

The Performance Auditing Methods for Public Enterprises

Yeon-Cheon Oh*

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* Assistant Professor of the Graduate School of Public Administration

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I. Introduction: Recent trends in public enterprise auditing.

Auditing is an important part of the accountability process because it provides independent judgement of the credibility and lawfulness of financial statements and of the manner in which public officials have carried out their responsibilities. By examining the procedures, operations, and management of policies or programs, auditing can help agencies or organizations improve efficiency and economy. By conducting an evaluation focusing on whether a program was carried out as planned and met its objectives or whether a program produced some change, or both, auditing can also help decision makers improve the effectiveness of public enterprise operations.

Until very recently, auditing of public enterprise has put its emphasis upon financial and compliance auditing. In other words, it has been assumed that once a policy, a program, or a project is made, the policy, program or project will be implemented, and the result will approach the expected goal. Thus, under the concept of financial and compliance auditing, procedures were developed mainly to check the legality of expenditures and insure honesty in fiscal affairs. Key tests made by the auditor were to determine if expenditure were properly documented and authorized, and whether funds were properly receipted, accounted for, and safeguarded.

As public enterprise program grew in size and complexity, however, the demands made of the auditor for additional information also grew, and management performance became a matter of special concern for auditors, policy makers, and administrators, since a good policy, program, or project may result as a bad one because of ineffective management. The manner and extent to which the expected goal of a policy, a program, or a project is achieved, has become a crucial concern for public enterprise auditing, and the scope of audit has consequently expanded.

Today public enterprise auditing is no longer concerned entirely with financial operations and compliance matters. In almost all developed countries, the prime concern is whether public enterprises are managing and utilizing resources entrusted to them "in an efficient and economical manner", and "whether the intended results or benefits have been achieved" within an approved budget. In other words, the necessity to extend auditing to the aspect of performance audit is a modern trend. It is expected of the public officials and it is the demand of the general public who have a right to know whether government funds are

handled properly and whether governmental programs are being conducted economically, efficiently and effectively.

II. The scope of public enterprise performance auditing

What is a performance audit? Such a definition of performance audit must be made although definitions are seldom blessed with universal acceptance, partly because of many ways in which definitions may be expressed, and partly because of the lack of agreement on the meaning or connotation of words used in a definition.

An audit may be operationally defined as an examination of records or other search for evidence, conducted by an independent authority, for the purpose of supporting a professional evaluation, recommendation, or opinion concerning (1) the adequacy and reliability of information and control systems, (2) the efficiency and effectiveness of programs and operations, (3) the faithfulness of administrative adherence to prescribed rules and policies, and/or (4) the fairness of financial statements and performance reports that purport to disclose the present condition and the results of past operations of an organization or program.⁽¹⁾

It has been common to speak of public enterprise auditing as comprehensive one. Comprehensive auditing is said to be an all-inclusive, umbrella-like concept, encompassing all audit policies and programs, and including both financial and compliance audits as well as performance audits.

Financial and compliance audit is traditionally focused on financial operation and compliance. In other words, this auditing is an examination restricted essentially to financial records and controls, for the purpose of determining whether funds are spent legally and honestly, whether receipts are properly recorded and controlled, and that financial reports and statements are complete and reliable.

Performance audit is an examination of records and other evidence to support an appraisal or evaluation of efficiency of public enterprise operation, the effectiveness of public enterprise programs, and the faithfulness of responsible administrators to adhere to judicial requirements and administrative policies pertaining to their programs and organi-

(1) Lennis M. Knighton, "An Integrated Framework for Conceptualizing Alternative Approaches to State Audit Programs", *Public Budgeting and Finance: Readings in Theory and Practice* (2nd ed.), (Robert T. Golembiewski, Jack Rabinc(ed.) Itasca Illinois: F.E. Peacock Publishers, Inc., 1976), pp.223-226.

zations. In order to evaluate whether the public enterprises have implemented their projects and activities economically, efficiently or effectively, it would be more appropriate to carry out performance audit. The performance audit may be divided into economy & efficiency and program results auditing.⁽²⁾

1. Audits of efficiency and economy of operations.

Economy and efficiency audit of operation is that portion of the performance audit which focuses primarily on operating policies, procedures, practices, and controls. This audit attempts to answer the question: How did they perform? This involves inquiring into such specific matters as:⁽³⁾

- (1) The need for goods or services provided or produced
- (2) The reasonableness of costs incurred or expenditures made
- (3) The adequacy of safeguard over and care of resources acquired
- (4) The proper use of resources (including financial resources and non-financial resources)
- (5) The adequacy of revenues received for goods or services sold
- (6) The compliance with sound procurement practices
- (7) The compliance with proper procedures to ensure that the need type, quality, and amount of items are available and are properly used and maintained
- (8) The avoidance of work that serves little or no purpose
- (9) The use of efficient operating procedures

2. Audits of program results or effectiveness audits

Program results audit (or effectiveness audit) is that portion of the performance audit which attempts to answer the questions: what was done and why was it done? Audits of program results then try to find out whether desired results or benefits (of agency programs and activities) are achieved and whether the objectives established by the legislature or other authorizing body are being met.

The audit work includes determining such matters as:⁽⁴⁾

- (1) The extent to which a program achieves a desired level of program results
- (2) Management weakness that adversely affects the achievement of the desired results
- (3) Alternative approaches that might achieve program objectives more effectively or at

(2) Ibid., p 225.

(3) Khi V. Thai, "Government Financial Reporting and Auditing", Handbook on Public Budgeting and Financial Management (Jack Rabin, Thomas D. Lynch (ed.), New York and Basel Dekker Inc., 1983), pp.387-388.

(4) Comptroller General of the United States, Standards For Audit of Governmental Organizations, Programs, Activities, and Functions (Revision), 1981, p.15, and Khi V. Thai, op. cit., p.398.

lower cost

(4) External benefits or detriments, that is, benefits or detriments resulting that were not contemplated when the program was established

(5) The adequacy of management system for measuring effectiveness.

III. The Approaches of Performance Auditing in Public Enterprises

1. Performance Auditing and Performance Evaluation

One may ask whether there is any difference between performance auditing and performance evaluation. There seems to be little significant difference between performance audit and evaluation in that both are concerned with economy, efficiency, and effectiveness of programs and overall organizational performance. It is particularly so when the performance auditing aims at guaranteeing efficient and effective operations of programs and projects, and ultimately encouraging efficiency and effectiveness of overall public enterprise activities.

According to the United States Government Accounting Office (GAO), any difference between two concepts is not found either: Audits of efficiency and economy of operations include evaluation whether... (GAO, 1978: 3-19); Audits of program results evaluate whether... (GAO, 1978: 3-20). But it can not be denied that there is at least a basic difference between auditing and evaluation in some respects. Strict auditing standards are applied in auditing, while there are no such strict standards for evaluation.

The public enterprise evaluation is broader than the public enterprise auditing, in other words, auditing is a part of a wide range of evaluation process. Malan salan says: "Work performed in program evaluation while using similar methodologies, is not subject to compliance with auditing reports".⁽⁵⁾ The performance auditing approaches and methods for public enterprises will be discussed here in terms of performance evaluation based on the proposition that performance auditing belongs to a broad range of performance evaluation.

2. Project-oriented auditing and Organization-oriented auditing

Project-oriented approach focuses its auditing efforts on evaluation of each project. This approach is based on an assumption that the efficiency and effectiveness of each project will naturally lead to the efficient and effective performance of each public enterprise as a whole. As far as a public enterprise carries out a single project, this approach is useful

(5) Kiti V. Thai, op. cit., p. 389.

in evaluating its overall performance. But this approach does not tell precisely the overall performance of a public enterprise when it carries out two or more projects simultaneously. Therefore, auditing is increasingly oriented toward the overall performance of an entire organization since more of public enterprises carry out a variety of projects. The organization-oriented approach is mainly concerned with achievement of the objectives of the target public enterprise. This approach can encourage auditors to do their jobs with more systematic sense and broader scope, and make more contribution to the improvement of the overall performance and organizational development.

3. Result-oriented auditing and Process-oriented auditing

Auditors usually specify the results of target project and judge how efficiently and effectively the project is achieved. This type of auditing may be termed "result-oriented auditing". Here, auditors measure the degree of goal attainment, cost and benefit, etc., in order to examine the efficiency and effectiveness of the results. This approach, in other words, puts more focus on the result than the process of project. On the other hand, process-oriented approach examines the process of project (i.e. whether the process is rational or not) rather than the outcome.

4. Efficiency-oriented auditing and Public-interest oriented auditing

Efficiency oriented approach is a traditional auditing method commonly used in auditing of profit organizations. This approach puts an emphasis on the input-output relationship or cost-saving (profit maximization). But more is needed in public enterprises seeking public goals because the criterion of efficiency does not necessarily tell whether the objectives of a target public enterprise are appropriately formulated in the first place and whether they are achieved satisfactorily. Therefore the efficiency-oriented approach is not used alone for performance auditing, but supplemented by public-interest oriented approach. As far as public enterprises pursue not only commercial profitability but also public goals, performance auditing of public enterprises must be made in terms of these two approaches. But at the same time it should be kept in mind that the degree of public interest imposed on each public enterprise is not identical. So auditors are faced with the question of how much the target public enterprise is pursuing public interests.

IV Performance Auditing Methods for Public Enterprises.

1. General View

Efficiency and effectiveness audit is a challenging function. By what methods and

techniques can we meet this function? Despite the recognized importance of performance auditing, the methods and techniques do not seem to have been developed systematically. Here methods of performance auditing in public enterprises will be discussed from several viewpoints: cost-benefit or cost-effectiveness analysis method, process-oriented method, and indicator method.

Cost-benefit or cost-effectiveness analysis is output and project-oriented performance auditing method, and process-oriented method is primarily concerned with the process and operation of a program or an organization. In addition to above two methods, performance indicator method is widely used for performance auditing. It is designed to evaluate and audit comprehensively the efficiency and effectiveness of the entire organization by choosing certain indicators that may express public enterprise performance.

Although such a classification gives an impression that it is possible to set each method apart from others in mutually exclusive fashion, they are in fact all integral parts and components of comprehensive auditing. Each fills a special role so that the whole is complete and perfect. These methods must be further modified and explored for practical application in performance auditing, since they are only suggested in abstract forms.

2. Process-oriented method

One of our strategies for efficiency and effectiveness auditing in the area of public enterprises is to focus on the process of decisions. This strategy does not require the measurements of the cost, the benefit or the goal attainment, but requires instead a thorough examination of decision process. It must be noted that the process-oriented method is discussed here with special emphasis on the performance of a certain unit project. The process-oriented approach assumes that if decision makings for a target project are rational, then the project itself can be regarded as cost-effective. In the normative point of view, a rational decision making includes four stages:

- (1) Clarify goals to achieve
- (2) Search for possible alternative ways to achieve goals
- (3) Predict consequences of each alternative
- (4) Choose the best alternative in terms of cost-effectiveness.

A public enterprise project usually includes two or more of the above decision points.⁽⁶⁾

(6) Chung-kil Chung, "The Role of Supreme Audit Institution in Efficient and Effective Public Construction Projects" Korean Journal of Public Administration (Graduate School of Public Administration, Seoul National University), Vol. XXI, No. 2, pp.103-106.

If auditors want to examine whether a certain public enterprise project is efficient and effective, they must investigate if each of decision making has followed the basic condition of the four stages. At certain decision point of target project, auditors will ask following questions.

First, what is the goal (or goals) of the target project?

Second, if the answer to the first question is consistent with the designed goals of the project, then auditors will ask whether there are any other alternatives to achieve the same goal and whether these alternatives have been duly considered by the authorities in charge of the chosen plan.

Third, if the answer to the above second question is yes, then the next question is "Did they predict the major consequences of each important alternative?" In other words, did they predict cost and goal attainment of each alternative? Auditors must bear in mind that at this stage of discussion, units or personnel being audited will try to justify their decision. For example, they will argue that they have considered major alternatives and predicted their consequences. And to justify their decision for the chosen plan, they may underestimate the goal attainment and overestimate the cost of competing alternatives.

The fourth stage of rational decision making process (to choose the best alternative) can be realized easily if the prediction of the major consequences of each alternative is rationally carried out. Therefore, sound and reasonable prediction is the most crucial element of rational decision making.

For the process-oriented method to be applied efficiently and effectively to performance auditing of public enterprise, auditors must pay a great deal of attention to following aspects. First of all, the success of this method depends largely upon the auditor's ability to check the soundness and accuracy in the prediction of consequences of major alternatives at each decision point. If the auditor can not check whether audited units are telling a lie or truth on the predicted consequences of major alternatives, he can never know whether a decision was rationally made. Auditors must also keep in mind that this method may tend to bind policy maker's discretion or harm his leadership.

3. Cost Benefit or Cost-Effectiveness analysis methods for the public enterprise performance auditing

1) Basic concepts of cost-benefit or cost-effectiveness

Efficiency is concerned with the output and the cost of a project or a program. Output is regarded as the direct physical result of the project activities. But, the term 'efficiency'

in its narrow sense does not ask what goal we want to achieve with the output. Therefore the concept of efficiency alone is not a sufficient criterion in the evaluation of organizational activities, performances and sometimes individual project itself. On the other hand, effectiveness emphasizes the goal attainment. Its focus is on how much goal we can achieve. It does not care about how much resources we must sacrifice to achieve the goal. Therefore, effectiveness alone is not a sufficient criterion in the judgement of public enterprise performance, either. In short, neither efficiency nor effectiveness as a separate concept can be a sufficient criterion in the performance audit.

But those two concepts can be combined into one criterion, namely, cost-effectiveness, or cost-benefit (or 'efficiency' in broader sense, as some people call it). The cost-effectiveness is defined as the ratio of the goal achieved to the cost needed. The term cost-effectiveness is a combination of efficiency in the sense that the concept of goal attainment corresponds with effectiveness and the concept of cost with efficiency. Therefore, cost-effectiveness can be appropriately used in evaluating performance of public enterprises.⁽⁷⁾

2) Importance of cost-benefit or cost-effectiveness analysis for the public enterprise performance auditing

As we have seen, efficiency audit focuses on the efficiency of a project (or program) or the operational efficiency of audited units. And, effectiveness audit focuses on the effectiveness of project or program. Auditor performs efficiency and effectiveness audit by checking whether a project or a program is run efficiently and effectively. So, the objective of efficiency and effectiveness audit is to stimulate, and sometimes demand audited units to raise efficiency and effectiveness of a project or a program. We may say that efficiency and effectiveness audit aims at promoting the cost-effectiveness of a project or a program.

Cost-benefit analysis makes the evaluation and auditing convenient by providing more scientific tools for measuring public enterprise performance based on the consideration of all the relevant costs and benefits. Therefore, the auditing agency should develop relevant methods and technics based on cost-benefit or cost-effectiveness analysis, which may control the unnecessary or inefficient project.

3) The positive and negative features of cost-benefit analysis in public enterprise performance auditing.

Cost-benefit analysis is most often used to measure the relative efficiency and effectiveness of alternative courses of program toward some goal rather than the effectiveness of an

(7) Ibid., pp.99-100.

entire organization. This implies that there are actual alternatives to compare, or that expert judgement could be used to develop achievement standards against which the cost-benefit ratio of an existing course of program could be compared. Inherent in the cost-benefit model is the notion that the components of both the numerator and the denominator can be reduced to a single composite score for each and that the ratio itself has at least interval scale properties. The cost-benefit model will lead to a much more analytical and thorough analysis of action strategies.⁽⁸⁾

But, the specification, measurement, and valuation of costs and benefits—procedures that are central to cost-benefit analysis—raise two distinct problems. First is the identification and measurement of all program costs and benefits; second is the expression of all costs and benefits in terms of a common denominator, that is, their translation into monetary values. The problem of identifying and measuring costs and benefits is most acute for ex ante auditing, where there are scanty or no data with which to make estimates. However, data are often limited in ex post cost-benefit analysis as well. For many auditors, the information from an evaluation may in itself prove insufficient to carry out a retrospective cost-benefit analysis. The second problem is the difficulty of translating benefits and costs into monetary units. Public enterprise programs frequently do not produce results that can be accurately valued by market prices.

4. Performance Indicator Method

As discussed so far, performance auditing can be divided into two categories of project and organization approaches. Project based method (including cost-benefit analysis) puts more emphasis on efficiency and effectiveness of individual project rather than performance of the entire organization. Since the project-based performance method alone is not enough to evaluate and audit each public enterprise which carries out various projects or programs, an additional auditing method is needed for comprehensive evaluation. In other words, the comprehensive auditing or evaluation has to expand its arena and cover the evaluation of the overall activities of the public enterprise in a given condition. In an effort to measure how efficient and effective a public enterprise has performed, a variety of performance indicators representing public performances are widely used. One of the most important aspects of performance auditing is to find appropriate performance indicators and weigh the importance of each indicator. For this kind of over-all performance auditing, a syste-

(8) Paul S. Goodman, Johannes M. Pennings and Associates, *New Perspectives on Organizational Effectiveness* (Washington: Jorssey-Bass Publishers, 1981), pp. 24-25.

matic framework is necessary. It should be designed so as to make it possible to measure the over-all activities of public enterprises. But the systematic framework which can be applied to public enterprise is not still sophisticatedly developed.

In formulating performance indicators for public enterprise auditing, the following considerations are necessary. First, indicators must be chosen so as to reflect the national & social profitability (public interest), as well as the commercial profitability. Second, it must be possible to evaluate not only short term management efficiency but also long term management capability. Third, inter-relationship between government policy and environmental variables must be considered. Fourth, the standards for choosing indicators must be as consistent as possible.

Management processing system can be regarded as one of the major frameworks in evaluating public enterprise management performance. Basically, management processing system is composed of management goal formulation, management strategies, management planning, which influence the overall activities of public enterprise, and management operations. Therefore, auditors can evaluate public enterprise performance based on these major components of the management processing system while taking into account environmental variable. Performance indicators are usually designed to reflect a. management objectives, government policy, and consistency between them; b. management goal formulation, management strategies, management planning; c. management operations including project management, the amount of effort to ameliorate internal management system, save cost & increase productivity, etc., and R & D and improvement of service quality; d. the degree of social contribution with respect to clients or citizens, etc. In addition, performance indicators should be specified with more concrete forms which are available in practice.

V. Performance Auditing Framework for Public Enterprises

1. Performance Auditing Framework in General

A framework specifically evolved for the purpose of evaluating and auditing enterprises serves the control as well as other purposes including that of providing an incentive to enterprise management. Particularly the performance auditing is basically regarded as a tool which provides an incentive to improving management efficiency and effectiveness of public enterprise.

The overall auditing framework should be specific and indicate overall performance of

target public enterprise. The framework should reflect not only short-term efforts aiming at minimizing cost, maximizing the rate of return, and ensuring liquidity, but also long-term prospective achievements with respect to technological, managerial, and economic development. The auditing framework should recognize the characteristics of each industry and should also have some stability so that public enterprises can plan their operations over a number of years. More specifically, the auditing framework should specify, from an economic point of view, the considerations that should govern new investments and pricing policies. The performance of an enterprise, like any of its counterparts in the private commercial world, is the result of interaction among numerous factors which cover the following: (a) situational factors (type of activity, size or nature of market, control by external agencies), (b) strategic factors (goals of government), (c) structural factors (forms of organization, relationship to government budget, planning, control, and information system), and (d) behavioral factors (motives and attitudes at the operational level and in the government). It is essential that auditing framework be developed based on a variety of factors mentioned above. The framework should emphasize the overall performance of enterprise rather than financial performance alone.⁽⁹⁾

In designing auditing framework for practical use, particularly for performance indicators, several concepts which play an important role in measuring scale should be taken into account: reliability, validity, and meaningfulness. Each concept provides a means to evaluate a different facet of the relationship of some measure to a particular attribute of some object. Reliability addresses the question of the degree of error inherent in the measurement. The question of the validity of a measure has to do with whether that measure does indeed measure the conceptually defined property it is intended to measure. Meaningfulness can best be expressed by asking the question, "Does the logical validity of a numeral statement hold up if an alternative scale is used?"⁽¹⁰⁾

2. Objectives of Public Enterprises and Specification of Targets

Evaluation presumes the existence of ex ante objectives. Since the absence of objectives implies a lack of clear understanding of their role, the evaluating and auditing of public enterprise performance can not be objectively and appropriately carried out without clari-

(9) A. Prenehand, "Control of Nonfinancial Public Enterprises and Autonomous Agencies" Seminar on Budgeting and Expenditure Control (International Monetary Fund Fiscal Affairs Department: Washington, D.C.) January 20-28, 1982, p.147.

(10) K.J. Eiske, "Budgeting and Public Management", Handbook on Public Budgeting and Financial Management, pp.408-410.

fication of the goals and objectives. In order to evaluate public enterprise for auditing purpose, therefore, goals and objectives must be naturally formulated and specified. Also the performance function of the government and citizens for each objective should be revealed in as specific manner as possible.⁽¹¹⁾

The numerous objectives that are expressed as guidelines for public sector enterprise performance can be generally classified into three types. First, there are those which are financial, in that they deal with the revenues and costs of the firm or the budgetary relationship between the enterprise and the government. Second, there are economic objectives that are related to efficient allocation of the country's scarce resources and to the net contribution of the enterprise to the output and growth of the economy in general. Third, public enterprises have social objectives including distributional objectives. These objectives are generally closely interrelated and should be viewed as three stages of an overall evaluation of a public sector performance. If a public enterprise is expected to meet the financial, economic, and social objectives, the auditing of the performance of public enterprise should be carried out to investigate if and how much such objectives were fulfilled and can be achieved in the future.

As guardians of the public interest, the supreme audit institutions should ensure that the public enterprises conduct their operations as efficiently and effectively as possible—which involves ensuring that funds are committed, services are provided, and consumers are served in the possible manner. In order to make a performance auditing effective and valid, objectives of a public enterprise and performance targets must be specified. First of all, remarkable efforts should be made to state clearly what objectives a public enterprise is intended to satisfy. The auditing office must lay down standards against which performance can be objectively measured. It is important that the auditing standards and criteria should be defined as precisely as possible.

For making objective assessments about performance, it is necessary to set specific targets for each enterprise. Where costly social ends are considered important enough to be built into public enterprise operations, for example, the government should fix financial targets accordingly; higher rates of return will be expected from the public enterprises not so affected. Moreover, transfer payments from the central treasury to the public enterprise may be made in certain circumstances to compensate the latter for the costs to it of com-

(11) A. Premchand, *Government Budgeting and Expenditure Controls: Theory and Practice* (Washington, D.C.: International Monetary Fund, 1983), pp. 463-464.

plying with social directives from government. The fixing of financial targets and the making of compensatory payments to public enterprises are essential for appropriate performance evaluation and auditing. Similar devices, for example, profit targets taking into account social obligations undertaken by enterprises in accordance with policy directions, and the specification of rates of return for investment decisions and the continuing operations of the corporation are receiving increasing support in the exploration of developing country needs. But it is pointed out that it is no simple task to gain agreement on such targets, rates or payments, or on the divisions of responsibility.⁽¹²⁾

VI. Financial and Economic Aspect of Performance Auditing

Given the broad range of objectives, admittedly no single measure would be adequate to cover them much less provide satisfactory answers. The basic feature of performance auditing for public enterprise is to evaluate and measure financial and economic performances. The focus on financial performance is inevitable because the pattern of the issues that will emerge or the type of demand that may be made on national resources will depend on the financial performance. In evaluating financial performances of public enterprise, guidance should be specific, should preferably be industry oriented, and, where feasible, should be targeted to enterprises. The specification of what has to be earned and retained is a complex task that involves the measurement of a flow of profits against a stock of assets. There are numerous ways in which the numerator and the denominator can be defined and each can provide a different result.⁽¹³⁾

To provide a comparative and a reliable framework, guidelines have to be provided on the measurement and treatment of depreciation, the measurement of assets, and related aspects. Different approaches in regard to some of these technical aspects can change the values of reported return. The rate of return is the result of the work of several factors and should be considered as meaningful only in revealing the aggregate picture. It cannot reveal whether the poor or good performance is due to price, organizational or other factor. In order to make sure that improvement of financial performance is due to the effort of public enterprise management, another separate and more substantive analysis is required.

(12) R.L. Vettenhall, "External Control, Autonomy and Efficiency of Public Enterprises", The Role of Public Enterprise in Development, Chakrit Noranitipandungkarn, ed., (Bangkok: EROPA Study Series on Development Strategies, 1979), pp. 258-259.

(13) A. Primchand, Government Budgeting and Expenditure, pp. 464-465.

When deficits are incurred, for example, they need not necessarily be considered as reflections of failure. In some cases, they may be a prelude to a new era of better performance or wider markets. The framework should, therefore, specify the nature of the return expected over a period and should be cognizant of the shifts during the short and medium terms.

Exclusive emphasis on financial performance may detract from the other important issues of efficiency. When auditing public enterprises, private business financial criteria can often be mistakenly used because their sources of finance and costs of finance as well as their wage and price policies are entirely different. However, this is not meant to imply that the financial performance of a public enterprise does not matter. Financially weak enterprises which continuously rely on government subsidies and emergency assistance will generally find it very difficult to formulate and carry out consistent business plans. Therefore, it may be important that enterprises which could potentially generate measurable net returns to the economy be allowed to retain enough of the total economic benefits to enable them to be financially viable.

Economic performance is another aspect that has come to be used as the basis for evaluation and auditing of public enterprises. The economic aspects would include factors such as capacity utilization, productivity, value-added by enterprises, export performance, and import substitution. One of typical economic parameters for performance auditing is productivity.⁽¹⁴⁾

The measurement of productivity offers a basis for providing incentives where needed. The application of the measurements is only significant for productivity when these measurements are used in full awareness of their scope and limitations and of the internal and external conditions of the public enterprise being assessed. Misuse of the measurements can quickly lead to loss of confidence and may very soon be used for proving a success even when this is not true. On the whole, this is an area that has a great potential and, in view of possible abuses, therefore, measurements are best used in conjunction with other economic and financial targets instead of independently.

The key element in most of economic and financial fields is the price policy. The auditing framework should specify the considerations that are to be kept in view in formulating prices. As prices affect the utilization of capacity, the rate of return, and other

(14) *Ib d.*, pp. 466-467.

related aspects such as self-financing and future investments, the framework should provide guidance for the objectives that can be ignored temporarily and the objectives that must be fulfilled in any event when, contrary to expectations, market conditions change.

Auditing of public enterprise outputs, like that of private enterprise is partly carried out by short-term performance indications such as the profitability, the stability and the growth, etc. But it should be kept in mind that public enterprises typically operate in the very different financial environment than do private enterprises. For example, they obtain their investment funds from the government agency at a price that differs substantially from the cost of such funds paid by private enterprises. Also many public enterprises do not pay the same rate of taxes nor are they free to set prices to the same degree as are private firms. Undoubtedly it should be considered that the indicators to be used in public enterprises are remarkably different from those in private enterprises because of the nature of public enterprises which basically pursue public-interest oriented goals.

Because most public enterprises are in the different situation from the private enterprises, the proper use of the traditional measure for financial analysis as a guide to the evaluation of public sector performance should be carefully taken into account. That is, the traditional performance measure, particularly in the field of financial performance, including the calculation of the rate of return and ratio analysis of assets and liabilities categories may lead to spurious results.

Though the use of financial data provides evaluators and auditors with very important information concerning public enterprise performance, the use of financial data and interpretation of public enterprise performance based on such data must be limited in that most public enterprises have different environmental characteristics and objectives from private enterprises.

VII. Conclusions: The future of performance auditing.

1. The elevation of relevance, validity and meaningfulness in performance auditing methods & criteria.

The measurement system should reflect the attribute measured which is connected with the target of evaluation and auditing. For this purpose, the methods & criteria used by auditors to measure the performance of public enterprises should be designed with special emphasis on relevance (or reliability), validity, and meaningfulness of the auditing. There-

fore, the supreme audit institution must try hard to improve the traditional auditing techniques and develop new auditing methods in order to elevate the relevance, validity, and meaningfulness of the performance auditing. Moreover, public enterprises on their part audited by the supreme audit institution must do their best to facilitate performance auditing by strengthening systematic reports and standardizing indicators and data which are internally used by the public enterprises.

The development of new measurement system for performance auditing may be a very difficult task. But as the importance of the performance auditing is recognized, more useful methods and criteria will be devised.

2. Introducing measurement information system into public enterprises

An ideal performance auditing, as defined here, may hardly be achieved because an ideal and systematic accumulation of information and data is difficult to achieve. That is, performance auditing depends on prompt submission of full and comprehensive reports which assume an efficient system of control by qualified staff in public enterprise. In order to stimulate performance auditing of public enterprises, therefore, it is necessary to devise useful measurement information system. In an effort to stimulate this type of idea, it is desirable to incorporate Management Information System (MIS) into public enterprises.

3. Institutionalization of the supreme audit institution's performance auditing function in public enterprises.

Performance auditing becomes much more significant to public enterprises. The function of performance auditing can be viewed as an essential apparatus of improving as well as checking management. Recently, top managers of public enterprises are more inclined to welcome and respond to constructive criticisms. Performance auditing can provide knowledge as to alternative course of action for decisions which has gone wrong. Therefore, in order for the supreme audit institution to carry out these roles practically, it is necessary to institutionalize the supreme audit institution's performance auditing function for public enterprises. The institutionalization of the performance auditing function can be backed in several ways; building of organization for performance auditing, obtaining financial and personnel resources necessary for performance auditing, and standardization of the auditing process.

First, the supreme audit institutions must have the organization which is solely responsible for public enterprise performance auditing with professional staff and for carrying out comprehensive performance auditing of public enterprises.

Second, it is necessary to mobilize financial, personnel, technical resources. Actually performance auditing demands broad skills and techniques, while auditing officers can not possess all the skills necessary to do his or her audit work. So there must be auditing staffs that consist of people with various backgrounds, including accounting, economics, public administration, management science, statistics, engineering, and so forth.

Finally, for appropriate process of performance auditing it is required to standardize evaluation and auditing process, develop the auditing information system, and devise the appropriate methods and techniques.

4. Maximizing the utilization of public enterprise performance auditing results.

In order that performance auditing can assist public enterprises in improving the economy & efficiency of operations, and the effectiveness of results, it is necessary to maximize the utilization of public enterprise performance auditing results.

In studies of the use of social research in general and evaluation in particular, five conditions appear to affect utilization consistently:⁽¹⁵⁾

- a. relevance
- b. communication between evaluators and users
- c. information processing by users
- d. plausibility of evaluation results
- e. user involvement or advocacy

Thus, for the purpose of increasing the utilization of public enterprise performance auditing results, several guidelines can be advised as follows.

- a. Auditors must understand the cognitive styles of decision makers.
- b. Auditing results must be timely and available when needed. Auditing findings must therefore balance timing and accessibility of finding with thoroughness and completeness of analysis.
- c. Auditing must respect stakeholders' program commitments.
- d. Utilization and dissemination plan should be part of the evaluation.
- e. Auditing should include the assessment of utilization.

(15) Peter H. Rossi, Howard E. Freeman, *Evaluation: A Systematic Approach* (2nd ed., California: SAGE Publications, Inc., 1982), pp. 323-324.