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1 Introduction

Despite extensive improvements over the last years, social security systems in developing countries are still very weak. Major parts of the population are often left alone with life-threatening risks. This is especially true for the poor and rural population. Both the state and the few market-based insurance companies existing in developing countries have difficulties or lack incentives to extend services to the informal sector and in providing individuals, households and communities there with proper insurance. This is a crucial deficit, as the rural sector as part of the informal sector is still the largest sector in developing countries.

Triggered by the lack of formal insurance, i.e. as a need for self-help, community-based insurance schemes have emerged to fill the niche, trying to compensate for the state and market failure. In the last years increasing attention has been paid to these developments. However, even though the demand and need for social protection cannot be denied, it is still being debated whether these mutual insurance schemes can be seen as long-lasting and final solutions to the insurance deficit faced by the poor. Furthermore, it is still unclear whether these arrangements are in fact capable in providing the very poor, i.e. the most vulnerable, with adequate protection.

This paper reviews existing literature on the functioning of mutual insurance schemes and their contribution in providing access to social services for disadvantaged people. Literature published on this matter specifies both the advantages of these institutions as well as their limitations. A critical evaluation of existing approaches is necessary in order to formulate policy recommendations which could help in improving the institutional design. Ongoing schemes will be evaluated regarding their efficiency and capability of reaching those parts of the population which have been excluded from social security services provided by the state or market.

The outline is as follows: Section 2 provides some background information, emphasizing the demand for social protection in the informal sector. Section 3 presents two relatively successful case studies of mutual insurance schemes, also giving insights into the variety of existing schemes. The approaches will be classified according to some selected determinants. Section 4 focuses on the main characteristics of mutual insurance schemes. In particular their comparative advantages and limitations compared to formal insurance schemes will be discussed. In Section 5 a discussion of mutual schemes in general is

presented evaluating the viability of the schemes and isolating characteristics of successful schemes. Section 6 presents policy recommendations and further research needs.

2 Demand for insurance in the informal sector

There is no doubt that the demand for social protection in the informal sector is extensive. While low-income countries already spend very little of their GDP on social protection compared to high-income countries¹ the informal sector is further disadvantaged compared to the formal sector. It is this part of society in developing countries which is especially vulnerable. With little financial capital, poor households are helpless against risks of all sorts. It is a common understanding that „in order to reduce vulnerability, improve consumption smoothing, and enhance equity“ these income risks facing poor individuals, households and communities have to be reduced (Holzmann and Jorgensen 1999, p.3).

Fact is that large parts of the population in low-income countries are not covered by formal insurance schemes. Market-based institutions often do not see a profit in extending their services to the population in the informal sector as the administration of insurance in this sector is extremely difficult and expensive. For example, the rural sector is characterized by agricultural employment „and much of this is seasonal, family or self-employment. Cash income is seasonal and also subject to significant fluctuations from year to year.“ (Bennett et al., 1998, p.7) As income flows in the informal sector are rarely continuous and administrative infrastructure in rural and poor areas is often lacking, private for-profit insurance schemes have been reluctant in entering this market. High unit transaction costs have made the expansion of their services to this market unprofitable.

Out of necessity the poor in the informal sectors have found ways to handle risks on a community level. The fact that workers in the informal economy as well as poor rural households in general have a strong demand in social protection can be seen in the multitude of mutual insurance schemes existing in the developing world. „These cases are varied and arise from the specific sub-context of ideology, economy, political system and degree of local activism“ (Lund and Srinivas 1999, p.50). Mutual insurance schemes can broadly be defined as systems based on voluntary engagement and the principles of solidarity and reciprocity. Members usually have to meet certain obligations, e.g. payment of premiums and are bound together by a common objective and a strong local affiliation. Many times

¹ High income countries spend 20-25 percent of their GDP, while low-income countries spend 1-5 percent of their GDP on social protection. (Lund and Srinivas 1999)

these schemes evolve out of traditional systems or form as a response to the low coverage provided by formal systems (Jütting 1999). Focus of this paper is to analyse and evaluate these schemes in terms of efficiency and effectiveness in order to allow for the formulation of recommendations that could help in compensating for possible weaknesses.

In the following, a more precise definition of risk is presented. Understanding the nature and types of risks is essential as mutual insurance schemes are to be evaluated in terms of their capacity to provide social protection, i.e. their capacity to deal with risks.

Risk has two sides. There is, of course, the cost of the unexpected losses. But in addition, there is the cost of uncertainty itself even if there are no losses. Since the poor are risk averse, it is particularly difficult for them to deal with uncertainty. This extreme risk aversion can lead to a distortion in the use of resources (land, labor, capital, technical knowledge) causing inefficiencies. Inefficiencies in choices in turn can impede economic growth. Adequate risk management instruments are thus necessary to allow for more efficiency, e.g. in terms of production techniques, promoting economic development and thereby allowing the poor to escape from poverty (Holzmann and Jorgensen 1999). If insurance could take care of income risk, the poor could concentrate on making the right production decisions, without having to think about the consequences in terms of risks. SIEGEL and ALWANG (1999, p.1) find that „private and social welfare losses result both from the risky events and from household strategies to manage the risk.“ A typology of risks is presented in the following, portraying the diversity of risks against which coverage is necessary (Morduch 1999):

- *Low frequency versus high frequency risks.* Individuals, households or communities are confronted with income-threatening events that either occur at a low or high frequency. Low frequency events include old age, death in the family, chronic poverty and chronic disability. High frequency events on the other hand can be seen in transient illness, crop loss, temporary unemployment, macroeconomic and political shocks. Whereas high frequency events due to their temporary nature can most often be compensated through temporary support to the affected individuals or households, low frequency events have a long-lasting damaging impact on the household and may require transfers for an extended time-period. Low frequency events thus tend to be more costly.
- *Idiosyncratic versus covariate shocks.* The difference between idiosyncratic and covariate shocks is that the former affects only an isolated number of households,

whereas the latter hits the whole community at once. A covariate shock could e.g. be a natural catastrophe.

- *Single versus repeated shocks.* This distinction refers to the recurring nature of shocks. Obviously the more often a bad shock occurs in a row the more devastating the impact on the household or community. Droughts and floods, e.g. often have severe consequences for the communities as they can lead to run-off, desertification and poor soil conditioning, from which the communities will have to suffer for a long time.

Having discussed the diversity of existing risks against which protection is needed, we will now move on to describe the steps taken by poor, rural communities to deal with this need. In the next section two existing, relatively successful, mutual insurance schemes will be presented.

3 Case studies

3.1 SEWA

The Self-Employed Women's Association (SEWA) is a registered trade union working mainly with poor self-employed women in the Indian state of Gujarat. Founded in 1972, SEWA initially started out as a self-help organisation for women in the informal sector. It focused on employment and income related issues. Supportive services provided by the SEWA included child care and training. In 1974 a sister organization, the SEWA Bank, was established. The bank specialized in micro-credit for poor families (Bennett et al. 1998).

Over the years SEWA members voiced a strong demand for insurance against poverty-causing risks. At the same time the bank saw a main cause of loan default in illness of the borrower or household. As a solution, i.e. in order to ensure the longterm viability of the bank and in response to member demand, an „Integrated Social Security Scheme“ was established in 1992 that included health insurance (Bennett et al. 1998).

In India over 90%² of the labour force are informal sector workers for whom state-based social protection is almost non-existent (Lund and Srinivas 1999). Responses to this deficit can be found in SEWA's large membership. Membership in the SEWA is almost a quarter of a million³ and its Integrated Social Security Programme today insures over 32,000 women workers. The Programme is the largest comprehensive contributory social security scheme in

² This percentage includes agricultural workers.

India (Lund and Srinivas 1999). Membership is voluntary. SEWA very well portrays the demand for self-help and social security existing in the informal sector.

Services provided

SEWA's social security scheme covers health insurance (including a small maternity benefit component), life insurance (death and disability) and asset insurance (loss of or damage to housing unit or work equipment). Health and asset insurance can be purchased in a combined package and life insurance can be added if desired (Lund and Srinivas 1999).

The initial benefit package has been expanded in recent years to include ambulatory care, occupational health benefits and gynaecological care. This has happened in response to member demand and is financed through an increase in premium payment (Bennett et al., 1998).

Financing

The annual premium for the combined asset and health insurance package is approximately Rs.60 and encompasses Rs.75 when life insurance is included (Lund and Srinivas 1999). The financing of the premium is provided by three parties. One third is financed through direct contributions by women workers, one third is covered by the interest paid on a grant by the German Technical Development Agency (GTZ) and the remaining cost are financed through a subsidised packaged scheme provided by the Life Insurance Corporation of India and the United India Insurance Company (Lund and Srinivas 1999).

SEWA has been quite innovative in designing payment schemes of premiums to suit different income groups. It allows for annual as well as monthly payments. In addition, the Deposit scheme enables members to make a one-time payment of Rs. 500 and Rs. 700 for life membership and finance yearly premiums through the interest received on the Deposit (Lund and Srinivas 1999, Bennett et al. 1998). For its poorest members, who cannot afford regular premium payments, SEWA offers a loan fund, where members can borrow Rs. 500 and place the loan in a savings account to use the interest on the account to pay for the premiums. The loan is then paid back over the years (Bennett et al. 1998).

Administration

SEWA established its insurance scheme in cooperation with private for-profit insurance companies, specifically the Life Insurance Corporation (LIC) of India and the United India

³ The vast majority of its members lives in the state of Gujarat, but SEWA also includes members in five other Indian states (Krause 2000).

Insurance Company (UIIC)⁴. In 1995, however, in response to complaints from beneficiaries who pressed for improved benefits and faster reimbursement, SEWA contracted out of its cooperation with UIIC and started managing health insurance aspects itself while continuing its cooperation with LIC. (Bennett et al. 1998)

The SEWA Bank is in charge of membership management and claim processing. This incorporates considerable field presence and grassroots organising from SEWA Bank staff and SEWA Union staff. (Lund and Srinivas 1999) The provider payment mechanism is set up as out-of-pocket payments, in which the patient directly pays the health care provider and is later reimbursed by the insurance company. „Evidence from elsewhere in India suggests that in such circumstances demand may be considerably reduced because of the necessity of finding cash to make the initial payment.“ (Bennett et al. 1998, p.35)

Equity

The premium members have to pay is a flat rate offering no exemptions. This could lead to a problem with equity regarding the incapability of poor people to pay this premium. However, as described earlier, SEWA has dealt with this deficit by introducing the loan fund. Yet there are no data available depicting the percentage of very poor women included in this scheme. Furthermore, it can be argued that equity across gender has not been achieved (even though it is clear that this has not been SEWA's objective).

Sustainability

SEWA has shown great flexibility in adapting the scheme in order to meet members' needs. After replacing the private for-profit insurance company, SEWA has made improvements in the quality of the benefit package offered to its members and expanded the benefits included in the package. Rather than just acting as a financial intermediary, SEWA has taken on the role of a financial manager. To ensure better quality of care, SEWA has adopted selective contracting with providers (Bennett et al. 1998).

However, members still voice a demand that the health insurance offered by SEWA should incorporate more than just hospitalisation costs. So far SEWA has only made a few exceptions in this regard and appears hesitant to include more risks in its portfolio. In this context, women members of the insurance scheme also pressure SEWA to include their husbands and children into the scheme.

⁴ LIC is the only insurance company undertaking the life insurance business in India. UIIC is one of four subsidiaries of the General Insurance Corporation (GIC) which is the only insurance company undertaking general insurance. (Krause 2000)

Another challenge SEWA has to face concerns picking up further insurance tools.

3.2 Bwamanda Hospital scheme in the Democratic Republic of the Congo

The Bwamanda district in north-west Congo is a rural district encompassing approximately 150,000 inhabitants. The district's health services include 22 health centers and one referral hospital (Criel et al. 1999). The Bwamanda Hospital insurance scheme is a NGO-owned scheme launched in 1986. It was established on one hand to guarantee the financial viability of the hospital by raising local revenue as government funding was nearly non-existent and external subsidies uncertain. On the other hand, it aimed to maintain financial accessibility and equity by keeping hospital fees affordable (Criel 1998).

Characteristic of rural areas, the population in Bwamanda is mainly dependent on agricultural output and has its income fluctuating with seasonal crops. The insurance scheme had the objective to make health services available and affordable to poor rural households. In general, the insurance scheme can be seen as a response to the economic and political crisis in the Democratic Republic of the Congo where overall health policy was virtually non-existent (Bennett et al. 1998).

The CDI Bwamanda (Centre de Développement Intégral), a Zairian non-profit organisation established in the late sixties, helped in the economic and social development of Bwamanda by organising activities in areas such as health care, communication, education, transportation, etc. It was subsidised from Belgian bilateral aid, while subsidies from the government of Congo were very rare (Criel 1998). Thanks to the CDI, by 1986, when the insurance scheme was set up, the Bwamanda health care system was already functioning well. The relationship between the CDI and the population and the district management was by then based on trust and social cohesion due to the long presence and success of the CDI project. This confidence on the sides of both the community representatives towards CDI as well as of CDI towards the ability and trustworthiness of the district management team facilitated the cooperation and set-up of the insurance scheme (Criel 1998).

Similar to the SEWA case, the scheme very well reflects the great demand of the community for this voluntary insurance scheme. Within four weeks after its initiation already 32,600 people – i.e. 28% of the district's population – had joined the scheme. This number kept on rising and eventually stabilised at the membership rate of approximately 60-65% (Criel 1998).

Services provided

Risk coverage is limited to hospital care. The patient has to make a payment of a 20% co-payment rate when admitted to the hospital. A mandatory referral system ensures that admission to the hospital is only possible when the patient has been referred to the hospital by a health centre (Criel 1999).

Financing

Premiums for the insurance scheme are collected annually during the months of March and April and set at 20 Zaire (approximately 0,3 US\$). Twenty Zaire is equivalent to the price Bwamanda farmers receive for selling 2 kg of soybeans. This relation was tried to be kept stable also during times of inflation (Criel 1998). The premium was based on a community rating system, independent of age, sex, domicile, health status, etc. There was an option to have the whole household as a subscription unit, with individual premiums.

Locally generated revenue by the Bwamanda hospital increased after the initiation of the insurance scheme. Revenue is made up of „direct payments of non-insured patients, prepayment of employer-organised health care schemes (covering a few thousand of people), reimbursements to the hospital by the insurance fund, and co-payments by insured patients themselves.“ (Criel 1998, p.12) It can be said that the insurance scheme achieved its goal of ensuring the financial viability of the hospital by relying more on stable resources rather than being dependent on external subsidies.

In achieving this goal, the insurance scheme profited considerably from CDI support. The CDI helped with technical and financial know-how and from the beginning on acted as a financial guarantor to the scheme. The scheme further profited from the broad range of activities in which CDI was involved. On one hand, these development activities helped raise the income level of the population, making the payment of premiums by local households easier. On the other hand, they helped with value-maintaining mechanisms in the context of inflation problems. For example, as a means of protection from inflation, funds were invested in a foreign currency account; „this was only possible because the scheme was linked to agricultural activities that produced coffee for export.“ (Bennett et al. 1998, p.20)

Administration

The Bwamanda scheme is managed by the district health team. It is a direct insurance scheme as the insurance institution is also the health care provider. The scheme is characterized by a relatively high administrative efficiency compared to other schemes, as is

reflected by its rather low administrative costs. Administrative costs in the years 1990-1995 ranged between 5-10% of total expenses, whereas the costs in similar schemes in other African countries were much higher (Criel 1998; Gruat 1990; Shaw and Griffin 1995).

Equity

In a socio-economic survey carried out in 1988 518 households of the Bwamanda district were interviewed to compare characteristics of households which had joined the insurance scheme and those that had not. One of the only differences found concerned the monetary income structure of the two groups. In the non-member population very low and very high income groups were more represented than in the member population. While relatively wealthy households did not see a need of joining the insurance scheme as they could readily afford paying user fees directly to the hospital, the poor were excluded from the insurance and hospital care as they could not afford paying the premium (see Weinberger and Jütting 1999 for similar results). This figure suggests that the initial objective of the scheme - to make access to the hospital affordable to all groups - was not met. In response to this deficit, the Bwamanda team is trying to look for ways to include the very poor by differentiating premiums and fees and by considering exemption of payment (Criel et al. 1999).

In terms of equity in utilization, it was observed that insured households living close to a health care facility had a higher utilization rate, and that these households also were more likely to join the insurance scheme. To enhance equity, the Bwamanda scheme implemented a sliding scale based upon the household's proximity to the health care facility. This scale, however, was eventually dropped as it did not seem to have an impact on utilization and was administratively costly (Bennett et al 1996). CRIEL ET AL. (1999) summarize that while the scheme helped with providing the insured population with effective hospital care, deficits and unmet needs remain in the noninsured population and especially for those who live in remote noninsured communities.

Sustainability

The success and viability of the scheme can to a large extent be explained by the favorable conditions in which the scheme thrived. Through its presence and considerable support the CDI acted as a backbone to this scheme. In addition to attaining organisational and financial efficiency, the Bwamanda scheme found effective ways of dealing with adverse selection and moral hazard. The scheme has a relatively high membership rate and provides the option to have the whole household as a subscription unit, hereby controlling for adverse selection.

The mandatory referral of the patient by the health centre along with the system of co-payments helps with problems of moral hazard. However, since the insurance scheme is only available to inhabitants of the Bwamanda district it is to be doubted that the risk pool is diversified enough to deal with covariate risk.

4 Micro-insurance Schemes: An evaluation

4.1 Strengths

Imperfect information on the part of both the buyer and seller leads to imperfections in the insurance business. In cases where the state and the market are prone to fail, informal insurance schemes can still be successful due to their ability to deal with informational asymmetries and transaction costs.

Accumulation of Social Capital

Participants in micro-insurance arrangements have usually known each other for a long time and live in the same communities. These close interpersonal relationships are based on the one hand based on trust and social cohesion and on the other hand, they can also contribute to the accumulation of social capital, meaning the ability of individuals to secure benefits by virtue of membership in social networks or other social structures. In the case of SEWA, the participating women were bound together by their common hardships and the will to improve their general position in society. High levels of social capital in a community can lower transaction, enforcement and control costs (Jütting 1999). Positive effects of social capital also became evident in the Bwamanda hospital insurance scheme where the relationship of trust and confidence between the CDI and the community helped with communication and the successful implementation of the scheme.

Good Access to Information

Due to the proximity to their members and their local character micro-insurance schemes are characterized by a relatively good information base. This helps to control for moral hazard behavior as the monitoring of individual behavior is facilitated. Techniques for dealing with moral hazard include group pressure and community-specific information (Siegel and Alwang 1999). Market institutions, on the other hand, have to rely on public information and are thus much more susceptible to moral hazard. Especially since the implementation of mandatory insurance schemes in the informal sector is difficult (most informal schemes are based on voluntary membership) due to problems in the accountability of households in this sector, information problems have been a major obstacle for the set up of for-profit schemes.

In the case of SEWA, the private insurance companies could mainly ignore these problems as SEWA acted as an intermediary and was in charge of membership and claim processing. This way the insurance company benefited from SEWA's good information base and SEWA members benefited from the insurance provided to them. A similar situation existed in the Bwamanda scheme where health care staff and district commissioners worked together in close cooperation and enjoyed the trust of the community.

Innovative Power

It is also assumed that mutual arrangements have a significant innovative power (Badelt 1999). While governments tend to be centralized and bureaucratic, community-based institutions are more flexible and non-hierarchical in their nature. Operating on a grass-roots level they have a good information base and can react more quickly to complaints or changing demands. This adaptability is of crucial importance against the background of fast changing economic environments.

SEWA, for instance, has shown its flexibility by reacting to its members' demands. It quitted its cooperation with the for-profit insurance company when members expressed dissatisfaction with the offered services and expanded the benefit package to meet members' needs. The Bwamanda scheme showed its innovative power when it introduced a sliding scale based on geographical proximity to the health care centre as a response to decreasing utilization with increasing distance.

4.2 Weaknesses

The reasons why mutual schemes in spite of the described institutional strengths cannot be regarded as exclusive solutions to the insurance deficit become clear in this section. Institutional weaknesses of informal insurance arrangements will be pointed out in terms of efficiency and sustainability.

Efficiency in Risk Coverage

It is often being emphasized that informal insurance arrangements can only deal with certain types of risks and are helpless against other types. According to the typology of risks presented in Section 2 limitations of informal insurance schemes in covering some kinds of risks will be pointed out in the following.

It is obvious that low frequency events, covariate and repeated shocks have the greatest financial impact on insurance schemes as they are associated with the largest and most costly

damage. Mutual insurance schemes are usually not very effective in addressing such large-scale risks. This can be partly explained by the lack of heterogeneity and the small size of their risk pools. Informal arrangements which find their basis in close social ties and networks have the characteristic that their members are all very homogenous, facing similar risks in similar circumstances. Their social and geographic spread is not very extensive compared to formal insurance schemes. This results in highly positively correlated risks (Siegel and Alwang 1999). In the case of a covariate risk, like drought, the whole community will depend on insurance payments and no household will be able to pay into the insurance budget anymore resulting in the break-down of the scheme if external aid is not provided.

The fact that mutual insurance arrangements are usually not capable in dealing with these kinds of risks is a quite severe drawback, as they do not provide proper insurance when risk payoffs are most needed. During periods of droughts, flood and epidemics these insurance schemes fail (Coate and Ravallion 1993, Morduch 1999). The longterm economic welfare of its participants is thus not guaranteed as households are not enabled to enjoy smooth consumption levels. The fact that households cannot completely rely on the protection of the insurance schemes also hinders them in making efficient economic decisions. This will consequently have the effect that households will remain in poverty. In addition, inefficient decisions will also retard economic growth.

It is essential that these limitations in risk coverage are pointed out to signal the need for improved insurance schemes. The insight that informal arrangements can deal with some risks should not lead to the conclusion that the informal sector is taken care of and that the state and market-based institutions need not worry about the provision of insurance to this sector anymore. Rather extensive restructuring is necessary to expand coverage of the informal sector to all types of risks.

Sustainability

Community-based institutions are sometimes praised for their flexibility. Other than the rigid structures of the state, these institutions often come up with innovative schemes. This innovative power is needed to adapt to economic changes. At the same time, however, it is being emphasized that the structure of mutual insurance arrangements is not compatible with economic development. The traditional social networks on which these arrangements are based and which have been developed in communities over time will be weakened when

„economies start to modernize and exchanges become more commercial and impersonal“ (Siegel and Alwang 1999, p.37).

Migration and urbanization, factors of modernization, can also have destabilizing effects on local insurance arrangements. When households move away they can default on their insurance obligations and thereby endanger the proper functioning of the arrangement. Furthermore, it can be observed that usually richer households move away and poorer households stay behind. The latter are more dependent on established community networks and do not see a chance of group-based insurance in urban areas. If migration and urbanization are associated with economic improvement and better earning opportunities for households, one can say that the „presence of informal insurance in villages can then be a drag on economic development.“ (Morduch, 1999, 9; Banerjee and Newmann 1997; Das Gupta 1987)

Financial viability is also threatened due to the structure of informal schemes. Small risk pools, problems with adverse selection and administrative inefficiencies can lead to financial difficulties in the longterm (Bennett et al. 1998).

4.3 Mixed results

This section deals with those kinds of characteristics of mutual insurance arrangements that cannot be classified as pure strengths nor as pure weaknesses. Compared to the initial situation and level of social protection in the informal sector the establishment of mutual insurance schemes can often be considered improvements, while at the same time limitations of their capability and inefficiencies in functioning become very clear.

Organizational (in)efficiency

Mutual insurance arrangements often lack management, financial and technical know-how, resulting in organizational inefficiencies. For example, informal insurance arrangements are not necessarily cost-efficient. Other than market institutions they do not face competitive forces but are based on social relationships (Siegel and Alwang 1999). This lack in cost-efficiency can have a rather severe impact on households which only have limited financial capabilities. In a study by the WHO (1998) which analyses 82 insurance schemes in the informal sector it is found that the administrative costs of the schemes range between 5 – 17 % of income⁵ (Bennett et al. 1998). In developed countries a figure of approximately

⁵ These figures do not include the opportunity costs of volunteer time used in support of administration.

5% is common. In a further data source, it has been estimated that in some areas of India „households may sacrifice as much as 25% of average income to reduce exposure to shocks“ (Morduch 1999, p.7). Increasing the efficiency of mutual insurance arrangements would therefore also have a positive impact on the average income of these households.

Yet BENNET ET AL. are hesitant to draw a firm conclusion regarding the administrative structure in mutual insurance schemes as only limited data are available. Furthermore, it is unclear whether a higher degree of cost-efficiency would be achieved in formal insurance schemes as the difficulty in administration of the informal sector has often been stated as being one of the main obstacles for health insurance schemes to expand to this sector.

The case of SEWA shows how financial know-how can ensure affordability and thus lead to success of the scheme. Financial efficiency was provided through the SEWA bank which had already gained financial experience prior to the start of the insurance scheme. In terms of management efficiency, the SEWA insurance scheme at first contracted risk management out to a private for-profit insurance company which had experience in this business. However, in response to complaints from beneficiaries regarding the administration of claims, SEWA took over management responsibilities itself. In Bwamanda it could also be observed that the scheme benefited from the infrastructure, administrative facilities and technical know-how provided by the CDI. As discussed earlier, administrative costs in this scheme were relatively low.

Equity

While state and market institutions have often been blamed for not extending their services to the most disadvantaged part of the population, it would be expected that mutual insurance schemes are much more available to the poor and rural population. However, many observers find that this positive aspect of these schemes has been overestimated. Rather it becomes evident that they many times exclude the poorest of the poor. Equity is not necessarily being achieved when informal arrangements are in place.

As typical mutual insurance contracts usually lack external enforcement and are instead based on social contracts which are self-enforcing, poor households might be tempted to defect on the agreement when they cannot afford helping other participants in the scheme, especially when the household is itself confronted with the same poverty-causing event (like drought). To ensure viability of the scheme the inclusion of poor people might not seem effective. This suggests that voluntary systems may work better when members are slightly

richer (Morduch 1999). Vulnerable households are thus not wanted in the risk pool (Siegel and Alwang 1999, Weinberger and Jütting 1999).

Other than for economic factors, poor rural households might also be excluded on the basis of social factors. As informal arrangements are often based on social relationships and networks they can be quite exclusive. A lot of social exclusion takes place against newcomers to the community or on the basis of gender, tribe, class lines etc. SAHN (1989) further finds that usually the most vulnerable members of the household or village are excluded when risk-related pressures are greatest.

Another way of excluding poorer households from the risk pool of mutual insurance scheme is suggested by a theory of HOFF (1997). A scenario is described where richer households opt out of the risk pool in order to form a new insurance scheme with participants of equal wealth or to deal with risk problems individually. HOFF sees reciprocity-based systems as possible poverty traps as in the longterm poorer households will remain in the pool without the support of richer households (Morduch 1999). This theory can be partly supported by experience with the Bwamanda scheme. There, it was observed that the very poor and the relatively wealthy were more represented among those households which did not join the insurance scheme than among the group of insured households.⁶ While efforts were taken to include the poor into the scheme, the relatively wealthy households will probably remain outside the insurance scheme.

Furthermore, another obstacle for poor households to join mutual insurance schemes are the high costs associated with insurance (Morduch 1995; Morduch 1999). As pointed out earlier, informal arrangements tend to be cost inefficient. In view of affordability several figures exist which highlight the financial barrier of poorer households to join social protection schemes. SOMKANG ET AL. (1994) find that premium-payments amount to 5-10% of the annual household budget for low-income households in the Nkoranza district, Ghana. In the case of Muyinga, Burundi a household survey found that for 27% of the interviewees financial inability to purchase an insurance card was among the main reasons not to join the scheme (Arhin 1994).

Nevertheless, as the example of SEWA shows, some informal arrangements have made an effort to allow even poor households (or women) access to insurance. As described earlier, poor women who cannot afford the premium payment can take up a loan at the SEWA bank

and pay their insurance premiums with the interest they gain on the deposit of that loan. This insight together with the fact that poor women or rural households who have not profited from any kind of insurance schemes prior to the implementation of SEWA and Bwamanda respectively make it difficult to criticize mutual insurance schemes in terms of their lack in equity. While equity in universal terms has not (yet) been achieved, an improvement in relation to the initial situation can definitely be found.

5 Discussion

The picture regarding mutual insurance schemes presented in this paper may seem very negative. Institutional weaknesses of these institutions have to be pointed out, however, to allow the design of improved mechanisms. Despite described weaknesses, it should have become clear though that in today's context, characterized by the absence of comprehensive social protection for poor and rural households in developing countries, these informal arrangements are of significant importance to the informal sector. While they might not work completely efficiently, nor are able to reach all poor households, fact is that quite a few households profit from these arrangements who did not have any access to insurance before. An improvement for these households has undoubtedly been achieved.

The analysis has also made clear, however, that these arrangements might not be sustainable or have the capability to insure households against all, i.e. especially low-frequency, covariate and repeated risks. In this context, a cooperation between the state, market and informal insurance schemes may help in achieving the goals of efficiency, equity and sustainability by exploiting the advantages of each institutional form (Jütting 1999). The state has the ability to provide for the appropriate regulatory structure, while market-based institutions are known for their efficiency. The comparative advantage of informal arrangements can be found in their good information base and control of moral hazard.

However, even though a partnership between these different institutions might make sense, it is difficult to formulate a universal policy recommendation as to what this partnership should look like, as the individual political, economic and social contexts have to be taken into consideration. According to these criteria the optimal public-private mix might be quite different for each country or district (Holzmann and Jorgensen 1999, Jütting 2000). Still, various success stories give hope that a well-functioning partnership is possible.

⁶ See Weinberger and Jütting (1999) for a further discussion on this 'middle-class-effect'.

- For example, the case of SEWA shows how government and NGO participation in a mutual insurance scheme can be successful. Both the German Technical Development Agency (GTZ) and the Indian Ministry of Labour support the functioning and financial viability of the scheme by subsidising the premium (Lund and Srinivas 1999).
- The Bwamanda scheme is an example of a successful scheme which came into existence without any support from the state. Rather the CDI seemed to take on the role and responsibilities, such as technical and institutional support, that would usually fall on the government. CRIEL (1998: p. 25) finds that in the absence of a functioning and supportive state, the success of a scheme is „largely dependent on the presence of support by a public-interest-oriented body or institution.“
- SHINE, the Social Health Insurance / Networking and Empowerment in the Philippines, is a case where an NGO (again the GTZ) and the government successfully cooperate with informal schemes. In SHINE they work together with local health initiatives to build up a national health insurance scheme in which care for the poor will be subsidised (Lund and Srinivas 1999; Fuhr 1999; Development and Cooperation 1999). GTZ helps with the provision of technical know-how as well as assists with the networking of local initiatives. The government is in charge of the regulatory structure in the form of legal, financial, administrative and technical support. LUND and SRINIVAS (1999: 65) emphasize the need for external (state) intervention: „Social capital alone cannot ensure success and caution must be exercised in developing social insurance programmes that rely purely on CBOs to act as ‚mini-Welfare States‘.“

A recent survey of public-private-partnerships in the health sector of developing countries showed the variety of different forms of a public-private mix ranging from fairly non-cooperative to a partnership in which the individual actors agreed on defining the objectives, the methods and implementation of an agreement. The challenge is, however, to optimize these arrangements. A functioning public-private-partnership (PPP) seems to be beneficial for the entire health sector as by increasing competition, delegation of power to the local level and the active participation of the concerned population, the efficiency, equity and quality of health care provision can be improved (Jütting 2000).

6 Policy recommendations

As the analysis in this paper showed, problems and limitations in the informal sector are extensive. While mutual insurance arrangements have been a first step towards improving the level of social protection of individuals in this sector, they as well have limitations. The following policy recommendations can be seen as a selection of possible strategies to overcome these weaknesses.

Technical and organizational improvement of existing systems

It was pointed out that mutual insurance arrangements often lack the technical and organizational know-how in running the schemes. Assistance from experienced actors can then be of great help. For example, SEWA profited from its cooperation with private for-profit insurance companies and in the case of Bwamanda the CDI project considerably helped with the coordination and functioning of the scheme.

Mutual insurance schemes also have to make risk-pooling more effective as a major identifiable deficit of these arrangements concerns the homogeneity and small size of their risk pool. A strategy to stabilize the insurance pool could thus be to enlarge the membership base. A larger, more diversified risk pool would also improve the scheme's ability to deal with covariate risks. With a larger risk pool the risks which participants are facing are less positively correlated, as the probability that participants come from different environmental, economic and social settings is increased.

Compulsory membership would be possible solution. However, imposing compulsory schemes is not very easy in the informal sector and has also been seen as a major hindrance for market institutions to enter this market-sector (Bennett et al. 1998). A possibility would be for the state to step in and provide organizational and regulatory assistance with the encompassing of all households. In addition, some kind of subsidy must be available for poorer households who cannot afford paying the premiums. The case of Boboye, Niger shows that the implementation of compulsory membership is not impossible; authorities there have managed to implement a mandatory scheme through an earmarked tax (Bennett et al. 1998).

Establishing an insurance scheme with compulsory membership in the informal sector is a long process. Within this context, any movement towards an enlargement of the insurance pool and increased heterogeneity is a step towards improvement. It has to be kept in mind,

however, that by enlarging the risk pool, the problem of moral hazard would increase as well, as monitoring would become more difficult. At the same time though adverse selection will decrease as a problem when membership is expanded.

Involvement of external actors

As the presented case studies of SEWA and the Bwamanda hospital scheme showed, cooperation with external actors can be successful and ensure viability of the scheme. Reinsurance, support of private businesses as well as a PPP can help to make mutual insurance schemes more stable.

More public action

As discussed earlier the fact that mutual insurance schemes are not based on binding, legally enforceable contracts can exclude poor households from the risk pool, especially in times of extreme poverty. Public actions may then be justified „to partly insure or subsidize poor people’s production and price risks, or to reduce or insure their „background“ risks to health and food security“ (Lipton and Ravallion 1995, p.2621). Moreover, as stated before several risks can not be managed at the community and group level. Here the public sector has an important role to play in designing policies and programmes such which help poor people to better manage risks, e.g. social polies, safety nets, workfare programs etc.

Better data needed

A fundamental deficit in this area of research is the limited availability of data. Data in the informal sector are difficult to collect and extensive limitations regarding the household number and income structure exist. This lack of data inhibits research in this area and can also be seen as an explanation why private for-profit companies have not become involved in this sector. In order to expand coverage „an actuarial approach for assessing how vulnerable population groups in the informal economy can be protected“ is needed (Lund and Srinivas 1999, p.83). More exact information would make involvement for the private sector easier. Detailed information on mutual insurance schemes would also help to provide a more thorough understanding of where limitations are and where support of state or market-based institutions is mostly needed.

7 Conclusions

This paper gave a broad overview of the research and preliminary results of the functioning, effectiveness and efficiency of mutual insurance schemes in the informal sectors of

developing countries. These informal arrangements can be seen as a broadly defined institution form next to the state and the market. Their existence can be explained by the demand of the population in the informal sector for general social protection, which could not be met by the state or for-profit institutions. While at a first glance, these arrangements might appear as solutions to the incentive problem of market-based institutions to expand to this sector and the difficulty of the government to provide for a regulatory structure, these informal schemes have limitations which cannot be ignored. Despite some comparative advantages, these institutions have considerable limitations. A discussion of their strengths and weaknesses makes clear that it is very unlikely that these schemes in their present form can survive or be effective and efficient by themselves without external support. Rather, two presented case studies of relatively successful schemes show that often a cooperation between the community-based scheme and another institution, like the state, market or a NGO, can help in terms of efficiency and viability. The assumption that informal arrangements are more equitable and have the means to make insurance available to the very poor population could also not be underlined. On the contrary, equity in schemes which are based on social contracts can often be a considerable problem.

Even though some institutional strengths and weaknesses have been pointed out and the ‚success-stories‘ of two schemes have been traced, policy advice and recommendations for improvement are difficult to formulate. The diversity in size, structure and functioning of mutual insurance schemes against the background of diverse country- and community-specific backgrounds do not allow for universal solutions to the problem. Instead case-specific solutions need to be found. It is safe, however, to take into consideration that a cooperation between two or three of the institutions has proven to be successful in cases where trust and confidence in each other have laid a solid foundation for the actors.

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