

Evaluation of Hospital Performance with Balanced Scorecard Approach: Case Study in National Brain Center Hospital

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Abstract— In strategic management, the Balanced Scorecard is used as a performance metric to measure internal business functions and external results that can be used to measure feedback to organizations, whether for profit or non-profit organizations (public sector). This study aims to evaluate the results of the performance of the National Brain Center hospital which is one of the public sector organizations using the Balanced Scorecard approach in achieving organizational goals. The method used is in the form of descriptive analysis using data from 2015 to 2017. The results of the analysis show that there are some performance results that have not reached the set targets because the selection of KPIs used is not relevant to the strategy of the National Brain Center Hospital. In addition, there are several KPIs that do not have a causal relationship between one another. The National Brain Center Hospital is recommended to improve the design of the Balanced Scorecard, by adding a dictionary of performance indicators to facilitate the achievement of the KPI.

Index Terms— Balanced Scorecard, Hospitals, KPI, Performance Evaluation, Public Sector Organizations Minimum

1 INTRODUCTION

Hospitals in Indonesia is an organization which turns a finger in health sector that is improving fast enough.

This can be seen on the enormity of increase in the number of hospitals with the average growth of 16% during the period of 2015 until 2017. In 2017, the number of hospitals has been spread as many as 2829 in Indonesia, 55% of them is general hospital and 45% of them are owned by private (Health Ministry of Indonesia Republic, 2018).

Various availabilities of health services given, make hospitals become as organizations which consist of collections of heterogeneous entities, namely activities and processes which involve among community, patients, doctors, government and professionals particularly in health sections. With the heterogeneity brings a system needed for facilitating need, priority, and performance evaluation criteria of each entity. Besides that, hospitals also face important challenges in enhancing the best health service for their patients (Catuogno, et al. 2017).

In evaluating the good or not hospital performance, it is able to be seen from health service given by the hospital. How to increase the quality of hospital service to be better is something important for hospital management, whether for public hospital or private hospital. The quality improvement of hospital service meant is by keeping the quality of assurance owned, that is a process cycle of any actions and activities to develop, protect, maintain and improve the health service quality (Donabedian, 2003).

The performance of good management system can be seen from fulfilling an organization's mission in carrying out its operation. The most basic characteristic difference between private organizations and public sector is their visions and missions they have, which make private organization and public sector have different financial in measuring their performances. For private organizations, getting profit can become very important point in measuring its financial performance, whereas for public sector organization, measuring fi-

ancial performance can be seen from how the organization is able to manage its financial in tune with what has been budgeted (Kaplan & Norton, 2001).

An approach used to measure management performance is Balanced Scorecard, which was first popularized in 1990 by Nolan Norton Institute, a part of research of Public Accounting Firm of KPMG in USA, which was led by David P Norton together with Robert Kaplan, a professor of Harvard Business School, is a study with the objective to balance business activities from executives toward financial or non-financial performance, as well as performances that have short and long term period. The result of the study delivered an article "Balanced Scorecard Measures That Drives Performance" in 1992, which then in 1993 management consultant of Renaissance Solution, Inc applied Balanced Scorecard as an approach to translate and implement strategy in various companies. From then on Balanced Scorecard has developed into the core of strategic management system.

Several studies about applying Balanced Scorecard in public sector and non-profit organization have been conducted with considering their characteristics, from this study, the approach of Balanced Scorecard is applied in city government (Olafsson, Snjo'lfur. & Wisniewski, 2004) and the approach of Balanced Scorecard is also applied in university (Lawrence, Stewart & Sharma, 2002). Besides that, in the previous research, Balanced Scorecard is also able to be used in health service organization as a measurement tool for an organization that has multi-dimensional performance which can be adjusted with specific condition of a public hospital (Catuogno et al, 2017).

Performance measurement is a system which is able to create exact balance among measurement of financial performance and operational, translating vision and strategic purpose into an action for each employee by providing a set of performance indicators that can be predicted in the future and relating performance to recognition/appreciation (Hoffecker and Goldenberg, 1994).

The methodology of Balanced Scorecard is as a measurement method of performance, whether it is for manufacturing industry and service industry, non-profit organization or governance, it has a focus on the main issues in a modern business organization, namely measurement of company performance effectiveness and achievement evaluation of company strategic application. System of performance measurement which is proposed in this Balanced Scorecard is not only concerned with financial performance, but also shows indicator of non-financial performance which is able to examine service quality given, internal or external customer satisfaction, organizational self-development system and organization ability to have adaptation and change. These indicators which is in context of methodology of Balanced Scorecard have role in Key Performance Indicator (KPI) (Grigoroudis & Siskos, 2012).

The advantage of Balanced Scorecard compared to other measurement systems is by dividing the measurement into four balanced perspectives between tangible measurement through financial perspective and intangible measurement, namely customer perspective, perspective of internal business process and perspective of learning and growth (Kaplan & Norton, 2001).

In the private sector, last achievement of measurement of success is in the form of profit which is performance indicator is easy to measure and fixed. This is what distinguishes between private sector and public/non-profit sector, in which organization of public/non-profit sector is not aimed to be profitable, however, it is more to the achievement of mission set. Thus, it is better at the top of scorecard which is represented long term purpose of organization in public/non-profit sector, is placed organization purpose that is going to be achieved. Financial performance is only one of success indicators if organization of public/non-profit sector has been able to carry out internal efficiency or effective in using cost/budget (Kaplan & Norton, 2001).

Modification of Balanced Scorecard in giving organization mission emphasis for public sector and non-profit organization keeps going on four main perspectives, the most important placement for organization mission is divided on the model of Balanced Scorecard, while the strategy is still in core system of scorecard. Customer perspective is emphasized to who is defined as customers, and how it can create value for them. The main perspective which gets emphasis is in which business internal perspective is focused on business process advantage for satisfying customers by considering budgeting limitation, on the other hand focus on growth perspective and employee learning are to ensure the organization's ability to grow and change, get the same emphasis in budgeting limitation (Niven, 2003).

2 METHODOLOGY

The research carried out is about measurement evaluation of National Brain Center Hospital performance with approach of Balanced Scorecard using research methodology with descriptive analysis.

The first step of this research is conducted through evaluating measurement system of performance existed in order to identify, illustrate, analyze action that is used by the hospital

through semi structured interview and collecting data from information system, technical report, and related document (Lohman, Fortuin dan Wouthers, 2004). This research uses report from National Brain Center Hospital in the form of Business Strategic Plan in 2015-2019, Performance Report of Government Agency from 2015 to 2017, Annual Report from 2015 to 2017, Financial Report from 2015 to 2017, as well as other related reports. Interview was conducted to 2 of 4 directors of hospital, one of headmasters who has responsibility for monitoring and performance evaluation as well as staff representative as executor from measurement system of performance. The interview was recorded and then it was typed. If it is necessary, the second interview is prepared to clarify information that appears in other information. In order to overcome bias and subjectivity attached in analyzing, researcher code information collected (Campbell et al, 2013).

The next step is development of measurement system of performance uses the approach of Balanced Scorecard for evaluating hospital performance in achieving strategic purpose of its vision and mission. Performance indicator is identified and adjusted with the availability of information that has been collected through people who were interviewed.

In analyzing results, researcher used triangulation method by using different theory for analyzing and interpreting data. In qualitative study, type of this triangulation is often used including interview, observation and field notes as well as various theories or hypotheses that can help researchers in supporting or denying the findings (Carter et al, 2014).

3 RESULT

3.1 National Brain Center Profile

National Brain Center Hospital has special health services in brain and nerve in accordance with Health Minister Regulation of Indonesia Republic. Apart from being a public hospital, National Brain Center Hospital also as a Public Service Agency that has flexibility in using income that is obtained to finance hospital operations and is able to be invested if hospital has plans to develop its services for the future without burdening state finances.

National Brain Center Hospital has 774 staffs which consist of 81 medical staffs, 535 medical support staff, 42 non-medical staffs and 116 administration staffs with the status of employee that consists of government employees, non-government employees and consultants. National Brain Center is a government hospital (public sector) which gives special health service in the field of brain and nerve with type of class A, so that, according to Health Social Security Organization (BPJS) in Indonesia, it has become as the special final reference for brain health service and nerve after previous health facility. Hence, in order to support health service given by National Brain Center Hospital, it has 115 beds for usual hospitalization with various class level (President Suite, VVIP, VIP, class 1,2,3), 10 beds for Intensive Care Unit (ICU), 6 beds for High Care Unit (HCU), 10 beds for Stroke Care Unit (SCU), infection 2 beds, 7 beds for patients of neurorestoration, and 1 bed for palliative patients.

3.2 Evaluation Performance using Balanced Scorecard

The cascading process of the vision and mission of the National Brain Center Hospital was derived from one of the visions of the President of the Republic of Indonesia, namely the realization of Indonesia's sovereignty, independence, and personality based on mutual cooperation. Then formed seven National Development missions, in which the fourth mission is to realize the quality of life of Indonesian people that is high, advanced and prosperous. The realization of the vision and mission was written in nine priority agendas, with the fifth priority being to improve the quality of life of the Indonesian people. To realize the fifth priority agenda, an Indonesian Health program was made by the Ministry of Health as written in the 2015-2019 strategic plan in accordance with Minister of Health Decree no. HK.02.02 / Menkes / 52/2015 with the planning of the implementation of the second pillar is the strengthening of health services carried out by strategies to increase access to health services, optimization of the referral system and improving the quality of health services, using a continuum approach of care-based interventions and health risks.

From the second pillar of the Ministry of Health of the Republic of Indonesia, The National Brain Center Hospital developed a vision and mission along with a program to be achieved over the next 65 years which was formulated in the 2015-2019 Business Strategy Plan which became the basis for the formulation of work plans and budgets for National Brain Center Hospital operations for a period of five years.

The Business Strategy Plan Drafting Team consists of the heads of each hospital work unit. This is intended so that every work unit leader in the National Brain Center can socialize and continue the hospital's strategy to the bottom line to jointly create a Key Performance Indicator (KPI) related to the work unit and each individual in meeting the achievement of home performance sick.

The Business Strategy Plan owned by the National Brain Center has a performance measurement system using the Balanced Scorecard as a tool to facilitate reporting on hospital performance every year. The relationship between the intended target and the relationship perspectives in the Balanced Scorecard can be illustrated in a strategic map and make the Key Performance Indicator a measurement of the achievement of the performance to be achieved. The strategic map is used in the Balanced Scorecard as a strategic communication tool for all lines in the organization.

The strategic map owned by the National Brain Center Hospital currently has several shortcomings. Therefore the proposed strategic map design to improve it, namely the target of realizing an integrated information system in the hospital which is in the perspective of growth and learning is abolished, because it is not in the national brain center hospital business strategy plan for 2015-2019, but part of KPI's reliability of facilities, infrastructure and health equipment. This proposal is in line with the opinion of Kaplan & Norton (2001), in the perspective of Growth and Learning in the Balanced Scorecard, there are three main categories represented by each target, namely: Measurement of Human Resources through the realization of competent Human Resources targets, Capital Information measure through the target reliability of facilities,

infrastructure and health equipment, Organizational Capital Actions through a culture of good performance targets.

Proposed design changes are also made in the Internal Business Process where targets in perspective, namely the target of implementing superior services in the field of brain and nerves, and the formation of cooperation in the field of services as well as education and research and realization of hospitals as a means of education of the brain and nervous system must have a relationship cause and effect. Harmony of all targets is able to encourage the achievement of targets for the realization of superior health services with quality control and cost control through synergy with the realization of the target of increasing revenue and budget efficiency in a financial perspective, thus motivating the realization of targets in the perspective of stakeholders who can achieve the vision and mission of the National Brain Center Hospital.

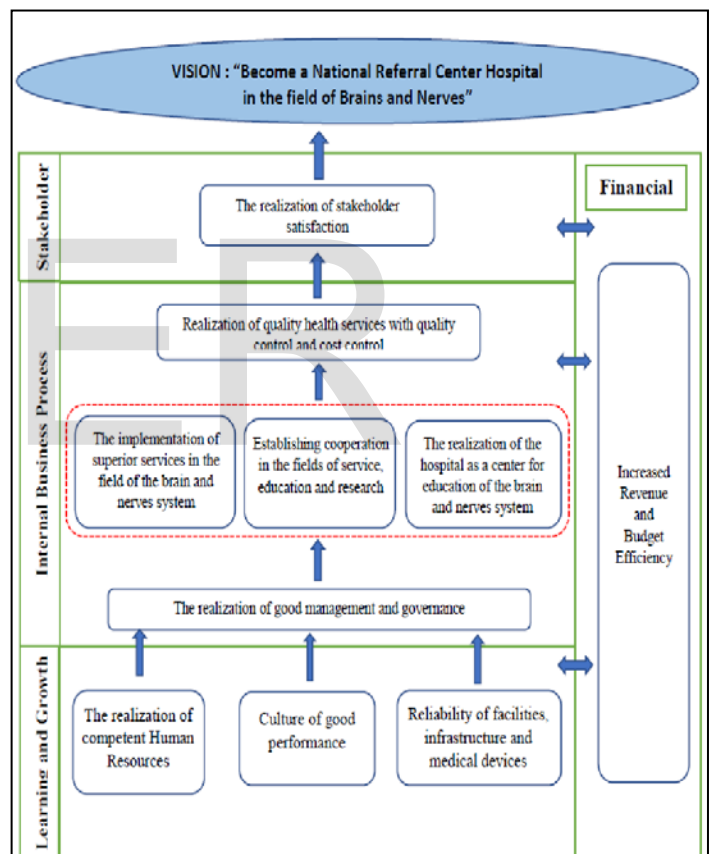


Fig. 1. Design Proposal of Strategic Map of National Brain Center Hospital

In reaching performance of national brain center hospital, there are several KPI that have not suited to current condition, therefore, the result of performance obtained in National has not yet able to reach target appointed, thus it is proposed change on KPI for adjusting, so that vision achievement is able to reach soon. Following is the table about KPI and its change:

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TABLE 1
RECAPITULATION OF CURRENT KPI AND PROPOSAL OF KPI

	TARGET	THE CURRENT KPI	PROPOSAL OF KPI	
Stakeholder	Satisfaction Realization of Stakeholder	Satisfaction level of patient and family	Satisfaction level of patient and family	
		Satisfaction level of staff	Satisfaction level of staff	
			Satisfaction level of education and research participant	
Finance	Realization of increase revenue and budget efficiency	Surplus increase of hospital income per a year	Level of income growth	
		Increase of accounting system	Income ratio of PNPB towards operational cost (PB)	
Internal Business Process	Realization of management and good governance	Audit of financial statement by KAP	Timeliness of service	
		Accreditation of hospital	Accreditation of hospital	
	Realization of hospital as a mean of brain education and nerve system	Accreditation of Education Hospital		Timeliness of patient identification
				Accreditation of Education hospital
	Implementation of superior service in field of brain and nerve	Number of superior service		Number of superior service
				Presentage of difficult cases that succeed
	Intervining of cooperation in service field, education and research	Number of cooperation		Number of cooperation
	Realization of qualified health service with quality control and cost control	Presentage of cases according to PFK		Level of obedience towards medical service standard
			Achievement Presentage of 5 medical indicators	Level of infection control in hospital
Learning and Growth	Reliability of facility, infrastructure and health equipment	Reliability level of facility, infrastructure and health equipment according to the best practice	Laboratory tool calibration timeline according to schedule (KKA)	
			Reliability level of facility, infrastructure and health equipment (OEE)	
			Level of integrated IT	
	Realization of competent human resources	Integration level of hospital IT		Staff presentage in critical area who get 20 hour training / person per a year
			Presentage of certified human resources	Presentage of certified human resources
Culture of good performance	Presentage of human resources with optimal performance	Presentage of human resources with optimal performance		

4 CONCLUSIONS

National Brain Center Hospital had a good performance during the 2015-2017 period with the achievement of 14 KPIs out of the 15 KPIs targeted. However, work units at the National Brain Center Hospital still experience difficulties in carrying out performance to achieve KPI targets due to the absence of a dictionary of performance indicators that can be used as guidelines for work units within the National Brain Center Hospital.

The results also found that in the 2015-2019 Business Strategy Plan, there were four perspectives of the Balanced Scorecard used as one of the communication tools in achieving the hospital's vision. The cascading relationship was also carried out starting from the President's vision in the form of Nawacita, then downgraded to the ministry level vision to the vision of a national brain center hospital. Even so in achieving the vision of the national hospital brain center cause and effect relationship between the applicable KPI is still not reflected in the strategic map, therefore it is necessary to change the KPI to facilitate each work unit in measuring the ability and achieve the targets set in achieving the national vision and mission brain center hospital.

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