



Key Performance Indicators of Indonesia State-Owned Enterprise - a Model using BSC and BEF

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Abstract: The State-Owned Enterprise (SOE) in Indonesia should report financial and non-financial information to the stockholder, the government. For these reasons, the government published a performance measurement system to stimulate SOEs improving their quality and productivity namely KPKU (Assesment Criteria for Performance Excellence), which adapted from the Criteria of Baldrige Excellence Framework (BEF). However, there is no description of how to deploy this measurement system into performance measurement for the SOEs. Therefore, this paper looks at designing the key performance indicators of the State-Owned Enterprise by using Balanced Scorecard (BSC) interrelated to BEF Criteria. This study explored the vision and mission of the SOE and analysed the relationship to the government requirements to formulate the company's strategic plan. The strategies translated into four balanced scorecard perspectives which interrelated to BEF Criteria. To measure the strategic achievement, the formulation of the key performance indicators (KPIs) for each strategic objective have been determined.

Keywords: KPKU, State-Owned Enterprise (SOE), Balanced Scorecard (BSC), Baldrige Excellence Framework (BEF), Key Performance Indicator (KPI)

1. Introduction

State-Owned Enterprises (SOEs) have become tools for some countries to better position themselves for the future in the global economy, given the increased competition for finance, talent, and resources [1]. State-owned enterprises play a considerable role in many economies, especially the performance of state-owned enterprises that emerged as reforms in many countries were implemented [2]. In this context, the Organisation for Economic Cooperation and Development guidelines that the ultimate purpose of state ownership of enterprises should be to maximize value for society, through an efficient allocation of resources [3]. In Indonesia, SOE is a legal entity that undertakes business on behalf of its owner, the government. While they conduct commercial activities, they may also have public policy and social objectives. Indonesia State-Owned Enterprises is the majority possessed by the government. The government takes control of the state corporations under one ministry, the Ministry of SOEs, which role like a holding company. The size and importance of the state-owned enterprises surely have a massive impact on the Indonesian economy, that's why the Ministry of SOEs in the Strategic Plan 2015-2019 assign two objectives for the SOE; to establish the professional SOE and to raise the SOE contribution to the National Economy [4]. In the dynamic and rapidly changing environment, SOE, like other organizations operate, must design, implement, and effectively manage their performance metric [5]. SOEs should report material financial and non-financial information on the enterprise in line with high quality internationally recognized standards of corporate disclosure, and including areas of significant concern for the state as

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an owner and the general public [3]. For these reasons, the ministry of SOEs published a performance measurement system named KPKU (Assesment Criteria for Performance Excellence) which is adapted from the Baldrige Excellence Framework (BEF) to help stimulate companies to improve quality and productivity for the pride of recognition while obtaining a competitive edge through increased profits [6].

The objectives of BEF are to raise the standard live quality of an organization and to be more competitive with other organizations in the region [7]. Based on the BEF, each SOE can assess all elements of the company that affects the management, process, and improvement of results. With the BEF as a guide and measuring tool, SOEs are expected to design the benefits of organizational performance, diagnose the overall performance management system, identify weaknesses and strengths of the organization, and assess performance improvement efforts [8]. Unfortunately, in its implementation, the enterprise has not optimally adapted the BEF criteria because it has not been fully deployed into the measurement system of the enterprise [9]. Evans analyzed that without a robust measurement system, it is challenging to develop effective strategic plans and lead to continued organizational improvements [6]. To ensure the conditions necessary for the effective measurement functioning, also to minimize the underlying complexity aspects of performance assessment, it is important the identification of factors that determined the SOEs performance measurement results [2].

There are several techniques to assist in the identification of factors that determined SOE performance, but less tool aligns closely with the Results category of BEF criteria. The instrument by which an organization can measure its progress toward strategic and operational activities and aligns with the 7th Result categories of Baldrige is Balanced Scorecard or BSC [10]. Also, the management system that has had more opportunities to be selected by many companies and businesses around the world is the Balanced Scorecard [11] and [12]). In Indonesia, 21% of SOE has applied BSC in their managerial performance system and shown better performance compared to other SOE [13]. Also, there is an alignment between BSC and Baldrige criteria in raising the SOEs' achievement [14]. Therefore, the objective of this paper is to design a state-owned enterprise performance measurement indicator by using BSC, which will effectively monitor the SOE performance and still in-line with the BEF Category 7.

2. Literature Review

The state-owned enterprises have to develop a performance measurement system that reflects the business growth environment and to fulfill the requirement from its stockholder, the government. Also, to compete in the regional markets, the enterprise strives to make an outstanding performance to achieve its set goals. It includes outcomes accomplished through a contribution of individuals or teams to the organization's strategic objectives [1]. Performance measurement focuses on mean and results, or processes and issues can be described in terms of practices and metrics [5], performance measurement can also be defined as the process of quantifying the efficiency and effectiveness of action [15].

Recently studies about the Indonesia SOE measurement system have been developed to asses and manage SOEs' performance quality. Christina [16] applied BSC as a framework to measure the performance of SOE in the construction industry between the years 2010 and 2011. They presented performance measurement using BSC expected to imply the stakeholders such as corporate and management, employees, potential investors, suppliers, creditors, and partners. The results of this research showed that enterprise performance was better in applying BSC. Andriyanto [13] analyzed the BSC effectiveness to increase the performance of SOEs. This research used 15 of 70 SOEs as the sample to measure managerial performance system. The result of this research shown that SOEs which have implemented BSC reach their performance better than SOEs don't.

Kharis [14] proposed to design the SOE performance measurement of SOE on a portland-cement industry by combining BSC, Baldrige criteria, and AHP. First, they analyze the integration between BSC and Baldrige criteria. In the second step, they establish a map strategy based on Baldrige criteria, then formulating key performance indicators, weight the indicators using AHP, and the last step to polarize and analyzed the indicators. Damanik [17] examine the SOE's healthiness on electricity companies based on government requirement indicators. They showed that the healthiness performance of the SOE had met the criteria of Ministerial Decree. In this research, he used the BSC method to analyze each of the key performance indicators. Ningtyas et al. [18] proposed to apply BSC for SOE on public transportation service by analyzing the mission, vision, and primary value of the enterprise and classified into performance targets and key indicators in four perspectives of the balanced scorecard, to increase the employees' performance [19]. Although many performance measurement system studies on SOEs, there are not enough SOEs application using BSC related to KPKU criteria and other government requirements. Hence, this study focused on the performance measurement of SOEs to meet those conditions.

3. Proposed Model

As mentioned before, this research proposed a model of implemented BSC to measure SOEs' performance in-lined with BEF criteria. There are four steps to designing the model. First, comparing BSC and BEF to identify the relationship between them. Second, formulate the strategic map, a figure that gives the conception of the main priority for every strategy. Third, to develop the key performance indicators related to BEF and to quantify them. The BSC

recognizes the driver relationships between the four scorecard perspectives, enabling the organization to focus efforts on those improvements [20]. BSC is the ultimate success measurement in the eyes of stockholders [10]. BEF result in category 7, aligned with BSC perspectives, is shown in Table 1.

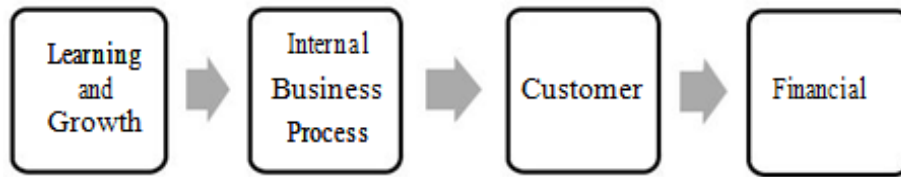


Fig. 1 - BSC Driver Relationships.

Table 1 - Relationship BSC Perspectives and BEF Results

| BEF Results | | BSC Perspective |
|-------------|-------------------------|---------------------------|
| 7.1 | Product and Process | Customer |
| 7.2 | Customer focus | Customer |
| 7.3 | Workforce | Learning and Growth |
| 7.4 | Leadership & Governance | Internal Business Process |
| 7.5 | Financial & Market | Financial |

Based on the purpose of the BEF Category 7 and the vision-mission of the enterprises, each perspective of BSC must address the requirement of the BEF Category 7 as deployed in Table 2.

Table 2 - BSC Perspective and BEF Requirements

| BSC Perspectives | BEF Category 7 Requirements |
|---------------------------|--|
| Financial | <ul style="list-style-type: none"> • The trend of key financial performance • Trends in marketplace performance • Productivity performance including labor and capital productivity |
| Customers | <ul style="list-style-type: none"> • Trends and targets met for the performance indicators of key business and support product and processes • Trends and targets met for supplier and partner performance indicators • Trends and targets met for community and environment protection indicators • Comparable results with competitors or benchmarks • Trends and targets met for customers satisfaction and comparable with competitors and other organization providing similar products • Trends and targets met for customer engagement indicators |
| Internal Business Process | <ul style="list-style-type: none"> • Trends and targets met for achievement vision and mission enterprise • Trends and targets met for governance indicators |
| Learning and Growth | <ul style="list-style-type: none"> • Improvement trends and targets met for employee’s satisfaction indicators • Improvement trends and targets met for employee involvement indicators • Improvement trends and targets met for employee training indicators • Comparable results with competitors or benchmarks |

This relationship among BSC perspective and BEF Category 7 requirements is then deployed into BSC strategic initiatives and strategic objectives, as shown in Table 3. To describe how the strategic plan delivered to its strategic goal, we draw a diagram, namely the strategy map. The strategy map outlines, as shown in Fig.2 is the fundamental business logic of the plan that demonstrates the implications for internal and external stakeholders, codifies the organizational competencies needed, explores what kind of skills and knowledge staff need, and identifies what resources need to be invested. The strategy map shows the process of intangible assets that will affect tangible assets such as employee competencies, customers, and internal process business towards tangible assets, which is the financial aspect. Those intangible assets have a contribution towards increased or decreased in the financial point. So, the formulated strategic is not only focused on the company's profitability but also in enhancing customer, product

innovation, employee productivity, and business process productivity that ultimately impact on the profitability of the company.

The following step is to formulate the key performance indicators (KPI). KPI is a key indicator of quantitative measurements used to indicate and compare performance to achieve the vision and mission of the enterprise [21]. KPI is formulated based on strategic objectives. The formulated KPI should be relevant to the pre-defined strategic objectives. In the formulation of KPI does not have too many in terms of quantity, but the most important that can support the objectives of the enterprise. Hence, formulate the KPI should address the BEF category 7, BSC, and strategic map. The key performance indicators are divided into four perspectives of the balanced scorecard and derived from the strategic map of the enterprise. By using the analytical hierarchy process, which is distributed to the staff of SOE, resulted in some KPIs for each of the BSC perspectives. The KPI drew in a relational concept of the balanced scorecard strategic map, as shown in Table 4, is to give a perspective review of the BEF and related to strategic themselves. Each one of strategic objective is deployed into at least one key performance indicator (KPI) which are grouped for each of one BSC perspective.

Table 3 - Strategic Initiatives and Objectives

| BSC Perspectives | Strategic Initiatives | Strategic Objectives |
|---------------------------|---|--|
| Financial | Expand profit opportunities | <ul style="list-style-type: none"> • Increased Profitability • Increased Sales Revenue |
| | Improve cost efficiency by cooperating with other State-Owned Enterprises | <ul style="list-style-type: none"> • Increased Productivity |
| Customer | Expanding market share | <ul style="list-style-type: none"> • Market Share Growth |
| | Maintain customers by making excellence a competitive strategy | <ul style="list-style-type: none"> • Customer Loyalty • Customer Growth |
| | Manage brand corporate image as competitiveness with other companies | <ul style="list-style-type: none"> • Manage Corporate Engagement |
| Internal Business Process | Develop diversification or innovation | <ul style="list-style-type: none"> • Diversification of Service to achieve Vision and Mission |
| | The partnership between state-owned enterprise | <ul style="list-style-type: none"> • Governance by Partnership with others |
| | Improve operational service quality as a competitive strategy | <ul style="list-style-type: none"> • Develop Governance in Quality Insurance • Governance in Work Efficiency |
| Learning and Growth | Developing the quality and capability of employees by the development of the industry in national and international scale | <ul style="list-style-type: none"> • Increased WorkForce Involvement • Increase WorkForce Competence |

4. Discussion

4.1 Financial Perspective

The financial perspectives are resulting in two strategies that have been formulated based on internal and external factors. These two strategies exist to support the company in achieving its vision to become a reliable consultant with the help of the financial aspect. The strategy for the financial perspective is to improve cost efficiency by cooperating with other state-owned enterprises by optimizing the utilization of cost usage towards service offered to the customer by the enterprise. The KPI, which related to the strategic objectives of the financial perspective, is: Increase profitability, cost efficiency, and sales revenue.

4.2 Customer Perspective

Three strategies are established to support company vision and mission in providing product and service excellent and trusted by the customer. The first strategy helps the enterprise to expand its market to support the previous strategy that is increasing profit opportunities. The second strategy is to maintain its customers by using the strong point of the

enterprise as a competitive strategy to face a challenge from the competitor. And the third strategy in the customer perspective is to manage brand corporate image as competitiveness with another enterprise. The indicators related to the strategic objectives of the customer perspective are Market share growth, customer growth, manage brand corporate image, and customer loyalty.

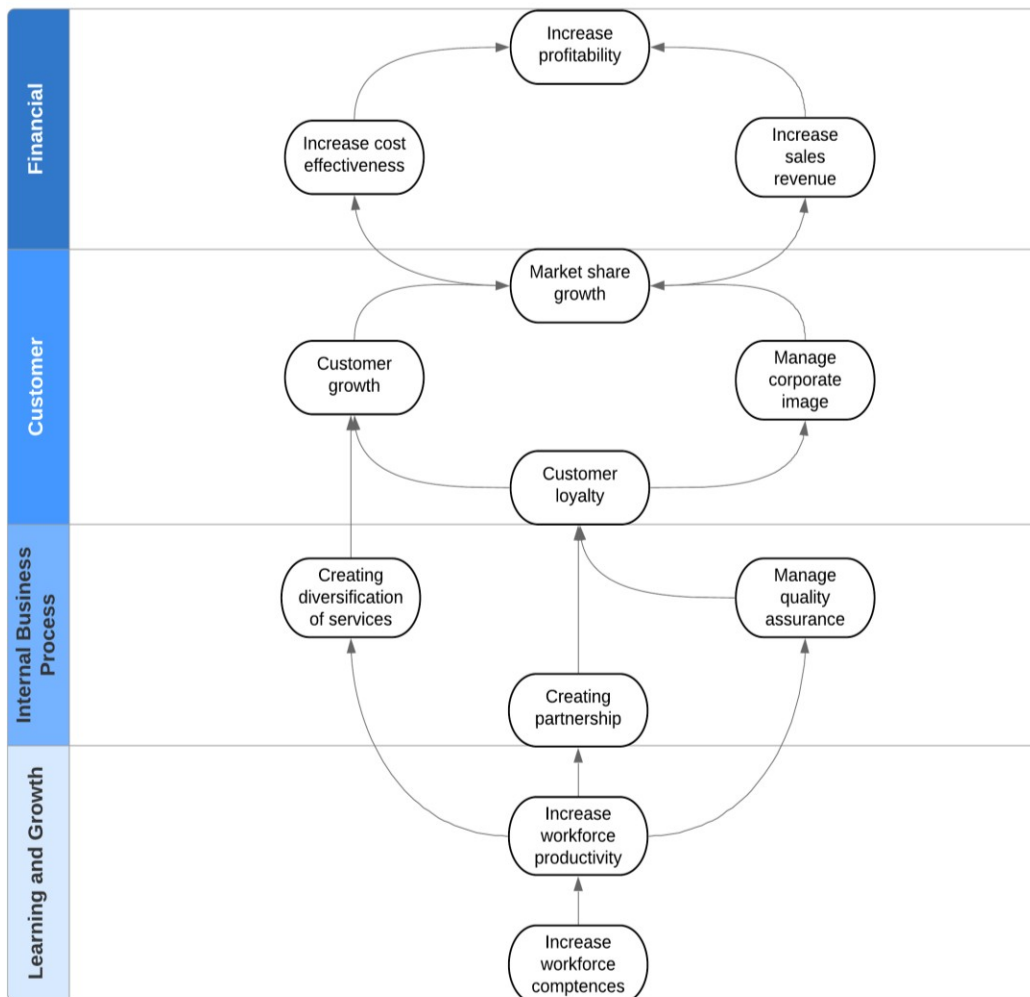


Fig. 2 - Strategy Map.

4.3 Internal Business Process

The first strategy is to develop diversification or innovation on product and service to be adaptive within the changes of environment that will affect the enterprise's condition. The second strategy exists to support enterprise by utilizing synergy among state-owned enterprises based on a policy of the SOEs Ministry. This strategy also helps the enterprise to improve cost efficiency by cooperating with other state-owned enterprises. Synergy among state-owned enterprises can be built through partnerships on handling projects, and it supports company mission to improve corporate performance to meet the expectation of stakeholders. And the third strategy in the internal business process is to enhance operational service quality as a competitive strategy. Means that this strategy ensures the company to manage its product and service quality meet the customer requirement and improve their work efficiency to provide the competitive price of the product and service. The KPI, which related to the strategic objectives of the internal business process perspective, is Creating diversification services, increase work efficiency, manage quality assurance, and creating a partnership.

4.4 Learning and Growth

The learning and growth perspective has the only strategy to develop the quality and capability of employees by the development of the industry. This strategy has been formulated from enterprise internal and external factors. If the

enterprise can achieve this strategy, it could increase the workforce productivity and increase workforce competence that aligns with company needs based on market demand.

The KPI which related to the strategic objectives of learning and growth perspective are: Increase workforce productivity and increase workforce competencies. There is no one standard path to achieve organizational performance excellence. Every enterprise has its mission and strategy. Therefore, the managers should understand the organizational context and improvement initiatives better to decide on which action would best suit the situation [22].

Table 4 - Key Performance Indicators.

| Strategic Objectives | KPI |
|---------------------------------|---|
| Increased Profitability | <ul style="list-style-type: none"> • Net Profit Margin • Return on Investment • Return on Equity • Return on Assets |
| Increase in Revenue | Sales Revenue |
| Increase in Cost Efficiency | Cost of Goods Sold Ratio |
| Market Share | Market Share Growth |
| Customer Loyalty | Customer Retention Rate |
| Customer Growth | Customer Acquisition Rate |
| Corporate Brand Image | Number of Award Received |
| Develop Service Diversification | Number of Service Diversification |
| Create a Partnership | Number of Established Partnership |
| Manage Quality Assurance | Number Complain Received |
| Increase Work Efficiency | Punctuality Rate |
| Increase Work Productivity | <ul style="list-style-type: none"> • Employee Productivity • Number of Training Provided |
| Increase Workforce Competence | Employee Retention Rate Number of Certified Employee |

5. Conclusion

The main result of this study is to develop key performance indicators for measuring SOE performance. The KPI related to the link between BEF governance and the strategies of SOE. The strategy formulated from internal and external conditions of the SOE has been categorized into nine strategies initiatives, 13 strategic objectives, and 18 quantitative key performance indicators that classified for each of balanced scorecard perspectives. Although the research has generally achieved the specific goals, it has limited to the following points:

- The pair-wise comparisons (AHP) that we used to weight the indicators can only be subjectively performed, and only relate in a linear hierarchy. Instead, use ANP to describe the relationship of the indicators among the BSC perspectives for better results.
- The size of the sample of this research was limited; therefore, a significant group of the SOE must be identified in the next study to get a detailed picture of the KPI for each industry.

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