Linear regression statistic from accounting information system application for Employee integrity

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Abstract. The purpose of this study was to determine the effect of the accounting information systems application on employee performance, whether organizational culture and employee integrity moderated the accounting information systems application influence on employee performance. The research conducted at Bank Perkreditan Rakyat in Palembang. The samples of this study were 42 respondents by using purposive sampling. The data collection methods were questionnaire and interview, while the data analysis technique was multiple linear regression analysis. According to the research result by distributing questionnaires to 42 respondents, it could be concluded that the accounting information systems application had a positive and significant effect on employee performance. The organizational culture and employee integrity influenced positively and significantly toward employee performance as well as organizational culture and employee integrity as the accounting information system application moderation showed that employee integrity could moderate the organizational culture.

1. Introduction
One of scopes of information technology designed in line of corporate economics and finance is the Accounting Information System (AIS). Progress in technology has made it possible to use accounting information from a strategic perspective, where companies/organizations need this information to deal with higher levels of increasingly competitive market uncertainty. This not only affects a particular company or agency management, but also influences the accounting information systems application in an organization.

The success of a system is closely related to the system performance. The benchmark in determining the good and bad performance of an information system will be seen through the user’s satisfaction of the accounting information system itself [1]. Accounting Information Systems (AIS) is human and capital resources collection in an organization whose task is to prepare financial information and information obtained from transaction management collecting [2]. Information systems could use to increase the speed, flexibility, integrity, and accuracy of the produced information, thus many parties use information systems to make company excellence.

Accounting Information System is a tool that combines technology with information designed to assist in managing and controlling all organizational activities related to finance. Rapid technological advances have opened up the using and producing accounting information possibility from a strategic perspective [3]. The Accounting Information System technology application in companies provides added value to users which ultimately has a positive impact on improving individual performance [4]. Work productivity is the main goal for the company so that its survival or operation can run well. The individual performance achievement related to achieving a series of tasks.
for individuals with existing information technology support. Individual performance improvement will not be achieved if the accounting information system application is not in accordance with user needs. Accounting Information Systems can be effective if the information provided by the system is able to serve the needs of system users [5].

The rapid technological development now includes the information technology infrastructure development such as the hardware, software, storage technology and communication technology development. Information and computer must use and apply by all employees in an organization so that the available information technology and computer in an organization or company can use maximally to increase productivity by employees in a company. The influence factor of other Accounting Information Systems is human factors. As an information provider, accounting information systems always relate to humans in organizations. Information provided by AIS must pay attention to the behavior of recipient humans. The AIS is also operated by humans in organizations. Human behavior that operates the AIS must consider avoiding the failure of AIS development and application. Therefore, human factors are very decisive in the Accounting Information System application.

Today, the banking industry in Indonesia is one of the economic sectors experiencing dynamic development compared to other economic sectors. The banking sector is required to be more responsive to these changes because of the very aggressive competition between elements of the banking sector, both at the local or international level. Thus, banks must able to develop widely in developing their information systems of various forms, especially in accounting information systems, so that they can improve services to clients and improve local and foreign competitiveness [6]. BPR is a financial institution that has a strategic function and role in encouraging the growth of micro, small and medium enterprises (MSMEs) as well as financial institutions that can let local entrepreneurs as a tangible form of community-based economic activity. BPR is also a microfinance service institution with business scope such as savings, loans, and payment services in a simple form. BPR as a microfinance institution with MSME as its strategic sector, proved to be strong in facing the monetary crisis that had happened in Indonesia some time ago when it compared to commercial banks. One of them is BPR in Palembang, which in its development has experienced slow development compared to the development of BPR in other cities.

In fact, there are many fundamental problems that make BPR not optimally apply technology such as technology used by commercial banks. Therefore, to improve the performance of Bank Perkreditan Rakyat, it is very important to know the effect of the accounting information systems application and the use of information technology to improve employee performance and finally to increase company productivity.

Previously several studies on the effect of accounting information systems effectiveness on employee performance showed the effectiveness of the accounting information systems application had significant positive influence on employee performance [7–9]. On the other hand there are studies which show that the adoption of accounting information systems does not improve company performance. The implementation of information systems has a negative impact on labor productivity while positively influencing the number of complaints, and does not affect the success level of goods receipt. The application of accounting information systems is the quality of a combination between hardware and software in an information system. This is indicated by the performance of a system that shows how well the capabilities of hardware, software, policies, and procedures of an information system can provide information on users' needs.

The repeat application of information systems means that users are satisfied using the system. Based on theoretical studies, the previous studies and formulation of the problem, the hypothesis proposed in this study are:

H1: The application of accounting information systems has a positive and significant effect on employee performance at the Bank Perkreditan Rakyat in Palembang.

Employee integrity is presumed strengthen the positive relationship between the application of accounting information systems on employee performance because employees with integrity will create a culture of integrity within the company, and a culture of integrity will create a valuable corporate environment. Hence, the company can focus more on long-term situations that are better for
employees, customers and investors that result in the company's performance. Likewise the integrated employees who apply information systems will increase trust for customers and investors if the employee or company has integrity. It is in line with Mulyadi’s statement that customers will choose to deal with companies whose employees uphold integrity; only people with integrity should be made as partner at work [10]. Therefore integrity is the quality that underlies public trust which measured in the form of what is right and fair. Based on the description above it can be concluded the hypothesis as follows:

H2: Employee integrity can strengthen the influence of the relationship between the application of accounting information systems and employee performance.

2. Method

This study used an associative quantitative approach. Quantitative approach is a research method that used to examine a population or a particular sample that aims to test a predetermined hypothesis [11]. Associative research aims to find out the relationship between two or more variables [12].

The location of this research was Bank Perkreditan Rakyat in Palembang which consists of 3 BPR. The object of research is the concepts used in research. It can be ordinary things and things that are not concrete; the nature is the characteristics of objects [12]. From this understanding, it obtains an explanation that the object of research is the source and place of research to get data. The object of this research was Bank Perkreditan Rakyat in Palembang.

The independent variable in this study was the accounting information systems application. System implementation means hardware and software combination in information systems. The focus was on the system performance, showing how well the capabilities of hardware, software, policies, and rules of information systems could give information on user needs.

Moreover, the dependent variable in this study was employee performance. Performance is defined as the level of success in doing the work. Meanwhile, the moderating variable in this study was employee integrity.

Based on the type of data, it can divided into two, namely qualitative data and quantitative data. Qualitative data are data that expressed in the form of words, sentences, and schemes. The qualitative data from this study was information on the number of BPRs, the organizational structure and tasks of each part of the BPR. Quantitative Data is data in the form of numbers that can expressed and measured by a unit of calculation or qualitative that predicted. In this study the quantitative data obtained from qualitative data which estimated by using Likert scale which referred to used variables measurement. The primary data used in this study was the answer to the questionnaire distributed to employees as the user of accounting information systems at Bank Perkreditan Rakyat in Palembang. Secondary data used in this study was the company profile, and the organizational structure of Bank Perkreditan Rakyat in Palembang.

Population is the generalization which consists of objects or subjects that have certain qualities and characteristics set by researchers to studied and then draw the conclusions [13]. This study population was all employees at the Bank Perkreditan Rakyat in Palembang which consist of 3 BPR namely BPR A.Rivai, BPR Pasar 16, and BPR Veteran. Samples are part of the number of groups and characteristics possessed by the population [13]. The sampling technique in this study used purposive sampling, namely the technique of determining the sample with certain considerations [13]. Certain considerations were the employees of existing BPR in Palembang who met the requirements to select as samples.

Data collection methods of this study were questionnaires and interviews. Questionnaire is a method of data collection conducted by giving a set of questions or written statements to the respondent to answer [13]. The questionnaire distributed was in the form of a list of questions and written statements to the respondents about the employee integrity influence on the relationship of the accounting information systems application to employee’s performance at Bank Perkreditan Rakyat in Palembang. Interview is data collection technique that carried out if researchers want to conduct a preliminary study to find problems that must studied, and if researchers want to know things from respondents deeper and the number of respondents is small [13]. This interview conducted to get
information about information systems in the company and get the number of employees who use information systems in the company and get the number of employees who use accounting information systems in their work.

This analysis aimed to measure the strength of the relationship between two or more variables and showed the relationship direction between the dependent variable and the independent variable [14]. Multiple linear regression analysis in this study was to answer hypothesis 1 (H1) and hypothesis 2 (H2).

3. Result and Discussion
The application of Accounting Information Systems related to how much contribution made by the company's Accounting Information System to improve employee performance in completing tasks.

Based on the results of the study, it was found that the responses of the most respondents to the quality variables of the Accounting Information System (SIA) were very good. From these results it could be interpreted that respondents' assessment of the used accounting information system was by the company's goals and provided exact, timely, safe and complete accounting information for the company. Employee performance in question was attaining of a series of each task with the support of existing information technology. In this case the employee duties achievement supported by the Accounting Information System.

The results of the study it was known that the responses of the most respondents to the variable integrity of employees were very good. From these results it could be interpreted that employee integrity already had a positive influence on the application in the respondent's work, as well as the company's productivity.

The normality test aimed to test whether in the regression model the disturbing or residual variables had a normal distribution. There are two ways to detect whether residuals are normally distributed or not, namely graph analysis and statistical tests [14]. The statistical test used to test residual normality in this study was the Kolmogorov-Smirnov (K-S) non-parametric statistical test. If Asymp. Sig (2-tailed)> α (0.05) it means that data was normally distributed [14]. The significance value was 0.196 (0.196> 0.05). This means that the regression model was normally distributed.

The multicollinearity test aimed to test whether the regression model found a correlation between independent variables. If the tolerance value was above 0.10 or the VIF value is smaller than 10, it could be concluded that there was no multicollinearity.

The tolerance value of the variable of accounting information system application (X1) and employee integrity (X2) could be obtained, namely 0.833 or 83.3%. The tolerance value was above 0.10 or 10%, so the regression model was free of multicollinearity. VIF values based on the table above from the variable of accounting information systems application (X1) and employee integrity (X2) were the same, namely 1.184. All VIF values were less than 10, and then the regression model was free from multicollinearity. Table 1 below presented the results of the multicollinearity test.

| No. | Variable | Tolerance | Variance Inflation Factor (VIF) |
|-----|----------|-----------|-------------------------------|
| 1.  | The application of Accounting Information System (X1) | 0.833 | 1.184 |
| 2.  | Employee Integrity (X2) | 0.833 | 1.184 |

Heteroscedasticity test aimed to test whether in the regression model there was variance inequality from the residual of one observation to another observation. If the residual variance from one observation to another observation remained, then it called Homoscedasticity and if it was different it called heteroscedasticity. This study used the Glejser test, if of significance chance was above the confidence level of 5% (0.05), it concluded that the regression model does not contain any heteroscedasticity [14]. Table 2 below presented the result of the heteroscedasticity test.
Table 2. Heteroscedasticity Test Results for Multiple Linear Regressions

| Model                                    | T   | Sig.  |
|------------------------------------------|-----|-------|
| (constant)                               | 3.852 | 0.000 |
| The application of Accounting Information System (X1) | -1.510 | 0.1137 |
| Employee Integrity (X2)                  | -1.755 | 0.085 |

Based on Table 6 it could be seen that the significance probability was greater than the real level (\(\alpha\)) which was 0.05. So it could be concluded that there was no heteroscedasticity. The normality test aimed to test whether in the regression model the disturbing or residual variables had a normal distribution. There are two ways to detect whether residuals are normally distributed or not, namely graph analysis and statistical tests [14].

The statistical test used to test residual normality in this study was the Kolmogorov-Smirnov (K-S) non-parametric statistical test. If Asymp. Sig (2-tailed)> \(\alpha\) (0.05) so that the data is normally distributed [14]. The significance value was 0.784 (0.784> 0.05). This means that the regression model was normally distributed.

Table 3. Multicollinearity Test Results for Moderate Regression

| No. | Variable                              | Tolerance | Variance Inflation Factor (VIF) |
|-----|---------------------------------------|-----------|---------------------------------|
| 1.  | The application of Accounting Information System (X1) | 0.521     | 1.923                           |
| 2.  | Employee Integrity                    | 0.271     | 3.682                           |
| 3.  | (X1 X2)                               | 0.188     | 5.304                           |

The multicollinearity test aimed to test whether the regression model found a correlation between independent variables. If the tolerance value was higher than 0.10 or the VIF value was smaller than 10, it could be concluded that there was no multicollinearity. Based on Table 8 above, the tolerance value of the variables of the accounting information systems application (X1), employee integrity (X2), and the accounting information systems application that moderated by employee integrity (X1. X2) consecutively were 0.520 or 52%; 0.272 or 27.2%; and 0.189 or 18.9%. All tolerance values above were 0.10 or 10%, so the regression model was free of multicollinearity. The VIF values based on Table 8 above from the variables of the accounting information systems application (X1), employee integrity (X2), and accounting information systems application moderated by employee integrity (X1.X2) consecutively were 1.922; 3.682; and 5.305. All VIF values were less than 10, then the regression model was free from multicollinearity. A good regression model is that homoskedasticity or there is no heteroscedasticity [14]. Heteroscedasticity test aimed to test whether in the regression model there was variance inequality from the residual of one observation to another observation. If the residual variance from one observation to another observation remains, then it called homoskedasticity and if it was different called heteroscedasticity. This study used the Glejser test, if the significance chance is above the 5% (0.05) confidence level; it concludes that the regression model does not contain any heteroscedasticity [14]. The results of the heteroscedasticity test presented in Table 4 below.

Table 4. Heteroscedasticity Test Results for Moderate Regression

| Model                                    | T   | Sig.  |
|------------------------------------------|-----|-------|
| (constant)                               | 4.206 | 0.000 |
| The application of Accounting Information System (X1) | -0.163 | 0.871 |
Based on Table 4 it could be seen that the significance probability was greater than the real level (\( \alpha \)) which was 0.05. So it could be concluded that there was no heteroscedasticity. The regression equation interpretation used to find the equations in the research which could be used to decide the research model and explain each independent variable influence and on the dependent variable.

The constant value of 4045 means that if the accounting information systems application and employee integrity was constant, then employee performance increased by 4045 denominations. The regression coefficient value of the accounting information systems application (\( X_1 \)) was 284, it means that if the application of accounting information systems increased by 1 unit with assumption that other variables were constant, so employee performance increased by 284 denominations. The regression coefficient value of employee integrity (\( X_2 \)) was 205 means that if the employees integrity increased by 1 denomination with assumption that other variables are constant, so the employee's performance increased by 206 denominations. The regression equation interpretation with the moderating variable used to decide the equation in the research which could be used to decide the research model and explain each independent variable and moderation on the dependent variable influence.

The constant value of 11.924 means that if the accounting information systems application, employee integrity and the relationship between the accounting information systems application and employee integrity were constant, so the employee performance increased by 11,924 denominations. The regression coefficient value of the accounting information systems application (\( X_1 \)) was 0.025 which means that if the accounting information systems application increased by one denomination with the assumption that other variables were constant, so the employee performance increased by 0.025 denomination. The regression coefficient value of employee integrity (\( X_2 \)) was -0.876 means that if employee integrity increased by 1 denomination with the assumption that other variables were constant, so employee performance decreased by 0.876 denomination. The regression coefficient value \( X_1X_2 \) was 0.034 which indicated that if the relationship between the accounting information systems application and employee integrity increased by 1 denomination, then the employee's performance increased by 0.034 denominations. Based on Table 10, the estimation results of the system application variable were at the value of \( t = 2.103 \) with significance of 0.041. The significance value was below 0.05 which indicated that the accounting information system application variable influenced positively and definitely on employee performance variables. This explained that hypothesis 1 accepted. Based on Table 10 the estimation results of the ease of system use at the value of \( t = 0.512 \) with significance of 0.000. The significance value was below 0.05 which indicated that the employee integrity variable had a positive and significant influence on employee performance variables. This explained that hypothesis 2 accepted. Based on Table 11 the estimation results of employee integrity variables \( t = 2.232 \) with significance of 0.030. The significance value was below 0.05 which indicated that the employee integrity moderating variable could moderate the accounting information systems application influence. In other words, the increasing of employees’ integration could increase the accounting information systems application influence on employee performance, so hypothesis 3 accepted.

4. Conclusion
Based on the results of this study, it could be concluded that the accounting information systems application influenced positively and definitely on employee performance. This was because the accounting information system application at Bank Perkreditan Rakyat in Palembang would simplify and accelerate the completion of the tasks carried out by everyone in the institution. Employee integrity positively and definitely influenced the employee performance. This means that employees with integrity would create a productive work culture. Employee integrity was able to influence stronger the accounting information systems application on employee performance, so it could be
concluded that the variable employee integrity was a moderating variable. It was because employees with integrity would be able to create person and organizational behaviors that directed to increasing company value.

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