

# Measuring Strategic Performance in State-owned Organizations: An Evaluation of Five Proposed Contemporary Metrics

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**Abstract-** Performance measurement provides the inspiration to achieve superior levels of effectiveness and competitiveness. It focuses on means and results or processes and outcomes of, and can be described in terms of practices and metrics. This paper is a review of related studies and literature on the measurement of strategic performance in state-owned organizations with a detailed evaluation of some proposed contemporary metrics. Materials for the study were collated from secondary sources including proceedings from conferences, book references, periodicals, journals, newspapers, and the internet. An interpretive literature approach was adopted for the study. Thoughts and personal interpretations on the issues addressed in the paper were the bases upon which the authors drew their conclusions on the topic. The study revealed that given the dynamic and rapidly changing environment in which most organizations operate, it is important that state-owned organizations design, implement and effectively manage their performance measurement metrics. This would ensure that such metrics remain appropriate and provides information that is relevant to the strategic performance of the specific enterprise.

**Index Terms-** Strategic performance, Organizations, State-owned, Metrics, Balanced scorecard

## I. INTRODUCTION

It has become increasingly important for organizations to develop systems of performance measurement which not only reflect the growing complexity of the business environment but also monitor their strategic response to this complexity. Also, to compete in the global markets, organizations strive to make outstanding performance. Thus evaluating an appropriate performance is a key role in company's success. For this reason, performance measurement has gained a tremendous amount of attention because it has significant influences on performance.

Lack of proper performance measure will result in failure to meet customer needs. And this causes low competitiveness and provokes low profit, if bad performance measurement lasts. It is generally believed that a well-extracted metrics can increase the chances for success by inspecting the entire process of the company environment. And the result of performance measurement delivers company's competitive advantages by

correcting the company's defects. The choice of performance measure has long been a difficult issue facing researchers within the organizational field (Glaister and Buckley, 1998). Finance and associated disciplines have relied on objective performance metrics such as share price movements and accounting data to assess the outcome of organizational choices. Others, for example organizational behavior and strategic management, have frequently relied on subjective performance indicators, including managers' self-report. In some cases the use of a subjective measure has been justified by difficulties in obtaining objective data, for example because the focal unit was a constituent part of a larger organization (Dess and Robinson, 1984).

Neely (1999) defined performance as the ability of an object to produce results on a dimension that has been determined beforehand with relation to a target. Therefore it is important to get first, an object against which performance is being considered; second, a dimension where we are going to be interested, and third, a target for results. Metrics are an objective means of measuring performance and effectiveness. There is a saying that "you can't manage if you can't measure." That leads to "unless you are measuring, you are only practicing", and "you will achieve what you measure." Metrics are like a two-edge sword; on one hand, metrics are necessary to establish objectives and measure performance. On the other hand, incorrect or disconnected metrics can mislead and result in unexpected and sub-optimal results.

Performance measurement is the process of measuring efficiency, effectiveness and capability, of an action or a process or a system, against a given norm or target. Effectiveness is a measure of doing the right job, that is, the extent to which stakeholder requirements are met. Efficiency is a measure of doing the job right, that is, how economically the resources are utilized when providing a given level of stakeholder satisfaction. Capability is a measure of ability required to do both the job right and right job, in the short-term as well as the long-term. This can be tangible, such as, resources, technology, or intangible, such as a corporate culture. Hon (2005) describes performance measurement as indispensable for managing the state of the system and taking the appropriate actions for maintaining company's competitiveness. It is defined as "the process, a metric, or the set of metrics, which are used to quantify both the efficiency and the effectiveness of actions" (Bourne et al.,

2003). Performance measurement is the ongoing monitoring and reporting of program accomplishments, particularly progress towards pre-established goals. It is typically conducted by program or agency management. Performance measures may address the type or level of program activities conducted (process), the direct products and services delivered by a program (outputs), and/or the results of those products and services (outcomes).

### 1.1 Objectives of the Study

The purpose of this paper is to project the idea that all state-owned organizations, especially in Ghana, have performance measurement systems to support their own planning and evaluation activities. This would help address appropriate linkages, reduce waste in public organizations, and eliminate duplication of effort via teamwork and collaboration.

## II. THEORETICAL FRAMEWORK

Brown and Delvin (1997) define a performance measurement system as a complete set of performance measures and indicators derived in a consistent manner according to a forward set of rules or guidelines. It is a means to monitoring and maintaining organizational control, i.e. the process of ensuring that an organization pursues strategies that lead to the achievement of overall goals and objectives (Nanni et al., 1990). Performance measures can be used to force an organization to focus on the right issues. Performance measures quantitatively tell us something important about our products, services and the processes that produce them. They are a tool to help us understand, manage, and improve what our organizations do. Effective performance measures can let us know: how well we are doing; if we are meeting our goals; if our customers are satisfied; and if and where improvements are necessary.

The characteristics of effective and efficient performance measures are described in (Parmenter, 2010; 2004; Neely et al., 1995, 1997). These are summarized as follows: aligns daily activities to strategic objectives; have a balance between critical measures and have a limited number of performance measures; be easily accessible; have a clear purpose and a target for each performance measure and a timeframe for targets; guard against sub-optimal; developed by users; consider improvement in performance; combine leading and lagging indicators; and motivate employees. Neely et al. (1997), based on prior research, state that measures of performance should: be simple to understand and clearly defined; be visible to all; be derived from strategy and relate to specific, achievable goals; provide timely and accurate feedback; be quantitative (and the organization should be able to influence these numbers).

Organizational performance is a broad term that covers both economic and functional aspects. According to Bourne et al. (2003) Performance Measurement Systems (PMSs) should include (i) both financial and non-financial measures, (ii) both internal and external measures and (iii) both measures which quantify what has been achieved as well as measures which are used to help predict the future. Key elements of a PMS are: a set of procedures for collecting and processing data; timetables and protocols for distributing information about performance to users within and outside the organization; an organizational learning

mechanism to identify what actions can be taken further to improve performance; a review process to update the PMS regularly; and reward system.

Sinclair and Zairi (1995) provided a list of seven dimensions to emphasize the importance and need for performance measurements. Performance measurement: enhances improvement; can ensure that managers adopt a long-term perspective; makes communication more precise; helps an organization to allocate its resources to the most attractive improvement activities; is central to the operation of an effective and efficient planning, control or evaluation system; can affect the motivation of individuals and encourage right organization behavior; and can support management initiatives and manage change.

Generally, the function of performance measurement can be categorized into the following four aspects (Neely, 1998): *Checking position*: Establishment of current status and monitoring of progress over time and against benchmarks; *Communicating position*: Communicate with shareholders, customers, or employees by releasing annual reports, etc.; *Confirm priorities*: Performance data provide insights into what is important to a business, thus exposing shortfalls that allow organizations to identify priorities; and *Compel progress*: The measures can help organizations focus on specific issues and encourage people to search for ways to improve performance. The measures communicate the priorities and can form the basis for reward. Therefore, the role of performance measures is to control processes and to enforce continuous performance improvement by quality improvement teams. That is, measures should supply information about how well processes and people perform, the goal of which is to motivate better future performance. They provide us with the information necessary to make intelligent decisions about what we do.

According to Propper and Wilson (2003), among the rationales ascribe to performance measurement in the U. K. public sector are: As a mechanism designed to improve the performance of individual units such as hospitals, schools or local authority departments with the best performing units often held up as examples for others to follow. Also, as a device aimed at improving the performance of the whole system of the organization, for example education and social care. Here, auditors and inspection agencies disseminate information as a way of signaling 'best practices' within a particular organization. In addition, performance metrics as attempts to foster 'pseudo-competition', for example when providers of healthcare provide performance information in a way designed to influence purchaser's decision or in the U. K. care homes sector. Moreover, the metrics serve as ways of upholding accountability, especially of local agencies to their clientele or customers. Here, performance measurement has taken the form of publicly available information such as 'league tables', which are often used to highlight organizations that perform poorly. The notion of public choice on which such systems are based has come under scrutiny. This way of using performance information has also been employed to ensure accountability to higher 'central' bodies. Finally, the measures are internal management control or performance management device (Curley, 1951). Here, performance information may not be made public, is used instead

to assist local managers in monitoring the success of objectives and to inform resource allocation decisions.

A performance measure is composed of a number and a unit of measure. The number gives us a magnitude (how much) and the unit gives the number a meaning (what). Performance measures are always tied to a goal or an objective (the target). Performance measures can be represented by single-dimensional units like hours, meters, nanoseconds, dollars, number of reports, number of errors, number of employees trained, length of time to design hardware, etc. They can show the variation in a process or deviation from design specifications. Single-dimensional units of measure usually represent very basic and fundamental measures of some process or product. More often, multidimensional units of measure are used. These measures are expressed as ratios of two or more fundamental units. They may be units such as miles per gallon (a performance measure of fuel economy), number of accidents per million hours worked (a performance measure or the companies safety program), or number of on-time vendor deliveries per total number of vendor deliveries. Performance measures expressed this way almost always convey more information than the single-dimensional or single unit performance measures. Ideally, performance measures should be expressed in units of measure that are the most meaningful to those who must use or make decisions based on those measures. Performance measures can determine the level of progress of the organization and determine the necessary action needed for improving the organization. From a management perspective, performance measurement has the role of providing feedback information, which is very useful for managers to monitor the progress of the company's performance as an initial step in the development of the company, to increase motivation and communication and to diagnose problems (Rolstands, 1995). Neely et al. (2000) recommends criteria for the design of performance measurement that are grouped into two categories, i.e., criteria that focus on design process and criteria that focus on output of the design process. Criteria that focus on the design process are described as follows: performance measures should be derived from the company's strategy; the purpose of each performance measure must be made explicit; data collection and methods of calculating the performance must be made clear; everyone (customers, employees and managers) should be involved in the selection of the measures; the performance measures that are selected should consider the nature of the organization; and the measurement process should be flexible in terms of dynamic condition. Desirable characteristics of the output process include: performance measures should enable/facilitate benchmarking; ratio-based performance measures are preferable to absolute numbers; performance criteria should be directly controlled by the evaluated organizational unit; objective performance criteria are preferable to subjective ones; non-financial measures should be adopted; performance measures should be simple and easy to use; performance measures should provide fast feedback; and performance measures should stimulate continuous improvement rather than simply monitor.

According to Zairi (1994), the function of performance measurement is to generate information that will be useful for solving a wide variety of problems and which can be applied to certain situations. In its various forms, performance measurement

represents the yardsticks which gauge how well people have done and in turn, which motivate them to achieve even higher targets (Zairi, 1994). Performance measurement provides the inspiration to achieve superior levels of effectiveness and competitiveness. It focuses on the means and results (ends) or processes and outcomes, and can be described in terms of practices and metrics (Zairi, 1994). Practices are characteristics which describe internal and external business behaviors which tend to lead to a performance gap. Practices could be related to the processes themselves, organizational structures, management systems, human factors, and strategic approaches. Performance measurement can also be described as an important aid for making judgments and decisions. Performance measurement can help managers to answer five strategically important questions: 1) where have we been? 2) where are we now? 3) where do we want to go? 4) how are we going to get there? and 5) how will we know that we got there? (Lebas, 1995).

Performance measurement provides the basis for an organization to assess how well it is progressing towards its predetermined objectives, to identify areas of strengths and weaknesses, and to decide on future initiatives, aiming to improve organizational performance (Amaratunga and Baldry, 2002). According to literature, performance measurement has been developed in two phases (Tangen, 2004, Lavy et al., 2010). In the first phase, which continued until the 1980s, performance measurement primarily focused on financial criteria. Since the late 1980s, the second phase revealed that the traditional performance measures had severe limitations including the fact that it encouraged short-term thinking, lacked strategic focus and had insufficient local optimization. The introduction of new performance measures such as shareholder value, economic profit, customer satisfaction, internal operations performance, intellectual capital and intangible assets (Neely et al., 2000) reflected a more holistic and integrated approach by taking into account the benefits as well.

Today, the perceived limitations of traditional accounting-based measures are numerous and well-known: 1) too historical and "backward-looking", 2) lack of predictive ability to explain future performance, 3) reward short-term or incorrect behavior, 4) lack of actionability, 5) lack of timely signals, 6) too aggregated and summarized to guide managerial action, 7) reflect functions instead of cross-functional processes, and 8) give inadequate guidance to evaluate intangible assets (Ittner and Larcker 1998). Even so, non-financial measures are also problematic. The relation between improvement in non-financial measures and profits is unclear. Moreover, as with all measurement systems, dysfunctional behavior can be observed in employees that use "gaming" to optimize individual performance (Fisher 1992). Neely et al. (1995) summarized the main changes from traditional performance measurement systems towards modern innovative performance measurement systems concluding that performance measurement has changed from simply focusing on the effectiveness and efficiency of an organization to establish a wider set of criteria.

In attempting to establish a clear link between performance and strategy it is vital that management ensures that the performance measures target areas within the business where success is a critical factor. The performance measures chosen should: measure the effectiveness of all processes including

products and/or services that have reached the final customer; measure efficiency in terms of resource utilization within the organization; comprise an appropriate mix of both quantitative and qualitative methods; comprise an appropriate focus on both the long-term and short-term; and be flexible and adaptable to an ever-changing business environment. Kaplan and Norton (1996) identified four barriers to implementation of performance measurement systems. These were identified through individual cases but quantifiable supporting evidence was provided from a survey of managers attending the Business Intelligence conference in London. These barriers are: *Vision and strategy not actionable*: This occurs when the senior management team has failed to achieve consensus as to how the vision should be achieved. This leads to different groups pursuing different agendas and effort is neither coherent nor linked to strategy in an integrated way. *Strategy is not linked to department, team and individual goals*: When this happens, then those concerned continue to follow the old traditional performance criteria and thwart the introduction of the new strategy. This can be exacerbated by an unaligned incentive system. *Strategy is not linked to resource allocation*: This often occurs when the strategic planning process and annual budgeting process are separated and may result in funding and capital allocations becoming unrelated to strategic priorities; and *Feedback is tactical and not strategic*: This occurs when feedback concentrates solely on short-term results (such as the financial measures) and little time is reserved for the review of indicators of strategy implementation and success.

Eccles (1991) argues that, from his experience of working with organizations implementing performance measurement systems there are three important factors for the successful updating of a performance measurement system: 1) developing information architecture with supporting technology; 2) aligning incentives with the new measurement system; and 3) the lead given by the CEO.

## 2.1 Why Measure Performance?

According to <http://www.orau.gov/pbm/documents/overview/whymeasure.htm> (retrieved on 12/2/2016), state agencies, businesses, and foreign governments are increasingly relying on performance measurement information to help chart progress in increasingly frugal times.

Performance measurement involves determining what to measure, identifying data collection methods, and collecting the data. Evaluation involves assessing progress toward achieving performance expectations, usually to explain the causal relationships that exist between program activities and outcomes. Performance measurement and evaluation are components of performance-based management, the systematic application of information generated by performance plans, measurement, and evaluation to strategic planning and budget formulation.

Performance measurement improves the management and delivery of products and services. A recent opinion poll in the USA asked a group of adults what they thought the Federal government's top priority should be. Almost half wanted emphasis put on better management. In a world of diminishing resources, improving management of programs and services is critical.

*Performance measurement improves communications internally among employees, as well as externally between the organization and as customers and stakeholders.* The emphasis on measuring and improving performance (i.e., "results-oriented management") has created a new climate, affecting all government agencies, and most private sector and nonprofit institutions as well. A results-oriented organization requires timely and accurate information on programs and supporting services. Collecting and processing accurate information depends on the effective communication of mission-critical activities.

*Performance measurement helps justify programs and their costs.* The public, and other national accountability agencies are increasingly taking a more "results-oriented" look at government programs, and the cost-effectiveness of program expenditures is increasingly being called into question. In an era of shrinking state budgets, demonstration of good performance and sustainable public impacts with positive results help justify programs and their costs.

*Performance measurement demonstrates the accountability of stewardship of taxpayer resources.* State employees and contractors want their day-to-day activities to contribute to a better society. Performance measurement can show that we are addressing the needs of society by making progress toward national goals.

It is important to note, however, that performance measurement cannot be undertaken in isolation. It is only one step in a continuous improvement process that includes assessment, strategic planning, program and budget formulation, performance measurement, and program evaluation.

## 2.2 How is Performance Measurement Used?

State organizations may use performance measurement for three basic purposes:

1. Providing measurable results so the state-owned organization can demonstrate progress towards goals and objectives. This is done by providing specific measurement results that aggregate to organization-wide measures.
2. Determining the effectiveness of the state-owned entity. State organization needs to determine how well it is meeting its mission, vision, and goals. Developing and using a system of performance measures enables you to identify areas needing attention and opportunities for improvement.
3. Characterizing the performance of a work process can support improvement of that process. Process improvement teams often analyze work processes by breaking them down into related project activities and tasks to improve quality, timeliness, and efficiency.

## III. MATERIALS AND METHOD

The study is based on a review of relevant related data on performance measurement in state-owned organizations. Data for the study were therefore collated mainly from secondary sources including proceedings from conferences, book references, periodicals, journals, newspapers, and the internet. An interpretive literature approach was adopted for this study. The authors reviewed widely adequate literature on the subject, breaking into parts and examining the components of the topic for easy comprehension of the issues discussed. Thoughts and

personal interpretations of the issues addressed in the paper were the bases upon which the authors drew their conclusions on the topic.

#### IV. DISCUSSION

Although quality management models are not designed for performance measurement, they act as tools of managing performance and are often used to help organizations to improve performance practice. These quality models are also self-assessment frameworks. Below is evaluation some of the models and metrics.

##### 4.1 Balance Scorecard (BSC)

The BSC was developed by Kaplan and Norton (1992) as a performance measurement framework that added strategic non-financial performance measures to the traditional financial metrics to give managers and executives a more clear and holistic view of organizational performance. It has evolved from its early use as a simple performance measurement framework to a full strategic planning and management system. Within a decade, a majority of the Fortune 1000 companies were implementing or had already implemented the BSC (Kraaijenbrink, 2012). Today, thousands of private, public and not-for-profit organizations have implemented the BSC (Kaplan, 2010; Basuony, 2014). Martinsons et al., (1999) link the widespread adoption of the BSC to its multi-dimensional approach to performance measurement. The application of the BSC involves strategizing in the use of available resources such as manpower, finances and other resources to attain set goals. A very pertinent link to maximizing organization wealth is profitability. Profit-making is essential because it is the measure of performance on production of goods or services and it is the means by which the future of the firm is assured and operational improvements are believed to cause improved financial results and increased shareholders wealth in the long-run.

The underpinning conception of BSC is, "if you cannot measure it, you cannot understand it" (Kaplan, 2010). Kaplan and Norton (1992) developed this conception based on multi-company research findings done in 1991 by the Nolan Norton Institute. The findings indicated that, despite intangible assets playing an increasingly central role in value creation, firms were not measuring nor integrating intangible assets in their management systems. Thus, the original and core objective of the BSC was to measure and integrate intangible assets into a firm's performance measurement (Kaplan and Norton, 1992, 2004; Kaplan, 2010). However, since the concept of BSC is evolving, differences in its interpretation and practice have emerged. Depending on interpretation and practice, many organizations have implemented the BSC to support a wide range of strategic organizational objectives. Some firms use the BSC as a strategic management tool to support decision-making at the strategic management level (Martinsons et al., 1999; Murby and Gould, 2005), to improve management of intellectual capital (Bose and Thomas, 2007), to develop employee incentive system (Ciuzaitė, 2008) and to manage (Shadbolt et al., 2003). However, a majority of firms use the BSC to measure the overall performance of an organization or to implement a strategy (Nzuve and Nyaega, 2011).

The BSC enables companies to develop a more comprehensive view of their operations and to better match all operating and investment activities to short-term and long-term strategic objectives. The BSC approach provides a clear prescription as to what companies should measure in order to "balance" the implications in all the functional areas, arising out of the strategic intent. BSC is capable of enforcing the achievement of corporate strategies especially as there are causal relationship between the performance of the organization and the effective management of the dynamics of its four perspectives (Kaplan and Norton, 2001). When using the BSC to measure performance, firms focus on the four performance metrics or perspectives i.e. financial, customer, internal process, and learning and growth metrics (Kaplan and Norton, 2002). These are means by which each member of staff performing key functions are expected to measure their performances on the job especially their contribution to organizational goals of increasing wealth and profitability.

According to Al-Najjar and Kalaf (2012), financial *measures* convey the economic consequences for the actions already taken by the organization, and focus on the profitability related measures on which the shareholders verify the profitability of their investment. According to Kaplan and Norton (1992) the three core financial themes that can drive the business strategy are: *Revenue Growth*: deals with every action/activity that can increase the revenue base of an organization (Koutsoyiannis, 1979). This theme focuses on how to increase the number of new products, develop new customer and how to change to a more profitable product (or service) mix. *Cost Reduction*: focuses on how to reduce product/service cost per unit and how to reduce selling/general administration cost. *Asset Utilization*: this theme measures financial performance such as: return on investment and economic value added.

Kairu et al. (2013) noted *customer perspective* captures the ability of the organization to provide quality goods and services, the effectiveness of their delivery, and overall customer service and satisfaction. This will result from price, quality, availability, selection, functionality, service, partnerships and brand value propositions, which will lead to increased customer acquisition and retention (Gekonge, 2005). The core objectives of this perspective are: *Increasing the Market Share*: the theme is focused on all activities that the organization can employ to improve its share of the market. This may be through advertisement, sales, promotions, low-prize of products and services; *Increasing Customer Retention*: the focus is to ensure that existing customers continue to patronize the organization. Strategic measures that can be taken include; improving customer-organizational relationship, responding to customers' complaints/suggestions, offering after-sale services to customers; *Increasing Customer Acquisition*: the focus here is to increase total sales to new customers. Strategic measures to be taken include giving out free samples to new market segments, penetration of new market segments and introduction of new products and/or improving on existing old products; and *Increasing Customer Satisfaction*: The focus here is on customer-survey satisfaction ratings. Strategic measures that can be taken include administering of questionnaires to customers, monitoring number of repeated patronage by old customers, etc.

The *internal business process* perspective, according to Gekonge (2005), “focuses on the internal business results that lead to financial success and satisfied customers”. Kaplan and Norton (1992) also identified three process value-chains on who to apply the internal process perspectives. These are: *Innovation Process*: here, the managers research the needs of customers and then create the product or service that best meet those needs; *Operations Process*: This process represents the short-wave of value creation. It is concerned with producing and delivering existing products and services to customers; and *Post-Sales Service Process*: It represents the final item in the process value chain for the operations process perspective. It focuses on how responsive the organization is to the customer after the product or service has been delivered. After sale services include warrantee and repair activities, treatment of defect and returns, administration of customer payments and resolution of customer problems/complaints.

Finally, the *learning and growth* perspective looks at how an employee of an organization learns and grows in his/her career to improve the performance of the organization. According to Kairu et al. (2013) “the learning and growth perspective examines the ability of employees (skills, talents, knowledge and training), the quality of information systems (systems, databases and networks) and the effects of organizational alignment (culture, leadership, alignment and teamwork), in supporting the accomplishment of organizational objectives”. Kaplan and Norton (1992) identified two major enabling factors for this perspective to be actualized: *Increasing Employee’s Capabilities*: the focus is to ensure that every employee is able to deliver a service that would put the company in the best advantageous position. Strategic measure that can be taken to achieve this include: constant training of staff to master existing ways of doing the job as well as adopting new ways and making staff attend internal and external workshops and seminars on new trends relating to the job and industry; and *Increase Motivation, Empowerment and Alignment*: The focus here is to take individual goals into consideration when formulating organizational goals to bring these in alignment. Strategic measures that can be taken include: training existing staff to acquire new knowledge of the job rather than replace them with new staff and welcoming individual suggestions on ways to improve existing products/processes or developing newer and better ones.

By measuring the four metrics, the BSC assists firms to track all the important aspects of a firm’s strategy as well as achieve continuous improvement of partnership and teamwork. The performance model retained financial metrics as the ultimate measure of a firm’s performance. The BSC as a management system is designed to link and align the company with its strategy at all levels. After the BSC is formulated at the corporate level of the company, it is cascaded downward to strategic business units and support departments (Niven, 2006). These units develop scorecards to implement the strategy communicated by the corporate scorecard. Full implementation of the BSC model requires cascading down to the individual level. This provides for each person having a perspective on his or her role in strategy implementation. For each measure in the personal scorecard, strategy implementation goals are set. Incentives such as stock options and merit pay increases are linked to their performance in implementing strategy.

Measurements are used throughout the organization to implement strategy and achieve synergies. Cascading corporate BSC to the innovative function and the R&D department aims to achieve integration of technology planning with business strategy (Bremser and Barsky, 2004; Kaplan and Norton, 2001). In practice, companies use the BSC approach to accomplish four critical management processes: clarify and translate vision and strategy; communicate and link strategic objectives and measures; plan, set targets, and align strategic initiatives; and enhance strategic feedback and learning.

The BSC has been applied to almost all industry sectors and industry sizes, from manufacturing to service industries, from large to small organizations and from public to the private sector (Giannopoulos et al., 2013). The continued revision of the concept widened its application (Madsen and Stenheim, 2014). Bose and Thomas (2007) studied the application of the BSC in Fosters Brewing Group in Melbourne Victoria, now acquired by the SAB Miller Plc. Fosters Brewing Group was experiencing a decline in performance. The CEO decided to adopt the BSC as a strategic management tool to acquire and to improve intellectual capital, and to retain old markets while capturing new ones. Investing in intellectual capital would enhance innovation of products and features to improve and sustain the brewing firm’s value and its competitive advantages. The application of the BSC reversed the declining performance by improving the market value of Fosters Brewing Group. However, implementation of the BSC had several challenges. It took a long time because the BSC’s top-down structure placed a greater emphasis on senior management. The departure of some senior management staff stalled implementation. The changing nature of the business environment, including new competitors and changing customer tastes required several re-conceptualization of the BSC and multiple revisions of key indicators. The final limitation was the application of the BSC was for meta-change initiative, which requires high costs of maintenance and dedicated leadership, either of which could potentially stall the maintenance of the BSC.

The main proponents of the BSC, Kaplan and Norton (1992; 2002) assert has beneficial values to implementing organizations. In the original conception of the BSC, the main benefits were to assist organizations to develop and implement effective business strategies (Kaplan and Norton, 1992). Madsen and Stenheim (2014) add that despite a large body of scholarship on the BSC criticizing or remaining skeptical about a clear-cut relationship between the BSC and business performance, the widespread practice of the BSC suggests its use has some beneficial values, whether perceived or real, to thousands of organizations that have implemented it. In fact, Rigby and Bilodeau (2013) argue the extremely first and successful spread of the BSC among thousands of organizations two decades after its inception is sufficient evidence that implementing organizations are either satisfied with the concept or at least find some aspects of the concept useful and beneficial to enhance performance.

Madsen and Stenheim (2014) supported the position that the BSC has an overall positive effect on the performance of an organization but find that not all aspects of the model are beneficial. While some aspects or uses of the BSC assist to improve performance, others hamper performance. However, Madsen and Stenheim (2014) observe that the differential

outcomes of the BSC are because the concept is still developing. They argue that academics and practitioners should understand that the concept is still evolving and its interpretation and use varies across scholars and practitioners respectively. Because of the interpretive and practice variations, different organizations have implemented the framework to achieve different purposes especially to improve performance or to improve strategic management. As a result, the BSC has different benefits to organizations depending on the purpose of the implementation. The variations notwithstanding, Madsen and Stenheim (2014) find three common benefits of the BSC to management. First, the BSC assists managers to focus on strategy, structure and vision. Focus is important for management to understand and to guide strategy implementation. Second, the BSC integrates financial and non-financial-based metrics to assist managers to focus on the entire business process and ensure current business activities and events contribute to customer values and to the long-term firm strategy. Third, the BSC assist managers to monitor the execution of a strategy by mapping cause-and-effect linkages between employee activities and strategy implementation.

Basuony (2014) also finds that BSC benefits organizations but the benefits lean towards large organizations. The main benefit is solving problems associated with organizational characteristics such as changes in organization structure, specialization and different hierarchical levels. The associated problems are communication, coordination and control. The BSC solves these problems through its five principles: translating strategy into operations; aligning organization to strategy; integrating strategy into employees' everyday tasks; making strategy a continuous process; and mobilize change through top leadership (Kaplan and Norton, 2002). Basuony (2014) observes aligning organization to the strategy assists in solving the problem of communication especially formal reporting and bureaucracy whereas making the organization strategy an everyday job solves the problem of communication and coordination. Further, as a control system, the BSC assists large organizations to achieve their strategies by enabling management to articulate, communicate, and monitor strategy implementation. While small firms have not had equal benefits, Shadbolt et al. (2003) find the BSC could assist them to reduce their high failure rates. According to Giannopoulos et al. (2013), the BSC has the potential to assist small organizations to connect internal factors to internal business process, and learning and growth perspectives, and external factors to customers and financial perspectives to enhance chances of success.

Casey and Peck (2004) also support that the BSC benefits organization. It benefits organizations by providing managers with a deeper insight into business operations and into different ways to create value. In particular, strategy maps provide managers with a visual illustration of the inter-relationships between employee activities and strategy implementation. The process of developing strategy maps in itself provides the management with a deep insight into business operations and the potential areas to focus to create value. Thus, strategy maps are especially beneficial to organizations that use the BSC as a strategic management tool. The benefits come from strategy maps providing a common language and a common frame of reference, facilitating discussion, communication and visualization of the organization strategy and channels or

activities required to achieve the strategy. Nazim (2015) adds that the BSC improves achievement of strategy since it transforms a strategy into tangible performance metrics, which managers can track, alter or speed up. It also enables managers to align strategy vertically, from strategic management to operational management as well as horizontally between employees to ensure operations activities promote and support strategy execution.

Also, performance measurement is seen as fostering organizational learning, owing to its capacity to acquire, distribute, interpret and store knowledge. "The relationship between organizational learning and management control system is both recursive and two-way, with the two concepts inextricably interwoven" (Kloot 1997). Otley (1999) introduces a performance management framework that is designed to go beyond the measurement of performance and clearly represents the essence of the holistic view. The framework is basically grounded in a cybernetic approach where (i) stakeholder interests determine the organizational key objectives, (ii) strategies and plans are adopted, and the processes and activities required are identified, (iii) performance is measured and rewarded, and (iv) feedback is provided. However, the latter step gives precedence to the learning process that is enhanced by the opportunity to revise ineffective strategies and foster the emergence of new ones. In addition, in order to stimulate learning and contribute to strategy formulation, performance measurement systems focus attention on strategic priorities, create visibility within the organization to ensure coordination, inspire action and enhance communication considered essential to learning (Vitale and Mavrinac 1995).

By providing and measuring information on critical uncertainties, top managers help focus organizational attention and efforts toward those uncertainties. The discussions, debates, action plans, ideas and tests throughout the organization foster learning that encourages the gradual emergence of new strategies and tactics. More than just being a diagnostic system, performance measurement also represents an interactive device (Simons, 1990). Further, performance measurement contributes to strategy formulation and implementation by revealing the links between goals, strategy, lag and lead indicators (Kaplan and Norton 1992, 1996) and subsequently communicates and operationalizes strategic priorities (Nanni et al. 1992). The role of performance measurement evolves from a simple component of the planning and control cycle to an independent process that assumes a monitoring function. This function entails measuring movement in a strategic direction instead of distance from a goal, which is different from the planning and control cycle (Nanni et al. 1992).

Despite its widespread adoption, the outcomes of implementing the BSC have varied from successful to no tangible results to outright unsuccessful (Casey and Peck, 2004; Parmenter, 2012). A growing body of scholarship thus finds limitations in the BSC, particularly in its concept (Neely et al., 2004; Kraaijenbrink, 2012; Parmenter, 2012), application (Basuony, 2014), and practice (Antonsen, 2010, Hoque, 2014). The same body of scholarship contends these limitations could either undermine the effectiveness of the BSC or cause firms to abandon it altogether for better performance measurement alternatives.

Also, many researchers have divergent opinions to the benefit or otherwise of BSC in strategy implementation performance framework. According to Nooreklit (2000), a number of concerns is also being raised as to whether such scorecards can effectively enable strategy implementation alone or whether there is a need for them to be supported by other management tools such as budgets and forecasts, measures of economic value added, and focused incentives and reward systems. Some pro-researchers about the balanced scorecard explained that the BSC provides a framework for managing the implementation of strategy while also allowing the strategy itself to evolve in response to changes in the company's competitive market and technological environments (Kaplan and Norton, 1996).

The re-conceptualization of the BSC was a challenge since the four categories were cross-referencing instead of a one-way linear relationship as perceived by the BSC. The other limitation was the exclusion of suppliers and other key stakeholders especially the government and the environment that were key to the success of the project. Shadbolt et al. (2003) studied the application of the BSC to small-scale organizations as a strategic management tool. The study aimed to examine the applicability of the BSC and its impact on improving the success of small-scale organizations. The study finds the application of the BSC assists small-scale organizations to avoid failure and to improve performance by linking external factors to learning and growth perspective, and internal processes to the financial perspective. However, when applying the BSC to a small-scale family-owned farm business, two limitations emerged. The customer perspective was inadequate since farm business puts equal emphasis on the customer and supplier. The customer perspective required re-naming to supply chain perspective. The second limitation was deciding which perspective was more appropriate to address family expectations such as time-off, holidays and children education, which are part of business expenses since the family is both owner and employee. To accommodate family expectations, the financial perspective required expansion to include shareholder (family) interests and renaming financial/shareholder perspective.

Despite the limitations identified by some researchers, BSC is good when adopted by organizations as it incorporated both the financial and non financial variables in measuring performance at any given time. State-owned organizations are advised to adopt the BSC Model as a strategic performance measurement tool as it has maximum benefits. Companies that have adopted this model in performance measurement have started to enjoy its benefits.

#### 4.2 Performance Pyramid

The Performance Pyramid, also known as the Strategic Measurement Analysis and Reporting Technique (SMART) system, was one of the first PMSs proposed by (Lynch and Cross, 1991). The system is designed with the intent of creating a management control system of performance metrics that can assist in defining and sustaining organizational success. The model represents an acknowledgement by the writers that traditional performance measurement systems were falling short of meeting the needs of managers in a much changing business environment. The pyramid system is an interrelated system of

different variables, which are controlled at different organizational level. It contains four levels of objectives that affect the organization's external effectiveness and simultaneously its internal efficiency. The framework employs a hierarchical view of business performance measurement, in the sense that it is modeled as a pyramid with four hierarchical levels of objectives and measures, as in Figure 1 below. Strategic objectives flow down through the organization, with a reverse flow of information upwards. The Performance Pyramid establishes a clear relationship between goal setting and measurement as well as between business strategies and implementation. It also identifies measurements at the team level, where work teams focus on quality measures, whereas leadership teams focus on process or strategy (Lynch and Cross, 1991).

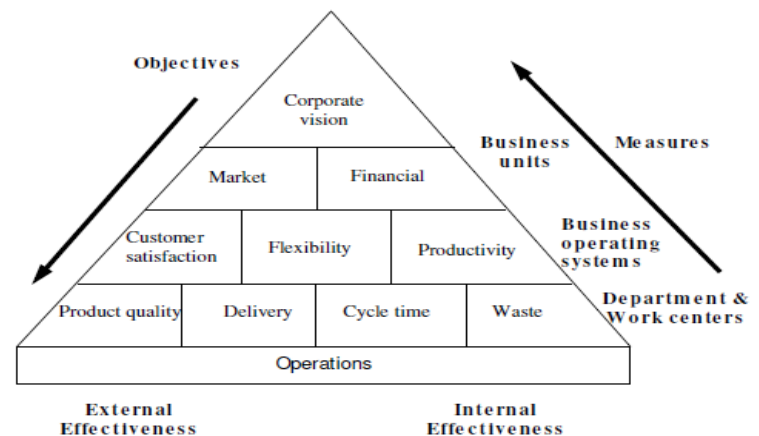


Figure 1: Performance Pyramid/SMART by (Lynch and Cross, 1992)

Lynch and Cross (1991) use a pyramid-shaped “map” for understanding and defining the relevant objectives and measures for each level of the business organization. Lynch and Cross suggest a number of measures that go far beyond traditional financial measures such as profitability, cash flow and return on capital employed. The measures that they propose relate to business operating systems, and they address the driving forces that guide the strategic objectives of the organization. Lynch and Cross propose that customer satisfaction, flexibility and productivity are the driving forces upon which company objectives are based. They suggest that the status of these driving forces can be monitored by various indicators which can be derived from lower level (departmental) measures of waste, delivery, quality and cycle time. The performance pyramid derives from the idea that an organization operates at different levels each of which has a different focus. The four levels of the pyramid embody the corporate vision, accountability of the business units, competitive dimension for business operating system, and specific operational criteria. However, it is vital that these different levels support each other. Thus the pyramid links the business strategy with day-to-day operations.

In proposing the use of the performance pyramid, Lynch and Cross suggest measuring performance across nine dimensions/objectives i.e. market and financial for business units; customer satisfaction, flexibility and productivity for business operation; and product quality, delivery, cycle time and waste for department and work centers. These are mapped onto



the pyramid (*Fig. 1* above) i.e. from corporate vision to individual objectives. Within the pyramid the corporate vision is articulated by those responsible for the strategic direction of the organization. These objectives can be achieved through measures at various levels in the organization. These measures are seen to interact with each other both horizontally at each level, and vertically across the levels in the organization.

The performance pyramid system is built on four levels, integrating the links between the corporate strategy, strategic business units and operations. It focuses on the linkage of organization's strategy with its operations within the four levels, which seem to fit into each other in the achievement of objectives. According to Laitinen (2002) and Stefan (2004), the purpose of the pyramid is "to link an organization strategy to its operation by translating objectives from the top-down (based on customer priority) and measures from bottom-up". According to Laitinen, "the development of the firm's performance pyramid starts with the definition of an overall corporate vision (the highest or first level of objectives), which is then translated into individual business unit objective at the second level".

The second level is concerning the setting of short-term *financial* targets like cash flow and profitability and long-term goals for growth as well as *market* position. At this level of the objectives, key market and financial measures, are identified as ways of monitoring performance in achieving the vision. In order to attain these market and financial objectives, the driving forces or key measures of customer satisfaction, flexibility and productivity are also derived (Lynch and Cross, 1992).

The third level contains day-to-day operational measures concerning *customer satisfaction, flexibility and productivity*. Brown (1998) explains what Lynch and Cross refer to as 'getting it done in the middle' focuses on business operating systems where each system is geared to achieve specific objectives, and will cross departmental/functional boundaries, with one department possibly serving more than one operating system. For example, an operating system may have new product introduction as its objective, and is likely to involve a number of departments from design and development to marketing. First, there will be a focus on the need to ensure customer satisfaction. Second, there will be a focus on the need for flexibility in order to accommodate changes in methods and customer requirements. Third, there will be a focus on the need to achieve productivity which necessitates looking for the most cost effective and timely means of achieving customer satisfaction and flexibility.

Lastly, the key measures, satisfaction, flexibility and productivity at the third level are further converted into specific operational measures, which form the base of the pyramid. The bottom level of the pyramid is what Lynch and Cross refer to as 'measuring in the trenches'. Here the objective is to enhance *quality* and *delivery* performance and reduce *cycle time* and *waste*. At this level a number of non-financial indicators will be used in order to measure the operations. The four levels of the pyramid are seen to fit into each other in the achievement of objectives. For example, reductions in cycle time and/or waste will increase productivity and hence profitability and cash flow. The four key performance measures (quality, cycle time, delivery and waste) are used at individual departments and work centers on a daily basis (Striteska and Spickova, 2012).

The Performance Pyramid and BSC are two excellent methods of strategically driven performance management systems, and both models use strategy maps to explain the relationships between the aspects of performance. However, BSC is more effective than Performance Pyramid in the use of the strategy map. According to Hasnan (2006), the success map of the Performance Pyramid is more difficult to understand than the strategy map of BSC. In the strategy map of BSC everybody can understand the cause-and-effect of logical mapping and direction towards the strategic objectives.

The strength of the Performance Pyramid model lies in the fact that it ties together the hierarchical view of business performance measurement with the business process review. It also makes explicit the difference between measures that are of interest to external parties, such as customer satisfaction, quality and delivery, and measures that are of interest within the business such as productivity, cycle time and waste (Neely et al., 2000). Lynch and Cross concluded that it was essential that the performance measurement systems adopted by an organization should fulfill the following functions: The measures chosen should link operations to strategic goals. It is vital that departments are aware of the extent to which they are contributing, separately and together, in achieving strategic aims. The measures chosen must make use of both financial and non-financial information in such a manner that is of value to departmental managers. In addition, the availability of the correct information as and when required is necessary to support decision-making at all levels within an organization. The real value of the system lies in its ability to focus all business activities on the requirements of its customers.

The pyramid faces many critical points, including Meral and Mark (2005), who note that the Performance Pyramid does not explicitly integrate the concept of continuous improvements; does not provide any mechanisms to identify key performance indicators; and also the model has not been empirically tested. Meanwhile, stakeholders other than customers and shareholders do not feature prominently in the pyramid. The user will have to make sure that measures at the different levels of the pyramid relate to other principal stakeholders, such as suppliers in the case of managing purchasing performance. These conclusions helped to shape the performance pyramid which can be regarded as a modeling tool that assists in the design of new performance measurement systems, or alternatively the re-engineering of such systems that are already in operation.

#### 4.3 Performance Prism

Many alternative and customized frameworks continue to be developed based on the breakthrough BSC framework developed by Kaplan and Norton in 1992. The Performance Prism is an example of one such customized BSC framework. In the Performance Prism, companies view their organizations from five perspectives, rather than the four traditional perspectives of the BSC. Also, many researchers have identified shortcomings of BSC including its lack of perspective on some critical stakeholders such as suppliers and employees. Kennerley and Neely (2002) emphasized that performance prism built on the strengths of the existing frameworks and addressed the latter's weaknesses with regard to performance measurement. By centering various important stakeholders such as shareholders

and other investors, customers, intermediaries, employees, suppliers, regulators and communities in the framework, the performance prism framework successfully reflects all of the areas of performance that influence the performance of an organization. This feature enables a balanced picture of the business to be provided, highlighting all measures for the category. Neely, Adam and Kennerley (2002) exemplified over 200 measures in their demonstration of its application.

The performance prism is a multi-dimensional and multi-faceted performance evaluation framework created by Nelly and Adam (2001); it presents itself as performance management system alternative to be used by organizations. It can measure the level of satisfaction as to the requirements of all relevant stakeholders to the highest degree. The significant feature of the Performance Prism is that the performance measurement should be derived from the stakeholder satisfaction. It changes the usual opinion that is adopted by most performance measurement framework or methodologies, i.e. the performance measure should be derived from the strategy technique. Neely et al. (2001) believe that the purpose of measurement and the role of strategy are, in this way, fundamentally misunderstood. Instead, they believe that performance measures “are designed to help people track whether they are moving in the direction they want to. They help managers establish whether they are going to reach the destination they set out to reach. Strategy, however, is not about destination. Instead, it is about the route you choose to take and how to reach the desired destination”.

According to Neely et al. (2001), the performance prism illustrates the true complexity of performance measurement and management. The Prism is designed to be a flexible tool, which can be used for commercial or non-profit organizations, big and small. They claim that there are three major reasons why the new framework, which is said to be a second generation model, is needed to replace first generation models, such as the BSC and the Performance Pyramid: First, organizations should think about the wants and needs of all of their important stakeholders and endeavor to deliver value to each of them if the organizations want to survive and prosper in the long-term. It is no longer acceptable for organizations to focus on one or two of their stakeholders. Secondly, organizations have to align and integrate strategies, processes, and capabilities in order to deliver real value to its stakeholders. Thirdly, the relationship between organizations and their stakeholders is reciprocal, that is, stakeholders have to contribute to organizations as well as to expect something from them. The framework builds on and strengthens existing measurement framework on shareholder value (the BSC, the EFQM Excellence Model, the Malcolm Baldrige Award criteria).

According to Frederico and Cavenghi (2009), the performance prism focuses on stakeholders involved in the environment of an organization through five interrelated facets/perspectives, considering stakeholder satisfaction, stakeholder contributions, strategies, processes and capabilities. The organization must consider each of these perspectives.

*Stakeholder satisfaction:* the first facet of the Prism focuses on who are the stakeholders, and what do they want. Here, the importance of stakeholder mapping is recognized. Stakeholder mapping means identifying the key stakeholders, and determining how important each of them are to the organization.

This may be based on how much power they have, and on whether or not they are likely to use it. If the majority of employees are members of a trade union, for example, then it is likely that the trade union will hold significant influence over the organization. If organizations do not keep the most influential stakeholder groups happy, then this will impact on financial performance in the long run. Dissatisfied employees, for example, will be less motivated or may leave the organization, causing expenses of hiring and training new employees. Organizations need to identify the most important stakeholders, and what they want from the organization. They must then identify performance measures to monitor how well the organization is meeting these needs.

*Stakeholder contribution:* organizations are becoming more demanding in what they expect from their own stakeholders. In the second facet of the Performance Prism, users need to identify exactly what it is that the organization wants from those stakeholders, and then come up with ways to measure whether or not the stakeholders are providing it. A good example is customers. Many earlier performance measurement frameworks such as the BSC do ask ‘what do our customers want from us?’ They do not consider ‘what do we want from our customers?’ Organizations normally want loyalty and profits from their customers and many organizations have started to perform customer profitability analysis. Some have found some surprising results, for example, customers whom they thought were their most valuable turned out to be loss making when activity-based approaches to customer profitability analysis were used. Customer profitability analysis is an example of how contribution from customers can be measured.

*Strategies:* many performance management frameworks start with strategy, and there is a myth that having identified the strategy of an organization, selecting appropriate performance measures is easy. This is largely because many people confuse strategy and goals. In the Performance Prism, strategy means how the goal will be achieved. It is the route the organization takes to reach the goal, not the goal itself. The goals are defined in the first two facets of the Prism. In the strategies facet of the Performance Prism, therefore, we ask ‘what strategies should the organization be adopting to ensure that the wants and needs of its stakeholders are satisfied, while ensuring that its own requirements are satisfied too?’ Having identified the appropriate strategies, performance measures will be identified and used to determine whether the selected strategies are working. The purpose of performance measures relating to strategies is four fold: to show how well the strategies are being implemented; to communicate the strategies within the organization; to encourage the implementation of strategies by managers; and to see if the strategies themselves are still appropriate.

*Processes:* after identifying the strategies, organizations need to find out if they have the right business processes to support the strategies. Many organizations classify four business processes as follows: develop products and services; generate demand; fulfill demand; and plan and manage the enterprises. These processes can then be sub-divided into more detailed processes. Each process and sub-process will have to have a process owner who is responsible for the functioning of that process. One sub-process of ‘plan and manage the enterprise’, for example, might be ‘recruitment’, and it is likely that the head of

human resources would be responsible for this process. Measures will then be developed to see how well these processes are working. Management will have to identify which are the most important processes, and focus attention on those, rather than simply measuring the functioning of all processes. Business process reengineering may be used at this stage to identify any redundant processes. Value chain analysis may also be employed to identify what are the key processes.

*Capabilities:* are the people, practices, technologies and infrastructure required to enable a process to work. It is important that the right capabilities exist within an organization in order to support the processes identified in the processes facet of the Performance Prism. Neely and Adams provide the example of an order to cash fulfillment process in an electronics business. This particular process may require the following capabilities: customer order handling; planning and scheduling; procurement; manufacturing; distribution; and credit management. In the capabilities facet of the Performance Prism, the organization needs to identify which capabilities are required, and identify performance measures to see how well these capabilities are being performed. Benchmarking is likely to be used extensively in measuring the organization's capabilities. In this respect, benchmarking is used to determine if the organization has the right skills, not just currently, but also to take the organization forward into the future. So the focus here is not in simply measuring existing performance, but that the correct skill sets exist.

The facets of the Performance Prism are interlinked and should support each other. The required strategies are identified, then the processes required in achieving these strategies, followed by identifying the capabilities required to perform the processes. This is very much a top-down process, similar in some ways to the Lynch and Cross's Performance Pyramid. The most important development in the Performance Prism is the focus on identifying the needs of a wider range of stakeholders, as well as identifying what the organization wants from its stakeholders in return. To each of the aspects of the framework specific performance measures are given, accompanied by their results, trends, targets, standards, initiatives and action plans. These data-sets are included in scorecards to facilitate the performance management. The measurements are further connected with each other through sets of hypothetical relationships called 'success map'. Together the five viewpoints provide a comprehensive and integrated framework for managing organizational performance. The Performance Prism takes a radically different look at performance measurement, and sets out explicitly to identify how managers can use measurement data to improve business performance. However, the measurement faces some critical points: according to Metawe and Gilman (2005) the Performance Prism tends to give little concentration to the processes of designing the system. Additionally, Etienne, Erik, Arjan, (2005), note that there is only little evidence that the Performance Prism works in practice.

It is a tool that helps management teams to think about vital questions and strategies to address (Michaela et al., 2012). Although the Performance Prism extends beyond traditional performance measurement, it offers little about how the performance measures are going to be realized. Another weakness is that little or no consideration is given to the existing

PMSs that companies may have in place (Kurien et al., 2011). To some extent, the Performance Prism was instrumental in developing the Balanced Scorecard further. For example, the concept of stakeholders is broadened in the latter, which not only considers shareholders and customers, but also include employees, suppliers, alliance partners or intermediaries. However, the two theories also differ: Neely et al. (2001) disagree that the performance measurement should be derived from the strategies; instead, "strategies should be put in place to ensure the wants and needs of the stakeholders are satisfied". In short, the Performance Prism is not a prescriptive measurement framework; instead, it is a tool (framework) that helps management teams to think about key questions and strategies to address them. The very same benefits that make the Performance Prism a strong, comprehensive model, however, also make it difficult to easily utilize.

The Performance Prism is relatively new, having been developed by a major consulting firm and the Cranfield School of Management in 2000. Its first significant implementation was in 2001, and it illustrates the flexibility of the BSC framework to be adapted and applied to the various needs of businesses. It can therefore be concluded that the Performance Prism is a rigorous framework for assisting companies to manage performance as it has an expanded stakeholder considerations. Unlike earlier frameworks, it requires an analysis of stakeholders and their needs before considering strategy. It also considers what processes and capabilities are required to support the strategy before identifying appropriate performance measures. This should lead to performance at all levels of the organization that is consistent with the strategy of the organization, and help it to meet the needs of a wider group of stakeholders.

#### **4.4 Malcolm Baldrige National Quality Award**

The Malcolm Baldrige National Quality Award (MBNQA) is a widely-used performance self-assessment framework. The Baldrige Criteria for performance excellence are designed to help organizations manage performance through an integrated approach. The Malcolm Baldrige National Quality Improvement Act, signed into US law by President Ronald Reagan on August 20, 1987 with the aim of making quality a priority and stimulating the economy, led to the creation of the Malcolm Baldrige National Quality Award in 1988. The purpose of this competitive award program is to improve quality and productivity in the USA by establishing guidelines and criteria that can be used by organizations to evaluate their own quality improvement efforts. The purpose of the MBNQA criteria for Performance Excellence is threefold (Brown, 2004). First, the objective of the criteria is to assist organizations in improving performance practices, capabilities and results. Second, the program works to disseminate best practices throughout the US, regardless of industry. Lastly, while the criteria is not prescriptive, it does act as a guide for strategic planning, identifying areas of opportunity and managing overall organizational performance (Senge, 1990). The MBNQA Criteria for Performance Excellence created a public-private partnership designed to enhance quality standards, maximize productivity growth, and boost quality practices by setting standards of excellence for American companies in order to combat global competition (Brown, 2004).

The MBNQA Criteria are built upon a set of interrelated core values and concepts i.e. visionary leadership; customer-driven excellence; organizational and personal learning; valuing employees and partners; agility; focus on the future; managing for innovation; management by fact; social responsibility; focus on results and creating value; and systems perspective. The MBNQA performance criteria consist of seven categories: 1) Leadership, 2) Strategic Planning, 3) Customer and Market focus, 4) Measurement, Analysis and Knowledge Management, 5) Human Resource Focus, 6) Process Management, and 7) Results. These seven categories were divided into two triads: Leadership (Category 1), Strategic Planning (Category 2), and Customer and Market Focus (Category 3) represent the Leadership triad which emphasizes on the importance of leadership focusing on strategy and customers, wherein senior leaders set organizational direction and seek future opportunities for organization; and Workforce Focus (Category 5), Process Management (Category 6), and Results (Category 7) represent the Results triad. In the Baldrige Criteria, all activities are toward the results: product and service outcomes; customer-focused outcomes; financial and market outcomes; workforce-focus outcomes; process effectiveness outcomes, including key internal operational performance measures; and leadership and social responsibility outcomes.

The MBNQA Criteria are system-perspective, in that they are non-prescriptive and adaptable, thus supporting goal-based diagnoses. According to Baldrige, as organizations mature in their ability to develop and deploy integrated approaches to their strategic plans and use learning to improve their quality, they will achieve the highest levels of performance excellence (NIST, 2011). The “Baldrige Journey” refers to the cycles of learning and improvement that organizations experience while they use the Criteria to self-assess, write and submit an application at the state or national level. According to Evans and Lindsay (2005), cycles of learning include planning, execution, assessment and refinement based on findings. Each of these stages is part of the MBNQA process and as organizations continue on this journey they achieve “maturity”, eventually attaining the highest level of performance excellence.

Organizations implementing the MBNQA Criteria for Performance Excellence are initially required to complete an organizational profile used for internal self-assessment (Brown, 2004). The organizational profile is used to identify key suppliers, customers and customer needs, as well as better define the key operating strategic initiatives for the organization (McGuire, 2006). After completing the organizational profile, the organization discusses the seven categories in the same manner by addressing questions regarding how and what the organization does to accomplish business requirements (Brown, 2004). According to NIST (2011), although not prescriptive, the Criteria are helpful in integrating performance management within organizations. They were developed in order to lead to the delivery of ever-improving value to customers, thus contributing to improved quality, as well as an improvement in overall organizational effectiveness, capabilities and organizational and personal learning (NIST, 2011).

In literature related to the MBNQA, a number of other strengths have been identified. For Yong and Wilkinson (2003), the higher the quality of the product or service that the

organization is able to produce, the greater customer loyalty will follow. DeBaylo (1999) notes that the MBNQA encourages an alignment of the mission, vision and values of the organization with its overall strategy. Once this strategy is both defined and implemented then assessment is important in determining overall performance and this cannot be achieved without the involvement and support of senior leadership. Adam et al. (1999) and Hendricks and Singhal (1996) highlights that recipients of the MBNQA typically see their stock price increase from the day that they are announced as recipients of the award. Returning to Yong and Wilkinson (2003), the authors have found that workforce engagement is enhanced by implementing the MBNQA, while employee and customer satisfaction is also improved. Both Brown (2004) and Blazey (2003) concur that the MBNQA Criteria for Performance Excellence can substantially improve an organization’s market share.

Over time, the Malcolm Baldrige Criteria for Performance Excellence has received criticism from various well-known quality gurus. Crosby, for instance, believed the NMBQA would not serve a useful purpose and believed the process to be nothing more than a form-filling exercise (Main, 1991). In addition, Deming has called the MBNQA a nonsense (Chuan and Soon, 2000). Blumenthal and Epstein (1996) note that “despite its clear success in particular instances, there is so far no convincing evidence that the application of the techniques of total quality management in healthcare improves the quality of care in entire institutions or among large numbers of physicians”.

Historically, a major criticism of the Baldrige framework has been that it is not based on empirical evidence (Black and Porter, 1996). Research has been limited due to the data confidentiality requirements of both public and private companies (Kelley, 2002). Others argue that while the MBNQA provides a framework for values-based leadership and employee engagement, it may not go far enough in actually providing a roadmap for higher performance. Because the MBNQA is not prescriptive in nature it is difficult to determine the right thing to do in order to achieve the Criteria’s overall objectives (Byrne and Norris, 2003).

#### **4.5 European Foundation for Quality Management (EFQM) Excellence Model**

The Balanced Scorecard approach inspired the European model of business success known as the EFQM Excellence Model (European Foundation for Quality Management, 1999), which is currently very popular in the EU. The initiative of EFQM came from 14 top Western European companies who established it with the aim of improving the performance and position of European companies in global competition (Westlund, 2001). EFQM Excellence Model is used to detect the problem points of a company and to warn about its weaknesses. EFQM is a non-profit organization that was established in 1988 with the mission ‘Being a stimulus of sustainable excellence’.

EFQM Excellence Model, also known as Self-assessment or EFQM, was developed in 1991 and revised in 1999. It is a framework designed to help organizations achieving business excellence through continuous improvement in the management and developing the process to engender wider use of best practice activities. According to Steven (2003), the main objective of EFQM is to improve organizational performance through self-

assessment and improvement activity against major benchmark excellent criteria. The EFQM is a practical tool that helps organizations in determining whether they are on the path of excellence by assessing the current health of the organization ([www.wikipedia.org](http://www.wikipedia.org)). The model evaluates the organization's processes and performance against a uniform set of strategic priorities, which facilitates the design of process and enables the standardized "benchmarking" of results between different organizations (Henrik, Anderson and Michael, 2000). The Model gives people an insight in how a company's actions and decisions impact on the company's results. It allows an organization to assess its effectiveness in developing and delivering a stakeholder-focused strategy. The model allows constant improvement by determining the shortcomings and encouraging appropriate solutions for them (EFQM, 2012).

The Model is based on a set of three integrated components: the Fundamental Concepts of Excellence; the Model Criteria; and the RADAR Logic. First of all, excellence needs to be defined. "Excellent organizations achieve and sustain outstanding levels of performance that meet or exceed the expectations of all their stakeholders" (EFQM, 2012). To ensure sustainable financial growth, it is necessary for a company to achieve adequate levels of customer satisfaction. In the EFQM Excellence Model, excellence is outlined by eight fundamental concepts. Each of the concepts is important, but maximum benefit is achieved when the organization integrates them all into its culture.

The fundamental concepts of excellence form the basis for the criteria of the EFQM Excellence Model. These are 1) adding value for customers, 2) creating a sustainable future, 3) developing organizational capability, 4) harnessing creativity and innovation, 5) leading with vision, inspiration and integrity, 6) managing with agility, 7) succeeding through the talent of people, and 8) sustaining outstanding results (EFQM, 2012). EFQM believes that 'truly excellent organizations are those that strive to satisfy their stakeholders by what they achieve, how they achieve it and what they are likely to achieve'. According to the definition of EFQM, stakeholders include those individuals or groups that impact upon, or have an impact on, the organization, such as customers, employees, partners, suppliers, the society in which the organization operates, and those with a financial stake in the organization. The Excellence Model aims to achieve this by finding a balance between the most important stakeholder needs. The Model acknowledges 4 types of stakeholders: Society, People (the employees), Customers and Shareholders (EFQM, 2012).

The significant feature of EFQM Excellence Model is that the model distinguished the result area [Results the organization has achieved (WHAT)] and organization areas [Management of the organization (HOW)] (Wongrassamee, et al., 2003). In fact, the business excellence models (EFQM and MBNQA) take a broader view of performance and include references to a wider set of stakeholders than does the BSC. However, they also contain a host of dimensions that are effectively difficult to measure (Neely et al., 2001).

To achieve excellence, the EFQM Excellence Model relies on nine criteria. Five of these are 'enablers' and four are 'results'. The enabler criteria cover what an organization does and how it does it. They are the things an organization needs to do to develop and implement its strategy. The 5 enablers are: 1)

leadership, 2) strategy, 3) people, 4) partnerships and resources and 5) processes, products and services (EFQM, 2012). On the other hand, the results criteria represent what a company achieves. These are the results an organization achieves, in line with its strategic goals. The four results are: 1) customer results, 2) people results, 3) society results and 4) business results. These results should provide an organization with the relevant measures for analyzing their performance. These measures enable the organization to evaluate the successful deployment of their strategy. The results can be segmented to evaluate the performance of specific areas of the organization (EFQM, 2012). Because of the ever-changing global market and customer needs, companies that achieve excellence today will not necessarily be the companies that achieve excellence in the future. The EFQM Excellence Model has implemented a continual feedback loop to handle this challenge. This feedback loop allows companies to learn out of their results and thereby improving their 5 enablers. In the long-term, this should lead to constant innovation and customer satisfaction (EFQM, 2012).

The RADAR methodology, which is a dynamic assessment tool that allows management to examine the performance of the organization in a structured way, is the core of the EFQM Excellence Model. It states that an organization must take the following into consideration (EFQM, 2012): determine the *results* it is aiming to achieve as part of its strategy; plan and develop an integrated set of sound *approaches* to attain the required results; *deploy* the approaches in a systematic way to ensure implementation; and *assess* and *refine* the approaches by monitoring and analyzing the results achieved.

The BSC and the EFQM are tools used to measure organizational performance for the purpose of improvement, and both tools have been widely adopted and addressed broadly similar issues. However, there are some differences between the two tools. Henrik et al. (2000) point out that the BSC design processes starts with the articulation of a shared strategic vision specific to the organization, and backwards to define the priority strategic activities and outcomes that need to occur to achieve success. Contrary, the EFQM assesses performance against a standard of activities against generic 'best practice' standards. This may lead to say that the design of BSC is more complex than the design of EFQM. At the same time, with respect to differences between the strategic priorities of organizations, the measures of BSC are more likely (compared to the EFQM) to provide direct information on an organization's strategic performance. Additionally, BSC designs explain uniquely for each organization its managers' plans to drive improved performance. This makes a BSC approach more positive to represent the specific strategic issues of the organization. The EFQM Model is a widely used tool, which was designed to help organizations in their drive towards being more competitive. However, there are many critical points of the EFQM Model. Henrik et al. (2000) note, that the EFQM is closely defined and relatively static-based on generic strategic priorities. In addition, a partnership study conducted by McAdam and O'Neills (1999) with Northern Ireland Electricity emphasized the limitations of the Model as a strategic framework in that it is primarily on assessment of the existing, rather than a predictor of future strategy. Furthermore, Steven (2003) concluded that there are

two major limitations of EFQM: the lack of a strategy direction and the need to focus improvement activity.

The EFQM Excellence Model was presented as an outline framework in 1992 (EFQM, 2012). The framework can be used by different kinds of companies as it has a flexible approach. However, not all businesses or business units should apply the same prescriptive template. They can apply a customized framework with specific measures to fit their goals, mission or strategy (Wongrassamee et al., 2003).

## V. CONCLUSION

Performance measurement metrics and systems are the focus of considerable attention in academic and practitioner communities. As demonstrated by the above evaluation, they clearly have a considerable contribution to make in the measurement of performance of organizations especially in state-owned ones. However, for this contribution to be realized, it is essential that the measurement metrics and systems used are relevant and appropriate for the environment and strategies of the organization. Given the dynamic and rapidly changing environment in which most organizations compete, it is important that organizations effectively manage their measurement metrics so that it remains appropriate and provides information that is relevant to the strategic performance that is of importance. However, it must be remembered that there are varied approaches to designing and implementing performance measurement systems.

## VI. CONTRIBUTION TO KNOWLEDGE

According to Behn (2004), we measure the performance of a public agency to evaluate it. Elected chief executives, legislators, journalists, stakeholders, and budget directors seek to measure the performance of public organizations to determine whether or not they are doing a good job. Behn argues further that for the leaders of a public agency, a performance measure is useful only if it helps in some way to improve their organization's performance. The study therefore serves as a guide to state-owned organizations that do not yet have a performance measurement system on the need to develop one to support their own planning and evaluation needs.

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## COMPETING INTERESTS

Authors have declared that no competing interests exist.

## REFERENCES

- [1] Al-Najjar, S.M. and Kalaf, K. H. (2012). Designing a balanced scorecard to measure a bank's performance, A case study. *International Journal of Business Administration* vol.3 (No.4) July, 2012. Retrieved via [www.google.com](http://www.google.com) on 23/8/2013.
- [2] Amaratunga, D. and Baldry, D. (2002). Moving from performance measurement to performance management. *Facilities*, 20, 217-223.
- [3] Antonsen, Y. (2010). The downside of the Balanced Scorecard: A case study from Norway. *The Scandinavian Journal of Management*, 30 (1), 40-50.
- [4] Basuony, M. A. K. (2014). The Balanced Scorecard in large firms and SMEs: A critique of the nature, value and application. *Accounting and Finance Research*, 3 (2), 14-22.
- [5] Behn B. (2004). Why measure performance. *Public Management Report*, 1(11): 1-2.
- [6] Black, S. A. and Porter, L. J. (1996). Identification of the critical factors of TQM. *Decision Sciences*, 27(1), 1-21.
- [7] Blazey, M.L., Davison, K.S. and Evans, J.P. (2003). Insights to performance excellence in education, 2003: an inside look at the 2003 Baldrige Award criteria for education. Milwaukee, WI: ASQ Quality Press.
- [8] Blumenthal, D. and Epstein, A.M. (1996). The Role of Physicians in the Future of Quality Management. *New England Journal of Medicine*. 335(1), 1328-1332.
- [9] Bose, S., and Thomas, K. (2007). Applying the balanced scorecard for better performance of intellectual capital. *Journal of Intellectual Capital*, 8 (4), 653-665.
- [10] Bourne, M.C.S., Neely, A.D., Mills, J.F. and Platts, K.W. (2003). Implementing Performance Measurement Systems: A Literature Review", *International Journal of Business Performance Management*, Vol. 5, No. 1, 1-24.
- [11] Bremser W.G and Barsky N.P (2004). Utilizing the balanced scorecard for R&D performance measurement. *R & D Management*. 34(3): 229-238. DOI 10.1111/j.1467- 9310.2004.00335.
- [12] Brown, J. and Devlin, J. (1997). Performance measurement – the ENAPS approach. *The International Journal of Business Transformation*, 1, 73-84.
- [13] Brown, G. (October 1998). Accountability and Performance Measurement, *Students' Newsletter*.
- [14] Brown, M. G. (2004). Baldrige Award winning quality: How to interpret the Malcolm Baldrige Award Criteria (14th ed.). Milwaukee, WI: American Society for Quality (ASQ) ix-xviii.
- [15] Byrne, G. and Norris, B. (2003). Drive Baldrige level performance, *Six Sigma Forum Magazine*, May, pp. 13-21.
- [16] Casey, W. and Peck, W. (2004). A balanced view of balanced scorecard. Executive Leadership Group, White Paper: The Leadership Lighthouse Series.
- [17] Chuan, T. K. and Soon, L. C. (2000). A detailed trends analysis of national quality awards world-wide. *Total Quality Management*, 11 (8), 1065-1080.
- [18] Ciuzaitė, E. (2008). Balanced scorecard development in Lithuanian companies: Cultural implications, Balanced Scorecard development process framework and discussion on interlink with employee incentive system. Thesis, University of Aarhus Denmark.
- [19] Curley, J. R. (1951). A Tool for Management Control. *Harvard Business Review* 29, 45-59.
- [20] DeBaylo, P. W. (1999). Ten reasons why the Baldrige model works. *Journal for Quality and Participation*, 22(1), 24-28.
- [21] Dess, G. and Robinson, R. (1984). Measuring Organizational Performance in the Absence of Objective Measures: The Case of the Privately-held Firm and Conglomerate Business Unit, *Strategic Management Journal*, 5, pp. 265-273.
- [22] Eccles, R.G. (1991). The performance measurement manifesto, *HBR*, Jan./Feb., 131 – 137.
- [23] EFQM, (2012). The EFQM Excellence Model. URL: <<http://www.efqm.org/the-efqm-excellence-model>>. (05/02/2014)
- [24] Etienne, J. Erik, M. Arjan, J. (2005). Performance management models and purchasing: relevance still lost. The 14th IPSERA conference, Archamps, France, March 20-23. Pp 687-697.
- [25] European Foundation for Quality Management (1999). EFQM Model for Business Excellence: Company Guidelines. Brussels: EFQM.
- [26] Evans, J. R. and Lindsay, W. M. (2005). *Managing for quality and performance excellence*. Thompson, OH: South-Western.
- [27] Fisher, J. (1992). Use of non-financial performance measures. *Journal of cost management* Spring: 31-38.
- [28] Fredireco, G. and Covenghi, V. (2009). The measurement of organizational performance with focus on stakeholders: A performance prism approach. Sao Paulo State University. POMS 20th Annual Conference Orlando, Florida U.S.A. May 1 to 4, 2009 . pp 2-17.

- [29] Gekonge, C. O. (2005). What a System! The Professional Journal of KASNEB, (Issue No. 4).
- [30] Giannopoulos, G., Holt, A., Khansalar, E. and Cleanthous, S. (2013). The use of the balanced scorecard in small companies. *International Journal of Business and Management*, 8 (14), 1-22.
- [31] Glaister, K. and Buckley, P. (1998). Measures of Performance in UK International Alliances, *Organization Studies*, 19, pp. 89-118.
- [32] Hasnan, N. (2006). Development A Balanced Scorecard Model for Evaluation of Project Management and Performance. University of Birmingham.
- [33] Hendricks, K. B. and Singhal, V. R. (1996). Quality awards and the market value of the firm: An empirical investigation. *Management Science*, 42(3), 415-436.
- [34] Henrik, V., Andersen, G. and Michael, S. (2000). The Balanced Scorecard vs. The EFQM business excellent model. Which is better strategic management tool? 2GC limited. pp 1-16.
- [35] Ho, D. C. W., Chan, E. H. W., Wong, N. Y. and Chan, M. W. (2000). Significant metrics for facilities management benchmarking in the Asia Pacific region. *Facilities*, 18, 545-556.
- [36] Hon, K. K. B. (2005). Performance and Evaluation of Manufacturing Systems," *CIRP Annals - Manufacturing Technology*, vol. 54, issue 2, pp. 139-154.
- [37] Hoque, Z. (2014). 20 years of studies on the balanced scorecard: Trends, accomplishments, gaps and opportunities for future research. *The British accounting review*, 46(1), 33-59.
- [38] Ittner, C. D. and D. F. Larcker (1998). Are nonfinancial measures leading indicators of financial performance? An analysis of customer satisfaction. *Journal of Accounting Research* 36(Supplement): 1-35.
- [39] Kairu, Wafula, Okaka, Odera and Akerele (2013). Effects of balanced scorecard on performance of firms in the service sector. *European journal of business and management* vol.5 (No. 9). Retrieved via [www.google.com](http://www.google.com) on 20/9/2013.
- [40] Kaplan, R. S. and Norton, D. P. (1992). Balanced Scorecard- Measures that Drive Performance, *Harvard Business Review*, January-February 1992, 70-79.
- [41] Kaplan, R. S. and D. P. Norton (1996). *The Balanced Scorecard: Translating strategy into action*. Boston, Ma, Harvard Business School Press.
- [42] Kaplan, R. S. and Norton, D. P. (2002). The strategy-focused organization: How Balanced Scorecard Companies thrive in the new business environment, *Internal Auditor*, 59 (1), 21-22.
- [43] Kaplan, R. S. and Norton, D. P. (2004). *Strategy maps: Converting intangible assets into tangible outcomes*. Boston: Harvard Business School Press.
- [44] Kaplan, R. S. (2010). *Conceptual foundations of the Balanced Scorecard*. Harvard Business School, Working
- [45] Paper 10-074.
- [46] Kelly, D. L. (2002). Using the Baldrige criteria for improving performance in public health. (Unpublished doctoral dissertation). University of North Carolina, Chapel Hill, NC.
- [47] Kennerley, M. and Neely, A. (2002). A framework of the factors affecting the evolution of performance measurement systems, *International Journal of Operations & Production Management*, forthcoming, Vol. 22 No. 11.
- [48] Kloot, L. (1997). Organizational learning and management control systems: responding to environmental change. *Management Accounting Research* 8: 47-73.
- [49] Koutsoyiannis, A. (1979). *Modern microeconomics*. 2nd Ed., London: Macmillan Press Ltd.
- [50] Kraaijenbrink, J. (2012). Five reasons to abandon the Balanced Scorecard. [Online]. Available: <http://kraaijenbrink.com/2012/10/fivereasonstoabandonthebalancedscorecard/> (18/02/2015).
- [51] Laitinen, E. K. (2002). A Dynamic Performance Measurement System: Evidence from small Finnish technology firms. *Scandinavian Journal of Management* 18, 65 – 99.
- [52] Lavy, S., Garcia, J. and Dixit, M. (2010). Establishment of KPIs for facility performance measurement: review of literature. *Facilities*, 28, 440-464.
- [53] Lebas, M. J. (1995). Performance measurement and performance management. *International Journal of Production Economics*, 41, 23-35.
- [54] Lynch, R. L. and Cross, K. F. (1991). *Measure up: Yardsticks for Continuous Improvement* (1st ed.), Blackwell.
- [55] Madsen, D. O. and Stenheim, T. (2014). Perceived benefits of balanced scorecard implementation: Some preliminary evidence. *Problems and Perspectives in Management*, 12 (3), 81-90.
- [56] Main, J. (1991). Is the Baldrige overblown? *Fortune*, 6, 62-65.
- [57] Martinsons, M., Davison, R. and Tse, D. (1999). The balanced scorecard: A foundation for the strategic management of information systems. *Decision Support Systems*, 25, 71-88.
- [58] McGuire III, C. U. (2006). *A Baldrige Study of the Benefits, Considerations, and Disadvantages of Implementing the Baldrige Criteria for Performance Excellence*. (Doctoral dissertation). Capella University, Minneapolis, MN.
- [59] Metawe, M. and Gilman, M. (2005). Problems with the implication of performance measurement systems in the public sector where performance linked to pay: A literature review drawn from UK. Conference on performance measurement and management control.
- [60] Meral, M. and Mark, G. (2005). Problems with the implementation of performance measurement systems in Public sector where performance linked to pay. A literature review drawn from the UK. 3th conference on performance measurement and management control (Nic September 22-23, 2005).
- [61] Michaela, S. and Marketa, S. (2012). Review and Comparison of Performance Measurement Systems, *Journal of Organizational Management Studies* Vol. Article ID 114900, 13 pages
- [62] Murby, L., and Gould, S. (2005). *Effective performance management with the Balanced Scorecard*. Technical Report. London: The Chartered Institute of Management Accountants.
- [63] Nanni, A. J., Dixon, J. R. and Vollmann, T. E. (1990). Strategic control and performance measurement. *Journal of Cost Management*, 33-42.
- [64] Nanni, A. J., Dixon, J. R. and Vollmann, T. E. (1992). Integrated performance measurement: management accounting to support the new manufacturing realities. *Journal of Management Accounting Research* 4(Fall): 1-19.
- [65] National Institute of Standards and Technology (2011). *Baldrige Award Recipients' Contacts and Profiles*.
- [66] Nazim, T. (2015). A critical analysis of Balanced Scorecard as a performance measurement tool: an overview of its usage and sustainability. [Online] Available: <http://www.academia.edu/6154100/> (19/02/2015)
- [67] Neely, A., Gregory, M. and Platts, K. (1995). Performance measurement system design: a literature review and research agenda. *International Journal of Operations & Production Management*, 15, 80-116.
- [68] Neely, A., Richards, H., Mills, J., Platts, K., and Bourne, M. (1997). Designing performance measures: a structured approach. *International Journal of Operations & Production Management*, 17(11), 1131-1152. <http://dx.doi.org/10.1108/01443579710177888>.
- [69] Neely, A. (1998). *Measuring business performance*. London: the economist in association with profile books.
- [70] Neely, A. (1999). The performance measurement revolution: why now and where next, *International Journal of Operations and Production Management*, Vol. 19 No. 2, pp. 205-28.
- [71] Neely, A., Bourne, M. and Kennerley, M. (2000). Performance Measurement System Design: Developing and testing a process based approach. *International Journal of Operation and Production Management*, Vol. 20, No. 10, pp. 1119-1145.
- [72] Neely, A. D. and Adams, C. (2001). Perspectives on Performance: the Performance Prism. *Journal of Cost Management* 15(1), 7-15.
- [73] Neely, A. D., Adams, C. and Kennerley, M. (2002). *The Performance Prism: The Scorecard for Measuring and Managing Business Success*, FT Prentice Hall, London.
- [74] Niven P. R. (2006). *Balanced scorecard step-by-step: Maximizing performance and maintaining results*. Hoboken: John Wiley & Sons. 318p.
- [75] Nooreklit, H. (2000). The balance score card- a critical analysis of some of its assumption, *Management Accounting Research*, Vol.11, No.1, pp.65-88.
- [76] Nzube, S. N. M., and Nyaega, G. (2011). Application of Balanced Scorecard in performance measurement at Essar Telecom Kenya Limited.[Online] Available: <http://ssrn.com/abstract=2231330>.
- [77] Otley, D. (1999). Performance management: a framework for management control systems research. *Management Accounting Research* 10: 363-382.

- [78] Parmenter, D. (2010). A table without any legs: A critique of the balanced scorecard methodology. In implementing Winning KPIs whitepaper. [Online] Available: [http://davidparmenter.com/how-toguides\(18/02/2015\)](http://davidparmenter.com/how-toguides(18/02/2015)).
- [79] Proper, C. and Wilson, D. (2003). The use and usefulness of performance measures in the public sector. *Oxford Review of Economic Policy*, 19, 250-267.
- [80] Rigby, D. and Bilodeau, B. (2013). *Management Tools ad Trends 2013*. London: Bain & Company.
- [81] Rolstands, A. (1995). *Performance Measurement: A Business Process Benchmarking Approach*. Chapman and Hall, New York, USA.
- [82] Senge, P. M. (1990). The leader's new work: Building learning organizations. *Sloan Management Review*, 32(1), 148-165.
- [83] Shadbolt, N. M., Beeby, N. Brier, B., and Gardner J. W. G. (2003). A critique of the use of the balanced scorecard in multi-enterprise family farm businesses. Proceedings of the 14th International Farm Management Congress: Pat 1, 602-609. August 10-15, 2003. Perth, Australia.
- [84] Simons, R. (1990). The role of management control systems in creating competitive advantage: new perspectives. *Accounting, Organizations and Society* 15(1/2): 127-143.
- [85] Sinclair, D. and Zairi, M. (1995). Effective process management through performance management. *Business Process Re-engineering & Management Journal*, 1, 75-88.
- [86] Stefan, T. (2004). Performance measurement: from philosophy to practice. international journal of productivity and performance management. Vol 53 No, 8. 2004. Pp 726-737.
- [87] Striteska, M., and Spickova, M. (2012). Review and Comparison of Performance Measurement Systems. *Journal of Organizational Management Studies*, Vol. 2012, 1-14.
- [88] Tangen, S. (2004). Performance Measurement: from philosophy to practice. *Journal of Productivity and Performance Management*, 53.
- [89] The Malcolm Baldrige National Quality Improvement Act of 1987 in H.R. 812, 1987.
- [90] Vitale, M. R. and S. C. Mavrinac (1995). How effective is your performance measurement system? *Management Accounting* 77(2): 43-55.
- [91] Westlund A. H. (2001). Measuring environmental impact on society in the EFQM system. *Total Quality Management*. 12(1): 125-135. DOI 10.1080/09544120020010147.
- [92] Wongrassamee, S., Gardiner, P.D., and Simmons, J.E.L. (2003). Performance measurement tools: the Balanced Scorecard and the EFQM Excellence Model. *Measuring business excellence*, 7(1), 14-29.
- [93] Yong, J. and Wilkinson, A. (2003). From Kyoto to Singapore: the adoption of quality management in the services sector in Singapore. *TQM & Business Excellence*, 14(8), 849-873.
- [94] Zairi, M. (1994). Benchmarking: the best tool for measuring competitiveness. *Benchmarking for Quality Management & Technology*, 1, 11-24.

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