

## THE INFLUENCE OF INVENTORY ACCOUNTING INFORMATION SYSTEMS AND INVENTORY INTERNAL CONTROL ON THE EFFECTIVENESS OF HOSPITAL MEDICINE INVENTORIES

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**Abstract:** This study aims to determine the effect of inventory accounting information systems and inventory internal control on the effectiveness of partial and simultaneous hospital medical supplies, where the study was conducted at the Jampangkulon General Hospital, using quantitative research methods with parametric statistical approaches for data collection techniques using questionnaires, interviews, literature and documentation, the number of population and a sample of 33 was taken from the number of employees of the pharmacy installation of the Jampangkulon General Hospital. The data analysis technique used is validity test, reliability test, classical assumption test, multiple regression test, and hypothesis testing. This research is assisted by SPSS25 software by producing a conclusion that inventory accounting information systems and inventory internal control on inventory effectiveness can be said to have a positive and significant effect on the effectiveness of drug supplies in hospitals. Judging from the significance value obtained through the t-test and f-test of  $0.00 < 0.05$ , which means that  $H_0$  is rejected,  $H_1$  is accepted.

**Keywords:** Accounting Information System, Effectiveness of Drug Inventory, Internal Control.

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### INTRODUCTION

The progress of the times at this time provides very fast changes in various fields within the organization, including one of the needs in a company, namely inventory, where according to (Hery 2014) inventory is material or goods that are still available for sale until the end of the period. usually referred to as merchandise inventory (merchandise inventory) means that inventory must remain in a company to maintain sales stability. The hospital is one of the non-profit companies, of course, very much maintains one of its current assets, namely inventory, so that it can meet the needs of hospital operational activities. Hospitals must be able to ensure that their supplies are maintained and ensure their effectiveness. Effectiveness means how much the expected output results are the extent to which a company has achieved from previous plans, if the company can manage both in terms of time, money, costs, and quality then it can be said to be effective, Ravianto (Gea et al., 2018). In the current era, companies need a system that can regulate the entry of inventory, until a quality report is made, the system is called an accounting information system.

According to Romney & Steinbart (2019), an information system is a system that contains activities to collect, record, and process data to produce information needed by

interested parties. about inputs and outputs so that an inventory and assets owned by the company can be clearly identified by looking at the final report that has been compiled in the accounting information system, the accounting information system will run well if it is accompanied by an internal control or internal control.

Internal control according to (Hery 2014) is all forms of rules and policies made by the company to protect all company assets from the possibility of fraud that occurs, also ensuring that accounting information is accurate and assisting the company in directing all employees to follow applicable law. In the sense that internal control helps the company in maintaining and helping employees to comply with the law. However, there are still many problems faced by many hospitals, one of which is the Jampangkulon General Hospital, namely when there is a drug vacancy which at the time of ordering inventory records is following what is specified, the possibility of fraud committed by parties inside or outside the hospital, For this reason, it is necessary to have an accounting information system coupled with an internal control that is expected to increase the effectiveness of drug supplies and help problems that exist in hospitals. Based on the analysis above, several previous studies conducted by (Hoeriah Rabiatal Adawiyah, 2018) with the title "The Influence of the Accounting Information System for Raw Material Purchases and Internal Control for Raw Material Purchases on the Effectiveness of Raw Material Inventory at PT Ipha Laboratories" obtained the results that the Accounting Information System and Control Internal has a significant effect on the Effectiveness of Hospital Drug Inventory.

Furthermore, research conducted by (Mufidah 2017) with the title "The Influence of Inventory Internal Control and Accounting Information Systems on Fraud Prevention Efforts in Inventory Management at Pt Mitra Jambi Pratama" found that internal control and accounting information systems have an effect on fraud prevention (Fraud) on inventory management. And also research conducted by (Djuhara & Januaryska 2014) entitled "The Influence of Inventory Accounting Information System on Internal Control of Inventory at CV Tri Multi Manunggal Bandung" which resulted in the conclusion that Internal Control had a positive and significant effect.

(Romney & Steinbart 2019) An accounting information system is a system in which there are activities to collect, record, store, and process data to produce information for decision-makers. Bodnar and Hoopwod's (Mulyani 2017) accounting information system is a collection of resources created to convert financial data and other data into the required information. From the two definitions above, it can be concluded that an accounting information system is a system in which it is designed to collect, record, store, and process data to produce information needed by interested users.

From the four objectives above, it can be concluded that accounting information systems are used to assist in making it easier to make information needed by the company. As well as the quality and reliability of the information created.

COSO (Sugiarto, 2016) Internal Control is a process in which various activities are followed by all employees in the company accompanied by various rules and policies in matters such as reporting, effectiveness, the efficiency of a company and also following the provisions

applicable law. (Hery 2014) says that internal control is all forms of procedures and rules that aim to secure all company assets from all forms of fraud that may occur, internal control also ensures accurate accounting information and ensures that all company employees comply with legal provisions and rules. applicable.

Seeing from these two definitions, it can be concluded that internal control is the involvement of all available resources to assist in protecting and securing all company assets and also ensuring that all employees follow and comply with the rules that have been set. Components of internal control, control environment, risk assessment, control activities, accounting information, supervision

According to Sugiarto (2016) internal control has the following objectives: Help the company in achieving the goals that have been made, Assist in realizing reliable quality financial reports, Assist employees in complying with all applicable rules and regulations From the three objectives above, it can be concluded that the purpose of the existence of internal control itself is to assist the company in protecting, and realizing all plans that lead to the company's main goals and assisting in the compliance of all employees to obey the rules and laws.

Mardiasmo (Kalendesang et al., 2017) effectiveness is a measure of the organization's success in achieving its goals, when the organization can achieve its goals well then the organization can be said to be effective.

Komarudin (Kalendesang et al., 2017) effectiveness is defined as a condition that becomes a measure of the success or failure of a company to achieve the goals that have been made previously. The two definitions above mean effectiveness as a level of success or failure of the company in achieving the goals that have been made in advance, run according to plan, and produce good or bad end results, can be said to be effective when the plan goes as expected with the objectives that have been achieved. Sugiarto (2017) inventory is one of the most active assets in a company whose cycle is purchased or produced which will later be resold. (Purwaji et al., 2017) Inventory is a current asset that is quite large in number in trading companies and manufacturing companies.

Seeing from these two definitions, inventory can be concluded as a current asset in the company which is quite large in number, inventory is also an asset that must be considered because its existence is an important asset that is useful in assisting the company's operational activities. Anief (Purba Sari, 2017) medicine is an ingredient that has a function to heal wounds, and is useful for getting a diagnosis, preventing, reducing, eliminating, making fun of the body or body parts in humans.

It can be concluded that medicine is a substance or substance that can help heal, relieve pain in the human body, as well as animals, these materials can be chemical, vegetable, or animal substances.

## **METHODS**

The research method used in this research is using quantitative methods using an associative approach. According to (Sugiyono 2017), quantitative methods are research methods based on the philosophy of positivism, used to examine certain populations or samples, sampling techniques are generally carried out randomly, data collection uses research instruments, data analysis is quantitative/statistical with the aim of testing hypotheses. set. Sugiyono (2017) an associative approach is used to find out how much influence the accounting information system of internal inventory control has on the effectiveness of hospital medical supplies. The population in this study is the pharmacy installation of the Jampangkulon General Hospital, using 33 samples from the Inpatient Depot as many as 12 people, the Outpatient Depot 8 people, the Ok Depo 6 people, and finally the Drug Warehouse as many as 7 people. In this study also used a sampling technique, namely non-probability sampling with saturated sampling. Saturated sampling is a sampling technique in which all the population is used as a sample. The data analysis techniques used in this research are normality test, heteroscedasticity test, multiple linear regression test, t-test, f test, and coefficient of determination test. The normality test was conducted to test whether the data used were normally distributed or not. Heteroscedasticity test was used to test whether the data used spread randomly or formed a pattern. Multiple linear analysis is used to test the hypothesis by looking at the convincing output results for further analysis. Hypothesis testing, namely t-test, f test, and coefficient of determination test were used to determine how much influence the independent variables had on the dependent variable.

## **RESULTS AND DISCUSSION**

### **Classic Assumption Test**

For the results obtained from the Kolmogorov Smirnov test, the Asym.Sig.(2-tailed) value of 0.200 is greater than 0.05. So it can be said that the data is normally distributed. From the results of the multicollinearity test, the collinearity tolerance value of the inventory accounting information system variable is 0.983 with a meaning greater than 0.10 and the VIF value is less than 10, which is 1.017. and has a VIF value of less than 10, which is 1.017. So it can be concluded that the independent variable does not occur multicollinearity. The results of the processed data are contained in the following table:

**Tabel 1. Normality Test Results**

One-Sample Kolmogorov-Smirnov Test			
			Unstandardized Residual
N			33
Normal Parameters <sup>a,b</sup>	Mean		.0000000
	Std. Deviation		2.64358708
	Most Extreme Differences	Absolute	.112
	Positive	.073	
	Negative	-.112	
Test Statistic			.112
Asymp. Sig. (2-tailed)			.200 <sup>c,d</sup>

a. Test distribution is Normal.  
b. Calculated from data.  
c. Lilliefors Significance Correction.  
d. This is a lower bound of the true significance.

Data Source Processed (2021)

**Table 2. Multicollinearity Test Results**

Model	Coefficients					Collinearity Statistics	
	Unstandardized Coefficients		Standardized Coefficients	T	Sig.	Tolerance	VIF
	B	Std. Error	Beta				
(Constant)	-13.602	6.411		-2.122	.042		
Accounting Information System (X1)	.611	.088	.651	6.918	.000	.983	1.017
Internal Control (X2)	.835	.162	.484	5.147	.000	.983	1.017

a. Dependent Variable: Drug Supply Effectiveness (Y)

Data Source Processed (2021)

**HYPOTHESIS TEST  
T-Test (Partial)**

**Table 3. T-Test Results (Partial)**

Model		Coefficients		Standardized Coefficients Beta	t	Sig.
		Unstandardized Coefficients				
		B	Std. Error			
1	(Constant)	13.602	6.411		2.122	.042
	Accounting Information System (X1)	.611	.088	.651	6.918	.000
	Internal Control (X2)	.835	.162	.484	5.147	.000

**a. Dependent Variable: Drug Supply Effectiveness (Y)**

Data Source Processed (2021)

Inventory Accounting Information System Coefficient Testing Information, from the results obtained in the table above, it shows that t count = 6.918 and t table (Df = n-k) = 2.042, which means t count is greater than t table. Meanwhile, the significance value is 0.000, which means the sig value is less than 0.05. So it can be concluded that H0 is rejected and H1 is accepted which indicates that the Accounting Information System (X1) has a partially significant effect on the Effectiveness of Drug Inventory (Y). Inventory Internal Control Coefficient Test, from the results obtained in the table above that t count = 5.147 and t table (Df = n-k) = 2.042 which means t count is greater than t table. Meanwhile, the significance value is 0.000, which means the sig value is less than 0.05. So from the explanation, it can be concluded that H0 is rejected and H1 is accepted by showing that Internal Control (X2) has a partially significant effect on the Effectiveness of Drug Inventory (Y).

**F Test (Simultaneous)**

**Table 4. F Test Results (Simultaneous)**

Model		ANOVA			F	Sig.
		Sum of Squares	Df	Mean Square		
1	Regression	633.881	2	316.941	42.517	.000 <sup>b</sup>
	Residual	223.634	30	7.454		
	Total	857.515	32			

**a. Dependent Variable: Drug Supply Effectiveness (Y)**

**b. Predictors: (Constant), Internal Control (X2), Accounting Information System (X1)**

Data Source Processed (2021)



Based on the results of the table above, it can be seen that  $F_{\text{arithmetic}} = 42.517$  and  $F_{\text{table}}$  ( $Df_1 = k-1$ ,  $Df_2 = NK$ ) obtained a value of 3.315 which means  $F_{\text{count}}$  is greater than  $F_{\text{table}}$ , and the significance value is 0.000, which means the sig value is less than 0,05. From the following statement, it can be concluded that  $H_0$  is rejected and  $H_1$  is accepted which indicates that the Accounting Information System ( $X_1$ ) and Internal Control ( $X_2$ ) have a significant effect simultaneously on the Effectiveness of Drug Inventories ( $Y$ ).

### Coefficient of Determination

**Table 5. Coefficient Of Determination Test Results**

Model	Model Summary			
	R	R Square	Adjusted R Square	Std. Error of the Estimate
<b>1</b>	.860 <sup>a</sup>	.739	.722	2.73029

**a. Predictors: (Constant), Internal Control (X2), Accounting Information System (X1)**

**b. Dependent Variable: Drug Stock Effectiveness (Y)**

Data Source Processed (2021)

Based on table 4.20 it can be seen that the value of R Square is 0.739 or (73.9%). So this shows that the percentage value of the  $X_1$  (Accounting Information System) and  $X_2$  (Internal Control) variables on the  $Y$  variable (Drug Inventory Effectiveness) has an effect of 73.9%, while the remaining 27.1% is influenced by other variables that are not included in this research. Influence of Inventory Accounting Information System on the effectiveness of drug inventory results of hypothesis testing using the t-test which shows that the t-count for the Accounting Information System is 6.918 while the t-table ( $Df = n-k$ ) = 2.042 so that t-count > t-table. While the significance value obtained is 0.000 so that Sig < 0.05. Therefore, it can be concluded that there is a partially significant positive effect between the variables of the Accounting Information System on the Effectiveness of Drug Inventories. This is in line with research conducted by Mufidah, (2017) with the title "The Influence of Inventory Internal Control and Accounting Information Systems on Fraud Prevention Efforts in Inventory Management at Pt Mitra Jambi Pratama" found that internal control and accounting information systems have an effect on fraud prevention ( Froud) on inventory management. The effect of inventory internal control on the effectiveness of drug inventory The results of hypothesis testing using the t-test show that t count = 5.147 while t table ( $Df = n-k$ ) = 2.042 so that t count > t table. Meanwhile, the significance value obtained is 0.000 so that Sig < 0.05. Therefore, it can be concluded that there is a significant positive effect between the Inventory Internal Control variable and the Effectiveness of Drug Inventory. This is in line with previous research by Djuhara & Januaryska (2014) entitled "The Influence of Inventory Accounting Information Systems on Internal Control of Inventory at CV Tri Multi

Manunggal Bandung" which resulted in the conclusion that Internal Control had a positive and significant effect. The effect of inventory accounting information system and inventory internal control on the effectiveness of drug inventory

The results of hypothesis testing using the f test can be seen which shows that F count = 45.517 while F table ( $Df_1 = k-1$ ,  $Df_2 = n-k$ ) is obtained at 3.315, where F arithmetic is greater than F table, while the significance value is 0.000 (Sig < 0.05). Concerning these results, it can be concluded that the independent variables, namely the Inventory Accounting Information System and Internal Control of Inventories, have a significant effect on the Effectiveness of Hospital Drug Inventories.

The results of this study are in line with previous research conducted by Hoeriah Rabiatal Adawiyah (2018) with the title "The Influence of the Accounting Information System for the Purchase of Raw Materials and Internal Control of the Purchase of Raw Materials on the Effectiveness of Raw Material Inventory at PT Ipha Laboratories". significant effect on the Effectiveness of Hospital Drug Inventory.

## **Discussion**

It can be seen from the results of research conducted by the accounting information system at the Jampangkulon General Hospital so far it has worked very well in the effectiveness of its drug supply, because pharmacy employees follow the rules that have been set by the hospital to always run as well as in the use of inventory accounting information systems. medicine at Jampangkulon General Hospital named (RS SIM) in which there is a cycle from first entering the drug until it is issued or sold to the patient. Making it easier for employees to view, organize, classify and later facilitate decision making by interested parties.

On the results of observations made in carrying out internal control of the operational activities of the Jampangkulon General Hospital, especially in the pharmaceutical sector, it has been carried out properly following the rules and policies that have been made by the Hospital where all employees are involved in helping to achieve company goals by utilizing existing resources. and also take part in implementing the internal control that has been determined.

Furthermore, the results of observations during research in hospital operational activities, especially in the field of pharmaceutical supplies, have implemented and also implemented an accounting information system and accompanied by internal controls in achieving an expected drug inventory effectiveness, looks to have been going well, it can be seen from the process performance and the running of activities from start to finish went well and following the rules set by the hospital. However, the placement of the drug stock is not neat but does not interfere with the effectiveness of the drug supply in the hospital. From the research results prove that there is an influence of Inventory Accounting Information System and Internal Control of Inventory on the Effectiveness of Hospital Drug Inventory.



### CONCLUSION

From the research conducted, it is found that the accounting information system variable (X1) has an effect on the effectiveness of drug inventory (Y), and the inventory internal control variable (X2) has an effect on the effectiveness of drug inventory (Y), and inventory accounting information system variables (X1) Inventory internal control variable (X2) affects the effectiveness of drug inventory (Y). it can be concluded that the inventory accounting information system and inventory internal control affect the effectiveness of drug supplies in hospitals.

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