



POLICY BRIEF 12

Improving Competitive Agricultural Research Funding In India

Introduction

Agricultural research systems in developing countries face new demands and challenges, arising from the process of economic liberalisation, globalisation and structural adjustment. To meet these challenges, research systems are undergoing institutional, management and funding reforms. The focus is on developing a pluralistic institutional and funding base, strengthening linkages with clients and improving accountability and efficiency. The purpose is to sustain funding from domestic sources and multilateral and bilateral donors. In order to do this it is necessary to convince funders that money is being used efficiently to meet national goals (Echeverria et al, 1996; Pal and Joshi, 1999).

One of the problems of the research systems in developing countries is that they have tended to be funded by block grants that are seldom linked to performance and impact. One way of addressing this problem is to shift to competitive funding mechanisms, following the example of a variety of developed countries. This realisation has recently led to the establishment of a number of competitive funds in developing countries, including India. In order for these funds to function effectively, it is essential that they are properly designed and fit with the contextual realities of the system, including building on past experience.

Competitive Funding

The main purpose of competitive funding is to improve the effectiveness of the research system through linking funding firstly to clients' needs, and secondly to the performance of scientists/institutions in addressing them. A dedicated pool of money is allocated for research in agreed priority areas. Rules and operational procedures are established up-front and then various organisations and individuals compete to gain access to the money.

The specific objectives of different competed agricultural technology funds (CATFs) may vary, but most of the funds aim to improve relevance, cost effectiveness and accountability, and thereby sustain research funding (Kampen, 1997). Other benefits of CATFs that are not specifically due to competition are that they can build on the comparative advantage of multiple institutions in both the public and private sector, achieve synergy through collaboration and networking, and help strengthen other institutional reforms.

Apparent disadvantages of competitive funding include: neglect of the long-term research agenda, limited attention to capacity development (including possible neglect of the research infrastructure), high transaction costs, and the possibility of 'rent-seeking' in the resource allocation process (Echeverria, 1998).

It is important that CATFs are designed in such a way as to help minimise these potential shortcomings, whilst improving the system's effectiveness and sustaining continuity of funding.

Competitive funds in India

Competitive funds have been established in India to complement block grants for research. They focus on three main concerns. First, they aim to build scientific capability and research infrastructure in frontier areas of science. The funds located in the Indian Council of Agricultural Research (ICAR), the Department of Science and Technology (DST) and the Department of Biotechnology (DBT) strongly support this concern. Second, they aim to fill critical technology gaps and address new research problems. This is a priority objective of almost all the Indian funds. Third, they aim to strengthen multidisciplinary research and collaboration between the public and private sector. This is a key concern of the Competitive Grant Scheme (COS) under the National Agricultural Technology Project (NATP) of ICAR as well as of the Competitive Agricultural Research Programme (CARP) of the Uttar Pradesh Council of Agricultural Research (UPCAR).

All the Indian CATFs aim to provide greater flexibility to the system (as compared to block grants). In general they are operating quite successfully, though certain operational problems have limited their effectiveness. We hope that the findings of a global study (Gill and Carney, 1999; Box I) (the study is based on ten case study funds from Asia, Latin America and Africa supported by the DFID (UK) and conducted by ODI, London. The funds vary in terms of geographical spread, longevity of fund, donor involvement and area eligible for funding. The Indian case studies include Adhoc Research Scheme of AP Cess Fund (of 1CAR) and Ford Foundation's Agricultural Research Fund at Vidya Bhavan Krishi Vigyan Kendra (Udaipur). All the case studies can be viewed at two websites: www.rimisp.cl/odiprinc.html and www.oneworld.org/odi/) will contribute to improving the effectiveness of CATFs in India.

Governance

Most CATFs in India are governed by the top-level management of the 'home institution'. Priority areas for funding tend to be identified subjectively by these bodies. In order to improve effectiveness, it is important to bring objectivity to the identification of both research priorities and the milestones against which effectiveness can be assessed. Objective identification of priorities will help researchers to formulate focused projects, thereby improving the success rate of proposals and fund utilisation. It also facilitates monitoring and impact evaluation. Priority areas should be in line with national policy priorities and clearly differentiated with research programmes of block grants. They should also be linked to stakeholders' needs. The CGS scheme of NATP specifically emphasises participation. It is therefore important that a pluralistic body is put in place to identify key milestones and research priorities for this fund.

Box 1. Competitive Funds in Developing Countries: Policy Conclusions

- Where there is sufficient agricultural research and dissemination (AR&D) capacity in-country to constitute an effective market, a competitive fund can stimulate competition and enhance efficiency. Where there is not, it is better for donors to concentrate on building up this capacity through institutional development across all sectors, not just in the public sector as in the past.
- Among smaller countries where this is impractical, an alternative worth investigating is the regional fund.
- Funds work best where government leads the institutional reform initiative, has a clear vision of priorities and is willing to put the necessary mechanisms and modalities in place.
- The best 'home' for a CATF is in an independent institution which does not bid for projects. Locating a fund within traditional public sector AR&D institute minimises success prospects.
- Competitive funds are more expensive to administer than block grants, and the smaller the fund the higher the proportion of costs needed for quality administration. In the interest of setting up a pluralistic national system, funds should pay the overheads and staff costs of those from outside the public sector.
- Monitoring and evaluation should focus on impact on intended beneficiaries. There is as much to be learned from studying failure as from studying success.
- When setting up a fund, every effort should be made to draw on the 30 years of experience of developing this model in Latin America, including the adaptation of modalities, mechanisms, guidelines and pro formas.
- The governing body should be high profile, pluralistic and with no majority from any one stakeholder. Priorities should be set by this body in line with national policy priorities.
- Where there is commitment to institutionalised reforms it may be appropriate to establish an endowment based on debt conversion, provided the government is prepared to make significant contribution in local currency.

Source: Gill and Carney (1999)

Management Efficiency

Management efficiency refers to the costs of management, the timely flow of funds and the effective monitoring of projects. Since there is no independent management for projects in the Indian funds, it is difficult to assess management costs. In other developing countries management costs varied between 5 to 43 percent of the total fund budget (depending upon the management structure and size of the fund). Although an independent fund management system is desirable for greater efficiency, it increases management costs. It can therefore only be justified when the CATF itself is of a sufficient size. The Chilean (FONDEF) and Colombian (PRONATTA) funds (Chile FONDEF: Fondo de Fomento del Desarrollo Científico y Tecnológico (Fund for the Promotion of Scientific and Technological Development) under Chile's National Commission for Scientific and Technological Research; established in 1991 with loan from Inter-American Development and 72 percent local contribution. Colombia PRONATTA: Programa Nacional de Transferencia de Tecnología Agropecuaria (National Programme for the Transfer of Agricultural Technology of the Ministry of Agriculture and Rural Development; established in 1989 as part of Government's decentralisation programme; funded by World Bank loan with government counterpart co-financing.) have done well in this respect and restricted the cost within 6 percent of the fund (Gill and Carney op cit.).

Management efficiency is often impaired by inadequate staffing, irregular and unreliable flows of resources to and from funds, and time-consuming review and management processes. Sometimes there is dearth of good proposals submitted for funding. This is particularly true for

the AP Cess Fund scheme of ICAR. Such problems can be addressed by allowing fund managers flexibility to adapt to changing circumstances, by placing greater reliance on modern communication methods and by paying for inputs such as the screening of proposals, peer review, etc. (many funds currently rely on voluntary contributions in this regard). The Colombian CATF, PRONATTA, has developed an effective decentralised management information system which might provide a model for other funds.

Monitoring and evaluation of fund-financed projects is essential to ensure accountability. Monitoring mechanisms in the Indian funds tend to be ritualistic and lack rigor. This is partly because of delays in the flow of funds to projects (these delays limit research progress and therefore complicate monitoring) and partly because of lack of resources for monitoring. Consequently, the monitoring process is dominated by financial - as opposed to technical - considerations. Technical monitoring tends to be confined to whether the task has been completed, rather than examining the quality of the work. The situation is slightly better in the DST and DBT funds where quality is assessed through a monitoring workshop. Both ICAR funds (AP Cess Fund and CGS) need to strengthen this. However, impact assessment of the fund itself (in terms of achievement of its objectives) and completed projects on intended beneficiaries have rarely been attempted. This needs to be corrected. The guiding principle should be to monitor the quality of work on-site and through peer review. Excessive control and financial monitoring should not be allowed to unduly hamper work by disrupting the flow of resources to projects.

A further efficiency concern relates to the way in which research outputs are assessed in the Indian context. Although the utility of expected outputs is an explicit consideration in funding, this is seldom assessed objectively. By contrast, FONDEF in Chile conducts an objective evaluation of proposals in terms of their socio-economic significance and scientific merit. A check list or scoring method can be used for this purpose. The bottom line is that objective evaluation, based on pre.-defined criteria, establishes transparency and improves the credibility of the proposal screening process.

Eligibility and Operational Procedures

Operational procedures and eligibility criteria for the Indian funds are similar to those in other countries. The funds provide operational guidelines for use of money and an application format. Only operating expenses for research are covered. The failure to provide for staff salary costs places a de facto constraint on applications for funding from private voluntary organisations. This is an important concern, especially for those funds such as the COS and CARP that place considerable emphasis on the participation of non-governmental research institutions. Similarly, the fact that the CATFs are unwilling to provide scoping grants excludes the possibility of building proposals on initial market research or surveys to identify clients' needs.

There also appears to be merit in shifting from open-ended to time-bound arrangements for submitting proposals in response to public advertisements (most of the Indian funds currently have no time requirements on application). This should not only facilitate the formulation of focused proposals, but also make screening more efficient, as all proposals can be evaluated in a timely fashion by a single panel of experts. In addition, the monitoring schedule of successful projects can be more uniform (because they all start together) and thus more efficient.

Key Objectives

The key objectives of a fund may include capacity building, decentralisation, networking, multidisciplinary research, poverty alleviation, etc. These concerns can be incorporated in the modalities of fund. For example, money can be allocated on a regional basis to promote decentralisation. However, decentralisation usually involves some degree of trade-off with the relevance and quality of research. It has therefore been resisted in central funds such as the AP Cess Fund Scheme and also the CGS.

To address this problem it may be desirable to have separate funds for (a) scientific excellence, including capacity building, and (b) technology development and dissemination. The former type of fund can be located in a central institution, but the latter requires some degree of decentralisation and participation of stakeholders (as it is very easy for clients' needs to be overlooked by a central fund). The lack of decentralisation can be seen in the CGS in spite of greater decentralisation of production system research under NATP. Similarly, support for innovative technology dissemination methods gets low priority in the AP Cess Fund Scheme of ICAR. As a result, this fund is more commonly known for research funding. There is much to be learnt from the PRONATTA fund (Colombia). This is decentralised in design and ensures the participation of stakeholders at every stage of project management.

Networking and the promotion of multidisciplinary working methods are common objectives of donor-established funds. These concerns are well integrated in ICAR's All India Coordinated Research Projects. It may therefore not be essential to incorporate them into Indian CATFs as well. However, partnership with the private sector is rightly encouraged in the CGS of NATP and CARP of UPCAR. But the promotion of partnership is successful only when there is: (i) adequate emphasis on the relevance of research; (ii) involvement of the private sector in governance of the fund; and (iii) a transparent mechanism for benefit sharing. If CATFs in India can make progress in these directions, they will be making a significant contribution to overall institutional reform of the Indian agricultural research system.

Effectiveness and Sustainability of Financing

Most funds aim to improve the effectiveness of research through better targeting, increasing accountability, effecting institutional reform and achieving visible socio-economic impact. However, these are elusive goals and the evidence on their achievement is quite contradictory. A majority of donors and researchers, particularly in the developed world, subscribe to the idea of competitive funding. However, a US study has demonstrated the negative effect of competitive funding on scientific productivity (Huffman and Just, 1994). The AP Cess Fund Scheme, the oldest competitive fund in India and perhaps in the world, has been successful in identifying important research issues, which were later taken up under block grant funding. This Fund has also established a trend for competitive funding in India. But its contribution in terms of socio-economic impact and institutional reforms has yet to be documented.

The sustainability of fund financing (ability to mobilise additional funds and ensure continuity of financing) is primarily determined by the impact of the fund. The Indian CATFs have stood the test of time and survived through several institutional and political transitions. In general, it seems to be the case that the most sustainable funds, like AP Cess Fund Scheme, FONDEF and FONDECYT (Chile FONDECYT: Fondo Nacional de Desarrollo Científico y Tecnológico (The National Fund for Scientific and Technological Development under Chile's National Commission for Scientific and Technological Research; established in 1981 with 100 percent government funds).), are those that exist within technology systems that have a successful history and strong national commitment. Some funds have made a start in mobilising additional funds, particularly from private sector. However, this important development can only be expected to continue where there is close participation of the private sector in terms of management of the fund.

Summing Up

Competitive agricultural technology funds focus mainly on short-term research issues. This means that there will always be a need to fund long-term basic research through block grant systems. However, it remains important to improve the competitiveness and accountability of research systems through enhancing the overall share of competitive funding. India has all necessary preconditions for making competitive funding effective and efficient. Box 2 provides some suggestions as to the steps that need to be taken to enhance effectiveness. In addition, it is important that those involved recognise the importance of ensuring timely flows of funds to researchers. This may perhaps require some liberalisation of existing administrative

procedures. Finally, some elements of competitive funding, such as screening, monitoring and evaluation of projects, can also be built in resource allocation under block grant funding.

Box 2. Improving the Indian Funds

In order to improve the effectiveness of the various Indian CATFs, it is important to:

- put in place pluralistic groups/bodies to govern the funds and identify priority areas;
- strengthen the demand-drive or relevance of research through decentralisation and stakeholders' participation;
- establish independent management units that oversee technical review by the relevant subject matter divisions of 'home institution' and peers;
- establish effective monitoring mechanisms for projects financed by the funds as well as the funds themselves;
- provision for time-bound scoping grant;
- instill a focus on fund impact assessment; and
- establish decentralised funds to focus on technology dissemination.

References

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