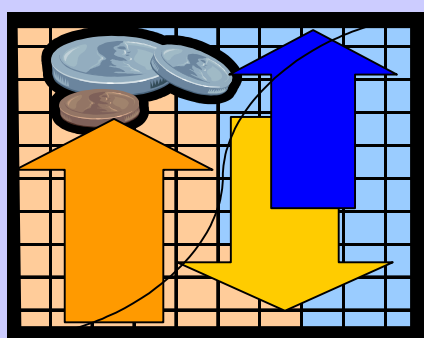




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**Community based
Health Insurance Schemes in
Developing Countries:
facts, problems and perspectives**

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by

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WORLD HEALTH ORGANIZATION

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1. Introduction

Scarce economic resources, low or modest economic growth, constraints on the public sector and low organisational capacity explain why the design of adequate health financing systems in developing countries, especially the low income ones¹, remains cumbersome and the subject of significant debate. Earlier on, cost-recovery for health care via user fees was established in many developing countries usually as a response to severe constraints on government finance. However, most studies alert decision-makers to the negative effects of user fees on the demand for care, especially that of the poorest households².

Alternative health financing systems exist, de-linking utilisation from direct payment, and thereby protecting the population, especially the most vulnerable groups, from having to resort to various coping mechanisms³. Financing is based either on general tax revenues and/or social health insurance contributions. Risk-pooling is a core characteristic of these systems, enabling health services to be provided according to people's need rather than to their individual capacity to pay for health services. A tax funded health system may not be easy to develop, due to the lack of a robust tax base and a low institutional capacity to collect taxes and weak tax compliance. Social health insurance has traditionally started by insuring workers. A further nationally organized expansion of social health insurance to the self-employed and non-formal sector is especially demanding. Other financing methods which would circumvent these organisational difficulties are therefore explored, including the direct involvement of communities in health financing.

In this paper, the focus will be on voluntary health insurance, organized at the level of the community, or community based health insurance (CHI). In the next section, we return to the issue of CHI as a response to obstacles to the implementation of universal coverage. In this paper, we look at how community based health insurance schemes (CHIs) have been performing in practice so far. This evidence is analyzed using a simple framework that is presented in section 3. In section 4, we discuss the international evidence, using this particular framework. We also analyze factors that influence the performance of CHIs in the same section. In section 5, we study the impact of CHI on goals of the health system. Perspectives regarding the future role of CHIs are offered in section 6. Concluding remarks are in section 7.

2. Universal financial protection: obstacles to implementation

Health financing via general taxation or via social health insurance are generally recognised to be powerful methods to achieve universal coverage with adequate financial protection for all against health care costs. Henceforth, we will refer to 'universal financial protection' to more clearly reflect the true objective of universal coverage. These systems also intend to respond to the goal of fairness in financing, in that beneficiaries are asked to pay according to their means while guaranteeing them the right to health services according to need; in tax funded systems, the population contributes indirectly via taxes, whereas in social health insurance systems, workers and enterprises generally pay in via contributions based on salaries.

So why is it that many developing countries, but especially the low-income ones, experience difficulties in achieving universal financial protection⁴. First, health systems that depend upon a share of government tax revenue have been generally constrained by insufficient levels of government revenue. The latter implies that only a part of the population can be reached and that, if it is reached, the amount of health service benefits offered is generally insufficient. It is difficult to substantially expand the taxable capacity in most countries. Economic growth may indeed be too modest to enlarge the tax base in a systematic way. In addition, taxes are still heavily dependent on international trade and domestic consumption, with income and asset taxes being very weak. The latter could potentially be increased but only when there exists greater acceptance of the principle of taxation according to ability to pay, and of sufficient compliance among income earners and asset holders.

Secondly, a swift move to social health insurance is difficult as well. It may be particularly difficult to arrive at a nation-wide consensus between various partners to accept the basic rule of SHI, that is to stay, guaranteeing similar health service benefits to those with similar health care needs, regardless of the level of contributions that were made. In fact, this problem may be very acute when countries prove to have a significant inequality of incomes and assets, and where middle and high income earners would be reluctant to contribute significantly more than the poor.

In addition, governments may not yet have the necessary managerial apparatus to organise a nation-wide social health insurance system. Often this problem is compounded by communication problems, such as lack of adequate roads, telecommunications and banking facilities, that would inhibit a SHI scheme to collect contributions and organise reimbursements, to manage revenues and assets and to monitor the necessary health and financial information.

Applicable to both tax funded and social health insurance financing, there is the factor of poor political stability, usually linked to economic insecurity that interferes with a steady development of the health sector. Indeed, implementation of increased taxes for social development or of a social health insurance policy will be prohibited or severely delayed if there is no strong and steady political support.

The impediments to universal financial protection are recognized by most countries. This is perhaps why there has been an increasing interest in financing based at the community level⁵, where it is thought to be easier to identify the contributing population and to collect contributions. The involvement of the community in health financing was in fact spurred, among others, by the Declaration of Alma Ata⁶ in 1978, urging maximum community participation in organisation of primary health care. Community financing for health is referred to as a mechanism whereby households in a community (the population in a village, district or other geographical area, or a social-economic or ethnic population group) finance or co-finance the current and/or capital costs associated with a given set of health services, thereby also having some involvement in the management of the community financing scheme and organization of health services⁷.

There may also be various forms of community financing: a scheme can involve the direct payment of health services or health service inputs such as drugs, the payment of user fees for services organized via the scheme, or community based health

insurance. CHI is a common denominator for voluntary health insurance schemes that are labelled alternatively as mutual health insurance schemes⁸, and medical aid societies⁹ or medical aid schemes¹⁰. The common characteristics, however, are that they are run on a non-profit basis and they apply the basic principles of social health insurance. The question addressed here is to what extent CHI can be used as a component in a strategy to enhance universal financial protection. Before reviewing the CHI experiences in the international literature, we present a framework for analysis that will help us in assessing them.

3. Community based health insurance: a framework for analysis

3.1 Goals of the health system

The health financing system, including CHIs, can not be looked at in a vacuum, but needs to be connected to the final goals of the health system as whole. Earlier on, WHO has considered the following final goals: health status and health equality, responsiveness of health systems to people's non-medical expectations and fairness in financial contribution. We consider financial contributions for health as fair when health expenditure of households is distributed according to ability to pay rather than to actual costs incurred as a consequence of illness. Methods have been designed so as to quantify health systems' achievement at the national level with respect to each of these objectives¹¹. In principle, an application at the level of the target population of the CHIs can be considered. Such an application, at least for an important sample of CHIs has so far not been undertaken. Therefore, it is as yet not feasible to judge the performance of CHIs with reference to the above mentioned goals.

In the meantime, intermediate goals for which current information is available can be considered: equity in utilization and sustainability. In addition, we propose to retain the goal of fairness, but to use the degree of financial protection as a proxy indicator. The latter will be measured by the number of households that are confronted with excessive or catastrophic health expenditure in relation to their capacity to pay.

3.2 Functions of the health system

Four main functions of the health system are considered: the provision of health services; the resource generation for health (spending on, and development of, human resources for health, buildings and equipment); health financing; and government stewardship.

Concentrating further on the *health financing function*, its objective is to ensure that sufficient financial resources are made available, so that people are guaranteed access to effective personal and public health care. Three sub-functions in health financing are proposed: revenue collection, fund pooling and purchasing. Revenue collection can be defined as the process by which the health system determines and obtains financial contributions from households, enterprises, and other organisations

including donors¹². In the pooling sub-function, contributions are accumulated and managed in order to spread the risk of payment for health care among all members of a pool, instead of requiring that people pay individually for their health services¹³. Purchasing is defined as the process by which pooled contributions are used to pay providers to deliver a set of specified or unspecified health interventions¹⁴. Note further that the ‘strategic’ approach to purchasing involves the search for those interventions, through contracting and incentives, that are most efficient in reaching the health system goals¹⁵.

For the *health financing sub-functions*, one can conceive of a number of performance criteria. They will be presented in the next subsection. These criteria should allow us to better understand the impact of the health financing sub-functions on the intermediate goals considered above. The performance in each of those sub-functions is also likely to have an impact on other functions of the health system as well, i.e. creating of resources for the health system and provision of health services. This paper will deal especially with the former impact, however.

We also pay attention here to the stewardship function in the health system. The latter refers to a government’s overall responsibility for the health of its population, through activities of monitoring, regulation and guidance. Stewardship is crucial as it will have an impact on the way the three health financing sub-functions are carried out.

3.3 Performance criteria in the health financing sub-functions

Revenue collection

Enrolment

Recognizing that universal financial protection is a target, we can first assess what the percentage population is that a CHIs effectively covers compared to the target population. Health insurance on a voluntary basis might be considered as an intermediate step, for organisational and political reasons. But then, an important pitfall should be signalled immediately. In fact, when a CHIs would propose a health insurance contribution based on average health care costs of the target population, a number of households, usually the healthier ones, may not be interested in signing up, judging that the contribution proposed is exaggerated in view of low expected health care costs they incurred before. The less healthy, however, may be interested in signing up for the opposite reason. This is referred to as the problem of adverse selection¹⁶. It may thus happen that a voluntary CHIs tends to attract members with ‘bad’ health risks instead of a mixture of members with good and bad health risks. In a voluntary framework, adverse selection and its impact on health care costs and contributions may even lead to the discontinuation of insurance: contributions may become so high that the scheme stops to attract potential members altogether.

Low membership rates may thus be a warning that adverse selection is taking place. Instead broad membership is needed to make a scheme viable over the longer run. In addition, and for equity reasons, membership should be not be biased towards the better off, but also be effectively open to vulnerable groups.

Ratio of prepaid contributions to health care costs

While membership is a crucial feature, it is equally important that sufficient revenues are collected. The higher the volume of prepaid health insurance contributions, the more one can avoid the financial consequences of treatment costs. The latter is especially important with regard to high-cost treatment. Indeed if high-cost treatments were still to require large out-of-pocket payments, effective utilisation of such care for those who need it would suffer. In particular, the low-income population groups are likely to suffer most from high out-of-pocket payments (or low level of prepayment). Out-of-pocket payments are the result of co-payments, deductibles or maximum reimbursements, or simply exclusion of health services from the CHI benefit package.

It is important to note that prepayment does not only rely on household contributions. Also others such as central and/or local government and donors may pay into the CHIs. What will finally matter therefore is the 'aggregate' ratio of prepaid contributions (including subsidies and/or grants) to health expenditure.

Pooling

Practice of risk-pooling

Membership and the level of prepayment have to be complemented with a further criterion, that of risk pooling across members of the community based health insurance scheme. Risk-pooling is in principle beneficial because those members who need health care will gain access to it in an affordable and timely manner¹⁷. In other words, it will allow financial resources to be shared between the healthy and the sick. Furthermore, especially when health care is costly, can risk-pooling be an effective device to protect households from excessive health care expenditure.

Risk-pooling, although its benefits are known, is not always put fully into practice. In fact, there is an important concern that schemes (within the same country, region or district) may have different funds for different categories of people, adjusting contributions and health insurance benefits to the risks in each fund. For example, funds may be organized along professional lines, for instance farmers vs. workers. If higher risks are prevalent among farmers, it is they who would then pay higher contributions. In addition, total administrative costs may increase as a result of managing the different funds, and thus may have an overall upward impact on contribution levels. The higher contributions for the high risk professional group may reduce the willingness to sign up among parts of that target population.

We thus need to ensure that there is risk pooling, which allows for transfers from low-risk to high-risk members. Thus, the funds collected would allow for adequate financial protection of those households who need it most. This contrasts with the case of no-insurance where such households would have to carry the full burden of the health care cost.

Pooling does not necessarily imply a single fund. There may be different funds with different financial capacities, but as long as there are mechanisms by which they can be 'connected', adequate overall pooling may still be obtained. One such mechanism is a risk equalization fund, that is financed from the pools that have a financial

surplus (for instance due to a combination of low risk and high contribution levels) and that transfers funds to those pools that otherwise would incur deficits (for instance due to a combination of high risks and low contribution levels).

Purchasing

Practice of strategic purchasing

What is essential is that purchasing is ‘strategic’. Strategic purchasing is present when there is a continuous search for the best health services to purchase, the best providers to purchase from and the best payment methods and contracting arrangements¹⁸. Strategic purchasing can also be seen as a way to ensure access to rational and cost-effective health care.

Strategic purchasing requires though that the mandate¹⁹ that the CHIs receive from their members is sufficiently strong. For example, the mandate may comprise the right of the CHIs to purchase a set of personal and non-personal health services at the best price from pre-selected providers. Alternatively, the CHIs may receive the authority, among others, (i) to determine the list of health care providers from which CHI members can then freely choose; (ii) to establish the set of insured health services or benefit package; (iii) to set quality standards of care; (iv) to propose the provider payment mechanisms. Thus, strategic purchasing is opposed to simple funding or reimbursement of non-specified health services by various providers with whom the CHIs has no special contractual relationship.

Note that the issue of the benefit package is one of the recurrent elements in the discussions about strategic purchasing. If it is decided to introduce such a package, it would be expected to at least include inpatient care. Inpatient care would normally include hospitalisation due to general surgery, and to treatment of general medical, gynaecological, obstetric and paediatric problems. In so doing, catastrophic health spending is avoided and the risk of impoverishment is reduced. In many developing countries, lack of geographical access to inpatient facilities and the ensuing costs of transportation can be an impediment to utilizing inpatient care, however. There is a case then for considering transportation as a possible benefit so as to help avoid or reduce the expected burden on the household budget.

The arguments for including ambulatory care in the benefit package solely as a means to avoid catastrophic spending are less strong. However, one also has to consider the fact that frequent use of ambulatory care by the chronically ill can easily generate catastrophic spending.

Incorporating ambulatory care in the benefit package also has a financial advantage. In cases where ambulatory care would not be fully accessible, lack of effective ambulatory treatment may result in a sudden urgent need for inpatient care. This generally more expensive inpatient care could have been avoided, however, had ambulatory care been part of the benefit package. In this way, adding ambulatory care to the benefit package responds to the criterion of cost-effectiveness. The cost-saving role of ambulatory care should be properly acknowledged as well in the design of a referral system.

Pharmaceuticals could also be included in the benefit package, provided they belong to the essential drug lists: in addition generics could be encouraged in order to enhance the cost-effectiveness of care.

3.4 Summary

In Figure 1, we bring together the various elements of the framework which will be used to better understand the empirical findings to be discussed subsequently.

4. Empirical findings concerning the performance of CHIs

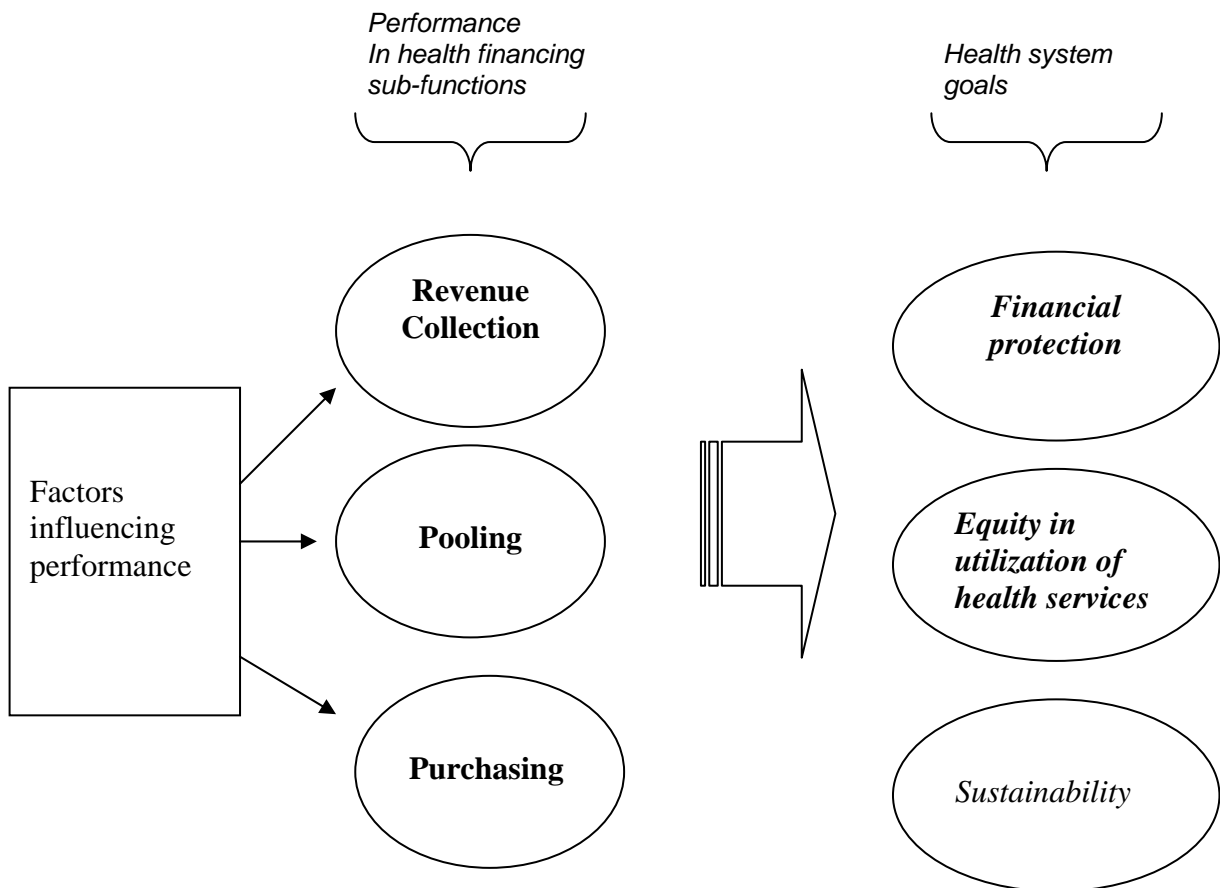
4.1 Performance criteria

Enrolment

An extensive WHO review was made in 1998 (henceforth called WHO Study) concerning 82 non-profit health insurance schemes for people outside formal sector employment in developing countries²⁰. It was observed that very few of these schemes covered large populations or did not even cover high proportions of the eligible population. From a subset of 44 of the schemes, the median value of the percentage of the eligible population covered was 24.9%; 13 schemes had a coverage rate below 15%, and 12 schemes²¹ had a coverage rate above 50%. Another conclusion was that adverse selection was more affecting the schemes that insured against high-cost low frequency events than schemes that covered low-cost high-frequency events. One of the main reasons was that many people tended to sign up with the CHIs, at the moment of illness. It follows that the members with high risks tended to be over-represented in the CHIs.

Further information became available since 1998. Low percentages of enrolment were observed in a study on 5 CHIs in East and Southern Africa²². In four schemes, enrolment percentages vary between 0.3% to 6.5% of the target population; one scheme is very small with 23 members out of a target population of 27 cooperative society members. In Rwanda, a project was launched, establishing 54 CHIs in three districts in July 1999 (henceforth called Rwanda Project) . By the end of the first year of operation, the enrolment rate reached in the three districts was 7.9% (88,303 members out of a total target population of 1,115,509)²³. Another study was made in nine West and Central African countries²⁴ (henceforth called WCA Study) on 22 CHIs. From the available information on beneficiaries and target membership, one CHIs in Benin reached an

Figure 1 Framework of analysis



enrolment rate of 24% in 1998, whereas another achieved an enrolment rate of 8%; the target population in these CHIs was 13,000 and 7,300, respectively. In one CHIs in Ghana and Mali, 53% and 25% of the target population of 25,000 and 200,000 was covered, respectively. And in Senegal, one CHIs reached a coverage rate of 26% after three years of operation whereas another achieved an enrolment rate of 82%; the target population was 13,650 and 1,200, respectively. A recent study²⁵ was also made on 4 out of 16 CHIs in the area of Thiès, Senegal (henceforth called the Thiès Study): in the year 2000, the average household enrolment percentage in these villages was 68%, with enrolment rates varying between a minimum of 37.4% and a maximum of 90.3%.

Equally interesting is to study the *enrolment over time*. Sometimes, there is evidence about reductions in enrolment rates, which beg for better understanding. For instance in the Maliando Mutual Health Organization in Guinea-Conakry, subscription dropped from 8% to 6% of the target population. Membership rates might be low in the beginning, but might increase as CHIs improve management and design. Few studies offer a long-term view of CHI. One study on the Bwamanda Hospital Insurance Scheme in the D.R. Congo shows that in 1986 when the scheme was established, 32,600 people or 28% of the district population joined within four weeks. Over the years, membership climbed to 66% in 1993 and seems to have stabilised at 61% in 1997²⁶. Another study on the Lalitpur Scheme in Nepal shows that population coverage in the target areas rose from 19-20% in 1983 to 27-48% in 1995²⁷.

It is also important to see whether community health insurance is *accessible across different population groups*. One conclusion from the WHO Study was that very few schemes reached the vulnerable population groups, unless Government or others facilitated their membership through subsidies. In the Bwamanda Scheme in particular, participation across income groups was not equal, according to a 1988 survey²⁸. The very poor and the high income group were in fact less well represented in the member population as compared to the non-member population: the very low income group represented 14.9% and 18.7% of the member and non-member population, respectively; the high income households represented, respectively, 5.9% and 10.5% of the member and non-member population. In the Rwanda Project, however, there was no statistically significant difference as to the enrolment across different income groups²⁹.

Ratio of prepaid contributions to health care costs

From the WHO Study, information about the prepayment ratio, but through household contributions only, was available for 24 CHIs³⁰. Thirteen CHIs had a ratio lower than or equal to 60%. This means that, without subsidies or grants from sources other than households, the share of out-of-pocket payments (co-payments or user fees) in health expenditure would be 40% and higher.

Ideally, we need information about the aggregate prepayment ratio. For 6 of the 13 CHIs mentioned above, sufficient information was available to assess the out-of-pocket payments that are finally incurred by households. In four of those schemes, these out-of-pocket payments were in the 40-70% range, so that many households are likely to be subject to excessive out-of-pocket payments. A similar finding comes from the Mutec Health Centre in Mali³¹, where in 1996 the household prepayment

ratio proved to be 15%, and user fees for medical visits and drugs accounted for 85% of health expenditure. It is likely that in that case catastrophic payments will be observed among certain families.

There is also recent information³² from the Self-Employed Women's Association (SEWA) health insurance scheme in Gujarat (India). SEWA is an organisation of self-employed women and workers in the informal sector, a cooperative bank being one its major initiatives³³. In 1992, SEWA started to offer health insurance. By 1999-2000, this scheme had 23,314 members. From data on hospital-related claims between mid-1994 and mid-2000, the prepayment ratio was 76.% of the total cost of reimbursed hospitalizations. Excessive or catastrophic health spending has not totally disappeared, however. We return to the latter issue in section 5.1.

Practice of risk-pooling

An important amount of evidence was recently reported by the International Labour Organization in a new study about the role of CHI in the extension of social protection³⁴ (henceforth called ILO study). A total of 258 community based health schemes were reviewed. The evidence related to the size of the risk pool is that out of 85 CHIs for which information was available, a majority (47) has less than 500 members. Only 14 schemes had more than 10,000 members³⁵. The Bwamanda and SEWA schemes referred to earlier therefore belong to the latter category and do not represent the typical CHIs.

Most of the CHIs are small and seem to cover relatively homogenous populations within a single pool. However, one example where a scheme may organize different funds for different population groups within the same rural area is that of the Rural Cooperative Medical Schemes in China. One of the reasons is the growth of industry in these rural areas in China, basically establishing two professional groups, that of farmers and of workers. From research in 42 townships³⁶, it was found that at least 8 townships established separate accounts for farmers and workers. The benefit package was also found to be different, with that of workers to be better than that of farmers; benefits were adapted to the financial situation of the two funds. It was said that enterprises and their workers were reluctant to have funds pooled, workers fearing that in a fully pooled system, they would have to be a multiple of the farmers' contribution. The absence of willingness to pool funds was exacerbated after workers judged that farmers' declared income was far below their real income and that, therefore, their capacity to pay contributions was underestimated.

An interesting finding from the ILO Study is also that most of the schemes (90 out of the 136 for which information was available) do not bear the bulk of the financial risk³⁷, however. Schemes may only cover a small part fraction of the cost of the benefit package from members' contributions. It is observed that in most of those cases (69 out of 85 for which information was available), central and local government cover the larger part of the cost of health services. Again, central government together with others are the most important financiers in 7 cases³⁸. The latter results are not totally surprising as central and/or local government are the legal or de-facto owners of CHIs in 61 (or 33%) of the 184 cases that had sufficient information. In addition, the ILO Study found information about accountability for 37 out of 258 cases. Here also, it was found that most of the CHIs, namely 29, were

accountable to groups of which central and/or local government were part of. These results, among others, lead the ILO study to conclude that most of the CHIs are in fact 'entry points' to larger pooling arrangements³⁹. CHI may also be understood as an institutional mechanism for organizing risk-pooling, thereby explicitly or implicitly using funds from both public and non-public sources. Thus, the role that CHIs could play in universal coverage strategies is clearly a subject for further policy research.

Practice of strategic purchasing

One of the conclusions in the WHO Study was that overall benefit packages were only weakly defined⁴⁰. Although some schemes defined exclusions, there was a tendency to include all available services at facilities participating in the CHIs. With this broad approach, enrolment rates among patients with pre-existing conditions, especially chronic illnesses, tended to be high. In other words, this led to the problem of adverse selection. After financial review, some schemes had to redefine the benefit package, even excluding certain population groups such as the elderly and/or excluding patients with pre-existing conditions⁴¹. Another way to contain costs as a result of introducing a broad benefit package was to introduce strict gatekeeping and referral practices. The latter was the case of the Bwamanda Health Insurance Scheme and the Chogoria Hospital Scheme, whereby patients could only get access to (insured) hospital care after being referred by a primary health care centre.

It was noted however by the WHO Study that some schemes gradually took a greater role in purchasing. This was the case of the UMASIDA scheme in Tanzania. This is a health insurance scheme owned and operated by a group of cooperatives of informal sector workers in Dar Es Salaam, Tanzania. This scheme has contracted with providers who respect a number of conditions, such as access to services of a qualified medical officer, the availability of maternal and child health services, adequate laboratory services, provision of health education and occupational health, use of essential drugs list and prescription by generic name, and engaging in appropriate record-keeping. The SEWA scheme in India also engaged in more active purchasing, learning from claims processing which clinics could provide adequate care at reasonable prices, and then encouraging members to use these.

The ORT Health Plus Scheme (OHPS) in the Philippines designed a benefit package⁴² consisting of ambulatory and inpatient care, prescribed drugs and basic ancillary services. Primary health care was directly provided by salaried doctors and nurses. Hospital-based diagnostic and therapeutic services were purchased from a private nonprofit hospital through a capitation contract. Hospital-based care could only be accessed after referral from a primary health care doctor, however.

Information on 67 mutual health organizations in the WCA Study, however, showed that active purchasing was not imbedded yet in management practice. Only 4 schemes had introduced essential and generic drug policies. And only 2 of the 15 schemes whose benefit packages contained both primary and hospital care had introduced mandatory reference for benefits beyond the primary care level⁴³.

In the Rwandan Project⁴⁴, efforts were undertaken to strategically purchase health services. At the health centre level, services covered include preventive and basic curative care by nurses, essential drugs, hospitalization at the health centre, and

ambulance transfer to the district hospital. At the district hospital, a number of services were covered, but only after referral from the health centre. In two districts, the services covered were: consultation with a physician, overnight stay and caesarean-section; in the third district, malaria cases (>5 years), paediatric cases (< 5 years) and caesarean-section were covered.

Recently, CHIs in Guinea-Conakry⁴⁵ have also introduced active purchasing by way of official contracts between schemes on the one hand and providers on the other. For instance, via a contract valid for one year, the Maliando scheme in Yendé-Millimou (Guinea-Conakry) provides access for its members to pre-defined health services from the Prefectoral Hospital of Gueckédou; the services included hernia operations, caesarian-sections and paediatric care (for children <15 years). In the same way, a contract was established with the Health Centre of Yendé in order to purchase primary care services for a pre-existing list of health problems. Emergency transport of patients to hospitals is also arranged for via a contract with a local transport association.

A remark is in order about administrative costs. The level of these costs matters as it will have a direct impact on the financial volume that will finally be available to purchase health services. From a selected number of schemes in the WHO Study, the ratios of administrative costs to scheme revenue varied from 5 to 17%⁴⁶. These ratios varied between 11% and 44% in a selection of seven CHIs from the WCA Study⁴⁷. And in the Rwanda Project, administrative costs represent 7% of total annual expenditure⁴⁸. Compared to West European health insurance funds, where administrative costs are generally about 5% of fund revenue⁴⁹, administrative costs in several of the documented CHIs are surely on the high side. It is clear that sufficient attention should be paid to the issue of administrative efficiency, and that CHIs ought to look out for cost savings. Some costs may indeed be the result of paying an excessive number of staff involved in the management of a scheme. But then some of the high administrative costs may result from an important investment in communication and enrolment campaigns in the initial phase of a CHIs. Finally, sheer cuts in administrative costs may be harmful when they lead to a reduction in the quality of managerial services and hinder the smooth running of a scheme's operations.

4.2 Exploring factors that influence performance

4.2.1 Factors influencing membership

Affordability of contributions

Not unexpectedly given the voluntary character of CHIs, affordability of premiums or contributions is often mentioned as one of the main determinants of membership. A number of schemes in the WHO Study had addressed the issue of affordability. For instance in the Nkoranza scheme in Ghana, the estimated cost of contributions varied from 5 to 10% of annual household budgets. It was recognized that such contributions could be a financial obstacle to membership. Contributions are also generally levied as flat sums, which is a disadvantage for the poorest: flat contributions are regressive,

a flat-rate contribution as a percentage of income being higher for poor than for the non-poor.

In the Rwandan Project Study, membership varied from 5.6% to 7.7% in the lowest and highest income category, respectively; yet, this difference was found not to be statistically significant. One indication though in this study that affordability matters, is that large households with more than five members had a greater probability to enrol in the CHIs than others⁵⁰. The explanation given is that contributions were kept flat, irrespective of household size up to seven members; the average contribution per household member was therefore less than for smaller families, inducing greater enrolment.

In the Thiès Study, income appeared to be a significant factor in explaining enrolment. Belonging to lower and upper income tertiles decreased and increased enrolment, respectively. When households classified themselves into poor and non-poor, it also appeared that the self-reported poor had a lower probability to join a CHIs than then higher income households⁵¹.

Related to policies to increase access of the poor to CHI, most schemes can be qualified as deficient. One way to increase insurance membership for poor households is to introduce exemptions. Yet, only a minority (13) of the 44 schemes surveyed in the WHO Study had exemption policies to allow the poor households to join. In one of the three districts in the Rwandan Project, attention was paid to this particular issue: in Kabutare, the local church paid for the contributions of about 3,000 orphans and widows with their family members.

One scheme that from the start introduced a pro-poor policy is the Gonosasthya Kendra (GK scheme in Bangladesh, differentiating contributions according to one of four socio-economic groups (the 'destitute', 'poor', 'middle-class' and 'rich'). For instance, contributions for the destitute were 1/10th of the contribution proposed to the highest income category. Renewal contributions and user fees for consultations and medicine, and caesarian section were also differentiated: the poorest categories pay the smallest co-payment or face no charge as in the case of medicine. Overall affordability was an important concern to the GK Scheme. That is why contributions and other payments by households were minimized by using subsidies transferred to the scheme either from GK's own commercial ventures or from international sources. An important finding is that the membership rates among the two lowest socio-economic groups are substantially higher than in the other groups. However, after 15 years of operation of the GK scheme, 20% of the 'destitute' group and more than half of the 'poor' group had still not been reached. The contribution levels and other payments are still said to be too excessive especially for the 'poor' as well as the lower middle income group of the 'middle class'⁵².

Unit of enrolment

Achieving adequate membership rates is likely to be easier when households or even villages, cooperatives or mutual benefit societies are taken as the basis of membership. In the WHO Study, almost half of the schemes surveyed had the family as the unit of membership. A number of schemes had actually switched to this type of membership, after experiencing problems of adverse selection, as a result of families signing up ill

family members or family members most prone to consume health care. Also, most of the case studies (14) reviewed in the WCA study had an automatic family coverage⁵³.

Some schemes went beyond establishing the family as the unit of membership, and defined that a minimum percentage of households in a village would be required before providing insurance. In the Kasturba Hospital scheme in India, at least 75% of poor households in a village are required to sign up⁵⁴. When the Vietnam Health Insurance programme launched its voluntary health insurance programme for schoolchildren, it recommended insuring adequate numbers of children, via establishing a minimum of 50% per class⁵⁵. In Uganda, some CHIs are linked to *engozi* (mutual benefit) societies; recently a rule was initiated whereby at least 60% of the members of the *engozi* societies should sign up before acceptance by the CHIs⁵⁶.

Some schemes like the Grameen Health Plan in Bangladesh benefit from a captive market: the great majority of insured households gain membership automatically via an initial participation in the Grameen Bank credit programme⁵⁷. The same is true for the UMASIDA health insurance scheme: members are automatically insured, with health insurance contributions being deducted from the overall revenues of the participating organisations⁵⁸.

Distance

Membership rates are often determined by the distance of the household's home from the nearest health facility where (insured) services are provided. For instance, in the GK scheme, membership among the two lowest socio-economic groups appeared to be related to distance: up to 90% of that target population from nearby villages subscribed, whereas only 35% did so for the target population in the distant villages⁵⁹. In the Rwandan Project Study, it was also found that households who lived less than 30 minutes from the participating health facility had a much larger probability to enrol in the CHIs than those who lived farther away⁶⁰.

Timing of collecting

The timing of collecting the contributions may matter for membership, although little empirical evidence is available. From the WHO Study, it was observed that schemes in urban areas were more inclined to establish monthly or quarterly contributions so as to match the income patterns of urban informal sector workers. Annual contributions seem to be prevalent among schemes in rural areas. However, in some schemes, such as the ORT scheme, payment schedules were held flexible, with monthly, quarterly or semi-annual payments. Flexibility was introduced as it was judged that few households were able to pre-pay for a one year or even six-month membership.

Other schemes link the time of payment of the contribution with a suitable event in the community. For instance, burial societies in Uganda (the above mentioned *engozi* societies) use their monthly meetings for the collection of premiums, either for the first-time members or for those who renew their membership. In Bwamanda, the nurse of the community based health centres collects the annual contribution at the time when Bwamanda's development cooperative, the Centre de Développement Intégré (CDI), purchases the cash crops from the population. In the GK scheme, a similar situation is observed as premiums are paid to the community nurse during

home-visits. And in the Grameen Health Plan, the contribution is collected from the accounts that members have in the Grameen Bank micro-credit scheme⁶¹.

Quality of care

The quality of care offered through the CHI is another factor to be considered. The latter was highlighted in an evaluation of the Maliando scheme in Guinea-Conakry⁶². Focus group discussions were organized with 137 persons sampled from the member and non-member population. In the 12 discussions that were held, quality of care was mentioned 383 times by participants as an important factor in the population's attitude towards this particular scheme. Most of the time, participants referred to rapid recovery, good health personnel, good drugs and a nice welcome at the participating health facilities as the most important features of quality. When membership was discussed specifically, lack of quality of care was cited as the most important cause of non-enrolment.

Several participants in the above mentioned focus group discussions said they would prefer not to enrol but rather seek care elsewhere (and admittedly paying more) in order to receive better quality care. Health care at private health facilities could thus well be preferred to health care offered by the public health facilities associated with the Maliando scheme.

Knowledge and attitudes towards the CHI scheme in Hanang District, Tanzania, were also assessed via focus group discussions with members and non-members⁶³. In addition, exit interviews were held at participating facilities and one non-participating facility. The issue of quality was also raised in the discussions and exit interviews. One of the reasons for non-membership invoked was the fact that members did not have access to better quality care at mission health facilities. As yet, only health care in public health facilities was part of the health insurance benefit package.

Trust

The existence of entry-points in the community, such as a micro-credit scheme, a development cooperative or other social groups, may facilitate the establishment of CHI. If such existing initiatives have won the population's trust⁶⁴, it may become easier to start up a CHIs. Information from some selected schemes is worth mentioning. For instance, initiated by the Catholic mission in Bwamanda, the development cooperative in Bwamanda (CDI) started as an integrated development project at the end of the 1960s. Primary and secondary schools, which were already run by the same mission, were integrated in the CDI project. The CDI gradually improved agricultural activities in the area: it introduced soya as a new crop aside from existing cash crops, such as coffee, and organised the purchase of produce at guaranteed prices. This resulted in fairly stable economic conditions in the Bwamanda region throughout the 1970s and 1980s which has enhanced the capacity and willingness of the population to enrol in the Bwamanda Scheme initiated by the CDI.

A simultaneous introduction of a development initiative can also be beneficial for a CHIs. When people notice their economic situation improves, trust is created resulting in a possibly greater response to a CHIs. The GK health scheme, for instance, was embedded into a broader development project. In fact, the initiators realised that a

comprehensive approach to development and uplift of the rural population, and particularly of girls and women, was the only sustainable way to improve the health situation in the region. Several socio-economic activities were thus gradually developed and female education and employment was promoted wherever possible, through micro-credit and through employment in traditionally male occupations⁶⁵.

Some credit schemes⁶⁶ were entry-points for CHIs. The Grameen Bank, for instance, showed interest in promoting health insurance, among others, to reduce default in credit reimbursement; the reasoning was that insured credit scheme members would be protected from major financial loss due to illness, so that they would be able to respect credit reimbursement schedules. A similar reason was invoked by the SEWA scheme before they established their health insurance scheme⁶⁷. Of course, as low-income groups basically constituted the membership of these credit schemes, health insurance was also seen to greatly benefit these groups by avoiding or reducing catastrophic expenditure.

Finally, trust can be enhanced when people see that their preferences matter. For example, in Rwanda, the Government has shown stewardship by stimulating improved democratic governance in the health sector; the CHIs are therefore invited to engage in transparent and participatory decision-making. Every scheme has now a general assembly, where members are able to interact with the scheme's administrative council about needs, concerns, suggestions for improvements etc. This interaction with the local communities also appeared to have a positive effect upon discussions and decisions concerning health at the district level⁶⁸.

The expectation is also that community participation will enhance community understanding of the proposed functioning of the CHIs⁶⁹ and compliance with payment of membership dues. When the scheme administrators tend to be responsive to the community's preference, people's overall satisfaction with the community scheme's services is likely to increase. One example of response to a community preference is that of the Pikine primary health care project in Senegal: the community representatives preferred wind or sun shelters in waiting places at health centres, rather than to buy more refrigerators or to give monetary incentives to health volunteers⁷⁰. Also note that in the ILO Study, out of 100 schemes with information, 57 schemes included participation of the community related to the benefit package. And in 51 schemes out of 104 with information, the community was a partner in discussing the level of the premiums.

4.2.2 Factors influencing the prepayment ratio

Prepayment does not have to rely on households exclusively. Financial contributions can come from other sources as well, such as central or local Governments or local and international donors. In so doing, one may obtain a prepayment ratio that is high enough to ward off the negative impact of out-of-pocket payment.

In one scheme with a household prepayment ratio of 15%, co-payments finally amounted to 31%, as 54% of health expenditure was prepaid via income from fund-raising activities. In a sixth scheme (the GK scheme in Bangladesh) the real out-of-pocket payments were much lower than initially thought from simply

inspecting the household prepayment ratio of 12% of recurrent expenditure. International subsidies and an internal subsidy from GK's commercial venture represented 50% and 14% of expenditure, respectively. Finally, out-of-pocket expenditure by the GK members and non-members, represented 8% and 16% of health expenditure in the GK scheme, respectively.

Apart from the GK scheme, other schemes are performing particularly well in terms of the prepayment ratio. In the Bwamanda Scheme⁷¹, the total prepayment ratio amounted to 80.3%; the household prepayment ratio was 58% and 22.3% came from subsidies and gifts. The co-payments of scheme members and user fees of non-members amounted to 8.7% and 11% of hospital expenditure, respectively.

4.2.3 Factors influencing pooling

Trust

Trust among the insured themselves may be equally important. An important element is the availability of information among potential members of a CHIs. Flows of information can in fact be considered as a form of social capital⁷². Adequate knowledge about how people behave vis-à-vis health insurance, in particular concerning moral hazard behaviour, should in principle help the decision of potential members to enrol or not. Geographical proximity enhances the information flows between people⁷³, and therefore is likely to help voluntary risk-sharing arrangements such as CHI. The latter may partly explain why pooling of risks across populations from geographically separated villages in a number of counties in the RCMS project proved to be difficult to achieve in a short period of time.

Trust was also considered a factor in the development of health insurance among informal sector workers in Dar Es Salaam, Tanzania⁷⁴. Informal sector workers constituted their own associations, which proved to constitute a good basis for building trust among members. Subsequently, health insurance was easier to develop. It was realized, however, that independent health insurance schemes would be too small-scale. An umbrella organisation would be beneficial for reasons of pooling and economies of scale in management. Therefore the Mutual Society for Health Care in the Informal Sector (UMASIDA) was established as the result of a regrouping of five informal sector associations. Such an organisation could also more easily assume the responsibility of extending health insurance to other groups.

Mechanisms for risk-pooling

Especially small-scale CHIs are exposed to risks which they themselves find hard or impossible to cope with. One example is where a single case of surgery might well bankrupt⁷⁵ an entire CHI with a limited amount of insured members and limited financial volume. Several alternative strategies exist for greater risk-pooling aiming at protecting schemes from bankruptcy and sustaining the financial protection of insured households.

A *first* method recently proposed is that of reinsurance: A number of CHIs would basically insure against high-level expenditure with a re-insurer. They would thus

pool some of their resources in order to avoid the risk of financial insolvency⁷⁶. Reinsurance is thus attractive because it expands the size of the risk pool. Yet, a *second* strategy may be worthwhile considering, that of establishing larger risk pools from the start⁷⁷. Instead of targeting village populations, for example, the district population could be targeted. *Thirdly*, a partnership with local and/or central government may be established so as to adequately finance the health service benefits from the agreed upon benefit package. *Fourthly*, progressive scaling up of CHIs and eventual merging will lead to larger risk pools. Merging of CHIs in the same district, region or province may take time, however.

As an alternative to merging, it could be explored whether CHIs could not be interconnected via risk-adjustment or equalization mechanisms⁷⁸. Basically, the latter would bring about financial support for those CHIs that face more than average risks, this support would be financed via transfers from those CHIs that face lower than average risks. Thus, CHIs in relatively poor areas with high health risks would be able to set contributions at an affordable level, in view of subsidies received via equalization mechanisms. In this respect, we refer to van den Heever (1998) who studied employer-based health insurance schemes⁷⁹ in South Africa. He notices that, since the late eighties, new employer-based medical benefit schemes for low-income and largely black workers have been established, and that these are largely separated from the funding of medical benefits for high-income workers. In other words, virtually no cross-subsidy seems to exist, so that the health insurance benefits of the former schemes are relatively limited. Policy proposals were therefore made to establish an equalisation mechanism across medical schemes, probably through a parastatal, in order to offer a similar basic package of health insurance benefits.

4.2.4 Factors influencing strategic purchasing

From the recent ILO Study, out of 62 schemes for which information was available, 10 only were found to have adopted strategic purchasing⁸⁰. One of the tools of selective purchasing, as mentioned above, is *contracting*⁸¹ with providers that agree to provide health services according to conditions put forward by the CHIs. In an earlier section, we already referred to the strategic purchasing activities undertaken by UMASIDA and SEWA via contracts. The Rwanda Project clearly has adopted strategic purchasing, and has established contracts between the 54 schemes and participating health centres and district hospitals⁸².

The provider payment mechanism is an important element of strategic purchasing. In the WHO Study, 42 of the 60 schemes for which information was available used *salaries and budgets* as payment method. These payment mechanisms are expected to be beneficial for cost-containment. But they may also lead to rationing, as a result of the enforcement of hard budgets. *Fee-for-service payment* was found the second most prevalent way of paying providers (11 schemes out of 60) in this review. Also in the WCA study, fee-for-service was found to be most frequent payment method⁸³. Fees may be used to induce the performance of providers, certainly in a situation of under-provision of health services. In one study in Pereang district in Cambodia, fees were part of an incentive system to increase the quantity and quality of publicly provided care. It even appeared that patients' out-of-pocket expenditure decreased with respect to the time before the establishment of the incentive system; the latter was the result

of official fees being competitive vis-à-vis unregulated private health care prices and being associated with good quality of care⁸⁴. An often cited disadvantage of the fee-for-service method, however, is that it may induce providers to over-prescribe treatment, certainly when part of fees collected are used as additional remuneration for providers⁸⁵. There is the additional risk that this payment method provokes a reduction in demand for health services, especially among the poorest. People may reduce demand for care⁸⁶ or refrain from demanding care when they need first to find the necessary cash in order to pay for the fees before receiving reimbursement. *Capitation* payment, which has built in incentives for providers to keep costs down, so far was used in a few schemes only. For example, it was used in the ORT scheme to pre-pay a contracted private non-profit hospital for hospital-based services to ORT members. However, in the Rwanda Project, capitation was introduced as the payment method for health centre services in the 54 Rwandan schemes. It is also stated by that project that this should give health centre providers incentives to increase preventive care⁸⁷.

Yet another element in purchasing is setting *referral rules* across echelons of the health system so as to realize efficiency gains. From the WHO Study, many of the hospital-based CHIs ignored primary health care, while primary health care-based CHIs underestimated the costs of referrals for hospital care. In the WCA study, only two cases were found where a gatekeeper system was put in place⁸⁸. The Bwamanda Scheme in particular, however, paid attention to the issue of referrals, namely hospital care requiring a strict referral from a health centre; the costs of care as a result of referral from the hospital to the health centre was not part of the benefit package, however. Also in the Rwandan Project, the district hospital services that are part of the benefit package are only covered after health center referral⁸⁹.

Finally, the establishment of a *waiting or qualifying period* before one can make effective use of insurance, is a device to help contain the effects of adverse selection on the overall costs of a CHIs. While it is certainly desirable when people have the possibility to enrol in a CHIs throughout the year, some restraint on immediate use of health care may be introduced. In the WCA study, of the six CHIs for which information was available, five had established a waiting period of 2 to 3 months⁹⁰. In the ORT scheme, for example, people can sign up at any time but the waiting period for inpatient care is 2 months⁹¹.

4.3 Summary

In Figure 2, we summarize the key factors that are likely to have an impact on performance in the areas of revenue collection, pooling and purchasing. It should be granted that the scientific importance of the results presented in the literature varies, however. In fact, the ILO Study refers to the absence of internal validity in many studies, i.e. where a scientifically consistent methodology was not used to ensure what one intended to measure⁹².

Thus it is necessary that evidence continues to be accumulated. This evidence could be the result of cross-scheme comparisons at the national or international level. It could also be obtained via analysis over time within schemes themselves; during the development or expansion of a scheme, the impact of factors such as the ones suggested above could be measured and tested.

5. Impact of community based health insurance on health system goals

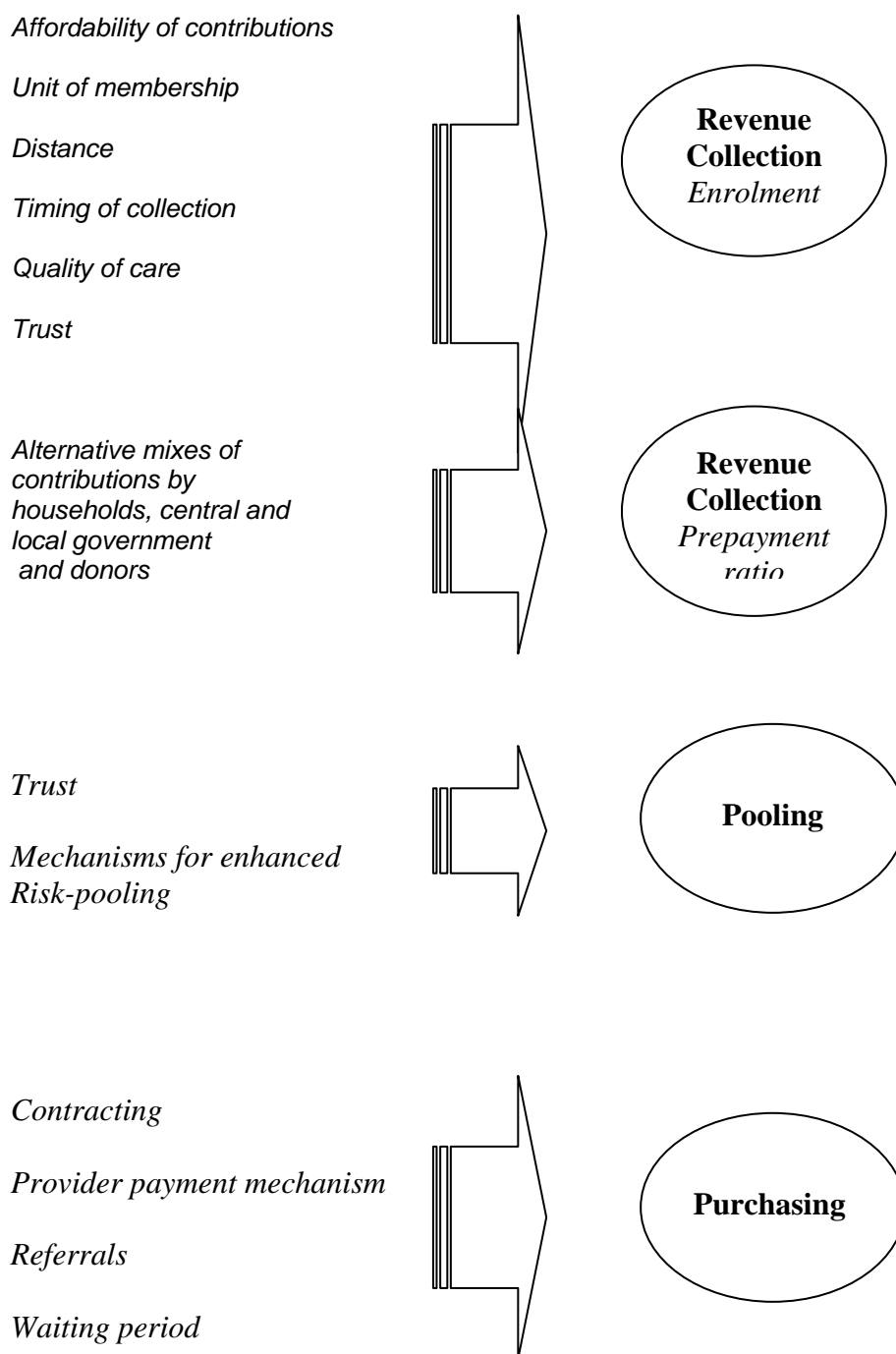
5.1 Degree of financial protection

In order to study ‘fairness in financial contribution’, we would need to know households’ expenditure for health (either directly through direct payments, user fees and health insurance contributions, or indirectly through tax payments part of which are channeled subsequently to health) as well as their capacity to pay. Data from an adequate sample of households would be sufficient, but such information is usually not readily available from the existing information on CHIs. A proxy indicator for financial fairness which may be easier to collect is the degree of financial protection of households against health care costs. The latter indicator is expected to measure how many households in society suffer from the impact of excessive or ‘catastrophic’ health expenditure on their livelihood.

According to the ILO Study, absence of financial protection exists when excessive health expenditure reduces households’ other household consumption to below the poverty line. Out of the 258 cases in the ILO Study, only 9 had information on the impact of CHI on financial protection, and 8 reported a positive impact on financial protection⁹³. Yet, the ILO concept was not used in those studies. Also, only 1 of the 9 analyses had internal validity.

In the recent study on the performance of the SEWA health insurance scheme⁹⁴, referred to earlier, it was found that this scheme had an important impact on the occurrence of catastrophic spending. In this study, ‘catastrophic spending’ occurs when a patient consumes more than 10% of the person’s annual household income on health care. It was found that without the insurance, hospital care would have been catastrophic for 35.6% of patients. However, as a result of the SEWA health insurance, the latter percentage was able to drop to 15.1%. We submit that this reduction was made possible by the relatively high prepayment ratio (76%) and to including costly inpatient care in the benefit package.

Figure 2 Overview of factors influencing performance of health financing sub-functions



Note that the WHO has proposed that health expenditure be called catastrophic when it is greater than or equal to 40% of capacity to pay⁹⁵. The latter concept, however, is based on non-food expenditure. In Gujarat, nonfood expenditure is about 28-31% of expenditure of the poorest quartile of households. The cut-off value for catastrophic expenditure in the WHO sense is therefore 11.2-12.4 %. If we assume that reported expenditure and income are roughly equal, the latter cut-off values are not that far

from the cut-off value used in the SEWA study. Application of the WHO method would therefore have led to similar conclusions concerning SEWA's impact on financial protection.

5.2 Equity in utilization of health services

From the WHO Study, it was found that only one pilot project in Boboye district in Niger had information that showed that utilization varied by income group⁹⁶. In this project, which was in a rural setting, two alternative financing methods were compared: a fee-for-service method and a risk-pooling strategy based on an annual tax + fee-for-service. One of the main results was that higher access for women, children, and the poor resulted from the risk-pooling method, as compared to the pure fee-for-service method. In the risk-pooling case, it was local government that was responsible for the prepayment of health care costs.

A few case studies refer to the impact of the household's geographical location on enrolment and utilization. In the RAHA scheme in India and the Bwamanda Scheme, a sliding scale of co-payments was established, decreasing according to distance. A similar principle was established in the Bwamanda Scheme. However, although enrolment was seen to increase among the population living at the greatest distance from the affiliated hospital, utilization of the insured hospital care did not increase. For this reason the sliding scale was later abandoned.

In the ILO Study, it was also concluded that a minority of schemes paid explicitly attention to utilisation. Out of the 258 schemes reviewed, the reports for 24 only contained some analysis of utilisation, with 14 out of 24 mentioning a positive impact of CHI on utilisation of health care services. Yet, only 1 out of 14 analyses could be said to respect the principle of internal validity. It is also noticed that most of the studies do not analyse differences in utilisation across different population groups.

In one of the studies in the Rwandan Project, an analysis is made about the determinants of professional provider visits⁹⁷. The determinants comprise income and asset variables, age, education, household size, health-related variables (pregnancy in the past year, degree of illness) and enrolment in the CHIs. The results show that enrolment has a positive influence on utilization of care, on top of the impact of the other variables. More precisely, the odds⁹⁸ that members of a CHIs utilize care are about 6 times as large compared to the odds of non-members. It was also found that patients in the lowest income quartile seek less care as compared to those in the highest income quartile. This points at a continued problem of equity in access for the poorest members. Moreover, this problem is even more acute for the poor non-members, who do not benefit from risk-sharing and financial protection.

Similar results as in the Rwanda Project can be found in the Thiès Study. Enrolment in the CHIs increased the probability to use hospital care by two percentage points, as compared to non-members. An interesting finding is with respect to the effect of enrolment on out-of-pocket expenditure: enrolled individuals spend about 50% less on hospital care than non-members⁹⁹. One can hypothesize that catastrophic expenditure among insured members is thus likely to occur less than among non-members; yet lack of data do not permit us to come to firm conclusions or to compare with the

results from other CHIs. Finally, it was also found that income enhanced the probability of hospitalization, pointing here as well at the problem of unequal access across households of different economic status.

5.3 Sustainability

In the WHO Study, sustainability was looked upon in financial and administrative or managerial terms¹⁰⁰. A number of reasons for poor financial viability were identified, including the small scale of a CHIs, the occurrence of adverse selection (leading to progressively smaller risk pools and higher costs) and important administrative costs. Two caveats need to be signalled. *First*, financial viability is not necessarily equal to self-financing, however. It is increasingly accepted that several other partners may contribute to health financing within the context of a CHIs, such as local and central government, national or international NGOs or official donors. Therefore, one may have to study instead the specific financial contributions via CHIs within the broader context of financing by several partners. *Secondly*, it is necessary to compare the financial viability of CHIs in the context of similar benefit packages. Indeed, some CHIs may exclude a number of health services (e.g. severe cases entailing important costs) from the benefit package, and therefore show a high percentage of cost-recovery. Of course, the latter may conflict with an obligation of the health system to respond also to patients' need for treatment which is now excluded from the benefit package.

The need for administrative and management capacity was stressed in the WCA study. The cases reviewed show a shortage of skills that are specific to CHIs, such as the setting of contributions, collection of contributions and compliance, determination of the benefit package, marketing and communication, contracting with providers, management information systems, and accounting. These elements are expected to have an important impact on the viability of schemes. One problem highlighted was that of arrears in the collection of contributions. In about four-fifths of a subset of CHIs for which information was available, arrears in contributions of different lengths of time and amounts were reported. Although exact information is not available, it stands to reason that this problem affects the financial viability of CHIs.

Finally, the WHO Study proposes a useful indicator of overall sustainability, namely the lifespan of a CHIs. Such information could only be derived from 37 schemes. Of these 37 schemes, 27 schemes were still ongoing and had an average lifespan of 8 ½ years. The Bwamanda Scheme belongs to those with the longest lifespan, namely 16 years. From the Thiès Study, we know that the oldest scheme (Fandène) has been operating for 10 years.

5.4 Summary

In Figure 3, we present an overview of the impacts, referred to in the literature, of the performance of the health financing sub-functions on the health system goals considered. Concerning financial protection and equity in utilization of health services, we refer to the performance criteria studied before. In the case of sustainability, factors are mentioned that are related to or help explain performance in the health financing sub-functions. The last factor 'availability of administrative and managerial

skills' has no special connection to one health financing sub-function in particular, but is a prerequisite for good performance in all sub-functions.

6. A possible way forward: connecting the CHIs to Government

6.1 The need for stewardship

From the evidence above, it is clear that CHIs as they are running now are far from perfect. The low degree of population membership in many CHIs stands out as an important problem. Nevertheless, a number of CHIs have also contributed to increased access and reduction of catastrophic health expenditure. The question is what is the overall future for CHIs ?

From a general point of view, one would need to consider again the major alternatives: increased coverage financed via tax revenues, expansion of social health insurance or a combination of both. In some countries, social and economic conditions may exist to look more favourably at these alternatives. However, CHIs may still play a role in those countries or regions where coverage can not be ensured in a short period of time by these alternatives. Given the problems and pitfalls referred to above, support for CHIs may be made conditional. It is here that Government stewardship becomes important as it is ultimately responsible for the overall performance of a country health system¹⁰¹. The risk is indeed that without stewardship, CHIs remain associated with certain population groups in certain regions only. The Government therefore has an important task to define what the role will be of CHI in a policy aiming at benefiting the whole of the population¹⁰².

6.2 Practising stewardship

6.2.1 Government's role

We would propose four basic tasks for Government: that of adviser on the design of CHIs, monitor of CHI-related activities, trainer and that of co-financier. Related to the design of CHIs, Government should be seen to steer CHIs in the direction of a national system of universal coverage and financial protection. Government could *first* help reduce the problem of adverse selection, by introducing simple rules. It could recommend to start up a CHIs only when a minimum percentage of the target population could be enrolled. Waiting periods could also be recommended, so as to refrain people from signing up with a scheme only when they are ill. Government could also strongly recommend not to enrol on individual basis but rather on a family basis. Apart from the percentage enrolment, the size of a CHIs is an equally important concern. Excessively small schemes, for instance with only a few hundred

members, do not constitute a solid risk pool capable of insuring its members adequately. Larger risk pools could thus be advised, for instance via the establishment of a federation¹⁰³ or network¹⁰⁴ of CHIs. Another possibility is the establishment of a reinsurance mechanism so as to counter the financial risk that small schemes are usually confronted with.¹⁰⁵

Secondly, Government could formulate recommendations on the composition of alternative benefit packages. These packages would have to reflect the health care needs of the population, and be designed in a cost-effective way, for instance through standard treatment protocols. For the sake of cost-effectiveness, they would also have to respect regulations such as on referral.

Thirdly, other concerns could also be addressed by Government, including membership, timing of collection, pooling and the role of the community in decision-making.

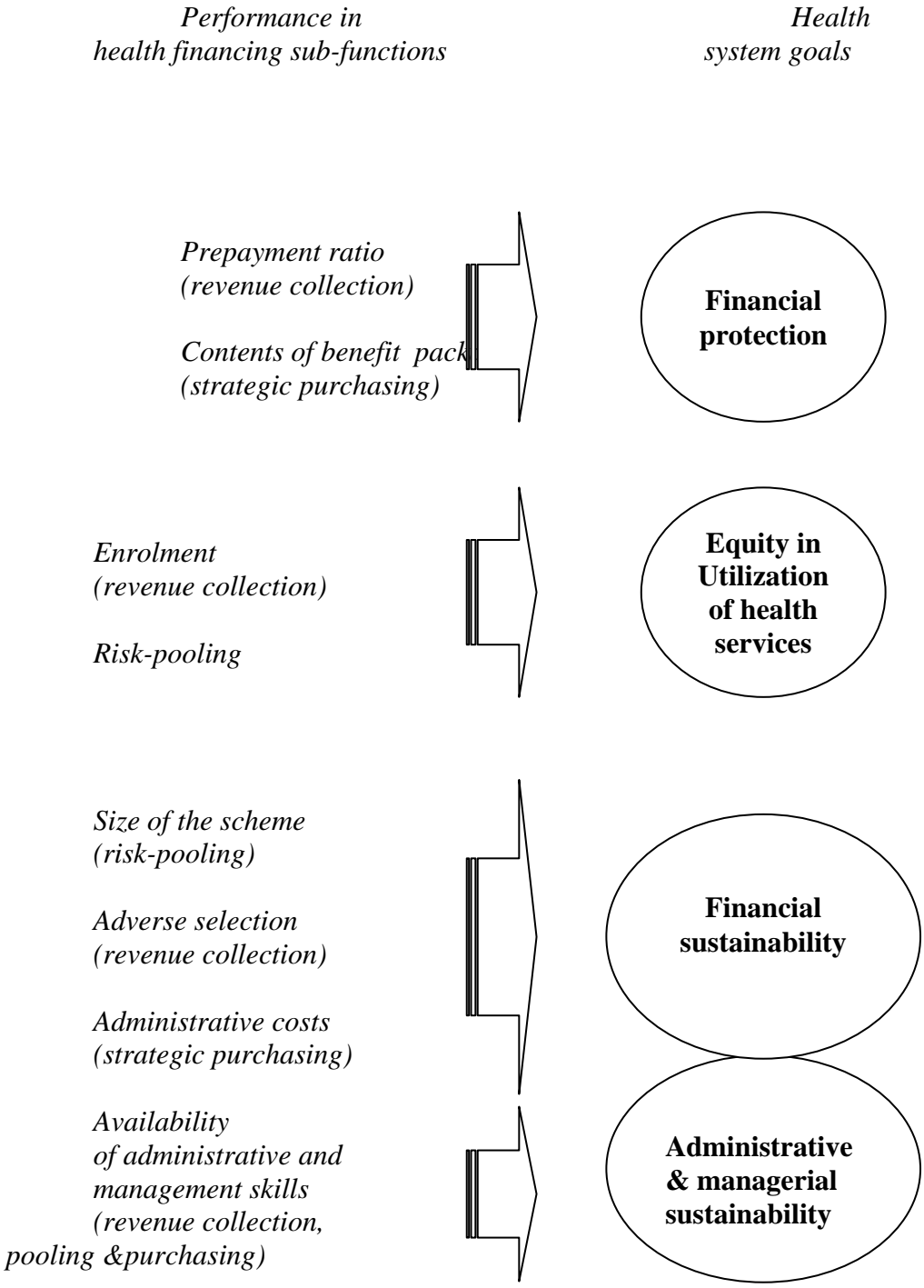
Next to the tasks of adviser on the design of CHI, Government can offer to monitor the basic performance of each CHIs, track progress across the different schemes through time, and perform comparative analysis. Monitoring should not be understood as passive, but enables Government to stimulate the establishment of CHIs, to signal problems to existing CHIs and to offer practical advice concerning these problems.

The results from monitoring and the promotion activities also provide a natural input into training activities that Government could organize. The scope of these training activities can cover the entire range of issues that concern the establishment and adjustment of health insurance, i.e. determination of the benefit package and of the contributions, collection of the contributions, issues of delay in payment of contributions and non-compliance, management information systems and the establishment of health insurance development plans.

Related to co-financing, Government can play a substantial role in enabling membership of the low-income groups in CHIs¹⁰⁶. *First*, at the level of a CHIs itself, Government could subsidise, partially or fully, the contributions of the poorest¹⁰⁷. These subsidies would be financed out of general taxation revenues. Government could also come to an agreement with donors, however, allowing them to reallocate part of their funds as subsidies. *Secondly*, Government could enact an inter-CHI solidarity rule, whereby some percentage share of contributions is allocated to a Solidarity Fund that would be used, for instance, to finance unexpected expenditure (such as in the case of local epidemics) or to pay for deficits of the least well-off CHIs in the country. This solidarity mechanisms would have to be understood and normally agreed upon by CHIs. Implementing 'excessive' solidarity might indeed be counterproductive.

A further argument for Government to be involved as financing partner is to counteract, to some extent, the regressive character of flat contributions by households in many CHIs. Of course the latter presupposes that the taxation system itself is progressive, which is not necessarily guaranteed.

Figure 3 Linkages between the performance of the health financing sub-functions and the health system goals considered



6.2.2 The role of the CHIs

The connection between Government and CHIs should not go one-way, however. Also CHIs could have an important input. The available evidence and how-know in existing and successful CHIs should enable the governments properly understand their dynamics and achievements. Such schemes can co-operate with Government to address technical issues relating to the functioning and management of CHIs, such as identification of health risks, setting of premium and co-payment levels, ways to avoid adverse selection, definition of benefit packages and protocols for curative, preventive and promotive activities, the establishment of health service contracts and a proper management information system.

Similarly, existing monitoring protocols used by well-functioning CHIs could assist Government to develop standardised protocols that could become applicable nationwide. Training of associations and organisations interested in health insurance is another Government task for which such well-performing CHIs could be of assistance.

6.3 Perspectives

The ‘connection’- scenario discussed above will only be feasible after certain preconditions are met, however. First, CHIs would have to be seen as part of a national effort for better financial protection, rather than as isolated entities. This requires a new entente between Government and CHIs: a balance will have to be struck between the often-desired self-reliance of CHIs and the need for overall stewardship by Government. In other words, a partnership is needed, whereby then technical and financial support from Government, but subject to certain conditions, becomes a natural input. Secondly, the interconnection between CHIs and Government will only function if the concerned parties show credibility so as to satisfy the population’s demand for trust, and if a properly organised health care delivery system is operating that enjoys the same level of trust.

Supposing that the preconditions are met, it is rather difficult to predict the future, however. Indeed, the speed with which financial protection will be improved at a nation-wide level is largely an unknown. In this respect, it should be noticed that the history of sickness or mutual health funds in European countries such as Germany will not necessarily repeat itself either. The social health insurance dynamic was clearly different in Europe. In fact, even before Bismarck’s social health insurance reform in 1883, local government obtained the right to make enrolment compulsory in existing voluntary sickness funds. In addition, compulsory health insurance for certain employment groups, namely miners, had already been organised on a national level in 1854¹⁰⁸. Furthermore, it is agreed that Bismarck’s 1883 law was part of a drive from the German Government to gain workers’s support and to weaken their social and political movement¹⁰⁹. Especially in low-income countries, movements that would trigger a similar response from governments do not appear to be strong or to exist.

7. Concluding remarks

A key finding from the present review is that achievements so far are generally modest, certainly with reference to enrolment. On the other hand, one should realize that many schemes are relatively young, and need more time to develop. It was also shown, especially through a number of well-performing schemes, how CHIs can contribute significantly to financial protection and to access. These schemes were shown to be institutionally different, in the sense that they strongly benefited from existing forms of cooperation developed within a broader development-oriented organisation.

Still, as we started out in this paper, CHI is not the only option. More universally based health financing methods are available. A number of social, economic and political elements may inhibit their straightforward adoption, however. Thus, provided no immediate nation-wide health financing alternatives are feasible, one could further scrutinize which beneficial role CHIs can eventually play. A key question thereby is how CHIs can perform better and what the conditions would be for their replication.

Most likely, however, CHIs will at best perform a complementary role. They are also not to work in an isolated way. Government has the task to define their place within the context of a national health financing policy. The latter policy should steer these CHIs in such a way that they contribute to reaching the goal of universal financial protection.

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¹ Low-income developing countries are defined as having a Gross National Product per capita of \$760 or less.

² McPake (1993).

³ Sauerborn et al. (1996).

⁴ See also van Ginneken (1999a).

⁵ See also Wiesmann and Jütting (2001) and Preker et al. (2002).

⁶ See Ashish Bose and P.B.Desai (1983, pp.42-45).

⁷ Stinson (1984,pp.124-125) refers to 'allowing communities to participate in designing appropriate delivery systems',..., 'deciding who will contribute and how much, managing revenue to prevent misuses, and making sure that all community members benefit appropriately'. Adeniyi-Jones (1976,p.9) also refers to community involvement as... 'sharing the responsibility and participating actively in planning and organizing health services. It also involves the proper utilization of these services by the community'.

⁸ Criel and van Dormael (1999) and Atim (1999, p.883). Note that a mutual health insurance scheme could be managed at the level of a community, an enterprise, a trade union etc.

⁹ Atim (1999, p.883).

¹⁰ van den Heever (1997, p.162).

¹¹ See WHO (2000) for a summary of the methods.

¹² WHO (2000,p.95).

¹³ WHO (2000,p.96).

¹⁴ WHO (2000,p.97).

¹⁵ WHO (2000,p.97).

¹⁶ See also Cutler and Zeckhauser (2000, section 6).

¹⁷ Davies and Carrin (2001).

¹⁸ WHO (2000,p.105).

¹⁹ For an overview of the possible mandates, see Perrot (2002).

²⁰ Bennett et al. (1998).

²¹ 4 schemes had a coverage rate between 50 and 70% whereas 8 had a coverage rate above 70%.

²² Musau (1999).

²³ Schneider and Diop (2001, p.5)

²⁴ Atim (1998).

²⁵ Jütting (2001).

²⁶ Criel (1998,pp.10-11).

²⁷ Harding (1996).

²⁸ Moens (1990).

²⁹ Schneider and Diop (2001,p.22-26).

³⁰ Bennett et al. (1998,Table 5.4,p.30).

³¹ Atim (1998,p.21).

³² Ranson (2002).

³³ Krause (2000).

³⁴ Baeza et al. (2002).

³⁵ Baeza et al. (2002, Table 16).

³⁶ Carrin et al. (1999).

³⁷ Baeza et al. (2002, Table 17).

³⁸ Baeza et al. (2002, Table 18).

³⁹ An entry point is defined by the study as 'facilitator of entrance to larger and more complex health care organization or sub-system at the local, regional or national levels either from the public sector or from NGOs other than the community'. See Baeza et al. (2002,p.51).

⁴⁰ Bennett, Creese and Monasch (1998,p.36).

⁴¹ This was the case of the Chogoria Hospital Scheme; see Bennett, Creese and Monasch (1998,p.36).

⁴² Ron (1999,p.944).

⁴³ Atim (1998,p.36).

⁴⁴ Schneider et al. (2001,p.6) and Schneider et al. (2000,p.17).

⁴⁵ Criel et al. (2002).

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- ⁴⁶ Bennett, Creese and Monasch (1998,p.43).
- ⁴⁷ Atim (1998,p.49).
- ⁴⁸ Schneider et al. (2001,p.33).
- ⁴⁹ Bennett, Creese and Monasch (1998,p. 43).
- ⁵⁰ Schneider & Diop (2001,pp.24-26).
- ⁵¹ Jütting (2001,p.12). See also Jakab et al. (2001, p.16).
- ⁵² Desmet, Chowdury & Islam (1999,p.933).
- ⁵³ Atim (1998,p.42).
- ⁵⁴ Bennett, Creese and Monasch (1998,p.24).
- ⁵⁵ Carrin et al. (1999,p.9)
- ⁵⁶ Carrin, Desmet and Basaza (2001,p.134).
- ⁵⁷ Desmet, Chowdury & Islam (1999,p.931).
- ⁵⁸ van Ginneken (1999,p.132).
- ⁵⁹ Desmet, Chowdury & Islam (1999,p.928).
- ⁶⁰ Schneider and Diop (2001,p.25). The odds-ratio associated with the variable 'less than 30 minutes to health facility' was found to be 3.96; it was also found to be statistically significant at the 1% significance level.
- ⁶¹ Carrin, Desmet & Basaza (2001,p. 133)
- ⁶² Criel, Barry and von Roenne (2002, ch.2).
- ⁶³ Chee, Smith and Kapinga (2002, ch.13).
- ⁶⁴ van Ginneken (1999).
- ⁶⁵ Ibidem, pp.136-137.
- ⁶⁶ Desmet et al. (1999)
- ⁶⁷ Krause (2000,p.11).
- ⁶⁸ Schneider et al. (2001,p.19).
- ⁶⁹ The concept of health insurance may not always be understood right away. In fact CHIs are different from traditional mutual aid groups where 'generalised reciprocity' is a key concept. In CHIs, however, support is forthcoming only in the case of illness, and is therefore associated with 'conditional reciprocity' (Bärnighausen and Sauerborn, 2002,p.1561). For a further discussion in the context of the Bwamanda Scheme, see Criel et al. (1998).
- ⁷⁰ Janclous et al. (1985,p.103).
- ⁷¹ Criel (1998, p.13).
- ⁷² Ray (1998,p.394).
- ⁷³ It is shown by De Weerd (2002,pp.49-55) in Nyakatoke (Tanzania) that geographical distances between households codetermine the probability of mutual help between those households.
- ⁷⁴ Van Ginneken (1999b, p.182).
- ⁷⁵ Dror (2001,p.674).
- ⁷⁶ Dror (2001,p.675).
- ⁷⁷ Davies & Carrin (2001).
- ⁷⁸ For a theoretical treatment of risk adjustment, see Cutler and Zeckhauser (2000,pp.624-625).
- ⁷⁹ Called 'medical benefit schemes' in South Africa.
- ⁸⁰ Baeza et al. (2002,p.38).
- ⁸¹ Perrot & Adams (2000).
- ⁸² Schneider et al. (2001,pp.46-52).
- ⁸³ Atim (1998,p.30).
- ⁸⁴ Soeters and Griffiths (2002).
- ⁸⁵ Noterman et al. (1996) referred to in Bennett, Creese and Monasch (1998,p.44).
- ⁸⁶ Ellis, Allam & Gupta (1996) referred to in Bennett, Creese and Monasch (1998,p.35).
- ⁸⁷ Schneider et al. (2001,p.6).
- ⁸⁸ Atim (1998,p.33).
- ⁸⁹ Schneider et al. (2001,p.6).
- ⁹⁰ Atim (1998,p.27).
- ⁹¹ Ron (1999,p.944).
- ⁹² Baeza et al. (2002,p.23).
- ⁹³ Baeza et al. (2002,p.30).

⁹⁴ Ranson (2002).

⁹⁵ Kawabata et al. (2002).

⁹⁶ Bennett, Creese and Monasch (1998,p.46) who refer to Diop, Yazbeck and Bitran (1995).

⁹⁷ Schneider and Diop (2001, pp.41-44).

⁹⁸ In this case, the odds are defined as the ratio of the probability of using professional care to the probability of not using such care.

⁹⁹ Jütting (2001, pp.16-18) and Jakab (2001,p.18).

¹⁰⁰ Bennett, Creese and Monasch (1998,pp.50-51).

¹⁰¹ WHO (2000,p.119).

¹⁰² We refer here to Criel and Van Dormael (1999,p.159) who write that if community financing schemes such as the CHI 'are to significantly contribute to an increase in solidarity and a reduction of social exclusion, the support of a public authority will eventually be needed', and that they will 'thus, sooner or later, be confronted with the problem of the role and the performance of the state'. Further support for this statement is from Mills et al. (1997, p.309) who write that 'While government weaknesses may bolster arguments for relying less on the state, there is sufficient evidence of the dangers of unregulated health markets to suggest that the state cannot simply withdraw'.

¹⁰³ See Mills (1998,p.298).

¹⁰⁴ See Steinwachs (2002,pp.21-23)

¹⁰⁵ Dror and Jacquier (1999) and Dror (2002).

¹⁰⁶ This role for Government is highlighted by Mesa-Lago (2000, p.44) in his recent study on social security reform in Latin America. See also Jütting (2000).

¹⁰⁷ Burgess and Stern (1991,p.73) also point at the greater potential of central Government to deal with redistribution in favour of the indigent.

¹⁰⁸ Bärnighausen & Sauerborn (2002,p.1562).

¹⁰⁹ Ibidem,p.1565 and Criel and Van Dormael (1999,p.158).