CHAPTER 4

LITERATURE REVIEW

The literature review aims to explain the concepts of health insurance, financing, demand and premium of health insurance in order to make clear, understand and use them to answer the questions : "What is HI good for?" "Why do people choose HI?" "Is HI important?" for analyzing and building the thesis. Experiences from other countries, previous studies and comments on health insurance and VHI program in Vietnam and Haiphong will be mentioned in order to show the advantage points, and solutions that are relevant to apply into Vietnam.

4.1 **Concepts of Health Insurance**

Health insurance is a system in which prospective consumers of care make payment to a third party in the form of an insurance scheme, which in the event of future illness will pay the provider of care for some or all of the expenses incurred. In other words, health insurance is a means of providing members of a defined community with some protection against the cost of health services. Hsiao (1992) described health insurance as a means to pool the risks. When risks are pooled across a population, unpredictable losses can be transformed to predictable losses; and with cross-subsidization of resources from the healthy to the sick, from the rich to the poor, from small family to large family with a number of dependents achieved, individual security is improved.

The concept of *health insurance benefits describes* it as health services provided to insured persons which are delivered, paid or reimbursed in full or in part by the *third-party-payment,* that is payment for health care services incurred by a defined group of protected persons, made by government and health insurance companies, on behalf of them (Ron, Abel-Smith and Tamburi 1990).

> "Health insurance is a way of realizing social justice, because it is based on solidarity and cooperation between the well and the ill, the rich and the poor, and employers and employees" (Abel-Smith 1986).

The *basic issues* of health insurance are: Who will be covered? What will be covered? How will the plan be financed? How much will patients pay? (Sharp, Register and Leftwich 1994). The *goals* of health insurance organized by government can be summarized as follows :

(1) To ensure everyone access to adequate health care "equal opportunity of access to basic health care for people at equal risk". In terms of *equity*, the broader objective of full equality is usually phrased in the health care context as "equal treatment for equal need". Expending population coverage is one of the equity goals. The larger a scheme's population coverage, the more equitable a scheme is. The possible growth of coverage means that a scheme has the potential to increase the number of beneficiaries if financing supply is available.

(2) To eliminate the financial burden connected with the acquisition of health services.

(3) To control and limit rising health care costs, in order to avoid the moral hazard both in terms of "consumer moral hazard" and "provider moral hazard", and in order to achieve efficiency by doing the best way to provide health care services (Donaldson and Gerard 1993).

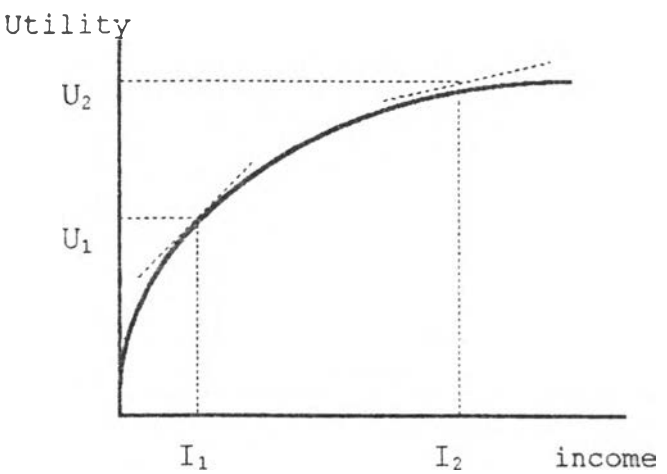
Puntularp's (1995) explained that in developing countries, health insurance will have a major role in mobilizing funds from private sources for health care services. Other options may not be suitable for low-income groups which HI is intended to cover (informal workers, agriculture workers), for example taxation, user charge, because they have such low incomes. Besides that, HI can have the disadvantage: *adverse selection* if more people with higher risk of illness join the scheme and people with lower risk are not likely to join it; and *moral hazard* since treatment costs are paid by the insurers while patients become less price-conscious. The *viability* of introducing this system or how successful it is, depends on the *level of economic development*, including income of the population, the *socio-cultural conditions* and the co-operation among MOPH and the health-related organizations; finally, how health management can operate in such a way that it leads to efficiency and equity. Because they lack that foundation, although more than half of developing countries have been

introduced health insurance into their countries, it covers only a small number (5-30%) of the population.

4.2 **Utilization, Demand and Premium for Health Insurance**

Phelps (1993) mentions that people seem to dislike risk. The pervasive purchase of insurance of many types offers concrete evidence of this dislike. People willingly (and often) pay insurance companies more than the *average loss* they confront, in order to eliminate the chance of really risky (large) losses. We can describe people who behave this way as risk *averse*. Risk aversion arises from a simple additional assumption, that the marginal utility of income, while positive, gets smaller and smaller as a person's income gets larger. In other words, if we were to plot a person's utility against his or her total income, the diagram would look like Figure 4.1A.

Figure 4.1A: Marginal Utility at Two Income Levels



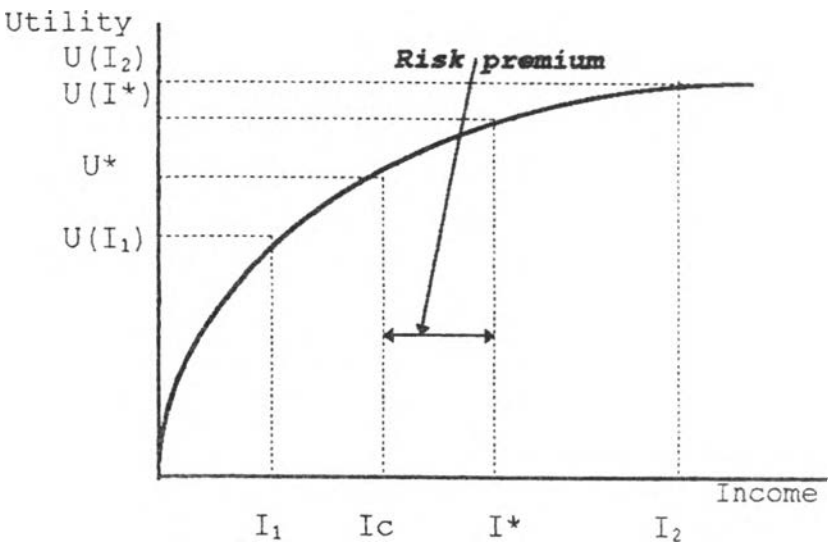
In the above figure, the person's utility would always increase as income increased, but the graph of utility versus income would always flatten out more and more . This is called *diminishing marginal utility*, and this idea is central to the question of why people buy insurance.

The Risk-Averse Decision Maker

Suppose a person with the utility function shown in Figure 4.1B starts out with an income I_2, but knows

that some externally generated risk may reduce this yearly income to I_1. If this risky event occurs with probability P, then the statistical *expected income* of this person is $E(I) = PI_1 + [(1-P)I_2] = I^*$.

Figure 4.1B :Expected Utility when Probability of I_1=P and Probability of I2=(1-P)



Using the utility function in Figure 4.1B, the corresponding with expected income I* in the utility-income graph is U(I*).

The expected utility for the person with this risky income $U^* = PU(I_1) + (1-P)U(I_2)$.

In principle, the expected utility is lower than the utility of the expected income (average income).

Corresponding with U* in the utility-income graph is certain income Ic that would create utility of I*. Ic is less than I*.

The difference between the certainty equivalent and average income is called the *risk premium.* It represents the maximum that a risk-averse person would be willing to pay to avoid this risk. The more the person dislikes risk, the bigger the gap between Ic and I*. This model of consumer behavior when confronted with uncertain risky financial events stands at the heart of the economist's way of thinking about such decisions. Economists presume that people act to maximize expected utility. When they do so, they buy insurance against risky events.

Besley (1990) argued that the main function of an insurance contract is to reduce the risk faced by the person who buys it. Such contracts typically operate in terms of an agreement by the insurance company to pay something to the insured in the event of a particular outcome, in exchange for the payment of an insurance premium. In case of health insurance, the two parties in a contract are the patient and the insurance company, and there are two conditions upon which insurance payments can be made to depend : one is the state of health and the other is expenditure upon health care. This kind of contract ties health insurance directly to the demand for health care.

The Problem of Moral Hazard of Health Insurance

The moral hazard of health insurance is the increased risk of pay-out for insurance firms that results from behavioral changes caused by the insurance coverage itself.

Insurance mechanisms often alter the economic constraint on both patients and providers. Since treatment costs are paid by the insurers, patients become less price-conscious and providers become less economically and morally restrained, charging higher prices as well as requiring frequent visits by patients. This condition causes over-consumption and over-treatment. The impact of moral hazard depends not only on demand factors, but also on the availability of supply and the response of providers. Under reimbursement insurance there may be incentives to increase consumption of health care, both from provider and consumer. The ways to avoid that problem as applied to consumers are the methods of *deductible, coinsurance and co-payment*, the way to encourage providers is *controlling health care cost* and making the necessary regulation to limit the abuse of health care services provision (Besley 1990).

Sharp, Register and Leftwith (1994) explained the *price elastic demand for health care services* when the sellers in the health care industry decrease prices, and the price elasticity of demand is equal to the percent change in quantity demanded divided by the percent change in price.

$$\eta = -(\Delta q/\Delta p).[(p1 + p0)/(q1 + q0)]$$

Premium for health insurance

> "*Premium* is the amount or installment paid for an insurance scheme, under which the total expenditure for benefits and administration of a given period are met out of the income (from contributions and other sources) of the same period" (Ron, Abel-Smith and Tamburi 1990).

Normally insurance schemes do not accumulate reserves except for contingency reserves. If insurance policies are actuarially fair, *premiums paid* will *equal health care expenditure incurred*, which assumes that insurance companies make no profit. The more people are covered the smaller will be the marketing cost per person, an economy which may then be fed back to consumers in *reduced premiums* (Donaldson and Gerard 1993). In the health insurance system, health care is basically financed by advance or premium payment by the population. The premium may be set for individuals or for families. In principle, the *premium reflects the average total cost* (per person or per family) of the health care covered by the insurance. The premium must effectively be collected from the population and this demands considerable administrative effort. Thirdly, the evaluation of health care costs and variations in the volume of care mean that *premiums must be regularly adjusted* (Carrin 1995).

4.3 **Health Insurance Financing**

> "Most of people agree that health insurance contribution is a considerable source of additional financing of health care for most developing countries if they want to achieve health for all. Introducing health insurance is essentially a problem of political salesmanship. The health insurance option makes it possible to restore an awareness of connections between participation by individuals and groups in health care financing on the one hand, and services rendered on the other and it is not realistic to expect the rural population to pay the whole cost of its health services in insurance contributions ; that means, health-for-all programs will have to be paid for almost entirely by countries' own resources"(Abel-Smith 1986).

Hsiao (1992) argued that private health insurance has not found its way to developing countries, because it is unfeasible. But voluntary health insurance could face the difficulty to cover all people in a developing country, and the financing strategy is only a means to achieve these objectives, one of which is extending as much as possible the membership of that program.

Ron, Abel-Smith and Taburi (1990) wrote :

(1) One of the ways to achieve flexibility in financing policy of health insurance schemes is changing contributions to meet changing demands for health care, and health insurance schemes will generally find it easier to finance or to introduce new programs than governmental ministries.

(2) MOPH and health insurance are related, because in developing countries, health insurance may be a semi-autonomous organization, it needs subsidization from government to different degrees. Normally it accounts only for a minor part of annual revenue which expected to cover current health care costs and administrative costs.

(3) The level of contribution required depends on a set of variables, such as the quality of health care services, income of the population in the target group, the subsidy from government and social and market conditions relevant to health care in general, such as education, age, family size... In terms of management, financial control is a*chieving a balance between revenue and expenditure*, even VHI schemes run by public organizations. It is necessary to limit as much as possible the "over spenders and overusers" of system. It also has to constrain the administrative cost around 8-10 % of revenue. In terms of strategy to extend the membership of scheme, the emphasis is on improving quality of care, but it takes time and challenges in both premium and cost containment, so another solution is to use flexibility in financing policy.

4.4 **Types of Health Insurance**

Many kinds of health insurance are applied nowadays, but mainly they are divided into two types, compulsory and voluntary health insurance.

Compulsory health insurance is a health insurance program in which legislation defines the population and benefits covered, the conditions of eligibility, and the

sources of funds of the scheme. Health insurance is a measure of *social security*, so it is also called social insurance. It is financed by imposing mandatory insurance payments on employed workers as a percentage of their wages, and by imposing on their employers a similar or somewhat higher payroll tax. Government may in some instances also contribute to the scheme. When legislation makes membership compulsory for a large section of the population, low and high risks are shared and resource are pooled. Then, the financial viability of the joint undertaking becomes high (Ron, Abel-Smith and Tamburi, 1990).

Voluntary health insurance is a health insurance program in which affiliation to the scheme is not determined by legislation. Membership of VHI is not mandatory and people who are willing and able to pay premiums join the scheme. The pre-conditions to implement VHI is that it should cover a large enough number of insured; the income of the target population group should be high enough to pay regular premiums and "the availability and stability of relevant health care infrastructure"(Ron, Abel-Smith and Tamburi, 1990).

4.5 **Experiences from Other Countries**

Donaldson and Gerard (1993) mentioned that, a *public insurance* system can be administered by *a monopolistic agent* such as a regional government, or national government. One of the best-known systems of public health insurance is that existing in *Canada*. There, consumers pay a uniform premium for hospital and medical care. Some elements of costs, such as capital expenditure, are financed from tax revenues. The 2 points from those experiences can be well applied in Vietnam, where VHI is a public system with uniform premium, and a part of costs are subsidized from tax revenue.

In case of *Thailand*, the experience from which Vietnam can learn is the VHI scheme regulated *procedure to seek health care services* with the first contact at public health grass-roots level. The *target population was expanded from coverage of the near poor to include the middle income class in rural areas*; and another thing is the School Health Insurance program can promote accessibility to health services among primary school children: in Vietnam now one-fifth of population is school children. The Voluntary Health Insurance Scheme (VHIS) in Thailand, commonly known as the Health

Insurance Card Scheme, was first introduced in 1993. Households contributed a minimal membership fee to the Health Card Fund to cover access to care for a year. Beneficiaries have to make the first contact at a public health center at the sub-district level with access to higher level of care through a referral letter. At the end of the year, the Health Card Fund reimbursed medical expenses to health centers, district and provincial hospitals on an actuarial basis. The MOPH informally subsidized the Health Card Project as medical expenses were greater than reimbursement from the Health Card Fund. The target population was expanded from coverage of the near poor to include the middle income class in rural areas. At present, the price of a health insurance card is 1,000 baht per year for one family of not more than five members. The population coverage is 2.7 million or about 4.6% of the total population. The benefits provided are outpatient care for sickness and injuries, inpatient care and mother and child health services. There is no limitation in utilization of services. The beneficiaries, however can go only to health care provider units under the Ministry of Public Health. The first contact is the health center or district hospital, then patients have to follow a referral line for higher levels of care. School Health Insurance (SHI) in Thailand, has the objective to promote accessibility to health services among primary school students. The target population is 6.7 million or 11.5% of the total population. The benefits of this scheme are outpatient and inpatient care at public service units. In some areas, dental services are provided. The MOPH is in charge of all administration of this scheme (Piyarain and Janjaroen, 1994).

In the future, the experience from Singapore should be applied to Vietnam by establishing the *family saving fund* which can be used to pay for medical expenses of family members, that is a shared responsibility in looking after the welfare of family members, and to avoid incurring medical expenses. Faced with mounting costs of the medical services, the Ministry of Health of Singapore started to look at various options for changing the health financing system. The problem was to keep the balance between demand and supply capacity. With growing affluence and greater health consciousness, many people are wanting more and better services, so *Singapore's family savings scheme* (MEDISAVE), was established in 1983, attempts to impose savings and to restructure the system of health care financing.

In addition to promoting individual responsibility for maintaining good health, it also aims to build up financial resources so as to provide the means to pay for medical care during illness.

The savings are regularly set aside by the transfer of 6% of earnings into a personal Medisave account. Funds can be withdrawn from the Medisave account to pay for hospital charges and some outpatient procedures. Medisave also can be used to pay for the medical expenses of family members, so there is a shared responsibility in looking after the welfare of family members, and to avoid incurring medical expenses (Donaldson and Gerard, 1993).

4.6 **Previous Studies and Comments on Health Insurance and VHI Programs in Vietnam and Haiphong**

Carrin, Murray and Sergent (1993) commented on "Towards a Framework for Health Insurance Development in Haiphong, Vietnam", that in Vietnam, an endeavor is made to introduce health insurance at a national scale, and province and district levels will have a large say in the development of health insurance. In Haiphong, the VHI scheme established basically provides for health insurance against costs of hospital services. Haiphong needs the health insurance development planning and study, in order to reach the objective of extending the membership of the VHI program.

In terms of management, Vietnam is to be congratulated on having established so quickly an administrative system for the scheme which has succeeded in enrolling so many insured persons and making payments to the providers; and health insurance has not led the ministry of finance consciously to cut the health budget. The introduction of health insurance has improved the drug supply position. Some of the extra drugs bought for health insurance are being used to supply the poor when stocks have run out. *The key* to maintain the health insurance in Vietnam is reduced supplies at lower cost more rational prescribing, and a way of *keeping the premium down* while still going a long way to meet the most important needs on a *family basis* for VHI card is one of *solutions to extend the membership* of VHI program in Vietnam and in Haiphong also (Abel-Smith 1993). Because of that, one of the objectives of VHI in Vietnam is increasing the access to health insurance, by defining

health insurance premiums that are attractive for the voluntary insured (Ron 1995).

In summary, Carrin, Murray and Sergent (1993) suggested as follows :

(1) The same as other countries, health insurance in Vietnam is a means of pooling risks among the insured population and operates on the principle of redistribution of financial resources. Simultaneously, health insurance helps to finance the health care delivery system in Vietnam.

(2) Management of a health insurance scheme must be clear as to which services it will cover and what it will reimburse. It needs to work closely with other parties, particularly hospitals.

(3) It is necessary to establish an appropriate premium for VHI scheme in Haiphong. The premium much be set in anticipation of estimated health expenditures.

The total amount of premiums must be based on the expected health care expenditures incurred by the insured. The costs are tied to the costs of operating a hospital. The health insurer must have access to those cost data.

(4) The payments by the health insurer must be structured in a way that encourages the hospitals to meet efficiency and effectiveness targets. The health insurer should not be required to simply reimburse the hospital for whatever costs it incurs. In this respect, the feasibility of adopting flat payment mechanisms needs to be investigated.

(5) The components of the costs of a health insurer are the membership size, the utilization rate of the membership, the costs of hospital services and the administrative costs related to the management of the health insurance scheme.

(6) Accrual accounting, annual budgets, the preparation of annual financial statements and regular (at least quarterly) reporting to management and government is an essential part of good management.