The Effect Of Internal Control On Internal Audit Effectiveness And Risk Management And Its Implications On University Performance

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ABSTRACT
Introduction/Main Objectives: This paper adds to the theoretical understanding of university performance while also presenting empirical findings on the significance of internal control, internal audit, and risk management in improving the performance of public universities in Indonesia. Background Problems: The quality of higher education in Indonesia still needs to improve both in the context of institutions and study programs, indicated by the the condition of Indonesian higher education rankings at both world and Asian levels is not sufficient to achieve the target of being ranked in the top 500, and The Higher Education Index achievement, an indicator for assessing the level of achievement in implementing higher education, is still far from the target. Novelty: The results of this research are intended to contribute to the limited body of studies on the implementation of risk management in accordance with ISO 31000:2018, particularly regarding its effect on performance in both government institutions broadly and public universities specifically. Research Methods: This research adopts a quantitative approach with an explanatory design to conduct hypothesis testing, aiming either to strengthen or to reject existing theories and prior research hypotheses. In addition, this paper provides an outline of the research methods and the data employed in the study. The research population as a collection of all units of analysis in this research includes all 118 in Public universities Indonesia. Thus, it can be stated that the total population and sample used is 118 State University entities, consisting of Legal Entity Universities, Public Service Agency Universities, and Work Unit Universities. Finding/Results: Internal control has a positive and significant impact on the success of internal audits and risk management. Furthermore, internal control also contributes positively and significantly to the performance of state universities, both directly and through the effectiveness of internal audits and risk management on the public universities in Indonesia.

Keywords:
Internal control, internal audit, risk management, state universities, performance

INTRODUCTION

Higher education today faces the challenges of modern progress. Many aspects of life are changing and shifting along with the development of information and technology. Contemporary higher education must be oriented towards the needs of work and industry by preparing students to have useful life skills. Hopefully, changes in the paradigm and higher education system will lead to a better future in education.

The quality of higher education in Indonesia still needs to improve both in the context of institutions (universities) and study programs, indicated by the majority of tertiary institutions only having C accreditation and very few having A or B accreditation. The number of tertiary institutions in 2019 was 4,620 tertiary institutions, The number of higher education institutions that have received accreditation from the National Accreditation Board for Higher Education is only 2,526 universities, so there are still 2,094 universities in Indonesia that have not received institutional accreditation National Accreditation Board for Higher Education. The percentage of A-accredited universities in the number of universities in 2019 only reached 2.07% or an increase of 0.26% compared to the percentage in 2018, which was only 1.81%.

This shows that the number of accredited universities (excellent) still needs to be increased (Lakin Kemenristekdikti, 2019).

The condition of Indonesian higher education rankings at both world and Asian levels is not sufficient to achieve the target of being ranked in the top 500. Based on the results of the 2021 *Quacquarelli Symonds World University Ranking (*QS WUR) publication, only 3 universities in Indonesia are included in the top 500, while in the top 1000, eight universities are included in this publication. In addition, the ranking of Indonesian universities at both world and Asian levels has not shown a significant upward trend. Several universities experienced a decline in their rankings. Meanwhile, the ranking of Indonesian universities at the Asian level is based on the 2021 *Quacquarelli Symonds Asia University Ranking* (QS AUR), Indonesia only placed 3 universities in the top 100 and 8 universities in the top 500.

One way that higher education performance can be measured is the rate of quality of teaching/lecturer resources. The number of Public universities is currently 118, so one Public universities has 32 professors (PDDikti, 2015). The small number of professors has to compromise because most also have to be leaders in administrative activities. They are appointed as Deans, Chancellors and other structural positions in universities, so their time to develop knowledge is limited.

The 2015–2019 Higher Education Index achievement, an indicator for assessing the level of achievement in implementing higher education, is still far from the target. Of the achievement target 50.60 in 2019, only 41.95 or 82.90% could be achievedThis indicates that the performance of higher education implementation in Indonesia remains far below the planned target. Based on the Audit Results Report issued by the Audit Board of the Republic of Indonesia (BPK) on the financial statements of the Ministry of Research, Technology, and Higher Education for 2015 to 2017, it was stated that within a period of 3 years, there were still weaknesses in the Internal Control System totaling 54 findings worth Rp. 231,512,467,334.00 and 95 findings of non-compliance with laws and regulations worth Rp. 716,385,497,187.00 (BPK, 2018).

The Internal Control System formulated by COSO in (Sawyer, 2003) conceptually it consists of the following elements: (1) control environment, (2) risk assessment, (3) control activities, (4) information and communication, and (5) monitoring.. These five elements originate from the way management or leadership carries out their duties and are essential factors in management's success in implementing the prevention of fraud and corruption behavior (Panggabean, 2020). According to the Committee of Sponsoring Organizations of the Treadway Commission (2017), fraud prevention refers to managerial activities involving the establishment of policies, systems, and procedures designed to ensure that the board of commissioners, management, and other personnel take the necessary actions to provide reasonable assurance of achieving three main objectives: the reliability of financial reporting, the effectiveness and efficiency of operations, and compliance with applicable laws and regulations.

Weak internal control is one of the main causes of fraud in Indonesia. A key weakness lies in the behavior of superiors who fail to act as role models, with many instead becoming the primary perpetrators of fraud. This is evidenced by the significant number of officials who have been imprisoned for corruption, including ministers, governors, and regents/mayors. The next cause is the need for more effective internal audits carried out by internal auditors (ACFE Indonesia Chapter, 2016).

According to (Agoes, 2012), an Internal audit is a process conducted by an organization's internal audit unit to examine financial reports, accounting records, and adherence to top management policies as well as relevant government regulations. (Tugiman, 2009) suggests five factors or conditions that must be considered to effectively implement the internal audit function: access to information, objectivity, freedom of opinion, persistence and responsiveness. Apart from that, (Tugiman, 2009) also mentioned Internal audit effectiveness can be measured through nine indicators, which include: the relevance of audit findings, responsiveness to the audited object, auditor professionalism, the ability to provide early warnings, contribution to cost savings, support for personnel development, management feedback, growth in the number of audits, and the accomplishment of audit program objectives.

According to COSO, 2013, every organization has risks that can hinder achieving its goals. Risks may arise from both internal and external organizational factors and therefore must be managed effectively to mitigate their adverse impacts. As a key component of the internal control system, risk management plays a crucial role in regulating organizational processes, minimizing negative risks, and enhancing positive opportunities.

Research related to internal control, such as that conducted by (Akisik & Gal, 2017; Ibrahim et al., 2017; Jacob & Oluwafemi Philip, 2016), shows that the effectiveness of internal control has a substantial impact on improving organizational financial performance.

Other research related to internal control (Nawawi & Salin, 2018; Wagner et al., 2015; Wardana et al., 2021; Zakaria et al., 2016) stated that internal control has a substantial impact on preventing fraud in an organization. Furthermore, (Taufik, 2013), in their research, concluded that understanding the principles of good governance, Internal control and organizational commitment have a notable impact on performance of public sector organizations, both directly and indirectly. (James, 2003) concluded that the internal audit team's organization and structure did not significantly affect efforts to prevent financial report fraud.

This research underlines the significance of applying risk management and internal control to the performance of State Universities under the Ministry of Education and Culture is highlighted. Previous studies indicate that there is a positive and strong relationship between risk management and organizational performance, with several studies, such as (Adeusi, S. O., Akeke, N. I., Adebisi, O. S., & Oladunjoye, 2013; Mohammed & Knapkova, 2016; Yudianto, 2021) confirming this.

The primary aim of this study is to examine how the implementation of risk management and internal control influences the performance of public universities. The focus includes evaluating the interactions between internal control systems, internal audit, and risk management to determine the implications for the performance of educational institutions. The specific objectives of this research are: (1) to analyze the direct impact of risk management implementation on university performance; (2) to examine the effect of internal control implementation on performance through the mediating role of internal audit effectiveness ; (3) to assess the influence of internal control implementation on performance as mediated by risk management implementation; and (4) to investigate how internal audit effectiveness impacts performance through the mediation of risk management implementation.

This research is expected to contribute to understanding the factors influencing Public universities performance, especially in risk management and internal control in higher education environments.

1. Literature Review

The Effect of Internal Control Implementation (ICI) on Internal Audit Effectiveness (IAE)

In general, one of the systems that encourages fraud is weak internal control; to prevent fraud, the internal control system must be made more effective. As stated by Tuanakotta in (Khusnaeny et al., 2018), fraud prevention can be done by making internal controls more effective in the organization, one of which is conducting internal audits.

Panggabean (2014), in his research concluded that the implementation of an internal control system has an influence on the implementation of internal audits in providing adequate confidence in the implementation of organizational activities and operations. Meanwhile, research conducted by (Badara & Saidin, 2013; Getie Mihret et al., 2010; Krongten & Panmareng, 2022) concluded that internal control carried out well can support the implementation of internal audits effectively effective.

H1 : ICI has a positive effect on IAE at Public universities.

The Influence of Internal Control Implementation (ICI) on Risk Management Implementation (RMI)

According to (Soeharjono, 2013), internal control in the context of risk assessment and monitoring that is not carried out effectively results in opportunities for deviation or abuse of authority by leaders or officials in an organization. In addition, weak risk assessment and monitoring in planning, implementation and accountability of activities can hamper the achievement of organizational goals. In other words, implementing internal control influences an organization's risk management effectiveness.

Research conducted by (Altanashat et al., 2019; Gordon et al., 2009; Malik et al., 2020) states that internal control that is carried out well will support the organization in carrying out optimal risk management. Thus, the implementation of internal control Impacts the adoption of risk management within the organization.

H2 : ICI has a positive effect on RMI at Public universities.

The Influence of Internal Audit Effectiveness (IAE) on the Risk Management Implementation (RMI)

Every organization cannot be separated from the potential for risks that can hinder or even thwart achieving its goals. Organizations that implement and develop a risk management system will improve risk management so that their performance improves and develops better.

Internal auditing serves to support an organization in attaining its objectives by employing a structured and disciplined approach to assess and enhance the effectiveness of risk management practices, the adequacy of internal controls, and the quality of organizational governance. Research conducted by (Sarens et al., 2012) and (Hameed et al., 2020) concluded that internal audits that are carried out well could effectively mitigate problems in implementing risk management in organizations.

H3 : IAE has a positive effect on RMI at Public universities.

The Effect of Internal Control Implementation (ICI) on Performance (KIN)

Effective internal control plays an essential role in helping management achieve organizational goals. Research by (Afiah & Azwari, 2015) shows that internal control significantly influences the quality of financial reports and good governance, ultimately improving organizational performance. (Taufik, 2013) also concluded that understanding the principles of good governance, internal control, and organizational commitment directly and indirectly significantly impacts the performance of public sector organizations.

Studies by (Akisik & Gal, 2017; Al-Thuneibat et al., 2015; Chen, 2020; Elbannan, 2009; Hussaini, Umaru & Muhammed, 2018; Ibrahim et al., 2017; Jacob & Oluwafemi Philip, 2016; Krongten & Panmareng, 2022; Oppong, Moses & Owiredu, Alex & Abedana, Virgil & Asante, 2016; Simangunsong, 2014; Zhou et al., 2017) also confirm that internal control contributes positively and significantly to organizational performance. Thus, Establishing internal control systems can enhance the effectiveness and efficiency of an organization activities and operations and improve organizational performance.

H4 : ICI has a positive effect on KIN

The Effect of Internal Audit Effectiveness (IAE) on Performance (KIN)

According to (Pickett, 2005), the function and role of internal audit are to assist all management members in completing their responsibilities effectively. The internal audit is expected to provide objective data analysis, assessment, suggestions and comments regarding the matters being examined.

Internal audits that are carried out effectively can assist management in carrying out organizational activities and operations, especially in compiling and conveying reliable information, maintaining conformity with policies, plans, procedures and statutory regulations, increasing asset protection, using resources economically and effectively, and assisting the organization in achieving its goals (Hery, 2018).

Research conducted by (Aikins, 2011; Alzeban, 2020; Babatope & Adewunmi, 2019; Caratas & Spatariu, 2014; Getie Mihret et al., 2010; Krongten & Panmareng, 2022; Mahachi, 2018; Matari et al., 2014; Sarens et al., 2012; Unegbu, A. O., & Kida, 2011; Yudianto, 2021) concluded that internal audits are carried out with Both will assist management in carrying out organizational activities and operations to achieve targets according to predetermined plans and objectives, to improve the performance of an organization. Thus, the effectiveness of internal audit has a positive effect on improving organizational performance.

H5 : IAE has a positively affects on KIN

The Effect of Risk Management Implementation (RMI) on Performance (KIN)

According to COSO (2011), every organization is at risk of experiencing obstacles to achieving its goals. Risks can negatively impact the achievement of organizational goals and can be measured based on their likelihood and impact. Risks can occur due to internal or external factors of the organization; therefore, they must be managed well so that they do not have too much impact on the organization.

Risk management is the process of identifying events that have the potential to affect the organization, managing risks so that they are within risk tolerance limits (risk appetite), and providing adequate guarantees for achieving organizational goals. The risk management cycle consists of 4 stages, namely: (1) risk identification; (2) risk evaluation; (3) risk control; and (4) risk monitoring. Internal control and risk management are interconnected and can help an organization achieve its goals (Griffiths P, 2005).

Research conducted by Andersen (2009), Gordon et al (2009), Loeb et al (2009), Hoyt and Lienberg (2011), Saleem and Abiden (2011), Adeusi (2013), Zohoori et al (2013), Rasid et al (2014), Jafari et al. (2015), Mohammed and Knapkova (2016), Syaiful (2017), Ahmed and Onyiego (2018), Altanashat (2019), Hammed et al. (2020), Panic et al (2020), Malik et al (2020), Yudianto et al (2021), Krongten and Panmareng (2022), and Mamari et al (2022) concluded that implementing risk management can help organizations achieve their goals. Thus, implementing risk management has a positive effect on improving organizational performance.

H6 : RMI has a positively affects on KIN

The Effect of Internal Control Implementation (ICI) on Performance (KIN) Mediated by Internal Audit Effectiveness (IAE)

The implementation of internal control affects the execution of internal audits by providing greater assurance in carrying out organizational activities and operations. A well-structured internal control system enhances the effectiveness of control activities, strengthens organizational culture, and supports the overall function of internal audit more effective (Harsono, 2017).

According to Panggabean (2014), a well-implemented The internal control system plays a crucial role in shaping the implementation of internal audits and in providing reasonable assurance regarding the effective execution of organizational activities and operations. The effectiveness of internal audits can help management carry out organizational activities and operations, helping the organization achieve its plans and goals (Hery, 2018).

Research conducted by Law (2011), Badara and Saidin (2013), and Krongten and Panmareng (2022) concluded that internal control influences performance either directly or through internal audit. Thus, implementing internal control influences the effectiveness of internal audits, and the implications can support and help the organization improve its performance.

H7 : ICI has a positively affects on KIN, mediated by the IAE

The Effect of Internal Control Implementation (ICI) on Performance (KIN) Mediated by the Risk Management Implementation (RMI)

The proper implementation of internal controls by management will significantly reduce an organization's risk of fraud. However, every organization cannot be free from risks that hinder or even thwart achieving its goals.

Soeharjono, 2013 stated that an internal control system that is not carried out effectively in the context of risk assessment and monitoring could create opportunities for irregularities or abuse of authority by managers or organizational leaders. In other words, the internal control system influences the effectiveness of implementing risk management in an organization.

Research conducted by (Altanashat et al., 2019; Gordon et al., 2009; Malik et al., 2020) concluded that organizations that have implemented and developed a risk management system can improve risk management. Risks managed well turn threats into opportunities for the organization to increase performance and develop better. Thus, implementing internal control influences risk management; well-managed risks will help Public universities's improve their performance.

H8 : ICI has a positively affects on KIN mediated by the RMI

The Effect of Internal Audit Effectiveness (IAE) on Performance (KIN) Mediated by the Risk Management Implementation (RMI)

Fraud prevention in organizations includes improving internal control by assessing and mitigating risks that may occur in the organization. An organization's risk control, carried out effectively and continuously, one of which is by carrying out good internal audits, can help the organization achieve the targets and goals set. (Mohammed & Knapkova, 2016; Panić et al., 2019; Yudianto, 2021).

Internal audits carried out well, effectively, and supported by management can detect and prevent fraud in public sector organizations. (Law, 2011; Unegbu, A. O., & Kida, 2011). Meanwhile, research conducted by (Hameed et al., 2020) concluded that the effectiveness of internal audits carried out could support the organization in achieving its goals, either directly or through the mediation of implementing sound risk management. Thus, the effectiveness of internal audits will support the organization in implementing risk management and improve the organization's performance in achieving its goals.

H9 : IAE has a positive effect on KIN mediated by the RMI

METHOD

The research objects in this study are Public universities within the Ministry of Education, Culture, Research and Technology. The number of universities used as research objects was 118 Public universities consisting of 17 State Legal Entity Universities, 38 Public Service Agency State Universities, and 63 Work Unit State Universities. This study employs a quantitative approach with an explanatory research design to test theories or hypotheses, aiming to either support or refute existing theories or findings from previous research. The research variables used: Internal Control Implementation (X), Internal Audit Effectiveness (Y1), Risk Management Implementation (Y2), Public universities Performance (Z)

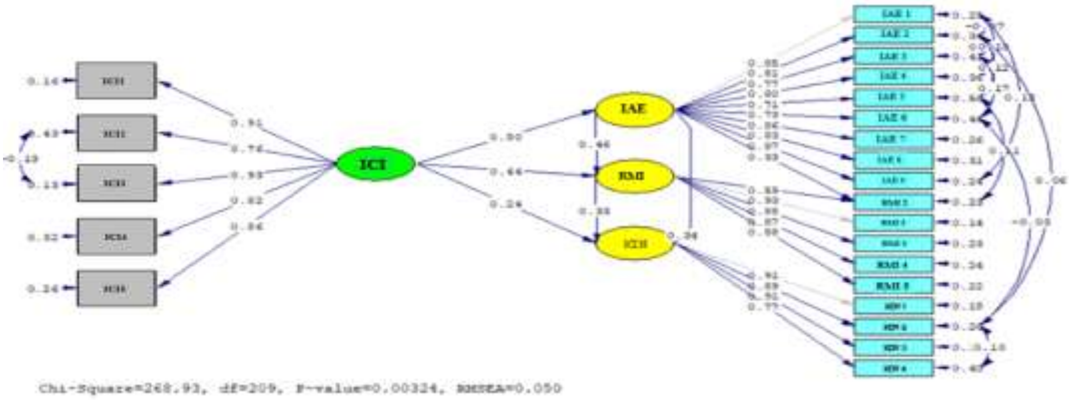
The research population as a collection of all units of analysis in this research includes all 118 in Public universities Indonesia. Thus, it can be stated that the total population and sample used is 118 State University entities, consisting of Legal Entity Universities, Public Service Agency Universities, and Work Unit Universities.

RESULT AND DISCUSSION

Full Structural Model Test Results

Figure 1 displays the results of the full structural model estimation using Latent Variable Score (LVS) data.

Figure 1. Results of the full Structural Respecification (Standardized) model



Evaluation of the goodness-of-fit indices for the structural equation model Figure 1 is presented in Table 1.

Table 1. Evaluation of Goodness-of-Fit Indicators in Structural (Respecification)

No.	Goodness of Fit	Target Value	Results	Model Evaluation Results
1	Chi-square	p-value ≥ 0.05	268,934 (0,03)	Marginal fit
2	RMSEA	RMSEA ≤ 0.08	0,050	Good fit
3	NFI	NFI ≥ 0.90	0,974	Good fit
4	CFI	CFI ≥ 0.90	0,992	Good fit
5	IFI	IFI ≥ 0.90	0,992	Good fit
6	RFI	RFI ≥ 0.90	0,968	Good fit
7	GFI	GFI ≥ 0.90	0,833	Marginal fit
8	AGFI	AGFI ≥ 0.90	0,780	Poor fit
9	PNFI	PNFI > 0.5	0,804	Good fit
10	PGFI	PGFI > 0.6	0,631	Good fit

Source: Data analysis results.

Referring to Table 1, the findings from the model suitability assessment and the results of the X2 test (chi-square) obtained a value of 268.934 with a p-value of 0.030 and an RMSEA of 0.050. This indicates that the model is appropriate, with most of the other GOF indices also meeting the fit criteria, allowing the analysis to proceed to the next stage. Figure 2 shows the results of the full structural test with estimated T Values.

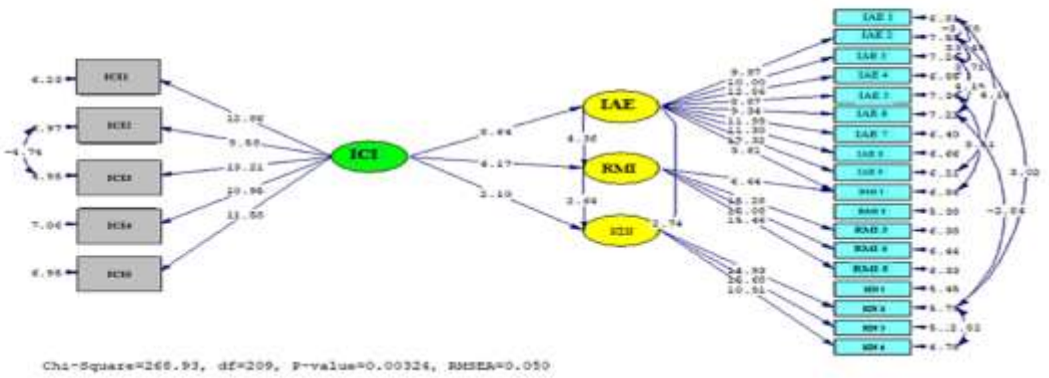


Figure 2. Full Structural model results (T values)

From the test results, the following equation model is obtained:

Structural Equations

IAE = 0.798*ICI, Errorvar. = 0.363, R^2 = 0.637
(0.0924) (0.0726)
8.637 4.997

RMI = 0.464*IAE + 0.438*ICI, Errorvar.= 0.267, R^2 = 0.733
(0.107) (0.105) (0.0488)
4.360 4.170 5.472

KIN = 0.339*IAE + 0.327* RMI + 0.243*ICI, Errorvar.= 0.279, R^2 = 0.721
(0.124) (0.124) (0.115) (0.0522)
2.738 2.641 2.103

Hypothesis test

In this research, 9 (nine) hypotheses were proposed, including 6 (six) direct effect hypotheses and 3 (three) mediation hypotheses The following section provides a summary of the tests conducted on the relationships among variables

Table 2. Recapitulation of Statistical Test Results

Hip.	Correlation	Path Coefficient	T Value	Conclusion Ha.
		Direct		
1	ICI → IAE	0,798	8,637	Accepted
2	ICI → RMI	0,438	4,170	Accepted
3	IAE → RMI	0,464	4,360	Accepted
4	ICI → KIN	0,243	2,103	Accepted
5	IAE → KIN	0,339	2,738	Accepted
6	RMI → KIN	0,327	2,641	Accepted
		Indirect		
7	ICI → IAE → KIN	0,270	2,606	Accepted
8	ICI → RMI → KIN	0,143	2,229	Accepted
9	IAE → RMI → KIN	0,152	2,253	Accepted
		Total Indirect Effect		
-	ICI → KIN	0,535	4,875	-
-	ICI → RMI	0,371	4,116	-
		Total Effect		
-	ICI → IAE	0,798	8,637	-
-	ICI → RMI	0,809	9,650	-
-	ICI → KIN	0,778	8,944	-
-	IAE → RMI	0,464	4,360	-
-	IAE → KIN	0,491	4,296	-
-	RMI → KIN	0,327	2,641	-

Discussion
The Effect of ICI on IAE
The first hypothesis tested was the influence of Internal Control Implementation (ICI) on internal audit effectiveness (IAE).

Table 3. Hypothesis test results 1

Path coefficient	T count	T Table	Hypothesis 1
0,798	8,637	1,658	Accepted

Source: Data processing results

Table 3 shows the statistical test results for hypothesis 1, which shows that the path coefficient between ICI and IAE is 0.798 with a t value of 8.637. Because the t value is 8.637 > t table 1.658, H0 is rejected, and H1 is accepted. This shows that ICI significantly influences IAE at Public universities in Indonesia. Judging from the path coefficient value of 0.798, which has a positive sign, it shows that the better the ICI, the IAE will increase, and conversely, if the ICI is lower, the IAE will decrease. Even though the magnitude of the influence of the ICI is 0.798 (79.8%), there is still a remainder of 21.2%, which shows that other factors outside this research influence the IAE.

In line with Panggabean (2020) research, The implementation of an internal control system has a significant impact on the execution of internal audits, which provides adequate confidence in the organization's activities and operations. Internal control plays a vital role in achieving effective oversight, which is implemented through internal audits to ensure: (1) the reliability of financial reporting, (2) the efficiency and effectiveness of operations, and (3) compliance with applicable laws and regulations.. Research by Mihret and Yismaw (2007), Law (2011), Badara and Saidin (2013), and Krongten and Panmareng (2022) shows that sound internal control increases the effectiveness of internal audits. Furthermore, effective internal audits can reduce abuse of authority in organizations. Research by Rivest & Lanou (2016), Zakaria et al (2016), Wang & Fargher (2017), Wardana et al (2017), and Nawawi et al (2018) stated that the five components of internal control (control environment, risk assessment, control activities, communication and information, and monitoring) which are implemented well by management have a significant effect in preventing and reducing the occurrence of fraud. Based on the research results, ICI (Internal Control System) has a positive and significant effect on IAE (Effectiveness of Internal Audit) at Public universities. This shows that the better the ICI at Public universities, the IAE will increase, and conversely, if the ICI is lower, the IAE will decrease.

The Influence of ICI on RMI
The second hypothesis tested is the influence of Internal Control Implementation (ICI) on Risk Management Implementation (RMI). The results of statistical testing of the second hypothesis are presented in Table 4.

Table 4. Hypothesis 2 test results

Path coefficient	T count	T Table	Hypothesis 1
0,438	4,170	1,658	Accepted

Source: data processing results.

In Table 4, the statistical hypothesis test 2 results show that the path coefficient between ICI and RMI is 0.438, with a t-value of 4.170. Because the t value is 4.170 > t table 1.658, H0 is rejected, and H1 is accepted, meaning that ICI significantly affects RMI. A positive path coefficient of 0.438 indicates that the better the ICI, the RMI will increase, and conversely, if the ICI decreases, the RMI will also decrease. The influence of ICI on RMI is 43.8%, while other factors influence the remaining 57.2%.

Research shows that ICI influences RMI at Public universities. The Government Internal Control System (SPIP), according to Government Regulation Number 60 of 2008, consists of five elements: (1) control environment, (2) risk assessment, (3) control activities, (4) information and communication, and (5) monitoring. Risk assessment involves a dynamic and interactive process at all levels of the organization to identify and assess risks to achieving objectives, which are then used to determine how higher education institutions should manage risks. Public universities leaders formulate a risk management approach and risk control activities to minimize the impact of existing risks (Arens, 2020).

(Suwanda, D., Junjunan, B. A., Affandi, A., & Rusliati, 2019) stated that sound internal control can reduce the impact of risk if failure occurs in achieving organizational goals. The organization's strategy must consider all risks that may occur and have a negative impact on achieving the organization's vision, mission and goals. Organizational management must anticipate risks by managing and controlling these risks. Research by (Altanashat et al., 2019; Gordon et al., 2009; Malik et al., 2020) stated that sound internal control supports optimal risk management in the organization.

Based on the research results, a good ICI at Public universities positively and significantly affects RMI. Conversely, if the ICI at Public universities is low, the RMI will decrease.

The Influence of IAE on the RMI

The third hypothesis tested is the influence of Internal Audit Effectiveness (IAE) on the of Risk Management Implementation (RMI). The statistical test results for hypothesis 3 can be seen in Table 5.

Table 5. Hypothesis 3 test results

Path coefficient	T count	T Table	Hypothesis 3
0,464	4,360	1,658	Accepted

Source: data processing results.

In Table 5, the statistical test results for hypothesis 3 show that the path coefficient between IAE (Internal Audit Effectiveness) and RMI (Risk Management Implementation) is 0.464, with a t value of 4.360. Because the t value is 4.360 > t table 1.658, H0 is rejected, and H1 is accepted, which means that IAE significantly affects RMI at Public universitie. A positive path coefficient of 0.464 indicates that the better the IAE, the RMI will increase, and conversely, if the IAE decreases, the RMI will also decrease. The influence of IAE on RMI is 46.4%, while other factors influence the remaining 53.6%.

Internal audits at Public universitie, carried out by the IMU (Internal Monitoring Unit) in each work unit, assist Public universitie leaders in ensuring operational effectiveness and efficiency, reliability of financial reports, and compliance with statutory regulations. The effectiveness of internal audits at Public universitie's can be seen from nine elements: human resource development, professionalism of the audit organization, positive response from auditees, internal audit's ability to provide early warnings, audit efficiency, appropriateness and significance of findings, increasing number of audits, achievement of the audit program, and positive feedback management.

Respondents' assessments show that IMU Public universities has carried out internal supervision well. However, Public universities needs to improve IMU HR development because it received the lowest assessment score. This is in line with research (Moeller, 2015; Nzechukwu, 2016; Pickett, 2005; Sawyer, 2003; Umar, 2006) which states that internal audit is an independent activity that provides objective assurance and consultation by professional auditors. , designed to provide added value and improve organizational operations. Effective internal audits help organizations achieve their goals by evaluating and improving risk management processes' effectiveness, controls' adequacy, and organizational governance.

Based on the research results, IAE positively and significantly affects RMI at Public universities. This shows that Public universities's that carry out internal audits well and effectively can improve their risk management achievements. Conversely, if the IAE is low, then the RMI at the higher education institution will decrease.

The Effect of ICI on KIN

The fourth hypothesis tested is the influence of Internal Control Implementation (IC) on Public universities Performance (KIN). The results of the fourth hypothesis test are shown in Table 6.

Table 6. Hypothesis test results 4

Path coefficient	T count	T Table	Hypothesis 4
0,243	2,103	1,658	Accepted

Source: data processing results.

In Table 6, the statistical test results for hypothesis 4 show that the path coefficient between ICI (Internal Control Implementation) and Public universities Performance is 0.243 with a t-value of 2.103. Because the t value is 2.103 > t table 1.658, H0 is rejected and H1 is accepted, meaning that ICI significantly affects Public universities performance. A positive path coefficient of 0.243 indicates that the better the ICI, the more Public universities performance will increase; conversely, if the ICI decreases, Public universities performance will also decrease. The influence of ICI on Public universities performance is 24.3%, while other factors influence the remaining 75.7%.

Implementing internal control at Public universities is a management activity that includes five components: control environment, risk assessment, control activities, information and communication, and monitoring. Research shows that Public universities has implemented these five components very well.

Effective internal controls improve operational efficiency, accuracy of financial reports, and regulatory compliance, which supports Public universities's overall performance. Rittenberg's research in (Panggabean, 2014) reveals that organizations invest in internal control systems to ensure operations, finances and compliance. (Taufik, 2013) also stated that understanding the principles of good governance, implementing internal control, and organizational commitment significantly affect the performance of public sector organizations. (Afiah & Azwari, 2015) added that internal control significantly affects the quality of financial reports and good governance, ultimately improving organizational performance.

Based on the research results, ICI has a positive and significant effect on Public universities performance. Public universities‘s that implement internal control well and continuously will improve their performance, while if internal control implementation is low, Public universities performance will decrease.

The Influence of IAE on KIN

The fifth hypothesis tested is the influence of Internal Audit Effectiveness (IAE) on Public universities Performance (KIN). The results of the fifth hypothesis statistical test are in Table 7.

Table 7. Hypothesis test results 5

Path coefficient	T count	T Table	Hypothesis 5
0,339	2,738	1,658	Accepted

Source: data processing results.

In Table 7, the statistical test results for hypothesis 5 show that the path coefficient between IAE (Internal Audit Effectiveness) and Public universities Performance is 0.339 with a t-value of 2.738. Because the t value is 2.738 > t table 1.658, H0 is rejected and H1 is accepted, indicating that IAE significantly affects Public universities performance. A positive path coefficient of 0.339 indicates that the better the IAE, the more the Public universities's performance will increase. In contrast, if the IAE decreases, the Public universities's performance will also tend to decrease. The influence of IAE on Public universities performance is 33.9%, while other factors influence the remaining 66.1%.

Internal audits are carried out well and effectively at Public universities, and a systematic approach is used to ensure effectiveness, operational efficiency, reliability of financial reports, and compliance with regulations. Respondents' evaluation of Public universities performance shows that the majority received good ratings, although one element of performance needs to be improved, namely the learning and development perspective.

This research shows that internal audit effectiveness has a positive impact on state university performance, helps identify weaknesses in internal control and risk management, and provides recommendations for improvements to increase operational efficiency and effectiveness. However, several factors can negatively influence Public universities performance, including limited implementation of audit recommendations, lack of stakeholder involvement, structural or organizational problems, changes in the external environment, lack of focus on the quality of education and research, and unstable financial conditions.

Previous research also confirms that effective internal audits contribute to achieving organizational targets and improving overall performance (Aikins, 2011; Caratas & Spatariu, 2014; Getie Mihret et al., 2010; Hery, 2018; Krongten & Panmareng, 2022; Mahachi, 2018; Matari et al., 2014; Pickett, 2005; Sarens et al., 2012; Unegbu, A. O., & Kida, 2011).

In conclusion, IAE has a positive and significant influence on Public universities performance. Thus, an effective internal audit will improve the performance of Public universities, while a lack of effectiveness in internal audits can cause a decline in the educational institution's performance.

The Effect of RMI on KIN

The sixth hypothesis tested was the influence of Risk Management Implementation (RMI) on Public universities Performance (KIN). The statistical test results of this hypothesis are in Table 8.

Table 8. Hypothesis test results 6

Path coefficient	T count	T Table	Hypothesis 6
0,327	2,641	1,658	Accepted

Source: Data processing results

In Table 8, the statistical test results show that the path coefficient between RMI (Risk Management) and Public universities Performance (KIN) is 0.327, with a t-value of 2.641. Because the t value is 2.641 > t table 1.658, H0 is rejected and H1 is accepted, indicating that RMI significantly affects Public universities performance. A positive path coefficient of 0.327 indicates that the better the RMI, the Public universities performance will increase, whereas if the RMI decreases, Public universities performance tends to decrease. The influence of RMI on Public universities performance is 32.7%, while other factors influence the remaining 67.3%.

Public universities face risks that can become obstacles to achieving their goals, both internal and external. Risk Management is a process that helps Public universities identify, evaluate, control and monitor these risks to remain within acceptable risk tolerance limits. Respondent evaluations show that RMI at Public universities is generally implemented well, although there is still room for improvement, especially in the component aspects of the learning and development perspective.

This research also highlights differences in implementing risk management in various types of Public universities (Work Unit, Public Service Agency State Universities, and State Legal Entity Universities), influenced by different organizational structures, regulations, and risk management needs. Previous studies support that the implementation of effective risk management can be significant in supporting the achievement of organizational goals (Adeusi,

S. O., Akeke, N. I., Adebisi, O. S., & Oladunjoye, 2013; Gordon et al., 2009; Murtaza et al., 2021; Zohoori, 2017).

In conclusion, RMI has a positive and significant effect on Public universities performance. Therefore, implementing a sound and structured RMI will improve the performance of Public universities, while a decrease in risk management can potentially reduce the performance of these educational institutions.

The Effect of ICI on KIN as Mediated by IAE

The seventh hypothesis tested is the influence of Internal Control Implementation (ICI) on Public universities Performance (KIN), which is mediated by Internal Audit Effectiveness (IAE). The statistical test results of the seventh hypothesis are shown in Table 9.

Table 9 Hypothesis test results 7

Path coefficient	T count	T Table	Hypothesis 7
0,270	2,606	1,658	Accepted

Source: Data processing results

In Table 9, the results of statistical tests show that the indirect effect path coefficient between ICI (Internal Control Implementation) and Performance (KIN) mediated by IAE (Internal Audit Effectiveness) is 0.270, with a t value of 2.606. Because the t value is 2.606 > t table 1.658, H0 is rejected and H1 is accepted. This shows that IAE is a significant mediator in the relationship between ICI and Public universities Performance. A positive path coefficient of 0.270 indicates that an increase in IAE, with high ICI influences, will improve Public universities performance. The influence of ICI on Public universities performance is 27%, while other factors influence the remaining 73%.

Public universities has implemented internal controls well, including upholding integrity, ethical values, adequate SPI supervision of programs and activities, risk mitigation policies and performance reviews. Strengthening SPI's role in supervising these activities can increase the effectiveness of internal audits, as proven by management's support for developing SPI human resources and implementing effective internal audits.

This research is consistent with (Khusnaeny et al., 2018) findings, which state that the implementation of internal control influences the implementation of effective internal audits and provides adequate confidence in the implementation of organizational activities and operations. A sound internal control system will strengthen control activities, improve organizational culture, and improve the internal audit function.

In conclusion, IAE has a positive and significant effect as a mediator in the relationship between ICI and Public universities Performance. Increasing IAE due to sound implementation of ICI will positively impact improving Public universities performance.

The Effect of ICE on KIN, which is mediated by the RMI

The eighth hypothesis tested is the influence of Internal Control Implementation (ICI) on Public universities Performance (KIN), which is mediated by the Implementation of Risk Management (RMI). The statistical test results of the eighth hypothesis can be seen in Table 10.

Table 10. Hypothesis test results 8

Path coefficient	T count	T Table	Hypothesis 8
0,143	2,229	1,658	Accepted

Source: Data processing results

In Table 10, the results of statistical tests show that the indirect effect path coefficient between ICI (Internal Control Implementation) and Public universities Performance (KIN) mediated by RMI (Risk Management Implementation) is 0.143, with a t value of 2.229. Because the t value is 2.229 > t table 1.658, H0 is rejected and H1 is accepted. This shows that RMI is a significant mediator in the relationship between ICI and Public universities Performance. A positive path coefficient of 0.143 indicates that an increase in RMI, with high ICI influences, will improve Public universities performance. The influence of ICI on Public universities performance is 14.3%, while other factors influence the remaining 85.7%.

Public universities has implemented Risk Management at every stage of activity. However, it could be more optimal, as seen from the respondents' assessment of 5 RMI indicators, including determining context, risk assessment, risk handling, communication and consultation, and monitoring and review, which are generally considered good.

This research is consistent with (Soeharjono, 2013) findings, which concluded that the internal control system, especially in the context of risk assessment and monitoring, influences the effectiveness of implementing risk management in an organization.

In conclusion, RMI has a positive and significant effect as a mediator in the relationship between ICI and Public universities Performance. An increase in RMI, which is influenced by good implementation of ICI, will have a positive impact on increasing Public universities performance.

The Influence of IAE on KIN Mediated by the RMI

The ninth hypothesis tested is the influence of Internal Audit Effectiveness (IAE) on Public universities Performance (KIN), which is mediated by the Implementation of Risk Management (RMI). The results of the ninth hypothesis statistical test can be seen in Table 11.

Table 11. Hypothesis test results 9

Path coefficient	T count	T Table	Hypothesis 9
0,152	2,253	1,658	Accepted

Source: Data processing results

In Table 11, the statistical test results show that the indirect effect path coefficient between IAE (Internal Audit Effectiveness) and Public universities Performance (KIN) mediated by RMI (Risk Management Implementation) is 0.152, with a t value of 2.253. Because the t value is 2.253 > t table 1.658, H0 is rejected and H1 is accepted. This shows that RMI is a significant mediator in the relationship between IAE and Public universities performance. A positive path coefficient of 0.152 indicates that an increase in RMI influenced by high IAE will improve Public universities performance. The influence of IAE on Public universities performance is 15.20%, while other factors influence the remaining 84.80%.

From the overall structural model testing results (table 4.17), it can be seen that the total effect of ICI's influence on Public universities performance is 0.778, which is higher than the direct effect of 0.243. This indicates that IAE and RMI contribute positively to increasing the influence of ICI on Public universities performance. Likewise, the total effect of IAE's influence on Public universitiesperformance was 0.491, which was higher than the direct effect of 0.339, indicating that RMI also contributed positively to increasing the influence of IAE on Public universities performance.

Internal audits carried out by SPI at Public universities aim to improve operational effectiveness and efficiency, financial report reliability, and compliance with statutory regulations. This is in line with research showing that effective Internal Audits supported by management can prevent fraud and improve internal control in public sector organizations.

In conclusion, RMI has a positive and significant effect as a mediator in the relationship between IAE and Public universities performance. An increase in RMI, which is a good IAE influence, will positively impact increasing Public universities performance.

CONCLUSION

Based on the results of research conducted to determine the effect of Internal Control Implementation (ICI) on Internal Audit Effectiveness (IAE) and Risk Management

Implementation (RMI) and its application on Public universities performance (KIN), the following conclusions can be drawn:

1. RMI has a positive and significant effect on performance at Public universities in Indonesia. This shows that the better the RMI, the more the Public universities performance will increase, and conversely, if the RMI is lower, the Public universities performance will decrease. This research aims to improve Public universities performance to realize the capability of risk management implementation.
2. ICI has a positive and significant effect on performance at Public universities in Indonesia through IAE mediation. This shows that the better the ICI, the better the Public universities performance will be mediated by IAE. On the other hand, if the ICI is lower, Public universities performance mediated by IAE. will decrease. The implication of this research is that to improve Public universities performance, it is necessary to implement internal control, which will be mediated by the implementation of effective Internal Audit.
3. ICI positively and significantly affects performance at Public universities in Indonesia through RMI mediation. This shows that the better the ICI, the higher the Public universities performance mediated by RMI will be. On the other hand, if the ICI is lower, Public universities performance mediated by RMI will decrease. This research implies that to improve Public universities performance, internal control must be implemented, which is mediated by the implementation of sound risk management.
4. IAE positively and significantly affects Public universities performance in Indonesia mediated by RMI. This shows that the better the IAE, the more the Public universitiesperformance mediated by RMI will increase. On the other hand, if the IAE is lower, Public universities performance mediated by RMI will decrease. The implication of this research is that to improve Public universitiesperformance, it is necessary to carry out effective Internal Audits mediated by implementing good Risk Management.

Acknowledgements

The authors would like to thank all parties who supported this research, which also helped the authors do much research. This research helped increase the authors' knowledge and skills. This research will be helpful for knowledge and a better future.

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