

Review Paper

A Qualitative Investigation on Risk Management Implementation in the Malaysian Public Sector

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ABSTRACT

This study aimed to examine the implementation of risk management in the public sector and, subsequently, identify the components of risk management that best fit the public sector. Interviews were conducted with 26 participants from nine government agencies to determine the Malaysian government's risk management and internal control processes. As a result, a new set of variables was identified for the public sector. These elements are the establishment of risk management in the government sector, the voluntary implementation of risk management, understanding risk management and internal control, the importance of risk management and internal control, the risk management process for the public sector, risk identification and investigation, understanding the risk management framework in the public sector, and the role of a consultant in risk management. This study contributed to the public sector by identifying potential aspects that may be crucial in ensuring the success of the early stages of risk management implementation. The outcomes of this study may benefit the public sector through an improved understanding of how to undertake risk management to ensure the success of risk management in Malaysia.

HIGHLIGHTS

- This paper is devoted to studying the implementation of risk management in the public sector.
- In the course of the study, the components of risk management that best fit the sector are examined.

Keywords: Risk management, employees, procurement and finance, public sector

The implementation of the risk management plan in Malaysia is based on the strategic plan, a framework and process that allows government organisations to manage risk effectively and systematically from the perspective of their strategic objectives. According to the *Malaysian Administrative Modernization and Management Planning Unit (MAMPU)*, this strategic plan-based risk management plan was established for the purpose of developing a control strategy by considering the expected risk incidents that may affect the organisation's core services. In addition, the risk management plan developed will be in line with the organisation's strategic plan in effect in the Malaysian scenario. According to MAMPU

(2023), risk management in the public sector is very important to ensure that public sector agencies are always ready to face threats and challenges that may impact the achievement of their objectives. There are many risks in public sector agencies, and one of the highest is corruption risk, as highlighted in the Malaysian Anti-Corruption Commission's (MACC) 2021 annual report and study by Azmi and Ismail (2022).

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Risk management is mostly used in the private sector, such as Malaysian listed companies (Abdurrahman, Mohamad, Garrett & Ehsanullah, 2020; Lai, 2014), Malaysian construction industries (Adeleke *et al.* 2020; Mustapha & Adnan, 2015; Kang *et al.* 2015), and Malaysian Islamic banks (Ariffin & Kassim, 2014; Tan *et al.* 2021). Risk management and internal control are important in the private sector because the wealth of the stakeholders must be kept safe. Risk management is not an exception to the public sector since it is a key element of corporate governance in the public sector in terms of their structures, processes, corporate values, culture, and behavior (ACCA, 2017). As suggested by Mat Ludin *et al.* (2017) and Setapa and Zakwan (2019), risk management in the public sector is essential as a preventative measure against further recurrences of improper practices. Hence, the government must emphasize how to reduce the risks it faces, such as fraud, abuse of power, and mistakes in making decisions that do not follow the needs of the government or the public sector.

This study aimed to examine the implementation of risk management in the public sector. Subsequently, this study identifies the components of risk management that best fit the sector. The findings of this study contribute to the existing literature on the implementation of risk management in the public sector and provide further understanding of how to undertake risk management to ensure the success of risk management in Malaysia. The next section provides a literature on the evolution of risk management procedures and the overall framework. Then the specifics of this study's research design are discussed, followed by the findings. The last section concludes this study.

LITERATURE REVIEW

Risk management is a method that is structured, consistent, and ongoing across the entire organisation to identify, assess, and decide on reactions to opportunities and threats that affect the attainment of organisational goals and to report on those opportunities and threats. The word 'risk' refers to the positive and negative implications of ambiguity regarding an organisation's demands and fulfillment (Hatvani, 2015; Kopanchuk *et al.* 2023; Kovalenko *et al.* 2023; Mamchur *et al.* 2023). Risk management assists an organisation in identifying

and analyzing possible risks by taking into account both the possibility and effect of a prospective event, for example, the procurement and payment processes. Aziz *et al.* (2018) explained that the risk management process consisted of objective setting, an internal environment, information and communication, event identification, risk response, monitoring, risk assessment, and control activities. Similarly, Ahmad, Ibrahim and Bakar (2018) explained that public sector risk management includes risk assessment, risk treatment, and risk monitoring.

Risk management involves senior management being prepared to handle all risks it encounters to guarantee that the organisation's goals and objectives are realized (Pawi *et al.* 2021). This statement implies that risk management is a method that can add value to an organisation's decision-making process and emphasizes organisational progress, especially in the public sector. In the study conducted by Tarjo *et al.* (2022), the researchers found that enterprise risk management (ERM) is necessary to prevent fraud in local governments. Specifically, the control environment, risk assessment, control activities, information and communication, and monitoring significantly influence efforts to prevent fraud. In addition, fraud detection initiatives could use monitoring, information and communication, control activities, risk assessments, control environments, and information and risk assessments.

A group of studies has examined risk management and internal control in the public sector. For example, on risk management and accountability (Bakar *et al.* 2016), risk management for Malaysian public-private partnership projects (Ahmad *et al.* 2018), risk management and analysis for local government (Hatvani, 2015), assessment of risk management practices in the Malaysian public sector (Ilias *et al.* 2022), the role of the CEO, audit quality, and risk management in federal and state statutory bodies (Mat Ludin *et al.* 2017), the impact of ERM in private universities (Setapa & Zakwan, 2019), non-profit organisations (Ghani *et al.* 2019; Haddad, 2023; Butola *et al.* 2022; Rahayu *et al.* 2022) and implementation of ERM practices in private universities (Mustapha & Abidin, 2017) The findings of these studies are mixed due to different contexts and settings used in these studies.

Another body of literature has examined the factors that impact risk management and internal control. For example, Yazid *et al.* (2011) found that the roles of the chief risk officer could affect the implementation of ERM. Pagach and Wieczorek-Kosmala (2020) argue that a centralized function for giving information to the board and management makes the ERM organisation stronger in the long run. Rahman *et al.* (2014) found that the implementation of ERM depends on how well people understand risk management, risk assessment and analysis, risk control, and monitoring. Mustapha and Adnan (2015) suggested that the most important parts of a successful ERM implementation are for employees to know about and understand the concept. Hudin and Hamid (2014) noted that other reasons to adopt ERM include corporate governance, following rules and regulations, pressure, firm and industry characteristics, the presence of a CRO (chief risk officer), potential benefits, and business trends. Mustapha and Mustapah (2020) posited that ERM has an effect on transportation companies and that putting it in place helps businesses keep track of how they run. On the other hand, Mat Ludin *et al.* (2017) and Setapa and Zakwan (2019) found that the right qualities in a CEO and a good internal audit, as well as the role of the CRO, top management, and employee involvement, can help government agencies speed up their risk management. However, these studies were mostly conducted in the private sector, leaving examinations in the public sector largely unexplored.

The two most popular risk management frameworks in the private sector are COSO ERM (2004) and ISO 31000 Risk Management. The public sector could also make use of these frameworks to assist with internal control and risk management. Irving and Walker (2021) raised the need for risk management in the government sector. For example, the United States federal government requires each agency to implement an ERM strategy to identify vulnerabilities early. According to Kim and Kim (2020), not only the United States but also Korea emphasizes the implementation of risk management in the public sector. As a subset of ERM, crisis management in the public sector of the Republic of Korea is not intended to serve only as a device for managing financial risk. Instead, it is also intended to serve as a device for managing

crisis policies. It should not come as a surprise that the implementation of risk management and internal control shows slow implementation at an early stage for the government sector. According to Oulasvirta and Anttiroiko (2017), these processes are not widely used in local governments because they work in silos. Furthermore, there is limited incentive for the government to pursue the voluntary implementation of a comprehensive risk management system.

The International Organisation for Standardization (ISO) issued the risk management standard ISO 31000:2009 for the first time in 2009. It issued the second version, ISO 31000:2018 (E), in February 2018 to replace the previous edition. The new version emphasizes the organisation's value of growth and safeguarding as primary goals. It elevates risk management to the status of a fundamental component of governance and leadership and an integrated component of all actions carried out at all levels of the organisation. ISO 31000:2018 defines risk management into three parts: methodology, framework, and principles. The ISO made it very clear that when an organisation develops its risk management framework, it must consider the principles that serve as the foundation for risk management. Besides ISO 31000:2009, the COSO ERM 2004 framework is also being embedded in many organisations. There are three (3) versions of the COSO ERM framework: COSO ERM 2004 (Integrated Framework), COSO ERM 2014, and the updated document COSO ERM 2017 (Integrating Strategy and Performance Framework). Based on the COSO ERM (2004), this study examined seven (7) main processes, which included objective setting, internal environment, information and communication, risk response, monitoring, risk assessment, and control activities, to ensure public employees could understand the first model of risk management and internal control framework

RESEARCH METHODOLOGY

Participants

The participants in this study were personnel from the ministries of health, education, and public works, as well as the ministry of home affairs, the national audit department, the accountant general's department, the prime minister's department, the

ministry of natural resources, environment, and climate change, and MAMPU, who were able to provide feedback for risk management and internal control. All participants are from the procurement and finance departments of each ministry and officers from MAMPU, the National Audit Department, and the Accountant General’s Department. MAMPU’s involvement is very important because it is one of the consultants to the public sector in implementing risk management and internal control.

Research Instrument

This study utilized a set of semi-structured questions as a guide in gathering the participants’ involvement in the development of risk management. Since all participants are executives at the management level, this study used one set of interview guides, such as ‘Do you believe in the need for risk management and internal control of procurement and payment or finance in general?’ ‘Are you aware of and do you know about the COSO ERM and ISO 31000 risk management frameworks?’ ‘In your opinion, how important are these two processes and policies?’ ‘Which quality is more important to improve risk management and internal control of procurement and payment, or finance in general?’

Data Collection

This study conducted interview sessions to obtain preliminary findings related to the awareness of risk management in the public sector, particularly from the procurement and payment perspectives. This

selection was made for the reason that procurement and payment are high-risk areas among operational activities, as also suggested by Azmi and Ismail (2022). At the beginning of the data collection, 20 official invitation letters were sent to the ministries and departments in Putrajaya. However, only nine (9) organisations agreed to cooperate. As shown in Table 1, 26 participants were interviewed for about nine (9) hours in total from September 1, 2022, until October 1, 2022. After receiving their consensus for the interview, the time and date were set up through Microsoft Team with the selected interviewees. The interviewees were selected by the respective representatives who liaise with the researchers. In addition, a copy of the interview questions was sent in advance as guidance to the interviewees. The interview sessions were recorded with permission and transcribed digitally. The response in Bahasa Malaysia was translated literally. For the purpose of this paper, the interview excerpts were presented as transcribed.

Data Analyses

Atlas TI8.0 was utilized to organize and produce themes from the interview materials. This study described the awareness, comprehension, and training associated with risk management based on the themes and key quotations from the interviewees. Each viewpoint on the presence of risk management and internal control was documented using a variety of techniques, including a notebook, Excel format, or a snapshot or screenshot of a dialogue. As indicated in Fig. 1, each statement

Table 1: Interview Participants

Organisation	Department	Participants	Code
Ministry of Health	Procurement	1	A
Ministry of Health	Account & Finance	2	B, C
Ministry of Education	Procurement	5	D, E, F, G, H
Ministry of Public Works	Account, Finance, & Procurement	3	J, K, L
Ministry of Home Affairs	Procurement	5	M, N, O, P, Q
National Audit Department	Procurement	2	R, S
Prime Minister’s Department	Procurement	2	T, U
Prime Minister’s Department	Account & Finance	2	V, W
Ministry of Natural Resources, Environment, and Climate Change	Procurement	2	X, Y
MAMPU	Consulting	1	Z
Accountant General’s Department	Account & Finance	1	AA

indicating an opinion was generated in Microsoft Word and transmitted to ATLASi for code-based analysis according to Miles *et al.* (2014).

This study began with first-cycle coding, originally summarized data segments, and employed descriptive coding. Subsequently, using pattern coding as done by Ilias, Ghani and Azhar (2022) based on the predetermined coding and undetermined variables from the past studies (Bakar *et al.* 2016; Ahmad *et al.* 2018; Setapa & Zakwan, 2019; Rahman & Lau, 2023; Garba *et al.* 2022; Mulyaningsih *et al.* 2022). The coding procedure was based on nine parameters that were recognized and created using the coding trends gathered from the 26 officers. Figs. 1 and 2 are photographs of Atlasti and an example of the Excel format used in the code manager for data analysis.

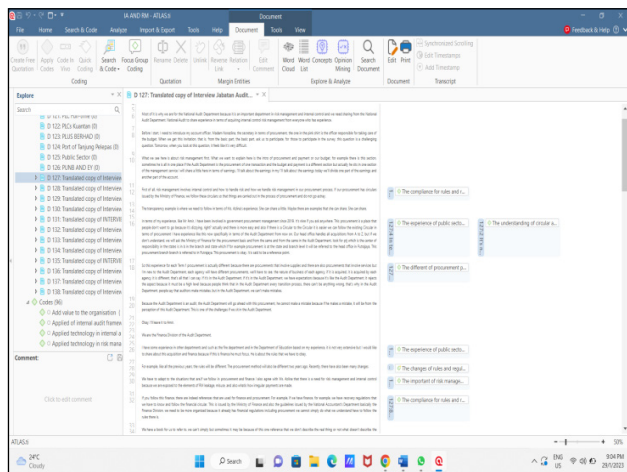


Fig. 1: Example of ATLASi Coding Process

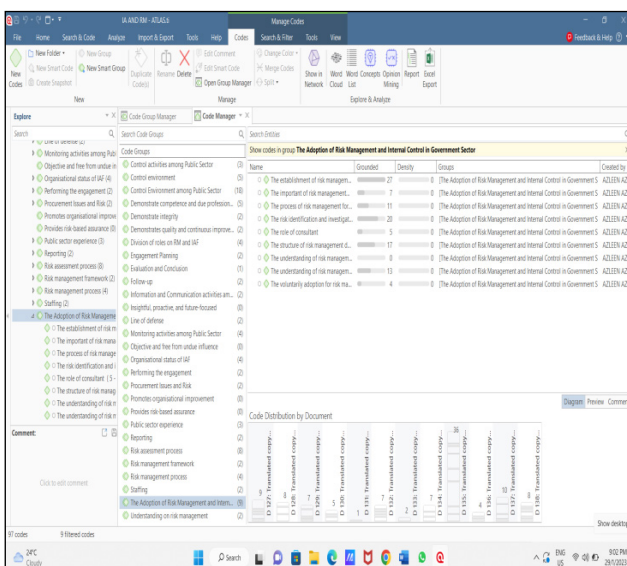


Fig. 2: Example of ATLASi Code Group or Theme

FINDINGS

Current State of Risk Management in Malaysia

This study shows that a public sector case study allows MAMPU-inspired practices to thrive. The Public Sector Information Security Risk Assessment helps the public sector analyze the risk of its information assets and prepare for and manage them. For this reason, the government issued General Circular No. 6 of 2005, “Public Sector Information Security Risk Assessment Guidelines.” These guidelines explain why and how to undertake public sector information security risk assessments. The Public Sector Information Security Risk Assessment Guidelines give methods and strategies for information risk assessment. This guideline consists of the Malaysian Public Sector Information Security High-Level Risk Assessment (HiLRA) and Risk Assessment Methodology (MyRAM). MAMPU consults and advises public agencies on strategic-based risk management strategies as part of its efforts to improve public service delivery and implement quality management principles. ‘Risk Management Strategies Based on Strategic Planning’ are supplied. MAMPU adopted MS 31000: 2010 Risk Management for the Public Sector Risk Management Plan.

Risk Management in the Public Sector

Based on the results of interviews with people who were chosen to share their thoughts on how to implement risk management in the public sector, there are nine variables related to understanding how risk management can be used voluntarily. This preliminary result will help improve knowledge of the implementation objectives and directions in the public sector. The variables are shown in Fig. 3.

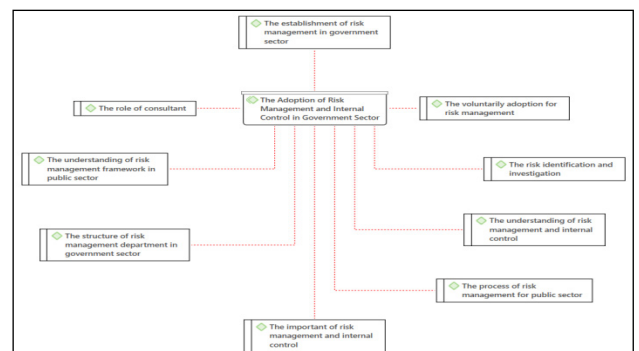


Fig. 3: Variables for Establishing Risk Management in the Public Sector

Establishment of Risk Management in the Government Sector

The goal of this study was to find out if public employees understand how risk management and internal control work so that a risk management framework could be made for the Malaysian government sector. Even though half of the participants did not know what the institution was, the interviews showed a range of understanding. This shows that being aware is an important part of managing risks. Officer B noticed that they both care about internal control and risk management in the public sector. He stated that:

In the beginning, there needs to be an awareness of the importance of risk management. We need to be aware of the importance of risk management. The officers who carry out their duties need to understand, but in fact, what they do must involve high-risk tasks.

Similarly, Officers J, K, and L mentioned that awareness and enforcement are important:

In my opinion, what I think is important is awareness and enforcement.

Officer K added that:

Awareness is sometimes already there, but we are not conscious of it. So, we don't have awareness, and it's not practical.

Meanwhile, Officer L thought that:

Enforcement is also important because we already have things that we don't use.

In addition, Officers O and P also felt that awareness was needed internally and was one of the matters for risk management.

For us, internal awareness is important because there only needs to be awareness among the staff.

On the other hand, Officer C stated that

What I am aware of—as far as I know—is that there is no risk management unit. But I don't think there has ever been a risk management unit.

MAMPU noted that risk management and internal control exist, but it doesn't look like the practice is widely used in the government sector. Each ministry and department may consider this optional, but it still requires effort to maintain an effective risk management process. Officer Z has taken note of this:

In general, this risk management has been carried out by the agency. It's just that it may not be structured because in the public sector, we're actually already well established. We are governed by a lot of rules and procedures.

This study also finds that most participants seem to be aware of the risk management procedures. However, owing to a lack of coordination across the public sector organisations, there may be several ways in which they are aware of and comprehend risk management practices while working in distinct ministries, departments, and units. They are not truly engaged in how risk management is practiced in the public sector when they are not in contact with risk management. Officer R stated:

If it is the department audit, I asked the department if there is any overall risk management policy. But it does not have it yet.

Noting that many participants lacked an understanding of what risk management and internal control are, the interviewers explained the terms to them. After the explanation, most officers agreed that they were sometimes not familiar with these terms at the early stage of this study and mentioned that they do apply risk management when performing their tasks. Officer A noted that:

In fact, I think that management and risk management and control have their ways. In general, I think that internal control risk management is there, but it is not called internal control risk management officially, but in practice, it already exists.

Some organisations formally practice risk management, which comprises risk identification and assessment, internal control, and monitoring. Officer V mentioned that:

As far as I remember, there is a strategic management policy department. There is a

department that will make a risk management plan so that each cost centre will be discussed there.

Aside from learning about risk management in general, this study focused on how to buy things and pay for them. Based on the interviews, this study finds that no established risk management and internal control practices for the procurement and payment processes exist. Officer S stated that:

There is no risk management plan for procurement and finance. But if there is one, I think it is under the department or under the agency's management, under the department.

Similarly, Officer V mentioned that:

This risk management section is under the management's service. Risk management? There is no risk management for administrative financial procurement. But from there, the officer will combine the risks and make a risk management plan for monitoring.

Officer K was also unsure about risk management for procurement. He said:

There is not really risk management and internal control. Does it exist? Not like some organisation have a policy for risk management and internal control or maybe there is a unit that actually handles risk management and this internal thing may be important for procurement and finance.

This opinion is also aligned with Office N's opinion of officers not knowing how risk management for procurement works. They depend on the circulars from the Ministry of Finance.

But I am not sure whether it is in line with the framework or not, but all the guidelines for procurement relies on the Circular of the Ministry of Finance for procurement.

However, Officer M was fairly certain that there is risk management for procurement.

If we look at it in terms of procurement, we know that there will be risk management for this procurement.

In spite of being unsure about the existence of risk management for procurement, the participants saw that risk management is important for procurement to reduce the possibility of corruption. For example, Officer M stated:

This is to avoid the core of the risk of corruption. The risk management is already there, but we can see that in the system, there is more or less like this risk management. It's a little more transparent.

Voluntarily Implementation for Risk Management

Risk management organisation and execution in Malaysian government organisations may be described as voluntary. This finding is based on the participants' ideas and information, indicating that the implementation is open and dependent on the ministry, department, and sector. MAMPU is active in providing comments on policy implementation and risk management. According to Officer Z:

It's not mandatory so far. There is no one saying that risk management in your sector is mandatory. So MAMPU took the initiative to help the agency implement risk management your sector is mandatory. So MAMPU took the initiative to help the agency implement risk management. The risk center However, our focus so far has been only on the strategic plan and not operations. For your information, I think it is not a problem now. The organisation has two conditions: the reason for the implementation and the effect of the implementation. MAMPU will provide consultation services, even up to the state level.

Structure of Risk Management Department in the Public Sector

The structure of risk management in government organisations differs from that in the private sector. This conclusion is based on the views of the participants, who claimed that having a risk management unit is essential. Officer K stated:

In my opinion, risk management comes from various sections. There are ten parts to this work. So, for every job, we have risk management.

So, I think it is holistic. If in one ministry, all departments play a role in preparing their respective risk management and then the strategy to manage that risk.

This study finds that there was not a separate risk management unit in the public sector like there was in the private sector. Instead, it has an integrity unit and internal audit, as mentioned by Officer AA:

In this government, we are not a risk department. But we are an integrity unit. We have an internal audit unit. These people will check if we say that there is someone who gives information about something. The integrity unit will check first and investigate.

This study shows that even though MAMPU helps with risk management, its representative said that the structure of the government is different from that of the private sector. Risk management is hard to put into place because of how complicated things are in the government sector. Based on the details provided by Officer Z, the following result:

We see that the government sector and the private sector are different. Private has its basis. If we look at a company, even a large one, they have a department. So, the Chief Risk Officer (CRO) will interview, do a self-assessment, or conduct a risk control assessment. The private sector will look at all departments. So, if in the government, there is none. We only give briefings on this. So, these are risks, and so on. That's it.

The government sector does not have a formal unit to implement risk management, as mentioned by the participants. Officer A mentioned that:

I think there is no unit for risk management; it's under the integrity unit. It seems like there is a section that does risk assessment. This one is in the integrity unit. I'm not sure how they analyze risk, but it is in the risk management plan.

Similarly, Officer C stated:

If there is a risk management unit, we need representatives from each existing unit to give their opinion because they know their own risks better for risk management itself. If the

drug department is involved, we need to have a representative from the drug (medicine) department.

Although the public sector does not have a separate risk management unit, the participants felt that procurement needs to be integrated with risk management because procurement has different risks from other units. According to Officer X:

Who needs to play a role if there is risk management in the future? Me, I think our procurement work is already using the procurement system of our service supply, which means that the system is already in the process. So, that's why I think it's integrated, interconnected, so it's a risk. Now, indeed, risk management needs to be integrated.

Understanding Risk Management and Internal Control

Along with raising awareness, this study looked into whether or not the public sector participants needed training. According to the findings, training may be critical and useful for public workers. The training is mostly for the procurement process and risk management. However, risk management training is not widely applied among Malaysian public employees. According to Officer O:

There is a lot of training in general, but it is also necessary for risk management and procurement.

Similarly, Officer R believed that:

Training is necessary, but this training depends on who is giving the training and what the training is about. Sometimes, different people's understanding is a different way for procurement.

The fact that the participants brought up training about the risk management framework shows how important it is to get the right training. Officer V stated:

Risk management is like in ISO. It's not like anti-corruption plans. But if it's like anti-corruption plans, there's a lot of training. But when it comes to risk management, it seems like there's no training or discussion.

Officer B also believed that:

...this risk management is necessary. There needs to apply the ISO framework into the organisation. So, we need to give training to the staff to understand better about ISO.

Officer Q thought that:

...we follow the Circular. Everything that is through the Ministry Finance is actually like a lot of training. Government officials need to know that there are other methods; that's what we need to know. What we need to learn is ISO 31000.

In addition to risk management and procurement training, participants in this study sought to understand the link between risk management and the procurement process. They felt that there should be specialized risk management strategies for each function, such as procurement, payment, technology, operation, finance, and other current activities. Training for these activities might help public officials identify and analyze potential hazards and identify solutions to manage the risks for their specific tasks. Officer F stated:

For this training, risk management is also one of those that is rarely carried out. So, it needs to be carried out for risk management for procurement because most of the training we have is mostly for procurement process. But risk management is necessary for procurement. So, maybe it can be improved for workshops in the future.

The majority of participants stressed the importance of procurement process training since it is difficult to understand the procurement procedures, which always need to be updated. Furthermore, procurement is one of the most important functions in the Malaysian government sector. Officer S mentioned that:

That's what we see in the Circular. We have to read it. But when we read it, we don't understand. There is also okay. Which Circular? We don't know how we want it to be carried out, so, we need to refer to the Ministry of Finance in terms of what we need. Training is very helpful for all officers, personnel, and professionals related to procurement and finance.

Importance of Risk Management and Internal Control

Based on the interviews, this study shows that the management must establish an effective risk management system and ensure that it is operationally sound. Strategic and tactical decisions are required for successful risk management for organisations to reduce their financial exposure. The majority of participants believed that risk management and internal control implementation were critical in the public sector. Officer R stated:

There is a need for risk management and internal control because we are exposed to the elements of RM leakage, misuse, and also how irregular payments are made.

Similarly, Officer D believed that:

Risk management is also needed if it can improve and identify what in this organisation is not good. It would be good if there is an example to reduce anything false or error or fraud. Sometimes, there is something that is not clear, this can be used.

Officer U also thinks that risk management is useful to improve job processes:

Maybe just trying to do something like this. As you know, these are not static documents, which we have to improve every year. There may be new risks, and we have to reassess every year. We have to review the risks and improve the documents. So, this is a process that is always carried out continuously at all times.

Officer H also believed that risk management is important, but he thinks that it should be at all levels:

I think the role is for risk management is at all levels. That's important for the implementation of risk management.

On the other hand, Officer T thought that the government sector should have a separate department for risk management:

For me, this risk management is really related to us, and our section is very important. In fact, the department and the Ministry should have a

risk management section because this is one of the instructions or matters under the competent authority.

Risk Management Process for the Public Sector

The risk management process for the government can also be said to have been implemented, but according to the needs and methods of each organisation. This study shows the process of identifying and analysing different risks in the government sector based on the information from the participants. According to Officer R, the process is bottom-up.

...the ISO risk management process in terms of its characteristics where the necessary requirements are very important for us to have right for risk management, which is necessary. In my opinion, this matter needs to be done at the bottom-up in the Audit Department itself to make a reason to identify the risk. The risk needs to be identified first by the officer - the officers who carry out the work themselves are the ones who know what the risks are. But if we want to identify the reason why we need to get information from all parties, communication is very important, which we always lack, i.e., lack of communication.

Officers B and C described that there is no one person in charge of the risk management process in their ministry because different risks are associated with different activities. According to Officer B:

... no one asked people to ask me to verbalise or list the risks. I don't think anyone has asked me to list the risks in this organisation. I think it's important that we first list the risks in terms of buying and paying for medicine, right? I think it's very important.

Similarly, Officer C stated:

I am in the payment and finance department, so I don't know the other departments for risk. I wasn't given any other work; it's only the payment part. So, the medicine part needs to have their own expertise. If this is vaccine, for example, needs to have own expertise.

Some agencies are uncertain about the risk management method being used. According to Officer A:

Maybe I think we have to be right about that evaluation. For example, when we identify, we can find the cause for the process, we can find. It's not just the officer level, maybe the staff can identify it. And then do the analysis.

As a consultant for government risk management implementation, MAMPU has also talked about the uncertainty of government risk management. Despite the absence of a defined risk strategy or organisation, the government emphasizes efforts to detect risks. According to Officer Z:

Each agency's internal policy has to be there. It means that it has to be there. For example, we say it is a priority. All agencies have policies. Examples are related to financial management, human resource management, and security. And, actually, the risk is already there; people just don't see it. So, in order to be more structured, there must be a policy for this risk management.

Risk Identification and Investigation

This study finds that auditing plays a vital role in detecting and analyzing the risks associated with an agency's operations because each operation's activities and goals are distinct, as is the method for identifying them. The participants felt that identifying risks would change depending on the scenario and environment in each organisation. The risk management process was also carried out indirectly in the government sector. Therefore, the audit results will aid in the knowledge of risk management. According to Officer C:

In fact, I think that risk management and control is in this way. In general, I think that internal control risk management is there, but it is not called internal control risk management officially or officially. But, in practice, it already exists.

This study, however, shows that the risk identification and investigation activities do not involve all stakeholders in the organisation since certain participants are not active in identifying risks in their department's process. Some

participants do not actively participate in the risk brainstorming process. Employees would have a greater understanding of the procedures, processes, and hazards if they were directly engaged in the activities. Someone in charge of the process could give more accurate and relevant information for organisational changes. Officer B stated:

There has to be the right person to analyse the appropriate risk in terms of payment. But if we analyse damaged drugs, we have to ask the pharmacy department. So, we need someone who can give us the right opinion.

There are various ways of identifying and analyzing different risks based on the functions and processes used in the organisation. According to Officer K, his department uses staff rotation or pairing to mitigate the risk of payment and supplier delays during holidays. They will also advise the claimants about the holiday dates. He further added:

We have our own risk management system. The management service secretary will compile it, but she seems to have only come once with the circular. When it comes to quality procedures, there is one area of risk management where we have a kind of traffic light rating. Ratings are red, green, and yellow (low risk, high risk).

Officer R mentioned that the risk identification and investigation activities in his department are coordinated by the department head with the assistance of the officers from the cost centers.

The coordinator is the head of the risk planning department. But an officer from the cost center will present it. He will tell you what the risks are that may happen. The head of department may have a basic plan that focuses the risk management plan. He will combine all the risks and coordinate the center of responsibility for risk management.

The participants who explained how the process of identifying and recognizing risk is carried out in their organisation felt the government also emphasizes the importance of risk management, even if it is still in its early phases of implementation. The risk assessment process includes recognizing the danger, analyzing it, and assessing its severity. The likelihood of the risk happening and its impact

(or consequence) may be used to determine its seriousness. According to the interviews, the government has employed a variety of methods for identifying and managing risks. Officer U said that:

Okay, if, for this year, the operational unit needs to provide information to the grassroots for any new risks that they are asking for. What are the risks and also the mitigation? Often this risk is like there is a group that will always have a workshop for and there will be a group that will discuss what risks and mitigations there are for ISO.

The Inspectorate is also one of the places where risks or strange events can be found. Inspections will assist the department or agency that is the center of responsibility and manages finances in identifying the risks that occur and how to overcome them. According to Officer A:

If it's for risk management, I think it depends on the responsibility center. It's important that they have to identify anything that is high risk. So, at the responsibility center level, there needs to be internal control, so we take a sample.

According to Officer Y, risk management is also appropriate for the procurement process.

We have discussion sessions with the department. So, from there we can get the expected risk for our transition; we already know it. So, from there we can get information. We cannot be too big for risk management, but we just do the basics.

Understanding Risk Management Framework in the Public Sector

Risk management frameworks exist to measure the efficacy of risk management strategies. On a worldwide scale, risk management frameworks are accessible and acceptable. These frameworks may be used to evaluate and measure the maturity of a company's risk management practices to enhance risk management procedures. Two examples of risk management frameworks available from different nations are the ISO 31000 Risk Management Guidelines and the COSO Enterprise Risk Management (ERM) Framework. The interviewees

in this study shared their knowledge of the risk management framework. According to Officer Z:

I think it is really difficult to implement COSO at the public sector level. Because it needs a department. So, let's look at ISO 31000, it's clear, simple. It's actually just the process.

Risk management in the public sector is reported to be difficult to implement because the ministry has so many different agencies and divisions, each with its own set of responsibilities. This implementation also depends on each business's resources and expenses, since each firm must concentrate on possible hazards and how to overcome them. Officer Z shared his viewpoint as a consultant engaged in the implementation of risk management, as follows:

In my experience, the agency didn't identify the risk. Knowledge, experience, and a lack of input. Risk impacts most risk transactions. If it can't identify, it recognises the risk but doesn't know the cause. It costs. Unset costs will cause issues.

When analyzing risks, both the chance of their occurrence and the possible impact on the successful execution of the objectives are considered. The assessment findings will offer management the information they need to establish the severity of the risks threatening their operational, financial, or compliance objectives. Government organisations should employ the notions of probability and effect. Office Z stated:

Rating ensures that this risk has two probability and two impacts. Even if it's voluntary, can we rate each risk's probable impact as high, low, or medium? Probability indexes are 2×2, 3×3, or 5×5. That depends on the agency.

Role of a Consultant

In the public sector, there are consultants who help every ministry, department, and agency with putting policies and systems into place. MAMPU consultants are engaged in the risk management implementation, where they will give insight and assistance on how to identify and analyze current risks. According to Officer Z:

I am not an expert with this risk. I only started this risk management when the ISO was issued

in 2001. At that time, it was handled by the Standard and Industrial Research Institute of Malaysia (SIRIM). So, I was involved at the same time in the ISO 9001 2015 quality management. This section is called the consulting service section. So, under this consulting service, we have several [activities].

This study finds that since they know more about how things work and how to do them, it is up to the agencies or departments to do this. The private sector has a separate department for managing risks, but the government needs the help of a consultant.

It's just when we are consultants, after some period, the people have done everything. After compilation, they will refer back to us to check whether they have done it correctly or not, especially in the risk register. So, the best depends on the organisation. We will help you there later. Before helping to register risk profiles.

CONCLUSION

This study collected data from the qualitative interviews, which can be summarized by the notion that risk management knowledge is vital even if there is no institutional risk management for procurement procedures in the government sector. Although risk management and internal control are thought to be used in the government sector, they are not commonly applied throughout Malaysian public organisations, as they are still adopted on a voluntary basis. This study demonstrates that the Malaysian government has its own government policy, which is the driving force behind many of the strategic objectives, and that the risk management system focuses on performance-aligned objectives. When it comes to day-to-day operations, there are aspects of government policy that have a direct impact on the design and operation of the risk management control system as guided by MAMPU. This study shows that although risk management and internal control are not new in Malaysia, they are still not implemented in their entirety and as standards because each organisation implements them independently and differently. Most organisations still do not have a formal risk management department and do not have

detailed risk management for procurement. In addition, detailed training in risk management requirements is necessary for government officials to improve their knowledge of proper policy and guidance. Training is required because most of the officers interviewed also stated that risk management and internal control are necessary to face any challenges in the future. Apart from that, Malaysian government organisations do have risk management and internal control processes involving how to identify and analyze risks. These processes exist because MAMPU's role as a consultant in risk management has helped the ministries, government departments, and agencies interested in implementing risk management and internal control do so.

This study established a new set of variables in the public sector. These elements include the establishment of risk management in the government sector, the voluntary implementation of risk management in the interest of risk management, understanding risk management and internal control, the importance of risk management and internal control, the process of risk management for the public sector, risk identification and investigation, understanding the risk management framework in the public sector, and the role of a consultant. This study provides insights to the government sector on the possible factors that are important in ensuring the early stage of implementation of risk management compared with past studies, such as Tarjo *et al.* (2022), Irving and Walker (2021), and Oulasvirta and Anttiroiko (2017), that go more into the impact and benefits of risk management.

This study shows that in-depth interviews and time spent in the government sector help show how risk management and internal control are doing in the sector as a whole. The findings of this study are important because the effectiveness of risk management and internal control systems depends not only on how the systems are put together as a whole but also on how the control framework for risk management and the management of risks are carried out. However, this study is not without limitations. The findings of this study are based purely on primary sources. Only federal departments that consented to participate in the study were examined. Therefore, future studies may

reinforce the results by examining other government bodies.

In sum, this study contributes to the knowledge of risk management implementation in the public sector. These insights might be extended to other federal agencies and state and municipal governments to promote governance, accountability, and openness.

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