Analysis of Service Performance and Financial Performance on Independence in Bogor City Hospital as a Regional Public Service Agency Year 2016-2018

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Abstract: The purpose of this study is to analyze the performance of services and financial performance whether it affects the independence in the Regional General Hospital (RSUD) of Bogor City as a Regional Public Service Agency. The independent variables used are service performance and financial performance. The dependent variable is Independence. The research sample was conducted on the performance of services and financial performance of Bogor City Hospital in the period 2016 to 2018. The method of analysis in this study used descriptive analysis and hypothesis testing with regression analysis. The results of the analysis, the variables that partially have a positive and significant effect on independence are the BOR, Current Ratio, Quick Ratio, Variables that simultaneously influence independence are the performance of the Service and Financial Performance.

Keywords: service performance, financial performance, BOR, AVLOS, TOI, Current Ratio, Quick Ratio, Debt Ratio, Return On Assets, independence

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I. Introduction

In Indonesia the Regional General Hospital is a health service agency for the community. Based on the Law of the Republic of Indonesia number 44 of 2009, the Government Hospital must be in the form of a Public Service Agency (BLU) or a Regional Public Service Agency (BLUD), the management of which is not seeking profits while still prioritizing productivity, efficiency, and effectiveness.

Based on the Minister of Home Affairs Regulation (Permendagri) number 61 of 2007 which has been changed to Permendagri no 79 of 2018, the management of BLUDs based on the Financial Management Pattern of Public Service Agencies (PPK-BLUD), is given the flexibility to apply hospital business practices so that they can use their receipts directly to finance operational and investment activities without having to be deposited in advance to the State treasury aimed at improving the services and independence of the Hospital.

Bogor City Hospital is a hospital owned by the Bogor City Government, established in 2014 (Bogor City Regional Regulation No. 5 of 2013), the financial management pattern has been PPK BLUD and must apply economic, effective and efficient principles (Bogor Mayor Regulation no. 20 of 2014).
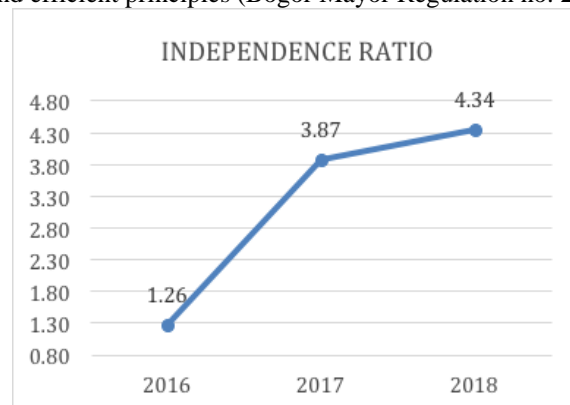

Fig 1. Achievement Ratios of the Bogor City Hospital in 2016 – 2018

Based on the picture the Bogor City Hospital has succeeded independently because of the value of the Independent Ratio ≥100%. (Decree of the Minister of Home Affairs number 690,900,327 in 1996).

Hospital management must know what information / indicators that influence it so that these conditions can be maintained. Ulum (2012: 22) information used for performance measurement is financial information and non-financial information and the ratio used is the ratio of independence, effectiveness ratio and efficiency ratio.

Service indicators to assess the performance of hospital services are Bed Occupancy Rate (BOR),

Average Length of Stay (AVLOS), Bed Turn Over (BTO), Turn Over Interval (TOI). Net Death Rate (NDR), Gross Death Rate (GDR). (Ministry of Health Regulation No. 1171 in 2011).

Madjid et al (2009:10) financial ratios that can answer several important questions about BLU operations namely current ratios, fast ratios, debt ratios and investment return. Previous researchSirait"s (2017) service performance of BOR, TOI, AVLOS and financial performance (current ratio, solvency ratio, profitability ratio) had a significant influence on independence in Vertical BLU Hospital, then Handayani and Sriyanto's (2015) negative correlation Turn Over Interval with Cost Recovery Rate (CRR), AVLOS positive correlation with the level of independence, financial performance with the ratio of profitability and dependence on the local budget is strongly and significantly correlated to the level of effectiveness and efficiency of the hospital as measured by the CRR.

Based on the Achievements of RSUD and previous studies the authors are motivated to conduct research "Analysis of Service Performance and Financial Performance of Financial Independence in Bogor City Hospital in the period 2016-2018".

The purpose of this study was to determine whether Service Performance (BOR, TOI, AVLOS) and Financial Performance (Current Ratio, Quick Ratio, Debt Ratio, Return On Assets partially and simultaneously affect the independence in the Hospital of Bogor City Hospital.

II. Theoritical Review

Hospital Services Performance

The service performance indicators (Permenkes no 1171 2011) are:
(1) Bed Occupancy Rate (BOR) is a percentage of the use of beds at a certain time unit which provides a description of the level of utilization of hospital beds. The ideal BOR value is 60-85%.
(2) Average Length of Stay (AVLOS), which is the average length of stay of a patient. Providing an overview of the level of efficiency can also give a picture of the quality of service. AVLOS values are ideal between 6-9 days.
(3) Turn Over Interval (TOI) is the average day when the bed is not occupied from when it has been filled to the next time it is filled. Provides an overview of the efficiency of the use of beds. Ideal TOI value of 1-3 days.

Hospital Financial Performance

BLUD performance evaluation (Permendagri no 79 2018):
    a. Obtain business results from services provided (rentability)
    b.Fulfill its short-term obligations (liquidity)
    c.   Fulfill all of its obligations (Solvency).
    d. Ability To receive from services to finance expenses.

Madjid et al (2009:10) evaluation of BLUD financial performance is calculated by:
a.   Current Ratio, shows how capable BLU fulfills its short-term obligations, but it still contains elements of inventory. Standard measure of hospital current ratio 1.75-2.75 (Syaaf, Ac in Hartati, 2012)
b.   Quick Ratio / quick ratio, to measure whether BLU is able or not to pay receivables that must be fulfilled as soon as possible with more liquid liquidassets.The standard size of the hospital's Quick ratio is 1.75-2.75 (Syaaf, Ac in Hartati, 2012
c.   Debt Ratio (debt ratio) to measure how much BLU assets of the total financed by debt.
d.   Return on Assets (ROA), to measure BLU's ability to obtain its benefits from the use of its assets.
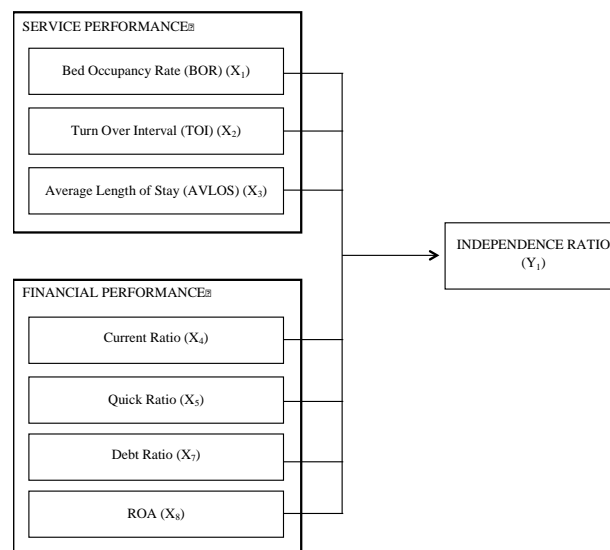
The Independent Ratio shows the BLUD's ability to finance its own services, government and development activities. (Ulum 2012: 31).

Table 1 assessment of the independence ratio

Financial Ability	Percentage Of Independence
Independent	$\geq 100\%$
Less Independent	$\leq 100\%$

Source: Kepmendagri 690.900.327 th1996

Fig 2. Research framework

Based on the framework can be proposed researchhypothesus as follows :

H1   There is a positive effect of Bed Occupancy Rate (BOR) on independence.
H2   There is a positive effect of Turn Over Interval (TOI) on independence.
H3   There is a positive effect of Average Length of Stay (AVLOS) on independence.
H4   There is a positive effect of Current Ratio(CR) on independence.
H5   There is a positive effect of Quick Ratio(QR) on independence.
H6   There is a positive effect of Debt Ratio(DR) on independence.
H7   There is a positive effect of Return On Asset(ROA) on independence.
H8   There is a positive influence on service performance (BOR, TOI, AVLOS) simultaneously on independence
H9   There is a positive influence on financial performance (CR, QR, DR, ROA) simultaneously on independence
H10 There are influences on Service Performanceand Financial Performance simultaneously on independence

III. Data Analysis Technique

The data used are secondary data from monthly service reports and financial reports at Bogor City Hospital 2016 to 2018. Data were analyzed with descriptive analysis, data feasibility analysis with kolmogorov –smirnov normality test. Hypothesis testing with regression analysis.

IV. Results

Descriptive Statistics

Variabel	N	Minimum	Maximum	Mean	Std. Deviation
BOR	36	75.83	93.02	84.5797	4.32350
TOI	36	.57	3.52	1.3328	.67601
AVLOS	36	3.62	6.31	4.7653	.42084
CR	36	1.34	9.01	4.2550	2.36427
QR	36	.96	7.79	3.5644	2.06967
DR	36	.07	.90	.1350	.13538
ROA	36	-.19	.51	.0789	.16760
Independence Ratio	36	.13	2.11	1.1372	.45148
Valid N (listwise)	36				

source: processed data

The statistical results of Bogor City Hospital in the achievement table of 114% independence ratio included in the Independent category, BOR at 84.58% ideal category, TOI at 1.33 days ideal category, and AVLOS 4.76 days less than ideal because the standard is 6-9 days. Financial Performance seen from the

achievement of the value of the Current Ratio produces a value of 4.26 (every Rp. 1 current liabilities guaranteed by Rp. 4.26 current assets). The value of Quick Ratio is 3.56 (every Rp. 1 current liability is guaranteed by Rp. 3.56 current assets), Debt Ratio is 13.5% means the total assets financed by debt is 13.5%, the value of Return On Assets 7.8% is defined as assets owned an average gain of 7.8%.

Regression Equation

Regression equation The effect of BOR, TOI, AVLOS, Current Ratio, Quick Ratio, Debt ratio and ROA simultaneously on independence in Bogor City Hospital is seen in the following table:

Coefficients[a]

del		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-1.888	1.743		-1.083	.288
	BOR	.049	.019	.474	2.647	.013
	TOI	.347	.152	.520	2.282	.030
	AVLOS	-.455	.144	-.424	-3.160	.004
	CR	.356	.223	1.862	1.596	.122
	QR	-.238	.258	-1.093	-.923	.364
	DR	-.471	.468	-.141	-1.005	.323
	ROA	-.711	.636	-.264	-1.117	.273

a. Dependent Variable: independence Ratio

$$Y = -1{,}888 + 0{,}049 \ BOR + 0{,}347 \ TOI - 0{,}455 \ AVLOS + 0{,}356 \ CR - 0{,}238 \ QR - 0{,}471 \ DR - 0{,}711 \ ROA.$$

Based on the Regression Equation shows that the variables BOR, TOI and Current Ratio (CR) have a positive direction of the regression coefficient or directly proportional to independence, meaning that these variables have a positive influence on independence.

The explanation:
- Regression coefficient BOR +0.049 means that if the BOR has increased by one unit, then independence will increase by 0.049, assuming the other variables remain.
- TOI regression coefficient + 0.347 means that if the TOI has increased by one unit, then independence will increase by 0.347, assuming the other variables remain.
- Current Ratio (CR) +0.3356 regression coefficient means that if CR increases by one unit, then independence will increase by 0.356, assuming the other variables remain.

VariablesAVLOS, Quick Ratio, Debt Ratio, Return On Asset variables have a negative regression coefficient direction or inversely proportional to independence, meaning that these variables have a negative influence on independence.

The explanation:
- AVLOS regression coefficient, -0.455 means that if AVLOS has increased by one unit, then independence will decrease by 0.455, assuming the other variables remain.
- Quick Ratio regression coefficient of -0.238 means that if QR increases by one unit, then independence will decrease by 0.238, assuming the other variables remain.
- Debt Ratio Regression Ratio -0.471 means that if the DR has increased by one unit, then independence will decrease by 0.471, assuming the other variables remain.
- Regression coefficient ROA -0.711 means that if ROA has increased by one unit, then independence will decrease by 0.711, assuming the other variables remain.

Hypothesis Discussion
1. Effect of BOR on Independence

The test results there is a positive and significant effect between BOR with independence in Bogor City Hospital, this means rejecting Ho who states "There is no positive effect of the Bed Occupancy Rate on independence", and accept H1. With the contribution of the coefficient of determination (R Square) = 0.132 x 100% = 13.2%, meaning that 13.2% of the independence variable is influenced by the BOR variable, while

the remaining 86.8% is influenced by other variables both in the model and outside model. The increase and decrease in BOR during the study period had a positive and significant effect on independence in Bogor City Hospital.

Suhartinah et al (2018) increasing the value of BOR can increase hospital revenue and increase patient confidence in the hospital.

2. **Effect of TOI on independence**

Test results partially there is a positive but not significant effect between the TOI with independence in Bogor City Hospital, this means rejecting H2 and accepting the Ho which reads "There is no positive effect of Turn Over Interval on independence". The increase and decrease in TOI during the study period did not significantly influence independence.

3. **Effect of AVLOS on Independence**

Test results partially there is a positive but not significant effect between AVLOS with independence in Bogor City Hospital. This means rejecting H3 and accepting Ho which reads "There is no positive influence Average Length of Stay (AVLOS) on independence". The increase and decrease of AVLOS during the study period did not significantly influence the independence.

Sudra (2010: 45) The longer the value of AVLOS the higher the costs to be paid by patients to the hospital.

4. **Effect of Current Ratio on Independence**

Partial Test Results there is a positive and significant effect between the current ratio with independence in Bogor City Hospital, this means rejecting Ho who states "There is no positive influence Current Ratio on independence" and accepts H4. The contribution of the coefficient of determination (R Square) = 0.139 x 100% = 13.9%. it means that 13.9% of the independence variable is influenced by the CR variable, the rest is influenced by other variables. The increase and decrease in Current Ratio during the study period had a positive and significant effect on independence in Bogor City Hospital.

Madjid et al, (2009) Current Ratio is a ratio to measure the ability of BLU to pay off its short-term obligations.

5. **Effect of Quick Ratio on Independence**

Partial test results have a positive and significant effect between Quick ratio (QR) on independence in Bogor City Hospital, this means rejecting Ho who states "There is no positive effect of Quick Ratio on independence" and accepts H5. Contributions 11%, meaning that 11% is influenced by the Quick Ratio variable, while the remaining 89% is influenced by other variables both in the model and outside the model.

6. **Effect of Debt Ratio on Independence**

Partial test results have a positive but not significant effect between the Debt ratio with independence in Bogor City Hospital.

This means rejecting H6 and accepting Ho which reads "There is no positive influence of Debt Ratio on independence".

7. **Effect of Return On Assets on Independence.**

Partial Test Results show there is a positive but not significant effect between ROA and independence in Bogor City Hospital. This means rejecting H7 and accepting Ho which reads "There is no positive effect of Return On Assets on independence".

8. **Effect of Service Performance (BOR, TOI, AVLOS) simultaneously on independence.**

Simultaneous Test Results there is a positive and significant effect between simultaneous service performance with independence at Bogor City Hospital, this means rejecting Ho who states "There is no positive effect of service performance on independence" and accepting H8. The contribution of the coefficient of determination (R Square) = 0.328 x 100% = 32.8%. meaning 32.8% is influenced by service performance variables while the remaining 67.2% is influenced by other variables both in the model and outside the model.

Increasing and decreasing service performance during the research period in Bogor City Hospital has an effect on independence.

According to Fachri (2017) hospital management must enhance reputation development accompanied by the development of institutional partnerships in an effort to improve performance. An increase in reputation will increase the credibility of the hospital supported by increased reliability, trust and responsibility.

9. Effect of Financial Performance (Current ratio, Quick Ratio, Debt Ratio and ROA) simultaneously on independence.

Simultaneous Test Results show there is a positive and significant effect between financial performance simultaneously with independence in Bogor City Hospital, this means rejecting Ho who states "There is no positive effect of financial performance on independence" means receiving H9. The contribution from the coefficient of determination (R Square) = 0.286 x 100% = 28.6%. it means that 28.6% is influenced by financial performance variables, the remaining 71.4% is influenced by other variables.

10. Effect of Service Performance and Financial Performance simultaneously on independence.

Simultaneous Test Results there is a positive and significant effect between service performance and financial performance simultaneously with independence in Bogor City Hospital, this means rejecting Ho who states "There is no positive effect of Service Performance and financial performance together on independence" means receiving H10. The amount of contribution from the value of the coefficient of determination (R Square) = 0.539 x 100% = 53.9%. meaning that 53.9% is influenced by variables of service performance and financial performance simultaneously while the remaining 46.1% is influenced by other variables both in the model and outside the model.

The results of the study indicate that the increase and decrease in service performance and financial performance simultaneously during the study period had a positive and significant effect on independence in Bogor City Hospital.

To maintain and improve service performance and financial performance in Bogor City Hospital in the BPJS era, solutions that can be done according to Asse (2016) include:
a. Increased competence of officers, especially general practitioners and specialists in understanding the implementation of the National Health Insurance with the INA CBG payment rate pattern.
b. Establishment of quality control and cost control
c. Establishment of Pharmacy Committee so that the rational use of medicines and consumables (BHP) are rational and are included in the National Formulary list.
d. Improved application of Clinical Pathway so that all units adhere to Clinical Pathway that has been prepared so that services will be better controlled both in quality and cost.

V. Conclusion

1. The results of descriptive analysis of service performance and financial performance of Bogor City Hospital in the period 2016 - 2018 are categorized as an independent hospital that successfully manages BLUD revenue to finance operational activities without depending on the Regional Government.
2. Variables that have a positive and significant effect on Independence: Partially BOR, Current Ratio (CR), Quick Ratio (QR) variables, simultaneously are service performance and financial performance
3. Variables that have no partial effect on TOI, AVLOS, Debt Ratio and ROA

Suggestion

1) Can be considered by the management of Bogor City Hospital as input for realizing an independent, effective and efficient hospital with better management implementation from planning, supervision to control.
2) Increasing the capacity of hospital human resources through training according to their duties and development is needed by further optimizing the existing infrastructure.
3) Research results are suggested as a hospital management guideline for decision making, both tactical and strategic and formulating policies and making Standard Operating Procedures (SOPs) in the JKN Era so as to improve the quality of health services and hospital revenues.

References

[1]. Asse, Ambo (2016). "Analisis Kinerja Pengelolaan Keuangan Badan Layanan Umum Daerah Rumah Sakit Umum Daerah Kabupaten Nunukan". Tesis. Program Studi Magister Administrasi Publik, Program Pascasarjana. Universitas Terbuka. Jakarta
[2]. Suhartinah: Muhammad Arief Rachman, Muhammad M, dan Asrianni RW. (2018)." Inpatient Service Efficiency Analysis Based On Inpatient Indicators (Bor, Alos, Toi And Bto) (Study On Inpatient Indicators At Gondanglegi Islamic Hospital, Malang, Indonesia), Journal of Health, Medicine and Nursing,Vol.49, ISSN 2422-8419.
[3]. Fahri, Helman; Dwi K, Hilmiana, dan Martha FC. (2017). "The Influence Of Institutional Partnership And Hospital Reputation On Hospital Performance In West Kalimantan". Academy of Strategic Manajemen Journal, Volume 16, Issue 2.
[4]. Handayani, Tri Wijayanti, Sriyanto (2015). "Evaluasi Kinerja Pelayanandan Keuangan RSUD Yang Menerapkan Pola Pengelolaan Keuangan BLUD di Subosukowanesraten".Jurnal Ekonomi, Bisnisdan Perbankan, EdisiMaret 2015. Vol.1 No. 1.
[5]. Hartati (2012)."PengukuranKinerja RSUD DR. Moewardi Surakarta denganmenggunakan Metode Balanced Scorecard".Tesis. Program Studi Magister Perencanaandankebijakanpublik. Program Pascasarjana. Universitas Indonesia. Jakarta.
[6]. Hatta, R. Gemala. (2013). Pedoman Manajemen Informasi Kesehatan di Sarana Pelayanan Kesehatan. UI-Press. Jakarta

[7].   IhyaulUlum,(2012).*AuditSektorPublik:suatupengantar*.BumiAksara.Jakarta.

[8].   Kasmir.(2016.)*AnalisisLaporanKeuangan*.RajawaliPers,Jakarta.

[9].   Mardiasmo, (2009), Akuntansi Sektor Publik, Edisiterbaru .Andi. Yogyakarta.

[10].   Peraturan Pemerintah Republik Indonesia nomor 23 tahun 2005 tentang Pengelolaan Keuangan Badan Layanan Umum.

[11].   Peraturan Menteri Dalam Negerinomor 61 tahun 2007 tentang Pedoman Teknis Pengelolaan Keuangan Badan Layanan Umum Daerah.

[12].   Peraturan Direktur Jenderal Perbendaharaan Negara nomor PER-36/PB/2016 tentang Pedoman Kinerja Badan Layanan Umum Bidang Kesehatan.

[13].   Peraturan Daerah Kota Bogor nomor 5 tahun 2013 tentang Rumah Sakit Umum Daerah Kota Bogor.

[14].   Peraturan Walikota Bogor nomor 20 tahun 2014 tentang Pola Pengelolaan Badan Layanan Umum Daerah RSUD Kota Bogor.

[15].   Peraturan Walikota Bogor nomor30tahun2017tentangPerubahanatas Peraturan Walikota Bogornomor20tahun2014tentang Pola Pengelolaan Badan Layanan Umum Daerah RSUD Kota Bogor.

[16].   Sirait, Sri Wahyuni (2017).” Analisis Pengaruh Kinerja Pelayanandan Kinerja Keuanganterhadap Kemandirian Keuangan Rumah Sakit Umum Pusatdengan Ketergantungan APBN sebagai Moderating di BLU Kementrian Kesehatan.” *Tesis*. Program Magister Akuntasi. Program Pascasarjana. Universitas Sumatera Utara. Medan.

[17].   Sudra, Rano Indradi. (2010). *Statistik Rumah Sakit–Dari Sensus Pasien & Grafik Barber Jhonson Hingga Statistik Kematian & Otopsi* .GrahaIlmu: Yogyakarta.

[18].   Sugiyono.(2017). *Metode Penelitian Kuantitatif, Kualitatif,dan R & D*. Alfabeta, CV. Bandung Undang-Undang Republik Indonesian omor44tahun2009 tentang Rumah Sakit.

[19].   Wakhyuni, Indriantydan Aty Herawati. (2019).” Comparison of Cost Effectiveness Analysis (CEA) for Chronic Disease Management Program (Prolanis) Participants and Non Participants (Non Prolanis) on BPJS Kesehatan Diabetes Patients Year 2014 – 2016”. International Journal Of Recent Technology and Engineering (IJRTE) ISSN:277-3878,Volume 7, Issue 655.