

Development Research in Eastern and Southern Africa: Some Issues for the 1990s

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Résumé. Vers la fin des années 1970, la baisse des niveaux de vie partout en Afrique au Sud vers Sahara était déjà visible. Cependant les crises qui en ont été responsables continuèrent et accouchèrent vers la fin des années 1980 d'un état d'agitation. Depuis quelques temps, la plupart des pays de la sous-région, parce qu'en fin ramollis par des années d'adversités, revoient leurs stratégies de développement à long termes, les remplaçant souvent et entièrement par des politiques à court termes spécialement destinées à gérer les crises actuelles. Cependant quelques uns de ces pays commencent à chercher au-delà des crises, à mettre en place des stratégies à long terme. Tout cela comporte des implications pour la recherche développement. Par conséquent il faudra de nouvelles stratégies à la recherche développement. Cependant quelles que soient les conséquences de ces stratégies, il faudra nécessairement pour les crises actuelles de la région, qu'elles remontent jusqu'aux prémises. Il faudra ensuite, pour les options qu'elles auront à proposer, qu'elles travaillent sur la base d'une contrainte continue de ressources très limitées. Qu'est-ce que cela veut dire en pratique pour l'Afrique Australe et l'Afrique de l'Est?

I - Introduction

The severe crises that have ravaged sub-saharan Africa now for more than a decade are forcing a re-examination, and increasingly, a repudiation of the strategies with which the region had been pursuing development. Indeed, development economics itself is going through a phase of grave self-doubt owing to those crises¹. Today adjustment of existing development policies not only is considered necessary, but is already underway virtually everywhere in the region, in one form or another - planned or unplanned, imposed or voluntary. Between 1980 and 1985, more than 30 African countries already had adjustment programmes with the International Monetary Fund (IMF). Today, for most countries in Africa adjustment is seen as the "dominating

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1 See, for example, Thandika Mkandawire's review "The Rise and Fall of Development Economics", in a paper presented at the Sixth General Assembly of CODESRIA, 5-8 December, 1988 (Council for the Development of Economic and Social Research in Africa, Dakar, Senegal).

economic preoccupation for setting the frame and constraints within which all other economic and development issues have to be considered"². At the same time, however, the policies that have come under review are thought to be so deficient in relation to the region's present circumstances, and deficient in such fundamental ways, that more than "mere" adjustment is seen to be required: no less than whole new long-term development strategies, accompanied by radical administrative reform³, are considered necessary.

But if the need for new development strategies is already clear, the precise elements of those strategies are not. What new goals should such strategies have? What new priorities should they set for themselves? To assure that the new goals and priorities are more "valid" than those they replace, what criteria should be used in choosing them? What ought to be the objectives in each priority area? How are those objectives to be achieved? What specific programmes of activities will each objective require? How will each programme be managed and with what resources? These questions (and others like them) are likely to command greater and greater attention in the coming years. As the quest for new development strategies becomes more and more earnest, they are likely to become some of the key issues that development research⁴ will be expected to illuminate before all else.

To do so, however, development research will almost certainly need new strategies itself. There is indication of this in at least one circumstance; development research may have been making the same kind of assumptions about development as the development strategies themselves (regarding goals and priorities, for example). When those assumptions are replaced by others, development research should not expect its strategies to remain wholly valid. A second indication that those strategies at any rate may not have been adequately taking into account the nature and number of crises being experienced in the region is the optimism with which development research has tended to address Africa's crises.

What new strategies, therefore, might development research adopt in the future? This is a question which this paper will address, with regard to sub-saharan Africa generally, but Eastern and Southern Africa specifically. The answer is not straightforward. One thing, however, seems clear: whatever else those strategies entail eventually, somehow they will have to include the

2 Giovanni Andrea Cornia, Richard Jolly and Frances Stewart (editors). *Adjustment with a Human Face: Protecting the Vulnerable and Promoting Growth* (Oxford, Cleared Press, 1987), p. 5.

3 See, for example, E.A. Brett - "Adjustment in the State: Problems of Administrative Reform" *IDS Bulletin*, Vol. 19, No 4, (October 1988), p. 4.

4 "Development research" is used here to denote research that seeks to facilitate development in Third-World countries, especially by promoting the use of improved technologies and by generating information for sound and equitable policies.

region's present crises among their "initial conditions".

II. - Context

To illustrate this and to provide a context for what the paper will claim later, a brief description of these crises may be given. None of the crises are purely "economic", "political" "social" or "natural", of course, these categories are employed purely for convenience of exposition.

2.1. - Economic crises

For about two decades, a series of "shocks" have hit sub-saharan Africa relentlessly, leaving the region's weak and predominantly commodity-dependent economies deeply destabilized.

The oil-price rises of 1973 and 1979 forced the region to divert to oil imports high proportions (in some cases, 50 percent or more) of its scarce earnings from exports.

A major recession in the industrialized North produced a decline in demand and price for commodity exports "not seen since the Great Depression"⁵, which started in the 1970s and continued into the 1980s.

Increasing protectionism in OECD countries made matters worse by reducing the region's access to their markets.

Generalized inflation in the world economy, which began in the 1970s, encouraged the region to accumulate debts. In 1974, the total debt of sub-saharan Africa was about US\$ 14.8 billion, but was US\$ 102 billion in 1986.

Subsequent disinflation in the world economy in the face of relatively high levels of debt at high real interest then increased the region's debt burden (to about US\$ 38 billion in 1988)⁶.

As credits and direct foreign investment into the region began to dry up (around 1980), foreign aid tapered off, resulting in greatly diminished inflow of capital.

By the early 1980s, these problems, aided by other factors (to be described later), had produced genuine catastrophe. In much of the region, output *per capita* had sunk below its 1960 level. Between 1980 and 1984 the GDP declined an average of 1.4 percent a year, GNP *per capita* an average of 4.4 percent a year⁷, export volume 7.4 percent a year, and import volume 5.9 percent a year⁷. Nearly everywhere, declines in standards of living were evident. The process of economic and social transformation, begun so promisingly at independence in the 1960s, was unravelling. It is expected to

5 Thomas M. Callaghy - "Debt and Structural Adjustment in Africa: Realities and Possibilities", *Issue: Journal of Opinion*, Vol. XVI. No 2, 1988, p. 11.

6 World Bank, cited in *Africa Research Bulletin*, Vol. 25, No 12. (January 31, 1989).

7 Thomas M. Callaghy, op. cit., p. 11.

continue to do so well into the next decade. For low income African countries, GDP per capita in 1990 and 1995 will be lower than in 1973 and 1980. For the majority of poor African countries, therefore, more than two decades of growth will have been lost⁸.

2.2. - *Political crises*

But Africa's economic hardship has been exacerbated by political problems. The including the following:

Governments in most African states are still fragile; they continue to be preoccupied with their own survival in a manner that makes development a rival - quite often a secondary - concern. Owing to political refugee. For states long locked in cycles of immobilizing ethnic strife, disruptive military coups, or paralyzing ethnic strife, disruptive military coups, or paralyzing rebel resistance, development may even be irrelevant.

Independence brought with it an urge to develop "African" ideologies. However, some of the domestic "philosophies" that emerged circumscribed the host countries tightly into a corner. Their dogmatic enforcement, even turned them into real obstacles to development.

Political succession in the region still poses a dilemma, changing presidents, whether through natural causes or through other arrangements, tends to spark off civilian and military unrest, but, on the other hand, retaining the same president indefinitely tends to foreclose some options, also indefinitely, and may lead to stagnation.

African economies, which separately are too small and fragmented to be viable, would benefit from regional integration. However, that can only come after *national* integration, and in some states this is yet to be achieved. Nevertheless, an even greater obstacle to regional integration is the narrowness of the partners self-interest and their reluctance to relinquish any of it to achieve regional co-operation.

Finally, African states still lack the capacity to act out their will. Many resolutions are passed but little is done to implement them. Even when the state attempts to impose its will on the citizenry, its ability to do so scarcely extends beyond urban centres, which leaves about four out of every five persons beyond reach. This impotence inclines African statemen to resort to "development by exhortation". Ineffective to begin with, that recourse is made even less effective by the immobilizing grip of ubiquitous corruption.

2.3. - *Social crises*

Even though Africa's social problem are many, only three of them will be

8 World Bank, *World Development Report 1986* (New-York: Oxford University Press).

mentioned here - partly thereby to give them deserved emphasis.

Population. One of them, perhaps the most discouraging, is the "population problem", represented by a high growth rate of Africa's population (now higher than that of any other continent). Africa's total population, which rose from 270 million in 1970 to the present 420 million, seems set to double by the turn of the century and significantly more than triple by the year 2020⁹. In consequence, individual income is steadily diminishing as total income is shared among more and more persons. It has been estimated, that half of the decline in GDP growth rate, from 1.4 percent a year in the 1960s to 0.4 percent a year during the period 1970-81, was due to an increase in the population growth rate (from 2.3 percent a year in 1960 to 3.1 percent a year in 1981)¹⁰. In the absence of concrete efforts to control it, the population growth rate may be expected to remain high in the years to come. To be sure, there has been a shift in African positions about population, from the pronatalist defiance of the 1970s, through the instinctive defensiveness of the early 1980s, to the present puzzled embarrassment. Positive action, however, still remains rare.

Education. A second social problem is the inadequacy of African education to its purposes. It is already clear that African countries will achieve development primarily, some might say, *only* to the extent that they will develop and adopt efficient technologies; that this is now a cliché is part of the evidence. It is also already clear, however, that this is not going to happen without education. For it to happen, African societies will have to change in two fundamental ways. First, their present attitudes towards *nature* will have to change. Often those attitudes are still based on a misreading of nature. Not rarely, therefore, nature's ordinary behavior elicits apparently whimsical responses, rather than calculated attempts to exploit it through its own laws. This will have to change. second, African societies interaction with their *environment*, too, will have to change. At present that interaction is inefficient, and often destructive to the environment - because it is not sufficiently methodical or adequately discriminating in its deployment of effort. There are not enough systematic attempts to take maximum advantage of connections between events or relations between objects. Indeed, effort is often pitted against both. This needs to change. The above two changes ought to be *the* primary goals of African education. But they most certainly are not.

Health. The third problem area is health. Sub-saharan Africa is the only region in the developing world where nutrition has worsened in recent years.

9 World Bank, *Toward Sustained Development in Sub-Saharan Africa: a Joint Program of Action* (Washington D.C.: The World Bank, 1984) p. 26.

10 World Bank, *op. cit.* p. 21.

It is believed that general health is declining. This whole subject has been given a sudden twist and then hurled into prominence dramatically by the incidence of AIDS. In the absence of a known cure AIDS will continue to be controlled through preventive practices. However, the existence of a known cure can be a relative matter, since a lack of access to an existing cure (now common once again in crisis-ravaged Africa) is indistinguishable in its effects from the absence of a known cure. Clearly, the relevance of preventive practices is greatest in Africa and extends beyond AIDS. In Africa, however, those practices will remain least effective (due to nonadoption) so long as existing attitudes towards disease prevail. To change those attitudes ought to be the primary goal of education, even though, as stated earlier, it is not.

2.4 - Natural crises

The worst drought in fifteen years hit Africa in the early 1980s, starting in 1982 in Southern Africa and extending to the Sahelian zone in 1983. According to estimates by the Food and Agriculture Organization (FAO), food production in the 24 "most seriously affected" countries declined by about 15 percent between 1981 and 1983 alone. Some of those countries then experienced their worst famines in decades. The drought, however, was only an extreme. Even in normal weather, bad climate and poor soil remain Africa's basic constraints. They are made even more limiting by the inhabitants present attitudes towards nature and their interaction with the environment. These need to change. To change them, it cannot be said often enough, ought to be the primary goal of African education, even though it is not.

Such is the context in which development research must work out its new strategies. It is a gloomy picture, indeed, be speaking of impossible challenges. Not surprisingly, after surveying the scene, one commentator has concluded that [to] be a realist about Africa one must be a pessimist¹¹.

III. - Choice

Resources for research in Africa have never come anywhere near being sufficient. Until 1987, the continent's allocations for R and D average only about 0.4 per cent of GNP, well below the threshold of 1 per cent which, it is believed, R and D must cross in order to begin to make economic impact¹². But even this low average masks the fact that as crises in the local economies deepened (Section 2.1), allocations began to diminish, in real terms, and continue steadily to do so. Should they diminish to zero, little point will be left to be guided by those strategies. The "resource question"

11 John Sinclair - "Africa and Structural Adjustment: a Personal Perspective", in *Structural Adjustment in Africa: External Financing for Development* (Ottawa, Canada: The North - South Institute, 1988), p. 42.

12 UNESCO, *CASTAFRICA II: Final Report* (Paris: UNESCO, 1988) p. 51.

therefore, is a critical one, and perhaps ought to be addressed first. However, the "zero-resource" scenario seems extreme. Less extreme is the certainty that resources for research will be *severely* limited.

That certainly implies that the quest for new research strategies is above all, an issue about *choice*. With severely limited resources, development research is going to have to make tough decisions. Hard choices will have to be made in at least two "spaces": the "problem space" and the "approach space".

3.1 - Problem

In the problem space, the choice is about *what* problems to study, given that available resources permit the study of only *some* of them. It is therefore an issue about priority. Since, far from being monolithic, Africa has great diversity, the priorities - and consequently the choices - are not going to come out the same everywhere. From this point on, therefore, it will be necessary from time to time to confine attention to Eastern and Southern Africa, although even, there a careful consideration of exceptions would not warrant some of the generalization that will be made.

Were one to poll informed opinion in Eastern and Southern Africa in an attempt to identify the one most important sector in the local economies in need of development, a consensus should quickly form around *agriculture*. This is worthy of note. As an indication of priority, however it is still too general to be helpful. Help comes at higher levels of detail, when, however, consensus also becomes more difficult to establish. But at a *second* level, consensus is still possible. For example, were one to ask about the one most important sub-sector in need of development *in agriculture*, consensus should form (although now perhaps not so quickly) around the *smallholder sub-sector*. Already this is significant. If, for example, current research strategies discriminate against smallholders in favour of large-scale farming, this indicates that a re-orientation towards the problem faced by smallholders ought to be part of the new strategies of development research. Throughout Eastern and Southern Africa, smallholders predominate in the production of traditional crops. For example, they produce 85 per cent of the maize in Tanzania, 93 per cent of the sorghum in Botswana, and 81 per cent of all agricultural output in Malawi¹³. Similarly, livestock production is predominantly a smallholder activity. The problems faced by smallholders in the region clearly deserve attention. Nevertheless the region's research is thought to be chiefly concerned instead with problems faced by owners of large farms¹⁴.

13 SADCC, *Agricultural Research Resource Assessment in the SADCC countries* (Vol. 1): Regional Analysis and Strategy (Gaborone, Botswana: SADCC, January 1985) p. 11.

14 SADCC, *op. cit.*, p. 10.

Consensus seems possible even at a *third* level. Here, one might first want to know, the one most important area in need of improvement *in the smallholder subsector*. Afterwards, one might want to know the two or even the three most important areas. As it happens, an "agricultural research resource assessment" carried out recently in Botswana, Lesotho, Malawi, Mozambique, Swaziland, Tanzania, Zambia and Zimbabwe, among other things, has nearly done just that. It asked "knowledgeable persons" to rate the severity of constraints to increased small-holder output. The result was that "economic", "traditional" and "institutional" and "institutional" factors were given the highest ratings. In addition, most respondents indicated that twice to three times current yields were possible if these constraints could be eliminated or substantially reduced¹⁵. This is even more significant: it suggests possible new directions that research might take. However, there is need to point out that elimination or reduction of constraint, may require *action more* than it suggests possible new directions that research might take. However, it ought to be pointed out that elimination or reduction of constraint, may require action more than it does research. This is actually part of a larger point, which may be stated in the form of a slogan to give it force: though research can illuminate problems, only action can actually eliminate them.

To continue, at higher and higher levels of detail consensus become more and more difficult to establish. The point nevertheless is to go on until consensus is no longer possible. Then one should stop. To press on further would be to enter a zone of uncertainty.

The cycle is then repeated by searching for the two most important sectors in the local economies in need of development. This will reproduce "agriculture" and, in Eastern and Southern Africa, "industry" will have to be added.

A third cycle is less likely to produce a unique addition, but possible additions in Eastern and Southern Africa might be transport and communication, mining, and so on. In any case, the process continues until expected resources cease to be adequate for the problem areas already generated. If more problem areas are added, research that cannot be completed will be initiated. This procedure has the common weakness of overlooking multi- and cross-sectoral problems, such as population, and macroeconomic management (including structural adjustment), and therefore needs "corrections" at the end. But although more elaborate procedure for establishing priorities exists¹⁶, it provides a quick indication of the strategic areas on which research ought to focus.

15 SADCC, *op. cit.*, p. 11.

16 See, for example, UNESCO, *Method for Priority Determination in Science and Technology* (Paris: UNESCO, 1976).

3.2. - Approaches

In the "approach space" the choice is about how to study the problems which, it is assumed, have already been selected. This choice has two parts. On part concerns a choice of approach *internal* to the problem to be studied - having to do, for example, with scientific technique. This is specific to the problem itself, and is determined largely by it; little more need be said.

The second concerns a choice of approach *external* to the problem. Under conditions of severely limited resources, this entails above all a decision to use only *existing* research capacity, and more effusively. The point, however, is not just about diminished resources for research, since resources for research have been known to rise while results from research fell. For example, between 1970 and 1980 the number of agricultural research scientists in Africa is said to have risen from 1,600 to over 4,000. But in that period no major practical advances occurred comparable to the breakthroughs achieved in the 1960s, when new maize hybrids were adopted in Eastern and Southern Africa¹⁷. Research in other sectors has done no better; in some it has done much worse.

One strategic point for action in the quest for more effective use of existing research capacity is *management* of research programs. In this connection, several areas are in need of improvement. They include programme *definition*: it has been said that in Africa "researchers are often underemployed because programs lack focus, continuity and coherence"¹⁸

More effective use of existing research capacity, however, also means greater utilization of results from research. Among other things, it means strengthening linkages between researchers and the "users" of their results. If no such linkages exist neither the researchers nor the users will see the practical relevance of research, nor, therefore, the need to disseminate its results. The strategic importance of results utilization is illustrated by the following two limiting cases: one uses limited resources to initiate new research while still no effort is made to utilize or disseminate the results from the new research or those from previous research: the other initiates no new research but spends the limited resources on efforts to utilize or disseminate the results of previous work. The superiority of the second case over the first is manifest. What this means in practice is that in the future researchers might work to advance the utilization or dissemination of *other* researchers

17 World Bank, op. cit. pp. 31-32.

18 Ibid.. A second area is *balance* between salary and research expenditures; payrolls of research institutions remain high while there are shortages of research equipment. Such shortages are often caused by foreign exchange constraints; But payrolls are also high while there are shortages of research *funds*. That is often a result of the immunity from budget cuts enjoyed by personnel, even in over-staffed institutions. There is clearly room for improvement there.

results, rather than initiating new activities of their own.

Finally, more effective use of existing research capacity also means exploiting available opportunities for regional impact. In this connection, opportunities for multicountry research projects are not to be missed. When they coincide with political or economic country groupings, they attract greater attention and have a correspondingly higher chance of impact than single-country initiatives. The most important such groupings in Eastern and Southern Africa include the Southern Africa Development Co-ordination Conference (SADCC) and the Eastern and Southern Africa Preferential Trade Area (PTA). Whether multicountry research projects should include the creation of *more* regional research centres (or even support of *existing* ones), however, is becoming less and less certain. There is increasing preference for project-oriented networks forged directly between *national* research centres. This still means that national centres must be strengthened - "two zeros cannot co-operate" to build a network. But at least network avoid many of the overhead characteristic of regional centres.

The dissemination and utilization of results can be particularly difficult, *but* are nonetheless important, in the case of social scientists - specifically, "policy researchers". Results from policy research quite often aspire to inform - and even influence - policy. As with other researchers in Africa, however, policy researchers are often based at universities. On the other hand, of course, policy makers are based in governments. The great difference in universities and governments working styles is one of the problems policy researchers will have to overcome in seeking the utilization of their results. Because of it, even in the United States, "the record of university-based efforts to provide usable advice" shows that "none of those efforts have had any visible effect on policy"¹⁹. This university-government divide disinclines researchers from giving advice to governments to begin with, and when they do, it inclines them to give it in ways that assure for it the governments' rejection. "It is easy to give advice, even good advice, to political leaders in such a way that they will not ask for it again"²⁰.

But while the task of giving policy advice may be daunting, the potential for making practical contribution also is great. The single most important preoccupation of African governments for years to come will remain policy management - that is, the implementation, monitoring and review of policy; the ubiquity of structural adjustment programs is part of the evidence. There is a clear opportunity, therefore, for policy researchers to make a practical

19 Peter Szanton - *Not Well Advised*, (New Well Advised, (New York: Russel Sage Foundation and Ford Foundation, 1981), p. 57.

20 McGeorge Bundy, in William T. Golden (editor) - *Science and Technology Advice to the President, Congress and Judiciary* (New York: Pergamon Press, 1988), p. 74.

contribution.

This, however, is likely to require adjustments of its own. Some of the adjustments, will entail changes of *images*. To be credible to their governments as sources of expertise, policy researchers may first have to determine the authorities image of an expert and then remould themselves accordingly. In this regard, a mixture of mystery and symbolism may prove necessary: some authorities think that mixture essential in conveying truly "learned" advice. Even then, surprise is still possible: advice may be spurned because a *local* expert proffered it, or embraced because a foreign expert did. "No one is a prophet in one's country"!

Some of the adjustments, however, will involve changes of substance. Policy researchers, it has been said, quite often ignore their customer. "They design intricate models to give sophisticated answers to questions nobody asked"²¹. One way to change this might be to forge a collaborative partnership between policy-researchers and policy-makers. This would assure not only that research addresses real policy needs but also that policy-makers identify with its results. But even this would not assure results utilization. If advice proposes substantial change, "it is near certainly that the change will not be accomplished unless [the] advisor himself is prepared to devote months, perhaps years, to bring it about"²². Why would the policy researcher wish to go to that trouble? Clearly, incentives are needed. Here the belief in results utilization is finally put to the test. Its sincerity will be indicated by the willingness to use available research funds to cover such incentives. "The proof of the pudding is in the eating"!

IV. - Resources

In Africa, resources for research are in such short supply that even their presence can mask their absence. For example, a researcher's salary is often sufficient to meet living costs for only a fraction of the period over which it is earned. What this means in practice is that "present" researchers will be absent in company time, while their supervisors look away to enable them to go out and earn supplementary income. Studies of the "research environment" carried out two years ago in Botswana, Tanzania, Zambia and Zimbabwe found that researchers salaries had fallen in real terms by to 40 per-

21 David Apgar, "Marketing of Policies: Who is the Real Policy Analysis Customer?" *Project Appraisal*, 1987, Vol. 2 No 1, p.51.

22 Peter Szanton, op. cit. p. 133.

cent in the previous five to seven years alone²³. Today, for many researchers a month's salary²⁴ is less than the equivalent of US\$ 100, and meets the cost of living only for the first two weeks or less. For the remaining two weeks income must be found from elsewhere.

4.1 - Consultancies

Increasingly, researchers are finding it from consultancies (not to mention farming and a wide variety of "allowance" - earning activities). For some, consultancies are now the major source of their income. If the initial institutional affiliation is retained, the reason is partly the "respectable address" and "additional security" it gives to "operations". So far this development has been receiving mixed reviews. Some fear that it is fragmenting research in random directions, contributing to further loss of focus and coherence and that, in any case, in the course of it research institutions are being "used". The researchers themselves of course think it is the best thing to happen since universities came of Africa.

A more relevant question to ask, however, may be whether, given its severely limited resources, research could put this development to good advantage. There are signs that it could. On one hand, diminishing salaries have forced researchers to put a value to their skills and to market them more aggressively than before. This would seem to be a good development. On the other hand, local firms and government institutions, too, are becoming more willing to pay for services which researchers might previously have rendered "free" of charge. Again, this is a positive development, one, moreover, that is not incompatible with the first. To the extent that consultancy fees defray research costs, they may be viewed as a channel of resources to research. In that case, the upsurge of consultancies may represent increasing importance of that channel, to be encouraged rather than discouraged. Further, since consultants do exactly what they are hired to do; it could even be argued that consultancies are need-oriented research *par excellence*. But, of course, consultancies can have no research component.

4.2. - Donor Assistance

One estimate has put external support to development research for the year 1984 in the range of US\$ 1.3 - 1.4 billion²⁵. Figures on allocation of re-

23 Tebicke, Haile Lul, *Research Environment in Botswana* (Stockholm: SAREC 1987). The author's similar reports on Tanzania, Zambia and Zimbabwe also were published by SAREC in 1987.

24 Also see ESAURF (Eastern and Southern African Universities Research Programme). *University Capacity in Eastern and Southern African Countries* (London: James Currey, 1987).

25 John P. Lewis - *External Funding of Development-Related Research: a Survey of Some Major Donors* (IDRC, Manuscript Report MR 160e), September 1967.

sources to research in developing countries themselves (often considered "confidential"), of course, are much less precise. But there is little doubt that the external component represents a significant fraction of those countries *entire* research budgets - perhaps as much as 10 per cent, and varying from one country to another. This global percentage masks the fact that the figure for Africa is higher. In 1988, for example, an official of the University of Sierra Leone estimated that about 90 per cent of the University's funds for research *activities* (that is, exclusive of salaries and infrastructure) came from external sources including about 70 per cent from the international Development Research Centre alone²⁶. Since there was little research going on outside the University, the official thought his estimate applied also to Sierra Leone as a whole. While Sierra Leone may be an extreme case, it illustrates the crucial role that donors have played in Africa's research programs. Given the region's bleak economic prospects, donor dependence of African research is not going to disappear in a decade, or two, or even three.

26 Private communication to the author, (October 1988).