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Health Insurance for the Informal Sector in Africa: Design Features, Risk Protection, and Resource Mobilization

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by

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Abstract

Studies and literature reviews of health insurance schemes targeting rural or informal sector populations in developing countries (often termed as community insurance schemes) frequently conclude that schemes have design weaknesses, yet do not explore in detail the effect of design features on performance. The paper presents a conceptualization of how performance in the area of risk protection and resource mobilization is determined by the interaction of design features with institutional and technical factors. Design features refer to the scheme specifications, such as required contribution, and to operating modalities, such as procedures for enrollment or obtaining benefits. Performance, with respect to risk protection and resource mobilization, of several potential “high population schemes” for the informal sector in Africa, is assessed. The outcome suggests that the design of community health insurance schemes may be improved by: 1) design specifications that utilize data on willingness to pay (WTP) of the target population and projected health care costs; 2) incorporating modalities of operations that facilitate cost-effective exchange between a formal organization and individuals acting in an informal environment.

Health Insurance for the Informal Sector in Africa: Design Features, Risk Protection, and Resource Mobilization

Executive Summary

Studies and literature reviews of health insurance schemes targeting rural or informal sector populations in developing countries (often termed as community insurance schemes) frequently conclude that schemes have design weaknesses, yet do not explore in detail the effect of design features on performance. The first part of the paper presents a conceptualization of how performance in the area of risk protection and resource mobilization is determined by the interaction of design features with institutional and technical factors. In the paper, design features refer to the scheme specifications, such as required contribution, and to operating modalities, such as procedures for enrollment or obtaining benefits. The second part of the paper presents the design features of several potential “high population schemes” for the informal sector in Africa and assesses their performance with respect to risk protection and resource mobilization as defined in the conceptual section. In the third part, suggestions are presented of broad national and international policy measures to support the implementation of risk protection schemes for populations in the informal sectors.

Community health financing schemes involve patients or prospective patients as payees and as decision-makers and/or managers. Schemes incorporating risk-sharing and pooling constitute **community health insurance (CHI) schemes**. The majority of CHI schemes are modeled as **Mutual Benefit Societies** (officials are members of an identifiable group whose contributions make up the pools, and are responsible for management) **or** as **Provider Insurance** (officials originate from the health care provider institution – or from the organization which is the ultimate provider, such as the government or mission health administration – and manage both the insurance and health care aspects of the scheme). A few CHI schemes are **Mutual-Provider Partnerships** (managers of the scheme are drawn from a mutual society and from the healthcare provider organization).

Contributions to a CHI scheme provide a pool of funds that represent **resource mobilization** in excess of that which would otherwise be available for health care. In the absence of insurance, contributions of members who do not experience illness would not be used for health activities. Commonly, government or not-for-profit health institutions provide care to those enrolled in CHI schemes and therefore resource mobilization is often associated with expenditure shifts from the private to the public sector. Although constrained by the low income of the contributing population (and thus their low willingness and ability to pay or contribute), schemes have mobilized from 30% to 100% of members' healthcare expenditures.

Establishing community insurance schemes that target households in poor communities such as rural villages or districts is an option for providing immediate **financial risk protection** (the shielding of an individual from critical income losses as a result of health care expenditures) to a significant number of households. In the absence of direct measures, risk protection may be assessed using "second best" indicators (see Table A). CHI schemes also offer the potential for eventually achieving universal insurance coverage and high cross-subsidization between high and low income households through the future linking of schemes for the informal sector to each other and to schemes for the formal sector.

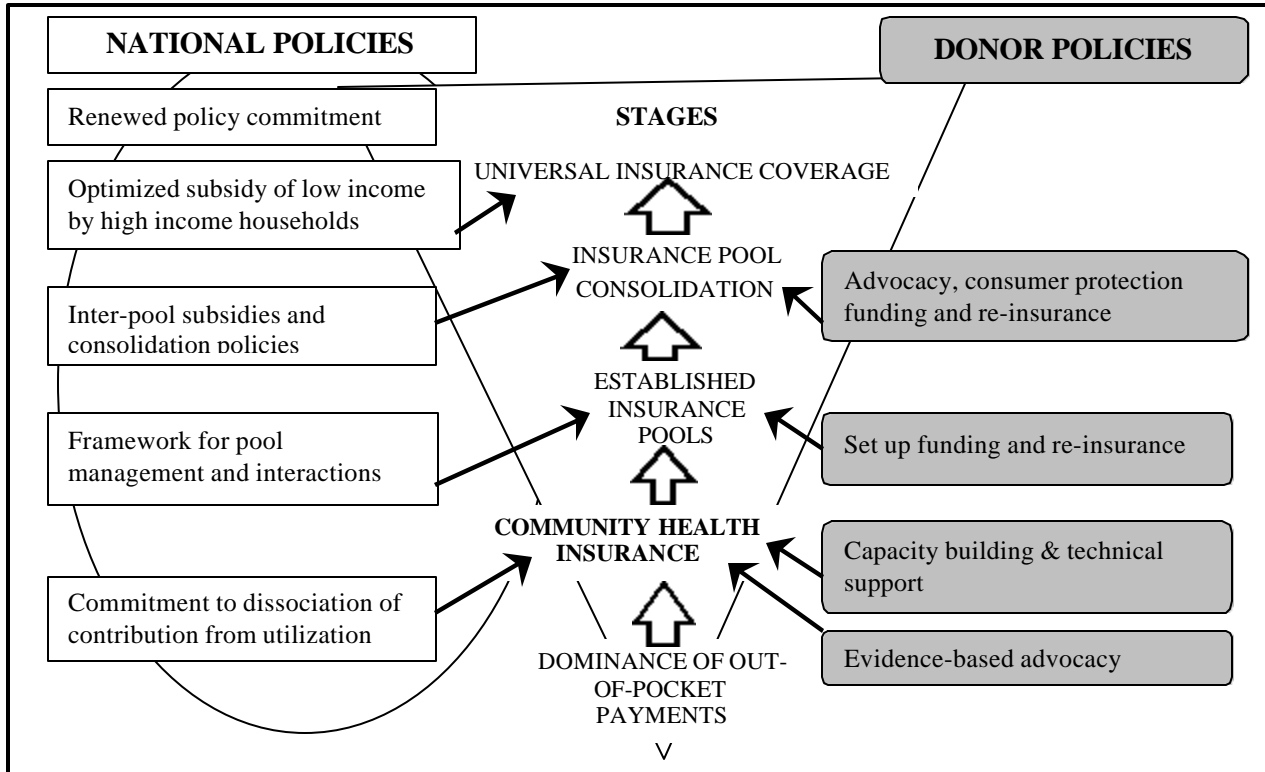
The paper concludes that many of the design weaknesses described by studies of existing community health insurance schemes in developing countries may be overcome by: 1) design specifications that utilize data on willingness to pay (WTP) of the target population and projected health care costs; 2) incorporating modalities of operations that facilitate cost-effective exchange between a formal organization and individuals acting in an informal environment, primarily through direct and infrequent transactions (see Figure A).

Key policies available to government and donors to improve the effectiveness and sustainability of CHI for the rural and informal sector populations include: (a) subsidies, (b) re-insurance, (c) management capacity building, and (d) forging linkages with the formal financing and provider networks.

Table A. Financial Risk Protection (FRP) Performance of Selected African Community Health Insurance Schemes

	Indicators of Financial Risk Protection (FRP)				Assessment of Financial Risk Protection (FRP)
	Affordability <i>% of target population enrolled</i>	Appropriateness of payment schedules	Completeness of package	Level of access	
1. <i>Carte d'Assurance Maladie</i> (CAM) program, Burundi (<i>Provider Insurance Model – by government</i>)	Affordable to about 77% 54% ever enrolled (in 1 province studied in 1992)	Generally appropriate	Full clinic and inpatient care when referred	Increased – insured/non-insured illness episodes	Significant FRP provided
2. Community Health Fund (CHF), Tanzania (<i>Mutual-Provider Partnership Model</i>)	Affordable to majority -- includes exemption mechanism 5.3% (in 2 districts studied in 1999)		Variable – dependent on the services at facility	Increased – 75% of patients receiving care are uninsured	Modest FRP provided
3. Abota Village Insurance Scheme, Guinea-Bissau (<i>Mutual Benefit Society Model</i>)	Affordable to majority -- level determined by villagers	Appropriate -- Determined by villagers	Full clinic and inpatient care when referred	Increased – primary health care available in villages	Significant FRP provided
4. Nkoranza Community Financing Health Insurance Scheme, Ghana (<i>Provider Insurance Model – by hospital</i>)	Premiums assessed as unaffordable by two-thirds of households and health workers approx. 27%	Inappropriate – low cash availability between Nov - Dec.	Inpatient care	Increased – insured/non-insured admissions = 2.4 responsible for 9% increase in admissions	Suboptimal FRP provided
5. Bwamanda Hospital Insurance Scheme, former Zaïre (<i>Provider Insurance Model – by hospital</i>)	Affordable premiums but co-payment unaffordable to households living far from hospital between 41% and 66% (1987-1995)	Appropriate -- time chosen by community	Inpatient care	Increased – insured/non-insured admissions =6.7	Suboptimal FRP provided
6. Dangme West Health Insurance Scheme (<i>Dangme Hewami Nami Kpee</i>), Ghana (<i>Mutual-Provider Partnership Model</i>)	WTP data (in 1998) implies affordable to approximately 35% of households approx. 5% of households (first enrollment period 2000)	Inappropriate – low cash availability at time of first enrollment	Full clinic and inpatient care when referred		Suboptimal FRP provided

Figure A. Stages of Financial Protection and Supporting Policies



INTRODUCTION

Increasing the access of African populations to health care is one of the formidable challenges facing the global community. During the 1980s and 1990s, health sector reforms intended to improve the efficiency of health systems and the quality of care provided were implemented by African governments with the endorsement of their international and bilateral donor partners. In many countries these reforms included the introduction or consolidation of cost recovery mechanisms, in particular out-of-pocket fees, paid at the time of illness (known as user fees), which had the unintended effect of decreasing access to health care by the poor (1),(2),(3). Since the mid-1990s, increasing incidence and prevalence rates of HIV/AIDS, TB, and other communicable diseases in low-income countries have contributed to the widening of the gap between the need for, and the utilization of, health services among poor individuals.

At the time of ill health, households in Africa do not have recourse to mechanisms that will protect the financial resources required for basic consumption needs, such as transportation, education, and food not produced by the household. As most functional health insurance schemes in Africa are associated with formal sector employment – requiring regular contributions compatible with formal sector earning – the majority of individuals are not insured. Vogel and others conclude that the formal sector schemes effectively cover those who constitute the relatively small upper and middle classes (4),(5).

Uncertainty about the timing of illness, the unpredictability of health care costs required for episodes of illness, and the low and irregular income of individuals make it virtually impossible for households to make financial provision for illness-related expenditures. User fees constitute a major part of such expenditures. As a consequence, user fees have been, and continue to be, a major contributing factor to the high incidence of out-of-pocket payment by individuals and households at the time of illness. Furthermore, the majority of households are unable to obtain credit from the formal banking system. Thus user fees, in addition to having been largely unsuccessful in raising significant resources, have contributed significantly to increasing the exposure of poor households to financial risks associated with illness.

Individuals are subject to illness-related financial risks that are correlated with health care prices and their disposable incomes. As ratios of health care prices to incomes rise, the probabilities of illness-related wealth and/or asset losses by households increases. Health care must often be consumed in complete packages and is therefore a discrete, rather than a continuous, variable in the health production function. Furthermore, components of packages, such as consultations, laboratory tests, and prescribed drugs, will vary in quantity and type giving rise to complex relationships between the quantities consumed, the costs, and the health outcomes.

As a result of the complexity of these relationships and the variations in illnesses that arise, identical household budget constraints will often have disparate impacts on the consumption of effective health care. In poor communities, this complex relationship will also lead to identical health status outcomes for households irrespective of the income groups to which they belong. Although those in the high income groups, obtained by ranking, have the economic means to purchase a greater proportion of health care packages, often providers will be unwilling to offer an incomplete package as in the example of “half a surgical procedure”; or if offered, it will be ineffective in improving health as in the case of a partial course of antibiotics. Consequently, in many situations of low per capita incomes, ranking households into income groups offers little utility for policy formulation aimed at providing universal access to effective health care. Rather, public provision of financial protection for all households in poor communities such as those in rural areas and slums, irrespective of their incomes relative to others in those areas, becomes a crucial element of strategies to reduce poverty.

Over the long term, health investments that make *preventive* health care available will lead to increased population health and productivity and hence increased incomes. In the short term, on the other hand, provision of access to *curative* health care is required to limit associated income shocks so as to prevent progression into poverty and to curtail the negative income effects that otherwise occur. For many health problems, households can frequently accomplish prevention but they are un-equipped to carry out effective treatment. To illustrate, with regards to prevention in the case of malaria, a farming mother in a village in Ghana can augment her immunity system and that of her child by consuming high protein foods that she grows and by breastfeeding. She can also take actions to repel mosquitoes. As a result she is able to dramatically influence the

frequency and prognosis of malaria episodes suffered by her child. In contrast, the inability of households to carry out treatment places the supply of accessible treatment high in the priority of functions expected of a health system by society.

A premise of this paper is that in poor African countries, individuals in the informal sector – regardless of their position in the income ranking – are unable to access appropriate health care, particularly curative care, at the time of need. In one study, expenditure for 70% of inpatient episodes exceeded 6% (in the fourth income quintile) and 4% (in the highest quintile) of the average annual income for individuals (6). In this environment, insurance schemes that provide financial protection to households in the informal sector would constitute an important poverty reduction measure. Another premise is that attempts to stratify informal populations by income ranking, with the aim of targeting financial protection for only those in the lower ranks, will only be partially effective in achieving the goal of access to health for those who have insufficient income to have effective demand for health services.

Establishing sub-national health insurance schemes, each targeting households in defined poor communities such as villages or districts, is an option for providing immediate financial risk protection to a significant number of households. It will also offer the potential for eventually achieving universal coverage and high cross-subsidization between high and low income households through the future linking of schemes for the informal sector to each other and to schemes for the formal sector. The alternative strategy of aiming to provide universal coverage on a national scale by implementing a single national scheme from the onset would be problematic because of the diversity in African populations and absence of appropriate administrative infrastructures.

Studies and literature reviews of sub-national health insurance schemes (often referred to as community financing schemes or micro-financing schemes) targeting rural or informal sector populations in developing countries frequently conclude that schemes have design weaknesses that hinder their performances (7). As the reviews do not explore in detail the relationships between design features and specific dimensions of performance, this paper focuses on the design-related issues of sub-national health insurance schemes for the informal sector in sub-Saharan Africa. It examines, in particular, the functions of risk protection against the financial

consequences of ill health and the mobilization of significant resources for the health sector. Resource mobilization is examined with reference to the fiscal impact of the insurance on health care provision rather than from an accounting perspective that focuses on meeting the financial obligations by a given scheme. Therefore, cost recovery is considered to be a variable that is related to resource mobilization rather than a prime indicator of performance.

The first part of the paper presents a conceptual framework intended to inform about the design of a health insurance scheme which focuses on the characteristics of schemes and factors that influence their performance. In particular, it presents key technical and institutional factors that, together with features of the design, determine performance of schemes in resource mobilization and financial protection. Emphasis is placed on dimensions of these factors that are particularly relevant to schemes targeting individuals and households in the informal sector in low-income countries. The technical factors relate to the data (its nature and quality) and the methodology used to specify the contribution levels, the benefit package, and the level of external financial subsidy. The institutional factors include the congruence between principles underlying the scheme's operations and norms of the participating population. Other institutional factors include experiences of health providers with third party contractual arrangements and payments. These institutional factors have a crucial influence on the nature and extent of community participation in the scheme, and secondly on the quality of scheme management and monitoring. Although regulatory factors – such as the guidelines produced by responsible government agencies and laws governing insurance and health care provision – also determine the quality of the insurance and health care supplied, they are not considered in this paper.

In the second part of the paper, available evidence is reviewed about the effectiveness and efficiency with which selected health insurance schemes for the informal sector population have achieved resource mobilization and risk protection. The evidence is presented mainly from schemes judged to have the necessary – although often insufficient – design and/or implementation features that would permit expansion to achieve high primary or secondary participation rates (the primary participation rate is that of the individual reference scheme, and the secondary rate refers to the total membership of a reference group of linked schemes as in the case of insurance funds of several small schemes). Logically these features exist because, at the

minimum, the calculation of contribution levels reflects the ability and willingness to pay (economic demand) of the target population. The proposed scheme is described to potential buyers in terms of benefit package and management structure, and the demand is the ability and willingness to pay (WTP) the annual contribution in the required installments.

Although relatively few schemes for informal sector populations in Africa have based their contribution calculations on WTP data, some, through a variety of approaches, have arrived at affordable or near-affordable premiums for their target populations. In some cases they have also obtained sufficient external resources to potentially fund the type and quality of health care benefits expected by enrolled members. Such “potentially high population” schemes include the *Carte d’Assurance Maladie* (CAM) program (Burundi), Community Health Fund (CHF) (Tanzania), Abota Village Insurance Scheme (Guinea-Bissau), Nkoranza Community Financing Health Insurance Scheme (Ghana), Bwamanda Hospital Insurance Scheme (former Zaire), and Dangme West Health Insurance Scheme (Ghana).

Of the examples of “potentially large population” schemes studied in this paper, two of them, CAM in Burundi and the Health Card Fund in Tanzania, are in some respect national schemes. These two schemes have significant central government involvement. Other schemes may be considered as district-based schemes from the onset, while the Abota, for example, evolved into a form of a district scheme and continues to expand through a process of institutionalization to approach national dimensions and characteristics. Criel uses primarily two features to characterize three schemes in Africa as District-Based Health Insurance Schemes (DBHIS): first, a prominent role of the local health service administrators in its operations, and second, an expectation that the scheme will eventually cover the entire population residing in the health administrative area or district (8). Evidence is presented from several schemes (including the Nkoranza scheme in Ghana and the Bwamanda scheme in former Zaire), which under Criel’s framework are examples of DBHIS. These are effectively single facility provider schemes (in both cases the facility being a hospital) and are susceptible to the problems of low participation because benefits are accessible only at a central location, discouraging the enrollment of those who live a significant distance from the provider.

When the inclusion of all levels of facilities (health post, health center, and district hospital) as providers is used in addition to Criel's two characteristics to categorize DBHIS, the only true example in the paper is the Dangme West Health Insurance Scheme (*Dangme Hewami Nami Kpee*) in Ghana (9). The outpatient (OPD) benefit package provided by lower level providers (health centers) in the Dangme scheme contributes to ensuring that insured patients present illnesses early when treatment resource requirements are minimal. In addition, the absence of financial incentives for insured patients to obtain inappropriate admissions has the potential to foster proper functioning of the referral system. Finally, the availability of OPD and emergency care as part of the benefit package has been found to be a critical factor in the decision to participate in a scheme. Although the schemes studied have large target populations, provide a comprehensive package in some cases, and are geographically readily accessible to enrolled members, the evidence shows enrollment often relatively low. Many institutional factors interact with design features either to enhance or limit the performance of all schemes.

Based on the evidence from the selected schemes, the third part of the paper discusses those institutional and technical factors that appear to influence performance. In the absence of established best practices in the design of schemes, an argument is made for experimentation, guided by lessons from these schemes. Suggestions are also made of broad national and international policy measures to support the implementation of risk protection schemes for populations in the informal sectors.

PART 1: CONCEPTUAL FRAMEWORK

1.1 Health Insurance, Risk, and Willingness-to-Pay

A mechanism whereby the risks of incurring health care costs are spread over a group of individuals or households constitutes a "health insurance". This definition is not dependent on the nature of the administrative arrangements employed, but on the outcome of risk sharing and subsequent cross-subsidization of health care expenditures among the participants. An arrangement designed to provide risk sharing for illness-related events and which is accessible to households in the informal sectors in low-income countries is a health insurance scheme regardless of the orthodoxy of its operational modalities. In such an arrangement, an insured

individual acquires “a state-contingent income claim” before the state of the world is known, and is entitled to resources and/or income to address the event for which he or she is insured if and when the event occurs.

Some studies have reported that low-income households are initially reluctant to join insurance schemes because they do not readily accept to “pay” for services they may or may not use (10). Interpreting such findings as evidence that these households have risk attitudes non-supportive of insurance (risk neutral or risk loving attitudes) would predict limited potential for insurance schemes targeting these households. In contrast, three studies in Ghana, Burundi, and Guinea-Bissau suggest that *households in rural areas are risk averse with regard to health care* (11). Such differences in population attitude and their WTP for health insurance would theoretically lead to predictable variation in the enrollment of insurance schemes, and therefore WTP information for a target population would facilitate the design and implementation of a scheme.

Currently, limited theoretical constructs and empirical evidence are available to guide WTP studies undertaken in developing countries for the purpose of pricing goods and services, as in the case of providing pricing inputs for the design of goods provided publicly rather than privately. Consequently, published data on the demand of population groups for health insurance, as indicated by their willingness and ability to pay premiums, pertain to a limited number of countries (12),(13),(14).

In many developing countries, ensuring the reliability and validity of WTP studies of insurance goods presents many problems partly because of the limited experience of the population with insurance policies. For example, this limited experience increases the probability that inappropriate discourse may be used to ascertain perceptions and result in an erroneous conclusion of reluctance to pay for uncertain consumption. As a consequence, inapt strategies of basic education may be adopted, rather than marketing approaches, to provide information on modalities and build trust. Exploratory discussions prior to a proposed scheme in a rural part of Ghana found that the term “health insurance” was not associated with risk sharing and rather referred to an unfamiliar product purchased mainly by the urban elite. Risk sharing arrangements

that were familiar to the communities were described as being “solidarity groups” or associations of people who assist each other when events associated with specific needs occur (15).

1.2 Relevant Scheme Models

Health insurance schemes are arrangements in which officials formally hold funds that consist of payments by insured participants, and use the resultant resource pool to finance all or part of the health care costs of members contributing to the pool. In African countries where schemes exist for the informal sector, most fall into the first three of the following four models. Where the officials are members of an identifiable group whose contributions make up the pools, and are responsible for management activities such as determination of benefits and contributions, the model is a **Mutual Benefit Society Model**. A mutual health organization defined by Atim as “a voluntary, non-profit insurance scheme, formed on the basis of an ethic of mutual aid, solidarity and the collective pooling of health risks, in which the members participate effectively in its management and functioning, provides an example of such schemes (16). In **Provider Insurance Models**, the officials originate from the health care provider institution (or from the organization which is the ultimate provider, such as the government or mission health administration), and manage both the insurance and the health care aspects of the scheme, similar to Health Maintenance Organizations (HMOs). A variant of these Mutual and Provider models is where the officials are responsible for management of the insurance product and provision of health care, and are drawn from members of a mutual society as well as a health care provider organization. Such a model may be termed a **Mutual-Provider Partnership Model** and correlates in general to the concept of community-based insurance put forward to test the hypothesis of feasibility of insurance for households in the informal sector (17). **Third Party Insurance** (where officials of a scheme are neither members of the pools nor providers of health care benefits, as in the case of a company whose sole function is to collect contributions and pay claims to patients or directly to hospitals/clinics) has not been a feature of insurance schemes for the informal sector in Africa.

Each of the four design models is associated with incentive structures that influence the behavior of the actors in the models. For example, Mutual models encourage greater accountability to the individuals who provide the pool but also generate a significant requirement for committed time,

skill, and knowledge from these individuals. Mutual-Provider Partnership models reduce the level of these requirements from the informal insured group. The integration of insurance management and health care provision in a scheme provides strong motivation for the provision of health promotion services and preventive care to limit benefit claims. On the other hand, where health care is provided to members by a separate insurance entity, the threat of non-payment or termination of contract may result in a higher quality of service. The skills and management capacities of the different actors, resource availability, the nature of the existing power balance, and the prospects for positive change will influence the appropriateness of a model for a given setting.

In Africa, schemes intended for the informal sector are confronted with low and irregular incomes of target populations and consequently negligible potential for profit-making. By necessity, therefore, schemes for the informal sectors have social welfare dimensions rather than commercial characteristics. This is made more apparent in Mutual models since they involve actions by social institutions, communities, and the State (the latter through regulation and legislation). The Mutual schemes represent public action taken to reduce human deprivation and eliminate vulnerability (18). They facilitate explicit or implicit participation by communities in the design and implementation of a scheme. Depending on the composition and cultural norms of the community, emphasis will be placed either equally or preferentially on achieving the social and financial functions of the schemes. Although they are intrinsically linked, the social and financial functions performed by a social welfare-oriented health insurance scheme may be considered separately. The social function effects risk protection for the individual, whereas the financial function leads to resource mobilization for the group.

1.3 Risk Protection Function of Schemes

In this context, risk protection is the shielding of an individual from critical income losses as a result of health care expenditures. In the sub-Saharan African situation, critical income may be considered as that required for needs such as food that is not grown on the household farm, specific material for constructing housing that cannot be produced by the household (i.e. corrugated iron sheets for roofing), and basic formal education. Health-related financial risk protection is inversely related to the percentage of income required to meet expenditures related

to treatment for an illness episode. To illustrate, a household survey finding that out-of-pocket expenditure for 20% of inpatient episodes exceeded half the mean annual household income for those in the lowest income quintile suggests that risk protection is non-existent for a significant proportion of Africans (19). Insurance schemes that provide 100% cover for illness episodes provide the highest levels of protection, and those involving co-payment provide lower levels of protection.

As protection is a function of income, the price of health care and other goods, the illness incidence, and the completeness of an insurance benefit package, data on all these aspects of illness and economic activity is required to assess the financial protection afforded by a health system. Using the ability of a system to safeguard the critical income of individuals in the event of illness as a measure of risk protection allows comparisons of risk protection performance of schemes operating in different economic circumstances as in different countries. Other measures of risk protection such as the difference in the out-of-pocket payment between scheme members and non-members permit comparisons only between schemes operating in very similar economic situations. For example, two schemes whose benefit structures require members to pay the same flat fee per prescription will provide different risk protection if the incomes and living costs of members of the two schemes are dissimilar.

In order for a scheme to provide FRP, it must offer an insurance product which is accessible to the target population and either eliminates payments associated with receiving care, as in the case of a zero co-payment rate, or reduce the payment to a level that has negligible impact on critical consumption. Accessibility in this context will be high when the premium specified in a scheme does not exceed the non-critical income of targeted individuals. The compatibility of the collection schedule with the cash flow patterns within target households, for example taking into account seasonal availability of cash income among agricultural workers, will also enhance accessibility.

Given that the process of obtaining health care in most low-income settings is a “bad” rather than a “good” (often associated with long journeys on foot and/or relatively expensive but uncomfortable travel by road, long hours of queuing, and loss of production for most of the day),

there is little justification to include measures such as co-payments to reduce possible moral hazard. In addition, the completeness of the benefit package is a design feature that has a major influence on FRP. Schemes in which the benefit package excludes common and/or expensive care will, as in the case of co-payments, frequently lead to significant payments associated with receipt of care and therefore limit financial risk protection.

In many instances, the data on illness incidence, incomes, and prices required for direct assessment of the protection offered by an insurance scheme will not be available as scheme implementers rarely collect population-based data. As an alternative, from the information commonly collected about community health insurance schemes, a set of “second best” markers may be combined and used to provide an approximate evaluation of the financial risk protection resulting from a given scheme. These markers are comprised of, firstly, process indicators of the accessibility of the scheme and the likelihood of payment associated with receipt of care, and secondly, outcome indicators of increased accessibility to care. They include the following:

- a) affordability of premiums charged by a scheme
- b) appropriateness of payment schedules to their target population, particularly those individuals living in rural areas and part of the informal sector
- c) absence of co-payments or affordable co-payments
- d) completeness of benefit package
- e) increase in the population’s utilization of health care services as a result of a scheme.

In the absence of risk protection, the cost of care becomes a barrier to seeking and obtaining health care. Thus health insurance not only provides protection for the income consequences of ill-health, but also removes financial barriers to obtaining health care at the time of illness, making it possible to access treatment promptly. Several African studies have demonstrated that many typical households are unable to utilize formal health services effectively because they are hindered by the immediate cash payments involved (20). This situation compels sick individuals to defer visits to the health facilities until their conditions become critical. Yet when emergency treatments are delayed, it may lead to serious health and financial consequences resulting in further impoverishment of the household. The financial barriers faced when seeking care from

the formal health system often lead would-be patients to resort to self-medication and other practices that are sometimes injurious to their health.

The risk protection provided by insurance also positively impacts on health equity in a community. Equity is enhanced as those who have lower risks, i.e. those who are healthy, subsidize the health care costs of individuals in the society who have higher risks. Although this may be regarded as redistribution of effective income, the more critical interpretation is that health insurance promotes equity because individuals who have equal health care needs (“need” being defined as the capacity to benefit from care) are assisted to obtain comparable care, irrespective of their economic status. All participating members of an insurance scheme have the private benefit of removed uncertainty about their claim to health at the time of ill health. In addition to the private benefits, health insurance, by promoting the optimal consumption of health care by individuals in society, also maximizes the public benefit accruing from the positive externalities associated with increased population health.

1.4 Resource Mobilization Function of Schemes

A health insurance scheme functions as a financial arrangement for mobilizing and pooling funds to cover all, or (in government-subsidized schemes) part, of the cost of health care for those who contribute to the pool. The existence of a pool facilitates the realization of economies of scale and reduces the tendency to “micro-purchase” (purchasing for a few isolated cases as revenue becomes available from, for example, user fees). Thus the pool makes it possible for providers to increase efficiency and cost-effectiveness. A scheme’s financial performance is a function of contributions, the cost of health care consumed by the insured, the level of external subsidy, the size of the pool, and degree of economies of scale that is achieved.

For a scheme to produce net financial benefit to society in a given period, the pool of funds should represent resource mobilization in excess of that which would otherwise be achieved for health care expenditure by the population. This is true if, in the absence of insurance, some of the funds in the pool would not have been used for health activities (i.e. the contributions of members who do not experience illness in the period). From the perspective of the public sector, insurance-mediated resource mobilization can also be a consequence of shifts from private sector

health expenditure of the participating population. Measuring the resource mobilization effect of a scheme necessitates an estimation of percentage increases in resources for health expenditure among the target group and this will be heavily influenced by people's willingness and ability to pay or contribute.

In the absence of direct measures of resource mobilization, an approximation can be obtained by ascertaining if the ratio of health care expenditure to scheme revenue from contribution is positive and greater than unity in the presence of evidence of increased overall utilization rates (i.e. for both insured and non-insured). Alternatively, positive and greater than unity ratios of "average expenditure on an individual" to "the average individual contribution" will also imply net positive resource mobilization. Where the average individual contribution approaches the average expenditure per individual member of the scheme, it suggests that the scheme is functioning as a medical saving scheme. A medical saving scheme enables its members to prepay for their health care and significantly limits the net resource mobilization benefit to the society. From the above conceptualization, net positive resource mobilization will be associated with the following outcome indicators of financial performance which may be used as "second best" markers:

- a) positive and greater than unity ratios of "health care expenditures" to "revenue from contributions"
- b) significantly greater than unity ratio of "average expenditure on an individual" to "average individual contribution".

Schemes can be considered as performing adequately financially if they raise sufficient revenues from contributions to cover the target/stipulated percentage of the costs of care provision, plus all administrative costs. On the other hand, schemes may have poor financial performance because of an excess of high-risk members in the scheme (adverse selection), or as a consequence of targeting to fund from contributions a percentage of costs incompatible with willingness and ability of members to pay. Although in theory, irrespective of a net benefit in resource mobilization terms, a scheme may be unable to fund the target percentage of the health care claimed by its insured because members make inappropriately high demands for care as a

response to being insured (moral hazard), as already argued, moral hazard is not a major problem among poor populations.

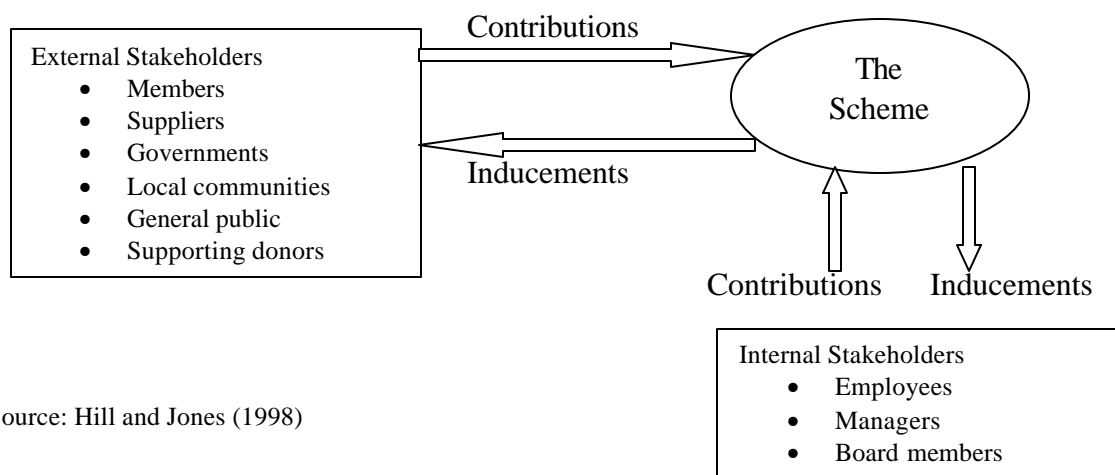
1.5 Design and Institutionalization

A consultative and inclusive process of scheme design will facilitate positive and optimal interactions between the scheme and entities that constitute its stakeholders. Effective consultation requires that the specific identities of all the major stakeholders be established when the process of design is initiated. A statement of the scheme's mission defines its business in terms of client groups, client needs, and implied organizational competence, and thus early adoption of a mission statement will assist early identification. As stakeholders, these entities have a claim, or interest, in the scheme, in what it does and how well it performs. Among the local entities, some, such as health workers, health facility managers, and advisory committee members, will be internal stakeholders. Others will make up the external stakeholder group: for example, insured members, suppliers, local supporting government and donor institutions, and the general public. As stakeholders are, or will be, the providers of present and future resources to the scheme as represented in Figure.1.1, they form relationships with the scheme in which there is exchange of resources and the expectation that interests will be satisfied by inducements (21). Like any other organization, a health insurance scheme must therefore have as part of its objectives the provision of satisfactory returns on stakeholder investments and the satisfaction of their interests in order to maintain the exchange of resources. As a consequence, a critical component of the governance of a scheme will be mechanisms to ensure that the actions of scheme officials are consistent with the interests of the different stakeholder groups.

By undertaking a situation analysis in which information is collected about proposed or existing target populations and about care provider(s), the potential contributions of stakeholders to the functions of a scheme can be factored appropriately into the design. Participation of stakeholders in the design will help ensure that the interpretation of the information obtained is based on an understanding of societal norms and expectations, as these will have a bearing on the skills and resources that stakeholders may wish to make available to the scheme. The approaches for collecting the relevant detailed information include focus group discussions, household surveys, and health facility costing studies. A situation analysis of a proposed or an existing scheme will

reveal for consideration design options in several dimensions. Table 1.1 sets out the main options available when designing a health insurance scheme for the informal sector in sub-Saharan Africa. Ultimately a match between the selected goals and options is the intent.

Figure 1.1 Relationships between Stakeholders and the Scheme



Source: Hill and Jones (1998)

For the majority of schemes in sub-Saharan Africa, an analysis of the situation reveals, in addition to information about stakeholders and design options, the following contextual factors: a) inadequate budget allocation to the health sector coupled with financial barriers to use resulting from out-of-pocket fees; and b) inadequacies of physical input and human resources resulting in poor quality of health care. An additional feature of this context is a crisis of management/administrative skills within the health sector. This is manifested by micro-purchasing and an inadequate referral system, which in turn leads to internal inefficiencies. These contextual factors are main determinants of the goals that have been selected for schemes. These and other situational findings relating to the target population's economic profiles and their health-related needs have, in most cases, led scheme designers and operators to adapt implicitly or explicitly one or more of the following goals: a) provision or improvement of financial access with high participation and risk protection; b) provision or improvement of physical access to health care providers; c) improvement of supply of services; and d) improvement of quality of care.

Table 1.1 Scheme Design Options

<i>Dimension</i>	<i>Choices</i>	<i>Strengths</i>	<i>Weaknesses</i>
<i>Utility functions</i>	<p>Access maximization</p> <p>Revenue maximization</p> <p>Cost recovery</p>	<p>Encourages affordable premiums and hence high participation</p> <p>Encourages community-rated premiums and enhances cross-subsidization between scheme members</p>	<p>Discourages affordable premiums (i.e. based on WTP)</p>
<i>Operation level</i>	<p>Single-facility based (i.e. a hospital scheme)</p> <p>Provider-network based (i.e. scheme consisting of participating clinics and referral hospital(s))</p>	<p>Encourages wider geographic spread of participants and greater range of benefits, and permits effective referral system</p>	<p>Discourages participation by distant populations & limits range of benefits</p>
<i>Range of providers</i>	<p>Restricted to public and not-for-profit private</p> <p>Includes or limited to for-profit private</p>	<p>Absence of profit motivation and use of existing structures may lower premiums</p>	<p>Profit margins may lead to high premiums</p>
<i>Range of benefits</i>	<p>Full basic package (i.e. outpatient plus inpatient care)</p> <p>Partial packages</p>		<p>Encourages high enrollment, prompt attendance to health problems</p> <p>Discourages early treatment until illness is severe and/or complications arise that are covered by scheme leading to high costs</p>

The challenge faced by scheme designers is to identify from the available design options those that will achieve the goals selected in consultation with stakeholders. Table 1.2 below gives an example of a set of design options that could be utilized to meet goals in physical and financial access, and efficiency.

Table 1.2 An Example of Goals Matched to Design Options

<i>Goal</i>	<i>Matching Design Option</i>
Financial access – affordable contributions	-Public and not-for-profit private -No or partial cost recovery
Physical access to providers	-Provider-network based
Efficiency	-Full package benefits

1.6 Tasks to Be Accomplished by Designs

As stated above, in pursuit of its goals, a health insurance scheme for the informal sector – like other organizations – must accomplish the primary task (sometimes referred to as “buffering” by Hatch) of resource (material, services, and money) transfer between it and entities that make up its stakeholders (22). In particular, a scheme relevant to this discussion must first affect the efficient transfer of contribution funds from its members in the informal sector to an organization which operates largely in the formal sector. The majority of members will be limited to transactions in cash, and therefore potentially efficient payment mechanisms, such as checks, installments by standing bank orders, payments in response to regular bills, and credit card payments, are not options. Secondly, the scheme must realize transfer of health care resources, in some cases cash from or via the scheme, to health care providers or members of the scheme who have limited mobility/transportation possibilities.

Another major task of all organizations is the transfer of information across the boundaries that separate it from its environment (referred to as “boundary spanning”). In a health insurance scheme, information transfer is required between the official of the scheme and the elements in the environment such as insured members, health care providers, and the government. This activity is crucial in establishing an understanding of the obligations and benefits between members and the scheme. Additionally, by capturing shifts in demand preferences and willingness-to-pay of its members, transfer of information helps to minimize differences in perceptions of these obligations and benefits over time.

A set of economic and financial specifications will be required to facilitate the primary task, and specific administrative and management structures – including business and legal processes –

will be the basis for realizing the information-related task. For a given benefit structure, the following economic variables must be specified:

- amount of contribution – may be cash or in-kind
- unit of contribution – may be per individual/household/village
- schedule of contribution – may be per month/half-year/year.

Financial viability and the meeting of financial obligations require that expenditure is less than the revenue from contributions. These factors have a bearing on resource mobilization as explained above, while financial protection of the target population will be increased by a unit contribution that does not exceed the WTP of the target group.

A trade-off is required in setting these specifications when the contribution that leads to desired financial viability is greater than the contribution that optimizes risk protection. Alternatively, both financial performance and high-risk protection can be maintained by lowering financial obligations through subsidies to the scheme.

Administrative and management structures to realize the task of information transfer provide the data to monitor financial performance and risk protection. Monitoring of these depends on continuous predictions of expenditure based on detailed data on the target population and provider activities. With regard to the target population, the specific data includes the level of utilization, pattern of illness, and care-seeking behavior. Data required about the care provider includes cost per unit of care for different services and the financing/income source. Similarly, monitoring will rely on continuous assessment and/or prediction of revenue as determined and influenced by WTP, health insurance perceptions and preferences, quality of care perceptions and preferences, and socio-economic characteristics of the target population. Hence this secondary function translates into consumer-oriented research and marketing and also leads to internal analysis of the scheme by its officials. The goal of an internal analysis of a scheme is to understand the scheme in depth with particular reference to its strengths, weaknesses, resources, and constraints. Information from such analysis can be used to develop responsive strategies: either exploiting strengths or compensating for weaknesses. This process must be ongoing in order to facilitate the institutionalization process.

Institutionalization of the operational modalities of a scheme involves a lengthy process of innovations, political lobbying, and geographical expansion. The process permits civil societies to gradually tailor the modalities of operation to local socio-economic conditions and align it with prevailing cultural norms relating to collectivism. This is less likely to happen if a scheme starts as a detailed project proposal created by a development professional referred to as a “normal professional” by Chambers (23). Development initiatives that have detailed plans at the onset often have limited opportunities for communities to participate fully. Participation, as used here, refers to a “process of empowerment of the deprived and the isolated” (24). It implies increasing the ability of social groups to exercise economic and political power and to make decisions both private and public. It is argued, therefore, that community involvement in the scheme for the informal sector should extend beyond the mobilization of local material and labor resources. The willingness of the formal health sector to engage in dialogue and collaborate with potential patients as a collective, rather than as individuals, is a crucial determinant of the success of the institutionalization process. The organizational culture of the health providers in the scheme will determine the ease with which effective dialogue and collaboration will evolve between scheme members (through their official representatives), health managers, and health care workers. In addition, functional collective solidarity schemes in most African societies usually involve the provision of benefits produced in the informal sector and/or in the control of ordinary people rather than professional groups. Examples of this are associations that provide member households with funeral assistance or periodic payments from the contribution of members.

PART 2: EVIDENCE

This section of the paper presents information from the literature and personal experience about the performance of schemes, particularly the provision of financial protection to their target populations and mobilization of resources for health care. In general, data on this topic is limited. Consequently, this section focuses on indirect measures of performance and makes reference to specific schemes as illustrations. The literature about existing “potentially large population”

Table 2.1 Features of “Potentially Large Population” Schemes for Informal Sector Households

	Policy and legal context	Organizational structure	Contributions estimation: method & data	Premiums level & membership unit	Payment schedule	Benefits package
1. <i>Carte d'Assurance Maladie</i> (CAM) program, Burundi (<i>Provider Insurance Model – by government</i>)	-Part of national strategy -Revenue collected and controlled by local government	-Financial control by local government (communes) -Care provided by public health facilities	-Fixed nationally by central government -No information on method or data	-Purchase of CAM card (500FB [\$1.85] in 1992) per HOUSEHOLD -Defined as 2 adults + all dependent children	-Annually	-All care at government clinic and hospitals
2. Community Health Fund (CHF), Tanzania (<i>Mutual-Provider Partnership Model</i>)	-Governed by district council by-laws -Political support from central government	-Management and decisions by district CHF board and CHF ward committees	-Inconclusive information on method -No evidence of use of data	-Flat rate per HOUSEHOLD irrespective of size -Rate carries by ward	-Annually	-All care provided by facility where registered -No upper limits on value
3. Abota Village Insurance Scheme, Guinea-Bissau (<i>Mutual Benefit Society Model</i>)	-Village committees control with oversight by donors and/or government	-Village management -Suppliers from central MOH	-Trial and error by community to limit periods of drug stock-outs	-Cash or in-kind per HOUSEHOLD or INDIVIDUAL	-Determined by village, usually annually or bi-annually	-Outpatient care by village health worker -Free referral care
4. Nkoranza Community Financing Health Insurance Scheme, Ghana (<i>Provider Insurance Model – by hospital</i>)	-Religious health sector rules by hospital staff and external donor oversight and regulations	-3-tier: Advisory board Management team Voluntary registrars	-Subjective judgment of affordability by hospital staff	-c450 (US\$1) in 1991 per INDIVIDUAL enrolled by family	-Annual registration Oct.-Dec.	-Inpatient care -Refund of referral expenses
5. Bwamanda Hospital Insurance Scheme, former Zaïre (<i>Provider Insurance Model – by hospital</i>)		-Enrollment and accounting by health staff -Scheme assisted by NGO	-Selection of premium and co-payment options by community	-Cash = price of 2 kg soya beans + co-payment per INDIVIDUAL	-Annually (normally in March)	-All hospitalization and chronic care in health centers
6. Dangme West Health Insurance Scheme (<i>Dangme Hewami Nami Kpee</i>), Ghana (<i>Mutual-Provider Partnership Model</i>)	-Government by decentralized district and regional MOH -Planned registration of association as an NGO	-Community association and the District Insurance Management Team	-Based on simulation applying data on WTP and costs and illness rates from survey	-Membership by HOUSEHOLDS -Contribution per INDIVIDUAL	-Planned to be annually	-Outpatient care at any district facility -Inpatient care when referred to regional hospitals

schemes illustrates a diversity of benefits, organizational structures, administrative arrangements, and paths of evolutions (see Table 2.1).

2.1 *Carte d'Assurance Maladie (CAM), Burundi*

This is a national health card insurance scheme introduced by the government of Burundi in 1984. The scheme has the characteristics of the Provider Insurance Model in which the government is the responsible organization for both management of the insurance scheme and provision of health care. Purchase of a CAM card by a household entitles its members (restricted to two adults and all children under 18 years old) to free health care at all public health facilities. The card is sold at a fixed price irrespective of the household size (in June 1992, the price of the card was 500 FBu (Burundi Franc) [US\$1.85]). Persons without cards are required to pay user charges for government health care. The user charge per episode of illness treated is determined by the health worker at his or her discretion and generally varies with the age of the patient and the quantity and type of treatment received. All health services provided by the government are covered by the CAM scheme and therefore, in theory, CAM cardholders who seek health care at government facilities should not incur out-of-pocket expenses. However, due to the shortage of drugs and other inputs, CAM holders, like fee-paying patients, are sometimes given prescriptions to purchase drugs on the open market.

The names of household members entitled to use a card are written on the card at the time of purchase, making it difficult for it to be used by individuals from other households. The card is valid for one year and may be purchased from a community representative at any time of year. This makes it possible for a non-CAM patient to pay a user charge at a health center, and on referral to a hospital, to purchase a CAM card in order to obtain free hospital care. The cards are not accepted by non-government health facilities, such as mission and for-profit clinics and hospitals.

The revenues from CAM card sales and user charges are retained by “commune” committees (the “commune” is the lowest level of local administration in the country). These committees have some financial responsibilities for the health centers in their localities and are expected to fund recurrent expenditures, such as stationery, fuel for refrigerators, linen, and in some cases

capital projects such as construction of new health centers. However, revenues from CAM and user charges are not designated to be used in the provision of health care and therefore, in practice, only a small fraction is allocated by communes to health. In 1990, 8% of the revenues of communes in Muinga Province came from the sale of CAM cards, whereas an average of only 1% of commune revenues were used to finance health care (25). The government, through the Ministry of Health's budget, funds the salaries of health workers and drug costs.

CAM: Risk Protection

Affordability of premiums and co-payments- A study in Muinga province, undertaken in 1993, reported that women had limited access to cash, and therefore, by eliminating cash payment at the point of care, CAM empowered them to decide the need for – and timing of – health care consumption by household members (women in CAM households do not require money, and hence permission, from male household heads to seek health care)(26). Cash had become less of a barrier to obtaining curative treatment for cardholders and it appeared that women, being the main carers, derive additional utility from the knowledge that in the event of child illness, treatment is available even in the absence of cash in the household. Larger households were more likely to purchase the CAM than small households and therefore illness episodes per household were significantly greater for CAM households than for non-CAM households. This situation may be described as 'adverse household selection' and possible results would be lowered risk sharing among households.

The same study also found that approximately 27% of households gave 'financial inability' to purchase a CAM card as one of the main reasons for non-membership. However, in practice, non-CAM patients referred from health centers to higher level facilities often purchased cards prior to, or on arrival at, the referral center, thus manipulating the scheme to reduce their financial barrier to expensive curative care without prior participation as members. The conclusion of the study was that the CAM provided significant financial protection to the communities studied.

CAM: Resource Mobilization

Relationships between premiums and benefits- A public treatment rate of 0.91 per household per month and a mean value of drugs of 134.1 FBU per formal treatment at the time of evaluation by the author implied that an average household consumed 1,464.4 FBU of outpatient drugs annually. The price of the CAM card could therefore cover 34.1% of the drug costs suggesting that the ratio of “average expenditure on an individual” to “average individual contribution” may have been less than unity (in practice, revenue from CAM did not appear to be used to purchase drugs or medical supplies required for patient care at the health center). In general, the target population for the scheme assessed the quality of care provided to members to be inadequate. As a consequence, women who participated in the focus groups were willing to pay a higher CAM contribution in order to improve the benefits provided; in particular, there was willingness to pay a higher price for the CAM card on condition that more drugs become available at government facilities.

Adverse selection and moral hazard are major causes of inefficiencies in the functioning of health insurance schemes and therefore have consequences for financial viability (27),(28),(29),(30). The rate of illness per person was found to be almost identical for members of CAM and non-CAM households, and, therefore, adverse selection of individuals did not seem to be a problem. In the absence of adverse selection, it can be inferred that capitalizing on the WTP for improved benefits would result in a significant increase in resource mobilization. Even so, this paper omits an evaluation of the level of resource mobilization actually achieved because other indicators of financial performance could not be obtained.

2.2 Community Health Fund (CHF), Tanzania

In Tanzania, the Community Health Fund strategy for financing rural health services was piloted in Igunga District in 1996, and by 1999 it had been initiated in nine other districts. Currently, schemes comprising the CHF are governed by district council by-laws and are also guided by a coordinator located in the headquarters of the Ministry of Health. Partly as a consequence of receiving funding and external technical assistance through a government World Bank funded project, the CHF represents a national initiative and thus has the significant political support from central government.

Three financing mechanisms are employed in CHF: user fees (exist nationally, having been introduced by central government in 1993), insurance contributions, and matching subsidies from the government (funded by a World Bank project). A team of expert consultants designed the CHF and its schemes in 1995; subsequently, some aspects of the design were modified following consultations with communities in the first pilot district. In particular, the level of pooling was changed from districts to sub-districts, known as wards, although a central management role was retained at the district level by the district CHF board. Decisions about the use of funds are made at ward level and are reflected in ward health plans and budgets for its public health facilities and outreach services. Employees of government health facilities have management roles in the CHF. They may be members of the ward health committee, may be selected by the community to collect contributions, or may be part of a consultative group representing community groups and health facility management which meet to review progress. The model of the CHF is therefore a Mutual-Provider Partnership Model.

All households in a participating district are eligible to enroll in the scheme and are required to pay a flat rate contribution per household irrespective of household size. The level of contribution is determined by the community (at the ward level), and the decision-making process is the responsibility of the CHF ward committee. Contributing households are registered with a public health facility situated in the ward where the household resides, and household members are entitled to all the health services provided by the facility.

CHF: Risk Protection

Affordability of premiums and co-payments- One study found that “over 50% of members were considered to be poor” suggesting high affordability (31). In addition, the CHF schemes include exemption mechanisms for households that are determined by the ward committee and certified by the district board as too poor to pay a flat insurance contribution or the user fees. In contrast, some health workers in Igunga District reported that the majority of participants of the insurance component of the CHF are salaried workers, and the procedure for obtaining exemption status is sometimes inaccessible by those whose incomes and socio-economic statuses are very low. The

care provided as benefit is not subject to an upper ceiling of value and co-payments are not required.

Resulting level of access to health care among the population- The percentage of the target population enrolled is approximately 5% and insured individuals constituted 75% of patients who received care in the provider facilities (32). It can be inferred that the increased funding of government health facilities provided by the scheme's revenue (contributions and matching funds) will have increased the supply of, and hence the access to, care for the target population.

CHF: Resource Mobilization

By 1999, the total funds of the scheme for the participating district were US\$371,000, consisting of 95 million shillings (35%) insurance contributions, 81m shillings (30%) user fees, and 95m shillings (35%) matching government funds. The existence of matching funds makes it almost certain that the scheme resulted in increased resources for health care for the target population and hence a high level of resource mobilization.

2.3 Abota Village Insurance Scheme, Guinea-Bissau

The Abota system entails prepayment for essential drugs and the provision of primary health care at the village level by trained members of the village. The system comprises many hundreds of autonomous Abota schemes at village level. Health care is provided voluntarily by members of the village, village health workers known as *Agentes de Saude de Base*, and by birth attendants at the village health post (*Unidad de Saude de Base* [USB]). The USBs were constructed from local building materials by the villagers and furnished with basic equipment (such as a metal storage cupboard, obstetric stethoscope, lantern, and a kit of teaching aids) by the Ministry of Health. Administration of the Abota system in each village is the responsibility of the village committee, the lowest level of the country's decentralized political system. This is an example of a Mutual Benefit Society Model, where the officials are community members participating in the scheme.

The earliest Abota schemes began in 1980 in a few villages as part of a general village health care program (33). Villages in the program adopted and modified an indigenous payment mechanism, originally used to collectively finance ceremonies, in order to fund inputs for

primary health care. Chabot describes the process of trial and error used by these villages over a three to four year period, to determine the frequency and level of prepayments that would ensure the availability of drugs throughout the year (34).

Since 1983, patients referred by village health workers to the public health facilities have been exempt from payment of consultation fees on showing evidence, usually a receipt, of having contributed to Abota. Growth of the scheme was continuous (in 1991 there were 462 villages participating), and at the time of study by the author the Abota system was widespread, forming an integral part of the country's health system. Furthermore, the Guinea-Bissau government's ten year health plan (1984-1993) emphasized the role of village-based primary health care, thus making the efficient functioning of the Abota system critical to the country's health strategy (35). The Abota revenue is used to purchase essential drugs and bandages from nearby government health centers or sectoral hospitals. The ultimate supplier is the central medical store situated in the capital. In each village, the village Committee decides the procedures for collecting contributions, purchasing drugs, and monitoring the system overall. As a consequence of this autonomy, prepayment terms vary substantially from one village to the next. In 1988 the annual contributions per adult male varied from P.G. 20-500 (at 1988 exchange rates, US\$1 = 1129 Guinea-Bissau pesos); in two of eighteen villages surveyed by Eklund and Stavem, only men paid; and in another two villages contributions were on a household basis (36). Other villages accepted in-kind contributions of agricultural produce.

Since the mid 1990s, the country's economic difficulties have threatened the survival of the Abota. Problems such as inadequate recurrent budget allocations, shortage of drugs, and low salaries for health workers plague the public health system (37). Ramifications include a decreasing capacity of government health workers to train and supervise village health workers, and difficulties in re-supplying village health posts, even when their Abota revenues are sufficient to fund their requisitions. In a few cases, Abota funds have been misappropriated (38) either by village health workers or staff of the Ministry of Health (MOH).

The published and unpublished literature drawn upon to provide the description of the Abota also permits a limited evaluation of the scheme. Again the criteria of affordability, payment

schedules, revenue and expenditure, and associated access to health care were used. The results are described below.

Abota: Risk Protection

Affordability of premiums- Studies of the Abota do not provide direct information on affordability but since the contribution was set by the members of the village, it is likely that the amount set could be afforded by the majority. The fact that many individuals were willing to increase their contribution also supports this general conclusion.

Appropriateness of payment schedules- The number of times prepayment contributions were collected in a year varied: some villages collected twice yearly, others once. The frequency of payments was determined by the villages themselves, therefore it is reasonable to assume it was the most appropriate for the community.

Resulting level of access to health care among the population- The fact that participating villages had basic health care made available within the village implies significant increases in access. Near universal membership in participating villages excluded adverse selection, and the watchfulness of health workers and local communities appeared to prevent moral hazard (39).

Abota: Resource Mobilization

Relationships between premiums and benefits- In the first year of operation, the villages' supply of drugs was depleted within 3 months because the revenue from contributions was exhausted. The scheme appears not to have held reserve capital to ensure the quality of the insurance policy.

2.4 Nkoranza Community Financing Health Insurance Scheme, Ghana

Started in 1992, the scheme, an example of a Provider Insurance Model in which management and health care are provided by the hospital personnel, is administrated by a three-tier structure:

a) *Insurance Management Team* (IMT) in the hospital, consisting of the medical officer in charge of public health and the Hospital Management Team. This is the decision-making body of the scheme;

b) *Insurance Advisory Board* made up of traditional, political, religious, and administrative leaders in the community and district health leaders (MOH and non-governmental organizations [NGOs]); and

c) *Zonal Coordinators and Field Workers*. There are 11 health zones, each managed by a team of three zonal coordinators. They supervise voluntary field workers who register families into the scheme.

The premiums are calculated per person so that they vary with the size of the family. The scheme ensures access to care at St. Theresa hospital in Nkoranza District (Ghana) by providing free admission in the medical, surgical, and maternity wards. However, admissions for normal deliveries are excluded. In addition, insured persons who are referred to other health institutions may claim refunds equal to the cost of an average admission at St. Theresa Hospital, Nkoranza. The scheme is available only to families living in the Nkoranza District and all the members of a family must register. Members have to travel various distances to the hospital, and a relationship has been observed between the distance of a community from the hospital and the enrollment of members in that community (see Figure 2.1). Registration is renewable annually, during the last two months of the year only.

Nkoranza: Risk Protection

Appropriateness of payment schedules- In the first year of operation, 72% of field workers and 65% of household heads stated that “people find it difficult to register because they are short of money between October and December” (40). Sixty-five percent of field workers and 75% of household heads were of the opinion that “more people will register if registration is between January and March.” Later evaluations of the scheme, including one undertaken in mid 1999, have continued to report a mismatch between the registration period and the time of highest cash availability among households in the district (41).

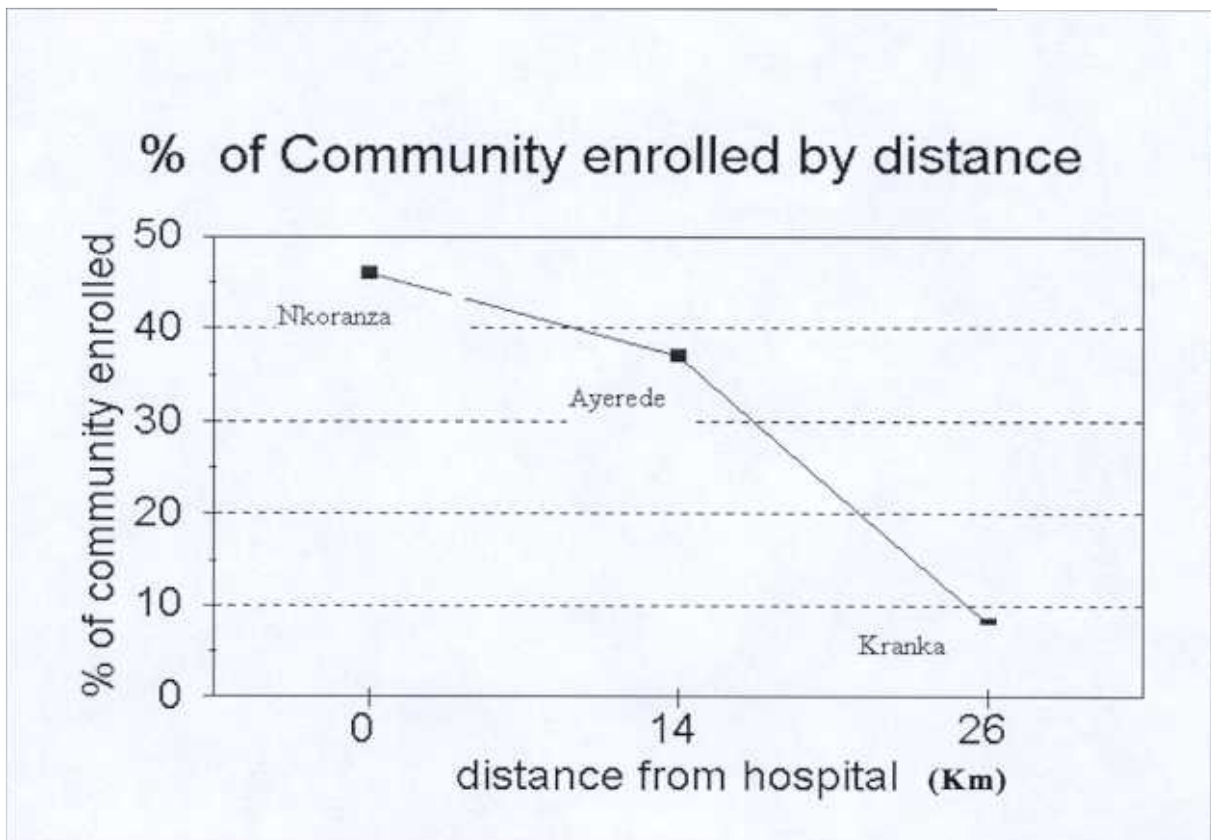
Resulting level of access to health care among the population- The findings suggested that the scheme had removed a barrier to admission for people in the district. Utilization, in terms of admissions per 100 person-years, was greater than the non-insured by a factor of 2.4. It was estimated that among the insured population, 9% of admission was due to factors such as earlier

reporting of patients and more liberal admission policy of staff, and that without the insurance policy this would not have occurred.

Nkoranza: Resource Mobilization

Revenue from premiums and expenditure for benefits- During the first year of operation, admissions' cost data for the insured population indicated that income obtained from premiums was 55% of the expenditure for the insured inpatients. At this time the premium was set at c450 per person (approx. US\$1 at 1992 exchange rates). Premium increases of 40%-70% relative to the preceding year occurred annually. In 1998 the premium had risen to c5,000 per person (approx. US\$1.9 at 1998 exchange rates). Since the mid 1990s, the ratio of revenue to expenditure has been approximately one, implying significant resource mobilization. In addition, the ratio of the average cost per benefit (inpatient costs) to premium was 7.5 in 1998, also suggesting that resource mobilization among those enrolled was substantial

Figure 2.1 Percentage of Community Enrolled by Distance



2.5 Bwamanda Insurance Scheme, former Zaïre

Bwamanda Health Zone is linked to a development project, Center for Integrated Development (CDI), started in 1969 and supported by Belgian volunteer workers. Impetus for the insurance scheme came from the Zone's medical staff who were concerned about the barrier to access caused by existing user fees and the low recovery of hospital costs from fees. Although the zonal hospital (a 156-bed reference hospital) had recovered 48% of its operating costs in 1985, this was a lower rate than that of eight comparable hospitals in the country (42). The parameters of the insurance plan, set by hospital staff, were explained to the community and preferences between two options of premium and co-payment levels were obtained. Enrollment of members was carried out by health center staff, mainly nurses, who received 3% of the premiums they collected as commission. Zone administrative staff made frequent supervisory visits to health centers during the enrollment period to monitor payment records, distribute membership stamps, and transfer premiums to the hospital. They also managed the plan at the hospital by verifying the membership status of admitted patients and keeping administrative and accounting records.

Members of the Bwamanda insurance plan are covered for hospitalizations including deliveries, dental extractions, and outpatient surgery. The cost of illness treatment at health centers is also covered. Twenty percent co-payment is charged but some groups are exempted.

Information in a World Bank report was used to assess the social and financial functioning of the Bwamanda health insurance plan in former Zaïre (43). The assessment results pertaining to the criteria of affordability, payment schedules, revenue and expenditure, and associated access to health care are presented below.

Bwamanda: Risk Protection

Affordability of premiums- Absolute inaffordability did not appear to be a problem. It was reported that in setting the premiums, the health staff compared the premium to the price of two kilograms of soybeans as a measure of affordability. In addition, only 16% of 21 non-members stated that they had not joined the plan because of inadequate cash. However, the combined costs of the travel and premium may have been unaffordable to some households: when in 1988 the co-payment rate was lowered for those living more than 25km from the hospital, the enrollment

declined less with distance than in other years. During the period 1987 to 1995, the percentage of the target population enrolled ranged from 41% to 66% (44).

Appropriateness of payment schedules- Communities elected to pay premiums during the months that followed the second harvest period (March to April). The explanation provided by the authors was that after the first harvest, cash was required to pay school expenses and therefore appropriateness of time of collecting was ensured by consulting the community.

Bwamanda: Resource Mobilization

Revenue from premiums and expenditure for benefits- The financial data for the insurance plan showed that in 1987 and 1988, premiums and interest were equivalent to 145% of the expenditure on care for beneficiaries. As a consequence, the share of the hospital's operating costs recovered rose from 48% in 1985 to 79% in 1988.

Resulting level of access to health care among the population- It was reported by the World Bank study that insured persons were 6.7 times more likely than the uninsured to be hospitalized, implying that access to care was greater for the former group. Since over 60% of the zone's population were insured, this implies a significant increase in the access to care as a result of the insurance plan. Even so, households living close to the hospital were also more likely to be insured, and therefore their high access and utilization may have been because of good physical access rather than the insurance plan. The combined effects of adverse selection and moral hazard was also felt to account for the high utilization. Even so, it is likely that the prevalence of adverse selection and moral hazard was reduced by the inclusion of co-payments and the requirement that all household members join the plan. Other researchers working in former Zaire, however, reported the rate of hospitalization among the insured to be only slightly higher than that of the non-insured (45).

2.6 Dangme West Health Insurance Scheme (*Dangme Hewami Nami Kpee*), Ghana

Empirical research initiated by the Ministry of Health (MOH)ⁱ and undertaken from 1993 to 1995 in a rural district in southern Ghana concluded that household preferences and WTP were compatible with high membership in, and satisfactory performance of, a proposed health insurance scheme. The research findings led an MOH team to work with households in Dangme West District to design and implement the Dangme West Health Insurance Scheme (*Dangme Hewami Nami Kpee*). The scheme is a collaboration between a mutual society and government health providers at the district level and therefore it is a Mutual Provider-Partnership Model. The scheme was part of an action research carried out for two purposes: 1) to improve the quality of health care provided by MOH facilities and increase access of households, and 2) to evaluate the outcome of the intervention and draw policy-relevant lessons. Quality-related objectives were to be addressed in three ways. Firstly was by the provision of in-service training of health workers to improve a) technical competence in patient diagnosis and treatment, b) drug supply and management procedures, and c) interpersonal skills. Secondly was supportive supervision to ensure the use of skills acquired during training. Thirdly was the refurbishment of MOH facilities to ensure that basic physical and laboratory investigations could be carried out. The health insurance scheme was the main strategy to increase access by eliminating payment of user fees for participating households.

As a result of consultation meetings with the district assembly (the local government for the district) and a series of durbars/community meetings attended by approximately 4,250 adults (7% of the adult population of the district), a Mutual Provider-Partnership model for the scheme emerged. The model consists of: 1) a solidarity association named “*Dangme West Hewami Nami Kpee*” (literally translated, ‘a good health group’; registered members of the scheme become association members), 2) the Dangme West District MOH responsible for provision of health care in the district through the public health facilities, and 3) the District Insurance Management Teams (DIMIT), ultimately consisting of staff of the district MOH and elected members of the association. The DIMIT is responsible for financial and administrative matters, including allocating insurance funds to health centers and hospitals using an approved formula and

ⁱ The principal investigator was an MOH health economist seconded to an academic health economics group in the U.K. The head of MOH was one of the advisors of the research.

monitoring performance to ensure that paid-up members of the association have access to good quality health care at hospitals and clinics without paying fees. Prior to the election of members of the association to the DIMT, implementation and management is the responsibility of an interim team consisting of the district assembly members and the district health administration members.

The first registration period for the scheme was October 2000 to January 2001. Enrollment was by household and the contribution for a household was calculated using a flat rate per adult (12,000 cedis [approx. US\$1.80]) and per child (6,000 cedis). As adjustments were not made for increased earnings and cost of living, in real terms the contribution rate was lower than the WTP of households in 1998. Members are entitled to outpatient care at any of the district health centers and clinics and to inpatient care at secondary hospitals in the regions and nearby hospitals. Although the implementation team (with the assistance of a local information technology [IT] group) developed software to integrate registration and identification of members with an information management system, plans to install appropriate inputs were abandoned due to resource constraints. Two local donors declined to support a proposal endorsed by MOH headquarters for US\$28,560 to fund the required physical inputs and training for four years of operations (46). The goal of the proposal was to provide effective management and IT solutions with respect to compatibility with existing processes, hardware affordability, and technical skill requirements. The inputs included hardware and specialized ID software. Consequently, registration with manual production of registration booklets was carried out using a Polaroid camera. Immediately following the first registration period, it became evident that a manual system of registration, identification of members at health facility centers, and collection of claim information would be inefficient and not cost effective.

Dangme West: Risk Protection

Affordability of premiums- The data obtained from the target population in 1998, eighteen months prior to the first premium collection, indicated that 35% of households would be willing and able to pay the contribution rate. Furthermore, the first collection of premiums was undertaken between October and January – a time when cash availability amongst farming

households is low. The resulting enrollment rate of 5% of the target population is evidence that financial protection was subnormal, due in part to the low affordability of premiums.

Appropriateness of payment schedules- The period for collecting the first premiums was determined by officials of the scheme and appeared not to be compatible with cash availability at that time. However, the officials' decision to have contributions paid annually was in line with the preferences found in a survey of households conducted prior to implementing the scheme.

Dangme West: Resource Mobilization

Revenue from premiums and expenditure for benefits- As of July 2001, six months after the first premium payments by enrolled households, officials of the scheme had yet to compile and analyze the financial data. However, in view of the modest enrollment rate, it is reasonable to assume that resource mobilization will be appreciable but suboptimal.

2.7 Performance Overview of Selected “Potentially Large Population” Schemes

Table 2.2 provides information relating to the “second best” indicators of financial risk protection (FRP) (as proposed in the conceptual section) for the selected schemes. The final column contains the author's assessment of the FRP provided by the scheme as inferred from the information. The assessments are based on these indicators because data on illness incidences, incomes, and the prices of health care and other goods faced by targeted populations conceptualized as necessary for direct assessment of FRP was unavailable. One scheme (the Community Health Fund [CHF]) was assessed as providing modest financial risk protection. The risk protection performance of two schemes (the Abota Village Insurance Scheme and the *Carte d'Assurance Maladie* [CAM]) was assessed as being superior to that of the CHF as they provided significant protection. Common to these three schemes are benefit packages that include outpatient and inpatient care, although the range of inpatient provision in the CHF depended on the facility with which an insured member is registered. These schemes also set premium/contribution levels that appeared to be affordable to a high percentage of their target populations and can be interpreted as being compatible with the populations' WTP. Two of the three schemes also involved significant decision-making by the target population.

In the literature on the selected schemes, increases in the resources for health care that resulted from the insurance schemes (postulated to be the appropriate direct measure of resource mobilization in the framework presented in part one) were unavailable for the selected schemes. With the exception of information permitting estimation of the ratio of expenditure to revenue, information about the “second best” indicators of resource mobilization (notable combined changes in utilization rates of insured and non-insured, and ratio of “average expenditure on an individual” to “average individual contribution”) was incomplete or absent. Therefore, assessments of resource mobilization of these schemes were not attempted.

Table 2.2 “Potentially Large Population” Schemes’ Financial Risk Protection (FRP) Performance

	Indicators of Financial Risk Protection (FRP)				Assessment of Financial Risk Protection (FRP)
	Affordability <i>% of target population enrolled</i>	Appropriateness of payment schedules	Completeness of package	Level of access	
1. <i>Carte d'Assurance Maladie (CAM)</i> program, Burundi (<i>Provider Insurance Model – by government</i>)	Affordable to about 77% 54% ever enrolled (in 1 province studied in 1992)	Generally appropriate	Full clinic and inpatient care when referred	Increased – insured/non-insured illness episodes	Significant FRP provided
2. Community Health Fund (CHF), Tanzania (<i>Mutual-Provider Partnership Model</i>)	Affordable to majority -- includes exemption mechanism 5.3% (in 2 districts studied in 1999)		Variable – dependent on the services at facility	Increased – 75% of patients receiving care are uninsured	Modest FRP provided
3. Abota Village Insurance Scheme, Guinea-Bissau (<i>Mutual Benefit Society Model</i>)	Affordable to majority -- level determined by villagers	Appropriate -- Determined by villagers	Full clinic and inpatient care when referred	Increased – primary health care available in villages	Significant FRP provided
4. Nkoranza Community Financing Health Insurance Scheme, Ghana (<i>Provider Insurance Model – by hospital</i>)	Premiums assessed as unaffordable by two-thirds of households and health workers approx. 27%	Inappropriate – low cash availability between Nov - Dec.	Inpatient care	Increased – insured/non-insured admissions = 2.4 responsible for 9% increase in admissions	Suboptimal FRP provided
5. Bwamanda Hospital Insurance Scheme, former Zaïre (<i>Provider Insurance Model – by hospital</i>)	Affordable premiums but co-payment unaffordable to households living far from hospital 41% - 66% (1987-1995)	Appropriate -- time chosen by community	Inpatient care	Increased – insured/non-insured admissions =6.7	Suboptimal FRP provided
6. Dangme West Health Insurance Scheme (<i>Dangme Hewami Nami Kpee</i>), Ghana (<i>Mutual-Provider Partnership Model</i>)	WTP data (in 1998) implies affordable to approximately 35% of households approx. 5% of households (first enrollment period 2000)	Inappropriate – low cash availability at time of first enrollment	Full clinic and inpatient care when referred		Suboptimal FRP provided

PART 3: DISCUSSION

3.1 Institutional and Technical Influences on Scheme Design

The schemes selected for review in this paper increased the consumption of health care by insured persons relative to the uninsured. The levels of increased consumption when combined with affordable premiums suggest that for three of the schemes, the financial risk protection provided is modest to significant. The low participation rate of the target populations in all the schemes strongly suggests that the level of resource mobilization achieved is below that which is potentially attainable. Some of the evidence supports the conclusion that the low performance in resource mobilization may be traced to institutional factors that influenced the design of these schemes and their modalities of operation. Secondary data on household preference and WTP was not available and, with the exception of the Dangme scheme, primary collection of such data was not undertaken. Contribution calculations were largely based on assumptions, and consequently, in almost all the schemes, low affordability among the target population was a major hindrance to participation.

In general, WTP data is rarely collected nor used as part of the process of designing health insurance schemes in developing countries. Yet contingent valuation theory and empirical evidence suggest studies may be undertaken in developing countries to obtain valid and reliable health-related WTP data (47). Measures that may be important in increasing the validity and reliability of WTP studies of the demand for health insurance in developing countries include the following (48):

- Careful questionnaire design to limit the problems of hypothetical and strategic bias. In addition to the respondents' contingent demands, two other areas of inquiry must be included in a WTP questionnaire. These are 1) past practices and expenditure for similar and substitute goods, and 2) respondent socio-economic characteristics. A plausible description of the hypothetical market must precede contingent demand questions. In this regard, guidelines emerge on the appropriate structure and content of open-ended and closed questions that would create realistic scenarios.

- Undertaking an initial qualitative study to ensure that the WTP questions use words and phrases that are consistent with the discourse on health, health care spending, and financial transactions used by the study subjects.
- Careful training of interviewers to administer the questionnaire accurately. Differences between the interviewers and the respondents in their level of exposure to and the discourse about insurance may compromise validity and reliability. The problem is most acute if the interviewer must translate questions from an official language in which the questionnaire is written into a local dialect.

Respondents should be given adequate time to consider the hypothetical good. Where possible, questions should be asked and/or repeated in an interview subsequent to that in which the hypothetical good was first described to the respondent.

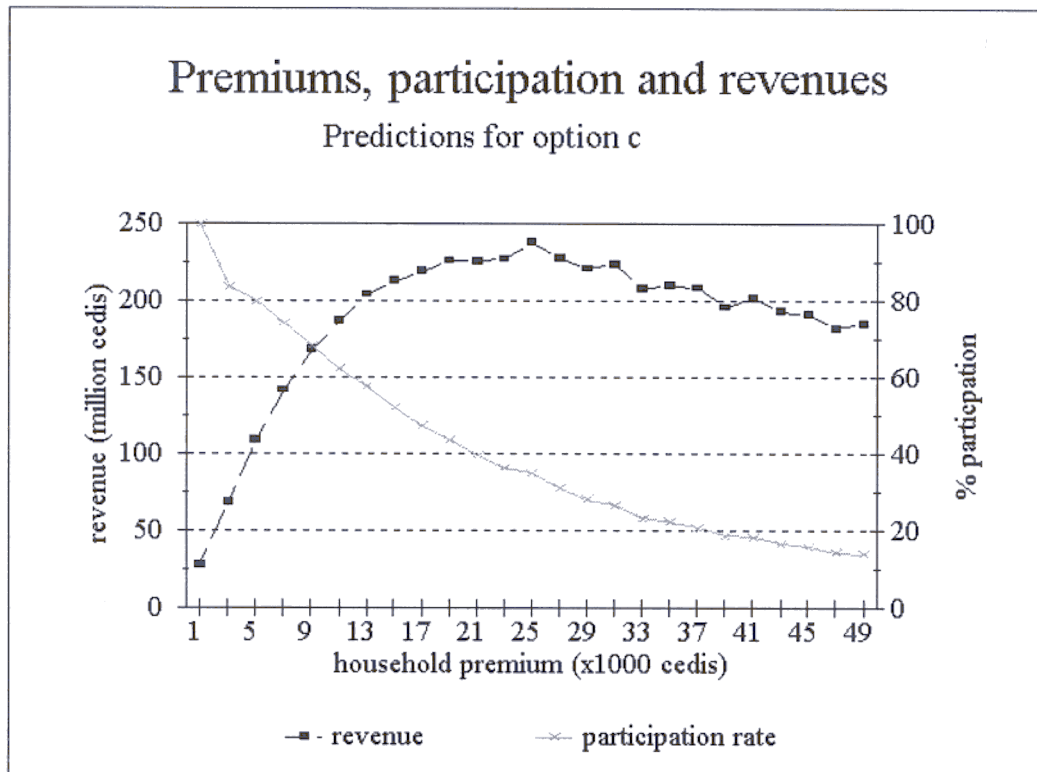
Whereas the concept of achieving compatibility between WTP and contribution levels has not been a driving force in the design of schemes, achieving financial sustainability through cost recovery goals appears to have been a major influence among designers and implementers when estimating contributions and designing benefits. Greater emphasis on the social functions of risk protection provided by the insurance would have dictated lower contribution rates, more comprehensive benefit packages, and measures to increase physical access to benefits. Low participation among the target population of the Nkoranza hospital scheme in Ghana suggests that hospital-based schemes may have the problem of being mainly attractive to those living close to the hospital, and as a result, achieve low enrollment. The subscription to the scheme appears not to depend on income disparity but on the differences in the direct and indirect costs of travelling to the one district hospital operating the scheme (49). As predicted by theory, achievement of financial and social goals in these reported schemes appears to mirror enrollment rates. Enrollment rates in turn reflect the target population's WTP for insurance plans offered by the schemes.

The prioritization of risk protection objectives is not incompatible with goals that relate to increased resources for the supply of services. Detailed costing of health care provided by

government and not-for-profit private facilities, and subsequent comparison costs with government funding and user fee revenue, may be undertaken to provide information on the resource gap to be filled by contribution. An analysis of this type was undertaken in planning the Dangme scheme, and a similar analysis was undertaken as part of an evaluation of the CAM scheme. The findings suggested that mobilization of resources through contributions would exceed, or exceeded respectively, that realized by user fees even when premiums were affordable to the majority. Given recent accelerated rises in health care costs as a result of the HIV/AIDS crisis and the sharp decline in real earnings of households in low-income countries, such predictions of revenues and costs will become critical in the design of schemes.

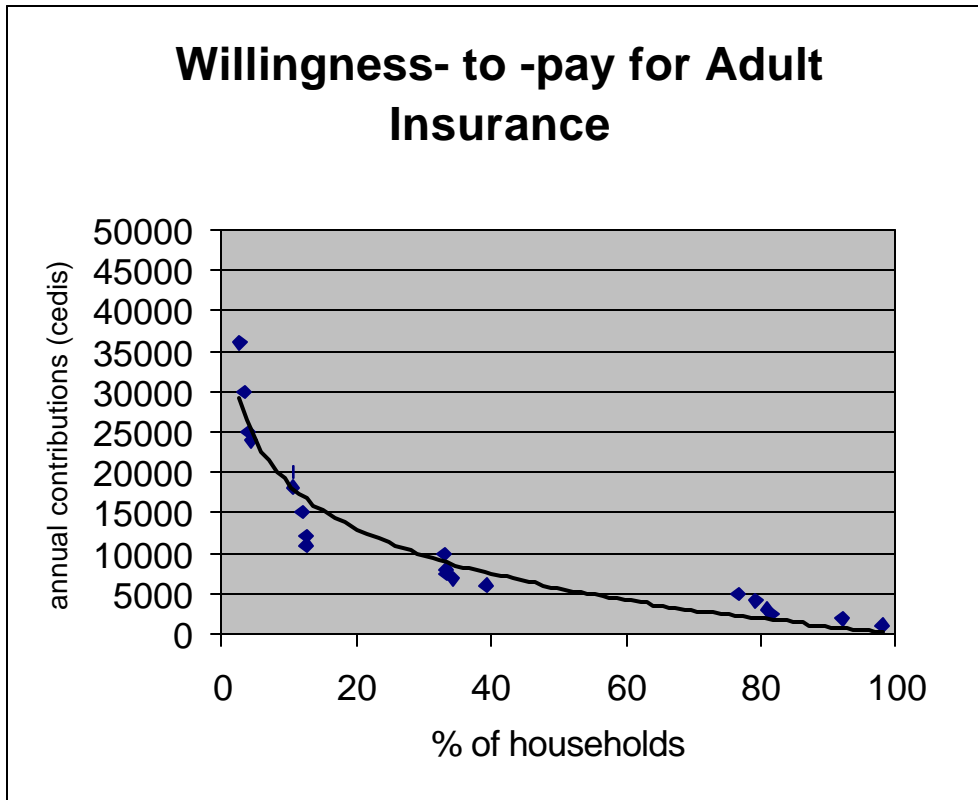
The demand curve and revenue curve estimated by initial research that guided the Dangme scheme illustrate the relationship between affordability of premium enrollment rates and revenues. Figure 2.2 shows the expected participation rates for a benefit package that combines inpatient and outpatient coverage (referred to as option C; options A and B being inpatient and outpatient packages respectively). The figure provides the predicted revenues (assuming a district population of 150,000) at different levels of household contributions based on the demand curve from WTP data. The highest revenue is predicted at a premium level of approximately c25,000 and corresponds to a low participation rate of 35% of the population. Above this premium level, the total revenue starts to decline along with a falling participation rate. If both a) revenue from the scheme, and b) utilization of health care by individuals (hence participation), enter into the utility function of decision maker(s), then setting the household contribution level above c11,000 would not be rational. The fall in participation would not be compensated by the rise in revenue and total utility would start to fall. On the other hand, below this level, a particular utility may be obtained with different premiums and therefore different participation rates. The optimum premium will then depend on the relative values of revenue and utilization and hence the relative revenue and participation. Introducing a concern for consumers' utility and taking into account their income constraints will further lower premiums.

Figure 2.2 Premiums, Participation, and Revenues



Institutional factors also have a bearing on the technical methods used to design and simulate the performance of schemes. The access to and/or the tradition of consulting reports and documents on technical issues relating to insurance are examples of factors. The disciplines from which the implementers originate will also influence the rigor with which health, epidemiological, social, and economic data will be sought and analyzed to influence design and management of the scheme. Simulation of revenue outcomes of a proposed scheme is an example of an activity that will be more readily undertaken if appropriate disciplines are used in the design and management process. Figure 2.3 illustrates an example of simulation activity which relies on planner and economic disciplines. For a proposed scheme in a district in Ghana, contingent evaluation techniques provided estimates of the maximum amounts that household heads would be willing and able to pay as an annual health insurance premium per adult and per child.

Figure 2.3 Willingness-to-Pay for Adult Insurance



Taking into account the tendency of consumers to state lower than the maximum in the hope that contribution will be low, estimates were based on a contribution rate of c10,000 per adult per year. Deducting administration costs of c2,500 gave an estimated net annual scheme revenue of c250,200,000 (55.9% of 1998 district expenditure). In 1998, government health services in the study district were funded from two sources: 1) the government of Ghana (GOG), and 2) user fees obtained from patients known as internally generated funds (IGF). IGF accounted for 3.21% of total funds utilized. The net revenue estimate from the moderate contribution rate would be equivalent to the IGF that would be obtained from 64,584.41 episodes of OPD care (in 1998 the actual number of OPD episodes treated was only 11,124).

3.2 Institutional Factors and Policy Environment

Institutional factors influencing health care providers' behavior, national policy formulation, and donor reactions to local initiatives appear to be important determinants of performance of the schemes. In several of the schemes, the initiator was external to the community to which the target individuals or households belonged, leading often to increased external financial support but also increased pressure to implement the scheme quickly to conform to the project time-frame. In these circumstances, primary data collection about illness experience and health care costs required to simulate the operations of the scheme were not carried out. The Dangme scheme, however, is an example of local initiation and conceptualization complimented by substantial primary data collection and analysis. Work was undertaken by the implementation team with the support of a full-time economist and health planner and illustrates the time-consuming nature of activities required to support innovative schemes.

The familiarity of donors with the subject of health insurance is decisive in determining the outcome of schemes. Unfamiliarity may lead a local donor to underestimate the complexity of inputs required to support an emerging scheme, particularly technical advice and data management systems, as in the case of the Dangme scheme.

As available evidence for best practice is scarce, donor funding procedures and regulation need to be flexible to support experimentation by communities, local governments, and local NGOs. These actors will require support to implement, monitor, and evaluate schemes. Where an external agency is unable to support both intervention (i.e. implementation) and research (i.e. monitoring and evaluation) of schemes, this adds significant transaction costs as local actors must secure additional support from another donor.

Although the existence of user fees is a strong incentive for populations to enroll in insurance schemes, the institutionalization of user fees within health care providers' practices presents an obstacle to the effective implementation of insurance schemes. Introduction of a scheme is likely to alter the power relationship between the provider and the individual consumer and requires changes in organizational culture and behavior. The provider may have to negotiate and contract with patients who interact with health care institutions as a collective group and as direct

sponsors. How an implementing team manages such changes will determine the level of trust between actors in the scheme. Orientation periods will be required to introduce health workers to their new and/or additional roles arising from an insurance scheme.

Institutional factors in the policy formulation arena may hamper systematic progress in obtaining consensus about national or local priorities and objectives for health insurance. In particular, the absence of a culture of consumer dialogue and marketing is a major disadvantage for policy formulation in this area, as the success of a policy is higher or lower depending on the reactions of consumers. A mismatch between the expectation of policy makers and the general public will result from institutional emphasis on resource mobilization at the expense of financial protection.

Organizations and institutions that are formed to provide health insurance to households in the informal sector ideally should be accountable not only to the members of the scheme, through officials of relevant mutual groups, but also to civil society in general. Civil society in this case refers to groups that are already engaged in providing social services including health care internationally or nationally – for example, the religious-related health providers. In many African countries, mission health facilities are major providers of health care, especially to low-income households and rural areas. As a result of their devotion and convictions, these faith-based health providers have proven to be accountable to the people and their reputations are untarnished by corruption.

3.3 Policy Implications

By the early 1990s, despite considerable involvement in health financing policy formulation in Africa, many of the international agencies had failed to encourage appropriate insurance-based alternatives to fee payment at the point of use. In particular, the 1993 World Development Report did not make recommendations for low-income countries that would change the situation in the short to medium term. By the end of the decade, the situation had changed significantly, leading to several international meetings focusing on health insurance for low and middle income countries. Following publications in the late 1990s, there is now increasing recognition of the vital role of insurance mechanisms in health systems (50). The outcome is acceptance in many national and international departments and agencies that the principles of health insurance

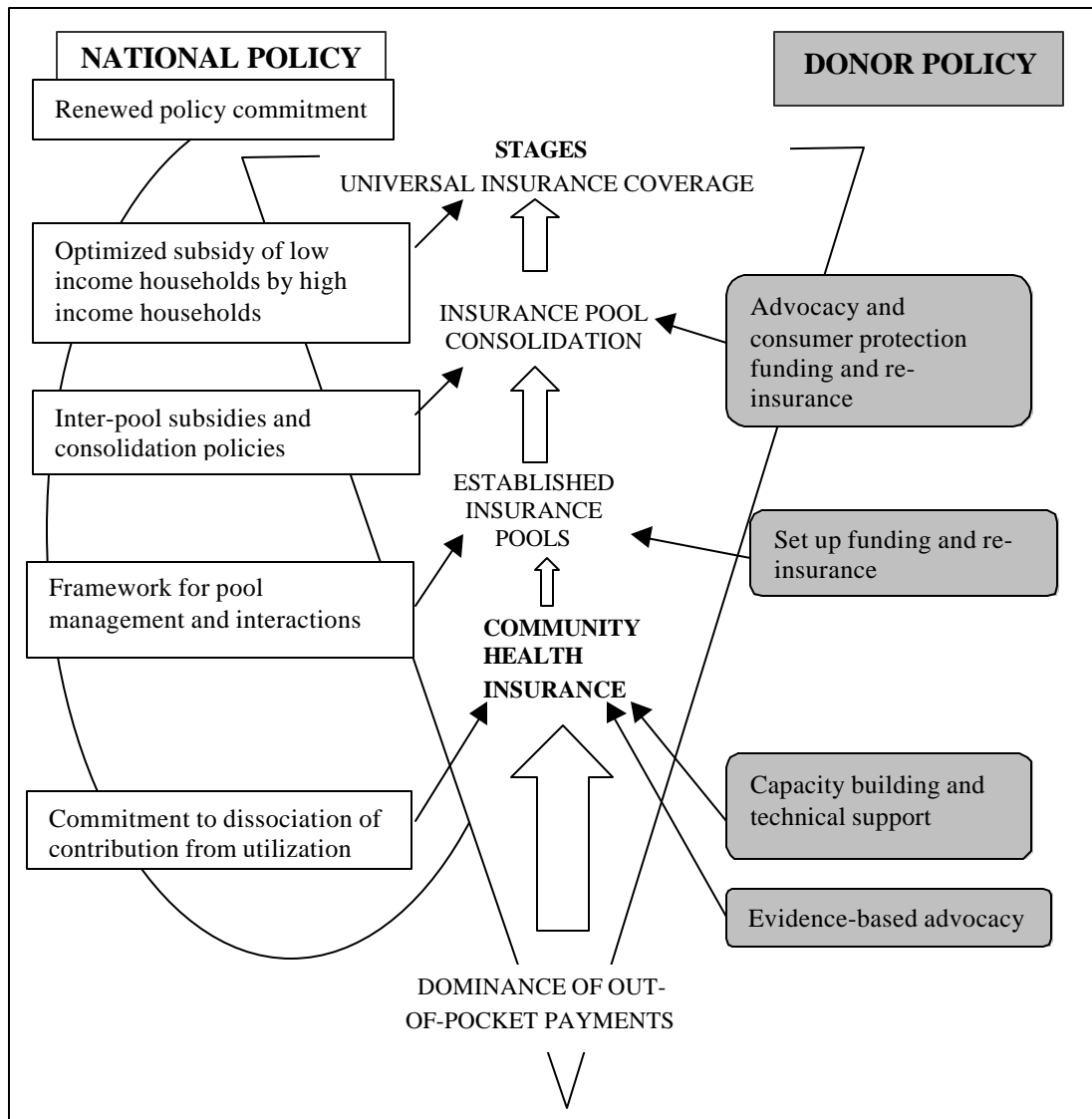
are applicable to low-income populations, and the willingness to study examples of insurance initiatives for poor and informal households.

The priority placed on health insurance within national health policy will in part determine the stage of financial protection attained as illustrated in Figure 2.4. In the figure, the triangular area represents “total population” health-related financial protection. The area below each of the levels approximates the magnitude of the population effectively protected from the financial risks of ill health as a consequence of the level. For example, at the level of “dominance of out-of-pocket payments” for personal health services, common in low-income sub-Saharan countries, a very small percentage of the population has protection. Conversely, true universal insurance coverage, as in Scandinavian countries, corresponds to virtually “total population” protection. Policy thrusts placed below the level are those that will facilitate attainment of the level and those placed above will support efficiency and equity within the level.

The appropriateness of launching a given policy thrust to establish health insurance schemes will be determined by the socio-economic context. The role of national policy-makers and donor agencies includes establishing the principle of disassociation between utilization/access and financial contributions. This will pave the way for strategic policies aimed at providing financial protection through insurance schemes. Policies supporting the substitution of health insurance for out-of-pocket fees are therefore an initial requirement. Given the socio-economic diversity among low-income populations, in the short term, contributions into sub-national insurance pools offer the greatest possibility of financial and administrative feasibility (51).

Health Maintenance Organization (HMO) type arrangements should be the goal, rather than third party schemes, since the former has the potential to stabilize health care costs and thus maintain low premiums. Nevertheless, in many low-income countries, voluntary contributory schemes will not have the revenue potential to fund all the health service costs for their members. Significant central government funding (fiscal transfers and/or budget allocations) must therefore be re-instituted in some cases, for example in China, or maintained in others, as in Ghana. Being key stakeholders in many schemes, donors can be instrumental in establishing sub-national schemes by providing start-up funding and re-insurance guarantees where appropriate.

Figure 2.4 Stages of Financial Protection and Supporting Policies



Sub-national insurance schemes, in which solidarity organizations form partnerships with providers, that meet cost containment and quality requirements, will represent important collaboration with civil society. Policy to support such collaboration must provide the regulatory framework (legal, financial, and informational) for the management of schemes and their interactions with other parts of the health system. This includes enabling acquisition of appropriate human resources to counteract “capture” tendencies by health workers and profit-

driven private investors, and to monitor financial and social outcomes of the individual schemes. Donors have significant roles to play in capacity building to support these goals.

Box 2.1 Ghana's Policy Thrusts to Enable Evolution of Community Health Insurance

“... expediting the establishment of health insurance or prepayment mechanisms will be critical to providing financial access.”

“... the health policy goals are best served by a multi scheme health insurance system.”

Ghana's Programme of Work 2000–2002
Ministry of Health, 1999

After two decades of intent to include insurance in its health financing strategy, during which several policy oriented research projects and feasibility studies were commissioned, an MOH policy framework has emerged promoting a “multi scheme health insurance system”. The goal is a system that embraces both the formal and informal sectors, providing affordable health insurance to the majority of Ghanaians and exemptions for indigents. Insurance schemes for the rural population present the greatest challenge. The framework envisages that “community-based health insurance schemes and mutual health organisations for the informal rural sector” will be a component of the multi scheme health insurance system that will meet this challenge.

The Planning, Monitoring and Evaluation Department of the MOH is charged with facilitating and supporting districts and regions that wish to establish insurance and prepayment schemes for the populations they serve. In this new policy framework, prospects have magnified for a district initiative in Dangme West, for example, to provide policy lessons that will inform the process of developing and implementing health insurance in Ghana. In addition, the availability of technical expertise to achieve this aim has permitted the initiative to undertake base-line studies that will be used to evaluate the scheme. These include household surveys of willingness-to-pay (WTP) for health insurance, studies of district health accounts, and studies of drug prescribing and stock levels of district health insurance. Future health policy on insurance will have the benefit of evidence from this and other sub-national schemes.

Where logistic inadequacies hinder active promotion of progressive contributions, as in informal sector schemes, the overriding objective should be maximization of enrollment rather than revenue, sanctioning community-rated premiums that are affordable to the majority of targeted households. These considerations and the inability to consolidate pools into a few large pools will necessitate re-insurance for some sub-national schemes. Donors as external stakeholders have crucial roles in assisting low-income countries to meet the need for re-insurance through sector-wide approaches.

3.4 Conclusion

In the foreseeable future, it is unlikely that either centralized government or large commercial schemes, as found in rich countries, can provide near-universal health insurance cover for people in Africa, most of whom live in rural areas. Yet, despite the endorsement of community health financing by many African countries with the support of international agencies, few large-scale community-based health insurance schemes have been attempted. Therefore, there are only a small number of experiences of “potentially large population” health insurance schemes in Africa upon which to base conclusions about their performance. Nevertheless, the performance of the schemes studied suggests that insurance mechanisms, in some situations, have or may eventually have a significant membership rate among the population and therefore are capable of increasing access to health care and, to a limited extent, mobilizing resources.

Constraints that have hindered attempts to design appropriate community insurance schemes include the policy environment, inadequate administrative infrastructures, and a shortage of trained staff to manage schemes. This underscores the need for information on the feasibility of schemes that are designed for rural populations. Data on WTP will be a critical part of such information since WTP will determine demand and the relationship between revenue and expenditure, hence social and financial performance. Affordability of premiums and appropriateness of payment schedules of existing rural health schemes suggest that WTP is substantial for such schemes.

Prospects for achieving resource mobilization effects that are significant relative to the total health care costs are declining because of decreasing purchasing power in developing countries and the rising incidence of HIV/AIDS, TB, and other infectious diseases. Recognizing that the low income of households in the informal sector will result in WTP insufficient to fund all the health care costs for scheme members, central government support of these schemes in the form of fiscal transfers and/or budget allocations will be required. Furthermore, schemes in which solidarity organizations form partnerships with providers create incentives for increased efficiency and accountability and should be supported by policies by national governments through appropriate legal, financial, and informational mechanisms. In the absence of established best practices in the design of schemes, donor funding procedures and regulations need to be

flexible to assist experimentation by communities, local governments, and local NGOs. Schemes operated by NGOs (especially church-related providers or civil society in partnership with local authorities, e.g.. district health authorities) may in the short term be effective and efficient donor fund recipients as in the case of matching funds, and in the medium term provide the basic structure for future national insurance schemes.

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