A Review of Monitoring and Evaluation Roles in Research Development Program

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Abstract

Sustainable development & improvement of every country is due training, preserving & maintaining its technological, research & scientific assets, researches improvement, promotion scientific technological development of country and finally its widespread sustainable development. Therefore identifying making contact and supporting this powerful stratum of the society in order to make use of their scientific cooperation and participation in various fields to produce science and technology is a strategic trend for sustainable development based on a national research development program. This study analyzes the monitoring and evaluation of state research development program, evaluation and monitoring procedures and standards, including the different actions taken by evaluation and monitoring agencies and association. (Governmental and non governmental).

In an indirect process for determining the eligibility of research institutions to participate in state development research programs it has directed that institutions are eligible for participation if they meet two fundamental conditions:
1- Be able to evaluate, monitor, analyze and predict fundamental changes in science and technology in order to keep abreast of the global fundamental changes in science and technology.
2- Be able to develop priorities plan to organize technological activities of the country to reengineer nationwide development of science and technology and to provide a sustainable structure for research development program.

Evaluating the national research system for developing strategic priorities towards science, research and technology emphasizing on decentralization and independence of universities and research centers in terms of administrative, financial, employment and organizational affairs. It also devising a comprehensive assessment system for research and technological affairs in national level For improving information technology through supervision of research programs for promoting the role of scientific associations and research organizations through their involvement in the decision-makings and supervision processes and also planning to boost the share of public and private research in the GDP and the state budget.

In this process supporting the implementation of state-run research projects by universities and research centers as a means to diversify their financial resources and also encourage faculty members to play more effective parts in national research activities are a strategic career.

By using a systems analysis approach based on role definitions, the problems of development and utilization of national research development program can be monitor in logical perspective. This perspective fall into two major categories:

- Those relating o effectiveness oriented approach.
- Those relating to efficiency oriented approach.
The first set of roles can be verified by making some changes in the design and performance of agencies providing various kinds of researches and also research monitoring actions and also to provide effective bridge between the functional elements.

In this process monitoring and evolution of research development program should be better balanced and more effectively geared to the national needs for national development.

Based on the state national development program a large proportion of resources are devoting to the research section and it could be served best by improving the efficiency of the exiting evaluating system.

The second set of categories can be alleviated by a major change in national development objectives which would give very high priority to a research development program of rural transformation.

It emphasizes the choices made by monitoring and evaluation agencies at different times as how they would conduct evaluations and what standards they would use.

This issues and circumstances are surrounding the initial development of evaluation and monitoring and major changes in procedure and standards. Also attention is given to some of the challenges that presently are posing for evaluation procedures as growing complexity, globalization and advances in instructional uses of electronic technology allow new forms of research provision to emerge.

The exiting policies need to be re-examined, and new policies developed. While research innovations must be recognized, it is also true that monitoring agencies have greatly assisted their career. In this process monitoring agencies serve as a public brain system to advocate changes that will improve research practice.

For national research development program monitoring and evaluation agencies need necessary process of innovation and ability of response to changing circumstances to move forward in a national oriented way. These centers may experiment with new approaches but must submit their plans to an outside review by other public or non-public evaluation agencies.

The recommended items for monitoring should be assessed alongside an organization’s role for national project, including whether they are fulfilling the responsibilities including monitoring commercial research.

By such methods, monitoring and evaluation agencies not only guide the development of innovative practices but they also serve to lend credibility to emerging forms of research innovation. They need to set certain terms of good practice and encourage certain types of practices, while other practices are discouraged or banned. This represents a soft approach.
Introduction

Sustainable development & improvement of every country is due training, preserving & maintaining its technological, research & scientific assets, researches improvement, promotion scientific technological development of country and finally its widespread sustainable development. Therefore identifying making contact and supporting this powerful stratum of the society in order to make use of their scientific cooperation and participation in various fields to produce science and technology is a strategic trend for sustainable development based on a national research development program. To achieve this objective in line with the state national development program, the national research development program approved to provide and direct researches and appropriate organizations for producing science and technology through directing research activities to achieve sustainable development of the country.

The objective of this program is offering assistance, financial and spiritual supporting services to the state research section including legal and real ones in order that research affairs bloom in accordance with production of sciences and technology and public utilization of research results in the country.

Through the last two state research developments program, research centers, universities and governmental research agencies have raised new questions about the quality and relevance of their systems and approach for program evaluation of research development program.

This trend can be seen as a response to the increased size, complexity and diversity of the research centers in terms of administrative, financial, employment and organizational affairs.

It also reviews the effect and roles of monitoring and evaluation on the ways that universities and research centers do their research activities.

This paper reviews several new developments in research development program with special attention to the issues that accrediting state long term national research development program for monitoring and evaluation policy and practice.

Context and issue

This study analyzes the monitoring and evaluation of state research development program, evaluation and monitoring procedures and standards, including the different actions taken by evaluation and monitoring agencies and association .(governmental and nongovernmental)

In this paper attention is given to the questions of decentralization and independence of universities and research centers in terms of administrative, financial, employment, human resource management policies and organizational affairs which can facilitate the national trend of research program.

In the Islamic Republic of Iran, monitoring and evaluation of research has a 50 years old record of experiences, extending back to the early years of the establishment of the former Iranian ministry of culture and higher education which reformed and renamed to Ministry of Sciences, Researches and Technology (MSRT) to strengthen and execute, assist, monitor, evaluate and policy make a policy for evaluation at the ministerial level.

At that time research monitoring and evaluation was directed towards research budget allocating and monitoring but today this process has changed in the way of efficiency and effectiveness evaluation and monitoring.
The policy issues that these new approaches raise are challenging, but they can also be seen as variations as the long standing tensions that evaluation and monitoring agencies have faced. Significantly, the questions for evaluation activities still focus on the adequacy and appropriateness of research centers practices and whether the practices are efficient and effective and achieve national research program results. Monitoring an evaluation process in Iran is centralized. Some governmental agencies carry out this role under supervising of the following organizations:
1- Iranian Ministry of Sciences, Research and Technology.
2- Supreme Council of the Cultural Revolution.
3- Research Monitoring Affairs Forum in Iranian Ministry of Sciences Researches and Technology

On the other hand, two different types of organizations carry out the evaluation and monitoring roles:

- Institutional evaluation agencies, which monitor the research capability of universities and research centers. This monitoring is organized by some internal monitoring agencies like the Research Monitoring Affairs Forum.
- Programming agencies for research development which their monitoring and evaluation roles focus on research policy making and long term programming.

This monitoring is organized by two organizations: Iranian Ministry of Sciences, Research and Technology and Supreme Council of the Cultural Revolution

A critical element in evaluation and monitoring of the national research program is the use of standards to evaluate and monitor the research development program. Four aspects of the development of programming accreditation are distinctive:

1- Changes in output of research:
   - Implementation of new strategies
   - Managing new executive programs.
   - Designing new research organizational structure and also financial assessment.
   - Designing a functions evaluation system for all level of research.
   - Time limited monitoring and evaluation.

2- Changes in output of research:
   - Optimum management of research financing.
   - New definition of short term research programming.
   - Define new tasks for liner research manager.

3- Bureaucracy decreasing of research:
   - Privatization of research activities.
   - Research outsourcing.
   - Making new chances for research competencies.

4- Defining interactional approach between researchers and research agencies:
   - Making new links between bureaucracy and research leadership.
   - Pay attention to policy making for research activities.
   - Acceptance of the social and political character of research center.

For evaluation and monitoring focusing on input oriented approach there are four standards:

- Standard 1: Defining structure purpose and research objectives.
- Standard 2: Defining the methods of achieving research objectives through core functions.
- Standard 3: Developing and applying resources and organizational structures to ensure sustainability.
- Standard 4: Creating a national commitment for research development.
In this case different views can be offered about the overall roles and impact of evaluating and monitoring systems in research development program especially based on the governmental monitoring agencies. There are five comprehensive roles: Economics, Business, End-users oriented roles, governmental oriented roles and cultural ones.

**Policies and programs**

Monitoring agencies have played a steering role in the area that is helping research center to find methods that adapt to new demands without imposing restrictions or demands for immediate action. This view related to the central role of the overall structure of the national research development program. At the same time it can also be acknowledged that monitoring agencies have been very instrumental in spurring structural change and improvement within institutions of national research. This trend is based on development of strong internal systems of research and self-assessment. It relates to an institution's overall mission has served a helpful role in shaping educationally useful innovation. The emphasis they place on developing good evidence has supported better decisions and better planning for new research challenges and programs.

To understand the full picture for research evaluation, it is necessary to look at a range of governmental roles in research development program. Government is responsible for the financial support of a large portion of the nation's research center especially those carried on by universities. It is responsible too for the great majority of the research grants and loans that support national level research. Notably, however despite this expansion of the central role, agencies have come to play in supporting the research programs while reserving significant oversight responsibilities to the governmental agencies itself.

The monitoring and evaluation role of government is technically a narrow one, which begins with the necessity that the government must determine whether a research institution is eligible to participate in national research programs especially development research programs and if they can achieve the targets.

In an indirect process for determining the eligibility of research institutions to participate in state development research programs it has directed that institutions are eligible for participation if they meet two fundamental conditions:

1- Be able to evaluate, monitor, analyze and predict fundamental changes in science and technology in order to keep abreast of the global fundamental changes in science and technology.

2- Be able to develop priorities plan to organize technological activities of the country to reengineer nationwide development of science and technology and to provide a sustainable structure for research development program. Some observer believe that this monitoring role of the states is gradually expanding. To understand another dimension of monitoring and evaluation role and it's impact it is necessary to look within research to the varied internal processes that support quality assurance and over time the maintenance and improvement of research quality.

Increasingly too it has become normal practice for most state universities and research centers to employ strategic management procedures: identifying priorities, planning...
carefully to promote those priorities, monitoring operations more closely and establishing various benchmarks and indicators for their own use. This increased self-security extends not only to administration but also to research programs and is conducted wholly apart from monitoring.

It is necessary to consider that public and private research center have a significant role in innovation cycle of developing countries.

Application of new public management paradigm as a comprehensive trend is a systematic approach for transferring from the hierocracy system to a flexible market based structure to achieve efficiency and effectiveness in the research development program.

In this process there is a consideration on the research management instead of research career and the necessity of research functional evaluation and also distribution of responsibilities.

**The need for evaluation:**

The implementation of an evaluation and monitoring plan thus entails a wide area of public and private activities. A systematic research evaluation of researches both short term and long term is an essential means of plan implementation.

Evaluating the national research system for developing strategic priorities towards science, research and technology emphasizing on decentralization and independence of universities and research centers in terms of administrative, financial, employment and organizational affairs. It also devising a comprehensive assessment system for research and technological affairs in national level for improving information technology through supervision of research programs for promoting the role of scientific associations and research organizations through their involvement in the decision-makings and supervision processes and also planning to boost the share of public and private research in the GDP and the state budget.

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**Research results**

The research key finding involving strategic policies and roles stipulated in the national development plan in research sector:

- Updating research matter subject in conformity with the diverse national needs and authorizing universities and research centers to develop their research carrier and innovate approaches in order to train more skillful, innovative and independent researchers.
- Developing and strengthening the Centers of Excellence in the pioneer universities and research centers.
- Expanding international research collaborations to make more efficient use of global research achievements and to have easy access to the international scientific achievements.
- Making a more efficacious internal and external assessment system.
- Modifying the structure of national research via authorizing research centers in order to provide a more dynamic, flexible, and competitive and integrated system.
- Providing secure financial resources for national researches.
• Developing and strengthening the spirit of research and scientific thinking in the society.
• Making regular and continues effort in order to respond to the present and future needs.
• Increasing the national sovereignty through the process of research and technological development.
• Organizing the research and development facilities in order to make connection between university skills, sources and research and also industrial centers.
• Giving effective orientation to the scientific society of the country toward the research in needed majors.
• Planning and creating the suitable ground in order to make the results of researches applicable and commercial.
• Creating suitable research and scientific environment for absorbing domestic and foreigner scientists and specialist.
• Promote the technical knowledge of specialists. in order that creativities and innovations in technology emerge.
• Getting access to the latest information and technical knowledge in order to acquire and create superior technology in the area of international competition.
• Disseminating culture and organizing the collective research activities and making use of the facilities.
• Giving suggestions about the suitable strategies for absorbing and transferring technical knowledge.
• Creating balance between the research development program plan and that of the nation's, paying attention to societal needs, development ratio and research quality enhancement both in public and nonpublic center.
• Multiplying the ways and fostering public cooperation to offer new paradigm national research to be responsive to the ever increasing research demand for research promotion.

Recommendations

The recommendations in this paper have been compiled from the monitoring protocols, policies and procedures submitted by governmental monitoring organizations. These recommendations focus on project level monitoring. Organization should consider reviewing their governance arrangements in wider systems context to ensure that the organization is able to achieve research governance based on a hierarchy of policy making to stipulate standards of roles, practice, research manual to assign responsibilities and finally standing operation procedure to achieve uniformity of the performance of a specific function. Thus monitoring organization should consider reviewing policies and procedures as well as governance practice, and also ensure that research governance and research monitoring align closely and practically with other appropriate and procedures such human resource policies, finance policies, health and safety policies and complaints etc. All research activity should be monitored routinely. In addition, a project might be audited if there is any suspicion of reduced research governance standards in a project. Monitoring and auditing should link together within an organization and both provide vital research governance information and safeguards.
By using a systems analysis approach based on role definitions, the problems of development and utilization of national research development program can be monitored in logical perspective. This perspective falls into two major categories:

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The first set of roles can be verified by making some changes in the design and performance of agencies providing various kinds of researches and also research monitoring actions and also to provide effective bridge between the functional elements.

In this process monitoring and evolution of research development program should be better balanced and more effectively geared to the national needs for national development.

Based on the state national development program a large proportion of resources are devoted to the research section and it could be served best by improving the efficiency of the exiting evaluating system.

The second set of categories can be alleviated by a major change in national development objectives which would give very high priority to a research development program of rural transformation.

**Operational Aspects**

This paper reviews the evaluation and monitoring and also applied experiences in the national development research program in some detail. It emphasizes the choices made by monitoring and evaluation agencies at different times as how they would conduct evaluations and what standards they would use.

This issues and circumstances surrounding the initial development of evaluation and monitoring and major changes in procedure and standards, respectively. Also attention is given to some of the challenges that presently are posing for evaluation procedures as growing complexity, globalization and advances in instructional uses of electronic technology allow new forms of research provision to emerge.

The exiting policies need to be re-examined, and new policies developed. While research innovations must be recognized, it is also true that monitoring agencies have greatly assisted their career. In this process monitoring agencies serve as a public brain system to advocate changes that will improve research practice.

For national research development program monitoring and evaluation agencies need necessary process of innovation and ability of response to changing circumstances to move forward in a national oriented way. These centers may experiment with new approaches but must submit their plans to an outside review by other public or non-public evaluation agencies.

The recommended items for monitoring should be assessed alongside an organization’s role for national project, including whether they are fulfilling the responsibilities including monitoring commercial research.

By such methods, monitoring and evaluation agencies not only guide the development of innovative practices but they also serve to lend credibility to emerging forms of research innovation. They need to set certain terms of good practice and encourage certain types of practices, while other practices are discouraged or banned. This represents a soft approach for:
• Achieving mechanisms for carrying out national development plan in research sector:

• Formulating a long term comprehensive plan to train specialized manpower at different levels of public and non-public researches sectors to coordinate the National Research Program with the needs of the country.

• Diversifying the development policies via drawing up separate and integrated plans for research national process.

• Determining centers of Excellence to encourage scientific innovations and to develop knowledge and technology.

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