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FACTORS AFFECTING INTERNAL AUDIT EFFICACY IN THE MALAYSIAN PUBLIC SECTOR: A SURVEY ON THE MINISTRY OF FINANCE

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ABSTRACT

The role of internal audit has changed over time in line with globalisation, which is undeniably vital in ensuring that an organisation can maintain its transparency and achieve its ultimate objectives. Such a role notwithstanding, the statistics recorded for corruption has not improved throughout time, especially among public servants in Malaysia. In view of this issue, this present study investigated the factors that determined internal audit efficacy among organisations classified under the Malaysian public sector. The research scope delves into three factors; (1) the relationship between internal and external auditors, (2) management support, and (3) internal auditor independence, which can affect internal audit efficacy. Accordingly, 103 internal auditors from the Malaysian Ministry of Finance were selected as respondents. The findings revealed that management support displayed a significantly positive link with internal audit efficacy. Alternatively, the relationship between external auditor and independence posed a positive yet insignificant impact on internal audit efficacy. Notably, this study contributes to the body of literature on internal audit in the context of Malaysian public sector by providing substantial evidence on factors that impact its efficacy. These outcomes should facilitate the organisations to focus on the key elements to enhance internal audit efficacy in their structures.

Keywords: *internal audit, public sector organisation, internal audit efficacy, management support*

1. INTRODUCTION

Internal auditing in the public sector is meant to facilitate the government in attaining sound financial and operational management of the public sector through effective government expenditure, accountability, and transparency. Internal auditors are referred to those who are capable of assuring compliance with government financial and accounting standards, advising government financial and accounting management, enhancing management efficiency, and fostering competent human capital (Accountant General's Department of Malaysia). Nevertheless, cases of government fraud and corruption that have come to light, such as the 1Malaysia Development Berhad [1MDB] (2018) and Scandal of National Feedlot Corporation (2014), has suggested that internal audits are ineffective in ascertaining that their organisational objectives are actually being met. The Malaysia's Anti-Corruption Commission (MACC) further reported on several other contemporary instances of fraud and corruption involving public officials (AWANI, 2019). Hence, it is crucial for the audits to be objective and independent in order to provide value to these organisations. A competent internal audit has an influence that transcends beyond the organisation, and simultaneously, has an impact on the entire country (Accountant, T. M. I. of., 2020). This amplifies the need for effective internal auditing to mitigate any deficiency straight down to their root cause.

Referring to statements given by the General Auditor of Malaysia in the published annual reports, the concerns, including late penalty payment, non-achievement of inventory specification criteria, delayed delivery beyond schedule, and missing aid money, are frequently cited. These issues may be mitigated if proper audits are conducted. Yusof et al. (2016) claimed that the public sector has significantly contributed to national development. Therefore, the personnel employed in the sector must closely adhere to all governmental constitutions, regulations, processes, and budgets, which are necessary in order to guarantee the fulfilment of their particular obligations and accountability. Identifying the characteristics that contribute to internal audit efficacy would, thus, be extremely valuable in accomplishing the above-mentioned major objectives.

To date, however, less studies have been conducted in delineating the component of internal audit efficiency in public sectors in the context of Malaysia. Among the pioneering works include Ali et al. (2007) ; Shamsuddin and Kirupanangtam (2014) ; Yusof et al. (2019), which focused on a deeper look into the topic in terms of public sector capability by using the IACM framework. However, the factors affecting were not studied up until 2014.

The purpose of this study is to assess the elements that contribute to internal audit efficacy in the setting of the public sector. To that aim, the elements that influence internal audit efficacy include interaction between external and internal auditors, management support, and internal auditor independence. An assessment of these criteria corresponds with the academic endeavour to explain the presence of any major influence on the efficacy of internal audit in the Malaysian public sector.

2 RELATED RESEARCH

2.1 Internal Audit Efficacy

Internal auditing facilitates an organisation to meet its goals by combining a planned and disciplined approach to reviewing and improving the efficacy of risk management, as well as governance procedures (Institute of Internal Auditor, 2019). An effective internal audit should further aid the organisations to comply with the increasingly stringent rules (KPMG, 2020). In order to achieve internal audit efficacy, Deloitte (2016) has established the idea of Agile Internal Audit, which aimed at executing better and quicker audits while offering a balanced emphasis on happier teams and stakeholders. Agile refers to a software development methodology that targets at reducing costs and time to market, while concurrently maintaining high quality. Agile Internal Audit denotes a mind-set that an Internal Audit department would use to prioritise stakeholder requests, shorten audit cycles, provide timely insights, reduce wasteful effort, and create less documentation. Internal auditors and stakeholders are encouraged to evaluate the value created by an audit or project from the start. This approach is useful when internal auditors need to conduct more audits in the same (or less) amount of time, foster tighter connections with stakeholders, and provide more relevant, higher-impact reports with less documentation. Hence, Agile enables the internal auditors to act rapidly and effectively when plans, goals, technologies, rivals, rules, and risks change.

According to Institute of Internal Auditor (IIA) members (2020), one of the critical A's for a successful internal audit is to ensure that any risk identified and applicable controls are properly overseen and developed, respectively, to mitigate risks. This study investigated efficacy in particular since it is viewed as a barometer for achieving organisational goals. In accordance with the foregoing, various theories have been closely connected with internal audit function, such as the following: Stakeholder Theory (Erasmus & Coetzee, 2018), Stewardship Theory (Badara, 2014), and Agency Theory (Ahmad, 2015; Kabuye, Nkundabanyanga, Opiso, & Nakabuye, 2017; Swinkels, 2012). The Agency Theory (Ahmad, 2013) has been the most commonly used conceptualisation in this context. This is despite Mihret and Dessalegn (2010)'s claims that it may be insufficient in addressing internal audit research work from multiple viewpoints and situations, particularly in assessing the efficacy of internal audit itself. Alzeban and Gwilliam (2014) discussed the stakeholder theory of internal audit efficacy in light of five factors, namely: competency, size of internal audit department, management support, interaction with external auditors, and internal auditor independence. Turning to this present study, it examined the idea put forth by (Alzeban & Gwilliam, 2014). An effective internal audit department contributes to organisational value creation by assisting stakeholders in assessing and improving managerial efficacy in terms of risk, internal control, and corporate governance processes (Gramling et al., 2004 ; Hass et al., 2006;Walter & Guandaru, 2012; Yee et al., 2008).

Several studies have explored the relationship of internal audit efficacy with financial reporting and internal audit performance, i.e., Abbot and Daughtery ; Parker and Peters (2016) advocated for a strong correlation between internal audit and the whole governance process, inclusive of financial reporting and internal control systems. Meanwhile, Ege (2015) reported a negative correlation between internal audit characteristics (e.g., objectivity and expertise) and the probability of managerial wrongdoing.

Internal audit has been cited by Coetzee and Erasmus (2017) as a vital and solid foundation for effective governance and accountability. This is corroborated by Ackermann and Marx (2016) by depicting that internal audit aids the management in executing their tasks by directing a larger perspective and scope in risk management. In general, an efficient internal audit function will surely provide various benefits to an organisation, particularly in terms of risk management.

However, it should be noted that internal audit is not an easy process. The process is rife with numerous elements, including long-term planning, staff development, and broad aspects of fieldwork (e.g., observation, verification & analysis, documentation, and follow-up). These processes necessitate a strong interpersonal relation and many interviews as they denote the significant aspects that should be observed and analysed with due diligence.

The intricacy of such process inevitably results in multiple factors that may affect the efficacy of internal audit. Many studies have described the topic within the public sector context by looking into experience and competency (Alzeban & Gwilliam, 2012; Drogalas et al., 2015), management support (Alzeban & Gwilliam, 2012; Mupeta, 2017), internal auditor independence (Alzeban & Gwilliam, 2014; Drogalas et al., 2015), and other factors, i.e., the link between external auditors. As there is no one way to achieve the efficacy of internal audit function, a thorough view of such function and analysis of many aspects is required to achieve this goal.

2.2 Internal Audit in Public Sector

Internal auditing is a critical management function in both the public and commercial sectors (Dittenhofer, 2001; Hermanson & Rittenberg, 2003; Goodwin, 2004). The function of internal audit in public sector organisations is strongly related with the possibility for increasing government openness and efficiency (Ali et al., 2007). This approach has inspired some countries to implement regulations and policies aimed at strengthening their public sector internal audit functions, with the goal of increasing their capacity for fulfilling their primary purpose, apart from establishing a reputation for accountability. Onumah and Krah (2012) explained the complexity of public sector organisations and how this may affect internal auditing across various activities and methodologies in comparison to private sector counterparts. Internal auditors in the public sector must closely adhere to their objectives in order to contribute to the overall improvement of organisational performance and productivity (Ahmad et al., 2009). Evidently, the golden principles described in the Code of Ethics for Internal Auditors in government, such as Integrity, Objectivity, Confidentiality, Independence, and Competency, must be rigorously adhered to (World Bank, 2015).

Auditing has been performed in Malaysian public sector for over a century, dating all the way back to the British colonial era. Auditing is composed of internal and external auditing (Ali et al., 2007). Both are assigned to the National Audit Department (NAD), which is rotated across several public sector organisations, including the ministries and government agencies. According to Ali et al. (2007), the distinction between the two aspects for the reporting line is that an internal auditor reports to the Ministry's Secretary-General, while an external auditor reports directly to the Auditor General.

Deloitte(2011) noted that the government seeks high-level transparency due to the overwhelming requirement to justify their responsibility in terms of public money use and service performance. This is reflected in the improved Corruption Percentage Index (CPI) that Malaysia periodically records. The efforts made by the government are, however, beyond this: a secondary purpose is installed to guarantee the inclusion of internal audit as part of procurement openness, as outlined in the National Anti-Corruption Plan 2019.

One issue highlighted at the Malaysian Institute of Accountant (MIA) conference (2020) is the significant role of internal auditors to combat bribery and corruption – signifying their relevance in public sector organisations to meet organisational goals. However, only a few studies have assessed the internal audit component in the public sectors in Malaysia. Ali et al. (2007);Shamsuddin and Kirupanangtam (2014); Yusof et al., (2019) are some pioneers who have delved into the issue of public sector capabilities based on IACM framework. These factors were untapped prior to 2014.

2.3 Relationship between Internal Audit and External Audit

Alzeban and Gwilliam (2014) depicted that internal stakeholders assist a firm in reaching its aim. Their theoretical approach revolves around five aspects that affect the efficacy of internal audits. Turning to this present study, it assessed three characteristics that could affect the performance of internal audit, namely the interaction between internal and external audits, management support for internal audit, and internal audit independence.

Generally, there is a positive relationship between internal and external auditors, with synergistic benefits and advantages for both sides (Alzeban & Gwilliam, 2014). Shamsuddin and Kirupanangtam (2014) emphasised on the critical nature of establishing a positive link between the two in order to sustain a successful internal audit system in public sector organisations.

A strong relationship between internal and external auditors typically fosters synergies, apart from signifying a powerful accountability relationship (Oussii & Taktak, 2018; Wood, 2004). This suggests a positive domino effect that decreases earnings management, but increases the quality of financial reporting (Prawitt et al., 2009). Hence, an internal auditor becomes more successful when these two parties collaborate (Jones et al., 2017; Oussii & Taktak, 2018), necessitating the consideration of these issues in a public sector setting.

Meanwhile, Brierley et al., (2003) have identified a lack of coordination between internal and external auditors as a contributing and primary factor towards deteriorating audit quality in the public sector, particularly across developing countries. Alzeban and Gwilliam (2014) validated this by reporting a positive correlation of internal and external auditor collaboration with internal audit efficacy. Parker and Peters (2010) ; Prawitt et al. (2012) ; Prawitt et al. (2012) assessed this correlation and reported similarly as well.

On the contrary, Suwaidan and Qasim (2010) discovered that auditors disagreed on the value of collaboration in aiding internal audit efficacy. Similarly, Usang (2014) ; Usang and Salim (2016) reported a negative relationship between these variables. Despite the refutation, some studies revealed that the aspects of strong collaboration between internal and external auditors exerted a strong impact on internal audit efficacy (Ahmad, 2013; Badara & Saidin, 2013; Salehi, 2016). This is confirmed by Salehi (2016), who identified factors that affected the efficacy of internal audits in Iranian enterprises, including the participation of the two parties. Hence, the following hypothesis is conceptualised:

H1: There is a significant relationship between internal and external auditors and internal audit efficacy.

2.4 Management Support for Internal Audit

Management support has been identified as a factor that influences internal auditor performance in Ethiopia (Mihret & Yismaw, 2007). Lack of support, in particular, has a detrimental impact on internal audit role, as auditors regard themselves as irrelevant to the organisation (Alzeban & Gwilliam, 2014). In the contexts of Uganda, Malawi, Kenya, and Ethiopia, Van Gansberghe (2005) discovered a link between managerial support and internal audit efficacy. Other studies conducted in Saudi Arabia have further validated this hypothesis (Alzeban & Gwilliam, 2014). Besides, a favourable association between private and public sectors in Israel was reported by Cohen and Sayag (2010). Hence, one of the most important factors in ensuring internal auditor performance is managerial empowerment (Al-Twaijry et al., 2003; Chang et al., 2019).

Nonetheless, several studies revealed an insignificant relationship between top management and internal audit efficacy (Badu & Kuutol, 2013; Onumah & Krah, 2012; Tackie et al., 2016). Management assistance, according to Tackie et al. (2016), has little influence on efficacy, particularly in a government that uses decentralised administrative systems.

Alternatively, Ahmad et al. (2009) proposed that lack of collaboration in executing audit work is related to internal audit efficacy, especially in terms of access to data and documents necessary for the audit process. Scholars depict that managerial support is the second most beneficial factor.

Notably, studies demonstrating a beneficial association outweighed those demonstrating a negative link. Therefore, senior management support is critical for internal audit efficacy (Mihret & Yismaw, 2007; Poltak et al., 2019; Alzeban & Gwilliam, 2014; Usang & Salim, 2016; Alquda et al., 2019), which enables the formation of the next hypothesis.

H2: There is a significant relationship between management support and internal audit efficacy.

2.5 Independence of Internal Audit

Shamsuddin and Kirupanangtam (2014) illustrated the impact of independence on internal audit efficacy, particularly on how a biased report can deteriorate a firm as a whole. An impartial report is, thus, critical as it is the primary means of avoiding scandals and frauds in public sector organisations.

The primary issue confronting internal auditors in the public sector is independence (Alquda et al., 2019; Arena & Sarens, 2015). Due to the critical nature of internal auditor efficacy, norm setters and professional associations have worked tirelessly to ensure internal auditor independence, despite the fact that internal auditors are employees as well (Alzeban & Gwilliam, 2014).

A study by Yusof et al., (2019) reported that the respondents experienced difficulty when carrying out their activities autonomously due to management interventions and limits imposed on them. Therefore, the internal audit function should be treated as a distinct entity in an organisation. A larger level of management control over internal auditors may erode their independence in performing their duties (Kondi & Petrovi, 2012 cited in Đorđević, & Đukić, 2017). As a result, both parties must strike a healthy balance in order to collaborate towards a common goal.

Brierley et al., (2003) assessed how internal auditors' lack of independence could impair their efficacy. In fact, similar outcomes were noted for Sudan (Mulugeta, 2008), Ethiopia, and Malaysia (Ahmad et al., 2009). Other studies have also examined the absence of audit independence and its detrimental influence on audit (Ahmad et al., 2009). Although internal audit independence positively affects internal audit efficacy, Badu and Kuutol (2013) discovered an insignificant correlation between these two factors in Ghanaian organisations.

Past studies have consistently demonstrated a positive link between independence and internal audit efficacy (Cohen & Sayag, 2010; D'Onza et al., 2015; Khelil et al., 2018; Poltak et al., 2019; Tackie et al., 2016; Usang & Salim, 2016). Such an outcome demonstrates its strong impact on the efficacy of internal audit. The Global Internal Audit Common Body of Knowledge (CBOK) has identified independence as a critical component of an effective audit activity in the public sector. With studies denoting the positive correlation between internal audit efficacy and independence (D'Onza et al., 2015; Salehi, 2016; Usang & Salim, 2016), the third hypothesis formulated for this study is given as follows:

H3: There is a significant relationship between independence of internal auditor and internal audit efficacy.

2.6 Theoretical Framework

2.6.1 Theory of Internal Audit Efficacy

In recent years, internal auditing has progressively developed from the conventional audit structure into a wider internal advisory role within the company's risk management function. Hence, independence issues may surface upon executing both audit and advisory tasks; rendering the importance of assessing the efficacy of internal auditing in this regard. In the context of Italy, Arena and Azzone (2009) discovered that internal audit team qualities, audit methods and practices, as well as organisational connections had an effect on the degree of efficacy. Similarly, Mihret and Yismaw's (2007) Ethiopia-based study had employed the mixed approach of questionnaire and interview techniques to define organisational variables that might improve or impair internal audit performance. As a result, they found that internal audit regulations had a significant impact on its efficacy.

Alzeban and Gwilliam (2014) proposed the following factors as determinants of internal audit efficacy, inclusive of Competency, Relationship with External Auditor, Management Support, Size, and Independence. This theory explains the positive association of internal audit efficacy mainly in public sector organisation with the factors mentioned above. This theory also supports the development of both independent and dependent variables. Nevertheless, this present study focused on three factors only, excluding the competency and size of internal auditors, as illustrated in Figure 1.

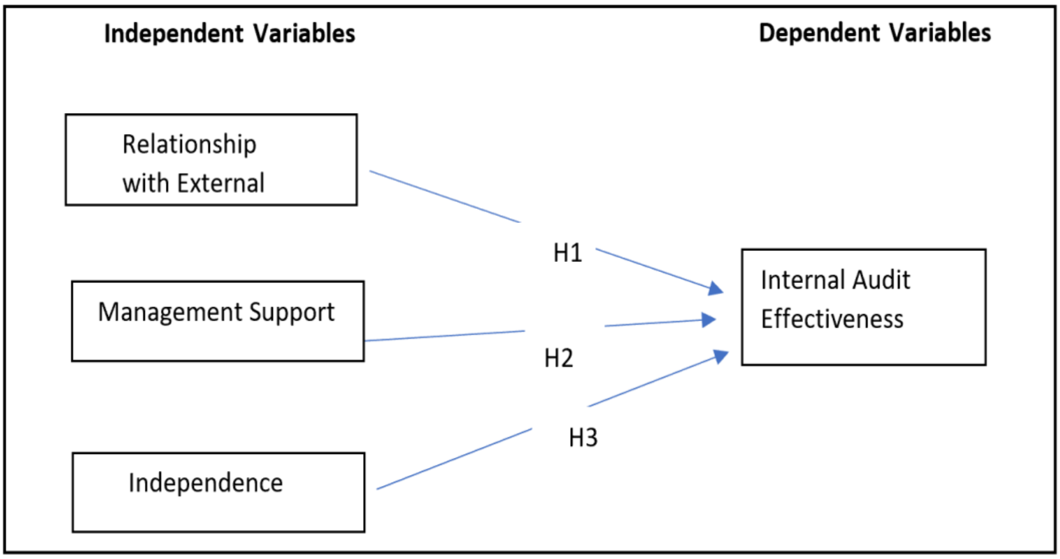

Figure 1: Research Framework

3. METHODOLOGY

3.1 Measurement of Constructs

In this present study, close-ended questions and interval scales were utilised; the former was used to gather demographic information in which the respondents must select the level that matched their profile. Next, the Likert scale (i.e., strongly disagree, disagree, undecided, agree, and strongly agree) was employed to assess independent variables (i.e., Relationship with Internal Audit, Management Support, and Independence). While, the measurement attributes were adapted from a study by Alzeban and Gwilliam (2014) ; Gramling et al. (2004); Hass et al. (2006) ;Walter & Guandaru (2012) ;Yee et al. (2008); Salehi (2016); Baltaci & Yilmaz (2006); Chang et al., (2019); Usang & Salim (2016) on internal audit in the public sector of Arab Saudi. Nonetheless, the proposition of nouns and verbs differed from the original paper, while the end meaning was maintained consistent with the original questionnaires. The questionnaire was presented in both Malay and English languages to ensure comprehension of the participants. The Statistical Package for Social Sciences (SPSS) was utilised for data analysis. The variable measurements are summarised in Table 1:

Table 1: Summary of Questionnaire and Measurement Method

	Measurement	**Author**
Dependent Variable Internal Audit Efficacy	5-point Likert Scale with 14 questions	Alzeban & Gwilliam (2014);Gramling et al. (2004); Hass et al. (2006); Walter & Guandaru (2012) ; Yee et al. (2008)
Independent Variable Relationship with External Auditors	5-point Likert Scale with nine questions	Alzeban & Gwilliam (2014) ;Salehi (2016)

Independent Variable Management Support	5-point Likert Scale with six questions	Alzeban & Gwilliam (2014), Alzeban & Sawan (2013); Baltaci & Yilmaz (2006) ; Chang et al., (2019)
Independent Variable Independence	5-point Likert Scale with eight questions	Alzeban & Gwilliam (2014) ; Usang & Salim (2016)

3.2 Data Collection and Sampling

The purposive sampling method was deployed in this study, whereby the sample selection required the process of identifying the right representatives of the population and further filtering the selected sample to ascertain that the individuals did fit the profile needed. The target population was the Internal Audit Department in the Ministry of Finance, Putrajaya. The Ministry of Finance has been listed as one of the strategic partners with a huge role stipulated in the National Anti-Corruption Plan 2019, thus serving as a high indicator of internal audit efficacy in public sector organisations. The criterion of inclusion refers to all accountants in the department, whereas exclusion was applied for administrative staff, i.e., office secretaries and information technology officers. The sample size of 127 internal auditors who participated in this study is in line with Sekaran and Bougie's table that outlines a minimum sample size of 92 for the studied population. Questionnaires were distributed via email to the department in order to ensure collection of data within a short period of time. The respondents were given the chance to ask for any clarification due to doubts regarding the questionnaire items. The questionnaire is composed of five sections (Sections A until E), as listed in Table 2:

Table 2: Summary of Questionnaire Items

Section	Number of Questions
Section A: Demographic and Information	7
Section B: Relationship with External Auditor	9
Section C: Management Support	6
Section D: Independence	8
Section E: Internal Audit Efficacy	14

In the questionnaire, close-ended questions were deployed in Section A while 5-point Likert scale (i.e., 5=Strongly Agree, 4=Agree, 3=Neutral, 2=Disagree, and 1=Strongly Disagree) was used for Sections B until E, upon adaptation from (Alzeban & Gwilliam, 2014). The adapted items included certain modifications made to suit the study context.

4. Findings

4.1 Profile of Respondents

The questionnaire designed for this present study was disseminated to the internal audit department located in the Ministry of Finance, Malaysia. Out of the 127 respondents, 103 (63%) of them were female. Next, those holding the position of Assistant Accountant were made up of 63% (n = 103), whereas 73% of the sampled population were employed as internal auditors for at least 1 to 5 years. Although a majority of them (50.5%) held at least a bachelor's degree, a bigger percentage of the respondents were not equipped with professional qualification (69.9%).

Table 3: Demographic Profile on Gender, Age, Position and Working Experience as Internal Auditor

Demographic Characteristics		Frequency	Percentage
Gender	Male	40	38.8
	Female	63	61.2
Age	21-30 years	9	8.7
	31-40 years	63	61.2
	41-50 years	28	27.2
	51-60 years	3	2.9
Position	Assistant Accountant	63	61.2
	Assistant Director	15	14.6
	Senior Assistant Director	12	11.7
	Principal Assistant Director	5	4.9
	Senior Principal Assistant Director	3	2.9
	Deputy Director	4	3.9
	Director	1	1.0
Working Experience as Internal Auditor	<1 year	3	2.91
	1-5 years	76	73.79
	6-10 years	15	14.56
	>10 years	9	8.74
Education	SPM and below	1	1.0
	Sijil Simpan Kira-kira	1	1.0
	Diploma/STPM	42	40.8
	Bachelor Degree	52	50.5
	Master's Degree	6	5.8
	Other	1	1.0
Professional Qualification	No	72	69.9
	Yes	31	30.1

4.2 Descriptive Analysis and Mean Scores

This section presents the perceptions of the respondents towards factors that could affect internal audit efficacy in public sector organisations. This element was measured using the 5-point Likert scale with the following range: 1 = Strongly Disagree, 2 = Disagree, 3 = Neutral, 4 = Agree, and 5= Strongly Agree.

Based on the perception of relationship with external auditors, the respondents agreed that *effective co-operation between internal and external audits is promoted by the senior management* (mean = 3.77) and that *external and internal auditors discuss the issue that they have mutual interest in* (mean=3.55). However, the respondents were "not sure" regarding most of the other statements. On average, the mean score for all the nine statements was 3.34, which implied that the level of perception among the respondents regarding their relationship with external auditors was neutral. This was manifested in their responses of "not sure" when considering the elements of the relationship with external auditors.

As for management support that comprised of six statements, the resulting mean score of 4.01 signified agreement among the respondents, on average, with the management support. Management support includes the involvement of those in managerial position in the process of audit plan, preparation of reports, and provision of reasonable response to the internal auditors. Overall, the respondents agreed with the statements related to management support for internal auditors, which resulted in high mean scores for this dimension.

In light of independence, the respondents agreed that direct reporting to the top management enabled the internal auditors to perform their duties efficiently (mean=4.06). On the contrary, the respondents had least agreed that *internal audit staff is independent in performing their duties* (mean=3.61) and that *unrestricted access is given to internal audit staff for all departments and staff* (mean=3.58). The overall mean score of 3.79 indicates the respondents' agreement regarding the independence dimension on average.

For internal audit efficacy, the overall mean score of 4.07 showed that the respondents agreed on internal audit efficacy on average. Meanwhile, the two other statements yielded mean scores less than 4, but showed agreement: 1) *The action taken to implement the recommendations of the internal audit report is being carried out timely* (mean=3.97) and 2) *The adequacy and efficacy of the organisational control systems are determined by internal audit* (mean=3.96). Collectively, the respondents displayed overall agreement for the statements related to the dimension of internal audit efficacy.

The Cronbach's alpha coefficients for both dependent and independent variables exceeded 0.80, implying that the statements incorporated could reliably measure the respondents' perceptions towards the four related dimensions in public sector organisations, namely relationship with external auditor, management support, independence, and internal audit efficacy. In the context of this study, all skewness and kurtosis values fell within the range of -3 to 3, indicating normal distribution for the mean scores of all the four dimensions (i.e., relationship with external auditor, management support, independence, and internal audit efficacy). Following these findings, the parametric statistical tools were employed in this study.

4.2 Correlation Analysis

A summary of the statistics generated following the correlation analyses is presented in Table 4 and the related discussion is given next.

Table 4: Summary of Correlation Analysis Statistics for Relationship with External Auditor, Management Support, Independence, and Internal Audit Efficacy

Variable	Internal Audit Efficacy	
	Pearson Coefficient of Correlation (r)	p-value
Relationship with external auditor	0.302	0.002**
Management Support	0.677	0.000**
Independence	0.553	0.000**

** Significant at 0.01

Relationship with external auditor (r = 0.302, p<0.01) displayed a positive but weak correlation with internal audit efficacy. Therefore, increase in the relationship which enhances internal audit efficacy at a low extent, and vice versa. The outcomes revealed a moderately positive correlation between management support and independence with internal audit efficacy. In particular, higher management support (r = 0.677, p<0.01) and independence (r = 0.553, p<0.01) increase the internal audit efficacy to a moderate extent, and vice versa.

4.3 Multiple Regression Analysis

Regression analysis is commonly used to evaluate the linear relationship between independent and dependent variables. Meanwhile, multiple regression denotes an analysis that allows more than one independent variable to forecast a single dependent variable, thereby testing the effect of independent variables on the dependent variable. This analysis was performed in this present study to achieve the research objective of determining the factors that influenced internal audit efficacy in the Malaysian public sector. The formula for the multiple regression test is expressed in the following:

Yi = b0 + b1x1i + b2x2i + b3x3i + ei

Where:

Yi = Internal Audit Efficacy b0 = Constant
b1x1i = Relationship with External Auditor
b2x2i = Management Support
b3x3i = Independence
ei = Error

The Pearson correlation coefficient is deployed to determine the presence of key relationships between independent and dependent variables. The objective of this analysis is to investigate if there is any relationship between variables and to discover the existence of multicollinearity issue. Multicollinearity is a situation where two or more variables are highly correlated. The accuracy of the multi-regression test result may be affected as it indicates a bias relationship between two variables when there is high degree of multicollinearity. Turning to this present study, all the independent variables were positively but weakly correlated with external auditor, but a display of moderately positive link was noted for the other two variables (i.e., management support and independence).

This section discusses the manner in which multiple regression was performed to further investigate the linear relationship between a dependent variable and two or more independent variables. The objective of multiple linear regression is to develop a model capable of reflecting the relationship between independent and dependent variables. Hence, the tool has been applied for predictive analysis in articulating the relationship between a continuous dependent variable and two or more independent variables in detail. In this present study, a regression equation was estimated by implementing internal audit efficacy as the dependent variable, whereas the independent variables were denoted by relationship with external auditor, management support, and independence. Table 5 presents a summary of the statistics generated based on the estimated regression equation.

Table 5: Estimated Regression Equation

Variable	Coefficient	*t*-value	*p*-value	*VIF*
Relationship with external auditor	0.136	1.743	0.084	1.177
Management Support	0.572	5.824	0.000**	1.874
Independence	0.111	1.070	0.287	2.093
F		31.712		
R^2		0.490		

** Significant at 0.01

Referring to Table 5, the individual regression coefficients revealed that management support yielded the only statistically significant coefficient at 0.01 (p<0.01), hence in support of H3. On the contrary, relationship with external auditor and independence was insignificant, rendering H2 and H4 are not supported. Alternatively, the coefficient of management support (0.572) indicated that increment in management support increases internal audit efficacy, whereas changes in the relationship with external auditor and independence posed no impact on the latter variable.

The first hypothesis predicts the presence of a significant relationship of internal audit efficacy with internal and external auditors. This was further substantiated by the positive but insignificant correlation between these variables, as reflected in the study outcomes.

Therefore, one may presume that the relationship with an external auditor does not impact the efficacy of internal audit carried out in an organisation. Similarly, Usang (2014); Endaya and Hanifah (2013) ; Usang and Salim (2016) reported that the relationship with external auditor did not influence the functional internal audit performance, thus supporting the findings of this present study.

The second hypothesis denotes a significantly positive relationship between management support and internal audit efficacy, as signified in the study outcomes. The finding is consistent with prior reported outcomes, thus justifying the relationship between management support and audit efficacy (sCohen & Sayag, 2010; Alzeban & Gwilliam, 2014; Chang et al., 2019). This suggests that robust support from the management can improve internal audit efficacy in public sector organisations. However, as the position of 38.8% of respondents are in managerial level, this result may subject to slight prejudice of the respondents.

Next, the results depicting the relationship between independence and internal audit efficacy generated a positive but insignificant relationship, thereby indicating that internal auditor independence posed no impact on its efficacy. Similarly, Badu and Kuutol (2013) found an insignificant relationship between internal auditor independence and internal audit efficacy across public sector organisations in Ghana. Meanwhile, Poltak et al., (2019) suggested that auditor independence may affect their efficacy, which is not necessarily positive; only when certain conditions are satisfactorily met. Such a notion is supported by(Đorđević & Đukić, 2017).

5.0 CONCLUSION

5.1 Key findings and contributions

The primary goal of this study is to ascertain the impact of the relationship between internal and external auditors on internal audit efficacy. The hypothesis predicted a correlation between such elements, in which the result had failed to support the projected hypothesis. This was observed in line with the “almost neutral” score provided by most of the respondents pertaining to their perceptions towards internal auditor relationship with external auditors. It also demonstrated a lack of collaboration and communication between both parties in the public sector organisations. Nevertheless, the higher-ranged scores obtained signified that such a relationship between these entities was promoted by the top management, but the lowest mean score was related with work collaboration between them. These findings highlighted the lack of substantial association of the relationship between internal and external auditors with perceived internal audit efficacy among the respondents. As a result, the connection between internal and external auditors had no effect on the efficacy of internal audit in public sector organisations.

The second objective is to determine the effect of management support on internal audit efficacy across public sector organisations. The results of the analysis validated the premise that there was a positive and substantial relationship between management support and internal audit efficacy. The high mean score was specifically tied to engagement and cooperation of the top management in audit work, thus achieving the second aim. It is reasonable to argue that higher management support improves internal audit performance in public sector organisations due to their inevitable influence.

Next, the third goal is to determine the influence of organisational auditor independence on its efficacy in public sector organisations, with a positive relationship emerged for these factors. However, the outcomes failed to support the hypothesis due to low mean scores observed by respondents regarding independence among internal auditors in executing their duties. This insignificant link between independence and internal audit efficacy leads to the rejection of the third hypothesis. Thus, independence had no influence on internal audit efficacy in public sector organisations.

This study contributes to the body of literature and bridges some academic gaps identified among studies that assessed internal audit efficacy, specifically in the context of

Malaysian public sector organisations. This was compounded by the fact that the last study was carried out in year 2014, further justifying the shift in results to reflect the present scenario. This study supports previous theories of internal audit effectiveness and act as evidence that the core value and factor of internal audit effectiveness does not significantly change with time. Regardless, studies on internal audit in the Malaysian public sector organisations seem to remain lacking, with countless gaps that demand further evaluation in contrast with their private counterparts.

On a more practical note, the outcomes of this present study facilitate in viewing the factors of internal audit efficacy from a new perspective, thus offering a clearer scenario faced by the present internal auditors. Such valuable information can be used by the public sector organisations to enhance their internal audit efficacy; particularly in light of management support. For professional bodies, i.e., IIA and MIA, the outcomes of this study contribute to the idea of policy development pertaining to the responsibilities of internal auditors and an organisation alike as a whole to ensure internal audit efficacy. This may aid in setting up standard regulations and law enforcement that place focus on factors that can improve internal audit efficacy. This study amplifies the importance of the top management in assisting internal auditors towards achieving organisational goals. To this end, management involvement, cooperation, and a larger budget for internal audit may further improve its efficacy in the public sector organisations.

5.2 Limitations

The scope of this research work is limited to the internal audit department of the Ministry of Finance, Malaysia, rendering the sample non-generalizable to the entire population of the public sector organisations. Furthermore, the number of participants is substantially limited, whereby a bigger number of participants would inevitably contribute to a more specific study and resulting outcomes. The failure to achieve the first and third objectives pertaining to the relationship with external auditor and independence without any influence on internal audit efficacy is ascribed to the small number of respondents, thus failing to reflect accurate results.

Consequently, suggestions for future research endeavour are plenty. They include ascertaining a higher coverage of respondents involved in future studies by involving internal auditors from other ministries, state governments, and local authorities. The involvement of comparable counterparts from other public sector organisations may further improve the generalisability of findings accordingly, as varying entities possess dissimilar cultures and perceptions towards internal audit efficacy. Additionally, the deployment of qualitative approach should be considered in future work to complement the findings reported in this present study, possibly generating better insights regarding factors that influence internal audit efficacy in public sector organisations.

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