

AN EMPIRICAL ANALYSIS OF CONTROL ACTIVITIES IN MANAGING RISK FOR SUSTAINABLE MALAYSIAN MANUFACTURING SMES

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ABSTRACT

This study presents an empirical analysis of control activities among Malaysian manufacturing SMEs in managing the risk of employee fraud for the sustainability of SMEs. Continuous measurement, monitoring and evaluation of control activities are regarded as the basis to form effective controls against employee fraud. This study is based on an in-depth case study that examined how an organisation forms a good foundation of control activities to curb employee fraud in SMEs. Semi-structured interviews were conducted with the owner of three manufacturing SMEs from the Food and Beverage industry. This study identifies and summarises the current control activities based on (1) response to objectives and risks, (2) design of appropriate types of control activities at various levels, and (3) segregation of duties. The result shows that most of the manufacturing SMEs implement control activities partially automated through the entity's information technology system. This study provides a basis for several aspects of future research on other components of internal control by integrating each component in assessing business risks and explanation towards SME sustainability.

Keywords: control activities, sustainability, SMEs

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INTRODUCTION

The sustainability of SMEs in the new global economy has become a concern among the business community. SMEs need to adapt to changes in doing their business as new technologies have transformed the way businesses interact with customers, suppliers, and the community (Nor, Bhuiyan, Said & Alam, 2016). SMEs with the establishment of ICT, particularly in using accounting information systems (AIS) provides comprehensive information, thus greatly improving the quality of accounting (Pakko, 2002). Unfortunately, the rapid development of ICT has also caused the rise of corruption, fraud and other criminal activities, which have resulted in serious losses to society and the business community (Seetharama, Senthilvelmurugan & Periyamayagam, 2004). The 2013/2014 Global Fraud Study found that the level of fraud has increased, where 70% of the companies reported suffering from at least one type of fraud in the past years. The damages that occurred include the increase in incidences with vendors, suppliers or procurement fraud and management conflicts of interest. Based on the study, the most likely perpetrators were the employees or the management. For companies that had suffered fraud and their perpetrators were known, 32% had experienced at least one crime where a leading figure was in the senior or middle management, 42% in which the incident involved a junior employee, and 23% were either an agent or an intermediary.

SMEs are exposed to external and internal fraud and even collusion between someone within the business and an outsider. External frauds are perpetrated by individuals outside the organisation such as investment fraud, customer's fraud and vendor's fraud. Internal fraud is perpetrated by management or employees and is commonly known as corporate fraud or occupational fraud (Johnson & Rudesill, 2001; O'Gara, 2004; Wells, 2005, Kassem, 2014). Furthermore, occupational fraud represents a significant threat of fraud in SMEs (ACFE, 2014; Kuratko, Hornsby, Naffziger & Hodgetts, 2000). Hrnair and Metts (2012) highlighted that employees utilized many methods to conduct fraud. The methods used depend on several factors including assets that the employees have been entrusted with and the level of access to the company funds. The Association of Certified Fraud Examiner (ACFE) (2010) reported that the most common type of occupational fraud was asset misappropriation. Asset misappropriation involves stealing an asset of a company for personal use at the company's

expense or misuse of a company's resources (Kassem, 2014). It presents the greatest risk, which includes stealing company's assets either directly or through fraudulent billing schemes, expense reimbursement, and check tampering.

The survival of small businesses is threatened by the fraud occurrence, in which every year, a typical organisation loses 5% of its revenue to fraud (ACFE, 2010, 2012, 2014). In fact, small businesses face the greatest number of fraud cases every year compared to others. Failing to address these issues places the business at a competitive disadvantage and of consequence, poses a question on the SMEs sustainability to survive in the long term. Furthermore, public disclosure of significant fraud can irreparably damage an organisation's brand name, resulting in declining sales and revenue. In extreme cases, it can even lead to market collapse of the business due to bankruptcy (Adams, Campbell, Campbell & Rose, 2006; Rotem, 2011). This study focuses on the control activities in managing risk in three SMEs with reported incidences of fraud in Malaysia. These three SMEs known as SME A, SME B and SME C are in the SME Corporation 50 Enterprise Awards Winners list and are well established SMEs, audited financially every year.

Previously, studies on control activities have mainly focused on the internal control for financial reporting, auditors' internal control over financial reporting decisions, and management report on internal control (Asare, Fitzgerald, Graham, Joe, Negangard & Wolfe, 2013; Changchit, Holsapple & Viator, 2001; Aldridge & Colbert, 1994). However, to date, there are not many studies that have examined the control activities in managing risk for SMEs. Thus, there is a need to examine the control activities adopted in the SMEs to provide a benchmark for other SMEs to adopt in their business in order to avoid fraud. In the next section, a literature review on SME sustainability, small business risk and control activities is provided. Then, the next section provides the research objectives and research design. This is followed by describing the background of the selected SMEs. The discussion includes the current control activities in these SMEs. Some weaknesses in the current control activities in managing risk are briefly explained. Then, some issues and challenges are highlighted with suggestions for future research. The last section concludes this study.

LITERATURE REVIEW

SMEs Sustainability

Sustainability is a controversial issue and there are many definitions of what is meant by sustainability. At the broadest sustainability is concerned with the effect of actions taken in the present upon the options available in the future (Crowther, 2002). Thus, sustainable development as a concept has captured most issues facing SMEs, indicating endless possibilities for SMEs to find strategies that will impact their social and environmental performance (Loucks, Martens & Cho, 2010). Many studies on SME sustainability is related to SMEs business strategies including SMEs internal operations such product and production process innovation, SMEs brand and marketing. Most of these studies are based on the Triple Bottom Line concept that constitutes three components namely, economic prosperity, environmental quality and social justice (Carls & Vereeck, 2004; Tiley & Young, 2009).

Sustainability is often considered as a possibility for large companies as opposed to SMEs because of their variations in size and ability to overcome challenges in the business environment (Labonne, 2006). Labonne found that small companies were far less likely to examine their environmental impact, primarily due to their financial limitations and costs associated with the environment assessment tools. In addition, Dressen (2009) found that small businesses tend to face less pressure from external stakeholders about their sustainability practices, have limited financial resources availability, and perceive that engaging in sustainability practices is too complex.

Business structure of SMEs can also be quite diverse as they operate with different personnel structures, budget sizes, as well as corporate strategies and missions (Loucks et. al., 2010). However, in view of this, SMEs must recognize the list of obstacles faced by them whereby SMEs that engage in sustainability have the flexibility to quickly adopt innovative practices.

For the purpose of this study, the concept of sustainability is defined as the continuing commitment by the management and board members in ensuring the organisation has the appropriate control mix in place. The organisation should also recognize its oversight duties and responsibilities in

terms of sustainability and its fiduciary role to its stakeholders, depending on organisational form (IIA, AICPA & ACFE, n.d.). Furthermore, the Committee of Sponsoring Organisations of Treadway Commission (COSO) (2013b) has identified that to successfully demonstrate effective sustainability practices, an organisation needs to do more than just implementing policies and procedures. Besides, SMEs owners and management have long sought ways to better control the organisation that they are managing. They need to balance risk and control through an effective system of internal control. To achieve this, the internal control should be proactive, value-added, and cost-effective and address exposure to risk. Therefore, control procedures need to be developed so that they decrease the risk to a level where management can accept the exposure to that risk.

Small Business Risk and Control Activities

Small businesses are exposed to risks all the time (CPA Australia, 2009). Such risks can directly affect day-to-day operations, decrease revenue or increase expenses. Their impact may be serious enough for the business to fail. Every risk has its own distinct characteristics that requires particular management or analysis. Most people will recognize the 'obvious', or most apparent risk that they are facing. According to Falkner and Hiebl (2015), there are six different types of risk in SMEs which are (1) interest rate risk, (2) raw material price risk, (3) e-business and technological risk, (4) supply chain risk, (5) growth risks and (6) management and employees.

When preparing reports on internal control, the management usually covers the risk assessment and control activities components simultaneously. The control activities identified in the COSO model introduced in 2012 provides the completeness and authorization of internal control procedures (Vona, 2008). Given the control environment, management identifies and evaluates the risks related to the preparation of reliable financial statements. Once the risks are known, appropriate procedures and other control activities are implemented to help ensure the attainment of the financial reporting objectives (Aldridge & Colbert, 1994). Internal control activities are those policies and procedures that management has established to meet its objectives for financial reporting. There are potentially many such control activities in any entity. The extent of separation of duties depends heavily on the size of the organisation (Changchit et al., 2001). However,

in general, the control activities may be classified into five categories as follows (COSO, 2012):

1. Adequate segregation of duties. When one person performs both functions, there is an excessive risk that person's disposing of the asset for personal gain and adjusting the records to relieve him or herself of responsibility. For example: if the cashier receives cash and is responsible for data entry for cash receipts and sales, it is possible for the cashier to take the cash received from a customer and adjust the customer's account by failing to record a sale or by recording a fictitious credit to the account.
2. Proper authorization of transactions and accounts. To achieve effectiveness of internal control, appropriate individuals must authorize transactions. If there is any person in an organisation who could acquire or expend assets at will, complete chaos would result. For example: a merchandising business would require specific authorization to be obtained before incurring a long-term debt.
3. Adequate documents and records. Documents and records are the physical objects upon which transactions are entered and summarized. In order to prevent fraud and irregularity, certain relevant principles should be adopted to dictate the proper design and use of documents and records.
4. Physical control over assets and records. It is essential for adequate internal control to protect assets and records. If assets and records are not adequately protected, they can be stolen, damaged, or lost. In the event of such an occurrence, the accounting process as well as normal operations could be seriously disrupted. The most important type of protective measure for safeguarding assets and records is the use of physical precautions. For example: a storeroom for inventory can be used to guard against pilferage. When the storeroom is under the control of a competent employee, there is also further assurance that obsolescence is minimized.
5. Independent check on performance. The need for independent checks arises because an internal control structures tends to change over

time unless there is a mechanism for frequent review. Personnel are likely to forget or intentionally fail to follow procedures, or become careless unless someone observes and evaluates their performances. In addition, both fraudulent and unintentional misstatements are possible, regardless of the quality of the controls.

This study aims to explore the current control activities by SMEs. Specifically, this study examines the existing control activities in the manufacturing SMEs. In addition, this study also identifies the similarities and differences of control activities in manufacturing SMEs that can manage business risk for sustainability. To achieve these research objectives, the following research questions were developed:

- RQ1:** What are the current practices of internal control activities in manufacturing SMEs?
- RQ2:** What are the similarities and differences of current internal control activities between manufacturing SMEs?

RESEARCH DESIGN

Sample

In Malaysia, SMEs are defined based on two criteria, namely annual sales turnover and number of full-time employees of a business. For the manufacturing and manufacturing-related services, SMEs refer to enterprises with a sales turnover of less than RM25 million or full-time employees of less than 150 workers, while for services and other sectors, SMEs are those with a sales turnover of less than RM5 million or less than 50 workers. A business that meets either one of the criteria will be deemed as an SME. SME businesses can be legally structured as entities registered either under the Registration of Businesses Act 1956 (Act 197) or the Companies Act 1965 (Act 125). This study selected three SMEs with reported incidences of fraud in Malaysia and are known as SME A, SME B and SME C. To ensure that the findings are unbiased, these three manufacturing SMEs have similar characteristics that are:

1. Fall under manufacturing industries particularly food and beverage.
2. The manufacturing SMEs are award winners of 50 Enterprise organized by the SME Corporation Malaysia to celebrate and highlight the achievements of small and medium sized enterprises that are well positioned for the future.
3. These manufacturing SMEs have audited financial records for three consecutive years.

SME A

SME A was formed 17 years ago, and it is a leading manufacturing company of Premium Ice-Blended Coffee and Beverage solution in Asia. It is 'Halal', HACCP and ISO22000 certified factory having won numerous awards and recognition throughout the years from the SME Corporation Malaysia. With passion and innovation, their product line has increased from just one which is the "Ice-Crushed Cappuccino" to sixty gourmet flavours, ranging from coffee to non-coffee products. The vision of SME A, is to ensure that it brings 'Joy and Happiness' to everyone and their principle is 'Being a Corruption Free Company'.

SME B

Established in 1991, SME B started with recycled glass bottles. Since then, the company has expanded its factory by manufacturing, selling and distributing bottled beverages consisting of soft drinks, isotonic energy drinks and clarified sparkling fruit juices. SME B has been honoured with several awards and recognition since 2007 with the biggest recognition the "Prime Minister Award" for Agriculture and Agro-Based Industry Sector. With the vision of 'Leading the beverage industry through endless innovation', SME B is expected to gear for growth in the local and export market.

SME C

Products of SME C exists in the Malaysian fridges since 1983. SME C caters for the needs and desires of all Malaysian yoghurt eaters with wide range of products of fresh yoghurt, fruit yoghurt, Greek yoghurt and yoghurt drinks. SME C has also received several accreditations from the SME Corporation Malaysia and SIRIM QAS International as Malaysian brand certification. With the motto 'belongs in every fridge', SME C is expected to penetrate the market with the new products being launched.

Method

This study used the case study method to explore the current control activities by these three manufacturing SMEs. This is because a case study is an approach to facilitate exploration of phenomenon within its context using a variety of data sources (Baxter & Jack, 2008). This study employed the exploratory case study approach as suggested by Yin (2003) whereby in this situation, the manufacturing SMEs are the unit of analysis, in which the control activities being evaluated has no clear, single set of outcomes.

Instrument

This study uses semi-structured and open-ended interview questions to obtain the data. Interview questions guided by interview protocols were prepared based on reviewing the literature by focusing on the characteristics of COSO (2013a) components of control activities. Control activities are the actions established through policies and procedures that help ensure that the management's directives to mitigate risks to the achievement of objectives are carried out.

This study focussed on the control activities in Principle 10: The organisation selects and develops control activities that contribute to the mitigation of risks to the achieve the objectives to an acceptable level (COSO, 2013). The following characteristics relating to this principle are considered: (1) response to objectives and risks, (2) design of appropriate types of control activities at various levels, and (3) segregation of duties. Therefore, this study followed the framework adapted from COSO (2013).

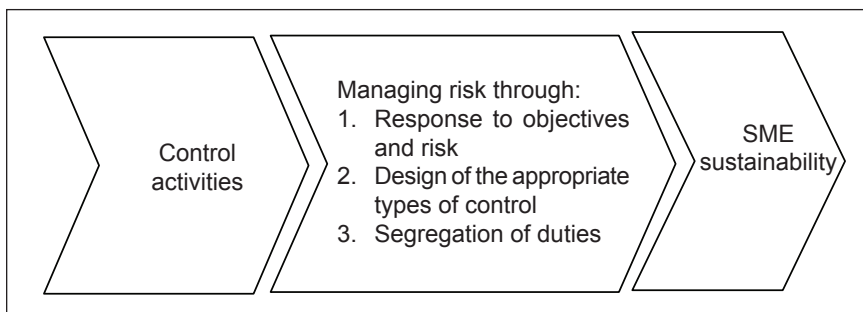


Figure 1: Study Framework on Control Activities in Managing Risk (COSO, 2013)

Table 1 presents the design of interview questions based on control activities Principle 10. There are three questions posed to the interviewees in determining the control activities developed by the SMEs.

Table 1: The Interview Protocol Based on Principle 10

Control Activities	Interview Questions
Response to objectives and risks	How does your organisation select and develop control activities that can mitigate risks?
Design of appropriate types of control activities at various levels	What are the things that your organisation has to do to control the risk?
Segregation of duties	How does your organisation select and develop control activities management should consider whether duties are divided or segregated among different people to reduce risk?

Data Collection and Analyses

The data were collected through in-depth interviews with the owner of these manufacturing SMEs. Due to the concept of anonymity and confidentiality as suggested by Wiles, Crow, Heath and Charles (2008), the real names of these manufacturing SMEs are not be disclosed. The interviews focused on control activities guided by an interview protocol and lasted around one hour. The interview protocol used in the study is to assist the researchers in collecting the data. An interview protocol is more than a list of interview questions; it also extends to the procedural level of interviewing and includes a script of what the researcher will say before the interview, script for what the researcher will say after the interview, prompts for the interviewer to collect informed consent, and prompts to remind the interviewer the information that she or he is interested in collecting (Jacob & Furgerson, 2012).

To ensure that every statement was documented, the interviews were recorded. The interviews were conducted from the beginning of January to the end of April 2016 at three selected manufacturing SMEs. This study used the thematic analysis operationalized via Nvivo to analyse semi-structured interviews with a word-based and code-based approach together with several analytical strategies adopted for the interviews.

FINDINGS AND DISCUSSIONS

This section presents the findings according to the objectives of the study. Firstly, the study highlights the existing control activities in manufacturing SMEs and secondly, this study identifies the similarities and differences of control activities in manufacturing SMEs that can manage business risk for the sustainability of the SMEs. A comparative analysis is provided at the end of the discussion. This study focuses on the control activities Principle 10: The organisation selects and develops control activities that contribute to the mitigation of risks to the achievement of objectives to an acceptable level (COSO, 2013). The following characteristics relating to this principle are considered: (1) response to objectives and risks, (2) design of appropriate types of control activities at various levels, and (3) segregation of duties.

Response to Objectives and Risks

Control activities are designed in response to the department's objectives and risks identified to achieve an effective internal control system. Control activities support all the components of internal control, but are particularly aligned with the risk assessment component. In other words, control activities are the policies, procedures, techniques, and mechanisms that enforce management's directives to achieve the entities objectives and address related risks. Policies and procedures are the strategic link between the mission statement and day-to-day operations. Therefore, to gain an understanding on the response to objectives and risks in these selected manufacturing SMEs, the following question was posed to the interviewees:

Q1: How does your organisation select and develop control activities that can mitigate risks?

Based on the interviews, this study shows that the owner and the top management of the three manufacturing SMEs are aware and committed in selecting and developing control activities that can mitigate fraud risk even though they do it informally. For example, establishing standards of conduct in the control environment, are carried out properly and in timely manner. As noted by interviewee SME A:

...We have policy written and this is the first thing that we talk to our employees. In our handbook, we explain what is our company's value systems, what does our company believe in. Not only for our employees, also for our supplier, for our customer, for agent and distributor as well...

Well-written policies and procedures allow the employees to clearly understand their roles and responsibilities. It also helps to eliminate common misunderstanding by clearly identifying job responsibilities and establishing boundaries. Interviewee SME B noted:

...First, we have SOP (Standard Operating Procedures) for our employees to know how they are responsible on doing their jobs. The supervisors or leaders will give briefing on the SOP to new workers. Besides, the SOP also is place at specific location according to the job specification on each department...

In addition, this result also shows that the SMEs have adopted policies related to general strategies for decision-makers on how to handle issues as they arise. Interviewee SME C noted:

...First thing when people join our company, we provide them with training where they have to go through all the company regulations. The employee will sign the "aku janji" declaration with someone as witness that the employees will follow the rules and regulations, and acknowledge on the action taken when the rules been broken...

Therefore, employees need to be competent and trustworthy, with clearly established lines of authority and responsibility documented in written job descriptions and procedure manuals. Procedures provide a clear and easily understood plan of action required for carrying out or implementing a policy. This is based on the following conversation with interviewee SME C that noted:

...Management creates check and balance work procedures for staff. Also, we incorporate zero tolerance for fraud and dishonestly...

When determining what actions to put in place to mitigate risk, management considers all aspects of the entity's internal control components and the relevant business processes, information technology, and locations where control activities are needed. As noted by interviewee SME A:

...For example, if we are looking for a new supplier, there must be a minimum of three quotations. We make a comparison and we summarize the reasons why we choose supplier A and not B or C. We must have this kind of basic discussion before we make decision. There are a lot of criteria in terms quality, price, supplier reliability and company profile besides the cheapest price they offered...

It is essential to verify that controls are operating properly. As noted by interviewee SME C:

...We seek advice and recommendations from auditors and advisors. We also do the assessment of industry best practices and benchmarks...

Design of the Appropriate Types of Control Activities at Various Level

Control activities can be either preventive or detective. A preventive control activity prevents an entity from failing to achieve an objective or address a risk. In addition, preventive control attempts to deter or prevent undesirable events from occurring. Preventive controls are proactive controls that help to prevent loss. Examples of preventive controls include proper authorization, segregation of duties, adequate documentation and physical control over assets.

A detective control activity, on the other hand, attempts to detect undesirable acts. Thus, detective control discovers when an entity is not achieving an objective or addressing a risk. They provide evidence that a loss has occurred but do not prevent a loss from occurring. Examples of detective controls include reviews, analyses, reconciliations, exception reports, physical inventories and audit. Therefore, in summary, control activities include segregation of duties, authorization of transactions,

documentations and records, physical control over assets and records, and independent checks (COSO, 2012). Thus, the following question was posed to the employees:

Q2: What are the things that your organisation has to do to control risk?

Based on the interviews conducted, most the manufacturing SMEs self-defined the appropriate type of control activities without proper or detail formal procedures. Interviewee SME A noted:

...Our sales team consist only three staffs. So, basically, we just follow a flowchart. That means there is flowchart procedure in every department...

Whereas, some of the manufacturing SMEs only concentrated at factory level activities without considering the whole company. Interviewee SME B noted:

...What currently we have is only stock checking under account department. Physical stock check verifies with the recorded figures in the computer system...

In addition, proper control practices have been taken by the SMEs by periodically reviewing some of the activities against a set of standards on a regular basis. As noted by interviewee SME C:

...We practice check and balance work procedures by integrating financial accounting software. We also do regular internal and external audit...

From the finding, this study concludes that most of the manufacturing SMEs implement control activities partially automated through the entity's information technology system. However, automated control activities tend to be more reliable because they are less susceptible to human error and are typically more efficient. In addition, control activities are essential so that unusual conditions identified as a result of performing control activities are investigated and appropriate corrective action taken.

Segregation of Duties

Segregation of duties is critical for effective internal control which reduces risk. Management should divide or segregate key duties and responsibilities among different people to reduce the risk of error, misuse, or fraud. This includes separating the responsibilities for authorizing transactions, processing and recording them, reviewing the transactions, and handling any related assets or process so that no one individual controls all key aspects of a transaction or event. In other words, control activities related to authority, custody, and accounting of operations should to be separated to achieve adequate segregation of duties. Therefore, to gain an understanding on the segregation of duties in these three selected manufacturing SMEs, the following question was posed to the interviewees:

Q3: How does your organisation select and develop control activities and should management consider whether duties are divided or segregated among different people to reduce risk?

To be sure that the duties are being segregate in practice, SMEs should look at various criteria such as structure, size, complexity, purposes and management philosophy (Doyle, Ge & Mcvay, 2007). This study shows that most of the manufacturing SMEs have minimal practices on segregation of duties due to limited resources particularly on human capital. Interviewee SME A noted:

... We have different people with authorize and approve. One person prepares the quotation, then another person will authorize and approve. Same procedure in factory, there always one person who prepares the document, one approves, one check or approve, there will be at least two persons or three people will get them sign on certain thing...

A department head is responsible for all activities conducted by the department by setting up the department's business operations with a series of control to balance the risks. The department head must directly authorize individuals within their business operations. As noted by interviewee SME B:

...When we make cash sales for example, there will be one person received the cash, he/she will issue receipts. After that, another person at different department will received the cash, verify and bank in. After that account department will reconcile with invoices...

On the contrary, SME C shows no segregation of duties may be because of it not being practical due to limited personnel. Hence, not having segregation of duties exposes the companies to the risk of fraud (Srinidhi, 1994).

Comparative Analysis of SMEs

Although similarities between these manufacturing was SMEs easily traced due to their common function and identical organisation setting i.e. Food and Beverage industries, we noted there are some differences in form of the practices of control activities. A summary of the differences between these three manufacturing SMEs i.e. SME A, SME C and SME B is presented in Table 2.

This study shows that each manufacturing SME is unique in the practice of control activities in mitigating risk as suggested by the COSO Internal Control Integrated Framework (2013). Even though the three SMEs are in the same industry that is in the Food and Beverage industry, there are other factors of the SMEs existence such as location or employee context which may contribute to differences in effective control activities.

Table 2: Comparative Analysis of Control Activities in Selected SMEs

Principle 1	SME A	SME B	SME C
Response to objectives and risk	<ul style="list-style-type: none"> • Core value system identified and inculcate the value into daily routine task 	<ul style="list-style-type: none"> • Standard of operating procedures 	<ul style="list-style-type: none"> No formal documentation No formal communication
Design of the appropriate types of control activities at various level	<ul style="list-style-type: none"> • Process flowchart • External auditor 	<ul style="list-style-type: none"> • Physical stock check • None of audit 	<ul style="list-style-type: none"> • Check and balance work procedures • Regular internal and external audit

Principle 1	SME A	SME B	SME C
Segregation of duties	<ul style="list-style-type: none"> • Demonstrate but limited to: - 1 person prepare document - 1 person authorize - 1 person approve 	<ul style="list-style-type: none"> • Demonstrate but limited to: - 1 person receives cash and issue receipt - 1 person receives cash, verify and bank in 	<ul style="list-style-type: none"> • Not mentioned

CONCLUSION

This study presents the control activities Principle 10: The organisation selects and develops control activities that contribute to the mitigation of risks. These manufacturing SMEs do follow the COSO (2013a) control activities with these characteristics (1) response to objectives and risks, (2) design of appropriate types of control activities at various levels, and (3) segregation of duties, even though it is informal control activities practices by them. However, this study lays the groundwork for several strands of future research on other component of internal control by integrating each component in assessing business risk and explanation towards SME sustainability. Furthermore, this study is based only three manufacturing SMEs namely from the Food and Beverage industry, hence, it is unsuitable to use them for making generalisations on the same good practices of control activities in other types of manufacturing industry.

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