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# The Influence of Accounting Information Systems and Internal Control on Employee Performance Using Artificial Intelligence as an Intervening Variable at the Kuala District Office

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**ABSTRACT**

This research aims to test and analyze the influence of accounting information systems and internal control on employee performance with artificial intelligence as an intervening variable at the Kuala sub-district office directly and indirectly. The approach used in this research is associative. The population in this study was all 35 employees. The sample in this study used a census or sampling technique totalling 35 employees. The data collection technique in this research uses a questionnaire technique. The data analysis technique in this research uses a quantitative approach using statistical analysis using Auter Model Analysis, Inner Model Analysis and Hypothesis Testing. Data processing in this research uses the PLS (Partial Least Square) software program. The results of this research prove that the accounting information system has no direct effect on artificial intelligence. The accounting information system does not affect employee performance. Internal control has a significant effect on artificial intelligence. Internal control has a significant effect on employee performance. artificial intelligence does not have a significant effect on employee performance. The accounting information system does not affect employee work with artificial intelligence as an intervening variable. Internal control does not affect employee performance with artificial intelligence as an intervening variable.

**Keywords:** Accounting Information System, Artificial Intelligence, Employee Performance, Internal Control

## INTRODUCTION

Public sector accounting is a technical mechanism and accounting analysis applied to the management of public funds in high state institutions and subordinate departments, regional governments, BUMN, BUMD, NGOs and social foundations, as well as in public sector cooperation projects and private.

The accounting information system is a very important part of the information system which can receive raw financial data and process it into information for the benefit of both outside and inside an organization. Internal control is a series of activities carried out by a company to provide sufficient confidence in achieving company goals (Nugroho et al., 2019).

A good system is considered an important factor in achieving greater performance, especially in the decision-making process. The better the quality of the accounting information system which includes: easy to use, fast access, reliable, flexible and safe in protecting user data, the more satisfied system users will be (Kasandra in Anjani, 2021).

Artificial Intelligence (AI) is a field of computer science that focuses on developing systems capable of mimicking human intelligence and performing tasks that typically require human intelligence, such as facial recognition, natural language processing, decision making, and learning. Implementing artificial intelligence (AI) in sub-district offices can provide various benefits, but also involves several challenges.

Although AI offers significant potential benefits, there are several challenges that must be overcome in its implementation in sub-district offices. Some of these challenges include data privacy and security, the need for necessary technical expertise, adapting to organizational culture, and the importance of maintaining a balance between decisions made by AI systems and human considerations that are important in the context of socially sensitive public services.

One of the government agencies in Langkat Regency is the Kuala District Office. This Kuala sub-district office serves the community which consists of 14 villages and 2 sub-districts, namely: Bela Rakyat sub-district, and Pekan Kuala sub-district. In carrying out service duties to the community, the Kuala sub-district office has several sections and is assisted by Kuala sub-district office staff, the sections are as follows: the governance, peace and order section, and the empowerment and development section. One of the divisions in the sub-district office is the BKKBN section.

Quoted from berita.sanggau.go.id/2022 BKKBN implements a more contemporary and accountable information system, namely the Family Information System (SIGA) application which has now been changed to New SIGA, where the New SIGA application will become operational data for family planning officers and other parties. related to intervening in the BKKBN program, especially the Bangga Kencana program.

Based on the results of a survey in the field, problems were found, namely the lack of knowledge about information systems, which resulted in employee performance decreasing and the preparation of reports being hampered. Then, regarding the attendance or absentee list for Kuala sub-district office employees, it can be seen that there are still employees who are not disciplined at work.

The system method used to fill in the attendance list is using a fingerprint which will then be automatically computerized to the North Sumatra Province Communication and Information Service (Kominfo). However, sometimes there are still network problems and a lack of employee knowledge regarding information systems, so that it is necessary to use manual absences, namely only with initials. Of course, manual absences can be manipulated because the manual absence method is still less effective for assessing employee performance and for assessing the time discipline of employees. employee.

It can be said that accounting information systems are generally used to facilitate work such as preparing reports, preparing proposals, preparing work plans, and so on, all of which have the aim of improving company performance and achieving company goals more effectively, but AIS at the sub-district office is used to inputting employee

attendance data, the input data can make it easier for the North Sumatra Communication and Information Service (Kominfo) and to input reports via the New SIGA application to see employee work results through employee daily attendance levels.
Previous research conducted by Fahrun Dini (2020) and Dina Fadilla (2022) shows that accounting information systems have a significant effect on employee performance.
Furthermore, research conducted by Ahmad Hadi (2020), Sella (2021), and Lesly Astuti Putri Lubis (2018) shows that internal control influences employee performance

## LITERATURE REVIEW

### Accounting Information System (AIS)

According to (Rahmansyah & Darwis, 2020) accounting information systems (AIS) have an important role in business processes where connected reports are designed to distribute financial data into information needed by management, this is driven by its use in various equipment, record forms, including computers and equipment as well as communication tools, implementing personnel. According to (Romney & Steinbart in Mas Rasmini & Suryanto, 2018) the definition of an accounting information system is as a system that can be used to collect, record, store and process data to inform decision makers. Furthermore (Pratiwi et al., 2019) said that AIS is a system framework that consists of various structures, records and reports that have been prepared and create the information needed by an organization. According to (Susanto, 2017), the components of an accounting information system are hardware, software, brainware, procedures, databases and communication networks.

### Internal control

According to Mulyadi (Fibriyanti & Wijaya, 2018), the Internal Control System includes organizational structure, methods and measures that are coordinated to maintain organizational assets, check the accuracy and reliability of accounting data, encourage efficiency and encourage compliance with management policies. Meanwhile, according to (Dona, 2015), internal control is a tool created by management within a company. which is very important and helps in organizing and directing organizational activities with the aim that all activities or activities in the company can be carried out effectively and efficiently. Furthermore, supported by the opinion of Tuanakotta & Theodorus M (Ramlah et al., 2023), internal control is a process designed, implemented and maintained by TCWG (Those Charged With Governance), management and other employees to provide adequate insurance regarding the achievement operational efficiency objectives, and compliance with laws and statutory provisions. The term internal control means one or more elements of internal control.

### Employee Performance

According to Hasibuan (Yusnandar & Muslih, 2021), employee performance is a work result achieved by a person in carrying out the tasks assigned to him which is based on skill, experience and seriousness as well as time. Meanwhile, according to Mangkunegara (Ratu et al., 2020), performance is the result of work in terms of quality and quantity achieved by an employee in carrying out his duties with the responsibilities given to him.
According to Armstrong & Baron (Wibowo, 2018), factors that influence employee performance include personal factors, leadership factors, team factors, system factors and contextual/situational factors.

### Artificial Intelligence

According to Prateek Joshi “Artificial Intelligence (AI) is a way to make machines think and behave intelligently. These machines are controlled by the software inside them, so AI has a lot to do with the intelligent software programs that control these machines. This is the science of finding theories and methodologies that can help machines understand

the world and react appropriately to situations in the same way humans do (Azzahra, 2020).

## RESEARCH METHOD

(Sugiyono, 2019), suggests that research methods can be interpreted as a scientific way to obtain valid data with the aim of finding, developing and proving certain knowledge so that it can in turn be used to understand, solve and anticipate problems. This research uses quantitative research with a causality research design designed to examine the possibility of a causal relationship between variables, independent variables and dependent variables between accounting information system variables and internal control on employee performance.
The population in this study were Kuala District office employees, totaling 35 employees with honorariums. The sampling technique in this research is using simple random sampling or probability sampling using random sampling. The data collection technique used in this research was a questionnaire.

## RESULTS

The data processing technique applied in this research uses PLS (Partial Least Square) assess the FIT Model of a study. These stages are as follows: Data Quality Testing Through Outer Model Assessment

**Table 1. Outer Loading Data Processed Results (Measurement Model)**

| | Accounting Information | System for Internal | Control of Employee Performance | Artificial Intelligence |
|---|---|---|---|---|
| X1.1 | 1.212 | | | |
| X1.2 | 0,813 | | | |
| X1.3 | 0,723 | | | |
| X1.4 | 0,821 | | | |
| X1.5 | 0,921 | | | |
| X1.6 | 0,822 | | | |
| X2.1 | | 0,732 | | |
| X2.2 | | 0,833 | | |
| X2.3 | | 0,935 | | |
| X2.4 | | 0,940 | | |
| X2.5 | | 0,835 | | |
| X2.6 | | 0,765 | | |
| X2.7 | | 0,943 | | |
| X2.8 | | 0,867 | | |
| X2.9 | | 0,754 | | |
| X2.10 | | 0,911 | | |
| X2.11 | | 0,829 | | |
| X2.12 | | 0,933 | | |
| X2.13 | | 0,872 | | |
| Y.1 | | | 0,732 | |
| Y.2 | | | 0,859 | |
| Y.3 | | | 0,929 | |
| Y.4 | | | 0,877 | |
| Y.5 | | | 0,789 | |
| Y.6 | | | 0,944 | |
| Y.7 | | | 0,765 | |
| Y.8 | | | 0,863 | |

| | | | | |
|---|---|---|---|---|
| Y.9 | | | 0,910 | |
| Y.10 | | | 0,720 | |
| Y.11 | | | 0,812 | |
| Z.1 | | | | 0,751 |
| Z.2 | | | | 0,911 |
| Z.3 | | | | 0,823 |
| Z.4 | | | | 0,750 |
| Z.5 | | | | 0,839 |

**Source: SmartPLS data processing results, 2023**

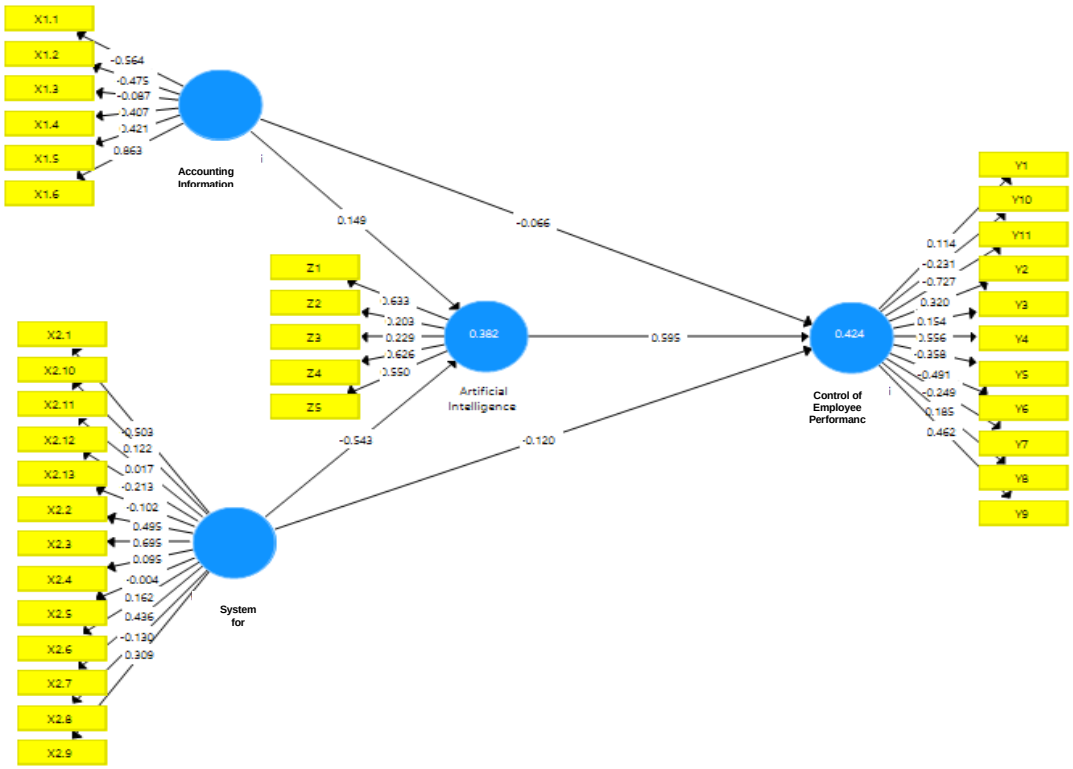


**Figure 1. Outer Model**

To see the average variance inflation factor (AVE) value, you can see the following table:

**Convergent Validity (Convergent Validity)**
**Table 2. Data Processed Results Construct Reliability and Validity**

| | Cronbach's Alpha | rho_A | Composite Reliability | Average Variance Extracted (AVE) |
|---|---|---|---|---|
| X1 | 0,732 | 0,752 | 0,872 | 0,872 |
| X2 | 0,821 | 0,734 | 0,921 | 0,892 |
| Y | 0,932 | 0,852 | 0,789 | 0,821 |
| Z | 0,720 | 0,921 | 0,931 | 0,926 |

**Source: SmartPLS data processing results, 2023**

Based on the table above, the AVE (average variance extracted) value of each construct in the model, it can be concluded that the AVE value is above 0.6. These results indicate that this variable meets the requirements and can be said to be valid.

**Discriminant Validity (Discriminant Variable)**
**Table 3. Results of Cross Loading Processed Data**

| | Accounting Information | System for Internal | Control of Employee Performance | Artificial Intelligence |
|---|---|---|---|---|
| X1.1 | 1.912 | 0,790 | 0,812 | 0,721 |
| X1.2 | 0,813 | 0,749 | 0,920 | 0,740 |
| X1.3 | 0,723 | 0,733 | 0,790 | 0,766 |
| X1.4 | 0,821 | 0,820 | 0,833 | 0,780 |
| X1.5 | 0,921 | 0,851 | 0,924 | 0,748 |
| X1.6 | 0,822 | 0,938 | 0,741 | 0,822 |
| X2.1 | 0,701 | 0,732 | 0,730 | 0,734 |
| X2.2 | 0,982 | 0,833 | 0,782 | 0,831 |
| X2.3 | 0,874 | 0,935 | 0,846 | 0,894 |
| X2.4 | 0,765 | 0,940 | 0,820 | 0,910 |
| X2.5 | 0,982 | 0,835 | 0,922 | 0,861 |
| X2.6 | 0,873 | 0,765 | 0,843 | 0,752 |
| X2.7 | 0,925 | 0,943 | 0,927 | 0,740 |
| X2.8 | 0,981 | 0,867 | 0,873 | 0,721 |
| X2.9 | 0,783 | 0,754 | 0,922 | 0,820 |
| X2.10 | 0,820 | 0,911 | 0,745 | 0,765 |
| X2.11 | 0,822 | 0,829 | 0,899 | 0,782 |
| X2.12 | 0,911 | 0,933 | 0,931 | 0,766 |
| X2.13 | 0,810 | 0,872 | 0,823 | 0,743 |
| Y.1 | 0,924 | 0,831 | 0,732 | 0,731 |
| Y.2 | 0,763 | 0,892 | 0,859 | 0,745 |
| Y.3 | 0,759 | 0,881 | 0,929 | 0,761 |
| Y.4 | 0,729 | 0,923 | 0,877 | 0,832 |
| Y.5 | 0,871 | 0,873 | 0,789 | 0,801 |
| Y.6 | 0,819 | 0,766 | 0,944 | 0,929 |
| Y.7 | 0,832 | 0,751 | 0,765 | 0,721 |
| Y.8 | 0,780 | 0,790 | 0,863 | 0,904 |
| Y.9 | 0,899 | 0,752 | 0,910 | 0,831 |
| Y.10 | 0,761 | 0,784 | 0,720 | 0,733 |
| Y.11 | 0,720 | 0,842 | 0,812 | 0,921 |
| Z.1 | 0,842 | 0,911 | 0,827 | 0,751 |
| Z.2 | 0,845 | 0,740 | 0,788 | 0,911 |
| Z.3 | 0,926 | 0,932 | 0,892 | 0,823 |
| Z.4 | 0,933 | 0,981 | 0,910 | 0,750 |
| Z.5 | 0,843 | 0,720 | 0,744 | 0,839 |

**Source: SmartPLS data processing results, 2023**

To test the discriminant variable is by looking at the cross loading value. This value must be above 0.70.

**Structural Model or Inner Model**
The R-Square value is used to measure the level of variation in changes in the independent variable towards the dependent.

**Table 4. Results of R-Square Data Processing**

| | R Square | R Square Adjusted |
|---|---|---|
| Y | 0,823 | 0,827 |
| Z | 0,840 | 0,852 |

**Source: SmartPLS data processing results, 2023**

Based on the table above, the R-Square value for the Employee Performance variable (Y) is 0.823 and the artificial intelligence variable (Z) is 0.840. So, these two variables are included in the strong category.

## DISCUSSION

### The Influence of Accounting Information Systems on Artificial Intelligence

In the analysis using SmartPLS, the variable "Accounting Information System" (X1) was assessed based on the six questions used in the research. The measurement results are then evaluated based on the p-value obtained. P-value is an indicator that measures the statistical significance of the relationship between the variables studied. The lower the p-value, the stronger the statistical evidence that the variable has a significant influence. From the results above it can be seen that the p-value of the accounting information system on artificial intelligence is 0.621 so it can be concluded that the accounting information system has no effect on artificial intelligence. intelligence.

### The Influence of Accounting Information Systems on Employee Performance

In the analysis using SmartPLS, the variable "Internal Control" (X2) was evaluated based on the eight questions used in the research. The results of this research found that the influence of the accounting information system variable had no effect on employee performance because it had a P-Value of 0.793. So 0.793>0.05, so it can be stated that the accounting information system has no effect on employee performance.

### The Influence of Internal Control on Artificial Intelligence

In the analysis using the SmartPLS method, internal control variables (X2) and artificial intelligence (Y) are evaluated based on the questions used in the research. . The results of this research found that the direct influence of internal control variables on artificial intelligence variables had a P-Value of 0.003. So 0.003 <0.05, so it can be stated that internal control has a significant effect on artificial intelligence.

### The Effect of Internal Control on Employee Performance

In the context of internal control, if the question item measuring the internal control variable shows a low p-value, as stated in the p-values table, namely 0.000 then this indicates that there is strong statistical evidence that the internal control variable has a significant influence on employee performance variables in this research model. In other words, these results confirm that internal control has an important role in influencing or relating to employee performance variables.

### The Influence of Artificial Intelligence on Employee Performance

The results of this research found that the influence of artificial intelligence (Z) on employee performance (Y) has a P-Values value of 0.062. So 0.062>0.05 can be stated that artificial intelligence has no effect on employee performance. Perception of utilization Artificial Intelligence has a positive and significant effect on employee performance, meaning that the application of Artificial Intelligence technology is able to significantly provide additional motivation for employees to work because of the convenience factor

obtained in using Artificial Intelligence technology. Setyaningtyas, c. & temaluru, y. (2020).

**The Influence of Accounting Information Systems on Employee Performance with Artificial Intelligence as an Intervening Variable**

In analysis using the SmartPLS method, the results of this measurement are then analyzed by considering the resulting p-value. It was found that the p-value for all questions measuring the influence of accounting information systems on employee performance with Artificial Intelligence as an intervening variable was around 0.675. This shows that the influence of accounting information systems on employee performance with Artificial Intelligence as an intervening variable is less significant in this research model. Even though some questions have quite low p-values, overall, these results show that the influence of accounting information systems on employee performance with Artificial Intelligence as an intervening variable does not have a very strong influence on the variables in the model. Even though several aspects of AI play a role, overall, the analysis results show that the influence of the accounting information system has no effect on employee performance with Artificial Intelligence as an intervening variable.

**The Effect of Internal Control on Employee Performance with Artificial Intelligence as an Intervening Variable**

Based on the test above, through the second indirect hypothesis test, namely that internal control of employee performance with artificial intelligence as an intervening variable. The results of the analysis show that measuring internal control over employee performance with artificial intelligence as an intervening variable has a p-value of 0.104, so it can be concluded from this hypothesis that it indicates that internal control over employee performance with artificial intelligence as an intervening variable does not have a significant influence. significant.

## CONCLUSION

Based on the results of the research and discussion previously stated, the conclusion can be drawn that the accounting information system has no effect on artificial intelligence at the Kuala sub-district office. The accounting information system has no influence on employee performance at the Kuala District office. Internal control influences artificial intelligence at the Kuala sub-district office. Internal control influences employee performance at the Kuala District office. Artificial intelligence has no effect on employee performance at the Kuala sub-district office. The accounting information system has no effect on employee performance with artificial intelligence as an intervening variable at the Kuala District office. Internal control has no effect on employee performance with artificial intelligence as an intervening variable at the Kuala District office.

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## DECLARATION OF CONFLICTING INTERESTS

The author has no conflict of interest in writing this article.

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