

# Evaluating the Implementation of Balanced Scorecard in Employee Performance Appraisal

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**Received:** 15<sup>th</sup> August 2024/ **Revised:** 29<sup>th</sup> November 2024

**Accepted:** 9<sup>th</sup> December 2024/ **Published Online:** 6<sup>th</sup> February 2025

**Abstract** - One well-known performance assessment approach is the balanced scorecard (BSC), which evaluates financial and non-financial performance aspects. Although BSC has been widely used in the private sector, its implementation in the public sector presents unique challenges. The research examined the implementation of BSC at Perum Perhutani, an Indonesian state-owned company that manages forest resources. The research focused on the implementation of BSC in the Human Resources (HR) division. Even though BSC has succeeded in improving overall performance assessment, there are still obstacles to employees' understanding of the BSC concept, which causes employees to be confused when interpreting performance indicators. Apart from that, performance assessments are still affected by subjective assessments and a lack of specific and clear indicators. The research proposes the integration of Objectives and Key Results (OKR) to increase the clarity and alignment of performance indicators. By employing NVivo 12 for analysis, the research contributes to the literature regarding BSC implementation in developing countries, especially in the public sector, offering new insights to improve performance management practices in Indonesia.

**Keywords:** employee performance assessment, balanced scorecard, NVivo 12

## I. INTRODUCTION

An effective performance assessment must be based on clear and measurable criteria (Milkovich

& Newman, 2014). A successful performance appraisal and management system is crucial for an organization's human resource management (Helal, 2022). Performance appraisal is a method to evaluate and communicate how employees fulfill their job responsibilities while also formulating plans to enhance their performance. According to Dangol (2021), performance appraisal is a technique that positively influences work performance and employee motivation. So, performance appraisal can be interpreted as a systematic, clear, and measurable process aimed at providing feedback, improving performance, and motivating employees to achieve organizational goals.

One notable performance assessment method is the Balanced Scorecard (BSC). It is a method used to evaluate a company's performance by considering financial and non-financial aspects (Usman et al., 2022). Initially designed for private sector organizations, the BSC has since been adapted for non-profit and public sector entities (Olariu et al., 2023). In the last two and a half decades, the application of the BSC has garnered significant attention as a management model for public and non-profit organizations (Madsen, 2020).

According to Kaplan and Notron (in Amer et al., 2022), the aspects measured in the BSC focus on four main perspectives that help organizations understand their overall performance. First, the financial perspective highlights the organization's financial performance from the perspective of shareholders or investors. This perspective includes the measurement of revenue, profitability, cash flow, profit growth, and capital use. Second, customer perspective allows companies to align key customer metrics (such as customer satisfaction, loyalty, retention, acquisition, and profitability) with the organization's target market segments. Third, the internal business process

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perspective evaluates the efficiency and effectiveness of the company's internal processes that support the achievement of strategic goals. This perspective includes measurements such as production cycle time, production costs, product or service quality levels, and product or process innovation. Fourth, the learning and growth perspective focuses on employee training and fostering a corporate culture that prioritizes self-development for both individuals and the organization.

Although the BSC has been widely applied in private companies with positive outcomes, its implementation in the public sector often encounters unique challenges and inconsistent results. Some research shows that public sector organizations face difficulties adapting BSC to meet their operational needs and the need for diverse and complex performance indicators (Kumar et al., 2022). This gap is frequently attributed to the differences in goals and organizational structure between the public and profit-oriented private sectors. In the public sector, broader objectives such as social value and transparency are more challenging to measure and integrate into BSC systems that often emphasize financial and customer-related aspects. Furthermore, limited resources, conflicting priorities, and inconsistent management support further complicate the implementation of BSC in the public sector (Olariu et al., 2023). However, the implementation of BSC shows positive results on patient satisfaction and the financial performance of healthcare organization (HCO) (Amer et al., 2022). Implementing the Balanced Scorecard (BSC) proved effective in Tanzanian public organizations (Duwe, 2024). The implementation of BSC increases the possibility for employees to provide quality services.

Implementing the BSC in the public sector has various challenges and gaps. Thus, the research is important because it explores how BSC can be implemented effectively in public sector organizations, especially in Indonesia, through a case study of Perum Perhutani. Perum Perhutani is an Indonesian state-owned enterprise that plays an important role in managing national forest resources while supporting social, environmental, and economic sustainability. By understanding how the BSC is applied in this context, a more appropriate approach can be identified to achieve objective and constructive performance assessment, which other public sector organizations in Indonesia can adapt.

The need to improve public sector performance, often perceived as suboptimal, underscores

the importance of conducting further research. Consequently, the research focuses on examining the implementation of the BSC in the public sector, especially in Perum Perhutani. Perum Perhutani, which manages forest resources across Java and Madura and operates on a large scale, places great emphasis on performance appraisals, especially within its Human Resource (HR) division. The division is responsible for designing and implementing a performance appraisal system that periodically evaluates employee performance and provides constructive feedback.

Perum Perhutani's performance management System, also known as the Enterprise Performance Management System (EPMS), is established based on Perum Perhutani directors' decree no 78/KPTS/DIR/2011 and implemented using the OPEXIS application system. The management guidelines explain that the BSC is a basic concept for developing a Performance Management System (PMS). The BSC remains the core concept for Perum Perhutani's Performance Management System. In its implementation, Perum Perhutani adopts five performance assessment perspectives in accordance by the Regulation of the Minister of State-Owned Enterprises Number SK-306/MBU/11/2023 concerning Technical Guidelines on the preparation of Key Performance Indicators in State-Owned Enterprises (Indonesian Minister of State-Owned Enterprises, 2023). The five perspectives include economic and social value for Indonesia, business model innovation, technological leadership, increased investment, and talent development.

The results of employee performance, particularly in the HR Division at the head office, are reflected in the average employee performance scores in Table 1.

As shown in Table 1, the achievement of these performance indicators reflects a very high-performance result. The total 25 HR division employees demonstrate very high-performance results with average scores falling within the good (81-95) and very good (>95) assessment categories.

Table 2 presents the range of values used by Perum Perhutani to measure performance outcomes. The performance assessment of Perum Perhutani's HR Division employees is based on five perspectives outlined in the regulations of the Indonesia Minister of State-Owned Enterprises, encompassing a total of 66 indicators. Although the average performance score of HR division employees is relatively high,

Table 1 Data on Average Performance Values of Perum Perhutani Employees (HR Division) Head Office 2021-2023

No	Year	Number of Employees	Employee Performance Value				
			Q I	Q II	Q III	Q IV	Average
1	2021	21	94,48	94,13	94,41	95,27	94,57
2	2022	21	93,76	94,59	94,78	94,25	94,34
3	2023	25	95,45	95,72	95,68	95,99	93,80

this is not in line with actual practice, as there are still challenges in conducting accurate performance appraisals. According to one interviewee, current performance assessments do not accurately reflect actual performance due to the absence of standardized criteria for success in achieving each performance indicator from the appraisal perspective. This causes subjectivity in assessment.

Table 2 Range of Final Performance Values for Perum Perhutani Individuals

Value Range
Unusual > 95
Good 81-95
Fair 61-81
Bad <60

The research aims to bridge the gap between the performance indicators implemented and the actual performance results achieved, particularly in the HR division of Perum Perhutani. This research proposes the development of Objective and Key Results (OKR) as a method to ensure performance indicators align with employee's actual work and establish clear standards. Additionally, NVivo 12 is used as a qualitative data analysis tool, providing significant insights to better understand and evaluate employee performance in greater depth.

In line with this objective, the Balanced Scorecard research from 1992-2021 is classified based on countries and author affiliation (Kumar et al., 2022). Authors from many countries have contributed to the BSC literature. The United States, the United Kingdom, and India are the top three countries with the highest BSC article publications. Most research comes from developed countries, whereas the BSC remains a relatively new issue in several developing countries. The lack of research highlights the relevance and significance of research conducted in the Indonesian public sector because similar research remains limited in developing countries.

Furthermore, the technical analysis in BSC research reveals significant differences in approach. 64.04% of BSC research uses quantitative analysis, while 35.96% uses qualitative analysis (Kumar et al., 2022). Therefore, this research, not only contributes to the context of analytical methods but also seeks to ensure a more effective and targeted implementation of the BSC in the Perum Perhutani's HR division.

## II. METHODS

The research applies a qualitative research method with a case study approach. Then, NVivo 12 software is utilized for data analysis. The case study approach is chosen to facilitate an in-depth investigation of the performance appraisal process in

the HR division of Perum Perhutani. It is to understand complex phenomena within a real-world context. This approach supports comprehensive research through various data collection methods, including interviews, observation, and documentation, while assessing the effectiveness of the BSC in the public sector and identifying the challenges (Creswell & Creswell, 2018).

Observations are conducted to observe the implementation of the performance assessment system and the BSC. The focus is on observing employee interactions with the implemented systems and practices to identify potential challenges encountered in daily implementation.

Documentation includes assessment policies, performance data, and relevant evaluation reports. These documents are analyzed to complement the interviews and provide additional context regarding performance appraisal practices in the HR Division of Perum Perhutani.

Interviews are conducted with informants from the HR Division of Perum Perhutani through face-to-face and online meetings, such as Zoom. Interview questions are designed to explore respondents' understanding of the assessment process, their experiences with the criteria, and their recommendations for improving the system. All interviews are recorded to ensure the accuracy of the data collected.

Purposive sampling is used to select informants, totaling 12 individuals chosen based on their direct knowledge of the HR performance assessment process. The selection criteria include HR Division employees at Perum Perhutani with at least 2-3 years of work experience, as well as having an understanding and involvement in performance appraisal. (Fausiah et al., 2023). Data collection methods included observation, interviews, and documentation. Observation and documentation data are analyzed using NVivo 12 to identify main themes and relationships among findings. Observations capture the hands-on process and challenges associated with performance appraisal. Then, documentation, such as policies and white papers, provides additional context. Integrating these data types offers a deeper understanding of the gaps between formal policies and actual field practices.

The data validity is tested through triangulation by comparing employee interview data with internal data from the HR Division of Perum Perhutani. The comparison is to ensure consistency of information. Data analysis is conducted using thematic analysis to identify patterns or themes in the collected data (Mahmić-Kaknjo et al., 2023). Data processing uses NVivo 12 software. The process begins with data import and is followed by coding interview transcripts, observation notes, journals, documents, and literature. The coding results are visualized using hierarchical diagrams to observe trends and a Project Map to illustrate relationships between themes and subthemes. These visualizations facilitate the identification of key patterns and trends. The Project Map provides

clarity on the overall data structure, enabling a deeper understanding of the research context.

### III. RESULTS AND DISCUSSIONS

The findings from interviews, observations, and documentation are grouped into five main themes: the BSC and five perspectives adopted from the regulations of the Minister of State-Owned Enterprises, the process of employee performance appraisal, the procedures and standards of performance evaluation, the performance assessment indicators, and the recommendations for improving the performance assessment system. These themes are chosen to address the three research questions and analyzed using NVivo 12, which facilitates data categorization based on themes.

Data processed in NVivo 12 is visualized using hierarchical diagrams and Project Maps to identify patterns and relationships between themes, helping to present findings more clearly and systematically. These themes are processed in NVivo 12 (see Figure 1).

Furthermore, the data processing results are presented in a hierarchy chart (see Figure 2), which identifies various aspects of the main research theme. The hierarchy chart displays that each color represents a different theme. Then, the size of each section in the chart corresponds to the number of statements or

responses from the informants. The larger the section, the more frequently similar answers or opinions are expressed. The following is an explanation of each section in the Hierarchy Chart:

The first section is the BSC and five perspectives of state-owned enterprises (SOE). Researchers conducted interviews to assess the informants' understanding and the suitability of the method used in HR division of Perum Perhutani. Figure 3 reveals several findings from the interviews.

Researchers conduct interviews with informants regarding the BSC and 5 SOE Perspectives. The results show that most informants believe the application of the BSC and the five perspectives is relevant and appropriate. One informant noted that the method used by BSC is suitable and can be applied (9 informants, interviews, 2024). The balanced scorecard is considered an effective tool for performance assessment, though it is necessary to adjust the indicators and weights. The five perspectives of SOE are seen as comprehensive and reflective of national aspirations. However, some informants do not fully understand the BSC, highlighting the importance of training for all stakeholders. As best practice, organizations must ensure that key performance indicators (KPIs) are communicated and explained well to staff and that appropriate benchmarks are set for assessing staff performance (Dangol, 2021). Effective communication through BSC ensures that



Figure 1 NVivo 12 Nodes and Codes

everyone understands their role in contributing to overall organizational goals (Huang et al., 2023). This is important because employees who understand the company's goals and vision are more motivated to work to achieve these achievements.

The BSC is also considered applicable to all types of organizations as long as the organization's vision and mission are well-defined. Perum Perhutani has effectively integrated its vision and mission into the BSC. However, some informants still do not fully understand its implementation.

Figure 4 is a hierarchy chart used to organize and group information visually. It shows that most informants (9 informants) believe that the BSC and the five perspectives of SOE are appropriate and relevant for the HR Division in Perum Perhutani.

The second section is the process of employee performance appraisal. The researcher conducts interviews to understand how the employee performance appraisal process functions within the HR division, which led to several findings, as presented in Figure 5.

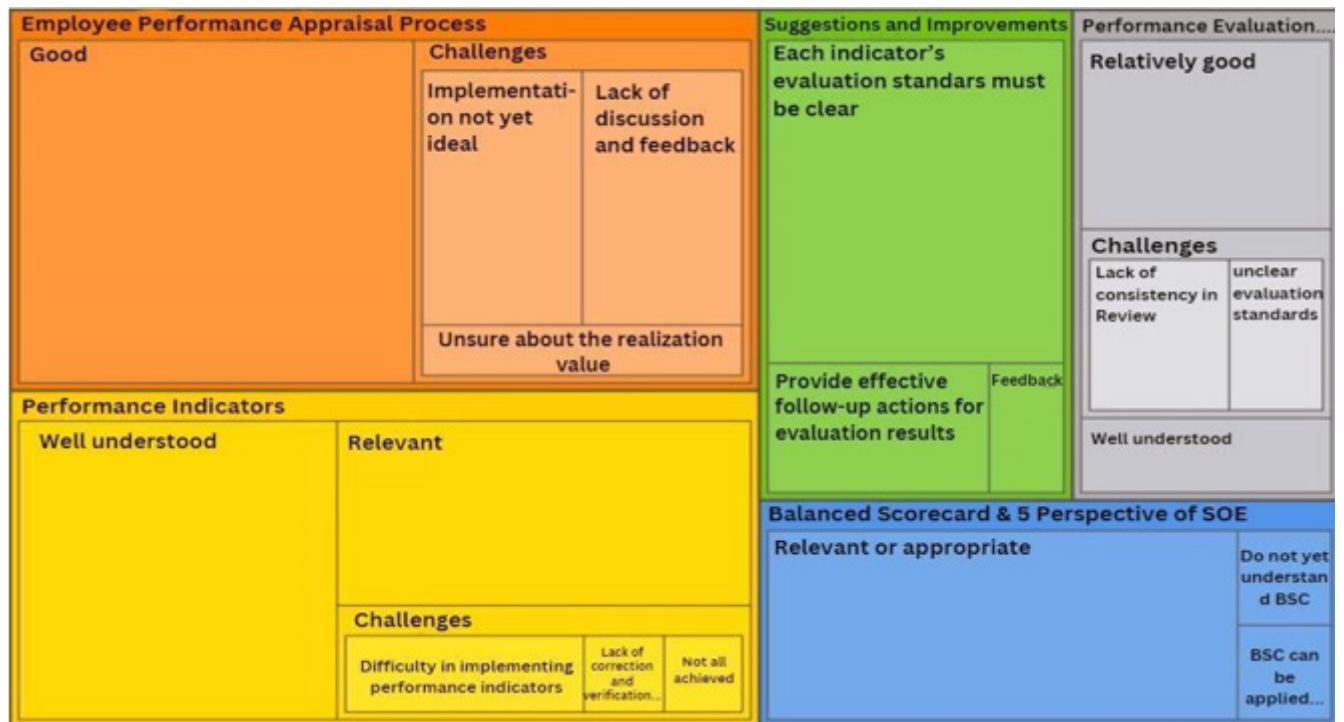


Figure 2 Hierarchy Chart

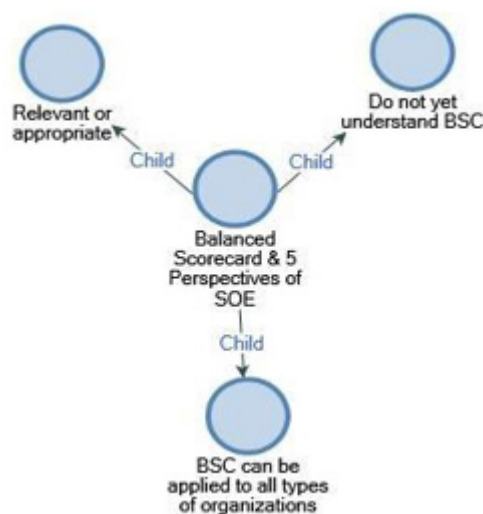


Figure 3 Project Map Balanced Scorecard and 5 SOE Perspectives

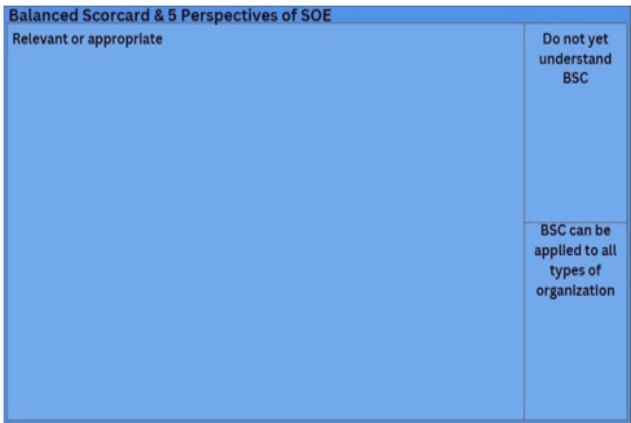


Figure 4 Balanced Scorecard Hierarchy Chart and 5 BUMN Perspectives

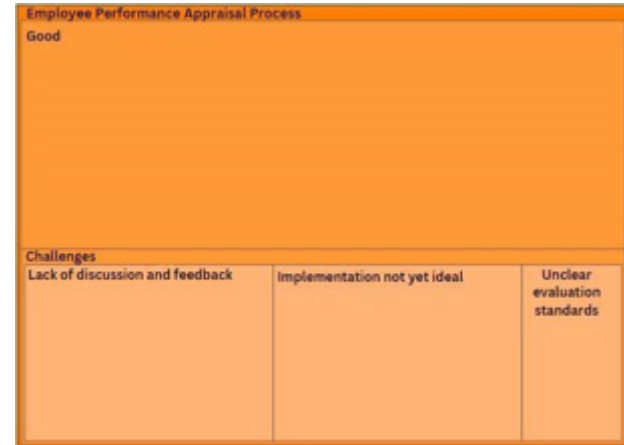


Figure 6 Hierarchy Chart of Employee Performance Appraisal Process

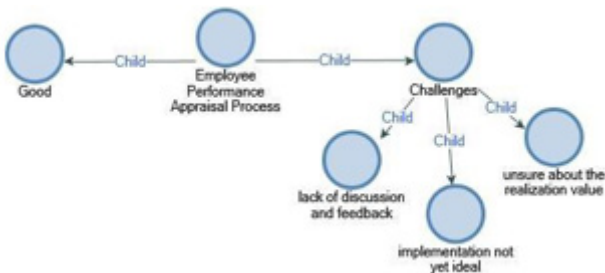


Figure 5 Project Map of Employee Performance Appraisal Process

The research finds that the performance appraisal system in the HR division is well-developed and aligned with business needs. However, several challenges persist, including a lack of confidence in the value of the results, suboptimal implementation, and insufficient discussion and input. The uncertainty about the accuracy of the assessment leads employees to question whether their performance achievements align with expectations. In addition, implementation is not fully optimized, and there are difficulties in describing activities and completion processes that adequately reflect the performance indicators. One informant stated that the indicators have not been able to describe how the person does their job. Furthermore, feedback is often delayed, and communication is less effective. Therefore, enhancing the effectiveness of performance appraisals through a structured feedback system between superiors and subordinates is necessary.

Most informants agreed that, although the performance appraisal process is well-functioning, these challenges still need to be addressed. Figure 6 shows that of the 12 informants, 10 informants rated the evaluation process as good overall, although all 12 acknowledged specific challenges or obstacles.

Third section is regarding performance procedures and standards of employee performance evaluation. Researchers conducted interviews with informants to examine the procedures and standards for assessing

employee performance in the HR division of Perum Perhutani. The findings from these interviews are presented in Figure 7.

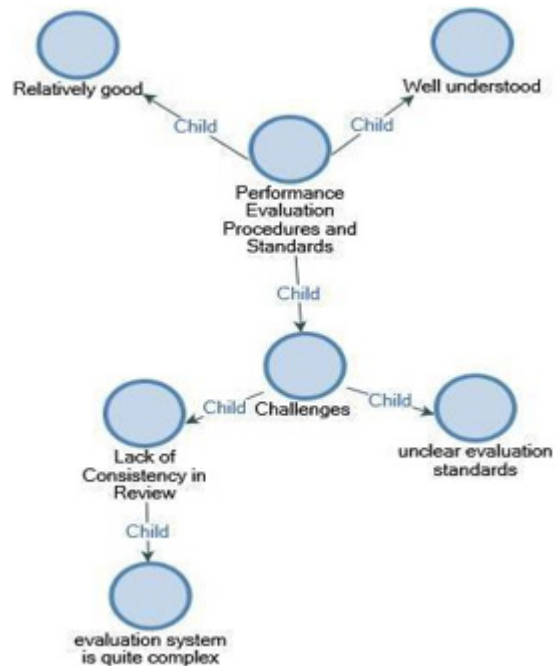


Figure 7 Procedures and Standards of Employee Performance Evaluation

The procedures and standards for assessing employee performance in the HR division function well and can be understood by employees. First, the assessment standards lack clarity, making the assessment subjective and prevents proper measurement. The standards and indicators fail to fully capture employee performance, resulting in assessments that do not accurately reflect the realities of their work. Therefore, it is necessary to develop more comprehensive performance indicators that encompass various aspects of work. Second, there is a lack of consistency in conducting reviews, and the

appraisal system's complexity means that leaders often do not have sufficient time to provide timely feedback.

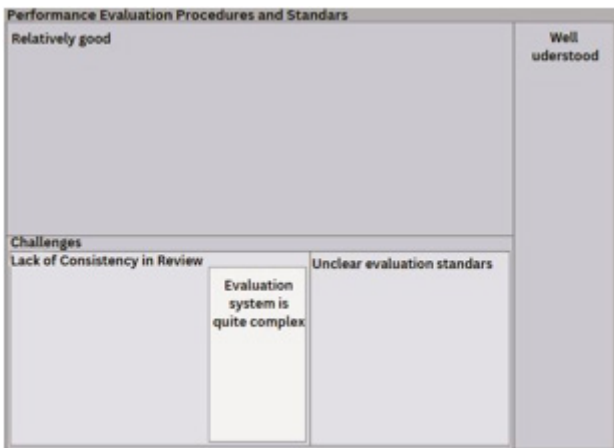


Figure 8 Hierarchy Chart of Performance Evaluation Procedures and Standards

Figure 8 shows that, of the 12 informants, 5 considered the procedures to be good, 2 had a clear understanding of the procedures, and 5 pointed out the challenges.

Fourth section is regarding the performance indicators. The researchers interview the informants to identify the key indicators for assessing employee performance in the HR division. The findings are presented in Figure 9.

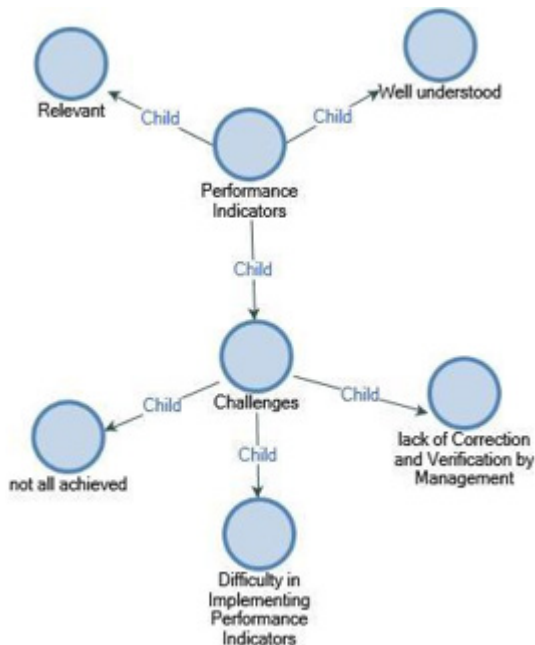


Figure 9 Project Map of Performance Indicators

Most informants understand their performance indicators and consider them relevant to their duties and responsibilities. However, there are still challenges

in their implementation. First, there are difficulties in effectively applying performance indicators. One informant stated that these indicators do not describe the difficulty, pace, or detail of the work. Many performance indicators focus solely on percentages without clearly representing the complexity or speed of achieving targets. Some performance indicators remain misaligned with employee roles, highlighting the need for adjustments to better reflect actual duties and responsibilities. Second, there is a lack of correction and verification from leadership. Third, the performance indicators are not consistently achieved, as obstacles prevent some employees from effectively achieving their targets.



Figure 10 Hierarchy Chart of Performance Indicators

Figure 10 shows that, out of 12 informants, 10 informants felt they understood the performance indicators, 8 believed the indicators were clear, and 4 acknowledged the challenges.

Fifth section is regarding suggestions and improvements. Figure 11 shows the suggestions and improvements provided by the informants.

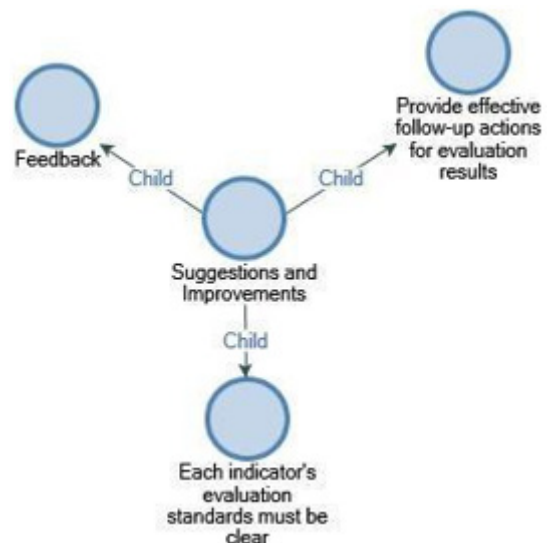


Figure 11 Project Map of Suggestions and Improvements

Figure 11 highlights the suggestions and improvements provided by the informants. According to the informants, a more specific explanation of the performance indicators is needed to make them easier to understand, measurable, and adaptable to actual needs and conditions. Using the objectives and key results (OKR) method is recommended to ensure relevance and measure success objectively. OKR can also be used as a benchmarking tool to evaluate progress against desired goals or objectives (Saragih et al., 2022). The decision to combine the BSC model into OKR proves to be relevant in discovering the benefits inherent in each model (Chalupova & Voracek, 2021). The HR division of Perum Perhutani can apply the OKR method, which is equipped with a success scale or indicator achievement scale to provide a clear picture. Table 3 shows the implementation of coaching and counseling.

In addition, the differences in indicators occur in some cases. For example, Earnings Before Interest, Taxes, Depreciation, and Amortization (EBITDA), Profit and Loss, and Emerging Sources Citation Index (ESCI) have been used as performance indicators in the HR division. This gap means that the indicator does not have a valid realization. The use of irrelevant indicators can result in inaccurate performance assessments, which can affect management decisions based on such assessments.

Another perspective suggests that important indicators are still missing from the existing performance indicators, particularly those related to psychological aspects. One such indicator that can be applied to the HR division is psychological well-being (PWB).

According to the World Health Organization (WHO), psychological well-being (PWB) is defined as a state of mind in which a person can develop their potential, work productively and creatively, and cope with the everyday stresses of life. According to Ryff (in Arslan, 2023), there are six characteristics of PWB: self-acceptance, positive relationships with other people, autonomy, mastery of the environment, life goals, and personal growth.

PWB is an important aspect of mental and emotional health that requires ongoing attention and care (Dhanabhakya & Sarath, 2023). Moreover, PWB has a beneficial effect on employee affective commitment, which in turn improves employee performance (Kundi et al., 2020). Based on previous research, indicators of PWB can be used to assess the well-being of all employees in the HR division to get a picture of their mental health. Performance indicators can also be applied more specifically to certain areas, such as recruiting or training teams, to evaluate how PWB influences their respective performance outcomes.

From the performance assessment feedback, informants suggested that the performance appraisal needs to be conducted in a more structured manner. In enhancing the effectiveness of performance appraisals, it is necessary to develop an objective and transparent feedback system between superiors and employees. Providing constructive feedback is considered an important factor by employees, as it helps them perform better in subsequent assessments and improve their job performance (Dangol, 2021).

Communication is very important when using BSC (Gomes & Romão, 2018). Effective communication through the BSC ensures that each individual understands how their role contributes to achieving the organization's goals (Huang et al., 2023). Additionally, leaders must actively provide evidence-based feedback and create a positive and productive work environment. Leadership Engagement is closely related to feedback in the employee performance appraisal process. Leadership engagement is leadership behavior that facilitates, strengthens, connects, and inspires employees to increase employee work engagement (Schaufeli, 2021). Increasing leadership involvement is crucial for ensuring leaders can provide constructive feedback and comprehensively support the performance appraisal process.

The final suggestion from the informant is to provide adequate follow-up measures. The suggestion includes offering training and development opportunities for employees whose performance is

Table 3 Implementation of Coaching and Counseling

Objective	Improving employee performance and welfare through effective coaching and counseling programs	Scale of success
Key Results 1	Perform 10 individual training sessions per month.	- 0 sessions: 0% - 1-3 sessions: 30% - 4-6 sessions: 60% - 7-9 sessions: 90% - 10 sessions: 100%
Key Results 2	Hold 2 group counseling sessions per month.	- 0 sessions: 0% - 1 session: 50% - 2 sessions: 100%
Key Results 3	Achieve an 85% satisfaction rate in the post-session survey of coaching and counseling.	- <60% satisfaction: 0% - Satisfaction 60-70% : 50% - 71-84% satisfaction : 75% - 85% or more: 100%



not optimal while considering cost efficiency. In the public sector, it is found that employee training and development has the most substantial impact on organizational performance (Nafari & Rezaei, 2022). Therefore, companies must provide training and development to their employees.

One approach to optimizing employee performance, especially for employees who have potential but whose performance needs to be improved, the HR division of Perum Perhutani can apply peer mentoring. Peer mentoring is when employees at the same or nearly the same level in an organization provide guidance, support, and knowledge to one another. Connected peer mentoring is highly effective for transferring critical job-related and technical knowledge, making it a valuable resource for knowledge transfer and learning (Murrell et al., 2021). The key to the success of peer mentoring is employee involvement.

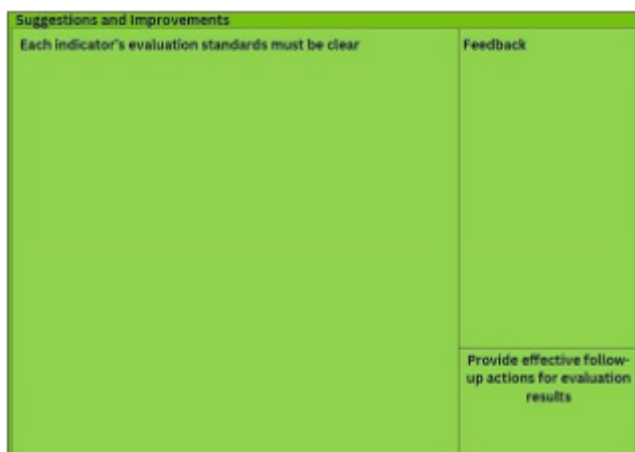


Figure 12 Hierarchy Chart of Suggestions and Improvements

Figure 12 shows several suggestions and improvements provided by the informants. Out of 12 informants, 9 informants emphasize the need for clarity in evaluation standards, 1 informant recommends implementing effective follow-up measures, and 3 informants highlight issues related to the feedback process.

#### IV. CONCLUSIONS

The research concludes that although the implementation of the BSC in organizations is ongoing, there are still some challenges. These challenges include employees' lack of understanding of the BSC concept, which creates ambiguity in interpreting performance indicators. Therefore, intensive training and more systematic socialization programs are needed to increase understanding. In addition, developing specific, measurable, and clear performance indicators is also important to increase

evaluation objectivity and reduce subjectivity.

Other recommendations include adopting OKR to set performance standards that are more flexible and responsive to external changes, as well as providing structured, data-driven feedback to increase leadership involvement in cultivating a positive work culture. Introducing psychological well-being indicators in performance appraisals can also improve employee well-being and overall organizational operational effectiveness.

Theoretically, the research provides insight into the challenges of implementing BSC and emphasizes the importance of management involvement in the performance assessment process. This also opens opportunities to develop a more adaptive performance management theory by incorporating the OKR approach. Practically, the research offers actionable recommendations to improve BSC implementation and performance assessment effectiveness through more measurable indicators, implementation of OKR, and increased data-based feedback. Peer mentoring is also recommended as a cost-effective training solution that utilizes the organization's internal resources.

The research acknowledges certain limitations, including potential bias in data objectivity and organizational resistance to culture change, which may hinder the successful implementation of these recommendations. Future research could explore the effectiveness of BSC training and the impact of OKR implementation and compare other performance appraisal models to gain a deeper understanding of BSC implementation and performance appraisal in organizations. The research contributes to the development of managerial practices and theories of performance assessment in organizations despite the challenges in its implementation.

**Author Contributions:** Conceived and designed the analysis, T. D. K. G., N. L. S., and M. K. S. M.; Collected the data, T. D. K. G.; Performed the analysis, T. D. K. G., N. L. S., and M. K. S. M.; Contributed data or analysis tools, T. D. K. G., and N. L. S.; Writing original draft, T. D. K. G.; Other contribution, T. D. K. G., N. L. S., and M. K. S. M.

**Data Availability Statement:** Data are available from the corresponding author, T. D. K. G., upon reasonable request.

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