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Social Security in Sub-Saharan Africa: Reflections on Policy Challenges

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1. INTRODUCTION

Exceptionally high insecurity of livelihood continues to plague the great majority of sub-Saharan Africa's population. In contrast with Asia and Latin America, famines have continued to exist in Africa during the 1980s. Food shortage, health, and sanitation constraints pose risks to livelihood for a large share of the rural and urban population. Low levels of income, lack of physical and social infrastructure, and limited administrative capacities, including the human capital required for them, inhibit implementation of social-security systems that protect effectively against falling into absolute poverty, disability, or sickness.

1.1. *Arguments for 'Social Security with Growth'*

It seems straightforward to start with the premiss that social security in sub-Saharan Africa can only be achieved as a consequence of, and after, economic growth. At least two reasons, however, argue against a 'growth *before* social security perspective'. First, economic growth in sub-Saharan Africa must, to a large extent, result from agricultural growth, with an increase in labour productivity. Increased labour productivity in agriculture is inseparable from improved production technology (capital) and nutritional well-being and health (Kumar 1987). The need for nutritional and health improvement argues for 'social security *with* growth'. Secondly, Africa must achieve a swift 'demographic transition' from its present regime of high mortality and fertility rates (with a high rate of population growth) to a regime of considerably lower mortality and fertility rates (with slower population growth). Improved social security is likely to make a substantial contribution to this objective by (1) reducing mortality rates; (2) reducing the number of births needed in a family to ensure a given number of surviving children; and (3) reducing the demand for surviving children. Some of these effects may, of course, require relatively long adjustment periods.

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1.2. The Challenge to Combine State-Based and Community-Based Systems

In Africa, social security is increasingly thought of in terms of pension funds, medical insurance, and disability insurance schemes. Substantial elements of social-security systems of the European type exist in most African countries, though they are mainly limited to the formal employment sector (Mouton 1975). Most of these schemes evolved in the 1960s and 1970s. International agencies played an important role in setting them up.¹

The formal elements of social-security provision may form important building blocks of social-security systems in the long run, but for a considerable time to come, social-security policy in sub-Saharan Africa will have to concentrate on the basic needs of food and health. Food security policy and health and sanitation policy are, therefore, cornerstones for social-security policy. This chapter deals with these in a broad social-security agenda.

Existing formal social-security systems in Africa tend to be urban-biased and to serve the privileged rather than the poor (Mouton 1975). Broader approaches to social security, however, have a part to play in development and actually do already play a significant role. Yet, in most instances they are, at this stage, not State-based, but rather community- and family-based systems. A broad perspective is needed, not only for instruments and types of interventions for social security, but also for institutional and organizational modes of social-security provision. We shall therefore be addressing the roles of State-based social-security systems and community-based systems, viewing family-based systems as a subset of the latter, and examine interaction between the two.

1.3. Choice of Development Strategy and Demand for Social Security

In the process of modernizing and diversifying the economy, optimal structures and sizes of insurance systems will change. Community-based systems may lose some of their advantages and new functions for State-based social security will emerge.² To identify and design appropriate systems for the appropriate phases of economic development in the very heterogeneous regional, cultural, and geographical settings of sub-Saharan Africa is a challenge for the decades ahead.

One of the critical policy questions for a long-term strategy is the identification of appropriate roles for State action versus community-based social-security systems. These roles will change in the development process and the nature of

¹ A record of this process, and of the important role that International Labour Organization played in it, can be found in ISSA (1985) and earlier volumes of similar conferences.

² An example of this is the account by Duncan Clarke (1977) for Rhodesia (Zimbabwe). The respective roles of community-based and State-based security systems are discussed in Torry (1987), and in Chap. 4.

change will depend to a great extent upon the development strategy. An urban-biased, industrialization-promoting strategy will create a rapidly expanding role for State action in the field of formal social security. An agricultural-based development strategy expands rural employment and can generate the resources for rural community-based social-security systems.³ A strategic issue remains to combine these community-based systems creatively with State-based systems in the long run, when scale economies and structures of demand for social security change in favour of the latter.

Given the severity of resource constraints in Africa, it is important to establish the economic costs and benefits of alternative systems (community-based and State-based) and system mixes. Only if the costs of alternative systems providing specified social-security benefits are known can a cost-effective perspective for social-security policy be established. Very little is known about the costs and social returns of State-based social-security systems in developing countries, and even less about community-based systems. The latter also change quite rapidly in the course of economic development. Community-based social-security systems in Africa need to be seen as an asset on which improved social security may be built in the long term. The stock of institutional capital needs to be evaluated in the appropriate regional and temporal context in order to make creative use of it in changing social, cultural, and economic development.

This chapter does not provide a comprehensive description or account of the scale and nature of the lack of social security in sub-Saharan Africa. Its objective is rather to raise some fundamental issues related to current structures of and long-term strategies for social security in the region, particularly the changing roles of State action and community support in social security provision. For this task, lessons will be drawn from the contrasting developments of social-security policy in different countries at the aggregate level (Section 2) and from contrasting micro-level insights into the strengths and weaknesses of community-based social-security provision in a specific land-rich setting in West Africa as against a land-scarce setting in Central Africa (Section 3).

2. STATE-BASED SOCIAL-SECURITY PROVISION

Taking a broad definition, the sub-Saharan African countries spent about 10.7 per cent of central government budgets on social security in the mid 1980s.⁴ This puts sub-Saharan Africa at the average of low-income economies as

³ On the employment effects of choice of development strategy, see Mellor (1976).

⁴ Including spending for health, housing amenities, social insurance, and welfare. Based on a narrower definition, Mouton (1975) estimates that State-based social-security schemes in Africa represented about 1–2% of GDP and about 5% of State budgets in the 1970s.

Table 9.1. Government spending on social security and services in sub-Saharan Africa in comparison with other groups of countries, 1985

	Government spending on social security as % of government budget
Sub-Saharan Africa	10.7
Low-income economies	10.9
Lower middle-income economies	13.6
Upper middle-income economies	23.6
Industrial market economies	46.9

Sources: World Bank (1987, 1988).

defined by World Bank classifications (Table 9.1). As can be seen from the table, the relative share of public spending on social security tends to increase drastically only when economies reach the upper middle-income level where spending reaches about a quarter of government expenditures. Very limited information exists on what share of these expenditures actually reaches the absolute poor.

2.1. Growth and Public Spending on Social Security

A strong relationship between income (GNP per capita) and State-level social-security expenditure, however, also exists among the African countries. In fact, this relationship appears to be exponential: dollars spent on social security increase more than proportionately with dollars of per capita GNP (Fig. 1). This impression is further supported by a regression exercise which suggests an exponential growth of State social-security expenditures in association with economic growth (Table 9.2, column 1). The regression results suggest that GNP growth (in US\$ equivalents) from \$300 to \$600 per capita may increase public spending on social security by \$16 from \$4 to \$20 per capita, and a further \$300 increase from \$600 to \$900 per capita may expand social-security spending by an incremental \$25 per capita per annum. The responsiveness of social-security expenditure to GNP is even greater in non-African developing countries. On the basis of the parameter estimates from the non-African developing countries, an increase of GNP per capita from \$300 to \$600 meant an increment of social-security expenditures by \$25 and from \$600 to \$900, by \$35 (based on Table 9.2, column 2).

Hardly any developing country has failed to combine growth with a massive expansion of public-sector spending on social security. It is very unlikely that

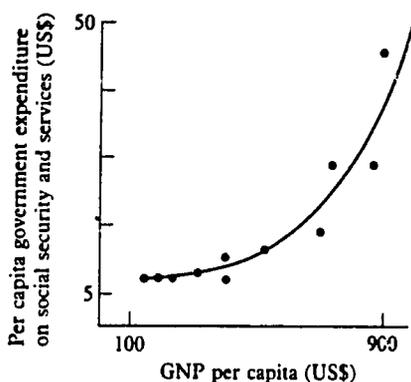


Fig. 9.1. GNP per capita and public expenditure on social security and services in sub-Saharan Africa, 1985.

Source: As Table 9.1.

Table 9.2 Regression analysis of the relationships between GNP per capita and public expenditure on social security, 1985–1986^a

Exogenous Variables	Africa ^b	Other developing countries ^c
GNP per capita	0.1339 (4.34)	0.1597 (3.27)
ln GNP per capita	-35.057 (-2.74)	-31.638 (-0.894)
Constant	163.446	135.681
R ²	0.822	0.656
F	28.8	45.3
Degrees of freedom	10	22

^a Dependent variable is US\$ per capita of central government expenditure on social security. For definition, see Table 9.1.

^b Selection of countries for this analysis was dictated by constraints of data availability. For sub-Saharan Africa, it includes Botswana, Burkina Faso, Cameroon, Cote d'Ivoire, Ghana, Kenya, Lesotho, Liberia, Malawi, Sierra Leone, Tanzania, Togo, Zimbabwe.

^c The 'other developing countries' sample includes Egypt, Turkey, Morocco, Tunisia, Jordan, Republic of Korea, Papua New Guinea, India, Bangladesh, Nepal, Burma, Pakistan, Sri Lanka, Indonesia, Philippines, Thailand, Haiti, Bolivia, Dominican Republic, Paraguay, Ecuador, Costa Rica, Uruguay, Brazil, El Salvador, Mexico.

this will be different in sub-Saharan Africa. The policy question is then less one of levels of social-security expenditures in the long run, but rather one of setting priorities within social-security spending in the process of economic development, especially at low levels of per capita income. Priorities can, of

course, range over a large number of issues, but increasing life expectancy at birth will certainly rank high in any circumstances. Decreased rates of infant mortality, as a key determinant of life expectancy, are closely related to economic growth and the expansion of social-security expenditures in developing countries in general (Fig. 9.2.i). A few outliers exist and are widely recognized, such as in Sri Lanka, China, and the state of Kerala in India. They suggest that at low-income levels, a clear-cut trade-off does not necessarily exist between social security and economic growth, and that sustained public action in the context of low national income can reduce mortality quite rapidly and sustainably.⁵ Such outliers hardly exist in sub-Saharan Africa (Fig. 2.ii). Nevertheless, the general association between economic growth, social-security expenditures, and reduced infant mortality is also evident in sub-Saharan Africa.

A few lessons can be drawn from this broad-based comparison of social-security spending across developing countries and in Africa.

- (1) Revitalized growth in sub-Saharan Africa will lead to a rapid expansion of State-based social-security systems; strategies for guiding this expansion are needed.
- (2) Given the low base of economic wealth in sub-Saharan Africa, an extraordinarily rapid growth process would be required to achieve the desired rapid improvement in social security in the foreseeable future along standard patterns of growth in the developing world.
- (3) The critical policy issue remains to direct the expansion of social-security spending towards the truly needy, namely, the food and health insecure.

Public action has to get ahead of economic growth for social security. Learning from the outliers of Asia and emulating their social-security achievements in the African context by utilizing the stock of community-based institutions (rather than 'copying' the Asian and Latin American outliers' experiences) appears to be of critical relevance.

2.2. Food Security and Famine Prevention as Basic Elements of Social Security

With the given resource constraints, public action for social security in sub-Saharan Africa can have only a limited set of priorities, including primarily the improvement of nutrition and health. Public action to improve on food security—that is, the ability of all people in a country actually to acquire sufficient food for an active and healthy living—is at the core of social-security

⁵ For further discussion of the experiences of China, Kerala and Sri Lanka, see Chaps. 7 and 6 respectively, above.

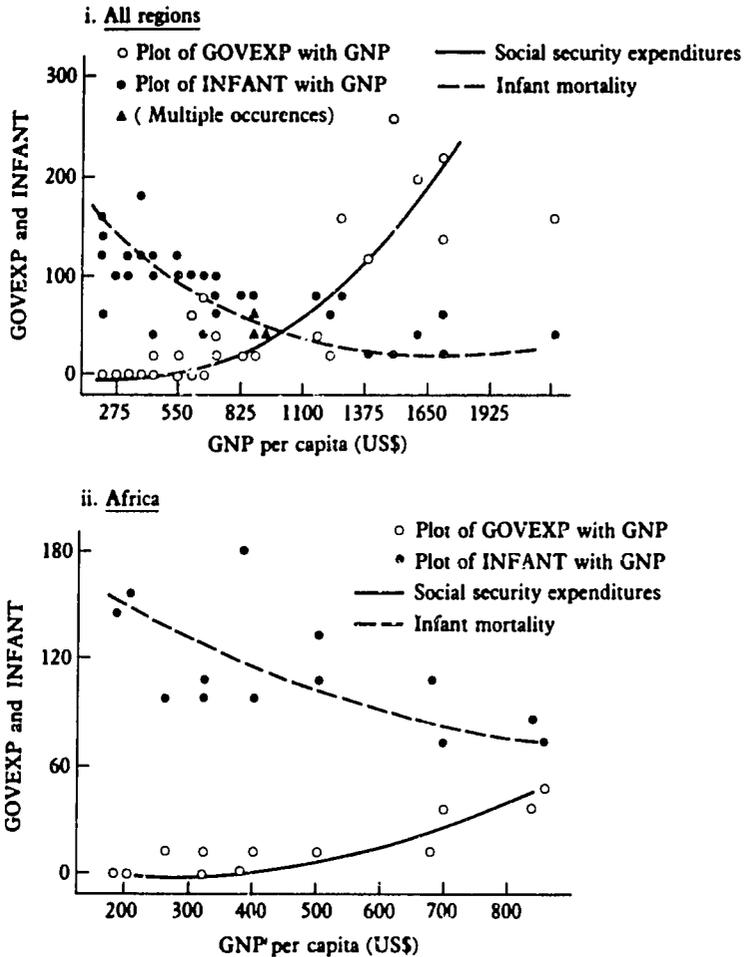


Fig. 9.2. State social-security expenditures in developing countries, income level, and infant mortality, 1985–1986.

Notes: The vertical axes represent government expenditure per capita on social security (GOVEXP) in US\$ and infant mortality in deaths per 1,000 born (INFANT).

policy. The relevance of food security within a broad social-security programme increases with poverty. It also increases in environments with extremely deficient infrastructures, such as Sudan, or with excessive policy failures, such as Ethiopia in the 1980s. Investment in rural infrastructure and policy reform for the stimulation of agricultural growth are a high priority for social security in these settings.

Unlike in some Asian and many Latin American environments, the relationships between domestic food production, regional and local food availability, and household-level food security remain close in the famine-prone countries of sub-Saharan Africa.⁶ This suggests a different set of priorities under these circumstances—priorities related to increased levels and reduced instability of domestic food production, and priorities related to infrastructure for improved market integration (not only food market integration but integration of labour and capital markets as well). Furthermore, famine mortality in Africa is closely associated with health and sanitation constraints and with the limitations of related delivery systems, which again arise partly from deficiencies in infrastructure.

Employment generation is a key requirement for the expansion of access to food for famine prevention. The lack of availability of food in famine-prone areas has often resulted in drastic price increases, which limit the impact of income transfer-related programmes that do not provide for a simultaneous expansion of food availability. This problem—short-term explosive food price inflation—is highlighted by dramatically deteriorating domestic terms of trade between livestock and staple foods, or between cash crops and staple foods, during famines, sometimes amplified by policies disrupting domestic trading. These large changes in terms of trade in domestic markets undermine the purchasing power of those who depend on net purchases of food for their survival. For example in Kordofan (Sudan), the cereal–livestock terms of trade increased from 1:1 to 1:8 during the 1984/5 famine in disfavour of livestock.⁷ This change, which meant a sharp reduction of purchasing power for some groups (especially pastoralists), contributed to an instantaneous translation of food shortage into increased prevalence of severe malnutrition among pre-school children (Fig. 9.3).

Clearly, social security in its basic sense continues to relate closely to prices and their stability. Price instability, in this environment of deficient infrastructure, is largely a result of production instability. Along with employment and income transfer programmes, the food production and supply side of famine prevention requires particular emphasis in the African context of thin and fragile markets. Decentralized (self-targeting) public works are so far limited in sub-Saharan Africa, but some positive examples⁸ suggest that this may be more due to lack of programme and policy focus and weak local

⁶ On famines in Asia, see Sen (1981); Drèze (1988); Drèze and Sen (1989), and the large body of literature cited there. Famine records and analyses in Africa are much less comprehensive; for some studies, see Watts (1983); Hay *et al.* (1986); Glantz (1987); Vaughan (1987); Downing *et al.* (forthcoming); von Braun and Teklu (1988); Webb and von Braun (1989); Curtis *et al.* (1988).

⁷ Other indicators relating to food shortage and purchasing power for the same year were a deterioration of the terms of trade between food crops and cash crops (groundnuts) from 1:1 to 1:4, and a much deteriorated rural wage rate (in terms of food prices); see von Braun and Teklu (1988).

⁸ See Drèze (1988) on Botswana and Cape Verde.

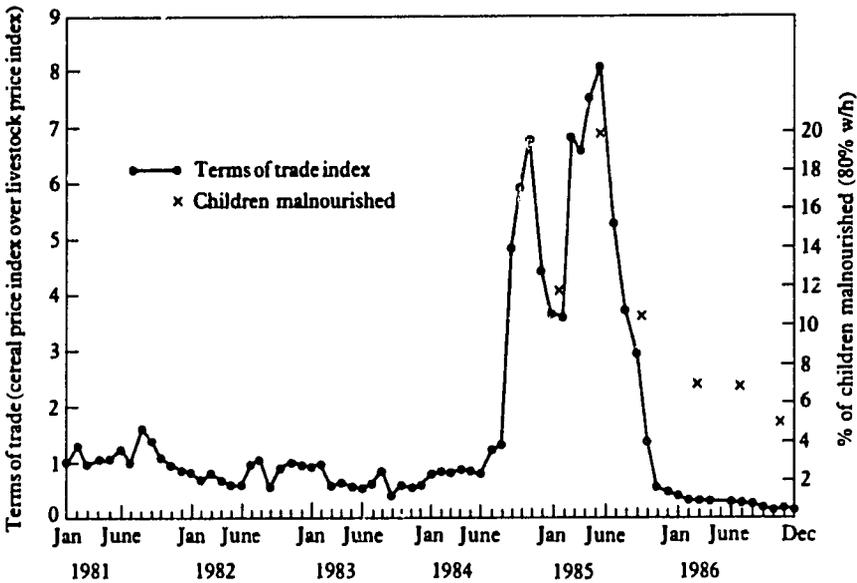


Fig. 9.3. Seasonal cereals-livestock terms of trade (sorghum to cattle) and child malnutrition in Kordofan, Sudan, January 1981–December 1986.

Notes: Malnourished children are below 80% of weight for height of reference population, using World Health Organization standards.

Sources: Republic of Sudan, Ministry of Agriculture; Republic of Sudan, Ministry of Health (Nutrition Division); OXFAM, UNICEF (computing from unpublished data).

institutions than genuine inappropriateness of the instrument. The need to generate infrastructure is certainly huge in rural Africa and this should offer potentials for employment-intensive programmes which will produce long-term income flows beyond the short-term employment effect of public works. The high degree of interregional labour mobility and the low extent of customary constraints on the participation of the female labour-force in rural Africa suggest that there exists a high level of latent demand for employment—with favourable effects by gender—in such schemes during the off-season and during times of production shortfalls.

Improved technology in agriculture increases production and makes agriculture less shock-prone. Improved infrastructure enhances trading and permits gain from specialization. These two—technology and infrastructure—and a conducive foreign trade policy contribute to basic social security by reducing the impacts of production fluctuations. Currently basic social security is impaired by the far-reaching effects of production shocks. Given the close relationships between the agricultural production and livelihood of the poor in Africa—partly mediated via price, wage and, employment effects (as

exemplified in the Sudan case)—it is in the agricultural policy area that a number of sub-Saharan African countries can most rapidly contribute to social security with growth (Mellor *et al.* 1987).

3. COMMUNITY-BASED SOCIAL-SECURITY PROVISION

Sub-Saharan Africa is poor in state institutions, but rich in community institutions for social-security provision. These are not confined only to rural areas but reach out into peri-urban and urban areas as well, partly by maintained urban-rural linkages (Mitchell 1987). The nature and causes of poverty in sub-Saharan Africa are extremely heterogeneous and do not lend themselves to any simplistic categorization.⁹ The structural poor of pre-colonial Africa were mainly those lacking access to labour to exploit land—both their own labour (when they were disabled, or old or young) and the labour of others (when they were bereft of family or other support) (Iliffe 1987). Structural poverty resulting from land scarcity appeared only slowly in Africa.

3.1. *Contrasting a Land-Rich and a Land-Scarce Setting*

Today, emerging land scarcity in generally still land-rich Africa is becoming an important concern in any long-term outlook for rural social security based on community support systems. Contrasting a land-rich with an extremely land-scarce rural environment in sub-Saharan Africa may therefore suggest some lessons. We hasten, however, to say that extrapolations from cross-sectional comparisons which largely neglect historical processes, location, and differences in culture are quite limited.

In the more land-rich parts of rural Africa (for instance parts of semi-arid West Africa), access to labour and technology which will increase labour productivity are dominating factors for poverty alleviation. In the land-poor environments (for instance, in the extreme cases of the Central African highlands), poverty is closely related to shortage of land and absence of yield-increasing technology.

Actions by the poor to achieve greater security in land-rich environments frequently entail the formation of large households or kinship relationships across communities, which permits the exploitation of scale economies and the pooling of labour and risk (Binswanger and McIntire 1988). In land-scarce environments, the diversification of income sources appears to be the prevalent strategy coping with the risks of specialization. Extended family-based social-security systems are less prevalent. It is probably in these environments that state involvement in social security is currently in greatest (latent) demand.

⁹ For an excellent review, see Iliffe (1987), particularly chap. 10.

More generally, this will be more and more so in the long run as land scarcity increases.

In the following, two distant points on the continuum between land-rich and land-scarce rural environments in sub-Saharan Africa will be contrasted to highlight different issues for the different environments in terms of emerging need for social-security action. The two environments are in West Africa (The Gambia) and Central Africa (Rwanda). The latter is the most densely populated area in sub-Saharan Africa (man-land ratio of 10.1 persons per hectare of farm land), while the former is still to be considered a land-surplus area—sparsely populated not only in terms of population per square kilometre but also in terms of carrying capacity. The non-agricultural income share in Rwanda is already more than 50 per cent whereas it is about 20 per cent in the Gambian study area. Information for this comparison is based on detailed household-level survey work in both areas in the mid-1980s.¹⁰

In both study areas, the social-security challenges are indicated by high levels of infant mortality, a small but rapidly growing percentage of old people, high levels of morbidity, child malnutrition, and the hunger problem visible in chronic calorie deficiencies (Table 9.3).

Table 9.3. Rwanda and The Gambia: Comparisons of selected social-insecurity indicators

	The Gambia	Rwanda
Infant mortality (per 1000 live births) ^a	160	116
Population over 60 (% of total)	5	3
Malnutrition among children (%) ^b	27	28
Morbidity (women, sick previous month, %) ^c	62	52
Calorie-deficient households (%) ^d	18	41

^a Rwanda: 1986, from *World Development Report*, table 33, p. 286. The Gambia: Government Medical and Health Department, *Annual Report*, 1982.

^b Percentage of children 6–60 months below 80% of weight for age standard.

^c Computed from International Food Policy Research Institute (IFPRI) surveys; The Gambia dry season percentage for women's morbidity 50.8; the table shows wet season information for The Gambia and mid-year for Rwanda.

^d Percentage of households below 80% of calorie requirements.

Food insecurity is a combined chronic and transitory problem in both settings. In the West African study environment, seasonality continuously affects the poorest quartile in terms of per capita income in the wet season, but not the rest of the rural poor. Calorie deficiency and workload result in

¹⁰ Field research is based on the IFPRI studies in The Gambia and Rwanda on the effects of commercialization and technological change in traditional agriculture. See von Braun *et al.* (1989); and von Braun *et al.* (1990).

symptoms of chronic malnutrition among both children and adults. Household-level food insecurity is a persistent problem of a subset of households in both environments. For instance, in The Gambia, about one-third of households fell continuously below calorie requirements over two observed seasons, whereas in Rwanda, this applies to about 46 per cent of households. In the latter, a quasi-landless rural population has emerged over the past three decades.

3.2. *Different Community Patterns: Different Social-Security Systems*

In the West African setting, an important example of an institutionalized system of community-level food security and welfare can be found in the *Zakat* system, under which a tax (10 per cent delivery obligation of staple food to the mosque) is redistributed to the poor and the needy in the village communities through the Imam. The *Zakat* system highlights the fact that society-wide social-security spending is much underestimated when only government expenditures are taken into account (as in Table 9.1). Village-level savings societies and work groups along age and gender lines further contribute to the pooling and spreading of economic risks. Such groups are active in eight out of ten surveyed villages in The Gambia. Due to the existence of such village institutions, at least in smaller rural communities, a substantial degree of shared decline and shared improvement in social security can be observed. For example, the village of Tubanding on the bank of river Gambia suffered from three consecutive droughts in the 1980s. Calorie consumption in most households of this village dropped far below requirements. Drought can, in The Gambia, prevail quite locally. The village of Sarre Balla, only about 20 kilometres away was luckier and had favourable rains in the third year. Calorie consumption at household level recovered in Sarre Balla from low levels in most households in that third year whereas deficiencies remained widespread in Tubanding (von Braun, *et al.* 1989: 81). The localized, dispersed, and versatile nature of economic risks makes any targeting of interventions (such as food and income transfers) an administratively difficult task (say to discontinue transfers to Sarre Balla in year 3, and continue to target Tubanding—which by the way recovered in year 4). However, the nature of intra-village communal systems of social security make household-level targeting less of a necessity. Links between the community and local government require strengthening to cope with local hunger and welfare insecurity in these settings.¹¹ Investment in information and communication is as important as public capacity to respond to the food and health crises at village level.

Very different from that in The Gambia is the nature of community-level social security and related systems in Rwanda. There, settlements are largely

This applies not only to the problem of acute food problems but also to local epidemics.

in the form of individual and scattered farms. Villages do not exist in rural Rwanda. Communities are clearly defined administrative units ('communes'). 'Community'-based social-security systems here are already to a large extent connected to the State. Elimination of the quasi-feudal system was followed by expanded State social-security provision in the 1960s. The strong role of the State is exemplified by public works (every adult has an obligation to work for the community for one day per week), and the system of rural health and nutrition centres. Also, formal rural financial institutions already have a significant role in the credit market, which permits some intertemporal spreading of risks.

3.3. *Food Insurance, Transfers, and Labour Exchange for Social Security*

In both contrasted settings, rural households attempt to run food insurance schemes. These schemes operate, however, very differently. While in The Gambia, large household units (compounds) comprising 10–100 people (16 on average) allocate labour time and land to produce food for the whole unit (the 'maruo' crop), food insurance at the household level in Rwanda is confined to the nuclear family unit. Cash and kind transfers between households are, on average, larger in the land-scarce setting of Rwanda than in the West African setting.¹² However, in the food-scarce pre-harvest season, transfers are quite important for the poorest in The Gambia, too (Table 9.4). The lowest income quartile in The Gambia obtained about 16 per cent of real income out of

Table 9.4. Value of cash and kind transfers received by rural households in The Gambia and in Rwanda by income classes (1985/6)

	Transfers as % of annual income			
	The Gambia			Rwanda
	Pre-harvest	Post harvest	Annual	Annual
Bottom quarter	15.6	2.9	5.5	16.8
Second quarter	9.5	2.7	4.4	7.9
Third quarter	10.8	3.1	5.4	6.9
Top quarter	16.8	3.4	6.5	14.2
Average	13.2	3.1	5.7	11.4

Sources: For The Gambia, joint survey by the IFPRI and the Planning, Programming and Monitoring Unit of the Gambian Ministry of Agriculture; for Rwanda, IFPRI survey.

¹² Note that income transfers relative to household income between small households (Rwanda) and large households (The Gambia) are not strictly comparable, as significant transfers occur within the large households in The Gambia between nuclear families and gender groups which would appear as interhousehold transfers in Rwanda's small household setting.

transfers and gifts in this 'hungry' season. In both settings, the lowest and the highest income quartiles obtained the highest transfers relative to income. Among the poorest, this may relate to welfare and charity, but it is (foreign) remittances reaching the higher-income groups which explain part of this similar pattern in both settings at the upper end of the income distribution.

Cash and kind transfers between households for food security is only one element of community-based social-security systems. At least as important are 'labour transfers', that is, making labour time available to the community or the extended family to achieve mutual food security. In The Gambia, this is mainly happening within the compound and to lesser extent at the village level. The labour input into compound (common) food production accounts for 56 per cent of total labour (von Braun and Webb, 1989). In Rwanda, labour-sharing occurs between individual farms. Of total farm labour input, about 30 per cent is non-family labour and 78 per cent of this is labour exchange without cash or in-kind payments involved, which means that 23 per cent of total farm labour is in the form of unpaid mutual help (von Braun *et al.* 1990*b*). While sizeable, this suggests that the labour transfer in Rwanda (23 per cent) is only about half of that observed in The Gambia (56 per cent). The aggregate resource transfers between households in Rwanda are thus much lower than in The Gambia, despite the somewhat higher income transfers received by Rwandan households.

The consequence of this for social security, however, needs to be seen in the context of the riskiness of the economic environment. Inter-annual crop production risks (fluctuations) are much lower in Rwanda than in The Gambia, as there are two cropping seasons in Rwanda. Yet, as manifested in the 1985 general food shortage situation in Africa, a minor drought in Rwanda combined with rising food prices in neighbouring countries transmitting into Rwanda resulted in rapid increases in severe child malnutrition: prevalence rates increased to 11 per cent in the study area whereas they are 2–4 per cent in normal years (von Braun *et al.* 1990). More than in The Gambia, specific social groups (especially the landless) rather than specific communities were affected. In Rwanda, State action for social security in the form of open-ended public works could be operated much more effectively than in The Gambia, given population concentration, a relatively large rural wage labour population, and an already existing system of public works (in the form of community work obligation without pay). At least in the 1985 situation, food availability would have had to be expanded jointly with food demand creating public works. Otherwise, further local food price inflation would have followed, adversely affecting poor food purchasers not being reached by such public works.

Open-ended public works, so effective in reducing famine vulnerability in India (Drèze 1988), are underutilized in the densely populated areas of sub-Saharan Africa. As pointed out above, helping each other in food crop production ('labour transfer') is a most important element of community-

based social-security systems, frequently more important than the actual sharing of food or cash. Better understanding of these labour transfer systems in their specific contexts may be a key to a creative use of public works at the community level. Potentials for community participation in social development must not be overlooked but appropriately utilized to provide cost-effective social security with a broad coverage of the poor and at-risk population (Midgley 1986).

3.4. *Intrahousehold Systems Failures*

State-based and community-based social-security systems both have their elements of failure, inefficiency, and injustice. This not only relates to large insurance schemes but also to the very micro-level. Least understood are insurance market failures in community-based systems, and particularly at the intrahousehold level.

In several African languages, the common word for 'poor' implies lack of kin and friends. Iliffe, however, also documents in great detail the importance of the kind of family structures and support systems, since different kinds had their particular points of weakness and particular categories of unsupported poor—orphans in one case, barren women in another, childless elders in a third (Iliffe 1987). Platteau's review in this volume—not limited to Africa—shows that traditional social-security systems in village societies were and are far from being perfect hunger insurance mechanisms. One of the possible imperfections involved relates to intrahousehold divisions of resource control.

A traditional social-security system that, for instance, protects household consumption from falling below a certain level of average per capita food consumption in times of community-wide or individual household crises, but which does so with unequal treatment of types of household members relative to needs, fails to provide insurance to all. This would represent a coverage problem of social security due to intrahousehold systems failures. For instance, intrahousehold distribution of nutritional welfare is not found to be equal in the two contrasted environments of The Gambia and Rwanda when systems are under stress. While in both settings, no systematic discrimination against girls is found—in fact girls show up with better nutritional status than boys—other indications of intrahousehold conflict exist. Children of compound heads in The Gambia have a significantly better nutritional status than other children in the same households, controlling for age, sex, birth order, and other relevant characteristics (von Braun *et al.* 1989). The difference widens in situations of food insecurity, namely, in the pre-harvest stress situation of poorer households.

In Rwanda, spending from women-controlled income—holding total income per capita constant and controlling for household demographic characteristics—is more food-oriented than that from men-controlled income

in the lowest-income group, but not so in the higher-income groups. This may indicate a latent intrahousehold conflict over resource allocation to food at low income levels in this setting.

We refrain from generalizations here. Understanding failures of traditional social-security systems at the intrahousehold level, however, has important implications for identifying the potential scope for State action. Scope for State action exists not only where a specific social-security good can be delivered at lower cost through public systems (for example, because of increasing returns to scale, or the advantage of pooling and spreading risks widely), but also where community-based systems show a risk of failure at the final element of the chain—inside the household. State action may have a special role in protecting children, the aged, women, or any specific group.

3.5. *The Aged*

Social-security systems in high-income countries are increasingly focused on the support of the old, while welfare improvement in low-income countries is much concerned with the very young. This is partly a reflection of the structures of current age pyramids. However, the small proportion of old people in the population of low-income countries—3–5 per cent over 60 in our Rwandan and Gambian samples—is a result not only of high birth rates but also of short lives because of high risk to survival at older age. Thus, there are few old people because social-security provisions are so limited. The absolute and relative growth of the aged population which is now emerging poses a challenge but must not be viewed as a burden in Africa. The aged will increasingly be able to contribute to home goods production and child welfare. Supply of child care time per child can increase. In such settings as The Gambia or Rwanda, given gender divisions of work, this will free younger women's time for work in fields and off farm. The African Conference of Gerontology recently urged that the aged be put on the policy and research agenda.¹³ A key recommendation was to include ageing persons in the development process through participation in community activities, including organization of health care and the working of health care services.

3.6. *Complementarities of Community-Based and State-Based Systems*

Community-based and State-based social-security systems each have their strengths and weaknesses. These need, in the context of a specific country, to be explored to determine optimal system mixes which also change over time in the development process. The assessment of the cost-effectiveness of system elements and system mixes taking scale economies of State-based and com-

¹³ On the deficiencies of knowledge and problems of social security for the aged, see for instance International Centre of Social Gerontology (1984).

munity-based systems into account is an important aspect of policy and programme design. However, interactions between the two types of systems may be both competitive and complementary. For instance, State-based systems may undermine community-based systems by reducing the incentive and solidarity to maintain their support, and in a situation of crisis the collapse of a State-based system may leave the community worse off if the community-based system had deteriorated earlier due to State action. But there may also be complementary effects, for instance when the support of State systems during a crisis would prevent the collapse of community support—or even the collapse of whole communities forced into distress migration in a famine situation as in parts of Sudan and Ethiopia in the mid-1980s.

Complementarity and competition between State-based and community-based systems are specific to the social-security good they are to deliver, to the abilities of the State and the communities, and to the socio-economic environment. The Gambia-Rwanda contrast has highlighted the latter in particular. In terms of goods, there is in general probably much less scope for community-based systems to provide health (vaccination, curative services) than sanitation and food security. Weak local governments may find they have a complementary part to play in strengthening (subsidizing) existing community-based systems and initiatives. In any case, a knowledge and an appreciation of community-based systems are pre-conditions for their effective utilization for improved social security.

4. CONCLUSIONS

In view of the fact that nutritional and health improvement in Africa is not only an objective in itself but also a precondition for development, this chapter argues for 'social security before and with growth'. The massive human welfare problem in rural Africa on the one hand, and the resource constraints and weak public institutions on the other, pose a dilemma for State-based social-security systems. But while Africa is poor in State institutions, it is rich in community-based institutions which should be viewed as an asset. Public-sector resource constraints and the existence of effective elements in traditional systems of social security suggest the need to consider creative combinations of State-based and community-based social-security systems, rather than the adoption of Bismarckian systems which could only provide social security for a few.

The need for social-security expenditures by the state is much influenced by development strategy. A rurally biased development strategy reducing the rapid growth rates of urbanization might help to reduce the fiscal and economic costs of social security, as greater reliance could be placed on elements of functioning community-based systems in rural areas.

African countries as much as other low-income countries exponentially expand their State social-security expenditures with rising per-capita income. Thus, revitalized growth in Africa would expand public spending on social security to a considerable extent. The critical policy questions will be the setting of priorities within social-security spending, and the direction of social security toward the truly needy, that is, the food and health insecure. Health of the work-force, technological change in agriculture, and improved market integration are critical foundations for the sustainability of improved social security.

Insecurity of livelihood in rural Africa relates closely to fluctuations in crop production and income, and to low levels of productivity in agriculture. Food security remains a crucial aspect of social security. The latent demand for public involvement in the provision of food security may be greater in the land-scarce, more densely populated areas, where proportions of non-agricultural income are already high but income levels in general are low, and where community-based systems of food security provision are constrained. The growing non-agricultural self-employed and wage labour population has only a reduced chance of food insurance at household and community level based on own food production and stockholding. Thus, as land scarcity is emerging in increasingly large parts of rural Africa, the need for expanded State involvement in social-security provision is increasing.

Famine prevention remains a key task for social security in sub-Saharan Africa. The lack of availability of food in famine-prone areas has often resulted in drastic price increases which limit the impact of programmes for income transfer that do not provide a simultaneous expansion of food availability. Employment-expanding and asset-creating public works for famine prevention appear so far to be underutilized in Africa. Especially in the more densely populated areas, public works could become an important instrument. In this context, it is noteworthy that food and cash redistribution is frequently less important in traditional community-based systems than making labour time available.

There is a great deal of scope to seek creative combinations of State-based and community-based systems for social security. Optimal mixes of these may take very different forms in land-rich and land-poor environments. In order to capitalize on community-based systems, a better understanding of their strengths and weaknesses is required. Basic differences in community-based systems as identified in a land-rich setting (The Gambia) and a land-scarce setting (Rwanda) call for a careful assessment of the scope for State-based social-security systems to achieve optimal system mixes for specific settings and stages of development.

413

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