The Effect of Payroll Accounting Information Systems on Improving the Effectiveness of Internal Control of Employee Salary Payments

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ABSTRACT

This study discusses the effect of accounting information systems on internal control at PT Perfect Circle Engineering. With the aim of knowing how the payroll accounting information system is used and how internal control of employee salary payments is affected by it. This research uses a quantitative descriptive approach, primary data collection using observation methods and distributing questionnaires. The population in this study were all employees of PT Perfect Circle Engineering as many as 45 people, and as many as 30 people became samples in this study, all of which were returned to researchers. This study uses data quality test analysis, simple linear regression analysis, hypothesis testing and uses the IBM SPSS Statistics Version 23 program. The results of the author's research indicate that the implementation of the payroll accounting information system has been carried out properly in accordance with the procedure. and the system that has been used has a significant effect on how effective internal control of employee salary payments is.

Keywords : Accounting Information System, Payroll System, Internal Control Effectiveness

Introduction

In the current era of globalisation, the business environment is changing very rapidly due to intense competition, especially in the field of information exchange. A good company salary information system is expected to provide some information about salaries so that companies can distribute costs as efficiently and fundamentally as possible. This prompted PT Perfect Circle Engineering to participate in the development of a computer programme aimed specifically at entrepreneurial companies to ease the work of project management. The main focus is to complete projects with pre-defined cost, quality, and time (BMW) objectives. The growth of entrepreneurial companies is fuelled by an increase in the value of projects and an increase in the number of projects completed. Forecasting the increase in the amount of work generated can be done by increasing the number of human resources by providing the right tools to allow human resources to grow as well.

The accounting information system used by PT Perfect Circle Engineering is in the form of computer software, namely SIAP contractor. Various areas such as financial accounting, logistics, budgeting, project execution, HRD equipment and facilities are proven to be improved due to this software. And also, it facilitates project cost management in project cost estimation so

that the structure and operation of each company's information system varies according to the interests of specific users. Because the interests to be applied are very different, information systems and accounting information systems are also increasingly diverse. Accounting information systems provide important information about corporate policies, directions and objectives and internal controls. Payroll information systems, too, are expected to provide information about salaries so that companies can manage costs efficiently and with principles.

The topic of employee salary is probably the most complex issue in HR management and one of the most important aspects for both employees and the company. Salary is a form of compensation for employees' financial achievements that result in job satisfaction. The importance of salary for employees is important because the level of salary reflects the value of the work performed by the employees. Each employee gets a different salary depending on their level in the company. Salary is a very large cost for the company and is an area that has many risks of possible manipulation and waste, because company management must focus on applicable accounting regulations, in this situation it is called a salary calculation system.

Internal controls are required to determine the correct amount of wages to be paid to each employee, to ensure that the wages paid to employees are what they are entitled to and to prevent the payment or amount of imaginary wages and salaries. Salaries paid are too high and wrong. The function of this internal control is so that the company can detect and prevent fraud. To evaluate the performance of the payroll system implemented at PT Perfect Circle Engineering, the purpose of this study is to identify whether the use of the payroll system has an impact on how effective salary control is. Researchers will investigate whether there are errors, fraud, fraud, or data discrepancies in the payroll system.

This supports the research findings by Septri et al (2017), Astari (2020), Kencono (2016), Rahmawati & Zulkarnaini (2018), and Putriyandari (2014), who found that internal control of employee salaries is assisted by the payroll accounting information system. However, these findings differ from the research of Oroh et al (2021), Indrasti & Sulistyawati (2021), Citra et al (2016), Jermias (2016), Septiani (2021), and Chartady (2022). This study differs from previous studies in terms of the object and approach used; previous studies used qualitative methods, while this study used a quantitative approach.

Researchers want to determine how PT Perfect Circle Engineering uses its payroll accounting information system based on the previously described problems. And to find out how much influence the payroll accounting information system has on increasing the effectiveness of internal control of employee salary payments.

Research Methods

This research is included in the type of descriptive research conducted using the survey method. According to (Hadari Nawawi, 2012), the descriptive method is an approach that aims to solve problems by describing or explaining the actual condition of research objects, such as individuals, institutions, communities, and so on, based on existing facts as they should be. To ensure data validity, this research utilises several data collection methods, namely questionnaires, interviews, and observations. Which are collected or processed by the organisation itself. This data comes directly from the source.

The research object in this study is the independent variable, namely the payroll accounting information system. This variable is also known as stimulus, predictor, and antecedent variables. In Indonesian, it is often referred to as an independent variable. Independent variables are variables that affect or cause changes or occurrences of the dependent variable. As for the dependent variable, namely the effectiveness of internal control.

The data collection technique in this study uses observation techniques, namely collecting and observing and recording the state or behaviour of an object. Questionnaires or questionnaires in this study made a list of questions using a closed questionnaire, with a closed questionnaire / questionnaire template, questions are easy to answer, do not take much time, are not too burdensome for respondents, are easy to analyse and answers are not distorted. And documentation techniques with data collection that examines the respondent's personal information.

This study uses purposive sampling method, which is a sampling technique based on criteria determined by the researcher. The sample was selected from the total population of permanent employees at PT Perfect Circle Engineering, which amounted to 45 people. In this study, only permanent employees who have a direct relationship with the payroll accounting information system were sampled, namely 30 people. The sample consists of employees who work in finance, accounting, and other related departments.

Result

The author conducted an analysis with Microsoft Excel, which had previously been calculated with SPSS, during the validity test to determine the validity of the questionnaire. A query expression is considered valid if rcount > rtable, while if rcount <; rtable then it can be said that the statement is false. The results obtained after completing the test are shown in the table below:

Table 1 Summary of Payroll AIS Variable Validity Test (X1)

No. Statement	r- Count	r- table	Conclusion
1	0,671	0,361	Valid
2	0,736	0,361	Valid
3	0,707	0,361	Valid
4	0,770	0,361	Valid
5	0,711	0,361	Valid
6	0,421	0,361	Valid
7	0,748	0,361	Valid
8	0,686	0,361	Valid
9	0,668	0,361	Valid
10	0,562	0,361	Valid
11	0,690	0,361	Valid
12	0,716	0,361	Valid
13	0,771	0,361	Valid
14	0,785	0,361	Valid

15	0,646	0,361	Valid
16	0,709	0,361	Valid
17	0,785	0,361	Valid
18	0,705	0,361	Valid
19	0,658	0,361	Valid
20	0,606	0,361	Valid
21	0,797	0,361	Valid
22	0,693	0,361	Valid
23	0,804	0,361	Valid

Source: Primary data that has been processed 2021

Based on the rcount value found in Table 7, the value will be compared with the rtable value. The rtable value is obtained with a significance level of 5% and n = 30, which results in 0.361. From Table 7, it can be seen that all statements are considered valid, because the correlation value of each is greater than 0.361.

Table 2 Summary of Validity Test of Internal Control Effectiveness Variables (Y)

No. Statement	r- Count	r-table	Conclusion
1	0,673	0,361	Valid
2	0,615	0,361	Valid
3	0,722	0,361	Valid
4	0,878	0,361	Valid
5	0,800	0,361	Valid
6	0,846	0,361	Valid
7	0,725	0,361	Valid
8	0,770	0,361	Valid
9	0,786	0,361	Valid
10	0,770	0,361	Valid
11	0,772	0,361	Valid
12	0,794	0,361	Valid
13	0,784	0,361	Valid
14	0,753	0,361	Valid
15	0,752	0,361	Valid
16	0,750	0,361	Valid
17	0,618	0,361	Valid

Source: Primary data that has been processed 2021

The rcount values found in table 7 below will be compared to the rtable value. There is an rtabel of 0.361 when sought at 5% significance with n = 30, and the correlation value for each statement is more than 0.361, so all statements are considered valid.

Reliability Test

Cronbach's alpha value must be compared with the standard value of 0.6 to determine whether the question is reliable, according to (Hastono, 2016). If Cronbach's alpha value is greater than 0.6, then the question is reliable.

Table 3 Results of Relibilitas Test of Payroll AIS Variables

Reliability Statistics	
Cronbach's Alpha	N of Items
0.951	23

Source: Primary data that has been processed 2021

The analysis results show that the Cronbach's Alpha value is 0.951. Thus, it can be concluded that the research details are reliable, because $0.951 \geq 0.6$. N of items 23 explains that each correct question number alone is tested in the reliability test.

Table 4 Results of the Internal Control Effectiveness Variable Reliability Test

Reliability Statistics	
Cronbach's Alpha	N of Items
0.950	17

Source: Primary data that has been processed 2021

According to the analysis results, the Cronbach's Alpha value is 0.950. Since 0.951 is greater than 0.6, it can be concluded that the research data is reliable. N of items 17 indicates whether only valid questions were tested in the reliability test.

Normality Test

The normality test is carried out to determine whether the data obtained is normally distributed, this is done to ensure that the residuals of the optimal flow regression model have a normal distribution. The research method used in this study to test normality is to use the Kolmogorov-Smirnov test and non-standardised residuals.

Data can be considered normally distributed if the significance value obtained is greater than 0.05 and vice versa if it is less than 0.05 the data is categorised as not normally distributed. Based on the research results, the output analysis shows the following results:

Table 5 Normality Test Results

One-Sample Kolmogorov-Smirnov Test		Unstandardized Residual
N		30
Normal Parameters[a,b]	Mean	0.0000000
	Std. Deviation	4.17260761
	Absolute	0.124

Most Extreme Differences	Positive	0.124
	Negative	-0.069
Test Statistic		0.124
Asymp. Sig. (2-tailed)		.200[c,d]
a. Test distribution is Normal.		
b. Calculated from data.		
c. Lilliefors Significance Correction.		
d. This is a lower bound of the true significance.		

Source: Primary data that has been processed 2021

Based on the results of the normality test using standardised residuals, the Kolmogorov-Smirnov significance value is 0.200. This value is higher than the 5% significance level (0.05), or in other words, $\text{sig} > 0.05$. This indicates that the residual value has a normal distribution.

Linearity Test

The linearity test shows whether the model designed shows a linear relationship or not. The relationship can be analysed through correlation and regression models. said to be good if there is a linear relationship between the independent variable and the dependent variable. In this study, the linearity test with scatterplot was carried out by computer using the SPSS 20 programme.

(Santoso, 2014) states that looking at the plot pattern is the first way to make a decision in the distribution linearity test. The pattern formed with a positive or negative relationship direction is considered fulfilled by the linearity assumption. Conversely, if no pattern is formed, the linearity assumption is considered unfulfilled.

The following are the results of the linearity test of each independent variable on the dependent variable.

Table 6 Linearity Test Results

ANOVA Table

			Sum of Squares	Df	Mean Square	F	Sig.
Pningkatan Efektivitas * SIA Penggajian	Between Groups	(Combined)	2033.367	21	96.827	4.504	0.017
		Linearity	1700.458	1	1700.458	79.091	0.000
		Deviation from Linearity	332.909	20	16.645	0.774	0.697
	Within Groups		172.000	8	21.500		
	Total		2205.367	29			

Source: Primary data that has been processed 2021

Based on the Significance Value (Sig) and ouput above, the Deviation from Linearity Sig value is 0.697 greater than 0.05. it can be concluded that there is a linear and positive relationship between the independent variable and the dependent variable there is a linear relationship.

Heteroscedasticity Test

The heteroscedasticity test is used to test the regression model with the aim of identifying whether there is a difference in the variance of residuals between one observation and another observation. In this study, the heteroscedasticity test was carried out using a scatterplot on a computer running the SPSS 20 program. The following results of the point spread graph can be seen in Figure 1.
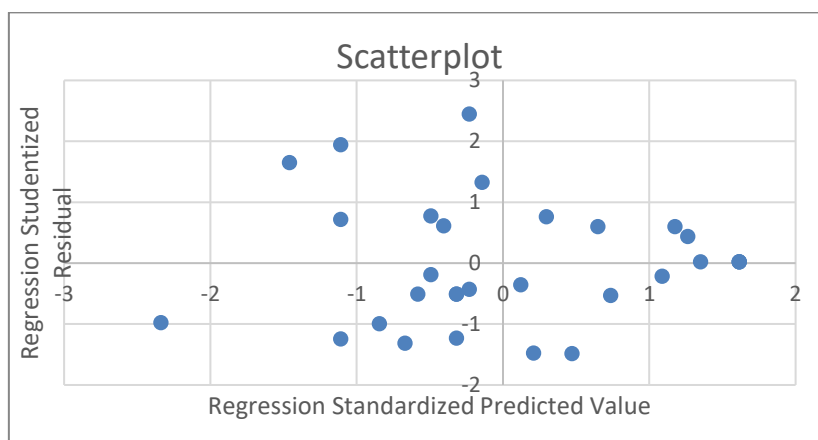

Figure 1 Heteroscedasticity Results

Source: Primary data that has been processed 2021

Based on the results of the scatterplot graph above, it can be seen that there is no clear pattern, and the points are randomly scattered above and below the number 0 on the Y axis. Therefore, it can be concluded that there is no heteroscedasticity.

Simple Linear Regression Analysis

Table 7 Simple Linear Regression Analysis Results

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	7.572	6.738		1.124	.271
	SIA PENGGAJIAN	.673	.069	.878	9.711	.000

a. Dependent Variable: PENINGKATAN

a = Constant number of Unstandardised Coefficients

In this case, the constant value is 7.572. This value indicates that if the payroll Accounting Information System (AIS) (X) exists, then the effectiveness of internal control (Y) is consistently worth 7.572. Meanwhile, the regression with a value of 0.673. This means that

every 1% increase in the level of payroll AIS (X) will cause the effectiveness of internal control (Y) to increase by 0.673. Because the regression coefficient value is positive (+), it can be concluded that payroll AIS (X) has a positive influence on the effectiveness of internal control (Y). Therefore, the regression equation is Y = 7.572+0.673X.

Simultaneous Test (F Test)

The F test serves to determine the simultaneous influence of the independent variable (payroll SIA) on the dependent variable (effectiveness of internal control). The following describes the simultaneous variable testing:

Table 8 Simultaneous Analysis Results (F Test)

ANOVA[a (uji f)]

Model	Sum of Squares	df	Mean Square	F	Sig.
1 Regression	1700.458	1	1700.458	94.300	.000[b]
Residual	504.909	28	18.032		
Total	2205.367	29			

a. Dependent Variable: PENINGKATAN

b. Predictors: (Constant), SIA PENGGAJIAN

a. **Hypothesis**

1. If the significance value is less than 0.05, then H1 is accepted and H0 is rejected, which means that the independent variable (payroll SIA) simultaneously affects the dependent variable (effectiveness of internal control).

2. If the significance is more than 0.05, then H0 is accepted and H1 is rejected, which indicates that the independent variable (payroll SIA) does not simultaneously affect the dependent variable (effectiveness of internal control).

b. **Hypothesis Testing**

Based on the results from the table, the significance of F = 0.000 is obtained. So the significance of F < 0.05 (0.000 < 0.05). Thus H1 is accepted and H0 is rejected, which means that simultaneously the payroll SIA variable has a significant effect on the internal control effectiveness variable. So it can be concluded that simultaneously there is a significant influence between the payroll SIA variable, and the effectiveness of employee payroll internal control.

Partial Test (t Test)

The partial test (t-test) aims to determine whether payroll AIS (X1)-the independent variable-has a significant and positive effect on the dependent variable, the

effectiveness of internal control (Y). The following describes the testing of each independent variable on the dependent variable partially:

1. The Effect of Payroll on Internal Control Effectiveness
    a. Hypothesis
        a. If the significance value is greater than 0.05, then H0 is accepted and H1 is rejected, which means that the payroll SIA variable has no effect on the internal control effectiveness variable.
        b. If the significance value is less than 0.05, then H1 is accepted and H0 is rejected, which indicates that the payroll SIA variable affects the internal control effectiveness variable.

Hypothesis Testing

Table 9 Results of the t Test of the Effect of AIS Payroll on the Effectiveness of Internal Control

Coefficients[a]						
		Unstandardized Coefficients		Standardized Coefficients		
Model		B	Std. Error	Beta	T	Sig.
1	(Constant)	7.572	6.738		1.124	0.271
	SIA Penggajian	0.673	0.069	0.878	9.711	0.000

a. Dependent Variable: Peningkatan Efekivitas

Source: Processed primary data 2021

Based on the table above, the results of the Payroll SIA variable are 9.711 and a significant value of 0.000, because the significant value of 0.000 <0.05, it can be concluded that the Payroll SIA variable has an influence on the effectiveness of internal control.

Test Results of the Coefficient of Determination (R2)

The coefficient of determination (R2) is used to measure the extent to which the model can explain variations in the dependent variable (effectiveness of internal control). In addition, the coefficient of determination also serves as a measure to determine the level of relationship between the independent variable (payroll AIS) and the dependent variable (effectiveness of internal control). The results of the coefficient of determination can be seen in the table as follows.

Table 10 Test Results of the Coefficient of Determination

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.878ª	0.771	0.763	4.246

a. Predictors: (Constant), payroll SIA

Source: Processed primary data 2021

Based on the results of the above calculations, it can be seen that the percentage of the influence of payroll AIS on the effectiveness of internal control obtained at the Adjusted R Square value is 0.763 (76.3%). With this, the percentage of contribution from the payroll AIS variable has a positive effect of 76.3%, while the remaining 23.7% (100%-76.3%) is influenced by other variables not included in this study.

Descriptive Statistical Analysis Results

Descriptive statistical analysis is made to find out the responses of respondents regarding each variable submitted through the research questionnaire. The variables examined in this study are the effect of accounting information systems (X1) and the effectiveness of internal control (Y1). The questionnaire was distributed online to 30 respondents who were employees from various sections, including finance, accounting, and IT. and distribution of funds with 30 questions including: 17 questions about the influence of information systems (X1), and 13 questions about the effectiveness of internal control (Y1).

Discussion of Research Results

Test validity, reliability, simple linear regression analysis, coefficient of determination, and hypothesis testing to evaluate the survey results. The validity test is declared valid if the calculated r value is greater than the r table value, according to data processing. From these results, it can be concluded that the research instrument claims are valid and can be used in research.

Based on the results of the reliability test data processing, it can be concluded that the Cronbach Alpha value is greater than the Cronbach Alpha standard, which means that the instrument used in the questionnaire is reliable. This shows that this research data can be relied upon to measure and produce consistent objects in similar studies. From the calculation results, it can be seen that the constant value (a) is 7.572 and the regression coefficient value (b) is 0.673, so that if put into the equation it becomes $Y = 7.572 + 0.673X$. Because the regression coefficient value is positive (+), it can be said that payroll AIS (X) has a positive effect on the effectiveness of internal control (Y).

The coefficient of determination (r^2) is a percentage based on the results of data processing. This calculation shows that the coefficient of determination (r^2) is 76.3%, which shows the effect of payroll accounting information system variables (X) on the effectiveness of

internal control of employee salary payments (Y). Other factors not examined by researchers affect the remaining 23.7%.

Data processing resulting from hypothesis testing shows that the t test of this study produces a value of 9.711 with a significance value of 0.000. Because the significant value of 0.000 <0.05, it can be concluded that the Payroll SIA variable has an influence on the effectiveness of internal control. Thus, it can be concluded that H0 is rejected and H1 is accepted.

1. Implementation of the payroll accounting information system that has been implemented by the company.

   Payroll system at PT Perfect Circle Engineering From the results of processing questionnaire data, we can know if the payroll system at PT Perfect Circle Engineering is implemented very well. If among the answers as many as 84% of respondents strongly agree and agree, and according to the total score of respondents who are included in the very high category. From this we can conclude that the payroll system at PT Perfect Circle Engineering is implemented very well. which includes related activities, documents used, accounting information applied, data used by management, and a series of procedures that make up the system.

2. The Effect of Payroll Accounting Information Systems on the Effectiveness of Internal Control of Employee Salary Payments.

   This study investigates how the payroll information system impacts how well PT Perfect Circle Engineering's payroll internal controls. Based on the interview results, it can be concluded that PT Perfect Circle Engineering implements systems and procedures in operation. In addition, there are documents, statements, and reports that form the basis for the operation of the payroll information system and its internal controls. Although there are differences in the theories about payroll information systems, the documents, accounting information, and reports used are essential to both the operations and internal controls of payroll information systems.

   According to (Romney and Steinbart, 2005), many documents and records are critical to achieving control objectives. Consequently, Perfect Circle Engineering has sufficient payroll information systems, supported by documents, accounting information, and reports, which are used to achieve payroll internal control objectives.

   The results show that the independent variable, salary information system (X), strongly influences the dependent variable, internal control effectiveness (Y). The results of the simple regression analysis show this: the regression equation has a b-value or regression coefficient of 7.572, which indicates that the regression coefficient of the payroll information system has a positive impact on the effectiveness of internal control.

In other words, the better the payroll information system, the higher the effectiveness of internal control achieved.

In addition, based on the partial test results (t-test), the effect of the salary information system on the effectiveness of internal control listed in Table 16 shows that the t-count value of the salary information system variable is greater than the t-table, namely 9.771> 1.699. H0 states that the salary information system does not have a positive and significant effect on how effective the internal control of PT Perfect Circle Engineering's employee salary payments is.

Therefore, the hypothesis (Ha) which states that the salary information system has a positive and significant effect on the effectiveness of internal control of salary payments for employees of PT Perfect Circle Engineering is accepted. The results of this study are also in line with the research findings of Anne Septri Yani Argie which states that 'the salary information system has a significant effect on improving internal control of employee payroll at PT Artha Karya Usaha Bandung'.

Meanwhile, the results of the coefficient of determination in this study. Based on the results of the calculation, it can be seen that the percentage of the influence of SIA Payroll on increasing the effectiveness of the performance obtained in the Adjusted R Square value is 0.763 (76.3%). With this, the percentage of contribution from the payroll SIA variable has a positive effect of 76.3%, while the remaining 23.7% (100%-76.3%) is influenced by other variables not included in this study.

Conclusion

The results of this study indicate that the use of payroll accounting information systems has been carried out properly and in accordance with standards. In addition, the results show that the internal control of employee salary payments is very effective with the payroll accounting information system. Perfect Circle Engineering implements systems and procedures to build payroll information systems. In addition, there are documents, statements, and reports that form the operational basis of the payroll information system, as well as internal controls that function to regulate the system. Although there are differences in payroll information system theories, the documents, accounting information, and reports used are still important for payroll information system operations and payroll internal controls.

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