



Knowledge-Based Performance Management Framework for Small Public Health Facility: A Case Study of Clinic T in City B, Indonesia

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ABSTRACT: The healthcare service system in Indonesia is divided into two levels, first-level healthcare services, and advanced-level healthcare services. One of the first-level healthcare services is the small public health facility or clinics. The healthcare system in Indonesia requires patients to seek treatment at a first-level health care system first and prohibits seeking treatment at an advanced-level healthcare system unless emergency or necessary. However, research on the performance management system for clinics is still very minimal. This research is intended to design a performance management framework using Clinic T in City B, Indonesia, as a case study. The flow of research methodology in this study is started with problem identification, continued with framework selection analysis. The selected framework in this study is the Knowledge-Based Performance Management System (KBPMS). Performance framework for Clinic T and the performance indicators are presented, along with the linkage between performance variables and one of the simple ways to show the clinic's performance for easier evaluation. The proposed framework is expected to be suitable for other clinics in Indonesia and can be used as a foundation for other clinics in designing their own performance management framework.

KEYWORDS: Clinics, Healthcare, KBPMS, Management System, Performance Framework.

INTRODUCTION

The healthcare service system in Indonesia is divided into two levels, namely first-level healthcare services and advanced-level healthcare services. One of the first-level healthcare services is the small public health facility or clinics, while one of the advanced-level healthcare service is the regional general hospitals (RSUD).

The healthcare system in Indonesia requires patients to seek treatment at a first-level health care system first. To be able to seek treatment at an advanced-level healthcare system, it is necessary for the patient to have a referral from a doctor stating that the patient requires further treatment or cannot be handled by in a first-level healthcare system. However, this provision is excluded in certain cases, such as when a medical emergency occurs or when the patient is outside the area where the first-level health care facility is located. One of the clinics in City B, Indonesia was taken as a case in this study. To maintain confidentiality, this clinic will hereinafter be referred to as "Clinic T".

Initially, this clinic only served general patients, but after the rename and rebranding, Clinic T then also accepted BPJS patients. General patients are patients who are not an insurance participant, or do not use insurance. BPJS patients, on the other hand, are patients who use Healthcare BPJS, the health insurance program from the Indonesian government. The Social Security Administrator for Health issued a BPJS rating system for a clinic in order to make sure the fairness of service for all BPJS participants. Clinics with low BPJS rating could be removed from the list of clinics that can accept BPJS participants and are prohibited from accepting BPJS participants. This could actually massively affect the clinic's income.

Clinic T further expanded its services by adding laboratory test services, such as general blood tests and cholesterol tests. In the era of the Covid-19 pandemic, it also serves covid tests such as antigen and PCR tests. Recently, Clinic T has also expanded its services by adding a beauty clinic.

Broadly speaking, the flow of services at Clinic T can be observed in the following figure

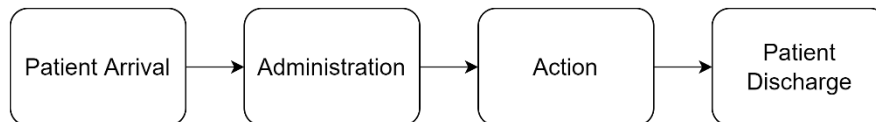


Figure 1. General Flow of Service in Clinic T

The flow started with Patient Arrival. This is when the patient first arrived to the clinic. Because of the Covid-19 pandemic, Clinic T require all entrants to the clinic to do Covid procedure, which is washing hands. The Administration section is when the patient registers for treatment and wait until called in for treatment. For a more service-specific procedure, there are slight differences for the Action and Patient Discharge sections. For general practitioners and dentists, the action taken is an evaluation and diagnosis by a doctor. For laboratory services, the actions taken are sample collection and inspection. For beauty clinics, the actions taken are evaluation and diagnosis, or skincare treatment. For general practitioners and dentists, the Patient Discharge section is usually started by administrating needed medicine to the patient. For beauty clinics, however, drug administration is also carried out, but only for patients who needed it.

To assess the current condition of Clinic T, an SWOT analysis was carried out. SWOT analysis can be used to identify the unique competencies possessed by a company and to show opportunities that may have not yet been exploited by the company due to limited resources 1. The results of the SWOT analysis of the Clinic T are as follows.

Table 1. SWOT Analysis of Clinic T

| <i>Strength</i> | <i>Opportunity</i> |
|---|--|
| <ul style="list-style-type: none"> • Has a doctor who graduated from the prestigious Faculty of Medicine, University of Indonesia which has "A" accreditation • Has a high customer satisfaction rating • Provide Covid-19 tests, namely the Antigen and PCR • Provide beauty care services, which are rarely found in clinics in general • Has a good BPJS rating | <ul style="list-style-type: none"> • Prices for the clinic’s drugs and services follow the price marketed by the government. If the price from the government goes up, the price from the clinic would also goes up, resulted in higher income • There is a need for cooperation between the clinic and manufacturing companies within the region, for the clinic to be a reference for BPJS clinics for its workers. This could increase the number of BPJS patient registered to Clinic T • There is no other clinic in the area of operation that can provide beauty care services |
| <i>Weakness</i> | <i>Threat</i> |
| <ul style="list-style-type: none"> • The number of registered BPJS patients can be considered small • The number of rooms the clinic has are actually still lacking according to BPJS standards • Still does not have adequate space for birth delivery • Its BPJS rating is actually classified as standard when compared with other clinics | <ul style="list-style-type: none"> • Prices for the clinic’s drugs and services follow the price marketed by the government. If the price from the government goes down, the price from the clinic would also goes down, resulted in lower income • Changes from BPJS’s regulation for clinics • Other clinics could copy Clinic T’s business strategy |

PROBLEM FORMULATION

After conducting SWOT analysis on Clinic T and studying the day-to-day operations of Clinic T, several issues that would be the focus of this study were found. Those issues are:

- Clinic T does not yet have a performance management system
- The number of BPJS patients registered at Clinic T is still relatively small
- The BPJS rating owned by Clinic T is still classified as standard when compared to the ratings of other clinics



- Clinic T's participation in medical scientific activities is still very low
- Clinic T does not yet have an adequate marketing system
- There is still no attendance system for employees and doctors on duty at the clinic
- Employee performance measurement system in Clinic T is not yet formulated
- The use of technology to assist HR activities or other operational activities is still very minimal

Many researches on the implementation of performance management systems in health institutions have been carried out. However, most of the studies take hospital as a reference or case study. In this study, small public health facility or clinic is taken for a reference instead. Apart from that research on the performance management system for clinics is still very minimal, this is also in accordance with the health system in Indonesia where patients are asked to seek treatment at the clinic first, instead of being allowed to go directly to the hospital, unless it is an emergency.

FRAMEWORK SELECTION ANALYSIS

Performance Management System can be defined as *"a systematic process for improving organizational performance by developing the performance of individuals and teams"*². By this definition, performance management is a way to achieve better result from the collaboration of individual, team, and organizational effort, through the understanding and management of performance that refers to the agreed objectives, standards, and competency of the company.

The conventional approach of performance management relies heavily on the financial factor or, more specifically, the financial report. The financial report, namely the income statement, balanced sheet, or the cashflow statement, is formulated in the 1800s and is still being used to this day. However, with the advancement of technology and business management, the financial ratios can no longer solely serve as a relevant indicator for performance. It is concluded that the conventional performance management system, that only uses financial performance as its basis, is no longer suitable for the current era³.

Various studies on the weakness of the financial-based, conventional performance management system has been carried out. The main conclusion of these studies is that financial-based performance management system is unable to accommodate the operating system of current companies. The limitation of financial-based performance management system has been well-explained and summarized as follows: the conventional performance management system is lack of relevance, tend to report pass performance (lagging metrics), short-term oriented, less flexible, depends on standard and fixed variables, do not foster improvement process, and often confused on the cost aspects⁴⁵⁶.

The new generation of performance management system, on the other hand, are designed to counter the liabilities of the traditional performance management system. The new generation performance management system is summarized as a system that: based on the company's strategy, build on the basis of the company's value, synchronized with the performance to be measure, customer oriented, long-term oriented, measure team performance, monitor improvement and development, aims at the evaluation and engagement process, and emphasize on continuous improvement⁷. One dissertation suggests that the process in performance management system follows a closed-loop system, based on the Plan-Do-Check-Act, popularized by Walter Shewhart in 1930. The closed-loop system for performance management is the cycle of performance measurement, evaluation, diagnosis, and follow-up from the diagnosis process⁸. In this study, the new generation of performance management system that will be reviewed, in accordance to Clinic T's needs, are the Balanced Scorecard⁹, the Performance Prism¹⁰, and the Knowledge-Based Performance Management System⁶.

The Balanced Scorecard (BSC), developed by Kaplan & Norton in 1992, is the most widely used performance management system in the world. The BSC is considered as the corner-stone of every performance management framework that came after it. BSC measures company performance in four perspectives: Financial, Customer, Internal Process, and Learning and Growth. Objectives that the company needs to achieve then mapped into these four perspectives, along with its variables, targets, and initiatives. The variables are selected variable that can be used to monitor the objective's achievement, the targets are the desired achievements, and the initiatives are the program of activities that must be carried out to achieve these targets.

Even though the BSC has been used by many companies in the world, the framework is not without a shortcoming. For example, one criticizes that the BSC lack benchmarking capability and the Learning and Growth perspective could cause confusion. This confusion is mainly due to multiple interpretation in its application and the measurement method for this perspective is not yet been explained⁶.

The Performance Prism is a performance management system developed by A. Neely in 2002 as one of the improvements for BSC 10. One area that Neely criticizes about BSC is it only covers two stakeholders, namely the shareholders and the customers, while the Performance Prism framework is built upon considering the satisfaction of all stakeholders, such as the customers, employees, interrelated suppliers, governments, community, as well as activists. The Performance Prism framework is also developed under the basis of five fundamental questions 10, which is: Stakeholder Satisfaction (who are the important stakeholders? what are their needs and wants?), Stakeholder Contribution (what contribution from the stakeholder that the organization needs?), Strategies (what are the strategies to satisfy the stakeholder’s wants and needs?), Processes (what important process that the organization must have to achieve its strategy?), and Capabilities (what are the capabilities that the organization needs in order to improve itself?).

Although the Performance Prism provide a wide range of performance indicators, it also become its shortcoming. There are several critics for criticize the Performance Prism. The first point is that the Performance Prism concept is very complicated and hard to understand because it views performance from five different perspective that mutually related. The Performance Prism also didn’t provide a step-by-step example on how to implement the performance management system in the real-world case. Another point is that the benchmarking system and procedure is not explained explicitly in the framework 6.

The Knowledge-Based Performance Management System (KBPMS) by D. Wibisono can be viewed as the refinement of both the Balanced Scorecard and the Performance Prism. The KBPMS combines the simplicity of design from the BSC and the stakeholder satisfaction aspect from the Performance Prism. The KBPMS also built on the expectation that the framework would be especially applied to companies in Indonesia.

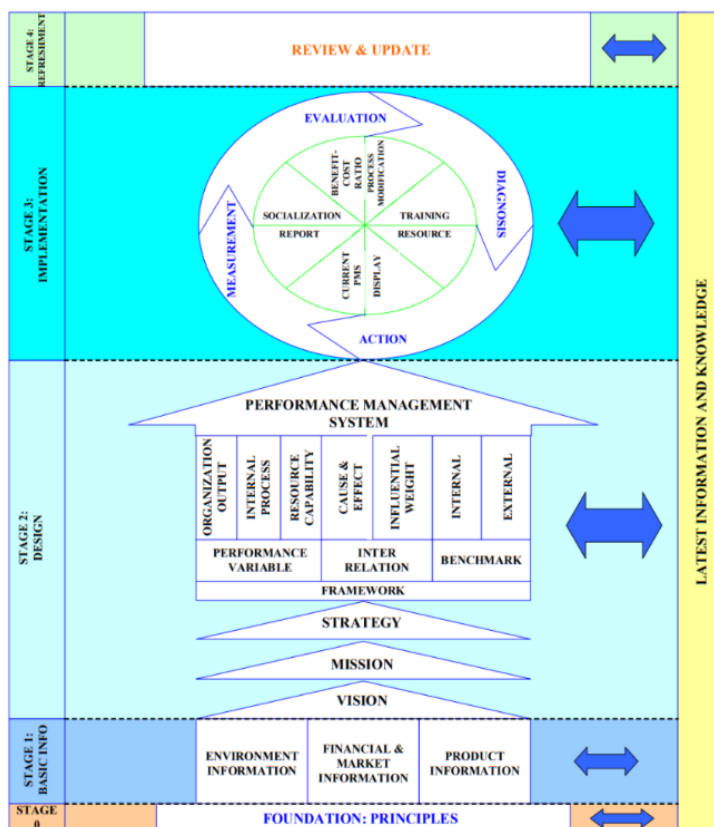


Figure 2. The KBPMS Framework Design 11

The KBPMS is much simpler compared to the BSC and the Performance Prism because it simplifies the performance perspective into three perspectives: Organization Output, Internal Process, and Resource Capability. It also can be considered to be very complete and easy to understand because it explains the design process from start to finish: from establishing how the foundation of a performance management system should be, the method for analyzing the business environment, how to connect the company’s strategy with the performance management system, the high-level view of the performance measurement framework, the steps for implementing the



framework, and the process of updating the performance management system. Additionally, the KBPMS also clearly explains on how to conduct benchmarking procedure 6.

The KBPMS can be applied to any industry, whether its manufacturing or service. Based on these considerations, the KBPMS is selected as the framework to develop the performance management system on Clinic T.

RESEARCH METHODOLOGY

The flow of research methodology in this study is started with problem identification. During this stage, the author will study the characteristics of the clinic, that being used as a case study, using SWOT Analysis. SWOT analysis is used to determine the internal strengths and weaknesses of the clinic, along with the external opportunities and threats faced by the clinic. The author also identifies several problems that are being faced by the clinic during this stage. From this identification process, it was concluded that there is a need for a management system that can be used to manage performance of the studied clinic.

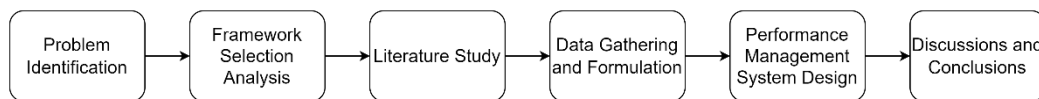


Figure 3. Research Methodology Flow

The next step in this study is the Framework Selection Analysis. In this step, the author present, describes, and analyses several, very well-known, performance management frameworks that have been widely used in various types of industry. From the results of this framework analysis, it is concluded that the Knowledge-Based Performance Management System (KBPMS) will be chosen as the reference framework for this study.

The next step is a literature study to understand more about the steps in designing a performance management system based on the KBPMS framework. It is discovered that in the KBPMS framework, there are five stages in designing a performance management system, namely the Foundation, Basic Information, Design and Planning, Implementation, and Review and Update. From the literature study, several suggested performance indicators in the KBPMS are identified, which include indicators to measure Organization Output, Internal Process, and Resource Capability. From these indicators, several will be selected and adjusted to match the needs of the clinic that being studied.

The next step is to conduct data gathering and data formulation. From this process, two types of data are obtained, the first one is primary data and the second one is secondary data. Primary data is obtained through interviews conducted with Clinic T's management. From this interview, Clinic T's business processes are determined and its needs are formulated. Secondary data is obtained via literature study on journal or books that is relevant to performance management or healthcare system, especially in Indonesia. Throughout these results, the data will be used as the basis for the selection of indicators in the KBPMS. The last step is to design performance management with the KBPMS based on the information obtained and conduct discussions and determine the conclusions about the conceptual framework that has been designed.

KBPMS-BASED FRAMEWORK DESIGN

The KBPMS Framework is divided into stages. The first stage is the Foundation. This stage explains the principles and rules that must be used as a foundation for designing a performance management system. The second stage is Basic Information where basic information about the company, such as the forces that could affect the company's operation, are determined. The third stage is Design and Planning where variables that could be chosen as a performance indicator are designed and planned. The fourth stage is Implementation which explains about aspects that needs to be considered when implementing the KBPMS framework. The last stage is about the Review and Update of the KBPMS in order to maintain the suitability of the framework to the company's performance and maintain the relevancy of the framework.

A. Foundation

In designing a performance management system, there are four foundational principle that must be used as a guideline:

1. Comprehensive partnership between management, employees, and customers. It is hoped that from this partnership, there will be a thorough understanding between the stakeholders on the importance of a performance management system. Each party would also need to take part in determining the performance indicators



2. Empowerment from the company leaders to all levels of employees. This aspect needs to be carried out in order to ensure awareness and activeness for all employees in improving the company’s performance
3. Integrated performance improvement, where linkages exist between the performance variables for each of the company’s division. It is hoped that from this integration, employee’s sense of belonging would grow and view the company’s performance improvement process as something that needs to be maintained and cared for
4. Independent performance team are needed. This would be the team that responsible for the design, review, and maintain the company’s performance management framework. The role of this team is to organize and determine the key performance indicator for all of the company’s division. Therefore, they must be given the opportunity and trust from all aspect of the company

There are also five important rules that must be considered in designing a performance management system:

1. The KISS (Keep It Stupid Simple), where the designed performance management system must able to be easily understand and must be easily applied by all levels of the company
2. Long Term Oriented, where the performance management system must be designed to support the company's performance in a long term so that the company can continue to compete
3. Realtime Basis with as-soon-as-possible Feedback, where the performance variables must reflect what the company needs at real time. If a performance deviation occurs, which are not in accordance with the company’s performance guidelines, it must be followed up immediately
4. Focus on Continuous Improvement, where the designed performance management system must be able to accommodate continuous improvement process, such as benchmarking and learning from other company’s best practice
5. Use Quantitative Approach, where the variables of the performance management system should be quantitative variables. This is because quantitative variables are easier to be checked and maintain, and deviating performance variable could also be easily identified

B. Basic Information

Basic information is needed as an input to design the performance management system based on the environment condition of the organization. The business environment analysis is carried out using a modified Porter Competitive Forces concept and the result can be observed in the figure below.

| Aspect | | Scale | | | | | |
|---------------------------------|-------|-------|---|---|---|---|--------|
| | | 1 | 2 | 3 | 4 | 5 | |
| Threat from New Entrants | | 1 | 2 | 3 | 4 | 5 | |
| Switching Cost | High | | | | | | Low |
| Access to Customers | Hard | | | | | | Easy |
| Required Capital | Large | | | | | | Small |
| Access to Labor | Hard | | | | | | Easy |
| Business Experience | High | | | | | | Low |
| Rival/Competitors | | 1 | 2 | 3 | 4 | 5 | |
| Number of Competitors | Low | | | | | | High |
| Industry Growth | High | | | | | | Low |
| Product Features | Win | | | | | | Lose |
| Substitute Product | | 1 | 2 | 3 | 4 | 5 | |
| Availability | Low | | | | | | High |
| Buyer Power | | 1 | 2 | 3 | 4 | 5 | |
| Number of Potential Buyers | High | | | | | | Low |
| Service Cost | Low | | | | | | High |
| Switching Cost | High | | | | | | Low |
| Supplier Power | | 1 | 2 | 3 | 4 | 5 | |
| Number of Supplier | Many | | | | | | Few |
| Supplier Contribution to Profit | Small | | | | | | Large |
| Cost Contributed to Supplier | Small | | | | | | Large |
| Other Stakeholder Power | | 1 | 2 | 3 | 4 | 5 | |
| Industry Regulation | Loose | | | | | | Strict |

Figure 4. Clinic T Porter Competitive Forces Analysis



From the Porter Competitive Forces analysis, it can be concluded that the major force in the small public health facility is the industry regulation. The regulation is issued by the Ministry of Health and it must be strict since its concerned with the patient’s well-being. The threat from rivals/competitors could also be considered as high since the score is at second-highest on the scale. Even though the industry growth is small, the number of competitors is quite large. However, Clinic T has an advantage in terms of the number of services it featured. Threat from New Entrants is average because, while customers switching costs is low and the access to customer and labor is easy, the capital and the experience required in order to establish the business is high. The Buyer power is also average because there are many potential buyers and Clinic T could provide its service at a little bit lower price compared to the average, even though the cost for the customer to switch clinic is low.

The Supplier power and the Threat from Substitute Products can be considered as low, with later to score the lowest on the scale. The profit and cost contributed the supplier is average, but there are many numbers of supplier. This aspect lessens the supplier’s power in the industry. For substitute products, its availability is low from the start, making it to be the weakest competitive force.

C. Design and Planning

In this stage, the performance indicators for the three KBPMS perspective is formulated, based on the characteristic of Clinic T and it needs. The linkage between these performance indicators is also established.

1) Vision, Mission, and Strategy

Just like any business, Clinic T has Vision and Mission for its reason for being. The vision of Clinic T is “*To become a clinic that can create a healthy community, supported by a good and quality health service system with adequate health facilities and infrastructure, while increasing public awareness about health*”, and its missions are:

1. Provide adequate health facilities and infrastructure in accordance with the continuous needs and progress of medical technology
2. Stay up-to-date with the developments in medical science and technology, by engaging in various medical scientific activities at local, national, or international levels
3. Involve in social activities in the community, either unilaterally or through collaboration with existing community institutions or organizations
4. Implement a quality and affordable health care system for the whole community
5. Establish good cooperation with other health institutions or organizations

Its business strategy could be considered as the mix of Low-Cost strategy and Differentiation Strategy. Clinic T’s pricing strategy is to provide its service, whether its medical check-up or lab test, with the same price or slightly cheaper than the market price. Clinic T also expand its service, not only providing medical service from general practitioners and dentists, it also has laboratory to do medical tests and beauty clinic.

2) Performance Indicators

Determining performance indicator in KBPMS can be viewed in three perspective, Organization Output, Internal Process, and Resource Capability. Each of these perspectives can be expanded into more detailed aspects.

Table 2. KBPMS Performance Perspectives and Aspects

| <i>Perspective</i> | <i>Aspect</i> |
|-----------------------|---|
| Organization Output | Financial Non-Financial |
| Internal Process | Innovation Operating Process Marketing After-sales |
| Resource Capabilities | Human Resource Technology and Infrastructure Resource Organization Resource |



From these aspects, more detailed performance indicators for every perspective will be identified, based on the company’s vision, mission, strategy, and needs.

a) *Organization Output*

The Organization Output perspective of the KBPMS consists of two aspects: Financial and Non-Financial. The financial aspect is an important aspect for the company in relation to maintaining and fulfilling the wishes and needs of investors. Non-financial aspects, on the other hand, are closely related to the level of customer satisfaction. These two things are very important aspects that needs be considered. For companies whose performance cannot be directly assessed from the Financial aspect, the Non-financial aspect becomes a more important aspect of performance appraisal.

In the Financial aspect, indicators regarding the financial performance of the clinic are identified. For the Non-Financial aspect, indicators regarding the performance of the clinic’s output beside that related to financial performance are explained. Below are the performance indicators for financial aspect.

Table 3. Financial Aspect Performance Indicators, Description, and Formula.

| <i>Financial Aspect Performance Indicators</i> | | |
|--|--|--|
| <i>Indicator</i> | <i>Description</i> | <i>Formula</i> |
| <i>Operating Profit Margin</i> | To determine the operating profit margin of the clinic. Could also determine the reduction percentage of revenue due to operating expenses | $(\text{Operating Profit}/\text{Revenue}) \times 100\%$ |
| <i>Profit Growth</i> | To determine the profit growth on current period compared to the previous period | $(\text{Current Period Operating Profit}/\text{Previous Period Operating Profit}) - 1$ |
| <i>Current Ratio</i> | To determine the ability for the clinic to pay its current obligations | $\text{Current Asset}/\text{Current Liabilities}$ |
| <i>Return on Asset</i> | To determine the clinic's asset utilization level for gaining profit | $\text{Operating Profit}/\text{Total Assets}$ |
| <i>Market Share</i> | To determine the clinic's market position compared to its competitors in the same industry | $(\text{Clinic's Revenue}/\text{Total Industry Revenue}) \times 100\%$ |

Below are the performance indicators for non-financial aspect.

Table 4. Non-financial Aspect Performance Indicators, Description, and Formula

| <i>Non-Financial Aspect Performance Indicators</i> | | |
|--|---|--|
| <i>Indicator</i> | <i>Description</i> | <i>Formula</i> |
| <i>Patient Satisfaction</i> | To determine the satisfaction level of the patient to the clinic's services | Patient Satisfaction Survey |
| <i>Patient Acquisition Growth</i> | Number of patients acquired in current period compared to previous period | $(\text{Current Period Patients Acquired}/\text{Previous Period Patients Acquired}) - 1$ |
| <i>New BPJS Patients</i> | Number of new BPJS patients acquired in a time period | New BPJS Patients count in a time period |
| <i>BPJS Patient Market Share</i> | Total number of BPJS Patient registered to the clinic compared to total number of BPJS patient in an area | $(\text{Clinic's Total BPJS Patient}/\text{Total BPJS Patient in an area}) \times 100\%$ |
| <i>BPJS Rating</i> | Rating from BPJS concerning the overall quality of the clinic | Rating from BPJS |

b) *Internal Process*

The Internal Process perspective consist of four aspects: Innovation, Operating Process, Marketing, and After-sales. Internal Process is the perspective that concerned with day-to-day operation of the company, or in this case, the clinic. Based on the information obtained regarding Clinic T’s business process, the Internal Process aspect selected are Innovation, Operating Process, and Marketing. Innovation is an important aspect for the clinic to stay competitive in the industry. This is because new products or services that enter the market earlier will have the opportunity to sell more than those that enter the market later 12. Operational Process can be defined



as the process of converting materials, energy, and information into products or services at a certain scale to meet customer needs 13. This aspect is one of the most crucial components in organizational strategy. The concept of marketing in the business approach should not be something that only marketing people can master, but it is the task of everyone in the organization within the company 14. Performance indicators that related to Clinic T’s internal process performance are as follows

Table 5. Innovation Aspect Performance Indicators, Description, and Formula

| <i>Innovation Aspect Performance Indicators</i> | | |
|---|---|--|
| <i>Indicator</i> | <i>Description</i> | <i>Formula</i> |
| <i>Medical Scientific Activity Attended</i> | The number of medical scientific activity attended in order to keep up with the latest medical science and technology | Medical scientific activity attendance count |

Table 6. Operating Process Aspect Performance Indicators, Description, and Formula

| <i>Operating Process Aspect Performance Indicators</i> | | |
|--|---|---|
| <i>Indicator</i> | <i>Description</i> | <i>Formula</i> |
| <i>Administration Time</i> | The time it take for a patient from entering the clinic, check-in with administration, waiting for treatment, and entering the room for treatment | Average Patient Administration Time |
| <i>Treatment Time</i> | The time it take for the doctor to do treatment to the patient | Average Patient Treatment Time |
| <i>Discharge Time</i> | The time it take for the patient to wait for after treatment administration | Average Patient Discharge Time |
| <i>Lab Test Result Time</i> | The time it take to produce the patient's lab test result | Average Lab Test Result Time |
| <i>Clinic Capacity Utilization</i> | The number of patients that the clinic could serve | Clinic Capacity Count |
| <i>Operating Medical Devices</i> | The number of medical devices that still operable | Number of Operating Medical Device |
| <i>Accurate Inventory Counting</i> | The accuracy of the inventory count especially for drugs availability | %missed count on inventory availability |

Table 7. Marketing Aspect Performance Indicators, Description, and Formula

| <i>Marketing Aspect Performance Indicators</i> | | |
|--|--|--|
| <i>Indicator</i> | <i>Description</i> | <i>Formula</i> |
| <i>Marketing to Industry Count</i> | The number of time marketing campaign done to industrial companies | Number of Marketing Campaign |
| <i>Industry Campaign Effectivity</i> | The number of patients gained from industry campaign | New Patient from Industry Campaign/Total New Patient |
| <i>Marketing Medium</i> | The number of medium for marketing that the clinic have | Marketing Medium Count |
| <i>Social Activity Attendance</i> | The number of social activity that the clinic organize or participate in | Social Activity Count |
| <i>Advertising Effectivity</i> | The effectivity of paid advertising to the profit of the clinic | (Advertising Cost/Revenue) x 100% |
| <i>Promotion Effectivity</i> | The effectivity of promotion to the profit of the clinic | (Promotion Cost/Revenue) x 100% |



c) *Resource Capabilities*

The Resource Capability perspective consist of three aspects: Human Resource, Technological Resource, and Organization Resource. This perspective assesses how the company's performance is in utilizing its assets, both tangible and intangible. In this study, based on the information obtained regarding Clinic T's business process, the Resource Capability aspect selected are Human Resource and Technological Resource. Human Resource is the most important resource for a company to stay competitive because it could be considered as the backbone of the designed system. This Human Resource capability can be assisted by Technological Resources. Investment in technology, to increase the level of competitiveness of the company, is an important element for achieving long-term success of the company 15.

Performance indicators that related to Clinic T's Resource Capability performance are as follows

Table 8. Human Resource Aspect Performance Indicators, Description, and Formula

| <i>Human Resource Aspect Performance Indicators</i> | | |
|---|--|--|
| <i>Indicator</i> | <i>Description</i> | <i>Formula</i> |
| <i>Employee Attendance</i> | To determine the attendance rate of the employee | Number of employee absent days compared to total working days |
| <i>Employee Satisfaction</i> | To determine the satisfaction level of the employees | Employee satisfaction survey |
| <i>Doctor Attendance</i> | To determine the attendance of doctors and their availability at their on-duty hours | Number of doctor absent hours compared to total working hours per period |
| <i>Doctor Qualification</i> | The number of doctors graduated from "A" accredited universities | High qualification doctor count |
| <i>Availability of Experties</i> | The number of available employee based on their jobdesc and experties | Available experties compared to the needs |
| <i>Employee Productivity</i> | To determine the productivity of the employee based on the delivery of their task | Employee Job Completion Rate |
| <i>Employee Participation</i> | The number of employee participating in various clinic activities | Employee participation count |

Table 9. Technological Resource Aspect Performance Indicators, Description, and Formula

| <i>Technological Resource Aspect Performance Indicators</i> | | |
|---|--|-----------------------------|
| <i>Indicator</i> | <i>Description</i> | <i>Formula</i> |
| <i>Supporting Technologies</i> | The number of technology that can be utilize to improve and support the HR process or operating activity | Supporting technology count |

3) *Variable Linkages*

In general, there are four levels in a company's organizational structure related to performance management: the Corporate level, Business Unit level, Operations Management level, and Day-to-day Operations level. Between these levels, there is a need for identifying the relationship between performance variables. By determining the relationship between performance variables, the improvement process on variables that do not reach the required standard will be easy to implement. In addition, the interrelationships between performance variables may involve cross-sectoral inter-departments that are not vertically related.

By identifying the variable linkage, the connection of performance variable from the Resource Capability perspective to the Organizational Output can be observed. Improvement on the Resource Capability could affect the improvement of the Internal Process and, in the end, will resulted in the improvement of the Organizational Output.

The performance variable linkage for Clinic T's performance indicators is presented below

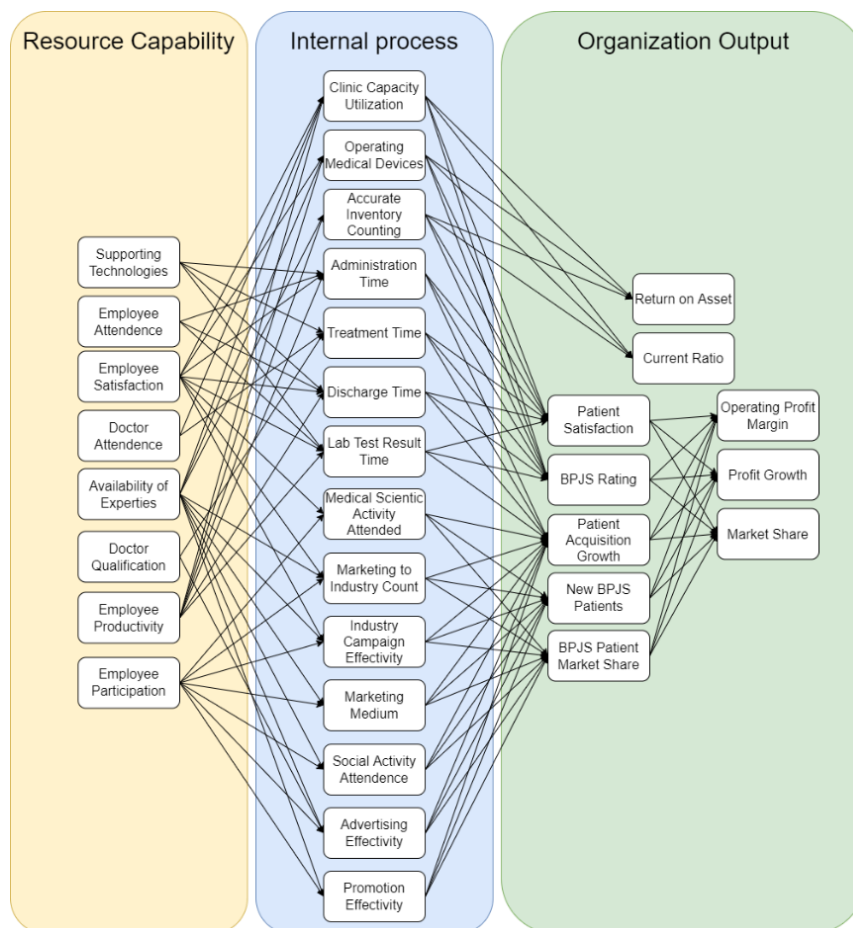


Figure 5. Clinic T Performance Variables Linkage

D. Implementation, Review, and Update

The implementation aspect of the KBPMS follows four cyclical steps: Measurement, Evaluation, Diagnosis, and Follow-up. Measurement needs to be done to determine how the company's performance, after the performance management system is implemented. The results of these measurements can then be used as a basis for evaluation. Evaluation is where the measured performance is evaluated to determine its alignment with the established standards. From the results of this evaluation, deviant performances are identified and then diagnosed. The purpose of the Diagnosis step is to diagnose deviant performances and determine its cause. Later, Follow-Up will be carried out to re-align these performances with the standards set in the performance management system.

Another important aspect in implementing performance management system is to communicate the results to the employees. Publishing the company's performance measurement results, especially those that summarize how teams or individuals in the company are performing, can increase overall motivation in the company and create a supportive environment. As previously discussed in the Foundation section, quantitative data will be easier to display and understand, even though the context of the data may only be understood by the concerned teams or individuals.

One of the simplest ways to communicate performance is to use Display graphic. The main rule in designing it is that the graphic must be easy to read and attract attention. Display graphic with various color and large text can help to attract attention. In addition, these graphics must also be easy to design, update, access, and interpret.



Figure 6. Display Graphic Example for Showing Clinic T's Performance

Continuing the implementation aspect of the KBPMS are the Review and Update of the performance management system. The purpose of this is to keep the performance management system dynamic and in accordance with the needs or problems faced by the company. One way is to maintain the sustainability of the company's characteristics that were previously good, such as leadership, commitment, stakeholder involvement, and others.

DISCUSSIONS AND CONCLUSIONS

Performance management framework for Clinic T based on the Knowledge-Based Performance Management System (KBPMS) has been presented. The performance indicators are categorized in KBPMS's three main perspective: Organization Output, Internal Process, and Resource Capability. The Organization Output perspective consist of two aspect, Financial and Non-Financial, and each of these aspects has five performance indicators. For Internal Process perspective, there are one performance indicator for Innovation aspect, seven (7) indicators for Internal Process aspect, and six (6) indicators for Marketing aspect. For the Resource Capability perspective, there are seven (7) indicators for the Human Resource aspect and one indicator for the Technological Resource aspect. The linkage between variables has also been shown to make it easier to see the cause-and-effect relationships between indicators. Display graphic example for showing and communicating Clinic T's performance is also presented.

The regulation of the Indonesian Ministry of Health Number 9 of 2014 is a regulation regarding clinics that must be followed by all clinics running in Indonesia. Additionally, the BPJS rating system is also applied to all clinic that can accept BPJS patients. Based on these considerations, it is hypothesized that most clinics in Indonesia will face the same problem as the Clinic T. However, this hypothesis requires further evidence by testing this performance management framework in other clinics. By benchmarking with various clinics, performance variables for clinics that can be applied generally can be obtained, with slight changes for special cases or certain clinics. In addition, the author admits that there are still limitations to the correlation analysis between performance variables. Further studies can be carried out by taking the topic of improvements to the correlation analysis between these variables by using more concrete correlation analysis methods.

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Cite this Article: Muhammad Siddiq Purwongemboro, Dermawan Wibisono, Mursyid Hasan Basri (2022). Knowledge-Based Performance Management Framework for Small Public Health Facility: A Case Study of Clinic T in City B, Indonesia. International Journal of Current Science Research and Review, 5(8), 3068-3080