

**EVALUATING NATIONAL RESEARCH SYSTEMS AND PROGRAMS
IN THE THIRD WORLD: SOME COMMENTS**

Doug Daniels and Sing Chew*
Office of Planning and Evaluation
IDRC

Prepared for the Conference on Research for Third World Development,
co-sponsored by the University of Waterloo and the International
Development Research Centre, May, 1985

92795

* The views expressed in this paper are those of the authors and do not necessarily represent the views of the International Development Research Centre.

The authors hold the position of Director and Planning Officer respectively in the Office of Planning and Evaluation in IDRC.

INTRODUCTION

The focus of this workshop on planning and evaluation in research systems is appropriate both because interest in the potential value of these two aspects of research management is growing and because there is evidence that research managers in both North and South could benefit from exchanging approaches and experiences in these areas.

There appear to be areas of commonality as well as some significant differences in the use of research planning and evaluation between the North and the South. Naturally any attempt to make sweeping generalizations is difficult when the differences within each group of countries can be larger than the differences between the two and when individual situations vary so enormously. However, some general comments may be useful in trying to identify whether there are significant differences and points of mutual interest which can be explored.

The environment, resources and requirements of research systems in the North and the South may vary enormously but the research organizations and the research process used are often similar. This is not surprising when one considers that research institutes and the way they are organized in the Third World were usually modelled on those already existing in the industrial countries.

The attitude of individual scientists to attempts to increase planning and evaluation is often no different in the South than in the North. Planning at the macro research system level has often been resisted as creating impediments to the freedom and flexibility the individual scientist must be allowed if he is to advance the cause of knowledge. Serendipity is a critical element in the research process. Without formally defined development and research objectives, evaluation of research systems becomes more difficult. Evaluation, which conjures up images of critical appraisals of individual performance, can be a sensitive issue in any research system. In some ways, this response to planning and evaluation as management tools at the macro level is ironic considering the importance that individual scientists assign to these aspects at the research project level.

These similarities in research organization and processes and attitudes towards planning and evaluation for research in both the industrial and developing countries suggest that experiences and approaches developed in one region may have value in other regions. At the same time there appears to be some significant differences.

Economic planning in the Third World is a much more important process than in those industrial countries with free market economies. The research sector is often one of the few areas for which formal plans are not developed and integrated into national five year plans, although there are a growing number of cases such as in Bangladesh where this is being done. In the industrial countries, attempts to develop coherent research strategies are probably no less refined or tentative than other development strategies such as industrial or trade policies. The differences are probably even more marked in the area of evaluation. Program evaluation has been developed most extensively in North America and appears to be a much more accepted and practiced element in management systems in the industrial countries than in the Third World.

This paper will focus on a review of evaluation in national research systems and IDRC's activities in this area since the paper prepared by Fernando Chaparro for this workshop will review the role and importance of research planning in the Third World with particular focus on Latin America.

TRENDS AND TENDENCIES

For the past two decades in North America, evaluations, particularly of government sponsored programs, have been increasing. This increase in evaluation activities and evaluation research has been fuelled by growing interest in obtaining information on the implementation and effectiveness of programs in the public sector. In the United States, rapid development of evaluation activities and evaluation research followed the Great Society Programs of Lyndon Johnson's Administration in the 1960's (Brewer, 1983:15). In Canada, the impetus for evaluating federally sponsored programs measuring program intent and specific operating goals, besides traditional audit concerns, developed following the shift by the Federal Government towards more decentralized financial and management control and the adoption of modern management techniques (Comptroller General of Canada, 1981:3). Further institutionalization of evaluation activities in the Federal Government occurred in the late 1970s.

Underlining this expansion of program evaluation is the pressure to ensure that publicly funded programs are achieving their objectives. Accountability becomes especially important during periods of economic uncertainty and when funds available for programs are being reduced.

Having stated this one should not leave the impression that the above is the sole *raison d'être* for evaluating programs. Rutman (1980) has identified other functions of program evaluation. Evaluations can also be considered as tools for better management and for resource allocation.¹ Clearly, the latter two functions are important means for improving the quality and service of programs.

¹ Even though these are other related functions pertaining to the conduct of evaluations, they are on the general level accountability-related activities.

These evaluation functions are also cited by overseas development assistance agencies and multilateral organizations. Of course, depending on the donor agency, there are variations in emphasis vis-à-vis the three functions of evaluations mentioned above. Most development assistance agencies are part of the overall systems of national governments and they have responded to growing interest in program evaluation. Furthermore, since political and public support for development assistance is invariably contingent on the state of health of a nation's economy, evaluations of assistance programs become more crucial during a period of fiscal restraint. There is also growing pressure on multilateral institutions from their member countries to demonstrate the efficiency and effectiveness of funds spent. More recently there has been increasing demands for evaluation of the social impact of projects and programs being funded.

Interest in utilizing evaluation has also appeared in the South. Whether this interest arose indigenously out of a growing concern to ensure better management and efficient resource allocation or through the pressure of donor agencies is difficult to gauge. On one hand, there is growing pressure to evaluate externally funded projects. This interest has been particularly stimulated by the growing number of World Bank loans for agricultural research in the 20 to 50 million dollar range. The Bank and other external agencies demand that an adequate monitoring and evaluation component be built into the activities they support. On the other hand, one can also note instances of independent requests from recipients of project funds for evaluations in order to increase the effectiveness of project performance and for better resource allocation and management. The increasing number of joint evaluations between donors and Third World counterparts attests to this.²

² Other commentaries tend to see these jointly sponsored evaluations as a result of:

- 1) the need by donors for greater legitimacy in their project evaluations;
- 2) the feeling that there will be an advantage to have Third World consultants on the team; and
- 3) the economics of costs. (See for ex. King, 1984:25)

Whatever the reasons, there is clearly a growing concern about developing and utilizing evaluation in research systems in the Third World. Before reviewing this in more detail, it may be useful to outline the Centre's own evaluation activities.

The Office of Planning and Evaluation (OPE) in IDRC has been responsible for the growing use of evaluation of research activities the Centre has supported. We will review some of the OPE's activities designed to meet the Centre's needs as well as to encourage the development of evaluation capability in the Third World. Central to the latter is a concern that the Centre encourages the development of evaluation systems in the Third World which meet their own planning and evaluation needs and not just the more narrow requirements of external donor agencies.

II

EVALUATION FOR DEVELOPMENT : IDRC'S ACTIVITIES

Most of the evaluation activities undertaken by the Office of Planning and Evaluation are targeted directly to meet IDRC management needs. The division, however, funds a small program to support and develop evaluation activities and expertise in the Third World. For the former set of activities, evaluations are geared towards the provision of useful information for Centre personnel to assess the projects/programs funded by the Centre. Emphasis is placed on the **user defining the parameters of the evaluations** through a dialogue process known as an evaluation assessment phase. This initial involvement of the user is essential to ensure that evaluation results will be utilized by Centre staff.³ In other words, **evaluations at the Centre are used for better resource allocation, and for the development of more effective project/program management.**

Evaluations conducted by the Division to date have included both project to program level evaluations. They have also included sector specific and geographic (country or region) focus evaluations. These activities have focussed on assessing the effectiveness of IDRC programs/projects with some covering the social impacts of IDRC projects/programs. Conduct of these evaluations has been undertaken by Third World consultants, external Canadian consultants and IDRC staff members. They have also included recipient participation in the evaluations as evaluators or jointly sponsored evaluations. Currently, the Centre is undertaking a major study attempting to determine some aspects of funding research for development and the development impact of a selected set of IDRC supported activities.

³ For an explicit account of some of the evaluation activities of IDRC see J.D.M. Hardie, S.C. Chew, W.D. Daniels, the Role of Evaluation in Planning, Paper Presented at 5th Annual Conference, Canadian Evaluation Society, Ottawa, May 2-4, 1984.

These evaluations have revealed a number of factors which condition the effective attainment of projects and program objectives. Factors such as weak staff research capacity in the Third World, weak Third World research management capabilities, the lack of continuous national government support for project activities, and a weak infrastructure, recur frequently in our evaluation findings. By no means are the above factors new to individuals familiar with developmental activities in the Third World. However, since these are recurring issues which arose from evaluation studies, it is important to grapple with them. It leads us also to suggest that rigorous ex ante assessment studies can help to identify the strengths and weaknesses of a proposed research project or program and thus allow the Centre to tailor its support to reduce the problems created by working with weak research institutions.

In addition to evaluation of Centre supported research activities, the Division supports or carries out policy studies or reviews of different aspects of Third World research systems. These studies are not designed according to the criteria of what we understand as formal evaluation studies, but are more review oriented studies. One such study involving the review of the role of a Third World university in development provides some indications of the nature of these studies. The objective of this study was to assess the developmental role of the Alexandria University in Egypt. The study was conducted by the Heads of two departments in the Colleges of Arts and Agriculture at the University. Some of their findings were: the failure of the university's faculty to implement research results, inadequate university response to national socio-economic development goals, little attempt by the university to study community and national development, and inadequate university response and adaptation to the needs of a changing environment. In sum, the authors of this study indicate that the university has not fully fulfilled its mandate.

The Division also funds evaluation activities not necessarily related to the work of the Centre **which are specifically designed to allow Third World professionals to design and undertake evaluations of programs and build up national evaluation capacity.** The intent is to provide an opportunity for these professionals to develop their evaluation systems according to **their perceptions of** national needs. Even for evaluations primarily designed to meet Centre needs, the division tries to use Third World evaluators, dramatically reducing the costs of such evaluations and increasing the opportunities to develop local expertise.

One such project is being currently funded in Thailand. The aim of the project is to permit a Thai research team to assess whether the present evaluation systems of Thailand in the agriculture and natural resource sectors are adequate and comprehensive, and whether findings of evaluation studies are used to guide improvements. The research agenda involves a review of evaluations conducted in the above two sectors, the methodologies used, lessons learnt, and institutions and individuals involved in evaluation. An assessment of the linkages between research programs and national development needs will also be made. The Project team's intention is to develop a system that can be used to help streamline resource allocation, and to provide an assessment of Thailand's agricultural and natural resource programs. The project team expects to find that evaluations have been used in a haphazard and ineffective manner, with some programs receiving careful scrutiny and others never having been evaluated. Identifying the exact nature of the weaknesses in the present approach will provide a useful foundation for developing and introducing a more comprehensive national evaluation system.

We have outlined briefly the contours of the evaluation activities of IDRC. They are targeted to provide information for better resource allocation and program management in IDRC. As well, they are undertaken to meet the evaluation needs of the Third World as identified by national research organizations in the South. In the concluding section, we will review some current initiatives at the national level to evaluate development research programs. This brief review will cover activities that are funded by developing countries themselves as well as by external donor agencies.

III

CURRENT INITIATIVES IN EVALUATING DEVELOPMENT RESEARCH PROGRAMS AND RESEARCH SYSTEMS IN THE SOUTH

Some of the most active initiatives in evaluating research programs and research systems in the Third World are occurring in the agricultural sector. Basically, there are two reasons for this. First, agricultural research in nearly all developing countries is the largest research sector and in some cases represents half of all research in the country. Secondly, it has received the most external development assistance, which often contains an evaluation component.

Program managers cite the role of evaluation in providing information for management to increase the effectiveness and impact of funds allocated (Sadikin, 1984), while others frankly acknowledge the impetus provided by external agency requirements (Nestel, 1984:1, Abdullah, 1984:5).

A review of the evaluation activities in South and South East Asia (Pakistan, Bangladesh, Thailand, Malaysia and Indonesia) in the agricultural sector, indicates that most assessment activities are concentrated in the ex ante and monitoring stages of research programs. The practitioners consider these ex ante assessment stages as evaluation exercises which can improve allocation of resources. Monitoring activities, which are a part of the administrative features of many research programs enable corrections or changes to be made during

ongoing research. Institutional mechanisms are in place in the above countries that enable the conduct of the above assessment activities. National managers cite such ex ante assessments and monitoring activities as important processes which provide information for their planning activities and indicators of whether funded activities are in accord with development and research goals. However, we do not know to what extent this information is fed back into the system to ensure the information is used. Some positive indicators do exist. In Indonesia, senior managers of research programs and institutes participate in these assessment activities and hence, we believe, are more likely to utilize the results because of their involvement. Another development that may increase utilization is the centralizing of responsibility for most of the agricultural research in a country within an institution, especially if the institution is also given an evaluation mandate. One can witness this for example, in Bangladesh (Bangladesh Agricultural Research Council), Pakistan (Pakistan Agricultural Research Council), Indonesia (Agency for Agricultural Research and Development), and in the Philippines (Phillippine Council for Agriculture and Resources Research and Development).

Besides these ex ante assessment and monitoring activities, increasing attention is being given to evaluating the impact of agricultural research. These studies according to one senior national manager, will "improve our planning and implementation of agricultural and rural development projects even though they are difficult to measure." External donor agencies have also become more interested in impact studies. Elements of these impact evaluations can be found in the activities of the Pakistan Agricultural Research Council (Internal Project Reviews), Indonesia's Agency for Agricultural Research and Development, and Malaysia's Malaysian Agricultural Research and Development Institute. In the latter's case, the activities are sponsored in connection with World Bank loans obtained by MARDI for agricultural research.

Perhaps a more indepth review of the role of evaluation in one national program would be useful. Indonesia provides an example of one country where evaluation is formally built into the national program of the Agency for Agricultural Research and Development (AARD).

For the past ten years, AARD has received over 100 million dollars in terms of external donor assistance for agricultural research. AARD uses external consultants as a key component of their evaluation activities. Evaluation activities and reviews at AARD occur both at the system wide level and at the commodity level. In addition, evaluations of individual research institutes are carried out. In this case, five objectives were developed to measure the performance of the research centres. These are:

- a) the research results impact on agriculture and rural development;
- b) the institute should be recognized and widely regarded by the farming community in particular as a national reference point for problems of the commodities or functions assigned to it;
- c) the institute must have a well balanced, qualified and productive critical mass of scientists and supporting staff;
- d) the institute must have adequate physical facilities in the form of established laboratories, offices, branch stations and experimental farms; and
- e) the institute must have a stimulating working atmosphere and working relationship with extension, education, training and other development agencies.

These conditions were utilized as criteria in a review of all the research centres associated with AARD. The Director General of AARD believed the end result has been the creation of a stimulating and healthy competitive atmosphere (Sadikin, 1984:5).

Besides this institutional level set of evaluation activities, a system-wide review of AARD was undertaken by the International Service for National Agricultural Research (ISNAR) in 1981. Currently, jointly sponsored evaluations between ISNAR and AARD are taking place at the commodity level. These commodity evaluations assess the structure and organization of research; planning and budget; manpower and training; facilities, equipment and supplies; scientific and technical activities; management of programs; communication linkages; and the impact of the research being conducted.

Clearly, the ongoing activities at AARD upon completion will provide a vast array of information for AARD management. There is no reason to believe that this ongoing interest in undertaking evaluation at the national level will fade away. On the contrary, we expect to see an increase in such activities in the Third World.

To conclude this section, we will shift to Africa and review some evaluation activities in Ethiopia jointly sponsored by the Ethiopian Science and Technology Commission (ESTC) and IDRC.

Prior to the commencement of ESTC-IDRC sponsored evaluation in 1983, most attention was directed to ex ante assessment and monitoring

of research projects. The Commissioner of ESTC, stated that the objectives of an expanded program of evaluation activity are designed to help develop national research priorities, to build the evaluation capacity of the Commission's professional staff, and to improve the management of research in the country.

The evaluation of IDRC supported research projects in Ethiopia completed in early 1984 was an attempt on the part of the Commission to develop impact evaluations. Since very few impact studies of projects have been done prior to the start of the above evaluation, the ESTC undertook the exercise not only to evaluate whether the research projects identified for evaluation were meeting Ethiopia's development objectives and to assess project impact, but as well, to develop capacity to conduct impact evaluations.⁴ Specific research projects were identified for evaluations and joint teams of ESTC personnel with external consultants from the East African region were mobilized for the assignment. Specific aspects identified for evaluation were:

- a) Provision of knowledge/technology;
- b) building research capacity;
- c) use and impact of research results;
- d) procedures;
- e) coordination.

One significant outcome is that in the process of conducting the evaluation, the Ethiopian evaluators emerged with a perspective of the Ethiopian research system that transcended the views they possessed prior to the evaluation. This development sensitized management personnel to the necessary conditions conducive to effective research.

⁴ For a detailed discussion of this evaluation see "Nazreth Workshop on IDRC supported Research Projects in Ethiopia" 23-26 April, 1984. Ethiopia Science and Technology Commission.

The evaluation results pinpointed some key aspects of the research process that were constraints to effective research. There was consensus that a critical weakness was the failure to promote utilization of research results and the team identified institutional barriers preventing follow through to utilization. These weaknesses are by no means, typical of projects located in Ethiopia or even of developing countries only. However, where resources are more limited, as they are in developing countries generally, the effects on research systems are more acute. The challenge of developing countries is to ensure that research systems are demonstrably effective or additional resources may not be forthcoming. Evaluation can play a useful role in this context.

This quick review of some evaluation initiatives currently in place in the Third World indicates there is an emerging interest to undertake evaluation-type activities. The level and frequency of these activities are by no means equivalent to those in North America. The example cited of Indonesia indicates, however, that in selected cases, the level of evaluation activities is commensurate with those in many industrial countries.

CONCLUSION

We would suggest certain areas require more attention.

- a) The constituency supporting expansion of research in Third World countries is still very limited and the economic pressures on many developing countries have become much more severe since 1980. Unless scientists can demonstrate the payoff from research, there may be little growth or reduction in already hard pressed research organizations. In this environment, impact evaluations showing the impact of research on development can play a critical role. In addition, there is considerable evidence that limited utilization of research results is a major constraint. Focusing evaluation activities on assessing cases both on where research has been utilized and where utilization has been limited could be helpful in identifying and introducing changes in process and organizational relationships which could improve utilization. However, this type of evaluation is both difficult to undertake and costly, so such studies must be carefully selected and designed.
- b) There is evidence that even the limited number of evaluations undertaken to date have not been readily accepted or effectively utilized by national level program managers. Part of the reason for this is the introduction of evaluation approaches taken 'holus-bolus' from the industrial countries without any regard for cultural and other environmental differences. The national and institutional political environment, attitudes to hierarchy, and receptivity to frank written critical reports are very different in different countries. An evaluation system must be designed to take

account of these differences. There is a plethora of evaluation approaches and methodologies developed in industrial countries which are being promoted in the Third World. In some cases, "cookbook" manuals have been developed for general application in all developing countries which encompass and promote all possible levels of evaluation from project to national system reviews. Our experience also indicates that user needs for different types of evaluation in different countries are not uniform. We believe emphasis should be placed on encouraging national systems to identify and map out their own needs and to evolve their own evaluation strategies.

- c) This implies that external donor agencies who have been responsible to date for a large proportion of formal evaluations must begin to involve national program managers in the selection and conduct of evaluations. Unless national program managers are involved, the results of these evaluations will not be as effectively used as they could be. The present approach encourages excessive focus on meeting the short term objectives of the specific donor supported project rather than the improvement of national research systems. The process of evaluation can be as important as the product.
- d) Despite the importance we place on the central role of Third World country involvement in evaluations, there is clearly opportunities for more mutual benefit from greater involvement with scientists and evaluators from the industrial countries, including Ontario's universities.

As the level of evaluation activity increases, Third World countries will continue to increase their requests for involvement of external experts. External consultants bring a different perspective and an obvious disinterestedness which can be useful in often small research systems where there are few individuals who are perceived as totally disinterested. Secondly, external consultants often lend an air of legitimacy and support to recommendations for changes which are not accepted when made from within the system.

- e) The state of the art of evaluation of research is still very weak and the development of improved methodology is an area where Canadian researchers could make a useful contribution. The experience in Canada where, at the federal level, more attention is being paid to developing evaluation for management uses rather than accountability is an approach that may fit many objectives of Third World country managers.
- f) Finally, the experience of Canadian universities in finding ways to fulfill their mandates more effectively can be very useful to universities in the Third World. University researchers in developing countries often have access to considerably fewer funds than scientists in government ministries although the academic qualifications of university staff are usually much higher. There is increasing discussion about the limited role of universities in meeting development objectives in Third World countries. The Alexandria University study referred to earlier indicates that the university staff share this concern. Recent

commentaries in the press and in other public forums in Canada suggests that Canadian universities also face some pressures for development of a stronger and more direct link between the research activities of Canadian universities and Canadian development objectives. The universities have introduced a number of changes, as discussed in Dr. Clark's paper, which could prove helpful to universities in the Third World. The establishment of consulting groups within universities, the formation of liaison offices provides examples of initiatives which Third World universities may want to evaluate. The development of coherent research strategies and a greater ability to demonstrate the relevance and payoff of university research could be fundamental to the continued development of universities in the Third World.

ARCHU Evaluating national resea
DANIEL no. 05



REFERENCES

- ABDULLAH, H. S. Programme Evaluation in the Malaysian Agricultural Research and Development Institute.
Paper presented at Regional Workshop on Research Programme Evaluation.
Dhaka, Bangladesh. Oct. 1-3, 1984.
- BREWER, M. Evaluation : Past and Present
in Struening, Elmer & Brewer, M. (ed.)
Handbook of Evaluation Research
pp 15-30
Beverly Hills : Sage, 1983.
- COMPTROLLER GENERAL OF
CANADA Program Evaluation.
Branch Discussion Paper.
81-001.
Ottawa : 1981.
- KING, Kenneth North-South Collaborative Research
in Education.
IDS Bulletin.
Vol. 15 #4.
1984 : 25-30.
- NESTEL, Barry Some Experiences with Program Evaluation
in Indonesia.
Paper presented at
Regional Workshop on Research Program
Evaluation.
Dhaka, Bangladesh.
Oct. 1-3, 1984.
- RUTMAN, Leonard Planning Useful Evaluations.
Beverly Hills : Sage
1980.
- SADIKIN, S. W. Agricultural Research Program Review
and Evaluation.
Keynote Address.
Regional Workshop on Research Program
Evaluation.
Dhaka, Bangladesh.
Oct. 1-3, 1984.