

The role of local organizations in risk management:

Some evidence from rural Chad*

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Abstract

This paper analyses the role of local organizations in Southern Chad in helping poor people to deal with risk. Different categories of risks are identified and set into relation to response strategies at the community level. Membership in local organizations is mainly motivated by the desire to reduce the occurrence of risks, however the actual impact of membership is risk mitigation. Using regression analysis we establish that while local organizations help people to mitigate risks via access to information, saving and credit and social networks, a “middle class effect” of participation materializes. The exclusion of the poorest parts of the population should seriously be taken into account when donors set up or support local organizations.

Keywords:

Chad, rural local organizations, risk management

1 Introduction

The exposition to basic risks is a permanent threat to the income earning capacity and the well being of millions of people in developing countries. This holds true especially for the poor and rural population. The mechanisms of social exclusion of rural households from statutory social insurance schemes as well as the reasons for the quasi non-existence of functioning credit and insurance markets as instruments for risk management have been analyzed in detail¹. However, there is a controversy about the potential of local organizations to deal with risk and social exclusion at the community level. Local organizations can act as a gap filler for social protection when the state and the market fail. But, it has also been shown that local organizations face important constraints, e.g. the limited effective size of the risk pool,

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problems with financial sustainability and managerial difficulties (Ziemek and Jütting 2000, Robinson and White 1997).

With this contribution we want to shed some light on the potentials and constraints of local organization in helping rural households to deal with risks. So far the literature on local organizations and their potentials for risk management has concentrated on credit and saving organizations, e.g. Grameen Bank, financial self-help groups, etc. (e.g. Bhatt and Tang 1998, Morduch 1999). These contributions have brought important insights in the functioning of the schemes and their impact on local development. Yet, whereas the credit and saving providing services have been given considerable interest, the role of insurance provided by these micro-finance organizations has hardly received attention. The negligence of the insurance function is a pity, because poor people have demonstrated a huge demand for insurance as recent studies have clearly pointed out (e.g. Jahangir and Zeller 1995, Schrieder 1996, Zeller 1999). Only lately interest has been devoted to social risk management² and to the strengths and weaknesses of mutual insurance schemes (Modurch 1999, Ziemek and Jütting 2000). Three major questions lead our analysis: First, which types of risks do rural households face and which kind of risk coping strategies do they adopt at the community level? Secondly, what are the expectations of members joining a local organization with respect to risk management? Third, what are the overall factors, which explain participation of members in local organizations?

Only few empirical studies of determinants of community participation exist so far (see for example White and Runge, 1995, Gaspart et al. 1997). We use the example of a project funded by the German Agency for Technical Cooperation (GTZ) in Chad to analyze the role

¹ For a summary see Jütting (1999)

² Social risk management refers to a new conceptual framework for social protection of the World Bank (Holzmann and Jorgensen 2000)

of local organizations managed by women in risk management at community level as well as to identify determinants of participation. The organizations support a variety of functions to their members such as income earning activities, credit and saving functions and training activities that help to share risks at the community level.

The outline of this paper is as follows: In the following section, we present a conceptual framework to analyze the role of local organizations in dealing with risks. In Section 3 we present the project region, the data as well as the modeling approach. For the empirical analysis of the determinants of participation within the groups we use limited dependent variable models and the results are discussed in section 4. The paper concludes with section 5 by identifying key points which donors should bear in mind when they want to support social risk management of poor people.

2 Dealing with risks at the community level: the role of local organizations

Agrarian households in developing countries face a variety of risks, meaning stochastic events and outcomes, which have a direct and indirect negative impact on their living situation and their well being. When the event occurs, e.g. a drought or ill health, people have to rely on their assets. These assets can be tangible such as physical, human, natural and financial assets or intangible assets such as social capital, participation possibilities and the access to health and educational services (Moser 1998, Narayan and Pritchett 1997). Risks are transmitted to households through an exchange in the stock of assets, which affect their value and productivity (Siegel and Alwang 1999). Vulnerable households are those, which have difficulties to resist against a shock in order to prevent a decline in their well-being. Vulnerability is therefore primarily a function of the households' assets and its possibilities to deal with risks.

Rural households face several risks, which have their source in uncertainty with respect to changes in the environment, markets, policies and institutions. The high dependence on agriculture as the main income source implies that these households specifically face intra-seasonal risks (Sahn 1988, Sanders et al. 1996). Evidence suggests that the high exposure to risk leads to a risk averse behavior. This implies welfare losses not only because of actual outlays and opportunity cost for risk reduction but also in terms of dynamic inefficiencies resulting from risk management strategies which concentrate in lower risk and lower return assets (Morduch 1995, Zimmermann and Carter 1996, Jalan and Ravallion 1998). Table 1 presents an overview of different sources of risks which rural household face.

Table 1: Main sources of risks affecting rural households

	Production Risks	Health Risks	Social Risks	Policy/ Institutional Risks
Covariant	Natural disasters, price risks, input availability	Epidemics, flu, AIDS	Domestic violence, crime, social upheaval, civil strife, wars	Failure of local institutions ; Legal framework, unspecified property rights
Idiosyncratic	Price risk Production risks affecting business, crop or livestock activities	Human diseases, injury, disability, pregnancy, old age	Claims by social network to fulfil, e.g. financial or mutual work contributions	Failure of local institutions ; Legal framework, unspecified property rights

SOURCE: OWN COMPILATION BASED ON HOLZMANN AND JORGENSEN 2000, ZELLER 1999

An important distinction has to be made between covariant risks, affecting a whole community at one point in time or idiosyncratic risks, which affect only one household. Rural households are exposed to production and market risks. Covariant weather risks like a drought or a flood can destroy or diminish current production as well as have an impact on prices. Market risks also are common, as farmers cannot necessarily count on the availability and quality of inputs. Risks related to health are mainly idiosyncratic by nature which allows the setting up of community based health insurance schemes (Wiesmann and Jütting 2000). On

the contrary, social risks as well as political and institutional risks are often covariant, which calls for action outside the household and community.

A typology of risks and shocks to which people are exposed to helps to better understand the impact of the risk in itself as well as the different strategies chosen by the poor to deal with the risk. It is important to note that different risks can interact with each other, e.g. a drought with price risks. Also, as Siegel and Alwang (1999, p. 7) point out, the actual impact of a given risk is a function of the frequency, intensity, duration and spread of the risk, and the size of the effective risk pool.

In classifying responses to risk by the household, the following distinction is usually made. Risk reduction strategies, which ex-ante lower the probability of a risky event; risk mitigation which represents ex-ante investments which pay-off when the event occurred such as insurance contracts, savings and help from social networks; risk coping strategies which ex-post help to smooth consumption. Not only the *category* of risk management strategies, but also the *level* at which the response takes place is important:

- Individual/ household level: marriage, buying and selling of assets, storage of goods
- Group/ community level: access to credit, information sharing, networking. (details see Table 2)
- National level: public or private provided arrangements such as social insurance, transfers, public works and financial assets

As the focus of this paper is on local organizations, in the following we concentrate on the community and group level.

Table 2: Risk management at the community and group level

Potential role for local organizations in....	Production/ Market Risks	Health Risks	Social Risks	Policy/ Institutional risks
Risk reduction	Organizing input provision; Marketing and commercial activities; Training; Access to information	Establishing a health infrastructure: Health education: Preventive health care; Providing adequate food	Social cohesion; Building social capital	Community participation; Common property resource management; Lobbying
Risk mitigation	Providing insurance, e.g. livestock, assets; Providing access to credit and saving	Primary health care provision; Mutual health insurance schemes	Providing insurance, e.g. assets; Networking	Lobbying
Risk coping	Mutual help and voluntary work; Solidarity; Charity	Mutual help and voluntary work; Solidarity; Charity	Mutual help and voluntary work; Solidarity; Charity	Mutual help and voluntary work; Solidarity; Charity

SOURCES: OWN COMPILATION BASED ON HOLZMANN AND JOERGENSEN 2000, ZELLER 1999

The overview of the different risk management strategies at the community level shows that local organizations can help to manage risks in a variety of ways ranging from helping to getting better information to mutual and voluntary help. Also, it turns out that the risk coping possibilities are rather limited: In the case of a covariant shock such as a drought or a flood it would be very difficult to cope with the consequences as all community members are simultaneously affected. Another problem arises when people in the community have no access or are excluded from these mutual insurance schemes. This could be because of discrimination or other factors (Jütting 2000).

Summarizing, local organizations can help vulnerable households in dealing with risks in three major ways:

1. They can *reduce* risks via their possibilities to lobby for public intervention, their ability to promote institutional innovations as well as income earning activities, allowing for a better access to information and building of social capital.
2. They can *mitigate* risks via the delivery of social and financial services, e.g. helping to improve access to credit, saving, insurance, education, nutrition and health.
3. They can help to *cope* with risks via charity, mutual help and voluntary work.

In our case study we will use the presented framework to analyze which risks are covered by local organizations in Chad, what the expectations of members are to join the groups and what determines the participation in those organizations. Whereas the first two aspects focus on the ability and role of local organizations for the risk management of their members, the last aspect analyses whether or not all fractions of the population have the same probability to benefit from the risk management. We will show that this is not the case, which implies that other levels of risk management namely the public based has a role to play.

3 Expectations and activities of members in local organizations with respect to risk management

The *Projet Microréalisation: Appui au Projet Autopromotion des Organisations Paysannes* (PMR) operates in the prefecture of Mayo Kebbi in Southern Chad. The public sector in Chad is still far from functioning smoothly, although the civil war terminated in 1990. Since the mid-eighties, a multitude of farmers' organizations has therefore been founded as a response to the malfunctioning of the state. Initially, men were the driving forces behind these organizations; however, women also are increasingly involved in creating organizations. Yet, many organizations lack organizational and management capacities. Therefore, an objective of PMR is to assist self-help activities of farmers' groups in order to strengthen the organizations. A main activity to this end is the support of microfinance institutions to

enhance financial capacities, vocational training, training of organizational capabilities, and exchange travels to member-based organizations in other regions and countries (Weinberger, 1998). The groups operate on an autonomous level. Project staff does not regularly visit them. The project attempts to incorporate a participatory approach by reacting to, not directing group activities. It is also a project policy not to advocate the foundation of groups. In 1997, PMR supported over 300 groups, associations and unions with the activities described above, both of men and women. In order to analyze the role of the women's local organizations (LOs) in risk management, a survey that attempted to identify the expectations of members, the ability of the organizations to deal with risks and the determinants of individuals to participate was undertaken. The survey was conducted in 1997 and comprised a household survey, guided group discussions and interviews with key informants. Guided group discussions were performed with 12 groups and about 150 participating women. Seventy-seven women participated in the interviews at household level.

First we look at the motivation to found a group. It should be stressed that neither risk reduction, nor risk mitigating or risk coping strategies were *expressis verbis* given as reasons to found a local organization. However, a comparison between motives and those activities that form part of risk management at the community level presented in Table 2 shows that all expected benefits that membership in a local organization has, in one way or the other, contribute to risk management.

The development of the community is the underlying goal in the majority of LOs, as Table 3 shows. This can be interpreted as the desire to reduce risk, because village development implies that the infrastructure of a village is extended and strengthened, improving marketing and commercial facilities. Other reasons to found a local organization that fall into the category of risk reduction are the access to information, lobbying ("women have to unite to be strong") the installment of a corn mill, which signifies that production facilities are improved,

and the generation of income. Risk mitigation is attempted when women seek to strengthen their position, and through the access to credit facilities. Risk coping, finally, plays a minor role among the discussion within the focus groups and is expressed by hoping on mutual help in times of distress.

Table 3: Reason to Join a LO, Focal Group Discussion, Chad (n=12)

	N	%	Typology
<i>Village Development</i>	7	30.4	Risk reduction
<i>Share Information</i>	4	17.4	Risk reduction
<i>Mutual Help in Times of Distress</i>	3	13.0	Risk coping
<i>Women have to Unite to be Strong</i>	3	13.0	Risk reduction/ mitigation
<i>Corn mill</i>	3	13.0	Risk reduction
<i>Credit</i>	2	8.7	Risk mitigation
<i>Income Generation</i>	1	4.3	Risk reduction
Total responses (multiple answers allowed)	23	100.0	

SOURCE: FIELD SURVEY IN COLLABORATION WITH PMR, 1997.

Table 3 shows the relative importance of the various risk management strategies that women name in group discussions as being the motive for joining a local organization. The importance of risk reducing strategies as a motivation to found a local organization is much bigger than that of mitigating and coping strategies.

After having identified the motivation for individuals to participate in LOs, we now analyze which activities the members actually pursue to deal with risks. It appears that all activities that are undertaken within the LOs are directly productive and serve the accumulation of capital. All groups have a joint cash box. Usually, each member is obliged to regularly pay a certain amount into the cash box. Some groups also charge in naturals, for instance peanuts.

The acquisition of larger amounts of money for the cash box is realized through several activities. Customary is the joint cultivation of a field, with peanuts or cotton. Out of the twelve groups nine groups participate in this activity. Several groups oblige their members to participate in the cotton and peanut harvest for wages. One group collected stones and sold

them to a construction company. Others produced pottery and calabashes and sold them on the market.

A look at the utilization of group money reveals that the most important activity is the joint storage of grains, especially millet and peanuts. Eleven out of twelve groups store these grains to make them available to members as well as nonmembers in times of need. Households may borrow grains and pay them back later in the year. Additionally, LOs also stock crops in order to sell them later in the year, when the price increases, to earn money for the group cash box. For grain storage, the profitability, calculated as profit on assets, ranges between 25 and 50%, without taking into account labor cost (Weinberger, 1998). Additionally, all groups make available short-term credits to their members, with interests rates up to 200% p.a. Five groups bought tools, which are lent to group members and others. In five groups, members have decided to additionally save on private accounts. From the above outlined it can be deduced that risk management strategies actually form an important part of the portfolio of activities of groups. Both grain storage and allocation of credits is an active contribution to risk reduction and mitigation, as is the possibility to hold savings. The availability of tools improves the production possibilities and therefore also contributes to the reduction of risk. It is worth pointing out that for some of these risk management strategies it is the whole community that benefits, not only the individual member.

The following table indicates how members recognize the impact of their group membership. It is based on individual interviews. Most important are the improvement of the social network in terms of numbers, and the access to credit, be it, that a credit was actually received or simply because of the security that a credit would be available in times of need. Financial security is also improved because of saving accounts. Also important is regarded the access to information.

Table 4: Impact of being a member in an LO, Individual Interviews (n=34)

	N	%	Typology
<i>Has more social contacts</i>	13	21.7	Risk mitigation, risk coping
<i>Has received a credit</i>	11	18.3	Risk mitigation
<i>Knows that she could take a credit in times of need</i>	7	11.7	Risk mitigation
<i>Holds a savings account</i>	7	11.7	Risk mitigation
<i>Has better access to information</i>	6	10.0	Risk reduction
<i>Relation to men has changed</i>	3	5.0	Risk reduction/ mitigation
<i>Other impact</i>	6	10.0	--
<i>No impact</i>	7	11.7	--
Total responses (multiple answers allowed)	60	100.0	

SOURCE: FIELD SURVEY IN COLLABORATION WITH PMR, 1997.

Table 4 represents the results for the sub-sample of members of LOs. It shows that for the individual, the actual impact of membership is more important in terms of risk mitigation than in terms of risk reduction. This is quite an interesting result if one compares it with the expectations of becoming a member discussed before: As shown in Table 3, on the group level risk reduction is the most important motivation to found a local organization. In contrast to these expectations, the experience with membership on an individual level shows the importance of risk mitigation as an actual outcome. From an individual's viewpoint this makes sense. It is the strength of many, also termed lobbying, that enables organizations to reduce risks. The individual however can only mitigate, as she is not able to change risky institutions.

4 Who participates in local organizations?

It may be doubted whether all households within a community have the same probability to participate in local organizations in the first hand. Certain strata within a community may benefit more than others from the risk management offered through LOs, simply because they have a higher probability to participate. The following regression analysis will shed some light on this question. As in Weinberger (2000) it is assumed that participation depends upon resources (e.g. time, capital) available within a household and the access of each individual to them or the individual's bargaining power. It is thus assumed that participation (p) is a

function of household characteristics (Z_{hh}) and characteristics of the individual (Z_i), as well as norms and rules at community level that affect collective action, expressed in (Z_c). Furthermore, adding the average, monthly cash income (Y) of the individual into the function incorporates the opportunity cost of time, determined by the wage rate. Simultaneously, income (Y) is determined by participation, as income-generating activities are a project component of the program. This results in the following two equations³.

$$Y = f(Z_{hh}, Z_i, p, c, v_1) \quad \text{Equation 1}$$

$$p = f(Z_{hh}, Z_i, Z_c, y, v_2) \quad \text{Equation 2}$$

Table 5 gives an overview on the variables that are used in the two models and their expected signs.

Table 5: Overview on Variables and Expected Signs

Variable	Description	Expected sign
<i>farm2_lg</i>	Farm area logged, per household member (ha)	+
<i>smrumin</i>	Number of small ruminants	+
<i>comppoor</i>	Household classifies himself as poor compared to the average household in the community (dummy)	-
<i>compav</i>	Household classifies himself as average compared to the average household in the community (dummy)	base
<i>comprich</i>	Household classifies himself as wealthy compared to the average household in the community (dummy)	-
<i>childhh</i>	Number of children living in the household	+/-
<i>density</i>	Ratio of households within a locality to the total number of organizations	+
<i>age</i>	Age of interviewed woman	+
<i>school</i>	Number of school years attended	+
<i>empo</i>	Bargaining power index (participates in decisions concerning livestock, farming, education)	+
<i>group</i>	Participates in other groups (dummy)	+/-
<i>iv_inco*</i>	Average monthly income earned by woman (US\$)	+

* endogenous variable

The results of a basic Probit estimation for determinants of participation in Chad are shown in Table 6 and Table 7. Two models were constructed. One includes metric measures of the wealth status of a household (farm area and small ruminants) and the other one includes a

³ For details on the two stage procedure applied and a detailed description of the variables see Weinberger (2000).

categorical variable for self-classified status of wealth of households. Model 1 will indicate whether or not a linear correlation exists between the metric measures of wealth, while Model 2 will show whether or not a cut-off point exists⁴. The statistical validity of both models is strongly supported by the log likelihood statistic. It indicates that the null hypothesis can be rejected at the 0.001 level or better for both models. The explanatory power of both models is good.⁵ With regard to the individual coefficients, in Model 1, eight of ten, in Model 2, seven of ten coefficients are significant at the 0.10 level or better. The signs and magnitude of coefficients in both models resemble each other.

Table 6.: Participation Determinant Estimates for Chad, Model 1

Probit Estimates						Number of obs = 72	
Log Likelihood = -29.127634						chi2(9) = 47.71	
						Prob > chi2 = 0.0000	
						Pseudo R2 = 0.3924	
member	Coef.	Robust Std. Err.	z	P> z	[95% Conf. Interval]		
farm2_lg	1.992825	.886352	2.248	0.025	.2556073	3.730043	
smrumin	.0369499	.0705015	0.524	0.600	-.1012305	.1751303	
childhh	.1827215	.1093509	1.671	0.095	-.0316023	.3970454	
density	19.91726	6.426883	3.099	0.002	7.320799	32.51372	
age	.0486661	.0209077	2.328	0.020	.0076877	.0896445	
school	-.04361	.1187318	-0.367	0.713	-.2763201	.1891001	
empo	2.411015	.9119663	2.644	0.008	.6235937	4.198436	
group	2.771585	.9061128	3.059	0.002	.9956366	4.547534	
iv_inco	-.0367781	.0153641	-2.394	0.017	-.0668911	-.0066651	
_cons	-15.57356	4.092273	-3.806	0.000	-23.59427	-7.55285	

SOURCE: SURVEY DATA, 1997

Starting with variables referring to the household, both the logged size of *farm area* per household member and the number of *small ruminants* per household have a positive effect on membership. The effect of the farm area cultivated is significant. This shows that wealthier households in terms of asset ownership have a greater interest in participation. Simultaneously, from Model 2 it can be deduced that a cutoff point exists, because the wealthiest households do not participate. Contrasted against average households, both poor

⁴ The level of women's monthly cash income must not be correlated to the wealth status of her household. This is confirmed by a correlation analysis between the IV for income and both the categorical wealth measures as well as the numeric variables for household assets (Weinberger 2000).

⁵ Because R² Probit and Logit estimation is based on the log likelihood, it is generally lower than in ordinary least square estimations. Hagle and Mitchell (1992) propose a corrected version of Pseudo R² of the Aldrich/Nelson type applied by STATA. For Model 1 the corrected Pseudo R² takes a value of 0.52, which suggests that the predictive value of the model is quite strong.

and wealthy households have a negative probability of participating in LOs, and for wealthy households this probability is significant. This, together with the results from the first model, indicates that it is the middle class in communities for which participation in LOs is most attractive; a result that also holds true for political participation in industrialized countries.

The *number of children* within a household also has a positive and slightly significant effect. It was expected that with a growing number of children the incentive to participate would diminish, because of the higher opportunity cost of time through child attendance. The positive sign indicates that the discounted expected benefit of participation is considered higher when the number of children within a household is bigger. Two reasons could explain this: when more children live in a household, the age distribution is greater; older children can thus take care of younger children, while mothers attend group meetings. On the other hand, the benefits of participation may be regarded greater in bigger households, because more people benefit.

Table 7: Participation Determinant Estimates for Chad, Model 2

Probit Estimates		Number of obs = 72				
Log Likelihood = -32.562108		chi2(9)	= 36.82			
		Prob > chi2	= 0.0000			
		Pseudo R2	= 0.3216			
member	Coef.	Robust Std. Err.	z	P> z	[95% Conf. Interval]	
comppoor	-.4138697	.5018958	-0.825	0.410	-1.397567	.569828
comprich	-.8888165	.5375147	-1.654	0.098	-1.942326	.164693
childhh	.0855351	.1025495	0.834	0.404	-.1154582	.2865284
density	14.63785	4.928205	2.970	0.003	4.978741	24.29695
age	.0517922	.0201941	2.565	0.010	.0122125	.0913719
school	-.1103879	.1018208	-1.084	0.278	-.309953	.0891771
emp	2.737372	.9723959	2.815	0.005	.8315109	4.643233
group	2.754744	.7823036	3.521	0.000	1.221457	4.288031
iv_inco	-.0297773	.0142612	-2.088	0.037	-.0577287	-.001826
_cons	-6.992248	1.638164	-4.268	0.000	-10.20299	-3.781506

SOURCE: SURVEY DATA, 1997

The variable measuring the level of social capital in terms of the *density* of organizations within a locality has a significant and positive effect on the probability of participation. This finding suggests that the social capital stock within a locality, measured by the number of organizations, networks and groups, has a significant influence on the decision to participate. The expected benefits associated with group membership are regarded higher if a minimum level of trust and cooperation within a locality exists.

Regarding individual characteristics, those variables indicating the *bargaining power of a woman* (age, school attendance and the bargaining power index) render mixed effects. *Age* as well as the *bargaining power index* have the expected positive signs and are significant in both models. The years of *formal school education* have a negative, yet insignificant effect in both models. A strong influence on whether a woman decides to participate or not comes from the general attitude towards groups and networks. Women participating in *other formal and informal groups* have a significantly stronger probability to participate in LOs than women who do not participate. This variable indicates that the participation of women in local organizations with a risk reducing and mitigating function may be driven by factors that also influence participation in other organizations.

The negative and significant effect of *income* on participation in both models is interesting. It indicates that nonparticipating women have a higher opportunity cost of time. The reason may actually be that the opportunity cost of nonparticipating women is determined by their wage rate, while that of participating women is determined by the relation of wage rate to the value of all goods consumed – inclusive those produced by participation. Participation in LOs could also be a reason to forego income, with the expectation that in due time, income will increase because of participation.

Our analysis has clearly shown that not every member in a community has the same chance to participate in a local organization. While for wealthier fractions of the population participation in a LO may not be attractive because they rather pursue other strategies of coping with risks, the poor are excluded. The reasons for this are embedded in the fact that participation bears a cost, in terms of time and money, but also a risk. Hence participation becomes too costly for the poor. This means that local organizations provide social protection only to certain strata of the population. In consequence, poor people have to rely on risk coping mechanisms on the individual level, such as dissaving, sending children to work or selling assets when a shock occurred. This last result has important implications for development policy, as participation is often regarded as an instrument to reach the poorest of the poor (World Bank 1994, Esman and Uphoff 1984).

5 Concluding remarks

Local organizations play an important role in the social risk management of rural households.

The reason for this is that there are serious limitations of dealing with risks at the individual

and household level, and state and private market based arrangement are often not existent or not well functioning. Therefore, it does not come as a surprise that the possibility to participate in risk reducing and risk mitigating arrangements has proven to be one of the most prominent reasons for people to join a local organization. It is the often overlooked insurance function, which motivates people to participate.

The activities of local organizations are not only restricted to their members. As these groups have an interest to contribute to the overall development of the community, non-members benefit as well. Examples are the establishment of grain stocks and the access to credits. Some services are however restricted to group members, for instance the holding of a savings account, and can therefore be regarded as a by-product in the Olson sense. This is rational, because otherwise free-riding would present a problem.

While local organizations hold a considerable potential in helping rural household to deal with risks, there are also significant limitations. Given the types of responses to risks, local organizations contribute mainly to risk reduction and risk mitigation. When the event has occurred and risk coping strategies need to put in place, the risk coping possibilities based on mutual help and voluntary transfers are rather limited, especially in the event of a covariant shock. This problem weights even heavier, because only certain strata of the population participate. Making participation more attractive for wealthier members of the community would spread the risk. A possible solution could be to enlarge the effective size of the risk pool through compulsory membership. However, establishing compulsory membership is a long process.

Our analysis has also shown that the poorer part of the population cannot participate to the same extent as other members of the community, due to high opportunity cost of time and capital. From group discussions it became evident that some groups have no interest in the

participation of poor people, as their financial basis is insufficient. In the described cases, this has led to a “middle class effect”, meaning that both for the wealthier and the poorest part of the population the expected cost-benefit ratio of participation is negative.

These findings have important policy implications. Donors should be aware that it may be very difficult, or even impossible, to reach the poorest part of the population via participation in local organizations. In order to reach the poorest, the costs of participation, and especially the risk associated to participation, would have to be reduced. Public action is needed “to partly insure or subsidize poor peoples production and price risks, or to reduce or insure their background risks to health and food security” (Lipton and Ravallion 1995, p. 2621). This could be achieved by helping local organizations to improve their technical and organizational know how, by promoting the integration of other actors such as private business and by setting up a conducive legal framework which allows a greater flexibility for these organizations to operate.

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