



**“WILLINGNESS TO PAY  
FOR SOCIAL HEALTH INSURANCE:  
A CASE STUDY OF  
KAMPALA (UGANDA).”**

by:

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## **DECLARATION**

This research paper is my original work and has not been submitted for any academic and/or examination purposes at any other university.

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**CHARLOTTE W. MUHEKI**

This research paper has been submitted for examination with my approval as the University Supervisor.

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- *Charlotte W. Muheki.*

## **LIST OF ABBREVIATIONS**

AAR	Africa Air Rescue
AIDS	Acquired Immune-Deficiency Syndrome
ATP	Ability To Pay
GDP	Gross Domestic Product
MOH	Ministry of Health
NGO	Non-Government Organization
NSSF	National Social Security Fund
PHC	Primary Health Care
SHI	Social Health Insurance
UIA	Uganda Investment Authority
WHO	World Health Organization
WTP	Willingness To Pay

## **ABSTRACT**

In the face of rising health care costs and reductions imposed by budgetary cuts, many governments in developing countries are considering alternatives, other than general tax revenue, to finance their health services. The most popular options, so far adopted, include *user fees, community pre-payment schemes, and health insurance.*

Social Health Insurance has been identified, by policy-makers in Uganda, as a potential source of extra funding for the health sector. As the establishment of the feasibility and viability is a formidable task, this study was restricted to the evaluation of one of the aspects that needs to be investigated before the introduction of social health insurance.

The main aim of this study was to explore employees' willingness to pay for Social Health Insurance (SHI), and to identify the factors that influence their willingness to contribute to a SHI scheme. Through the study I was also interested in establishing the extent to which employees' socio-economic characteristics and the SHI attributes affect their willingness to pay.

The study was carried out in Kampala, Uganda's capital city. A survey was conducted, whereby 400 employees were interviewed. The respondents were selected from both private and public sectors, using a two-stage simple random sampling technique in each sector. Data collected from the interviews was used to run a loglinear model, where the dependent variable was the *logarithm of the maximum amount employees were willing to pay.* The independent variables included the employees' socio-economic characteristics, and some of the attributes of the SHI policy, such as size of premiums and benefit package.

Keeping in mind the requirements of SHI and the limitations of the WTP approach, and considering the designs and limitations of similar empirical WTP studies, this study, has

used the *direct* method of eliciting WTP values. The design of this study has been constructed in close collaboration with previous studies in the field. Consequently, a reasonable amount of caution has been taken in the design of the methodological and theoretical frameworks;

- ◇ The sample was restricted only to people who were formally employed, since the focus of this study is only on one form of health insurance; Social Health Insurance.
- ◇ To minimize bias, both open-ended and closed questions were used and construction of questions asked was done with care.
- ◇ Based on the fact that contributions are normally deducted from the payroll, the presentation of a hypothetical market explained that deductions would be subtracted from employees' salaries.
- ◇ Great care was taken in explaining to the interviewers, that the WTP responses elicited depended on the way the SHI hypothetical markets were presented to the interviewees.
- ◇ Lastly, the results from this study have been interpreted with caution, especially since the WTP method is still in the infancy stage.

Major findings from this study indicate that:

1. Employees' enrollment in SHI schemes can be made compulsory, since about 77% of the employees were willing to join SHI and 91% were willing to pay contributions to SHI Fund.
2. Several factors affect employees' rate of willingness to pay. The most significant factors are: their levels of income, their education levels, the amount of money they currently spend on health care, the extent to which paying of premiums would result in the foregoing of some important consumption items, and their perception of quality of care in health facilities. Factors such as age, gender, marital status, source of

medical care, household size, and administration of the health insurance fund, were found to be insignificant.

3. Increasing employees' incomes would stimulate their willingness to pay.
4. If the premiums are set high enough to cause employees to forego vital consumption items, their willingness to contribute declines.
5. If SHI schemes are to cover services provided in the public sector, there is a need to first improve the quality of the existing services.
6. Educating the people about the importance, objectives and design of SHI is of crucial importance, and it must be done thoroughly before introducing the policy.

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## CHAPTER 1: PURPOSE AND SCOPE

### 1.0: INTRODUCTION

This chapter gives the background of this study. Here, the research problem is defined and justification for the study is given, as well as its objectives. The chapter concludes with an outline of the organization of the rest of this report.

### 1.1: BACKGROUND

In most developed countries, good health is regarded as a basic right for all people, as declared by the World Health Organization (WHO, 1978). These developed countries have National Health Services, where services are offered free at the point of consumption or at minimal costs. This is possible because their health sectors are allocated substantial financial and human resources by their governments, and mostly so because the majority of their population are members of some health insurance scheme.

This, however, is not the case in developing countries. Unlike in the developed countries, the health sectors of most developing countries are under-financed. In the past, funding for the health sectors of these countries has come from general tax revenues and from donor funds. However, this funding has not proved adequate to provide the basic right of good health for all in these countries.

The introduction of new technology in the health sector, coupled with the emergence of many terminal diseases (such as AIDS) have stimulated new health care needs, which has resulted in the escalation of health care costs. This escalation of health care costs and the realization that donor funds are not sustainable, have alerted governments of developing countries to the fact that the

health sectors need more financial resources, and that extra funds have to be sought from sources other than general tax revenue.

In view of this, many governments in developing countries are considering alternative options to finance their health services. These financing options include user fees, community pre-paid schemes and health insurance.

- ◊ The *user-fees* option (i.e. payment at the health facilities, of part of the cost of services) has been tried out in many countries (e.g. Ghana, Uganda and Kenya), but several studies (e.g., Arhin, 1995; Mwabu, 1996) have shown that user fees have a negative impact on service-utilization, because they restrict access to health services, especially for the poor.
- ◊ *Community pre-paid schemes* (i.e. community-based insurance schemes, where contributions need not be in monetary terms) have also been adopted in some countries (e.g. Zambia, Burundi and Ghana), and their success seems to be much better than that of user-fees. However, the amount of funds generated from such schemes is relatively low because most of the funds from members depend on seasons (e.g. for farmers), and sometimes contributions are not in cash form.
- ◊ The *Social Health Insurance* (SHI) option (i.e. health insurance for the formally employed, and sometimes the self-employed) has, until recently, been the least used of the three, probably due to its administrative and managerial complexities. This option has gained popularity, however, especially after the failure of user-fees in most countries.

Social Health Insurance could be both feasible and viable, but at the same time undesirable in a given country. Normand & Weber (1994), point out that SHI is a risk-pooling venture which requires that the people involved have a mutual

understanding of it being a good thing. If this understanding is not there, the introduction of SHI will be met with resistance from the people involved. Furthermore, some people fear that the introduction of SHI might have a negative impact on employment, especially if employers are made to contribute part of the insurance premium. This is likely to happen particularly if joining of the SHI schemes is made compulsory for all formal employees, in which case the employer would have to make contributions for each employee. If SHI schemes are made compulsory, it is likely that employers will employ fewer people. In relation to this, therefore, it is important to establish the stakeholders' views and attitudes about the SHI policy, before it is introduced.

## 1.2: THE PROBLEM

The increasing interest given throughout the world to the financing of the health sector is a reflection of the problems being faced by nations, in trying to cope with the spiraling costs of health care (Jayasuriya, 1990). There have been relatively few studies on health insurance (including community pre-payment schemes) in Africa (Abel-Smith & Rawal, 1994; Arhin, 1996; McIntyre, 1997). With the exception of the study on Tanzania, by Abel-Smith & Rawal (1994), that investigated employers' willingness to pay for SHI, most other studies in Africa have focused on the feasibility and viability of SHI. None of these studies has tried to establish the extent to which the different socio-economic characteristics of individuals, and the SHI attributes, affect the choices made by employers and/or employees on joining or contributing to SHI.

One of the major problems facing the health sector in Uganda is the lack of adequate funding. SHI is one of the potential financing mechanisms that is currently being investigated by policy-makers in Uganda. Currently, the policy-

makers are concerned especially with the feasibility and viability of this option, in the Ugandan political and socio-economic context. Following the Ministry of Health's identification of SHI as a potential financing mechanism, German Consultants were employed to examine the different health insurance schemes that could be workable. From their findings, they recommended different health insurance schemes for different groups. For example, compulsory Mutual Health Funds (MHFs) were recommended for formal employees and their employers. Local Health Care Plans (LHCPs) were recommended for rural areas. The study did not establish people's willingness to join and to contribute, nor did it evaluate the likely impact of SHI on employment. Apart from this, no other study has been carried out on health insurance in Uganda. Social Health Insurance has not been implemented yet. This study wishes to establish the desirability of the Social Health Insurance (SHI) option, as a financing alternative in Uganda, in terms of willingness to pay for SHI; a crucial issue that has not been tackled at all.

The investigation of the feasibility of SHI is quite complex and before embarking on introducing SHI, several critical issues need to be evaluated in great detail. Some of the crucial questions that the Ugandan government must address are:

- ◇ Is SHI a feasible and viable option for Uganda?
- ◇ Are employees and their employers willing to join SHI?
- ◇ How would employees' decisions to join and contribute to SHI be affected by their socio-economic characteristics and the SHI attributes?
- ◇ What is the likely impact of the introduction of SHI on employment?
- ◇ What would the potential political, social, economic and institutional bottlenecks be in the introduction of SHI?

Establishing the feasibility of SHI, in any country, is a formidable task that involves addressing all the questions listed above. This study does not intend to embark on

such an enormous task. Instead, it seeks to address only a small part, that of employees' willingness to pay contributions to a SHI fund. The major focus of this study is specifically outlined in the next section.

### **1.3: STUDY OBJECTIVES**

The objectives of this study are to:

- (1) Investigate the existing health schemes provided by employers for their employees.
- (2) Investigate willingness of employees to make compulsory monthly contributions to a SHI fund, in return for a defined health benefit package.
- (3) Identify the key factors affecting employees' choice on willingness to contribute to such a fund.
- (4) Estimate the effects of employees' socio-economic characteristics and the SHI attributes (identified in 3 above) on their decision about how much to contribute.

### **1.4: JUSTIFICATION**

Results from this study will be of particular importance to the Ugandan MOH, which is currently grappling with the evaluation of other crucial issues relating to the introduction of SHI. To obviate duplication of effort and resources, I have concentrated on the area which has not yet received attention, but which is crucial and central to the successful introduction of SHI. In addition to finding answers to the objectives stated above, results from this study will inform policy-makers in Uganda about:

- ◊ the extent to which employers are willing to join and contribute to SHI;

- ◇ Employees perception of quality of care in the public, private and missionary facilities;
- ◇ Employees' major source of health care and their levels of expenditure on health care;
- ◇ the preferred health care provider; and
- ◇ the preferred institutional framework (i.e. administration of the fund).

Knowledge of people's attitudes towards paying for the existing health services would be important to the policy makers in the Ministry of Health. For instance, the extent to which employers contribute to their employees' health expenditures gives an indication of their interest in having healthy employees, and is thus indicative of the fact that they might be willing to contribute to their employees' health insurance. This will inform decision-makers about the extent to which employers will welcome the introduction of SHI.

Establishing employees' willingness to join and the factors that influence their choices would provide information about the possible areas of resistance, which would enable policy-makers to establish mechanisms to minimize such resistance. This information would also be helpful in determining whether joining a SHI scheme should be made compulsory or not.

Of equal importance to the policy-makers, is the knowledge of the maximum amount employees would be willing to pay as a monthly premium. This is crucial information, which will give policy-makers an estimation of the amount of money to be set as premiums for different benefit packages. Information on factors that affect employees' willingness to pay would also be useful for establishing means of stimulating willingness to pay higher contributions.

Furthermore, knowledge about the preferences on contents of the benefit package, the preferred health care providers and the preferred institutional framework, would

provide a useful guide for determining what to include in the health insurance benefit package, how services should be provided under SHI, and who should administer and run the SHI fund.

Apart from being of use to policy-makers in Uganda, results and conclusions from this study might be helpful to other researchers and to the donor community. Such results might create a basis for future research and/or a basis for ideas around the funding of particular projects in Uganda.

## **1.5: ORGANIZATION OF THE REMAINING CHAPTERS**

Chapter 2 gives a brief description of Uganda's political, social and economic background. An analysis of the existing health system is given and the level of development of the insurance industry is explained.

Chapter 3 reviews the available literature on SHI, and on willingness to pay (WTP) as an approach to establishing monetary values for health services. It looks at the design and methods used in the previous WTP studies, as well as their limitations. The chapter discusses the main findings on the *Social Health Insurance* and *Willingness To Pay* concepts, and highlights the strengths and limitations of the WTP method to valuation of health services or programs.

Chapter 4 focuses on the Conceptual Framework of the study. It expounds on the loglinear model, used to determine the effect. In this chapter also, the explanatory variables, which explain the choice of how much to pay for SHI, are defined. It also discusses the estimation procedures and the expected causal relationship between the dependent and explanatory variables.

In Chapter 5, the Fieldwork Methodology of the study is explained. This chapter describes the sampling frame (justifying the selection of Kampala as the area of study), the sample size, the sampling techniques, and the data collection techniques. It also discusses the limitations of the sample.

Chapter 6 presents the results of the study. A full description of the results is presented and explained. This includes both the descriptive statistics and regression results.

Chapter 7 analyses the results presented in the previous chapter. It evaluates the extent to which the study objectives have been realized. Finally, based on the findings of the study, policy recommendations and suggestions for future research are offered.

## CHAPTER 2: INFORMATION ABOUT UGANDA

### 2.0: INTRODUCTION

This chapter provides some background information on Uganda. In section 2.1, the political background is discussed. Section 2.2 discusses the economic, social and health indicators. Section 2.3 presents a brief description of the insurance industry. Section 2.4 discusses Uganda's health policy and health service provision. The chapter concludes with a brief situational analysis of the health sector.

### 2.1: POLITICAL BACKGROUND.

Uganda is a landlocked country in East Africa and covers an area of approximately 241,000 square kilometers. She received her independence in October 1962, having previously been a British colony.

The political state of Uganda took a turn for the worse in 1966 when the then president was ousted by the army, and reached its worst when General Idi Amin Dada became president. The Amin years were characterized by widespread violence and repression. In 1972, he expelled the Asian community, who controlled more than 90% of the private sector manufacturing and retail trade in almost all the major towns in the country. As a result of this, other foreign investors left the country. By early 1973 there was an unprecedented outflow of skilled personnel from the country. This, together with the expulsion of the Asian entrepreneurs, brought about economic disaster, resulting in a rundown of industry, marketing structures and social infrastructure.

In mid-1979, Idi Amin was overthrown, leaving both the economy and its people on the verge of a total breakdown. The 1980 elections that ushered back Dr. M. Obote

as president were seen as unfair and fraudulent and thus resulted in degeneration into civil war between 1981 and 1986. A new government, the National Resistance Movement (NRM) led by Yoweri Museveni, came into power in 1986. The 16-year period of turmoil, between 1970 and 1986, had serious setbacks on the economy, such as dysfunctional power generation and supply, poor water supply, poor telecommunication systems, defunct and vandalized industrial plants, an inflation rate of about 300%, poor health services as well as abandoned hospitals, schools and farms. In mid-1987 the new government embarked on the first serious attempt at restructuring the economy that had been badly shattered by years of economic mismanagement, political instability and civil war. The economy has been steadily growing since 1987 although there still exists pockets of insurgency in the northern and western parts of the country.

## **2.2: SOCIAL, ECONOMIC & HEALTH INDICATORS**

Registration of births and deaths in Uganda is limited as a reflection of demographic data, however, according to the 1991 Census data, the projected population size for 1997/98 was about 20 million. From the Census data Uganda's population was estimated to be growing at a rate of 2.5% per year, 51% of the population were female and 49% male, and the economically active population (15 - 64 years) was about 49%. Approximately 85% of the population reside in the rural areas and depend mainly on agriculture for their livelihood. About 55% of the population are estimated to be living below the poverty line (Uganda, 1995 and 1996).

Only 40% of the school age population were enrolled in schools in 1990, resulting in a low literacy rate of 54%. As in many developing countries, female literacy is lower (45%) than male literacy (65%). 38.4% of the total population in 1991 were economically active, and only 12% of these were salaried or earned wages, while the

others were self-employed (the most common occupation being subsistence farming which engages about 72% of the working population). The urban population is about 15% of the total population, and its average annual growth rate was 4.8% between 1980-1993 (Uganda, 1985; Uganda 1995).

The estimated Crude Birth Rate (CBR) for 1990-1991 was 52.1 per 1000 population per year. Total Fertility Rate for Uganda (1991) was estimated at 6.8. Life expectancy at birth for both sexes was estimated at 48.1 years in 1991. Generally, the major causes of mortality and morbidity in the country are malaria, tuberculosis, intestinal worms and HIV/AIDS.

Uganda's current GDP stands at US \$ 3000 million (1996/97) and GDP per capita is estimated at US \$ 150, making her one of the poorest countries in the world. Over the past 10 years, GDP has been growing steadily at a rate between 5% - 10%. Uganda is an agrarian economy. Agriculture accounts for about 44% of GDP (1996/97). Although agriculture is still dominant, the structural composition of economic activity has been changing during the past 10 years, with reduced over-reliance on agriculture. The rate of inflation has steadily declined since 1987, and has been a single-digit figure over a long period of time, now standing at about 5%. Uganda's external debt as at the end Dec. 1996 was valued at US \$ 3.6 billion.

As in numerous other developing countries, Uganda's health sector is under-financed. Central government expenditure (1996/97) on the health sector is estimated at about 4.2% of GDP. Expenditure on the health sector is as follows:

*Recurrent* health expenditure (1992/93) was Ushs<sup>1</sup> 152,625 million (or Ushs 8,700 = US \$ 7.27 per capita), 34.4% of which was spent on hospitals, 52.4% on Primary

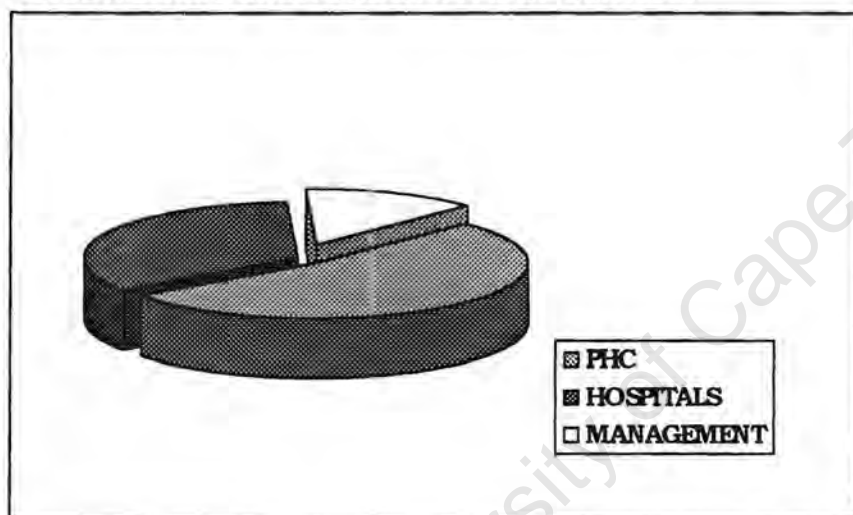
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<sup>1</sup> Currently, US \$ 1 = 1,100 Ushs as at June 1998.

Health Care (PHC) and 13.2% on management and training<sup>2</sup>. Of the US \$ 7.27 per capita expenditure, approx. \$ 5.00 is private expenditure, which includes individuals' costs to travel to health facilities.

Total expenditure on health (1992/93) was estimated to be Ushs 235,565 million. (Note that expenditure on water & sanitation projects is included in capital expenditure on health). 88% of the capital expenditure on PHC was spent on water & sanitation projects. If water and sanitation are excluded, total health expenditure is Ushs 162,578 million (= US \$ 9.57 per capita). (Uganda, 1996).

GRAPH 2.1 EXPENDITURE BY TYPE OF SERVICE.



### 2.3: THE GENERAL INSURANCE INDUSTRY IN UGANDA

Although insurance companies have mushroomed all over the country in the past 10 years, few people who take on insurance. Most of these insurance companies are small establishments which thrive on issuing motor-third-party insurance which, by law, every motorist must have. There are, however, some big and well-established insurance companies, which offer a wide range of insurance policy covers.

<sup>2</sup> See Graph 2.1, which shows expenditure by type of service.

In the past, (even the big insurance companies) have not offered health insurance policy covers. Recently however, two medical schemes were started (both private). These two Kenyan-based medical schemes, 'Africa Air Rescue' (AAR) and 'Medical Evacuation' (MEDIVAC), are located in Kampala. They offer health insurance covering different aspects of health, and thus have different benefit packages, at premiums paid once a year. AAR owns a medical centre where a certain class of their clientele can seek care.

In Uganda, people have a low opinion on insurance companies, and on taking insurance covers. These negative attitudes towards insurance could be attributed to the political instabilities of the past, and to the fact that most insurance companies are overly profit-oriented, and sometimes become unscrupulous in the way they handle reimbursement issues. Many people complained to have had bad experiences with insurance companies. In instances where insurance companies had to reimburse people, they appear to have looked for reasons not to do so.

Related to the issue of insurance, is the National Social Security Fund (NSSF), which is supposed to provide a pension scheme for all formal employees. A monthly deduction is made from their salary, to go into this Fund. Upon retirement however, it is not easy to access the pension because the process is painfully long, and inflation is never taken into consideration when calculating pension. This reduces the pension amount people are entitled to, to almost nothing. With such a reputation, it is indeed little wonder that people have little confidence in such schemes, and might oppose the introduction of any similar sounding scheme.

#### **2.4: HEALTH POLICY AND SERVICE PROVISION**

Following independence in 1962, the governmental health policy continued the trends left behind, curative and urban biases, of the colonial health system, with

little emphasis on preventive health care aspects. Due to international isolation and contracting health finances during the period 1967 - 1985, it was impossible to pursue any national policies, as major attention was placed on the political survival of the country. The 16 years of war and turmoil exacerbated the already precarious situation by displacing people, breaking down the limited health services, and enhancing the spread of malnutrition and diseases (especially HIV/AIDS). As a result of the breakdown of health services, international agencies came to the forefront of service provision (Okuonzi & Macrae, 1995). This, coupled with the lack of government co-ordination, led to further fragmentation of the health system, and increased reliance on external resources.

During the process of recovery, which started in 1987 with the adoption of the Stabilization and Structural Adjustment Programs, in order to identify policy gaps the Health Policy Commission was formed. The Commission recommended a two-pronged policy strategy, which sought to rehabilitate the existing health system and to develop further health care services. The implementation of these recommendations was slowed, however, due to limited capacity within the MOH and insufficient political interest. Donors have greatly been involved in health policy formulation, especially given the fact that Uganda is heavily reliant upon them for financing of the health sector. Okuonzi & Macrae (1995) point out that in 1992, expatriate personnel largely designed the 3-year health plan. This plan recommended that there should be no further expansion of health care infrastructure, priority should be given to the restoration of existing facilities, there should be an orientation of health systems towards PHC, and user-fees should be promoted as an alternative financing mechanism.

Health services in Uganda are provided jointly by government, NGOs, and the private-for-profit sectors. The organization of the health sector is divided into 3

levels, namely:

1. Central,
2. District, and
3. Community levels.

The first level of care is provided at the Community level and run by the community. The facilities found at the community level include dispensaries, delivery & maternity units, and aid posts. A Health Centre is the at the second level (i.e. the District), serving a population of about 20,000 people. It provides curative, preventive, promotive and laboratory services. The third level of care is the hospital. Hospitals sometimes provide PHC services to the people within the local vicinity, implying that the referral system is poor. There are three categories of hospitals: district/rural, regional referral, and national referral hospitals. Among the 49 government public hospitals, 37 are district/rural hospitals, 10 are regional referral, and 2 are national referral (Mulago & Butabika hospitals). Regional referral hospitals offer highly specialized services in about four fields (medicine, surgery, pediatrics, obstetrics & gynecology).

Undoubtedly, the Ugandan health sector is in need of more resources. More resources are needed because the situation of health service provision in the public sector is precarious<sup>3</sup>. Of great importance, therefore, is the identification of a financing alternative that will raise funds specifically for the health sector. The policy-makers have identified Social Health Insurance, as a potential financing mechanism. Before establishing the desirability of the SHI option in Uganda, an exploration of the literature in the field of SHI generally, is made.

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<sup>3</sup> See Box 2.1 on page 16, for the situational analysis of the health sector.

## BOX 2.1: BRIEF ANALYSIS OF UGANDA'S HEALTH SECTOR PROFILE.

- ◆ The biggest and major problem facing this sector is in terms of finances. As a result, the country depends heavily on international donor funding, a by-product of which has been the direct involvement of donors in the formulation of the national health policy. The under-financed health sector in Uganda is plagued with inefficiencies, poor public health services, low staff morale, inadequate supply of drugs in health facilities, long waiting periods, and low service-utilization due to poor services and sometimes inaccessibility to health facilities.
- ◆ The meagre resources from tax revenue are not allocated efficiently or equitably. High levels of corruption have resulted in mismanagement and mis-allocation of public funds, abuse of public offices and a demise in public utilities.
- ◆ Besides having few health facilities (especially in the rural areas), there is poor accessibility of health services, both in terms of having to travel long distances for the services and other resource costs involved on the part of the patients. Housing and sanitation conditions are poor, leaving the communities at high risks of contracting (preventable) diseases.
- ◆ Most of the health facilities are poorly staffed, partly due to the fact that doctors and other qualified staff are not willing to work in rural areas, and those in the urban areas find it more profitable to provide health services for private paying patients. In addition, most public facilities do not have adequate drugs, making working conditions harder for the medical personnel.
- ◆ The health workers are poorly paid, and given their already poor working conditions, their morale is low. Furthermore, their low salaries have resulted into "informal charging" (which amounts to pure exploitation of patients).
- ◆ There is poor regulation of the private and NGO sectors, and in most cases there is no collaboration between these 2 sectors and the public sector. This often results in unnecessary duplication of services.

## CHAPTER 3 : LITERATURE REVIEW

### 3.0: INTRODUCTION

This chapter presents of a critical review of the literature on SHI and WTP. Section 3.1 discusses the background to the need for health-sector financing reforms. The definitional and fundamental issues of SHI are outlined in Section 3.2, and the major components of the SHI system are discussed briefly in Section 3.3. A critical analysis of the WTP - i.e. the Contingent Valuation Approach - is given in Section 3.4. Lastly, Section 3.5 gives an exposition of the empirical studies on WTP for health insurance carried out in Africa and outlines the important ideas from the literature which have been used to design this particular study.

### 3.1: BACKGROUND

Generally, the health sectors of all countries are plagued with problems that cannot be addressed without some degree of government involvement. Owing to a number of market failures in the health sector, simple market solutions do not work well. Such market failures in the health sector are a result of, uncertainty and ignorance of consumers, a monopoly of power of health service providers, the asymmetry of information about illnesses, and the externality element.

One of the most common problems facing the health sector, especially in developing countries, is that of inadequate financing. In the recent past however, owing to declining budgetary resources and rising health care costs, health care financing reforms have become an inevitable phenomenon.

As pointed out by Ensor (1995), the stimulation of such reforms in many countries has been the increased recognition of the fact that health care financing cannot continue to depend on general tax revenue alone, and that donor funds are not sustainable.

As a result of the reforms funds from general tax revenue in many countries are now being supplemented by increasing direct household contributions through a variety of policy reforms such as: community-based financing schemes, user fees at government facilities, and health insurance. These three financing alternatives have had different degrees of success in the different countries where they have been adopted.

From the experience drawn from other countries, the user-fee option has not been as successful as initially hoped. As Jayasuriya (1990) points out that user fees has been a successful option in many countries and as a result, health insurance has emerged as a more attractive alternative. User fees is regarded as a less attractive alternative because of the negative impact it has had on health service utilization in the countries where it has been introduced, for example, in Ghana, Swaziland, Lesotho, the former Zaire, and Kenya, (Arhin, 1995; Mwabu *et al.*, 1991). On the other hand, health insurance is seen as a relatively better alternative, because unlike user-fees, it does not place access to health care at risk for the poorest members of the population.

In order to assess the appropriateness of any financing option, health policy objectives must be explicitly defined, and the main obstacles to achieving them should be identified so that any health financing mechanism can then

be judged in terms of its potential to contribute to the achievement of these goals (Normand & Weber, 1994). Once the appropriate financing mechanism has been identified, careful designing and planning is necessary before the policy can be implemented.

In view of this need for values of health programs, decision-makers are faced with the difficult but important question of how to price health services or programs. One way of doing this is to carry out a willingness to pay (WTP) study for the health service/program in question, from which a rough estimate of a price can be determined. Willingness to pay is important because consumer responses to prices will influence service utilization levels and patterns, and revenues collected. Before analyzing the WTP approach, it is important to define and discuss the requirements of Social Health Insurance (SHI), the policy for which WTP values are being elicited in this study.

### **3.2: DEFINITION & FUNDAMENTAL ISSUES OF SHI**

Health insurance takes on different forms, such as *private health insurance*, *Social Health Insurance*, *community pre-payment schemes*, *Health Maintenance Organizations* (HMOs) and *Preferred Provider Organizations* (PPOs) (Jayasuriya; 1990). One dimension, along which health insurance forms differ, is the extent to which the population is covered by insurance. While some countries have achieved total population coverage (e.g., Korea), that is National Health Insurance, others (e.g., Vietnam) have concentrated on mandatory payment only by people in the formal sector (Yang, 1991; Abel-Smith & Rawal, 1994; Ensor, 1995; Kutzin, 1996; McIntyre, 1997).

Social health insurance is defined as *compulsory* payment of premiums by the formal sector employees and their employers, initially, into a centralized health fund (Jayasuriya, 1990; Yang, 1991; McIntyre, 1997). Kutzin (1996) defines it as a means of paying for health care and ensuring access to services by providing a mechanism for sharing the risk of incurring medical expenditures among different individuals. SHI is based on mutual support and involves a transfer of resources from the relatively healthier and richer people to the sick and poor.

Contributions to a SHI fund are normally made by employees and employers. The proportion paid by each varies across countries. The basis for calculating the contribution is usually the payroll (Normand & Weber, 1994), which implies that ability to pay is a factor implicitly taken into account. Whether or not payroll contributions are the best source of funds for health insurance is a crucial question. Normand and Weber (1994) argue that in most countries, the payroll is the major source of taxation; and hence, in instances where deduction rate is already high, further payroll deductions might result in higher unemployment. In the case of Social Health Insurance for the formally employed, it is important that to ensure that this factor be taken into consideration before recommending that contributions be deducted from people's salaries.

The introduction of SHI is a very complex process, as its success is dependent on several factors. Authors like Ron *et al.* (1990); Jayasuriya (1990), Normand & Weber (1994), Kutzin (1995), and McIntyre (1997)

discuss in detail the crucial factors necessary for the success of SHI, in any country. Normand & Weber (1994) have outlined them to include:

- (1) *The existing health systems.* The existing mix of private and public health services and the current system for provision of health care, are important factors. In countries where health services have been provided free-of-charge by governments at a reasonable level of satisfaction, the introduction of health insurance is likely to meet with strong resistance.
- (2) *Level of economic development* (i.e. size of the formal sector). Since SHI requires a large risk pool, the bigger the formal sector the better. SHI can, however, be extended to the informal sector, particularly the self-employed people.
- (3) *Supply of facilities and human resources.* Health insurance gives the insured population an entitlement to health service. It is important, therefore, to ensure that health infrastructure and adequate human resources exist to provide these services.
- (4) *Demand for quality.* If the quality of care provided in the public facilities is perceived as being poor, consumers tend to take up the consumption of private services. In the event that private services provide adequate 'perceived quality' at affordable costs, the introduction of compulsory health insurance - covering only services in the public facilities - is likely to be met with resistance.
- (5) *Technical and managerial capacity to administer and support health insurance issues.* It is necessary to identify the administrative needs of an insurance system and decide whether they can be met.

Insurance arrangements require considerable administrative and managerial skills, as well as computerized systems.

It is important to note, as authors like Ron *et al.* (1990), Abel-Smith & Rawal (1994), and Kutzin (1996) argue, that the feasibility and success of a SHI policy will depend, not only on whether the above-mentioned necessary conditions are in place, but also on other factors which include: the stakeholders' perception of the benefits of insurance (premiums should be lower than the expected cost of care without insurance), the size of the insured group (risk pooling), the stakeholders' willingness and ability to contribute, the provider reimbursement mechanism, the measures put in place for cost containment, and the extent to which the SHI fund receives finances from other sources.

### **3.3: COMPONENTS OF A SHI SYSTEM**

#### **3.3.1: POPULATION COVERAGE**

From the experience of several countries, SHI initially covers sub-groups of the population. Over time, coverage is then extended to other groups, until the entire population is covered. Some countries have managed to achieve this in a relatively short time (e.g. Korea which achieved it in 13 years) and others have taken longer, or even stopped at covering only part of the population. There are several target groups for SHI, such as, employees, the self-employed, special groups (e.g. military personnel), and the non-working groups (e.g. the pensioners, the disabled, students, etc.). Given the variety of potential target groups, several aspects need to be considered in the

development of a population coverage policy. Normand & Weber (1994) outline the following aspects:

- ◇ *Political*: what is the political impact of including or excluding certain groups?
- ◇ *Technical*: what kind of risk mix is needed to ensure a functioning health insurance system?
- ◇ *Feasibility*: will it be feasible to cover a large number of different population groups?
- ◇ *Membership*: will the system be compulsory or voluntary? What are the problems associated with voluntary membership?" [p 38].

Taking all four points into consideration, a country should initially concentrate on introducing health insurance for one group (e.g. the formally employed), and should later extend suitable insurance schemes to other groups of the population.

### 3.3.2: BENEFIT PACKAGE

The range of benefits under an insurance scheme varies between countries and sometimes between different population groups within the same country. It is, however, important to design the benefit package in such a way that the people to be insured perceive the benefits to be higher than what they would have achieved without being insured.

The ideal benefit package for a specific country will depend on several considerations such as those outlined by Normand & Weber (1994):

- ◇ the available financial resources,
- ◇ the existing infrastructure and quality of health services,
- ◇ assessment of health care priorities,

- ◊ the rate of health care utilization by the population entitled to the benefits,
- ◊ the cost of health care services,
- ◊ the pattern of diseases in the population, and
- ◊ the methods of providing health care benefits [p 45].

They also advise that it is important to consider the following questions when designing or planning entitlement provisions:

1. What are the existing morbidity patterns and corresponding health needs?
2. What are the priorities for benefits?
3. What kind of benefits can be provided? What is the relationship between the available financial resources, the desired benefit package and the associated cost?
4. Can the existing infrastructure support the planned benefit package? Is there a need for additional investment and training?
5. Are there other schemes that provide services that overlap with the health sector? Will there be a need for co-ordination or restructuring of the benefit package?" [p 51].

These question are, indeed, crucial and need to be specifically addressed during the process of designing a benefit package.

### 3.3.3: PROVISION OF HEALTH SERVICES

Under SHI, methods of service provision are usually classified as *direct* or *indirect* methods (Abel-Smith, 1992; ILO, 1993; Normand & Weber, 1994). The organization that runs and administers the health insurance fund is responsible for defining how services will be provided to the insured group.

In the *direct* method, medical professionals are salaried and the fund builds and organizes the facilities from which services will be provided. This model is found in Greece, Spain, and Latin America (Abel-Smith, 1992).

The *indirect* method is one, which contracts the already existing private providers and pays them on a fee-for-service basis or some other agreed mode. This model is prevalent in Canada, Japan and Germany. Usually, central government regulates these health insurance schemes.

#### 3.3.4: PROVIDER PAYMENT MECHANISMS

In each method of service provision, there are several ways of reimbursing providers (Roemer, 1987; Yang, 1990; Ensor, 1995; ILO, 1993; Abel-Smith, 1992). The most commonly discussed mechanisms include

- ◇ fee-for-service;
- ◇ case payment;
- ◇ daily charges (*per diem*);
- ◇ flat-rate payment;
- ◇ capitation; and
- ◇ salary.

Each of these methods has its advantages and disadvantages, and has a different impact on quality of health care services, cost containment and administration. Generally speaking, the choice of provider-payment depends on the existing health systems in a given country. Abel-Smith (1992) argues that some reimbursement mechanisms are too costly to operate, and warns that what might be tolerated by providers in one country may be totally opposed in another. Each country is therefore encouraged to work out a scheme that would best suit their situation. Authors like Yang (1991), Abel-Smith (1992), Normand & Weber (1994), and Kutzin (1996), recommend a

combination of two or more of the above reimbursement mechanisms, in order to encourage certain behaviour or to penalize inappropriate health services provision patterns.

### 3.3.5 : FINANCING OF SHI

There are several sources of finance for SHI, such as: contributions, co-payments, user-charges, interest on reserves and, government subsidies.

Contributions, the major source of revenue in SHI, are calculated in many ways. Each method of calculating contributions has a different effect on the distribution of the burden of contributions among the social insurance members. Contributions can be *flat rate and equal*, or a *percentage of wage/income*, the latter being the most frequently used. Contribution Rate (CR) as percentage of income is calculated as follows:

$$CR = \frac{\text{cost of benefit} + \text{admin. costs} + \text{changes in reserves}}{\text{Total sum of salary}} \times 100$$

(Normand & Weber, 1994; p. 89).

Co-payments take various forms e.g. *flat rate*, or *percentage of fee/price*, and are intended to encourage the insured people to contain their consumption of health services, and to reinforce or discourage certain types of behaviour (*ibid.*).

### 3.3.6 : COST CONTROL METHODS

Controlling cost increases is one of the major problems faced under SHI. Normand & Weber (1994) argue that experience from several countries (e.g.

China and USA) shows that health care costs tend to rise faster than GDP and faster than salaries, thus leading to higher contribution rates. From their point of view, the analysis of rising costs can be seen from 2 sides of the problem; the *demand* side and the *supply* side. On the demand side, the major strategies for containing demand are: carefully designing the benefit package, introduction of co-payments and user-charges, refunding part of the contribution at the end of the year if the patient has not claimed benefits, and restricting the choice of provider. On the supply side, costs and their growth are mainly dependent on provider-reimbursement mechanisms.

#### 3.3.7 : ADMINISTRATION AND MANAGEMENT

Establishing a health insurance system can be a formidable administrative task. As Roemer (1987) argues, there is a need to pilot the scheme before it is introduced at national level, because a system adapted from elsewhere may not work well in a new place. It is also important to establish an administrative agency, to carefully choose the controlling board, staff and equipment, and to install a system for financial control and monitoring before introducing SHI. Administrative staff would need substantial training. Additionally, Abel-Smith (1992) contends that a system of collecting contributions and contracting providers must be established, and that the provider-payment mechanisms should be carefully selected, if a health insurance scheme is to be successful. There is need to have in place an information system to monitor utilization, costs and quality. All together, these are time-consuming and contentious tasks, which require highly skilled personnel.

### 3.4 : WILLINGNESS AND ABILITY TO PAY CONCEPTS

Measuring of benefits from health programs or services is a difficult, but crucial task. The *Willingness To Pay* (WTP) method is an approach to the valuation of health programs/intervention benefits, and if properly employed, it is consistent with the principles of welfare economics and cost-benefit analysis. WTP is a concept, which is increasing being used to provide information for decision-making and priority setting. Although not without controversy, the WTP approach has been used in several studies in economics and other fields (Thompson *et al.* 1984; Donaldson, 1989; Donaldson, 1990).

In the health sector, WTP methods have been developed to value the benefits of health programs/interventions. For example, with the rise of cost-recovery in many developing countries, the WTP approach is now being used in social and economic contexts to obtain information on subjects such as the demand for public services if user charges are introduced, the potential revenue that could be raised, and the sustainability of the policy change (Russell *et al.*, 1995).

Willingness to pay values can be obtained in two ways:

- (a) In the *indirect* method, WTP values are obtained by observing and modeling people's past health care utilization and expenditure.
- (b) In the *direct* method, values are obtained by asking people directly how much they would be willing and able to pay for goods or services (Gafni, 1991; Russell *et al.*, 1995). The direct approach of eliciting WTP values is sometimes referred to as the *Contingent Valuation* (CV) approach because

the elicited values are contingent upon a particular hypothetical market described to the respondent.

Russell *et al.* (1995) argue that the indirect method may sometimes be inappropriate because:

- (1) a market for the health service may not have existed previously because the services had been freely provided;
- (2) the price paid for the service in the past may not reflect the maximum that a patient might be willing to pay; and
- (3) willingness to pay for a service is sometimes related to situations and non-price factors, such that a patient might be willing to pay different prices for a given service under different conditions.

For the direct method, although there is no general consensus on the best question format, a number of alternatives have been commonly used in WTP studies. Mitchell & Carson (1987), WASH (1988), and Russell *et al.* (1995) have identified the following alternatives and the difficulties associated with them:

- ◇ *Open-ended questions* - these have been criticized on the grounds that respondents find it hard to pick a value out of the blue, if the service on offer is not familiar to them.
- ◇ *Closed questions* - these are believed to be a better technique, because they simplify the market situation for the respondent, but they are also criticized on the grounds that they do not provide the maximum WTP amount.
- ◇ *Bidding Games* - here, different prices are suggested to the respondent, and the interviewer bids the respondent up or down depending on the

answers given. This technique has been used in several studies, but has been criticized because there is a danger that the starting value in the bidding game will bias responses.

In other words, the respondent attaches a value to the goods or services based on the hypothetical description and information given by the interviewer. This means that the manner in which such information is provided will determine whether or not people give true WTP values. The Contingent Valuation approach is vulnerable to miscommunication between what the interviewer says and what the respondent understands it to be. More specifically, the WTP approach has its limitations in the possibility of bias in question wording or research procedures. The potential sources of bias have been discussed widely in the literature (Mitchell & Carson, 1986), thus giving a chance to researchers to minimize such sources of error. Caution that WTP surveys have to be carefully designed, is given by several authors like Mitchell & Carson (1986), Morrison & Gyldmark (1992), Russell *et al.* (1995), and Russell (1996). Indeed, the way questions are phrased will have a considerable impact on the values obtained from the respondents.

Related to this, is the interpretation of results from WTP studies. Russell *et al.* (1995) argue that apart from the biases that might be introduced by the wording of questions, there is doubt as to whether people can give meaningful answers to these questions. Respondents answers depend on the information provided by the interviewer about the service, implying that their responses may not be reliable if they do not understand the information, or if the information provided is insufficient or inaccurate. It is therefore

crucially important that results from WTP studies be interpreted with caution.

Donaldson (1990) points out that the WTP method is worthy of further investigation regarding its refinement and possible application to health care programs. She argues that the nature of the commodity "health care" must be taken into account when eliciting WTP values. The nature of the health care commodity is quite different from the traditional economic commodity in that health gain (the expected benefit from health care) has value in use, but no value in exchange. Health care is perceived as unique because, unlike most goods, it is usually unpredictable, and even more interesting, its purchase does not always result in cure. Given this, and the externality element of the health care commodity, the question is posed as to what the utility function of health care contains. Donaldson (1990), thus points out that, with such caveats, it becomes questionable as to what one is eliciting willingness to pay for.

An important concept related to WTP, is that of *Ability To Pay* (ATP). In many developing countries people's ability to pay for health care, i.e. the affordability of health care, has become a critical policy issue. Most literature on affordability of health care has focused on willingness to pay (WTP), and most authors have assumed its synonymy with ATP. But authors like Russell (1996) point out the fact that WTP may not necessarily reflect ATP, and therefore the two should not be taken to be synonymous. He contends that households may persist in paying for health care, but mobilizing such resources may require sacrificing other basic needs like food, clothing and education. He argues further, that the question of affordability is crucially

important, especially in countries undergoing stabilization and structural adjustment programs. In carrying out WTP studies, it is important that the ATP concept be incorporated. Unfortunately, however, methods of evaluating *ability to pay* are still in the initial stages of being experimented. In this regard, this study is limited to evaluating *willingness to pay* and does not in any way address the *ability to pay* issue. Although the questions posed to respondents asked of them, "How much would you be willing and able to pay?" no further mechanisms were employed in this study, to evaluate people's ability to pay.

### 3.5 : EMPIRICAL STUDIES ON WTP FOR SHI IN AFRICA

Abel-Smith & Rawal (1994) carried out an empirical study on employers' willingness to pay for compulsory health insurance in Tanzania. The findings of their study only give descriptive and inferential results. One of the major findings of their study is that even when the formal employment sector covers a small percentage of the population (as small as 3%), a scheme of compulsory health insurance may still be worthwhile. From their study, they also report that the extent to which employers finance the health care of their employees is an important factor, which should not be ignored in the planning and design of a health insurance scheme. There was however, no indication from this study, of the extent to which the characteristics of the firms studied influenced employers decision on willingness to be a part of a compulsory health insurance scheme.

With the exception of the above study, other studies on willingness to pay have focused on WTP for medical interventions or services (Yonder, 1989). The studies that have attempted to investigate WTP for health insurance are those that those on WTP for pre-paid schemes (Arhin, 1995). From her study on the viability of rural health insurance in Ghana, Arhin addresses the issue of 'willingness to pay' and

findings from her study show that the monetary contributions that households were willing to make, were on the condition that the schemes gave access to health care of acceptable quality.

In summary, the following lessons have been learned from the literature review:

- \* Although Social Health Insurance could be a good health financing alternative, its introduction must be well planned, by looking at issues like;
  - ⇒ the different types of health insurance available as alternatives to choose from and the evils associated with each one of them;
  - ⇒ the critical factors necessary for the successful introduction of SHI;
  - ⇒ Population coverage;
  - ⇒ The benefit package;
  - ⇒ The provision of health services under insurance;
  - ⇒ Provider payment mechanisms;
  - ⇒ Financing of SHI;
  - ⇒ Cost control, administration and management of the schemes.
  
- \* Before the introduction of SHI, there is need to measure the willingness and ability of the people, who are going to be covered by the scheme. This is important that in the sense that, such evaluation will provide crucial information upon which the design of the SHI scheme(s) could be based. For instance, this willingness and ability to pay evaluation will provide information on how much people are willing and able to contribute as monthly contributions, and also information on how best to design the program so as to minimise rejection from the stakeholders involved. While conducting a willingness-to-pay study is important, it is important to keep in my mind the caveats of the different methods of eliciting willingness-to-pay values.

## **CHAPTER 4 : CONCEPTUAL FRAMEWORK**

### **4.0 : INTRODUCTION**

The purpose of this chapter is to outline the analytical framework which will be used in identifying the key factors affecting employees' willingness to pay for health insurance. Fieldwork was done in both the public and private sectors, and it undertook to interview employees on their willingness to contribute to SHI. Details on methodology and data collection are presented in Chapter 5. In this chapter, assumptions made are outlined and the specification of the model is discussed in section 4.1. The dependent and independent variables are defined in section 4.2, and their hypothesized casual relationship is discussed in section 4.4. The estimation procedure is explained in section 4.3.

### **4.1 : THE MODEL : ASSUMPTIONS AND SPECIFICATION**

#### **4.1.1 : ASSUMPTIONS**

Before building the model to be used in this study, some assumptions need to be made:

1. Firstly, that employees are risk averse, and as such, are likely to take part in contributing to a SHI Fund.
2. It is also assumed that their decision to make contributions to a SHI fund is based on rational evaluation of the expected outcomes of the two alternative situations; that is, being covered or not being covered by insurance.

3. The model assumes that individuals are faced with two alternatives, and that their choice depends on their socio-economic characteristics, as well as the attributes of the SHI scheme.
4. It is assumed that the individual's choice of how much to contribute to SHI is a *linear* function of the individuals attributes and the attributes of the SHI program.
5. The error term,  $\epsilon$ , is normally distributed and satisfies all the other assumptions of the Ordinary Least Squares (OLS) model.

#### 4.1.2 : MODEL SPECIFICATION

Following economic theory and given their budget constraints, employees strive to attain the highest possible satisfaction from the consumption of goods and services. If SHI were introduced, an employee would then opt for SHI only if they expected an improvement in their welfare. For different benefit packages, an employee might make varied choice decisions. For example, the employee might be willing to pay Ushs 10,000 as a monthly insurance premium if insurance covered their entire family, but might be willing to pay less than Ushs 10,000 if insurance covered only themselves.

It is assumed that an employee's decision to join or to pay a certain amount of money as a premium, depends on their socio-economic characteristics and the insurance-specific attributes. The employee's decision process can thus be expressed as:

$$U_i = u_i (X_i, Z) \dots\dots\dots(1)$$

where  $U_i$  = utility that an employee  $i$  expects to derive from SHI

$X_i$  = a vector of socio-economic characteristics specific to employee  $i$ .

$Z$  = a vector of the attributes specific to the SHI program.

Since an employee is assumed to behave rationally, their wish is to maximize expected utility. The amount they are willing to pay as insurance premium can be expressed as:

$$P_i = f(X_i, Z) \dots\dots\dots(2)$$

where,  $P_i$  = maximum amount employee  $i$  is willing to pay as a monthly premium,

$$X_i = f(\text{age}_i; \text{education status}_i; \text{family size}_i; \text{income}_i; \dots\dots) \dots\dots\dots(3)$$

$$Z = f(\text{benefit package; perceived quality; membership of other insurance;}) \dots\dots\dots(4)$$

Growth in the amount of money an employee  $i$  is willing to contribute can be represented by taking the logarithm of the amount they are willing to pay, and can be expressed as:

$$\log P_i = f(X_i; Z) + \epsilon_i \dots\dots\dots(5)$$

where  $P_i$ ,  $X_i$ , and  $Z$  are defined as before and  $\epsilon_i$  is the error term, assumed to be well behaved. The final form of the equation would then be:

$$\log P_i = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \dots + \beta_1 Z_1 + \beta_2 Z_2 + \dots + \epsilon_i \dots\dots\dots(6)$$

Disaggregating  $X_i$  and  $Z$ , yields the set of independent (explanatory) variables, which are listed and defined in Section 4.2.2 in Table 4.1 below.

## 4.2 : DEFINITION OF VARIABLES

### 4.2.1 : DEPENDENT VARIABLE

The dependent variable Log (MAXIMUM), is the logarithm of the maximum amount of money an employee would be willing be to pay as a monthly premium to be covered by SHI. The values for the variable MAXIMUM were elicited from the employees, under the assumption that the benefit package would contain coverage of all health services, for the employee's entire family as long as these services were sought from public facilities.

#### 4.2.2 : INDEPENDENT VARIABLES

TABLE 4.1 : DEFINITION OF EXPLANATORY VARIABLES

VARIABLE	VARIABLE DESCRIPTION	EXPECT SIGN
AGE	age of respondent	+
HHSIZE	employee's household size	+
SALARY	monthly salary of respondent	+
EXPEND.	employee's monthly expenditure on health	+
GENDER	gender status of the employee; a dummy; 1 = male, 0 = female	- if 1
EDUC	highest level of education; a dummy, 1 = A' level and above, 0 = lower than A' level	+
MARITAL	marital status; a dummy, 1 = married, 0 = otherwise	+ if 1
SICK	whether a member of the employee's household had been sick a month before the interview; a dummy, 1 = yes, 0 = no.	+ if 1
SOURCE	where employee seeks medical care; a dummy, 1 = private, 0 = other	+ if 1
BILL	how the individual's medical bill paid; a dummy, 1 = out-of-pocket, 0 = otherwise	+ if 1
BENEFITS	a dummy variable; 1 = has health benefits, 0 = no health benefits, from employment	- if 1
TYPE	health benefits available at work for the employee	+/-
QUALITY1	perceived quality of care in public facilities; a dummy, 0 = poor, 1 = otherwise	- if 0
QUALITY2	perceived quality of care in private facilities; a dummy, 0 = poor, 1 = otherwise	- if 0
QUALITY3	perceived quality of care in missionary facilities; a dummy, 0 = poor, 1 = otherwise	- if 0
SHI25	employees view on whether SHI should be implemented; 0 = no, 1 = yes	+ if 1
ADMIN	employee's preferred choice of administration of SHI Fund; 1 = private, 0 = otherwise	+ if 1
COVER1	services covered by insurance; a dummy, 1 = in-patient + out-patient, 0 = otherwise	+ if 1
COVER2	who insurance should cover; a dummy, 1 = employee + family, 0 = otherwise	+ if 1
FOREGO	whether employee would forego anything by paying the stated amount; a dummy; 1 = yes, 0 = no	- if 1
JOIN	employee's willingness to join SHI; a dummy; 1 = yes, 0 = no	+ if 1
WHAT	items that would be forgone if employee contributed the SHI premium they stated	+/-

### 4.3 : ESTIMATION PROCEDURE

A loglinear model was used to analyze employees' choice of how much to pay as an insurance premium. The aim was to estimate the growth in premium values an employee is willing to pay, conditional on their socio-economic characteristics and the attributes specific to the SHI scheme.

400 observations were used for estimation purposes. The coefficients of the independent variable show the degree to which a specific variable influences variation in the dependent variable. Thus, the  $\beta$ 's show the percentage by which MAXIMUM will change as a result of a unit change in the independent variable. The *ordinary least squares* estimation procedure was used. The following equation was estimated:

$$\log(\text{MAXIMUM}) = \beta_0 + \beta_1 \text{ADMIN} + \beta_2 \text{AGE} + \beta_3 \text{BENEFIT} + \beta_4 \text{BILL} + \beta_5 \text{COVER1} + \beta_6 \text{COVER2} + \beta_7 \text{EDUC} + \beta_8 \text{EXPEND} + \beta_9 \text{FOREGO} + \beta_{10} \text{GENDER} + \beta_{11} \text{HHSIZE} + \beta_{12} \text{MARITAL} + \beta_{13} \text{QUALITY1} + \beta_{14} \text{QUALITY2} + \beta_{15} \text{QUALITY3} + \beta_{16} \text{SALARY} + \beta_{17} \text{SHI25} + \beta_{18} \text{SICK} + \beta_{19} \text{SOURCE} + \beta_{20} \text{TYPE} + \beta_{21} \text{WHAT} + \varepsilon_i \dots\dots\dots(7)$$

where MAXIMUM is maximum amount an employee would be willing to pay as a monthly insurance premium, and the other variables are the independent variables defined in Table 4.1 above.

#### 4.4 : HYPOTHESIZED RELATIONSHIPS

The relationship between the *dependent* variable and the *independent* variables is hypothesized *apriori*, from theory. The expected sign, in Table 4.1 above shows this relationship.

The variables; AGE, EDUC., HHSIZE, and SALARY (a proxy for income) are hypothesized to have a positive relationship with the dependent variable. This means that as these variables increase, the amount an employee is willing to pay as a premium will increase too.

A positive relationship is expected between the dependent variable and the variables, BILL (if the employee currently pays their medical bills out-of-pocket), MARITAL (if the employee is married), SHI25 (if the employee thinks that SHI should be introduced), SICK (if one of the members of the employee's household had been sick a month prior to the interview), SOURCE (if the employee seeks medical care from private clinics), ADMIN (if the administration of the SHI fund is done by a private company), COVER1 (if the insurance covers both out-patient and in-patient services), COVER2 (if the scheme covers the entire family of the employee), and EXPEND (the higher the amount the employee is currently spending on health care, the more willing they are expected to pay a higher premium).

A negative relationship is expected between the dependent variable and the variables; BENEFIT (if the employee is already receiving health benefits in the absence of SHI), FOREGO (if the employee is likely to forego something as a result of paying the stated premium), GENDER (if the employee is male), and QUALITY 1, 2, & 3 (if the employee perceives quality of care as poor).

## **CHAPTER 5 : FIELDWORK METHODOLOGY**

### **5.0 : INTRODUCTION**

This chapter discusses the fieldwork methodology used in the study. It explains the sampling framework, the size of the sample, and the sampling techniques used. Further, it explains the techniques used in collecting the data, and discusses the contents of the questionnaires.

### **5.1 : SAMPLING FRAME**

This quantitative, non-interventionist exploratory study was carried out in Kampala, Uganda's capital city. Being a liberalized economy, both public and private sectors run alongside each other in the provision of health services. The public sector offers a wide range of services in the big regional and referral hospitals, as well as in the smaller rural health facilities. The private sector (including both missionary and private facilities) also provides a substantial number of services, especially in the urban areas, and particularly in Kampala. Most average-income and high-income groups of people in Kampala seek medical care from the private sector, due to their low perception of the quality of services offered in public hospitals and the long waiting periods there.

The population under study, included all people who were formally employed, regardless of age, gender, or nationality. The private sector in Kampala comprises of a considerable number of non-Ugandan employers (mainly from the Asian community), so leaving them out would misrepresent the employment situation in Kampala. Both employees and employers

working in the firms that are owned by non-Ugandans were interviewed. The employee-respondents ranged mainly between the ages of 22 to 50 years (there were a few cases of casual employees below the age of 20 and some cases who were above 50 years).

Kampala was chosen as the area of study due to the following facts:

- (a) The city has a critical mass of formal private enterprises.
- (b) It is the government city, thus most of the ministerial headquarters are situated there.
- (c) It was the most accessible city to the researcher.
- (d) Given the resource constraints, it was not possible to include another city/town in the sample.

## 5.2 : SAMPLE SIZE

Owing to the limitations imposed by resources, the entire population cannot be studied. A representative sample, therefore, has to be drawn from the population. This sample should be made as big as possible in order to obtain more accurate results. Given a specific margin of error, it is possible to calculate the minimum sample size required using the formula:

$$N = \left( \frac{ZS}{D} \right)^2$$

where:

N = the required sample size.

S = the standard deviation of the sample.

Z = a z-value taken from the tables (corresponding to the given confidence level).

D = the margin of error at the specified level of confidence.

(Hammond and McCullagh, 1978).

Thus, with an error margin of 1.5 at the 95 percent level of confidence, and a standard deviation of 15, the required sample size will be given as:

$$N = \left( \frac{2 \times 15}{1.5} \right)^2 = 400$$

#### 5.2.1 : EMPLOYEES' SAMPLE SIZE

The actual size of the sample for employees is 409 ( $N_1 = 409$ ). The employee respondents were sampled from both the private (214 respondents) and public (195 respondents) sectors, but data from only 400 questionnaires could be used (209 from the private and 191 from the public sectors), as nine questionnaires were incomplete.

#### 5.2.2 : EMPLOYERS' SAMPLE SIZE

Using the above formula, with an error margin of 1.6 and a standard deviation of 7.5 the required sample size is 88. The actual size of the sample for employers was 40 ( $N_2 = 40$ ). Owing to the great difficulty in finding them at their places of work, the number of employer respondents (for both private and public sectors) interviewed was smaller than required. About 36 people, who were interviewed as employers were directors, managers or personnel managers, in the case of the private sector. In the case of the public sector, five Under Secretaries were interviewed.

### 5.3 : SAMPLING TECHNIQUES

#### 5.3.1 : PRIVATE SECTOR

A list of firms registered with the Uganda Investment Authority (UIA) was obtained, which gave all firms (and their locations) in the country, in alphabetic order. This list, however, lacked information on the size of the

firms, or the number of people employed by each firm. Under these circumstances, firms were taken on regardless of the number of people they employed<sup>1</sup>. On average, the firms in the sample employed 8 people or more.

A two-stage random sampling method was used. In the first stage, 130 firms were selected using the *systematic random sampling* method, from a population of about 1562 firms situated in Kampala. The second stage involved drawing a random sample of 2-3 employees from the firms in the sample.

Interviews were conducted with the help of two research assistants. Each of the firms in the sample was visited, and permission to interview the employer and a few employees was obtained. *Employee*-respondents from the private sector totalled 214, and this number was obtained from 98 firms. Not all of the 130 firms in the sample were interviewed due to the following reasons:

- (1) some of firms in the sample were found to employ only 1 or 2 people, and were thus deliberately left out of the sample;
- (2) some firms were not found in the locations stated in the UIA inventory, and
- (3) managers or owners of some firms refused to grant permission to interview them or their employees.

The *employer*-respondents from the private sector were chosen from the selected firms in the sample. It was, often difficult to get into contact with

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<sup>1</sup> Originally, I had intended to focus on firms that employed 10 or more people.

these respondents because they were seldom found at their places of work. (Attempts to interview an *employer*-respondent (from a particular firm) ceased after trying three times in vain).

#### 5.3.2 : PUBLIC SECTOR

As in the private sector, a two-stage simple random sampling method was used. The first stage involved drawing a sample of 5 ministries from a population of 26. The second stage involved selecting 25 - 30 respondents from each of the 5 ministries in the sample.

A total of 195 *employee*-respondents were interviewed from these 5 government ministries and one parastatal firm. From these, the respondents were either chosen by the personnel manager or by the researcher (with permission). The number of employees interviewed from each ministry is showed in the Table 5.1. Apart from the ministries and the parastatal firm, respondents were selected from 5 (2 secondary and 1 primary) schools, which were purposively chosen by the researcher, due their ease of access.

The *employer*-respondents from the public sector were as difficult to get into contact with as was the case in the private sector. Due to the failure to reach the Permanent Secretaries of the above-mentioned ministries, the under-secretaries were interviewed instead. A total of 6 employer respondents were obtained from the public sector.

#### 5.3.3 : LIMITATIONS OF THE SAMPLE

Firstly, the study concentrates on Kampala city, where the biggest proportion of the 'better-off' population resides. In some ways, this might not

be representative of the general population of formal employees in the whole country. Another problem lies in the fact that not all firms in the sample were interviewed, for the reasons mentioned earlier. Furthermore, firms that employed less than 10 people were included in the sample, as there was no *a priori* knowledge of the number of people employed in the firms in the sample. (Usually, SHI is not made compulsory for firms that employ very few people).

TABLE 5.1 : DISTRIBUTION OF RESPONDENTS IN THE PUBLIC SECTOR

Ministry / Institution	Number interviewed	Sampling method
EDUCATION	30	List of 30 names purposively chosen by the personnel manager.
FOREIGN AFFAIRS	31	All respondents purposively chosen by researcher.
JUSTICE	29	List of 30 names purposively chosen by the personnel manager.
LOCAL GOVERNMENT	27	All respondents purposively chosen by researcher.
PUBLIC SERVICE	29	All respondents purposively chosen by researcher.
SCHOOLS (3)	36	All respondents purposively chosen by researcher
UGANDA REVENUE AUTHORITY	13	List of names of 11 people provided by senior employee
<b>TOTAL</b>	<b>195</b>	

## 5.4 : DATA COLLECTION TOOLS USED

### 5.4.1 : QUESTIONNAIRES

The study was carried out on two different groups of people, namely; the *employees* and the *employers*. The major focus, was on the employees. Having studied 2 different groups, two types of questionnaires/interviewing guides were designed. Interviewing started off with the private sector. Since permission had to be sought from each firm interviewed, the researcher and two assistants moved together from one firm to another. In most instances, the assistants interviewed the employees, while the researcher interviewed the employer.

### 5.4.2 : OTHER SOURCES OF INFORMATION:

Information on Uganda's political, social and economic situations has been derived from secondary sources of data, especially from publications from the Ministry of Health, and the Ministry of Finance and Economic Planning. Information about the existing private and parastatal firms in Kampala was obtained from the Uganda Investment Authority (UIA). Secondary data has also included information from Journals of Health Economics, Journals of Health Policy and Planning, and other publications. Secondary data was used in the design of the conceptual framework.

## 5.5 : QUESTIONNAIRE CONTENTS

### 5.5.1 : EMPLOYEES QUESTIONNAIRE<sup>2</sup>

The major aim of the study was to elicit employees' *willingness to contribute* to SHI premiums, and to establish the factors that might be responsible for

their choices on joining and contributing to SHI schemes. In order to do this, a short and simple interviewing guide was designed, in which the following investigations were made:

The first section of the questionnaire, sought to elicit respondents' socio-economic characteristics such as age, gender, marital status, highest level of education attained, size of the household and monthly salary/income.

Section 2 elicited the respondents' past health care practices, attitudes and expenditures, as well as their perceived quality of care in the public, private and missionary hospitals/clinics. In this section, respondents were asked to state reasons why the quality of care (in all the three sectors) was perceived in the way it was.

In section 3, the SHI policy was clearly explained to the respondents, who were thereafter asked to give their views on whether such a policy should be implemented. A hypothetical market was created, whereby 2 different benefit packages were explained and, the respondents were asked to state the maximum amount they would be *willing and able* to contribute for each package (an open-ended question). Respondents were asked whether, by contributing the stated amount they would have to forego something from their usual consumption list. They were asked to state exactly what they would have to forego or where they would reduce consumption. In the next question, some values were listed and the respondents were asked again (for purposes of consistency) first, whether they would be willing to join the SHI scheme, and if they did, how much (maximum) they would be willing to contribute (a closed question). Finally a list of common assets was presented to the respondents, who were then asked to indicate which assets they

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<sup>2</sup> See Appendix 1 and 2 for the employees' and employers questionnaires.

owned, and if they felt they would have to sell off (at a later stage) some of these assets as a result of contributing to the SHI fund.

#### 5.5.2 : EMPLOYERS QUESTIONNAIRE

The interviewing guide for the employers was much shorter. The first section consisted of questions about the characteristics of the organization. The questions asked in this section were about, whether the firm was private, parastatal or public, how long it had been in existence, how many people it employed, and the type of work it was involved in.

Section 2 elicited employers' 'perceived quality' of health care services from the public, private and missionary hospitals or clinics. As in the case of employees, employers were asked to state reasons for their impressions of perceived quality in all cases.

In section 3, the SHI policy was carefully explained to the respondents, and questions that followed intended to determine their views on this policy. Respondents were asked whether they thought such a policy should be implemented, what percentage they thought should be contributed by the employer, who they thought should administer such a fund, what such an insurance scheme should cover and who it should cover. A hypothetical market was then explained, where two benefit packages (the same as those in the employees questionnaire) were presented, and the employers were asked to state the *maximum* amount of money they would be *willing and able* to pay, as a monthly contribution for just *one* worker. Lastly, employers were asked whether they thought compulsory enrollment in such a scheme would have any impact on the number of people they employed.

## CHAPTER 6 : EMPIRICAL RESULTS

### 6.0 : INTRODUCTION

This chapter reports the findings of the study. The descriptive statistics are presented in section 6.1; where *employees* results are presented in section 6.1.1; and *employers* results in section 6.1.2. The regression results are presented in section 6.2.

### 6.1 : DESCRIPTIVE STATISTICS

#### 6.1.1 : RESULTS BASED ON EMPLOYEES DATA.

Information was collected on employees' socio-economic characteristics, past health care practices, attitudes and expenditure, and on their views about the introduction of Social Health Insurance. Descriptive statistics for the employees' data are presented in Tables 6.1 and 6.2.

TABLE 6.1 : DEFINITION AND DESCRIPTIVE STATISTICS FOR CONTINUOUS VARIABLES

VARIABLE	MEAN VALUE	STD. DEVIATION
<b>AGE</b> = age of respondent	32.98	8.07
<b>HHSIZE</b> = household size	5.25	3.13
<b>SALARY</b> = monthly salary of respondent (Ushs)	243887.29	225777.76
<b>EXPEND.</b> = monthly expenditure on health	32296.48	41100.25
<b>WTP1</b> = amount respondent is willing to pay if source of care is restricted to public facilities	9597.70	15879.47
<b>WTP2</b> = amount respondent is willing to pay if source of care is both private + public facilities	14250.50	24149.09
<b>MAXIMUM</b> = maximum amount respondent is willing to pay as a monthly contribution, if source of care is public facilities	10776.88	16570.87

Source: Survey Data.

From the 400 people interviewed (nine questionnaires were discarded), it was found that their ages ranged from 22 to 50 years, with an average of 32.9 years. The

household size varied from 1 to 16 with an average of 5.25 persons. The smallest salary was about Ushs 40,000 ( $\cong$  US \$ 40) and the highest was above Ushs 1,500,000 ( $\cong$  US \$ 1,500) with an average salary of Ushs 244,000 ( $\cong$  US \$ 244). On average, people were willing to contribute about Ushs 11,000 as a monthly health insurance premium, the least being zero and the highest being Ushs 200,000. The descriptive results of the non-continuous variables have been presented separately in Table 6.2 below.

TABLE 6.2 : VARIABLE DEFINITIONS AND DESCRIPTIVE STATISTICS (N = 400)

Variable	Responses	Count	%
GENDER = a dummy; 1 = male, 0 = female	Male	233	58.2
	Female	167	41.8
EDUC = highest level of education attained	Primary	6	1.5
	O' level	54	13.5
	A' level	50	12.5
	Diploma	146	36.5
	Degree	144	36
MARITAL = marital status	Never married/single	148	37
	Married	237	59.2
	Divorced	6	1.5
	Widowed	9	2.3
SICK = whether a member of the household had sick in the month preceding the interviews.	No	83	20.7
	Yes	317	79.3
SOURCE = where medical care is sought when	Private	320	80
	Public	48	12
	Private + public	32	8
BILL = how is the medical bill paid	Out-of-pocket	310	77.5
	Employer	56	14
	Insurance	12	3
	Out-of-pocket + employer	22	5.5
BENEFITS = whether employee currently has benefits from employment	No	210	52.5
	Yes	190	47.5
TYPE = health benefits available at work	None	210	52.5
	Clinic on premises	15	3.6
	Contracted doctor	21	5.3
	Contracted clinic	21	5.3
	Claims	32	8
	Medical allowance	21	5.3
	Other (including insurance)	80	20

QUALITY1 = 'perceived quality' of care in public facilities	Not visited	19	4.7
	Poor	204	51
	Average	140	35
	Good	36	9
	Excellent	1	0.3
QUALITY2 = 'perceived quality' of care in private facilities	Not visited	6	1.5
	Poor	2	0.5
	Average	96	24
	Good	264	66
	Excellent	32	8
QUALITY3 = 'perceived quality' of care in missionary facilities	Not visited	73	18.2
	Poor	5	1.3
	Average	77	19.3
	Good	224	56
	Excellent	21	5.2
SHI25 = whether SHI should be implemented	Strongly agree	116	29
	Agree	156	39
	Disagree	98	24.5
	Strongly disagree	30	7.5
ADMIN = preferred choice of administration of SHI Fund	Government	70	17.5
	Private firm	269	74
	Other	34	8.5
COVER1 = Services covered by insurance	Out-patient	12	3
	In-patient	22	5.4
	Out+ in-patient	362	90.5
	Other	4	1
COVER2 = who insurance should cover	Employee	9	2.3
	Employee +	8	2
	Employee, spouse	375	93.8
	Other	8	1.9
JOIN = willingness to join SHI; a dummy variable	No = 0	90	22.5
	Yes = 1	310	77.5
FOREGO = whether the respondent would have to forego something if they contributed the amount said they were willing to pay; a dummy variable	No = 0	210	52.5
	Yes = 1	190	47.5
WHAT = items that would be forgone if people contributed the SHI premium they stated	Nothing	210	52.5
	Rent	7	1.7
	Food	24	6
	Clothes	31	7.8
	Houseware	12	3
	Entertainment	116	29

Source: Survey Data.

The above table shows that from a sample of 400, 58.2% were male and 41.8% female. About 59% of the sample were married, with an average household size of 5

people. 36.5% of the whole sample, had a diploma as their highest level of education and 36% had attained a degree.

80% of the people interviewed were found to seek medical care from the private sector and only 12% sought medical care from the public sector (see Graph 6.1). Most people said they went to the private clinics for care because they were near their homes or places of work, the quality of services there was good, they did not have to wait for long periods to see a doctor, and some said the private providers were the family doctors or friends. 77.5% of the people were found to pay their medical bills out-of-pocket, and only 3% were found to have medical insurance (mostly provided by their employers). About 48% of the people interviewed had some health benefits from their employers, mainly in the form of contracted clinic/doctor (10.8%), claims/reimbursements (8%), medical allowance (5.3%), and other forms of assistance including insurance (20%).

Employees' perceived the quality of care<sup>1</sup> at public facilities to be generally poor (51%), while quality of care at private and missionary facilities was perceived as good (66% and 56% respectively).

68% of the employees favored the proposal that SHI be introduced. About 74% of them had a preference for private administration of the Fund, 91% preferred to have both in-patient and outpatient services covered by the insurance, and 94% said the insurance should cover the whole family.

Approximately 78% of the employees said they would be willing to join the SHI scheme if it started. The average amount of money that employees were willing to pay, if the source of care was restricted to public facilities (Ushs 9,600), was slightly

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<sup>1</sup> Graph 6.2 shows employees' perception of quality of care across health facilities.

lower than what they said they were willing to pay if they were free to seek care from both private and public facilities (Ushs 14,250). The average maximum amount they were willing to pay as a monthly health insurance premium, was about Ushs 10,700.

#### 6.1.2 : RESULTS BASED ON EMPLOYERS' DATA.

Of the 40 firms from which employers were interviewed, 82% were private firms (See Table 6.3). About 60% of the firms employed between 1 - 20 people, while 22.5% employed more than 50 people. The biggest percentage of firms interviewed (80%) were engaged in service provision rather than production.

Of the employers interviewed, 67% perceived quality of care at the public facilities as *poor* and 30% as *average*, while 42.5% perceived the quality of care at private facilities as *average* and 50% as *good*. Several employers interviewed did not have views about the quality of care at missionary facilities (mostly because they had not visited them).

Of the 40 firms, 70% provided health benefits for their employees, the commonest type of benefits being medical allowance, contracting of a specific doctor/clinic where employees can seek medical care, and other minor forms of support (such as free drugs for those who worked in Pharmacies, and occasional financial assistance when sick).

TABLE 6.3 : DESCRIPTIVE STATISTICS FOR EMPLOYERS' DATA SET (N = 40)

VARIABLE	COUNT	%
<i>Type of firm</i>		
Private	33	82.5
Public	2	5
Parastatal	5	12.5
<i>Number of years of existence</i>		
2 - 10 years	27	67.5
11 - 20 years	7	17.5
over 20 years	6	15
<i>Number of employees</i>		
1 - 10	12	30
11 - 20	12	30
21 - 50	7	17.5
over 50	9	22.5
<i>Type of work done</i>		
Production	8	20
Services	32	80
<i>Employer's view of quality of care at public facilities</i>		
Not visited / no view	0	0
Poor	27	67.5
Average	12	30
Good	1	2.5
Excellent	0	0
<i>Employer's view of quality of care at private facilities</i>		
Not visited / no view	1	2.5
Poor	1	2.5
Average	17	42.5
Good	20	50
Excellent	1	2.5
<i>Employer's view of quality of care at missionary facilities</i>		
Not visited / no view	10	25
Poor	3	7.5
Average	15	37.5
Good	11	27.5
Excellent	1	2.5
<i>Does the firm provide any health benefits for its employees?</i>		
No	12	30
Yes	28	70
<i>What type of benefits?</i>		
Clinic on the premises	2	7.1
Contracted doctor where workers go	4	14.4
Contracted hospital/clinic	2	7.1
Reimbursement of medical expenses incurred	2	7.1
Medical allowance is added to their salary	6	21.4
Other (including insurance)	12	42.9

TABLE 6.3 (CONTINUED).

<i>Employers' willingness to join SHI</i>			
	Strongly agree	10	25
	Agree	25	62.5
	Disagree	5	12.5
	Strongly disagree	0	0
<i>Percentage of premium to be contributed by employer</i>			
	0 - 20%	10	25
	21 - 50%	23	57.5
	over 50%	7	17.5
<i>What premium should cover</i>			
	Only out-patient	4	10
	Only in-patient	2	5
	Both out-patient and in-patient	34	85
<i>Who premium should cover</i>			
	Only employee	13	32.5
	Employee and spouse	1	2.5
	Employee, spouse + children	26	65
<i>Employer's view on institutional framework</i>			
	Government owned	3	7.5
	Privately owned	29	72.5
	Parastatal	8	20
<i>Employer's willingness to pay monthly contribution for just <b>one</b> worker</i>			
	0 Ushs *	2	5
	1000 - 5000 Ushs	22	55
	6000 - 10000 Ushs	9	22.5
	11000 - 20000 Ushs	4	10
	over 20000 Ushs	3	7.5
<i>Impact that compulsory SHI would have on number of people employed</i>			
	Reduce number of employees	11	27.5
	Increase number of employees	0	0
	No impact	29	72.5
<b>Employers' Comment on the introduction of SHI</b>			
	Theoretically a good policy.	10	25
	Fear that it might fail due to corruption (funds will be mismanaged).	12	30
	Should not be implemented because 'it cannot work'.	6	15
	Implementation should be done very carefully, preferably first pilot it.	6	15
	Improve health services first, before implementing it.	4	10
	Prefer private health insurance instead.	1	2.5

\* US \$ 1 = 1,100 Ushs as at June 1998

Source: Survey Data.

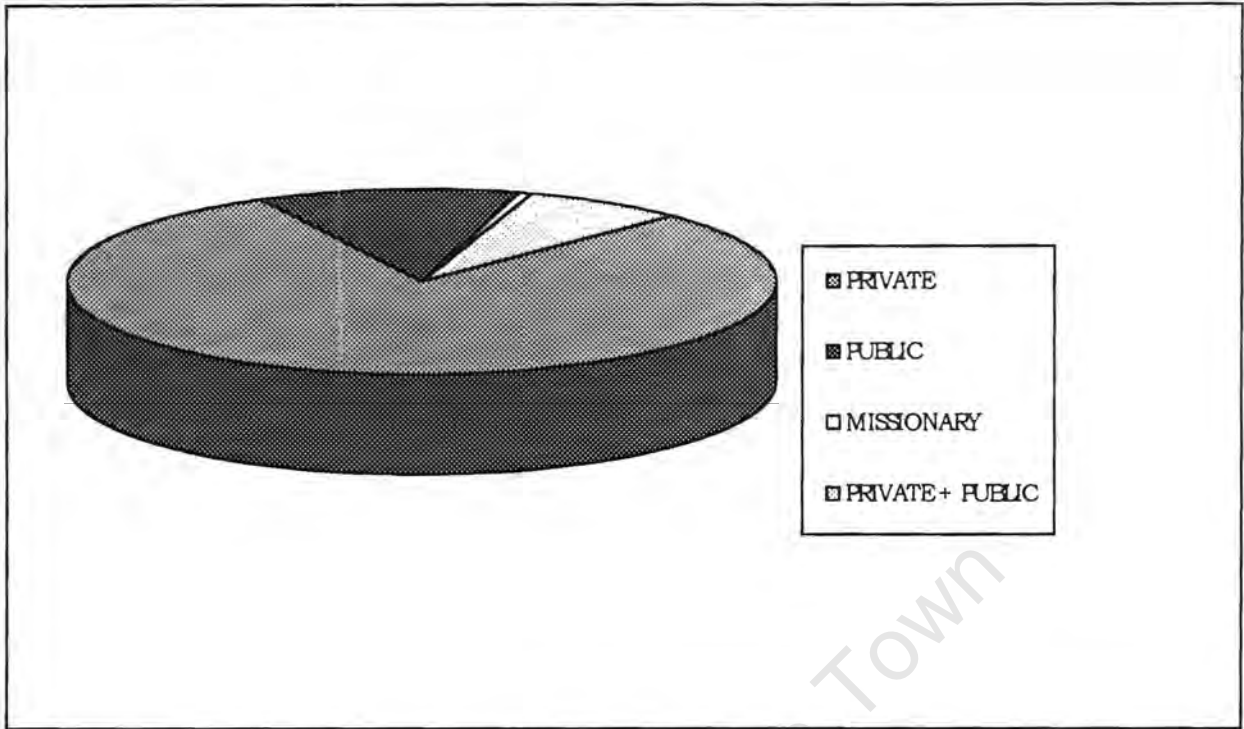
88% of the employers said they would be willing to join the SHI scheme, and about 58% preferred to contribute between 21 - 50% of the insurance premiums. As in the case of employees, the greater percentage (85%) of employers wished the insurance to cover both in-patient and outpatient services. 65% favored the idea that the insurance cover the employee's whole family. 73% preferred the SHI Fund be administered by a private firm.

Only 2 employers were not willing to contribute anything to their employees' health insurance. 22 out of 40 were willing to contribute between Ushs 1,000 and 5,000 for *each* employee (as a monthly insurance premium) and 13 employers were willing to contribute between Ushs 5,000 and 20,000 for each employee.

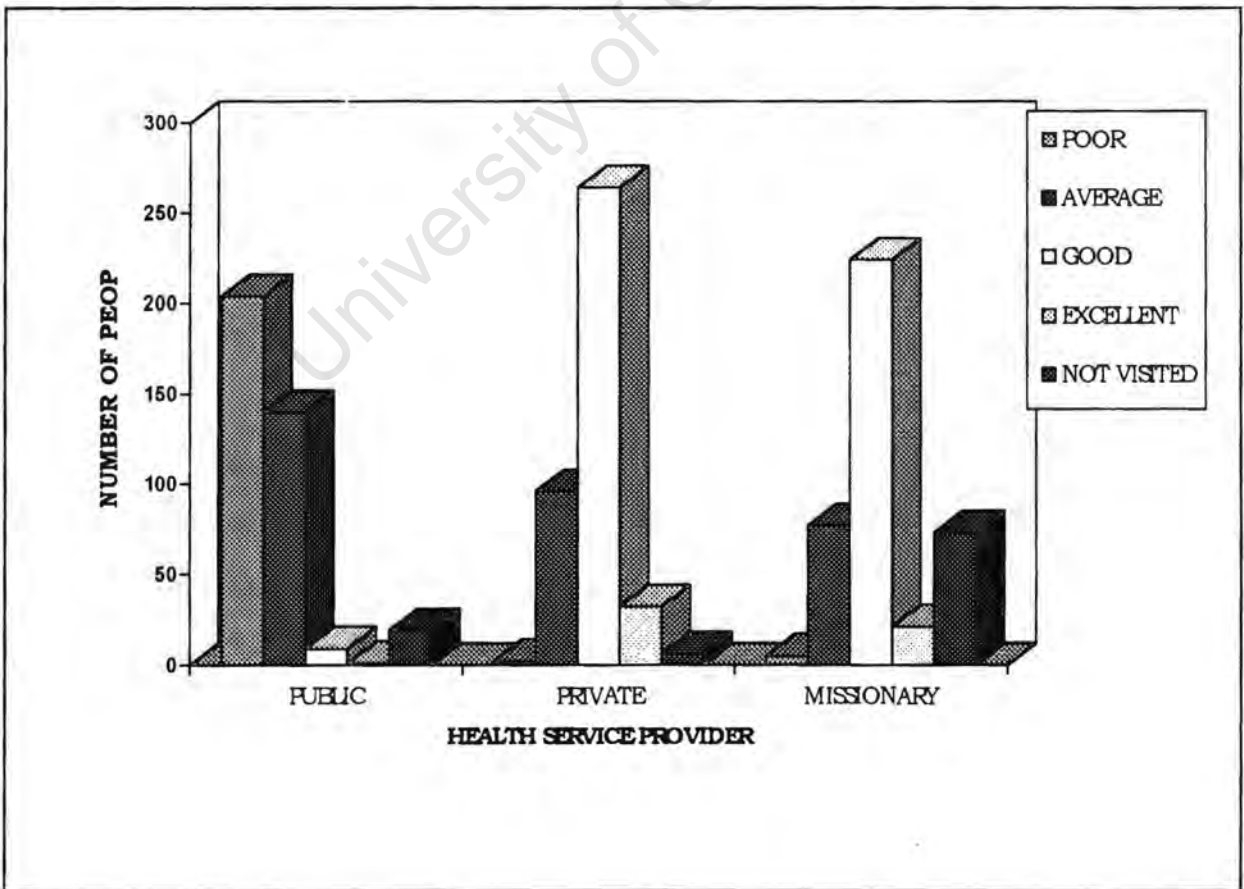
Approximately 72% of the employers interviewed said the introduction of SHI would have no impact on the number of people they employed, while 28% said it may cause them to reduce the number of people they employed.

In order to obtain their general opinion on the SHI policy, employers were asked to give a comment about it. About 30% said they feared that the SHI might fail due to corruption; 25% said the policy was a theoretically good one; 15% thought it should not be implemented at all; 15% advised that implementation should be done carefully; and 10% said that the health services in the public facilities should be improved first.

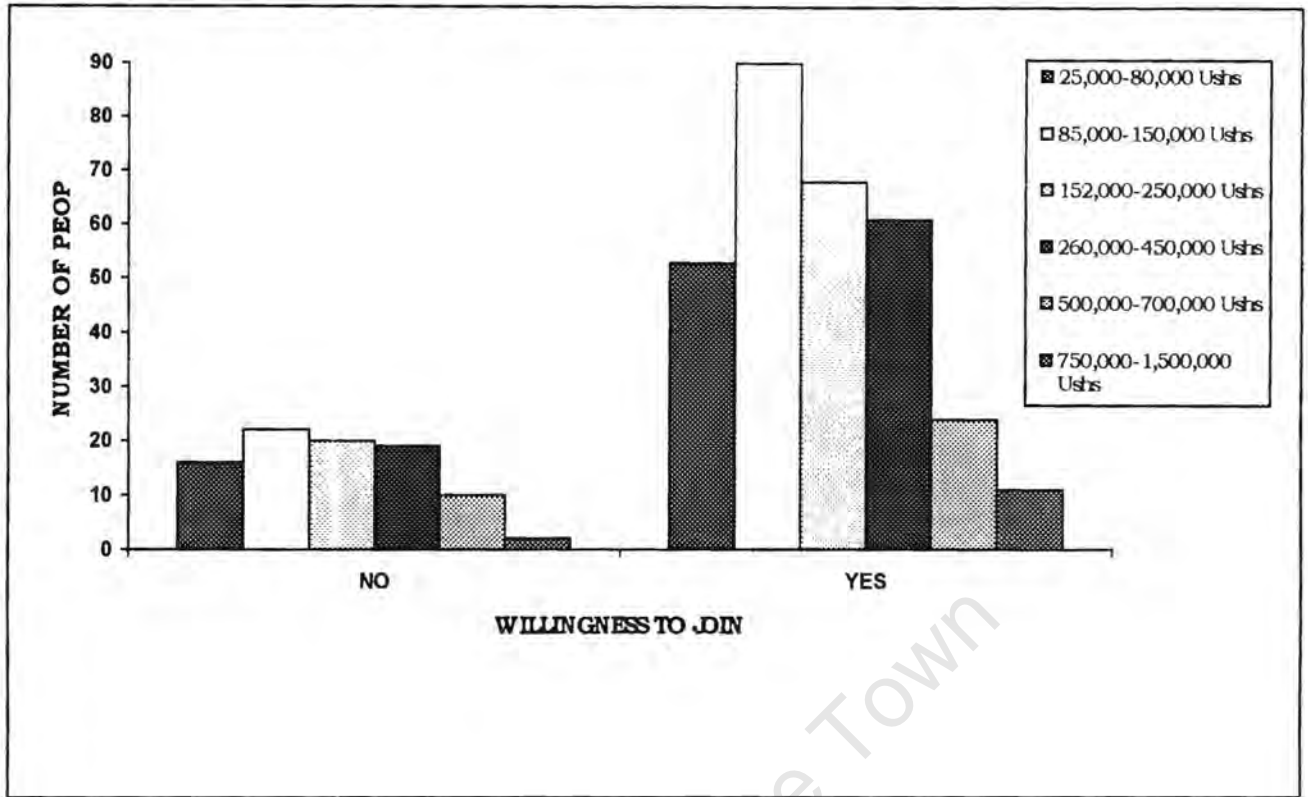
GRAPH 6.1 : EMPLOYEES' SOURCE OF MEDICAL CARE.



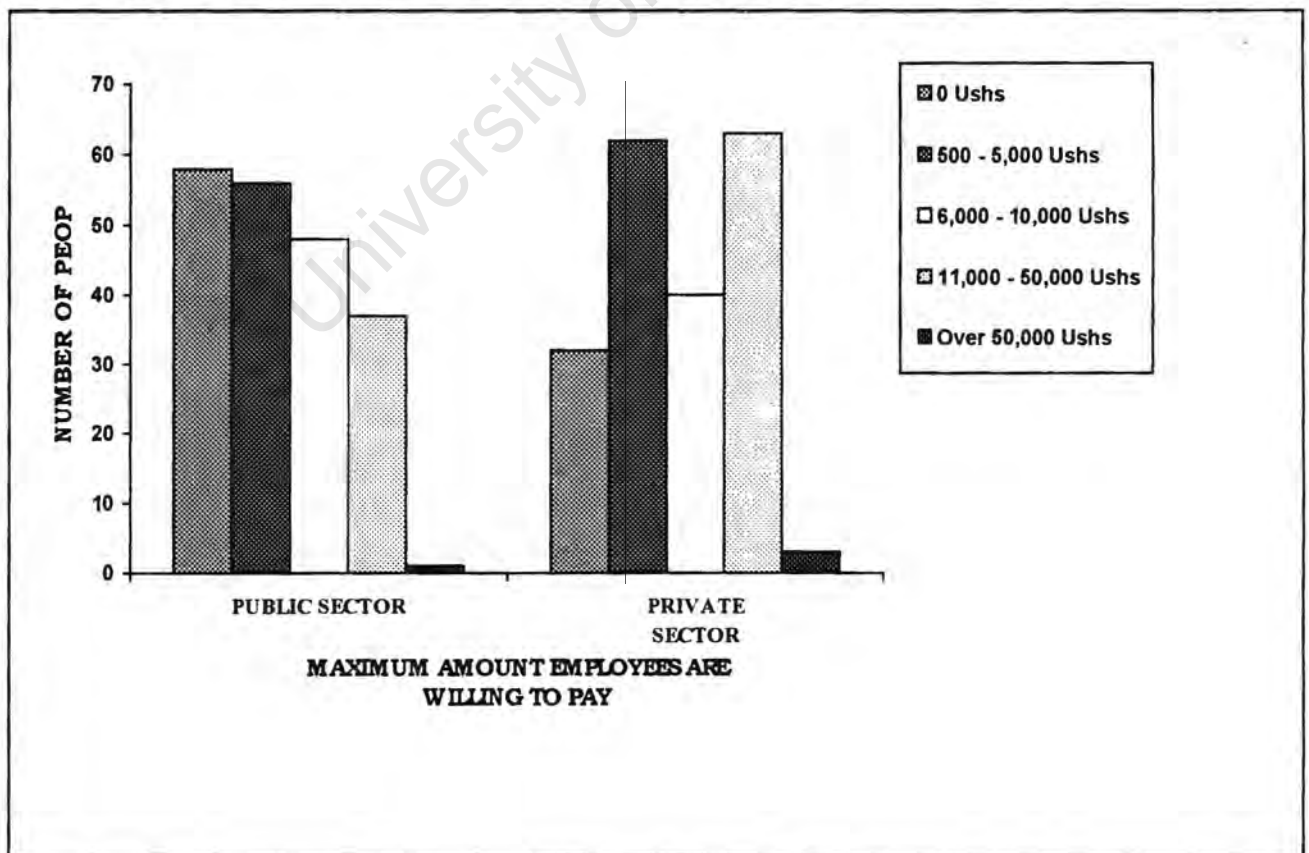
GRAPH 6.2 : EMPLOYEES' PERCEPTION OF QUALITY OF CARE ACROSS FACILITIES



GRAPH 6.3 : EMPLOYEES' SALARY PLOTTED AGAINST WILLINGNESS TO JOIN



GRAPH 6.4 : MAXIMUM AMOUNT EMPLOYEES ARE WILLING TO PAY FOR SHI.



## 6.2 : REGRESSION RESULTS FOR THE LOGLINEAR MODEL

The results of the model are presented in Table 6.4. The  $\beta$ 'coefficients show the impact of the explanatory variables on the growth of the maximum amount that an individual is willing and able to contribute as a monthly insurance premium. A negative sign of the coefficient means that the rate of the amount an individual is willing to contribute declines as the variable increases. On the other hand, a positive coefficient means that as the variable increases, the rate at which an individual is willing to contribute will also increase.

From the regression results, although the coefficients of most of the variables are not statistically significant, most have the hypothesized sign. This implies that these variables help in explaining the variation in employees' rate of willingness to contribute.

As expected, the income variable (SALARY) has a positive coefficient, and is highly significant (even at the 1% level), which implies that as salary increases, the amount that people are willing and able to pay as the insurance premium, increases. The variables EDUC., EXPEND., and FOREGO<sup>2</sup> are also significant at 5% and with the correct signs, while the variable QUALITY3 is significant at 10% and with the correct sign.

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<sup>2</sup> See Table 4.1 for the definitions of all these variables.

TABLE 6.4 : OLS RESULTS FOR THE LOGLINEAR MODEL

Dependent Variable : **LOGMAXI** (= log [MAXIMUM] ) N = 400

<b>VARIABLE</b>	<b>β COEFFICIENT</b>	<b>T - RATIOS</b>
ADMIN	0.069401	1.298
AGE	- 0.001927	- 0.533
BENEFITS	- 0.280837	- 0.668
BILL	- 0.033921	- 0.543
COVER1	- 0.076099	- 0.857
COVER2	0.100336	0.914
EDUC. **	0.154358	2.958
EXPEND. **	1.67774E-06	2.851
FOREGO **	0.234383	4.680
GENDER	- 0.015598	- 0.336
HHSIZE	0.009247	0.945
MARITAL	- 0.001624	- 0.031
QUALITY1	0.042884	0.938
QUALITY2	0.039407	0.239
QUALITY3 *	0.110244	1.875
SALARY **	6.909092E-07	5.606
SHI25	0.048578	0.905
SICK	0.043265	0.732
SOURCE	0.004919	0.081
TYPE	0.221424	0.526
WHAT	0.058792	0.936
(Constant) **	3.300120	13.735

\*\* These variables are statistically significant at 5%.

\* The variable is only statistically significant at 10%

Multiple R = 0.56259      Standard Error = 0.37568

R squared = 0.31651      F = 5.85171

Adjusted R squared = 0.26242      Signif. = 0.00000

Source: Survey Data.

The coefficients for ADMIN, BENEFITS, COVER2, EDUC., EXPEND, QUALITY1, QUALITY2, QUALITY3, SHI25, SICK, and SOURCE have the expected signs. The variable AGE surprisingly, has a negative sign, implying that as people grow older, they become less willing to contribute to a program that might not take-off. Although it is statistically insignificant, the coefficient for the household size variable (HHSIZE) is positive, as expected, which implies that the rate at which employees are willing to contribute (towards a Social Health Insurance fund) increases as household size increases. Expectedly, the negative sign of the GENDER variable indicates that male employees are less willing to contribute to health insurance. Surprisingly, the variable for marital status (MARITAL), shows that married people are less willing to pay for health insurance.

Given the above descriptive and regression results, a crucial question for this study is: what policy implications can be drawn from them? In order to be helpful to the policy-makers and other interested people, the policy implications of the results presented above need to be discussed. It is from these implications, that policy recommendations can be drawn. What follows in the next chapter is the discussion of the results, and the policy recommendations that follow from them.

## CHAPTER 7 : DISCUSSION & CONCLUSION

### 7.0 : INTRODUCTION

Section 7.1 of this chapter discusses the results presented in the previous chapter. This discussion is an evaluation of the extent to which the research objectives have been realized. The chapter outlines the general conclusions derived from the study, in section 7.2. In section 7.3 policy recommendations are outlined, and finally section 7.4 suggests possible areas for future research.

### 7.1 : DISCUSSION OF THE RESULTS

#### 7.1.1 : DISCUSSION OF RESULTS ON EMPLOYEES.

The results of this study indicate that 77.5% of the people interviewed were willing to join SHI, and 68% agreed to its implementation. It is interesting to note, that the greatest proportion (65%) of those who were not willing to join SHI worked in the public sector. This might be explained by the fact that the salaries in the public sector are very low. The highest salary earned by an average graduate-employee amounts to a sixth of that earned by their counterpart in the private sector. This implies that one way of stimulating willingness to join SHI is to increase salaries, especially in the public sector. It is important, however, to note that this might have inflationary implications. Graph 6.3 shows employees' salary ranges plotted against their willingness to join. This graph clearly shows that the major reason for reduced willingness to join in the public sector, is the low salaries.

From the results, most people spend, on average, Ushs 30,000 on health care, every month. With an average household of 5 persons, it means that the average expenditure per person on health care, per month is about Ushs 6,000. If health

insurance is to cover the entire family, then the premium contribution made by an employee could be calculated on the basis of household size. The amount of money per household member would be set at a level below Ushs 6,000.

Since the definition of 'family' in Africa varies widely, people can be given the freedom to have many of their household members insured, as long as contributions for health insurance are based on the number of people to be covered. This will be of great help in making the insured group as large as possible, covering even those who are not formally employed. In fact, such a policy design would allow people to have health insurance for their parents (especially since traditionally the welfare of the elderly is the responsibility of their adult children), thus making the insured group even bigger.

Based on the findings of the study, the amount people are willing to pay for SHI, if the source of care is restricted to the public sector (Ushs 9,600), and the amount they are willing to pay if they have the freedom to seek care from both private and/or public facilities (Ushs 14,200), are different. Although these figures differ on average, most of the respondents (63.5%) were willing to pay the same amount in both situations. On average, employees from the private sector were willing to pay higher contributions than their counterparts in the public sector (see Graph 6.4).

Of the 400 people, 53 (13.3%) were willing to pay nothing if medical care was restricted to the public sector, but were willing to pay something if insurance covered services in both private and public sectors. From the whole sample, only 35 people (8.8%) were not willing to pay for either package. This calls for great care, on the part of policy-makers, in the areas of designing the benefit package and setting the premium levels.

Although a big percentage of the sample were willing to pay the same amount of money for both packages, results show that 80% of the people interviewed seek medical care from the private sector (see Graph 6.1). Noteworthy, therefore, is the fact that it might take some time before people become willing to seek care from the public sector, especially given that people perceive quality of care in the public facilities as poor (51% of the sample) or as average (35% of the sample). This implies that it would be necessary for the services in the public facilities to be improved if SHI schemes are to cover services offered in these facilities.

The two major reasons advanced by the 32% who did not agree to the implementation of the SHI policy were:

- (i) that it would not be successful, due to corruption, and
- (ii) that if it was a government-initiated policy, it was likely to fail like most others (the most common example given being the NSSF).

One of the respondents stated 'SHI will be another way of government stealing from the public.' It is also important to mention that most people were not agreeable to the introduction of SHI because they related its working to those of the other types of insurance available in the country. In relation to this, it was found that 74% of the sample preferred the SHI Fund (if started) to be administered by a private organization.

This suggests that it is crucially important to educate people about the objectives and design of SHI, and to ensure they understand that the SHI policy will be different from the usual insurance schemes in several aspects. It will be the duty of the policy-makers in the Ministry of Health to convince people, that the SHI policy will differ from the NSSF policy.

According to the results, the levels of literacy for those formally employed were relatively high. 72.5% of the people interviewed had at least a Diploma or a Degree. This means that the process of educating people about the importance of SHI, its objectives and design will be relatively easy. The policy makers have to choose the appropriate means of channeling this information to the relevant groups of people, before implementing SHI.

#### 7.1.2 : DISCUSSION OF REGRESSION RESULTS.

From the study, the following factors were found to influence employees decision of how much to contribute to a SHI scheme:

1. gender,
2. their level of education,
3. size of their income,
4. the size of their households,
5. their current source(s) of medical care,
6. the amount of money currently spent on health care,
7. their perception of quality of care in the different health facilities,
8. whether or not they already had health benefits from their places of work, and
9. whether or not contributing SHI premiums would result in their foregoing of basic consumption items.

The manner and extent to which these factors affect the rate of willingness to pay is different. While some of the factors are positively related to the rate of willingness to pay, others are negatively related.

Although the coefficients of most of these variables were statistically insignificant, their signs were correct; implying that these variables do influence the rate of

willingness to pay, but to an extent that is statistically insignificant. The degree to which each of these affects the rate of willingness to pay is shown by the  $\beta$  coefficient (see Table 6.4).

The variable for education (EDUC.) is positively related to the rate of willingness to contribute, and is significant at 5%. This means that the more educated people are, the higher the amount of money they would be willing to contribute to SHI. This further emphasizes the need to educate people about the importance of having health insurance. Knowledge of this also indicates that some special health insurance schemes could be designed for students, especially those at higher institutions of learning.

The variable EXPEND (current amount of money spent on health care) is also positively related to the rate of willingness to pay, and is significant at the 5% level. Results also showed that 79% of the people interviewed had been sick or had a member of their household who had been sick, in the month preceding the interviews.

This indicates that people get sick quite regularly, and may therefore spend large sums of money on health care. These facts together, show that people might be willing to join and to pay for SHI, since they believe that they will need to use services regularly. What policy-makers have to be aware of is that they should set a monthly insurance premium slightly lower than what people are currently paying for services. The idea is to make people believe that they are paying less under SHI than they would have been otherwise.

Another highly significant variable (at the 5% level) was FOREGO (whether one would have to forego something if they were to pay the amount stated). As

indicated in Table 6.2, 47.5% of the sample said they would forego something. Of these, 29% said they would forego entertainment, leaving a small percentage (18.5%) of people who would forego vital items such as food, clothing and houseware. Since only a small percentage is likely to be affected by contributing, the *willingness to pay* values elicited from employees can be taken as a basis for setting the insurance premium. It is important to note, however, that if the set premiums are high enough to cause people to stop consumption of vital items, then willingness to contribute declines.

The significance (at the 10% level) of the variable QUALITY3 (perceived quality of care at missionary facilities) is indicative of the fact that employees' perception of the quality of care is an important factor, and lends credence to the argument that there is need to improve the quality of services in public facilities, if SHI schemes will be designed in such a way as to cover these services.

The most significant factor (even at the 1% level), that seems to influence the rate at which employees are willing to pay for SHI, is that of income (SALARY). As mentioned earlier, it might be necessary to increase salaries, especially in the public sector, in order to stimulate *willingness to pay*. This is a very crucial factor, because the public sector consists of the major sector of formal employment. The extent to which income influences willingness to join and to contribute to SHI is clearly shown in Graphs 6.3 and 6.4, where employees in the private sector are more willing to join SHI than their counterparts in the public sector, and they are even more willing to pay higher premiums.

### 7.1.3 : DISCUSSION OF RESULTS ON EMPLOYERS.

Although the sample for the employers data is small some conclusions from the findings can still be made. The fact that 35 (87.5%) of the 40 firms interviewed, were willing to join SHI, seems to indicate that the introduction of SHI will not meet strong resistance from the employers' side. This is further emphasized by the fact that 28 (70%) firms already had some form of health benefits for their employees. The commonest type of health benefits were in the form of medical allowance in addition to employees' salaries, and the contracting of a specific doctor or clinic where employees go for medical care.

Related to willingness to join is the issue of the percentage that employers should be made to contribute. Results show that 23 employers (57.5%) were willing to pay between 21% and 50%, and some were even willing to contribute more than 50% of the premium. It is interesting to note that about 77% of the employers were willing to contribute between Ushs 1,000 and Ushs 10,000 per employee per month. In the event that premiums paid by employees are charged on the basis of the number of beneficiaries, employers could be made to pay a flat fee for each employee per month.

29 (72%) of the 40 employers interviewed said that the introduction of SHI would not have any impact on the number of people they employed. It is important to note, though, that 11 (28%) who said that the introduction of SHI would result in a reduction of the number of people employed is a relatively sized percentage which cannot be ignored. One could therefore suggest that it might also be necessary to sensitize the employers about the advantages of the SHI program and the merits of having a healthy workforce.

## 7.2 : CONCLUSIONS

This paper has studied employees' decisions to pay for health insurance, in relation to their characteristics and the attributes of the SHI program. Employees' decision to pay for SHI was expressed as a linear function of age, marital status, household income, etc. To a much narrower extent, employers' willingness to join was also evaluated.

Data was collected from 400 employees and 40 employers. A loglinear model was used to establish the extent to which the rate of variation, in the amount of money employees were willing to contribute, was explained by their socio-economic characteristics and the SHI attributes.

Findings from the study show that the greater percentage of employees (77.5%) and employers (87%) are willing to join SHI. Similarly, both employees(91%) and employers (95%) are willing to contribute to SHI.

Several individual socio-economic characteristics and SHI-specific attributes were found to influence employees willingness to pay. The most significant factors found to affect the employees rate of willingness to pay are:

- ◇ their levels of education,
- ◇ the size of their households,
- ◇ the size of their income,
- ◇ the amount of money they are currently spending on health care, and
- ◇ the degree to which they are likely to forego vital consumption items, as a result of paying insurance premiums.
- ◇ Their perception of the quality of care at the different health facilities.

Policy-makers can manipulate these crucial factors in the relevant ways so as to stimulate willingness to contribute. Some of the identified ways of doing this include: educating the employees and employers about the importance and design of SHI; increasing people's salaries; setting premiums at reasonable levels; designing special health insurance schemes for students at tertiary institutes of learning; and improving the quality of services in the public facilities.

Findings from the study have helped identify the areas that policy-makers need to address. From these findings, several policy recommendations can be made. Some recommendations of areas that need addressing are outlined in the section that follows.

### **7.3 : RECOMMENDATIONS**

On the basis of the findings of this study, the following proposals are recommended for consideration by policy-makers, as they plan and design the introduction of SHI in Uganda.

- ◊ First and foremost, both employees and their employers need to be educated about the objectives and design of SHI, especially emphasizing how it would be different from the existing insurance schemes and the NSSF policy. Almost all the people interviewed lacked knowledge on health insurance, and how it operates. It was discovered that those who disliked the idea of SHI did so because they associated it with the existing insurance schemes, and with government behaviour (i.e. of corruption and mismanagement of resources).
  
- ◊ Generally, employees' income is directly and positively related to the amount they are willing to contribute as a health insurance premium. This means that

SHI contributions could be made a percentage of income/wage (rather than a flat rate). With this knowledge, it is recommended that raising employees' incomes would result in increased revenue collection. Policy-makers must realize that raising employees' incomes does not necessarily imply increasing their salaries. One way of achieving this, for example, is by reducing taxes, so that their disposable income increases. Apparently, most employees argued that there were already many deductions being made on their salaries, and they did not want any further deductions to be made.

◇ Furthermore, there is a need to improve health services. Most people's perceived the quality of services to be poor, in the public facilities. If the quality of services is not improved, health insurance might only serve to make private providers richer, as people will continue to seek medical care there. The situation would be worse if health insurance covers the services provided by private providers. On the other hand, however, if the private sector (profit and non-profit making) is more efficient in service provision, then they could be contracted (by the SHI fund) to provide services. This would be helpful in reducing the burden that would otherwise be placed on the public sector if it had to provide services for all the insured. Contracting might also be an attractive alternative because people might be comfortable with seeking care from the private providers, and restricting them to the publicly-provided services may seem to them like an imposition resulting from the introduction of SHI.

◇ It would be important for policy-makers to 'define' the term *family* as they design the benefit package. The meaning of 'family' in Africa, includes the extended family, and care must be taken to define the limits of the definition in terms of the benefit package. During the interviews, no effort was made to

define this term, but most respondents desired the insurance to cover the whole family (some of the respondents clearly reminded the interviewer that family meant 'extended family'). Alternatively, the calculation of insurance premiums could be based on the number of people covered by the scheme. In this case, a flat rate could be set as the amount to be paid per person covered. This method is, however, not equitable, since it puts those with big families at a disadvantage.

- ◇ Health insurance could be extended ( at a later stage) to the self-employed people. This would only be possible if it has been successful with the formal sector.
- ◇ The administration of the SHI fund should be done by a private company, but working within a tight framework of regulations from government.
- ◇ A proportion of a member's contributions should be reimbursed, if no claims have been made throughout the year. It is important to note, however, that this is possible only if the SHI scheme is making profit (i.e. if total premiums are greater than the total cost of running the SHI program). Reimbursement of part of the premium would be necessary because, it would help reduce the doubt that people have in insurance schemes, and would give credence to the fact that the SHI is actually different from the NSSF policy. It would help to restore confidence in government-initiated programs.

#### 7.4 : SUGGESTIONS FOR FURTHER RESEARCH

As noted previously, resource constraints limited not only the composition and size of the sample, but also restricted this research to only one city. In light of these limitations, the following recommendations are made for further research on willingness to pay for Social Health Insurance.

1. A similar study could be carried out, but on a much wider scale, covering all the major towns in Uganda, in order to get general conclusions on willingness to join and to contribute to SHI.
2. This study has mainly focused on employees, and paid less attention to employers views. One possible area of research is that of investigating the factors that influence employers' decisions about joining SHI and also about their willingness to pay. Two models could be used to estimate the effect of the factors on the two decisions.
3. A number of variables in the loglinear model were insignificant, and some had signs different from the hypothesized ones. The model had relatively low explanatory power. Further research could focus on introducing some different variables into the model, such as, employees attitude towards the already existing insurance schemes and, their risk attitudes.

4. A study similar to this one could be carried out, focusing on the informal sector. It was discovered from this study, that those who were informally employed were more willing to give their views (they actually asked interviewers why they were being left out), compared to their counterparts in the formal sector. This would be necessary if SHI were to be extended to the informal sector.
  
5. Lastly, this study did not take into account the *ability to pay* factor. As noted previously, ability to pay is a very crucial issue that needs to be incorporated in all *willingness to pay* studies. Methods of evaluating *ability to pay* are still in the initial stages of being investigated, the reason why this study did not take it into account. Any further research on this problem could incorporate this factor, to see whether results obtained would be significantly different.

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## APPENDIX I

### EMPLOYEES' QUESTIONNAIRE / INTERVIEW GUIDE

You are kindly requested to answer all questions, with the help of an interviewer. Any information provided by you, will be completely treated with strict confidentiality. The information you give will be important and might be used by policy makers. Thank you for your co-operation.

### SECTION 1: PERSONAL & HOUSEHOLD CHARACTERISTICS

1. Age (in years) .....
2. Gender  
1 = Male                      0 = Female
3. What is your Marital Status?  
1 = Never Married              2 = Married              3 = Divorced              4 = Widowed
4. What is the highest level of education you have attained?  
1 = Primary    2 = O' level    3 = A' level    4 = Diploma    5 = University degree
5. What type of position do you hold here at work?  
1 = Permanent              2 = Casual              3 = Other (specify) .....
6. How long have you worked in this firm/organization? ..... years.
7. What is your current salary range (per month)? ..... Ug. Shs
8. If you worked in any other firm/company/organization before joining this one, please indicate the type.  
1 = Private              2 = Parastatal              3 = Civil service

9. How many people live in your household (including you)? ..... people

### SECTION 2: PAST HEALTH CARE PRACTICES, EXPENDITURE & ATTITUDES

10. Have you or any of the members of your household fallen sick in the last one month?  
1 = YES                      2 = NO

11. Where do you or your household members go for medical care when you get sick?  
1 = Private clinic    2 = government hospital    3 = Traditional healer.    4 = Other .....

12. Could you please supply reasons for your choice above. ....  
.....  
.....

13. How do you pay for the medical bill?  
1 = Out-of-pocket    2 = Employer pays    3 = Medical insurance pays  
4 = Other (specify) .....

14. About how much do you spend (for yourself and you household members) on health care in a month (e.g. last month)?.....in Uganda Shillings.

15. What is your view about/perception of the current quality of care from health services in government/public hospitals?  
1 = Poor                      2 = Average                      3 = Good                      4 = Excellent

16. Give reasons for your choice in (15) above. ....  
.....  
.....

17. What is your view about/perception of the current quality of care of health services in private hospitals/clinics?  
1 = Poor                      2 = Average                      3 = Good                      4 = Excellent

18. Give reasons for your choice in (17) above. ....  
.....  
.....

19. What is your view/perception of the current quality of care from health services in missionary hospitals/clinics?  
1 = Poor                      2 = Average                      3 = Good                      4 = Excellent

20. Give reasons for your choice in (19) above. ....  
.....  
.....

21. Does this firm/company/organization provide any benefits for its workers when they fall sick? If NO go to SECTION 3.

1 = YES                      0 = NO

22. If YES, what type of benefits?

- 1 = Firm has a clinic on the premises.
- 2 = Firm/company has contracted a specific doctor where all workers go for health care.
- 3 = Firm/company has contracted a specific hospital/clinic where all workers get treated.
- 4 = Workers go anywhere they want for treatment, but make claims after that.
- 5 = Additional medical allowance is added to their salary.
- 6 = Other (specify) .....

23. If the company has a clinic on the premises, what health services are offered?

- 1 = Only Out-patient services
- 2 = Only in-patient services
- 3 = Both out-patient and in-patient services
- 4 = Other (specify) .....

24. If a specific doctor/hospital has been contracted to provide services, how is he/it paid?

- 1 = Worker pays the whole bill and makes claims later.
- 2 = The company has pre-arranged terms and fees with the doctor/hospital/clinic, which then pays for every worker treated.
- 3 = Doctors are paid a salary every month.
- 4 = I don't know

**SECTION 3 : HYPOTHETICAL MARKET & WTP / ATP QUESTIONS**

Government is considering implementing a policy, Social Health Insurance, where all people who are employed formally will be made to contribute a percentage of their salary to a *health insurance fund*, in return for a package of health services at a later time when required. In this type of health insurance, all formally employed workers will contribute a certain proportion of the set premium, and the employer (firm/company/organization) will pay the other part of the premium. If this policy is implemented, contributing to such a fund will be made compulsory for all formal employees and their employers. When insured, workers (and probably their families) will be entitled to free services or will only

be asked to pay a very small fee when they seek medical care. The questions that follow are about your views about such a policy.

25. Government is contemplating implementing this policy. How do you feel about it?

1 = Strongly agree 2 = Agree 3 = Disagree 4 = Strongly disagree

26. Supply the reasons for your choice in the space provided below:

.....  
.....

27. If such a policy were to be implemented, how should the premium be split between employer and worker, in your view? Employer should contribute .....% of the premium.

28. If the policy were implemented, what services would you want the premium to cover?

- 1 = Only Out-patient services
- 2 = Only in-patient services
- 3 = Both out-patient and in-patient services
- 4 = Other (specify) .....

29. If the policy were implemented, who should it cover?

- 1 = Only you
- 2 = You and your wife/husband.
- 3 = You , your wife/husband plus your children.
- 4 = Other (specify) .....

30. In your opinion, which should own, run and administer the Fund that keeps the premiums?

- 1 = Government 2 = Private Company 3 = Other (specify) .....

31. If from the insurance scheme the worker and his entire family are covered, and a benefit package is defined as below, what is the maximum amount of money you would be willing and able to pay as monthly contribution to the health insurance scheme?

1

All health services are free, but on condition that they must be sought from the public hospitals.

2

All services are free, whether or not they are sought from the public hospitals or from the private hospital/clinics.

Amount .....Ug. Shs Amount .....Ug. Shs

33. If you paid the above-mentioned amount of money per month, is there any item on your usual consumption list that you would have to forego?

YES = 1

NO = 2

34. If yes, choose from of the items below, which you are likely to forego.

Rent ..... Food ..... Clothing ..... Houseware ..... School fees ..... Family Celebrations ...  
Other (specify) .....

35. Suppose that the after paying monthly contributions/premiums to the health fund, you and members of your household are guaranteed free health services each time one of you falls sick but with a condition that you would have to seek medical care from a public hospital/clinic. The questions that follow are to establish whether you would be willing to join and to contribute.

QUESTIONS	YES	NO
Would you be willing to pay a monthly contribution/premium to get health insurance?		
Would you be willing to pay: Shs 2 000?		
Would you be willing to pay: Shs 5 000?		
Would you be willing to pay: Shs 10 000?		
Would you be willing to pay: Shs 15 000?		
Would you be willing to pay: Shs 20 000?		
Would you be willing to pay: Shs 25 000?		
Would you be willing to pay: Shs 40 000?		
Would you be willing to pay: Shs 50 000?		
Would you be willing to pay: Shs 100 000?		
What is the maximum amount you would be willing to pay as a monthly contribution for health insurance ? Shs _____		

ASSET OWNERSHIP AND THE POSSIBILITY OF DEPLETION		
Which of the following assets do you own?	What are the quantities?	If health insurance is introduced, are you likely to sell any of your assets in to be able to continue consuming all the items on your consumption list? If YES, which ones?
Land (in acres)		
Residential Houses		
Business premises		
Cattle		
Television sets		
Motor vehicles		
Savings (in local currency)		
Other Assets (Specify)		

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## APPENDIX II

### EMPLOYERS' QUESTIONNAIRE / INTERVIEW GUIDE

You are kindly requested to answer all questions, with the help of an interviewer. Any information provided by you, about your company/firm/organization will be treated completely with strict confidentiality. The information you give will be important and might be used by policy makers. Thank you for your co-operation.

#### SECTION 1. COMPANY/FIRM/ORGANIZATION CHARACTERISTICS

1. What type of firm/company/organization is this one?

Private = 1                      Parastatal/public = 0

2. How long has this firm/company/organization been in operation? ..... years

3. How many people does this firm/company currently employ (including casual workers)? ..... people

4. What type of work is done in this firm/company?

Production = 1                      Services = 2                      Other (Specify) .....

#### SECTION 2: HEALTH-RELATED ATTITUDES & PRACTICES

5. In your view, what do you think about the quality of the existing publicly provided health services?

1 = Poor                      2 = Average                      3 = Good                      4 = Excellent

6. Please give reasons for your choice in (5) above.

.....  
.....

7. In your view, what do you think about the quality of the existing privately provided health services?

1 = Poor                      2 = Average                      3 = Good                      4 = Excellent

8. Please give reasons for your choice in (7) above.

.....  
.....

9. In your view, what do you think about the quality of the existing health services provided in missionary hospital ?

1 = Poor      2 = Average      3 = Good      4 = Excellent

10. Please give reasons for your choice in (9) above.

.....  
.....

11. Does this firm/organization provide any health benefits for its workers when they fall sick? *If NO go to SECTION 3.*

1 = YES      2 = NO

12. If YES, what type of benefits?

- 1 = Firm has a clinic on the premises
- 2 = Firm has contracted a specific doctor where workers go for health care
- 3 = Firm has contracted a specific health facility where all workers get treated
- 4 = Workers go anywhere they want for treatment, but make claims after that.
- 5 = Additional medical allowance is added to their salary.
- 6 = Other (specify) .....

13. If the company has a clinic on the premises, what health services are offered?

- 1 = Only Out-patient services
- 2 = Only In-patient services
- 3 = In-patient and Out-patient services
- 4 = Other (specify) .....

14. If a specific doctor/hospital has been contracted to provide services, how do you pay them?

- 1 = Worker pays the whole bill and makes claims later
- 2 = The company has pre-arranged terms and fees with the doctor/hospital/clinic, which the then pays for every worker treated.
- 3 = Doctors are paid a salary every month
- 4 = Other (specify) .....

**SECTION 3: HYPOTHETICAL MARKET AND WTP.**

Government is considering implementing a policy, Social Health Insurance, where all people who are employed formally will be made to contribute a percentage of their salary to a *health insurance fund*, in return for a package of health services at a later time when

required. In this type of health insurance, all formally employed workers will contribute a certain proportion of the set premium, and the employer (firm/company/organization) will pay the other part of the premium. If this policy is implemented, contributing to such a fund will be made compulsory for all formal employees and their employers. When insured, workers (and probably their families) will be entitled to free services or will only be asked to pay a very small fee when they seek medical care. The questions that follow are about your views about such a policy.

15. Government is contemplating implementing this policy. How do you feel about it?

1 = Strongly agree 2 = Agree 3 = Disagree 4 = Strongly disagree

16. Supply the reasons for your choice in (15 above, in the space provided below:

.....  
.....

17. If such a policy were to be implemented, how should the premium be split between employer and worker, in your view? Employer should contribute ..... % of the premium.

18. If the policy were implemented, what services would you want the premium to cover?

1 = Only Out-patient

2 = Only in-patient

3 = Both in-patient and out-patient.

19. If the policy were implemented, who should it cover, in your view?

1 = Only the individual worker

2 = The worker and their wife/husband.

3 = The worker's wife/husband plus their children.

20. Who should own, run and administer the Fund that keeps the premiums?

1 = Government

2 = Private Company

3 = Parastatal company

21. Let us suppose that the insurance scheme will cover, the worker and his entire family. The benefit package could either be of the forms described below. Below each box indicate the maximum amount the firm/company would be willing and able to pay for just one worker, as a monthly contribution.

1

All health care services are free, but on condition that they must be sought from the public hospitals.

Amount .....Ug. Shs

2

All health services are free, whether they are sought from the public hospitals or from the private hospital/clinics.

Amount .....Ug. Shs

22. If this policy were implemented, how would it impact on the number of people you employ?

- 1 = Reduce the number of people employed.
- 2 = Increase the number of people employed.
- 3 = it would have no impact
- 4 = Other (specify) .....

23. Any comments about the implementation of such a policy?

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