

The Effectiveness of the Strategic Plan in Improving Hospital Performance

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Abstract—Hospital performance is a crucial role in determining hospital success and providing healthcare. The hospital's success can be assessed from the compatibility between the hospital's strategic plan and its implementation. This study investigated the strategic plan's effectiveness in improving hospital performance at two hospitals (A and B) of the Public Service Agency. The data gathered implemented the qualitative method by analyzing the secondary data and comparing the strategic plan and hospital performance to implement hospital A and B's strategic plan. This study showed that the model of the strategic plan of hospital A and B was similar. Both hospitals used the Balanced Scorecard method to assess hospital performance. Besides the strategic plan, both hospital A and hospital B had a significant improvement in hospital performance. It revealed that the average percentage of performance achievement was higher than the predetermined target. Even though several failed targets were achieved, the problems identified and the follow-up plan were determined to achieve the target set.

Keywords—management, performance, hospital, balanced scorecard, strategic planning

I. INTRODUCTION

Nowadays, many organizations from various fields focus on the performance assessment and what is carried out by the hospital. Hospital performance is a crucial role in determining hospital success in providing healthcare. The hospital's success in delivering health care can be

evaluated more effectively, efficiently, and productively using the Balanced Scorecard (BSC). The Balanced Scorecard is one method that provides balance in hospital performance assessment by considering both financial and non-financial performance. This method is a tool used to solve a challenge in balancing its theories with its implementation [1]. As previously mentioned, the balance between financial and non-financial goals arranged carefully become a set of strategy. The hospital is motivated to achieve financial performance and achieve non-financial performance, leading to the financial aspect. The Balanced Scorecard requires the organization to develop a balanced performance metrics portfolio that includes four main perspectives: financial, customers, internal processes, and learning and growth [2]. Moreover, by implementing the Balanced Scorecard, the hospital's success is determined by the financial and previous perspectives.

In the past, the Balanced Scorecard was only used to evaluate company performance. Due to the development of this era, the Balanced Scorecard is developed as a strategic management tool. Many companies that have already implemented the Balanced Scorecard become management tools, both private, public, and non-profit companies in the whole world. Some companies develop the Balanced Scorecard from performance measurement tools to become a new strategic management system [2,3]. Moreover, the Balanced

Scorecard can be used as a tool to evaluate hospital performance and strategic hospital management. A. *Results*

Organizational success depends on how well the organization can implement a Balanced Scorecard in executing strategic planning. In achieving an exemplary implementation, it needs a good foundation that depends on the Balanced Scorecard's purpose and planning and commitment levels. A Balanced Scorecard is a matching method for managing business strategy [1].

Currently, hospital performance assessment using the Balanced Scorecard only focuses on performance assessments as the final process. However, integrating the Balanced Scorecard as a hospital strategic management tool, including external and internal analysis, strategy formulation, strategy implementation, and control, is rare. Several hospitals set the hospital strategic plan, but in the implementation, the strategic plan has not been applied efficiently. Besides, a valid results evaluation was also yet to be achieved [4]. Thus, this study investigates the strategic plan's effectiveness in improving hospital performance by implementing Balanced Scorecard as hospital strategic management tools. It is expected that the use of a Balanced Scorecard becomes more effective, efficient, and productive based on the hospital vision and mission.

II. METHOD

The approach used in this study was a descriptive qualitative approach. The data gathered implemented a qualitative method by analyzing the secondary data. The secondary data included hospital A and B's strategic plan and its annual performance accountability reports. The researchers analyzed the data by comparing the strategic plan and hospital performance due to implementing hospitals A and B in Jakarta, Indonesia, as a National Public Service Agency. Also, Nvivo 12 plus was applied in analyzing the data. Thus, the researchers could get detailed information regarding the strategic plan's effectiveness in improving hospital performance at two hospitals of the National Public Service Agency. Additionally, the data regarding the strategic plan and hospital A and hospital B's performance accountability reports were obtained from the internet.

III. RESULTS AND DISCUSSION

This study presents the implementation of the strategic plan of two hospitals as the National Public Service Agency. Both implemented the strategic plan for the period of 2015 – 2019 from Hospital A and B. A brief explanation of hospital A and hospital B's strategic plan as the public service agency is presented below.

Strategic Plan of Hospital A

Hospital A set the strategic plan for 2015-2019, including hospital vision and mission, to achieve the hospital's predetermined goals. The hospital vision was “Becoming the national referral hospital with integrated excellence services in 2019”, while the hospital’s missions consisted of four missions including; 1) Providing quality and integrated service, education, and research, 2) Improving the employee performance, competence, and welfare, 3) Carrying out good corporate governance, and 4) Providing services based on the continuum of care throughout the life cycle [5]. From those hospital vision and mission, 15 strategic targets were developed using four perspectives of Balanced Scorecard to achieve the hospital vision in 2019. The stakeholder perspective targets consist of realizing stakeholder satisfaction; realizing an excellent service, education, and research; and achieving hospital accreditation sustainability. The business process targets consist of realizing excellent and integrated service, integrated service, education, and research (AHS); realizing health network education; partnerships supporting services, education, and research; the quality assurance system, and the improvement of the hospital business process. The learning and growth targets consist of realizing a measurable and integrated performance management system; realizing a Good Corporate Governance; realizing competent human resources, and realizing facilities and integrated information systems. Financial perspectives consist of achieving income growth; and realizing cost-effectiveness in services [5]. The strategic target of each perspective is shown in Table 1.

Table 1: The strategic targets of the strategic plan of hospital-based on each Balanced Scorecard Perspectives

Perspectives	Strategic Targets
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Stakeholder	Realizing stakeholder satisfaction Realizing an excellent service, education, and research Achieving hospital accreditation sustainability
Business Process	Realizing excellent and integrated service Integrated service, education and research (AHS) Realizing health network education Realizing partnerships that support services, education, and research Realizing the quality assurance system Realizing the improvement of the hospital business process
Learning and Growth	Realizing a measurable and integrated performance management system Realizing a Good Corporate Governance Realizing competent human resources Realizing facilities and integrated information
Financial	Achieving income growth Realizing cost-effectiveness in services

Hospital A set the Key Performance Indicator (KPI) to measure strategic targets' success level to achieve the hospital vision in 2019. There were 27 KPI sets based on the perspectives of Balanced Scorecard [5]. They are 8 indicators of stakeholder perspective, 11 indicators of business process perspective, 5 indicators of learning and growth perspective, and 2 financial perspective indicators. Additionally, the KPI of each Balanced Scorecard perspectives is presented in Table 2.

Table 2: KPI of the strategic plan of the hospital A off 2015-2019

Perspectives	Strategic Targets	KPI
Stakeholder	Realizing stakeholder satisfaction	Patient Satisfaction Index The percentage of staff satisfaction The percentage of student satisfaction

Table 2: KPI of the strategic plan of the hospital A off 2015-2019

Perspectives	Strategic Targets	KPI
Business Process	Realizing an excellent service, education, and research	The level of public service agency level The success rate in multidisciplinary difficult case handling
	Achieving hospital accreditation sustainability	The percentage number of modules per study program independently implemented at hospital A. The number of research published nationally/international Hospital accreditation achievements
Business Process	Realizing excellent and integrated service	The percentage of integrated service cluster development
	Integrated service, education and research (AHS)	The percentage of DPJP supervision of students
	Realizing health network education	The percentage of AFI (Action for Improvement) related to the integration followed The number of documented translational research
	Realizing	The percentage of appropriate referrals The number of mentoring programs on the network
	Realizing	The number of KSO

Table 2: KPI of the strategic plan of the hospital A off 2015-2019

Perspectives	Strategic Targets	KPI
	partnerships that support services, education and research	equipment procurement The number of staff attending the Sub-specialization, Doctoral and Nursing Specialties programs The number of research partnerships undertaken
	Realizing the quality assurance system	The percentage of SIPs that were followed up The percentage of medical performance achievement
	Realizing the improvement of the hospital business process	The percentage of follow-up findings from the integration coordination meeting
Learning and Growth	Realizing a measurable and integrated performance management system	Percentage of work units achieved
	Realizing Good Corporate Governance (GCG)	GCG Perception Index
	Realizing competent human resources	The percentage of human resources who have competencies according to standards (job competency requirements)
	Realizing facilities and integrated	Infrastructure reliability level Information system integration level

Table 2: KPI of the strategic plan of the hospital A off 2015-2019

Perspectives	Strategic Targets	KPI
Financial	information	
	Achieving income growth	The trend of increasing income
	Realizing cost-effectiveness in services	Operating Income and Operating Cost (OIOC)

The KPI score (Key Performance Indicators) was determined for each target annually to know the strategic targets' achievement progress quantitatively. Besides, the total weight of all types of KPI was 100 % [5]. Additionally, based on the performance accountability reports of the strategic plan of hospital A period of 2015-2019, the achievements of KPI annually are shown in Figure 1.

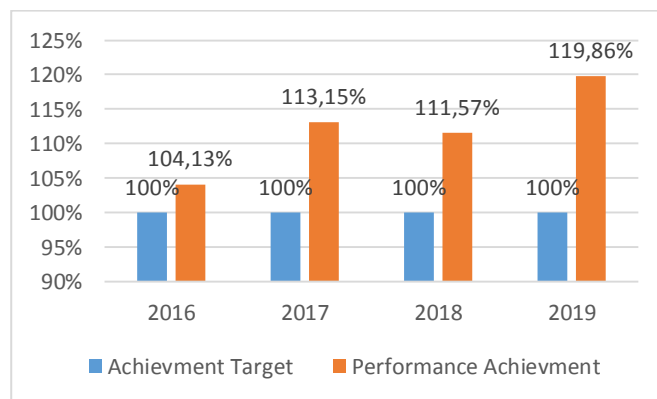


Figure 1. The KPI's achievements of Hospital A for the period 2015 -2019

Based on the Figure 1 regarding the achievement of Key Performance Indicator (KPI) is for the 2015 – 2019. It presents that the performance achievements of KPI exceed 100 % annually. In 2016 of Figure 1 shows that from 27 indicators based on the balanced Scorecard perspective, performance indicators' achievements exceed the targets set, which is 104,13% [6]. Besides, in 2017, hospital A also successfully achieves achievement targets, which is 113,15%. However, the percentage of performance indicators' achievement in 2017 decreases

compared to the previous year's achievement. Those achievements cannot indicate decreased performance because of differences in KPI from the previous year. Based on the revision of the strategic plan for 2015 – 2019 set in the performance accountability reports of 2017, there are nine types of the strategic target divided into 12 KPI using the Balanced Scorecard perspective [7,8]. Also, in 2018, from 12 indicators based on the balanced Scorecard perspective, the achievement of performance indicators in 2018 has exceeded the target set of 111, 57% [9]. In 2019 of Figure 1, performance indicators' achievement has exceeded the target set of 119, 86%. Additionally, 12 types of KPI was set in 2019 [10]. Therefore, hospital A has succeeded in achieving the targets set in a strategic plan for 2015 – 2019. The number of KPI for every year are presented in Table 3 for each perspective of the Balanced Scorecard.

Table 3: The number of KPI every year for each Balanced Scorecard perspectives

Year	Perspective	Number of indicators
2016	Stakeholder	8
	Business	12
	Process	
	Learning and Growth	5
	Financial	2
2017	Stakeholder	1
	Business	6
	Process	
	Learning and Growth	4
	Financial	1
2018	Stakeholder	1
	Business	6
	Process	
	Learning and Growth	4
	Financial	1
2019	Stakeholder	1
	Business	6
	Process	
	Learning and Growth	4
	Financial	1

Strategic Plan of Hospital B

Hospital B had set the strategic plan for 2015 – 2019 to achieve the hospital goals in 2019. Therefore, hospital B determined the hospital vision and mission from 2015 to 2019. The hospital vision was creating an infinite experience for all through Academic Health System (AHS), while the missions were 1) providing complete, quality and affordable health service for all society, 2) carrying out the education producing the best graduates based on the research in the international standard hospital, 3) carrying out the medical research, international standard medical education research, and interdisciplinary research to anticipate the future health problems, 4) taking an active role in assisting the central and local governments in the fields of health service, education, and medical research, and 5) carrying out integrated, effective, efficient, and accountable organizational governance to realize financial growth and reliable management [11]. 16 strategic targets were developed based on hospital vision and mission. The Balanced Scorecard method was also used to develop strategic targets to achieve hospital vision. The stakeholder perspective consisted of realizing stakeholder satisfaction; and realizing an excellent service, education, and research. The targets of the internal business process consist of realizing the AHC institution; National and International Accredited; realizing an integrated center of excellence for research, service and education; realizing service and education network system towards hospital B as acute academic tertiary care; realizing a specialist doctor education to support primary services; realizing an effective advocacy system for stakeholders; realizing a system of governance and quality assurance at the work unit level, and realizing a seamless and integrated business process. The learning and growth targets consist of realizing the accelerations of IT integration; realizing the hospital B to be the best place to work; realizing the culture of helping and performing; and realizing the staff with superior comprehensive competencies with an integrative and interdisciplinary approach. Besides, the financial perspectives' targets consist of realizing the strategic public-private partnership; and realizing the cost-containment in education, service, and research. The strategies of each perspective are presented in Table 4.

Table 4: The strategic targets of the strategic plan of hospital-based on each Balanced Scorecard perspectives

Perspectives	Strategic Targets
Stakeholder	Realizing stakeholder satisfaction Realizing an excellent service, education, and research
Internal Business Process	Realizing the AHC institution National and International Accredited Realizing an integrated center of excellence for research, service and education Realizing service and education network system towards hospital B as acute academic tertiary care Realizing a specialist doctor education to support primary services Realizing an effective advocacy system for stakeholders Realizing a system of governance and quality assurance at the work unit level Realizing a seamless and integrated business process
Learning and Growth	Realizing the accelerations of IT integration Realizing the hospital B to be the best place to work Realizing the culture of helping and performing Realizing the staff with superior comprehensive competences with an integrative and interdisciplinary approach
Financial	Realizing the strategic public, private partnership Realizing the cost-containment in education, service, and research

of each Balanced Scorecard perspectives is presented in Table 4.

Table 5: KPI of the strategic plan of hospital B period 2015-2019

Perspectives	Strategic Targets	KPI
Stakeholder	Realizing stakeholder satisfaction	Patient satisfaction level Student Satisfaction Level The number of translational research applied in services The percentage of complicated cases that are managed (survive or die with good quality. The number of new types of complicated cases to model (yan, lit, etc.) The percentage of graduates who gain more experience and competence from standard
Internal Business Process	Realizing the AHC institution	The issuance of the legal basis for the formation of the AHC The percentage of integrated business processes managed by AHC
	National and International Accredited	JCI accreditation LAM-PTKs accreditation

Hospital B had determined the Key Performance Indicator (KPI) to measure strategic targets' success level, helping the hospital achieve the hospital vision in 2019. There are 31 KPI determined based on the Balanced scorecard perspectives [11], including 6 indicators of stakeholder perspective, 14 perspectives of internal business process, 8 indicators of learning and growth perspective, and 3 indicators of financial perspective. Then, the KPI Philosophical Readings XIII.4 (2021), pp. 1128-1139. 1133
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Table 5: KPI of the strategic plan of hospital B period 2015-2019

Perspectives	Strategic Targets	KPI
	Realizing an integrated center of excellence for research, service and education	The number of centers of excellence for research, service and education integrated with excellent performance
	Realizing service and education network system towards hospital B as acute academic tertiary care	The percentage of inappropriate referrals to hospital B The number of assisted hospitals that can become a back referral hospital Number of Network Hospital training education programs implemented by Hospital B
	Realizing a specialist doctor education to support primary services	The number of graduates who work in the primary health network system of hospital B
	Realizing an effective advocacy system for stakeholders	The number of results of strategic studies used for advocacy to stakeholders
	Realizing a system of governance and quality assurance at the work unit level	The percentage of 20 work units (Units & Dept) that get excellent scores (ISO governance, leadership, continuous improvement, integration of

Table 5: KPI of the strategic plan of hospital B period 2015-2019

Perspectives	Strategic Targets	KPI
		education, services and research) The percentage of work units carry out the RTL (Follow-up Plan) of internal quality audits and tracers The percentage of work units achieving excellent medical indicators (JCI)
	Realizing a seamless and integrated business process	The number of BTP (Break Thru Project) that has been successfully implemented
Learning and Growth	Realizing the accelerations of IT integration	IT integration level
	Realizing the hospital B to be the best place to work	Staff satisfaction index to the system and work environment
	Realizing the culture of helping and performing	The percentage of medical staff with excellent performance The percentage of non-medical staff with excellent performance AHC performance culture index of hospital B

Table 5: KPI of the strategic plan of hospital B period 2015-2019

Perspectives	Strategic Targets	KPI
	Realizing the staff with superior comprehensive competences with an integrative and interdisciplinary approach	The percentage of medical staff who have integrative and interdisciplinary behaviors (follow primary clinical doctor education, have a certificate of Good Clinical Practice, have handled difficult medical cases) The percentage of non-medical staff who have the appropriate competence The percentage of work unit leaders who have managerial competence
Financial	Realizing the strategic public, private partnership	The number of new services whose financing is PPP-based (> 10M)
	Realizing the cost-containment in education, service, and research	The fairness level of service costs, education and research-based on cost containment

The KPI score (Key Performance Indicators) was determined for each target annually to know the strategic targets' achievement progress quantitatively. Besides, the total weight of all types of KPI was 90 % [11]. Based on the strategic plan of hospital B period 2015-2019, the achievements of KPI annually are shown in Figure 2.

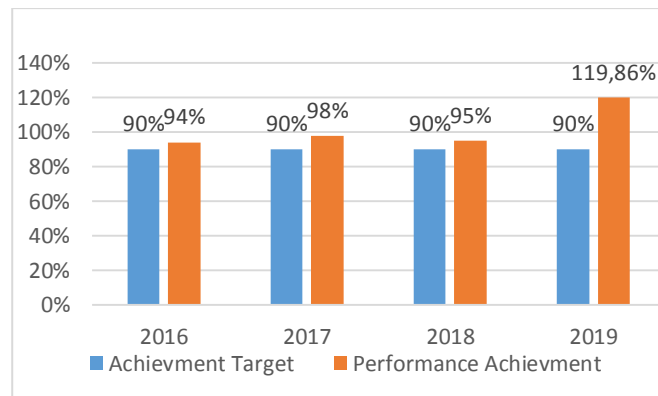


Figure 2. The KPI's achievements of Hospital B for the period 2015 -2019

Based on the Figure 2 regarding the achievement of Key Performance Indicator (KPI) for 2015 – 2019. It shows that the performance achievements of KPI exceed the target set annually. In 2016 of Figure 2, 29 indicators succeed in achieving the target with the achievement of 94%. It presents that hospital B has succeeded in achieving the overall of the Key Performance Indicators (KPI). There are several achievements achieved by hospital B regarding the implementation of Key Performance Indicators (KPI) 2016 such as; 1) sustaining the international accreditation of JCI (Joint Commission International), 2) sustaining the accreditation of the Hospital Accreditation Committee (KARS), and 3) ISO (International Organization for Standardization) re-certification [12]. Besides, there was a 29 KPI target set in 2017. The hospital B also has successfully achieved the target of KPI with the achievement of 98%. It is revealed by the achievement of A category regarding the public service's health level [13]. Also, in 2018, there were 26 KPI set by hospital B. The performance achievements of hospital B are 95%. It that hospital B has successfully achieved almost the KPI. However, KPI of 2018 were different from the previous year because some indicators were removed. Thus, hospital B determined 26 KPI and the targets to achieve the hospital vision and mission [14]. The last, in 2019, the performance achievements of hospital B is 96,15%. It presents that almost the overall KPI have been achieved. 16 KPI had been set for achievements in 2019 [15]. Thus, the number of KPI for every year is presented in Table 3 for each Balanced Scorecard perspectives.

Table 6: The number of KPI every year for each Balanced Scorecard perspectives

Year	Perspective	Number of indicators
2016	Stakeholder	5
	Business	13
	Process	
	Learning and Growth	8
	Financial	3
2017	Stakeholder	5
	Business	13
	Process	
	Learning and Growth	8
	Financial	3
2018	Stakeholder	5
	Business	11
	Process	
	Learning and Growth	8
	Financial	2
2019	Stakeholder	2
	Business	6
	Process	
	Learning and Growth	6
	Financial	2

The similarity of the strategic plan of hospital A and hospital B

There are similarities from the strategic plan models, both hospital A and hospital B, as public service hospitals. They are voyage plans, summary, table of contents, method, and tools used in determining strategic position which used SWOT and TOWS analysis. Besides, there are similarities in the calculation of SWOT analysis weights regarding the calculation of opportunities, threats, strengths, and weaknesses analysis, which have 1 or 100% each calculation [5,11]. However, in the revision of the strategic plan of hospital A for the period 2017 – 2019, those errors had been corrected, the total weight of the opportunities and threats analysis was one. Likewise, the total weights of strengths and weaknesses analysis were one [5].

B. Discussion

Both hospital A and hospital B had set the hospital strategic plan to facilitate its overall

hospital goals [5,11]. In designing and implementing the hospital strategic plan, both hospitals adopted the Balanced Scorecard Method. The Balanced Scorecard concept has been widely used by manufacturing and service companies, a non-profit organization, and government entities over the years [16] since Kaplan and David Norton introduced it in the early of 1990s [17]. The hospital had adopted the Balanced Scorecard method to measure hospital performance and achieve the hospital goals [18]. In implementing the hospital strategic plan, both Hospital A and Hospital B had previously determined the strategy and hospital performance indicators.

Before implementing the hospital strategic plan, both hospital A and hospital B set: First, the hospital determined the hospital vision to create an overview of its overall goals. Additionally, the hospital vision presented strategies to achieve hospital goals [16]. After hospital vision was determined, the hospital developed the hospital vision into a hospital mission number [16]. Hospital A developed four missions from the hospital vision: providing quality and integrated service, education, and research; improving employee performance, competence, and welfare; carrying out good corporate governance; and providing services based on the continuum of care throughout the life cycle [5]. Also, hospital B defined five hospital missions. They consisted of providing complete, quality, and affordable health service for all society; carrying out the education producing the best graduates based on the research in the international standard hospital; carrying out the medical research, international standard medical education research, and interdisciplinary research to anticipate the future health problems; taking an active role in assisting the central and local governments in the fields of health service, education, and medical research; and carrying out integrated, effective, efficient, and accountable organizational governance to realize financial growth and reliable management [11].

The hospital strategies also were defined based on the hospital's vision and mission. Both hospital A and hospital B develop the strategy map to translate vision into strategies [16] as an effort to achieve the hospital's predetermined goals. The hospital strategies were developed based on four perspectives of the Balanced Scorecard [18],

namely, financial and non-financial perspective [3]. Simultaneously, non-financial perspectives consist of customer perspective, internal business perspective, and learning and growth perspective [3]. There were 15 strategies formulated by hospital A [5], and there were 15 strategies formulated by hospital B [11]. Also, 4 Balanced Scorecard was combined and completed to communicate the hospital vision strategies [3]. Moreover, the strategy map formulate the hospital strategies and guide the hospital to execute the strategies [19].

After the hospital vision, mission, and strategies had been formulated, hospital A and hospital B developed the strategies into several Key Performance Indicators (KPI) based on each Balanced Scorecard perspective [20]. There were several KPI agreed by the hospital as an effort to achieve the hospital vision. Hospital A agreed to 27 KPI in 2016 [5,6], 12 KPI in 2017 [7,8], 12 KPI in 2018 [9], and 12 KPI in 2019 [10]. Besides, hospital B defined 31 KPI in 2016 [11,12], 29 KPI in 2017 [13], 26 KPI in 2018 [14], and 16 KPI in 2019 [15]. The target and score of KPI were defined based on each of Balanced Scorecard perspective [20]. Thus, both hospital A and hospital B have evaluated KPI's achievement annually [21]. The KPI evaluation was to check whether the KPI achievement met the target set or not. The KPI with a high achievement meant that the KPI succeeded in achieving the goals. Thus, KPI's total score was calculated to get a clear overview of hospital performance overall [21]. Also, due to pandemic of covid-19, the hospital needs to create a hospital strategic plan with a creative and reasonable approach to overcome problems that might occur [22]. Besides, in creating a strategic plan, a health care system must be smart in allocating healthcare workforce and resources. It remembers that the healthcare workforce and resources play one of the main roles in overcoming the global crisis[22].

This study only used secondary data as the instrument of the study accessed from the internet. The secondary data included the hospital strategic plan and hospital A and hospital B's performance accountability report. Besides, due to the pandemic of Covid-19, this study was not followed by interviews with the hospital. because of the situations and conditions that do not allow.

IV. CONCLUSION

The strategic plan of hospital A and B have many similarities regarding the implementation of the strategic plan. Both hospital A and hospital B adopted the Balanced Scorecard method in translating the strategies to achieve the desired hospital goals in the form of the hospital strategic plan. The Balanced Scorecard method is believed to be the method designed to realize the hospital goals [21]. On the other hand, hospital A and hospital B's strategic plan also have differences regarding hospital A and hospital B's strategic plan. Both hospitals' achievements performance can be measured by evaluating hospital performance annually, which has different hospital characteristics related to human resources or other hospital resources. Besides the implementation of the strategic plan, both hospital A and hospital B were effective. It revealed that the average percentage of performance achievement was higher than the predetermined target. However, several targets failed to achieve, but the problems identified and the follow-up plan were determined to achieve the target set.

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