

Discussion Paper

Innovation Funds for Universities

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**For potential participants in the Nigeria University System Innovation Project
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Innovation Funds for Universities

The use of innovation funds to promote and finance improvements in university quality is relatively new in the field of higher education. Innovation funds have recently been introduced within the following countries: (i) the United Kingdom: Higher Education Funding Council for England (HEFCE) in 1992; (ii) Argentina: Fund for University Quality Improvement (FOMECE) in 1995; (iii) Chile: Fund for Improvement in Higher Education Quality and Performance (FONDO) in 1998; (iv) Venezuela: Millennium Science Initiative in 2000; and (v) Bulgaria: University Teaching and Management Fund (CTMF) in 2000. Several other countries are currently considering this mechanism.

What is an “innovation fund?” In essence, it is a funding pool that can be accessed by groups within the university community to carry out new initiatives and innovative approaches to existing problems in teaching, learning and management. Normally, an independent Board of Advisers defines appropriate standards and criteria for funding decisions and publicizes them to the academic community. Teams of persons (e.g., representing a particular department, faculty, administrative unit, student group, etc.) then develop their innovative ideas and present them in an application for financial support to carry out their proposal. An Awards Committee evaluates the proposals and recommends funding for those that meet the funding criteria. The teams implement their proposals and evaluate the results. Positive outcomes and promising ideas are then shared with the university community at large. In this way, innovation and change are promoted by the persons who best understand the problems being addressed – academic staff, students and administrators.

BACKGROUND

In most countries, public resources have traditionally been allocated to universities through financial planning methods based on the number of pupils enrolled and other variables. In this process, the key to budgetary allocation has always rested heavily on the negotiation ability (i.e., lobbying) of each university’s administration in relation to the government bureaus in charge (e.g., Ministries of Education, Ministries of Finance, buffer or oversight organizations and, depending on the particular situation, even the Parliament).

During the past decade, this traditional approach has evolved in some countries to incorporate more explicit and rational criteria. The new trend is to reward gains in quality and efficiency, and to establish differential costs according to the type of academic program. Generally, these criteria are applied only to supplemental budgets because of the difficulty of establishing a zero-based budgeting process, on the one hand, and the fact that universities’ historical budgets tend to be almost impossible to modify, on the other.

The most common approach to fund-based allocation of resources exists in the research field. University scientists will readily recognize this mechanism. Research funds are usually designed to encourage excellence in the generation of new knowledge. They may also assist the preparation of research proposals and the development of research teams. They normally function on the basis of competitive application within a framework of explicit and transparent funding criteria. Research funds differ from innovation funds in ways that will be explained below.

Another approach to the allocation of supplementary (i.e., non-core) funding among universities is the “Program-Contract” which has been utilized extensively in France and recently in Spain. The “Program-Contract” establishes agreed performance indicators and employs them over a period of several years. Supplemental allocations are made to institutions as long as they achieve the agreed performance indicators. The Program-Contract approach seems best suited for relatively mature university systems that possess strong management capacity and reliable management information systems.

INNOVATION FUNDS

During their short history, innovation funds have been used as policy tools to help university systems (i) improve academic and management quality; (ii) introduce innovations aimed at greater academic relevance; and (iii) increase university cost-effectiveness. Resources obtained through these innovation funds are treated as supplements or additions to the institution’s government-funded core budget.

The Innovation Fund is a tool that enables university units to link their strategic planning with actual prospects for strategic implementation of these plans. It does this by requiring funding applications to be based upon and justified by the university’s initial diagnosis of its principal strengths and weaknesses in the context of environmental opportunities and risks. Innovation funds accelerate processes of constructive change and institutional modernization by promoting both cooperation and competition among participating departments, faculties and universities. The World Bank presently finances innovation funds Argentina, Bulgaria, Chile and Venezuela.

The application for funding summarizes a systematic exercise in which problems are defined and diagnosed; multi-year strategies for their resolution are elaborated; and the goals, performance indicators, human resources, and financial needs are established. The Fund’s support is not a reward for excellence previously achieved by the applicants, nor is it a compensation for institutional poverty. Any university units – whether of excellent, average or modest quality – can obtain Innovation Fund resources as long their innovation effort is feasible, and as long as their applications meet the required criteria of quality, relevance and strategic impact.

In their design, innovation funds respect university autonomy while encouraging institutions to think holistically about their planning and development. Universities decide for themselves the innovations that they would like to carry out. They select the key academic areas they regard as their greatest assets. They choose the strategic mix of staff development, short-term training, visiting experts, laboratory equipment, computers, technical assistance, etc. that they believe will best allow them to implement successfully their proposed innovation. The process of preparing a funding application encourages institutional self-reflection and staff discussions centered on problem-solving and priorities, and requires institutional acceptance as well. In many cases, institutional partnerships and cooperative efforts increase the possibilities of funding success.

Following approval by the Awards Committee, the financing of each university’s proposal for innovation is shared proportionately from three sources: the Innovation Fund (comprised of World Bank resources), the Government’s agreed counterpart contribution, and the university system’s agreed participation share. For example, the project funding formula could establish that the NUSIP Innovation Fund would finance 85% of the budget for approved proposals, that Government’s counterpart funds would finance an additional 10%, and that the remaining 5% would be contributed from the university’s own recurrent budget. In this way, institutional acceptance of the proposal will be demonstrated, and the basis created for post-project sustainability of activities.

Innovation funds also encourage program evaluation and reinforce accreditation efforts. In cases where accreditation agencies work in close coordination with the innovation fund managers and the Awards Committee, the latter can ensure that innovation proposals reflect the results of these evaluations and attempt to address the weaknesses identified by the accreditation process. In cases where systematic institutional audits or course accreditation are not yet established, innovation funds may require that responsibility for evaluation of project impact be assigned to the implementing department, faculty or university as a self-assessment exercise.

Program accreditation and institutional evaluation are necessary activities to improve university quality. But they are alone insufficient to accomplish this purpose. To be fully effective, they need to be complemented by strategic planning, capacity building programs, and adequate financing. Innovation funds can help to address the latter requirement, as shown in the following table:

OUTPUT	INITIATOR	PURPOSE
Self-evaluation	University management	Accountability to stakeholders; preparation for external evaluation; self knowledge.
External evaluation	Institutional and disciplinary peer committees.	Quality assurance; objective feedback; identification of institutional strengths and weaknesses.
Accreditation	External agency	Public information on institutional performance and compliance with standards.
Strategic Plan	University management	Definition of institutional mission, goals, role and priorities.
Development Action Plan	University management	Concrete steps to achieve strategic goals.
Identified innovations and changes	Innovation Fund	Support for strategic actions and innovations.

ORGANIZATION AND MANAGEMENT

Innovation funds function in relative autonomy from national governments, the World Bank, and university leadership. To date they have been structured as independent public agencies with full decision-making autonomy. Organizationally, they are led by a Board of Advisers comprised of distinguished scholars, highly respected stakeholder representatives, and employer representatives. Members of this Board can be chosen from government or university institutions, but they are not institutional representatives and serve purely in their individual capacities. Senior university officers are excluded from becoming Board members.

The decision process for project approval is thorough and considered. Both national and international participants are usually involved in the Awards Committee. Funding approval decisions are normally based on the following criteria:

- *eligibility* of the proposal.
- *quality* and *relevance* of the proposal.
- the proposal's *strategic justification* in relation to national, institutional and disciplinary priorities.
- *financial sustainability* of the proposed activity.

Objective evaluation of these funding applications is a critical undertaking. It must be carried out in a fully transparent way in order for subsequent decisions to be credible within the university community. Non-approved applications are not regarded as failures. Instead, they are viewed as insufficiently developed. In such cases, the effort that went into preparing the application is recognized, and technical assistance may be requested in order to strengthen the application and increases its chances of success in the next round of awards.

To be effective, acceptance of innovation funds as appropriate instruments for quality enhancement must be forthcoming from within national academic and scientific communities, as well as from the political, economic and social spheres of the country. Legitimacy must be established by appropriate process at the beginning and it must be maintained throughout. Appropriate process includes the following requirements:

- Agreement with university stakeholders concerning the fund's strategy and design.
- Academic community participation in the evaluation processes.
- Workshops, technical assistance and other supports for the preparation (and revision) of funding applications.
- Timely and effective methods for disseminating the fund's experiences.
- Strict adherence to procedures and defined timetables.

Efficient management is also indispensable. If modernization is to be encouraged, then the Fund itself must lead by example (e.g., demonstrating prudence its own administrative expenditures, providing high quality services to its "clients," and communicating well its activities and results to an interested public).

DISCUSSION

The Fund's awards will have strategic impact on key requirements and constraints within the higher education system. In Argentina, for example, the Fund's annual disbursements have represented less than 3% of the total higher education budget, yet its investments in university equipment amount to more than 80% of the system's annual expenditures on this item. University salaries and recurrent expenses are not paid out of the Fund since its purpose is to complement public expenditures rather than to substitute for them.

The following are some common uses of Innovation Fund resources: (i) scientific and teaching equipment; (ii) dissertation completion awards for junior academic staff; (iii) internships to acquire specific new knowledge and skills; (iv) guest lecturers; (v) technical assistance and consultants; (vi) development of libraries and information centers; (vii) computers and related information technologies; (viii) new program development; (ix) management training; (x) preparation of new textbooks and teaching materials; (xi) partnerships with employers; and (xii) institutional linkages.

The Fund is a flexible tool able to adjust its priorities in response to periodic feedback on its performance. For this reason, the Fund's activities need to be continually evaluated. These evaluations allow change to be introduced. The following are examples of the types of periodic evaluation that are currently being used by Innovation Funds: (i) Board of Advisers' assessment of eligibility and award criteria and of the award committee's application of them in its funding decisions; (ii) an international panel that undertakes annual reviews of the Fund's performance and accomplishments; (iii) feedback from university, employer and Government representatives who participate in annual self-evaluation workshops that enable the expression of opinions and the formulation of recommendations; (iv) semi-annual monitoring of the overall program by the World Bank; and (v) financial audits by national firms.

To date, the accumulated experience with Innovation Funds has identified the following likely associated risks: (i) the tendency for the Awards Committee to employ decision criteria used for the evaluation of scientific research instead of criteria associated with quality improvement and innovation; (ii) poor university management of the application review process within the institution and consequent tendencies to support the "faster" applicants rather than the more strategic units or essential groups; (iii) strong pressures for the large scale acquisition of equipment without justifying these purchases within a strategic institutional context of innovation and change; (iv) inadequate design of partnership and networking projects; and (v) slow implementation of activities due to management capacity limitations. Prior recognition of these dangers allows for the possibility of preventing them.

CONCLUSION

Worldwide experience with innovation funds is new and evolving. The initial results are very encouraging. But each case is different, and responds to unique local needs and circumstances. This suggests that as additional innovation funds are designed, they should be original creations inspired by the lessons learned from other experiences. However, they should avoid – due to the uniqueness of each national academic setting – the temptation to copy or imitate existing designs.

Examples of Funded Innovations

The following are three examples of actual innovation initiatives approved for financial support by the Fund for University Quality Improvement (FOMEC) in Argentina.

Example 1: **NATIONAL UNIVERSITY OF THE SOUTH**

APPLYING DEPARTMENT: Electric Engineering.

PROFESSIONAL CAREERS AFFECTED: (i) Electric Engineering; (ii) Electronic Engineering; (iii) Teacher's Certificate: Electricity and Electronics; MA and Ph.D.: System Control

PROJECT TITLE: Improvement of graduate and post-graduate teaching

APPROVED FUNDING: \$944,271

PROJECT DURATION: 4 years

PROBLEM PRESENTATION: "Project development was a very important process. It led us to carry out a thorough analysis of different possible improvement strategies. From the beginning the Fund was presented as an opportunity for change and growth rather than as a possibility of updating equipment".

DIAGNOSIS: A communication and coordination gap exists between teaching and research activities, and between graduate and post-graduate activities; high rates of student drop-out in the first years; excessively long study programs; obsolete equipment.

PROJECT GOALS: Expansion of course offerings; greater integration and coordination of curricula; increased graduation rates; increased scientific output; increased number of full-time and post-graduate lecturers; increased post-graduate course offerings; and a stronger and more cooperative relationship with industry employers.

Example 2: **NATIONAL UNIVERSITY OF ROSARIO**

APPLYING DEPARTMENT: Mathematics

PROJECT TITLE: Mathematics teaching as an informational tool

PROJECT AMOUNT: \$128,620

PROJECT DURATION: 2 years

PROBLEM PRESENTATION: The difficulties of teaching mathematics effectively to 6,000 students.

DIAGNOSIS: Inadequate orientation of students, most of whom are not interested in a mathematics career, yet were referred to the Department as future specialists in the field; students possessed weak prior preparation in mathematics; and inadequate teacher preparation in the use of computing tools.

PROJECT GOALS: Updating of didactic methodology departing from each teacher's own experience at the use of new tools; adaptation of physical space for installment of 25 web spaces; and incorporation of CAS (Computer Algebraic System)

Example 3: **PSYCHOLOGY PARTNERSHIP**

APPLYING DEPARTMENT: Faculties of psychology from seven different public universities.

PROJECT TITLE: Psychology network for better quality teaching.

PROJECT AMOUNT: \$245,537

PROJECT DURATION: 3 years

PROBLEM PRESENTATION: Shortage of lecturers for some required and specialized courses; difficulty of students to transfer to universities offering these courses; consequent excessive time and cost required to complete degree programs.

DIAGNOSIS: Need to facilitate student mobility; provide specialized courses through the use of qualified specialists from other sectors or neighboring countries.

PROJECT GOALS: Elaboration of a core teaching cycle common to all institutions in such a way that students can easily transfer from one institution to another; and use of guest lecturers to provide instruction in specific disciplines for which there are no specialists in the country.