Agricultural Higher Education

The Bank has been an important source of assistance for agricultural higher education. But though outcomes were satisfactory at the time of project completion, questions began to emerge about the longer-term effectiveness of the institutions being supported. Concerns included the growing mismatch between the education provided and manpower needs, the persistence of low farm productivity and rural poverty, and shortages of recurrent funding for many project-assisted institutions. In the 1970s and 1980s, universities in general increasingly suffered from their reliance on public funds that seemed to many disproportionate to the social benefits generated. As these controversies mounted, so did the Bank’s ambivalence about investing in agricultural universities.

A new OED study finds that projects usually achieved or exceeded targets for expanding and improving physical plant, for upgrading staff, and for expanding enrollments and numbers of graduates. But less was accomplished with regard to broader economic and institutional development goals. Because the Bank imperfectly understood the problems of tertiary agricultural education, its contributions tended to be inappropriately staffed and designed. University management was often weak and the hand of government too strong. The most successful projects encouraged links with employers or other agencies engaged in research and extension.

Bank lending

The Bank started financing agricultural higher education (AHE) development in the 1960s, to help supply the trained manpower and new technologies needed to increase agricultural production and make it more scientifically based. Its assistance to AHE in FY64-90 targeted 68 tertiary institutions through 41 education projects in 25 countries. Asian countries received about half of the projects and about 80 percent, or $581 million, of the total investment. Forty percent of the total investment went to China. Most operations assisted one or two institutions within a country; only a handful supported several institutions or provided assistance over a series of projects, and most of these were in Asia.

Project goals

Underlying models

The Bank was influenced by the Western model of universities that combine research with teaching, and in particular by the experience of the US land grant colleges, which combined research and teaching with extension services. But few of the socioeconomic conditions that had made these models workable prevailed in borrowing countries, and neither the agriculture nor education projects sought to foster them in a concerted way.

Design process

Problems that undermined the quality of project design included cursory issues analysis, borrowers’ inadequate understanding of—or insufficient commitment to—agricultural higher education components, and unworkable implementation arrangements. Issues analysis was weak for two reasons. It was based on forward-looking manpower projections, which themselves stemmed from questionable assumptions about economic growth and agricultural development, rather than on realistic assessments of labor market opportunities. And it lacked the organizational perspective needed to provide the type of inputs that would create institutional capacity over the longer term.

Frequently, means for achieving goals were not well thought out. Raising agricultural production and productivity was a major goal for most projects, but the specific strategy for achieving it through strengthening agricultural universities was rarely spelled out. Plans...
Factors Influencing Sustainability of Investments

The Bank’s understanding of problems and potential solutions was hampered by its limited technical knowledge of universities as organizations. For agricultural universities—outwardly-oriented service institutions dependent upon public funds and social demand—the external environment and its interaction with the internal environment are key to institutional relevance and survival. A university’s ability to balance autonomy and accountability concerns is linked to its ability to administer and renew itself; its ability to stay relevant to the economy is linked to its relationship to clients and colleagues and its ability to adapt programs to their needs. The projects reviewed paid scant attention to these factors influencing university sustainability.

Bank-financed projects did little to help institutions with capacity building and policy formulation, e.g. on enrollment and resource use. Projects did not seek to promote the type of professional association among academics that faculty standards depend upon. Neither did they build up lines of communication between universities and government support programs.

Implementation issues

Implementation lags did not affect outcomes adversely; they gave opportunities for some aspects of institutional development to catch up with the overall pace of the project.

The main implementation problems arose from:

• not allowing for autonomous execution of agricultural university components, and not sufficiently involving university staff;
• supervision by Bank staff without sufficiently direct experience with higher education issues or the agricultural portfolio in the country;
• poor performance by technical assistance experts; and
• weak monitoring and evaluation mechanisms that did not allow implementation problems to be flagged and dealt with in a timely fashion.

Outcomes

Enhancing agricultural production and productivity: Key determinants of success were the conditions for promoting agricultural growth and the links between the university and the community.

Where economies had prospered and the university was actively engaged with farmers and the business community, institutions fulfilled a range of roles and demonstrably contributed to production increases (China Agricultural Education and Research Project).

Meeting manpower needs: Expansion and upgrading of physical capacity and program coverage were the most obvious and enduring contributions of the Bank’s assistance. Enrollments in agriculture undergraduate programs rose dramatically, and most institutions became a major source of trained manpower for their country’s agricultural services. But economic problems in many countries made it increasingly difficult for graduates to find jobs commensurate with their training, and universities found it difficult to alter their programs to suit evolving needs. Part of the problem lay with state-led approaches to economic development, centralized manpower planning models, and project planners’ overoptimism about economic growth.

Institution building: Project investments established some institutions and enhanced the academic status of others. They also helped to improve undergraduate education, by providing better equipment and learning materials, as well as overseas fellowships for upgrading teaching staff (Thailand II, India I, and China projects). But in other ways, institution-building achievements were modest. Fellowships, though useful, exacerbated brain drain problems and did not ensure periodic faculty renewal. Projects that set out to improve graduate education sometimes failed to provide complementary research activities. Several projects that sought to promote contract research or community outreach for universities suffered from a poor understanding of the economics or

June 1992
politics that fueled the demand for and response to these services.

Improving university management and governance: AHE institutions had weak control over some very basic internal decisions regarding funding, staffing, programs, admissions, and enrollments. Although projects ostensibly sought to build up academic capabilities, they did little to enhance the institution’s ability to guide, direct, and manage these capabilities. Governments remained heavily involved in regulating universities, paralyzing momentum and destroying the capacity for institutional responsiveness and innovation, and undermining the independence essential to self-governance and good performance.

Strengthening links and institutional relevance: The most successful components encouraged or enabled institutions to form links with groups they served; this was the single best way to keep university programs relevant. Universities needed to maintain good contacts with employers and take responsibility for assisting with graduate placement. The need to address rural poverty issues and to support agricultural development called for more active participation in agencies responsible for research and extension, and for graduate programs that encourage, if not require, students to conduct applied research with potential economic benefits.

Developing university systems or agricultural support services: The few projects that sought to build links between agricultural universities and support services generally did not accomplish this goal, owing to: unworkable management or financing arrangements; inadequate or inappropriate inputs; competition and disagreement between universities and government ministries concerning the role of each in providing

### Two Donor Agencies; Similar Findings

During the period under review, USAID provided the largest AHE assistance program among the bilateral agencies, reaching 70 institutions in 40 countries. Efforts by the Bank and USAID seem to have complemented one another over the 25 years under review: indeed, 10 institutions in 12 countries were assisted by both agencies, with similar aims (higher productivity, manpower development, and institution building) and similar inputs (physical facilities, expansion of academic programs, and faculty upgrading).

Both agencies have reached similar conclusions from independent ex post evaluations of their programs:

- more success in strengthening education than research and extension;
- programs put undue stress on traditional agricultural science disciplines at the expense of social sciences, interdisciplinary studies, or innovative pedagogies;
- more success in Asia than in Africa;
- lack of women in agricultural degree programs;
- successful establishment, in a few Asian institutions, of productive research capacity, but general neglect of the research function;
- generally, lack of involvement of universities with extension;
- erosion of earlier successes in faculty development;
- declining financial support and consequent weakening of education and research programs;
- weak links to clients, colleagues, and occasionally, ministries of agriculture; and
- lack of institutional autonomy and weak governance structures.

Outcomes in Africa were far less satisfactory. Facilities were built and equipped, but learning materials were often missing. Economic difficulties imposed great hardship on universities and their faculty, whose monthly income might suffice to feed a family for a week. Projects only partly succeeded in making curricula more practical, eliminating the need for expatriate staff, and controlling costs. In some countries, attempts to contain admissions were futile, resulting in chronic overcrowding. Where containment of enrollments was successful (because sagging economies could not absorb more graduates), institutions were underused and unit costs exorbitantly. Most disappointing was the lack of research capacity in African universities and the deterioration of the programs that the Bank had helped to establish.
Recommendations

*Improve issues analysis:* From sector work through project generation and appraisal, the Bank should pay closer attention to the context and conditions necessary to sustain viable and high quality institutions, including retaining staff who have demonstrated competence in managing universities or university systems.

*Involve a broad range of actors in issues analysis and project design:* Although university staff and the government must take the lead in developing a sense of ownership of the project, others who will benefit from the investment (faculty, students, business leaders, farmers), must participate in the formulation process. This requires government commitment to consensus building as a precursor for Bank support.

*Improve project evaluation design:* Adequate project formulation should lead naturally to the development of effective monitoring and evaluation components designed to capture both process and product outcomes, since the former, in particular, may prove crucial to project success and the durability of the outcomes. University involvement in the design, implementation, and use of monitoring and evaluation components is an integral part of institution building.

*Focus project assistance on upgrading university management and developing appropriate governance structures:* Further investment should focus considerable resources on assisting institutions to manage themselves. University administration and managerial processes need to be strengthened as a first priority. This may involve changes in government policies and regulations, or the creation of university grants commissions or accreditation boards which can act as brokers for the university, as standard bearers of academic excellence, or as buffers between universities and the government. Universities need to be able to generate and allocate resources better and should be allowed to engage in directly productive activities and to benefit from them.

*Strengthen the Bank’s capacities in university management:* If lending for agricultural higher education is to increase (if only to rehabilitate institutions previously assisted), the Bank needs to involve more individuals with practical experience in academic management. Alternatively, it could identify institutions in developing countries that manage themselves especially well, and either recruit individuals from those institutions as consultants or support “twinning” arrangements on a case-by-case basis, based upon a thorough needs assessment and long-term institutional development plan.

*Incorporate agricultural concerns and organizations into university structures:* Farmers, agribusiness concerns, and public agencies need to collectively identify priorities and strategies for training and research programs. This would also ensure that prospective employers and research clients support AHE institutions and their graduates. Visits and field exercises on local farming systems would help ensure that graduates are prepared to work on subjects relevant to local needs and are exposed to realistic teaching and research situations. Funding mechanisms for location-specific adaptive research would encourage a problem-solving approach to training and research as well as interdisciplinary work.

*Strengthen ties to the international agricultural research centers (IARCs) and national agricultural research systems (NARs):* Links should be encouraged between AHE institutions and the IARCs, as well as with local NARs, through training, internships, and joint research programs, similar to what already exists between national and international research organizations. Such opportunities are most frequent for farming systems research and socioeconomic aspects of technology development, to which the universities can contribute social sciences and management skills rarely available in NARs.

*Encourage donor coordination for agricultural higher education:* Recent evaluations by the World Bank, USAID, and FAO have arrived at similar conclusions regarding the development of agricultural higher education and the impact of donor assistance (see box). These findings could provide a basis for initiating a dialogue between borrowers and the donor community that is region-, country-, or institution-specific. Whenever possible, donors should endeavor to channel assistance through a single cofinanced project, or a series of projects in a comprehensive development program. In this way, project assistance itself can provide a vehicle for donor coordination.