

Does Management Support Moderate the Relationship between the Independence of Internal Auditors and the Internal Audit Effectiveness?

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Abstract

This research aims to investigate the relationship between the independence of internal auditors (independent variable) and the effectiveness of internal audits (dependent variable) in the Malaysian Public Sector. Additionally, this study examines the moderating effect of management support on the relationship between the independent and dependent variables. The study employed a quantitative research method to measure the relationships between the variables. Using a purposive sampling method, 111 internal auditors who work under Malaysian Federal Statutory Bodies were selected as the research subjects. This quantitative research method employed questionnaires with 30 items to measure the effectiveness of internal audits. The data was collected through electronic mail and analysed using descriptive, correlation, and regression analyses. The results indicate that the independence of internal auditors positively impacts the effectiveness of internal audits. However, the interaction between management support and the independence of internal auditors did not significantly contribute to internal audit effectiveness. This study highlights the importance of the measured factors in addressing audit-related issues, reducing corruption rates, and improving organisational performance. As a result, stakeholders and the management team gain confidence in the internal audit function, which ultimately benefits the audit services provided.

Keywords: Independence Of Internal Auditor, Management Support, And Internal Audit Effectiveness.

Introduction

A considerable amount of research has been conducted in this field of study as the internal audit holds a crucial function in organizations. Researchers agree that public sector organisations should have a robust internal audit function as it promotes credibility (Alzeban & Gwilliam 2014). Yusuf and Kanji (2020) state that an internal audit's primary function is to confirm the effective operation of an organization's risk management, governance, and internal control mechanisms. In essence, an internal audit's primary function is to provide independent and objective opinions to the accounting officer, in particular with respect to risk management, monitoring and governance issues (Abrar, 2020). The internal auditors are also responsible for assessing and evaluating the internal control systems, regulatory compliance, and fraud prevention in the public sector as well as in the private sector (Whittington & Pany, 2010).

Internal audit was explored in relation to fraud and corruption in the developing world by Asiedu and Deffor (2017). They found little evidence to support the notion that internal audit impacts accountability, transparency, or corruption in such nations. This highlights the need for further investigation into how internal audits can help improve accountability, transparency, and reduce corruption in developing countries (Almahuzi, 2020). Additionally, because emerging nations face unique challenges and circumstances, there is a need for more research to determine how internal auditors can assist public organizations in these areas. The importance of the internal auditor's commitment to the organisation is closely related to the significance of their role (Kwon & Banks, 2004). The internal auditor's role goes beyond detecting fraud and includes assessing the effectiveness of internal controls, evaluating the accuracy of financial reports and related records, and ensuring that financial resources are being used efficiently and effectively by management and employees while complying with rules and regulations.

The idea of internal audit effectiveness has drawn a lot of interest and has been given significant consideration by several academic studies (Tahajuddin & Kertali, 2018). To increase performance in the public sector, internal audit function effectiveness is viewed as crucial (Coetzee & Erasmus, 2017). The ability of the internal auditor to find and fix any errors and remain fixed may help to enhance the performance of the public sector. The phrase "effectiveness" means the degree to which a set of objectives is fulfilled (Institute of Internal Auditors, 2016). In this context, internal audit effectiveness is viewed as the degree to which the internal audit function accomplishes its predetermined goals (Roussy, Barbe, & Raimbault, 2020). Although effectiveness and efficiency have different literal meanings, they are normally used interchangeably. According to Bednarek (2018), effectiveness is more crucial than efficiency since no matter how efficient the audit function is, it is still considered insignificant.

The degree to which established objectives are accomplished can be used to describe the success of an internal audit (Institute of Internal Auditors, 2010). The Institute of Internal Audit (2015) states that in order for internal auditing to be effective, some core principles must exist and be in good working order. The Core Principles are independence, strategy-oriented, objectives and risk-focused, sufficiently resourced, quality and ongoing development, effective communication, provide assurance on risk-based, analytical, proactive and future-focused, and improve the organisations' performance. Any of the Core Principles must be attained for an internal audit operation to be regarded as effective in carrying out the mission of an internal audit.

According to Cohen and Sayag (2010), the concept of internal audit effectiveness can be approached through two primary methods. The efficacy of internal auditing is contingent upon the alignment between the audit and a set of universally applicable criteria derived from the attributes of internal auditors (White, 1976). The Institute of Internal Audit (2016) introduced a particular method that outlines 19 attribute standards. These standards specifically focus on the traits of both organisations and individuals involved in the practice of internal auditing. Several criteria that are commonly recognised in the academic community include independence and objectivity, proficiency, internal assessment, and ongoing professional development. Based on the second perspective, the quantifiable assessment of the efficacy of internal auditing is not feasible; instead, it is contingent upon the subjective assessments attributed to this function by organisational management. In essence, the evaluation of an internal audit's effectiveness is contingent upon the alignment between its outcomes and the anticipated outcomes of the stakeholders involved (Albrecht et al., 1988).

Theoretical and Conceptual Framework

This study employed resource-based theory and contingency theory to elucidate the association between the independent variable, namely the independence of the internal auditor, the moderating influence of management support, and the dependent variable, which is the efficacy of internal audit. This study emphasizes that internal organizational resources are the main factor affecting organizational performance (Barney, 1991). Therefore, an organisation has to look for specific features that might contribute to a higher performance. If an organisation has more distinct capabilities or internal resources, it will be able to boost its efficiency and effectiveness (Barney, 1991). For instance, for the internal auditor to be independent, the chief audit executive's (CAE) and senior management's formal reporting relationships should be strong. This is congruent with Barney's (1991) which emphasised on organisational capital resources (reporting structure of the company). The internal audit function will be enhanced by having a robust formal reporting process between the senior management and the chief audit executive. Contingency theory contributes in identifying complex relationships between variables (for instance; examining the effects of mediator and moderator variables) (Heo & Han, 2003). The link between the internal auditor's independence, competency, and internal control system effectiveness towards the internal audit effectiveness is believed to be impacted by management support. As a result, management's commitment to engage with internal auditor is a contingent factor that influences the internal audit effectiveness. A new conceptual framework was developed based on the previous researcher (refer Figure 1).

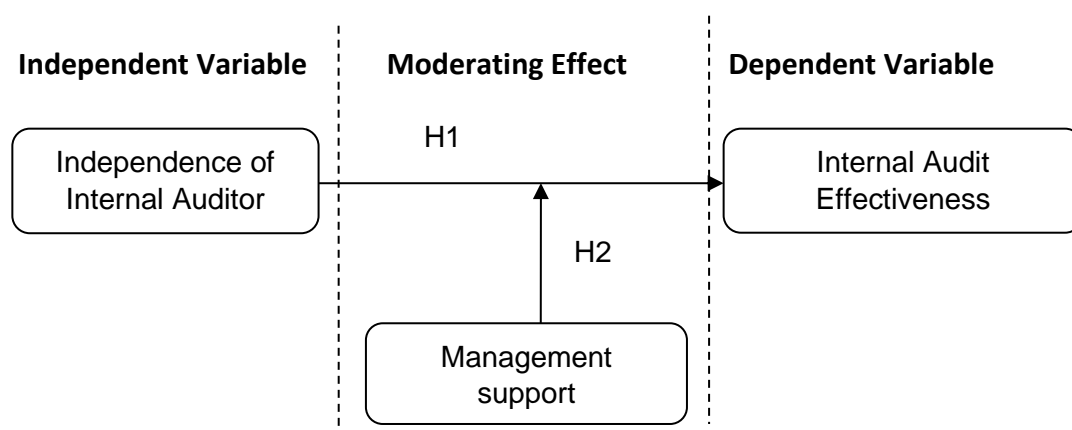


Figure 0 Conceptual Framework

The selection of the independent variables is based on inconclusive findings among the researchers despite the fact that the factor still lacking in research specifically in the Malaysian Public Sector context. The findings by Joshi (2021); and Abdullah, and Mustafa (2020) revealed that the independence of internal auditor produced conflicting results. As a consequence of respondents' potential perceptions of the measurement items as either sensitive or confidential, their study findings show that the independence of the internal auditor has no impact on the effectiveness of the internal audit. Despite the fact that there are several researches that investigate this factor in the Malaysian context, the study only covers on local government level (Badara, 2013). Hence, this study will concentrate on Malaysian Federal Statutory Bodies, an area that has received less academic attention thus far. Badara (2013) suggests a potential research topic for future scholars, which involves examining the impact of a moderating or mediating variable on the relationship between variables and the efficacy of internal audit. The present study aims to investigate the relationship between independent variables and the dependent variable while considering the moderating influence of managerial support, with the intention of addressing the existing research gap.

Literature Review and Hypothesis Development

Independence of Internal Auditor

Internal auditors provide assurance services concerning their credibility and value, which may be obtained through their independence of thought and appearance, (Stewart & Subramaniam, 2010). Internal auditors can only join the management team if they are independent (Joshi, 2021). Internal audit has several characteristics and features, some of which have been highlighted by the Institute of Internal Audit (2016). A function's characteristics and features include its independence and objectivity, the way it contributes value to the organization, an organized and regulated procedure, and the evaluation and improvement of its effectiveness in managing risks, controlling risks, and governing the organization. These features are considered essential for internal auditors to discharge their responsibilities properly. Although it is quite tough to have complete independence of mind, the internal auditors should possess the ability to make tough recommendations without fear or favour (Mihret et al., 2010).

Independence is commonly defined as the state in which the internal audit function is free from any circumstances that could potentially compromise its capacity to carry out its tasks in an objective manner (Institute of Internal Auditors, 2017). According to Cohen and Sayag (2010), it is imperative for internal auditors to possess sufficient independence from the entities they are required to audit. This independence ensures that both parties can operate without any bias. To enhance the autonomy of internal auditors, the chief audit executive (CAE) must be granted unimpeded and unrestrained entry to senior management and the board, whenever feasible, by means of an integrated reporting framework (Institute of Internal Auditors, 2017). It is thought that adequate work rotation is required for internal auditors to preserve an appropriate level of independence (Institute of Internal Auditors, 2016). Internal audit departments view task rotation as vital since it ensures auditors are not given any tasks that might undermine their neutrality as they have previously handled them. This can ensure the reliability and fairness of the auditor's work and ensure peace of mind towards the stakeholders regarding the dependability of the report's findings. Given the increasing weight on the importance of independence by the standard setters and professional bodies, these factors had received the greatest attention from previous research but the least attention was given in the context of the public sector in Malaysia.

Previous research has shown that the effectiveness of an internal audit depends on the level of independence demonstrated by the organization conducting the audit. Studies by Pelser et al. (2020), Shohihah et al. (2018), and Rudhani et al. (2017) support this idea. A study by Tahajuddin and Kertali (2018) analyzed 119 internal auditors who were members of the Institute of Internal Auditors Malaysia (IIAM). The study found that the independence of the internal auditor was positively associated with the effectiveness of the internal audit. However, the study also found that there was no significant relationship between internal audit objectivity and the efficacy of internal audit. This finding is consistent with the International Standards for the Professional Practise of Internal Auditing (ISPPIA), which emphasizes the importance of independence in internal auditing (Institute of Internal Auditors, 2017). However, other research has shown that there may not be a significant relationship between internal auditor independence and internal audit effectiveness. Respondents may have provided neutral responses to sensitive questions, as demonstrated by research by Joshi (2021) and Abdullah and Mustafa (2020). Based on these findings, it is suggested that independence alone may not be the only factor determining the effectiveness of internal audits. In light of this, the following theory is put forth:

Hypothesis 1 (H1): There is a positive correlation between the internal auditor's independence and the effectiveness of internal audit in the Malaysian Public Sector.

Management Support (Moderating Effect)

Hassan et al. (2016) found a favourable association between management team support and the effectiveness of internal control systems regarding the competency and independence of internal auditors. Management must offer adequate support for the internal auditor to effectively carry out their duties. The internal audit team's endeavours will be rendered futile in the absence of support from the management team. Based on research findings, it has been suggested that in the absence of management support and consent, the internal audit process may prove to be an inefficient use of time and financial resources (Ta & Doan, 2022). Hence, excellent communication between the management and internal audit teams is imperative. The success of internal audit activities is contingent upon providing managerial support to the role of internal auditing. The managerial team's response to the audit findings holds significant importance, as it has the potential to impact the operational efficiency of the internal audit division within the public sector of Malaysia (Noor Nizah, 2012; as cited in Hassan et al., 2016).

According to Joshi (2021), there is a consensus among scholars and professionals that the involvement and support of the Board of Directors and senior management are crucial in facilitating the effective execution of internal auditors' responsibilities and obligations. The success of internal auditing is contingent upon the endorsement and backing of senior management (Ta & Doan, 2022; Singh et al., 2021; Joshi, 2021; Abdullah & Mustafa, 2020). Hassan et al. (2016) contend that management assistance is crucial for enhancing the correlation between internal control systems' efficacy and internal audits' effectiveness. Further, Abdullah and Mustafa (2020) suggest that the efficacy of internal audit is mainly influenced by management assistance and internal audit competency. Nevertheless, the researchers did not discover any statistically significant correlation between the autonomy of the internal auditor and the efficacy of the internal audit process. In a study conducted by Shamki and Alhajri (2017), it was shown that the impact of management response on the effectiveness of internal audits was negligible. The priority of external audit parties by upper management over the internal audit department may have resulted in unanticipated consequences.

The efficacy of internal audits is contingent upon the support of top management, notwithstanding several studies that propose a correlation between the attributes of internal auditors and the effectiveness of internal audits (Endaya & Hanefah, 2016). According to Al-Twajjry et al. (2003), it is crucial to comprehend the internal auditor's independence by examining the connection between management and internal audit staff. The actions of top management notably impact the correlation between independence and the efficacy of internal audits. When senior management abstains from intervening in the audit scope and permits unfettered auditing work on their part, the impact of the internal auditor's independence on the effectiveness of internal audits is heightened. However, audit scope restrictions or managerial interference have a detrimental effect. In a nutshell, the management team must not interfere with the internal auditor's investigation pertaining to the audit matter. Based on a number of empirical investigations (Alzeban & Sawan, 2013; Mahzan & Hassan, 2015), the implementation of an autonomous internal audit department and the provision of adequate resources for staff training, recruitment, and professional

development have been found to be positively correlated with management support and the presence of an independent internal audit department. Based on the concise explanations provided in the above paragraph, the subsequent hypothesis is proposed:

Hypothesis 2 (H2): Management support moderates the relationship between internal auditor independence and the effectiveness of internal audits in the Malaysian public sector.

Methodology

To control variables and evaluate particular hypotheses, a quantitative research methodology should be founded on objectivism and conform to the post-positivist worldview (Khanal, 2013). The logical qualities of data are the main emphasis of quantitative research, and numbers and statistics are used to represent peoples' opinions (Creswell, 2021). This technique can be applied when the researcher wants to ascertain the proportion of individuals who support a suggested change in goods or services and how strongly they hold that position. Quantitative research typically generates enormous amounts of numerical data, which may be used for statistical analysis (Almalki, 2016). Quantitative research designs benefit from organised procedures while gathering the data. The best examples of these techniques are questionnaires and surveys, in which the respondents are given a set of questions and must select one option from a pre-determined selection of responses (Creswell & Clark 2017). Using surveys and questionnaires makes it easier to quantify replies by counting the number of times participants chose particular multiple-choice answers (Bryman & Bell, 2015).

The research utilised a cross-sectional survey methodology. The utilisation of cross-sectional surveys allows for the collection of data at a single point in time, as opposed to longitudinal surveys which gather data over a period of time (Creswell, 2009). Creswell (2009) categorises surveys into many types: self-administered questionnaires, interviews, structured record reviews, and structured observations. Consequently, this study will employ self-administered questionnaires due to their ability to prompt participants to engage in more profound reflection on the questions, their perceived anonymity, their efficiency in collecting data, and their cost-effectiveness (Cooper & Schindler, 2006). Moreover, this approach has been commonly employed by previous scholars, like Pelser et al. (2020), Rudhani et al. (2017), and Coetzee and Erasmus (2017). It enables researchers to obtain primary data and allows respondents to engage anonymously.

The researcher chose the respondents as they had the best chance of providing insightful comments on the audit issue. Black (2019) agrees that selecting the most insightful respondents might help one comprehend the research phenomena better. This population group was chosen because the Malaysian Federal Statutory Bodies (MFSB) contributes to the highest audit issues compared to other tiers of the Malaysian Government. Therefore, this group may provide insightful comments on the issues in regard to the effectiveness of internal audit and might also help one comprehend the research phenomena better. The total population is derived from the total of 164 internal auditors who work under the Malaysian Federal Statutory Bodies (MFSB). To make observations and statistical conclusions about the larger population, a subset of the target population is chosen through sampling (Smith, 2022). In this study, the respondents were purposefully chosen because they had the best chance of providing insightful comments on the audit issue. Black (2019) agrees that selecting the most insightful respondents might help one comprehend the research phenomena better. Since it would be challenging to examine the entire Malaysian public sector, the research

concentrated on 111 respondents (internal auditors), which covered a subset of the whole population of internal auditors in Malaysian Federal Statutory Bodies.

Data Analysis

Descriptive Statistical Analysis

Table 1 below summarises the general demographic information of the internal auditors who participated in the survey.

Table 1

Demographic Information: Internal Auditors

Demographic Information of Internal Auditors		Responses	
		Frequency	Percentage (%)
Gender	Male	53	48
	Female	58	52
	Total	111	100
Age	20 to 29	4	4
	30 to 39	51	46
	40 to 49	48	43
	50 to 59	8	7
	Above 60	0	-
	Total	111	100
Field of study	Accounting	76	68
	Economics	4	4
	Management	12	11
	Others	19	17
	Total	111	100
Educational level	Diploma	19	17
	Bachelor's Degree	72	65
	Master Degree	14	13
	Others	6	5
	Total	111	100
Professional certification	Certified Internal Auditor (CIA)	5	6
	Certified Public Accountant (CPA)	3	3
	Certified Management Accountant (CMA)	2	2
	Others	14	16
	None	87	78
Total	111	100	
Years of experience	Less than 3 years	9	8
	Above 3 years less than 5 years	10	9
	Above 5 years less than 10 years	29	26
	Above 10 years	63	57
	Total	111	100

Reliability Analysis

Based on the data presented in Table 2, all assessed items appear to have an acceptable range of Cronbach's Alpha values between 0.839 and 0.950. These results align with Piaw's (2022) standards, which state that items with Cronbach's Alpha () values between 0.80 and 0.95 are considered acceptable. Essentially, this study's data analysis was conducted using responses from all variables.

Table 2
Reliability Statistics

	Reliability Statistics	
	Cronbach's Alpha	N of Items
Independence of Internal Auditor (IAIND)	0.887	10
Management Support (MNGSUP)	0.931	10
Internal Audit Effectiveness (IAE)	0.924	10

Analysis of Regression

There were two stages of regression analysis. The first used multiple linear regression without a moderating effect. The second stage utilized moderated regression analysis, which involved the interaction between the independent and moderating effects.

Multiple Linear Regression Analysis

The multiple linear regression analysis showed which factors in the models were significant predictors of internal audit effectiveness. The effectiveness of internal audits is indicated in the summary of the models. The variation level of the dependent variable was determined using the Adjusted R squared value, which needs to be reported as all predictors were significant (Piaw, 2022). Table 3 shows that the Adjusted R squared was 0.581, meaning that 58.1% of the changes in Internal Audit Effectiveness (IAE) are influenced by the changes in the IV (IAIND), while other factors outside the model's scope account for the remaining 42%.

Table 3
Model Summary

Model Summary ^b					
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	0.769 ^a	0.592	0.581	0.35946	1.853

a. Predictors: (Constant), IAIND

b. Dependent Variable: IAE

According to the results presented in Table 4, the statistical analysis indicates that the model is statistically significant, as evidenced by the F-statistics values ($P = .000$) and $F = 51.770$. These findings suggest a robust relationship between the predictors and the regression variables, supporting the notion that the model is well-suited for estimating the effectiveness of internal audits in the public sector.

Table 4 ANOVA

ANOVA ^a						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	20.068	3	6.689	51.770	0.000 ^b
	Residual	13.826	107	0.129		
	Total	33.894	110			

a. Dependent Variable: IAE

b. Predictors: (Constant), IAIND

The beta sign of IAIND demonstrates the positive influence of the predicted dependent variable, as shown in Table 5 below. That implies that any rise in the independent variables will increase the dependent variable. In other words, the researcher's proposed hypothesis H1 was acceptable since they demonstrated a positive link with the dependent variable. Based on the statistical significance of the independent variable over the dependent

Coefficients ^a						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	0.666	0.295		2.259	0.026
	IAIND	0.326	0.097	0.298	3.349	0.001

variable, IAIND significantly contributes to IAE at a confidence level of $P < 0.05$. This suggests that the Malaysian Public Sector's internal audit function should focus more on the IAIND since they are significant predictors of IAE. Thus, the proposed hypothesis 1 was accepted.

Table 5 Coefficients

a. Dependent Variable: IAE

Moderated Regression Analysis

The results of the moderated regression analysis indicated the significant determinants of internal audit effectiveness by identifying the interactions within the models. The term "interaction" pertains to the association between independent factors and the moderating influence. The Adjusted R squared value was utilised in the models to determine the level of variation in the interactions (predictors). According to the data presented in Table 6, the findings indicate that the Adjusted R squared value is 0.611. This suggests that about 61.1% of the variations observed in Internal Audit Effectiveness (IAE) can be attributed to Predictors Variables (MNGSUP*IAIND) changes. The remaining 39% can be attributed to factors not accounted for within the confines of the model.

Table 6
 Model Summary (Moderated Regression Analysis)

a.

Model Summary^b				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.788 ^a	0.622	0.611	0.34620

Predictors: (Constant), MNGSUP*IAIND

b. Dependent Variable: IAE

Based on the results presented in Table 7, the statistical analysis reveals the model's significance through the F-statistics values ($P = .000$) and $F = 58.599$. These values indicate a robust relationship between the predictors and the regression variables' outcomes, suggesting that the model is highly suitable for predicting the effectiveness of internal audits in the public sector of Malaysia.

Table 7
 ANOVA (Moderated Regression Analysis)

ANOVA^a						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	21.070	3	7.023	58.599	.000 ^b
	Residual	12.824	107	0.120		
	Total	33.894	110			

a. Dependent Variable: IAE

b. Predictors: (Constant), MNGSUP*IAIND

The beta sign of the overall interactions, as shown in Table 8 below, indicates the positive influence of the predicted dependent variable. That is to say, any increase in the interaction between MNGSUP and IAIND will result in an increase in the dependent variable (IAE) for instance. Unfortunately, the interaction between MNGSUP and IAIND did not substantially influence the predicted dependent variable (IAE) as the level of significance was higher than 0.05 ($P = 0.092$). In other words, the proposed hypothesis 2 was rejected.

Table 8
 Coefficients (Moderated Regression Analysis)

a.

Coefficients^a						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	2.469	0.141		17.451	0.000
	MNGSUP*IAIND	0.039	0.023	0.285	1.698	0.092

Dependent Variable: IAE

Conclusions

Within the public and private sectors in developing nations, internal auditing is universally acknowledged to be important. While several researches on the effectiveness of internal auditing have been carried out in developing countries, there is still a lack of sufficient evidence of these studies being done in the Malaysian public sector. In an effort to protect the public's funds and reduce fraudulent cases; the Malaysian government established an internal audit unit in every public sector organisation. The internal audit unit in Malaysia is mainly responsible for conducting financial management audits by way of examining the financial system, internal control, and financial records in order to assess whether the expenses, revenue, assets and stores were managed as per laws, regulations and directives. The results obtained from the completed questionnaires provided strong evidence in favour of the hypotheses positing that the level of independence exhibited by internal auditors has a substantial impact on the overall efficacy of internal audits. The statistical analysis also indicated that there was a significant relationship between management support and the independence of internal auditors in relation to the overall efficacy of internal audits. The study employed multiple linear regression analysis and moderated regression analysis to assess the relationship between various factors and the effectiveness of internal audits. The results of the study indicate that the efficacy of internal audit is strongly influenced by the independence of the internal auditor. This finding aligns with the principles of resource-based theory and contingency theory.

The enhancement of internal audit effectiveness in Malaysian public sector organisations may be facilitated by the presence of a suitable level of independence among internal auditors. The regression analysis reveals that these factors make substantial contributions to the IAE, as shown by a positive beta coefficient and accounting for 58.1% of the variation in the IAE. The significance of this aspect is paramount in the context of IAE within the Malaysian Public Sector. Furthermore, the examination of correlation reveals that there is a direct relationship between all independent variables and internal audit effectiveness (IAE). Moreover, the regression analysis indicates that the independent variables (IAIND) exhibit positive coefficients when examining their impact on IAE within the context of the Malaysian public sector. Unexpectedly, the statistical analysis revealed that the outcome of the interaction between MNGSUP*IAIND ($P = 0.092$) did not reach statistical significance.

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