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Internal Audit and Risk Management Practices among Public Universities in Malaysia

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ABSTRACT

This paper aims to explore the level of risk management practices and the role of internal audit in such practices in Malaysian public universities. It is one of the few studies on risk management in emerging economies context. It provides insights on changes in internal audit and risk management practices in public universities in response to external and internal forces. In gathering the perceptions of internal auditors on the subject matter studied, the questionnaire survey was distributed by hand to internal auditors of twenty Malaysian public universities. Due to the exploratory nature of the study, the perceptions of internal auditors were analysed using descriptive statistical analysis. The findings show that all Malaysian public universities have an internal audit unit, which is in line with the requirement of Treasury Circular Nos. 9/2004 and PS 3.1/2013. Two-thirds of the respondents are involved in evaluating the effectiveness of the risk management process. An older public universities already achieved an advanced level with an established risk management practices. Meanwhile, majority of the newer public universities still have a basic or developing level of risk management practices.

Keywords: Internal audit, risk management, public universities, Malaysia

INTRODUCTION

The education system in Malaysian public universities (PUs) is overseen by the Ministry of Education (MOE), and their operations are mainly funded by the Malaysian government.According to MOE (2015), about 90 percent of the annual expenditure of PUs is funded by the government and the amount of funding is increasing at a rate of 14 percent per annum. However, recent financial crisis and competitive global market have increased the burden on the overall government budget, which has affected the financial allocation to the education sector. This has resulted in greater control being exerted by PUs over their expenditure of the allocated funding and budget cuts across all agencies under MOE. Therefore, the financial sustainability of PUs is one of the critical issues that received attention in the recent Malaysian Education Blueprint 2015–2025 (Higher Education) (MOE, 2015).

The appropriate sustainable funding model is critical for PUs, but this creates a new challenges to them. In particular, PUs need to determine the strategic direction in order to balance up between teaching, research and innovation activities. Besides gaining a greater level of financial independence than before, PUs are also involves with the government's effort to decentralise its governance system. For instance, PUs have been granted greater autonomy in decision making, generating their own funds by diversifying their financial resources, which simultaneously reduces reliance on government funding. However, any new business strategy adopted by PUs will increase their exposure to risk of uncertainty. This is because, PUs are also competing against 700 other public colleges and private PUs in the country at the same time (MOE, 2015).

The evidence revealed an increasing trend of malpractice among the PUs between 2010 and 2012. As reported by the National Audit Department (NAD), four cases were identified in 2010, five in 2011 and six in 2012 (NAD 2010, 2011, 2012). Among the issues highlighted in the reports includes, the mismanagement and delay of construction projects and the mismanagement of the recruitment of lecturers under the scholarship scheme. Furthermore, the Ministry of Higher Education has reported the occurrence of repeated cases of mismanagement, misappropriation, lavish spendingand wastage in PUs' financial management practices (KPT, 2011). For example, there

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have been failures in the project implementation in PUs due to poor financial management and inadequate progress monitoring as per required specifications as well as misuse of funds. All of these have resulted to a significant loss of public funds. Such failures are keep increasing and this trend has raised their concerns about the identification of the potential risks that may tarnish their image and reputation in future

The abovementioned issues underscore the importance of ensuring accountability and transparency in PUs. Accountability and transparency are crucial in the PUs because they are among the public organisations which utilising the public funds. The general public and other stakeholders expect good practice from them especially on integrity in delivering their educational services. Therefore, prior evidence shows there is a growing interest among PUs in finding ways to promote effective governance and good financial management. Higher learning institutions, particularly PUs, are striving to improve accountability and transparency in their services, operations and financial management through effective risk management practices, which they believe could reduce the occurrence of malpractice and ultimately enhance the public trust. By doing this, possible risks could be identified earlier and preventive measures could be taken to mitigate or avoid problems altogether. Hence, the establishment of an internal audit function is required in order to ensure the effectiveness of risk management practices in PUs (Zakaria *et al.*, 2006).

However, prior studies have found that the internal audit function in PUs are mainly focuses on operational audits, compliance audits and the assessment of internal control (Azad, 1994; Zakaria *et al.*, 2006; Arena, 2013). Others have investigated the factors that affect the effectiveness of internal audit in PUs (Mihret & Yismaw, 2007) and the impact of internal audit practices on risk management in PUs (Vijayakumar and Nagaraja, 2012). There is only limited studies have examined the implementation of risk management in PUs (Christopher & Sarens, 2015, 2017; Verdina, 2011). Therefore, Schmidt and Gunther (2016) suggested thatin-depth study on this area is highly recommended, especially within the context of emerging economies.

In light of the above, the present study is significant because it extends the scant literature on the level of risk management practices and the role of internal audit in risk management practices in PUs. It contributes to filling a gap in this area by looking at the development of risk management and internal audit practices in the Malaysian public sector. Specifically, it aims to examine the level of risk management practices in PUs in response to changes in the external and internal environments of the education sector. Furthermore, the emergence of risk management practices recently has changed the scope of audit work to cover beyond the financial sphere. For instance, internal auditor need to review the risks related to the strategic initiatives besides the operational activities of organisations (Arena & Jeppesen, 2015). Indeed, internal audit and risk management practices are now quite varied (Abuazza *et al.*, 2015; Arena & Jeppesen, 2015) and as in the case of South Africa, these activities are still in infancy stage among public sector organisations (Coetze, 2016). Hence, the objectives of the present study are twofold. The first objective is to examine the current level of risk management practices in PUs. The second objective is to assess the role of internal audit in risk management practices in PUs. This is important as it provides useful input for the Malaysian government in enhancing internal audit practices in the public sector. At broader level, the findings could provide useful insights for the Malaysian Treasury and Auditor General's Office in improving the policies on risk management practices and defining the roles of internal audit in public organisation.

The remainder of this paper is organised as follows: first, the development of public sector auditing in Malaysia is briefly explained and then the phases of risk management and internal audit practices in the public sector and in PUs is discussed. Next, the research methodology is explained and followed by the findings and discussion of the results. In the final section, recommendations are made specifically to improve the risk management and internal audit practices in Malaysian PUs.

PUBLIC SECTOR AUDITING IN MALAYSIA

Public sector auditing is an avenue for observing and verifying the accountability and transparency of the publicsector's organisation in managing public funds. This is to ensure that there is no misappropriation of public funds and the funds are used in an effective, efficient and economical way. The ministries, departments and agencies of Malaysian government are subject to be audited by external and internal auditors. The external audit function is performed by the NAD under the authority and responsibilities of the Auditor General (AG), who is appointed by Articles 106 and 107 of the Federal Constitution and Section 6 of the Audit Act 1957. Under this constitution the AG has the power to conduct an inquiry, an examination and audit of government entities.

Afterwards, the AG's reports are required by the Audit Act 1957 to be presented to parliament, at the federal level and to the state legislative assembly, at the state level. Once the AG's reports being tabled, the Public Accounts Committee will take charge with regards to prepare follow-up action on the AG's findings. In order to carry out this duty, the AG is supported by the audit committee, internal auditor and public sector accountant.

With regard to internal audit function, this is part of management control function that acts as a resource for top management in the public sector (Treasury Circular, 2013). The establishment of internal audit units in the public organisation is part of the government's efforts to strengthen the internal control and financial management system. This is in line with the latest developments of financial management in the public sector which aims to strengthen accountability and transparency in the managing the public funds. In fulfilling that aim, they will carry out independent assurance, consulting, suggest improvements and make recommendations to government agencies (Treasury Circular, 2013). There are two types of audit performed by the internal audit unit, the financial management audit and the performance audit (Treasury Circular, 2004). The financial management audit will evaluates financial records, internal control and financial management to ensure it complies with procedures and regulations, whilst the performance audit examines the effectiveness, efficiency and economy of the activities undertaken by the organisation in achieving the desired goals. According to Treasury Circular (2013), the roles and responsibilities of internal auditors should include:

1) ensuring that management achieves target objectives and that there is accountability in financial management;
2) ensuring that financial operations are in compliance with rules, laws and regulations;
3) ensuring the implementation of good internal control and information technology;
4) ensuring that the activities implemented are effective, efficient and economical;
5) reporting audit findings to the Secretary General of Ministries;
6) providing recommendations; and
7) preparing an annual internal audit plan and yearly internal audit report for the approval of the Secretary General

The Treasury in the Ministry of Finance of Malaysia is the main authority responsible for setting up, monitoring and coordinating the implementation of internal audit units among the ministries, departments and government agencies (Treasury Malaysia, 2013). At the same time, the Treasury also responsible in issuing general policy directions, providing audit guidelines, giving advice and guidance on the implementation of audits and evaluating the effectiveness of the internal audit function. The establishment of the internal audit unit was initially enforced through Treasury Circular No. 2 of 1979. This circular was then replaced by Treasury Circular No. 9 of 2004. In recent moves to centralise circulars, Treasury Circular PS 3.1/2013 further clarifies the enforcement of establishing an internal audit unit in all government agencies, departments and ministries. As stipulated in this latest Treasury Circular, the power and responsibilities of the internal audit unit are administratively determined by the respective head of each government agency (Treasury Circular, 2013). However, for the purpose of monitoring at the Treasury level, an approved audit plan must be submitted to them in annual basis. At the level of ministry, the findings highlighted in the internal audit reports need to be presented to the Secretary General of Ministries or the Director General of Agencies. This is because, the head of each agency is required by the latest circular to responsible for overseeing matters related to human resources, follow-up actions taken by management, and ensuring that free access is granted to the internal audit unit.

LITERATURE REVIEW

Risk management and internal audit practices in the public sector

The public sector organisation is more accountable and open to scrutiny by the public than is the private sector (Vincent, 1996). The earlier is entrusted by larger stakeholders in managing the public funds and should only spend them in accordance with the approved budget. Hence, there should be less involvement in risk-taking activities. However, recent developments in new public management which emphasise the adoption of best practices in private sector have changed the approach taken in managing the risk in the public sector environment (Vinnari & Skaerbaek, 2014). The establishment of risk management practices in the public sector tends to be initiated by either regulation (Hood & Smith, 2013; Wood, 2009), external forces (Crawford & Stein, 2004; Power, 2004) or internal forces (Vinnari & Skaerbaek, 2014). As stated by Power (2004), changes in the regulatory framework and the emergence of good governance might stimulate the need to establish risk management practices. In fact, risk management practices are critical due to the need for public entities to be accountable to a range of stakeholders and wider society (Crawford & Stein, 2004).

The impact of risk in the public sector adversely affects reputation and can lead to high litigation costs due to negligence or loss of public funds (Crawford & Stein, 2004; Power, 2004). This view is supported by Vinnari and Skaerbaek (2014), who found that the occurrence of fraud (i.e. embezzlement) as well as poor governance and control are factors that contribute to the existence of a risk management framework. In fact, Hood and Smith (2013) conclude that improper risk management may have detrimental effects on the effectiveness and efficiency of an organisation or even its survival. Hence, risk management is believed to be able to improve the performance of an organisation and to improve the delivery of good-quality services to the public. This is in line with the study conducted by Wood (2009), which revealed the importance of risk management in Birmingham City Council in the UK, where the risk management practices were largely driven by the introduction of Treasury guidance in 2001 by the Council.

The main reason for establishing risk management practices in public sector organisations is to enable them to achieve better performance delivery and to be more responsive to the public. In many countries, internal audit is the central function that acts as a monitoring mechanism to ensure that risk management practices are operating effectively (Zakaria *et al.,* 2007). As highlighted by Vijayakumar & Nagaraja (2012), internal audit has recently become an integral function that assists an organisation in ensuring the effectiveness of risk management, the achievement of target objectives, the safeguarding of assets and the enhancement of the reliability of information. In a similar vein, Badara and Saidin (2012) claimed that the raison d'être of internal audit is mainly to act as monitoring mechanism in which the unit oversees the efficiency of the financial and internal control procedures, which in turn should allow internal audit to assist the organisation to achieve its objectives. More recently, Vinnari and Skaerbaek (2014) concluded that internal audit could heighten risk and control awareness through the provision of training to both the users and employees of an organisation. Thus, the establishment of an internal audit unit is crucial in ensuring the effectiveness of several systems within an organisation (Zakaria *et al.*, 2007; Abuazza *et al.*, 2015).

Nevertheless, the study by Ahmad *et al.* (2009) and Abuazza *et al.* (2015) found that the internal audit unit in developing countries is often understaffed, lacked of competence and received inadequate management support. These factors may cause inaction to adequately respond to audit findings. Furthermore, internal audit involvement is mainly restricted to auditing financial matters in emerging economies (Abuazza *et al.*, 2015). Their role in the assessment of risk is considered an activity for the future (Ali *et al.*, 2007). In contrast, the study of internal auditor's role in one of developed countries by Goodwin (2004) found that that internal audit in Australia has a higher involvement in operational and strategic risk as compared to financial, environmental and other risks. However, this research found that most of the prior studies on risk management and internal audit practices have mainly been conducted in the context of local authorities (Zakaria *et al.*, 2007; Wood, 2009; Vinnari & Skaerbaek, 2015) and the implementation of risk management is mostly guided by the introduction of a risk policy (Wood, 2009; Vinnari & Skaerbaek, 2015). Although PUs have some similarities with local authorities in which they considered as not-for-profit entities and are highly subsidised by the government, the recent changes in the governance system and pressure to achieve financial sustainability may expose PUs to unexpected uncertainties and complexities. Moreover, in Malaysia PUs are governed by statutory bodies. Studies also illustrate that the extent of the risk management structure is varied; it can be fragmented or integrated and this largely depends on management support, internal audit resources, and organisational size and activities (Vinnari & Skaerbaek, 2014; Abuazza *et al.*, 2015; Coetze, 2016). The next section explains the current level of risk management and internal audit practices in PUs and introduces the questions addressed in the present study.

Risk management and internal audit practices in public universities

Traditionally, the role of internal audit in PUs has been mainly to evaluate the efficiency and effectiveness of the allocation of resources and their utilisation. However, the present challenges faced by PUs are very similar to those of many other private organisations. Declining resources, increasing operating costs and a competitive market are among the internal and external forces that place pressure on PUs to be more effective and efficient in managing their funds (Azad, 1994). For instance, higher education institutions are facing higher risk exposure from internationalisation initiatives (Beecher & Streitwieser, 2017) as well as the accreditation process and entrepreneurialism (Hommel *et al.*, 2016). Furthermore, colleges and universities are striving to improve transparency in their services, operations and finances for stakeholders and the public (Azad, 1994). In overcoming this issues, there is growing interest among PUs in gaining better control over their processes, activities and procedures through the establishment of risk management and internal audit (Protiviti, 2008). Hence, risk management is considered as a new paradigm for managing the risks faced by an organisation (Musig & Kunsrison, 2012).

Prior studies indicate that the structure of risk management in PUs very much depends on top management support, budget resources and leadership (Mihret & Yismaw, 2007; Arena, 2013). In particular, it has been argued that congruence between top management values and corporate culture would further encourage the adoption of risk management practices (Christopher & Sarens, 2015, 2017). In the case of Malaysia, Ariff *et al.* (2014) discovered that risk management in PUs is less developed, while the study by Christopher and Sarens (2015) in the context of Australia reported a mixed findings. The adoption of risk management is seen at the strategic level (i.e. decision makers and top management) but not at the operational level (i.e. process owners). This is in line with the study by Verdina (2011), which indicates that the risk management structure in PUs is mostly fragmented rather than integrated on a continuous or systematic basis. Thus, the identification and management of risks is often done for certain type of risks at different levels of the organisation. Overall, prior literature seems to indicate that the structure of risk management in PUs ranges from fragmented to integrated, and the implementation of such a structure still depends on a 'buy-in' from the leadership of the organisation. Hence the first question that the present study seeks to answer is:

RQ1: What is the level of risk management practices in PUs?

As highlighted earlier, sound risk management practices assist an organisation in achieving its target objectives and goals. According to the Institute of Internal Auditors ([IIA], 2013), risk management practices can be categorised into risk assessment, risk management and risk communication. Risk assessment is a systematic process of evaluating the potential risks that may be involved in any operational activity. Risk management involves a process of identifying procedures to mitigate or avoid the impact of potential risks. Risk communication refers to the dissemination of risk-related information as well as creation of risk awareness. Since the existence of an internal audit unit is crucial in ensuring the effectiveness of these risk management practices (Zakaria *et al.,* 2006; Abuazza *et al.*, 2015), the internal auditor should acts as a monitoring mechanism by providing assurance in respect of risk identification and the risk management process, and in providing that assurance, they need to recognize different stakeholders' expectations (Christopher & Sarens, 2015). Moreover, agency theory supports the idea that the internal auditor's role is to act as an oversight mechanism (Adams, 1994).

Studies show that the role of internal audit in risk management practices evolves over time. In the case of Malaysia, a quantitative study conducted by Zakaria *et al.* (2006) examined the formation of the internal audit department in Malaysian PUs. The researchers found that 88.2 percent of PUs had formed an internal audit department, while the remaining 11.8 percent of PUs had yet to establish an internal audit department because they themselves had just been established recently. As for private universities, the researchers found that a significant number of them lacked an internal audit function. They also found that the reason for the restriction of the scope of internal audit activities might be due to the limited amount of budget allocated to the internal audit department. Based on their findings, the researchers suggested that policy makers consider revising the Treasury Circular guidelines to include a focus on risk management in order to better address the various risks that PUs may encounter.

Subsequently, a study by Mihret and Yismaw (2007), which focused on the public higher educational institutions in Ethiopia, examined the factors that influence the effectiveness of internal audit in terms of internal audit quality, management support, organisational setting and auditee's attributes. The results highlighted that internal audit quality and management support strongly influence internal audit effectiveness while organisational setting and auditee attributes do not have a strong impact on internal audit effectiveness. Moreover, a study by Verdina (2011) on risk management in Latvia's higher education institutions indicates that there is an absence of risk management policy and strategy as a tool for securing internal control over the implementation of the study programme process. The result is based on students' opinions that were collected in a survey of six PUs across Latvia. The study also found that risk management practices are being implemented only when it is deemed to be relevant and that the focus is on certain types of risk.

More recently, a study on risk management practices in higher education at Thailand was conducted by Musig and Kunsrison (2012). The study revealed that assurance activity efficiency and consulting practice effectiveness influence the continuous improvement of enterprise risk management (compliance risk, strategic risk and operational risk). Moreover, the researchers found that both assurance and consulting have a positive impact on the success of internal audit work. This demonstrates that internal auditors should not only test internal control, which is an established activity of internal audit, but should also provide advisory services to management.

From the review of the prior studies, it is evident that the emergence of risk management in PUs is not formalised by any regulatory requirement. Rather, the adoption of risk management is probably initiated due to recurring internal issues of malpractice, mismanagement and wastage, which raise concerns in relation to the public interest regarding the appropriatemanagement of public funds. These are mainly caused by the lack of management competency, negligence in performing duties, poor internal control and lack of supervision by management (KPT, 2011). Hence, similar to the private sector, the adoption of internal audit requirements tends to be strengthened subsequent to financial scandals (Abuazza *et al.*, 2015). In view of these, internal audit in the public sector in general has undergone dramatic changes in which they should act as the three lines of defence (Chambers & Odar, 2015). It is no longer confined to its traditional roles of checking compliance and control but has encompassed new ones in value-added services (Abuazza *et al.*, 2015). Thus, the moves by the Malaysian Government to reduce the budget allocation to the PUs and the consequent need for alternative sources of finance have increased the risk exposure to them. However, there is scant literature that discusses the development of internal audit and risk management in PUs. Therefore, the present study attempts to answer the following research question:

RQ2: What are the roles of internal audit in risk management practices in PUs?

RESEARCH METHODOLOGY

The questionnaire used in the present study was mainly adapted from IIA (2013). The original specifically referred to the roles of internal audit in risk management practices in the private sector setting. Therefore, the adapted questionnaire was further validated by internal auditors in PUs to ensure that the questions were relevant to the context. These experts confirmed that the questionnaire items were compatible with the existing activities practised by internal auditors in PUs. In fact, all internal auditors of PUs are required to be professional members of the internal audit professional body in Malaysia, i.e. the Institute of Internal Auditors Malaysia (Treasury, 2013), and members of this professional body must follow the requirements of the internal audit professional standards. As shown in **Appendix A**, the questionnaire consisted of five sections. Part A concentrated on the background of the internal audit unit. Parts B to D covered the roles of internal audit in the three components of risk management practice, namely risk assessment, risk management, and risk communication, respectively. Open-ended questions were also included in the questionnaire in order to gather information on the rationales for having established risk management practices in PUs. Part E consisted of questions to obtain demographic information.

Due to the exploratory nature of the present study and the small population of PUs in Malaysia, this study covered all of the 20 PUs. All of the 20 PUs have established an in-house internal audit function. Data collection was done through the distribution of the abovementioned questionnaire by hand to internal auditors (including all chiefs or heads of internal audit and assistant auditors). Each target respondent received a copy of the questionnaire together with a covering letter that clearly stated that the anonymity of responses would be ensured and the data collected was strictly for educational purposes. Internal auditors were the target respondents because of their level of expertise and involvement in the area of interest to the present study. A total of 219 questionnaires were delivered to the internal audit units in all the PUs and 127 were completed and returned, which equates to a 58 percent response rate. The Cronbach's α test was applied to the responses to the questionnaire survey, resulting in a score of more than 0.7 (internal auditor role in risk management = 0.90; internal auditor role in risk assessment = 0.83; internal auditor role in risk communication = 0.79), indicating that there is consistency of measurement. The next section discusses the descriptive findings only as the two main objectives of the study are to explore the level of risk management practices and the roles of internal audit in risk management practices in PUs.

FINDINGS AND DISCUSSION

Descriptive statistics

Table 1 shows the different levels of maturity of the internal audit function across the 20 PUs. The majority (approx. 55 percent) of them are between 10 and 20 years old, while 15 percent are less than 10 years old and 30 percent are more than 21 years old. From the results, it seems that the establishment of an internal audit unit very much depends on how long the PU itself has been in existence. The finding on the time of the establishment of an internal audit unit is in line with the earlier work of Zakaria *et al.* (2006), who found that the majority of PUs in Malaysia had set up their internal audit function. This shows that the establishment of an internal audit unit in PUs was mostly driven by the requirements of Treasury Circular 9/2004 and Treasury PS 3.1/2013. From the 20 PUs, only 61.9 percent of the PUs have established a separate risk management unit (see **Table 2**).

Table 1: Age of Internal Audit Unit

Age (years)	Frequency	Percent
1–5	2	10
6–10	1	5
11–15	5	25
16–20	6	30
21–25	3	15
26–30	0	0
31–35	3	15
Total	20	100

Table 2: Establishment of Risk Management Unit

Detail	Yes	No
Does your institution have a risk management unit?	61.9%	38.1%

RQ1: What is the level of risk management practices in PUs?

The first objective of the present study was to ascertain the level of risk management practices in PUs. This can be categorised into basic, developing, established and advanced (Beasley *et al.*, 2005). According to this categorisation, the basic level refers to PUs that have not yet established risk management practices but are considering doing so. The developing level refers to PUs that have decided to establish risk management practices and are in the process of planning the development of risk management practices. The established level refers to PUs that have implemented risk management practices and have applied them in selected areas or activities. The advanced level refers to PUs that have properly implemented risk management practices and applied them in all their activities.

As displayed in **Table 3** below, 50 percent of PUs have a basic level of risk management practices, 40 percent have a developing level and 5 percent have an established and an advanced level. The results also indicate that most PUs are in the initial phase of planning and considering establishing a risk management process. From these, research found that although no formal policy has been imposed on the public sector to setting up a risk management unit or risk management process, most PUs have started to develop risk management practices.

Table 3: Level of Risk Management Practices

Level of risk management practices	Frequency	%
Basic	10	50
Developing	8	40
Established	1	5
Advanced	1	5
Total	20	100

Apart from the level of risk management practice, the study also compare the level of risk management practices and the age of internal audit in PUs. **Table 4** indicates that the PUs with either an advanced or an established level of risk management practices are in the category of older institutions (more than 20 years old). The newer PUs (less than 15 years old) are mostly at the basic level and therefore do not have proper risk management practices in place. The respondents also revealed that the risk assessment activities are undertaken by the internal audit unit when developing the annual audit plan in such cases.

Table 4: Comparison of Level of Risk Management Practices and Age of Internal Audit Unit

Level of risk management practices	Basic		Developing		Established		Advanced	
Age of unit (years)	Freq	%	Freq	%	Freq	%	Freq	%
1–5								
6–10	2	10						
11–15	1	5	1	5				
16–20	4	20	4	20				
21–25	2	10	1	5				
26–30	1	5					1	5
31–35			2	10	1	5		
Total	10	50	8	40	1	5	1	5

These findings imply that most PUs, particularly the newly established PUs, are in the initial stage of considering the implementation of risk management practices. This is mostly perhaps due to the influence of trends in the private sector, recent developments in new public sector management and the recent financial crisis. These findings are in line with Arena (2013) and Christopher and Sarens (2015). Moreover, the current moves made by PUs in establishing a risk management unit is in line with the approach of local authorities. This finding supports that of Crawford and Stein (2004), in which they emphasised on the strong need to improve public confidence and trust through the introduction of risk management practices in the public sector. Hence, the findings of present study indicate an urgent need to introduce the appropriate policy on risk management practices and the specific role of internal audit in risk management, the PUs in particular and in the public sector in general. This is also align with the earlier suggestion made by Zakaria *et al.* (2006).

RQ2: What are the roles of internal audit in risk management practices in PUs?

The second objective of the present study is to examine the roles of internal audit in implementing the risk management practices in PUs. According to internal audit professional standards, the role of internal audit in risk management practices within the private sector context should focus on three different components of the risk management process, namely risk assessment, risk management and risk communication (IIA, 2013). Applying the same requirement in public sector context, the internal auditor should play their roles in risk management at the respective PU by identifying the risk, preparing the assessment and reporting processes. With this regards, this research gathered the responses from internal auditors in PUs as presented in **Table 5**.

With respect to the risk assessment as one of the component in risk management process, majority of the internal auditors, which is 70 percent of them applied a macro risk assessment in developing audit planning for critical areas. As elaborated in the open-ended question section, their critical areas in this activities are the registry and treasury units. In contrast, only 47 percent of the respondents are involved in developing the internal control risk assessment questionnaire, using the micro risk assessment approach in the individual audit plan. The results also show that approximately 50 percent of internal auditors are involved in facilitating the development of risk assessment activities through consultation. Although utilising a different approach, all of them highlight that the need for risk assessment is mostly driven by the competitive environment of the education sector and rapid changes in the financial activities in which PUs are involved.

Regarding the role of internal auditors in risk management, the findings indicate that about 68 percent of the respondents perform an independent evaluation of the effectiveness of risk management practices and provide recommendations on areas for improvement. Meanwhile, only 50 percent of them evaluate the practices of mitigating the risks which links to strategic objectives.

In communicating the risk identified, the internal audit should create awareness of best practices in risk management across the organisation through the moderate use of formal documents such as reports, manuals, etc. In this study, the results show that 80 percent of the internal auditors play a role in disseminating and recommending the best practices in risk management within their organisation. However, only 62 percent of them has distribute the findings on weaknesses ininternal control and risk within their institution. Finally, 46 percent of the respondents perform self- assessment activities for control and risk and 50 percent of the respondents maintain a centralised database on risk. These results show that the internal audit function is actively involved in promoting greater understanding and awareness of risk management practices among employees of PUs.

Overall, the above findings are consistent with Christopher and Sarens (2015), who found that in the early stage of implementing the risk management process, the internal auditors often has higher responsibilities in creating risk awareness across the organisation as compared to the later stage. In fact, the internal auditor also plays a significant role as a facilitator in developing risk management practices. This is also similar to the findings highlighted by Abuazza *et al.* (2015), Christopher and Sarens (2017) and Vinnari and Skaerbaek (2014). The results of the present study suggest that the implementation of risk management practices needs the strong support from the top management to facilitate the allocation of resources and to recognise the internal audit findings and recommendations.

Table 5: Roles of Internal Audit in Risk Management Practices

Roles of internal audit in:	Yes	No	Not Sure
Risk assessment			
Involved in the identification of the most critical areas based on the audit profile in order to define the audit plan	70.1%	16.4%	13.5%
Evaluates the risk assessment process	61.9%	26.1%	12.0%
Assists management in fulfilling their risk assessment responsibilities	59.0%	22.4%	18.6%
Facilitates the development of a system approach that management could use in dealing with risk	54.5%	25.4%	20.1%
Provides consultation in the risk assessment process	51.5%	32.8%	15.7%
Involved in identifying risks in individual audits	47.8%	25.4%	26.8%
Involved in the facilitation of risk self-assessment and assists with the implementation of these questionnaires	47.0%	29.1%	23.9%
Risk management			
Provides an independent and objective evaluation of the institution's risk management process	67.9%	20.1%	12.0%
Facilitates the improvement of risk management practices	63.4%	19.4%	17.2%
Reviews and appraises the adequacy, effectiveness and efficiency of the institution's risk management practices in order to provide its independent opinion	62.7%	24.6%	12.7%
Evaluates the development of risk management practices	56.7%	26.1%	17.2%
Evaluates whether all identified risks are mitigated properly by management	53.7%	23.9%	22.4%
Evaluates whether the inherent risks in the strategic objectives are being identified by management	52.2%	26.1%	21.7%
Risk communication			
Disseminates best practices within the institution	80.6%	10.4%	9.0%
Recommends a benchmarking source to improve the effectiveness and efficiency of risk assessment and internal control practices	76.9%	14.9%	8.2%
Disseminates reports on risk and internal controls within the institution	61.9%	22.4%	15.7%
Distributes internal control manuals within the institution	57.5%	22.4%	20.1%
Develops and maintains a centralised risk database	50.0%	34.3%	15.7%
Distributes risk and control questionnaires for self-assessments	45.5%	33.6%	20.9%

CONCLUSION

An increasing trend of malpractice in PUs in Malaysia has raised major concerns about the integrity and accountability of PUs in managing public funds. This may adversely affect the reputation and image of PUs and the public sector in general. Hence, the main objective of the present study was to examine the level of risk management practices in PUs and the role of internal audit in risk management practices. The findings discussed above indicate that all PUs do have an internal audit unit, which is in line with the requirements of Treasury Circular Nos. 9/2004 and PS 3.1/2013. However, the age of the internal audit unit varies across PUs, and this mostly depends on how many years the PU itself has been established. Moreover, despite the absence of an authoritative policy from the Ministry of Finance, almost two-thirds of the PUs have developed a separate risk management unit.

The introduction of risk management practices is mostly driven by the needs and competitive environment of the education sector which currently experiencing rapid changes in terms of financial and operational activities. The findings indicate that most PUs still have a basic or developing level of risk management practices. Only one PU has reached the level of established practices and another one at an advanced level. Based on feedback obtained via the open-ended questions in the questionnaire, the PU with the advanced level of risk management practices established these through consultation with a professional audit firm. The above findings underline the growing interest among all PUs in moving forwards in improving their performance and accountability in managing public funds and enhancing their service delivery to the public through better risk management practices. The results also indicate the significant involvement of internal audit in throughout this process. In addition, they signify that internal auditors has performs a facilitator role in enhancing awareness of the importance of risk management within PUs.

The empirical evidence of the present study offers several contributions to the field of risk management. First, the establishment of a separate risk management unit and risk management practices among PUs may have implications for annual audit planning. Specifically, the NAD may want to consider expanding the scope of risk assessment and its impact on annual audit planning. This would further improve the effectiveness and efficiency of allocating audit resources. The preventive measures could also be taken with respect to any critical issues identified during risk assessment activities. Second, based on the results of the present study, the Treasury may want to consider the establishment of comprehensive risk management policies for the public sector at higher level and PUs in relation to the improvement of risk management practices at lower level. In particular, the present study highlights the need for the internal auditor to play an active roles in monitoring and facilitating the implementation of risk management practices. Also, there is a need for a clear definition of the specific roles of the internal auditor, which may prevent any conflicts in relation to the issue of auditor independence. Furthermore, PUs may wish to exploit the expertise and skills of internal auditors in managing potential risks and enhancing risk and control awareness in their organisation. This would help the PUs to prevent the occurrence of risky activities and improve accountability in relation to those activities. Finally, it is worthwhile to enhance awareness among the top management in PUs on the importance of risk management in any strategic initiatives taken. A top management that has relevant experience and skills such as income diversification or cost management would appreciate the importance of risk evaluation in any strategic decisions made.

When considering the evidence presented in this paper, it should be noted that the present study has some limitations. First, the sample size of 20 PUs means that the data analysis is limited in terms of its comprehensiveness. Perhaps, future research could investigate both public and private universities and compare the practices of those two sectors. This is because, private universities often act as profit-making entities. Second, the present study used a survey method which gives limited information and a lack of in-depth information on the studied area. Third, respondents may have lacked commitment in answering the questions due to time constraints, lack of sufficient knowledge about the issues being investigated and fear of negative consequences. Therefore, future research could adopt an interview or case study approach which would enable direct interaction with respondents. This could also provide the opportunity to obtain richer information such as on the extent of management support and the allocation of resources to risk management and internal audit practices.

REFERENCES

Abuazza, W.O., Mihret, D.G., James, K. and Best P. (2015). The perceived scope of internal audit function in Libyan public enterprises. *Managerial Auditing Journal, 30(6/7), 560-581.*

Ahmad, H.N., Othman, R., Othman, R., and Jusoff, K., (2009). The effectiveness of internal audit in Malaysian public sector. *Journal of Modern Accounting and Auditing, 5(9), 53-62.*

Ali, A.M., Gloeck, J.D., Ali, A., Ahmi, A., and Sahdan, M.H. (2007). Internal audit in the state and local governments of Malaysia. *Southern African Journal of Accountability and Auditing Research,* 7, 25-57.

Arena, M. (2013). Internal audit in Italian universities: An empirical study. *Procedia – Social and Behavioral Sciences,* 93, 2000-5.

Arena, M. and Jeppesen, K.K. (2015). Practice variation in public sector internal auditing: An Institutional Analysis. *European Accounting Review*, 25(2), 319-345.

Ariff, M. S. B. M., Zakuan, N., Tajudin, M. N. M., Ahmad, A., Ishak, N., & Ismail, K. (2014). A framework for risk management practices and organizational performance in higher education. *Review of Integrative Business and Economics Research*, *3*(2), 422-432.

Azad, A. N. (1994). Operational auditing in US colleges and universities. *Managerial Auditing Journal.* Vol. 10. Issu 3. p.26-30

Badara, M.S., and Saidin, S., Z., (2012). The relationship between risk management and internal audit effectiveness at local government level. *Journal of Social and Development Sciences*, 3(12), 404-411.

Beasley, M.S., Clune, R., & Hermanson, D.R. (2005). ERM: A status report. *Internal Auditor*.February, pp. 67-72.

Beecher, B., & Streitwieser, B. (2017). A Risk Management Approach for the Internationalization of Higher Education. *Journal of the Knowledge Economy*, 1-23.

Chambers, A. D. and Odar, M. (2015). A new vision for internal audit. *Managerial Auditing Journal,* 30(1), 34-55.

Coetze, P. (2016). Contribution of internal auditing to risk management – perceptions of public sector senior management. *International Journal of Public Sector Management,* 29(4), 348- 364.

Crawford, M. and Stein, W. (2004). Risk management in UK local authorities – the effectiveness of current guidance and practice. *International Journal of Public Sector Management*, 17(6), 498-512

Christopher, J. and Sarens, G. (2015). Risk Management: Its adoption in Australian public universities within an environment of change management – a management perspective. *Australian Accounting Review,* 72(25), 2-12.

Christopher, J. and Sarens, G. (2017). Diffusion of corporate risk-management characteristics: perspectives of chief audit executives through a survey approach. *Australian Journal of Public Administration.* DOI:10.1111/1467-8500.12257.

Goodwin, J. (2004). A comparison of internal audit in the private and public sectors. *Managerial Auditing Journal,* 19(5), 640-650.

Hommel, U., Li, W., and Pastwa, A.M., (2016). The state of risk management in business schools. *Journal of Management Development*, 35(5), 606-622.

Hood, J. and Smith, T. (2013). Perceptions of quantifiable benefits of local authority risk management.*International Journal of Public Sector Management.* Vol. 26, Issue 4, p. 309-319.

Institute of Internal Auditors (IIA). (2013), *International Standards for the Professional Practice of Internal Auditing*. Altamonte Spring, Florida, US.

Kementerian Pengajian Tinggi (KPT). (2011). *Isu Audit Berulang*.

Lee, M., (2004). *Internal Audit Practices in Malaysia*, Kuala Lumpur, Malaysia:Pearson/Prentice Hall.

Mihret, D., G., &Yismaw, A., W., (2007). Internal Audit Effectiveness: an Ethiopian Public Sector Case Study. *Managerial Auditing Journal*, 22(5), 470-484.

Ministry of Education Malaysia (MOE). (2015). *Malaysia Education Blueprint 2015-2025 (Higher Education)*.

Musig, P., & Kunsrison R., (2012).The Effect of Continuous Enterprise Risk Management Improvement on Internal Audit Work Success of the Institute of Higher Education. *Journal of the Academy Business and Economics,* 12(5), 79-90.

National Audit Department (NAD). (2010). Laporan Ketua Audit Negara, Pengurusan Kewangan dan Aktiviti Serta Pengurusan Syarikat Subsidiari Badan Berkanun Persekutuan.

National Audit Department (NAD). (2011). Laporan Ketua Audit Negara, Pengurusan Kewangan dan Aktiviti Serta Pengurusan Syarikat Subsidiari Badan Berkanun Persekutuan.

National Audit Department (NAD). (2012), Laporan Ketua Audit Negara, Pengurusan Kewangan dan Aktiviti Serta Pengurusan Syarikat Subsidiari Badan Berkanun Persekutuan.

Power, M. (2004). The nature of risk: the risk management of everything. *Balance Sheet*, 12(5), 19-28.

Protiviti. (2008). *Internal auditing in higher education: profiles of top performers*. Protiviti Inc.

Sarens, G., D'Onza, M., & Melville, R., (2011). Are Internal Auditing Practices Related to the Age of the Internal Audit Function?. *Managerial Auditing Journal*, 26 (1), 51-64.

Schmidt, U., & Günther, T. (2016). Public sector accounting research in the higher education sector: a systematic literature review. *Management Review Quarterly*, 66(4), 235-265.

Treasury Circular (2004). Pekeliling Perbendaharaan No. 9 Year 2004. *Pelaksanaan audit dalam di kemeneterain / Jabatan persekutuan dan kerajaan negeri*.

Treasury Circular (2013). Pekeliling Perbendaharaan PS 3.1/2013. *Pelaksanaan audit dalam di kementerian atau jabatan perekutuan dan kerajaan negeri*.

Verdina, G., (2011). Risk management as a tool for securing internal control in the process of study programme implementation at higher education institutions. *Economics and Management,* 16, 987-991.

Vijayakumar, A.N., and Nagaraja, N., (2012). Internal Control Systems: Effectiveness of Internal Audit in Risk Management at Public Sector Enterprise. *BVIMR Management Edge*, 5(11), 1-8.

Vinnari, E. and Skaerbaek, P. (2014). The uncertainties of risk management – a field study on risk management internal audit practices in a Finnish municipality. *Accounting Auditing & Accountability Journal, 27(3), 489-526.*

Vincent, J. (1996). Managing risk in public services: A review of the international literature. *International Journal of Public Sector Management.* Vol. 9, No. 2, p. 57-64.

Woods, M. (2009). A Contingency Theory Perspective on The Risk Management Control System within Birmingham City Council. *Management Accounting Research,* 20, 69-81.

Zakaria, Z., Selvaraj, S., D., & Zakaria, Z. (2006). Internal auditors: Their Role in the Institutions of Higher Education in Malaysia. *Managerial Auditing Journal*, 21(9), 892-904.

Zakaria, Z., Zakaria, Z., & Idris, M., D. (2007). The Role of Internal Auditors in Malaysian Local Authorities. *The International Journal of Interdisciplinary Social Sciences, 2*(2), 237-244

APPENDIX A

QUESTIONNAIRE

Internal auditor's role in risk assessment

The internal auditor's role in risk assessment is to identify and assess both the likelihood and potential impact of various risks to the institution.

The following are items of the internal auditor's role in risk assessment:		Yes	No	Not Sure
a.	Evaluates the risk assessment process			
b.	Provides consultation in the risk assessment process			
c.	Assists management in fulfilling their risk assessment responsibilities			
d.	Facilitates the development of a system approach that management could use in dealing with risk			
e.	Involved in the identification of the most critical areas based on the audit profile in order to define the audit plan (macro risk assessments)			
f.	Involved in identifying risks in individual audits (micro risk assessment)			
g.	Involved in the facilitation of risk self-assessment (development of risk assessment questionnaires) and assists with the implementation of these questionnaires			

Internal auditor's role in risk management

The internal auditor's role in risk management is to evaluate the risk management process in terms of risk identification and risk mitigation, where decisions need to be made on how to manage the perceived consequences of that risk.

The following are items of the internal auditor's role in risk management:		Yes	No	Not Sure
a.	Provides an independent and objective evaluation of the institution's risk management process			
b.	Reviews and appraises the adequacy, effectiveness and efficiency of the institution's risk management process in order to provide its independent opinion			
c.	Evaluates the development of the risk management (risk identification and risk mitigation) practices			
d.	Evaluates whether the inherent risks in the strategic objectives have been identified by management (Responsibility Centre@PTJ)			
e.	Evaluates whether all identified risks are mitigated properly by management			
f.	Facilitates improvement in the risk management practices			

Internal auditor's role in risk communication

The internal auditor's role in risk communication is to spread risk information within the institution.

The following are items of the internal auditor's role in risk communication:		Yes	No	Not Sure
a.	Disseminates best practices within the institution			
b.	Recommends a benchmarking source to improve the effectiveness and efficiency of risk assessment and internal control practices			
c.	Develops and maintains a centralised risk database			
d.	Disseminates reports on risk and internal controls within the institution			
e.	Distributes internal control manuals within the institution			
f.	Distributes risk and control questionnaires for self-assessments			

Open ended questions:

1. To what extent the risk management unit focuses their exposure. Please specify (i.e. treasury unit, registry unit etc.)

2. Do you think that risk management practices is needed in your institution and why?

3. How risk management practices are being developed in your institution?