

The Effect of Internal Control Mechanism Towards Fraud Prevention in Small and Medium Enterprises

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Abstract: The aim of this study is to examine the effects of internal control mechanism namely, control environment, control activities, risk assessment, information and communication, and monitoring activities on the fraud prevention amongst employees in SMEs. The study used quantitative method to collect data by distributing a questionnaire to 131 SME owners from various SME sectors to achieve the study's objectives. Using regression analysis, the results obtained on the internal control mechanism of SMEs revealed that all the independent variables, namely, control environment, control activities, risk assessment, information and communication, and monitoring activities have substantial roles to safeguard SMEs business against fraudulent activities by the employees. This study would benefit business owners to assess the organization's internal control mechanism that can prevent, detect, or minimise any attempted wrongdoing by employees. The value of this study lies in its contribution to understanding and enhancing fraud prevention mechanisms within SMEs. The specific aspects investigated—control environment, control activities, risk assessment, information and communication, and monitoring activities—provide valuable insights into the internal control systems of SMEs and their effectiveness in mitigating fraudulent activities by employee.

Keywords: communication, fraud, internal control, monitoring, risk.

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INTRODUCTION

The Association of Certified Fraud Examiners (ACFE) report to the nations in 2022 reported 2110 cases of occupational fraud with a total loss of over 3.6 billion dollars, mainly in small businesses. Due to low staffing levels, this applies to small businesses. Numerous studies confirmed the aforementioned report and showed that internal fraud is more common in small businesses than in larger ones (ACFE, 2020). Occupational fraud, as defined by McNeal (2016), is a type of fraud that occurs when there are inadequate, or no fraud prevention measures in place within an organisation. The Crime Statistics Malaysia 2022 by the Royal Malaysia Police shows an alarming 15.3% increase in white-collar crime and 851 cases of corruption in 2021 (DOSM, 2022). This statistic shows an alarming increase in crime, including occupational fraud in small businesses.

Small businesses in Malaysia which is termed as Small and Medium Enterprises (SMEs) have been playing a vital role to the nation's economy as it constitutes around 97.4% of overall business establishment



(SME Corp, 2020). SMEs particularly are much more vulnerable to fraud and much less able to absorb losses than larger corporations due to their small operations by nature with limited financial resources and opportunities of knowledge (Shanmugam et al., 2012; Rao et al., 2023). According to Shanmugam et al. (2012), studies indicated that many frauds happened in situations with inadequate internal controls. Internal controls contributed 30% of US small company failures (Oseifuah & Gyekye, 2013). Internal controls cause 60% of Malaysian SMEs to fail after five years (Rashid et al., 2024). The perpetrator might easily commit fraud owing to overwhelming circumstances or the organisation and management turning a blind eye to control abuse. Hence, the absence of effective internal control systems is the root cause of SMEs' vulnerability to fraudulent schemes, scams, employee embezzlement, pilferage, and other sundry crimes in the workplace.

Malaysian SMEs are more vulnerable to employee fraud than large firms (Ali & Zaharon, 2024; Shanmugam et al., 2012). Previous studies on internal control frameworks concentrated on big, public listed companies, thus SMEs frequently had to emulate similar practices, leading to the idea that what is good for large companies is also excellent for SMEs (Moeuf et al., 2018; Barnes, 2006). On the other hand, Sow et al. (2018) states that, majority of studies on fraud prevention measures and their impact on the workplace were at conceptual level and conducted from a western perspective, with less emphasis placed on empirical studies from an eastern perspective. The studies might not entirely apply to SMEs in Malaysia scenarios as that knowledge about internal control systems of SMEs were mostly acquired from a western perspective and the application of the western-originated internal control frameworks to other non-western countries, like Malaysia, can be argued as further strengthening the idea of one-size-fits-all in SMEs.

According to the PwC Global Economic Crime and Fraud Survey 2022, asset misappropriation is the most common type of occupational fraud. From 2012 to 2018, Utami et al. (2019) found that asset misappropriation surpassed accounting fraud and corruption. Despite asset theft, researchers have focused on accounting fraud (Koomson et al., 2020). This finding is confirmed by Wells (2017), who claims that accounting fraud is comparatively rare compared to embezzlement and corruption. Further, it was mentioned in the study that small businesses are most at risk for occupational fraud since they are least likely to have an audit, a hotline, or effective internal controls. This calls for action to conduct more research that focuses primarily on fraud prevention measure caused by the employees in SMEs, and this study represents the effort.

Thus, this study seeks to identify the best internal control mechanism for employee fraud prevention in Malaysian SMEs. The results of this study will help SME owners, managers, and aspiring entrepreneurs start new businesses by addressing fraud prevention measures that Malaysian SMEs can easily implement. As a result, SMEs will be less vulnerable to employees' fraudulent activities. Therefore, the objectives of this study are 1) to examine the effect of control environment mechanism on employees' fraud prevention in SMEs; 2) to examine the effect of control activity mechanism on employees' fraud prevention in SMEs; 3) to examine the effect of risk assessment mechanism on employees' fraud prevention in SMEs; 4) to examine the effect of information and communication mechanism on employees' fraud prevention in SMEs; and 5) to examine the effect of monitoring activities mechanism on employees' fraud prevention in SMEs.

METHODS

The survey sampled SME owners from Klang Valley, Malaysia. The study used convenience sampling. Sekaran & Bougie (2016) define convenience sampling as non-probability sampling in which target population respondents meet practical criteria such easy accessibility, geographic proximity, availability at a given time, or desire to participate. The main advantage of this convenience sampling is its ability to gather data from

respondents who are easily accessible and cost-effective to the researcher. This is supported by Sekaran & Bougie (2016), that the convenience sampling approach is the best and quickest way to get crucial information because the respondents are known to the researcher. Based on statistics of SMEs according to states in 2016, the total population of SMEs in Klang Valley, which constitutes the states of Selangor and Federal Territory Kuala Lumpur were 472,614 (DOSM, 2022). The sample size determined in this study is based on the Sekaran & Bougie (2016) table which stated that, from a population of 472,614 total SMEs in Klang Valley, 382 respondent samples should be selected. A total of 131 respondents were able to be gathered using this sampling method.

This study relies heavily on primary data sources. Structured and semi-structured questionnaires with open and closed ended questions were used to collect primary data. The questionnaires were distributed to selected SMEs in the Klang Valley region. The questionnaire is used to cover a large area at the same time while exerting less pressure on the responders. The questionnaire in this study is outlined in seven sections. Section A contains both demographic and operational characteristics design to determine fundamental issues including the demographic characteristics of the respondent. Sections B to G is devoted to the identification of internal control mechanisms on the prevention of employee frauds where the five independent variables and one dependent variable of the study are put into focus. These sections use a 5-point Likert scale with response options of 1– Strongly disagree, 2– Disagree, 3– Neutral, 4– Agree, 5– Strongly agree to determine the level of respondents' agreement. The data obtained is used to drive the objective of the research.

The process of data collection for the study began with a self-administered method from 6th December 2022 to 22nd December 2022, where the questionnaire was distributed via direct message, LinkedIn, Instagram, Facebook and Telegram group platform. The researcher returned three days after to follow up and gain the prospective respondents' cooperation to complete the questionnaires. However, out of 382 questionnaires that were distributed, only 90 of them were completed by the respondents. Also, researchers utilised a telephone survey to increase response rates. Between 16th and 22nd December 2022, respondents who did not respond are called in person. This method ensured participants answered and understood questions. These efforts led to the receipt of an additional 41 completed questionnaires, bringing the total number of usable questionnaires to 131. The surveys had a 34.3% response rate.

RESULTS AND DISCUSSION

Data obtained shows that the number of male respondents is higher than the number of female respondents, constituting 70 (53.4%) male and 61 (46.6%) female respondents. In addition, majority of SME owners in this study (36.6%) are between the ages of 20 and 29 years old and had acquired a bachelor's degree qualification (54.2%). Next, most of the respondents (43.5%) own Private Limited company and came from "Other Sectors" principal activity, having percentage 58.8% of overall respondents. Majority of SME owners (53.4%) have one to four employees and have been running the companies between 1 to 5 years (56.5%). The SME under study is mainly operating in services sector (41.2%), rather only 14.5% in manufacturing sector.

The mean range for all statements is 4.0153 to 4.3053 with standard deviations (SD) range between .72210 to 1.0746, indicating respondents tend to moderately agree than disagree with the statements along with minimal dispersion from the mean data. The majority of respondents, as indicated by a mean of 4.3053 and a standard deviation of .72210, agreed that their employees are committed to their work. While, the lowest mean of all the statements (mean 4.0151, standard deviation 1.07406) indicates that the jobs of all employees are standardised, as shown in Table 1.

Table 1 Descriptive statistics relating to Control Environment.

No	Statement	Mean	Standard Deviation
1	Employees are committed to their jobs	4.3053	.72210
2	All the duties are performed according to the approved standards.	4.2595	.85564
3	Activities are performed in an atmosphere of creativity and innovation.	4.2595	.79988
4	Employees have good working relationships between themselves.	4.2366	.78282
5	All employees are treated equally.	4.2214	.89692
6	There is a mechanism to monitor regular attendance of employees.	4.2137	.86831
7	All employees have work schedules hence no job conflicts.	4.2061	.92585
8	All jobs are given on a competency basis.	4.1832	.84854
9	The hiring process for contract employees is transparent.	4.0992	.89318
10	The work structure is flexible, and it allows employees to go on leave in the month of their choice without pressure.	4.0305	.86770
11	All jobs are standardized.	4.0153	1.07406

The mean for all statements relating to control activities is within the range of 3.7099 to 4.4198 revealing respondents' view of neutral to moderately agree. The study found that most respondents had put into practise the recording of all financial transactions in vouchers for future use, as well as all payment procedures were followed. This is evident by among the highest means of 4.4198 and 4.3740, and SDs of .82233 and .82589, respectively. However, when they were asked whether the organisation was frequently audited, the respondents likewise expressed neutral views (mean 3.7099, SD 1.383910), as indicated in Table 2.

Table 2 Descriptive Statistics Relating to Control Activities

No	Statement	Mean	Standard Deviation
1	All financial transactions are recorded in vouchers for future references.	4.4198	.82233
2	All payment procedures are followed for all transactions.	4.3740	.82589
3	All payments are authorized by the responsible officer before payment is made.	4.3511	.79347
4	Accounts are reconciled on a monthly basis to detect errors and fraud.	4.2901	.85475
5	All organisation assets are cordoned and marked.	4.2443	.99299
6	The organisation has an asset register which is updated regularly.	4.2290	.94921
7	Employees are aware of the penalties for breaking internal control procedures.	4.0992	.93525
8	Employees are given up to date internal control manuals for reference purposes.	3.8855	1.08586
9	This organisation is frequently audited.	3.7099	1.38391

The range of the risk assessment mechanism mean is 3.5573 to 4.291, also ranging from neutral to moderately agreed response. Based on the highest mean of 4.2901 and SD of .76950, the respondents revealed that there were communication mechanisms in place for changes in service delivery. Nevertheless, referring to Table 3, the statements "All risks facing this organisation are measured," "Organisational restructuring provides limited risks to the organisation," and "New services pose less risks to the organisation" received generally neutral

responses from the respondents, as demonstrated by the means of 3.9924, 3.7939, and 3.5573 and standard deviations of 1.01902, 1.12809, and 1.20359, respectively.

Table 3 Descriptive Statistics Relating to Risk Assessment

No	Statement	Mean	Standard Deviation
1	Communication channels are in place for changes in service delivery.	4.2901	.76950
2	The organisation has competent and knowledgeable personnel.	4.2595	.73994
3	Controls exist for approving decisions regarding financing alternatives and accounting principles, practices and methods.	4.2061	.82944
4	Risks are assessed in relation to changes in the operational environment.	4.1221	.75471
5	There are risk assessments in place to identify and react to possible changes in the internal and external environment, and potentially take action to manage the impact.	4.0687	.78633
6	This organisation is keen on identifying risks.	4.0534	.95525
7	Changes of new employees are clearly examined for the risks it may cause.	4.0076	.85482
8	All risks facing this organisation is measured.	3.9924	1.01902
9	Organisational restructuring brings limited risks to the organisation.	3.7939	1.12809
10	New services possess less risks to the organisation.	3.5573	1.20359

The information and communication variable included 10 statements, with the lowest mean being 4.0458 and the highest mean being 4.3511 (Table 4), thus lying under moderately agreed category. “The current information flow is quick and effective” and “The company’s owner is the spokesperson of the organisation” were amongst statements rated highest with means of 4.3511 and 4.3282, and SD of .77384 and .76904 each. Finally, the lowest mean of 4.0458 and standard deviation of 1.16924 showed that staff members have access to resources such as employee manuals and database systems.

Table 4 Descriptive Statistics Relating to Information and Communication

No	Statement	Mean	Standard Deviation
1	The current information flow is quick and effective.	4.3511	.77384
2	The company’s owner is the spokesperson of the organization.	4.3282	.76904
3	All channels of communication such as face-to-face communication, video conferencing, phone calls, emails, and others are utilized by employees.	4.2824	.84375
4	All operational information is given to employees in time.	4.1908	.85137
5	There is no ambiguity in information communicated.	4.1756	.85468
6	The organization has clear channels of communications.	4.1374	.86614
7	Information flows freely without any interference.	4.1298	.88923
8	All relevant information such as company goals, organisational structure, policies and procedures and expectation on their roles in communicating to employees.	4.1298	.87175
9	Employees have information on internal controls and accountability.	4.0611	1.02848
10	Employees have access to information such as employee manuals, database system and others.	4.0458	1.16924

The respondents were asked to respond to six statements related to monitoring activities, and their means ranged from 4.0000 to 4.2366, indicating a moderately agreed response. The statement “Quality assurance is adhered to for all organisation projects” received the highest mean of 4.2366 and standard deviation of .81176. The separation of duties between accounts payables, disbursements, and procurement was demonstrated by a mean of 4.0687 and standard deviation of .94617. Finally, the smallest mean of 4.0000 and standard deviation of .92819 indicated that monitoring strategies were used at any time during the monitoring process (Table 5).

Table 5 Descriptive Statistics Relating to Monitoring Activities

No	Statement	Mean	Standard Deviation
1	Quality assurance is adhered to for all organisation projects.	4.2366	.81176
2	Segregation of duties or mitigating controls exist within transaction processing, authorization custody and recording functions.	4.1527	.87243
3	There is a reporting mechanism for all activities of this organisation.	4.1374	.86614
4	The organisation projects are monitored and reported as required for their monitoring and evaluation criteria.	4.0840	.85068
5	Separation of duties exists between procurement, account payables and disbursements.	4.0687	.94617
6	Monitoring strategies are used at any time during the monitoring process.	4.0000	.92819

Based on Table 6, the reliability tests for all variables are satisfactory as they are far higher than 0.50 as per recommended. The variables such as control activities, risk assessment, information and communication, monitoring activities and fraud prevention mechanism has an excellent internal consistency with a Cronbach’s alpha that lies above 0.90, whilst control environment has a good internal consistency as the value is between 0.80 and 0.90. Hence, no variables are deleted. The details of each reliability value as per Table 6.

Table 6 Reliability value for each variable.

Variable	Cronbach’s Alpha
Control Environment	0.898
Control Activities	0.915
Risk Assessment	0.905
Information and Communication	0.934
Monitoring Activities	0.916
Fraud Prevention Mechanism	0.912

Multiple coefficients of determination (R^2) are used to measure the strength of the linear relationship between the dependent variable and its independent variables. The results in Table 7 shows that there is a relationship between employee fraud prevention and its five independent variables ($R^2 = 0.426$). The R^2 value represents that 42.6% of the variation in employee fraud prevention among SMEs in Klang Valley is explained by the set of five independent variables which are the influence of control environment, control activities, risk assessment, information and communication, and monitoring activities. While the adjusted R^2 is 0.403, which takes into the account the sample size and number of independent variables, indicates that the internal control components account for 40.3% of the variation in employee fraud prevention.

Table 7 Regression analysis

Model	Unstandardized Coefficients (B)	Standardized Coefficients (Std.Error)	Beta (b)	t	Sig
(Constant)	1.557	.308		5.053	<.001
Control Environment	.147	.104	.145	1.422	.158
Control Activities	.030	.087	.037	.348	.728
Risk Assessment	.143	.102	.154	1.395	.166
Information and Communication	.145	.101	.167	1.440	.152
Monitoring Activities	.210	.095	.250	2.208	.029
R ²					.426
Adjusted R ²					.403
F Change					18.574

Dependent variable: Employee Fraud Prevention

Table 7 shows that control environment mechanism prevents employee fraud ($\beta = 1.45$, $p < 0.001$). The control environment ($t = 1.422$) may explain employee fraud prevention variance. This proves that control environment mechanisms prevent employee fraud in SMEs. This is aligned with the study conducted by Holmes et al. (2002) who found that when the control environment in an organization is strong, frauds perpetrated by employees are less likely to occur. Therefore, H1 is supported. Table 7 also shows that there is a positive and significant effect of control activities mechanism on employee fraud prevention ($\beta = .037$, $p < 0.001$). This implies that the variance in the employee fraud prevention is explained by the variance in the control activities ($t = .348$). As such, this finding provides evidence that control activities mechanism is significant in preventing the occurrence of employee fraud in SMEs. Thus, H2 is supported.

The outcome in Table 7 demonstrates that the risk assessment has a positive and significant impact on employee fraud prevention ($\beta = .154$, $p < 0.001$). This suggests that the variance in risk assessment ($t = 1.395$) explains the variance in employee fraud prevention. As a result, this discovery shows how important risk assessment mechanism is in preventing employee fraud in SMEs. This finding added values on the existing study by Ridho & Irianto (2016) who mentioned that selection of new employees must be carried out carefully in order to foresee the risks that may arise. Therefore, H3 is supported. The finding in Table 7 demonstrates that information and communication mechanism has a positive and significant impact on employee fraud prevention ($\beta = .167$, $p < 0.001$). This suggests that the variation in information and communication explains the variation in employee fraud prevention ($t = 1.440$). As such, this discovery shows how important information and communication is in preventing employee fraud in SMEs. Thus, H4 is supported. Table 7 shows that monitoring activities significantly reduce employee fraud ($\beta = .250$, $p < 0.001$). Monitoring efforts ($t = 2.208$) may explain employee fraud prevention variation. Thus, SMEs must monitor activity to prevent employee fraud. H5 is supported.

From the regression results, internal control mechanisms prevent SMEs employee fraud. This result is consistent with earlier studies by Zainal et al. (2022); Artemieva et al. (2020); Ridho & Irianto (2016) which revealed that all internal control components play a substantial impact in preventing employee fraud in an organization. Therefore, all hypotheses proposed are accepted.

This study found that internal control systems that include a control environment, control activities, risk assessment, information and communication, and monitoring activities can successfully prevent employee fraud in Malaysian SMEs. The proprietors of the SME acknowledged in the control environment that their employees were committed to their work and that tasks were completed in line with accepted standards (Pu et al., 2021; Aftab et al., 2022; Yadegaridehkordi et al., 2023). The task was also carried out in an environment that valued uniqueness, creativity, and positive team member relationships (Zeb et al., 2020; Ghosh & Tripathi, 2021; Zhang et al., 2022). A system was in place that also kept track of the staff's regular attendance. Also, it was stated that no employees had issues at work because everyone received work schedules and assignments that matched their skill levels.

The analysis also discovered that all financial transactions were recorded in vouchers for future use and that all prescribed payment procedures were followed. Furthermore, each payment had to be approved by the designated accountable officer before it was made. All organisation assets were cordoned off, and their accounts were balanced off on a monthly basis to aid in the detection of fraud and errors (Šupuković et al., 2022; Kumar & Lokanan, 2023). Also, the employees were informed of the consequences for violating internal control procedures and the organisations' asset register was updated on a regular basis.

The establishment of channels of communication for service delivery changes related to the risk assessment was discovered. The organisations also ensured that controls were in place to authorise choices regarding the most crucial accounting principles, procedures, and techniques, in addition to engaging qualified and knowledgeable personnel. Every time the operational environment changed, the risks were likewise evaluated so they could be identified, dealt with, and prevented by taking preventive action (Settembre-Blundo et al., 2021). The respondents were also particularly interested in identifying hazards and any changes that involved carefully assessing any potential risks, like recruiting new staff.

According to the investigation, the organization's current information flow is quick and effective in terms of information and communication. Respondents named the key figure in the enterprises as the organization's spokesperson. Furthermore, workers used all forms of communication in their daily work activities, such as face-to-face meetings, video conferences, emails, and phone calls. Furthermore, workers had immediate access to all operational information and clear communication (Chew et al., 2023). Information moved smoothly and unfettered within the organisations thanks to their clear communication channels. The respondents further stated that all pertinent information about the organisation, including company goals, organisational structure, policies and procedures, and expectations for their positions, were communicated to all employees.

The analysis showed that all organisational monitoring programmes followed quality assurance. Transaction processing, authorization possession, and recordkeeping included role segregation or mitigating measures. Account payables, disbursements, and procurement all implemented separation of duties controls, according to respondents. Additionally, a reporting framework was in place to guarantee that all activities and organisational projects complied with the standards for monitoring and assessment. At any point during the monitoring process, monitoring tactics were used.

CONCLUSION

The primary purpose of this study was to examine the effect of internal control mechanisms on Malaysian SMEs efforts to prevent employee fraud. In conclusion, all of the independent variables examined in this study—control environment, control activities, risk assessment, information and communication, and monitoring activities—have had a substantial impact on preventing employee fraud in SMEs. The report stressed the need of SMEs

implementing a complete internal control system to combat fraud. The study recommends that SME owners create an updated internal control manual for reference purposes and conduct annual audits of their financial statements in order to enhance the credibility of their business's financial position and performance. Additionally, SME owners should ensure that they assess all risks facing their organisation, including risks associated with organisational restructuring and the introduction of new services. This study is without its limitation. Firstly, this study does not address the temporal aspect of internal control mechanisms. The effectiveness of these mechanisms may change over time due to changes in technology, regulations, or the business environment. Secondly, While the quantitative approach is suitable for analyzing relationships between variables, it may lack depth in understanding the nuances of internal control mechanisms. Complementing the quantitative data with qualitative insights could provide a more comprehensive understanding. This study includes all components in evaluating business risk and offering a rationale for SME sustainability. Given the broad scope of the study, it is suggested that more research should be conducted, specifically examining the impact of control activities on reducing the risk of employee fraud, particularly in the Malaysian manufacturing sector.

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