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AN AFRICAN BASED DOCTORAL PROGRAMME IN ECONOMICS: SUMMARY REPORT

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AFRICAN ECONOMIC RESEARCH CONSORTIUM

CONSORTIUM POUR LA RECHERCHE ECONOMIQUE EN AFRIQUE

An African based doctoral programme in economics: Summary report

A

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Preface

In May 1993 the African Economic Research Consortium convened an nternational conference in Cape Town to discuss the need for African economists to be trained at the doctoral level. The conference also reviewed the quality and relevance of doctoral training in relation to this need based on past experience and existing programmes. The following conclusions were reached:

- The recent decline in external support for doctoral level training has left large gaps for qualified staff at the region's universities.
- The decline in opportunities for training at this level impinges on the development of capacity for research and analysis of economic issues within public agencies and increasingly the private sector.
- There is a disjuncture between the quality and relevance of existing doctoral training and the more specific needs for skills and contextual relevance of such training in African countries.
- There is a need to pursue further analysis to establish the effective demand for doctoral level training and determine the most appropriate approaches to meeting these demands. In doing so the studies should take into account past experience and the variety of existing arrangements to offer this level of training.

The AERC Board approved the cornmissioning of these studies with three main purposes. First, to determine more systematically the magnitude of effective demand for doctoral training. Second, to propose the most effective approach to supporting doctoral training in the region in a manner that ensures self-sustenance in the long-term and exploits past investments made in graduate training in economics. Third, to assess the desirability and feasibility of an African-based collaborative doctoral training programme.

To these ends, the studies were commissioned by the AERC Secretariat in 1995. These focused on two major objectives: to assess the needs and attempt to determine the effective demand for doctoral training; and to consider as well as test the acceptability of the most appropriate models for intervention in this area.

This special paper presents a summary of the findings of the studies on an African based PhD programme that were commissioned by the Secretariat with the approval of the AERC Board.

William Lyakurwa
Training Coordinator, AERC

I. Introduction and background

This report summarizes the results of a series of studies commissioned by the African Economic Research Consortium to assess the desirability and feasibility of an Africa-based collaborative programme to offer a doctoral degree in economics. The studies were carried out between March and September, 1995. The overall terms of reference for the studies are summarized in Annex A.

The African Economic Research Consortium

Established in August 1988, the African Economic Research Consortium (AERC) is an exciting multi-faceted initiative that is making a substantial contribution to the establishment of a vibrant community of professional economists in sub-Saharan Africa. AERC manages a growing network of economists, drawn from government as well as academia, who are conducting research on designated themes and becoming increasingly engaged in collaborative undertakings with overseas scholars. AERC's research programme has helped resuscitate national professional associations, establish a regional programme for eastern and southern Africa, and strengthen an existing association for West Africa. Most communities of economists in sub-Saharan Africa, capable of undertaking research of acceptable professional standard, have become involved, at some point, in an AERC sponsored activity.

AERC also supports publication and dissemination activities. To date the Consortium has published about 35 externally reviewed monographs in its "Research Report" series, comprising work supported by its research grants. At least an equal number of manuscripts are at various stages of editing, external review and publication. Recast in a different format, this research is also starting to appear, partly as the result of proactive measures taken by AERC, in international and regional journals of the profession. Following on a series of studies into the research and policy communities, AERC initiated a round of seminars to expose strategically placed bureaucrats to AERC supported research and, perhaps more importantly, to an emerging capacity for economic research within the region.

During its first three-year phase of operation, AERC's support for training was essentially adjunct to its research programme. Small targeted grants were given to finance doctoral thesis research and to assist teaching departments to overcome bottlenecks hampering research by their staff.

In 1993/94, on the heels of two successive studies of graduate education in economics, AERC launched a collaborative MA programme in economics for anglophone Africa, involving 17 universities in 13 countries.[1] The programme is making commendable progress. At present, there are about 150 students enrolled in the two-year programme in the six universities that meet the agreed standards for offering their MA degree.[2] Feedback has been positive; the first group of graduates appear sufficiently well grounded to successfully complete doctoral programmes overseas. Furthermore, the programme has had a positive "cascading" effect on the quality of undergraduate education. Challenged by the standards required for entry into a quality master's programme, the participating universities have started to revamp their curricula and upgrade their teaching.

The rationale for an African doctoral programme

Implicit in the development of AERC's programmes for research and training has been the need to support doctoral education in economics. The Consortium's activities, together with others in sub-Saharan Africa, have been drawing on "human capital" created largely through the efforts of donors in the 1960s and 1970s.

Development of a doctoral programme in economics was first discussed at an international conference convened by AERC in Cape Town in May 1993.[3] The meeting concluded that expanded support for doctoral training was a priority for the following reasons:

- Although there has been a rapidly growing demand for qualified teaching staff at the region's universities, there has also been a decline in external support for doctoral level training in economics. Moreover, department heads now devote considerable effort toward mobilizing funds on a piecemeal basis, which distracts them from pursuing a systematic plan for staff development. Junior staff are discouraged by the absence of a plausible scheme for further training and career advancement.
- Aside from accommodating the needs of teaching departments, the region also requires highly qualified professionals to assume leading roles in the research and analysis of economic issues within public agencies and increasingly the private sector.

An informed appreciation of what appears to be an emerging gap between the region's needs and the supply of economists, trained at the doctoral level *either* within Africa or overseas, was considered a necessary first step toward the design of a programme for doctoral education.

The case for an *Africa*- based programme was deemed consistent with AERC's longer-term aim of assisting the profession in Africa to attain international norms in its teaching, research and other activities. The support for such a programme includes the following:

- Highly trained professionals would be more likely to continue teaching and conducting research in their local departments if they could benefit from the

intellectual challenge of a high level doctoral programme.

- Much as the MA programme has appreciably improved undergraduate teaching, a doctoral programme would have a similar "cascading" effect on MA level programmes through the establishment of norms for excellence, the infusion of new methods and materials, the rapid transmission of recent knowledge, and a general uplifting of morale and self-confidence.
- A well designed programme would broaden and sustain intellectual ties between Africans and non-Africans, both among individual professionals and institutions, thereby reducing the isolation that currently undermines the quality of many professional activities.
- An Africa based programme would increase the number of qualified professionals who can undertake research in important fields currently not covered by AERC, in large measure due to the absence of a "critical mass" in the relevant sub-specialties.
- A well managed programme, carefully coordinated with ongoing efforts at the MA level, would likely be able to lower both the cost and duration of doctoral level training. These features, as well as location of the doctoral programme within the region, would make it more attractive to students and their prospective sponsors. The likelihood of its being sustained over the longer term would be greater to the extent that it can elicit local support.

In summary, a well designed locally based doctoral programme would advance the longer-term aim of a vibrant African presence within the profession internationally. A strong programme would stiffen master's level education, much as the latter has improved the quality of undergraduate teaching. Through existing networks for research and training, the programme would also buttress morale, raise the stature of the profession within the region and push research to the international frontier of the discipline.

At the same time, it is important to be aware of the potential damage that could be caused by a badly designed and prematurely launched programme. Poorly prepared graduates, mainly destined for careers in academia, would undermine other efforts to raise the quality of research and training. Of equal concern is an awareness of the very limited margin for "error"; in contrast to the MA programme, a doctoral one would have no latitude for a progressive improvement in quality. It must be internationally credible from the outset. Otherwise, the programme would enter a downward spiral, with initial labeling as a "second best" option (to the overseas alternative) becoming self-realizing because of a subsequent failure to attract the better students and staff, including non-Africans. This damage would be compounded if introduction of a locally based programme also led to further cuts in any remaining external support for PhD scholarships at non-African institutions.

The study

This study was conducted by a team of five consultants under the overall direction of Professor William. Lyakurwa, the AERC Training Coordinator. Its objective was to

determine the desirability and feasibility of establishing a collaborative effort in PhD training by African universities over the coming decade.[4] More specifically, the study focused on the following issues:

- The structure and content of a doctoral programme, of recognized international calibre, that could overcome constraints specific to sub-Saharan Africa.
- A more detailed appreciation of the needs that would be met by an Africa-based doctoral programme. These include requirements for highly skilled professionals; further advancement of the economics profession to an internationally recognized standard; strengthening local capacity to conduct rigorous research; and development of a sustainable capacity to train future university staff.
- Ways the programme could be sustained through support from African universities, resources from local sources, and funds from the international donor community.
- The potential impact on the programme of changes in higher education over the next two decades.
- Possible adaptation of the collaborative MA programme to accommodate a doctoral level programme that could also include economics departments from South Africa, Nigeria and francophone Africa, as well as private universities in the region.
- The involvement of institutions and scholars outside Africa.

The team leader, Jeffrey Fine, prepared this synthesis report comprising the principal findings and setting out the conceptual framework for a locally-based doctoral programme. Five reports, for eastern and southern Africa,[5] Nigeria,[6] francophone Africa,[7] Ghana,[8] and South Africa, [9] were commissioned to provide detailed analyses of the need and effective demand for doctoral training, as well as the supply of graduates from both local and other institutions, including those outside Africa. In addition, these studies looked at the broader benefits of a doctoral programme. Finally, the studies highlighted some of the principal concerns associated with a collaborative effort. A sixth study[10] focused on the involvement of non-African institutions and scholars, as well as those features that would contribute to the programme's international stature and credibility.[9]

The six studies were conducted between March and September 1995. A preliminary draft of this synthesis report was first discussed informally over the course of the AERC research workshop held in South Africa in December 1995. This second draft, prepared in December 1995/January 1996, comprises seven sections. Completing this introduction is a brief description of the AERC collaborative MA programme for anglophone Africa, since its possible extension to doctoral level training comprises the "working model" initially adopted by the study team. Section 2 sets out the principal findings of the field studies, as the necessary but by no means sufficient conditions for a locally based doctoral programme. The "sufficient" conditions are discussed in the next two sections. Section 3 focuses on more general strategic considerations since the doctoral programme, an intervention limited both in terms of discipline, that is, economics and level, namely doctoral education, must successfully anticipate and cope with problems that are largely

systemic in nature. The other set of "sufficient" conditions arises from the interests and concerns of the primary stakeholders; these are explored in Section 4. Following on this broader context, Section 5 sets out the principal features of a locally-based programme. Section 6 takes up the question of impact in terms of how the programme would satisfy the concerns of key stakeholders. The concluding section lists the next steps in order to move from a very promising concept toward a feasibility.

Initial working model

Completing this introductory section is a presentation of the working model adopted by the study team at its first meeting in Harare, Zimbabwe, in February 1995. Since the model is based on an extension of the existing collaborative MA to the doctoral level, we begin with a brief description of this programme.

Departments participating in the MA fall into two categories: B, who offer their own MA degree under the terms of the programme, and A, who do not *yet* offer their own. Entry into the B category is determined by AERC according to criteria approved by an Academic Board comprising all the participating departments. In terms of classification, departments can move down as well as up; poor student performance due to systemic factors, e.g., an unanticipated influx of undergraduates or continuing civil unrest, can result in temporary or even permanent suspension of Category B status.

Reporting to the Academic Board are a number of committees focusing on core course development, student evaluation, external examination, elective courses, staff development and institutional development.[11] There is also a panel for scholarships of the Category B universities, for placing and financing applicants from Category A.[12] AERC is the implementing agency responsible for disbursing grants, monitoring performance and operating a joint facility for teaching elective subjects.

As depicted in Diagram 1, the degree spans two academic years. In the first year the students undertake course work that must include core subjects (microeconomics, macroeconomics and quantitative methods) conforming to an agreed curriculum. Assessment entails external examination in accordance with agreed programme procedures as well as the university's own regulations. Over the next three months, roughly from July to October, [13] students take two intensively taught elective subjects from the 10-12 contained in the departments' own calendar. These are examined externally and the results entered officially on the students' transcripts. The MA thesis in the following year is supported through AERC grants for research, thesis supervision and external examination.

Extending this programme to the doctoral level, as envisaged in the working model adopted by the study team, would involve some modifications and additions. These are summarized in Diagram 2 and the accompanying notes. The degree would be offered by departments, provisionally designated Category C, that satisfy criteria set by the collaborating universities, following procedures similar to those used in the MA programme. Departments from francophone Africa, Nigeria and South Africa, in addition to those involved in the anglophone MA, could apply for Category C status and otherwise participate in the doctoral programme.

Diagram 1: Collaborative MA program for anglophone Africa

Year	September to June	July to October
One	Core courses and other subjects at home campus. External	Two optional subjects taught at joint Facility for Electives. examination. External examination.
Two	Other subjects (if required by home university); thesis research and defense; MA degree.	

Diagram 2: The PhD: Initial working model

Year	September to June	July to September
One (at Category B university)	Core courses and other subjects at home campus. External	Two optional subjects taught at Joint Facility for Electives. examination. External examination selection for doctoral stream.
Two *(at Category B university)*	Thesis research and defense; award of MA degree.	
Three *(at category C university)*	Acceptance into doctoral programme; preparation and registration of prospectus	
Three and four *(at overseas campus)*	Directed study and research (12 to 18 months)	
Four and Five *(at Category C university)*	Research; preparation and defense of thesis; awarding of doctoral degree	

The model incorporates some important departures from current practice in sub-Saharan Africa. First, it provides for extensive course work and external examination as a *formal* feature of the programme. Virtually none of the existing PhD programmes within sub-Saharan Africa do so at present. Hence, application by a department for "Category C" status will invariably entail prior changes in its existing university regulations. Secondly, the programme provides for up to a year's attachment at a department outside

Africa. This component should not be seen as attempting to bolster a weak programme. Rather, the intention is to broaden students' horizons, expose them to the latest work in their chosen field, and deepen linkages, both among individuals and institutions. Indeed, as subsequently established in the study examining the involvement of non-African universities, this feature anticipates similar developments occurring among some leading European departments whereby students spend varying periods among two or three different campuses. The third and perhaps most radical feature is the implicit acceptance, from the outset, of a collaborative approach modelled on the MA programme. Nonetheless, as will become apparent from the plan presented in Section 5, this approach must be adapted to accommodate both the specific requirements of doctoral level training and the diverse needs of the principal stakeholders.

II. Principal findings of the field studies

Although the five studies have been completed, robust quantitative estimates of both the output and demand for doctorates in economics are only available for Ghana, Nigeria and eastern/central Africa for inclusion in this draft. For South Africa, pending the results of inquiries concerning overseas training, we have included more limited data on the output of doctorates in economics from local universities for the period 1986 through 1993. Nevertheless, this information, in conjunction with an ongoing monitoring of more recent developments in higher education, does not challenge our more general conclusion, namely that for English-speaking Africa as a whole there is a very significant and widening gap between the "demand" for doctorates in economics —for teaching, research and policy analysis — and their "supply" from both local and overseas sources. A similar picture likely obtains for francophone Africa; an analogous gap between "demand" and "supply, as reported to the 1993 AERC conference will, if anything, have worsened in the interim because of additional needs stemming from implementation of the francophone version of the collaborative MA programme in economics.[14] Of greater import, for more detailed planning of a collaborative doctoral program, will be the implications of changes in doctoral education in France and their possible replication within francophone Africa.[15]

The three completed studies contain robust estimates of the current "stock" of qualified teaching staff and the supply of doctoral graduates from African universities over the past 15 years. Information concerning graduates from overseas programmes has proved more difficult to obtain. Where possible, estimates were compiled from such sources as university departments, governments and donor agencies.

Total "output" from anglophone African universities has averaged about four per year over the past 15 years. Nigerian universities graduate about three and Ghanaian universities none. Eastern/southern African universities graduate about one annually, a figure that includes graduates from "sandwich programmes" involving formal overseas links (primarily with Swedish universities). Swedish support, focused primarily on Dar es Salaam, is being scaled down, and will not be offset *in toto* by parallel programmes in Zimbabwe, Zambia and Kenya. The figure for eastern/southern Africa overstates future output from local universities, which will drop to about one every two years.

Overseas training is financed primarily through external assistance, routed through government agencies and universities and, increasingly rarely, to individual applicants. In general, external support has steadily declined since the late 1970s, with the phasing out of institutional development activities undertaken largely by the Rockefeller Foundation, the Ford Foundation and the International Development Research Centre.

The studies suggest that about one, three and up to four doctoral students from Ghana, Nigeria and eastern/southern Africa, respectively, have graduated each year from overseas universities. Hence, for *all* of anglophone Africa, total annual supply from local and overseas sources has averaged about 11 doctoral graduates since the mid 1980s.

These aggregate figures warrant further qualification. In terms of quality and relevance, the field studies conclude that the training offered by local programmes is inferior to that provided overseas because of poor thesis supervision and the absence of structured course work. Furthermore, output has not been consistent; it has fluctuated considerably from one year to the next because of variations in the duration of training. For example, doctoral education under the Sweden-Dar es Salaam "sandwich" programme has ranged from 4 to 11 years and averaged about 8. Another factor has been the limited availability of scholarships, which are distributed across departments or provided on rarer occasions through targeted donor funds. A further observation is the variation in the quality of overseas training. Course work and thesis research has often not been consistent with local needs. Graduates have frequently confronted problems in "social acculturation" and in adapting highly specialized training to the broader spectrum of needs more typical of African universities.

This "output" of about 11 doctoral graduates per year contrasts starkly with estimates of demand, based upon *maintaining*, in most cases, the *current* level of activity. Excluded from these estimates, moreover, are less robust figures provided by parastatals and the private sector. In short, the following estimates of demand are based primarily on information provided by university teaching departments, publicly financed research institutes and central government agencies, specifically ministries of finance, central banks and planning offices.

For Ghana, Dr. Jebuni estimates that over the next ten years, up to 60 doctoral graduates will be required by the five existing post-secondary (public) institutions. For research institutes and central government agencies, another 20 and 30, respectively, will be required. This estimate implies an annual demand of ten doctoral graduates. At present, none are produced locally and about one per annum is in the current "pipeline".

Corroborating the results of an AERC study published in 1994, Professor Soyode concludes that the 24 public universities and colleges currently offering economics at the undergraduate and graduate levels in Nigeria would require up to 250 doctoral graduates over the next five years. To these figures are added another 75 *annually*, as estimated by central government agencies and five major, publicly financed research institutes. While the latter figure may be somewhat exaggerated, even a more conservative estimate of 100 annually contrasts with the output of three from local institutions and a similar number from overseas ones.

Professor Mukras' study covers a sample of five countries — Zimbabwe, Kenya, Botswana, Tanzania and Uganda — within eastern and southern Africa. With the exception of Ethiopia, where a staff development programme is being implemented through the Centre for the Study of African Economies of the University of Oxford, his coverage encompasses all of the institutions in this sub-region that have offered doctoral training in the past. His estimates of demand cover a ten-year horizon and differentiate, as do the other two, between universities and government agencies. The principal results of his

detailed analysis are presented in Table 1. The figures pertaining to demand are *annual* estimates and those for the number of trainees refer to the *total* over the period 1996-2006.

Table 1: Demand for doctoral graduates in economics in Eastern and Southern Africa (1996-2006)

	96-98	98-00	00-02	02-04	04-06	Total
Kenya:Demand: universities	10	10	10	10	8	48
Demand: gov't/other	13	9	7	3	4	36
Kenya: Total number of trainees						*9*
Tanzania: Demand: universities	2	2	2	1	1	8
Demand: gov't/other	7	5	5	4	2	25
Tanzania: Total number of trainees						*16*
Botswana: Demand: universities	4	4	4	4	2	18
Demand: gov't/other	9	6	4	3	2	24
Botswana: Total number of trainees						*7*
Zimbabwe: Demand: universities	2	2	1	1	1	7
Demand: gov't/other	11	6	3	2	1	23
Zimbabwe: Total number of trainees						*11*
Uganda: Demand: universities	5	5	6	6	5	27
Demand: gov't/other	8	7	6	5	4	30
Uganda: Total number of trainees						*8*

Professor Mukras' findings cover five countries only. Furthermore, they are based on a static analysis, i.e., a projection of requirements that do not incorporate such possibilities as a deepening of skills in the public sector, further expansion of publicly financed higher education, the emergence of private universities or significant expansion of research institutes. Nonetheless, according to even these conservative estimates, the shortfall between projected needs and likely output will vary from a minimum of 2:1 to as high as 7:1 over the next ten years.

Preliminary data for South Africa indicate a potential shortfall. Although the figures presented in Table 2 do not extend into the post-apartheid era, they point to a rapidly emerging shortage of doctorates in economics for teaching and research. Among the salient factors likely to affect both "demand" and "supply" for the balance of the decade are the following:

- The capacity of established South African universities to provide high level instruction and thesis supervision at a doctoral level is eroding due to a drop in the number of qualified staff and a very rapid growth in undergraduate enrolment.
- The demand for qualified teaching staff is growing quickly because of a rapid increase in enrolment at the formerly "black" universities.

- For the next five years, most black South African graduates in economics, qualified to pursue postgraduate studies, may opt instead for attractive offers of employment in the private sector and government.

Table 2: PhD graduates from South African universities, 1986 to 1993

Group	Gender	1986	1987	1988	1989	1990	1991	1992	1993
White	Male	5	5	15	8	9	13	16	8
	Female	1	4	2	1	1	5	2	1
	Total	6	9	17	9	10	18	18	9
Coloured	Male	0	0	0	0	0	0	0	0
	Female	0	0	0	0	0	0	0	0
	Total	0	0	0	0	0	0	0	0
Indian	Male	0	0	0	0	1	0	1	0
	Female	0	0	0	0	0	0	1	0
	Total	0	0	0	0	1	0	2	0
Black	Male	0	0	0	0	0	1	0	1
	Female	0	0	0	0	0	0	0	0
	Total	0	0	0	0	0	1	0	1
Total	Male	5	5	15	8	10	14	17	9
	Female	1	4	2	1	1	5	3	1
	Total	6	9	17	9	11	19	20	10

The study of francophone Africa focused on three institutions, namely the Universities of Dakar, Abidjan and Yaoundé. Also included is a new University of Law and Economics in Bouaké since it relies heavily on staff of the Faculty of Economics of the University of Abidjan. Although coverage is partial, the study covers the principal francophone African institutions offering graduate programmes in economics, i.e., the Diplôme d'Etudes Approfondies (DEA) leading to a Doctorat de 3ème Cycle, the minimum qualification needed to enter an academic career. The situation varies considerably among institutions, but overall the study points to a growing gap between the need for doctoral level graduates and the supply from both local and overseas sources. Illustrative points include the following:

- In Yaoundé, enrolment in the DEA programme has fluctuated enormously from one year to the next, a reflection of unsettled conditions on campus. Most startling is the very low number of graduates — often less than 10% of enrolment — in any given year.
- For Dakar, there are reasonably firm figures that are consistent with recent changes in policy toward higher education, entailing a capping of total enrolment and public expenditure and a gradual shift away from arts to the sciences, engineering

and business. Nonetheless, the study identifies a backlog of 12 vacant positions that is growing by at least two annually because of the lack of qualified candidates.

- Equally robust estimates have been difficult to obtain for the Côte d'Ivoire for two principal reasons. First, recruitment of full-time staff has been affected adversely by a significant drop in real salaries and benefits over the past five years. Second, the government has responded to this problem by lowering formal qualifications for full-time lectureships. In effect, the growing shortfall will be reflected in a likely dilution in the formal qualifications of teaching staff rather than the number of vacant positions.
- Another indirect indication of the demand for doctoral training can be obtained from figures concerning the US-style PhD programme in agricultural economics and rural sociology jointly mounted by the Centre Ivorien de Recherche Economique et Sociale (CIRES) and the Economics Faculty. On average it receives about 300 applications annually, of whom 70 to 80 have the necessary qualifications for entry.

The field studies also looked into effective demand namely an estimation of "need" that is reinforced by a willingness and capacity to pay for doctoral level training either within or outside Africa. The distinction between the two can be illustrated with reference to the doctoral programme at CIRES. Of the 70 to 80 qualified candidates, only 8 and more recently 11 can be accepted annually on the basis of the scholarships available to finance their programme. More generally, the studies reveal that the principal source of effective demand is government agencies, since they have direct access to either domestic or external funding. In contrast, university departments, whose priority is arguably greater, since they comprise the instrument for supplying highly qualified professionals over the longer term, are singularly disadvantaged in this regard. Access by departments to funds for staff development is far more constrained and less determinate. Very limited university resources must be spread across a large number of departments. Additional resources must be obtained by department heads through time-consuming requests to a wide range of potential sources. Adding to their difficulties is the fact that such funding is frequently not available on terms consistent with the department's longer-term training needs.

In summary, three major conclusions can be drawn from the field studies:

- Economics departments are living off their (human capital). Indeed, in most cases, existing staff, badly stretched to meet current demands, will not be replaced.
- In a very basic sense this situation poses a major challenge to the viability of AERC's training and research activities over the longer term. Future generations of researchers and teachers are not being trained and indeed the capacity to do so within Africa has eroded significantly since the 1970s.
- In responding to this priority, a doctoral training initiative can draw upon a sizeable clientele, namely government agencies, that appear willing to pay for a high quality programme. On the other hand, the "clients" with the greatest need for doctoral level training, namely teaching departments, are also the most constrained in terms of mobilizing funds to pay for it.

Aside from confirming the urgency of doctoral level training, the studies also set out certain parameters for guiding the design of an African-based initiative. They assign highest priority to excellence as the most essential factor for enlisting the support of teaching departments and other clientele. Of particular note is the stress they place on formal coursework and external examination. The studies also endorse a collaborative approach along lines similar to the collaborative MA programme for anglophone Africa. While they appear to share a broad consensus that the latter should serve as the point of departure for a locally-based doctoral programme, there were contrasting views on how this should take place because of differences in university regulations and the needs of local "clientele". The studies also envisage a major role for AERC, not only in acting as the implementing agency, but more generally in sustaining a professional environment that will help retain staff and improve conditions for research as well as teaching.

Another finding bearing directly on the overall strategic approach to doctoral training is that universities potentially capable of introducing a doctoral programme in the medium term currently find themselves in a contradictory situation. To offer a credible degree and also meet the current teaching and research obligations, they require more highly trained staff. However, the absence of an easily accessible, high quality doctoral programme has hindered their attempts to raise both the quality and the numbers of their staff. This apparent dilemma suggests the need for a two-stage approach in developing a locally-based doctoral programme. The first would entail a more concentrated effort aimed at overcoming an immediate shortfall in teaching staff facing departments wishing to introduce a doctoral programme. Subsequently, as this bottleneck is resolved, doctoral level teaching would be expanded according to criteria jointly developed and executed by the collaborating departments.

III. Strategic considerations

The findings of the field studies provide compelling evidence of the need to increase significantly the number of Africans with doctorates in economics. The case for a locally-based initiative must address two additional considerations. The first, which we examine in this part, is whether it can be sustained in a difficult institutional environment wherein the track record for externally financed interventions has been poor. The second consideration is its broader benefits. This aspect is discussed in Section 4, in the context of the interests of key stakeholders.

The response to the institutional setting for research and higher education is exemplified by the collaborative MA programme. It poses an apparent paradox. The programme has been designed explicitly to insulate graduate education in economics from "shocks" to national systems,e.g., civil strife, repeated strikes, ill-conceived policies, political interference and misadministration. Successful "insulation", however, has not been achieved by divorcing the programme from these national systems through, for example, a concentration of effort in a "centre of excellence". Rather, the programme has successfully developed a network of departments within national universities that is resilient to shocks to any of its separate members.

A locally-based doctoral programme will confront the many systemic problems associated with weak national systems for research and higher education that are seemingly impervious to pressures, both from within and without, to initiate long-overdue measures for reform. The prospect for reform is not promising because of a lost decade of economic growth, with consequent cuts in real levels of public expenditure, along with an accelerated growth in overall student numbers, dilapidated plant and equipment, a steady haemorrhaging of skilled professionals, and a general crisis in morale and self-confidence.

These systems are not only weak, but in most cases are ill-matched to the region's needs. In contrast to the deep, varied and closely linked networks of universities, polytechnics and research institutes characteristic of more advanced countries, those in Africa are thin and undifferentiated. At their core lies one or at most several public universities. Modelled along the lines of a liberal arts college, the universities are expected to discharge a wide array of tasks including undergraduate education, professional training, extra-mural studies, postgraduate education and advanced research — functions that in more developed systems are handled by specialized and mutually supportive institutions interacting through a series of networks. Not surprisingly, their African counterparts, operating in a much less favourable environment, have failed to fulfil the functions satisfactorily.

In supporting both research and graduate education, AERC has evolved a unique strategic approach that not only copes successfully with this environment but indeed, within the confines of economics, has been moving toward replicating in a regional context the richer and more varied systems found outside Africa. Successful implementation of a locally-based doctoral programme would be a major advance toward this goal; its achievement would offer an instructive example for strengthening capacity in other disciplines and professions.

This strategic approach embodies three key elements: an *internet* principle in establishing and operating networks; *local ownership* based on enlightened self-interest; and AERC's special functions as "*server*" of these networks.

Perhaps unwittingly, but more likely as an informed response to the challenge of operating in a difficult environment, AERC's networks for both research and training have evolved along the lines of the "Internet". Inasmuch as the Internet was originally designed to prevent a knockout blow to American government communications, AERC networking has thus far displayed a similar suppleness and flexibility in its varied parallel linkages and nodes. The networks have proven resilient to unanticipated shocks, be they in the form of strikes, closures, financial cuts, political repression or misguided policies. In the case of the collaborative MA, the network comprises teaching departments within national universities. The recent cessation of teaching at Nairobi due to a prolonged strike did not deal a fatal blow to either the programme or the department. Students were transferred to other institutions and staff have been sustained through continued involvement both in the collaborative programme, as guest lecturers, external examiners and thesis supervisors and in AERC supported research.

The "glue" that bonds these networks together is local ownership based on enlightened self-interest. Over time, participating departments and individual professionals have come to recognize that their professional interest are best served through judicious and informed accommodation of the various demands posed by these networks. In the case of the MA programme, local ownership is exercised through the Academic Board. Comprising the participating departments, the Board determines the programme's structure and content, as well as relevant guidelines for various modalities including institutional grants for core courses, the conduct of external examinations, the evaluation of specific degrees and awards to individual students. This sense of ownership is strengthened through a carefully designed set of incentives for both participating departments and staff. Many of these are directed toward Category A institutions (not yet offering their own degree): their qualified staff have opportunities to participate in graduate teaching (at Category B departments and in the Joint Facility for Electives), to help develop curricula and prepare textbooks, to help supervise thesis research, and to serve as external examiners. For Category A departments there are grants for staff development, an opportunity to place their best graduates in a good MA programme and the ultimate prospect of introducing their own MA degree. Aside from these incentives as well as direct support for their own degree programme, Category B departments confront an additional prospect and challenge. Success at the MA level could lead, in the event of a locally-based doctoral programme, to further development of their own programme to this higher level. On the other hand, evidence of continuing poor performance could result in suspension of support for their

existing MA programmes.

A key element of this strategic approach is "governance" of these networks by AERC. In effect, AERC performs two distinct functions. The first is accountability to the funders, a large number of donors with different priorities and procedures. To be effective in this, AERC must remain credible through strong leadership, professional management and financial probity. The second function is to enforce the programme's provisions and regulations on behalf of the participating departments who cannot perform this task themselves because of an inherent conflict of interest between their roles as beneficiaries and as impartial managers of the programme. AERC must retain their confidence by displaying sensitivity to their interests and concerns and attempting to ameliorate, through targeted interventions, conditions for teaching and research.

In summary, introduction of a locally-based doctoral programme entails more than an extension and adaptation of the collaborative MA programme. Its design should also incorporate the key features of AERC's strategic approach, which thus far has proved highly successful in advancing both research and training in economics within sub-Saharan Africa.

IV. Stakeholder interests and concerns

Aside from coping with the challenges of a fragile and volatile environment for teaching and research, a locally-based doctoral programme must successfully address the principal interests and concerns of its major stakeholders. Some of these, in particular those of teaching departments, have been mentioned in our preceding discussion of "ownership" as a key feature of AERC's strategic approach toward strengthening capacity in economics. In this section, we examine how they bear directly on the design of the doctoral programme.

Teaching departments

As in the case of the MA, collaboration ultimately hinges on a department's prospect for *eventually* being able to offer doctoral level teaching. While this stance reveals parochial or even personalized interests, it also reflects well grounded caution concerning a regional degree. Concentration of resources in one or two institutions raises overall risk for the other participants, in the event of localized unrest or an unwise initial selection. Furthermore, a purely regional programme at one or two locations would weaken the undergraduate and graduate teaching of the other departments were it to attract their better staff through higher salaries, better working conditions and the challenge of doctoral level teaching. This process could forestall, perhaps indefinitely, their chances of ever engaging in doctoral level teaching within their own institutions.

The programme must try to balance two seemingly conflicting needs. In the short term, the programme must establish internationally credible norms for excellence. It must also try to overcome the very serious shortfall in qualified local teaching staff so that departments can continue to improve their MA programmes *and* "gear up" for the introduction of their own doctoral programmes. The second is to develop an appropriate framework, along with suitable modalities, so that over the medium term qualified departments can offer a doctoral programme, of recognized quality, that also responds to local needs. As in the case of the MA Programme, this prospect must be tangibly demonstrated through various measures that would include, in addition to doctoral education of new staff, direct involvement in the development of the various programme modalities.

Donors

For the international donor community, support of a locally-based doctoral programme poses three different concerns. The first is the deepening of support for an admittedly very successful intervention, AERC, but one that is confined to one discipline, economics, and to activities associated with a small elite. In this regard, the donor community has already given a partial response through support for "capacity building", which, as many are beginning to realize, can only be sustained over the longer term if there are functioning systems of research and higher education. To the extent that a locally-based doctoral programme rounds off a new strategic approach that is demonstrably effective where other efforts have failed, it could suggest ways of strengthening other disciplines and professions.

The second concern is efficient management. In this respect we note that repeated setbacks in "capacity building" have reinforced proclivities toward micro management of tightly defined objectives achievable within a limited time horizon. However, a locally-based doctoral programme entails a long-term commitment and requires flexible financing arrangements. To some extent, donor anxieties can be assuaged by continually assessing performance with such indicators as cost, throughput and quality. Fungible funding, as suggested by AERC's own record, is actually more likely to strengthen accountability and raise efficiency, in addition to promoting local ownership. Whether donors recognize this fact and/or can respond flexibly within the parameters set by existing policies and procedures will, as in the case of the MA, bear significantly on the feasibility of a collaborative, locally-based doctoral programme in economics.

The third concern, shared by teaching departments as well, is success in retaining graduates from the programme. A professional environment characterized by low salaries, poor working conditions and intellectual stagnation will continue to suffer from "brain drain", although its proportions may well have been exaggerated.[16] Justification of a *locally*- based doctoral programme would be misguided if lowered professional mobility were the result of a mediocre education. Ultimately the programme will only prove sustainable if it attains excellence, not only in an African context, but by the international norms set by the profession. Mediocrity will not attract gifted students and scholars, nor will it sustain overseas ties based on shared intellectual interests. Rather, higher retention should be the product of a vibrant network for teaching and research, further reinforced by world-class doctoral level education.

Universities and public agents

The field studies reveal widespread support for doctoral level education by two clientele —universities and public agencies. For both, a principal concern is an assurance of quality. For universities, this entails not only rigour, but also breadth, since graduates destined for academic careers will need to cover more fields than their counterparts outside Africa. For public agencies, notably central banks and finance ministries, quality is interpreted as an ability to conduct and supervise independent research, but with the capacity to

allow for incomplete and inaccurate information and to adapt theoretical knowledge to African circumstances. A second common consideration is the duration and assured continuity of the programme. Both clientele seek reassurance that thesis research in particular will not be prolonged indefinitely because of poor supervision. Equally ranked is guarantee of continuity since locally-based programmes are frequently interrupted by strikes, university closures and domestic unrest. Provided there is credibility with respect to quality, duration and continuity, cost then becomes an important consideration. In this respect, both clientele would expect that the locally-based programme will be highly competitive with overseas alternatives.

A third clientele comprises individual students. In principle, high direct returns from investment in doctoral education should induce them to pay for a high quality programme. In practice, self-financing is precluded for most because of the lack of credit, notably student loans and employment, sufficiently remunerative to yield significant savings. Another important constraint is the "opportunity cost" of doctoral education. Many students cannot afford to forgo income needed to support their dependents. From this perspective, the practice of maintaining benefits and salary for junior staff pursuing advanced degrees comprises a very important contribution by African universities. A similar policy is also followed by many African governments. Although typically not included as either a "cost" or "contribution", for many prospective students it can be a determining factor in their decision concerning pursuit of a doctoral degree.

African governments

As "clientele", African governments are prepared to sponsor staff for doctoral level training. Less evident is a willingness to provide assistance directly for a doctoral programme in economics. In the case of doctoral education in economics, African governments would benefit from a strong core of knowledgeable professionals who can advise government agencies and the private sector and contribute, through their research, to a better understanding and airing of issues and choices. Nonetheless, a cautious stance toward prospective government support is justified. Many of the benefits mentioned above, to the extent that they are perceived at all, are likely to be dispersed unevenly across countries and the decision-making processes within governments. Furthermore, support for doctoral education must compete against equally compelling demands for public expenditure. Hence, the programme in its initial years is unlikely to obtain significant general assistance, as opposed to specific sponsorships, from African governments.

In summary, the doctoral programme should prove able to satisfy the needs of the major stake holders provided it addresses two major concerns. The first is accountability, both to the collaborating departments and to the funders of the activity. The second is excellence, essential for enlisting the support of the principal clientele. Both concerns are compatible, indeed fully consistent, with AERC's strategic approach toward research and higher education.

V. The doctoral programme

The programme is outlined in terms of its strategic approach, structure, management and financing.

Strategic approach

The field studies confirm that a major impediment preventing potentially capable departments from introducing a doctoral level programme is the lack of qualified teaching staff who could also discharge existing teaching and research obligations, notably at the master's level. Furthermore, the studies confirm that for a doctoral programme to be sustained over the longer term, its standard of excellence must be comparable to competing opportunities, however limited in practice, available outside Africa. A third pertinent finding is the variation across countries in the composition of the potential "clientele" for the programme as well as demand for various sub-specialties within the discipline. Finally, as exemplified by the experience of the MA programme, concentration in a single location or institution is inadvisable. The broader benefits of collaboration, in terms of staff retention and morale, quality of teaching and research, and responsiveness to local needs, are reduced significantly. Ownership of the programme, the key to longer-term institutional commitment, would also be undermined. Finally, the programme would be highly exposed to disruptive developments in the immediate environment.

At the same time, however, the study has also revealed that an initial concentration of effort in as few as one to three teaching departments is unavoidable. One major consideration is a likely shortfall in resources, in terms not only of funding but, more importantly, of qualified teaching staff, especially in those departments that must also fulfil commitments to their MA programmes as well as research. Another relates to excellence. In contrast to the collaborative MA, there is no latitude for a progressive improvement in quality after the doctoral programme has been officially launched. If the doctoral programme is labelled as mediocre, it will acquire the undesired reputation as a "second best" option for those unable to secure admission into an overseas degree programme. As a result, the local programme will fail to attract the best students and staff, or to establish close professional links with the leading scholars and institutions outside Africa.

These considerations imply a phased approach. Initially, the doctoral programme should be launched by one or at most, two to three teaching departments selected according

to criteria set by the collaborating group as a whole. The criteria would cover such matters as the adequacy of infrastructure for teaching, research and student accommodation, and the quality of communications and library facilities. Evidence of the department's academic capability would be provided through the performance of its MA students both in the programme itself and in their subsequent careers and studies. In addition, departments applying for what might be termed "Category C" status would have to satisfy two other conditions. The first is tangible demonstration by their respective university authorities of a willingness to comply with the standards and procedures set by the collaborating group for such critical matters as the eligiblity and selection of doctoral students, the participation of other non-department staff in teaching and research, external assessment of student performance, and, most importantly, the structure and content of the doctoral programme itself. The second would be a willingness on the part of university authorities to provide a high degree of autonomy to their economics department or faculty, so that it could respond flexibly and quickly to the more broadly determined needs of the collaborating group.

Departments wishing to offer a doctoral degree under the collaborative programme would be invited to apply for "Category C" status. Aside from Category B universities, that is, those departments offering their MA degree under the collaborative MA programme for anglophone Africa, the pool of potential applicants would include their counterparts under the parallel francophone programme, along with universities from Nigeria and South Africa that offer an MA programme of comparable structure and quality. Selection from this initial group of applicants would be made by AERC, in its capacity as implementing agency, with the advice of the collaborating group as a whole.

As recommended earlier, the first phase of the doctoral programme would entail a concentrated effort to overcome immediate shortfalls in teaching staff, establish internationally credible norms for teaching and research, secure longer-term financing, and implement various modalities to strengthen collaboration. Subsequently, support for doctoral level teaching could be extended to other departments. In this regard, a number of possible arrangements should be developed by the collaborating group so that the programme, in this subsequent phase could facilitate a response by national universities to the wide range of local needs identified by the field studies. Overall, a phased approach would facilitate a rapid start, guarantee excellence and ensure responsiveness to the collaborating group of departments.

Structure

The structure summarized in Diagram 3 adheres closely to the original working model initially adopted by the study team insofar as it involves an extension of the MA collaborative programme to the doctoral level. However, it also incorporates some significant modifications arising from the findings of the various studies.

Intake

Students would become eligible to enter the PhD stream after completing the MA, as offered through the collaborative anglophone programme or a degree in the cases of Nigeria, South Africa and francophone Africa. Criteria for determining eligibility would be set by a Doctoral Education Committee (DEC) comprising representatives of the collaborating teaching departments. (The DEC is described below under *Management of the Programme*).

Year one

The first year of the programme would provide intensive course work aimed at pushing the students, who have already received a solid advanced grounding in core subjects, to the contemporary frontier of the economics discipline. To ensure rapid transfer of new advances in theory and knowledge, courses would be taught by leading international experts as well as the top African specialists in their respective fields. Criteria for selecting teachers would be determined by the DEC. Of the ten course units offered during this year, five focusing on core subjects and research methodology would be compulsory. A sixth unit would be a research paper involving an in-depth literature survey and preliminary analysis in the student's area of specialization. This paper, in all likelihood, would subsequently form the basis for the doctoral dissertation. At the end of this first year, students would sit comprehensive examinations. Those unwilling or unable to continue would terminate at this point with an MPhil degree.

Diagram 3: Collaborative doctoral programme

Year	
One	Intensive short courses; research paper; external examination.
Two	Preparation and registration of thesis prospectus.
Two and Three *(at overseas campus)*	Directed study and research (12 to 18 months).
Three and Four *(in Africa)*	Research; preparation and defense of thesis; awarding of doctoral degree.

Years two and three

Following successful completion of the comprehensive examinations, the student would prepare the prospectus for the dissertation and be assigned a principal supervisor. Criteria for determining eligibility for thesis supervision would be set by the DEC. Once the

prospectus has been approved and registered, the student would begin a 12-month overseas attachment.

Subsequently the student would begin thesis research. As an alternative to the more traditional *magnum opus*, students would have the option of a dissertation which could comprise three publishable essays on a specific theme or within a particular sub-speciality. The latter, an increasingly popular alternative, avoids the problem of research "fatigue", reduces the risk entailed in an initially unwise selection of topic and acknowledges the demands of formal course work at the doctoral level. Another feature commending its suitability to sub-Saharan Africa is the potentially richer combinations of topics, theoretical inquiry and empirical research, with commensurably greater breadth, both in the knowledge and skills.

During the attachment, the student's activities would be monitored by a "second supervisor" of the thesis who in all likelihood would have held meetings with both the principal supervisor and student the preceding year while participating in teaching the advanced courses. These prior contacts would have resulted in a programme, involving further course work, reading and research, that was carefully crafted to meet the student's individual needs. The risk of a mismatch, in terms of overseas institution or mentor, would thereby be reduced considerably. The attachment, in addition to furthering dissertation research, would be designed to expand the student's horizons and facilitate the establishment of links with professionals and institutions outside Africa.

Years three and four

Following completion of the overseas attachment, the student would return to the home campus and/or field site to complete the research and write the dissertation. The latter would be presented and defended according to procedures determined by the DEC.

The overall duration of the proposed doctoral programme compares favourably with programmes in North America and Europe.[17] Although its content corresponds closely to American programmes, which have increasingly become the norm for others elsewhere, the doctoral programme also incorporates features designed to meet the particular needs of an African clientele. Of particular note is the aim to achieve a judicious balance between "depth" and "breadth". Rigorous coverage of core theory, methods and knowledge is ensured through intensive, carefully designed and well taught courses. At the same time, "breadth" is encouraged through overseas study and research, as well as the option of three publishable essays for the dissertation. Another feature is various measures to overcome potential isolation from contemporary developments and debate at the frontier of the discipline, especially through the participation of leading international figures in both teaching and thesis supervision.

Post-doctoral and other activities

Although not formally a part of the doctoral degree, post-doctoral awards should be introduced in anticipation of the need to retain graduates in teaching and research. Tenable

primarily on a part-time basis, these awards could be used to assist graduates to publish portions of their dissertations in professional journals, often in association with members of their committee, and to present their work at professional meetings both within and outside Africa. Experience with other doctoral programmes indicates that such awards can prove very effective in raising retention rates, thereby ensuring a high return to the investment in doctoral level training.[18]

The collaborative doctoral programme should also provide for a strengthening of links between African and non-African scholars. One such activity would be a parallel "attachment" by non-African doctoral students, at a comparable stage in their own programme, to an African department. Another would be an investment in the systematic collection, storage and retrieval of empirical data generated principally through dissertation research. These data bases, developed in cooperation with government authorities and accessible to all researchers, would encourage rigorous micro level and sector focused research, especially by a new generation of African and non-African scholars.

In anticipation of a growing number of researchers in new fields, AERC could also begin to allocate funds for research in fields currently not covered by its programme, which at present focuses principally on macroeconomics. This growing body of professionals, with strong personal and institutional ties within and outside Africa, would be well placed — funds permitting — to initiate their own networks of research in various sub-specialities. Such research could contribute significantly to a better understanding of economic issues and more appropriate interventions by policy makers.

Management: Phase I

Management of the programme would rest with three bodies, a doctoral education committee, an international advisory board and AERC

Doctoral education committee

The DEC would comprise representatives of departments wishing to collaborate in doctoral education and would therefore include departments wanting to train students as well as a smaller number intending to introduce their own programmes. In all likelihood, the DEC would comprise most members of the Academic Board (of the collaborative MA for anglophone Africa), along with other universities in South Africa, Nigeria and francophone Africa. The committee would determine procedures on such key matters as programme structure, course content, teaching staff, thesis supervision, student intake and programme expansion. As has been the case for the collaborative MA, the DEC would set up sub-committees for institutional development, curriculum development, professional development and external liaison.

International advisory board

The IAB would comprise leading international and African scholars who would be actively

engaged in the programme's research and teaching activities. In providing an assurance of quality, especially during the programme's initial phase, the IAB would help raise the profile of the programme and attract support from local clientele. Members of the IAB would also help arrange overseas attachments and generally work toward strengthening ties between African and non-African institutions and scholars.

AERC

As has been the case for the collaborative MA programme, AERC would act as executing agency for the two principal stakeholders, namely the collaborating universities and the funders. Among its responsibilities would be the overall direction of strategic and operational planning, the mobilization of resources, and the implementation of the programme.

Cost and financing

A very preliminary costing of the collaborative doctoral programme was undertaken to assess whether it would be financially feasible. For this purpose, a useful point of reference is the figure used by AERC in budgeting for its own doctoral fellowships, namely $25,000 per student per annum. An average longer-term cost in excess of this amount would raise serious doubts about the viability of a locally-based doctoral programme since it would be unable to compete in terms of cost with an overseas alternative.

For this admittedly crude exercise, the following assumptions were made about implementation of the programme over its first five years:

- The programme would begin at one campus with an initial intake of eight students. Intake in Year Two would increase to 12 and subsequently remain at that level.
- The programme would expand to a second campus in Year 3 and to a third in Year 5, with a similar pattern of intake, i.e., an initial enrolment of 8 that increases to 12 in the second and following years.
- Students would spend Year 1 at the Category C campus, Year 2 overseas, Year 3 in their home country doing research, and Year 4 at the campus writing up and defending their dissertation.
- Aside from expenditure on programme management, the principal disbursements would be:

  - A one-time setting up grant and subsequent annual operating grants to the Category C campus.
  - Travel, subsistence and fees for part-time instructional staff from both within and outside Africa to teach courses, supervise dissertations and act as external examiners.
  - Airfare, subsistence, tuition and other expenses of students on overseas

attachment.

- Subsistence expenses of students at the Category C university in Africa (Years One and Three).
- Research and subsistence expenses for students while undertaking field work (Year Three).

A detailed breakdown of enrolment and costs is provided in Annex C and the principal results are summarized in Tables 3 and 4 below.

Table 3: Number of doctoral students

	Location	Year 1	Year 2	Year 3	Year 4	Year 5
First year	Campus	8	12	20	24	32
Second year	Overseas		8	12	20	24
Third year	Field work			8	12	20
Fourth year	Campus				8	12
Total No.	All years	8	20	40	68	88

Table 4: Doctoral Programme: Summary of costs and financing (US$)

	Year 1	Year 2	Year 3	Year 4	Year 5
Total cost	597,000	660,000	995,850	1,172,500	1,542,300
Average cost per student	74,625	55,000	24,896	18,316	17,526
Revenue from fees*	60,000	90,000	300,000	480,000	660,000
Annual shortfall	537,000	570,000	695,850	692,500	882,300
Cumulative shortfall	537,000	1,107,000	1,802,850	2,495,350	3,377,650

* Assumption of average fee of $7,500 per student (see discussion below)

This initial estimation would clearly be subject to further analysis at an operational planning stage, particularly to assess the impact of changes in some of the underlying assumptions. Among the more important ones are the average size of intake, the number of departments offering the doctoral degree, attrition over the course of the programme, duration of the overseas attachments and dissertation research, the total volume and unit costs of teaching services, and annual operating costs.

Nonetheless, this admittedly crude estimation would suggest that a locally-based doctoral programme, structured along the lines presented earlier, should prove feasible

in financial terms over the longer run. More specifically, this preliminary estimate suggests that a collaborative locally-based effort should be able, at the end of a five-year start-up phase, to offer a "product" of international quality at an average annual *long-term* cost of about $17,500 per student — about 70% of the comparable amount for an overseas programme. The initially high amount of $75,000 per student in Year 1 is attributable to start-up expenses and the small intake of students. However, average cost declines rapidly thereafter and by the fifth year would have fallen to about $17,500.

The figures in Table 4 also identify a need for two different and essentially complementary forms of finance to launch and sustain the program.

The first is fees. Notionally these could be set at around $15,000, approximating the programme's likely longer-term annual cost per student once it has expanded to three campuses. In practice, this amount, although significantly less than a non-African alternative, would be difficult to obtain in full since it lies beyond the capacity of most teaching departments wishing to sponsor junior staff for further training. Some may be able to acquire additional funds from either governments or donors. Hence, we have assumed that about half of the longer-term cost of the programme, namely $7,500 might be recovered through fees in the initial five-year phase. Based on this assumption, there would remain, according to the estimate set out in Table 4, a gap between revenues and outlays totalling about $3.4 million over the first five years of operation.

The assumption concerning the proportion of longer-term cost that can be recovered through fees appears realistic. Government agencies, as suggested by the field studies, appear willing to finance the full cost of the staff they would sponsor for a doctoral degree programme. However,universities, the other principal source of demand, are in a far less favourable position. Funds for staff development are limited and economics departments typically must compete for them with other university departments and faculties. Without some assurance of longer-term financing of doctoral training, departments collaborating in the doctoral programme would be unable to reap its full benefit in terms of being able to mount a systematic programme for staff development consistent with their longer-term priorities for teaching and research. Hence, assurance of additional funding, which effectively would be used to subsidize the staff development needs of departments collaborating in the doctoral programme, would be needed before the programme could be initiated. Our own admittedly crude and preliminary estimate would suggest an amount of about $3.5 million over five years, and more importantly, at least $2 million to cover the cumulative shortfall over the first three years.

VI. Impact

The impact of the doctoral programme can be adjudged in two ways: first, in terms of strengthening "capacity", and second, in terms of its responsiveness to the interests of major stakeholders, namely teaching departments, AERC, the donor community and African governments.

The programme comprises a carefully designed initiative that will begin to supply well trained African professionals required for research and higher education and by governments. Unlike overseas programmes, the initiative will also be self-sustaining since a significant proportion of its "output" will be "reinvested" directly into training future generations of scholars and professional economists.

The first phase of the programme is not intended to achieve this longer-term goal. Rather, it is designed to lay the foundation necessary for a collaborative, multi-faceted effort by African teaching departments. Hence, its aims are:

- To supply the additional staff needed by departments to strengthen their own undergraduate and graduate teaching, including a possible doctoral programme at a future date.
- To develop the administrative modalities needed for a locally-based collaborative effort.
- To establish an internationally credible degree programme that can subsequently be adapted and further expanded by collaborating departments to meet their own specific requirements.
- To provide a range of activities and linkages that will strengthen research and graduate education. These would include the development of doctoral level curricula; staff participation in doctoral teaching and thesis supervision; expanded contacts with overseas institutions and scholars; and the systematic development of data bases for research.

The second phase will involve further expansion of the doctoral programme as dictated both by the capacity of local departments and by effective demand from various sources, notably universities, research centres and the public sector. The resulting network will resemble the one associated with the collaborative MA programme in its resilience to unanticipated "shocks", responsiveness to local needs and commitment to excellence. In both quality and numbers, the expanded programme will be a significant response to Africa's longer-term need for professionals trained to the doctoral level.

The programme's benefits will not be confined to these departments. In all likelihood, introduction of the PhD will lead to a furthering strengthening of the MA, much as the latter has resulted in a significant improvement in undergraduate education. For all of the collaborating departments, including those currently not engaged in graduate teaching, the PhD programme will provide an accessible and affordable mechanism for staff development.

For AERC, the PhD will offer two important benefits. The first is an assurance that the Consortium's activities in research and MA level training can be sustained. Otherwise, AERC as indeed all other initiatives in this field, will continue to live off "human capital" created largely in the 1960s and 1970s. Not only is this "stock" not being expanded in anticipation of future needs, but it has actually been diminishing in many instances. Fortunately, the situation can be reversed, not least because of the very solid foundation provided by the MA programme. The second principal benefit will be a deepening of research through a steady increase in the number of new scholars and with a systematic investment in data bases. Undoubtedly this emerging capacity will result in new research networks, some of which will fall outside the immediate purview of AERC.

For the international donor community, a doctoral programme poses both an opportunity and a challenge. Investment in "capacity building" entails a long-term commitment. Possibly for this reason, donors have been reluctant to confront directly the daunting task of revitalizing African systems for research and higher education although these constitute the essential foundation, as in other parts of the world, for furnishing the skills and knowledge necessary for longer-term growth. AERC has proved to be an exception to what has otherwise been a discouraging record of largely unsuccessful interventions in sub-Saharan Africa. Its achievements can in large measure be traced to a strategic approach that addresses the specific features of the institutional environment.The approach includes close collaboration among departments and scholars, a commitment to excellence and highly professional management. A similar approach characterizes the proposed doctoral programme. Its successful implementation will consolidate and sustain a major investment in economics. For the donor community as well as African governments, the programme's success will also validate a strategic approach that can be applied to other disciplines and professions.

The issue of marshalling the support of African governments should be viewed from several perspectives. In the immediate term, some government agencies, as indicated by the field studies, will be prepared to sponsor staff for a high quality doctoral programme. Furthermore, some governments may also be prepared to offer direct support for the training of department staff. Hence, the assumption in the preceding section of a 50% offset in average costs through fee-paying student is not unrealistic. The proportion of costs recovered through fees will gradually increase through a decline in average cost and an increase in the demand for a credible, high quality product.

VII. The next steps

This document has presented the findings of a *conceptual* as opposed to operational planning exercise that has looked into the possibility of introducing an Africa-based doctoral programme in economics. The next step should feature extensive consultation with at least four major stakeholders, namely teaching departments, the donor community, AERC and African governments, in order to obtain their in-depth responses to the proposed programme. Their concerns and interests would subsequently be addressed in a feasibility study or, if circumstances so advise, in planning the operations a pilot phase. Indeed, experience in developing the MA programme dictates that such consultation is essential if the programme is to enlist the support of its most important stakeholders.

The following lists, by no means exhaustive, includes issues that warrant further discussion with these stakeholders.

For teaching departments:

- The phased approach, implying an initial concentration of effort in the first five years of the programme.
- The proposed structure and content of the programme.
- Extension of collaboration from the anglophone MA programme to participants from francophone Africa, Nigeria and South Africa.
- Suggested arrangements and procedures for the programme's "governance".
- Opportunities for additional resource mobilization to mount the programme and/ or use it for staff development.
- Preliminary identification of interested departments that are potentially eligible to offer the doctoral programme on behalf of the collaborating group.

For donors:

- A more precise estimation of likely costs over the longer term based on a range of assumptions concerning the average duration of study, student attrition rates, unit costs and student enrolment.
- A more precise assessment of cost recovery through fees.
- A longer-term strategy for financing the programme along with AERC's other activities.

For the AERC:

- Implications of the doctoral programme for future funding and management of the Consortium.
- Impact of the programme on AERC's longer-term research agenda.

For African governments:

- An assessment of whether the proposed programme would meet their own training requirements and whether they would be willing to pay its full (long-term) cost.
- An examination of prospects for expanded support for staff by economics departments.

The next phase in the study would in effect identify the various issues and concerns that would be raised in response to the detailed concept presented in this report. In so doing, it would ensure that they are satisfactorily addressed at the operational planning stage.

Annex A: Doctoral study: Objectives, conduct and outcome

Objectives

The purpose of the study is to assess the desirability and feasibility of establishing a collaborative effort in PhD training by African universities over the coming decade. In light of the experience obtained in designing and operating the anglophone MA programme, as well as accommodating those aspects specific to doctoral level education in sub-Saharan Africa, the study focuses on the following issues:

- The structure and content of a doctoral programme, of recognized international calibre, that can overcome constraints specific to sub-Saharan Africa. These include the region's isolation from the profession internationally and the crises besetting higher educations in most countries.
- A more detailed appreciation of the needs that would be met by an Africa-based doctoral programme of international calibre. These would include:

  - Requirements for highly skilled professionals performing leading roles in teaching, research and analysis in public agencies, academia and, increasingly, the private sector
  - Further advancement of the economics profession in the region to an internationally recognized standard.
  - Strengthening of indigenous capacity to conduct rigorous scientific research and policy analysis of international calibre.
  - Longer-term development of an indigenous capacity to train future university teaching staff.

- Sustainability of the programme in terms of support within African universities, mobilization of the resources from local sources and probable changes in public systems of higher education on over the longer term.
- The potential for extending the current structure developed in conjunction with the collaborative MA programme for anglophone Africa to the doctoral level, with particular reference to the potential involvement of private universities as well as universities in South Africa, Nigeria and francophone Africa.

Conduct of the study

The study will be directed by the AERC Training Coordinator and will involve the services of six African and international consultants. The latter are familiar with higher education in sub-Saharan Africa as well as teaching and research in economics in both sub-Saharan Africa and elsewhere. The consulting team will be led by a Study Manager who will be responsible for coordinating the various phases and preparing the synthesis report. The study will work closely with the universities involved in the collaborative MA programme and draw on AERC's extensive links with African universities and governments and the international donor community.

Outcome

The study, expected to last about six months, will provide detailed information and, where appropriate, recommendations on the above issues, namely:

- The structure and content of a collaborative doctoral program in economics.
- A systematic assessment of the various needs that would be met by a doctoral programme in economics.
- Approaches and measures to ensure that the programme can be sustained over the longer term without major external support.
- Means by which the current MA programme might be adapted for the purposes of a doctoral programme, with the potential participation of universities in Nigeria, South Africa and francophone Africa, as well as private universities.

The study's various reports will inform the next stages, which will involve further refinement of the programme's structure and content, detailed planning, and the mobilization of resources.

Annex B: Collaborative MA programme for anglophone Africa

Table B1: Enrolment: October 1994 through September 1995

University	Year 1	Year 2	Total	Students from Category A*
Addis Ababa	20	14	34	7
Dar es Salaam	16	12	28	11
Botswana	7	10	17	11
Ghana	15	11	26	5
Zimbabwe	13	10	23	4
Nairobi**	13	7	20	2
Total	84	64	148	40

* Students accepted from collaborating universities that are currently not offering the MA degree.

** Figures for Year 1 are for the beginning of the the 1994 school year.

Table B2: Enrolment: Students from category A universities*

University	Year 1	Year 2
Makerere	5	5
Cape Coast	2	0
Namibia	2	2
Lesotho	1	0
Sierra Leone	3	0
Kenyatta	2	3
Moi	1	3
Egerton	1	3
Swaziland	1	3
Malawi/Zambia	3	0
Total	21	19

* The University of Malawi is now a Category B university and the University of Mozambique recently joined as a Category A participant.