



Food Security and Agricultural Development in Sub-Saharan Africa

Building a case for more public support

Policy Brief No.2 : Conceptual and Empirical Framework

This synthesis provides the main findings of the Background Study which has been prepared by CIRAD on the request of the Policy Assistance Division of FAO (TCA) within the framework of the initiative: *Food security and agricultural development in Sub-Saharan Africa: building a case for more public support*, Rome, which will be published in 2006. The study brings together the evidence that justifies a substantial increase in public support, whether financial or of other type, allocated to the sector by governments of African countries. The Background Study examines the state of current concepts and theses on the issue, based on a review of experience from history (development in industrialized countries) and recent international developments (Asia, Latin America).

In addition to the Background Study, case studies were undertaken in various African countries and a final report prepared by TCA – a synthesis of which is presented in the Policy Brief No 1. The English versions of the reports prepared for this study are accessible at: http://www.fao.org/tc/tca/workshop2005_en.asp. French versions will also be accessible in 2006. Similarly, the whole set of reports will be published in 2006.

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The views expressed here are those of the authors and do not necessarily reflect the official positions of FAO, the French Government and NEPAD.

Food insecurity in sub-Saharan Africa: a chronic widespread condition, whose prominent cause is low income at household level

1. Almost 33% of African population, or 200 million people, are malnourished, which is the highest prevalence in the world. The number of malnourished has almost doubled since the late Sixties, increasing roughly at the same rate as population growth, indicating few successful strategies in poverty alleviation and food security improvement. Food crises emerge when shocks such as drought, flood, pest, economic downturn or conflicts occur and affect this chronically insecure population. Annually, around 30 million Africans are affected.

2. The analysis of average food availability among a representative set of African countries confirms this preoccupying situation and emphasizes the high degree of heterogeneity among countries. In one third of African countries the average intake of daily calorie

availability is below the recommended level of 2100 kcal (Ethiopia, Kenya, Rwanda, and Tanzania in East Africa; and Angola, Madagascar, Mozambique, and Zambia in Southern Africa; Sierra Leone in West Africa). In a few countries (DR Congo, Burundi, Eritrea, and Somalia) the mean availability is below 1800 kcal which is considered the minimum intake level. In some countries (Botswana, Burundi, Congo DC, Gambia, Liberia, Madagascar, Senegal, Sierra Leone, Somalia, Tanzania, and Zambia), the situation has been deteriorating over the last 10 years while in others (Ghana, Nigeria, and Malawi) aggregate figures exhibit an improving trend –. Less than 50% of sub-Saharan African countries show figures under 30% for the prevalence of malnutrition and only three of them under the 10% level (Gabon, Nigeria, and Namibia). Some

countries, despite economic growth and sufficient aggregate availability, display increasing malnutrition, as measured by the prevalence of stunted growth in children. Such is the case in Mali.

3. Average food availability is calculated by adding domestic production, imports, food aid and subtracting exports. Statistical analysis of several countries shows the marginal impact of exports. Inadequate average food availability is consequently the result of insufficient domestic production and imports.

4. When analyzing the time series on domestic production and external trade, the striking fact is the absence of adequate recourse to imports to allow adequate food availability when domestic

production is insufficient. Poverty statistics as well as national income trends, measured by GDP, indicate that the food insecurity problem is related to “access”: food insecure households do not have the means to pay the price for imports in order to access to adequate supply of food. In a world where adequate food supply is globally available, trade should indeed provide deficit countries with the volume of food required to feed their population properly. Increased income should generate a high response in food demand among food insecure households. If it is not the case while no bottleneck restricts access to international trade, the problem relies on the lack of solvent demand due to insufficient income.



Low labour productivity and non solvent demand as primary roots of insufficient income

5. Looking for chronic widespread food insecurity causes raises hence the tricky issue of understanding why household income of a large share of the population is so low. Factors constraining economic growth and job opportunities especially among low income households need to be examined.

6. At national level, income is defined as the sum of household incomes, including remittances. Among poor households, income is generated by selling goods produced at home and/or by selling labour. If income is not sufficient to meet the basic needs of the population, either by selling goods and/or labour selling, or both, are insufficiently met. Selling goods may earn insufficient income because products are not competitively priced. Then causes are directly related to **low labour productivity**. But the level of sales may also be insufficient due to the **lack of solvent demand**, directly related to low income. The lack of solvent demand explains the lack of economic growth and job opportunities. Production factors, such as labour, may then be under utilized.

7. Root causes of low labour productivity may be listed as follows: The **lack of public goods** in Africa is today pointed out/to as a main cause of

insufficient pro-poor growth. Public investment in soil and water management allows rural populations to cope with droughts and floods as well as to improve yields. Already in the Sixties the level of transport in Africa was far lower than in Asia, partly because of too low a population density. The fact that this situation still holds, despite the huge amount devoted to development aid between the Sixties and the beginning of the Eighties may be attributed to wrong projects definition, poorly conceived planning systems, lack of coordination between ministries and donors, lack of coordination between public and private investment. Since the beginning of the Eighties, it may be attributed to the enormous cut in public expenditure due to the decreasing of aid combined with macro-economic stabilization policies.

8. The **low level of capital endowment** per capita is largely explained by the risks faced by farmers as well as by traders and processors. Farmers face both yield and output price instability. Output price instability not only affects income flows but also ex post returns on potential investment in farming as well as in marketing and processing facilities. Actors react to the uncertainty induced by market instability

by reducing their level of investment both in physical and human capital. This impact is particularly visible among poor farmers who are highly risk-averse and do not access credit to ease consumption and investment difficulties. The low level of public goods provision, such as irrigation facilities, extension services and roads, further decreases the profitability of private investment and diverts private actors from the agricultural sector.

9. Counter intuitively, decline in the measured capital stock per worker in Africa is not the primary source of the decrease in output per worker in Sub-Saharan Africa from 1980 to 2000. It is not so much the limited growth of capital per worker during the last twenty years than its inadequacy to Africa production constraints (land available per worker, weather conditions, market institutions) that hampers productivity growth. **Inadequate technical agendas** in agriculture, with for example the very low level of inputs used, can be partly explained by limited access to (physical) markets for agricultural inputs and outputs as well as for non agricultural goods, and partly by the lack of adequate public research on African agriculture and the lack of efficient agricultural services (extension, credit).

10. The **lack of scale effect**, mainly in agro-processing and marketing activities is directly related to the isolation due to the absence of good-quality roads. Then actors are facing a very thin market with very high transaction costs. This considerably reduces the benefits of trade and discourages economic activities.

11. Risk considerations explain also the **lack of specialization**, one main strategy to cope with output prices and yields uncertainty being to diversify production activities.

12. Symmetrically, roots causes of insufficient solvent demand may be listed as follows. Considering **local household demand**, the lack

of income among a large share of population explains the lack of solvent demand. This is directly related to low labour productivity and to the lack of job opportunities. For the richest consumers, imported goods are often preferred for consumption. Moreover, exports subsidies as well as food aid have a negative impact on agricultural output prices and divert part of the local demand to foreign supply. Negative financial transfers, due to the burden of the debt repayment also affect the national income and thus solvent demand. Considering **public demand**, as already underlined, the drastic cut in public expenditures since the mid-Eighties explains a sharp drop. The **lack of foreign demand** is explained by high transaction costs, isolating local markets from the rest of the world, low competitiveness of local goods, due to low productivity, and foreign markets protection, through tariffs and non-tariff barriers.

13. Low productivity and low demand are indeed linked by a circular relationship. Early development theorists used to wonder why income growth in economically backward areas was trapped. Starting with the demand size of the problem, the most documented determinants are transport facilities, which Adam Smith singled out for special emphasis. Reductions in transport costs do enlarge the market in the economic as well as the geographical sense. But reductions in any cost of production tend to have the same effect. So the size of the market is determined by the general level of productivity and by the level of domestic factors used. Capacity to buy means capacity to produce. In its turn, the level of productivity depends largely on the use of capital in production. But the use of capital is inhibited, to start with, by the small size of the market. What is the way out this circle?



Using policy as a way out of the circle linking low productivity and the small size of the market

14. The root causes identified of chronic food insecurity can be turned into priority objectives. Priority objectives for policy makers whose country has been facing chronic food insecurity should be, first, to improve productivity, and second, to boost demand for food-insecure-household products and/or labour. The first objective is widespread and consensual among policy advisers and academics, with the exception of the external (foreign) demand for labour. The second one is far more neglected, if not ignored. When applied to the rural sector, it goes beyond agricultural policy per se and involves clearcut choices in terms of growth and development policies.

Refocusing on demand growth, both local and external, is a top priority development policies that enhance food security.

15. The review of policy measures actually implemented in African countries highlights the vanishing of agricultural policies in their OECD or post independence acceptance. With the exception of some subsidies on inputs (a few Southern African countries, cotton in some West African countries), remaining minimum price guarantee schemes (maize in some African countries), VAT exemptions, limited import tariffs (although far below the banded rate) and scattered public investment in rural areas, the scope of public intervention is narrow. This narrowness, when confronted with the breadth and depth of the causes chronic food insecurity in Africa, points to the scandalously limited policy response brought today by African countries to African populations.

A start in budget reallocation toward rural populations is urgent to overcome the unaddressed causes of food insecurity.

16. It is worth recalling first that available policy measures are much more numerous than the ones still in use in Africa. Policy measures restricted to the rural sector include: border measures (fixed tariffs, variable tariffs, quotas, both on imports and exports); domestic support (minimum price, output subsidies, input subsidies, consumption subsidies, direct transfers, stabilisation); indirect taxes (VAT exemptions); investment funding and incentives (subsidies); interest rate subsidies; provision of agricultural services in remote areas (credit,

irrigation, storage facilities). Successful food security strategies in places such as Indonesia, Europe or Central America in previous decades demonstrate that there is no orthodox, one-size-fits-all policy package. The larger the choice of measures available, the higher the probability to apply Tinbergen's efficiency rule, according to which one policy measure must be targeted at only one objective – following the popular idea that “you cannot hit two birds with one stone”. We have seen that root causes of food insecurity provide a large scope of policy objectives.

Significant widening and flexibility in the choice of available policy measures is urgent to overcome the unaddressed causes of food insecurity.

17. International or regional commitments of African countries do not bring convincing explanation of the narrowness of public intervention targeted at food insecurity in Africa today. The room for ambitious agricultural policies at WTO is wide, with total exemption of tariff and support reduction being granted to least developed countries (most of them are to be found in SSA) while developing countries enjoy a special and differential treatment rehabilitating some of the pre PAS instruments (like input subsidies as long as they are targeted at the poorest). Examination of bilateral agreements (like EPA following Cotonou Partnership Agreements between EU and ACP countries) and regional agreements (such as UEMOA), reveals no significant constraints on any kind of domestic support, since the primary constraint relates to external tariffs. The most stringent constraints seem to stem from the conditions imposed by donors and international financial institutions (IMF, WB) and other aid agencies adopting the same agenda.

Upgrading in a coherent framework the set of rights and obligations of the governments of food-insecure countries towards the international community – and specifically toward the Bretton Woods institutions and other aid agencies - is urgent to overcome the unaddressed causes of food insecurity.

18. Economists dealing with political economy have tried to show the losses and more generally, the dysfunctions and failures

associated with the use of some specific policy instruments. Regarding African countries, two major inputs in the political economy analysis of agricultural policy must be considered :

- A first “bunch” of researches has been focused on agricultural policy instrument giving access to a limited amount of specific free or subsidized goods or services (inputs, credit, extension...) or limited access to a particular market (a foreign market, for example). This limitation in quantity gives rise to subsidies and people will compete to get these subsidies and devote resources to such competition. Depending on the allocation method used, the kind of resource provided will differ. When allocation of trade licenses is decided by government officials, different kind of expenses will be realized to influence the decision: trip to the capital, office rent in the same capital, lobbyist services and of course directly money, i.e. bribe. Therefore, waste of resources is a primary problem. Increasing inequality can be a second one. Corruption the last one.
- The second “bunch” of political economic analyses aims at explaining the apparent preference of African government for input or credit subsidies and projects instead of higher price for agricultural commodities. According to such analyses the role of pressure groups actuation can be important but the search of power by the state elite is the main issue. The first objective of governments is to secure political control over their rural population. By using project instead of higher prices, government can exercise discretionary power, they can choose regions, groups or even individual to be the beneficiary, they can also choose in staffing the project. By choosing some specific groups they get their support and weaken any opposition by dividing the rural world.

19. These two “bunches” have provided sound contributions for the writing of obituary notices of 60's and 70's agricultural policies. Yet, before leaving them out completely, one should be reminded that low farm gate prices were at the same time stable and predictable – i.e. stabilised. Ample evidence shows that agricultural supply responds to price stability just as much as to mean price level. As a consequence, providing stable prices to farmers

is just as important for production as high prices. A trade-off was expected to occur between low and stable agricultural prices, allowing for productivity gains in agriculture through risk-free investment in capital goods, along with productivity gains in labour intensive activities in all sectors thanks to moderate wages increases allowed for by moderate food prices. This subtle trade-off did work in some places like Europe or Indonesia. It completely collapsed in most of African countries because too narrow a place was given to market forces between farm gate and consumer plate.

20. The policies maintained during the 60's and 70's are rightly criticized, especially in view of their poor outcomes. Yet this does not mean they were without any merit or justification. One should consider the rationale behind them. Relatively low farm gate price while international prices are high means profits for marketing boards and similar agencies. Economists who developed the concept, intended such profits to be spent on increased investments and long-term development devices that the market usually fails to secure, and **which by necessity must be funded by the State**. One may question the choice to have them funded by poor farmers rather than by richer people. But the central question is **why were these profits not spent on development by the States** responsible for it?

21. A second part of explanation derives from the lessons learnt from economic literature. Although controversy continues, academics tend now to promote budget-funded, targeted policy instruments to consumer-funded, price instruments, the latter suffering from poor targeting and distortive (inefficiency) effects. On efficiency grounds, the “modern” food policy relies heavily - theoretically at least - on freeing market prices, which means close-to-zero tariffs, decoupled support (compensation and insurance transfers), along with investment policy in public goods provision such as research, infrastructure, education, health and the enforcement of the rule of law so as to make market institutions properly work and even “work for the poor”.

When no such a budget is made available, the case for agricultural policy vanishes.

22. How best to use an agricultural budget in an accountable manner cannot be defined in terms of policy measures at this stage. This can only be dealt with on a country-by-country basis, with extensive participation of local stakeholders throughout the policy-making process. A framework for action has been set here, whereby a step-by-step definition of agricultural policies could make them both legitimate inside and outside the country, at all levels of negotiations, within and among ministries. The initial step is to identify the characteristics of food insecurity on a country-by-country basis, followed by the identification of its root causes. This in turn will provide economic grounds for policy action, as long as such causes relate either to market failures or government failures as described above. Checking for country commitment and possible perverse effects of such policy, because of subsidy-seeking or any counterproductive effect current knowledge helps prevent, leaves room for the final design of sound agricultural policies embedded in demand-led growth which secures food.

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