

The Effect of Service Information Systems on Simple Cash Flow in 2023 (Case Study at Rumah Therapi Sehat, Kutai Barat)

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Abstract

Rumah Therapi Sehat is a service business operating in the field of traditional health therapy located in Kutai Barat Regency, East Kalimantan. It offers various therapy services such as cupping therapy, chiropractic therapy, acupuncture, zone reflexology massage, and SPA (massage, body scrubs, and facial acupressure), committed to providing fast service to patients without requiring prolonged waiting times. At Rumah Therapi Sehat, common errors include inaccuracies in providing information about the services patients wish to receive, mistakes in patient data entry, patient scheduling, and financial report recording. This study aims to explain the influence of service information systems on cash flow, with Rumah Therapi Sehat as the case study location. The study is significant not only to refine previous research but also to serve as a consideration for decision-making by the management of Rumah Therapi Sehat as a therapy service provider. The research employs a quantitative method using multiple linear regression statistical tests through SPSS software. The findings conclude that the service information system significantly and positively influences simple cash flow at Rumah Therapi Sehat. The SPSS output shows statistical results with a t-test value of 2.262, an F-test value of 24.402, and a determination coefficient (R^2) of 84.4%. The t-test results for 2022 and 2023 indicate a difference of 23%, which is positive.

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INTRODUCTION

In the information era, where everything is interconnected, information systems have become increasingly essential for businesses, including Rumah Terapi Sehat. The importance of information systems lies in the information-driven economy, which allows business owners to anticipate changes and make informed decisions, enables knowledge exchange, and facilitates rapid dissemination of information. Financial reports, specifically cash flow reports, assist in managing and evaluating business performance. Efficient data processing operations enable the assessment of the efficiency and sustainability of business operations. In decision-making, information about service quality, customer satisfaction, and environmental impacts plays a crucial role in policy formulation and business strategies.

To analyze business development and support decision-making, financial reports – particularly cash flow statements – are indispensable for organizing and assessing a company's performance. Measuring the effectiveness and efficiency of service delivery

is done using annual financial reports to improve the company's overall performance (García et al., 2022). Performance measurement through annual financial reports helps evaluate the effectiveness and efficiency of service operations. Data processing encompasses various information, such as operational procedures and transaction frequencies, required to assess business operation efficiency and sustainability. For instance, service quality, customer satisfaction, and environmental impact assessments are essential for understanding the final outcomes of business processes. This information is vital for accurately calculating total costs and transaction expenses, which are critical for achieving a holistic and robust sustainability integration. Such integration facilitates informed decision-making and policy formulation for sustainable business practices (Anjaria, 2024).

By implementing a well-designed information system, Rumah Terapi Sehat is expected to improve its performance and achieve its objectives. Growing public awareness of the importance of maintaining health and seeking natural and safe alternative treatments is evident from 2021 statistical data in East Kalimantan. The percentage of residents with health complaints who did not seek treatment due to long waiting times was 0.53% (Badan Pusat Statistik, 2023). Rumah Terapi Sehat in Kutai Barat offers a variety of traditional therapy services, such as cupping therapy, chiropractic therapy, acupuncture, zone reflexology massage, and SPA treatments (massage, body scrubs, and facial acupressure), with a commitment to providing fast service.

However, several recurring issues have been identified, including errors in providing service information, patient data entry, patient scheduling, and financial reporting. In business, an information system consists of interconnected components involved in generating and distributing information. These components must work together to produce information that is useful, accurate, reliable, detailed, fast, and relevant for business operations (Zamzami et al., 2021). This system can help manage customer data, services, and transactions, improve service quality, and effectively manage cash flow. Financial performance is reflected in information derived from balance sheets, income statements, cash flow reports, and other items that enhance financial performance evaluation, focusing on corporate financial reports (Pandaleke et al., 2022).

An information system can also support marketing and booking processes, transaction report generation, and financial performance evaluation. Implementing this system is expected to assist Rumah Terapi Sehat in improving service quality and business management.

The influence of service information systems on cash flow has not been extensively studied. Previous research has predominantly focused on the impact of accounting information systems and information technology on financial reporting quality. According to Setyono & Isthika (2014), accounting information systems significantly and positively influence the quality of financial reports. Similarly, information technology usage impacts the informational value of financial reporting (Mattoasi et

al., 2023). Research conducted in China found that lower audit and financial reporting quality occurred when individual auditors were connected to their clients through prior relationships (Lennox & Wu, 2022).

This study aims to examine the influence of service information systems on cash flow at Rumah Terapi Sehat. A well-designed information system can enhance patient satisfaction and revenue while generating structured cash flow reports. The information provided serves as a benchmark for customers to evaluate their satisfaction with the services received (Lehmann et al., 2022). However, at Rumah Terapi Sehat, some information systems fail to meet patient expectations, and the existing systems are not well-integrated, resulting in unstructured cash flow reports. This research is expected to contribute to the development of more effective and efficient service information systems, thereby improving cash flow and patient satisfaction.

Thus, this study focuses on examining the influence of service information systems on cash flow at Rumah Terapi Sehat as the case study location. This research is essential for refining previous studies and providing insights for decision-making by Rumah Terapi Sehat's management. The research problem is formulated as follows: "Can implementing a service information system improve the cash flow of Rumah Terapi Sehat?" To address this research problem, the researcher is motivated to conduct a study titled "*The Influence of Service Information Systems on Simple Cash Flow in 2023*." This study aims to present the results of a comparative analysis of information system implementation and cash flow in 2022 and 2023, assist Rumah Terapi Sehat in monitoring and managing its cash flow, and increase revenue. It is hoped that by implementing a service information system, Rumah Terapi Sehat can ensure sufficient funds to meet its operational needs.

METHODOLOGY

This study employs a quantitative research method. Quantitative research is a structured, fixed, and systematic approach, making the stages from the beginning to the end of the research predictable. Additionally, quantitative research heavily utilizes numerical data, from data collection and interpretation to result presentation. Results are presented in forms such as images, tables, graphs, or other visualizations to enhance readers' understanding and facilitate the communication of information. This approach focuses on the analysis of numerical data, which is subsequently analyzed using appropriate statistical methods. The results of statistical tests present the significance of relationships being studied, where the direction of the relationship depends on the hypotheses and statistical test results rather than scientific logic (Medica et al., 2020). This research was conducted at Rumah Therapi Sehat, located in Kutai Barat Regency, East Kalimantan Province.

In this study, primary data were obtained from monthly patient satisfaction data for 2023. Secondary data were collected in the form of financial reports, patient visit records, and patient registration formats from Rumah Therapi Sehat for 2022 and 2023. All data were gathered through field data collection methods, including documentation, interviews, and observations.

Data collection through documentation involved gathering records during therapy sessions and documentation of simple cash flow records. Interview data collection was carried out by interviewing the business owner and the researcher, who also serves as the cashier administrator, as key informants regarding the implementation of the service information system. Observations were conducted by monitoring data processes and interactions at Rumah Therapi Sehat during the 2022 and 2023 periods. This research was chosen to directly and systematically examine the influence of service information systems on cash flow. To analyze this comparison, the researcher measured the independent variables: X1 (information systems) and X2 (patient satisfaction with service quality), along with their effectiveness on the dependent variable (Y), which is simple cash flow. The data analysis technique employed was multiple linear regression analysis using SPSS software to examine the relationship between variables and assess significant comparisons between 2022 and 2023.

To comprehend structural coefficients or regression coefficients used in multiple regression analysis as indicators of a variable's contribution to prediction, it is essential to understand the comprehensive meaning and conceptual logic behind these coefficients (Ziglari, 2024). Structural coefficient calculations provide insights into their significance and interpretation, offering information about the dynamics of the data.

RESULTS AND DISCUSSION

Results

The results of the multiple linear regression analysis using SPSS software, conducted through various tests, indicate that multiple regression analysis is part of the General Linear Model (GLM), where all analytical methods are correlational and yield effect sizes calculated based on variance analogs (Ziglari, 2024). Consequently, secondary analysis was performed using the available information, leading to the conclusion that the service information system positively and significantly impacts the simple cash flow of "Rumah Therapi Sehat." This is demonstrated in the following statistical test results.

The formulated hypotheses are as follows: H1: There is an effect of the information system (X1) on cash flow (Y). H2: There is an effect of patient satisfaction (X2) on cash flow (Y). H3: There is a simultaneous effect of the information system (X1) and patient satisfaction (X2) on cash flow (Y). ****Discussion of the t-test:**** 1. If the significance value (sig) < 0.05, or the t-calculated value > t-table value, then there is an effect of the X variable on the Y variable. 2. If the significance value (sig) ≥ 0.05, or the t-calculated value < t-table value, then there is no effect of the X variable on the Y variable.

Table 1. Results of testing the hypotheses H1 and H2 using the t-test

Model	Coefficients ^a		Standardized Coefficients Beta	t	Sig.
	B	Unstandardized Coefficients Std. Error			
1	(Constant)	-3300161.098	3915068.495		.421
	Jumlah Pasien (X1)	142225.149	62438.027	.676	.049
	Kepuasan pasien (X2)	318623.692	359515.478	.263	.399

a. Dependent Variable: Laporan Arus Kas (Y)

Testing the First Hypothesis (H1). The significance value (Sig.) for the effect of X1 on Y is $0.049 < 0.05$, and the t-calculated value is $2.278 > t\text{-table value of } 2.262$. Therefore, it can be concluded that H1 is accepted, meaning there is an effect of X1 on Y. Testing the Second Hypothesis (H2). The significance value (Sig.) for the effect of X2 on Y is $0.399 > 0.05$, and the t-calculated value is $0.886 < t\text{-table value of } 2.262$. Therefore, it can be concluded that H2 is rejected, meaning there is no effect of X2 on Y.

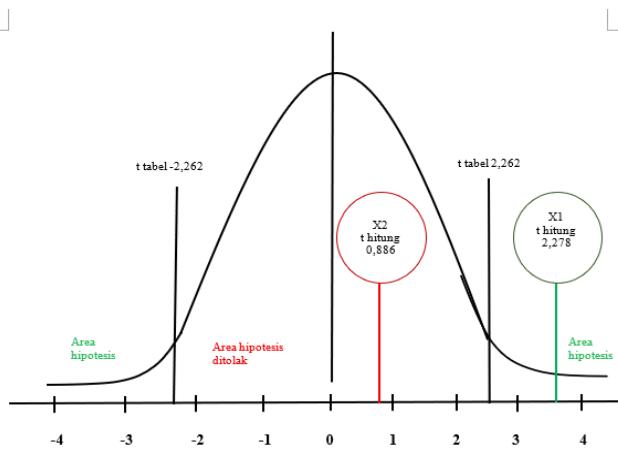


Figure 1. t-test curve

Discussion of the F-Test: 1. If the significance value (Sig.) < 0.05 , or the F-calculated value $> F\text{-table value}$, then there is a simultaneous effect of the X variables on the Y variable. 2. If the significance value (Sig.) > 0.05 , or the F-calculated value $< F\text{-table value}$, then there is no simultaneous effect of the X variables on the Y variable.

Table 2. Results of testing the H3 hypothesis using the F test

Model	ANOVA ^a		df	Mean Square	F	Sig.
	Sum of Squares					
1	Regression	2.488E+14	2	1.244E+14	24.402	<.001 ^b
	Residual	4.588E+13	9	5.098E+12		
	Total	2.947E+14	11			

a. Dependent Variable: Laporan Arus Kas (Y)

b. Predictors: (Constant), Kepuasan pasien (X2), Jumlah Pasien (X1)

Testing the Third Hypothesis (H3). Based on the output above, the significance value for the simultaneous effect of X1 and X2 on Y is $0.001 < 0.05$, and the F-calculated value is 24.402 at a 95% confidence level. Therefore, it can be concluded that H3 is accepted, meaning that X1 and X2 have a simultaneous effect on Y.

Table 3. Results of determination coefficient testing

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.919 ^a	.844	.810	2257898.2237

a. Predictors: (Constant), Kepuasan pasien (X2), Jumlah Pasien (X1)

Coefficient of Determination. Based on the output above, the R Square value is 0.844, which means that the X variable explains 84.4% of the variance in the Y variable. This study uses an independent samples t-test to examine the effect of the service information system on cash flow at Rumah Terapi Sehat. The income data for 2022 and 2023 are compared to assess significant results. The objective is to determine whether the service information system implemented at Rumah Terapi Sehat in 2023 has improved cash flow compared to 2022.

Table 4. Results of t-test in 2022 and 2023

Independent Samples Test											
Levene's Test for Equality of Variances				t-test for Equality of Means							
	F	Sig.	t	df	Significance One-Sided p	Significance Two-Sided p	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference		
Arus Kas 2022	Equal variances assumed	5.961	.023	-3.518	.22	<.001	.002	-5581583.333	1586482.3890	-8871746.433	-2291420.234
	Equal variances not assumed			-3.518	13.758	.002	.003	-5581583.333	1586482.3890	-8989880.972	-2173285.695

If the significance value is < 0.05 , there is a significant difference between 2022 and 2023. The test results show that the significance value is 0.01, which is < 0.05 , indicating a difference in cash flow between 2022 and 2023. To provide a clear illustration of this difference, the researcher created a Chart Title in the form of a graphic.

Figure 2. Income 2022 & 2023



Discussion

Based on the results of statistical testing, it can be concluded that the impact of the service information system on simple cash flow at Rumah Therapi Sehat in Kutai Barat Regency is significant. This is evidenced by Table 3, which shows the results of the coefficient of determination test. The output indicates an R Square value of 0.844, meaning that the independent variable (X) explains 84.4% of the variance in the dependent variable (Y). Service quality for patients needs to be further improved to increase customer satisfaction, which can positively influence cash flow. However, in this study, customer satisfaction in 2023 did not significantly affect cash flow. This is demonstrated in Table 1, which presents the hypothesis testing results for H1 and H2 using the t-test. The results show a Sig value for the effect of X2 on Y of 0.399, which is greater than 0.05, and a t-value of 0.886, which is less than the t-table value of 2.262. Thus, it can be concluded that H2 indicates no significant effect of X2 on Y. Simple cash flow reports showed a significant improvement in 2023 following the implementation of a well-structured service information system compared to the previous year. This is evidenced in Table 4, which presents the t-test results for 2022 and 2023. The significance value is 0.01, which is less than 0.05, indicating that there is a significant difference in cash flow between 2022 and 2023.

CONCLUSIONS

Based on the conclusions above, several recommendations can be provided to Rumah Therapi Sehat to support the smooth operation of the business in the future. Rumah Therapi Sehat should develop its information system further to minimize misunderstandings among patients. While the current services provided are

satisfactory, they should be enhanced to improve customer satisfaction and increase revenue. For future observation purposes, it is recommended that Rumah Therapi Sehat manage its financial data more effectively, ensuring that it is well-organized and structured.

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