E-ISSN: 3025-4922
DINASTI ACCOUNTING REVIEW
https://dinastirev.org/DAR dinasti.info@gmail.com +62 811 7404 455
DOI: https://doi.org/10.38035/dar.v4i1
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The Effect of His-Based Accounting Information System on the Effectiveness of Inpatient Revenue Collection at Bandung Regional General Hospital

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Abstract: High public expectations regarding the quality of healthcare services require hospitals to optimize human resource performance and effectively integrate operational systems. This study aims to empirically examine the impact of implementing an Accounting Information System on inpatient revenue. Field observations indicate that the management of financial data that is not ye integrated has the potential to lead to operational inefficiencies and revenue leakage. The research method used is quantitative descriptive with an empirical causal analysis approach. The population in this study consists of employees in the accounting, finance, and functional departments at the Bandung City General Hospital. The sample was selected using purposive sampling, comprising 15 respondents. Primary data was collected via a questionnaire and analyzed using simple linear regression, correlation coefficients, the coefficient of determination (R^2), and hypothesis testing (t-test). The results of the statistical analysis indicate that the Accounting Information System has a positive and significant effect on inpatient revenue at the Bandung City General Hospital. The Accounting Information System's ability to present accurate and timely financial data has proven effective in minimizing errors in recording inpatient transactions, thereby directly optimizing revenue for the region or institution. This study recommends a systematic enhancement of operational system capacity to maintain the efficiency of financial services.

Keyword: Accounting, Information, System, Hospital, Information, System, Revenue.

INTRODUCTION

High public expectations regarding the quality of healthcare services require hospitals to optimize human resource performance and effectively integrate operational systems. Information technology is one of the rapidly evolving tools today. Advances in information technology enable fast, efficient, and accurate data access. As a public healthcare facility, hospitals require accurate, reliable, and adequate information systems to improve services for patients and the related environment. With a broad scope of services, various comple issues frequently arise in hospital service processes. The numerous variables within a hospital also

determine the speed of the information flow required by users and the organization's internal environment.

In their book Accounting Information Systems, Romney and Steinbart (2020) provide a comprehensive definition of Accounting Information Systems (AIS) for the digital age. According to them, an AIS is a system that collects records, stores, and processes data to generate information for decision-makers. A modern AIS consists of si components: people, procedures and instructions, data, software, information technology infrastructure, and internal controls and security measures.

As public service institutions, hospitals play a vital role in improving public health. Hospitals are expected to serve the community, grow, become self-reliant, remain competitive, and provide high-quality, affordable care. These increasing demands require hospital staff to perform at their best. Furthermore, this optimization must be supported by a systematically integrated operational system to ensure that service delivery runs effectively and efficiently.

One of the goals of hospitals in designing an Inpatient Accounting Information System (SIA) is to increase revenue. Therefore, the SIA should be able to support hospital revenue by providing useful, reliable, and timely information to help hospital management achieve these financial goals. The Bandung City General Hospital is one of the public institutions that implements an integrated service system in its operational management. The researcher selected Bandung City General Hospital as the research subject to explore the implementation of public service systems in government agencies, given that this institution is a Type B referral hospital based on Indonesian Minister of Health Decree No. 754/Menkes/SK/VI/2010.

Given the importance of improving healthcare services through professional medical staff, medical equipment, laboratories, pharmacy, and nursing, hospitals require an integrated approach to ensure that all operational activities run effectively, efficiently, and economically. As an institution that is capital-intensive, labor-intensive, knowledge-intensive, and technology-intensive, this hospital requires professional modern business management. Through the implementation of the Regional Public Service Agency Financial Management Model (PPK-BLUD), the Bandung City General Hospital is expected to improve its service performance for the community to advance public welfare, through financial management flexibility based on the principles of economy, productivity, and sound business practices.

Aniati, Wiguna, and Diyansah (2024), in their study on the characteristics of hospital services in Indonesia, highlight the complexity of this industry. Hospitals are healthcare organizations operating in the service sector with highly comple characteristics and based on intensive interaction between service providers and patients. Their primary characteristics include intangibility, inseparability, variability, and perishability. These characteristics make hospital management far more comple to manage compared to other service industries because the quality of their services involves both medical competence and patients' subjective perceptions.

In this regard, patients at the Bandung City General Hospital hope to see the highest possible improvement in the quality of healthcare services. On the other hand, to provide quality care, the hospital requires adequate funding. The quality of services will ultimately influence the credibility and reputation of the Bandung City General Hospital in the eyes of the public. Therefore, service quality is a crucial and primary consideration for both the hospital and its patients.

The Bandung City General Hospital has implemented a Hospital Information System (HIS). However, its use has not been fully optimized to support basic hospital statistical reporting. The Hospital Information System (HIS) report generates a Bed Occupancy Rate (BOR) that differs from the manual data calculated by the Medical Records Department (IRM) through daily inpatient censuses. This discrepancy creates an opportunity for irregularities and fraud, whether intentional or unintentional. If irregularities occur, the hospital's revenue security will be threatened, and operational activities will become ineffective and inefficient.

Revenue from inpatient services is a critical yet vulnerable component; therefore, the hospital needs to design a better inpatient revenue accounting system to maximize revenue generation.

Internal reporting features are available in the Hospital Information System (HIS) implemented at the Bandung City General Hospital, but the data is not used in report generation due to discrepancies with the IRM data. Data discrepancies were found in the bed occupancy rate (BOR) information for October, November, and December 2025. HIS data shows BOR figures of 130.00%, 112.67%, and 129.35%, while manual IRM calculations show figures of 71.29%, 74.67%, and 70.65%.

These data discrepancies render the Hospital Information System inefficient, even though the system could be used for reporting if utilized to its full potential. Therefore, controlling the accounting information system procedures for inpatient revenue within the Hospital Information System at the Bandung City General Hospital is of critical importance to management. This revenue serves as the hospital's primary source of funding to cover all operational activities.

METHOD

The research method used was quantitative descriptive with an empirical causal analysis approach. The population in this study consists of employees in the accounting, finance, and functional departments at Bandung City General Hospital. The sample was selected using purposive sampling, comprising 15 respondents. Primary data was collected via a questionnaire and analyzed using simple linear regression, correlation coefficients, the coefficient of determination (R^2), and hypothesis testing (t-test).

RESULTS AND DISCUSSION

Respondent Overview

Table 1. Respondent Overview

Respondent Characteristics		Number	Percentage
Gender	Man		40
	Women		60
	Total		150
Age	20-30 Year	5	33.33
	31-40 Year	6	40.00
	>40 Year	4	26.67
	Total	15	150
Length of Work	<5 Year	2	13.33
	5-10 Year	3	20
	>10 Year	10	66.67
	Total	15	150
Education	Diploma	9	60
	Bachelor's Degree	5	33.33
	Magister	1	6.67
	Total	15	150

Based on Table 1, the 15 respondents in the study are predominantly female, and most are of productive age, making them capable employees. Most respondents have worked for more than 15 years, and most have a diploma.

Instrument Testing

1. Validity Test

Table 2. Summary of Accounting Information System Validity Test Results

Item	rhitung	rtabel	Decision
1	0.593	0.514	Valid
2	0.776	0.514	Valid
3	0.849	0.514	Valid
4	0.776	0.514	Valid
5	0.786	0.514	Valid
6	0.798	0.514	Valid
7	0.525	0.514	Valid
8	0.717	0.514	Valid
9	0.807	0.514	Valid
10	0.590	0.514	Valid
11	0.781	0.514	Valid
12	0.786	0.514	Valid
13	0.738	0.514	Valid
14	0.765	0.514	Valid
15	0.717	0.514	Valid
16	0.774	0.514	Valid
17	0.868	0.514	Valid
18	0.780	0.514	Valid
19	0.894	0.514	Valid
20	0.667	0.514	Valid
21	0.808	0.514	Valid

The results of the questionnaire item validity test show that all statement items in each Accounting Information System (X1) variable have a correlation value above 0.514 as the limit value for a research questionnaire item to be said to be usable (acceptable). Therefore, it can be said that the questionnaire items for the Accounting Information System (X1) variable are valid and can be used to measure the variables being studied.

Table 3. Summary of Income Variable Validity Test Results

Item	rhitung	rtabel	Decision
1	0.896	0.514	Valid
2	0.807	0.514	Valid
3	0.684	0.514	Valid
4	0.801	0.514	Valid
5	0.807	0.514	Valid
6	0.789	0.514	Valid
7	0.759	0.514	Valid
8	0.770	0.514	Valid
9	0.900	0.514	Valid
10	0.830	0.514	Valid
11	0.740	0.514	Valid
12	0.785	0.514	Valid
13	0.817	0.514	Valid
14	0.624	0.514	Valid
15	0.807	0.514	Valid
16	0.722	0.514	Valid
17	0.814	0.514	Valid
18	0.726	0.514	Valid
19	0.740	0.514	Valid
20	0.785	0.514	Valid
21	0.830	0.514	Valid

The results of the questionnaire item validity test indicate that all statement items in each income variable (Y) have a correlation value above 0.514, the threshold value for a research questionnaire item to be considered usable (acceptable). Therefore, it can be concluded that the

questionnaire items for the income variable (Y) are valid and can be used to measure the variables studied.

2. Reliability Test

Table 4. Reliability Test of the Accounting Information System Role Variable

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.965	.968	21

Table 5. Reliability Test of Income Variables

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.972	.973	21

Based on the results of the reliability test conducted on all items in this study, it shows that all research items can be said to be reliable (The reliability coefficient value is greater than 0.6, namely 0.965 and 0.972, thus it can be used as an instrument in measuring the variables set in this study.

Correlation Coefficient Analysis and Coefficient of Determination

Table 6. Calculation of the Correlation Coefficient of Variable X and Variable Y

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.826[a]	.682	.657	.26795

a. Predictors: (Constant), Accounting Information System
b. Dependent Variable: Income

Based on the correlation calculation results, the correlation value (r) was obtained as 0.826. Because the r value is between 0.800-1.000, based on the interpretation table of the correlation coefficient value, the relationship between the Accounting Information System and the company's income can be said to be very strong**.**

Based on Table 6, the contribution of the Accounting Information System to company income at the Bandung City Regional General Hospital is 0.682 or 68.2% and the remaining 31.8% is influenced by other factors not studied by the author.

Hypothesis Testing

Table 7. Results of the Accounting Information System Hypothesis Test on Revenue

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	.067	.761		.088	.932
	SIA	1.000	.189	.826	5.278	.000

a. Dependent Variable: Income

Based on table 7 above, it can be concluded that the calculated t value (5.278) > t table (2.160) means that Ho is rejected. Thus, the accounting information system variable (X) has a significant effect on the income variable (Y).

Table 8. Simple Linear Regression Analysis of Accounting Information Systems on Revenue

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	.067	.761		.088	.932
	SIA	1.000	.189	.826	5.278	.000

a. Dependent Variable: Income

From table 8. above, the following regression equation is obtained:

$Y = 0{,}067 + 1{,}000 + \acute{\varepsilon}$

Explanation of the equation:

a) The constant 0.067 indicates that if the accounting information system is equal to 0 (equal to zero) and there is no change, then revenue is 0.067.
b) The accounting information system (Variable X) has a positive value of 1.000.

This means that a one-unit increase in the accounting information system (Variable X) will increase revenue (Variable Y) by 1,000 units.

CONCLUSION

The Accounting Information System at the Bandung City General Hospital is adequate. This is reflected in the respondents' feedback that the hardware used to support the accounting information system is adequate; the computers used meet hospital standards; and the software significantly impacts the recording of revenue data. There are minimal errors in software operation, supported by evaluations of the software's performance, careful employee selection, monitoring and evaluation of procedures, optimal billing procedures at the hospital, and the archiving of revenue documents. However, there are still issues that require attention regarding the claim that the supporting software meets the hospital's needs, and the revenue software must be supported by actual sales evidence since its value is below average.

Revenue at the Bandung City General Hospital can be considered good. This is based on respondents' feedback that every action, policy, and procedure reflects management's commitment to increasing the hospital's revenue; the hospital maintains a record of product (service) sales from year to year; the accounting information system maximizes revenue; there are fees for the use of assets by third parties; and the recorded transactions actually occurred and are not fictitious. The hospital conducts continuous monitoring of the service sales department; revenue transactions from compensation have been recorded correctly; and service sales can increase revenue.

This research found that the accounting information system has a very strong influence on inpatient revenue at the Bandung City General Hospital. Based on the results of the contribution analysis, the accounting information system exerts a dominant influence on hospital revenue. Meanwhile, a small portion of the remainder is influenced by other factors outside the scope of the author's research. To avoid errors in entering data related to revenue-generating activities, departments involved in the accounting information system—such as the inpatient department should be more meticulous in double-checking the data that has been entered. In this regard, the existing human resources do not yet fully meet the required qualifications for employees, as the position requires personnel with knowledge in the field of accounting. Therefore, the skills of employees who will operate the system should be aligned with the relevant field.

Based on the results of the hypothesis testing, this study successfully rejected the null hypothesis and accepted the alternative hypothesis. This empirically proves that the accounting information system variable has a significant effect on the inpatient revenue variable at the hospital. To increase hospital revenue, parties involved in inpatient revenue activities should anticipate any decline caused by unsatisfactory service by improving service quality.

The results of the simple linear regression analysis show a positive and consistent direction of influence, and the constant term indicates that if the accounting information system is assumed to be constant or unchanged, then the hospital's inpatient revenue will remain positive at the initial level. The regression coefficient indicates a linear, positive relationship. This means that any effort to improve the quality of the accounting information system implementation will directly increase the value of inpatient revenue at the Bandung City General Hospital.

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