A strategy for graduate training in economics for Africans

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Preface

This paper has benefited from the erudition of many people too numerous to mention individually. They include members of the AERC Board and Advisory Committee; professional and support staff of the Rockefeller Foundation, Ford Foundation, USAID, the World Bank, and International Development Research Centre; department heads and scholars in the AERC "network"; and officials in African governments. I have drawn upon material collected by Professors Mohamed Mukras, S. Ibi Ajayi and Jacques Pegatienan. The reader is invited to refer to their published reports, especially where their opinions and recommendations may differ from my own.

I wish to acknowledge the contribution of two other individuals. My colleague, Prof Benno Ndulu spent many hours discussing the current state of higher education in Sub-Saharan Africa and various elements of the strategy proposed in this paper. The research of Prof Tom Eisemon of McGill University was influential in shaping my own thoughts on the changes occurring in higher education in Sub-Saharan Africa, and how these might best be accommodated in a limited intervention aimed at strengthening the advanced training of African economists.

Responsibility for the final product rests with me, and does not necessarily reflect the views of any of the above.

Jeffrey C. Fine

Foreword

Reflections of a new graduate from an African university

Although I had feared the worst,
I managed to obtain a first
Now I am able to proceed
To get the Masters that I need
The only problem that I face,
Is where to try to find a place
They offer something locally,
But I think that's not for me
You might think I'm prejudiced,
But there are some points you might have missed

First, although the local MA's stronger,
Completing it will take much longer
Second, I might learn more by far
But will I be able to acquire a car
Third, if I got a foreign degree
There'll be much more respect for me
So you can see I can't afford,
Not to spend some years abroad

On reflection, perhaps I ought
To pause, and give a second thought,
If we don't stay and study here,
The problem will arise each year
In 20 years without a doubt,
Our kids will still be going out
So let's stay and work until some pride is shown,
In proclaiming, "my degree's home-grown"

Rob Davies
Economics Department
University of Zimbabwe

Part One: Background to the strategy

I. Introduction

The principal aim of the African Economic Research Consortium (AERC)[1] is to strengthen local capacity for conducting independent, rigorous inquiry into problems pertinent to the management of economies in Sub-Saharan Africa. From AERC's establishment in August 1988, institutional support and training have been considered a functional element of its programme. At present, the AERC finances sabbaticals and institutional attachments to consolidate skills upgraded through research.[2] The Consortium also supports graduate thesis research on topics falling within thematic areas designated by its Advisory Committee. Modest institutional grants are provided to teaching departments to remove impediments to research through the purchase of such items as microcomputers, photocopiers, and professional literature.

Requests for these grants have been assessed in terms of their likely facilitation of research financed by the Consortium. This policy, however, also underscores a more general awareness of the close relationship between research and formal training.

Most AERC research is conducted by academics employed in teaching departments. Modest material support for research often assists teaching. Research that applies hard earned skills to current issues can help raise morale in a deteriorating professional environment. AERC support for research emphasizes the upgrading of skills and thus indirectly raises the quality of instruction. Research results make coursework more relevant through the introduction of contemporary materials pertinent to local concerns.

These linkages are acknowledged in the allocation of a nominal sum in the AERC budget toward PhD training. The amount would have barely sufficed for one overseas fellowship during the AERC's first three-year phase. However, its inclusion in the programme of work and budget signifies strong interest in the postgraduate education of African economists, and points to the possibility of greater involvement in future.

The strengthening of researchers' skills features prominently in AERC's research programme. By deliberately confining its coverage to a few broad themes, currently balance of payments management and domestic financial management, the Consortium has been able to introduce procedures and concentrate its resources so as to raise the technical competence of participating

scholars. Research is financed by a series of annual grants that successively deepen knowledge and skills with the ultimate intent of applying economic theory and methods, in a creative and rigorous way, to the analysis of African problems. To this end, the Consortium has evolved modalities that steadily raise the competence of researchers. Proposals falling within themes covered by the Consortium are scrutinized carefully, and are frequently revised in response to detailed comment and reference to relevant scientific literature.[3] Proposed and ongoing research is discussed by professional peers, comprising fellow researchers and noted resource persons, at biannual meetings of each thematic network. Results are compiled in a final report that is then reviewed externally for possible publication as an AERC Research Paper.

This elaborate and labour-intensive process is directed by the Consortium's Secretariat, which also carries out the more conventional tasks associated with the administration of research grants. As noted in the recent external evaluation of AERC's programme (Svendsen 1990, pp. 5–7, 10–11), the Consortium is continually adapting these modalities in response to operational experience and to accommodate a cautious expansion of researchers and thematic coverage. The process is far from consolidated, and its success, in terms of sustained original and rigorous research into African economic problems, has yet to be assured.

An expanded role for the AERC in the formal training of African economists was therefore approached with considerable caution by its Secretariat, Advisory Committee and Board. A first step was to obtain reliable information concerning the state of graduate training in economics for Africans. To this end, the AERC, commencing in May 1989, launched a series of studies with the active involvement of up to 15 heads of department in Sub-Saharan Africa. The background to these studies and their findings are presented in Section II. A major conclusion is that many of the problems besetting graduate education in economics are "systemic", in so far as they manifest a deeper crisis in higher education in the region. The next two sections place these systemic problems in historical context, first in terms of trends and problems in higher (tertiary) education (Section III), and secondly, with respect to external interventions over the past 30 years (Section IV). This review falls far short of a comprehensive survey of the voluminous literature on higher education in Africa. Rather, its intent is to ascertain the type of intervention most likely to prove sustainable under conditions of considerable duress and uncertainty. The intervention itself, namely the strategy for advanced training in economics is presented in Section V, "The training strategy", Section VI, "The MA programme", and Section VII, "The PhD programme". The concluding Section VIII, "Implementation of the training strategy" considers a prospective role for the AERC, in conjunction with local institutions, national governments, and external agencies.

II. AERC studies of graduate training in economics

Background

Implementation of AERC's research programme has been conditioned by its staff's general awareness of deteriorating conditions for teaching, as well as research, in the region. Prior to assuming his present position, AERC's Research Coordinator had been Chairman of the Economics Department of the University of Dar es Salaam. Over a five-year period, he and his colleagues managed to strengthen the Department's MA programme, and over a longer period of collaboration with the Swedish International Development Agency (SIDA), to implement a successful staff development programme at the doctoral level. AERC's Executive Director, at an earlier stage in his career, had been actively involved in educational planning and budgeting in Kenya.

Further knowledge was obtained through periodic visits to universities. In addition, the biannual meetings of researchers, which often included 10 or more heads of department, and deans of social sciences, provided an opportunity for informal discussion of conditions for teaching as well as research. Requests for AERC grants to conduct thesis research supplied further information concerning African graduate students. The surprisingly low demand for these grants suggested that the numbers enrolled for higher degrees in economics was disturbingly small.[4]

Additional information was contained in requests from institutions for modest grants to alleviate specific constraints. The absence, in many instances, of simple equipment, eg. typewriters and calculators, and of basic reference materials, was indicative of a more general crisis in higher education.

Three principal conclusions were drawn from these sources. The first was that the research programme needed to take account, through appropriate adjustments in modalities and procedures, of a deteriorating environment. Below subsistence salaries, increased teaching and administrative burdens, and a self-perceived decline in professional status would restrict the time and energy available for research. Secondly, the situation was very complex, and thus not amenable to simplistic diagnosis and remedy. A few institutions appeared to function well in the midst of difficult economic conditions. A surprising number of scholars were able to sustain their research despite a growing teaching load and apparent

decline in remuneration. Further in-depth investigation into different national and institutional settings appeared desirable. Finally, it was apparent that the researchers themselves, comprising heads of department, established academics, and younger scholars, held strong views on the causes of these difficulties, and had a vested interest in devising possible responses to them.

What was not clear to AERC's Secretariat or its Advisory Board was whether the Consortium should expand its involvement beyond attempts to alleviate specific problems through modest grants to individuals and institutions, and by facilitating periodic discussions of training issues. The AERC's Advisory Committee recommended, and the Board subsequently agreed, that part of the nominal sum allocated toward PhD fellowships should be used to mount a study of graduate training in economics for Africans. Its formal objectives were twofold, namely to provide a more accurate assessment of conditions for advanced training in economics, and to define a possible role for the AERC, consistent with its mandate, structure and resources.

This study, which started in May 1989, was also aimed at encouraging structured exchanges on training issues among leading scholars and the heads of teaching departments. The involvement of this group was considered essential to the design and implementation of a sustainable strategy for the advanced training of African economists. The group collaborated with three consultants[5] in the design of their study (May 1989), and commented on their interim findings (August 1989) and final results (December 1989). The group also facilitated the consultants' field visits.

The results of this first round of studies are contained in separate reports by the three consultants, and in a joint report, circulated in draft form to AERC researchers and discussed at a meeting of its Board in November 1989 (Ajayi, 1990; Ajayi, Pegatienan and Mukras, 1990; Mukras, 1990; Pegatienan, 1990). The Board formally agreed that AERC's mandate for research included research by Africans into issues of training; approved further study into specific modalities, identified by the first round, for strengthening MA and PhD training; and directed the Executive Director to recommend a strategy for advanced training for AERC's second three-year phase, commencing January 1991.

The second round of studies, which started in February 1990, differs significantly from the preceding one. Separate exercises have been initiated for three distinct groups of universities. The first is anglophone Africa with the notable exception of Nigeria. These institutions, in addition to language, share many institutional and academic antecedents. Their national structure of higher education is largely undifferentiated, with a few, and frequently only one university performing a multiplicity of functions relating to research and training. For this group, the AERC has carried out a second round of studies, focusing on possible modalities to strengthen MA and PhD training. This round has also entailed extensive participation by university departments, whose heads met on 9–10 February 1990 in Nairobi to finalize a questionnaire. A second meeting was held March 31 and April 1 to review their findings and discuss, at considerable length, specific proposals for strengthening graduate training. The consultant co-

ordinating this round undertook two overseas trips, to the UK, the Netherlands and Scandinavia in February 1990, and the USA and Canada in May 1990, to meet with donor agencies, African students, and the academics, scholars and administrators involved in their training. A final report is still in preparation, but its contents have been made available for this paper (Mukras, forthcoming).

Within the anglophone group, Nigeria is exceptional in its number of universities (31) and other institutions offering accredited degrees (4) and in the size of its student population. The country's system of higher education is also variegated, comprising state universities, federal universities, and research institutes, potentially capable of performing many specialized functions. The system is ultimately accountable to a *national* authority, the Universities Commission. Maintaining close liaison with the other anglophone group, Nigerian departments are currently organising themselves to study possible modalities more reflective of their own conditions and institutional setting.

To this end, the AERC Executive Director briefed Nigerian academics at a meeting held in Ibadan in February 1990 and two of them participated in the March meeting of the anglophone group. The Nigerian study, which will be financed by the AERC, should be completed toward the end of 1990.

The first round of the AERC study coincided with the reactivation of the Conference des Institutions d'Enseignement et Recherches Economiques en Afrique (CIEREA), which potentially encompasses those francophone institutions in Sub-Saharan Africa concerned with teaching and research in economics.[6] In collaboration with IDRC and the Ford Foundation, AERC is financing a detailed survey of programmes, curricula, students, staff and material resources, associated with instruction in economics at universities in francophone Africa. The survey will be undertaken between June and September 1990. To facilitate collaboration with the anglophone group, the AERC Executive Director has visited several institutions in West Africa, and the consultants responsible for carrying out the CIEREA survey have participated in several of the anglophone meetings.

Although beset by similar problems, the degree structure and institutional setting differ significantly *among* members of the francophone group as well as from those of anglophone universities A somewhat different initiative is therefore likely to emerge from this process.[7]

Findings

Advanced training in economics appears, with some notable exceptions, to have collapsed in Sub-Saharan Africa. The principal causes cited in the reports and discussions are stagnation in material support (in real terms) along with a rapid growth in undergraduate enrolments. The complex factors underlying these broad trends are examined in the next two sections. The reports describe the many tangible symptoms of this collapse: an acute shortage of trained staff; recourse to second and third occupations to supplement below subsistence incomes; an absence of books, journals and office supplies; deteriorating and inadequate physical facilities; and frequent cuts in electricity, water and communications.

This collapse is most apparent with respect to MA degrees. The studies observe that possibly as few as three universities can offer annually a sound MA programme that combines good coursework and a properly supervised thesis. Some older universities have had to suspend their degree or to offer it on an irregular, informal basis with inadequate coursework and supervision. Some newer institutions have declared their intent of introducing an MA degree in economics. Their likelihood of success is belied by an inexperienced and underqualified staff, expanding undergraduate enrolments, and inadequate guarantees of longer term support.

This situation is puzzling since senior government officials contacted during the studies complained of an acute shortage of well-trained graduate economists. The officials spoke knowledgeably about serous inadequacies in the local training received by recent graduates. There appeared to be a pressing need for individuals with a solid grounding in economic theory and method to analyse policies and manage programmes. Indeed, many governments are spending substantial sums to contract foreign technical services and to send local staff overseas for training, even as their locally offered programmes have been collapsing for lack of adequate public support.

Evidently the systemic problems of higher education that lie at the root of the current crisis are either not fully comprehended by local governments, or are considered unsolvable at the present time. The studies provide illustrations supporting both suppositions. Exemplifying the former is the well-intentioned effort of an African central bank to assist the local economics department and meet its own training requirements by establishing a professorial chair. The endowment provided for an attractive emolument (in local terms), and a generous fund for research. There followed protracted discussions within the university and an unsuccessful effort to identify and appoint a qualified academic. The bank is now turning to overseas institutions to meet its training needs. In support of the latter supposition, some officials noted the sizeable investment needed to mount a credible graduate programme in economics. In view of severe financial constraints, pressing demands from local and external sources, and insufficient time to marshall the technical resources and political support required for major changes in degree structure, curricula, and university administration, recourse to external services to meet urgent needs in this specialized field is readily comprehensible. Furthermore, the course of reform is indeterminate, and its outcome, in terms of a credible product, uncertain, in contrast to the less complicated option of purchasing a readily available and proven training package.

Three conclusions may be drawn from these findings. First, there exists a strong demand by national governments for MA graduates. Secondly, however, the "client's" demand is not directly translatable into investment in the local production of good MA graduates. This demand will only emerge once a credible "product" has appeared. Thirdly, and perhaps most importantly, this demand will be essential to sustain any investment, through material support and the adoption of appropriate policies affecting higher education in economics.

Collapse of the MA programmes has probably resulted in a decline in PhD candidates in African and overseas universities. Reliable data, especially on a historical basis, have been difficult to obtain.[8] The AERC reports, however, conclude that inadequate preparation at the MA level has probably reduced the

number of qualified applicants in the pipeline, lengthened the period needed to complete doctoral programmes, and raised the dropout or failure rate among candidates. For most institutions, the annual supply of new doctorates is insufficient to fill a growing number of vacancies, let alone augment the teaching complement in order to sustain a master's programme *and* also service an expanding undergraduate enrolment.

The state of PhD training prompted further investigation into the relative merits of local and overseas degrees in economics. The former, widely termed the "sandwich" programme, provides for coursework abroad and joint supervision of thesis research by staff from the local and overseas institutions. The programme, nurtured for over a decade at the University of Dar es Salaam, was introduced recently at the Universities of Nairobi, Zambia and Zimbabwe by SIDA, the sponsoring agency. Initial enthusiasm for the scheme has been tempered by a more sober awareness of possible weaknesses, which were subjected to further scrutiny in the second round of studies. The findings are presented in Section VII which describes the programme for PhD training.

The studies and discussions associated with them, revealed considered hesitation, indeed suspicion, toward greater regional collaboration as a means of strengthening graduate education in economics. In part, this attitude could be attributed to the Initiative on African Capacity Building which, in its initial version, emphasized investment in regional centres of excellence. Not surprisingly, heads of economics department, who for the most part had not been consulted in the preparation of the Initiative, perceived it as threatening to curtail rather than improve prospects for a sound graduate programme of their own. The possible imposition of an alternative approach, however, forced department heads to consider the merits of other forms of collaboration. A different concept emerged from a series of meetings that fostered a better understanding of each institution's problems and intentions, and the merits of different approaches. The outcome of this lengthy and often untidy process features prominently in the strategy for advanced training presented in Sections V, VI and VII.

The AERC studies provided useful information and identified some promising approaches to the advanced training of African economists. The participation of department heads and senior scholars activated a constituency that will play the determining role in the implementation of any training strategy. However, a set of modalities and a group of enthusiastic participants does not necessarily add up to a sustainable strategy. It must also be assessed in the broader context of trends and problems in higher education, and experiences of external intervention over the past 20 years. Those two aspects are considered in the following two sections.

III. Trends and problems in higher education

Perceived trends and responses

The many difficulties confronting university economics departments are largely manifestations of systems of higher education in acute distress. Among the symptoms disclosed by the AERC studies are:

(a) A continuing decline in real levels of support for research, the maintenance of physical plant and the purchase of books, journals and basic equipment;

(b) A steady drop (in real terms) in the salaries and benefits of professional and support staff;

(c) A substantial increase in average class size and individual teaching loads;

(d) An absence of funds for staff development;

(e) Diminished support, in the form of stipends or loans, for graduate study;

(f) The lack of funds for such professional incentives as research, travel and institutional attachments;

(g) Inadequate provision for external examination and exchanges of staff;

(h) A steady loss of experienced staff, worn out by deteriorating conditions for teaching and research.[9]

The AERC studies suggest two immediate causes. The first is an overall decline in public support for higher education.[10] This trend is attributable to prolonged economic crisis resulting in a steady decline in average real income per capita.[11] An immediate reversal of this trend, however, is unlikely to lead to significant increases in public expenditure on higher education. Taxation in most African countries is inelastic (with respect to changes in income) because of a narrow tax base and weak administration. Furthermore, any gains in public revenues would also have to be apportioned among such pressing needs as primary education and health care. In competing for additional funds, universities may not be as well positioned as more numerous and better organized groups such as primary teachers and public servants.[12] In any event, the substantial

portion of the budget for higher education already allocated to salaries implies that additional funds for other items would not be substantial.[13]

The second is the continued expansion of undergraduate enrolments. The *rate* did decline during the 1980s, partly because of financial stringencies associated with economic stagnation. More recent studies, however, predict a renewed upsurge in enrolments.[14] This is understandable since international comparisons with other developing areas clearly indicate that African economies remain severely disadvantaged in terms of their stock of skills.[15] A more compelling factor, though, may be strong local pressure for governments to accommodate a swelling number of qualified entrants emerging from secondary schools.[16] In the light of current demographic trends and the very substantial private as well as public investment in primary and secondary education, this pressure is unlikely to abate over the next 20 years.

We may, therefore, presume that undergraduate enrolments will continue to expand without a *commensurate* increase in material resources and qualified instructors.[17] One likely consequence will be a decline in the quality of undergraduate education.[18] Another will be further inroads into the time that can be spared for graduate teaching. More generally, we can anticipate, on the basis of current trends, a steady net outflow of experienced and dedicated scholars because of a seemingly irreversible deterioration in their living conditions and working environment.

Especially striking to the outside observer is the apparent inability of African governments and universities to respond, through a rationalization or redirection of effort, on a national or regional basis. Closer scrutiny of some possible solutions, however, discloses the complex and problematical changes occurring in higher education in much of Sub-Saharan Africa, and the necessity of accommodating them in any strategy for advanced training in economics.

University authorities seem unable to obtain adequate resources or to insist on a careful phasing, so that additional enrolments do not lead to a deterioration in the quality of undergraduate instruction. However, as we noted earlier, some government authorities are perplexed by the failure of economics departments to respond to well-intentioned offers of assistance in those few instances where it has been extended. In truth, both parties seem impotent in the face of change.

To date, African governments have not facilitated, in a positive and methodical way, private investment in higher education or in alternatives to the university. In contrast to Latin America and Asia, a system of high-quality private universities with limited enrolment has not emerged alongside public universities that cater for the vast majority of secondary school graduates.[19] In fact, a bifurcated structure *has* emerged, insofar as many of the elite in Africa send their own children overseas. The establishment of private universities would formally institutionalize the growing inequality of access to sound university education, *unless* this measure were associated with publicly guaranteed credit arrangements for meritorious applicants with insufficient means of their own. In some African countries, there is growing pressure for governments to facilitate the registration of private universities. In many, student loan schemes are replacing

stipends. The linkage between the two measures, namely the need for publicly guaranteed credit schemes so that students can finance their education at private institutions, may eventually be reflected in public policies over the coming decade.[20]

Other institutions of higher education, notably polytechnics and local colleges, have not yet emerged as plausible alternatives to help absorb the swelling number of applicants. Kenya, for example, saw the founding of "harambee institutes of technology" during the seventies by communities anxious to provide vocational training to primary school leavers. These institutes have slowly raised formal entry requirements; many now accept only secondary school leavers.[21] These changes reflect the continuing pull of the "university" as *the* normative model for higher education. Thus, these institutes are becoming embryonic universities rather than different components of a more variegated system. A similar process appears to be occurring in the case of teachers colleges. According to recent pronouncements, they are to be upgraded into "constituent colleges" as the first step toward eventual incorporation as autonomous universities. The option of community colleges, financed by and catering to the immediate locality, does not appear to have been considered.[22]

African governments, universities, and other institutes of higher education have not yet responded to the logical consequences of the current trend toward "mass" higher education. Universities in most countries are structured to accommodate a small number of students who had already started to specialize in the final years of secondary school. In some countries, such as Kenya, primary and secondary education are being restructured, but with somewhat contradictory motives. On one hand, there is the stated policy of improving primary education as the exit point for most children. This approach is consistent with the resources that are likely to be available for equipping school leavers with literacy, numeracy and some adaptable skills in the "informal" sector. In practice, however, changes in the duration and content of secondary education, along with recent pronouncements and actions pertaining to higher education, signal a desire to move toward mass education at all levels. One outcome *could* be the emergency of an educational system approximating that of the USA. The latter comprises many different types of institutions catering to a variety of needs. Specialization and selectivity take place at the level of graduate study. Institutions are financed from private as well as public sources. However, such expanded access and choice are invariably associated with the private financing of most costs of higher education. In Sub-Saharan Africa, the absence of developed capital markets implies that this system would require the introduction of publicly guaranteed credit for tertiary education.[23] Whilst questions pertaining to the financial and administrative feasibility of a global scheme lie beyond the confines of this paper, the principle of influencing demand, as well as supply, through more judicious pricing that affects net private and social rates of return, warrants consideration in designing a strategy for the advanced training of economists.

Whether this system is desirable for most countries in Sub-Saharan Africa is a moot point. What is clear, upon closer examination of responses to the current crisis, is that this outcome is by no means inevitable. Systems of higher education—in the jargon of economics—could become trapped in a continuing state of "disequilibrium" marked by further deterioration and eventual collapse. To illustrate this possibility, we look briefly at three types of responses: by universities to their financial crisis; by economics departments to the deterioration in undergraduate and graduate education; and by universities and economics departments to a rationalization of effort through greater collaboration.

a) Responses to the financial crisis

Most universities appear unable to respond to the steady decline in public support, either by lowering unit costs or tapping other sources of income. Correspondingly, much of the recent literature comments at length on the high unit costs of higher education in Africa.[24] In absolute terms, these may have been exaggerated because of overvalued exchange rates. The most commonly used indicator, wherein costs are expressed as a proportion of per capita income may also be misleading because of the low level and steady decline in the denominator.[25] Scope for a significant reduction in costs is limited by "structural" features of the system. Universities are designed for a small intake of students. They must provide boarding facilities for a substantial proportion because of the absence of a developed housing market, a low level of urbanization and the limited *number* of institutions of higher education in most countries. The unusually high ratio of support to teaching staff is matched by rates of remuneration commensurate with low levels of productivity associated with deteriorating infrastructure, shortages of equipment, and inadequate training.[26] The prospects for improving efficiency and lowering costs appear limited.

Universities' *cash flows* might be augmented by replacing inadequate stipends with more substantial loans. Charges could be raised, so as to finance increased expenditure on facilities, instructional materials, and salaries. In the absence of a private market for credit, however, such loans would have to be financed or guaranteed by government. Many governments are unable to do so, because of stringent ceilings on public expenditure, the budget deficit, and credit to the public sector. Moreover, even in those few cases where they possess the administrative machinery to enforce repayment, the lengthy period involved would result in a substantial net outlay for at least 5–7 years.

Universities have also been urged to supplement their income by marketing skills and services directly to government, external agencies, and the private sector. However, the time that can be spared from growing teaching loads and from research may be limited. Furthermore, this time is often used by staff for private consultancies to supplement inadequate salaries. Attempts to rechannel such services through universities have not proven successful. Professional staff view overhead charges as a tax imposed by an inefficient, obstructive and unsympathetic administration. Efforts to enforce compliance have led to the

departure of badly needed staff. In practice, university administrators and professional staff maintain an informal *modus vivendi* in which a growing neglect of teaching and research is seen as the inevitable response to the university's failure to maintain adequate levels of compensation. Thus, the numbers listed as full-time members of staff invariably overstate the time actually available for teaching and research, since most staff are available in practice only on a part-time basis.[27]

b) *Responses to deterioration in the quality of education*

Turning to the particular case of economics, we note from the AERC studies that departments appear unable to adjust the structure of degrees, the content of courses, and methods of instruction in response to a deteriorating environment. This paralysis is comprehensible since restructuring requires funds for the requisite equipment and texts. Furthermore, staff are often undertrained and inexperienced, are wrestling with growing teaching burdens, and are disheartened by poor pecuniary and professional incentives. They also sense the low priority assigned to maintaining quality and relevance in favour of expanding student numbers. In such circumstances, it is heartening, therefore, to note their desire to participate in AERC's research activities[28] and contribute to its training studies. The decline in morale may not yet have reached the stage where they despair of a longer term solution to their problems.

This attitude must be qualified by the failure on the part of universities and economics departments to rationalize their efforts through greater collaboration with counterparts in the same or neighbouring countries. It could include exchanges of specialized staff, a redistribution of courses among participants, and information on curricula and instructional materials.

c) *Responses through regional collaboration*

Regional collaboration among African universities remains very feeble.[29] Indeed, the AERC studies provided the African participants their first opportunity for a *direct* in-depth exchange of information on training matters. This unfortunate situation contrasts sharply with the strong ties between many African and overseas institutions. Without exception, links among African departments are limited in scope, seriously underfinanced, badly administered, and therefore difficult to sustain. Indeed, we perceive an opposite trend marked by the sundering of previously strong ties. Constituent colleges of regional universities have become autonomous national institutions,[30] and initial intentions to allocate activities across national institutions have quickly been abandoned.[31] This trend is also evident within some national boundaries, with the break up of national universities[32] and the establishment of new ones in a seemingly uncoordinated fashion.

This trend seems to parallel manifestations of nationalism or localism in other fields, notably economic policy. Therefore, we note with considerable interest that economic co-operation is now high on the agenda of many African govern-

ments as a necessary measure toward arresting economic decline. That an analogous process will occur in the field of higher education is far from certain. The need for a regional rationalization of effort may not be as apparent since governments have a plausible alternative in resorting to overseas institutions, especially where the cost is financed by donor funds specifically assigned for this purpose. Sovereignty in education is also a jealously guarded prerogative of national governments.

The relevant constituency, comprising university authorities, heads of department and senior scholars, remains highly suspicious of "collaboration", whether it emanates from their national governments *or* external agencies. The AERC studies clearly reveal their sensitivity on this matter. However, the studies also suggest that underlying causes cannot be attributed solely to chauvinism or personal ambition. Rather, their response reflects more complex changes in the system of higher education.

Trends and problems in an historical context

To understand these responses to the current situation, we need to examine how higher education has developed in Sub-Saharan African since its inception. Given the limited scope of this paper, we shall only draw selectively from the substantial literature on this broader topic (World Bank, 1988; Eisemon, 1979; Eisemon and Davis, 1990; Hinchliffe, 1985; Commonwealth Secretariat, 1986; Court, undated). Our aim is modest: to highlight those features that will condition a strategy for the advanced training of economists.

At independence, African countries were severely lacking in highly qualified manpower.[33] Local provision for higher education was introduced at the same time or, in a few cases, one or two decades previously. The national university was an important symbol of political sovereignty. It was immediately charged with the supply of badly needed skills for nation building. In many cases, graduate training, particularly in the field of education (Eisemon and Davis, 1990, p.3) was added before undergraduate teaching had been firmly consolidated. This situation contrasted to Latin America, East Asia and South East Asia, where the principal universities predated political independence, and graduate education, especially at the doctoral level, was introduced in a cautious and methodical way (Eisemon and Davis, 1990, p.4).

Under such pressing circumstances, the model for higher education was borrowed with little adaptation from the former colonial power. It was compatible with the principal features of primary and secondary education established during the colonial period. In anglophone countries, universities were designed to receive small numbers of carefully selected students who had started to specialize in the final years of secondary school. The past two decades, however, have witnessed a steady move toward mass education. Changes in the structure and content of primary and secondary education have not been matched by parallel ones in higher education. At present, governments lack the means of recasting

higher education, by establishing a range of institutions to meet the different needs of secondary school leavers, and by shifting subject specialization for a more select group to graduate education.

A similar trend has occurred in francophone countries, but with three additional features. One is a different degree structure. A second is the tradition of conducting research in specialized institutes rather than universities. A third, in some countries, is the introduction of "grandes ecoles" to provide specialized training for highly select groups.

Because of the economic and political vicissitudes of the past 25 years, these systems, in terms of formal structure and mandate, have remained frozen, even as they have undergone substantial changes in the originating country. In the UK, coursework has become part of the MA and PhD degrees in economics of many universities. In Sub-Saharan Africa, in spite of the removal of subject specializations from secondary education, and a dilution of content in the undergraduate programme, universities do not require or indeed formally recognize coursework as a part of their doctoral degrees. In countries that adopted the French system, there has been no move to follow innovations in doctoral education recently introduced in French universities.[34]

Another important feature of higher education has been the dominant role of government. There has not developed a tradition of autonomy in higher learning. Universities were established to supply high-level manpower, in most cases to meet the immediate needs of the public sector. Their resources come from or through government authorities. In practice, governments make the key administrative appointments, set procedures governing personnel and managerial practices, and have not hesitated to intervene directly on many matters (Eisemon and Davis, 1990, p.13). An unstable climate induces many governments to monitor closely staff and student activities.

Universities have had little opportunity to control their own pattern of growth and manage their affairs in an autonomous fashion. Indeed, in most countries, university staff are considered, *de facto* or *de jure* members of the public service, and their career structure, remuneration, and scope for intellectual expression are determined accordingly. Not surprisingly, attempts to move outside the formal system, through the establishment of private universities, are viewed with considerable suspicion by public authorities. In contrast to Latin America and Asia, no private universities have emerged on a scale to compete with the public system. Such efforts have been turned down by the authorities on grounds of equity, namely lack of access by meritorious but poor applicants. However, this problem could be resolved by publicly guaranteed loans which would also, as we have seen earlier, help solve the financial problems of the public system. Moreover, this stated concern for equity is belied, in many cases, by the elite's practice of sending their own children overseas for undergraduate education.

Our brief overview of historical trends suggests that systems of higher education will evolve in one of two directions. Countries such as Nigeria may develop a more variegated structure, with a range of institutions responding to different needs and performing more specialized functions in teaching and research. The

institutions would include state universities with large undergraduate enrolments, some national or federal universities specialising in different fields of study, and research institutes attached to universities or government agencies. Sustainable centres of excellence are a distinct possibility, since they would be complemented by institutions fulfilling other important functions.[35] Advanced training may adopt the Indian practice, wherein the federal government supports graduate education at select institutes, while undergraduate education is provided primarily at universities financed by state governments. A similar pattern may eventually emerge in Kenya, where teachers colleges are in the process of being upgraded to universities, and there is discussion in some government circles of the need to concentrate resources for graduate education in a few select, purpose-built institutions.[36] We should stress, however, that the full ramifications of this trend are not yet perceived by authorities in either country, and their capacity to pursue this approach to its logical conclusion is uncertain.

For most other countries, we project a very different scenario. Undergraduate enrolments will continue to expand, and will undermine attempts to sustain more advanced training at local institutions. Although the *number* of universities may increase, the system as a whole, will remain largely undifferentiated. Each institution will be given additional functions pertaining to research and training that it will be incapable of performing efficiently. There is no compelling reason to assume that such systems would move toward a socially desirable "state of equilibrium" over the coming decade. They could continue to absorb substantial resources, and turn out products ill equipped to meet the country's needs. Growth over the ensuing period would make the task of structural reform even more difficult than at present.

Implications for a training strategy

A strategy for training economists cannot be based on a narrow definition of needs and possible responses. It must also consider how the effort can be insulated from disruptions caused by a national system of higher education operating under considerable stress. There are two possible approaches, each being associated with a very distinct strategy.

The first is to delink graduate training from national systems of higher education by establishing an autonomous regional or sub-regional "centre of excellence". Regional centres have been advocated for another reason, namely prospective economies of scale resulting from a concentration of scarce resources.[37] These claims are probably exaggerated. However, a more cogent argument is that these centres could shelter graduate training from many of the problems inevitably associated with national systems of higher education. The centre could set its own curricula, select qualified students, and provide an attractive working environment. In general, it could make more effective use of Africa's limited stock of skilled and experienced economists.

This concept was initially advanced for the purpose of policy analysis rather than training.[38] However, some of its limitations as a modality for policy analysis are pertinent to our discussion of training. We note that economic policy is pursued in a national context. Because of location and staffing, the centre would be remote from the daily activities of policy makers. Its extra-national relationship with governments would still amount to external technical assistance, albeit from an African location. In contrast, researchers based in strengthened national institutions, particularly economics departments, are likely to prove more useful because of their accessibility and knowledge of local conditions.

As a modality for training, a regional centre would seriously weaken any capacity remaining in national universities. Least important would be a possible diversion of external resources from national institutions to a regional centre. Of more lasting and negative consequence would be the attraction of gifted scholars and good students from local departments of economics. Even the stronger economic departments in the region would be seriously weakened by the departure of two or three leading scholars.[39] A regional centre, staffed by the better scholars and teachers of the region, would seriously weaken *undergraduate* teaching in national institutions.

Thus, the problem of linkage between a regionally selective graduate training programme and sub-standard undergraduate education would remain unresolved. Concentration of resources in a regional centre would result in the collapse of undergraduate instruction in national universities. In practice, the regional centre *would* have to address this problem by allocating substantial resources toward remedial course work at the centre or in national universities. The supposed gains from any scale economies would be reduced by such costs, which could prove substantial.

It may be argued that such costs are only transitional, since the quality of undergraduate education would improve as the products of the regional centre return to their home countries. However, there is no reason to presume a significant "trickle down" effect that would offset the initial deterioration or collapse of national programmes. In light of current trends in undergraduate education, national departments would face a difficult task in replacing their few leading scholars. Nor are these scholars likely to return, since the regional centre will undoubtedly offer terms of service and working conditions that are considerably more attractive than those of national systems. Their replacement by the better products of the centre is also problematic, since the latter will return home only after they have exhausted other opportunities.

The second approach is to encourage regional collaboration in order to strengthen the graduate programmes at *local* institutions. As described in section VI, this would involve the teaching of core courses and the conduct of thesis research at the university awarding the degree, and the operation of a joint teaching facility for elective courses taught on an intensive basis. Aside from the facility, universities would collaborate in the external examination of course work and thesis research, in the design and modification of curricula, and in the development of teaching materials, including textbooks. At first glance, this sec-

ond approach seems more problematic than a concentration of effort in a regional centre. More precisely, it explicitly retains the linkage between graduate training and a national system likely to be operating under considerable stress for the immediate future. Investments in staff, facilities and materials earmarked for graduate education in economics could conceivably be dissipated by the continued expansion of undergraduate education. Any expenditure on graduate training would then simply become an indirect subsidy for higher education.

This second approach, although endorsed by all of the economics departments participating in the AERC study, would prove unsustainable unless there is a commitment by national governments to the programme. "Commitment", however, would have to entail more than an earmarking of some local funds. A more important feature must be government's involvement as the principal consumer of the "product", a well-trained master's graduate in economics. As a convinced "consumer", national governments should be prepared to pay the "marginal costs" of training at the local institution, rather than continue purchasing training services overseas. More crucially, they must be willing to insulate the local graduate programme from the principal systemic problems afflicting higher education. The key consideration in this regard is careful management of the growth in undergraduate enrolments in economics, so that there are adequate resources for the graduate programme. Hence, a sustainable programme is only possible where the projected size of undergraduate enrolments in economics is consistent with the continued operation and strengthening of a credible MA programme.[40]

From this perspective, we can see that the AERC studies devoted considerable attention to the type of investment needed to lower the entry barrier for would be participants in a collaborative MA programme. Equally important, however, is the need to accommodate the prospect of failure. In light of our earlier discussion of trends in higher education, there is a high probability that some institutions will fail to meet the minimal requirements (described in Section VI), for continued participation in a collaborative programme. Among the likely causes will be the departure of key staff because of a continued deterioration in working conditions; inadequate resources owing to an expanding undergraduate enrolment; further cuts in government support for higher education; and government disinterest in the graduate programme.

Provision for exit significantly strengthens the case for this alternative approach in two ways. First, it explicitly accommodates the prospect of failure, namely that even a well-intentioned programme at a national institution might be overwhelmed by major systemic problems in tertiary education. Secondly, it provides for a reallocation of limited resources to successful efforts, as adjudged by their actual performance. A collaborative approach, based on the strengthening of national institutions, must therefore provide for norms of achievement and procedures for monitoring performance in an objective, transparent and collaborative manner. It follows that collaboration, in this sense, cannot be construed as an unconditional right for equal national representation, or as an equal allocation of resources among would-be participants. Provision

for the termination of support to failed programmes must be an integral feature of the collaborative approach if it is to prove sustainable over the longer term. In the event of failure, however, the approach should also be sufficiently flexible to provide for the transfer of MA teaching to other participants, and for the possibility of re-entry in the event of an improvement in local conditions.

Subject to these additional features, regional collaboration can yield substantial benefits by exploiting potential economics of scale, and providing an efficient means of mobilising and disbursing additional resources. Nevertheless the collaborative elements must be chosen carefully, with a view to strengthening local economics departments in a cost- effective and sustainable way. The elements themselves are presented in Section VI, which sets out the proposed programme for the MA degree.

IV. External intervention, local commitment and the demand for economists

The Issues

Some recent documents have concluded that there has been significant underinvestment by the international community in Africa's human resources (World Bank, 1988, p.180; World Bank, 1989, p.1). The historical record suggests that substantial funds have been provided since the early 1960s. The activities have included scholarship programmes for advanced and specialized training overseas; the construction and support of important institutions for research and training; and specialized training relating to the needs of particular projects.[41]

There has been a general tendency to write off these efforts as partial or total failures (World Bank, 1989, pp.1, 8). Africa has experienced a substantial "brain drain", the movement of highly skilled people, trained at substantial cost, to more attractive prospects outside their home countries. Some highly regarded institutions have been destroyed by prolonged domestic violence. Governments seem unable to sustain investments in institutions once external support has been withdrawn. There also appears to be a conflict in domestic priorities since recent calls for renewed external investment to provide badly needed skills would appear to be at odds with the very rapid, general expansion of undergraduate enrolments and the apparent unwillingness of many African governments to undertake badly needed reforms.

Since this document proposes yet another investment in human resources, we must confront these misgivings of the international community directly. They are most frequently raised in the guise of two concepts. The first is the "commitment" of the recipient government to the investment in question. The second is the "demand" by the recipient for its products. The two are interrelated. Demand for the product should strengthen local commitment toward maintaining the investment. Conversely, a strong commitment should help ensure that its products are properly utilized.

This section examines both concepts in the context of external investment in human resources in Sub-Saharan Africa over the past 25 years. "Commitment" is shown to be an imprecise and often misleading concept because of differences in decision making processes and of motivation between donor and recipient. A similar observation applies to "demand", owing to divergent views concerning

the needs of African economies and whether demand should be reflected in terms of the recipient's willingness to pay for the average or marginal cost of locally conducted training. This section also notes that external skepticism concerning further investment in human resources can be observed among overseas universities and scholars. The conclusions drawn with respect to a strategy for the advanced training of economists are surprisingly similar to those of the preceding section, which had qualified the proposals emerging from the AERC studies in terms of the problems confronting higher education in the region. The key indication of a local "commitment" and "demand" will *not* be the recipient's willingness to pay for part of the initial investment, or even for the marginal cost of training, but rather to take appropriate measures that will insulate the programme from potentially disruptive repercussions of problems in higher education. Another conclusion is that the involvement of non-African universities and scholars in the advanced training of Africans cannot be taken for granted, but must be nurtured as an integral part of the strategy that is set out in sections V–VII.

Local commitment and the demand for economists

Much has been written on the subject of external investment in human resources in Africa. The literature includes formal reports, project appraisals, and scholarly books and articles. The intent is not to summarize this voluminous literature, but to highlight certain aspects pertinent to the advanced training of Africans in economics.

The international community undoubtedly underestimated the enormity of the task confronting newly independent African countries. Their governments had to meet a gamut of needs, spanning mass literacy at one end, to the training of highly specialized manpower at the other. The magnitude of the task has increased because of an exceptionally high and unabated growth in population.

To these tasks of education and training were added highly ambitious and, in retrospect, unattainable goals for a wide range of "basic human needs", encompassing housing, health care and social assistance. Before the onset of the current economic crisis, there were growing signs that many of these programmes were badly designed and could not be sustained from local resources. Many countries had not adequately pondered the choice between investment in productive activities, and public expenditure on a growing range of social services.

History may be in danger of repeating itself. A recent World Bank document examines the many causes of economic collapse in Sub-Saharan Africa. The analysis extends beyond economic factors to include such matters as political accountability and institutional reform. However, the latter portion, in a seemingly unrelated fashion, presses for a broadly based strategy of investment in human resources (World Bank, 1989, pp.189–190). Clearly, investment in human capital is essential for economic growth. However, the experiences of the sixties and seventies, and the straitened economic conditions of the nineties ar-

gue for the careful selection and sequencing of such investments, with due regard to the carrying capacity of each economy.

External assistance has played a more influential role than might be suggested from its proportional contribution to total investment (World Bank, 1989, Tables 24 and 30). Most donors have limited their assistance to expenditures associated with capital investment. This approach is intended to avoid open ended commitments and to define a complementary role for the recipient. In this regard, donors have experienced two sources of difficulty. The first has been the poor record of implementation, which has been ascribed to the limited managerial capacity of the recipient.[42] The second has been the recipient's inability to sustain the investment. This failing has been attributed to an initial underestimate of operating costs, and more recently, to insufficient local funds because of economic stagnation.

We would contend that there are other important reasons, as yet not fully comprehended by donors, since they are the product of a very different pattern of decision making found in many African governments. We devote some space to this issue because it may shed further light on the concept of "local commitment" which has been advanced as an important criterion for assessing the viability of further investment in human resources.

A striking feature of negotiations involving external assistance is the seeming rapidity of the decision making process. Often the approval of one or two senior officials is all that appears necessary for the approval of a project. In the author's experience, this feature contrasts sharply with the prolonged and tortuous negotiations that often characterize decision making within Western governments. These prolonged negotiations, however, serve to draw out and reconcile the many contending interests, within government and among the public. Hence, once a decision is reached, implementation becomes largely a technical and managerial matter. In many African governments, the process is very different. The rapidity with which an initial decision is reached does not obviate the need to reconcile various interest groups within and outside government. However, these emerge, and adopt their negotiating stance, *after* there is an external commitment to the project. Thus, in spite of an apparent agreement between the donor and recipient on specific details, in reality there exists only a broad agreement in principle. Donors then become frustrated as implementation is delayed because of the recipient's requests for changes in design and problems in marshalling local finance and personnel. This delay is usually ascribed to poor managerial and administrative "capacity". Another, possibly more compelling reason, is inadequate understanding of a very different decision making process.[43]

The second feature relates to the role of donor financing in the local budget. Because of a shortage of foreign exchange, public investment, set out in an annual "development budget", is largely or in some cases entirely financed from external sources.[44] Hence, donors can exercise enormous leverage over the pattern of public investment. What is less clearly comprehended is the link to the operational or recurrent budget, financed primarily from local sources.

Implementation of a donor project usually entails the commitment of local funds. Hence, government departments may actively seek externally financed projects in order to maintain or buttress their position in the annual bargaining over their share of the recurrent budget. In contrast to the carefully articulated development plans regularly issued by governments, actual investment often reflects the short term interests of government departments contending for increasingly scarce *domestic* resources.

From this perspective, we can readily perceive that "government" endorsement of a particular scheme is not difficult to obtain. However, the recipient's real interest may lie less with the intrinsic value of the scheme than its usefulness in the continuing competition for scarce *domestic* resources. This process would also explain why many investments have not been sustained in spite of initial guarantees of longer term support by the recipient. Once the donor's expenditure has terminated, the government department in question lacks the external agreement used to obtain local funds. These may be reduced, since the department also requires local finance for new external investments. Thus the department ends up looking for new projects, even as the completed ones slowly languish for lack of adequate support.

The problem of interpreting local commitment has been recognized by more sophisticated donors. They perceive that commitment involves more than guarantees of local funds and arrangements for the training of counterparts. With respect to new investments in human resources, their uneasiness has been articulated as a request for plausible evidence of local "demand". Such requests can be interpreted as a need for assurance that the product will be used. Increasingly, however, donors are asking whether the priority they assign to such investments is equally recognized by the recipient, so that they will be sustained after external assistance has been terminated. With specific reference to the advanced training of economists, we noted earlier that local commitment is essential to the success of any investment. However, the type of commitment that is needed is not local funds during the initial period of investment. Rather, it is government's willingness to insulate the activity from deleterious trends in higher education, and to pay its own training costs over the longer term.

Turning to the second concept, namely "demand", we first note that external views have also changed concerning the type of training required, and more generally, how it will contribute to the broader objective of economic growth. For most of the period since independence, external funds were invested in training personnel to design development plans and administer economic programmes dominated by the public sector. More recently, as a result of prolonged economic crisis, and perceived shortcomings in public administration, the requisite skills have been redefined in terms of strengthening local capacity for policy analysis and economic management.

In this regard, however, we would contend that insufficient attention has been devoted to two major questions. The first is how economic policies are formulated in practice. The second is unwarranted optimism that many

economic issues will be quickly resolved once governments have properly trained personnel.

Turning to the first question, we note that the recent World Bank document on capacity building posits a normative model of policy formulation (World Bank, 1989, p. 2, box 1) that is rarely if ever obtained in practice, since most government decisions are incremental and often involve a choice among the "least harmful" possibilities. Frequently a linkage is created between unrelated economic issues. Information is imperfect, as are individual processes of decision making. Often the principal battles revolve about who places an item on which agenda.[45]

The foregoing observations should not be misconstrued as an argument against investing in technical skills. However, they suggest that the relationship between investment in the advanced training of economists and perceptible improvements in economic management is not clear cut. In practice, newly qualified personnel will need to demonstrate their knowledge and skills on a series of issues before they gain the confidence and trust of policy-makers. Through exposure to a variety of situations, they will become increasingly adept at intervening effectively at key stages in the decision making process.

On the second question, we note the serious lack of knowledge concerning the structure of most African economies and the behaviour of economic agents. An unimaginative application of conventional policy instruments can lead to unanticipated and undesirable results. For example, much of the research sponsored by the AERC invariably focuses on the structure of different markets for goods and services. In Western economies, much of the research on such topics as imperfect competition, information, and disequilibrium is still at a highly theoretical stage. Rekindled interest in institutional economics, a field with long intellectual antecedents, is only beginning to be felt in research on Africa.[46] Considerably more research on such matters as market segmentation, the expectations of economic agents, and government interventions is needed in order to offer credible advice to policy-makers. The same observation applies to most other areas of economic policy. Painstaking research will be a necessary, if not sufficient condition for significant improvements in the quality of economic management.

Local demand for trained economists to assume instrumental roles in the design and management of public policies may therefore, be inchoate. For this reason, calls for more precise estimations of the "demand" for highly trained analysts may not prove especially helpful in establishing whether a significant external investment in training will be sustained over the longer term.

These requests for more tangible evidence of effective demand mask a more profound uneasiness concerning the nature and extent of local commitment. Even where figures are provided, potential donors will tend to treat them cautiously. The figures may, in the first instance, justify investment in badly needed skills. However, they do not offer conclusive evidence that the investment will be sustained over the longer term from local sources.

Recourse by governments to technical assistance has been advanced as evidence of a demand for people to analyse issues and manage the economy.[47] However, the possible substitution of local for foreign skills is an imprecise indicator since many of these skills are linked to specific projects, and their financing is often not fungible. Furthermore, the issue is whether to invest in the training of nationals at home instead of conducting it overseas. We have noted some of the constraints: a substantial initial expenditure in facilities, equipment, instructional materials, and instructors and the adoption of appropriate measures to insulate the activity from harmful developments in higher education. Most governments perceive the need for local MA graduates in economics. Whether governments are willing to take the necessary measures to train them at home is another matter. They are more likely to do so once they are convinced of the quality of the local product.

For most countries, it is difficult to obtain a precise estimate of the numbers required over the longer term. Accurate data are lacking. Labour markets are shallow and segmented. Well-trained economists can enter many occupations.[48] Since forecasts are subject to a very wide margin of error, they can provide only a crude order of magnitude as to the numbers likely to be required.

These gaps in information are not an insurmountable obstacle to designing a sustainable strategy for the advanced training of economists. Careful inquiry of those university departments wishing to provide quality graduate education clearly indicates that the numbers will be very small, in most cases not exceeding ten MA graduates annually for the first five years.[49] Saturation of the local market, therefore, is most unlikely. These initial targets are modest, because they are based on a realistic assessment of constraints, in particular an acute shortage of qualified staff, and the desire to lay a solid foundation for a quality programme that can subsequently be expanded in response to local demand.

Our final set of observations relates to the role of external universities and scholars, since external skepticism concerning further investment in human resources in Africa is not confined to donor agencies but is becoming increasingly visible on the intellectual plane. Over the past decade, interest in African economies has been declining in overseas universities. Students who might have previously considered specialising in African issues are now being attracted to the study of other regions, notably Eastern Europe, East Asia, South-East Asia, and Latin America.

While these trends are not evident in all Western countries, they may reflect a growing feeling, especially in academic circles, that economic development has failed in Africa, as manifested by the increased reluctance of young scholars to enter what is perceived to be an area of marginal importance. This observation may especially apply to important centres of scholarship in the USA and Canada.[50]

Many scholars are also deterred by what they consider to be an environment hostile to open intellectual inquiry. Moreover, conditions for field work can be difficult. Researchers are frequently frustrated by delays in obtaining the

necessary clearances and institutional attachments. Desk research in the home country is difficult because of incomplete and inaccurate data.

There are also indications of a growing reluctance to admit African students into graduate programmes because of a perceived decline in the quality of their undergraduate education. The lengthening period needed to complete graduate studies inevitably raises doubts as to the adequacy of financing from local or overseas sources. As to the alternative of conducting more training in Africa, we note that many leading overseas scholars are reluctant to teach in African institutions for any appreciable period.

A meaningful involvement by leading overseas institutions and scholars in the advanced training of African economists cannot, therefore, be taken for granted. Incentives beyond the purely pecuniary are needed to sustain intellectual interest in African issues. These other incentives should include funds for research, travel, publications, and institutional attachments. A training programme can justify the financing of these other activities since they would be important in sustaining it.

Implications for a training strategy

We now summarize experiences of external intervention by highlighting those aspects germane to designing a strategy for the advanced training of economists.

Lack of knowledge concerning current and future requirements indicates that graduate education should aim at providing individuals with a broad grounding in advanced economic theory and methods. This education should comprise a solid foundation for more specialized training to meet particular occupational requirements, including some not foreseen at the present time. For the foreseeable future, most of this demand will stem directly or indirectly from the public sector. The MA degree should also equip a smaller proportion for doctoral study, for a career in teaching and research. In addition, some of those entering government service might also undertake a doctoral programme.

Two inferences may be drawn with respect to a strategy for advanced training in economics. The first relates to the issue of "externalities" and hence of likely sources of financial support for trainees. Most of the demand for training will stem directly or indirectly from agencies in the public sector. Even where a strong private sector exists, firms may be reluctant to pay for the cost of an advanced degree in economics since the training will not be specific to their needs. (This situation contrasts to that of highly specialized courses, or even business education, where the sponsoring firm can expect to capture directly much of the benefits of any investment in training.) Thus, sponsorship of advanced training in economics will in all likelihood devolve primarily to agencies in the public sector or private individuals.

The second inference is that the structure and content of graduate education should evolve in response to advances in economic theory and method, and further insights into local economic problems. Close links with other institutions in

Africa and overseas will be essential to maintain quality and a receptivity to new ideas. However, we note that the involvement of overseas scholars and institutions cannot be taken for granted. Their intellectual interest in African economies should be encouraged through funds for travel, research, and publications, and flexible arrangements for institutional attachments. Their involvement should not be narrowly construed in terms of technical assistance alone, but for the purpose of nurturing broader ties, encompassing many intellectual and professional interests.

We conclude by noting that the role envisaged for donors would entail a major departure from more conventional patterns of assistance. We have contended that endorsements from governments and assurances of support are not difficult to obtain. What is really essential, however, is that African governments are motivated to support the programme because it responds to their own self-interest. One indication of government's commitment will be its willingness to pay the cost of training, once the programme been established and become fully operational. A more important indication will be the adoption of appropriate measures to insulate the programme from trends in higher education likely to undermine it. As suggested in our earlier discussion of trends in higher education, these measures may involve a slow growth in undergraduate enrolments in economics, a more constructive working relationship with university economists, and selective efforts to improve pecuniary incentives. The task for donors will be to subsidize, over a period of three to five years, development of a credible, high-quality product in full awareness that failure is probable for some institutions. The successful ones, however, would constitute a sound, collaborative programme of graduate education, increasingly sustained from local sources.

Part Two: The training strategy

V. The training strategy: guidelines and objectives

Strategic guidelines

The training strategy presented in the second part of this document departs radically from earlier approaches. For this reason, we have first discussed the findings of the AERC studies, trends in higher education, and patterns of external involvement. Those observations and conclusions that are germane to the design of the strategy are summarized in the form of guidelines.

(a) The principal instrument for strengthening advanced training is the economics departments of African universities. They are selected, in preference to a regional centre, on the following grounds: prospective importance for locally based research; greater likelihood of sustaining the quality of undergraduate education; and the need for local participation and accountability.

(b) Economics departments can be strengthened through a careful blending of direct assistance and collaborative activities, involving African and overseas institutions. Collaboration will involve greater use of existing ties, e.g. external examinations, and the fostering of new ones. Aside from encouraging a more efficient use of resources, the intent is to reduce isolation through a structured exchange of people, ideas, materials and methods and thereby encourage a steady improvement in the quality of education.

(c) The cornerstone of the strategy is a strengthened local MA degree to attract local government support for advanced training and to provide a solid foundation for doctoral study.

(d) Although the MA degree would be similarly structured for all participating departments, the programme must provide considerable latitude to accommodate differences in university regulations and syllabi.

(e) To participate in the MA programme, a department would present, for approval by the collaborating group, a medium term target for MA graduates, as derived from its own need for PhD candidates and local demand from various sources, particularly that of government for MA graduates. Given the small size of the private sector in most African economies, most of the demand from non-academic sources will come from govern-

ment and parastatals. The department would also indicate the size of a sound *undergraduate* programme *consistent* with its target for the MA. It would set out a longer term programme for staff development to meet the instructional requirements of undergraduate and graduate education.

(f) To maintain its active participation in the MA programme, the department would need to execute satisfactorily those aspects for which it would be directly responsible. Performance would be monitored regularly according to standards and procedures set by the collaborating group. Failure to meet these performance standards within a reasonable period would result in the suspension of assistance for its MA programme. Should this occur, the department could remain a participant, and thereby benefit from assistance for PhD training as well as retain the possibility of restarting its MA programme at a later date, by agreeing to send its own MA candidates to other participating departments. In such cases, the other departments would receive additional support.

(g) Assistance would be provided directly to local departments to meet start-up and operating costs, and to finance collaborative activities. After five years, a participating university would assume responsibility for local operating expenses. Assistance would be maintained for the collaborative elements of the programme. To mobilize local support in anticipation of the need to finance its own operating costs, a department would establish a training committee, with strong government representation, during the first phase of support.

(h) Because of the initially weak state of most departments, output from the MA programme will be considerably less than the demand by government for highly trained economists, and by the department for doctoral candidates. However, priority in the first phase would be assigned to laying a solid foundation for a high quality programme. Its credibility will be a key factor in securing the local commitment necessary to sustain the programme over the longer term.

(i) Two modalities, the own, i.e. local degree, and the overseas degree, will be used for PhD training. Both modalities entail substantial periods of course work overseas and of field research at home. PhD training would be linked to the MA programme in terms of the standards and content set for the latter, and a department's longer term requirements for teaching and research, as specified in its staff development programme.

(j) The strategy would commence with anglophone universities, with the exception of Nigeria. Nigerian universities would be encouraged to develop their own programmes that, depending on the circumstances, would be administered through an appropriate national agency or as part of the anglophone African effort. Programmes developed for francophone universities would be implemented through a suitable agency such as CIEREA.

(k) There is need for substantial foreign involvement in both the MA and PhD programmes. To stimulate interest in African economies and strengthen ties with African institutions, the strategy also provides for institutional attachments, travel, publications and research by foreign scholars.

Objectives

The strategy itself has two objectives. The first is to develop MA and PhD programmes of an internationally acceptable standard for the training of African economists. The second is to enlist the support of national governments and universities so that the programmes can eventually be sustained from local resources, and through the adoption of appropriate measures toward higher education.

The objectives of the MA programme are:

1. To train economists in advanced economic theory and methods, so that they can be employed in the analysis of public policy and management of economies;
2. To train a smaller number who can undertake more advanced study at the doctoral level.

The objectives of the PhD programme are:

1. To train economists who will engage in teaching and research in African universities and research centres. Their actual number will be determined by the staff required for an MA programme, run in collaboration with other universities, and for a sound undergraduate programme that can be sustained from local resources.
2. To train economists who will assume leading functions in the design and implementation of public policies.

Scope

The strategy potentially encompasses three different groups, namely:

(a) Anglophone countries with the exception of Nigeria. These countries typically have few universities and an undifferentiated system of higher education. They share a common international language, and similar institutional antecedents.

(b) In contrast to the above group, Nigeria has a highly variegated system of higher education, comprising numerous state and national universities and some specialized research centres, subject to a national authority.

(c) Francophone countries share a common international language, but differ considerably from each other, as well as from the anglophone group, in the structure and content of their higher educational systems. Members of this group have established a regional organization that could strengthen advanced training in economics through appropriate modes of collaboration. However, these have yet to be defined and studied in depth.

The programmes described in this document apply to the first group, but with the expectation that they can be adapted by the other two to their own requirements.

VI. The MA programme

Strategic overview

The cornerstone of the strategy for graduate education in economics is a strengthened local MA programme, that will attract government support for advanced training and lay a solid foundation for doctoral study. This aim is reflected in the two objectives of the MA programme. The first is to train individuals in advanced economic theory and methods so that they can be employed in the analysis of public policy and management of economies. This training should allow them subsequently to undertake other courses specific to their jobs, or to commence a doctoral programme at a later stage in their careers. The second objective is to train a smaller number to undertake more advanced study at the doctoral level toward a career in teaching and research, or a leading role in the formulation and implementation of public policies.

Central to the design of this programme is the question of its sustainability. Over the longer term, government support is essential. First, it will be the principal source of effective demand for most of the MA graduates. This demand will eventually be expressed by government's willingness to pay the cost of training its prospective (or actual) employees. To this end, universities must demonstrate that they can offer a high quality programme, pertinent to government's needs, at a price competitive with those offered by overseas institutions. Secondly, government must be prepared to insulate the programme from the disruptive consequences of the crises likely to beset most systems of higher education in the region. The most meaningful measure, as noted earlier, is maintenance of realistic levels of support for an undergraduate programme, whose size is consistent with the human and material resources available for the MA.

The necessity of local commitment is recognized explicitly, insofar as one of the conditions for a university's participation in the programme is a projected undergraduate enrolment compatible with implementation and strengthening of its MA degree. Whether endorsement of this projection of enrolments by the country's educational authorities is a sufficient guarantee of government commitment is highly problematic. However, a significant deviation from this figure will provide initial evidence of possible failure of the university's programme, that might subsequently be confirmed through various mechanisms that will continually monitor students' performance.

To mobilise both forms of government commitment, a participating university will establish a Liaison Committee on Advanced Training that would include representatives from government and the private sector. This Committee will monitor the content of the programme and the performance of students. It will also advise on MA thesis research to ensure that the topics are relevant to issues bearing on public policy, and to avoid a possible duplication of other research initiatives. These and other activities will be aimed at convincing potential local sponsors of the programme's merits and the measures needed to sustain it.

The logic inherent in this task of "product development" is reflected in four other aspects of the programme, namely the projected number of students for the first phase; the provision for future expansion; the potential for innovation in graduate education; and the role envisaged for external assistance.

Most of the would be participating universities have projected an initial annual intake of only ten students, that might possibly rise to fifteen toward the end of the first five year phase. This modest intake is undoubtedly less than the demand for trained economists in the countries concerned, either for immediate employment or further doctoral training, especially if one presumes a likely attrition rate of up to $^1/_3$ over the two academic years of the programme. However, this estimate is based on a realistic assessment of the qualified personnel and appropriate facilities available at the programme's outset, as well as the high priority attached to quality. However, once the programme is well established, and existing constraints are overcome through modest expenditure on facilities and a significant investment in doctoral education, an increase in annual intake should prove possible without compromising the quality of the programme. Furthermore, this expansion should lead to a reduction in the average real cost of MA training, and make the programme even more attractive to governments and other sponsors.

An unanticipated outcome of the AERC study has been the mobilisation of up to 12 universities in anglophone Africa that are prepared to start MA programmes or strengthen existing ones through a collaborative effort. This collaboration has been given concrete expression in terms of a common structure for the degree, and a wide range of modalities for rationalising resources, developing curricula, producing instructional materials, and monitoring performance. The universities have also agreed on the terms and conditions for participation in the programme. Even more encouraging has been their recognition of the need to accommodate failures, as a necessary condition for sustaining the collaborative programme as a whole. Thus, the MA programme sets out procedures for exit as well as entry, on the understanding that collaboration cannot be construed as an unconditional right of equal national representation, or an equal allocation of resources among participants. As a result, the MA programme will be able to reinforce success and limit the impact of failure.

Aside from expanding the number of trainees and using scarce resources more effectively, the collaborative programme also offers considerable scope for introducing important innovations in the advanced training of economists. Among the modalities available for this purpose are a sub-committee on curricula;

procedures for the assessment of courses and thesis research; the involvement of external specialists in curriculum development, teaching and examination; and the joint development and dissemination of teaching materials. The structure of the degree gives priority to thorough and rigorous instruction in three basic subjects, namely macroeconomic theory, microeconomic theory and quantitative methods. However, once this has been assured, there is an implicit recognition of the need to adapt curricula, both for these three core courses, and for elective subjects to be taught jointly at a common facility. One important reason is the need to take proper cognisance of more recent developments in economic theory and method. A second is to adapt and apply abstract concepts and generalised methods to the particular circumstances of African economies.

Research supported by the AERC as well as discussions held over the course of the AERC training studies point to at least two areas where innovations in curriculum may prove fruitful in the analysis of African economies. The first is "institutional economics" which attempts to incorporate "transactions costs", arising from the legal structure, its enforcement (or otherwise) and social *mores*, into the neo-classical paradigm. This approach, and other work on such matters as imperfect competition and disequilibrium could potentially yield important insights into the functioning of markets in Africa, which invariably feature a large "informal" sector. Such knowledge would in turn prove germane to the formulation of more effective policies.

The second is the adoption of a different approach to the subject of economic development which is currently stipulated as a required graduate course by some universities. The AERC studies revealed that its content differs considerably from one university to another. The proposed MA programme will not include this subject in the required list of core courses. However, the programme will provide an opportunity for linking the study of economic development to the analysis of contemporary issues. This linkage would enable the student to apply the theoretical and applied content of core courses, together with a knowledge of the broader factors influencing economic growth, to the analysis of pertinent problems. An experimental course along these lines might first be introduced as an elective subject with a view to its eventual acceptance as a core course by participating universities.

Collaboration in the MA programme may eventually provide a basis for teaching doctoral level course work in the region. At present, those universities offering a local doctoral degree arrange for course work to be conducted at overseas institutions. Over the longer term, one can envisage universities with a well established MA programme extending their collaboration in order to mount PhD courses in the region.

The programme also offers considerable scope for experimentation and innovation in pedagogical methods. One self-evident measure will be the compilation of teaching and instructional materials. The production of textbooks, jointly authored by specialists from the region and overseas, will become an economical proposition, because the programme will have created a larger and more easily identifiable readership. A similar observation applies to an expanded use

of audio-visual and computerised instructional methods. The collaborative structure of the programme may also lend itself to the introduction of new instructional methods, pioneered by Open Universities in the UK and other industrialized countries.

Most of these innovations will remain promising prospects for the future until the collaborative programme has been firmly established and its acceptance has been demonstrated through strong local support. The more immediate task for the next five years is to initiate the programme, and carefully refine its structure, modalities, and content in the light of operational experience.

The foregoing observations point to a clear role for external intervention. Our earlier discussion of trends in higher education suggests that local support for a collaborative effort is highly improbable at the present time. Indeed, local support might compromise the programme's commitment to quality, since the termination of failed efforts would be very difficult to implement in practice because of political sensitivities. The task of external donors is to finance the operation of the collaborative mechanism, modest start-up expenditures, and annual operating costs. Following an initial five year phase of "product development", the cost of courses and of thesis research conducted at participating universities should be met from local sources, either by the universities themselves or through the sponsorship of students by other agencies, notably national governments. Continued external support would be desirable to ensure the quality is maintained; to foster innovations in curricula and instructional methods; and to provide a basis for doctoral level teaching in the region. The specific components in question will include management of the collaborative programme; start-up and operating grants for new entrants; the operation of joint teaching activities; and the external examination of course work and thesis research.

Our final set of comments concerns the relevance of the proposed MA programme for Nigerian and francophone universities since it has emerged from interaction among anglophone universities (with the exception of Nigeria). As subsequently noted in Section VIII, its extension to Nigerian universities will depend on the type of MA programme that emerges from the present Nigerian study of graduate training. Should the Nigerian universities opt for a collaborative scheme within a national framework, the MA programme for anglophone universities could accommodate selective forms of interaction including participation in the joint teaching of elective subjects; the design and external examination of core courses; and the supervision of MA thesis research. If, on the other hand, the current Nigerian study identifies only a few Nigerian universities capable of undertaking an MA programme, these institutions would be able to participate directly in the collaborative programme described later in this section.

Turning to the francophone universities, we note that they are currently undertaking a major study of advanced training in economics under the direction of CIEREA. The MA programme for anglophone universities is being carefully studied by them as a possible model for strengthening graduate training in a collaborative fashion.

Description of the programme

Because of the innovative features of the MA programme, and the chequered history of earlier regional initiatives in Sub-Saharan Africa, we provide a detailed account of how the programme would actually operate.

Structure of the MA degree

The MA degree of a collaborating university will comprise three principal components to be completed over a total period of 18 to 24 months:

(i) *Core Courses*

At least three core courses, in advanced macroeconomic theory, microeconomic theory and quantitative methods (mathematics, statistics and econometrics) will be taught at the university that is awarding the MA degree. In accordance with its own regulations, a university may increase core course work, in terms of contact hours or the number of courses. Core courses will be taught annually from September to June.

(ii) *Elective Courses*

The number of elective courses (beyond at least one) will be set by each participating university. Elective courses will be taught annually on an intensive basis from June to September at a common facility. To take electives, a student must first complete the core courses successfully.

(iii) *Thesis Research*

Following successful completion of the elective courses, the student will undertake a thesis of 6–12 months duration, depending on the regulations of the university awarding the degree.

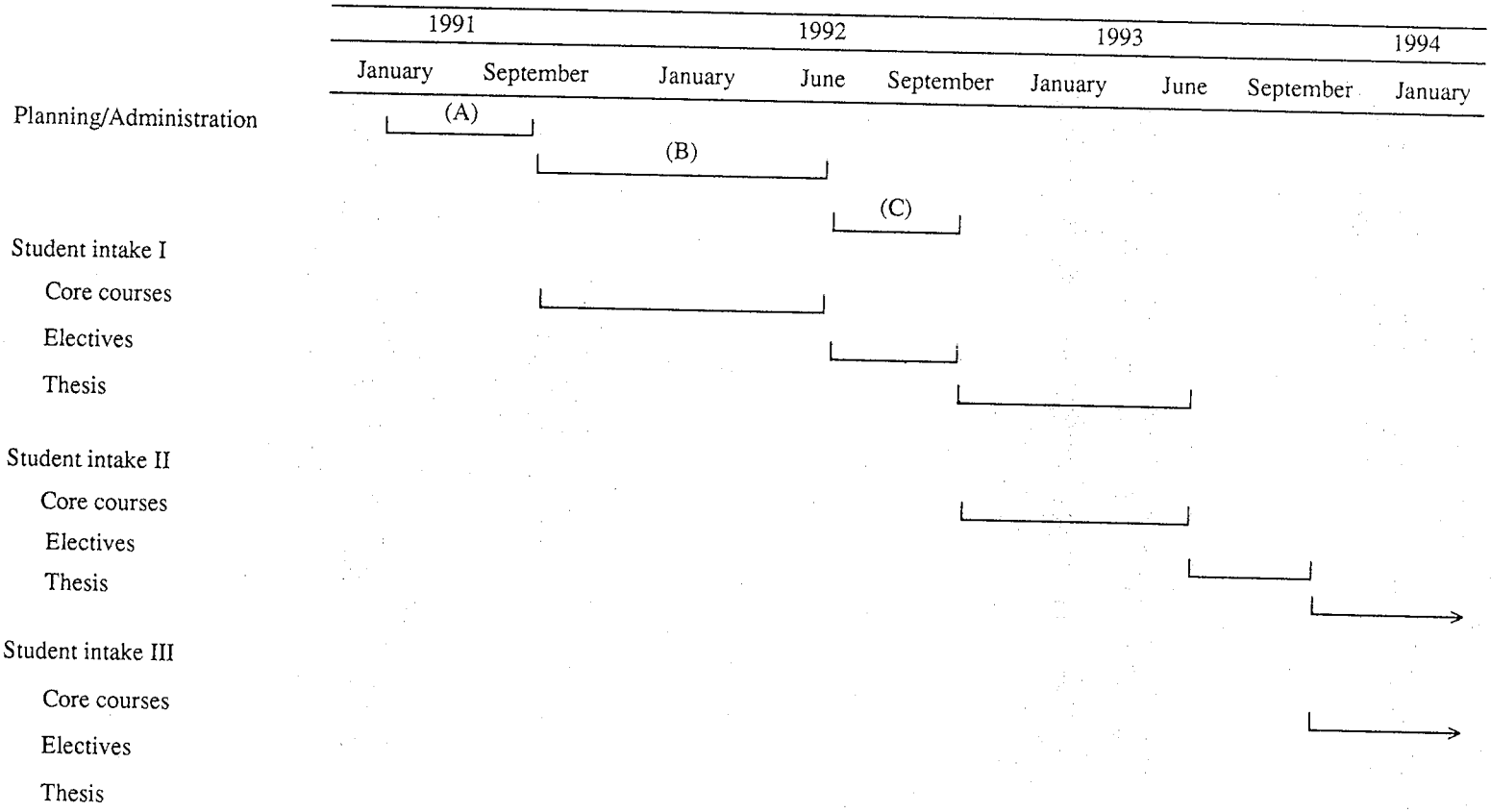
The structure and sequencing of the MA degree is set out in Figure 1.

Collaborative framework

Universities will collaborate to strengthen these three components of their MA degrees. For this purpose, they will establish an academic board with one representative from each participating university. During the period that the MA programme is being implemented by an external agency, the Board will have advisory functions. Subsequently, the Academic Board will assume direct executive responsibility for implementation.

The Academic Board will elect a Chairman and Sub-Chairman and an Executive Sub-Committee to conduct its affairs between annual meetings. The Board will also appoint specialized sub-committees, including one on curriculum. The Curriculum Sub-Committee will comprise subject specialists from the participating universities and institutions outside Africa. This Sub-Committee would periodically review the content of courses, recommend suitable reference materials, and generally provide technical advice to economics departments. The Sub-Committee may eventually commission textbooks and other teaching materials.

Figure 1 Sequencing of collaborative MA degree programme



In consultation with the Academic Board, the implementing agency will appoint a qualified Programme Director responsible for overall coordination of the programme; directing a secretariat managing collaborative activities; and liaising with national governments and overseas institutions.

Conditions for entry

To participate in the programme, a university must prepare, for the approval of the Academic Board, a detailed plan for its MA degree in economics. The plan should contain the following information:

(i) A medium-term, i.e. 5-year target, for the annual output of MA students. This target should be based upon a realistic assessment of the department's ability to teach the core courses satisfactorily, and provide adequate supervision of thesis research;

(ii) A 5-year projection of undergraduate enrolments consistent with the financial resources and qualified staff needed to operate the MA programme;

(iii) A projection of the longer term demand for MA graduates based upon an estimate of local, especially public sector requirements, and the department's own need for PhD candidates;

(iv) A programme for staff development as derived from estimates of:

- The staff needed for teaching the core courses of the MA degree and supervising thesis research
- The staff required to teach an undergraduate programme of a specified size and content that can be properly supported from local sources;

(v) An estimate of start-up costs for the MA degree. Such costs may include:

- Modest capital expenditure on dedicated facilities for teaching and personal study and the storage of documents and equipment, and for the purchase of transport
- The acquisition of reference materials
- The purchase of photocopying, computer and audio visual equipment;

(vi) An estimate of annual operating costs to teach the core courses over a 5-year period. Typical costs will include:

- The purchase of consumable items, e.g. computer paper, and photocopying supplies
- The maintenance of facilities and equipment

- The hiring of part time lecturers, either to teach graduate courses or to free up permanent staff for graduate teaching
- The purchase of essential texts, and the production of instructional materials
- The contracting of external examiners for the core courses, according to terms and conditions set by the Academic Board
- Travel by staff members to meetings of the Board and its sub-committees;

(vii) The plan should specify any changes in university regulations and procedures necessary so that the department can participate in the programme;

(viii) The plan must be endorsed by the appropriate university and, if feasible, government educational authorities.

(ix) Each participating university will undertake to establish a local liaison committee, comprising representatives from the economics department, government agencies and the private sector with the aim of mobilising local support for the programme.

Core courses

Following approval of a university's plan by the Academic Board, the implementing agency will provide a start-up grant and funds for the first group of students commencing core courses. For most universities, the timetable for core courses implies a reduction *on paper* in the present load, since it excludes elective subjects normally taught from September to June during the first year. In practice, the lighter burden will allow participating universities to teach the core courses more thoroughly, and to provide appropriate remedial instruction.

Participating universities can admit part time students to the core courses. However, such students will be expected to complete their elective requirements in the normal three month period, and their thesis in not more than 24 months. The operating grant to each department will be adjusted on a *pro-rata* basis.

The Curriculum Sub-Committee will prepare for the Academic Board a list of scholars qualified to serve as external examiners for the core courses. In consultation with each university, the Academic Board would annually appoint external examiners for the core courses. Their terms of reference and remuneration would be set by the Board. The external examiners would annually report their findings, including recommendations for improvements in quality, to the university in question, the Curriculum Sub-Committee, and the Academic Board.

Elective courses

The Academic Board, in collaboration with the implementing agency, will set up a joint teaching facility for elective courses, which would be taught on an intensive basis from June to September each year. No student would be allowed to

take elective courses unless he or she is enrolled in the MA programme of a participating university and has passed the core courses. Should there be additional space, a member of staff from a participating university may also take an elective course. An MA student may register for up to two elective courses.

By January of each year, the participating departments will have submitted a list of students and their proposed electives. Based on these requests, the Programme Director will:

(i) Prepare a list of elective courses to be offered at the Facility that year;

(ii) Designate, in consultation with the Academic Board, a "course leader" for each elective subject;

(iii) Prepare an estimate of expenditures for elective courses;

(iv) Make such logistical and other contractual arrangements needed to operate the Facility.

The terms and conditions for the course leaders and resource persons used in the electives, as well as the standards of accommodation and subsistence for the students, will be set by the Programme Director in consultation with the Academic Board.

Each course leader will prepare a syllabus, identify suitable resource persons, and assemble teaching materials. For these activities, the course leader will receive a planning grant to cover time and expenses. By April, each course leader will submit a detailed course outline, through the Programme Director, to the Academic Board for its approval. The outline will provide details concerning the syllabus, reference and teaching materials; a list of resource persons teaching different parts of the course; and arrangements for evaluation of the course by participating staff and students.

The results achieved by the student on elective courses will be communicated to the home university and entered officially on his/her transcript. Materials used in the teaching of electives will also be sent to the home universities.

The Programme Director, in consultation with the Academic Board, may eventually commission textbooks and other materials resulting from the teaching of elective courses.

Universities participating in the collaborative programme have the option, where they have the requisite specialists and resources, to mount their own elective courses.

MA thesis research

The duration and content of the thesis will be determined by the home university. Based on the current regulations of likely participating departments, its duration will range between 6 and 12 months. The student cannot undertake thesis research until the core courses and electives have been completed satisfactorily.

For each thesis, the home university will appoint a supervisor. In addition, the university can request an outside resource person to act as a joint supervisor. The terms and conditions for joint thesis supervisors will be set by the Programme Director in consultation with the Academic Board. Assistance can be offered to cover up to two visits by the joint supervisor in order to comment on the prospectus, to review research at an interim stage, and to help examine the thesis.

Each department shall submit, no later than July of each year, a budget for MA thesis research commencing in September. The budget will typically cover such costs as travel, data collection and analysis, and word processing. To facilitate field work, the department may request, as part of its start-up costs for the MA programme, funds for the purchase of a vehicle. Following approval of the budget by the Programme Director, and the successful completion of course work by the candidates, a grant for thesis research will be sent to the department.

To help finance the living expenses of MA students, the department may engage them as teaching assistants. For such services, they can be remunerated from the department's annual operating grant for core courses. Such activities will be monitored so that students are not delayed in completing their degrees within the allotted period.

Conditions and procedures for the termination of support

The programme has been designed to encourage participation by universities with the capacity to sustain an acceptable standard of instruction of the core courses, and to provide adequate supervision of MA thesis research. It is probable that some of the initial participants will not be able to satisfy these requirements in spite of a start-up grant and two or three annual operating grants. Among the likely causes will be a continuing deterioration in conditions for teaching and research leading to the departure of qualified staff, and an expansion of undergraduate enrolments that reduces staff time available for the MA programme.

Failure to meet the programme's requirements for continued support will be indicated by:

1) Serious and continuing defects in the teaching of core courses, as demonstrated by the poor performance of students in core and elective courses;

2) The inability of students to complete their thesis research satisfactorily within the allotted period.

In such cases, the Programme Director, in consultation with the Academic Board, will initiate an independent review to determine whether the department can rectify those problems within a two year period. Should the review conclude that it cannot, the department may continue to participate in the collaborative programme, but on condition that it transfers applicants for its own MA degree to other participating universities. The latter would have their operating and

other grants augmented accordingly. Staff at the university that has suspended its own MA programme would still remain eligible to participate in the other activities of the collaborative programme, including curriculum development, the preparation of teaching materials, external examination, thesis supervision, and teaching elective courses. Furthermore, the MA students sent to other participating universities could still be sponsored for PhD studies to further staff development at the home university. Finally, if conditions improve, the university could reapply for assistance to start its own MA programme.

Implementation

The schedule of events set out in Figure 1 presupposes that the programme would commence in January 1991.

The following activities shown as (A) in Figure 1 would be initiated between January and September, 1991:

- Appointment of the Programme Director and administrative staff;
- Establishment of the Academic Board;
- Preparation and approval of detailed plans submitted by departments wishing to participate in the programme;
- Approval of start-up and operating grants for the core courses, and
- Appointment and meetings of the Curriculum Sub-Committee.

The activities shown as (B) would take place between September 1991 and June 1992:

- Preparation of a list of external examiners, and approval of the terms and conditions for their services;
- Continued meetings of the Curriculum Sub-Committee;
- Submission of requests for elective courses, to commence in June 1992;
- Contracting of facilities and services for the joint facility;
- Grants to "course leaders" to prepare elective courses;
- Review of the proposed elective courses by the Programme Director and their approval by the Academic Board;
- External examination of the core courses (May and June 1992) and their assessment by the Curriculum Sub-Committee and Academic Board;
- Submission and approval of operating grants for the second group of MA students starting in September 1992; and
- Submission and conditional approval of grants for thesis research, to be started September 1992 by the first group of students.

The activities shown as (C) would take place between June and September 1992:

- Mounting of the first round of elective courses at the joint facility, and
- Final approval of grants for thesis research by the first group of MA students

Financing of the programme

The costs of the collaborative programme are shown in Table 1 under the following categories:

1. *Programme Management*: This item covers the direct costs of administration, and meetings of the Academic Board.
2. *Core Courses:* This item covers grants to participating universities for the start-up and operating costs of the core courses. In addition, the Programme would pay directly for meetings of the Curriculum Sub-Committee, the preparation of teaching materials and text books, and the expenses and fees of external examiners.
3. *Elective Courses:* This item would cover expenditures on grants to course leaders for planning electives; contracting facilities and services for the joint facility; payments to course leaders and resource persons teaching the elective subjects; and grants for the preparation of teaching materials and textbooks.
4. *Thesis Research:* Grants would be given to each university to cover the cost of thesis research by eligible candidates. In addition, the programme would pay directly for the cost of joint thesis supervisors.

The preliminary estimate of the cost of the collaborative MA programme is $9.7 million, and is summarized in Table 1. This estimate is highly sensitive to assumptions concerning the number of participating departments, and *their* projections of MA students. More specifically the estimate presumes that the number of participating universities will increase from six in years 1 and 2, to eight in years 3, 4 and 5; the average intake will rise from ten in years 1 and 2, to thirteen in years 3, 4 and 5; and that $1/3$ of the entrants will *not* complete the programme. Further details concerning these assumptions and unit costs are contained in Appendix A.

By the end of the first five-year phase, the programme's quality should be sufficiently well recognized to attract support from local sources, especially government agencies currently training their personnel elsewhere. After five years, universities would assume responsibility for certain costs. These would be paid directly by students who obtain sponsorship by the department itself and other local bodies, especially government agencies. The costs would include core courses, with the exception of external examination, and of thesis research, ex-

cept for joint external supervision. The collaborative programme would continue to finance the start-up and operating grants for new entrants; programme administration, including the Academic Board, the Curriculum Sub-Committee, and their various activities, and the joint facility for elective courses.

Table 1 Preliminary cost estimate, collaborative MA programme (1990 US$ '000)

Item	Year 1	Year 2	Year 3	Year 4	Year 5	Total
A. Programme management	220	220	225	225	225	2,115
B. Core courses	1,134	494	930	770	770	4,098
C. Elective courses	308	308	414	414	414	1858
D. Thesis research	–	319	319	546	546	1,730
Sub-total	1,662	1,341	1,888	1,955	1,955	8,801
Contingency (10%)	166	134	189	196	196	881
Total	1,828	1,475	2,077	2,151	2,151	9,682

Note: This table presents a summary of more detailed estimates contained in appendix A.

The programme should not substitute for other MA schemes in economics currently financed by donors. It is experimental and may fail. Assistance for advanced training should, therefore, not be confined to this one initiative. Moreover, competition with other approaches is healthy as it should stimulate improvements in quality and efficiency. We also note that the programme's first graduates would emerge, at the earliest, in June 1993. Premature curtailment of these other programmes would aggravate the present acute scarcity of trained African economists. Finally, for very special and comprehensible reasons, some countries may not be able to participate in this programme. In their case, other forms of bilateral and multilateral assistance for MA training may prove necessary.

VII. The PhD programme

Our discussion of modalities has concentrated thus far on the MA degree as the essential foundation for the advanced training of economists. The PhD programme has two specific objectives. The first is to train the staff needed to teach the MA programme. The second is to train staff to teach an undergraduate programme whose quality and size are compatible with sustaining a sound MA degree.

A key question to which we now turn is the choice of modality for doctoral education. The AERC studies identify two, namely the local or "sandwich" degree and the overseas degree. We discuss each one prior to explaining their distinct functions in the PhD programme. The principal features of the two degrees are summarized in Appendix B.

The overseas degree

The substantial investment in overseas degree programmes, especially during the sixties and seventies, has been evaluated by many of the implementing agencies.[51] More recently, the question of PhD thesis research in American universities was discussed at a meeting convened by the Rockefeller Foundation.[52] The economics profession in the USA has also taken a closer look at the PhD programmes in some leading institutions.[53] More general trends in doctoral education have been the subject of professional deliberations and of articles in the media in Canada and the USA. Among the concerns raised is the lengthening duration of doctoral programmes; the relevance of course work and research; the criteria used to select students and award degrees; dwindling resources for course work and research; and growing attrition rates.[54]

There has been no systematic study focusing on African students enrolled in degree programmes at overseas universities. However, discussions with donors, students, academics and senior African scholars have highlighted some important issues.

There is a growing impression, as yet unsubstantiated by reliable data, that external support for PhD training abroad in economics is declining.[55] What is not clear, however, is whether the numbers are declining in absolute terms, in relation to a swelling number of applicants, or because of a shift in local and donor priorities to natural and applied sciences.[56]

University departments in Africa complain that scholarships are often offered in an uncoordinated fashion from many sources. They experience difficulty in matching these offers to their own staffing requirements, in terms of subject specialization, and in scheduling the release of trainees in a manner least disruptive to their teaching needs.

Bilateral donors have sometimes "twinned" a local department to another in their own country as part of a larger programme of technical and material support. Although some of this overseas training may be sub-contracted to other universities, the overseas "partner" may not be the most suited, in terms of quality and range of subject specializations, to meet the needs of the African department. More flexible arrangements, offering greater choice of overseas institutions, are clearly preferable. However, African departments frequently lack timely and reliable information concerning the training available in overseas institutions. As a result, selection is often based on personal experience and contacts, or the unwarranted reputation of a famous institution. More precise and timely information is needed concerning the programmes and staff in overseas economics departments.

A key concern is leakage, namely the failure of students to return to sponsoring institution upon successful completion of their programme. Reliable data are not readily available or easily interpreted. Clearly, deteriorating local conditions, marked by an erosion of pecuniary and professional standards are a plausible explanation. However, leakage rates are not uniformly high across the region, notably at the University of Dar es Salaam and a few other institutions.[57] We also note that the leakage may not involve migration overseas, but movement to international agencies in the region, to universities in other African countries, and to the private sector in the student's home country. Thus the degree of occupational mobility may not be exceptional in view of the small labour market in most African countries.

Concerning the content of overseas degree programmes, senior African scholars have criticized the usefulness of some course work requirements. Furthermore, many overseas fellowships do not provide for fieldwork at the thesis stage in the student's home country. Another highly sensitive issue is the prolonged period of absence abroad. Students experience problems in maintaining family ties and reintegrating themselves upon completion of their studies. The costs of overseas training and international travel are substantial. However, doctoral programmes do result in an extended separation of families, a factor that may be particularly important in dissuading qualified women from further study.

There are limited data on attrition rates, i.e. failure to obtain the degree, for African students. Such data should be analysed to determine whether the rate has been increasing, after allowing for differences among training institutions and more general trends in doctoral programmes.[58] Our discussions with some overseas institutions do suggest a growing reluctance to accredit degrees awarded by African universities because of a perceived deterioration in the quality of undergraduate education and poor procedures for selecting candidates.

This generalization is unfair to some African universities that have raised the quality of their PhD candidates significantly over the past decade. What does emerge unambiguously from these discussions and other studies[59] is the importance of a sound undergraduate education in determining whether a candidate will complete the PhD programme successfully.

The local degree

A local degree that involves a substantial course work component is new to the region. Experience with it (in economics) has been largely confined to Dar es Salaam and Swedish universities, although it is now being introduced into some other institutions, namely the Universities of Nairobi, Zimbabwe and Zambia. Under the current arrangement, a student is accepted for the PhD degree of the local university. The student then proceeds overseas for up to two years of course work during which a thesis prospectus is also prepared. The student returns home and formally registers the prospectus for the local PhD degree. The research is then jointly supervised by scholars from the local and overseas universities. After completing field work, the student goes abroad for 6–12 months to write up the thesis. Afterwards, the student returns home to defend the thesis and obtain the degree. The local degree can be broken down into the following stages:

1. Sponsorship by the local university for course work overseas;
2. Course work at the overseas university. The duration varies from 12 to 24 months, depending on the quality and content of prior course work, the prerequisites demanded by the overseas university, and the student's area of specialisation;
3. Preparation of draft thesis prospect. This stage usually occurs concurrently with course work;
4. Revision of the draft prospectus at the home university, its acceptance for the local PhD degree, and the appointment of joint thesis supervisors. This stage normally requires a minimum of three months. *Only at this point does the student formally register for the local PhD degree*;
5. The collection and preliminary analysis of data at home. The duration of this stage can range from 18 months to four years;
6. Write up of the thesis at the overseas university. The time required for this stage has ranged from 12 to 24 months;
7. Defence of the thesis at the home university, completion of any required revisions, and awarding of the degree. This stage typically requires 6 months.

The programme at Dar es Salaam was discussed in interviews with staff, successful candidates and students conducted in Sweden as well as Tanzania. In addition, AERC's Research Co-ordinator, in his former capacity of Chairman of the Economics Department, played a major role in the design, implementation and assessment of the local degree programme. It was also discussed extensively at the meetings associated with the AERC studies. Some important concerns have emerged with regard to the local degree.

We begin by noting that *none* of the universities *formally* include course work as part of their PhD degree. In fact, the student only registers formally for the degree once the thesis prospectus has been approved. In practice, a candidate who has not completed course work overseas would not be considered for a teaching position by the department. However, since African universities are unlikely to change their regulations solely to accommodate a PhD in economics, this formal structure could create serious difficulties if the programme were adopted more widely. One potential problem is that universities typically require a minimum of 18 to 24 months after *formal* registration, before the degree can be awarded. However, this period (covering stages 4 to 7) is not substantially different from that of the overseas degree. A more serious concern is the lack of a uniform standard for course work among African universities. Major differences could emerge because of this absence of a uniform standard in conjunction with the varying requirements imposed by overseas institutions. To some extent, these difficulties would be addressed by a strong MA degree. However, minimum standards for PhD course work would still be desirable, even if they are not *formally* recognized by African universities.

A serious weakness of the Dar es Salaam programme is its inadequate financing of fieldwork (stage 5), which is currently assigned under Swedish bilateral assistance to local sources. Thesis research has been prolonged up to six years since students must pursue other activities because of a lack of funds. This shortcoming could be addressed by appropriate external financing.

Students appear to have been readily accommodated within Swedish universities. Interviews with some scholars and administrators in the UK and Scandinavian countries other than Sweden point to a similar willingness to collaborate in this way with African universities. Less certain is the attitude of universities in North America where the modality is comparatively unknown.[60] In general, acceptance of African students, for either a local or foreign degree, appears to hinge on the perceived quality of their earlier training and the professional interests of the likely thesis supervisor. The first consideration could be addressed by a sound MA degree, and the second by suitable incentives that stimulate a more enduring interest in African economies.

The problems associated with "twinning" institutions, mentioned previously in connection with the overseas degree, can also occur with the local degree. The Economics Department of the University of Dar es Salaam has commented very favourably on the training provided at Swedish universities. However, it has encountered difficulties in obtaining suitable courses in some areas of specialization, especially since the possibility of "third-country", i.e. non-Swedish,

training has been removed. This type of constraint, and other problems associated with twinning arrangements, are closely associated with bilateral financing. Expanded choice for African departments would necessitate external support from a multilateral source.

Some African students who are currently finishing the local degree programme feel disadvantaged. They will satisfy similar requirements as their compatriots who obtain overseas degrees, but believe they will lack the same career prospects and life-time earnings. We note though, that the private rate of return to their education will still remain very high. Furthermore, the limitations allegedly associated with the local degree should diminish as it achieves broader acceptance within African and overseas universities. Nonetheless, local degrees will probably be considered a "second best" alternative for some time.

The experience of Dar es Salaam's Economics Department with its own PhD programme has been quite positive. The local degree has involved its staff, through joint thesis supervision, in doctoral education. The programme has also been responsible for significant improvement in the MA programme since course work was restructured to meet standards prevailing in Swedish universities. More generally, important links, especially in research, have been forged between Swedish and Tanzanian scholars. Finally, there appears to be no significant difference in quality between students who have received a local degree and those awarded a Swedish one. Members of the former group, in fact, have tended to integrate more readily back into the Department upon completion of their studies.

The experience of Dar es Salaam suggest that the local PhD degree should *not* be introduced in an indiscriminate fashion in other African universities. A key consideration is whether staff are sufficiently qualified to participate meaningfully in thesis supervision. If not, the local degree is really a facade, since a department will not have been involved in any aspect of the student's doctoral education. In such cases, students' misgivings would be fully justified. Token involvement is a distinct possibility where a department cannot sustain a sound MA degree of the type described in the preceding section since its failure will normally be associated with serious systemic problems.

It follows that reliance on the local degree as the *sole* or indeed principal modality for PhD training would be unwise. The experience of the University of Dar es Salaam is exceptional since it is one of the few universities in Sub-Saharan Africa currently able to offer a sound MA programme in economics. The department has been able to improve the quality of its MA over the past decade because it has not been overwhelmed by a burgeoning undergraduate enrolment. This situation differs appreciably from that prevailing in most other countries.

The importance of a sound local MA degree, as the precondition for a local PhD has also been illustrated by the experience of the University of Nairobi. In the late sixties and seventies, the economics department sent several locally registered PhD candidates to the USA for course work prior to the commencement of their thesis research. The American universities were sufficiently impressed

by the students' performance to suggest that they register for their own PhD degree. This offer was declined by the University of Nairobi, as it wished to strengthen its own PhD programme in economics. This early version of the "sandwich" PhD programme ended by the mid-seventies, possibly because of problems resulting from the rapid growth in undergraduate enrolments and the real decline in resources for MA training.[61]

Local or overseas PhD degree?

By way of summarising the preceding discussion, we compare the two modalities in terms of their cost and effectiveness.

Cost

There is no reason to presume that the local degree is less costly. Assuming a student has been well prepared at the MA level, the duration would be four years, the same as the overseas degree. Both the local and overseas degrees would entail about three years of course work and thesis preparation abroad, and one year of field research at home. The local degree must also allow for travel by the joint thesis supervisors. However, provision for supervision in the field should also be part of an overseas degree. In summary, the costs associated with each degree should be similar.[62]

Effectiveness

Effectiveness can be adjudged as a function of attrition rates, leakage rates, relevance, and externalities.

Attrition rates: Satisfactory completion of the course work component within a reasonable period depends, in both cases, on the quality of the undergraduate and MA degrees. This observation underscores the importance of a strong MA programme as a necessary condition for either modality.

Leakage rates: Occupational mobility, especially to international agencies and overseas institutions will be less for holders of local degrees. However, this feature is a negative indicator of the acceptance of the local degree. Paradoxically, we would hope that occupational mobility would *rise* over time to a level normally associated with professionals of similar experience and ability who hold an overseas degree.

Relevance: The local degree offers greater scope for tailoring course work overseas to local requirements for teaching and research. Without relaxing its standards, the overseas university can afford to be more flexible in designing a suitable programme. However, its responsiveness will depend on whether

African students are considered sufficiently well prepared to handle advanced course work.

Externalities: We need to consider both modalities in the broader context of a strategy for strengthening advanced training in economics on a sustainable basis. Encouragement of the local PhD degree may have certain advantages in the context of a careful strengthening of local economics departments over the longer term. First, we note that a local degree programme can be tied more directly to efforts for raising the quality of MA training at local universities. More specifically, the content of the MA degree can be adjusted in response to deficiencies revealed by doctoral course work conducted overseas. This aspect has been demonstrated in the case of Dar es Salaam which revised the content of its MA programme to better prepare students for doctoral level course work at Swedish universities. Responsiveness is improved to the extent that the overseas university also becomes more actively involved in MA training, a possibility that could be accommodated by the proposed collaborative MA programme. The latter also offers the longer term prospect of gradually expanding the activities of the joint MA teaching facility to include PhD course work, now being provided by overseas universities.

Thus far, we have assessed the two modalities in the context of strengthening the graduate teaching programmes of economics departments over the longer term. With respect to more immediate requirements, two conclusions can be drawn from the preceding discussion. The first is the close association between a strong local MA and a department's likely capacity to offer a credible local PhD degree. Here we note that this condition may only obtain *at present* in as few as four universities in anglophone Africa (*including* Nigeria). The second is that there is probably no advantage, in terms of cost, in selecting the local PhD. A third consideration is the actual number of PhD candidates needed for teaching purposes. A survey of teaching departments in anglophone Africa (except Nigeria), conducted in the second phase of the AERC study,[63] suggests that the number of candidates *annually* will range from 12–16 in 1991 to 16–20 by 1995. This estimate is highly sensitive to such factors as the likely size of the undergraduate programme; the capability of the 13 universities canvassed to develop and sustain an MA programme under the terms of the proposed collaborative programme; the ability of these departments to retain teaching staff; and the continuation of current training programmes (where they exist). These estimates though may prove surprisingly robust since the above mentioned factors are interrelated. Specifically, the ability to sustain the MA programme will depend on whether undergraduate enrolments are expanded in a manner commensurate with local resources and on the retention of qualified staff. Conversely, the operation of a sound MA programme, with the prospect of future development of a local PhD degree, will be indicative of conditions likely to retain qualified teaching staff.

Based on the foregoing discussion, we reach the following conclusions with respect to PhD training:

1. The principal modality over the medium term (five years) should be the overseas degree;
2. For planning purposes, we suggest 10 to 15 candidates annually for anglophone Africa (except Nigeria). This figure encompasses the staff development requirements of universities with a collaborative MA degree, as well as the inclusion of a few outstanding candidates who may be expected to play a leading role in research and policy analysis in a non-university setting;
3. Those universities that already operate strong MA programmes should be given the option of using fellowships provided for PhD training for either their own or an external degree;
4. Over time, universities that develop a strong MA programme should be encouraged to offer the alternative of a local PhD degree. To this end, possible collaboration along lines proposed for the MA should be examined.

This approach is suggested for anglophone countries with the exception of Nigeria. In the case of Nigeria, the option of support for the local PhD degree should prove attractive for a few universities that have managed to maintain a sound MA and, in at least one case, a good PhD programme.[64] A precise estimation of requirements is being prepared as part of the current exercise, supported by the AERC, to articulate a strategy for graduate training suitable for Nigeria.[65]

The type of, as well as demand for doctoral training is more problematical in the case of francophone countries because of differences in degree structure *among* members of this group as well as with anglophone Africa. In the past, scholars with PhDs have experienced problems in obtaining accreditation of their degrees as fully comparable with the "doctorat" set down in local regulations. At first glance, the situation has been rendered more complicated with the introduction in France of the doctorat (de l'université) in place of other doctorat de troisième cycle and the doctorat d'etat. However, this innovation may also have created an opportunity for introducing a new doctoral degree, essentially comparable to the PhD. With respect to the choice between local and overseas degrees, there is unlikely to be any immediate demand for the former owing to the absence of sound MA (equivalent) programmes. Confirmation of this conjecture, as well as a more precise estimate of likely demand, must await the outcome of the CIEREA-led study of graduate education.[66]

Cost and administrative arrangements

A preliminary estimate of the cost of PhD training for anglophone Africa (except Nigeria) is $7 million over five years (see Table 2). This estimate is

based on requirements for staffing universities likely to sustain the MA programme described in Section VI. A detailed description of numbers and costs is provided in Appendix C.

Table 2 Preliminary cost estimate, collaborative PhD programme (1990 US$ '000)

Item	Year 1	Year 2	Year 3	Year 4	Year 5	Total
A. Fellowships	256	512	896	1,280	1,408	4,352
B. Thesis supervision	–	–	40	40	60	140
C. Programme review	75	75	75	75	75	375
D. Research grants	120	120	120	150	150	660
E. Programme administration	51	102	179	256	282	870
Sub-total	502	809	1,310	1,801	1,975	6,397
Contingency (10%)	50	81	131	180	198	640
Total	552	890	1,441	1,981	2,173	7,037

At first glance, the most logical arrangement for managing the PhD programme is the administrative structure proposed for the collaborative MA degree. Administration of the PhD programme, however, will generally entail a very different range of supportive services from those required for the MA. The latter will be conducted within the region and will be based on the networking of local institutions. In contrast, PhD training, even in the case of the local degree, will require extensive administrative support services outside of Africa, especially since the task of selection will be eased considerably because of information to be provided through the collaborative MA programme. In short, administration of the PhD programme from Africa appears neither necessary nor cost-effective.

VIII. Implementation of the training strategy

This concluding section considers how the strategy could be implemented, and what role, if any, AERC might play in the advanced training of Africans in economics. We do so in two steps. The first is to review the functional characteristics of the training strategy described in the three preceding sections. The second is to present and apply three sets of criteria toward assessing three possible roles for the AERC. The section concludes with specific recommendations concerning the future involvement of the AERC in the formal training of African economists.

Functional overview of the training strategy

The functional characteristics of the proposed strategy are examined in terms of discrete training activities; the *loci* and scope of these activities; linkages between MA and PhD training; changes over the longer term; and overall co-ordination and support.

Training programmes

Implementation of the proposed strategy will require at least four, and possibly up to seven discrete programmes. In the case of the MA, we described how a collaborative MA programme might operate for universities in anglophone Africa with the exception of Nigeria. Whilst external management may be required to initiate the programme, the proposed Academic Board should be able to assume full responsibility for its administration after three years. With respect to Nigeria, there are two possibilities, depending on the size and content of the proposed MA training scheme that emerges from the second phase of the AERC study. Should the scheme prove large in terms of the number of participating institutions and students, and its configuration significantly different from that proposed for anglophone Africa, a separate programme, managed by a Nigerian agency, would be desirable. Collaboration in such matters as curriculum development, external examination, and possibly the joint teaching of specific courses could be negotiated by the two separate programmes. On the other hand, a small Nigerian programme, in terms of participating institutions and students

and a similar scheme for training, could probably be absorbed within that proposed for anglophone Africa. With regard to francophone Africa, a separate programme for training at the equivalent of the anglophone MA will undoubtedly be necessary because of significant differences in language and the structure of higher education from that in anglophone Africa. Several possible arrangements may emerge from the study currently underway in francophone Africa. One is the establishment of up to three programmes, corresponding to the different educational systems *within* francophone Africa. Each programme might base its equivalent of MA training in a leading institution. Alternatively, a single programme may emerge; conceivably it could be managed by CIEREA, with additional technical support in the initial years of operation. Assuming the latter possibility, and the integration of a Nigerian scheme within the anglophone collaborative MA, the training strategy would necessitate two programmes for MA training.

PhD training should prove less complex in terms of the potential number of programmes. Possibly two may be required for anglophone and francophone Africa, respectively. As noted in the preceding section, local as opposed to overseas degrees can be accommodated within a single programme by giving universities the option of using fellowship funds toward a local PhD. This option would be considered on a case-by-case basis, according to criteria mentioned in our preceding discussion of PhD training. Conceivably PhD level training for francophone candidates could be managed within one programme for all of Sub-Saharan Africa, if the PhD degree is accredited as the equivalent of the new doctorat de l'université.

Training programmes: Location and range of activities

The MA programmes will be based in Africa and entail selective forms of support toward strengthening teaching in local universities. To this end, each programme will establish a network of eligible institutions that will engage in a wide range of collaborative activities, including external examination, thesis supervision, the design of curricula and syllabi, the production of teaching materials, and the joint teaching of specific courses. External involvement will largely comprise the participation of individual scholars in some of these activities.

In contrast, PhD training, in the case of the local as well as external degree, will be conducted largely outside Africa. Assuming a four-year duration, up to three years will be spent abroad on course work, and the write-up of the thesis, and only one, involving field research, in the home country. We do note that two other functions, namely the initial selection of candidates and the evaluation of their performance following completion of training and their return home, will be conducted in Africa. However, most of the essential administrative functions, especially those pertaining to support for candidates, and dealings with training institutions, will take place outside Africa.

The proposed strategy does suggest two forms of collaboration between African and overseas universities. The first is a joint annual review of PhD train-

ing. The second is a package of incentives for selected training institutions to strengthen intellectual ties between African and foreign scholars. Such collaboration, however, need not require a strong *administrative* presence within Africa, especially if collaboration were pursued on a direct bilateral basis between the institutions in question.

Links between MA and PhD training

The proposed strategy would entail three types of linkages between MA and PhD training.

The first type is the most apparent, namely that the MA programmes will provide the principal pool of candidates for PhD training, as well as information for selecting the most promising ones. In addition, the proposed programmes would identify priorities in terms of the staffing requirements of local universities. Hence, the selection of students for PhD training will require close liaison among those agencies responsible for administering the MA and PhD programmes.

The second type relates to the content and standards of *both* the MA and PhD programmes. To a considerable extent, the quality and content of the MA programmes will be adjudged by their ability to prepare students adequately so they can complete their doctoral education successfully within a reasonable period. Indeed, rapid improvement in the quality of MA teaching will be an important determinant of the cost-effectiveness of the PhD programme(s). Aside from student performance, there should be joint and continuous monitoring of such matters as the accreditation of MA courses, and the prerequisites demanded to pursue specific doctoral courses. This activity could be undertaken as part of the annual review of PhD training discussed earlier.

The third type concerns the eventual development of PhD teaching at African universities, either as part of a local degree or as the first step toward its establishment. Experience with the so-called "sandwich" PhD suggests that it will be a logical and desirable consequence of a sound MA degree. The first step would likely involve the teaching of some PhD courses, either at the home university or on a collaborative basis with other African universities, possibly through an expansion of joint MA teaching activities. However, this possibility would only arise after the first five-year phase of the proposed strategy.

In the same vein, another longer term possibility is the merger of MA and PhD training, along the lines of graduate education in many American and British universities where the student initially registers for a masters degree, but proceeds, on the basis of individual performance, directly to the doctoral programme. This innovation would entail the omission of the MA thesis. Its introduction in most African universities would require the prior establishment of strong MA *and* PhD teaching programmes and changes in existing regulations.

Evolution of training activities

Our preceding comments anticipate a more general discussion of how the training activities proposed in the strategy would evolve beyond the initial five-year

period discussed in this paper. The numbers projected for this initial phase are modest because emphasis is placed on quality and sustainability. Investment over the first five years should result in up to 15 anglophone and francophone African universities operating well-established and sound MA programmes. These will be progressively reinforced by a steady inflow of successful PhD candidates. Subsequent expansion of their annual intake should prove possible in response to growth in effective local demand and lead to a reduction in real unit costs at the "margin". At this juncture, a phased reduction in external support, along the lines suggested in Section VI, should be feasible.

Less apparent is the process for phasing out external support for doctoral training. In all likelihood, African universities will still be facing serious financial constraints and may be unable to mobilize sufficient funds, especially in foreign exchange, to assume responsibility for the entire cost. One possible solution may be an increase in the amount charged for their MA programmes so as to cover the cost of the "investment" in human resources necessary for future replenishment and expansion of teaching staff. Increased local financial support and the progressive development of local PhD training should result in a gradual transfer of administrative responsibilities for the PhD programme(s) to the local agencies managing MA training.

Overall co-ordination and support

Is there a need for an umbrella organization to marshall resources for the strategy and ensure co-ordination of its various components and activities? In response, we note that unrestricted multilateral support will be required to finance most of the proposed activities in a flexible, efficient and responsive fashion. At the present time, the most promising source appears to be the African Capacity Building Initiative spearheaded by the World Bank. An alternative and possibly second best solution would be the establishment of a consortium of interested donors. We also observe that proposed strategy offers sufficient opportunity, and in most cases, appropriate modalities to ensure adequate co-ordination among its various programmes and activities. Indeed, establishment of an umbrella training agency might impede the emergence of local capacity for managing MA and subsequently PhD training programmes.

A role for the AERC

In this section we consider three possible roles for the AERC. Each is assessed in terms of sets of three criteria, namely the relationship between research and training; networking with local institutions; and the impact of increased training responsibilities on AERC's research programme. We conclude with three specific recommendations.

Criteria

We present three sets of criteria for assessing a prospective role for the AERC.

The relationship between research and training

Most of the researchers in AERC financed projects teach in universities. A deteriorating environment has cut into the time and energy available to them for research. Indeed some good scholars are leaving. Measures to strengthen teaching will create a more congenial environment for research by these scholars. Conversely, research offers an important means of continually upgrading professional skills, and enhancing professional self-confidence and job satisfaction.

Knowledge generated from research can be introduced into courses so that theory and methods are applied to African issues. This relationship is most evident in thesis research that uncovers new information, provides fresh insights, and raises important questions that stimulate further research. Finally, we note that advanced training is a necessary investment in the supply of future generations of researchers as well as teachers.

This relationship between research and training clearly points to a continuing *interest* by the AERC in training issues, one typified by the studies described in Section II. However, it does not necessarily justify an active role by the AERC in the *implementation* of training programmes.

We also note that AERC financed research covers only a small portion of issues studied by economists. AERC's coverage will remain limited since it assigns priority to rigour and quality, and its principal modality, namely the networking of economists, implies that only a small number of themes can be accommodated at any given time. Some new thematic areas will be added, but these are likely to build on existing research activities. Many important areas of economic research are, therefore, never likely to be covered by the AERC. Hence the relationship between research and training will be asymmetric in so far as training will always encompass a much broader range of topics than the research to be financed by the AERC.

Networking with local institutions

The innovative strategies proposed for the MA and PhD underscore the special relationship AERC has forged with researchers, governments and universities in the region. The AERC is perceived as independent. Its mandate does not include the advocacy of particular economic policies and the research it finances emphasizes rigour both in the use of economic theory and method and in relating substantive results to public policy.

A major feature of the AERC studies of advanced training has been consultation with a key constituency comprising teachers, university administrators and government officials since their involvement is deemed essential to the design and ultimate success of any strategy. The proposals that have emerged from the studies reflect an intimate knowledge of local needs and conditions, a realistic sense of what is achievable, and a strong feeling of local ownership.

Activation of this constituency, however, is not sufficient reason for the AERC to become directly involved in implementation of the proposed activities. The proposed strategy can and should be assessed on its own merits, independently of a possible role for the AERC.

Impact on AERC's research activities

AERC involvement in the implementation of training activities must be assessed very carefully in terms of its ramifications for the research programme. We note that the AERC is much more than a convenient mechanism for the disbursement of research grants. It has evolved an elaborate and labour intensive process of reinforcing all aspects of research from the pre-proposal stage to the publication of externally reviewed results. Aside from grants, these supportive activities include periodic meetings of researchers to review research at its different phases; the provision of detailed technical comments and resource materials; and assistance in presenting results in a professional format.

From this perspective, AERC's research programme is still in its infancy. Procedures are constantly evolving in response to operational experience. The pace of activity has increased rapidly, even though thematic coverage has not been expanded. Review and publication of the first research findings have just commenced.

Central to the ultimate success of this activity is a steady improvement in quality. However, "quality" in this instance does not simply denote an application of more sophisticated methods. Rather, it entails an informed adaptation of theory and method that results from increased self-confidence, improved skills and wider knowledge. Conceivably, AERC's technical and managerial capacity can be expanded. What cannot be expedited is the process itself. For these reasons, the Advisory Committee and Secretariat have adopted a cautious and yet innovative approach that nurtures this process and therefore a guarded attitude toward any prospective involvement in formal training, in terms of whether and how it might detract from the momentum of the research programme.

Possible roles for the AERC

We now look at three possible roles for the AERC in formal training.

Role No. 1: Expansion of the current programme for training and capacity building

Within its current programme, the AERC provides limited assistance in the form of small targeted grants for training and capacity building. These were described in the introductory section. These grants are considered functionally related to the research programme in so far as they relieve critical bottlenecks impeding research; assist in identifying issues and disseminating results to a broader audience; strengthen ties between researchers and policy-makers; support complementary but independent efforts by other research organizations; and finance

graduate thesis work. Some of the grants, notably those for institutional attachments, have become important incentives for researchers to conduct high quality research. The above mentioned grants are carefully targeted because of the Secretariat's extensive contacts with local institutions and researchers.

Both the AERC studies and the external evaluation strongly recommend an expansion of this activity in terms of scope and funding, to include grants for:

- Individual travel to international conferences to present research results;
- The preparation of instructional and reference materials;
- A broader range of professional publications; and
- Thesis research into topics not included in AERC's thematic coverage.

Returning to our three sets of criteria, we note that this recommendation would draw on the complementary ties between research and training, and make effective use of AERC's extensive network of contacts in the region. It would not detract from the momentum of the research programme provided that:

- The average size of grant were maintained at its present size (in real terms);
- The current guidelines, based on the functional relationship of such grants to the AERC research programme, were not changed;
- The AERC Secretariat retained responsibility for assessing such grants; and
- The budget allotted to this activity were increased cautiously in line with the Secretariat's administrative capacity.

Role No. 2: AERC could serve as an implementing agency, for the collaborative MA Programme, for a limited period of three years

A sound MA programme is a key component in the strategy for advanced training. The collaborative MA programme seeks to reinforce national institutions through a flexible approach that attempts to accommodate disruptive developments in higher education. The programme's goal is sustainability, through the emergence of financial support from local sources and the adoption of appropriate public policies toward higher education.

Turning to our set of criteria, we note that the programme exploits some important ties between research and training. Research findings can be used for case studies and may lead to changes in curricula. Furthermore, research can help identify the best scholars to teach courses and serve as external examiners and thesis supervisors.

In structure, the proposed programme would closely parallel AERC's own extensive network of scholars from universities and government agencies. The latters' involvement is essential to the programme's implementation and sustainability. Successful management of the programme itself will depend on an in-depth understanding of local conditions and a creative approach toward networking institutions and scholars across national boundaries.

The third set of criteria raises the crucial question of the likely impact of this added responsibility on AERC's own research programme. Assumption of this second role would harm the programme's momentum unless it were done under the following conditions:

1. The task of implementing agency would be assumed for a period of three years only, following which it would be transferred to the Academic Board, along with the programme's administrative staff.
2. Consistent with this arrangement, the AERC would seek separate incremental financing for the programme from multilateral sources. The MA programme would be managed as a separate activity and would report to the AERC Board and its funders through the Executive Director. Upon completion of the trial period, funds for the programme would be given directly by the donor(s) to a new implementing agency.
3. The programme would cover anglophone Africa with the possible inclusion of Nigeria, in accordance with the circumstances mentioned earlier (see Functional overview of the training strategy). While acting as the implementing agency, the AERC would assist other initiatives to develop their own modalities for MA training by financing meetings and studies and facilitating exchanges with the anglophone group.
4. The AERC would adjust its own core programme for training and capacity building, as suggested under role No. 1, to avoid a possible duplication of effort.

Role No. 3: AERC should manage the PhD degree programme

The strategy for advanced training will entail operational and functional links between the MA and PhD programmes, as described above. Therefore it may be argued that the AERC should assume responsibility for PhD training were it to manage the collaborative MA programme for a limited period.

Turning to our first set of criteria, we note the many important links between PhD training and research. Indeed, these are explicitly recognized by AERC's present support for thesis research. This activity, and its possible expansion, as suggested under role No. 1, would have to be adjusted once a larger scale PhD programme is initiated as part of the training strategy. AERC's research programme also helps ensure that skills acquired in graduate school do not atrophy after the completion of formal study. However, we also observe that once AERC's research programme reaches its optimal size, it will only encompass a small proportion of the topics and students covered by the PhD programmes.

As suggested by our earlier discussion of the functional characteristics of the training strategy, AERC's networking features offer no particular advantage in terms of implementing the PhD programmes. AERC has no institutional presence outside Africa. To administer training, the AERC would have to develop an institutional presence expressly for this purpose. There are other organiza-

tions that already have an institutional presence both in Africa and overseas and that would, therefore, be better placed to assume this role.

The scale of involvement entailed by PhD training would have serious negative repercussions for AERC's research programme. We note that the task of implementing the PhD programme will be much longer and more labour intensive than for the MA. The average duration of PhD training would probably be four years in contrast to the MA programme. A considerable period will also be required to develop African based capacity capable of managing this activity.

We therefore conclude that AERC should not assume this role, especially since there are other agencies better placed to discharge this responsibility. We note three in particular, namely the Rockefeller Foundation, the Ford Foundation, and the International Development Research Centre of Canada. All three have an institutional presence in Africa and overseas; considerable experience in the management of doctoral programmes; and an administrative structure that could be expanded incrementally for this purpose.

Recommendations

With respect to an AERC role in the advanced training of African economists, we recommend the following:

1. An expansion in AERC's second phase of support for training and capacity building, according to the criteria set out under Role No. 1.

2. AERC should act as the implementing agency for the collaborative MA programme for a period of three years. For this purpose, AERC would manage a special programme, administered and financed separately from its other core activities. Indeed, in the view of AERC's Advisory Committee, adherence to these conditions is essential if the momentum of its research activities is not to be severely impeded.

3. AERC should not implement the proposed PhD programme. While it retains responsibility for the collaborative MA programme, AERC would work closely with the agency or agencies that undertake this task.

Appendix A
The collaborative MA programme: estimated costs

Table A–1 Preliminary cost estimate, collaborative MA programme (1990 US$ '000)

Item	Year 1	Year 2	Year 3	Year 4	Year 5	Total
A. Programme management						
1. Secretariat	211	211	211	211	211	1,055
2. Academic Board	9	9	14	14	14	60
Sub-total	220	220	225	225	225	1,115
B. Core courses						
1. Start-up grants	640	–	160	–	–	800
2. Operating grants	360	360	624	624	624	2,592
3. Curriculum sub-committee	48	48	48	48	48	240
4. Production of teaching materials	50	50	50	50	50	250
5. External examination	36	36	48	48	48	216
Sub-total	1,134	494	930	770	770	4,098
C. Elective courses						
1. Planning grant	12	12	16	16	16	72
2. Student travel/subsistence	95	95	165	165	165	685
3. Rental/operations of facility	30	30	30	30	30	150
4. Course leaders/resource persons	96	96	128	128	128	576
5. Production: Teaching materials	75	75	75	75	75	375
Sub-total	308	308	414	414	414	1,858
D. Thesis research						
1. Research grants	–	245	245	420	420	1,330
2. External examination	–	74	74	126	126	400
Sub-total	–	319	319	546	546	1,730
Sub-total A–D	1,662	1,341	1,888	1,955	1,955	8,801
Contingency (10%)	166	134	189	196	196	881
Total	1,828	1,475	2,077	2,151	2,151	9,682

Basic assumptions

1. Participating universities: six in years 1 and 2; eight in years 3, 4 and 5.
2. Number of students:
   - Weighted average intake of ten per participating university in years 1 and 2 and thirteen in years 3, 4 and 5;
   - Attrition rate of 10% by end of core courses, 10% after electives, and 10% after thesis, i.e. one third of the entrants do *not* complete the programme successfully.
3. The estimate covers anglophone Africa except Nigeria.

A. *Programme management*

1. Secretariat expenses

1.1. Personnel	US $
(a) Director: salary and benefits	90,000 p.a.
(b) Administrator: salary and benefits	20,000 p.a.
(c) Secretary: salary and benefits	15,000 p.a.
(d) Clerk: salary and benefits	15,000 p.a.
(e) Messenger/Driver: salary and benefits	6,000 p.a.
1.2 Travel	30,000 p.a.
1.3 Operations	
(a) Equipment (over five years)	10,000 p.a.
(b) Office Operations	25,000 p.a.
Total	211,000

2. Academic Board meetings

- Two meetings annually, three days each
- Years 1 and 2 (10 participants)
  Years 3 to 15 (15 participants)

Years 1–2: airfares	4,000	9,000
per diems	4,000	
other	1,000	
Years 3–5: airfares	6,000	14,000
per diems	6,500	
other	1,500	

B. *Core courses*

1. Average start-up grant of	80,000
year 1	640,000
year 3	160,000

2. Operating grant of $6,000 per student

Year 1	60 students	360,000
Year 2	60 students	360,000
Year 3	104 students	624,000
Year 4	104 students	624,000
Year 5	105 students	624,000

3. Meetings of Curriculum Sub-Committee

- Assume four meetings per year
- Average of 10 at each, including overseas scholars
- Duration of each meeting: three days
- Average unit costs: airfare (weighted) 700
  per diem 140

Per meeting:	airfares	7,000	
	per diems	4,000	
	other	1,000	
		12,000	48,000

4. Preparation of teaching materials and reproduction 50,000

5. External examinations

Years 1 and 2: 18 examiners
Years 3–5: 24 examiners

unit costs: airfare	400
per diems (75 x 8)	600
fee	1,000
Total	2,000
Years 1 and 2	36,000
Years 3 and 4	48,000

C. *Elective Courses*

Years 1 and 2: 6 electives
Years 3, 4 and 5: 8 electives

1. Planning grants

$2,000 per elective

Years 1 and 2	12,000
Years 3 and 4	16,000

2. Student airfares and subsistence

- Numbers: Years 1 and 2 54
  Years 3–5 94

- Airfares $250 (weighted average)
  Subsistence $1500 (over 12 weeks)

Airfare: Years 1 and 2	13,500
Years 3 to 5	23,500
Subsistence: Years 1 and 2	81,000
Years 3 to 5	141,000

3. Joint teaching facility 30,000
   - rental of teaching space
   - personnel services
   - equipment, consumables, communications

   assume $2,000 p.w. for 15 weeks

4. Payments to course leaders and resource persons

- Course leaders

travel and expenses	2,000
honorarium	4,000
	6,000

- Resource persons (two per elective)

travel and expenses	3,000
honorarium	2,000
	5,000
Years 1 and 2 for 6 electives (6 x 6,000)	96,000
Years 3, 4 and 5 for 8 electives (8 x 16,000)	128,000

5. Preparation of teaching materials and textbooks 75,000 p.a

D. *Thesis research*

Numbers of students

Year 2	49
Year 3	49
Year 4	84
Year 5	84

1. Average grant for thesis research of $5,000

Year 1	0
Year 2	245,000
Year 3	245,000
Year 4	420,000
Year 5	420,000

2. External examination

honorarium (total)	1,000
airfare and expenses	500
Year 2	73,500
Year 3	73,500
Year 4	126,000
Year 5	126,000

E. *Other items*

Assume contingency of 10%
No cost escalation is provided for. The figures are in 1990 US dollars.

Appendix B
The PhD degree structures

The local degree programme

(a) *Structure*

- Acceptance of the student as a potential PhD candidate
- Course work overseas for 1 1/2–2 years
- Preparation of the draft thesis prospectus overseas
- Registration of the student for the PhD degree at the home university. Appointment of joint supervisors, including at least one from the overseas university
- Fieldwork and preliminary analysis in the home country. Maximum duration of 12 months
- Write-up of the thesis overseas. Maximum duration of 12 months
- Defence of the thesis, completion of revisions, and awarding of the degree. Maximum duration of six months.

(b) *Individual eligibility*

- Successful completion of the MA degree, either in Africa or overseas
- Sponsorship by a local university as part of its staff development programme, or by a government agency.

(c) *Institutional eligibility*

- PhD degree in economics
- Evidence of capacity to provide supervision of thesis research
- Identification of overseas institutions prepared to provide course work and thesis supervision
- An approved staff development programme.

The overseas degree programme

(a) *Structure*

- Acceptance of the student for the PhD programme
- Completion of course work requirements. Maximum duration of 2 years

- Acceptance of thesis prospectus. Appointment of thesis supervisors
- Fieldwork in Africa. Maximum duration of 12 months
- Write-up, defence and acceptance of thesis by the university. Maximum duration of 18 months.

(b) *Individual eligibility*

- Successful completion of the MA degree, either in Africa or overseas
- Sponsorship by a local university or public agency
- Selection by an independent panel of leading scholars from Africa and abroad.

Appendix C
PhD Programme: estimated costs

Table C-1 Preliminary cost estimate, PhD programme (1990 US$ '000)

Item	Year 1	Year 2	Year 3	Year 4	Year 5	Total
A. Fellowships	256	512	896	1,280	1,408	4,352
B. Thesis supervision	–	–	40	40	60	140
C. Programme review	75	75	75	75	75	375
D. Research grants	120	120	120	150	150	660
E. Programme administration	51	102	179	256	282	870
Sub-total	502	809	1,310	1,801	1,975	6,397
Contingency (10%)	50	81	131	180	198	640
Total	552	890	1,441	1,981	2,173	7,037

Basic Assumptions

1. Each fellowship covers the cost of four years of course work and thesis research, both in Africa and overseas, and two return trips for the fellow and dependents.
2. Each fellow is assumed to have a spouse and two children.
3. Number of fellowships offered annually:
   Years 1 and 2 (prior to output from collaborative MA programme): 10 p.a.
   Years 3 to 5: 15 p.a.
4. This estimate covers only anglophone Africa except Nigeria.

A. *Fellowships*

1. Living expenses for the fellow and dependents is assumed to be $1,200 p.m. (projected from IIE survey of living costs of foreign students in USA in 1988/89), i.e. 14,400 per year.
2. Cost of tuition, books, insurance etc. assumed to be $7,600 p.a.
3. International air travel
   per one-way-fare: 3 x 1,200 = $3,600
   Three one-way journeys each year

Table C-2 Profile of PhD fellowship expenditures (US$ '000)

	Year 1	Year 2	Year 3	Year 4	Year 5
Group 1 (10)	220	220	220	220	–
	36	36	36	36	–
Group 2 (10)	–	220	220	220	220
	–	36	36	36	36
Group 3 (15)	–	–	330	330	330
	–	–	54	54	54
Group 4 (15)	–	–	–	330	330
	–	–	–	54	54
Group 5 (15)	–	–	–	–	330
	–	–	–	–	54
Total	256	512	896	1,280	1,408

B. *Thesis supervision*

One return trip to Africa by supervisor; average duration of 1 week.

- airfare 3,000
- subsistence 1,000

Year 3 40,000
Year 4 40,000
Year 5 60,000

C. *Programme review*

One annual meeting in Africa of participating institutions (from Africa and overseas), Academic Board of MA programme, and donor institutions to review programme content.

say 75,000

D. *Research Grants*

Grants provided annually to a select number of training institutions for research and travel relating to African economic issues.

average award: 30,000
number: Years 1–3 4 p.a.
Years 4–5 5 p.a.

E. *Programme administration*

Assume 20% of annual expenditure on PhD fellowships.

Notes

1. The AERC is composed of:
   (a) A Board of Directors elected by the sponsoring member institutions i.e. donors. The Board sets overall policy, provides support for a multi-year programme of activities and approves an annual programme of work and budget.
   (b) An Advisory Committee comprising leading researchers (5) and policy-makers (4) from the region, international resource persons (4), the AERC's Research Co-ordinator (who serves as the Committee's Secretary), and the AERC's Executive Director. The Advisory Committee sets the research agenda, recommends to the Board the programme of work for the coming year, and advises the Secretariat on grants for research and training.
   (c) A Secretariat currently comprising the Executive Director, Research Co-ordinator, and three permanent support personnel, that administers the programme and provides technical support to researchers.

   See: African Economic Research Consortium Inc., *Objectives, Structure and Programme,* Nairobi, June 1989.
2. During 1989, the AERC approved seven institutional grants totalling $52,000. With respect to awards for thesis research, AERC approved two for $22,000 in 1988, eight for $54,600 during 1989, and six for $42,800 as of July 1990. (These figures differ from those in the AERC audited accounts, as they refer to the approval date, as opposed to the date when funds were actually committed.)
3. For this purpose, the AERC currently maintains a reference library of 4,000 documents, consisting mainly of journal articles pertaining to these thematic areas.
4. AERC awards have been publicized widely in its brochures, in biannual research meetings, during the training study, and most recently in its newsletter. The total number of requests and inquiries did not increase appreciably throughout 1989 and during the first half of 1990. Since the inception of the AERC, they total approximately 30, including those for MA and matrise (deuxième cycle) thesis research. At least half have come from the Universities of Dar es Salaam and Ibadan.
5. The three consultants were:
   Prof. J. Pegatienan: former Director of the Centre Ivoirien de Recherche Economique et Sociale, and member of the AERC Advisory Committee;
   Prof. S. I. Ajayi: Chairman, Department of Economics, University of Ibadan; and
   Prof. M. Mukras: Chairman, Department of Economics, University of Nairobi.
6. CIEREA was founded in April 1986 and is currently based at the Université de Ouagadougou, Burkina Faso. The decision to mount a survey of the teaching of economics in francophone Africa was made at CIEREA's third conference, held in Abidjan

in February 1989. Its implementation has been closely co-ordinated with the AERC's own studies of graduate training in economics.

7. At least four different structures of higher education have been identified, namely:
   - those approximating the French system;
   - those approximating the Belgian system;
   - a hybrid of the French and English systems (Cameroon); and
   - a hybrid of the Canadian and Belgian systems (Rwanda).
8. The most complete database is maintained through an annual survey of foreign students in the USA conducted by the Institute for International Education (IIE). The published data (Zikopoulous, 1989) do not disaggregate beyond "social sciences". A special print-out prepared for the AERC by Elizabeth Sutton of IIE has yielded the following information about Africans studying economics in the USA in the academic year 1987/88.

Region	Reporting institutes	Undergraduates	Graduates	Total
Eastern African	59	51	41	92
Central Africa	34	20	14	34
Southern Africa*	41	21	20	41
West Africa	91	95	120	215

*Covering Botswana, Lesotho, Namibia, South Africa, and Swaziland. Mozambique and Zimbabwe are listed under Eastern Africa.

The data are incomplete as approximately 25% of the respondents in the survey, including several large institutions, e.g. Columbia University, did not reply.

Shortage of time did not allow for a breakdown of graduate training between MA and PhD students.

In terms of African students in the USA, the number studying economics at the undergraduate and graduate levels in 1987/88 were:

Region	Economics	Total	Percentage
Eastern Africa	92	6,700	1.4
Central Africa	34	1,800	1.8
Southern Africa	41	2,770	1.5
West Africa	215	11,740	1.8

Sources: Zikopoulous, 1989, Appendix 1.2, and special IIE printout, June 1990.

A more general review of trends in the social sciences reveals the following:

- Nigeria and Kenya have the largest number of students
- The ratio of undergraduates to graduates until 1988/89 is 2:1 for Nigeria, and almost the reverse for Kenya.

Most recently, the proportion of Kenyan undergraduates has begun to increase. This trend may well reflect two factors:

- The rapid increase in numbers of secondary school graduates;
- A perceived decline in the quality of undergraduate education.

The data, albeit incomplete, do point to a low level of output from the USA, which is not only the leading country for the overseas training of Africans, but the principal centre for graduate education in economics.

Assuming:

- all graduates are enrolled in a PhD programme (the MA, with a few exceptions, is not a separate graduate programme in most US universities),
- the median duration of the programme is 6.6 years (based on recent US trends: see *N.Y. Times* article of May 3, 1989 reporting on a special study of the Council of Graduate Schools (Berger, 1989), and
- the success rate is 55% (Berger, 1989)

then the total number of African PhD graduates from US schools for *all* of Sub-Saharan Africa would be in the region of *16* annually. This figure may be an underestimate owing to under-reporting. On the other hand, it does not take account of likely leakages due to brain drain (see Section III).

9. These symptoms are mentioned in Ajayi (1990), Mukras (1990) and Pegatienan (1990) and summarized in (pages 9–13) under "Incentive Structure" and "Capacity and Relevance."
10. *See* Ajayi, Pegatienan and Mukras, 1990, p. 8. The IBRD Study of Education in Sub-Saharan Africa estimates a drop in recurrent public expenditure per tertiary student, measured in constant (1983) dollars from $3,207 in 1970 to $2,197 in 1983 (median country). *See* World Bank, 1988, Table A-19. Given the prolonged economic crisis of the 1980s, it is highly probable that this trend has persisted.
11. GNP per capita dropped 2.8% p.a. between 1980 and 1987. For low income Sub-Saharan countries, the annual rate of decline was 3.6%. See World Bank, 1988, Table 1, p. 221.
12. Eisemon and Davis, 1990, note the potential of students to create unrest and their failure to mobilize a broader constituency, including their teachers or the university's administration (pages 4–14).
13. *See* Hinchliffe, 1985, 1987, for a detailed analysis of expenditure on tertiary education. The IBRD Study of Education in Sub-Saharan notes the following distribution (circa 1983) of recurrent expenditures on tertiary education:

Administration	4.3%
Teaching emoluments	49.7%
Teaching materials	1.9%
Scholarships, mainly maintenance of students	37.2%
Welfare services	1.2%
Other	6.5%

These figures are based on a weighted mean of a limited number of countries from which data could be obtained (World Bank, 1988, Table A-22, p. 146).

14. *See* Court, 1989, p. 4 for Kenyan figures and Court, undated, pp. 20, and 26, regarding predictions for Sub-Saharan Africa. Also Eisemon and Davis, 1990, p. 7.

15. In the case of primary education, the percentage of the relevant age group enrolled rose from 41% in 1965 to 79% in 1980, but then *dropped* to 73% in 1986. The comparable percentages for the rest of the developing world were 73%, 93% and 102%. Both sets of figures include individuals falling outside the normal age group for primary education (World Bank, 1988, Table 32). Tertiary enrolment expanded from 21,000 in 1960 to 437,000 in 1983. However, the annual rate of growth dropped from 13.2% between 1960 and 1980 to 5.3% between 1980 and 1983 (World Bank, 1988, Table A-4). The rate of growth has subsequently increased, along with the absolute rate of students. As of 1980, the rate of tertiary enrolment was 139 per 100 thousand population (a figure masking wide differences among countries), as compared to 650 in the Arab World and 1250 in Latin America (Hinchliffe, 1987, p. 30).
16. Eisemon and Davis, 1990, note that in Nigeria 85% of those seeking admission to university in 1989 were not admitted. In Kenya, public pressure forced the government to raise the number of entrants to 7,000, out of 13,800 qualified A-level leavers (Eisemon and Davis, 1990, p.5). Court notes that the double intake of university intakes, arising from the introduction of the 8:4:4 system would imply a jump from 7,000 entrants in 1987 to 57,000 (!) in 1990, if approximately 50% of the qualified secondary school graduates continued to be admitted. The number would still almost *quadruple* if only 15% of the estimated 172,000 students in the final year of secondary school were admitted to university (Court, 1989, Table 1, p.4). Although Kenya may represent a more extreme case, the figures are indicative of the likely pressure in other African countries to expand tertiary education in response to a swelling number of secondary school graduates.
17. Maintenance of gross enrolment ratios at their 1983 levels would require the addition of 39.4 million primary and 8.6 million secondary school places by the turn of the century. Assuming constant (and admittedly inadequate) recurrent and capital expenditure per student, the total amount required for primary and secondary education *only* would be $11 billion annually. This amount is $2 billion more than the total spent on *all* aspects of education in 1983. "In sum, the demographic tide requires massive efforts just to stay even in terms of enrolment ratios" (World Bank, 1988, pp. 19–20).
18. The ratio of students enrolled in arts and humanities to those in the sciences and engineering was 60:40 in 1986, the same as in 1960 (World Bank, 1988, p.72). In tests administered by the International Association for the Evaluation of Education Achievement based in Stockholm, students from the two African countries selected scored poorest in mathematics. In another test on general science and reading comprehension, a similar result was obtained. "The general conclusion to be drawn from these studies is that the quality of education in Sub-Saharan Africa is well below world standards" (World Bank, 1988, p.33).
19. In South Korea, Seoul National University, a public institution, is ranked above several excellent private universities. Indeed, the government maintains some highly selective institutes of higher learning, together with provincial universities that accommodate the bulk of entrants into the public system. Thus, the distinction need not necessarily be in terms of public/mass and private/elitist education. In virtually all Sub-Saharan African countries, the registration of private universities is proscribed by law or made very difficult in practice. See (Eisemon and Davis, 1990, pp. 18, 20).
20. The case for replacing student grants by loans has been advanced as a means of reducing public expenditure, or for narrowing the current disparity between an individual's and society's gains from tertiary education. What has been less apparent is that access to credit (student loans) is essential for individuals to have a broader selection in terms of cost and quality, and to make more rational choices in the light of prospective returns. In

Sub-Saharan Africa, the absence of developed capital markets infers that any loan scheme would need to be guaranteed and (in most cases) financed by government. As noted subsequently, this constraint would mean little net saving in public expenditure during the first years of a loan scheme. However, a loan scheme could help rationalize the demand for higher education, and stimulate investment from sources outside of government, primarily in the form of private universities.

21. Personal communication, Prof. G. Eshiwani, Principal, Jomo Kenyatta University College of Agriculture and Technology.
22. Ironically, Eisemon and Davis (1990) note that the *structure* of most African universities is very similar to that of small liberal arts colleges in the USA, even though they have a much broader range of functions (Eisemon and Davis, 1990, p.4).
23. *See also* World Bank, 1988, p. 79.
24. *See* Hincliffe, 1987, and World Bank, 1988, in particular.
25. Hinchliffe, 1987, Table 3.3, quotes unit costs of higher education as a percentage of GNP per capita:

Region	Primary	Secondary	Higher
Sub-Saharan Africa			
francophone	29	143	804
anglophone	8	50	920
South East Asia and the Pacific	11	20	118
South Asia	8	18	119
Latin America	9	26	88
All LDCs	14	41	370

These data illustrate clearly the more limited supportive capacity of African economies for higher education or, put somewhat differently, its much higher opportunity cost in terms of foregone resources, especially for primary and secondary education.

26. Thus, in his case study of the University of Ghana, Hinchliffe (1987) compares staffing ratios with those of the University of East Anglia, a British institution of comparable size and structure. The data relate to 1984. The non-teaching establishment is five times as large at the University of Ghana, and the ratio of non-teaching staff to students six times higher (see Table 8.10, p.130). What is perhaps more relevant, in terms of assessing quality and the scope for change, is the significant difference in the distribution of costs between the two institutions, as shown below:

Item	University of Ghana (% of total)	University of East Anglia (% of total)
Academic departments	23.3	62.9
Library	3.4	5.2
Staff and student facilities	9.8	3.8
Administration	14.8	7.2
Premises	30.6	14.8
Minor works	2.7	2.3
Health	12.4	0.7
Other	3.0	3.3

Source: Hinchliffe, 1987, Table 8.9, p. 128.

However, the scope for reallocating costs may be limited since the University of Ghana must directly finance certain costs due, for example, to the absence of a developed housing market, a national health scheme, etc.

27. As suggested by the AERC studies, the current situation is similar *in practice* to that of public institutions in Latin America and the Middle East, wherein most "full time" staff are only providing services on a part-time base.

    A much more contentious issue relates to teaching burdens. The IBRD and Hinchliffe studies conclude that teaching burdens are light, and that there is considerable scope for expanding enrolments (see, for example, Hinchliffe, 1987, p. 76). One reason cited is the unduly large number of programme and course offerings in African institutions, a function in turn of their small average size (as compared to that in developed countries).

    The AERC studies, on the other hand, cited burgeoning teaching loads as a crucial factor in the perceived erosion of quality in undergraduate teaching and the loss of highly experienced staff. The Mukras study estimated the full time student equivalent ratio (FTSE) for a sample of eastern and southern African universities. It ranged from 17 (Dar es Salaam) to 57 (Makerere), in contrast to a UNESCO quoted norm of 12 for the social sciences (see Mukras, forthcoming, Table 7-16).

    There are several possible explanations for these very different conclusions:

    - The staffing situation in *economics*, especially in recent years, is considerably worse than in other departments;
    - The impact of a decline in real support associated with a rapid drop in teaching staff had not emerged fully in the early to mid-1980s, the period whence the IBRD and Hinchliffe studies derive their conclusions;
    - The Mukras study takes account of substantial teaching obligations for students not majoring in economics, i.e. so-called service courses;
    - The current *structure* of African universities has not allowed them to exploit economies of scale which may exist on paper. Among these structural rigidities are the absence of suitable teaching spaces and audio-visual equipment to accommodate larger classes and the lack of funds to engage teaching assistants. A related factor may be the very rapid expansion of enrolment in advance of the small, but crucial, investments in infrastructure needed to accommodate growth.

28. The research honoraria provided by the AERC are very modest. The demand for grants undoubtedly reflects a desire for "self-investment" to enhance professional skills.
29. The Association of African Universities in Accra, Ghana, has a tiny secretariat and suffers from inadequate financing. In contrast, the IDRC has played the major role in setting up and financing a network of Deans of Graduate Studies for Eastern and Southern Africa. *See also* British Council (1987) and Commonwealth Secretariat (1986).
30. *See* the former Universities of East Africa, and of Botswana, Lesotho and Swaziland.
31. Personal communication from Prof. A. Bakayoko, President of CIEREA.
32. *See* the former University of Nigeria, and the most recent emergence of Kenyatta University College (of the University of Nairobi) as an independent university.
33. In 1980, following almost two decades of very rapid expansion, higher education enrolment per 100,000 population was 139 in Sub-Saharan Africa as compared to 650 in the Arab and Asian countries and 1,250 in Latin America (see Heyneman and Bernadette, 1988, p.30.
34. Most relevant for our study is the replacement of the doctorat d'etat and the doctorat de troisième cycle by the doctorat de l'université. This latter innovation should facilitate the development of a doctoral programme similar to the PhD in the "Anglo Saxon" system.

35. For this reason, the Korean Development Institute (KDI), cited in the recent IBRD paper on capacity building (World Bank, 1990, Box IV) is an inappropriate model for most Sub-Saharan countries. The KDI can function as a "centre of excellence" because it is supported by other institutions that perform other essential functions within the country's systems of higher education, research, and policy formulation.
36. Personal communication from several Kenyan officials.
37. *See* World Bank, 1988, especially earlier drafts. The later versions give higher priority to national institutions.
38. *ibid*,. p. 16. However, we note that the sub-heading is regional *training* centres, in which case our comments on this approach are pertinent.
39. Personal observation during the AERC studies.
40. The agreed target for undergraduate enrolments must also limit the demand for teaching students not majoring in economics.
41. The average flow of concessional aid to Sub-Saharan Africa for education, from OECD and OPEC members for the period 1981-83, was $757.4 million. It was distributed as follows:

Capital	26.4%
Technical assistance	44.3%
Fellowships	16.9%
Operating costs/supplies	10.9%
Non-specified	1.5%

Of this total amount, 34.2% was allocated to tertiary education.

See World Bank, 1988, Tables A-26, A-27.

42. Undoubtedly the very different conditions for assistance imposed by donors have severely overtaxed the administrative capacity of many African governments.
43. These observations are based, to a considerable extent, on the author's personal experience.
44. In Tanzania, for example, the development budget for most of the past 30 years has been entirely financed from external assistance.
45. A superb discussion of issues pertaining to training in economics *and* policy analysis is contained in the essay by Bruton and Clark, "An Approach to Development Policy Analysis" in Clark, 1987, pp. 77–112.
46. Much of this recent literature attempts to estimate "transactions costs" resulting from the legal structure, its enforcement (or otherwise), and behavioural patterns based on social values. The approach may prove promising for analysing "informal" markets, a very prominent feature of all African economies.
47. The IBRD paper on "Capacity Building" cites the estimated expenditure of $4 billion annually on technical assistance in Africa as *prima facia* evidence of a demand for economic policy analysis and advice. See World Bank, 1990, p.11.
48. The Ajayi study (1990) consulted Nigerian manpower planning data in an attempt to estimate the demand for economists. However, the author notes that there is no job classification for "economists" *per se*, and that trained economists could possibly enter up to 30 of the occupations listed.
49. These figures are derived by Mukras during the second phase of the AERC study for anglophone Africa except Nigeria (Mukras, 1990a). The figures are used in appendices A and C to obtain preliminary estimates of the costs of MA and PhD training.

50. Personal communication from Dr D. Gordon, USAID, and former Director of the Center for Research in Economic Development, University of Michigan.
51. Among the agencies (known to the author), that have conducted such evaluations are the Ford Foundation, Rockefeller Foundation, USAID and IDRC. For a thoughtful assessment of graduate training networks in Asia, *see* Weisblat and Kearl (1989) concerning the activities of the Agricultural Development Council.
52. Mimeographed materials presented at a meeting held 12 January 1990.
53. The recent study "The Making of an Economist" by Klamer and Colander, 1990, surveys graduate economics students at MIT, Harvard, Chicago, Yale, Stanford and Columbia Universities Their responses reveal considerable differences in intellectual environment, as well as programme structure and content. In a broader vein, the authors conclude that "[w]hat is needed in economics is the establishment of a set of conventions that can guide scientific inquiry when formal empirical testing cannot" (p.194). Such conceptual issues are clearly relevant to the advanced training of African economists.
54. These concerns were identified in a study conducted by the National Research Council in the USA and in papers presented to the 1989 meeting of the Canada Association of Graduate Schools (as reported in Berger, 1989, and Mshigeni, 1989).

    Among the more striking findings:

    - The median time taken by candidates completing a doctoral degree in 1987 in the social sciences was 7.2 years, an increase of over one year since the 1960s.
    - A more limited survey of economics candidates revealed an average of 6.6 years for the period 1980–1987. The attrition rate (from entry to successful completion) was 45%.
    - The lengthening period could be partly attributed to declining support from public and private philanthropic sources.
    - For over 75% of the successful doctoral candidates, the thesis was their *final* research activity.

    These results include non-Americans enrolled in doctoral programmes in the USA.
55. The annual survey of foreign students in the USA, conducted by the Institute of International Education, does suggest a *relative* decline in support from US and foreign governments, as well as private philanthropic sources. These data, however, must be treated cautiously as they cover all foreign students and a growing number of African undergraduates supported from private means. This information also relates to the USA only. The Mukras study (1990, forthcoming) and the Ajayi study (1990) conclude, on the basis of interviews with department heads and senior educational officials, that there has been a significant drop in PhD fellowships in the 1980s. They cite, in particular, the curtailment of the programme of the Rockefeller Foundation.
56. A point worth stressing is the low and declining quality of education in mathematics and science education in Africa at the primary and secondary levels (see Eisemon and Davis, 1990 p.15, World Bank, 1990, pp. 33–34). While weaknesses in mathematics education may act as an informal brake on the expansion of undergraduate enrolments in economics, it may lead in practice to a decline in rigour, due to a relaxation of entrance requirements and lack of remedial instruction.
57. Mukras (1990) observes, on the basis of information provided by 13 universities in anglophone Africa, that of 36 successful candidates sent abroad between 1980 and 1990, 16 never returned or left teaching shortly thereafter.

Some reasons for the low leakage rate at the University of Dar es Salaam, that are cited by Mukras are:

- supplementary income from consultancies;
- opportunity for research and travel; and
- a good relationship with government and involvement in policy-making.

One significant factor, *not* mentioned by Mukras, is the slow growth in undergraduate enrolments, as reflected in the FTSE: staff ratio (17:1 University of at Dar es Salaam as compared to 34:1 at Nairobi). As a result, staff have time for graduate teaching, consultancies, and their own research.

58. *See* footnote 54 above.
59. Personal observation by Dr Mohsin Khan from a study of Pakistani doctoral students in the USA. The single most important factor in determining their likelihood of success was the quality of their undergraduate education. (It should be noted that the Pakistani students were selected for overseas study after completion of their BA).
60. Mukras reports a positive acceptance in principle by some North American institutions visited in May 1990. However, their longer term receptivity will clearly be affected by the actual performance of students.
61. Personal communication from Prof. J. Maitha, former Chairman of the Economics Department, University of Nairobi.
62. The *total* period of graduate training, i.e. MA and PhD, would be six years, which compares favourably with the actual duration in North America of 6.6 years and possibly even longer in some European countries.
63. Mukras, 1990. Only seven of the 12 can formally offer at present a PhD in economics.
64. The institution in question is the University of Ibadan.
65. This study should be completed by December 1990. It is being financed by the AERC.
66. The preliminary results of this study should be available by November 1990. The study is being co-financed by the AERC and the Ford Foundation.

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