was profiled by the routine cost that was shown to be scaling down. (See Table 4-6)

Table 4-7: The overall routine cost financed from three levels based on cost classification

Cost Items	County (CNY) (%)	Township (CNY) (%)	Village (CNY) (%)	Total (CNY) (%)
Staff	633 (6.93)	842 (9.21)	3978 (43.52)	5453 (59.67)
Capital	100 (1.09)	318 (3.48)	556 (6.08)	974 (10.65)
Recurrent	170 (1.86)	1192 (13.04)	912 (9.98)	2274 (24.88)
Overheads	33 (0.36)	406 (4.44)	0 (0.00)	439 (4.80)
Total	936 (10.23)	2758 (30.18)	5446 (59.59)	9140 (100.00)

4) Components of Routine Cost

Looking into components of the overall routine cost, the staff cost ranked very outstanding from the others (59.67%), implying the high labor-resource consumption (especially at the grass-root level) of NCMS financing (see Table 4-7)

Table 4-8: The overall activity cost financed from three levels

Cost Items	County (CNY) (%)	Township (CNY) (%)	Village (CNY) (%)	Total (CNY) (%)
Promoting	465 (3.68)	0 (0.00)	0 (0.00)	465 (3.68)
Monitoring	334 (2.65)	757 (6.00)	8112 (64.25)	9203 (72.90)
Rewarding	1559 (12.35)	1068 (8.46)	33 (2.61)	2957 (23.42)
Total	2358 (18.68)	1825 (14.46)	8442 (66.87)	12625(100.00)

5) Cost for Different Activities

By comparing the overall cost of different activities, the current NCMS financing model that was still relies on the intensified advocacy efforts (especially the monitoring efforts at the village level by visiting villagers door to door (64.25%)) during the three-month financing period has been revealed. (See Table 4-8)

4.1.3 NCMS Financing Unit Cost of Haibazhuang Village

From the providers' perspective, the result of all the efforts on NCMS financing advocacy was all the recruited NCMS enrollees, together with the premiums they paid.

During the three-month NCMS financing period in 2007, there were a total of 3728 villagers of Haibazhuang Village to be recruited into NCMS. Thus, to divide the overall NCMS financing cost of Haibazhuang Village by the total number of NCMS enrollees, the NCMS financing unit cost of Haibazhuang Village was finally obtained (see Table 4-9). (To see the details in Table C of Appendix II)

Table 4-9: Unit cost financed from three levels with different payment

Cost Items	Accounting Cost			Opportunity Cost			Grand Total (CNY)
	Direct (CNY)	Indirect (CNY)	Sub-Total (CNY)	Direct (CNY)	Indirect (CNY)	Sub-Total (CNY)	
County							
Routine Activity	0.08	0.17	0.25	0.00	0.00	0.00	0.25
Activity	0.45	0.17	0.62	0.01	0.00	0.01	0.63
Sub-Total	0.53	0.34	0.87	0.01	0.00	0.01	0.88
Township							
Routine Activity	0.00	0.74	0.74	0.00	0.00	0.00	0.74
Activity	0.00	0.49	0.49	0.00	0.00	0.00	0.49
Sub-Total	0.00	1.23	1.23	0.00	0.00	0.00	1.23
Village							
Routine Activity	0.00	1.36	1.36	0.00	0.10	0.10	1.46
Activity	0.00	0.88	0.88	0.00	1.38	1.38	2.26
Sub-Total	0.00	2.24	2.24	0.00	1.48	1.48	3.73
Grand Total	0.53	3.82	4.34	0.01	1.48	1.50	5.84

4.1.3.1 Accounting/Economic/Total Unit Cost

In brief, as Table 4-9 was shown, the accounting unit cost of NCMS financing of Haibazhuang Village was 4.34 Yuan. Besides this, the economic unit cost was 1.50 Yuan. When both accounting and opportunity costs were counted, the total unit cost was 5.84 Yuan.

It meant that in Haibazhuang Village in the year 2007, in order to recruit one villager to become an NCMS enrollee and to collect his/her 10 Yuan premium, there was a total of 4.34 Yuan paid by real money in advocating him/her. However, besides this, there was some other cost existing but with nobody really paid. It was taken as the hidden resource consumption. In 2007 in Haibazhuang Village, besides the 4.34 Yuan that was paid by real money, there was a total of 1.50 Yuan unpaid but extra consumed on advocating each enrollees. Thus to look at the total resource consumption, without considering whether it was paid or unpaid, a total of 5.84 Yuan stood for the total unit cost on NCMS financing advocating in Haibazhuang Village in 2007.

Explicitly, for the total unit cost, among the three rural administrative levels, the village level took the biggest part (3.73 Yuan), while the smallest went to the county level (0.88 Yuan). Ranking as the middle, the township level responded for 1.23 Yuan.

4.1.3.2 Routine/Activity Unit Cost

Table 4-10: Routine/activity unit cost

Cost Items	Accounting Cost			Opportunity Cost			Grand Total (CNY)
	Direct (CNY)	Indirect (CNY)	Sub-Total (CNY)	Direct (CNY)	Indirect (CNY)	Sub-Total (CNY)	
Routine	0.08	2.27	2.35	0.00	0.10	0.10	2.45
Activity	0.45	1.54	1.99	0.01	1.38	1.40	3.39
Total	0.53	3.82	4.34	0.01	1.48	1.50	5.84

To look at where the NCMS financing unit cost was spent, as shown in Table 4-10, in brief, a total of 2.45 Yuan was spent in maintaining the supportive routine work that was taken in all the NCMS financing involved institutions, while a total of 3.39 Yuan was spent in conducting NCMS financing advocacy at three levels. Moreover, the major part (2.35 Yuan) of the routine cost was paid by real money, while for the activity cost, its bigger part (1.99 Yuan) was also paid, but with the other part that was unpaid (1.40 Yuan) quite competing as well.

4.2 Villagers' Non-Enrolling Behavior Responding to NCMS Financing

As stated in the first part (4.1 NCMS Financing Costs and Cost Structures) of this chapter, from the cost calculation and the cost structure analysis, it was revealed that, currently, NCMS financing in Meedu was still much relied on the intensified advocating efforts during the three-month financing period. Furthermore, explicitly, it was the monitoring efforts at village level in the way of visiting villagers door to door for NCMS advocating that made the most essential part of NCMS financing unit cost.

Besides the advocating efforts that grass-root NCMS financing personnel did, and the advocating resources that NCMS financing consumed, some non-enrolling villagers still have been identified. They were those who have never been successfully persuaded to enroll NCMS, those who have once enrolled NCMS but then dropped out, or those who have just newly enrolled NCMS but under the strong advocating by being visited for several times.

Responding to NCMS financing, the villagers usually give their answers straightforward—"to enroll" or "not to enroll". However, behind the two opposite choices, reasons that involved in their decision making on NCMS enrolling turn to be multiple.

Even the multiple reasons behind villagers' non-enrolling behavior varied from house to house, in this study, there were some addressed points to be identified as the explored reasons, which have been profiled through the selected cases, in the shared local context of Haibazhuang Village, Xinjie Township, Meedu County.

4.2.1 Local Context Briefing

4.2.1.1 Meedu County

Meedu County is a national impoverished county, belongs to Dali Prefecture and located in west of Yunnan Province, with its rural population of 297924 from a total of 320611. It administrates eight townships, five of which are

located in the plain area with their major residents as “Han” People, while the rest three belongs to the mountainous area with more minority “Yi” people resided.

Mostly relied on rural agriculture, Meedu is famous for garlic growing. Besides garlic, tobacco is another popular economic crop. Normally, villagers grow some economic crops, together with some agricultural crops such as rice, corn, and wheat. In recent years, raising poultry and growing fruit trees become the new ways to make a living, while a few villagers has started rural factories with a stronger economic background. In 2006, Meedu County reported its average rural net income as 1950 Yuan/Head—1267 Yuan above the national absolute poverty line¹. However, in 2007, the dropped price of garlic, the tobacco infection, and the pig murrain brought most villagers a big economic loss, while prices of general living products kept going up.

There are five county-level medical institutions (County Hospital, County TCM Hospital, County CDC, County MCH, and County Schistosomiasis Prevention Station) in the county town. And in recent years, the commercial pharmacies and private clinics (even hospitals) become quite prosperous. At the lower levels, each township has its own township health center, and most villages have their own village clinics.

For transportation, start from the county town, it takes more than two hours in the sunny day to travel to the farthest township in mountainous area by car, while only half an hour to get to the nearby townships. To travel to Dali City (the capital city of Dali Prefecture), it takes 2 hours by bus; while to Kunming City (the capital city of Yunnan Province), it takes 5 hours.

4.2.1.2 Xinjie Township

Among the eight townships of Meedu County, Xinjie Township is the second largest one in terms of population—the rural population is 50251 from a total

1. The national rural absolute poverty line of China is 683 Yuan/villager. It was announced in 2005 by the State Council Leading Group Office of Poverty Alleviation and Development.

of 51940. Xinjie Township administrated 10 villages, nine of which are located in plain area, while only one is in mountainous area.

In 2006, Xinjie Township achieved its average rural net income as 2631 Yuan/Head, which is much higher than the average of the whole county.

Among the eight township health centers, Xinjie Township Health Center ranks to be the most competitive one in recent years, with its annual revenue increased from 330,000 Yuan in 2003 to 1,080,000 Yuan in 2006. Except the mountainous village, every village has established their own village clinics.

From the Xinjie Township town, it takes only half an hour to get to the county town. The public bus is available nearly every ten minutes from 7 am to 7 pm.

4.2.1.3 Haibazhuang Village

In 2006, Haibazhuang Village has a rural population of 4087, with its average rural net income as 2842 Yuan/Head.

Haibazhuang Village has one village clinic with two doctors. Different from other village clinics which are open in the morning (8am-11am) and in the evening (5pm-9pm), Haibazhuang Village Clinic is open only in the morning. In terms of monthly net revenue, it always ranks to be the last one in Xinjie Township—while the top clinic achieved the monthly net revenue around 2000 Yuan, Haibazhuang Village Clinic got only 200 Yuan.

Haibazhuang Village has a good location with very convenient transportation—there is a national road passing by to connect with Kunming, Dali, and Lincang. However, due to the same convenience, in recent years, more and more villagers have left their hometown through this road to migrate to urban cities to find a job with higher income.

4.2.2 The Explored Reasons Behind Villagers' Non-Enrolling behavior

Case 1: The Poor: “We Lack of Enough Money”

Yang was a 68-year-old widower with both of his eyes blind from cataract for five years. When I met with him for the first time, he was sitting in the yard of his oldest son's house and taking off the corns. I noticed that the corns were moldy already, but he explained that they could still be used for feeding the chicken after drying in the sun. *“We got them from the whole year's hard working in the farm, how could we throw them without any hesitance?”*

Yang had three sons, two of them were responsible for supporting his living—the oldest and the youngest. However, the youngest son was under the normal intelligent level, and spoke words vaguely. Thus he was still single even that he nearly entered his fortieth. As a father, Yang worried about this son's marriage, *“He has been saving money for several years, but only got around 2000 Yuan by now. Even to request for a matchmaker, 3000-4000 Yuan is needed. Now he plans to go to the big city to earn money... But how long will it take for him to collect enough money for marrying a lady?”* Yang shared his house with his youngest son. It was a three-room old house built by clay bricks. Some holes on the wall gave light into the rooms, in the dark, a few pieces of furniture could be seen—with a pillow and a blanket, a big wood cabinet for storing rural products were used as his bed... At the same time, the family of his oldest son also led a difficult life. The granddaughter was 9 years old and attended the third year of primary school. With special care, the school didn't charge her for the school fee, but to buy the books and to pay for other fees, more than 100 Yuan was regularly paid for every semester. The 7-year old grandson had the same problem as his uncle in speaking clearly. Even to count numbers, he would count as “one, two, and four...” besides this, is his un-separated two fingers of the right hand. The family had consulted doctors about the treatment of the fingers in his early age. But it was learnt that thousands Yuan would be needed for the operation, then the treatment issue was never raised again. He attended the first year of primary school; around 350 Yuan was needed for every semester, in which the 50 Yuan “Student Insurance” was included.

It was the first time for Yang's family to enroll NCMS this year (2007). *"Thanks to the government, we were informed to enjoy the 'Subsidy for the Poor' since July of this year! So each month, I would receive 30 Yuan, my youngest son would receive 30 Yuan, and my oldest son's family would receive 100 Yuan (25 Yuan/Head) as the government subsidies."* I got the information from the leader of this sub-village that Yang's family was recruited into NCMS by his visiting for several times. Yang explained that the subsidy was actually arrived in September, when the sub-village leader came for the first time in August; Yang was together with his youngest son. His youngest son paid his premium in hesitance under the leader's advocating, but refused to pay for his father. Yang complained, *"He said that he was not generous enough to pay the 10 Yuan premium for me!"* And then for the following visits, even the sub-village leader came again and again, they still failed in preparing enough money to pay for the premiums, *"If I enroll, I should enroll together with my oldest son's family—four people plus me—50 Yuan would be asked. But for those days, the corn was not harvested yet, and the granddaughter and grandson were going to have the new semester very soon, it was very difficult for us to raise such amount of money."* Finally, at the fifth visit, they paid 50 Yuan to enroll NCMS, it is on the same day that they got the subsidy for the first round. *"The government is very kind to us already; it is what we should do to enroll NCMS. It is a good policy for villagers. As long as we have a little money in the pocket, we are willing to enroll. "*

As he was asked why NCMS was a good policy for villagers, Yang said because he knew that NCMS gave reimbursement to villagers if they used health service. But he didn't show any expectation on the potential benefit from NCMS for himself and his family in the coming enrolled year. *"To treat the old problem like my eyes (cataract) and the (un-separated) fingers of my grandson's, operations should be applied. It is never easy to take operations—at least, several thousand Yuan would be charged. How could we afford such expenditure?"* He told me that except his blind eyes, he felt himself still strong and healthy. *"If I could still see, do you believe that I could still go to farm with my toe?"* However, besides the blindness that he complained most, he also mentioned his sleeplessness since last year. *"When I lie*

down on the bed, I seldom sleep soundly. It is like you visited our village for the first time, vaguely, without knowing here and there clearly... Even a slight sound would wake me up.”

When talked about the use of the subsidy he got, he showed me the money that was put in the upper pocket of his shirt (I counted)—there was still 118 Yuan left (as the total should be 180 Yuan: 30 Yuan/months for the first half year). *“Last week, I gave 50 Yuan to my oldest son to buy some wheat seeds for his next year’s farming. He is the one who takes daily care of me. And yesterday I gave 12 Yuan to my youngest son to buy some pork of the pig’s head, which I have been expected to eat for a long time. I think it is more enjoyable to eat the food that I want with my family together. I am blind already, cannot know how many years will be ahead for me to live...”*

I learnt earlier from the Village Committee that the government subsidy was taken in one-year round, and normally one family could not enjoy the subsidy continuously—there are other poor families in the same village, waiting for their turns to receive the government financial support as well. Yang told me that he would keep on enrolling NCMS next year even without the government subsidy. But he was not sure whether they would be able to raise enough money for the premiums or not. Being asked about the possible ways of dealing with disease without enrolling NCMS, he didn’t answer directly, *“To be such a poor family like us, we can only plan for the nearest difficulties. Passes one day, there comes another day. I cannot foresee what will happen and what should I do. When difficulties come, we would always have our ways to try.”* Though Yang expressed his wishes as the government subsidy to be maintained for his family in the next year, he was aware that it was possible and reasonable to shift this benefit to another family. *“The given benefit is like the sunshine, it is warm, but we should not be too greedy to expect the sunshine to shed us only. All the corners should be concerned to enjoy the warmth.”*

Analysis:

Case 1 showed a poor rural family that was living in great difficulties and reluctant to enroll NCMS until they got the government subsidy this year. For this family, even the basic daily consumption was not fulfilled. As there were other competing consumptions such as maintaining the farm, supporting the kids, and preparing for the marriage to be ranked superior, health issues were less concerned. In front of the expensive health service, even with knowing that those suffering health problems of the family members could be treated, they chose to let them remain. Finally, this year, they enrolled NCMS, but with the main reason as showing their support to the government advocacy on NCMS financing considering the given “Subsidy for the Poor”. And due to the poverty, actually, the expectation of this family on pursuing potential benefit from NCMS reimbursement was already banished by their limited affordability in utilizing health care.

Case 2: The Healthy: “We Seldom Get Sick”

Yuan was a tall 26 years old man that was newly-married two years ago. He and his wife made a living mainly by farming and raising cattle. And during the busiest time of harvest, after they finished work of their own farm, they also worked for other villagers whose family lacked of enough labor. It was in his neighbor’s farm where I first met him. That day, he was working for them on a 25-Yuan payment plus three free meals.

On the official document of rural household, Yuan was recorded in a new established family with his wife as the only family members. However, in reality, he and his wife was living in a bigger family, together with Yuan’s father and mother, and a 20-year old younger brother, who were officially recorded as members of another household.

About the separateness on official records, Yuan said it was quite normal in Meedu, that as the children grew up and established their own family, they were supposed to separate from the parents and stand on themselves. For those who were married for a long time but still shared the same “household” with their parents, would be ashamed for keeping the burden to the old in even supporting their new

family. *“Of course, I am not that kind of lazy man who is less-abled. I have supported my parents since I finished middle school.”*

Yuan seemed to be content with his ordinary life. *“Though we are not the rich family in our village, we never worried on living. By farming and raising the three cattle, we live well enough. Working for my neighbor is not for the money, I just feel myself dislike spending the days without doing anything. It is not bad to be more diligent when you are strong and young.”*

Actually, before getting married, Yuan once left home for working in Jinhong City for three month (in south of Yunnan Province, 10 hours' traveling from Meedu by bus), but it turned to be a failed trying. *“I was working as the road-construction labor there. Finally I realized that the boss didn't want to pay money. Then I quitted and worked for blasting stones from the mountain nearby, as soon as I earned enough money to buy the bus-ticket, I came back home...”* It was that experience that confirmed Yuan's idea of leading a simple rural life rather than going out for urban jobs. *“I am a quiet person, dislike drinking, smoking, or gambling. The city is not a good place for me—it is too noisy. Even when the neighbor visits us too often and speaks too much, I feel being disturbed. I like going to sleep early and rising up early, from which I could keep energetic for a good day of working.”*

Yuan reported himself to be very healthy. He said that he even couldn't remember any experience of going to the hospital, for both him and his brother. *“If you ask me to which direction that the gate of the hospital faces, I couldn't answer...Even in winter, when other people go out with a thick sweater, I feel a shirt is enough for me. The neighbor always says to my mother, ‘oh, you are really lucky to have two healthy boys’, since she had a son with some mental problem for many years.”* The latest sickness he mentioned was catching a fever in four or three years ago. *“For that time, I got a high fever, my mother said that was called ‘Shang Han Bing’ (typhoid), which could be effectively treated by herbal medicine in old times, but nowadays most young doctors lost the good understanding in herbal medicine. The next day, I went to the village clinic, the doctor told me that I got the*

fever because I was bitten by “Liang Chong’ (a small local insect in Meedu that could cause infection by biting people).” After two days’ infusion, he recovered on the third morning. “It cost only 50 Yuan for that treatment, 30 Yuan for the first day, and 20 Yuan for the second day.”

Yuan said that his wife was also a healthy lady. Thus only a few kinds of general medicine in the family were enough for them. Later he mentioned that his mother looked forward to having a grandson very much, but her wife was not pregnant yet, his mother seemed to be worried a little. *“Nearly every time that she came back from ‘Zi Sun Miao’ (‘the Generation Temple’, it was a small rural temple located in the nearby sub-village, especially for blessing of the good new generations), she would tell me that she made a wish for us there.”*

Yuan and his wife had never enrolled NCMS, while his parents started enrolling since last year. *“For myself, it is not necessary to buy any ‘insurance’ at all—I never travel far away, have no bad habit, strong, and young. But for my parents, they were persuaded by the sub-villager leader. He said ‘you are entering an older age already; it is good to have NCMS as a back-up’. However, you see, one year passed, and they just got a little reimbursement from taking the medicine from the village clinic. This year they enrolled again. It is ok, as long as they feel willing...”* When talked about his wife’s reproduction, he told me actually they were trying to have a baby. Then he said he heard from the neighbor that NCMS provided subsidy for hospital delivery, and asked me whether it was true or not. I confirmed him with the detail regulations—for natural delivery, the reimbursement was 300 Yuan (in township health center) or 400 Yuan (in county hospital) per case; for Caesarean Section, it was taken as same as other In-Patient service—reimbursed for 45% (in county hospital) or 55% (in township health center) of the total after the deductible of 50 Yuan (in township health center) or 200 Yuan (in county hospital) was cut. After listening this, he smiled with a little shyness, *“In that case, if my wife gets pregnant, maybe we can enroll NCMS for the next year.”* However, when asked about NCMS enrollment in a longer term, he replied, *“if we keep healthy the same, I*

don't see the reason to keep enrolling, my wife said she expected only one child if it is a boy..."

Analysis:

In Case 2, it showed a newly-established family with only two members who were quite young. They didn't report any financial difficulties, but refused to enroll NCMS due to the confident self-perception on good health. While the parents started enrolling NCMS by being persuaded to back-up for the old age, the young son and his wife still hold the opinion as health insurance was not necessary. Only when there was a light shed on the possible benefit of reimbursement for the expected pregnancy and planned delivery of his wife, he revealed a potential will on NCMS enrolling, temporarily.

Case 3: The Migrant: "We Are Away from Home"

Li was a 25 years old lady. She went to Kunming in 2002 and worked there for a private wood company. Her family had never enrolled NCMS.

For the first time I visited, Li was not at home. Her mother was cleaning the house, *"Yesterday, she told us that she would come back the day after tomorrow, for a five-day holiday of the Mid-Autumn Day (the traditional Chinese Festival in middle lunar August that all the family members are gathered for celebrating the autumn harvest). We haven't prepared it yet, since normally she only came back for Spring Festival. Today I cleaned her room, and asked her father to go to the county town to buy some moon-cake and 'Xiang Sun' (Sweet and Fragrant) Pear (one local species of pears in Meedu that was very famous), which is our daughter's favorite!"*

She led me into the house. This family seemed to be a richer one in this village—besides the big-sized television and the fashioned leather sofa, there was a new motorbike parked aside the wall. The mother talked very proud of her daughter, *"We have Li as the only daughter, but she has made us live even better than those with two sons!"*

On the second evening after Mid-Autumn Day, I visited them again and met with Li. She was a pretty lady with a little makeup; some of her spoken words with a slight Kunming accent were captured during talking. She told me that it was her second job to work for the wood company. *“My first job was selling clothes in a private shop. That lady treated me not well. She often blamed me about the low revenue, and suspected that I kept some money of selling for myself... It was lucky for me to find the current job. The boss hires 9 staff for his business; all including me are young people from different areas of Yunnan.”* She reported her monthly salary as 2000-3000 Yuan, with irregular profit according to the gained business order. Besides the personal consumption such as eating and clothing, she tried to save money. *“Every month, I send 400 Yuan back to my parents, and put 500 Yuan into the bank account. My parents rely on me, and I should plan for myself.”* As asked what she planned for, she told me that she planned for living in Kunming in the future. *“I like Kunming. I have a few female friends who also worked there and got married already. My boss always praised me that Meedu girls were beautiful, smart, and working hard. I think I won’t be worse than those of my friends.”* She showed me a picture in her cell-phone, I saw a young man that was around 30. *“He is my boyfriend, a local Kunming boy. If I get married with him in the future, I would like to bring my parents to live with us as well.”*

When talked about the sick time and health care in Kunming, she said she never see doctor in the big hospital (government hospital) there. *“Once I accompanied my friend who had gynecological problem to go to the provincial hospital. We queued for the whole morning, and saw the doctor’s unfriendly face. My friend paid a bill that was around 500 Yuan, which I thought might be much cheaper if she had chosen a small clinic.”* When Li got sick, she just went to the drugstore to buy some medicine for herself. *“No big problems for me. I just occasionally have stomachache. I heard from the TV advertisement that ‘Jiang Zhong Jian Wei Xiao Shi Pian’ (one medicine for promoting stomach-digest) was good, then I tried. It works very well on me.”* For the problems that she could not handle herself, she went to the private clinic near her dorm. *“Last winter, I got flu for three days, the fever still remained even I took pills. Then my dorm-mate brought me to see the private doctor.*

She was a retired doctor from the big hospital. After having infusion there, my fever was gone in the next day. Except the lower price that they charged, I didn't feel anything of that clinic different from the big hospital."

Li told me that she heard NCMS was not beneficial for those who were working out of Meedu, and that is the main reason she chose not to enroll. I corrected her words that there was reimbursement for utilizing health care of the government hospitals outside Meedu actually. Then she replied, *"Yes, I know this. But they only reimburse a little."* She told me a story of one couple in this village who also worked in Kunming. Their little son dropped from the upper bed and hurt his head. He was treated in the big hospital, and got a bill that was over 4000 Yuan. But when they came back with all the documents required, they got only 135 Yuan as reimbursement. The township NCMS staff explained that some items in the bill such as the "bed fee" were excluded from calculation, since the case was taken in Kunming, not in Meedu. Besides this, she said it was a pity that for the drugstore and private clinic, which she visited most often, had no reimbursement at all.

When asked about the enrollment of her parents, she said that they looked still healthy, *"If only to buy some general medicine from the drugstore, the money I send to them is quite enough."* Added with her future plan of living in Kunming, she felt even a less sense on NCMS enrolling.

In the next morning, she left home. But this time, she didn't leave alone. She brought the daughter of her uncle to go together. That was a younger lady only 20 years old, who decided to leave home for exploring another new life in the city.

Analysis:

Through Case 3, a migrant lady chose not to enroll NCMS mainly due to the limitation of NCMS reimbursement on health care utilizing outside of the county. For most migrant villagers, according to their general income, the expensive health care provided by the government hospitals usually failed to be considered, but beyond which the NCMS reimbursement was not given. While villagers preferred to choose self-treatment or treatment in private clinics, the

documented NCMS benefit for the migrant turned to be vain. As more and more villagers trend to leave home for working outside, to maintain NCMS enrollment of migrant villagers turned to be even more challenging.

Case 4: The Disappointed: “Are We Really Benefited?”

Wen and her husband was a middle-aged couple. They had a daughter who was studying in university in Kunming, and a son who was attending the last year of high-school in the county town.

It was a rainy evening that I visited them. The husband and wife were taking off the corn in the sitting room. The room looked big, with a few pieces of furniture at the front side—a cabinet for the television, a table in the middle, and some small chairs around; at the back side, there piled the newly-harvested corn, rich and yellow. Mostly, it was Wen that replied my question actively, with her emotional voice up and down, while the husband just listened quietly and kept taking off the corn.

They had enrolled NCMS since the first year (2002), but this year (2007) they dropped out. “We decided already, it is not interested for us to enroll NCMS any more.”

In the busiest May, when the corn was seeded, Wen got acute appendicitis. She was sent to the County Hospital, and checked in after their NCMS certificate was showed. The doctor suggested the immediate operation. They accepted. The operation turned to be smooth. 8 days after operation, Wen checked out. They got a bill of 2187 Yuan with 1532 Yuan paid, since a reimbursement of 655 Yuan was received. Later in June, another lady in the same village got appendicitis as well, she was sent to Xinjie Township Health Center. She also took operation and recovered soon. However, when this lady checked out, she paid a bill that was only around 1500 Yuan. She was from a family that never enrolled NCMS. “*When we heard this, we felt that we were cheated. Yes, from the bill, we seemed to be reimbursed for 600 Yuan. However, what we paid actually was more than those who didn't enroll!*” While the detail variation between individuals biologically was

neglected, Wen emphasized the charging difference coming from NCMS enrollment. *“Nowadays, when you entered the diagnosing room, the first question that doctors ask is ‘are you a NCMS enrollee?’”*

To point that the different charging standard was not the only problem, Wen continued her complain with the example of medicine. *“Last week I got a fever. I went to the village clinic to see doctor. He prescribed one box of Amoxicillin Tablets to me, it was 11 Yuan, I got 3.3 Yuan (30%) as reimbursement and paid 7.7 Yuan. When the tablets of that box finished, I went to the Central Drug Store in the county town with the cover, and bought a new one at the price of only 6.8 Yuan!”* (she took two covers of Amoxicillin Tablets from the cabinet and showed me) *“You see? Exactly the same! The same factory, the same number of tablets, and the same content by volume!”*

Besides those bad cases, she said that she did know that there were other cases with real NCMS benefit. However, they belonged to the villagers who had a network in hospitals. *“If you know someone in the hospital, especially the ‘important’ (powerful) one, you can get more reimbursement and pay less. In that case, the doctor will not prescribe too much expensive medicine for you. They know how to choose the cheap one that is good enough. But for us, we know nobody in the hospital. Thus we were treated as most of others.”*

I asked Wen if NCMS reimbursement regulations would be modified in the future, would there be any revised items to attract her to re-enroll again. However, she replied in a negative way, *“actually, NCMS is good, and NCMS regulations are good too. But the local (clinic) practices make it distorted. ‘Wai Zui He Shang Nian Pian Jing’ (the monk who has a skew month would read the good chant as a bad one). NCMS is the good chant, but when it is applied in Meedu, it was ‘read’ by the ‘skew-mouthed monk’! So no matter how the regulations are going to be modified, those hospitals still have the way to keep their own profit. For villagers like us, we just act as the one in the middle of the process to be cheated. It is the same like the national policy of the free-taxation of rural production, it is good for villagers in reducing financial burden, but then, the price of the fertilizer has been increased...”*

Analysis:

Case 4 revealed the negative behavior of health care providers in the current complex health system that discouraged villagers' NCMS enrollment greatly. When the final payments of health service were compared by villagers, the real benefit from NCMS was doubted. The unequal ways of prescribing, the higher-priced medicine, and the special care that only went to the acquaintance brought the villagers who had good expectation on NCMS the unexpected disappointment.

Case 5: The Misunderstood: "Once Bitten, Twice Shy"

Zhang and his wife were both around 50 years old. Their son and daughter in law went to Zhejiang Province (a more economic-developed province in eastern China) three years ago for earning a living, leaving their little boy to the old parents at home. Under the delicate care from the grandparents, the boy grew up well. This year he was five, looked tall and lovely.

In 2004 (the second year of NCMS piloting in Meedu), this family once enrolled NCMS, but then dropped out in 2005. This year (2007), it was the second time for them to enroll NCMS again. They said that they would try to trust NCMS once again.

In 2004, compared with the first year of NCMS piloting, there were more villagers enrolled NCMS under the stronger NCMS advocacy. After being advocated by the sub-village leader, Zhang and his wife decided to enroll NCMS as well. *"The sub-villager leader told us that "NCMS is good. If you get sick and go to see doctor, just show the certificate, you will get some reimbursement back."*

However, such words were not realized in their grandson's case. One night in 2005, their grandson suddenly got vomit, diarrhea, and fever. Zhang took him to the village doctor. The doctor suggested them to call ambulance of Xinjie Township Health Center, "remember to take the NCMS certificate with you, so you can ask for reimbursement." Then the boy was send to Xinjie Township Health Center

and had one-night infusion there. In the next early morning, Zhang went back home to fetch the NCMS certificate, which they failed to take with in a big hurry the night before. *“I returned back with our certificate even before they (the Township NCMS Office staff) started working (at 8am). But we were just told that we couldn’t be reimbursed, because the infusion of our grandson was only 70 Yuan, and it was taken in Out-Patient Sector—since NCMS only reimbursed the In-Patient health care. Furthermore, they said that the reimbursed bill should be more than several hundred Yuan (it was 150 Yuan in regulation).”* Failed in getting the reimbursement, Zhang took his grandson back home in a great disappointment, without any further consulting or arguing on NCMS reimbursement regulations. (Actually, if they consulted, maybe they could have known that for this Out-Patient infusion of their grandson, reimbursement still could be asked if they insisted—the 45 Yuan in their “Family Account” could be given as reimbursement, which was usually used for taking prescribed medicine by most villagers.) *“Since that day on, we never expected anything from NCMS, and never tried it again. The certificate was put in the bottom of the cabinet. Even later, we were told that there were 45 Yuan in our “Family Account” still could be use, we just let it be...”*

Without utilizing health care from NCMS, Zhang and his wife mainly relied on self-treatment. *“Normally, we are healthy and don’t have any big problem. 30—50 Yuan would be enough for buying medicine from the drugstores.”* Zhang exemplified the names of some general medicine and explained their applying symptoms, from which a basic understanding on medicine of this family was confirmed. For problems that were more serious, especially for their grandson, they usually went to the hospitals in the county town, while Xinjie Township Health Center and Haibazhuang Village Clinic were never visited again. *“County hospitals are better equipped, in which the blood test could be requested. If our grandson got sick and didn’t turn better after seeing doctor for more than two times, it would be better to test his blood. The test could show clearly what the exact problem was, and then the doctor could prescribe the effective drugs.”*

For the NCMS re-enrolling, Zhang said it was because the newly-modified NCMS reimbursement regulations sounded more “realistic” this year (2007). *“No matter how much your bill (for the Out-Patient Services) is, you could get some reimbursement back, more or less. If your bill is 10 Yuan, you only need to pay 7 Yuan, with 3 Yuan reimbursed (30%)...The real benefit from the government of the socialist society should be realistic like this. It should not be the oral promise without giving real reimbursement only. Like in the past, when reimbursement only gave to those who had a bill of hundreds or thousands Yuan, it couldn’t be counted as ‘realistic’. Who wants to get a several-hundred bill when he gets sick?”*

When talking about the current understanding on the modified NCMS reimbursement regulations in details, Zhang still seemed to be not clear. *“This year, the sub-village leader visited us for four times, but he didn’t mention much about the details to us.”* Zhang asked me to explain a little for him. I took out one NCMS handout that I got from County NCMS Office and read the key points out. He looked very interested in this handout, and requested for keeping it. *“With this one, it would be much clearer. We just read, and then would understand what is what.”* (I suddenly remembered that two days before, I saw some handouts still piling in Xinjie Township NCMS Office. According to the quantity (around 2000 pages), they were prepared for two or three villages.) Actually, these handouts were supposed to be distributed to every rural household during NCMS financing advocacy. But in practice, they might be kept in somewhere else, without being read by anybody.

Analysis:

In Case 5, one family once dropped out from NCMS due to their misunderstanding. Besides the typical advocating words such as “NCMS is good”, there might be many details of the NCMS reimbursement regulations missed during NCMS financing advocating in a hurry—Out-Patient and In-Patient Service, the deductible line and the ceiling, the included and excluded items, the government hospitals and private clinics... Meanwhile, not all the IEC materials that developed for clarifying villagers’ misunderstanding/unclearness on NCMS were effectively distributed. Thus without knowing the detailed regulations well, in case that the

expected reimbursement was not given to villagers, some of them might neither understand the reasonable rejection, nor argue for their legitimate benefit, they might just lose their trust on NCMS, and choose a negative way—stop enrolling—to respond the on-going NCMS advocacy.



To summarize this chapter, based on answering the specific research objectives, the reported results were drawn from both the provider's perspective and the consumer's point of view.

From the provider's perspective, the first part of this chapter reported the calculated NCMS financing cost and the analyzed cost structures of Meedu County in the year of 2007:

1) The original cost of NCMS financing at county, township, and village levels were 240,086 Yuan, 56,352 Yuan, and 13,888 Yuan;

2) To allocate the original costs of the three rural administrative levels to Haibazhuang Village, the overall cost of NCMS financing was a total of 21,765 Yuan, with its biggest part as the staff routine cost and the monitoring activity cost from the village level;

3) The total NCMS financing unit cost of Haibazhuang Village was 5.84 Yuan, meaning that in order to collect every 10 Yuan premium from the enrolled villagers, there was 4.34 Yuan paid by real money, and 1.50 Yuan consumed without real money payment to be spent on advocating them.

Then, from the consumer's point of view, the second part of this chapter reported the explored reasons behind villagers' non-enrolling behavior responding to NCMS financing, illustrating through five selected cases:

1) Lacking of money, without the government financial support, the 10 Yuan premiums remained unaffordable to some poorest villagers. Moreover, due to the poverty that prevented them from utilizing health services, even with NCMS enrollment, the benefit of NCMS was still out of their reach.

2) With the confident self-perception of having a good health, some healthy villagers hesitated to enroll NCMS. They predicted themselves rarely to get sick to utilize the hospital health services, thus to have little possibility in receiving the benefit from NCMS.

3) Being away from home, some migrant villagers felt themselves being away from the benefit of the hometown NCMS as well. They chose not to enroll NCMS mainly because of the documented benefit of NCMS that was constrained within the government hospitals only, which, actually were less concerned when they getting sick in urban cities.

4) In order to pursue the higher profit, some negative behavior of the NCMS authorized health service providers made the expected villager very disappointed about the real benefit they got from NCMS. It resulted the disappointed villagers' decision of not keeping enrolling NCMS.

5) Without a good understanding of the detailed NCMS regulations and lack of further consultation, some villagers who had a good expectation on NCMS lost their trust and stopped enrolling NCMS in case that they met the unexpected rejection to their requested reimbursement, even the rejection might be reasonable.

CHAPTER 5

DISCUSSION

5.1 NCMS Financing Unit Cost: Too High to Accept?

5.1.1 The Total Unit Cost

In this study, the calculated NCMS financing total unit cost of Haibazhuang Village was 5.84 Yuan. It meant that in Haibazhuang Village in the year 2007, in order to recruit one villager to become an NCMS enrollee and to collect his/her 10 Yuan premium, there was a total of 5.84 Yuan spent as the total resources consumed in advocating him/her¹. If look at this number, the NCMS financing cost was high²—more than half of the unit premium that was collected.

5.1.2 Routine Cost as the Sunk Cost

However, to look at the different dimensions of the unit cost, there was an essential part taken as the routine cost (2.45 Yuan), which should be categorized as the sunk cost. The routine cost came from the supportive office work of all the NCMS financing involved institutions at three levels. It was the allocated cost to NCMS financing from the total costs of staff payment, capital depreciation, recurrent expenditure, and overheads sharing of these institutions. Such resource consumption truly existed, and it did related to NCMS financing in this study, but it would not be significantly reduced by any future decision on NCMS financing. No matter being involved into NCMS financing or not, those institutions are running there, maintaining their routine in the same way—the staff should be paid by month, the

1. It is clarified again here that the “NCMS financing unit cost” is unrelated to the “NCMS financing premium” that goes to the NCMS fund. Since there is a clear separation between NCMS fund and NCMS management expenditure, the full 10 Yuan premium will be put into NCMS fund together with the government subsidy, while all the “NCMS financing unit cost” is supposed to be financed separately from the government.

2. Lacking of relevant existing standard, 5.84 Yuan is “high” is only the subjective judgment of the researcher, based on comparison with the 10 Yuan premium. However, if possible, further technique clarifications on the criteria of “high” or “low” would be very helpful to make the objective claim.

capital settings have been purchased already, the recurrent expenditure is consumed as usual, and the overheads is shared like before. Thus, the routine support to the NCMS financing work in such a context actually didn't bring the significant extra expenditures to those involved institutions to call for an additional budget.

5.1.3 The Unit Activity Cost

To exclude the routine cost as the sunk cost, and to focus on the extra resources consumed in NCMS financing, the activity unit cost, perhaps, makes more sense in reflecting the controllable resource consumption, from which important suggestions for future decision making would be derived.

For the 3.39 Yuan activity unit cost, 1.99 Yuan was paid by real money, while 1.40 Yuan was unpaid and mostly absorbed as labor-resource consumption of the grass-root NCMS financing personnel. In this sense, what was really paid for NCMS financing advocacy (the 1.99 Yuan accounting activity cost) and what was achieved (the 10 Yuan premium) were reasonable¹. Moreover, even with the current economic labor-resource consumption being compensated by real money in the future, to spend the 3.39 Yuan activity cost in order to get the 10 Yuan premium, it is still acceptable².

5.1.4 The Long-Term Benefit

Furthermore, there is a long-term benefit of the current NCMS financing advocacy connecting with the villagers' health, their livelihood resistance, and the poverty alleviation. Such benefit goes beyond the monetary measurement, and it should not be missed from concern. Through NCMS financing advocating, the health enhancement of the recruited enrollees by utilizing health care within NCMS system, the established awareness of villagers on enrolling social health insurance for risks

1. Lacking of relevant existing standard, 1.99 Yuan is "reasonable" is only the subjective judgment of the researcher, based on comparison with the 10 Yuan premium. However, if possible, further technique clarifications on the criteria of "reasonable" or "unreasonable" would be very helpful to make the objective claim.

2. Lacking of relevant existing standard, 3.39 Yuan is "acceptable" is only the subjective judgment of the researcher, based on comparison with the 10 Yuan premium. However, if possible, further technique clarifications on the criteria of "acceptable" or "unacceptable" would be very helpful to make the objective claim.

sharing, and the reduced vulnerability to poverty of rural households that is caused by catastrophic diseases would argue for a great value of the NCMS financing cost that was spent.

5.2 NCMS Financing Cost Structures: Are the Resources Allocated Appropriately?

By analyzing the cost structures, there are some lessons learnt from the current resource allocation on NCMS financing, where the future improvement is expected to be made.

5.2.1 The Insufficient Budget Specific for NCMS Financing

In this study, only a small proportion of the accounting NCMS financing cost was funded from the County NCMS Office by the specific NCMS financing budget. The rest was either financed from other involved institutions by their own budget that was not related to NCMS, or was absorbed as unpaid opportunity cost.

Without the sufficient specific budget, currently, the implementing of NCMS financing is much relied on the financial support from the other involved institutions. Though most of those involved institutions show their understanding of the essence of NCMS financing and provide a good collaboration, some others are not enthusiastic in being involved in. Thus, depending on the varied enthusiasm of the involved institutions, the smooth implementing of the yearly NCMS financing with a regular scale is not assured.

5.2.2 The Converted Cost Absorption and Local Financial Power

From the overall NCMS financing cost structure of Haibazhuang Village of Meedu County, it was quite explicit that the lower levels absorbed the more NCMS financing cost, either in terms of accounting/opportunity cost or routine/activity cost.

Meedu County is a national impoverished county, with the majority of its local government finance funded by the transfer payments from the upper governments. Although the financial power of both the county government¹ and the township government² are very limited, the county government, which is upper than the township government, is still of a relatively greater power. Furthermore, the finance of the village committees is funded from the township government, which results an even more limited financial power of the village committee below the township government. At the village level, except the staff cost that is funded from the township level, other basic maintenance of the village committee is mainly supported by other funds raised within the village locally³.

Meanwhile, as a government hospital, the township health center⁴ receives the annual government budget as well, but such budget is not enough even for paying the staff and the basic maintenance. Since the national health system reform started, the township health center has been required to earn enough profits for supplementing its own total expenditures. Moreover, besides a modest government financial support, the village clinics that are administrated by township health center are also mainly relied on the funds from the earned profits of the township health center. However, being at the lower rural administrative level, the profits that the township health center earned are usually not ample enough to allow too much extra expenditures.

In the current NCMS financing, even with the financial power more limited, the village committee, the township health center, and the township government absorbed more cost (especial the activity cost) than the county-leveled institutions. Such financial burden for the local institutions should be noted.

1. Among the NCMS financing involved institutions, a) the County NCMS Office, b) the County Health Bureau, c) the County Government are fully supported by the given funds from the county government,

2. Among the NCMS financing involved institutions, the Township Government is fully supported by the given funds from the township government, while the Village Committee is partially supported.

3. Normally, the local funds raised within the village come from the profits of the village collective business, and the savings from the given budget (from the upper governments) of implementing programs on rural improvement.

4. Among the NCMS financing involved institutions, the Township Health Center and the Village Clinic are mainly relied on the earned profits of the township health center from providing health services, while the modest funds are given from the county government for a partial support as well.

5.2.3 NCMS Financing Transition and Retreat of the Government

The ongoing NCMS financing transition has showed a way to reduce the NCMS financing cost effectively, by cutting part of its previous routine cost. In 2007, it was the first time for the County Government of Meedu retreated from being involved into NCMS financing. And it did result an obvious scaling-down routine cost at the county level. However, the Township Government still held its leading role in NCMS financing in Xinjie Township. It was said that it was not the time for the township government to retreat yet.

As Xinjie Township Government concerned, the government administrative sectors' retreat from NCMS financing should not be blind in a hurry, and it should not be the simply retreat of the financial support. According to the local situation of NCMS financing, a careful consideration about the capability (both financial power and implementing ability) of the remained institutions in taking the role to achieve the expected NCMS financing target is seriously required.

5.2.4 Potential Economic Savings from the Recurrent Cost

The routine cost of NCMS financing was categorized as the sunk cost, which would not be influenced significantly by any new decisions on NCMS financing, but it was the researcher's observation in this study that a great potential of making economic savings from the recurrent cost would still be possible.

From the overall cost structure of routine cost, following the "staff cost" that ranked highest, was the "recurrent cost". For most of the NCMS financing involved institutions in Meedu, it was the cost of "coordinating activities and guest arrangement" that took the most notable part from the "recurrent cost". Such "activities" and "arrangement" were mainly in the form of having meals and giving presents. Under the macro-background of the Chinese culture and the local cultural context of Meedu, it was understandable that "coordinating activities and visitor arrangement" was necessary for those institutions, and it did help for some important communication and negotiation, especially when the tough tasks like NCMS financing were loaded. However, some institutions might rely too much on

communication and negotiation in this way, and made their recurrent expenditure over-spent.

If economic savings could be made by limiting the over-spent expenditures on “coordinating activities and guest arrangement”, not only the routine cost of NCMS financing would be reduced, but also would help those institutions make progress for a higher efficiency of their internal resources allocation.

5.2.5 NCMS Financing Activities

In this study, the NCMS financing activities were grouped into: promoting activity, monitoring activity, and rewarding activity.

5.2.5.1 Promoting

The promoting activity was taken only at the county level, with its cost spent on promoting towards NCMS financing personnel much more than on promoting towards villagers directly.

It was learnt from interviewing the County NCMS Office Chief that the promoting activity had been scaling-down, concerning that more and more villagers had been already familiar with NCMS along its piloting years. But it was the researcher’s observation that only a small proportion of the villagers had successfully obtained a clear understanding of NCMS, while the others just knew roughly that “NCMS is good” or “NCMS reimburses enrollees”. Especially for the details of the reimbursement regulations that were highly complicated, most villagers would need an extra explanation at the time they were asking for reimbursement.

Actually, after knowing the basic information, most villagers showed a need in acquiring furthering understanding of NCMS. But the current promoting that directly towards villagers (one street advertising board in the county town, one week TV broadcasting of NCMS Financing Announcement, several times reports about NCMS in the local TV news, and 50,000 IEC handouts of NCMS regulations explanation) might be far from enough. Together with the problems of the ineffective delivery, the achievement of NCMS promoting was greatly depressed.

5.2.5.2 Monitoring

The notable opportunity cost of monitoring activity at village level was one big feature of the current NCMS financing.

In the current stage, under the government's strong political commitment, the grass-root NCMS financing personnel has been working hard without asking for a sufficient payment. However, as the NCMS financing transition goes on, the retreat of the government administrative sectors might discourage motivations of those people. Thus to keep the grass-root personnel working for NCMS financing with an unfading enthusiasm in a long-term run, a subsidy as the corresponding labor compensation may become a necessary.

One of the new trying in Meedu since 2006 is to involve village doctors into NCMS financing. From interviewing, it was learnt that some villages achieved a very good NCMS financing mainly relied on the village doctors' advocacy. Compared with the village committee staff, normally, village doctors are more familiar with the detailed NCMS regulations thus are capable to provide a deeper consultation. Moreover, working closely to villagers for their daily health, most village doctors have gained a good relationship with villagers, as well as their trust. The village doctor's advantage in NCMS financing has been identified from the village working teams. Furthermore, another good trying that has been applied in Meedu is to request village doctors to conduct NCMS financing advocacy during their daily health care provision all-year round. Thus, if the villagers agree to enroll NCMS after being advocated, their premiums would be collected immediately. In Meedu, this new application is thought to be a good direction for NCMS financing transition to move toward, since from this strategy, the replacement of the door-to-door advocacy is viewed to be a possibility.

5.2.5.3 Rewarding

Together with the retreat of the County Government, the increasing "rewarding cost" has emerged as another important feature of NCMS financing in Meedu in 2007. And it showed a trend to be even higher in the future. As the expected

NCMS financing achievement has been set higher and higher (more and more difficult to reach), in order to encourage the lower-levered NCMS financing personnel to try harder, a proper “rewarding” could be considered as a good way to push NCMS financing moving forward, either as the economic motivation approach or the corresponding grass-root compensation.

5.3 On the Way to Alleviate Reasons Resulted Villagers’ Non-Enrolling Behavior

Behind the calculated cost numbers, varied reasons of villagers’ non-enrolling behavior towards NCMS financing were given. Such reasons covered an extremely broad boundary, in which many complex issues are involved. To alleviate villagers’ refusal on NCMS enrolling starting from addressing those issues, it is far than enough to rely on efforts of NCMS financing advocacy only.

5.3.1 Existing Problems of the Current NCMS Financing Advocacy

Since 2003, the five years’ NCMS piloting in Meedu and its yearly financing had made most villagers heard of “NCMS” already. But behind the repeated slogan such as “NCMS is good for villagers” and “NCMS gives enrollees reimbursement for health care”, most villagers lacked of important information about NCMS regulations in detail further. The shallow understanding on NCMS not only resulted the villagers’ low efficiency of utilizing rural health care (either lack of utilization or over-utilization), but also brought some hidden problems such as villagers’ misunderstanding about NCMS regulations and their lack of trust on NCMS, which might lead some of them to drop out.

Thus, as the first advocacy stage of telling villagers there exists the NCMS especially for them moves to the end, the following advocacy stage would be expected to aim at informing villagers how to make a proper use of NCMS after enrolling.

To make sure of an effective information delivery during NCMS financing advocacy is also very important. Currently, the designed NCMS financing advocacy activities had their value partially lost during the ineffective information delivery. The advertising board was posited aside the street with less passers-by; the 3-minute TV announcement on NCMS financing had been broadcasted for only 7 days (twice per day); some of the printed NCMS handouts were kept somewhere without being distributed... Meanwhile, during the door-to-door advocacy, most of the villages advocating teams were too hurry to give villagers enough details about NCMS regulations. Some advocating personnel even exaggerated the benefit of NCMS in order to persuade for villagers' enrolling.

It was another problem that the villagers' need on NCMS financing advocacy was not clear to the NCMS financing advocacy personnel yet. What the villagers mostly wanted to know, what they had not known yet, and what they had misunderstood may quite essential for developing the future NCMS financing advocacy to be more effective.

5.3.2 Challenges Extended to the NCMS System

In this study, some of the identified refusal of villagers was derived from the NCMS system. Such refusal is very likely to be lasting along the way of NCMS developing. As a young social health insurance scheme, there is a long way ahead for NCMS to develop and reach its maturity. Thus it would be impossible to alleviate the entire refusal from villagers by NCMS advocating in a short term.

Some of the NCMS regulations such as "free enrollment", "no deductible line", and "extra reimbursement" were designed especially for aiding the poor. However, in terms of providing the effective aid, such regulations were still of great limitation. The poorest villagers might enroll NCMS without any benefit returned, since even the reimbursed health services are out of their affordability. However, the poorer/poorest villagers are not the majority of NCMS targeted groups, and it is impossible for NCMS to address all the financial difficulties of them. To establish a good collaboration with the stronger social welfare funds from both government

organizations and non-government organizations, NCMS might be more helpful to the poorer/poorest in the future. In that way, not only the poor/poorest villagers would be able to enroll NCMS, but be able to utilize the necessary health services as well.

Along the development of NCMS, the rural health system has been developed as well. The government health institutions at three rural administrative levels are greatly benefited from NCMS indirectly. However, to pursue a higher profit, those health care providers keep trying to find ways to maximize their own benefit from NCMS funds, no matter such ways would harm villagers' benefit, or even hurt the whole NCMS system or not. It is part of the responsibility of the NCMS management system to monitor and supervise for a good order within NCMS system at both sides of health care providers and customers. However, without the forceful regulations from the state level to manage the entire health care system, it is very limited to fight with all the negative behavior of the health care providers by making NCMS regulations only.

By trying different NCMS models, the benefit distribution has been shown varied. Each model has its special attractiveness to a particular group of villagers, while its weakness raises dissatisfaction from other groups (such as the migrant villagers) of villagers as well. Based on the local context (of socio-economics, population, and health), to choose the most proper model to apply, with some adjusted regulations to supplement, NCMS would make the optimized choice. But it should be aware that to find a model that is perfect with every villager's approval is out of possibility.

5.3.3 Beyond the Reach of NCMS

Some existing problems and challenges that caused villagers' refusal on NCMS enrolling go beyond the reach of NCMS. They are deeply embedded in the macro-background of the current China's society. NCMS enrolling is only an opened window, through which some profound problems and challenges are seen.

The rural poverty, the unregulated health service system, the rural-to-urban migration trend, and the villagers' conservative culture... To address such problems and challenges, efforts from different aspects of the whole society are called up. Even by the united efforts, surely there is a long way ahead to make the essential progress.

5.4 Advocating for NCMS Expansion

The issue of NCMS financing advocacy was originally raised from the NCMS expansion. In order to expand NCMS to all the counties in rural China, and in order to recruit more villagers into the protection net of NCMS, NCMS financing advocacy has been conducted. Due to the "voluntary participation" principle, it is not allowed to compel villagers to enroll NCMS opposed to their will. However, confront of the villagers' refusal in practice, it becomes the only choice for the NCMS financing personnel to persuade the reluctant villagers again and again.

5.4.1 NCMS Orientation: Pursuing the 100% Coverage?

It is reasonable that at the beginning of NCMS piloting, the government set a target for the yearly NCMS financing, since a certain scale of enrollees for the health insurance scheme is objectively required. However, as those expected target has been successfully achieved year by year, new "higher" target would be set for the next expectation. Such pursuing turns to be endless.

Meanwhile, it has shown that after a particular coverage of NCMS was achieved, the potential of recruiting new enrollees from the remained villagers becomes less and less. The efforts spent for achieving the NCMS coverage of 90% from 80% are quite different from the efforts spent for achieving the NCMS coverage of 80% from 70%. In 2007, Meedu has successfully achieved the planned target as the NCMS coverage of 90%, however, would the 95% coverage be set by the government to be the new target for the next year? Most NCMS financing personnel in Meedu told me that it would be very possible.

Then the issue of NCMS financing advocacy has returned to its origin: what is the orientation of NCMS? Who are the targeted groups for NCMS to take care of? Are they the majority of the villagers, or all of them with no one as exception?

If it is aimed at recruiting every villager to be NCMS enrollees, the “voluntary participation” principle has provided those villagers the chance to choose the opposite choice. If it is aimed at providing a health protection net to most villagers, the pursuing of the “higher” NCMS coverage should be wisely stopped at somewhere, since the “100% coverage”, actually, is not the final goal.

5.4.2 The Neglected Vertical Expansion

Along the five years’ piloting, the on-going NCMS expansion in Meedu has been mainly focused on the horizontal expansion. While the higher and higher NCMS coverage has been cared with special attention, the further guidance for the recruited enrollees’ to utilize health care within NCMS has been neglected.

Without a proper guidance, some villagers may fail to perceive the real benefit of NCMS and then drop out. To recruit those dropped out villagers back to NCMS again, efforts spent might be much more than to recruit those who had never enrolled. Thus a vertical NCMS expansion, which aims to confirm the positive perception on NCMS enrolling of those recruited enrollees and to strengthen their will of keeping enrolling NCMS year after year, seems quite essential.

The NCMS financing advocacy of the vertical NCMS expansion would focus more on providing information for the further understanding on NCMS of each enrolled villagers. It is believed that the more the enrolled villagers understand NCMS, the stronger his/her willingness to keep enrolling NCMS would be.

In another word, under the NCMS financing advocacy of the vertical expansion, if one villager has been convinced to enroll NCMS voluntarily, because he/she had gained a good understanding on NCMS, the possibility of his/her dropping-out from NCMS would be very small in the future. Moreover, she might become a voluntary advocator of NCMS, to advocate other villagers with the convincing words from her own understanding.

Even the “higher” NCMS coverage is not the focus of the vertical NCMS expansion, in a long-term run, the horizontal expansion would be benefited from this as well, since the dropped-out cases would be minimize, while the remained cases would be maintained and strengthened.

5.5 Moving On

From this study, the problems and challenges that identified from the cost calculation, cost structure analysis, and exploring the villagers’ reluctance surely are not standing for a negative perception of the current NCMS financing. And it would not be the end of the NCMS financing advocacy.

It is those identified problems and challenges that lead a new way of NCMS financing and its advocacy coming out, with a greater potential to be done better in the future.

By the suggested efforts, it is expected to have NCMS further expanded in the broad rural China, with a higher NCMS financing achievement under the advanced NCMS financing advocacies.

“Right now, the villagers’ enthusiasm on enrolling NCMS is just like a little budding seed. We should do our best to protect it from being frustrated. Then it would grow up, bloom and fruit...”

—Chief of Meedu County NCMS Office

CHAPTER 6

CONCLUSION AND RECOMMENDATION

6.1 Conclusion

By conducting economic evaluation, this study has gained the understanding of the current resource allocation on NCMS financing in a typical rural county in the southwestern China. By calculating the NCMS financing costs and analyzing the cost structures, the resource consumption on the providers' side has been revealed. By interviewing the villagers about their refusal on enrolling NCMS, reasons behind their negative responses to the NCMS financing from the customer's side has been further explored. Thus to combine the research findings from both the provider's side and the customer's side, the existing problems and challenges of the current NCMS financing has been identified and discussed, leading a way of making future improvement on NCMS financing coming out.

6.2 Recommendation

6.2.1 Policy Recommendation

1) NCMS financing advocacy is worth conducting on. In the current stage, the awareness and willingness of enrolling NCMS of most villagers have not yet been firmly established. Without the regular NCMS financing advocacy, some villagers might be easily dropped out.

2) It should be considered to shift the focus of NCMS financing advocacy from only the horizontal expansion (to recruit more and more villagers to enroll NCMS) to the vertical expansion (to further the recruited enrollees' good understanding on NCMS), after a particular NCMS coverage had been achieved.

3) To set the higher and higher NCMS financing target year by year for the blind pursuing of the 100% NCMS coverage is not practical. Base on the “Voluntary Participation” principle of NCMS, it should be aware that it is impossible to expect all the villagers to enroll NCMS. And it should be aware that some identified reasons behind the villagers’ reluctance on NCMS enrolling can not be simply resolved by NCMS financing advocacy only.

4) The government should allocate a sufficient budget specific for NCMS financing. Heavily relied on the financial support from other non-NCMS institutions, the current NCMS financing is not financially independent to conduct all the planed advocacy activities with expected quantity and quality.

5) The NCMS promoting advocacy should pay more attention to the villagers directly rather than to the financing personnel preferentially. Meanwhile, to explore the good promoting approaches with the detailed NCMS information delivered effectively is also needed.

6) To pay a corresponding labor subsidy to the grassroots NCMS financing personnel is necessary. In a long-term run, to keep the enthusiasm of the grassroots personnel working for NCMS financing, relying on the unpaid extra labor-sources consumption is not recommended.

7) Awareness on further economic savings should be raised in most NCMS-involved institutions, especially from their over-spent “coordinating activities and guest arrangement” expenditures of the “recurrent cost”

8) The newly-emerged NCMS financing approaches (such as the village doctors’ NCMS advocacy) are expected to be tested and further applied in the NCMS financing transition. Since the old “door-to-door visit” approach at the village level is most costly in the current NCMS financing, and it waits for the replacement of new approaches that are more effective.

6.2.2 Future Research

1) Future research is expected to explore the cost-effective NCMS coverage. Below the 100% NCMS coverage, how to help the local government to set an appropriate¹ yearly NCMS financing target is worth looking into. Such an appropriate target should not be out of reach, but with potential to motivate the grassroots NCMS financing personnel working under their best efforts.

2) To conduce the further cost-effective analysis on the new approaches (such as the village doctors' NCMS advocacy) emerged from the NCMS financing transition would benefit the future NCMS expansion. It would guide the NCMS financing transition moving further by giving suggestions on applying the most effective NCMS financing advocacy approaches.

3) To conduct further qualitative research to look into the villagers' understanding on NCMS, their perception, expectation, needs, and dissatisfaction of NCMS services especially of NCMS financing advocacy. The qualitative findings would give detailed suggestions for improving the further NCMS financing advocacy to be more effective and convincing.

1. The criteria of “appropriate” is supposed to be set based on economic technique tools.

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Appendix I: Guideline of In-Depth Interview with Villagers

1. Family background
 - a) Family size
 - b) Family members
 - c) Family economic status
 - d) Family income and its sources
 - e) Family relationships
2. NCMS enrollment
3. Involvement of NCMS advocating
4. Understanding of NCMS/health insurance
 - a) Objectives
 - b) Regulations
5. Attitude towards NCMS
6. Experienced big events of health problems/health care
7. Risks perception
8. Attitude of daily life
9. Interested topics
10. Social Relationship with others

Appendix II: Detailed Tables of Calculated Costs
A) The Detailed Original Costs and Cost Structures at Three Rural Administrative Levels

a) County Level

● **Original cost of NCMS financing at county level**

level	cost items	cost in detail (CNY)						cost in sub-sum (CNY)						cost structure (%)								
		accounting direct		economic indirect		total	accounting direct		economic indirect		total	accounting direct		economic indirect		total	accounting direct		economic indirect		total	
		21522	37445	0	0		58967	21522	37445	0		0	58967	9.0	15.6		0.0	0.0	24.6			
routine cost	1 county NCMS office	0	9207	0	0	9207	0	9207	0	0	9207	0.0	3.8	0.0	0.0	3.8	0.0	0.0	0.0	0.0	3.8	
	2 county health bureau	0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	3 county government	21522	46652	0	0	68174	21522	46652	0	0	68174	9.0	19.4	0.0	0.0	28.4	0.0	0.0	0.0	0.0	0.0	28.4
county	sub-total	300	1500	0	0	1800	300	1500	0	0	1800											
	1 advertising board	0	100	1400	0	1500	0	100	1400	0	1500											
	2 TV program--NCMS financing announcement	0	625	1000	0	1625	0	625	1000	0	1625											
	3 TV program--local news about NCMS	3000	0	0	0	3000	3000	26725	3900	0	33925	1.4	11.1	1.6	0.0	14.1						
	4 IEC materials	0	16000	0	0	16000	0	16000	0	0	16000											
	5 NCMS paper cups	0	10000	0	0	10000	0	10000	0	0	10000											
activity cost	6 NCMS table calendar	2565	19405	0	0	21970	2565	19405	0	0	21970	4.665	19.687	0	0	24.352	1.9	8.2	0.0	0.0	10.1	
	1 health institution working teams	2100	282	0	0	2382	2100	282	0	0	2382											
III rewarding	2 stakeholder meetings	83635	0	0	0	83635	83635	113635	0	0	197270	47.3	47.3	0.0	0.0	47.3	0.0	0.0	0.0	0.0	47.3	
	1 working subsidies to township government	30000	0	0	0	30000	30000	0	0	30000												
sub-total	2 achievement bonus to township health center	121600	46412	3900	0	171912	121600	46412	3900	0	171912	50.6	19.3	1.6	0.0	71.6	59.6	38.8	1.6	0.0	100.0	
	grand total	143122	93064	3900	0	240086	143122	93064	3900	0	240086	59.6	38.8	1.6	0.0	100.0						

● **Detailed routine cost by classifying into staff/capital/recurrent /overheads at county level**

cost items	cost in sub-sum (CNY)				cost structure (%)			
	county NCMS office	county health bureau	county government	total	county NCMS office	county health bureau	county government	total
staff	43362	2791	0	46153	63.6	4.1	0.0	67.7
capital	5131	2122	0	7253	7.5	3.1	0.0	10.6
recurrent	10008	2375	0	12383	14.7	3.5	0.0	18.2
overheads	466	1919	0	2385	0.7	2.8	0.0	3.5
total	58967	9207	0	68174	86.5	13.5	0.0	100.0

b) Township Level

● **Original cost of NCMS financing at township level**

level	cost items	cost in detail (CNY)						cost in sub-sum (CNY)						cost structure (%)									
		accounting		economic		total		accounting		economic		total		accounting		economic		total					
		direct	indirect	direct	indirect	direct	indirect	direct	indirect	direct	indirect	direct	indirect	direct	indirect	direct	indirect	direct	indirect				
routine cost	1 township NCMS office	0	8525	0	0	0	8525	0	8525	0	0	8525	0	0	0	8525	0	0	0	15.1	0.0	0.0	15.1
	2 township health center	0	6611	0	0	0	6611	0	6611	0	0	6611	0	0	0	6611	0	0	0	11.7	0.0	0.0	11.7
	3 township government	0	18776	0	0	0	18776	0	18776	0	0	18776	0	0	0	18776	0	0	0	33.3	0.0	0.0	33.3
	sub-total	0	33912	0	0	0	33912	0	33912	0	0	33912	0	0	0	33912	0	0	0	60.2	0.0	0.0	60.2
township activity cost	1 advertising board	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
	2 TV program--NCMS financing announcement	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
	3 TV program--local news about NCMS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
	4 IEC materials	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
	5 NCMS paper cups	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
	6 NCMS table calendar	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
I monitoring	1 township government working teams	0	7505	0	0	0	7505	0	7505	0	0	7505	0	0	0	7505	0	0	0	16.5	0.0	0.0	16.5
	2 stakeholder meetings	0	1802	0	0	0	1802	0	1802	0	0	1802	0	0	0	1802	0	0	0	23.3	0.0	0.0	23.3
III rewarding	1 working subsidies to village committees	0	13133	0	0	0	13133	0	13133	0	0	13133	0	0	0	13133	0	0	0	39.8	0.0	0.0	39.8
	2 achievement bonus to village clinics	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	100.0	0.0	0.0	100.0
	sub-total	0	22440	0	0	0	22440	0	22440	0	0	22440	0	0	0	22440	0	0	0	39.8	0.0	0.0	39.8
	grand total	0	56352	0	0	0	56352	0	56352	0	0	56352	0	0	0	56352	0	0	0	100.0	0.0	0.0	100.0

● **Detailed routine cost by classifying into staff/capital/recurrent /overheads at township level**

cost items	cost in sub-sum (CNY)				cost structure (%)			
	township NCMS office	township health center	township government	total	township NCMS office	township health center	township government	total
staff	4690	2790	2871	10351	13.8	8.2	8.5	30.5
capital	873	1202	1834	3909	2.6	3.5	5.4	11.5
recurrent	2385	2331	9945	14661	7.0	6.9	29.3	43.2
overheads	577	288	4126	4991	1.7	0.8	12.2	14.7
total	8525	6611	18776	33912	25.1	19.5	55.4	100.0

c) Village Level

• Original cost of NCMS financing at village level

level	cost items	cost in detail (CNY)			cost in sub-sum (CNY)			cost structure (%)								
		accounting direct	economic indirect	total	accounting direct	economic indirect	total	accounting direct	economic indirect	total						
routine cost	1 village clinic	0	1241	0	50	1291	0	1241	0	50	1291	0.0	8.9	0.0	0.4	9.3
	2 village committee	0	3830	0	325	4155	0	3830	0	325	4155	0.0	27.6	0.0	2.3	29.9
	sub-total	0	5071	0	375	5446	0	5071	0	375	5446	0.0	36.5	0.0	2.7	39.2
village activity cost	I advertising board	0	0	0	0	0	0									
	2 TV program-NCMS financing announcement	0	0	0	0	0	0									
	3 TV program-local news about NCMS	0	0	0	0	0	0									
	4 IEC materials	0	0	0	0	0	0									
	5 NCMS paper cups	0	0	0	0	0	0									
	6 NCMS table calendar	0	0	0	0	0	0									
II monitoring	1 village-doctor working team	0	0	0	200	200	0									
	2 village committee working team	0	600	0	0	600	0									
	3 sub-village working teams	0	1350	0	4950	6300	0									
	4 stakeholder meetings	0	1012	0	0	1012	0									
III rewarding	1 achievement bonus to sub-village leaders	0	330	0	0	330	0									
	sub-total	0	3292	0	5150	8442	0	3292	0	5150	8442	0.0	23.7	0.0	37.1	60.8
	grand total	0	8363	0	5525	13888	0	8363	0	5525	13888	0.0	60.2	0.0	39.8	100.0

• Detailed routine cost by classifying into staff/capital/recurrent /overheads at village level

cost items	cost in sub-sum (CNY)			cost structure (%)		
	village clinic	village committee	total	village clinic	village committee	total
staff	1128	2850	3978	20.7	52.3	73.0
capital	74	482	556	1.4	8.9	10.2
recurrent	89	823	912	1.6	15.1	16.7
overheads	0	0	0	0.0	0.0	0.0
total	1291	4155	5446	23.7	76.3	100.0

B) The Detailed overall cost of NCMS financing of Haibazhuang Village

level	cost items	cost in detail (CNY)			cost in sub-sum (CNY)			cost structure (%)							
		accounting direct	economic indirect	total	accounting direct	economic indirect	total	accounting direct	economic indirect	total					
county	1 county NCMS office	295	514	0	0	0	809								
	2 county health bureau	0	126	0	0	0	126	295	640	0	935	1.4	2.9	0.0	4.3
	3 county government	0	0	0	0	0	0								
	total	295	640	0	0	0	935								
county	1 promoting	45	367	54	0	0	465								
	2 monitoring	64	270	0	0	0	334	1668	637	54	2359	7.7	2.9	0.0	10.8
	3 rewarding	1559	0	0	0	0	1559								
	total	1668	637	54	0	0	2358	1963	1277	54	3294	9.0	5.9	0.2	15.1
township	1 township NCMS office	0	693	0	0	0	693								
	2 township health center	0	538	0	0	0	538	0	2758	0	2758	0.0	12.7	0.0	12.7
	3 township government	0	1527	0	0	0	1527								
	total	0	2758	0	0	0	2758								
township	1 promoting	0	0	0	0	0	0								
	2 monitoring	0	757	0	0	0	757	0	1825	0	1825	0.0	8.4	0.0	8.4
	3 rewarding	0	1068	0	0	0	1068								
	total	0	1825	0	0	0	1825	0	4583	0	4583	0.0	21.1	0.0	21.1
village	1 village clinic	0	1241	0	50	1291									
	2 village committee	0	3830	0	325	4155	0	5071	0	375	5446	0.0	23.3	0.0	25.0
	3 rewarding	0	330	0	0	330									
	total	0	3292	0	5150	8442	0	3292	0	5150	8442	0.0	15.1	0.0	23.7
village	sub-total	0	8363	0	5525	13888	0	8363	0	5525	13888	0.0	38.4	0.0	25.4
	grand total	1963	14223	54	5525	21765	1963	14223	54	5525	21765	9.0	65.3	0.2	25.4

C) The Detailed unit cost of NCMS financing of Haibazhuang Village

level	cost items			cost in detail (CNY)						cost structure (%)					
				accounting		economic		total		accounting		economic		total	
				direct	indirect	direct	indirect	direct	indirect	direct	indirect	direct	indirect	direct	indirect
county	routine cost	1	0.08	0.14	0.00	0.00	0.00	0.00	0.22	1.36	2.36	0.00	0.00	3.72	
		2	0.00	0.03	0.00	0.00	0.00	0.00	0.03	0.00	0.58	0.00	0.00	0.58	
		3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
	total	0.08	0.17	0.00	0.00	0.00	0.00	0.25	1.36	2.94	0.00	0.00	4.30		
activity cost	1	0.01	0.10	0.01	0.00	0.00	0.00	0.13	0.21	1.69	0.25	0.00	2.14		
	2	0.02	0.07	0.00	0.00	0.00	0.00	0.09	0.29	1.24	0.00	0.00	1.53		
	3	0.42	0.00	0.00	0.00	0.00	0.00	0.42	7.16	0.00	0.00	0.00	7.16		
total	0.45	0.17	0.01	0.00	0.00	0.00	0.63	7.66	2.93	0.25	0.00	0.00	10.84		
	sub-total	0.53	0.34	0.01	0.00	0.00	0.88	9.02	5.87	0.25	0.00	0.00	15.13		
township	routine cost	1	0.00	0.19	0.00	0.00	0.00	0.19	0.00	3.18	0.00	0.00	0.00	3.18	
		2	0.00	0.14	0.00	0.00	0.00	0.00	0.14	0.00	2.47	0.00	0.00	2.47	
		3	0.00	0.41	0.00	0.00	0.00	0.00	0.41	0.00	7.02	0.00	0.00	7.02	
	total	0.00	0.74	0.00	0.00	0.00	0.00	0.74	0.00	12.67	0.00	0.00	12.67		
activity cost	1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
	2	0.00	0.20	0.00	0.00	0.00	0.00	0.20	0.00	3.48	0.00	0.00	3.48		
	3	0.00	0.29	0.00	0.00	0.00	0.00	0.29	0.00	4.91	0.00	0.00	4.91		
total	0.00	0.49	0.00	0.00	0.00	0.00	0.49	0.00	8.38	0.00	0.00	0.00	8.38		
sub-total	0.00	1.23	0.00	0.00	0.00	0.00	1.23	0.00	21.06	0.00	0.00	0.00	21.06		
village	routine cost	1	0.00	0.33	0.00	0.01	0.35	0.00	0.00	5.70	0.00	0.23	0.00	5.93	
		2	0.00	1.03	0.00	0.09	1.12	0.00	1.12	0.00	17.60	0.00	1.49	19.09	
		total	0.00	1.36	0.00	0.10	1.46	0.00	1.46	0.00	23.30	0.00	1.72	25.02	
activity cost	1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
	2	0.00	0.80	0.00	1.38	2.18	0.00	2.18	0.00	13.61	0.00	23.67	37.27		
	3	0.00	0.09	0.00	0.00	0.09	0.00	0.09	0.00	1.52	0.00	0.00	1.52		
total	0.00	0.88	0.00	1.38	2.26	0.00	2.26	0.00	15.12	0.00	23.67	38.79			
sub-total	0.00	2.24	0.00	1.48	3.73	0.00	3.73	0.00	38.42	0.00	25.39	63.81			
grand total		0.53	3.82	0.01	1.48	5.84	0.00	9.02	65.35	0.25	25.39	100.00			

Appendix III: Detailed Information of Opportunity Cost Estimation at Three Rural Administrative Levels

1. County Level:

At the county level, the opportunity cost was taken in the “promoting activity”.

No.	Cost Items	Estimated Opportunity Cost (Yuan)	Obtained Information for Estimation	Information Sources
1	Advertising board	1500	The yearly rent charged for other advertising boards aside the same street was 1500 Yuan per board.	Chief of the Public Advertising office
2	TV program—NCMS financing announcement	1400	The rent charged for other TV advertisements at the same time of the same channel was 50 Yuan per minute. The NCMS financing announcement was 2-minute long, it has been broadcasted for twice per day, totally 7 days.	Chief of the Meedu County TV Station
3	TV program—local news about NCMS	1000	The rent charged for other TV advertisements at the same time of the same channel was 50 Yuan per minute. In the year 2006, there were totally 5 reports in local news about NCMS. Each took around 2-minute, and was broadcasted for twice per report	Chief of the Meedu County TV Station

2. Township Level:

At the township level, there was no opportunity taken.

3. Village Level:

At the village level, the opportunity cost was taken mainly in the “Monitoring activity”, with another small part in “Land cost” of “Routine cost”.

No.	Cost Items	Estimated Opportunity Cost (Yuan)	Obtained Information for Estimation	Information Sources
1	Land cost of the Village Clinic	50	The Village Clinic was located together with the Village Committee. The land they occupied was freely provided from the collective land of Haibazhuang Village. The total area of the land is around 3000 M ² . Based on the yearly rent charged for other land nearby (2.7 Yuan/M ²), the total rent of the land in the year 2006 was around 8,000 Yuan. There were 20 rooms on this land. One of them was occupied as the Village Clinic. So the yearly land rent for the Village Clinic was 400 Yuan. Then based on the responsibilities and the working hours of the Village Clinic, part of the yearly rent was allocated to NCMS financing work.	Chief of the Village Committee Village Clinic doctors

No.	Cost Items	Estimated Opportunity Cost (Yuan)	Obtained Information for Estimation	Information Sources
2	Land cost of the Village Committee	325	<p>The land the Village Committee occupied was freely provided from the collective land of Haibazhuang Village. The total area of the land is around 3000 M². Based on the yearly rent charged for other land nearby (2.7 Yuan/M²), the total rent of the land in the year 2006 was around 8,000 Yuan. There were 20 rooms on this land. 13 of them were occupied as offices of the Village Committee. So the yearly land rent for the Village Committee was 5200 Yuan. Then based on the responsibilities and the working hours of the Village Committee in August, September, and October, part of the yearly rent was allocated to NCMS financing work.</p> <p>In the year 2006, the daily-paid labor in Haibazhuang Village is around 25 Yuan/day. The NCMS monitoring team of the village-doctor worked in the evening, normally for 3-5 hours per time. This year they went out for 4 times. There were two village doctors.</p> <p>2*25*4=200 Yuan</p>	Chief of the Village Committee
3	village-doctor working team	200	<p>In the year 2006, the daily-paid labor in Haibazhuang Village is around 25 Yuan/day. The NCMS monitoring team of the village-doctor worked in the evening, normally for 3-5 hours per time. This year they went out for 4 times. There were two village doctors.</p> <p>2*25*4=200 Yuan</p>	Village Clinic doctors

No.	Cost Items	Estimated Opportunity Cost (Yuan)	Obtained Information for Estimation	Information Sources
4	sub-village working teams	4950	<p>In the year 2006, the daily-paid labor in Haibazhuang Village is around 25 Yuan/day. The NCMS monitoring team of the sub-villages worked in the evening, normally for 3-5 hours per time. The average rural population of each sub-village is around 340 villagers. If 50 people could be advocated to pay their premiums in one night, each sub-village team would work for 7 nights. There were 12 sub-villages of Haibazhuang Village, with 3 persons (2 Chiefs, 1 health worker) in each monitoring team.</p> <p>$3 \times 25 \times 7 \times 12 = 6300$ Yuan</p> <p>Meanwhile, they were paid with a modest monthly salary by the government. Based on the responsibilities and the working hours of the sub-village working team members, part of their salaries were allocated to NCMS financing work. It was 1350 Yuan</p> <p>Thus the opportunity cost was: $6300 - 1350 = 4950$ Yuan</p>	<p>Chief of the Village Committee Sub-village leaders Sub-village health workers</p>

BIOGRAPHY

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