RESEARCH ARTICLE

MONITORING SYSTEMS WITHIN THE PUBLIC SECTOR IN SOUTH AFRICA

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ARTICLE INFO	ABSTRACT
	The elemental philosophy of the article is not concerning the discourse of the modernists, and traditionalists around the evolution of M&E, however is to see effectiveness and ineffectiveness of the implementation of monitoring systems within the public sector. It conjointly provides a basis for creating public officials accountable to their administrative superiors, political representatives and also the public in generally. This article further provides data to evaluate the performance of political leaders and an incentive for continuous learning for both public officials and politicians.

INTRODUCTION

This article outlines critical components (Theory of Change, outcome statements, result chain, type of indicators, baselines, and targets) which determine effectiveness and ineffectiveness of the implementation of monitoring systems within the public sector in South Africa. At some point, monitoring programmes view the production of data as the end point, with only the data generation portion usually considered in the design of the system. The approach of designing monitoring programmes as management information systems recognizes that the ultimate purpose of the monitoring programmer is to produce information, which is used to manage performance monitoring reporting. The researcher reviewed both the effectiveness and ineffectiveness of monitoring systems in some of the Africa Counties, including South Africa, Uganda, Benin, Senegal, Ghana, and Kenya. In South Africa, the framework for managing programmer performance information, and the revised framework for strategic planning and annual performance plan prescribed the performance monitoring reporting on monthly and quarterly basis. The performance monitoring reporting is linked to the Performance Agreements of Members of the Executive Council and Ministers Delivery Agreements within the public sector. In Uganda, performance is reviewed through organizing the strategic planning review sessions bi-annually, attended by ministers and senior public servants. With regard to Benin, the potential strengths of the various monitoring systems could be drawn upon to support the evaluation function. Conversely, in Benin, the monitoring systems are constructed around the two main initiatives of the government, the poverty reduction strategy, and the development assistance strategy.

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In South Africa and Uganda, there are emerging mechanisms to institutionalize monitoring systems to feed into executive decision-making processes (Porter, 2012). South Africa and Uganda have also moved to a more regular monitoring system linked to reporting directed at politicians. Senegal, meanwhile, is an outlier. As there is no overall mandated lead agency in Senegal, the monitoring function is dispersed among a number of structures, most of which fall under the responsibility of the Ministry of Economy and Finances (including, the National Statistical Office). In South Africa, Uganda, Ghana, Benin and Kenya, lead agencies collate information from other departments and the quality of the information depends on a number of factors, including skills, and capacity of the various departments. Monitoring reports are generally widely disseminated, and in all cases considerable human, and financial resources are employed for their development (Porter, 2012). Notably, the link between good governance, accountability, and monitoring and evaluation (M&E) is profound, yet, in most African states, this is lacking. According to Hamdok (2000), an accountability framework can provide the public sector and citizens alike with valuable information on the effectiveness, efficiency, and quality of government programmes. It also provides a basis for making public officials accountable to their administrative executive managers, political representatives and the public in general. In addition, it provides information to evaluate the performance of political leaders, and an incentive for continuous learning for both public officials and politicians. Hence, any M&E system should be an integral part of a broader governance framework.

The definitions and concepts offered below are those that are mainly used for discussion in the article.

- **Monitoring:** Is the process of collecting, analyzing and reporting data on a project or programme's inputs, activities, outputs, outcomes, and impacts, as well as external factors to track whether actual investment programmer results are being achieved. This data, when analyzed, determines progress or constraints as early as possible, allowing managers to adjust project or programmer activities as needed. Monitoring aims to provide managers, decision makers and other stakeholders with regular feedback on progress in the implementation of activities specified in the development plans.

- **Evaluation:** Is a systematic and objective assessment of an ongoing or completed project, programmer or policy, its design, implementation, and results. An evaluation determines the relevance and fulfillment of objectives, efficiency, effectiveness, impact, and sustainability. Evaluation is linked to monitoring, which in turn provides the basis for evaluation. The essence of evaluation involves answering two questions: "Has the project or programmer activity met its objectives?" Evaluation informs managers whether project/programmer activities are moving towards or away from project/programmer objective or management goals, as well as the reasons why. It provides lessons learned and recommendations for future improvements.

- **Indicators:** Is a measure that can be used to monitor or evaluate an intervention. Indicators can be quantitative (derived from measurements associated with the intervention) or qualitative (entailing verbal feedback from beneficiaries).

- **Performance vs. Impact Indicators:** Project or programmer monitoring and evaluation involve two kinds of indicators: implementation performance indicators (project/programmer inputs and outputs) and project impact indicators (achievement of objectives in relation to socio-economic development). The implementation of performance indicators track the progress against set targets of a project inputs, and delivering project output, while project impact indicators measure the consequence (the "so what") of implementation.

This article further outlines critical elements pertaining to M&E:

- **Inputs:** These are all the resources that contribute to the production of service delivery outputs. Inputs entail "what we use to do the work". For example, finances, personnel, equipment, and buildings;

- **Activities:** These are the processes or steps one takes to reach the project or programme's objective. They are written in the sequence or order in which they will be implemented. Each activity completed brings one closer to achieving the project objective;

- **Outputs:** These are the final products, goods or services produced for delivery. Outputs is defined as "what is produce or deliver";

- **Outcomes:** These are medium-term results for specific beneficiaries which are the consequence of achieving specific outputs. Outcomes should relate clearly to an institution's strategic goals and objectives as set out in its plans. Outcomes are "what we wish to achieve". Outcomes are often further categorized into immediate/direct outcomes, and intermediate outcomes;

- **Impacts:** Impacts pertain to "how we have actually influenced communities and target groups". They are the results or consequences of achieving specific outcomes, such as reducing poverty or creating jobs;

- **Results:** These are the outputs, outcomes or impacts, either intended or unintended, positive or negative, of a development intervention. In Kenya, for example, the government only encourages results that support sustainable improvement in the country's outcomes – bringing real positive changes in poor people's lives (Government of Kenya, 2016).

LITERATURE REVIEW

The Integrity of the Theory of Change: The Theory of Change (TOC) is clear, precise and convincing, while Program Theory is the story of how change happens. Program Theory is the basis of results-based management and is a theory of how an intervention contributes to an explicit outcome through a series of intermediate results. Funnel and Rogers (2011) suggest that "it is imperative to determine how the situation would be with or without the intervention. The contribution of a TOC is about how change occurs and how specific actions ascertain improvement in a particular situation. It is crucial to have a logical framework for design, management, monitoring, and evaluation. A logical framework is a tool for organizing thinking for relating inputs to the implementation of activities, activities to the production of outputs, outputs to the achievement of a defined purpose to a high-level goal or impact". It is critical for organizations to generate data with integrity. Integrity is regarded as important even though at times the meaning thereof is confusing. For example, it is mostly used almost synonymously with 'moral'. However, it is necessary to differentiate between acting morally and acting with integrity, as someone of 'integrity' may perhaps act immorally without realizing that he or she is doing so. With respect to individuals, the term 'integrity' refers to the quality of an individual's character. On the other hand, a database maintains its integrity for as long as the data remains uncorrupted by error.

There are various definitions for Theory of Change, but the NEPF (2011) uses the following definitions: 'Theory of Change is a tool that describes a process of planned change, from the assumptions that guide its design, to the planned outputs and outcomes and the long-term impacts that it seeks to achieve'. However, HIVOS (Van Es *et al*, 2015) explains Theory of Change as: 'Theories of change are the ideas and hypotheses ('theories') people and organisations have about how change happens. These theories can be conscious or unconscious and are based on personal beliefs, assumptions and a necessarily limited, personal perception and reality. It is important to keep in mind that a Theory of Change is simply a theory, and it can, and should be adapted as the strategy is implemented. It should be used as an on-going process to reflect on whether a strategy works the way it was planned, and if not, the Theory of Change should be adapted.

The Realization of Outcome Statements: The strength of outcome statements is mostly realized at output, outcome and impact level. The outcome statements are linked to the original problems that a project or programmer sets out to address. The

construction of the outcome statements is centered upon the identified problems or concerns expressed by targeted beneficiaries, hence the primary stakeholders must be engaged in order to ascertain their core concerns. Outcome statements constructed without incorporating the core concerns of the beneficiaries cannot be regarded as good outcome statements. For example, if the original problem or concern is lack of job opportunities created by the public sector, the outcome statement should be coined along with a particular problem or concern. Table 1. Below outlines (1) the specific concern/issue of primary stakeholders related to the developmental problem and (2) reformulates these as outcome statements.

Table 1. Stakeholder Concerns and Outcome Statements

Stakeholder Concerns	Outcome Statements
▪ Inadequate potential stakeholders to increase employment opportunities	▪ Improved family income ▪ Increased employment opportunities

Teresia-Eke *et al* (2012) postulate that all concerns should be translated into positive sentences in order to obtain the outcome statements. The statements should be written in change language as opposed to action language.

The language used is important when individuals craft an outcome statement and should be written to reflect the desired outcome. For example, instead of using "improving family income" (action language), a good outcome statement should be written as "improved family income" (change language). Action language is aligned to a project's activity, while outcome defines a preferred state of relationships.

Hierarchy of the Results Chain

In terms of the hierarchy of the results chain, the public sector limits its scope to an outputs level against the set targets. The South African Auditor-General prescripts do not permit the public sector to extend the scope to the outcome, and impact level. The budget *located* must be aligned with the performance information, at an output level of the reporting period, either quarterly and or annually. If the scope of a project or programmer is at the outcome and impact level, this allows the project to roll-over for the medium-term strategic framework (MTSF). This has led the public sector to focus only on the inputs and outputs relative to the outcome, and impact levels, the latter being highly important results levels whose achievement must continually remain the focus of development work managers.
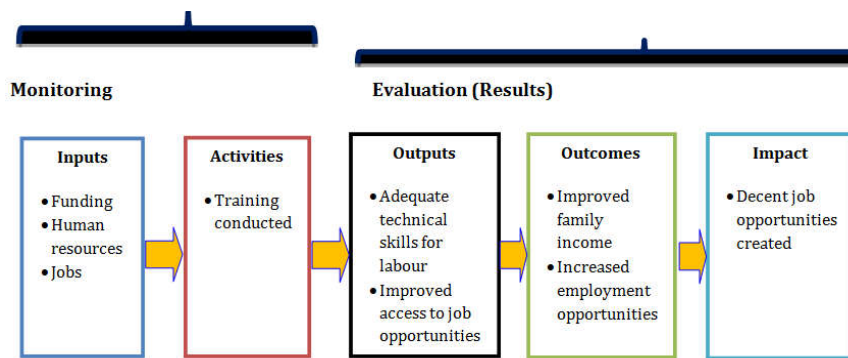

Diagram 1: Results Chain

Diagram 1. Results Chain

1.Logical Framework Approach

Table 2. Log-frame matrix based on the problem analysis

Aims hierarchy	Summary	Indicators	Baseline	Target	Assumptions	Risk
Impacts	Decent job opportunities created	Number of decent job opportunities created	2013: 10 000 decent job opportunities created	2014: 15 000 decent job opportunities created		
Outcome	Improved family income	% of family income improved	2013: 50% improvement of family income	2014: 90% of family income improved	Increased employment opportunities for relevant stakeholders	Inadequate potential stakeholders to increase employment opportunities
	Increased employment opportunities	% of employment opportunities increased	2013: 70% increase in employment opportunities	2014: 100% increase in employment opportunities		
Outputs	Adequate technical skills for labour	Number of technical skills for labour acquired	2013: 30 technical skills for labour acquired	2014: 50 technical skills acquired	Workers empowered with technical skills	Lack of reputable institution to produce skilled labourers
	Improved access to job opportunities	% of people accessing job opportunities	2013: 85% of people access job opportunities	2014: 100% of people access job opportunities	Adequate access to job opportunities	
Activities	Training conducted	Number of training sessions conducted	2013: 60 training sessions conducted	2014: 70 technical skills sessions conducted	There is appropriate expertise to conduct training	Lack of expertise to conduct training
Inputs	Funding Human resources Jobs	None	None	None	Buy-in of potential stakeholders including political heads	Lack of buy-in of potential stakeholders and allocation of resources

An important distinction between the results levels of outputs, on the one hand, and the results levels of outcomes, and impacts on the other, pertains to the source of information for M&E. Generally, programmer level information is sufficient to determine if outputs have been generated or otherwise. For outcomes and impacts, however, one needs to turn to population-level information to establish whether they have been realized or not. Given that developmental work is primarily about improving the lives of communities, i.e. people in the population, it is vital that the results realized are measured based on information generated from the citizenry within the population (Teresia-Eke *et al*, 2012).

Results Chain: Diagram 1 below, depicts the theory of how an intervention is supposed to work and the relationships between resources and results. The results chain for the intervention displays the necessary inputs, required activities, expected outputs, intended outcomes, and desired impact.

Quality and Nature of Indicators: A logical framework is a tool for organizing thinking for relating quality indicators and utilizes direct indicators to assess performance. Although they are only indicators, it is essential to select the best methods that can be utilized. Most of the indicators used are quantitative in nature, which is typically easier to use than qualitative indicators. Quantitative indicators provide objective rather than subjective measures, and are generally used in M&E systems. Qualitative indicators are descriptive criteria or categories of measurement. These indicators reveal whether a certain situation is present or not, for instance, whether a law had been promulgated, an institution set up a new policy implemented, assessment of whether a projects services are excellent, satisfactory and or poor implemented. Qualitative indicators can include changes in sensitivity, satisfaction, well-being (UNDP, 2009). Qualitative indicators measure results in terms of:

- Quality of …
- Level of…
- Compliance with …
- Extent of …

Quantitative indicators expressed in terms of amounts, numbers, ratios, percentages, and measurement of these give a numerical value that can be easily compared to targets to assess performance. Quantitative indicators tend to stress:

- Percentages
- Numbers
- Quantifiable results
- Rate
- Ratios

Both quantitative and qualitative variables are simple and reliable means to measure performance. The measurement tools help to establish the results, which are called indicators. A logical framework is a tool for measuring project progress through objectively verifiable indicators, and means of verification. Indicators generate information that highlight areas of success, as well as shortcomings. Government-Wide Monitoring and Evaluation System (2007) defines an indicator as a pre-determined signal that a specific point in a process has been reached or result achieved. It should include a unit of measurement that specifies what is to be measured along a scale or dimension but does not indicate the direction or change. It is beneficial to have indicators for the results chain at output, outcome, and impact level.

Teresia-Eke et al (2012) rightly note that it is important "that the existence of an effective M&E system with reliable measurements is being generated by the indicators however, the bad indicators cannot provide factual measurements". Cusec and Risk (2004) further suggest that "all indicators utilized in an M&E system should fulfill the CREAM criteria". The "CREAM" criteria apply to the indicators used, whereby each indicator set must be:

- Clear: precisely and easily understandable;
- Relevant: sufficiently linked to the result of interest;
- Economic: available at reasonable cost;
- Adequate: provide a sufficient basis to measure performance;
- Monitorable: amenable to independent validation.

Teresia-Eke et al (2012) state that "part of the element of results chain indicators are categorized into four main groups. This is known as the 4E's categorization". These indicators focus mainly on measuring a particular situation and comprise efficiency, equity, economy and effectiveness indicators, as elaborated below:

- Efficiency indicators: these focuses on how well resources have been utilized;
- Equity indicators: these are selected to suit a particular group and area;
- Economy indicators: these are concerned with cost and timing;
- Effectiveness indicators: these are utilized to measure the extent to which outputs are able to generate intended outcomes.

In order to generate performance information in the programmer or project which reflects its true success and shortcomings, it is worthwhile to have indicators for the results chain at output, outcome, and impact level. The indicators must contain the CREAM criteria, while the performance indicators must provide qualitative and quantitative measurements. However, qualitative indicators consume more time and are also more-costly when it comes to collecting data for analysis. As for performance indicators, these must allow management to make decisive decisions. Indicators may refer to either the present state or may be understood as pointing to future economic, and social potentialities. Atkinson et al (2002) describe social indicators as "a centered set of specific indices covering a large vary of social concerns". Indicators discuss with a broad array of phenomena, as well as measures, signs, and indices inform to the current state and additionally to future developments. Descriptive indicators discuss with the current and to a range of states, like housing or subjective experiences. Predictive indicators refer to longitudinal studies and are life course indicators, while the various states are interpreted as predictors of possible life course trajectories.

Baselines and Targets: For projects aiming at the creation of decent job opportunities, the baseline is a vital part in their M&E systems. A baseline is formed from activity to impact

level. The creation of a baseline is a crucial activity in order to measure the success and failure of the project and or programmer and must be correct, realistic and audited. A baseline is used as a yardstick to set realistic targets. Teresia-Eke et al (2012) postulate that "a baseline is seen as a measurement of the state of an indicator directly prior to the M&E period. The baseline is a record of the current condition against which changes in the future can be tracked". Underpinning the results chain are the results themselves, which are defined through indicators. Indicators are translated into a set of either quantitative or qualitative measures in order to establish whether progress is made (The World Bank, 2012).

Cusec and Risk (2004) state that the baseline is that the information for decision-making in order to inform programmer, policy and project performance. It's thus, crucial to line a baseline and to assemble information on the pertinent indicators. Baseline features comprise the following:

- Establishing baseline information on indicators;
- Building baseline information;
- Identifying baseline information sources for indicators;
- Designing and comparing data collection methods;
- Conducting pilots;
- Data collection.

In the logic framework, the target assists to ascertain whether the results in the form of impact, outcome, and outputs have been met as a set. Targets are objectives that point exactly to what is planned to be achieved. Teresia-Eke et al (2012) refer to the "SMART" principle that is used to measure targets. In terms of this, each target set must be:

- Specific: emphasizes the importance of clarity;
- Measurable: the extent of its actualization can be easily established;
- Achievable: targets ought to be considerable and reasonable;
- Relevant: targets must be inseparably linked to the achievement of intended results of outputs, outcomes, and impacts;
- Time-bounded: to know precisely the limits of time within which the targets must be realized.

Possibilities of Results in a Performance Paradox

Marshall W. Meyer and Vipin Cupta (1994), set forth the performance paradox theory, which posits that organizations are able to uphold control without full understanding what precisely performance is. The theory is grounded in three characteristics of performance measurement. Firstly, there are several performance metrics, and the figure continues to grow. Secondly, most measures, even those used more frequently for performance, display little to no correlation with one another. Lastly, the dominant performance measures at any given point in time change continuously. It is important to understand that the paradox is also about the reports on performance. As opposed to expectation, the performance paradox does not provide an accurate report of performance and may result in "overrepresentation", if the performance is worse than reported, or "underrepresentation", if it is better than reported. The results of performance assessments are used to evaluate

organizations or situations which may arise where there is poor performance (Van Thiel & Leeuw, 2002). Meyer and Cupta (1994) state that it is difficult to obtain performance reports if the indicators are inadequate. On the other hand, auditors' reports display a strong inclination to concentrate on procedures rather than actual performance. Another cause of unintended performance paradox, as noted by Wilson (1989), is the vagueness of policy objectives, as public policies are occasionally in contradiction to the stated goals. Typically, performance indicators are not neutral but challenge performance measures between politicians and managers in the public sector. The vagueness of evaluation casts doubt upon the efficiency and effectiveness of policy implementation. In addition, a deliberate performance paradox in the public sector may sabotage an audit when public service employees consider it an act of distrust. This non-cooperative behaviour becomes dominant and impairs effective and efficient policy implementation, which then muddies the relationship between pre-determined objectives and actual performance (Ghoshal & Moran, 1996; Leeuw, 2000).

Conclusion

Effective implementation of the monitoring system is essential within the public sector in South Africa. Hence, government performance is very critical in countries, particularly in developing countries. In this regard, governments have adopted the Government-Wide Monitoring and Evaluation System to improve performance measurement through a results-based approach. The approach of designing monitoring programmes as management information systems recognizes that the ultimate purpose of the monitoring programmer is to produce information, which is used to manage performance monitoring reporting. Monitoring system basically responds to a theory of how an intervention is supposed to work and the relationships between resources and results. The results chain for the intervention displays the necessary inputs, required activities, expected outputs, intended outcomes, and desired impact. Hence, to come up with performance data that reflects truth success and shortcomings of a project or programmer, it's useful to own indicators for the result chain at an output, outcome, and impact level.

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