

Issues in
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**SETTING
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Internal Audit Effectiveness in Malaysian Public Sector Organisations

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INTRODUCTION

Over the past several years, internal audits in public sector organisations in Malaysia has become a subject of interest. Recent news of financial misappropriations and fraudulent activities involving several public sector organisations like Port Klang Free Zone (PKFZ), National Feedlot Corporations, and the Ministry of Youth and Sport have raised doubt as to whether internal audits within public sector organisations are effective in performing their roles and responsibilities. Moreover, this doubt implies that more needs to be done in internal audit to continuously improve its work in monitoring compliance with internal control and financial probity. An effective internal audit can be achieved when the internal audit gives good quality assurance based on the accuracy of information and management controls across the activities of the organisation (NAO, 2012). Therefore, it is crucial to understand the determinants of an effective internal audit.

Taking into consideration these high-profile scandals, this study aims to examine factors that influence the effectiveness of internal audit as a monitoring mechanism because the auditors are the party responsible for evaluating the operations of organisations. This study is significant as it not only extends the literature on determinants of internal audit effectiveness in public sector organisations but also provides useful input to these organisations by way of improving the effectiveness of their internal audit departments.

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This paper is presented in six sections. Section 2 provides the research framework and hypothesis development. This is followed by Section 3, which covers the research methodology. Section 4 provides the empirical results, and Section 5 discusses implications of the findings in relation to the theoretical framework. Lastly, Section 6 provides the conclusion and recommendations for future research.

INTERNAL AUDIT EFFECTIVENESS IN THE PUBLIC SECTOR

The literature in auditing has recognised the internal audit as an important monitoring mechanism in promoting public accountability. Other than performing its role in overseeing management’s use of public funds (Azham, 2011; Guruswamy, 2012), the internal audit provides value-added service by providing non-audit services (IIA, 2006, 2014; Mebratu, 2015) to the organisations. Internal auditing is an important factor for improving an organisation’s internal controls, governance and risk management by providing insight and recommendations based on assessments of organisation’s activities (Bebchuk & Jesse, 2004; Lenz & Hahn, 2015).

Findings from the previous research had linked the effectiveness of the internal auditor to effective management, internal control and governance of the organisations. According to Rahmatika (2014), the internal audit exercises a critical role in improving governance in organisations. In terms of accountability and management relationship, Saren and De Beelde (2006) found that internal audit played a pioneering role in the creation of a higher level of risk and control awareness in managing risk in the management system. Internal audit is a ‘comfort provider’ to the audit committee especially in its assurance role and its involvement in improving internal control (Baharud-din, Shokiyah & Serjana, 2013).

Review of prior studies shows that internal audit effectiveness can be measured from various perspectives. Van Gansberghe (2005) suggested that the number of recommendation implemented by the organisations can be an indicator of audit effectiveness. This is supported by Arena and Azzone (2009) who highlighted that the percentage of recommendations implemented by the auditee is the most appropriate measure of internal audit effectiveness. Other researches such as Cohen and Sayag (2010) argue that it is also possible to measure effectiveness by using proxies such as by reference to the quality of the function as perceived by auditees and the value-added activities offered by internal audit. Internal audit

effectiveness in this study is measured using a proxy that is based on the value added activities offered by internal audit. There are two reasons for this decision. First, this study has adopted the questionnaire by Cohen and Sayag (2010) and aims to compliment his findings in the Malaysian context. Second, compliance audit is the most audit services implemented in Malaysian public organisations. Therefore, the shifting from compliance audit towards other types of audit would reflect the internal audit on its effectiveness.

RESEARCH FRAMEWORK AND HYPOTHESES DEVELOPMENT

The framework for this study is shown in Figure 1. In this model, it is posited that management support, management perceptions towards internal audit functions, internal audit independence, competency internal audit staff and the existence of approved internal audit charter would influence internal audit effectiveness in the public sector organisations.

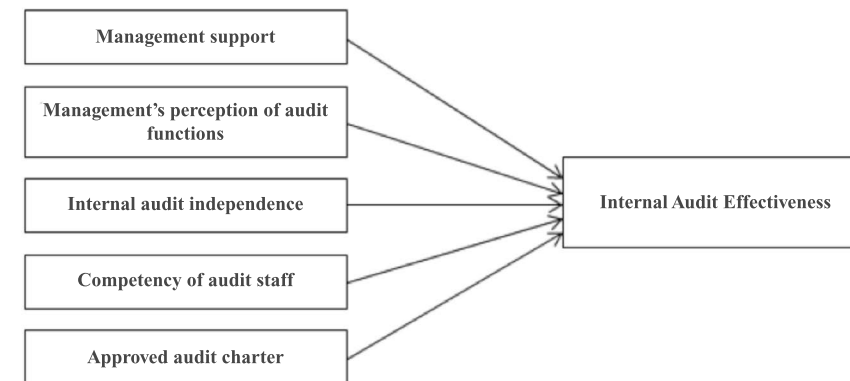


Figure 1 The conceptual framework

Management Support

The Institute of Internal Auditors (IIA, 2012) in its guidelines states that internal audit department must acquire cooperation from management, staff and personnel in charged with governance in order to be effective. According to Alzeban and William (2014), management support is expressed in terms of supporting the auditing process by fulfilling the necessary human and financial resources, transport if required, providing training, introducing auditors with new technology and procedures, and other facilities that facilitate the internal auditing tasks. Similarly, Cohen and Sayag (2010) suggested that, internal audit department needs to have enough resources to appoint the right number of high-quality staff, provide latest training and development, obtaining and maintaining physical resources such as computers and so on. A number of empirical studies have found top management support to be a key factor in its improvement such as by Ahmad, Othman, Othman and Jusoff (2009), Alzeban and Gwilliam (2014) and George, Theofanis and Konstantinos (2015). Thus, the following hypothesis was developed:

H1: *The management support has a positive influence the internal audit effectiveness in the public sector organisations.*

Management's Perception of Internal Audit Functions

Internal audit is always being regarded as a management tool; the eyes and ears of management. Positive management would view internal audit as a value added activity rather than as 'fault finders'. However, if there is no understanding, this could have a bad perception to the internal audit and further on will having problem in achieving the objective (Hailemariam, 2014). This reflects in the management attitude towards the Internal Auditors and internal audit functions. When employees at all levels perceive that the top management assigns importance to the function of internal audit, they will cooperate and support these processes (Cohen & Sayag, 2010). Thus, the following hypothesis was developed:

H2: *The management perceptions of internal audit functions has a positive influence the internal audit effectiveness in the public sector organisations.*

Internal Audit Independence

An auditor's independence is considered a key factor in internal audit effectiveness. Absence of independence means that internal auditors cannot do their work without disruption by management. According to the Institute of Internal Auditors (IIA) (2012), by having organisational independence, auditors are able to come out with valid and objective work as well as reliable results. The International Organisation of Supreme Audit Institutions (INTOSAI), in GOV 9140, stated that the audit activity must be positioned in such a way that it may obtain cooperation from management and staff of the program or entity being audited, and have free, unrestricted access to all functions, records, property, and personnel – including those charged with governance. The IIA (2010) Practice Advisory suggests that independence can be gained by different means, such as reporting to an audit committee, avoiding conflicts of interest, direct interaction with the board and senior management, unrestricted access to records, and not performing non-audit work.

Baharud-din et al. (2014) found that internal audit independence strongly influenced the effectiveness of internal audit. Similar results were obtained in a study by Ahmad et al (2009) and Salehi (2015), who concluded that independence will lead to effectiveness of internal audit. Thus, the following hypothesis was developed:

H3: *Internal audit office independence has a positive influence on internal audit effectiveness in public sector organisations.*

Competency of Internal Audit Staff

The IIA's Code of Ethics requires that internal auditors possess or develop the knowledge, skills, and other competencies needed to perform their responsibilities. Effective auditing in organisations is specified by an auditor's competency because the audit depends on auditors' potential to carry out a systematic and disciplined audit approach to analyse and enhance the effectiveness of the organisation's activities, financial management, and governance processes (Baharud-din et. al., 2014). Findings by Mebratu (2015) have shown that the presence of more competent staff in an organisation would improve internal control functions and lead to better governance in the public sector. Moreover, with competency, these staff would be able to become independent, provide unbiased assessments

on the appropriateness of the organisation's structure, and also perform the tasks effectively (IIA, 2010; 2014). Many previous empirical studies (e.g. Badarud-din, 2014; Manijegar, and Kirupanangtan, 2014; Shamsuddin, Mubin, Zain, Akil and Aziz, 2015; Soh and Bennie, 2011) found that internal audit staff with appropriate qualifications and competencies contributes to internal audit effectiveness. Thus, the following hypothesis was developed:

H4: *The competency of internal audit staff has a positive influence on internal audit effectiveness in public sector organisations.*

The Approved Internal Audit Charter

According to IIA (2010), for internal auditing to function properly, management should have established policies, processes, and practices. The functions of the internal audit are formed by authority of the head of the organisation in the public sector; it should be defined in an internal audit charter and then be approved by the audit committee. As stated by Guruswamy (2012), the scope of internal audit includes financial and operational activities. Other than financial report information, an audit charter includes identifying services performed by internal auditors. Unlimited access to all records, personnel, and physical properties of the organisation should be included in the audit charter of the internal audit department and receive higher management agreement (Cohen & Sayag, 2010). Thus, the following hypothesis was developed:

H5: *The availability of an approved internal audit charter has a positive influence on the internal audit's effectiveness in public sector organisations.*

METHODOLOGY

Data Collection

This study used a questionnaire survey to gather quantitative data for the purpose of hypotheses testing. An online survey was used for this study due to wide dispersion of respondents and the possibility of fast response from respondents. An email with the link to the questionnaire set was sent to 280 internal auditors in public sector organisations involving ministries, statutory bodies, and state agencies located in Klang Valley. A total of 122 responses were received during the two-month data collection period which, February to March 2016. Follow-up email sent to internal auditors did not yield further questionnaires. This represents a response rate of approximately 43.6 percent. However, due to some major data missing, the total usable questionnaires for the study were down to 118.

Measurement

The questionnaire sought to find out the factors of an effective internal audit in the public sector organisations via 24 items along a six-point Likert-type scale from 1=Strongly disagree to 6=Strongly agree. Items for the factors were adopted from the work of Cohen and Sayag (2010). The questionnaire consisted of two parts; the first part solicited the demographic profiles of respondents, and the second part was about the effectiveness of internal audit and its determinants.

Data Analysis

Data was analysed using SPSS 14.0. In order to assess the reliability and consistency of the instrument, Cronbach's Alpha (α) analysis was conducted. To determine the relationship among variables and to test the research hypotheses correlation, regression analysis was applied. Also, it was ensured that the ordinary least squares (OLS) assumptions of linear regression were met.

Model

Ordinary least squares (OLS) linear regression was performed to estimate the magnitude of the effect of the five factors identified above (the independent variables) on internal audit effectiveness, IAE (the dependent variable). The basic OLS regression model is:

$$IAE = \alpha + \beta_1 MS + \beta_2 MP + \beta_3 IAI + \beta_4 CIAS + \beta_5 AIAC + e_i$$

Where:

- IAE = The effectiveness of internal audit in the public sector offices,
- MS = Management’s support,
- MP = Management’s perception of IA’s value,
- IAI = Internal audit independence,
- CIAS = Competency of internal audit staff,
- AIAC = The existence of approved internal audit charter.
- α = is a constant, represents the effectiveness of internal audit when every independent variable is zero.
- β_{1-5} = is the coefficient, in which every marginal change in variables on internal auditor’s effectiveness affects correspondingly.
- e_i = the error term

The next section presents a discussion of the results pertaining to the research issues.

RESULTS

Respondent Demographic Profile

Table 1 provides a demographic profile of the 118 respondents, in which majority were females (63.5%) and males represented only 36.4 percent. The respondents were spread across different age groups, with majority of them in the range 30-39 years (40.7%).

Table 1: Respondent demographic profile

DEMOGRAPHIC QUESTIONS		RESPONSES	
		FREQUENCY	PERCENTAGE (%)
Gender	Male	43	36.4
	Female	75	63.5
	Total	118	100
Age	20 to 29	31	26.3
	30 to 39	48	40.7
	40 to 49	27	22.8
	Above 50	12	10.2
	Total	118	100
Level of Education	Diploma	24	20.3
	Degree	76	64.4
	Master	15	12.8
	Other	3	2.5
Total	118	100	
Professional Certification	Certified Internal Auditor (CIA)	7	5.9
	Certified Public Accountant (CPA)	3	2.5
	Other certification	13	11.0
	No professional certification	95	80.6
Total	118	100	
Experiences working as Internal Audit	Less than 5 years	42	35.6
	6 to 10 years	57	48.3
	11 to 20 years	13	11.0
	Above 20 years	6	5.1
Total	118	100	
Presence of an audit committee	Yes	116	98.3
	No	2	1.70
	Total	118	100
Sector	Ministries	103	87.3
	Statutory Bodies	14	11.9
	Other	1	0.8
	Total	118	100

In terms of qualification, the majority of them held a degree (64.4%), followed by diploma (20.3%), master (12.8%), and others (2.5%). Most had no professional certification (80.6%), while the remaining have professional certification either in CIA, CPA or ACCA. Approximately half (48.3%) have experience working as internal auditor for six to ten years. Of the remaining, 35.6 percent have experience working as internal auditor for less than five years. Eleven percent had from 11 to 20 years' experience, and only 5.1 percent had experience above 20 years. Lastly, most of the respondents represented the ministries (87.3%), while the remaining were from statutory bodies (11.9%) and others (0.8%).

Reliability Results

Table 2 shows the value of Cronbach's Alpha (α), which measures the internal reliability of the scales used in the study. The result shows that all variables are above 0.70, ranging from 0.732 to 0.890. The Table shows that the response generated for all variables used in this study were deemed to be reliable enough for data analysis, as the higher the Alpha is, the more reliable the test is, as indicated by George Mallery (2001) and Nunnally (1978).

Table 2 Reliability results

Variables	Cronbach's Alpha	No. of items
Management Support	0.732	5
Management's Perception of Internal Audit Functions	0.886	5
Internal Auditor's Independence	0.884	5
Competency of Internal Auditor	0.832	5
Approved Internal Audit Charter	0.890	4

Regression Results

The hypotheses were tested using linear regression analysis for the purpose of examining relationships between management support, management perceptions, organisational independence, adequate and competent internal audit staff, and the existence of approved internal audit charters on the direct effect of internal audit effectiveness, measured in terms of internal audit ability to identify the noncompliance activities and by their value-added contributions to the public sector organisations. The results are presented in Table 3.

Table 3 Regression results

Dependent variable	Independent variable	Standard coefficient	t-value	R ²
Internal Audit Effectiveness	Management Support	.274**	2.932	0.651
	Managements' Perception of Internal Audit Functions	.187	1.924	
	Internal Auditor's Independence	.242**	2.315	
	Competency of Internal Audit staff	.289**	2.904	
	Approved Internal Audit Charter	.194**	2.135	

** Significant at $p < 0.05$

Regression analysis results for the framework of the study reveal that 65.1 percent of the dependent variable is effected by independent variables, whereas the remaining 34.9 percent is represented by other independent variables that is mentioned in the study.

The regression coefficients presented in Table 3 indicate that management support, internal auditor's independence, competency of internal audit staff, and approved internal audit charter have a significant and positive effect on internal audit effectiveness. First, hypothesis H₁ posits that management support has a positive influence on the internal audit effectiveness was supported at $p < 0.05$. The beta obtained was 0.274. Next, Hypothesis H₃ has a positive regression coefficient of .242 at the $p < 0.05$, suggesting a positive relationship between internal audit independence and internal audit effectiveness. Then, competency of the internal auditor (H₄) has a positive regression coefficient of .289, suggesting a positive relationship between competency and internal audit effectiveness. Lastly, hypothesis H₅ has a positive regression coefficient of .194, suggesting that an internal audit charter positively influences internal audit effectiveness. However, hypothesis H₂, which proposes that management perceptions of internal audit functions have a positive influence on the internal audit effectiveness, was not supported at the $p < 0.05$ level. The beta obtained was .187.

DISCUSSION

The paper's objective is to examine the possible association between management support, management perceptions of internal audit functions, internal audit independence, competency of internal audit staff, and the existence of an approved internal audit charter with the internal audit effectiveness in public sector organisations. A total of five hypotheses are presented, and the results of this study provide a number of insights.

Management support is positively and significantly related to the outcome of the audit, suggesting that this variable is an essential factor for internal audit effectiveness. This result matches findings observed by Ahmad et al. (2009), Cohen and Sayag (2010), and Shamsuddin et al. (2014).

Internal audit independence is also important as it is positively and significantly associated with the effectiveness of the internal audit. This is consistent with the findings of Rahmatika (2014) and Shamsuddin et al. (2014), who suggest that the internal audit department should have maximum independence from the ministry they work in.

Concerning the relationship between competency of internal audit staff and internal audit effectiveness, it can be argued that competency of internal audit staff is the most important determinant affecting internal audit effectiveness according to the present research. Quite similar were the findings of Shamsuddin et al. (2014, 2015) and Alzeban and Gwilliam (2014), who argue that a competent internal audit staff is the most influential factor.

Regarding the role of an approved audit charter, the results of this study enhance previously related studies such as Mihret and Yismaw (2007), Cohen and Sayag (2010), and Alzeban and Gwilliam (2014), which show that an audit charter is also positively associated with internal audit effectiveness at almost the same values.

In conclusion, management support, internal audit independence, a competent internal audit staff, and an approved internal audit charter have a significant influence on the internal audit effectiveness in public sector organisations. However, management's perception has no significant influence on internal audit effectiveness. This implies that management settings and auditee attributes do have a strong impact on internal audit effectiveness.

CONCLUSION

Although this study was only conducted on 122 internal audit staff, the results confirm that organisational setting (management support and the existence of an approved internal audit charter) and internal auditor attributes (internal audit independence and competent internal audit staff) are important factors for internal audit effectiveness in public sector organisations. Taken together, these findings seem to suggest that full commitment and support from top management of public sector organisations are highly recommended. This can be done by allowing the internal audit staff to perform more value-added audit functions as well as making sure the internal audit has a clear audit charter. Other than that, support can also exist in terms of financial resources, which can allow the internal audit staff to upgrade their existing skills via training and professional certification.

The knowledge attained from the findings also demonstrate that further research about the effectiveness of internal audit is necessary for public sector organisations. As such, future studies should be aimed at examining the other portion of independent variables which are not examined in the present study. These factors include quality of work performed, size of internal audit department, level of interaction with external auditors, and audit committee.

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