AGRICULTURE DEVELOPMENT IN SUB-SAHARAN AFRICA

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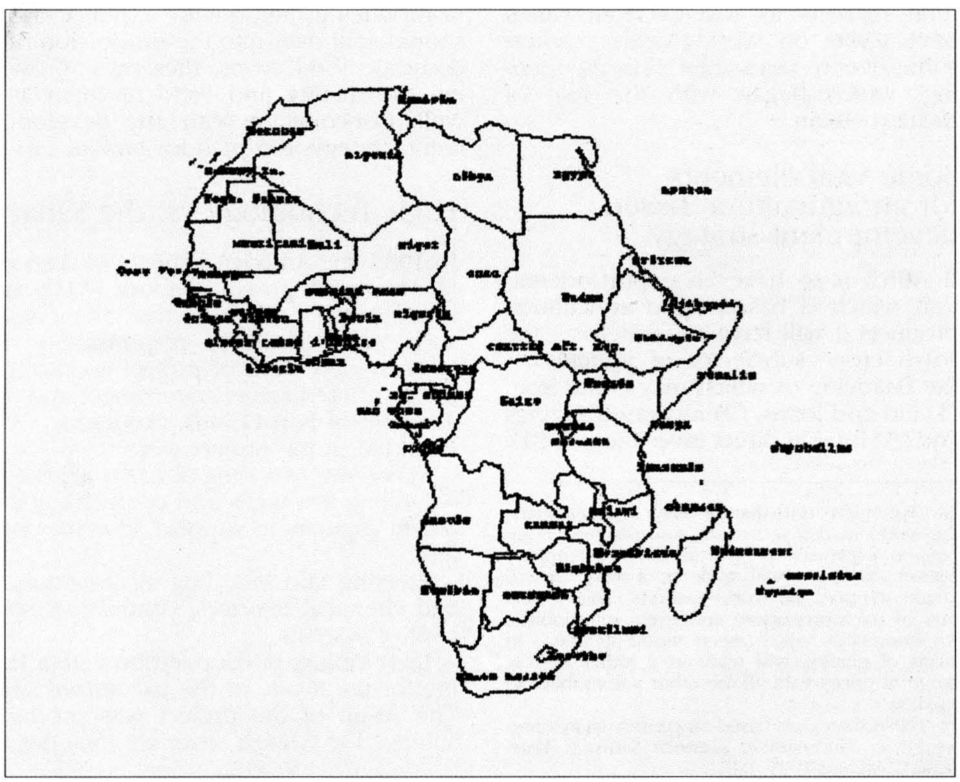
Abstract

The events in Africa should be of great interest to the Mediterranean countries in the coming decades. There are good reasons to believe that Sub-Saharan African development prospects will improve, especially if the countries of the region follow an export-orientation with an emphasis on exporting a wide range of high-quality agricultural products. This could be possible if high-technology is introduced into the agricultural sector with help from private sector foreign direct investment. FDI will flow into the region if private investors sense that their risks are low and that Sub-Saharan Africa is beginning to accelerate economic development. The public sector can help foster an optimistic development climate if it articulates a focused development strategy. However, no clear strategy will surface unless the coordination and harmonization problem that exists between the many African regional and interregional organizations is solved.

Résumé

Les événements qui se produisent en Afrique devraient être de grand intérêt pour les pays Méditerranéens dans les décennies futures. Il y a lieu de croire que les perspectives de développement de l'Afrique subsaharienne seront meilleures, surtout si les pays de la région s'orientent vers l'exportation, notamment de produits agricoles de haute qualité. Ceci serait possible à travers l'introduction de la haute technologie dans le secteur agricole à l'aide d'investissements étrangers directs du secteur privé. Les investissements étrangers directs pourront affluer dans la région si les investisseurs privés sentent que leurs risques sont faibles et que l'Afrique sub-saharienne commence à accélérer le développement économique. Le secteur privé peut contribuer à créer un climat de développement optimiste à travers une stratégie de développement ciblée. Toutefois, pour que toute stratégie soit claire, il faudra résoudre le problème de la coordination et l 'harmonisation entre les nombreuses organisations Africaines régionales et interrégionales



Events in Sub-Saharan Africa are naturally of great interest to the fourteen member countries of *The International Centre for Advanced Mediterranean Agronomic Studies* (CIHEAM). First of all because of Sub-Saharan Africa's proximity to the CIHEAM countries and the great agricultural potential of such a hugh land mass and second because of the generous role that the member countries have played in the financing of economic development there.

The twenty-first century is now before us, and with the experience of three United Nations Development Decades behind us, this is an opportune moment to benefit from the lessons learned and to avoid past developmental mistakes. The Sub-Saharan Africans in particular, with cooperation from the international community, have an opportunity to pursue a more effective development strategy for the region than they have in the past, since much of the uncertainty which shrouded developmental issues has been lifted.

One lesson learned, although there is still some debate on details, is that development strategies which lead to employment of the poorer populations work best in alleviating poverty. This is especially true if at the same time, economic growth is accelerated. Studies in Latin America [i.e. see ECLAC, *Social Panorama* (1994)] support this notion for that region. Income redistribution schemes which are not accompanied by economic growth are generally not very effective [see World Bank, India Poverty, Employment and Social Services (1989)]. A second lesson is that countries with an export-orientation grow faster than those with an inward-orientation [see Dollar (1992)]. This point is hardly debated anymore because of the success of the export-orientated Asian countries. We should remind ourselves that the export-orientation in Asia is based on the expansion of manufacturing, especially of consumer goods, although food security

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and agricultural development are not neglected. Inherent in this strategy is the idea of producing *high quality* goods which can be sold on world markets for the going world price (1). In such a strategy, employment is created and the terms of trade improve. For this group of countries, the dominant production factor is well trained labour which has an endogenous capacity to research, invent and patent new products. Can the Sub-Saharan African countries repeat the Asian experience? It is my opinion they can, in the sense that they can (1) adopt an export-orientation, (2) create employment for their poorer populations, and (3) grow faster. However, I believe that the comparative advantage (at least for the foreseeable future) of most African countries lies in agriculture, although for some it seems to be in mining and quarrying. This, of course remains to be proven but I am not alone with this view [see for example, FAO, *The State of Food and Agriculture*, 1995]. Nevertheless, the potential for agriculture in Africa has hardly been tapped. Less than 5% of the agricultural production is fertilized and if irrigation alone could be stepped up, yields would multiply. Even so, about 30% of Sub-Saharan's GDP is from agriculture, and the sector has strong multiplier effects on the rest of the economy. If the potential is properly developed over the next twenty years, agricultural products emanating from Sub-Saharan Africa can have the same effect on world agricultural markets as textiles from China have today on world textile markets some twenty years after China's opening, which began with the visit of Richard Nixon.

Some vital elements for an agricultural based development strategy

If Africa is to have an export-orientation which is based upon agricultural products it will have to modernize the "cash crop" sub-sector of agriculture, the financing of which may come from (1) aid and loans, (2) increased savings and (3) foreign direct investment (FDI). While generating financing is a major undertaking in the process of development itself, attracting FDI for agricultural production requires extra effort, as most foreign firms expect some preliminary infrastructure development before they will consider a site for investment. In rural agriculture development projects, it is not uncommon to find a lack of infrastructure. To be successful in world markets, the quality of the agricultural produce will have to meet world standards and the range of products increased. For example, an exporter of cucumbers will have to produce a product which is within certain size limits, has the proper color and texture, is relatively free of blemishes, tastes right and has a sufficient shelf life. Furthermore, the crop should yield a high percentage of cucumbers which satisfy the above criteria. All of this is possible if the high-technology of modern agronomy is applied. Private foreign firms with this technology will be attracted to Africa because of the low cost of agricultural labour and the potential for producing the "winter crop" for the northern hemisphere. The low labour cost will make for much larger profit margins than could be attained almost anywhere else in the world and the winter crop should enjoy favourable market conditions in the north. The African recipient nations will benefit from the employment gains, the training of the labour force, the transfer of technology and faster growth. Furthermore, much of the technology used in producing high-quality export crops should spill over into the production of domestic food crops, thereby improving the quality and yield of them as well. Concomitant with any development strategy, is a plan for human capital and social development. Having recognized this, the United Nations launched a system-wide "Special Initiative" on Africa this year (15 march 1996), with special attention to education and health. Currently, about thirty African countries are at various stages of implementing World Bank agriculture extension projects. These stress the *Training and Visit (T&V)* approach to agricultural development. Overall, the African countries have shown a commitment to social development, as the share of central government spending for education has increased from a country average of 16% in 1980 to 18.4% in 1993. Likewise, the spending on health increased from 5.7% in 1980 to 7.4% in 1993 (2). But, the expenditure on defense also increased 2.8% over the same period. These ratios are comparable to Asia where the expenditure on education and health in 1993 was 13.8% and 5.1% respectively. What is important is that the different national and int ergovernmental institutions charged with social development translate their mandates into the needs and preferences of their citizens, keeping in mind some overall national direction. It is that national direction or goal that seems to be lacking, or is not well articulated in Africa.

The last point suggests a vital element for a successful strategy, namely a clear and well articulated objective, which is understood by everyone in and outside of Africa. One reason why the Asian strategy worked as well as it did was because the countries involved were able to communicate what they set out to do. They had long-term national goals which were seriously simulated in their national planning agencies. Medium-term objectives were set

High Technology vs. the Sahara

In 1985, the Algerian Ministry of Agriculture conducted a project feasibility study for the development of about 16,000 acres of wheat farmland approximately 600 miles south of Algiers in the Sahara desert. Included was a plan to train local personal to as sume the responsibility of production and maintenance once the international team of project consultants left. The cost of the study was shared by the United States government and the contract awarded to Western Agri-Management of Fort Collins, Colorado.

Included in the project were:

– Surveying two sites of 8,000 acres each.

– Drilling test wells and completing wells approximately 3,000 feet deep of sufficient capacity to support 40 center pivot sprinklers or a total wet area of 5,000 feet.

– Erecting and installing all irrigation equipment, including sprinklers, fertilizer and chemical injectors, central fuel supply, and various interlocking safety and control systems.

– Developing, in cooperation with a Japanese chemical company, a special coating for the inside of the galvanized sprinkler pipes to keep corrosion in check.

The result of the project was production of the highest yield of wheat ever achieved in Algeria, over six tons per acre.

(1) One might argue that for many m anufactures, the world market is moving towards pure competition, especially in electronics. For example, a pocket calculator will trade in a very narrow range of prices on world markets. This is also true of microprocessors and even automobiles. An automobile which meets world standards in terms of quality, will trade in a rather narrow range of prices with all the other automobiles in its class.

(2) These shares are based on country shares presented in *Government Finance Statistics Yearbook*, 1988 and 1995, IMF.

which led to the longer-term goals. They knew in the short-term what they had to produce in order to fulfil the medium-term objectives. When countries have such aggressive national plans, they attract FDI, because the foreign investor understands the commitment of the society to achieve the goals and this instills confidence that the investment is subject to less risk.

African multinational institutions

As early as the 1960s, African States saw the potential of economic integration and the benefits that could be derived from larger sub-regional markets. Economic communities such as the Economic Community of West African States (ECOWAS), the Economic Community of Central African States (ECCAS) and the Preferential Trade Area for eastern and Southern African States (PTA) promoted increased trade among the countries within their respective regions. However, because of the currency difficulties, clearing house mechanisms had to be established to facilitate integration objectives at the subregional level. At the regional level, it became apparent that institutions were needed to support the development efforts of Africa as a whole, including the promotion of a broad mass of African capabilities in such fields as scimnce and technology, engineering, remote sensing and economic planning management. To meet these needs the following institutions were established: the African Regional Centre for Technology (ARCT), the African Regional Centre for Engineering Design and Manufacturing (ARCEDEM), the African Regional Organization for Standardization (ARSO) and the African Institute for Higher Technical Training and Research (AIHTTR). Also established were the African Deve lopment Bank (ADB), the African Institute of Economic Development and Training (IDEP) and the African Center for Applied Research in Social Development (ACARTSOD) to address the problems of development finance, and socio-economic policies and planning. Management training for the pzivate sector was provided by the Eastern and Southern African Management Institute (ESAMI) and population problems were the domain of the Regional Institute for Population Studies (RIPS) and the Regional Centre for Demographic Research and Training (IFORD), which served respectively the English- and the French-speaking countries. Furthermore, the major regional groupings for eastern, central and western Africa are subsequently divided into subgroups

Table 1

Common Market of Eastern and Sp. Africa (COMESA Former PTA). 1992 GDP in millions of U. S. $

	Share in Gross Domestic Product					GDP	Pop	GDP
Country	G	C	I	X	M		X1000	P.C.
Angola	29.0	60.2	7.7	29.7	26.6	5092	7014	726
Burundi	16.7	86.5	18.9	8.2	30.3	1124	4168	270
Comoros	24.9	81.0	16.1	15.4	37.4	273	376	726
Djibouti	29.8	80.9	10.9	27.0	48.6	660	264	2500
Ethiopia	14.8	85.6	8.7	6.7	15.9	4966	37166	134
Eritria								
Kenya	15.7	68.9	16.1	25.8	26.5	8332	15841	526
Lesotho	18.0	125.6	76.9	17.5	138.0	661	1298	509
Madagascar	12.0	79.6	8.2	13.5	13.4	2992	8618	347
Malawi	18.6	79.6	18.9	22.5	39.6	1851	6279	295
Mauritius	11.3	63.6	27.7	63.6	66.3	3035	873	3477
Mozambique	23.7	94.5	47.7	29.0	95.0	986	11157	88
Namibia	26.8	57.2	19.7	49.7	53.4	2456	1033	2378
Rwanda	17.6	79.4	12.1	8.1	17.1	1371	4896	280
Seychelles	30.3	54.7	20.1	67.2	72.5	393	57	6895
Somalia	8.8	73.7	20.4	0.5	3.5	1328	6271	212
Sudan	8.9	93.7	12.7	5.4	20.7	4547	17975	253
Swaziland	24.5	33.6	47.7	85.7	91.5	1000	535	1869
Uganda	7.7	93.5	12.0	6.6	19.8	3346	12156	275
Untd Rp.Tanz	10.7	89.0	26.6	18.6	44.8	2371	18003	132
Zambia	15.0	74.2	14.1	31.7	35.0	3303	5533	597
Zaire	19.3	54.1	20.5	60.8	54.6	4229	26205	161
Zimbabwe	20.7	60.2	26.7	28.3	36.0	5161	6802	759

Southern African Development Community (SADC Formerly SADCC).

	Share in Gross Domestic Product					GDP	Pop	GDP
Country	G	C	I	X	M		X1000	P.C.
Angola	29.0	60.2	7.7	29.7	26.6	5092	7014	726
Botswana	28.8	47.6	27.1	36.9	40.4	4444	852	5216
Lesotho	18.0	125.6	76.9	17.5	138.0	661	1298	509
Malawi	18.6	79.6	18.9	22.5	39.6	1851	6279	295
Mauritius	11.3	63.6	27.7	63.6	66.3	3035	873	3477
Mozambique	23.7	94.5	47.7	29.0	95.0	986	11157	88
Namibia	26.8	57.2	19.7	49.7	53.4	2456	1033	2378
South Africa	20.8	60.7	14.7	23.3	19.5	112810	27588	4089
Swaziland	24.5	33.6	47.7	85.7	91.5	1000	535	1869
Untd Rp. Tanz	10.7	89.0	26.6	18.6	44.8	2371	18003	132
Zambia	15.0	74.2	14.1	31.7	35.0	3303	5533	597
Zimbabwe	20.7	60.2	26.7	28.3	36.0	5161	6802	759

Table 2

Economic Community of West African States ECOWAS). 1992 GDP in millions of U.S. $

Country	G	C	I	X	M	GDP	Pop X1000	GDP P.C.
	Share in Gross Domestic Product							
Benin	12.1	83.4	14.7	22.7	32.9	2101	3420	614
Burkino Fas	17.2	77.7	23.8	12.0	30.6	2918	6721	434
Cape Verde	17.8	87.1	27.2	14.3	46.3	449	285	1575
Cote d'Ivoir	15.2	64.0	9.8	34.2	23.3	18552	7847	2364
Gambia	12.1	74.9	16.8	91.4	95.6	339	602	563
Ghana	11.5	88.3	9.6	14.8	24.2	7347	10756	683
Guinea	8.5	82.3	16.5	21.1	28.4	3240	4463	726
Guinea-Bissa	13.8	110.5	12.6	9.3	46.2	247	731	338
Liberia	12.7	58.5	9.0	44.1	24.3	972	1807	538
Mali	11.4	81.1	24.0	13.8	30.3	2912	6782	429
Mauritania	13.6	77.3	17.7	53.6	62.3	1156	1503	769
Niger	18.2	72.9	13.4	16.3	20.8	2720	5397	504
Nigeria	3.7	73.7	10.7	35.6	23.6	31977	74885	427
Senegal	11.7	85.7	17.2	27.3	41.9	9799	5234	1872
Sierra Leon	10.7	81.3	10.2	7.3	9.4	795	3188	249
Togo	12.3	74.3	19.8	24.8	31.2	1741	2531	688

West African Economic Community (CEAO).

Country	G	C	I	X	M	GDP	Pop X1000	GDP P.C.
	Share in Gross Domestic Product							
Benin	12.1	83.4	14.7	22.7	32.9	2101	3420	614
Burkino Fas	17.2	77.7	23.8	12.0	30.6	2918	6721	434
Cote d'Ivoir	15.2	64.0	9.8	34.2	23.3	18552	7847	2364
Mali	11.4	81.1	24.0	13.8	30.3	2912	6782	429
Mauritania	13.6	77.3	17.7	53.6	62.3	1156	1503	769
Niger	18.2	72.9	13.4	16.3	20.8	2720	5397	504
Nigeria	3.7	73.7	10.7	35.6	23.6	31977	74885	427
Senegal	11.7	85.7	17.2	27.3	41.9	9799	5234	1872

Mano River Union (MRU).

Country	G	C	I	X	M	GDP	Pop X1000	GDP P.C.
	Share in Gross Domestic Product							
Guinea	8.5	82.3	16.5	21.1	28.4	3240	4463	726
Liberia	12.7	58.5	9.0	44.1	24.3	972	1807	538
Sierra Leon	10.7	81.3	10.2	7.3	9.4	795	3188	249

Table 3

Economic Community of Central African States(CEFAC). 1992 GDP in millions of U.S. $ 1992 GDP in millions of I.S. $

Country	G	C	I	X	M	GDP	Pop X1000	GDP P.C.
	Share in Gross Domestic Product							
Burundi	16.7	86.5	18.9	8.2	30.3	1124	4168	270
Cameroon	10.6	70.1	21.3	15.2	17.2	11993	8362	1434
C. Af. Rep.	12.9	84.9	12.7	14.8	25.4	1420	2254	630
Chad	26.0	82.4	12.3	19.8	40.5	1256	4337	290
Congo	18.1	50.5	13.9	47.0	29.5	3164	1603	1974
Gabon	18.9	48.5	24.5	49.7	41.6	4864	798	6095
Equat. G	35.1	55.7	23.8	11.9	26.5	185	290	638
Rwanda	17.6	79.4	12.1	8.1	17.1	1371	4896	280
Sao Tome Prn	46.2	64.6	20.0	32.3	61.5	65	90	722
Zaire	19.3	54.1	20.5	60.8	54.6	4229	26205	161

Central African Customs and Economic Union (UDEAC CFA franc area).

Country	G	C	I	X	M	GDP	Pop X1000	GDP P.C.
	Share in gross Domestic Product							
Cameroon	10.6	70.1	21.3	15.2	17.2	11993	8362	1434
C. Af. Rep.	12.9	84.9	12.7	14.8	25.4	1420	2254	630
Chad	26.0	82.4	12.3	19.8	40.5	1256	4337	290
Congo	18.1	50.5	13.9	47.0	29.5	3164	1603	1974
Gabon	18.9	48.5	24.5	49.7	41.6	4864	798	6095
Equat. G	35.1	55.7	23.8	11.9	26.5	185	290	63

Economic Community of the Great Lake Countries (CEPGL)

Country	G	C	I	X	M	GDP	Pop X1000	GDP P.C.
	Share in Gross Domestic Product							
Burundi	16.7	86.5	18.9	8.2	30.3	1124	4168	270
Rwanda	17.6	79.4	12.1	8.1	17.1	1371	4896	280
Zaire	19.3	54.1	20.5	60.8	54.6	4229	26205	161

based upon the degree on economic integration that the member countries have agreed upon (see **tables 1**, **2** and **3**). These bodies tend to have elaborate secretariats, and somewhat politicized appointments. While no one questions the importance of having such institutions since the substantive problems that they address are important for Africa's development, there are difficulties in coordination among them which leads to a lack of a comprehensive strategy for the continent and ad hoc harmonization of activities (see: United Nations Economic and Social Council, *Rationalization and Harmonization of ECA-Sponsored Institutions*). There are a number of fundamental problems that these institutions are facing which hinder the harmonization that is necessary to produce a well defined African strategy, the most important is a lack of funding. These institutions largely depend on funds from assessed contributions of their member states. There are so many institutions that the total bill for dues becomes so high the member states often fall behind in their contributions. As a result, some institutions find it difficult to cover recurrent expenses, including salaries. Another source of funding is extrabudgetary from international organizations. This is usually in the form of project assistance and is normally provided over the life of the project and does not necessarily carry an expectation of extension. A second reason for a lack of harmonization is inherent in the autonomy of the governing bodies which oversee the work of the institutions. They normally operate with very limited interaction among themselves, thereby limiting the policy coordination between institutions. In this sense, even if each organization were to optimize policies from its own perspective, at best they would be working in partial equilibrium. Because of the problem of institutional coordination and harmonization, the annual Conference of Chief Executives of ECA-sponsored institutions was established to provide a forum to discuss common problems and possible solutions including harmonization efforts. However, because of financial problems or a lack of interest, the Conference has been poorly attended. The majority of the institutions have not been represented making it difficult to address problems of coordination and harmonization among all the relevant institutions.

At the Twenty-eight session of the Commission/nineteenth meeting of the Conference of Ministers, in Libreville, Gabon, the Economic Commission for Africa addressed these problems and made a number of recommendations to solve them. It is hoped that they will be followed-up with concrete actions by all concerned to facilitate their implementation. ●

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