

# ASSESSING THE FRAUD PREVENTION MECHANISMS IN MALAYSIAN GOVERNMENT AGENCIES

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## ABSTRACT

*The public sector is most susceptible to fraud but effective prevention mechanisms will help it to minimize fraud risk. This paper provides an indicator on the effectiveness of fraud prevention mechanisms, which facilitate it to minimize the fraud risks, implemented by the public sector. The framework of this study is developed based on the fraud triangle concepts which explain how pressure, rationalization and opportunity could be minimized by implementing effective fraud prevention activities such as internal control assessments, training and education, and other organisation-wide strategies. This study concentrates on fraud training and education mechanisms. (Insert research method). The results show that raising fraud awareness activities, training in ethics or code of conduct, training in privacy principles and training to employees involved in fraud control activities are effective mechanisms for fraud prevention.*

**Keywords:** *Fraud, fraud triangle, fraud prevention mechanism, public sectors*

## INTRODUCTION

Fraud is one of the world's most problematic issues. It can affect any organisation in both private and public sectors; from the smallest local firm to the largest multi-national conglomerate or government agencies. Fraud is on the rise and continues to be a major problem for Malaysian organisations.

and its impact on reputation and financial health can be enormous (Pickett, 2012). Despite the increasing risk and complexity of fraud in the current environment, many organisations have not reviewed the adequacy and sufficiency of its fraud prevention strategies. Several instances of fraud and misconduct, which were uncovered in the private or public sector, such as Transmile, Welli Multi, Megan, Media, GP Ocean and Port Klang Free Zone, pose a constant threat to the regulatory structure, public trust and confidence in a market economy. These have resulted in wastage of resources and have reduced economic growth and the quality of life, undermined government credibility and reduced its effectiveness (Buang, 2010).

In Malaysia, challenging business environment, which has had an impact on all areas of financial performance, has led to an increase of economic crimes in the past few years. The economic crime or fraud is expected to continue to increase as the business challenges increase. As a result, there has been an increase in investment in fraud controls and efforts made by regulators to reduce fraud. However, the fraud controls and efforts have been shown to be unsuccessful since the frequency of fraud incidences is at a much higher level than seen previously (KPMG, 2004). In 2007, the AG Report disclosed a number of suspected fraud cases. For instance, the computerized land registration, which was implemented nationwide about a decade ago, was flawed in terms of its data integrity. The system could be easily manipulated by unscrupulous people to undertake land transactions. In fact, police records showed that there were 185 cases of improper land deals (AG, 2007).

The Malaysian government has made continuous effort to promote awareness on accountability, integrity and transparency among the public servants in order to shoulder the trust that the public have entrusted (Buang, 2008). Total elimination of fraud and corruptions is impossible, but the risks can be minimized through proper hiring of staff, training, and deployment of procedures and internal controls. These activities can help to reduce fraud cases and increase management's awareness regarding red flags or warning signs before major damaging consequences happens. However, despite the increasing risk and complexity of fraud in the current environment, many organisations have not reviewed the adequacy and sufficiency of its fraud prevention mechanisms.

Generally, the government has sufficient laws and regulations to enable the departments/agencies to take actions against the wrongdoers. Among others, the government had issued the Financial Procedure Act 1957, Treasury Instructions, Treasury Circulars and General Orders. To ensure that all the laws and regulations are adhered to, it is suggested that the heads of department/agency ensure that the elements SIKAP<sup>1</sup> exist in his/her department.

Apart from SIKAP, a well-developed regulatory framework investigating fraudulent activities was established through good internal control system. However, there is an absence of measurement of the effectiveness of those mechanisms. An effective anti-fraud measures and control should be set to mitigate instances of fraud and misconduct (Buang, 2010). The development of an instrument to assess the effectiveness of preventing fraudulent activities mechanism would significantly benefit the public organisations, in particular, and the country, in general. Thus, this study is carried out to assess the effectiveness of fraud prevention mechanisms adopted by Malaysian public organisations. Specifically, it focuses on the four fraud training and education mechanisms namely: raising fraud awareness activities, training in ethics or code of conduct, training in privacy principles, and training to employees involved in fraud control activities.

This study extends the understanding of the most effective way to deal with the growing threat of fraud, which is to provide all staff with comprehensive fraud training; to make the entire workforce fraud smart.

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<sup>1</sup> SIKAP means:

S- SUPERVISION (close supervision given to the subordinates)

I – INTEREST (every officer must have interest in their work)

K – KNOWLEDGE (every officer must have sufficient knowledge in their field of work)

A- ATTITUDE (every officer must have the right attitude in performing their duties. A culture that values honesty, trustworthy and efficiency must be instilled)

P- PROCEDURES (proper procedures should be established for each activity and monitored to ensure that they are complied with)

## LITERATURE REVIEW

### Definition of Fraud

Bank Negara Malaysia (year) has defined fraud as “*an intentional act of deception involving financial transactions for the purpose of personal gain*” (page number). Fraud is a crime, and also a civil law violation. Bank Negara Malaysia found that many fraud cases involved complicated financial transactions conducted by ‘white collar criminals’ with specialized knowledge.

According to Black’s Law Dictionary (year), fraud is a false representation of a matter of fact, whether by words or by conduct, by false or misleading allegations, or by concealment of that which should have been disclosed. As distinguished from negligence, it is always positive, intentional fraud, a generic term, embraces all multifarious means which human ingenuity can devise and includes all surprise, trick, cunning, dissembling and any unfair way by which another is cheated (Johnson v. McDonald, 170 OK 117, 39 P.2d 150). According to The American Heritage Dictionary of the English Language (year), “fraud” is a deception deliberately practiced in order to secure unfair or unlawful gain. A piece of trickery, a swindle, a cheat; one who assumes a false pose, an imposter, a sham is also called a fraud. On the other hand, “misrepresentation” involves giving an incorrect or misleading representation of some important element or item or fact relating to the claim. Misappropriation of assets involves embezzlement/breach of trust, misuse of assets, theft of equipment/inventory/supplies, procurement fraud, forgery, cheque fraud and cheating/fictitious invoices. The focus of this study is to assess the prevention mechanism of financial fraud. According to the *American Institute of Certified Public Accountants (AICPA)*, they defined fraud, in accounting standards and reports as an intentional act that results in a material misstatement in financial statements that are the subject of an audit” (AICPA, 2002).

In an age of rapid growth of technology, most fraud offences are carried out through the use of computers in some way or other. Hence, the definition of fraud, particularly its geographical scope, needs to be stated in technology neutral terms. When defined in this manner, it will enable the most sophisticated fraudsters to be dealt with effectively by the courts. This is

important because the fraudster or the penetrator will do fraud when they have the opportunity and this opportunity comes with different scopes based on changing technologies.

Deceitful conduct may not only result in criminal consequences, but also civil ones. Traditionally, fraud was regulated principally through civil actions. The use of the criminal law as a regulatory strategy is a relatively new invention, at least in the history of the common law (Legal regulation of fraud, 1997). Today, the civil consequences of fraud continue to have widespread importance as, clearly, it is beyond the capacities of police and other regulatory agencies to investigate every allegation of fraud which comes to their attention.

### **Fraud Triangle**

According to Cressey (year), in his fraud triangle theory, the fraud triangle consists of perceived opportunity, perceived pressure and rationalization. Organisations must put an effort to remove or reduce the opportunities for fraud from the very beginning by placing more emphasis on prevention and deterrence of fraud. Nowadays, the organisations should remove or reduce the opportunities of fraud from the very beginning by place more emphasis on prevention and deterrence of fraud. In Cressey's view, there were two components of the perceived opportunity to commit a trust violation. First is technical skill and second is general information. Knowledge that the employee's position of trust could be violated is the definition of general information and the abilities needed to commit the violation are referred to as the technical skills (Kranacher, Riley & Wells, 2011).

According to CGMA (2012), the motivation or pressure for fraud is typically based on greed or need (resulting from financial difficulties) and opportunity arise where there are weak internal controls such as poor security, little fear of exposure or likelihood of detection. As for rationalisation, some may rationalise fraudulent actions as necessary, especially when done for the business, harmless because the victim was large enough to absorb the impact, or justified because the perpetrator had a sense of grievance.

The recipe of fraud used in this paper - opportunity, motive/incentives and rationalisation/integrity- comes from Cressey's (2004) fraud triangle (see Figure 1).



Figure 1: Fraud Triangle

Table 1: Description of Fraud Triangle

Opportunity	Rationalisation	Motive/Incentives
Internal controls are weak. Inadequate segregation of duties. Lack of supervision. Too much trust.	Internal dialogue that provides justification the self-justification for his action. Fraudster convinces himself that he is owed this remuneration by the employee.	Financial pressure. Desiring to report better than actual. Excessive lifestyle. Basic greed. To maintain personal income and wealth.

Source: KPMG (2004)

As shown in Table 1, the motivation to commit fraud is pressure such as financial needs, frustration with work and the challenge to ‘beat the system’. If the internal control is weak or absent, opportunity to commit fraud is higher. Fraudsters can contact their potential victims through many methods which include face-to-face interaction, by post, phone calls, sms and/or e-mails. On the other hand, corporate causes are the organisational reasons that allowed fraud to occur. The reasons include low commitment to brand, insufficient controls within the organisation, use of authority to override existing controls, high level of staff anonymity, high target for company performance and lack of clarity concerning corporate ethics (ref). These causes match with agency theory where unconstrained management will act in a manner that benefits themselves at the expense of the owners; although this problem can be addressed by monitoring and control activities (Watts and Zimmerman, 1996).

## **Fraud Practices in Malaysia**

Fraud is a deception deliberately practiced in order to secure unfair or unlawful gain (PwC, 2007). A piece of trickery, a swindle, a cheat; one who assumes a false pose, an imposter, a sham is also called as fraud. On the other hand, “misrepresentation” involves giving an incorrect or misleading representation of some important element or item or fact relating to the claim. Fraud can be classified into misstatements arising from fraudulent financial reporting and the misappropriation of assets (Sadique, Roudaki, Clark, and Alias, 2010). Gottschalk (2010), categorised fraud as consumer fraud, credit card fraud, external fraud, inventory theft, basic company fraud, click fraud, check fraud, identity fraud, financial statement fraud, sundry frauds, embezzlement, mortgage fraud, occupational fraud, advance fee fraud, financial fraud, and hedge fund fraud. Bank Negara Malaysia found that many fraud cases involve complicated financial transactions conducted by ‘white collar criminals’ with specialized knowledge and criminal (KPMG, 2004).

A fraud survey by KPMG (2004) found that there are three common types of fraud and misconduct risks in Malaysian public sectors namely, misappropriation of assets, corruption and revenue/ assets improperly gained and other misconduct (for example conflicts of interest and theft and leakage of proprietary/ confidential information/ non-public information). The impact of fraud to a public sector organisation can be seen in both financial and non-financial damages. Financial damages include losses to the government, implication on tax payers and investigation costs. Whereas non-financial damages include adverse impact on the credibility of the Government’s delivery system, reputation damage/negative impact on morale, parliamentary inquiry/ royal commission/ investigation by authorities, lost management time to rectify the problem, time exposure for press, the public and others, and erosion of public or tax payer’s confidence and trust in the public sector. The most common types of fraud are theft of funds (outgoing), corruption, theft of physical assets, financial reporting fraud, theft of funds (incoming), theft of intangible assets, electronic commerce and computer related fraud, identity fraud and other consumer related fraud (PwC, 2007).

In addition, PwC's Global Economic Crime Survey (2011) stated that the most common types of fraud that occurred in public sectors are: theft (including cash, consumables and intangible asset), procurement fraud (false invoicing), payroll fraud, fraudulent expenditure claims, unauthorised or inappropriate use of information technology, the unauthorised access and release of information, the forgery or falsification of records, and identity fraud. Fraud in the way government conducts business, such as outsourcing of service delivery to external service providers, the introduction of new policy initiatives and programs, introduction of internet-based transactions and electronic information exchange. In light of the cost and characteristics of offenders, it is important to propose the cost effectiveness model in preventing fraudulent activities mechanism in public sector.

A survey by PwC (2007) found two types of causes that could trigger fraud i.e., individual causes and corporate causes. Individual causes are the perpetrators' personal reasons to commit fraud which includes financial incentives, low temptation threshold, lack of awareness of wrong doing, career disappointment, expensive lifestyle, denial to financial consequences and potential redundancy. KPMG (2004) classified financial fraud into five categories which include fraudulent financial statement reporting, misappropriation of assets, expenditures and liabilities (avoided or incurred) for improper purposes, fraudulently obtained revenue and assets and other misconducts such as conflicts of interest, insider trading, discrimination, theft of competitor's trade secrets, antitrust practices and environmental violations.

According to Beasley, Carcello and Hermanson (1999), the most common techniques used by fraudsters are revenues and misstatements. Financial reporting fraud is expected to increase as a result of the current challenging business environment which has the current challenging business environment which has had an impact on all areas of corporate financial performance. Majority of fraud is perpetrated internally. Employees are not adequately trained to detect early warning fraud signs (red flags). Despite heavy reliance being placed on internal controls to prevent and detect fraud, poor and inadequate internal controls have failed to prevent and detect fraud.

Prior literature has conjectured that fraudulent activities may be easier for the fraudster to perpetrate in a non-profit organisation and this is supported



by Douglas and Mills (2000) who argued that contributory factors for the fraudulent activities are an atmosphere of trust, difficulty in verifying certain revenue streams, weaker internal controls, lack of business and financial expertise, and reliance on volunteer boards. Several instances of fraud and misconduct in the private or public sectors, such as Transmile, Welli Multi, Megan, Media GP Ocean and Port Klang Free Zone pose a constant threat to the regulatory structure, public trust and confidence in a market economy. These fraud, misconduct and corruption have resulted in wastage of resources and reducing economic growth and the quality of life, undermines government credibility and reduces its effectiveness. To prevent and detect fraud, organisations normally assign someone who has an expertise in accounting and management within the organisation to be responsible directly to reduce fraud risk. Examples of individuals who are usually assigned these tasks are internal auditors and fraud investigators (Perry & Bryan, 1997; Hillison, Pacini, & Sinason, 1999; Zikmund & O'Reilly-Allen, 2007).

### **Auditor's Role in Detecting Fraud**

The increasing fraudulent practices and corruption have also raised concerns regarding the credibility of the audit profession. Auditors have a role to play in promoting a culture that rejects waste and values honesty, responsibility and the rational utilization of economic wealth. Where internal controls are insufficient and/or ineffective, fraud can happen anywhere, whether in the public or private sector. Auditors must rely on their technical experience, professional judgement and a good understanding of how fraud is committed since fraud indicators are difficult to identify (ref). Credible audits create public trust in the accuracy of government actions thereby, increasing the legitimacy of government and strengthening the institutional framework of a country.

In the context of public sector auditing, the audit reports provide tell-tale signs of possible fraud which include unjustified high cost of equipment, payment made in full although contractor's or vendor's work has not been completed or equipment has yet to be delivered, certifying projects when defects have not been rectified and other forms of false claims (Buang, 2011). There are also instances where value-for-money of infrastructure projects is questioned. These include projects which continue to be delayed

despite several extensions and significant cost escalation, including additional expenditure to rectify defects not fully carried out during the defect-liability period. An example of suspected public sector fraud and waste of great magnitude is the recent billion dollar Port Klang Free Zone (PKFZ) scandal which has allegedly disclosed a frightening web of power abuse and mismanagement.

Weak project management and bad governance in term of disregard of proper government procedures, no open tenders, excessive costs, cash flow problems, lack of master planning and minimal supervision were said to have severely undermined the viability of the project (Buang, 2011). It is strongly believed that laws and regulations along with adequate oversight and enforcement as well as good governance and ethics can deter many acts of fraud.

Frauds could have been discovered in a timelier manner, or perhaps even avoided, had key officials in public service and corporation been more vigilant, competent and committed in discharging their responsibilities. The government under the leadership of Y.A.B. Datuk Seri Mohd Najib bin Tun Razak, the Prime Minister, has taken significant strides in reducing fraud and corruption risks through rigorous preventive measures in order to increase the public faith and confidence in the government agencies.

The measures include adoption of open tender system to ensure transparency in the government contract; public accessibility of information on government tenders using the My Procurement portal; the passing of the Whistleblower Protection Act 2010 by Parliament to protect those who disclose information on wrongdoings and those required to facilitate investigations; introduction of integrity pact where bidders are to refrain from offering, demanding or accepting bribes to influence procurement decisions as well as enforcing swift and stiffer punishments and accelerating corruption trials. Through concerted efforts of not only the government but also the private sector, professional bodies, civil society groups and individuals, Malaysia can achieve more success in eradicating fraud and corruption.

Organisations will incur substantial additional costs in investigating and prosecuting matters. Managers and other key personnel may then be required to attend court to give evidence although, in most cases of serious fraud,

the offender usually pleads guilty once a preliminary investigation has been concluded, and sometimes immediately when the incident comes to light. Forensic accountants may need to be engaged to conduct an audit of a whole department's accounts. These indirect costs incurred by victims of fraud can be substantial. Although some may be recovered from solvent offenders through court compensation orders, invariably, the victim company will suffer at least some additional costs associated with prosecuting a case that will not be able to be recovered, especially where the offender is without assets or had disbursed the sum stolen.

### **Fraud Prevention Mechanisms**

Fraud occurs in so many different ways and settings. There is no standard recipe for fraud prevention and the key to fraud prevention lies in the development, and refinement, of a fraud control system. The National Fraud Authority (NFA) has estimated fraud losses of £17.6 billion attributed to the public sector in the United Kingdom and £30 billion per annum for the whole country including public and private sectors (NFA, 2010). Based on research undertaken in 2009 by the London Boroughs Fraud Investigators Group (LBFIG), a figure of £621 million for fraud in local government was disclosed (Wesley Lane, 2010). With this study by Wesley Lane, it shows that more than 50% from total estimated losses in the United Kingdom is attributed to the public sector.

Regular fraud risk measurement exercises are not undertaken by the most organisations (Brooks et al., 2009). There are, therefore, lots of bodies and organisations who do not know the true extent or the exact amount of their fraud losses. Authorities could argue that their controls are sufficient, they suffer no fraud, hence need no investigation capability and, if a fraud was discovered, they could refer the matter to the police. In light of the well-documented decline in police response to fraud, that sentiment would be naive (Doig et al., 2001, Wright, 2003; Attorney General, 2006; Levi et al., 2007).

Fraud prevention is actually the responsibility of the entire organisation from top management to the lowest rank officer. To make sure the perceived opportunity of fraud will be reduced, strong controls is needed and for that reason, providing proactive measures to detect fraud through methods such

as questioning, fraud assessment and anonymous hotline, gives employees the responsibility and chance to help stop a fraud. With these methods, it also will increase the perception of detection, thereby reducing fraud risk and preventing possible future frauds. It will help to create a positive work environment that reduces the pressure or motives to commit fraud and increases employee morale and ethics (Peterson & Zikmund, 2004).

Public sector fraud can happen when internal controls are inefficient or ineffective (Buang, 2011). From the PwC's (2011) perspective, public sectors are most susceptible to fraud when they have large, demand-driven spending commitments and policies which do not allocate enough time and resources to assess risk or implement controls to detect, investigate and mitigate fraud; power is centralized unduly, for example, when a single individual has the power to make decisions on procurement, contracting and approval, and standard contracting procedures are bypassed using the justification of 'addressing urgent business needs'. This temporary approach may then be extended to avoid the checks and balances of procurement policies. Policies and rules to minimize fraud and corruption are not applied with the same rigour in remote operations as in the head office and an excessive focus on outcomes can result in increased pressure to improperly modify results leading to a loss of accountability and poor maintenance of associated business records.

The issues between fraud detection and prevention were supported by Bishop (2004), whereby he argued that there should be a balance between detection activities and prevention or deterrence activities. Historically, the majority of organisations put lot of effort on detection and investigation, which is 80%, and only 20% of the effort has been on prevention or deterrence. Nowadays, organisations need to reverse the emphasis and put more effort on prevention and deterrence (80%) and only 20% on the detection and investigation

When fraud is suspected, if processes are flawed and associated records are inadequate, this may lead to insufficient evidence being available to mount a successful investigation or prosecution. It may also result in the agency concerned being unable to instigate civil recovery action. As leaders within their organisation, senior executives have a critical role to play in controlling fraud in the government sector. It is important that they set the right tone

from the top and ensure that they, and the staff they lead, understand their particular fraud risks and profile and that these risks are on the radar and treated seriously.

Organisations need to adopt methods that will decrease motive, restrict opportunity and limit the ability for potential fraudsters to rationalize their actions as a way to deal with fraud. The aim or the purpose of preventative controls is to reduce opportunity and remove temptation from potential offenders. Prevention techniques to stop fraud from occurring include the introduction of policies, procedures and controls as well as activities such as training and fraud awareness (CGMA, *Fraud Risk Management*, 2012). The foundation for such a system is a management philosophy which is sensitive to fraud risk and the basic elements of such a system are a culture of integrity and loss prevention within the organisation, careful recruitment of staff, and regular auditing of transactions by internal controllers backed up by independent and accountable external auditors (Smith, 2001).

The underpinning of any good fraud risk framework is a set of comprehensive prevention strategies. In this study, prevention is defined as “intervention aiming to influence the underpinning risk factors (root causes) of criminal behavior and offending (Sansfacon, 2004, p. 5). Mitigating fraud is an ongoing process. The National Audit Department as well as other government agencies have been working hard to ensure the accountability chain is in place to maintain public trust (Buang, 2008). Total elimination of fraud is impossible; however, the risk can be minimized through effective mechanism in fraud prevention. PwC’s (2011) *Global Economic Crime Survey* listed nine mechanisms that government department used to prevent fraud. They are government structures and staff allocated responsibilities; fraud policy statement; fraud risk assessment; fraud control plan; procedures and guidelines; fraud awareness raising activities; training in ethics or code of conduct; training in privacy principles; and training to employees involved in fraud control activities.

Internal accounting controls are procedures designed and implemented to ensure the reliability and efficiency of accounting data and to safeguard assets and prevent or to reduce fraud risk. The essential elements of an anti-fraud strategy are ethical culture and effective system of internal control (CGMA, 2012). A good internal control is also an important factor as a fraud

prevention mechanism to reduce fraud risk because a good internal control will reduce the perceived opportunities and perceived rationalization for a person to commit fraud. Common fraud prevention measures, leaving as important red flags management integrity and attitude concerns such as corporate governance and accounting controls, disappear as influential determinants of fraud risk in the high risk sub-sample (Hernandez & Groot, 2007).

The effectiveness and cost and benefit analysis for FPM is important to ensure the cost has been weighed against the benefit, thus, increasing the value of the programs. The cost and benefit analysis will be examined based on the areas developed by Yeandle (2005) which covers perceptions of cost rises past and future by sector; particular sectors which might incur high costs; particular costs areas within sector; perceptions of benefits to organisations past and future by sector; and what the benefits are (e.g. increased revenue, reduced risk, reduced costs).

In addition, the effectiveness of fraud prevention mechanism will be measured using the following areas: perceptions of how effective the mechanisms are at detecting fraud; perceptions of whether PFAM are becoming and will become more effective; perceptions about intentions of fraudulent activities; and the practicality and proportionality of the mechanisms.

## **RESEARCH DESIGN**

The current study used a survey method to assess the fraud prevention mechanisms implemented in public sector. Survey is more commonly used to find an explanation for an event or phenomena. It also provides a quick, inexpensive, efficient, and accurate means of assessing information about a population (Zikmund, 2003).

### **Questionnaire Design**

The questionnaire in this study was designed to capture information on the fraud prevention mechanisms adopted by Malaysian government agencies. Specifically, this study focus on the four training and education mechanisms

adopted from PwC's (2011) Global Economic Crime Survey. They are 1) fraud awareness raising activities; 2) training in ethics or code of conduct; 3) training in privacy principles; and 4) training to employees involved in fraud control activities.

The variables measured in this study covered all the four (4) training mechanisms implemented by the public sector. The questionnaire is 8 pages (four double sided pages) long and included a covering letter explaining the purpose of the study and how to respond. A structured questionnaire was developed to get the opinion of the respondents on the effectiveness on each of the mechanisms using the following items: implementation cost; overall benefit; reduction in fraud risk; increase in awareness; morale implication; responsibility to prevent fraud; increase public trust; effectiveness of fraud prevention mechanism; intention to commit fraud; fraudulent activities; practicality the mechanisms; and balancing of cost and benefit.

A 5-point Likert scale was used to capture the opinion of the respondents regarding the implementation of respective mechanisms. The anchors ranged from "significantly low" (1) to "significantly high" (5). The sum of each score assigned to each item was used to indicate the level of effectiveness of each mechanism.

### **Sampling and Data Collection**

The sample was drawn from employees in various Malaysian government departments. The focus for this study is the employees in the finance departments. The questionnaires were distributed to 480 employees involved with financial activities in those agencies. Total responses to the questionnaires were 260, which gave a response rate of 54 percent. However, out of the 260 questionnaires returned, four were incomplete, leaving 256 questionnaires useable for analysis.

### **FINDINGS**

This section discusses the finding for this study. The data have been analysed using the descriptive statistic to achieve the objectives of the study.

## Respondents' Profile

Figure 2 to Figure 8 summarizes the profile of the respondents. Figure 2 shows that 20 out of 256 respondents have a postgraduate qualification (Master's degree or PhD). The majority of the respondents hold a bachelor's degree (84), followed by Diploma holder (76) and SPM or equivalent (66). The remaining 10 respondents did not state their qualifications.

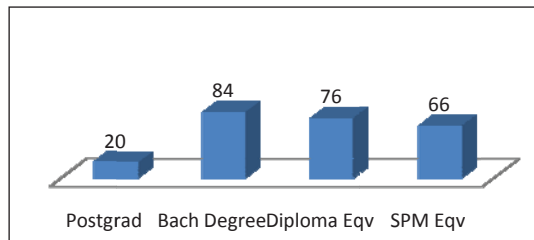


Figure 2: Educational Background

Among the 256 respondents, a majority of them are involved with finance administration and payments and receivables (126 and 107 respondents respectively). The remainder is involved with purchase of supplies, budget preparation and purchase using local order (11, 6 and 6 respondents respectively (refer Figure 3)).

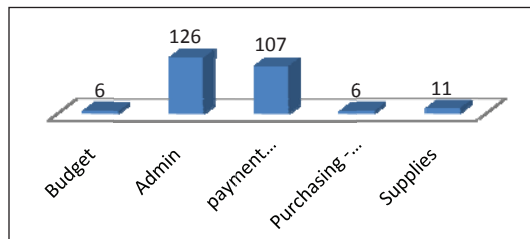


Figure 3: Job Specifications

The majority of respondents have been working at their organisations for between 5 to 10 years (74) and 57 respondents have been working for more than 10 years. Only 12 respondents reported that they have been working at their organisations for less than 1 year. This shows that the majority of the respondents have experience in the related areas, thus may be considered as experts in their job.



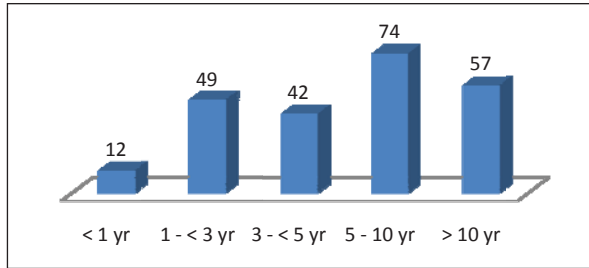


Figure 4: Working Experience

The respondents were also asked whether they have attended any training on fraud prevention. Fifty two per cent (52%), which is 130 respondents, have attended training in the past 3 years, while the remaining had not attended any training for the past 3 years. Among the respondents who had attended the training, the majority (50 respondents) stated that they only attended one training session in the past 3 years. 26 respondents attended the training twice in the past three years, 21 respondents attended the training thrice and only 5 respondents had attended the training more than 3 times in the past 3 years. The remaining respondents did not state the number of times they had attended training (Refer Figure 5 and 6).

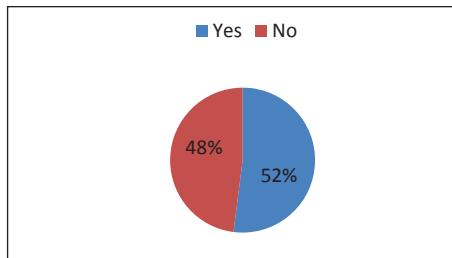


Figure 5: Training Attended

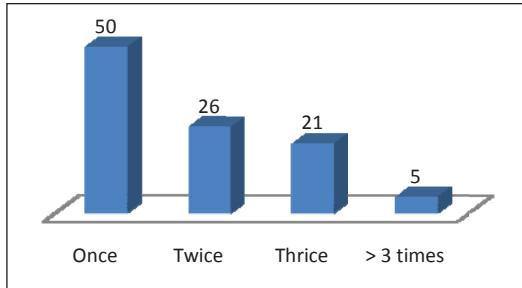


Figure 6: Frequency of Training

Among the respondents who have attended the training, 94% agreed that the training had given a benefit to them in understanding the fraud. Only 6% stated that the training did not benefit them.

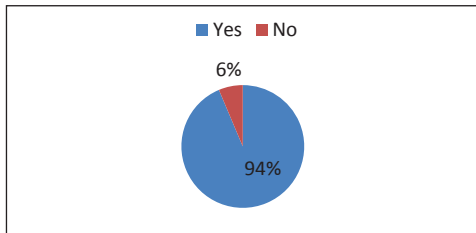


Figure 7: Benefit of Training

The majority of respondents agreed that the implementation of fraud prevention mechanisms in the organisation will increase public trust (96%). Only 4% did not agree (Figure 8).

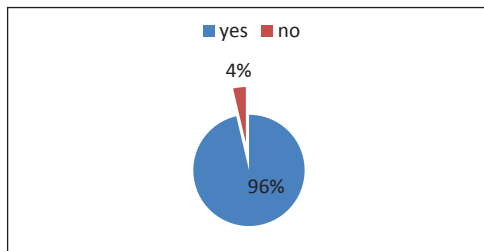


Figure 8: Public Trust

## Reliability of Data

Cronbach's alpha was used to test the reliability of the data before it was further analysed. Cronbach's alpha is the common method used to measure data reliability (i.e., internal consistency). It was originally derived by Kuder & Richardson (1937) for dichotomously scored data (0 or 1) and later generalized by Cronbach (1951) to account for any scoring method. Cronbach's alpha will generally increase as the inter-correlations among test items increase, and is thus known as an internal consistency estimate of reliability of test scores due to inter-correlations among test items.

Table 2 shows Cronbach's alpha for each mechanism namely Raising Fraud Awareness Activities; Training on Ethics/ Code of Conducts; Training on Privacy Principles; and Training on Fraud Control. All of the variables showed high reliability with a Cronbach's alpha of more than 0.8 (threshold value is 0.70). It shows that those variables are well explained by their respective constructs. It also indicates that the respondents have similar opinion regarding the effectiveness of the mechanisms implemented by government agencies, thus the data is deemed reliable for further analysis. The results of the descriptive statistics for each implementation level of fraud prevention mechanisms are discussed below.

Table 2: Cronbach's Alpha for Overall Mechanism

<b>Mechanisms</b>	<b>Value</b>
Raising Fraud Awareness Activities	0.89
Training on Ethics/ Code of Conducts	0.88
Training on Privacy Principles	0.88
Training on Fraud Control	0.87

## Fraud Prevention Mechanisms

The results of the descriptive statistics for each mechanism are shown in Table 3 to Table 6. All of the items showed high mean scores (>2.5).

### ***Raising Fraud Awareness Activities***

Table 3 shows results of raising fraud awareness activities. From the table, it can be seen that the mean score for all the items are high (>3.8) except for implementation cost. This indicate that the respondents perceived that the cost to implement this mechanism is quite high (mean = 2.69). The overall mean score of 3.50 indicates that this mechanism is effectively implemented. Despite the result showing an effective implementation of the mechanism, the government agencies should re-evaluate the implementation cost. This is to ensure the balance between the cost and benefit of the implemented mechanism.

Table 3: Fraud Awareness Raising Activities

	<b><u>MEAN</u></b>	<b><u>SD</u></b>
Implementation cost	2.69	0.97
Overall Benefit	3.86	0.81
Reduction in Fraud Risk	3.82	0.81
Increase in Awareness	3.82	0.86
Morale Implication	3.95	0.74
Responsibility to Prevent Fraud	4.06	0.71
Increase Public Trust	4.00	0.72
Effectiveness of Fraud Prevention Mechanism	3.94	0.77
Intention to Commit Fraud	3.98	0.74
Fraudulent Activities	4.05	0.70
Practicality	3.84	0.75
Cost Benefit	3.84	0.75
<b>Average Mean</b>	<b>3.50</b>	

Table 4: Training in Ethics or Code of Conduct

	<u>MEAN</u>	<u>SD</u>
Implementation cost	2.55	0.89
Overall Benefit	3.83	0.79
Reduction in Fraud Risk	3.81	0.82
Increase in Awareness	3.83	0.84
Morale Implication	3.92	0.76
Responsibility to Prevent Fraud	4.06	0.69
Increase Public Trust	3.96	0.79
Effectiveness of Fraud Prevention Mechanism	3.90	0.76
Intention to Commit Fraud	3.99	0.71
Fraudulent Activities	4.03	0.73
Practicality	3.84	0.74
Cost Benefit	3.83	0.71
<b>Average Mean</b>	<b>3.80</b>	

### ***Training in Ethics or Code of Conduct***

Table 4 shows the results on training in ethics or code of conduct. The mean score for all the items, as shown in the table, are high (>3.8) except for implementation cost. Again, this indicates that the respondents perceived that the cost to implement this mechanism is quite high (mean = 2.55). The overall mean score of 3.80 indicates that this mechanism is effectively implemented. Hence, similar to the raising of fraud awareness mechanism, government agencies should re-evaluate the implementation cost of training in ethics or code of conduct to ensure a balance between the cost and benefit of implementing this mechanism.

### ***Training in Privacy Principles***

Table 5 shows the results on training in privacy principles. From the table, it is shown that the mean score for all the items are high (>3.8) except for implementation cost. Just like the earlier two mechanisms, the respondents perceived that the cost to implement this mechanism is quite high (mean = 2.49). The overall mean score of 3.81 indicates that this mechanism is effectively implemented. Therefore, although implementation of the mechanism may be effective, government agencies should re-evaluate the implementation cost to ensure the balance between the cost and benefit of the mechanism.

Table 5: Training in Privacy Principles

	<u>MEAN</u>	<u>SD</u>
Implementation cost	2.49	0.92
Overall Benefit	3.84	0.79
Reduction in Fraud Risk	3.82	0.82
Increase in Awareness	3.82	0.86
Morale Implication	3.94	0.76
Responsibility to Prevent Fraud	4.06	0.71
Increase Public Trust	4.00	0.82
Effectiveness of Fraud Prevention Mechanism	3.96	0.76
Intention to Commit Fraud	4.05	0.70
Fraudulent Activities	4.06	0.70
Practicality	3.84	0.78
Cost Benefit	3.85	0.74
<b>Average Mean</b>	<b>3.81</b>	

### ***Training to Employees Involved in Fraud Control Activities***

Table 6 shows the results on training to employees involved in fraud control activities. The mean score for all the items shown in the table are high (>3.85) except for implementation cost. Similar to the other mechanisms discussed earlier, the respondents perceived that the cost to implement this mechanism is quite high (mean = 2.58). The overall mean score of 3.84 indicates that this mechanism is effectively implemented. Hence, the government agencies should also re-evaluate the cost of implementing this mechanism to achieve a balance between its cost and benefits.

Table 6: Training to Employees Involved in Fraud Control Activities

	<b><u>MEAN</u></b>	<b><u>SD</u></b>
Implementation cost	2.58	0.92
Overall Benefit	3.86	0.81
Reduction in Fraud Risk	3.86	0.80
Increase in Awareness	3.87	0.85
Morale Implication	3.96	0.69
Responsibility to Prevent Fraud	4.09	0.67
Increase Public Trust	3.97	0.85
Effectiveness of Fraud Prevention Mechanism	4.00	0.72
Intention to Commit Fraud	4.05	0.65
Fraudulent Activities	4.09	0.68
Practicality	3.88	0.76
Cost Benefit	3.89	0.70
<b>Average Mean</b>	<b>3.84</b>	

### **The Effectiveness of Fraud Prevention Mechanism's Indicators**

Table 7 shows the overall indicator for each mechanism. Using this indicator, the government agencies can assess the overall effectiveness of the mechanisms. All tested mechanisms namely Raising Fraud Awareness Activities; Training on Ethics/ Code of Conducts; Training on Privacy Principles; and Training on Fraud Control; are shown to be effective. However, as discussed earlier, even though the results indicate that all the mechanisms are effective, the government agencies should re-evaluate the implementation cost to obtain a balance between the costs and benefits of each mechanism. The government agencies should also identify the items that returned lower scores.

Table 7: Fraud Prevention Mechanisms Indicator

MECHANISMS	VALUE	INDICATOR
Fraud Awareness Activities	3.50	EFFECTIVE
Training on Ethics/ Code of Conducts	3.80	EFFECTIVE
Training on Privacy Principles	3.81	EFFECTIVE
Training on Fraud Control	3.84	EFFECTIVE

## DISCUSSION AND CONCLUSIONS

The Fraud Mechanisms Indicator was developed to measure the effectiveness of the mechanisms implemented by government agencies to prevent fraudulent activities. The effectiveness of the mechanisms is measured based on the cost and benefit analysis. The data was obtained from a survey of the government servants who are involved in the financial activities. The indicators were calculated based on the perceptions of the respondents on the effectiveness of the mechanisms. Table 7 shows the level of effectiveness for each mechanism.

The score value ranges from 1 to 5. If a score value of 1 to 2 is obtained which shows that the mechanism is not effective, the indicator will turn to red. The government agencies will then decide whether to stop or to re-evaluate the implementation of the mechanism. The score value of 3 shows that the mechanism is either effective or ineffective, thus the indicator will turn to yellow. This means that the government agencies should re-evaluate the mechanism. Whereas, if the score ranges from the value of 4 to 5, it indicates that the mechanism is effective, and the indicator will turn to green. Thus, the government agencies may continue to implement the mechanism. If the indicator shows a red or yellow colour, the lower score areas will be identified to be re-evaluated by the government agencies. Therefore, this indicator can help the government agencies in identifying the most effective



mechanisms to be implemented and thus, it will assist to minimize the fraud risk in the public sector.

Public sectors are most susceptible to fraud when they have large, demand-driven spending commitments driven by policy; power is centralized unduly; standard contracting procedures are bypassed using the justification of 'addressing urgent business needs'; policies and rules to minimize fraud are not applied with the same rigour in remote operations as in the head office; and excessive focus on outcomes. Total elimination of fraud is almost impossible; however, through the effective prevention mechanisms will help the public sectors to minimize the fraud risk. This paper provides an indicator on the effectiveness of fraud prevention mechanisms implement by public sectors which will help the agencies in their quest to minimize the fraud risk.

The framework of this study was developed based on the fraud triangle concepts which explained how the perceived pressure, rationalization and perceived opportunity could be minimized by implementing effective fraud prevention activities such as internal control assessments, training and education and other organisation-wide strategies. The results show that all the four fraud training and education mechanisms i.e., 1) fraud awareness raising activities; 2) training in ethics or code of conduct; 3) training in privacy principles; and 4) training to employees involved in fraud control activities are perceived to be effective mechanisms.

Mitigating fraud and financial mismanagement is an ongoing process where the National Audit Department, as well as other government agencies, such as the accountant general and the treasury, have been working hard to ensure that the financial management and accountability chains are in place as prescribed by the laws have to maintain public trust. While total elimination of fraud and corruptions may be impossible, minimizing the risks through proper hiring of staff, training, and deployment of procedures and internal controls have helped to reduce fraud cases and increased management's awareness regarding red flags or warning signs before major damaging consequences happens.

This study contributes an indicator which will help the government agencies not only to identify the effective mechanism but also to identify any factor

that is actually contributing to the effectiveness level. Even though the result may indicate the mechanism to be effective, there will be items that have a lower score, which would need attention from the person responsible for the implementation of the mechanism. This indicator will help the public sectors to evaluate the effective mechanisms to be implemented in minimizing fraud risk. This will help the government agencies in promoting awareness on accountability, integrity and transparency among the public servants. The better the government copes with fraud, the more the nation will improve its financial management.

Besides the practical implication, this study also contributes to the literature in this area. This study has discussed on the importance of proper assessment on the fraud prevention mechanisms in public sectors. It could help the academician to explore further how these mechanisms could help the public sectors in minimizing fraud risk. This study also can be extended using a case study so that the subject matter can be explored in greater depth.

As with any research, the current study is subject to a number of limitations. The sample of this study may not be fully representative of the population of various agencies in the public sector in Malaysia. Thus, any generalization of the study's results cannot be made without caution. The data was collected at one point in time rather than longitudinally. Thus, the research could not account for time-lag effects of how the implementation of the fraud preventing mechanisms may reduce the fraud risk.

The limitations addressed above however, do not negate the results and findings of the study. Despite these limitations, the results have extended our understanding of the implementation of fraud prevention mechanisms in the Malaysian public sector.

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