



**UNITED NATIONS
ECONOMIC COMMISSION FOR AFRICA**

**Public Administration, Human Resources
and Social Development Division**

**DRAFT
INDICATORS FOR
PUBLIC ENTERPRISE MANAGEMENT
PERFORMANCE IN AFRICA**

NOT for attribution or quotation

Unedited draft prepared for discussion at the Seminar on Improving Performance of African Public Enterprises: Proposed Indicators for Monitoring Performance, 19-21 September 1994, Addis Ababa

TABLE OF CONTENTS

	Page
I. Introduction: Background, Rationale and Methodolog	1
II. Experiences and Efforts of PE Performance Evaluation Systems and Indices in the World	5
III. PE Performance Evaluation in Africa: Review of Experiences	9
IV. General Financial Performance Indicators	10
V. General Non-financial Performance Indicators	20
VI. Industry-specific Performance Indicators	22
VII. Macro-economic Performance Indicators	24
VIII. Justification for Choice and Limitations	25
IX. Implementation Strategies	26
X. Conclusions and Recommendations for Further Action	27
Appendix A: Shortlisted General Financial Indicators	
Appendix B: General Financial Performance Indices	
Appendix C: Industry-Specific Performance Indicators	
Annotated Bibliography	

FOREWORD

The poor performance of public enterprises particularly in the 1980s, has subjected them to severe criticisms and an intensive campaign for their divestiture. While there is emerging consensus that governments should no longer continue to waste the limited public resources on loss-making ventures, there is also agreement that every effort should be made to assist better performing enterprises to be more efficient, effective and profitable.

The Public Administration, Human Resources and Social Development Division (PHSD) has undertaken a number of initiatives aimed at assisting public enterprises to improve their managerial economic and financial effectiveness. Apart from conducting training programmes in partnership with national governments and training institutes, and disseminating various publications on different aspects of improving the performance of public enterprise through its regular programme, it has also extended its outreach by undertaking major initiatives in the area of public enterprise management within the framework of the SAPAM project. The Debrezeit Senior Policy workshop on Improving the Performance of Public Enterprises in Africa held in November 1990, the Senior Policy Workshop on Improving the Performance of Public Enterprise Management in Africa: Lessons from Country Experiences, held in Dakar in 1991 and the Regional Conference on Development Management in Africa: Thirty years of Experience, Emerging Challenges and Future Priorities, held in Addis Ababa in 1993 are worth mentioning in this regard. These workshops and the conference analyzed the problems facing public enterprises in Africa in depth and recommended concrete measures for dealing with them. These fora recognized that public enterprises will continue to occupy a significant place in many African countries in spite of the current frustration and disillusionment with their performance, and recommended that no effort should be spared in assisting public enterprises to improve their performance through various measures.

The participants of the various workshops and conferences called for concrete measures to be undertaken by ECA with the objective of assisting public enterprises to improve their performance. One such measure urged ECA to develop indicators to monitor the performance of public enterprises in Africa. This study represents a response to that request. It is intended to assist public enterprise managers and those overseeing aspects related to the performance of Public Enterprises to monitor the fulfillment of enterprise objectives, ensure effective utilization of resources and provide an early warning system capable of detecting mal performance and resource waste and loss.

The study is in a draft form. It is being put before this Senior Policy Seminar with a view to subject it to a critical review by the participating practitioners and experts. The study will be released after incorporation of any amendments, observations and improvements which will be contributed at the seminar.

Sadig Rasheed
Director

Public Administration, Human Resources
and Social Development Division

I. Introduction: Background, Rationale and Methodology

Purpose and Rationale

Developing of performance evaluation system is crucial to promoting the badly needed reforms of public enterprises. Development of performance evaluation system for PE can be an important base for creating a new management information system, and promoting new management style.

Periodic evaluation is necessary for assessing effectiveness of decisions taken, ensuring that resources are being allocated effectively and improving performance. Periodic evaluation is definitely one of many managerial techniques that help to identify possible strengths that need to be enhanced, and weaknesses to be avoided or corrected and, thus, measure the extent of deviation from stated objectives. Hence, it is advisable for public enterprise management and government (owner) to assess the performance of public enterprises before "economic failures" or disaster occur in terms of resource waste and loss.

The importance of profit is hardly appreciated or sometimes its existence doubted in public enterprise management. Nevertheless it is still essential to ensure that resources are being utilised effectively and efficiently to meet desired goals. Evaluation of this kind depends on effective performance measures.

The performance measures must be developed into a deliberate, conscious, and open performance evaluation system capable of monitoring whether the PE is achieving the purpose it sets out to accomplish. For example, the performance evaluation system in South Korea, which is considered to be successful, is intended to achieve managerial accountability, management autonomy and make positive contribution to the nation's economy.

Any performance indicator developed to monitor and evaluate performance of PE should revolve around the enterprise goals, i.e. commercial goals, economic goals, and socio-political goals.

Performance measures can assist to improve management practice, as they provide essential information to management for regular monitoring of activities at several levels within the organization - i.e. at policy making, department, and cost centre levels. Therefore their identification, definition, and interpretation is important.

A distinction should be made between performance measure and performance indicator. Performance measure is a generic term which refers to appraisal tools. Performance measure is usually referred to where economy, efficiency, and effectiveness are measured rather precisely and unambiguously. Performance indicators on the other hand are "provocative and suggestive". They are indicators that alert management for need to pay attention and examine issues. (Jackson and Palmer 1989 p. 2).

A performance evaluation system can be developed by:

- looking into the public enterprise activity, that is its objectives and components, and
- deciding on what is to be measured or evaluated, and thus deciding which measures to use as tools for evaluation.

Evaluation of public enterprise performance could be made in terms of:

- (a) assessment of economic and financial viability
- (b) assessment of political and social usefulness
- (c) measurement of productivity
- (d) measurement of effectiveness, and
- (e) measurement of efficiency

They could also be looked at in terms of (a) macro-economic performance indicators which may include financial indicators and economic indicators, or (b) micro-economic indicators to include commercial as well as non-commercial indicators for evaluating specific industrial, or specific enterprise activity, or (c) quantitative or qualitative indicators.

Performance evaluation indices could be classified as follows (Powell 1987):

- general performance indices
- management performance indices
- financial performance indices
- investment performance indices
- cost breakdown indices
- physical performance indices
- production performance indices
- marketing performance indices
- manpower utilisation indices

Most crucial issues here are

- (a) identification of the PE sphere of activity and thereby delineating the focus of key policy objectives, delineating the profile of policy and its components in some quantitative terms which specify and help determine what is being measured;
- (b) developing a set of measure to be used, which requires decision on the choice of measures to be used. Here, there is need for balance between too many or too few and caution in designing of tools.

Most common "tools of the trade" which design set of measures revolve around measures of Economy, Efficiency, Effectiveness (Jackson and Palmer 1989).

Economy	-	measured by	Cost indicators
Efficiency	-	measured by	Productivity indicators
Effectiveness	-	measured by	Quality of service indicator demand (or take-up rate) for service indicator
Efficiency/ Effectiveness	-	measured by	Time Target indicator
Efficiency/ Effectiveness	-	measured by	Volume of Demand
Effectiveness/ Equity	-	measured by	Availability of Service
Goal achievement	-	measured by	Outcome (or Impact) of policy indicator

It is important to note whether evaluation is being made of the management or of the enterprise. For most part, our focus is on management performance evaluation criteria.

It is impossible to develop indicators that encompass all aspects and impact of PEs, for all purposes and objectives in all context. We have thus reverted to identifying most common "tools of trade" that exist for measuring economic outcomes of enterprises cutting across all enterprises.

It is within this framework that the study is conducted and a short-list of performance indicators in PEs is identified.

Methodology

This study started with an extensive literature search on performance measurement and performance indicators in terms of (a) concepts and historical development of enterprise performance measurement; (b) public sector and public enterprise performance evaluation criteria vis a vis experiences in Europe, Asia, and Africa; especially Great Britain, France, India, South Korea and Ghana; (c) reviewing conventional financial performance measurement techniques in private enterprise and their applicability in public sector.

Secondly, a list of annotated bibliography on public enterprise performance measurements in general and, in Africa, in particular, was prepared and a list of possible types of PE performance measurement were prepared.

Third a short list of what could be considered appropriate performance indicators for PE in Africa were determined based on the following criteria:

Commonality and general acceptability of a performance indicator.

Performance indicators must reflect "most common tool of trade", and be amenable to measurement of PE without too many constraints in computation and too much distortion in data or results.

Coverage

Indicators selected, should to the extent possible, include evaluations of financial and non-financial, quantitative and qualitative, short-term and long-term performance, macro and micro indicators. For most part indicators selected are to be used or applied to all enterprises across industries. In addition, industry-specific and enterprise-specific indicators are considered separately.

Acceptability and reliability of data

There is no use devising an elaborate performance indicator (formula), if the data needed for its use are unavailable or unreliable.

Simplicity and ease of understanding

The component element of the performance indicator (formula) should be easily understood for computation or interpretation.

Relevance to African PE

Indicators selected must be pertinent to African PE, taking into account considerations of existing and potential management information system (and or accounting data), and competent personnel.

Fairness

Indicators selected should be fair in assessing management's responsibility, extent of span of control, and also the environment of the industry and the country in which the enterprise operates.

Conceptual coherence

Indicators selected should conceptually be coherent rational, and must not contradict or duplicate each other.

For comparative purposes a list of various performance evaluation measures, as proposed by various writers or used in research and practice is provided in the Appendix.

These include:

- PE performance indicators proposed by J. Powell.
- PE performance indicators used in South Korea.
- Performance indicators used to predict "industrial sickness" in India.
- Performance indicators used to predict "business failures" in U.S. by Beaver.
- Performance indicators used in assessing "public enterprise" sickness in Ethiopia by Johannes.

- Financial performance indicators used to evaluate private enterprise in US as published by Dun and Bradstreet.

II. Experiences and Efforts of PE Performance Evaluation Systems and Indices in the World

The need for evaluation of performance of the private enterprises has been recognized long time ago. The process started in 1932 when P.S. Patrick made a random selection of 19 firms that failed and compared them to 19 successful firms on the basis of financial data, ascertaining that financial ratios were important tools in establishing significant relationships which could yield distinguishing characteristics. These efforts were continued by others such as Beaver (1967), and Altman (1968). Moreover, capital markets have developed and used financial ratios to discipline the foregoing private enterprises.

However, interest in evaluation of performance of public enterprises (PEs), has emerged relatively recently in developed and developing countries as a result of concern about their poor performance. The need to have established performance systems and indicators for PEs has always been inextricably linked to the desire for improving their performance through different reform measures (Chambers, 1983, Woodward, 1986, Trivedi, 1988, Bennet, 1988, Shaikh, 1990). Investigations of the performance of PEs by a parliamentary select committee or government commissions often highlighted the need for designing performance evaluation criteria and system.

PE Performance Evaluation Systems and Indices: Review of Experiences

In Britain, "most nationalized industries have published key performance indicators in their annual reports" (Woodward, 1986). In the case of three nationalized industries, that is, Gas, Electricity Supply (both denationalized now) and Coal, these performance indicators were usually part of a wider system of target-setting and performance appraisal. Most important, however, is that "the targets to which commitment was eventually given had been arrived at through a process of negotiation between the interested parties". (Chambers, 1983). These performance indicators basically consist of the conventional financial ratios and other ratios based on production and employment.

The British model of PE performance evaluation system and criteria is based on concepts of management by objectives (MBO). It doesn't involve any contractual agreement between PE management and the government. The use of performance indices for PE performance evaluation in Britain has experienced many limitations. Woodward (1986) observes that the "analysis of these cases suggests that performance indicators presented in annual reports give limited information except on the loosest definition of performance". He then outlines the following limitations:

- (i) conflict between financial and non-financial performance as to how far "doing well" on operational services and other performance indicators is compatible with good financial performance;

- (ii) trade-offs over time, in business terms, between short-term operational profits and longer-term survival. This is a problem common to all industries with long-lead times for planning investment and development;
- (iii) the problem of composition. Overall industry indices provide aggregate data. One sector of an industry may perform excellently (on all criteria), other abysmally. Aggregation conceals both extremes;
- (iv) the effect of government directives or interventions on performance measures. Where ministers are not accountable, the accounting of such interventions lends itself to wide divergence both in interpretations of effects, requiring counter-factual hypotheses, and attribution of related costs, particularly where joint costs are involved;
- (v) government-industry relationships. If the relationship between industries and sponsor departments exhibits "a marked absence of common purpose, trust and understanding" between departments and many of the major nationalized industries, then the provision of genuine internal performance indicators may provide further ammunition for use against the industries.

Despite these limitations, however, performance indicators were found to be useful for highlighting objectives of the nationalized industries. Woodward (1986) concludes his analysis by arguing that "there must be benefit in a public enterprise setting and publishing its own targets and performance indices, both for internal purposes and for discussions of performance with sponsor departments and other interested parties". As most of the British nationalized industries have already been denationalized (privatized), the British model has no bearing on the performance evaluation systems of PEs in developing countries.

The French system of contracts for managing PEs is of particular importance for us as "almost all less developed countries interested in improving the performance of their public enterprises are likely to consider this option seriously." (Trivedi, 1988). In fact, some developing countries, including some African countries, have already adopted some versions of this system. The French system came into existence in the late 1960s upon recommendations of a parliamentary committee formed to review performance of some French PEs. Among other things, it proposed that programme contracts be drawn up to increase the operational autonomy of PEs and restrict the state to the role of fixing the rules of the game.

There was no standard format for these contracts. However, all of them incorporated four essential elements (Trivedi, 1988). These include (i) the strategy of PE for a medium-term (three to five year) period, based on the government's macroeconomic projection for the development plan (ii) propositions formulated by the enterprise for adapting this strategy to fundamental goals of the French government's economic policy (iii) areas of financial relations with the government, especially the financial targets of the enterprise, and (iv) the government's obligations to cover the additional cost of non-commercial objectives and relevant procedures for achieving this reciprocal commitment.

The French system of contracts did not bring about the expected improvement in the financial performance of PEs. The French PEs continued to make huge losses. According to Trivedi (1988), "in 1983, the French government had to pay approximately \$7.8 billion to keep its PEs in business". This is mostly attributable to problems arising from the implementation of the contract system than the system per se. This is because "most French contracts did not meet most of the preconditions" necessary for their successful implementation. Nonetheless, for one reason or another, versions of the French system of contracts have been experimented within many developing countries that have established performance evaluation systems for their PEs.

In developing countries, a number of countries have reached the stage of designing and implementing performance evaluation systems for their PEs, and in a few cases the beginnings of the operational phase are in evidence (Sarmiento, 1988). The experiments in developing countries with the use of the French model for managing PEs may be classified into three categories.

The African Experience

The performance contract approach has been adopted by many African countries, notably the francophone countries. The system has been implemented by Senegal, Gambia, Morocco, Côte d'Ivoire and Ghana. More details on this will be provided later.

The Signalling System

This system is implemented in Pakistan, South Korea, and Venezuela (Trivedi, 1988, Soa, 1988, Mehdi, 1988, Song 1988). In these countries, "contracts between public enterprises and the government are just one part of this system, whose main objective is to send appropriate signals to the managers to guide them to make decisions in the national interest and reward them for doing so". (Trivedi, 1988). According to Trivedi (1988), the system consists of three main components:

- (i) performance evaluation system: this consists of several steps. One has to decide on a set of appropriate criteria for evaluating enterprise performance and combine both primary
(commercial profitability) and supplementary (non-commercial) indicators to come up with a composite score;
- (ii) performance information system: the purpose of this is to ensure a reasonable balance of information between the government and PEs;
- (iii) performance incentive (disincentive) system: this system links rewards (sanctions) to performance. Despite the fact that this version of the French contract system has also encountered some problems, the system worked well and improved the financial performance (commercial profitability) of PEs. Thus according to Trivedi (1988), in Pakistan "there has been a sustainable increase in the financial profitability of the entire sector", whereas in South Korea, "the Korean experiment has exceeded all expectations". The obvious

reason for this smashing success is that these countries have improved the system before adopting it.

Performance Contracting Systems

These systems are adopted in India and Bangladesh. The Memorandum of Understanding (MOU) is the Indian and Bangladesh version of the French system. MOUs are very simple and have the same contents as the French contracts. The original performance contracting system did not produce satisfactory results and had to be refined further.

Apart from the performance indicators used in the MOUs, in 1985 the Indian Government has passed a legislation named "the Sick Industrial Companies Act", which was made operational in 1987 (Kapoor, 1987, Kinfu, 1990). In the Indian context, six financial ratios were used to predict PE sickness, as defined by the Act, three years ahead of the actual failure of an enterprise. This will help the government to take the necessary remedial measures. These include net working capital to total assets, retained earnings to total assets, earnings before interest and taxes, market value of equity to total assets, total debt to total assets and cash flow to total debt.

Apart from the use of the French system of contracts in many developing countries, Brazil has adopted a different system of performance evaluation for its PEs. The main objective of the system is "helping the national planning system" in terms of "enterprises' contribution to combating inflation, reducing unemployment and lowering the public debt" (Arcirio, 1988). The system is used more for macroeconomic decision-making than microeconomic decision making. The system develops four performance criteria. These include:

- (i) financial performance evaluators: these use largely the conventional financial ratios;
- (ii) productivity gain evaluator: this relies on the calculation of the total factor productivity (TFP);
- (iii) social objective accomplishment evaluator: this evaluator has been divided into a component that measures the index of demand satisfaction and a component that measures the quality of the service;
- (iv) public opinion sounder: using this indicator, PEs investigate their market to determine whether or not their product/ service mix is satisfying society's needs through questionnaire.

One issue related to performance evaluation of Pes appears to be common to both developed and developing countries. This is the difficulty of assessing PE performance due to their multiple goals (Chambers, 1983, Trivedi, 1988, Arcirio, 1988). For some scholars, "the search for an absolute and universally - justifiable criterion - or set of criteria - appears to be fruitless (Bennet, 1988). To add to the difficulty, while the conventional financial

indicators are useful for assessing organizational performance, they are useless for assessing managerial performance" (Woodward, 1986).

In general, therefore, the subject of performance evaluation of PEs in developing countries is a new one and many questions have to be answered yet. (Trivedi, 1988). As Sarmiento (1988) argues, "the subject itself still needs further clarification and certain crucial questions appear to have multiple and possibly conflicting answers".

III. PE Performance Evaluation in Africa: Review of Experiences

If few LDCs have operated performance evaluation systems for their PEs, fewer African countries have reached that stage. Generally speaking, all the African countries that have designed and implemented performance evaluation systems have adopted a version of the French system of performance contracts. In the following sections we will discuss the efforts and experiences of PE performance evaluation in the Francophone and Anglophone countries. Moreover, the efforts of developing PE performance indicators at the Pan African level will also be discussed.

Francophone Africa

Many francophone African countries, notably Senegal, Congo, Morocco and Côte d'Ivoire, have designed and implemented a system of performance evaluation indicators as part of contract plans (Saulniers, 1990). The contents of these contract plans are similar to the French contracts. According to Saulniers, 1990, "one reason francophone countries use contract plans may be the plans' country of origin: France". Thus, a census of ninety-six African contract plans from 1973 to 1988 found only seven in anglophone nations. In Senegal, the system was designed by French experts and therefore it is "a pretty good facsimile of the original system" (Trivedi, 1988).

The use of financial indicators within these contract plans, in addition to other related reform measures, have contributed to the improvement of the financial performance of PEs in francophone Africa. "The analysis of company-level financial indicators shows that PEs in francophone Africa have apparently improved in the mid-1980s, when compared with private and multinational firms" (Saulniers, 1990). Some problems, however, have been encountered in this experience. These problems include lack of political commitment at various levels, failure to fulfil some preconditions for the success of contract plans, some exogenous factors related to the macroeconomic environment of these countries and lack of inadequacy of the government body to implement these systems (Saulniers, 1990, Trivedi, 1988).

Anglophone Africa

The available literature suggests that very few anglophone nations have designed and implemented a performance evaluation system for their PEs. In Egypt, a financial performance indicator system, which identify and define performance of PEs, was developed in 1985 as part of development of a financial information base for PEs (EL-Sherif, 1988).

No details, however, are available on how these performance indicators are used for performance evaluation and monitoring.

In Ghana, however, a comprehensive system of performance evaluation and monitoring was designed and implemented in 1982 (Shaikh, 1990). The government of Ghana has introduced a performance monitoring and evaluation system (PMES) in 18 core PEs as part of the PE reform project. The system was introduced with the technical and financial assistance of the World Bank. The government body responsible for the implementation of the system is the State Enterprises Commission (SEC). The components of PMES are typical to those of the Signalling System, itself being a version of the french system of contracts. Performance contracts, are therefore, the key instrument of PMES. Components and guidelines of PMES, according to Shaikh, 1990, are as follows:

Components and guidelines

A. *Performance Evaluation System.* For selecting indicators and specifying desirable levels of performance, the following guidelines were adopted in the development of the performance evaluation system:

- (i) the chosen indicators and targets must be fair to the country and to the management of PEs;
- (ii) chosen indicators must be simple, at least initially. Net profits and completion of accounts, are used as the main indicators, besides other secondary indicators;
- (iii) chosen indicators must be conceptually correct and not duplicative;
- (iv) the chosen indicators and the annual targets must reflect the long-term goals of the particular PE; and
- (v) targets must be agreed upon by the implementing authority - SEC - and the management of the individual PE, preferably through consensus generation.

B. *Performance Information System.* For accurately measuring actual levels of performance, guidelines for the development of the system include:

- (i) the information requirements of the system - at least in the initial phases - will be kept to a minimum;
- (ii) the information system should be primarily based upon published accounting data;
- (iii) the information system should be computerized to the extent possible.

C. ***The Incentive System***+. This links rewards with the degree of fulfilment of agreed levels of performance. The guidelines adopted in developing the incentive system in Ghana were:

- (i) incentive payments (bonuses) must be linked to performance;
- (ii) incentive payments should be sufficiently high to induce changes in management behaviour; and
- (iii) while monetary rewards remain the single most powerful incentive, other forms of incentives may be equally important.

The Implementation Process

The implementation of PMES has followed four main steps:

- (i) updating of audited accounts and information;
- (ii) preparation of corporate plans and strategies;
- (iii) preparation of performance contracts; and
- (iv) monitoring, evaluation and incentives.

Achievements and Constraints

The impact of PMES is positive and "there is strong possibility of sustainable increases in efficiency in the future" (Shaikh, 1990). Nonetheless, there are three problems confronting PMES that have to be resolved to ensure even better results. First, plurality of principals. This is an important area which requires additional effort to clarify the relative role of SEC, the sector ministries and the board of directors in the control structure of PEs. Second, an important precondition for the success of PMES is the creation of an institution that can effectively implement the system. The SEC therefore, must be viewed as independent, technically qualified and sufficiently influential. Third, coherence of reform measures. Progress in other related areas should accompany improving the control structure of PEs. These include granting of greater autonomy, correcting the pricing policies, allowing more competition, improving the quality of recruitment for managerial positions, and selective rehabilitation.

Efforts at the African regional level

Apart from the individual country experience in developing performance evaluation systems discussed above, some efforts have been made at the regional level. Also in November 1990 and October 1991, the Economic Commission for Africa (ECA) organized two policy workshops to discuss ways and means for improving performance of African PEs (ECA 1990, 1992). Participants of the two workshops have emphasized the need for performance evaluation criteria. Proposals of the two workshops have stressed that any assessment of PE performance in Africa should be based on their multidimensional objectives. The two workshops have

then identified a number of performance indicators for the African PEs. These were broadly classified as financial indicators, efficiency indicators and effectiveness indicators. Unfortunately, these guidelines stop short of identifying the institutional framework for implementing these indicators. The importance of these two efforts, however, is that they highlighted the urgent need for designing and implementing a comprehensive performance evaluation and monitoring system in a serious attempt to improve the poor performance of African PEs. In fact, these two preliminary efforts have paved the way for the preparation of this document.

Conclusions, Implications and Emerging Issues

This survey of the efforts, experiences and issues of PE performance evaluation systems in the world in general, and in Africa in particular, has useful implications for the design and implementation of an effective performance evaluation and monitoring system for African PEs. First of all, it clearly shows that performance evaluation systems can be useful if used as part of a contractual agreement between the government and PEs. This is because the performance contract approach helps to resolve the problem of tight government control which have a negative impact on performance of African PEs (Luke, 1988). As Saulniers, (1990) argues: "The francophone experience shows that contract plans provide a useful counterpoint to the often heavy-handed government interference in public enterprises. Although their implementation still poses some problems, they help to clarify goals and may lead to increased autonomy and greater efficiency in the use of a nation's resources".

Second, almost all the African countries that have designed and implemented PE performance evaluation systems are francophone and West African countries. The obvious reason for this is that about 80 per cent of the World Bank's work on public enterprise reform in West Africa were undertaken in Francophone countries. This suggests that African countries, which will use this set of performance indicators for PE performance evaluation and improvement, will need technical assistance from regional as well as international organizations.

Third, on the basis of the efforts and experiences of PE performance evaluation in developed and developing countries, the following issues emerge:

- (i) selection of the performance indicators that take account of the multiple objectives of PEs;
- (ii) establishment of criteria for the selection of performance indicators such as simplicity, fairness and quantification;
- (iii) creation of an institutional/legal framework to facilitate use of performance indicators for performance evaluation and improvement purposes, such as MBO or performance contracts; and
- (iv) establishment of a focal point that uses performance indicators for performance evaluation and endurance of accountability of parties involved in PE management.

IV. General Financial Performance Indicators

The following 25 general performance indicators are proposed for evaluating and monitoring PE financial performance at the micro-economic level, that is, the PE level. These are considered to be applicable to all sectors (see table A, appendix I).

These ratios can be broadly categorized into (1) liquidity ratios, (2) leverage ratios, (3) activity ratios, (4) asset structure ratios, (5) profitability ratios and (6) other combination ratios.

1. Liquidity Ratios

These are ratios used to measure an enterprise's ability to cover its current obligations by funds raised from conversion of most liquid assets within a current period, or as it usually referred to by "conversion of current assets". They include current and quick ratios.

(a) Current ratio

This is computed by:

Current Assets/Current Liability

and is expressed usually in comparative ratios of 2:1 or times.

This ratio measures the enterprise's ability to meet its current obligations, that is short-term commitments, out of its current assets which are the most liquid assets of the firm. If the ratio is less than one, the enterprise is generally considered to be in an unfavourable position. If the ratio is more than one it may be considered favourable. However, the most appropriate and ideal ratio for each enterprise will have to be determined based on the industry average, past trends and economic conditions. Generally two might be considered ideal.

(b) Quick ratio

This is computed by:

**Quick Assets/Current Liability (or)
Current Assets minus Inventory/Current Liability**

and is expressed usually in comparative ratio of say 0.7:1 or times.

This ratio measures the enterprise's ability to meet its current obligations that is total short term obligations (same as above), but only out of what are called quick assets. Quick assets are current assets excluding inventory, or just cash, receivables, and marketable securities (such as treasury bills) if any. It is important here that the quick assets identified must be cash or convertible to cash quickly within 6 to 9 months otherwise the whole purpose of such an index will be misrepresented and misleading.

If the ratio is less than one, the enterprise's financial position is considered to be unfavourable. If the ratio is more than one it may be considered favourable. But the favourableness of such a ratio have to be determined by comparison to industry average, past trends, and environmental conditions.

2. Leverage Ratios

These are ratios used to assess the extent of protection of creditors and the risk enterprise assumes in using alternative sources and types of financing in running its operations and acquiring different assets. They include total debt to total assets long term debt to net work. Long term debt to paid in capital, current liabilities to total debt, cash flow to total debt, time interest earned, fixed charge and coverages.

(a) Total debt to total assets

This is computed by:

$$\frac{\text{Total Liability/Total Assets (or)}}{\text{Total Equity/Total Assets}}$$

and is expressed usually in percentage.

This indicates the percentage of assets financed by outside capital, that is, short term and long term debt, showing the role of risk capital in the financing of the enterprise. The larger the percentage, the higher is the risk of the debtors, as they will be less protected by equity capital. This or its variant total equity to total assets are usually referred to as measure of leverage. Leverage is a trade-off that is exhibited between use of debt and equity in financing assets. Thus leverage ratio measures the extent of the enterprise's total debt burden, and its ability to meet its short-term and long-term debt obligations from its earnings. But the extent of trade-off the enterprise applies in its operation will depend on the industry it is in, and the conditions of the financial market.

(b) Long-term debt to net worth

This is computed by:

$$\text{Long-term Liability/Net Worth}$$

and is expressed in percentage.

This is another more strict measure of protection of creditors in the long-term. Creditors will prefer a low debt to equity ratio since it implies protection of their position. The appropriate mix and balance of this ratio will vary from enterprise to enterprise, industry to industry, and managerial attitude towards risk.

(c) Long-term debt to paid-up capital

This is computed by:

$$\text{Long-term Liability/Capital}$$

and is expressed in percentage.

This is also measure of leverage in relation to equity as measured by net assets (total assets minus liabilities), this one measures it in relation to initial paid-up capital.

(d) Current liabilities to total debt

This is computed by:

$$\frac{\text{Current Liability}}{\text{Total Debt (or) Long-term Debt}}$$

and is expressed in percentage.

This ratio tries to analyze out of the total debt what percentage represent short term and what percentage long-term, and whether short-term credits are being used to finance long term needs. Ideally short-term credits should be used to finance current assets, and long term credits to finance long-term assets (fixed assets).

(e) Cash flow to total debt

This is computed by:

$$\text{Cash Flow Income/Total Debt}$$

and is expressed in percentage.

This tries to compare net income on cash basis to total commitment (short-term and long-term).

(f) Times interest earned

This is computed by:

$$\text{Earnings before interest and taxes (Debit)/Interest Expenses}$$

and is expressed as times.

This ratio reflects the enterprise's ability to pay annual interest on its debt out of its earnings. Definitely creditors prefer high ratio, and high ratio will indicate management ability to trade on equity. But a low ratio will show enterprise's risk on trading on equity.

(g) Fixed charges coverage

This is another variation of the above computed by:

Income Available for meeting charges/Fixed Charges

and is expressed as times.

This ratio is a variant of the above (e) but includes not only interest but also instalment payments to be made, to be compared to income that will be available for such purposes.

3. Activity Ratios

These are ratios used to analyze the operational activity of an organization vis-a-vis its sales volume, inventory (stock), credit terms, and types and volume of assets used. They include inventory turnover, receivables turnover, average collection period, net generating margin, profit margin, return on total assets, return on equity, return on total assets with social commitment or without any social commitment.

(a) Inventory turnover

This is computed by:

**Cost of Sales/Average inventory (or)
Sales/Average Inventory**

and is expressed in times.

This tries to measure the rapidity with which inventory is turned over through sales. High turnover indicates quick moving inventory, and not much capital tied up in inventory. Low turnover indicates slow moving inventory perhaps obsolete goods, tying up capital in inventory. Possibly could also indicate poor buying practice and pricing practices.

(b) Receivables turnover

This is computed by:

**Credit Sales or Sales/Average
Accounts Receivables**

and is expressed in times.

This measure tries to indicate the number of times receivables are turned over in a year. High turnover indicates quick collection and or strict credit policy, while low turnover indicates slow collection and or very liberal credit policy.

(c) Average collection period

This is computed by:

Accounts Receivables/Average Credit Sales per day

and is expressed in number of days.

This attempts to measure the period within which accounts receivables are collected to denote every how many days accounts receivables are being collected in a year. Of course, further analysis must be made in the light of the billing terms, to determine whether the receivables are being settled promptly.

(d) Overall asset turnover

This is computed by:

Total Sales/Total Assets

and is expressed in times.

This measures the volume of sales generated by use of the total asset, that is the capacity of the assets to generate volume sales. High ratio indicates efficient utilisation of asset investment, and or effective marketing and or management efforts and favourable business conditions. Low ratio normally would indicate ineffective marketing and/or management efforts, and/or unfavourable business conditions.

(e) Fixed asset turnover

This is computed by:

Total Sales/Total Fixed Assets

and is expressed in times.

This ratio also measures the use of fixed asset investment to generate the volume of sales. As in # 12 the higher the ratio the more efficient use of fixed asset.

(f) Working capital (or current asset) turnover

This is computed by:

**Total Sales/Current Assets (or)
Total Sales/Net Assets**

and is expressed in times.

This ratio tries to indicate the capacity of working capital to generate the volume of sales. A high turnover evinces an efficient use of working capital.

4. Asset Structure Ratio

This ratio (%) attempt to screen the profile of the enterprise by looking at the quantity and quality of assets held by the enterprise.

- (a) **Current assets to total assets and
Fixed assets to total asset**

This is computed by:

**Current Assets/Total Assets (and)
Fixed Assets/Total Assets**

and are expressed as percentages.

These ratios portray what percentage of total assets are invested in current assets, and what percentage in fixed assets and whether such a profile reflects the nature of activity the enterprise is in.

- (b) **Stock (inventory) to current assets and
Debtors (receivables) to current assets**

This is computed by:

**Stock (inventory)/Current Assets and
Debtors/Current Assets**

and are expressed as percentages.

These measures attempt to scan the profile of current assets composition and thus divert attention to the quality of current assets.

5. Profitability Ratios

These measure the profit of enterprise from various aspects, that is, whether it is in relation to sales, costs, asset used, and or capital invested, and financial costs incurred and interest rates covered.

- (a) **Gross margin**

This is computed by:

Sales less Cost of Goods Sold/Sales

and is expressed in percentage.

This is a first measure of profitability, that attempts to gauge success or failure of enterprises' earning on sales. Assuming there is a "conscious acceptance of financial profitability as a major objective of PEs" (UNECA/SAPAM 1992), profitability indicators are crucial in the performance evaluation of African PEs. The higher the percentage the better. But the appropriate margin will depend on the enterprise's activity, the industry, and the economic opportunity.

(b) Net operating margin

This is computed by:

Operating Income/Sales

Operating income is determined as sales less cost of goods sold and operating expenses, and is expressed in percentages.

This is another measure of profitability but computed on more strict elements of incomes and expenses.

(c) Profit margin

This is computed by:

Net Income after Interests and Taxes/Sales

and is expressed in percentages.

This is another measure of profitability computed by taking into consideration all factors, that is, effectiveness of sales in producing sales, net operating margin, and effect of method of financing.

(d) Return on total assets (ROI)

This is also referred as rate of return on investment. It is computed by:

(e) Net Income after Taxes/Total Assets

and is expressed in percentage.

This ratio reflects the rate of return on all assets financed by debt and equity.

(f) Return on equity

This is computed by:

Net income after Taxes/Equity (Net Assets)

and is expressed in percentage.

This ratio attempts to measure return to the equity capital invested. Ideally the net income here should be the residual income available to the owners. Whether such return is acceptable or not depends the state of the capital market.

(g) Return on total assets with social commitment or without social commitment

This is computed by:

$$\frac{\text{Unadjusted Accounting Profit/Total Assets (or)}}{\text{Adjusted Accounting Profit/Adjusted Total Assets}}$$

This is expressed in percentages.

This ratio is a variation of return on total assets (ROI), but attempt to clear the net income of the PE from "social burden" over which the enterprise/management has no control, such as unnecessary labour (carrying disguised unemployment) or overhead expense enforced upon the enterprise.

6. Other Ratios

These are ratios that are used to analyze combination of factors, that is, profitability and asset use, or profitability and operational activity factors. They include earning capacity and rate of favourable impact.

(a) Earning capacity

This is computed by:

$$\frac{(\text{Asset Turnover}) \text{ times } (\text{Profit Margin}) \text{ (or)}}{\text{Sales/Total Assets times Net Income/Sales}}$$

These are expressed as percentages.

This measure attempts to portray an enterprise's rate of profitability and the soundness of its financial position. A healthy and sound business requires both sound financial position, and good profitability rate. The above formula tries to highlight the relationship of these factors.

(b) Rate of favourable impact

This is computed by:

$$\frac{\text{Rate of Return of Total Assets without Social Commitment} - \text{Rate of Return on Total Assets with Social Commitment}}{\text{Rate of Return of Total Assets without Social Commitment}}$$

This is expressed as percentage.

This rate is a variation of return on total investments, but is designed to show impact of social policy.

V. General Non-financial Performance Indicators

This category of PE performance indicators will consist of non-financial indicators which may be measured qualitatively or quantitatively. They are applicable to all PEs, that is, cutting across all industries. It is worth mentioning that it is very difficult at this point to establish a yardstick (performance standards/norms) for this set of indicators against which the performance of a particular PE can be judged as satisfactory or unsatisfactory. Such a yardstick will depend very much on, among other factors, the industry.

- a) **Capacity Utilization Rate (%).** This indicator is measured by dividing the actual production of goods/services by the technical available production capacity. The higher the ratio the better. A distinction has to be made between theoretical and attained capacities.
- b) **Employee Training.** This indicator attempts to measure PE performance as regards human resources development. This performance indicator can be measured in terms of number of days/weeks training per employee; and/or amounts spent on training per employee. More spending on employee training and more training days per employee indicate better human resources development policy and management's commitment to advance its most valuable assets. Hence, an indication of good company performance in this aspect.
- c) **Employee Job Satisfaction.** This indicator also attempts to measure PE performance on (employee motivation human resources development). It is measured through the rate of turnover and absenteeism. Generally speaking, lower turnover and absenteeism rates suggests higher employee job satisfaction and vice versa.
- d) **Quality of Service/Product.** This indicator endeavours to measure PE's commitment to producing/rendering top quality products/services. It is measurable through consumers' satisfaction. High consumers' satisfaction indicate top quality products/services and vice versa.

- e) **R & D.** This indicator measures PE's efforts towards indigenization of their products/services and innovation. Three measures are used for this: substitution of imports, use of local production inputs and product diversification. In addition, the percentage of budget allocated to R & D and the quality and quantity of manpower in R & D could also be good indicators. A substantial percentage of company budget allocated to R & D expenditure and existence of a high calibre and number of R & D manpower can be interpreted as a satisfactory company performance in this aspect.
- f) **Completion of Audited Accounts on Time.** This is used as indicator of an enterprise's ability to use financial performance indicators and extent of effectiveness of MIS. This indicator is measurable by the time lag between the date of actual production of audited accounts and the date the audited accounts are supposed to be produced. The choice of this performance indicator is attributable to the fact that financial statements (i.e. income statement and balance sheet) are much in arrears in most of the African PEs. Generally speaking, the shorter the time lag the better and vice versa.
- g) **Formulation and Implementation of Corporate Plans.** This indicator attempts to motivate PE management to maintain strategic corporate planning systems, which are lacking in most African PEs. Formulation and implementation of these corporate plans will be used to measure this indicator. This measure involves a lot of subjective evaluation technique. But, the extent of existence of corporate planning and its actuation of plans could be measured in terms of the importance given to such activity by management, organization and location of the planning unit, the quality and quantity of manpower in it, and budget allocated thereto. Preparation and effective implementation of corporate (strategic) plans can be interpreted as a good performance in this key success factor. The reverse holds true.
- h) **Use of Management Information and Internal Control Systems.** This indicator is used to measure the PE management's ability and commitment to design and implement modern management techniques. Lack or inadequate MIS is one of the greatest drawbacks in most of the African PEs. Design and implementation of these MIS or otherwise, will be used to measure this indicator. This can be measured in terms of division of function and responsibility, physical protection of property, flow and documentation of information for decision making and availability of policies and procedures manuals. Logically, therefore, companies maintaining and using effective management information and internal control systems in decision making and control should be ranked as performing well in this aspect. Lack of or poor management information and internal control systems or non-use of existing MIS can be interpreted as poor performance in this key success factor.
- i) **Public Policy Impact.** This indicator is designed to measure the PE performance in achieving public policy objectives such as contribution to social services (health, and education) and creation of job opportunities (employment), environmental conservation and consumers' subsidization. A

modest percentage of budget expenditure on such public policy objectives should be interpreted as good performance on PE socio-political objectives. A higher percentage of budget expenditure on these public policy objectives, however, can indicate or imply poor PE financial performance. Experience has shown that it is always difficult to reconcile social and political objectives of PEs with those which are commercial (Musa, 1991). For instance, consumers' subsidization, oftenly through charging prices lower than the cost of production, could result in huge financial losses. The main emphasis now is to improve the financial performance of PEs, while pursuing social objectives only as secondary ones. In fact, with the present public finance confronting many African countries, PEs cannot provide social services unless they are financially successful.

VI. Industry-specific Performance Indicators

A set of industry-specific (sector-wise) performance indicators are listed in Appendix 2. The following list of performance indicators, however, have been selected to evaluate performance of the African PEs along the criteria discussed earlier. However, these indicators are classified according to the sector of the economy in which PEs are found. Thus, there are indicators for PEs in manufacturing agriculture, transport, and public utilities (water, electricity, post and telecommunications).

a) Manufacturing Industry

$$1. \text{ Labour Productivity (\%)} = \frac{\text{Gross Value Added (GVA)}}{\text{Expenditure on Wages and Salaries}}$$

(N.B. GVA is measured in the same way as in the indicator of PE contribution to national income)

$$2. \text{ Capital Productivity (\%)} = \frac{\text{GVA}}{\text{Net Fixed Assets}}$$

$$3. \text{ Total Factor Productivity(TFP)(\%)} = \frac{\text{GVA}}{\text{Sum of Wages and Salaries}}$$

$$4. \text{ Market Share (\%)} = \frac{\text{Total Company Sales}}{\text{Total Consumption of Product/Service}}$$

$$5. \text{ Capacity Utilization (\%)} = \frac{\text{Actual production}}{\text{Available capacity}}$$

b) Agricultural Industry

$$1. \text{ Physical Productivity (ton/feddan (acre))} = \frac{\text{Physical Quantity of Crop}}{\text{Total Cultivated Area (feddan/acre)}}$$

$$2. \text{ Area Utilization (\%)} = \frac{\text{Cultivated Area (feddan/acre)}}{\text{Cultivated Area (feddan/acre)}}$$

$$3. \text{ Labour Productivity per Employee} = \frac{\text{Total production}}{\text{Number of Employees}}$$

4. Number of Employee per area.

c) Transport Industry

Rail Transport

1. Track renewal: this performance can be measured in terms of miles
2. Locomotive utilization: unit of measurement is miles per day
3. Freight traffic: measured in metric tons
4. Passenger traffic: measured in terms of passengers

Air Transport

1. Available seat kilometres (ASK): aircraft kilometres flown on each inter-airport multiplied by the number of seats available on that hop for revenue passenger use.
2. Freight-tonne-kilometres (FTK): aircraft kilometres flown multiplied by the number of tonnes carried on that hop.
3. Revenue passenger kilometres (RPK): this is computed by a summation of the products of the revenue aircraft kilometres flown on each inter-airport hop multiplied by the number of revenue passengers carried on that hop.

Common to both Air and Rail Transport

1. On time arrival/departure.

e) Public Utilities (water, electricity, post, and telecommunications)

1. Number of beneficiary consumers served;
2. Consumption per beneficiary consumer in terms of the respective service, e.g. cubic metres of water, kilowatt of electricity, etc.
3. Interruption or delay rate. The more frequent the interruption or the longer the delay, the less satisfactory is the service provided by the public utility.

VII. Macro-economic Performance Indicators

Because PEs dominate the economies of most African countries (Luke, 1988, Kinfu, 1990), it is essential to design some performance indicators that measure their sectoral/overall performance from a macro-economic perspective. This in turn will help the African governments to take the necessary corrective measures to reform their economies. The following macroeconomic indicators are selected for the African PEs:

1. contribution to national income (GDP) (in financial terms);
2. contribution to import-substitution (%);
3. contribution to employment (%);
4. contribution to state budget (treasury) (in financial terms);
5. subsidies paid by the state budget (treasury) to PEs, (in financial terms);
6. contribution to the national debt burden (%);
7. export performance.

a) Contribution to National Income (GDP) in financial terms

We can measure the contribution of PEs to community wealth by measuring the value added by its activities to national income in money terms and at market prices. The gross value added (GVA) for a period of enterprise operation is given by the formula:

$$GVA = O - R$$

Where: GVA = gross value added,

O = the value of output at market prices during the period,

R = the cost at market prices of all materials and services used during the period to obtain the output O and purchased from outside the enterprise

b) Contribution to Import - substitution (%):

= $\frac{\text{total production of PEs in a sector (in physical/monetary terms)}}{\text{Total consumption (of a product/service) in the country for the same period}}$

c) Contribution to Employment (%)

= $\frac{\text{Total number of employee in a particular PE sector of economy}}{\text{total employees in the economy (or a sector)}}$

d) **Contribution to the state budget:** This can be measured in (financial) terms of the contribution PEs make to public finance out of their profits.

e) **Subsidies paid by the treasury:** This can be measured in financial terms in the form of subsidies allocated in the state budget to PEs.

f) **Contribution to inflation:** Although it is possible to disentangle the element of inflation attributable to PE

inefficiency, (see Arcirio, 1988), in practical terms, however, it is difficult to assess the precise extent of inflation that can be attributed to one PE or group of PEs.

- g) **Contribution to the national debt burden (%)**: This indicator can be measured by relating the portion of accumulated debt allocated to PEs to establish them and/or for purchase of production inputs to the total national debt burden-in a particular country.
- h) **Export performance**: This performance indicator can be measured either in physical terms, that is, metric tons or products exported per year or in financial terms, that is, foreign exchange earnings per year.

VIII. Justification for Choice and Limitations

Justification for choice

The criteria used for selecting the short listed indicators have been explained at the beginning in the methodology. In the appendix are provided a very wide range of performance evaluation measures/indicators proposed by writers and researchers in the field, and also those found common in practice. Even then, we do not consider the list complete and exhaustive. However, what is important is not the number of measures but rather the quality of indicators and what they can measure.

It is believed what is important is the soundness of the criteria used for selecting indicators, and the extent the indices match with objectives. The criteria that has been identified, could provide a good base for a start. It is possible to revise these criteria in time. The indices selected attempt to cover different levels of responsibility, and represent quantitative and qualitative measures, macro and microeconomic aspects, financial and non-financial. This initiative represents only first step towards identifying performance evaluation indicators in PE in Africa, further research is necessary for refinement and synthesis.

Limitations

The appropriateness and viability of these indicators have to be proved in future by further research. Hence, their usefulness and applicability of these indices must first be tested in actual practice (by field research) in selected PEs in Africa. These indicators mostly rely on ratios. It must be realised that ratios are only tools of analysis useful for establishing important relationship between significant elements of information data, be it financial or otherwise, overtime. The analysis of this relationship will shed light on enterprise and or management performance or capability for performance. Thus the "rightness" of these ratios depends on the coherence of the relationship element they entail.

The outcome or results of these measures will depend on the accuracy of the data used. If the data base (financial information or other data) is unreliable then the computed amount or result of the indicator will be inaccurate and analysis and interpretation will be distorted or misrepresented. Thus, establishing good accounting data or MIS becomes a necessary condition. As indicated earlier results of performance evaluation measures especially those based on ratios are just numbers and by themselves cannot give conclusive

judgements without comparison with some kind of reference or norm against which to contrast. Thus standards, or norms, or industry averages must be established. These norms will require observations or experience accumulation in form of data to establish norms for comparison.

There is need to designate an existing international institution, such as the International Centre on Public Enterprises (ICPE) to develop data for developing norms on public enterprise performance indicators by compiling ratios of public enterprises in developing countries in different sectors, just like the numerous ratios that are prepared by Dun & Bradstreet Inc. for 72 lines of private business representing different sectors.

Where there is varying and inconsistent accounting policies, procedures and practices, and in absence of harmonised accounting guidelines, use of financial performance indicators in African PEs will be meaningless and misleading. Therefore, there is need for developing accounting policy guidelines for accumulating useful financial information, and improving financial reporting standards in African PEs. Overall, there would also need for more competent personnel and information systems. Thus absence of good financial reporting standards and good information system can become a big drawback to utilising appropriate financial performance indicators in African PEs.

Extreme caution is necessary in interpretation of ratios, especially in developing countries, where the experience in application of such indices is new. Results must be analyzed in light of managerial, social, economic and political conditions, to isolate cause and effect, and institute appropriate remedial measures. The financial ratios are subject to conventional financial statement data. Conventional financial statements have inherent limitations by themselves as they fail to consider elements of social cost and human resource assets in the accounting norms. Financial information to be used for PE performance evaluation must consider this.

IX. Implementation Strategies

Performance evaluation of PEs in developing countries in general, and in Africa in particular, is not a mechanical process. Design of sound performance indicators for African PEs does not necessarily guarantee their implementation for performance evaluation and improvement. Some steps, therefore, should be taken following this first phase of the project.

First and foremost, the review of experiences, efforts and issues of PE performance evaluation in Africa indicate that the indigenous capacity have not been utilized or involved in the design and implementation of performance evaluation systems and criteria in the PE sector. The few African countries that have established performance evaluation systems have made extensive use of foreign expertise. As a result no local capacity has been built in this field.

Second, there is an urgent need to test these performance indicators in some selected African PEs in the second phase of the project. Among other objectives, this test will ensure their applicability and practicality, or otherwise, within the Africa context. As this is the first

attempt on identification of PE performance indicators, reactions and comments should be obtained to further refine them.

Third, these performance criteria cannot be useful for PE performance evaluation and improvement unless they are compared with enterprise and industry standards (averages or norms) at the country and Pan African levels.

To overcome these difficulties, a top priority should be given to establishing a focal point at the Pan African level in the Second phase of the project. SAPAM/PHSD, which have done tremendous work on African PE performance evaluation and improvement, can form the nucleus of this focal point. For this reason, SAPAM/PHSD is encouraged to establish this focal point in collaboration with the academic community and relevant government bodies in Africa. This will contribute significantly to capacity building in this crucial area.

This focal point should be formed at the very beginning of the second phase of the project. The proposed focal point will assume the following functions:

- development and accumulation of industry norms (standards) over time to identify trends;
- definition and interpretation of the industry norms;
- definition and operationalization of performance criteria;
- test of performance criteria and norms in some selected African PEs
- dissemination of information on performance criteria and standards through periodical publications;
- provision of technical assistance to African countries which express interest in implementation of these performance indicators and standards; and
- development of modern management information and control techniques. This is a prerequisite for the effective implementation of these performance criteria and standards.

X. Conclusions and Recommendations for Further Action

PEs dominated the African economies for a long time. Their long record of poor performance is partly responsible for the economic malaise in some African countries. Reform of African PEs, therefore, is crucial for the reform of national economies. By the beginning of the 1980s, a number of African countries have shown willingness to introduce reforms including privatization. PEs, however, will continue to exist in one form or another. In view of the economic crises and inability to subsidize or privatize all PEs, African PEs have to improve their performance.

This publication responds to the need to improve performance of African PEs. It attempts to identify tools that could be used to analyze and diagnose better the performance of African PEs to take the appropriate remedial measures. As a result in the foregoing, a tremendous work has been done on the development of performance criteria, and the accumulation of annotated bibliography on PE performance evaluation and criteria.

This, however, is the only starting step in the process. The indicators will be refined as experience is gained in their implementation.

Shortlisted General Financial Indicators

1. Liquidity ratios
 - 1.1 Current ratio. Current Assets/Current Liabilities (times)
 - 1.2 Quick ratio.
Quick Assets/Current Liabilities (times)
2. Leverage ratios
 - 2.1 Total Debt/Total Assets (percentage)
or
Total Equity/Total Assets "
 - 2.2 Long term Debt/Net Assets "
 - 2.3 Long term Debt/Paid-up Capital "
 - 2.4 Current Liability/Total Assets
or
Long term Debt/Total Debt "
 - 2.5 Cash flow Income/Total Debt "
 - 2.6 Coverage
 - 2.6.1 Times interest
Earnings before interest and taxes (EBIT) (times)
Interest Expenses
 - 2.6.2 Fixed charges
Income available for meeting charges (times)
Fixed Charges
3. Activity Ratios
 - 3.1 Inventory Turnover
Cost of Sales/Av. Inventory (times)
or
Sales/Av. Inventory
 - 3.2 Receivables (Debtors) Turnover (times)
Credit Sales or Sales/Av. Accs. Receivables
 - 3.3 Average collection period (days)
Accounts Receivables/Average credit sales per day
 - 3.4 Asset Turnover
 - 3.4.1 Total Assets Turnover (times)
Sales/Total Assets
 - 3.4.2 Fixed Assets Turnover (times)
Sales/Fixed Assets
 - 3.4.3 Working Capital or Net Current Assets Turnover (times)
Sales/Current Assets
4. Asset Structure Analysis
 - 4.1 Current Assets/Total Assets (percentage)
 - 4.2 Fixed Assets/Total Assets "
 - 4.3 Stock (Inventory) Current Assets "
 - 4.4 Debtors (Receivables) Current Assets "
5. Profitability ratios
 - 5.1 Gross Margin
Sales less cost of goods sold/sales (percentage)
 - 5.2 Net Operating Margin
Operating Income/Sales (percentage)
Operating income determined as
Sales less cost of goods sold
less operating income
 - 5.3 Profit Margin
Net Income (a.t.i)/Sales "
 - 5.4 Return on Total Assets (ROI)
Net Income (a.t.)/Total Assets "
 - 5.5 Return on Equity
Net Income (a.t.)/equity (Net Assets) "
 - 5.6 Return on Total Assets
with social commitment versus
without social commitment "
- Unadjusted Accounting Profit/Total Assets
or
- Adjusted Accounting Profit/Adjusted Total Assets
6. Earning Capacity (percentage)
(Asset Turnover) times (Profit Margin)
Sales/Total Assets X Net Income/Sales
7. Rate of Favourable Impact (percentage)
Rate of Return on Total Assets without social
Commitment-Rate of Return on Total Assets
with Social Commitment

General Financial Performance Indices

Appendix B

Powell's

Financial Ratios to assist in assessing enterprise effectiveness:

1.	Surplus value added/ Capital Employed	Measure of return on capital	
2.	Gross value added/ Capital Employed	Measure of productivity on Capital	
3.	Gross value added/ Payroll costs	Measure of productivity of labour	
4.	Gross value added/Sales	Indication of contribution to value added	
5.	Current Assets/Cur. Liab.	Measure of financial stability to commitments	meet financial
6.	Liquid Assets/Current Liab.	Measure of financial stability	
7.	Current Sales as% of base year	A sales Index	

Indices for series of consecutive periods to be developed for the following Index measures:

1. Enterprise Profitability (Before tax)
2. Capital Productivity
3. Labour Productivity
4. Material Yield
5. Financial Liquidity
6. Financial Stability
7. Growth in trend of current costs

Indices could be classified into:

- General performance indices
- Management performance indices
- Financial performance indices
- Investment performance indices
- Cost breakdown (input coefficients)
- Physical performance (i.e. resource use)

General performance indices:

1.	Net Surplus (profit) b/t and Int/ to capital employed	%	Profitability - gross return on capital employed
2.	Current retained earnings/ net worth and or accumulated surplus/Net worth	%	Earnings of Enterprise left to Government
3.	Sales/Capital employed	times	Turnover of capital
4.	Surplus domestic value added b/t to sales	%	Net profit margin

Management performance indices:

1.	Operating Surplus (profit)/ Operating Assets	%	Guide to managerial Performance in using assets available to management
2.	Added value/Operating Assets or Sales/Operating Assets	%	Added value per % of operating assets
3.	Cost of sales/Stocks	times	Asset turnover-indicating asset utilization
4.	365/Stock Turnover (3)	times	Stock turnover. High rate guards against obsolescence
5.	Gross added value/Fixed assets or Sales/Fixed assets	days	Days of stock Utilizations of assets
6.	Gross added value/No. of employees or Sales/No. employees	times	" "
7.	Surplus (b/t)/No. Employees	%	Indicates whether capital intensive
8.	Sales less materials used/ and salaries	times	Indicates productivity (sales per employee)
9.	Outstanding Orders/ Average weekly sales	%	Profit per employee
10.	Sales/Sq. meter of all space	No. weeks	Value added per \$ 1 of total wages and salaries paid
11.	(Profit/Sales (Sales/Assets))	%	Order back log per plant capacity Over/under housed sales per sq. meter Earning power or Rate of Return on Assets (ROA)

Indices of financial performance

1.	Sales/Working capital	times	Efficiency of capital use over trading or poor use of W.C.
2.	Stocks/Working Capital	times	Vulnerability to trade fluctuations and cash shortages
3.	Trade debtors/Av. Daily Sales	days	Collection period
4.	Sales/Av. Trade Debtors	times	Efficiency of receivable movement and capital tied up
5.	365/Debtors Turnover	days	Collection period
6.	Current assets/ current liability	ratio	Liquidity measure, above 2 satisfactory
7.	Liquid assets/current liab.	ratio	Sufficiency of cash to pay creditors, above 1 satisfactory
8.	Long-term Loan/Paid-up capital reserves and long-term	ratio	Extent of dependency on borrowed money (gearing)
9.	Fixed assets/Total capital employed	%	Proportion of total employed finance in fixed assets
10.	Sales/Total capital employed	times	Generation of business
11.	Surplus b/t/Sales	%	Is sales made worth the effort
12.	Gross Profit/Sales	%	Adequacy of profit to cover expenses other than production cost

Investment Performance

1.	Fixed interest capital/ Capital employed	Financial gearing	
2.	Ordinary (normal) Operating Earnings (net)	times	Times dividend covered Close 2 is good to Gross Dividends (Residual surplus)

Appendix B
Page 2

3. Net Surplus a/t/Net Worth or Profit/Equity % Earnings power. Rate of Return on Investment (ROI)
4. (Profit/Sales) Sales/Assets (Assets/Equity) (Profit/Assets) = managers concern with profitability and investment

Index of cost breakdown. (Input Coefficient)

1. Materials and Parts/Sales + change in stock. Ratio cost breakdown
2. Labour/Sales + change in Stock
3. Production Overhead/Sales + changes in stock
4. R & D Overhead/Sales + changes in Stock
5. Selling Overhead/Sales + changes in Stock
6. General Adm. Overhead/Sales + change in stock

Physical performance indices

1. Plant Utilization Data on - Plant Breakdown - Machine down time-
2. Material losses in production Available time - Output
3. Labour productivity Loss in process, scrap, and reject quality
Direct and Indirect labour hours worked, related output, lost time, employee turnover by depts or function

Duns Analysis on Key Business Ratios in over 800 Lines of Business

Solvency

Quick ratio (times)
Current ration (times)
Current Liab./NW (%)
Current Liab./Inv. (%)
Total Liab./NW (%)
Fixed Assets/NW (%)

Efficiency

Coll. period (Days)
Sales to inv. (times)
Assets to Sales (%)
Sales to NWC (times)
Acct. Pay. to Sales (%)

Profitability

Return on Sales (%)
Return on Assets (%)
Return on NW (%)
Depreciation, Amortization, Exp./Net Sales % Relates expenses to Depletion capital or labour intensive industry
Officers Compensations/Sales % Relates management remuneration to operation

Ratios used in World Bank Report
May 31/1984 Study on Ethiopian Manufacturing Public Enterprises

1. Profit/Sales (%)
2. Return on total Assets (%)
3. Debt/Equity ratio
4. Net Worth/Total Net Assets ratio

Kinfu's Study:

1. Net Worth to Total Assets ratio
2. Debt to Net Worth ratio
3. Current asset to current liability ratio
4. Sales to total assets (times)
5. Sales to Inventory (times)
6. Net Working Capital to Total Assets ratio
7. Debt to Total Assets (%)

Dun Bradstreet's 14 Important ratios

1. Current asset to current liability (ratio)
2. Net Profits on Net Sales (%)
3. Net Profits on tangible Net Worth (%)
4. Net Profits on net working capital (%)
5. Net Sales to Tangible Net Worth (times)
6. Net Sales to Net Working capital (times)
7. Collection period (days)
8. Net Sales to Inventory (times)
9. Fixed Assets to Tangible Net Worth (%)
10. Current Debt to Tangible Net Worth (%)
11. Total Debt to Tangible Net Worth (%)
12. Inventory to Net Working Capital (%)
13. Current Debt to Inventory (%)
14. Funded debts to net working capital (%)

Indices used in the Indian Experience

- Net working capital to total assets
- Retained earning to total assets
- Earnings before interest and taxes
- Market value of equity to total assets
- Total debt to total assets
- Cash flow to total debt
- Fund flow analysis

Beaver's ratios used in testing business failures in US companies

- cash flow to total debt
- net income to total asset
- net working capital to total assets
- current assets to current liabilities
- no - credit intervals
- Quick assets - current liabilities/Operating expenses

Key Indicators of Performance Evaluation
South Korea

----- Subsectors -----
Manufacturing Banking
(weight in %) (weight in %)

(a) quantitative

1. Public profitability	20	-
2. Total deposits/No. of employees	-	10
3. Intermediate costs/Sales	10	-
4. Ratio of doubtful loans	-	10
5. Labour cost/Sales	10	10
6. Equity/Deposits	-	10
7. No. of injured people/ One million tons of coal	5	-
8. Administrative costs/Earnings	-	-
9. Total energy produced/Coal produced	5	-
10. Operating profits/Operating capital	-	10
11. Total coal mined/Total reserves	5	-
12. No. of consolidated companies under administration	5	5
13. Administrative costs/Sales	5	-
14. total amount of loans committed	-	10
15. Inventory/Sales	5	-
16. R&D expenditures/Administrative costs	-	5
17. R&D Expenditure/Sales	2	-
18. Equity + Fixed liabilities/Fixed assets	3	-
Subtotal (70) (70)	(70)	(70)

(b) Qualitative

1. Long-term corporate planning	10	3
2. R&D	10	6
3. MIS and internal control	10	15
4. Services quality	-	6
Subtotal	(30)	(30)
GRAND TOTAL	(100)	(100)

Sources: "Performance Evaluation Reports of GIEs for the Operational results of 1983," Seoul, June, 1984.
"Performance Evaluation Reports of GIEs for the Operational results of 1984," Seoul, June, 1985.

Industry-Specific Performance Indicators

I. Manufacturing Industry

1. Labour Productivity (%).
2. Capital Productivity (%).
3. Capacity Utilization (%).
4. Total Factor Productivity (TFP) (%)
5. Domestic Resources Cost (DRC_j) (%) = $\frac{DF_j}{IVA_j}$, where

DRC_j = domestic resource costs coefficient of j manufacturing activity

DF_j = value of domestic resources directly and indirectly employed in the production of j output and its non-traded inputs, measured in domestic currency at economic efficiency

IVA_j = net foreign exchange benefit. The DRC measures the actual costs to a country of producing the output rather than importing it. When DRC > 1, it is more profitable to import, if DRC < 1, it is more profitable to produce domestically, and a value of DRC = 1 implies indifference.

Some ratios used in Sugar Industry

1. Initial Investment as % of total production cost
2. Equipment cost as % of initial investment cost
3. Equipment cost as % of production cost
4. Yield in quantity per unit of land
5. Area under cultivation
6. Cane crushing per day in tons

Productivity

- Number of employees
- Man-year in production
- Production in tons (quantity)
- Production Tons/man-years
- Revenue (Sales) growth
- Cost breakdown: - Cost of Sales/Net. Operating Sales
- Operating. Expenses/Net Operating Sales

II. Agricultural Industry

1. Physical Productivity (ton/feddan (acre))
2. DRC(%) = measured in the same way as in the manufacturing industry - See (I) above
3. Area utilization (%)
4. Number of employees per area
5. Labour productivity per employee

III. Transport Industry

Rail Transport

1. track renewal
2. locomotive utilization
3. freight traffic
4. passenger traffic
5. labour productivity: This indicator can be measured in terms of traffic units per employee.

Air Transport

1. Available Seat Kilometres (ASK)
2. Freight-tonne-kilometres (FTK)
3. Revenue Passenger Kilometres (RPK)

Common to Air and Rail Transport

- on time arrival and departure

IV. Public Utilities

1. Capacity Utilization (%)
$$= \frac{\text{Actual production (water, electricity)}}{\text{Available capacity (water, electricity, ... etc.)}}$$
2. Number of beneficiary consumers (persons);
3. Consumption per beneficiary consumer in terms of the respective service e.g. cubic metres of water, kilowatt of electricity ... etc.

Annotated Bibliography

1. Abdella, A.K.,
"A Framework for the Development of a Managerial Performance Evaluation System in the Sudanese Public Agricultural Corporations", Public Enterprise, Quarterly Journal, ICPE, Ljubljana, Vol. II, No. 4, 1991, pp. 280-287. Discusses the deficiency in existing measures of performance evaluation of the Sudanese public agricultural corporations. He describes a performance evaluation system which he believes to be more fairer and comprehensive. The proposed evaluation system is based on the key success factors in the industry.
2. Abdel-Khalik,
A.P. and K. EL - Sheshai, "Information Choice and Utilization in an Experiment on Default Prediction", Journal of Accounting Research, Autumn 1980, pp. 325-342.
Contains study of failure prediction by use of ratio variables selected and used by commercial loan officer - conclude most frequently preferred ratio was current ratio and cash flow to total debt.
3. Ahmed, A.M.,
"The Performance of Industrial Public Enterprises in the Sudan", African Administrative Studies, CAFRAD, Morocco, No. 36, 1991, pp. 553-60. Points to the need for a performance evaluation system that takes account of their multiple objectives. Uses performance indicators like financial profitability, self-financing ratios, productivity and contribution to government's budget to assess performance of the Sudanese manufacturing PEs which turned to be poor.
4. Agrawal, R.C.,
"Effects of Industrial Sickness on Bank's Profitability", The Chartered Accountant, Journal of the Institute of Chartered Accountants of India, September 1985, pp. 1955-201.
Discusses curative steps to be taken to avoid industrial sickness in banks, through monitoring of profitability index.
5. Altman, E.I.,
"Financial Ratios: Discriminant Analysis and the Prediction of Corporate Bankruptcy", Journal of Finance, September 1968, pp. 589-609. Contains study of 33 firms who filed bankruptcy through use of multiple discriminant analysis for distinguishing defined group. Number of bankrupt and non-bankrupt firms randomly selected were analyzed on 22-variable several ratios.
6. Arcirio, R.,
"The Brazilian Public Enterprise Performance Evaluation System", Public Enterprise, Thematic issue on Performance Evaluation of PEs in LDCs, ICPE, Ljubljana, Vol. 8, No. 1, 1988, pp. 43-55. Describes both the conceptual framework and the operational model developed by the Brazilian government to evaluate its PEs for implementing government policies. The

Annotated Bibliography (cont'd.....)

system measures the PE contribution to macroeconomic aspects such as inflation, unemployment and public finance deficit.

7. Beaver, W.,

Financial Ratios as Predictors of Failure - Empirical Research in Accounting", Selected Studies 1960, Supplement to Volume 5, Journal of Accounting Research, January 1967, pp. 71-111. Shows a study of 79 firms selected from Moody's to compare mean value of 14 final ratios for Failed and non-Failed Firms.

8. Bennet, A.H.M.,

"Theoretical and Practical Problems in Determining Criteria for Performance Evaluation of Public Enterprises, Public Enterprise, Thematic issue on Performance Evaluation of PEs in LDCs, ICPE, Ljubljana, Vol. 8, No. 1, 1988, pp. 18-27. Distinguishes performance evaluation of PEs from their management. the need for the latter arises as a result of use of performance contracts in LDCs. Performance indicators used for this purpose must be simple, flexible and distinguish factors controllable by management from those which are uncontrollable.

9. Chambers, D.,

Target - Setting and Performance Assessment in Public Enterprises, in Reddy (ed.): Government and Public Enterprises, 1983. The book discusses various issues of target setting and performance assessment in British nationalized industries such as multiplicity of goals and principals.

10. Dun and Broadstreet

Industry Norms and Key Business Ratios, Desk-Top Edition 1989-90. Statistics in over 800 Lines of Business. Dun and Broadstreet Business Credit Services, N.Y. Contains 14 important ratios in various lines of business.

11. EL. Sheriff, H.A.,

"A Framework for the Development of A Public Sector Information Base in Egypt, Public Enterprise, Thematic Issue on Performance Evaluation of PEs in LDCs, ICPE, Ljubljana, Vol. 8, No. 1, 1988, pp. 94-102. Reports the progress to date of an action-oriented strategy, whose objective is to improve productivity in Egyptian public sector. This has resulted in the development of a comprehensive financial information base for all public sector companies as well as the establishment and use of performance indicators.

12. Gupta, L.C.C.,

"Financial Ratios for Signalling Corporate Failure" The Chartered Accountant, Journal of Institute of Chartered Accountants of India, April 1983, pp. 697-707.

Attempts to test and analyze financial characteristics that distinguish potentially sick from nonsick companies, applying models used in US to predict bankruptcy. Concludes strong association between sickness and weak equity base.

13. Gross, Bertram, M.,

What are your Organization's Objectives? A General System Approach to Planning. Maxwell Reprint Series - No. 6,

Annotated Bibliography (cont'd.....)

Reprint from Human Relations, Vol. 8, No. 3, 1965, Tavistock Institute of Human Relations, London, England.

Contains expose on developing "a general - systems model" of an organization that leads to performance structure and model, conducive to predictable and fully controlled situation by identifying:

- performance objectives (goals and norms), Table 1,
- output performance objectives, Table 2,
- input - output performance objectives, Table 3,
- structural objectives, Table 4.

14. Jackson, Peter,

and Palmer, Bob. First steps in Measuring Performance in the Public Sector. A management Guide. Public Finance Foundation, 1989, London. Describes useful guidelines to the development and use of performance measures in public sector, based on principles to be applied

15. Kappaor, G.K.,

"The Sick Industrial Companies (special Provisions) Act. 1985", The Chartered Accountant, Journal of the Institute of Chartered Accountants of India, August 1987, pp. 87-93. Highlights problems of industrial sickness and possible causes in India and attempts made to provide legislation for their rehabilitation and identification in advance.

16. Khan, Arshad M.

and Veerachai, Manpichet Wattana, "Predicting Business Failures: Models and Judgement" The Chartered Accountant, Journal of Chartered Accountants of India, October 1985, pp. 297-300. Reviews literature on various models developed to predict business failures, and discusses the efficacy of financial ratios.

17. Kinfu, J.,

"Accounting Tools - From Predictors of Industrial Sickness to Predictors of Sickness in Public Enterprises", Ethiopian Journal of Development Research (EJDR), Vol. 12, No. 1, October 1990. Reviews studies and experiences in India to delineate "Industrial sickness" through use of accounting tools and other researchers in US made to predict business failure through selected ratios. He applies some of these ratios to Ethiopian manufacturing enterprises to analyze and interpret their incipient "sickness".

18. Knight, J.B.,

Public Enterprises and Industrialization in Africa, Unit for the Study of African Economies, Institute of Economics and Statistics, University of Oxford, 1990. Discusses the performance of African PEs in terms of contribution to GDP and profitability. He admits insufficiency of these criteria for performance evaluation purposes and emphasizes the need for development and implementation of an adequate performance

Annotated Bibliography (cont'd.....)

19. Kumar Swresh,

"Public Enterprise Policy and Reform Measures: The Indian Experience", Public Enterprise, Quarterly Journal, Vol. II, No. 4, December 1991, ICPE, Ljubljana, pp. 327-333. Expounds on the choice of performance contract or memorandum of understanding (MOU) as the strategy for assessing performance of public enterprise in India. MOU contains "weights" and "values" of agreed commercial and non-commercial criteria, together with performance incentive system made an integral part of it, and linked to a composite score. Continuous cash loss and equity erosion are mentioned as indicators. MOU is made to emphasize cost effectiveness, higher capacity utilization, energy saving, efficient use of working capital. But no actual description of MOU details.

20. Luke, D.F.,

"The Economic and Financial Crisis Facing African PEs", Public Enterprise, ICPE, Ljubljana, Vol. 8, No. 2, 1988, pp. 1655-174.

Emphasizes the importance of financial profitability in terms of return on capital employed (ROCE) as a measure of performance of African PEs and calls for the development of other criteria to measure achievement of other public policy objectives. He concludes that performance of African PEs in terms of ROCE and contribution to GDP is generally negative.

21. Mehadi, I.,

"The Pakistani Experience in the Development and Implementation of the Signalling System", Public Enterprise, Thematic Issue on Performance Evaluation of PEs in LDCs, Vol. 8, No. 1, ICPE, Ljubljana, 1988, pp. 71-83.

Discusses the design, development, implementation and operational pluses of the Pakistani Signalling System. Particular emphasis is given to important issues faced in the operational phase such as the impact of pricing policy, financial criteria selection and inclusion/exclusion of accounting items in the computation of the financial profitability.

22. Mihy O, P.,

"The Legal Environment and the Performance of Public Enterprises in Tanzania", African Administrative Studies, CAFRAD, No. 22, 1983, pp. 49-67. Relates the poor performance of Tanzanian PEs, in terms of aggregate losses, to the tight legal environment and lack of well-defined objectives.

23. Musa, E.A.,

"Public Enterprise and Planned Development in Africa: The Case of Sudan", Public Enterprise, ICPE, Vol. II, No. 4, Ljubljana, 1991, pp. 289-302. Discusses the development role of PEs in Sudan, their poor performance and the reasons thereof. He emphasizes the need for taking into account the pricing policy and political intervention in PE performance evaluation and proposes an integrated approach for performance improvement of Sudanese PES.

Annotated Bibliography (cont'd.....)

24. Oyugi, W.O.,

Privatization in Africa: Premises and Prospects, in Chole, E, W. Mlay and W. Oyugi (editors): The Crisis of Development Strategies in Eastern Africa, UBS Publishers and Distributors Ltd., India, on behalf of OSSREA, 1990.

Points to emphasis on economic criteria involving indignization, economic and socio-political functions to evaluate performance of PEs in moderate and socialist African countries - While financial performance of African PEs is generally poor, the author argues that they seem to have succeeded in realizing their socio-political functions.

25. Park, Y.C.,

A system for Evaluating the Performance of Government-Invested Enterprises in the Republic of Korea, World Bank Discussion Paper No. 3, The World Bank, Washington, D.C., 1986.

Describes the government act promulgated in 1984, introduced in an attempt to monitor performance of Government-Invested-Enterprises (GIE) and improve their management performance in Korea. The system of performance indicators' include 70% quantitative and 30% qualitative indicators. From the 12 quantitative indicators, profitability accounts for 20% weight as the most important factor among the indicators. Among the qualitative indicators, 3-4 indicators are devoted to long-term composite debt management and improvement of quality management. The Korean performance evaluation system is considered to be of highly impressive achievement. The performance indicators are linked to a system of incentives for managers.

26. Powell, Victor,

Improving Public Enterprise Performance: Concepts and Techniques, Management Development Series No. 22, ILO, Geneva, 1987.

Discusses appraisal mechanisms for PE, expounds commercial and non-commercial measures of effectiveness by use of value added at domestic market prices. Attempts to recast PE financial statements presentation with new approach that depicts financial performance of PE through measuring contribution to value added. Gives examples of financial ratio to be used in assessing enterprise effectiveness (34-355). Gives schedule of examples of performance indices and their calculations (pp. 38-39). Gives values to adjusted prices in performance statements. Describes how indices could be classified (37).

27. Ramanadham, V.V.,

The Nature of Public Enterprise, Croom Helm Ltd., London 1984. Discusses various aspects of PE management in LDCs including many African countries. The author warns against the use of commercial profitability as the sole measure of performance. A survey of financial performance of PEs in some African countries shows that their performance is poor.

28. Rai, R.C.,

"Accounting Tools on Predictors of Industrial Sickness", The

Annotated Bibliography (cont'd.....)

- Chartered Accountants, Journal of the Institute of Chartered Accountants of India, June 1987, pp. 968-970.
Discusses public accounts obligation to make use of accounting tools for predicting failure of an industry ... or such unit in order to take remedial action on time. Recognizes number of ratios and indicators of industrial sickness.
29. Robert Morris, 1989 Annual Statement Studies, Robert Morris Associates, Philadelphia, Pa. Contains comparative historical data and other sources of composite financial data. Also includes descriptive and comparative ratios, explanation, interpretation and computation.
30. Sarminto, M.O., "Management Control Systems for Public Enterprises: A Theoretical Framework", Public Enterprise, Thematic Issue on Performance Evaluation of PEs in LDCs, ICPE, Ljubljana, Vol. 8, No. 1, 1988, pp. 5-155.
Uses concepts of management control systems to develop performance indicators for PEs in LDCs. He emphasizes the need for performance indicators for financial evaluation, but pinpoints their limitations. He proposes the economic rate of return and social rate of return for socio-economic performance evaluation.
31. Sastrny, K.S., "The Concept of Political Will in the Context of Evolving a Suitable Performance Evaluation for Public Enterprises - Some Explorations", Public Enterprise, Vol. 11, No. 4, ICPE, Ljubljana, December 1991, pp. 223-233.
Discusses the need to develop methodology for identifying effects of interference, which cannot be quantified and made an integral part of performance evaluation systems for PEs.
32. Sauliniers, A.H., Public Enterprises in Francophone Africa, in J. Health (ed.): Public Enterprise at the Crossroads, Routledge, 1990, pp. 126-141.
Discusses the financial performance of PEs in Francophone Africa in terms of profit ratios. He then discusses the use of contract plans in the management of these PEs and development of performance criteria.
33. Shaikh, H., "A Performance Evaluation System for State-owned Enterprises in Ghana", Public Enterprise, ICPE, Ljubljana, Vol. 10, Nos. 3-4, 1990 pp. 305-316.
Describes in detail the design, implementation and the functioning of the performance evaluation system for PEs in Ghana. He outlines the various components of the performance evaluation system including performance indicators, performance information system and the incentive system. Though the system encountered some problems, it proved to be useful for improving performance of the Ghanaian PEs.

Annotated Bibliography (cont'd.....)

34. Schall, L.D and

C.W. Haley, Introduction to Financial Management, McGrawhill, 1980.
A general textbook on financial management which discusses in detail the computation and interpretation of financial ratios used in performance evaluation.
35. Song, D.H.,

"A New Performance Evaluation System of Korean Enterprises: Policies and Experiences", Public Enterprise, Thematic Issue on Performance Evaluation of PEs in LDCs, ICPE, Ljubljana, Vol. 8, No. 1, 1988, pp. 84-94.
Discusses in detail the South Korean System of PE performance evaluation. The system is professionally implemented by a non-government task force according to specific performance criteria which are revised annually. Implementation of the system proves to be successful in terms of increased profitability and efficiency.
36. Sosa, A.J.,

"A Mixed Scanning Approach to Performance Evaluation of Public Enterprise", Public Enterprise, Thematic Issue on Performance Evaluation of PEs in LDCs, ICPE, Ljubljana, Vol. 8, No. 1, 1988, pp. 64-70.
Discusses the Venezuelan system of PE performance evaluation. The system measures two different dimensions: the aggregated impact of short-term behaviour on macroeconomic results and the financial and economic efficiency of individual PEs.
37. Trivedi, P.,

"Theory and Practice of the French System of Contracts for Improving Public Enterprise Performance: Some Lessons for LDCs", Public Enterprise, Thematic Issue on Performance Evaluation of PEs in LDCs, ICPE, Ljubljana, Vol. 8, No. 1, 1988, pp. 28-42.
Discusses the theoretical basis and the practice of the French system of contracts for managing PEs. Political commitment and training were emphasized as prerequisites for the success of the system.
38. Troy, Leo.,

Almanac of Business and Industrial Financial Ratios, Englewood Cliffs N.J. Prentice Hall 1989.
Contains sources, definitions and explanations of factors and ratios given in the Almanac Ratios.
39. Tybout, James,

Microeconomic Adjustments during reform. Introduction. p.941-947. Tybout, James. and Petrei, A. Hamberto. Microeconomic Adjustments in Argentina during 1976-81: The Importance of Changing levels of Financial Subsidies. p.949-967. Galvez, Jaleo and Tybout, James, James. Microeconomic Adjustments in Chile during 1977-81: The Importance of Being a Groupo. p.969-994.
DEMERO, Jaime, Pascale, Ricordo. and Tybout James. Microeconomic Adjustments in Uruguay during 1973-81: The

Annotated Bibliography (cont'd.....)

Interplay of Real and Financial Shocks. p. 995-1015

World Development. Vol. 13 No. 8, 1985 Pergamon Press, Great Britain. These articles try to analyse the effect of micro-events on firms by use of indices in various latin American countries. They study micro-economic adjustment during reform using financial statement data to track changes. Inference about micro financial phenomena are made by

- a) Linking earning fluctuations with economic environment through analysis of Gross Margin, Asset Turnover (Sales/Operating Assets) to measure capacity utilisation, overhead per unit of sale, financial cost, and non-operating earnings.
- b) Examining balance sheet structure through ratio analysis using quick ratio, gearing ratio (total debt/total asset) and asset composition. In addition growth of balance sheet items are examined, i.e. total debt, equity, current asset etc.

40. Turk, I.,

"Evaluation of the Performance of the Yugoslav Public Enterprises", Public Enterprise, Thematic issue on Performance Evaluation of PEs in LDCs, ICPE, Ljubljana, Vol. 8, No. 1, 1988, pp. 56-63.

Discusses the Yugoslav system of PE performance and the problems thereof. The basic indicators for every basic organization include income per worker, income in relation to average business assets, net income per worker, accumulation in relation to income, accumulation in relation to net income, accumulation in relation to average business assets, personal incomes and the formation of the common consumption fund per worker and the net personal income.

41. United Nations

Economic Commission for Africa: Improving Performance of Public Enterprises in Africa, Report of a Senior Policy Workshop organized by ECA/SAPAM, Ethiopian Management Institute, Debre Zeit, 12-16 November 1990.

The report discusses challenges to African PEs, strategies for improvement and brief outline of proposed financial indicators.

42. United Nations

Economic Commission for Africa, Public Administration, Human Resources and Social Development Division: Improving the Performance of Public Enterprise Management in Africa: Lessons from Country Experiences, Senior Policy Workshop, 14-17, October, 1991, Dakar, Senegal, published by ECA, Addis Ababa, May, 1992.

The report reviews case studies of some successful and failed African PEs in some selected countries, together with the reasons thereof. The report suggests briefly some performance indicators and the need for a thorough performance criteria.

Annotated Bibliography (cont'd.....)

43. Valk, de P.,
A General Framework for Evaluating the Performance of Textile Enterprises in LDCs, with an Application to Tanzania under Structural Adjustment, Ph.D. Thesis, University of Rotterdam, The Netherlands, 1992.
Develops and uses a number of performance indicators to compare the performance of the Tanzanian textile industry along the public-private ownership dichotomy. The firm-specific performance indicators he uses include output, capacity utilization, profits, relative total factor productivity (TFP) and the domestic resources cost (DRC).
44. Westwick, C.A.,
How to use Managements Ratio, Management Ratio, Press Work Book, London 1976.
Discusses use of various ratios, especially the so-called Du Pont System of Financial Analysis.
45. Woodward, S.,
"Performance Indicators and Measurement in Nationalized Industries", Public Administration, 64, Autumn 1986, pp. 303-317.
Discusses the performance indicators used in three British nationalized industries described in the text of this monograph.
46. Yadav, R.A.,
"Sick Industrial Companies Legislation-Remedy or the Palliative", The Chartered Accountants, Journal of the Institute of Chartered Accountants of India, October 1986, pp. 289-292.
Discusses the Indian Government Legislation enacted (1985) to ensure detection of industrial sickness and take preventive action. Discusses various indicators that signal symptoms of sickness including financial ratios.