Application of Information Systems, Internal Control, Risk Assessment, and Internal Audit for Collection Effectiveness of Accounts Receivable

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Abstract
The aim of this study was to ascertain how internal control and accounting information systems, risk assessment and internal auditing influence the effectiveness of receivables collection. This study was conducted at PT. Puninar Infinite Raya using the use of internal audit, risk assessment, internal control, and accounting information systems as independent variables and the effectiveness of the collection of accounts receivable as dependent variables. The sample in the study amounted to 42 people. The questionnaires received back from the respondents were 42 people. There is one analysis model of the data processing method used, namely the model for multiple regression analysis. According to the study's findings, the use of accounting information systems significantly and negatively affects the efficiency of collecting receipts; on the other hand, internal control significantly and favorably affects the efficiency of collecting receivables, and risk assessment affects the efficiency of collecting receivables. The efficiency of receivables collection is impacted concurrently by the use of accounting information systems, internal control, risks associated with their implementation, risk assessment, and internal audit. The study's managerial implications include the use of information systems for operating efficiency and real-time monitoring. Internal control such as fraud prevention, legal compliance.

Keywords: Accounting Information Systems Application, Internal Control, Risk Assessment, Internal Audit, Effectiveness of Receivables Collection.

1. Introduction
Mulyadi (2016) state that an internal control system encompasses the organizational structure, methods, and coordinated measures used to safeguard the organization's assets, verify the accuracy and reliability of accounting data, promote efficiency, and ensure compliance with management policies. Every company must compile financial reports at the end of each month and year to evaluate the company. Financial reports depict the financial position of the business, including the balance sheet, cash flow statement, and profit and loss statement (Omasrianto et al., 2017). The accounting information system plays a role, influences, and has supporting factors in improving the quality of financial reports. Because financial reports generated through the use of an accounting information system are related to good input, process, and output aspects, if these three aspects are applied in an integrated and continuous manner, they will form the foundation of a financial reporting system.
Therefore, the application of an accounting information system is related to the quality of financial reports. According to Herawati (2014), the internal control system has a positive and significant influence on the quality of local government financial reports. An accounting information system is defined as a collection (integration) of subsystems or components, both physical and non-physical, that are interrelated and work harmoniously to process transaction data related to financial issues into financial information (Susanto, 2013). According to Susanto (2013), an accounting information system consists of several components, namely Hardware, Software, Human resources (brainwave), Procedures, Database and Database management system, and Telecommunication network technology.

Sunyoto (2014) states that an impartial assessment function used within an organization to test and assess its operations is called an internal audit. Internal auditing is a review carried out by the organization's employees, often referred to as internal accountants, who are typically not involved in accounting recordkeeping and company operations. Internal accountants are concerned with the company's internal control for the purpose of achieving efficiency, effectiveness, and compliance in the implementation of company operations. They are always in a position to provide recommendations or improvement suggestions to management. The factors of internal audit are as follows: 1) Independence, 2) Professional competence, 3) Scope of work, and 4) Implementation of audit activities.

Additionally, systems are also used to prevent fraud. In this regard, every company must implement an internal control system to prevent fraud. The internal control system is created to provide security assurance for the elements within the company (Wiratna, 2015). Santosa et al. (2022) explain that the scope of internal audit work should include testing and evaluating the adequacy and effectiveness of internal controls owned by the organization and the quality of the responsibilities' implementation. Financial reporting includes financial statements. The balance sheet, profit and loss statement, statement of financial position (which can be presented in a variety of ways, including a cash flow statement or fund flow statement), notes, additional reports, and internal explanatory materials are typically included in a complete financial statement.

A quality financial statement does not necessarily have to comply with accepted accounting standards, but it needs to be supplemented by an external audit report that offers an evaluation of the financial statements' consistency and dependability (Budiantoro, Lapae, et al., 2022). The audit opinion offers reassurance that the audited organization has fairly presented the financial situation, operations results, and total surplus or deficit and that the financial statements have been prepared in compliance with accounting principles. Furthermore, the audit report is essential in halting the spread of inaccurate information. Emay et al. (2019) and Budiantoro et al. (2022), that internal audits used by companies have a negative impact on the quality of financial reports, which has been extensively researched by several experts (Suherman, 2018). In this research (accounting information system), the internal control system and the role of internal audit are all studied together. According to Romney and Steinbart (2015), the function of an accounting information system is to collect and store data about the activities, resources, and personnel of an organization. An organization has a number of routine commercial operations, such as buying raw materials or making sales and transforming data into information so that management may organize, carry out, oversee, and assess the company's personnel and resources. An organization's independent assessment function for testing and assessing its operations is called internal auditing. Internal auditors carry out internal auditing tasks. In order to add value and assist organizations (audits) in achieving their goals, an internal audit is an impartial, independent activity that takes the form of assurance and consulting. It does this by employing a methodical, structured approach to evaluate and enhance the efficacy of risk management, control, and governance processes (public sector). The internal audit, according to Agoes Sukrisno (2014), is an examination carried out by the internal audit section of the company, both against the financial statements and accounting records of the company, as well as compliance with predetermined top management policies and compliance with government regulations and provisions of applicable professional ties. Provisions of professional ties, for example, financial accounting standards.
In addition to meeting information management standards, the company's accounting information system also acts as a foundation for decision-making, which makes it indispensable. The structure known as information system accounting is the asset of entities that use hardware to transform data (Paranoan et al., 2018). The accounting information system is indispensable for the internal control of the company's cash to be effective (Arandhea & Puspitасari, 2021). A collection of hardware and software components called computer-based information systems are used to convert data into valuable information. The most recent accounting information is one kind of computer-based information system that is intended to transform accounting data into information (Musthafa, 2017). A system of internal control consists of the organizational structure as well as all the procedures and guidelines that are collectively followed to preserve the organization's whole assets from a variety of angles. Where internal control includes checking and includes the organizational structure and all means and tools to maintain the security of the company's property (Indrayati, 2016).

2. Literature Review and Hypothesis

Application of Accounting Information Systems to the Effectiveness of Receivables Collection

Hama et al. (2021) define an accounting information system as a collection of resources, such as people and equipment, designed to transform financial and other data into information that will be communicated to various decision-makers. The impact of implementing an accounting information system on the quality of the information in a system for collecting and recording, storing data and information, and monitoring the preparation of annual financial reports as material for organizational decision-making (Zamzami et al. 2021). The theory discussed previously strengthens research, which shows that the appropriate use of AIS will help company management.

The role of the accounting information system includes, among others, compiling a list of overdue accounts receivables and presenting receivables information, which will ultimately make receivables collection effective. Research conducted by Nurdin (2016) mentions that there is an influence between sales accounting information systems on the effectiveness of accounts receivable control. This finding is in line with research conducted by Arifuddin and Sugiono (2019), which mentioned that accounting information systems have significant and positive effects. Because SIA's role in collecting receivables can support the effectiveness of collecting the company's receivables, based on this theory, the hypothesis that is built is:

H1: Implementation of an Accounting Information System Influences the Effectiveness of Receivables Collection

Internal Control on the Effectiveness of Receivables Collection

According to Hery (2015), internal control is a set of policies and procedures to protect a company's assets or assets from any form of abuse, ensure the availability of accurate company accounting information, and ensure that all legal provisions and management policies have been followed as appropriate by the company's employees. An organization needs to improve internal control so that control within the organization can be implemented and efficient in achieving company goals. The easier it will be to accomplish the objectives of the company, the more effective internal control is implemented. This control will be quite helpful to the company in managing its operations, particularly with regard to this research and the gathering of receivables, which directly plays a role in the company's sustainability in generating profits, which is one of the company's goals. Prawiranegara (2014) mentions that internal control plays an active role in increasing effectiveness. Sunarya et al. (2018) and Effendi (2015) stated that internal control has a significant and positive effect on internal control by minimizing risk. Thus, the hypothesis proposed is as follows:

H2: Internal Control Influences the Effectiveness of Receivables Collection

Risk Assessment of the Effectiveness of Receivables Collection

Risks can arise from internal sources and external sources of an Education agency. Risks originating from external sources include the emergence of new legislation, technological developments, natural disasters, and security disruptions. Risk identification carried out before
analysis is the stage of first identifying what kind of risk will occur and how something can happen. The next stage provides an assessment of the magnitude of the level related to the risk. This stage is part of the risk assessment itself, which provides meaning to an identified hazard to provide an idea of how big the risk is. Sari and Prayudi (2017) found risk assessment to be influential on the effectiveness of credit distribution. Umam and Pratama (2018) state the same that risk assessment has a positive effect on the effectiveness of receivables collection. So that further action can be taken against such dangers, the hypothesis proposed is as follows:

**H3: Risk Assessment Influences the Effectiveness of Receivables Collection**

**Internal Audit on the Effectiveness of Receivables Collection**

The internal examination aims to support the business in accomplishing its goals by assessing and enhancing the efficacy of risk management, control, and honest, clean, and sound processes using a methodical, disciplined approach. An essential tool for helping management make decisions is internal control. Numerous economists offer different interpretations of internal control, but they all basically cover the same ground: evaluating the operational activities carried out by the company. The function of internal audit and the efficiency of accounts receivable collection processes are significantly influenced by one another. Thus, the hypothesis that claims that the efficacy of trade receivables is significantly influenced by or related to the role of internal audit collection procedures is proven.

**H4: Internal Audit Influences the Effectiveness of Receivables Collection**

**Conceptual Framework**

A conceptual framework (theoretical framework) is a model that explains how a theory relates to important factors known in a particular problem (Erlina, 2011). Below is a research conceptual framework scheme which can be described as follows:

**Figure 1. Conceptual Framework**
3. Data and Method
This kind of study employs a descriptive strategy and is quantitative. Numerical and objective data collection and analysis are the focus of quantitative research. Variable intercorrelation can be quantified, and quantitative research variables can be discovered. With the use of this descriptive method, one hopes to investigate the reasons for a certain symptom and characterize the nature of anything that was happening at the time the research was done.

Operational Research Variables and Measurement Scales
This variable is used to ascertain the varieties and markers of the variables under investigation. In addition, operational variables seek to ascertain each variable's measurement scale to enable suitable tool-based hypothesis testing.

Table 1. Operational Definition and Variable Measurement Scale

<table>
<thead>
<tr>
<th>Variable</th>
<th>Operational definition</th>
<th>Indicator</th>
<th>Scale</th>
</tr>
</thead>
<tbody>
<tr>
<td>Implementation of Accounting Information Systems</td>
<td>A reliable and accurate source of information about the company's financial situation is the accounting information system.</td>
<td>Hardware, Software, Brainware, procedures, Databases and Communication Networks</td>
<td>Interval</td>
</tr>
<tr>
<td>Internal control</td>
<td>Internal control is defined as a procedure that is implemented by management, company directors, and other employees to provide adequate assurance regarding the following matters: limitations on financial reporting, adherence to relevant laws and regulations, and the efficacy and efficiency of business operations.</td>
<td>Hazard Identification, Risk Analysis, Risk Evaluation</td>
<td>Interval</td>
</tr>
<tr>
<td>Risk Assessment</td>
<td>Risk assessment is a process carried out by an agency or organization. It is an integral part of the risk management process in decision-making by carrying out the risk identification, risk analysis, and risk evaluation stages.</td>
<td>Audit Competency, Audit scope, Evidence collection, examination, Analysis, and Audit Conclusion</td>
<td>Interval</td>
</tr>
<tr>
<td>Internal Audit</td>
<td>Internal audit is a function in an organization that is expected to provide added value, improve operations, and help achieve organizational goals.</td>
<td>Collection time, Goals or Targets, Policies, Classification and Identification of Receivables, Notes and Reports, Labor, and Cash Receipts</td>
<td>Interval</td>
</tr>
<tr>
<td>Effectiveness of Receivables Collection</td>
<td>The effectiveness of receivables collection is the level of achievement in cash receipts. The effectiveness of collecting receivables can be adjusted to the terms and time agreed between the parties giving and receiving the receivables themselves.</td>
<td></td>
<td>Interval</td>
</tr>
</tbody>
</table>
Method of collecting data
This research uses two types of data; the first is primary data, namely two that come from the research object directly by distributing questionnaires to respondents for variables, accounting information systems, internal control, and risk assessment, the results of which are collected and then analyzed. Another data collection technique is the participant observation technique. Second, secondary data, namely data that is used as a source of information obtained through various references related to this research, collects important library materials to support the background and theoretical basis of the research.

Population and Sample

Population
The population in this study were employees at PT Puninar Infinite Raya in Jakarta and the Balikpapan branch, with a total of 173 employees.

<table>
<thead>
<tr>
<th>Department</th>
<th>Location</th>
<th>Number of employees</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Balikpapan Operations</td>
<td>Balikpapan</td>
<td>112</td>
<td>65%</td>
</tr>
<tr>
<td>Jakarta Operations</td>
<td>Jakarta</td>
<td>22</td>
<td>13%</td>
</tr>
<tr>
<td>Finance</td>
<td>Jakarta and Balikpapan</td>
<td>9</td>
<td>5%</td>
</tr>
<tr>
<td>Accounting</td>
<td>Jakarta</td>
<td>4</td>
<td>2%</td>
</tr>
<tr>
<td>Taxes</td>
<td>Jakarta</td>
<td>3</td>
<td>2%</td>
</tr>
<tr>
<td>HCGA</td>
<td>Jakarta &amp; Balikpapan</td>
<td>6</td>
<td>3%</td>
</tr>
<tr>
<td>HSE</td>
<td>Jakarta &amp; Balikpapan</td>
<td>3</td>
<td>2%</td>
</tr>
<tr>
<td>Legal</td>
<td>Jakarta</td>
<td>4</td>
<td>2%</td>
</tr>
<tr>
<td>Commercial</td>
<td>Jakarta &amp; Balikpapan</td>
<td>7</td>
<td>4%</td>
</tr>
<tr>
<td>I.T</td>
<td>Balikpapan</td>
<td>3</td>
<td>2%</td>
</tr>
<tr>
<td><strong>Jumlah</strong></td>
<td></td>
<td><strong>173</strong></td>
<td><strong>100%</strong></td>
</tr>
</tbody>
</table>

Sample
The sample in this research was taken using a purposive sampling technique based on departments directly related to collecting receivables from customers. Namely, employees in the Jakarta finance, commercial accounting, and operations department at PT Puninar Infinite Raya, totaling 42 people.

Data analysis method
The analytical Since there are four independent variables and one dependent variable, multiple linear regression is the method that is applied. The strength of the association between two or more independent variables (independent) and one dependent variable (dependent) is measured using multiple linear regression. With the use of the IBM SPSS (Statistical Package for the Social Sciences) version 26 software, the data gathered for this study was analyzed statistically. This study makes use of the first two categories of primary data: information obtained straight from the research object through the distribution of questionnaires to participants regarding risk assessment, internal control, and accounting information system characteristics. Which were collected and then collected. Other data collection techniques with participant observation techniques aimed at providing an overview of procedures in the collection of receivables and compounding the data by using data collection techniques consisting of interviews and documentation in order to obtain data, in this case, data of the entire financial statements in particular accounts receivable, management of accounts receivable and control of accounts receivable as necessary

3. Results
Descriptive statistics
An overview and description of the variables in this study are given using descriptive statistics. It is anticipated that data explanation via descriptive statistics will offer a preliminary understanding of the issue under investigation. Table 3 provides details regarding the descriptive statistics used in this investigation.
Table 3. Descriptive Statistical Test Results

<table>
<thead>
<tr>
<th></th>
<th>N</th>
<th>Minimum</th>
<th>Maximum</th>
<th>Mean</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Effectiveness of</td>
<td>42</td>
<td>36</td>
<td>50</td>
<td>41.43</td>
<td>3.387</td>
</tr>
<tr>
<td>Receivables Collection</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Accounting information system</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Internal control</td>
<td>42</td>
<td>32</td>
<td>50</td>
<td>41.07</td>
<td>4.375</td>
</tr>
<tr>
<td>Risk Assessment</td>
<td>42</td>
<td>35</td>
<td>50</td>
<td>41.95</td>
<td>4.350</td>
</tr>
<tr>
<td>Internal Audit</td>
<td>42</td>
<td>58</td>
<td>73</td>
<td>67.36</td>
<td>3.043</td>
</tr>
<tr>
<td>Valid N (likewise)</td>
<td>42</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: Results of data processing (2018)

Data Quality Test

Validity tests and rehabilitation testing are the two categories of data quality assessments. To evaluate the validity and reliability of the developed constructs, validity tests and rehabilitation tests are conducted (Wahyuddin et al., 2023).

Validity test

If the questions in a questionnaire can provide information about what the questionnaire is intended to measure, then the questionnaire is considered legitimate. A validity test compares each question item's score to the total score in order to determine the validity of the instrument. The computed values are compared with the table to perform the validity test. To determine the table value, the degrees of freedom are looked for using the formula (Santosa & Hidayat, 2014):

df = (N-2)
df = (42-2)
df = 40

with df = 40, the table value is 0.304

F Statistical Test (Simultaneous)

If the F-test results show a significant impact, a t-test can be used to continue this regression model. On the other hand, if it has no effect, then none of the independent factors can affect the dependent variable, making the t-test (partial test) invalid. The F-test results indicate that any independent factors that have a significant impact on the efficacy of the study are significantly influenced by the independent variables collectively (simultaneously). Receivables collection, so a t-test (partial test) is carried out.

Table 4. F Statistical Test Results (Simultaneous)

<table>
<thead>
<tr>
<th>Model</th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regression</td>
<td>249.440</td>
<td>4</td>
<td>62.360</td>
<td>10.448</td>
<td>.000*</td>
</tr>
<tr>
<td>Residual</td>
<td>220.846</td>
<td>37</td>
<td>5.969</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>470.286</td>
<td>41</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: Results of data processing (2018)

T Statistical Test (Partial)

According to Ghozali (2016), the T statistical test basically shows how much influence an independent variable individually has in explaining the dependent variable. Acceptance of a significant t statistical value > 0.05, at which point Ho is approved, and H1 is rejected. In other words, if the significant t statistical value is less than 0.05, then Ho is rejected, and H1 is allowed. This result indicates that an independent variable by itself does not affect the dependent variable. This indicates that each independent variable affects the dependent variable on its own.
Table 5. T Statistical Test Results (Partial)

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardized Coefficient</th>
<th>Standardized Coefficient</th>
<th>t</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Constant)</td>
<td>20.824</td>
<td>8.784</td>
<td>2.371</td>
<td>0.023</td>
</tr>
<tr>
<td>Accounting Information System Manager</td>
<td>-0.534</td>
<td>0.189</td>
<td>-0.539</td>
<td>-2.827</td>
</tr>
<tr>
<td>Internal control</td>
<td>0.273</td>
<td>0.116</td>
<td>0.353</td>
<td>2.359</td>
</tr>
<tr>
<td>Risk Assessment</td>
<td>0.312</td>
<td>0.117</td>
<td>0.401</td>
<td>2.668</td>
</tr>
<tr>
<td>Internal Audit</td>
<td>0.480</td>
<td>0.211</td>
<td>0.431</td>
<td>2.270</td>
</tr>
</tbody>
</table>

Source: Results of data processing (2018)

4. Discussion

The Influence of Internal Control on the Effectiveness of Receivables Collection

The test findings in this study demonstrate that internal control significantly and favorably affects the efficiency of receivables collection. The table of results from the t-statistical test shows the significant effect. A significant value of 0.024 is seen in the table, which is less than the 5% probability of 0.05. The accounting information system’s functions include, among others, compiling a list of overdue accounts receivables and presenting receivables information, which will ultimately make receivables collection effective. Research conducted by Nurdin (2016) mentions that there is an influence between sales accounting information systems on the effectiveness of accounts receivable control. This finding is in line with research conducted by Arifuddin and Sugiono (2019), which mentioned that accounting information systems have significant and positive effects.

The Effect of Risk Assessment on the Effectiveness of Receivables Collection

A statistically significant value of 0.011 was found, less than the 5% probability of 0.05. The coefficients table indicates a positive influence. The success of receivables collection is positively correlated with the risk assessment variable, as indicated by the table’s coefficient value X3 (b3) = 0.312. With these results, H2 is accepted. Research conducted by Prawiranegara (2014) mentions that internal control plays an active role in increasing effectiveness. This finding is in line with research conducted by Sunarya, et al. (2018) and Effendi (2015) that stated that internal control has a significant and positive effect on internal control by minimizing risk.

The Influence of Internal Audit on the Effectiveness of Receivables Collection

A significant value of 0.092 was obtained, which is smaller than the 5% probability, namely 0.05. In comparison, the positive effect is seen from the coefficients table. In the table, the coefficient value X4 (b4) = 0.480, indicating that the internal audit variable has a positive relationship with the effectiveness of receivables collection. With these results, H3 is accepted. This result is part of the risk assessment itself, which provides meaning to an identified hazard to provide an idea of how big the risk is. Sari and Prayudi (2017) found risk assessment to be influential on the effectiveness of credit distribution. Umam and Pratama (2018) state the same that risk assessment has a positive effect on the effectiveness of receivables collection.

The Effect of Implementing Accounting Information Systems, Internal Control, Risk Assessment, and Internal Audit on the Effectiveness of Receivables Collection

This hypothesis has a significant effect on the effectiveness of receivables collection. After testing the hypothesis simultaneously, The F test results display a significant value of 0.000, which is less than the significant 0.05, as can be seen from the ANOVA table. This result indicates that the F-test findings demonstrate a considerable impact of the concurrent (joint) adoption of the accounting information system, internal control, risk assessment, and internal audit on the dependent variable, which is the efficiency of receivables collection. A coefficient of determination test is performed to determine the extent to which the independent variable can characterize the efficiency of receivables collection. Additionally, the coefficient of determination test findings demonstrate that
the variables-applying accounting information systems, internal control, risk assessment, and internal audit-are capable of explaining the efficaciousness by 53% in the collection of receivables. In the meantime, factors not covered by the research model affect or explain the remaining 47%. In light of these findings, H4 is approved.

5. Conclusion
The analysis and data processing results of this study may be used to make conclusions about the effects of internal control, risk assessment, internal audit, and accounting information systems adoption on the effectiveness of PT’s receivable collection. Puninar Infinite Raya as follows: Adopting an accounting information system has a major and significant impact on how effectively bills are done. The efficiency of receivables collection is greatly and favorably affected by internal control, as stated by H1, which is supported by these findings. Additionally, they back H2, which says that H3 is approved in light of the risk assessment's findings, which significantly and favorably affects the effectiveness of receivables collection. The effectiveness of receivables collection is positively and significantly impacted by internal auditing as well. H5 has been accepted.

Recommendation
Based on the conclusions above, suggestions that can be used as input are as follows: For researchers who want to research accounting information systems, it is best to conduct research on companies from sectors other than logistics or change the Y variable in this research to be able to find out other influences from accounting information system, Internal control, risk assessment, and internal audit have been statistically proven to have a positive and significant effect on the effectiveness of receivables collection at PT. Therefore, it is hoped that the company will continue to pay attention to and improve internal control, receivables risk assessment and internal audits in the company. By increasing the effectiveness of receivables collection, it will certainly have a positive effect on the company itself. For further research, it is hoped that other variables will be added outside of the research variables that have been carried out in this research. In particular, as a replacement variable for implementing an accounting information system, which has a negative effect on the effectiveness of receivables collection. For example, replacing the accounting information system with an internal accounts receivable control system.

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