Journal of Economics, Finance and Management Studies

ISSN (print): 2644-0490, ISSN (online): 2644-0504

Volume 4 Issue 11 November 2021

Article DOI: 10.47191/jefms/v4-i11-22, Impact Factor: 6.228

Page No. 2299-2307

Performance Evaluation Model – Overview of Some Research

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ABSTRACT: The article is made on the basis of a research method to review published documents related to the current model of performance evaluation according to financial and nonfinancial factors in the world. The review process of documents on each type of effectiveness evaluation model shows that: There is a performance evaluation model based solely on the financial factors of the entity, there are a number of models that allow performance evaluation based on both financial and non-financial factors to assess the overall performance of an organization. At the same time, the research has analyzed and pointed out the advantages, applicability and certain limitations of each model. From there, the article gives some discussion to consider the suitability of each performance evaluation model for different types of organizations. These are also recommendations for managers in each type of organization to choose to apply an appropriate model to achieve their organization's goals.

KEYWORDS: Organizational performance, Performance assessment, Performance model.

1. INTRODUCTION

Evaluating the performance of an organization in the for-profit or non-profit sector is a topic that always attracts the attention of many stakeholders, such as: Policy makers, managers of the organization, researchers and the public.

Phusavat (2009) and Hoque (2014) share the same view: Performance evaluation is important for all types of organizations. For the private sector, performance evaluation is an essential tool for successful management, a basis for managers to make decisions, and helps determine organizational performance. For the public sector, performance evaluation helps determine the achievement of the mission, the achievement of strategic goals, the productivity, quality and effectiveness of the organization's mission. This is considered an important management tool to help direct the organization, becoming an integral part of a quality management system.

In practice and research, evaluating the performance of public service providers is always a challenge. The intangibility of the service makes the evaluation and measurement of performance sometimes subjective and emotional. On the other hand, the evaluation criteria in public service delivery organizations are much different from the profit sector. Therefore, studying advanced performance evaluation models, including from the private sector to apply in the public sector, is really necessary both scientifically and practically.

Studies show that the role of performance appraisals has changed over the past thirty years. That is, moving from the traditional performance evaluation based on financial criteria to the evaluation including non-financial criteria, in which many organizations focus more on non-financial criteria such as customer satisfaction, internal processes, learning and development…

With the role of performance evaluation recognized above, this study has systematized performance evaluation models widely applied in the world today. Research results show a new point of not entering a single model that has been recognized today. The study carried out in-depth understanding of different performance evaluation models, clarified the elements in each model, the advantages, application conditions and certain limitations in the model, through which managers understand an overview of performance evaluation models. From there, based on the requirements and capabilities of the unit can choose to apply a model to achieve the evaluation objective for the unit.

Through the literature review method, this article focuses on the following main contents:

- Firstly, the article points out current views on performance evaluation based on various factors both financial and non-financial.
- Second, the study clearly shows the role of performance evaluation in an organization.

- Thirdly, the study outlines the efficiency evaluation factors in the model, which factors belong to the group of financial factors and which ones belong to the group of nonfinancial factors.
- Fourth, the study analyzed the suitability of each model for different types of operating organizations.

2. SOME PERFORMANCE EVALUATION MODELS

2.1. The concept of performance evaluation

Proviroiu (2001) said that performance evaluation in the public sector is the assessment of the means used (inputs), processes, products (outputs) and the results achieved. Performance evaluation can be based on the following criteria: Evaluation of economic resources, costs, results, service quality, financial performance and overall efficiency of the unit.

Traditional accounting performance reflects economic value added or return on investment (Dupont model). However, in view of modern accounting, the above criteria are not comprehensive reflection on the activities of the organization, Organizational performance according to the opinion of Otley (1999), Ittner and Larker (2001), Kaplan and Norton (1996; 2001) includes financial and non-financial performance.

Along the perspective of modern accounting, Lockett (1992) states that: Organizational performance is a multidimensional construct in which common factors combine with organizational performance to create overall performance. According to Lee (2006), the overall performance of the organization is assessed through: efficiency, productivity, service quality, achievements in all aspects of the organization. In the study of Singh (2005), who also have a similar point of view to Lee (2006), overall performance is a measure that aggregates criteria on the effectiveness, productivity, and quality of the organization.

According to De Waal (2003), performance is generally understood as the past, present or future achievement of the organization's mission. Performance is demonstrated through a set of standards that are known to be accurate, complete, and valid over time.

Thus, in performance evaluation studies, each model can be built based on only financial factors or a combination of both financial and non-financial factors. Each model has certain advantages and limitations. These models have been applied by many different studies in evaluating performance in accordance with the requirements of managers in the unit.

2.2. Financial performance evaluation model

A typical representative is the Dupont model: This model allows businesses to evaluate operational efficiency through analytical indicators, financial measures with the following indicators: Return On Assets (ROA), Return On Investment (ROI) and Return On Equity (ROE). With the factors given in the model related to detailed financial indicators such as: net revenue, cost of goods sold, selling expenses, administrative expenses, inventory, receivables, money, fixed assets… The model is as follows:

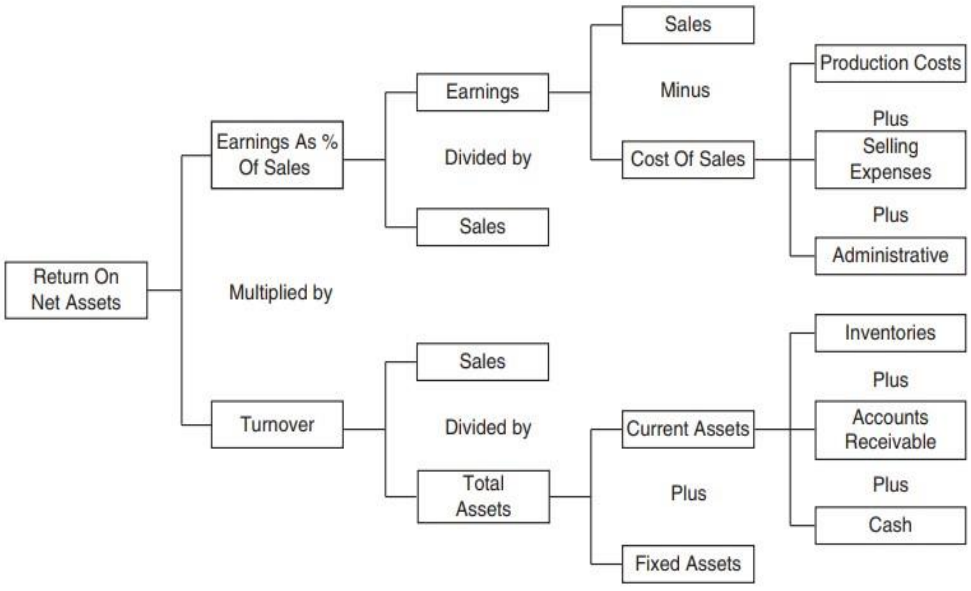

Figure 2.1: The Dupont model

Source: Bititci, U.S. (2015)

Performance Evaluation Model – Overview of Some Research

According to the factors shown in model 2.1, it shows that the evaluation of performance under traditional accounting is based on the criteria in the financial statements, which are short-term, lacking in timeliness and forecasting. At the same time, the model does not evaluate activities based on non-financial criteria, so the evaluation results do not represent all aspects of the unit's operations. This model is suitable for profit units that want to focus on evaluating financial performance.

2.3. Financial and non-financial performance evaluation models

Pyramid model (Smart) of Cross and Lynch (1989): The model includes strategic objectives and operational dimensions through four structural tiers that integrate both financial and non-financial aspects of the organization.

Performance pyramid model creates a 4-level management control system with performance evaluation criteria in order to achieve organizational goals from top management down, The performance process measures goals achieved in a bottom-up direction. This model has the advantage of allowing performance evaluation at all levels of management, however, the model has not shown the integration and continuous improvement among management levels. The evaluation factors shown in Figure 2.2 show that the model is suitable for assessing both financial and non-financial factors in manufacturing or service-providing enterprises.

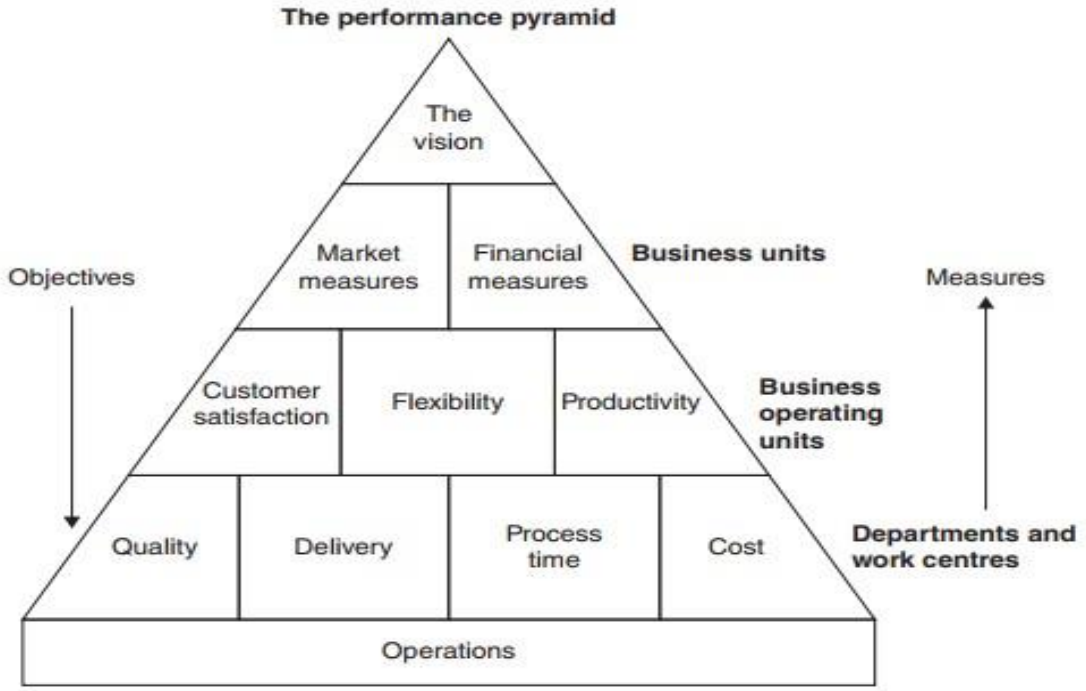

Figure 2.2: Performance pyramid model
Source: Cross and Lynch (1989)

The performance measurement Matrix (PMM) developed by Keegan et al. (1989) integrating financial and non-financial aspects, internal and external aspects according to figure 2.3 as follows:

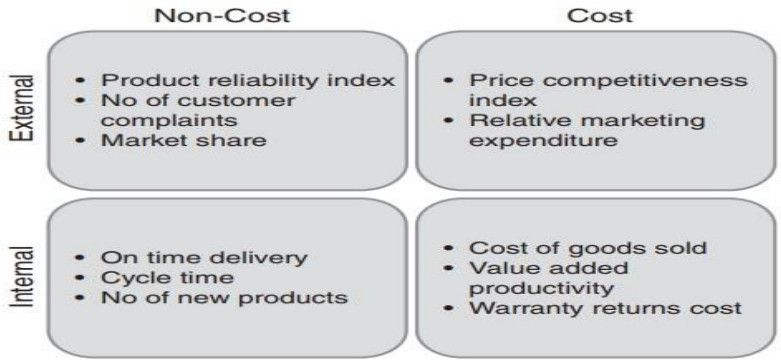

Figure 2.3: Performance measurement Matrix (PMM)
Source: Keegan et al. (1989)

Performance Evaluation Model – Overview of Some Research

The model of Keegan et al. (1989) has a simple structure, suitable for businesses, especially for transport businesses However, the limitation of the model is that the structure is not detailed, the model does not indicate specific evaluation criteria, lacks the linkage between aspects in the model. Based on the factors indicated in the PMM model, the model is suitable to be applied to the type of business that manufactures products in a highly competitive environment in terms of aspects such as: Price, product quality, continuous product innovation, delivery conditions, customer satisfaction...

The Performance Measurement Question (PMQ): This model was developed by Dixon et al. (1990) research, to assess the critical factors of an organization's success with its current performance assessment information system and to provide feedback on areas for improvement in the current performance measurement system. The limitation of this model is that it cannot be used as a comprehensive assessment system for the organization.

The Results and Determinants Framework (RDF): Fitzgerald *et al*., (1991) has a structure composed of six performance dimensions classified under two categories: results and determinants. This model includes 6 performance parameters (Competitiveness, Financial performance, Quality of service, Flexibility, Resource utilisation, Innovation). There are two types of measures: Results Lagging Indication and Determinants Leading Indication. The detailed elements and scales of the model are as follows:

	Dimension of performance	Types of measure
RESULTS Lagging Indicators	Competitiveness	Relative market share and position Sales growth Measures of the customer base
	Financial performance	Profitability Liquidity Capital structure Market ratios
DETERMINANTS Leading Indicators	Quality of service	Reliability responsiveness Aesthetics/appearance Cleanliness/tidiness Comfort Friendliness Communication Courtesy Competence Access Availability Security
	Flexibility	Volume flexibility Delivery speed flexibility Specification flexibility
	Resource utilisation	Productivity Efficiency
	Innovation	Performance of the innovation process Performance of the individual innovations

Figure 2.4: The Results and Determinants Framework
Source: Fitzgerald et al., 1991

According to the evaluation criteria in Figure 2.4 of the R&DM model, it shows that: The model is highly suitable for business units that want to focus their assessment on competitiveness, financial efficiency, resource use, innovation, creativity and operational flexibility.

Integrated Performance Measurement System (IPMS) reference model: The performance model was developed by Flamholtz (1995) – IPMS is an impact model of organizational development using six factors: Corporate Culture, Management, Product &Services, Markets. In particular, the model focuses more on the management system element. The model is summarized as follows:

Performance Evaluation Model – Overview of Some Research

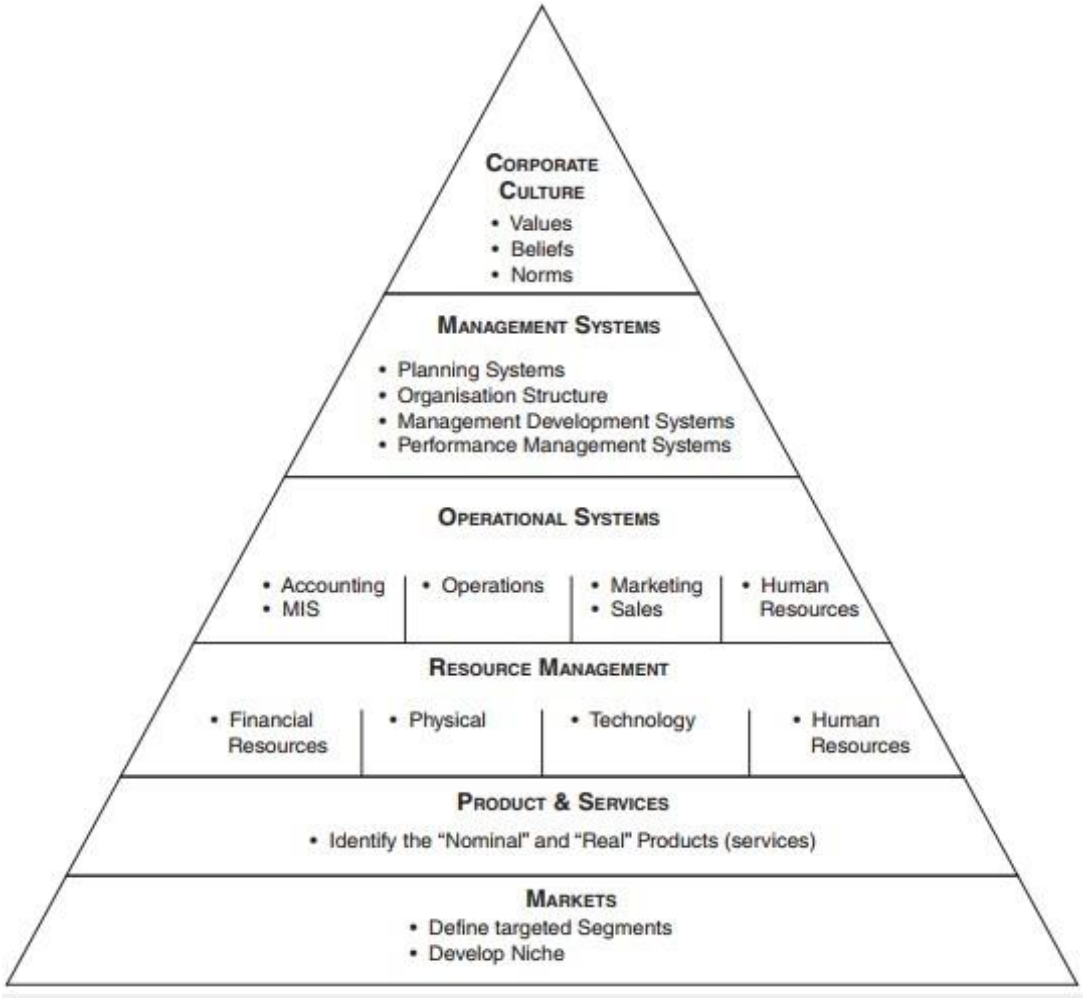

Figure 2.5: The Pyramid of Organisational Development
Source: Flamholtz (1995)

The Cambridge Performance Measurement Design Process is a model created by Neely et al. (1996): This model has integrated internal, external, financial and non-financial factors with the strategic system in the organization's operations, specifically as follows:

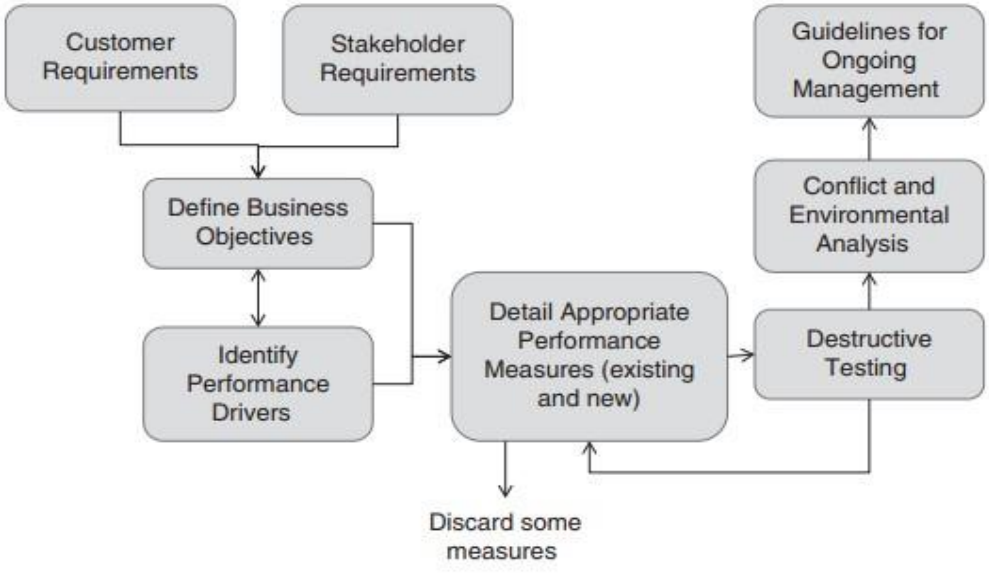

Figure 2.6: The Cambridge Performance Measurement Design Process
Source: Neely et al. (1996)

Performance Evaluation Model – Overview of Some Research

The performance evaluation model of Neely et al. (1996) focused on evaluating the performance of the process in order to serve managers to achieve business goals. This model is suitable for evaluating the performance of joint stock enterprises with capital mobilization from shareholders.

Performance evaluation model IPMS (Integrated Performance Measurement System - Bitichi et al., 1997): The model used in evaluating business performance, mainly focuses on four aspects at all levels of business management: Stakeholders, external monitoring (through audits), objectives and implementation solutions. The model focuses on assessing the effectiveness of business management, so it lacks diversity in all aspects of operations. Therefore, this model is suitable for evaluation in for-profit enterprises with the goal of improving business management efficiency at all levels in the enterprise.

The European Foundation for Quality Management (EFQM) of Westlund (2001) is a performance evaluation model divided into two groups of capabilities and outcomes. This model allows to evaluate both financial and non-financial aspects, in which the evaluation factors according to the model are mainly non-financial factors. However, the model does not detail the scale for each evaluation criterion for the operational aspects, so it is difficult to apply the model. The model is summarized in Figure 2.7.

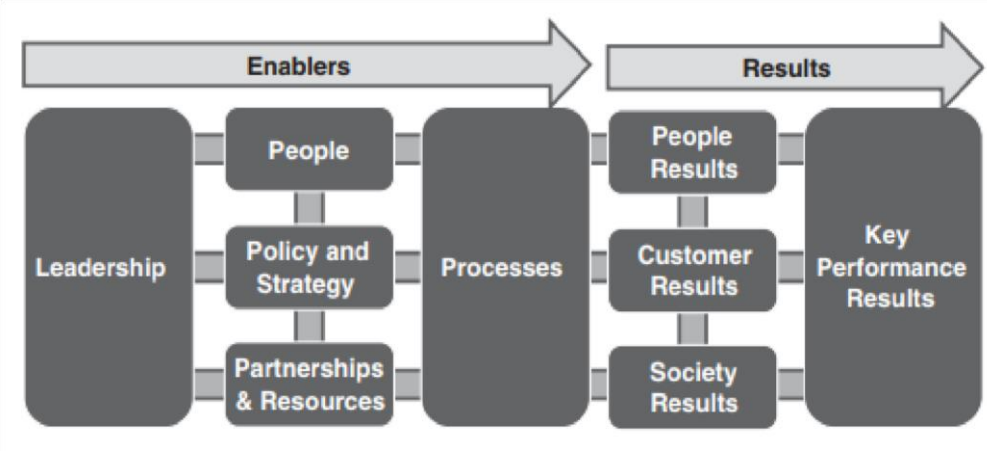

Figure 2.7: The EFQM Business Excellence model
Source: Westlund (2001)

Balanced scorecard model (BSC) created by Kaplan and Norton (1992). This is a performance assessment tool that works on the following basic aspects: Customer, Internal Business Process (Internal Process), Learning and Development (Employee Training and Development), Finance

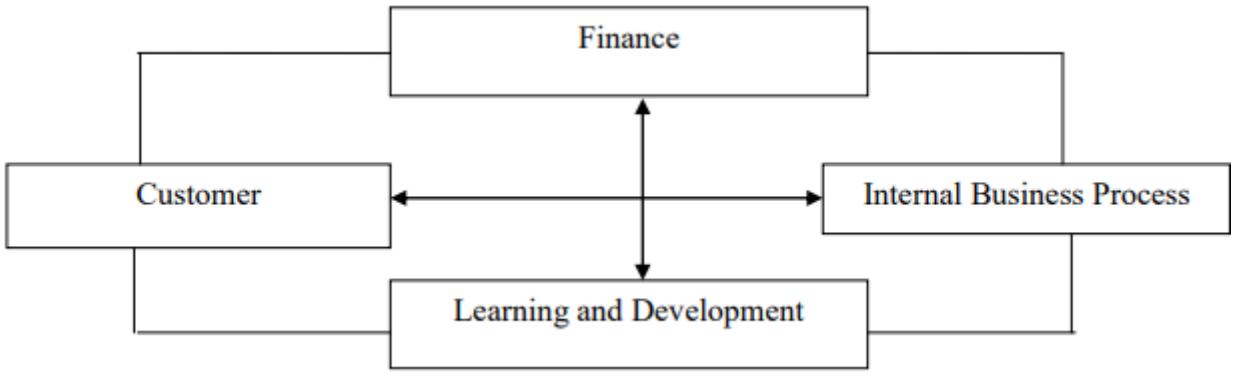

Figure 2.8: Balanced scorecard model
Source: Kaplan and Norton (1992)

The BSC is a described tool consisting of a set of quantitative evaluation criteria derived from an organization's strategy that leaders use to communicate to employees and stakeholders about results, drivers lead to operational efficiency. At the same time, through which the organization achieves its mission and strategic goals. Therefore, this tool is also understood as "communication tool", "evaluation system", "strategic management system" (Niven, 2003). According to Group (2010), the evaluation process is made both input and output of activities in the organization. The BSC is called the Balanced Scorecard because there are three tradeoffs: Balance between financial and non-financial metrics; balance between internal and external components of the organization; balance between historical criteria and organizational leadership criteria. BSC

was introduced by Kaplan and Norton (1992) as a method of evaluating the performance of tangible and intangible assets in an organization.

The BSC contains a combination of performance criteria and performance criteria. Performance metrics focus on outcomes at the end of a period. The outcome evaluation criteria are "directive" or lead to the results of the performance measurement. Kaplan and Norton (1996a) argue that BSC is a comprehensive and flexible performance evaluation model in all aspects of the organization. Therefore, the number of aspects that can grow beyond the four aspects of the original model, depending on the development goals of the organization. Therefore, the performance evaluation model of BSC is suitable for all types of organizations, and the model allows both financial and non-financial evaluation.

Khomba, J.K (2011) pointed out that the BSC model has certain limitations such as: Difficulties in strategy implementation, managers are familiar with the use of financial indicators, so it is difficult to apply non-financial indicators. The application needs experienced managers to avoid failure, the model focuses on a few aspects and simplifies…

Rillo (2004) also argues that the BSC has some limitations: Lack of some interest groups in the structure of BSC; Setting up a top-down execution process sometimes creates implementation issues; BSC will be very difficult to build and apply if leaders do not have knowledge, experience and understanding of this model as well as lack of determination to successfully implement it; The evaluation criteria are broad, carrying too many organizationalspecific elements, so the evaluation results may be scattered.

According to Lee (2006) and some studies on BSC have shown some features of some performance evaluation models in the following table 2.1:

Table 2.1: Features of performance evaluation models

Featured	BSC	PP	R&DM	IPMS	CPMP
From strategy	✓	✓	✓	✓	✓
Link operations with strategic goals	✓	✓	✓	✓	✓
Stimulating continuous improvement	✓		✓	✓	✓
Provide fast, accurate feedback	✓		✓	✓	
Clearly defined purpose	✓		✓	✓	✓
Consistent and easy to maintain	✓			✓	✓
Simple, easy to understand and easy to use	✓	✓	✓	✓	✓
Flexible assessment with any organization	✓				

Source*:* Research review author In which:

- PP- Performance Pyramid (Lynch and Cross, 1991)
- R&DM - Results and Determinants Matrix (Fitzgerald et al., 1991)
- IPMS - Integrated Performance Measurement System (Bitichi et al., 1997)
- CPMP - Cambridge Performance Measurement Design Process (Neely *et al*., 1996)
- BSC- Balanced Scorecard (Kaplan and Norton, 1992)

In the above performance evaluation models, BSC model is one of the models with full of outstanding features of the performance evaluation model. In particular, the BSC can flexibly evaluate in different aspects, the number of aspects depends on the organization to determine. In addition, the study of Marr and Schiuma (2003) reported that from 1992 to 2002, nearly 75% of the studies evaluating the performance were based on Kaplan and Norton's BSC model. Researchers Ittner and Larcker (1998a); Chenhall and Langfield-Smith (1998a) confirmed that BSC is the best performance evaluation model, the most cited in the studies. With such scientific statements, the selection of an appropriate BSC model applies performance assessment for all types of profit and non-profit organizations.

Depending on the operating characteristics, organizational capacity and resources, each organization can choose an appropriate performance evaluation model to achieve the assessment objectives set by the unit.

The results of this study show that: The article has reviewed the performance evaluation models, the factors in the model. The study draws out a number of advantages, disadvantages, and suitability of the model with different types of

organizations. The limitation of the study is that it has not been clearly shown the effectiveness of applying each of these models in the practical context of profit and non-profit units according to specific industries and fields of operation. This study has not specified which model will be best applied to which industries and fields of operation today. Therefore, these will be future research gaps. Scientists can continue to delve deeper into the use of different performance evaluation models in different contexts, industries, and areas of activity. From there, it is possible to further expand the research results on this issue.

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