

ENTERPRISE RISK MANAGEMENT: EVIDENCE FROM SMALL-MEDIUM ENTERPRISES

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ABSTRACT

This paper aims to investigate the extent to which Malaysian small- and medium-sized enterprises (SMEs) practised enterprise risk management (ERM) framework and their effects on sales performance. The components of ERM examined includes: risk appetite, control environment, assessing the risk management framework and control activities. The paper is based on a questionnaire survey study among 214 SMEs that consist of 77.6% (166) from services related enterprises; and 22.4% (48) of manufacturing related enterprises. The data analysis indicates that 80% of the respondents are clear about the importance of risk management to achieve organisational long term sustainability; the senior management is committed to cultivate good culture and have policies to support ERM. More than 20% of the respondents failed to appoint an independent director to chair risk management committee and to obtain external stakeholders' view when developing risk appetite. Regression analysis also indicates that control environment has a significant and positive impact on sales. Hence, it is important for SMEs to establish a structured system of internal control, to appoint oversight functions and independent assurance providers to manage risks. Risk management is vital in SMEs to reduce exposure to business loss. It is recommended that standards and professional bodies need to develop ERM principles applicable to SMEs. This principle should balance between preferences, requirements and resources within SMEs. This paper contributes to the empirical literatures on the extent of ERM practices and their effects on SMEs' sales in emerging markets.

Keywords: *enterprise risk management, small and medium-sized enterprises, emerging markets, Malaysia*

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INTRODUCTION

Environment and risks changes over time; traditional approach of managing risks in 'silos' without integrating risks with important business context is no longer applicable. In fact, COSO (2004) has published an Enterprise Risk Management (ERM) framework which described ERM as a process managed by relevant personnel in the formulation of strategy and a process for managing risks throughout the whole company in realising objectives. Recent economic crisis, regulatory changes, and a security breach caused by regulators, auditors, appraisers and other credit institutions have promoted the focus of ERM in organisations. Companies are invited to go beyond the traditional risk management methods to work functionally to embrace ERM. ERM system process control; integrate offer and identify critical financial, operational, strategic, compliance and other risk assessment of the effects on the economic and strategic goals for the organisation and implement organisational solutions to address them (Locklear, 2012).

According to SME Corp. Malaysia (2013), businesses are regarded as Small Medium Enterprises (SME) if it meet either one of the conditions specified. Businesses in the manufacturing sector will be regarded as SME if the turnover does not exceed RM50 million or if there are less than 200 full-time employees. In contrast, businesses in the service and other sector will be regarded as SME if the turnover does not exceed RM20 million or if there are fewer than 75 full-time employees. SMEs are crucial for the economy as it contributes a major part to the Gross Domestic Products (GDP) of Malaysia.

SMEs play an important role in most economies worldwide (Burgstaller & Wagner, 2015). For instance, SMEs play a significant role in (the) Malaysian economy; the 2012 to 2020 SME Master Plan (2012) reported that SMEs contributed about 32% of GDP and 59% of employment in Malaysian economy. Since 2004, SME GDP growth has consistently exceeded Malaysia's overall economic growth. Between 2005 to 2015, the SMEs' average compounded annual growth rate (CAGR) was 7.0%, which was higher than 4.9% CAGR of the overall economy. As a result, SME's contribution to GDP increased from 29.6% in 2005 to 36.3% in 2015, SMEs also contributed 65.5% of total employment and 17.6% of total exports (SME Corp. Malaysia, 2016). Hence, risk management is vital for SMEs

survival (Mohd & Abdulah, 2014). Event related to risk has catastrophic effect on SMEs than in large corporations, since the capital background in SMEs is usually limited; risk management is therefore vital in SMEs to reduce the exposure to business loss. However, many SMEs rarely engage in ERM due to lack of knowledge and resources to implement processes. Their risk management practices are restricted to financial status and daily activities only.

Attention on how to improve SMEs in contributing towards the economy should therefore be concerned. In order to lay out basis for the best practices in managing businesses, Malaysian Code of Corporate Governance (MCCG) (2012) highlights the role of Board in setting up effective internal control systems and risk management framework. Although, the MCCG (2012) only addresses the best practices for listed companies; and is seemed as a burden to SMEs (Mahzan & Chia, 2014), however, development of such elements in SMEs should be examined to improve SMEs governance.

There are a number of researches on risk management done focusing on respondents from one industry (Adnan, Jusoff & Salim, 2009; Siang & Ali, 2012, Yusuwan, Adnan, Omar, & Jusoff, 2014). While the findings are more detailed and useful for SMEs in that particular industry, the ability of generalisation of results would be a consideration for future research. Most of the past Malaysian studies focused generally on ERM implementation. For example, Lai and Samad (2011) studied the relationship between ERM implementation and organisational performance, while Razali, Yazid and Tahir (2011) investigated determinants of ERM adoption for listed companies. Literatures of risk management among Malaysian SMEs are still lacking. Moreover, literatures of ERM are mostly focus on public listed companies rather than SMEs; hence, there is a research gap on the extent to which SMEs practise ERM and its impact on sales. This study aims to shed light on the current practices of risk management among Malaysian SMEs to give helpful guidance for SMEs improvement. Hence, the objectives of this paper are to examine: (1) current practices of risk management using COSO (2013) framework among Malaysian SMEs, (2) and its effect on sales performance. SME in Malaysia can be defined as firm's turnover not exceeding RM20 million per annual in service sector or RM50 million per annual in manufacturing sector (Bank Negara Malaysia, 2015). Next section presents theoretical perspective, followed by the literature in Section 3,

whereas Section 4 presents methodology, Section 5 discusses findings and Section 6 offers conclusion.

THEORETICAL PERSPECTIVE

According to classical decision theory, risk is the probabilistic uncertainty of outcomes resulted from a choice and regarded as reflecting variation in the distribution of potential outcomes, probabilities and subjective values (Brustbauer, 2014). Even though theoretical risk concepts are extensive, they are weakly grounded on the entrepreneurs realities (Hagigi & Sivakumar, 2009). The reasons being: 1. Majority of entrepreneurs do not treat uncertainty related to positive outcomes as an important factor of risk. From an entrepreneur's perspective, a risky option is one which entails the threat of a poor outcome; 2. For most entrepreneurs, risk is not primarily a probability concept, they see uncertainty as a risk factor, and therefore, the extent of potential negative outcomes appears to be stronger; 3. Most entrepreneurs strive for accuracy in estimating risk, but they show little desire to reduce it to a single quantifiable measure (Brustbauer, 2014). The above reasons appear to show that what is relevant for risk management activity is entirely an entrepreneur's personal interpretation and evaluation. Hence, their risk perception and ability to manage risks are likely to influence the risk management approach adopted (Child, 1972).

LITERATURE REVIEW AND HYPOTHESIS DEVELOPMENT

The rapid changing economic and competitive environments, shifting customer demands and priorities as well as restricting for future growth indicates how extensive an organisation control and risk management should be structured to ensure continuous growth in sales generation (Hannah, 2013). At all organisation levels, the management and staff have to be involved in addressing risks to provide reasonable assurance of the achievement of the organisation's mission and objectives. Every organisation strives to provide products and services at a competitive price deriving from most efficient and effective business operation for the sales to flow into the organisation.

Relationship between Enterprise Risk Management (ERM) and Sales

Sales is defined as revenue arising from sale of goods and rendering of services from certain types of transaction (IFRS, 2014). To increase sales generation, organisations need to interact with customers and other stakeholders to find out how best they can satisfy their needs. Internal controls provide an independent appraisal for the quality of management performance in carrying out their responsibilities to increase sales generation (Beeler, Hunton & Wier, 1999). An effective internal control correlates with organisational success in meeting its sales target (Fadzil, Haron & Jantan, 2005). Organisation should continuously increase their sales by having effective control system built into the organisational infrastructure for continuous improvement to gain competitive advantage. The effective control system is an essential component of ERM. Risk management encompasses a set of resources, procedures and actions adapted to organisation characteristic to enable management to keep risks at a reasonable level. Internal control system and risk management complement each other in controlling the organisation's activities, both have been considered as fundamental elements of organisational governance (Hannah, 2013). Consequently, risk management is perceived as a new means of strategic business management, linking business strategy to daily risks and optimising those risks to realise business value (Saarens & de Beelde, 2006).

Many SMEs have incorporated risk management functions to prevent and detect losses. These functions required lot of efforts and resources to address internal risk, commercial risk, financial risk, economic risk, environmental risk and political risk. As enterprises are growing in size and complexity even with multiple technology based systems implementation, they are still at risk of suffering losses, because internal risk management is losing ground to highly networked and sophisticated fraudsters (PwC, 2011). ERM consists of risk appetite, control environment, risk management framework and control activities as presented below.

Risk Appetite

Companies define risk appetite as the amount of risk they are ready to bear in overall or separate according to its various risk categories (Rittenberg

& Marten, 2012). Majority of the literatures in both Malaysian SMEs (Wan Aris, Ishak & Kazis, 2009; Salleh & Ibrahim, 2011) and foreign SMEs (Zurich, 2013) revealed that SMEs have low to moderate risk appetite. SMEs often seek secure growth rather than being aggressive in risk taking, they generally exhibit a negative risk preference (Georgousopoulou, Chipulu, Ojiako & Johnson, 2014); and this prevent them from growing into large corporations (Salleh & Ibrahim, 2011). Managers are conscious about risks their face (Samugwede & Masiyiwa, 2014). However, the majority of companies do not have a risk appetite statement although they do recognise its importance (Zurich, 2013). In contrast, ICAEW (2005) unveiled that a less formal monitoring environment has motivated risk taking among growing SMEs. Risk appetite will be able to guide company management to set business goals and make relevant decision to achieve in order to sustain their operation through higher sales performance. Thus, the researchers hypothesise:

H₁: The risk appetite of ERM has significant impact on sales performance

Control Environment

Literatures unveiled that most of the SMEs' internal controls systems (ICSs) include control environment that is fairly adequate (Nyakundi, Nyamita, & Tinega, 2014; Siwangaza, Smit and Bruwer, 2014). SMEs seem to have limited knowledge and the commitment towards establishing a formal ICS (Nyakundi, Nyamita, & Tinega, 2014) such as having a procedure manual (Nyakundi, Nyamita, & Tinega, 2014; Chen & Nie, 2011). Improper independent review (third line of defense) among SMEs hinder them from getting loan financing (Bukonya & Kinatta, 2012). Authority and responsibilities regarding risks are defined ambiguously (Chen & Nie, 2011). SMEs generally lack the awareness of the significance of internal audit (Mahzan & Chia, 2014) and thus the majority do not have an internal audit department. In most cases the owner-manager acts as the chief risk officer (Oseifuah & Gyekye, 2013). ICSs in SMEs are only fulfilling the basic requirement which results in low ability to safeguard against risks (Siwangaza, Smit, & Bruwer, 2014).

Control environment is influenced by code of conduct, management's culture and operating style; and competency of the workers. The workers' control consciousness reflects the attitudes of organisation in respect to the importance of internal controls in sales and profit generation. Weak internal control is related to higher information vagueness and resulted to higher cost of capital and it will reduce the expected future earnings. Therefore hypothesis is:

H₂: The control environment of ERM has positive impact on sales performance

Risk Management Framework

Risk management practices among Malaysian SMEs are low (Samugwede & Masiyiwa, 2014, Yusuwan, Adnan, Omar & Jusoff, 2008, Wan Aris, Ishak & Kazis, 2009). Majority of the companies do not have ERM in place. Companies with formal internal control systems may not necessarily have risk management framework because of the lack of expertise (Samugwede & Masiyiwa, 2014) and the high cost of implementation (Oseifuah & Gyekye, 2013), only few companies have risk management policies (Wan Aris, Ishak & Kazis, 2009). Moreover, SMEs awareness on risk management is only at a moderate level (Yusuwan, Adnan, Omar & Jusoff, 2008; Wan Aris, Ishak & Kazis, 2009, Brustbauer, 2014) but the usefulness of risk management is well recognised among them (Yusuwan, Adnan, Omar & Jusoff, 2008). Larger SMEs shows more mature risk management while family-owned businesses are not committed to set up ERM (Brustbauer, 2014). Their main concern is sustainability but ERM is not perceived to be a main contributor to survival (Zurich, 2013). Positive linkage between ERM and SMEs performance are found to be existed (Yusuwan, Adnan, Omar & Jusoff, 2008). The next hypothesis is:

H₃: The risk management framework of ERM has positive relationship with sales performance

Control Activities

Control activities refer to policies and procedures put in place to ensure management directives are properly carried out (Hannah, 2013).

This documentation and guidelines help to determine how the control activities are to be executed, and all necessary actions should be taken with the objective to address risks. Olabode (2011) revealed that there is consciousness among SMEs in business continuity management and disaster recovery plan. Succession planning among SMEs is not effective, other factors rather than the competence of candidate are taken into consideration when determining successor (Obadan & Ohiorenoy, 2013). A common risk mitigation action among SMEs is found to be the purchasing of insurance (Samugwede & Masiyiwa, 2014).

Control activities reflect the policies and procedures put in place in regard to the importance of internal control in revenue generation (Hannah, 2013). Beeler, Hunton and Wier (1999) and Fadzil, Haron and Jantan (2005) argued that control activity correlates organisational success and managerial performance to higher revenue generation. Hence, the researchers hypothesise that:

H₄: The control activity of ERM has significant impact on sales performance

RESEARCH METHODOLOGY

Researchers collected data through a questionnaire survey distributed by research team consists of fifty one (51) final year accounting students to two hundred and fourteen (214) SMEs. Research team members obtained the responses from their relatives, friends and associates who owned SMEs. The period of this study was from the 4th February to 8th May 2015. The questionnaire consists of two sections; Section A asked respondents to rate 42 ERM statements using a five (5) point Likert scale (-2 = disagree strongly, -1 = disagree somewhat, 0 = neutral, 1 = agree somewhat and 2 = agree strongly). The statements were based on some components from COSO (2013); it included statements relating to risk appetite (7 statements), control environment (13 statements), assessing risk management framework (17 statements) and control activities (5 statements). The questionnaire was adapted from statements posted by Corporate Governance Board Asia Pacific (2014). Section B solicited demographic profile of respondents. Researchers measured sales performance based on the annual sales turnover generated by SMEs (refer Table 1).

In order to measure reliability of data collected, this study tested internal consistency of responses using Cronbach's coefficient. As a general rule, the correlation is attenuated very little by random measurement error at an alpha of 0.7 – 0.8 (Hair, Black, Babin & Anderson, 2010). This study obtained Cronbach's Alpha of 0.951, which surpasses the recommended internal consistency required.

RESULTS

Descriptive Statistics

Table 1 shows sample companies consist of 77.6% (166) service-related companies and 22.4% (48) manufacturing-related companies. 41.1% (88) of the service-related companies and 14% (30) of the manufacturing-related companies generated turnover amounting to RM300,000 to less than RM15,000,000. 51.4% (110) of the respondents owned the sample company.

Table 1: Profile of the Respondents

| Respondents' Profile | No. of Respondents (N) | % |
|--|------------------------|-------------|
| Manufacturing and manufacturing-related services | | |
| Number of full-time employees | | |
| < 5 | 3 | 1.4 |
| 5 to < 75 | 33 | 15.4 |
| 75 to < 200 | 12 | 5.6 |
| Total | 48 | 22.4 |
| Annual sales turnover | | |
| < RM300,000 | 3 | 1.4 |
| RM300,000 to < RM15,000,000 | 30 | 14.0 |
| RM15,000,000 to < RM50,000,000 | 15 | 7.0 |
| Total | 48 | 22.4 |
| Services and other sectors (including information and communication technology (ICT), primary agriculture, construction, mining and quarrying) | | |

| Respondents' Profile | No. of Respondents (N) | % |
|---|-------------------------------|-------------|
| <i>Number of full-time employees</i> | | |
| < 5 | 41 | 19.2 |
| 5 to < 30 | 83 | 38.8 |
| 30 to < 75 | 42 | 19.6 |
| Total | 166 | 77.6 |
| <i>Annual sales turnover</i> | | |
| < RM300,000 | 37 | 17.3 |
| RM300,000 to < RM3,000,000 | 88 | 41.1 |
| RM3,000,000 to < RM20,000,000 | 41 | 19.2 |
| Total | 166 | 77.6 |
| <i>Position of the respondents</i> | | |
| Owner | 110 | 51.4 |
| Senior manager | 60 | 28.0 |
| Accountant/auditor | 20 | 9.4 |
| Others | 24 | 11.2 |
| Total | 214 | 100 |

In order to answer the 1st research objective, respondents were asked to indicate the enterprise risk management scales for their organisation based on a 5 point Likert scale of -2 = disagree strongly, -1 = disagree somewhat, 0 = neutral, 1 = agree somewhat and 2 = agree strongly. Table 2 presents findings with more than 80 per cent of the respondents agreed to the statements relating to risk appetite and control environment. Results show sample companies are clear about the importance of risk management to sustain organisational long term sustainability (Yeo & Lai, 2004), and senior management is committed to cultivate good culture and having policies to support ERM.

Table 2: More than 80 Per Cent of Respondents “Agreed” to Following Statements

| Questionnaire Statements | No of Respondents (N) | Agree Somewhat (%) | Agree Strongly (%) | Total Agree (%) |
|---|------------------------------|---------------------------|---------------------------|------------------------|
| <i>Risk appetite</i> | | | | |
| Board is clear about extent of risk & willing to achieve its objectives | 187 | 43.9 | 43.5 | 87.4 |
| <i>Control environment</i> | | | | |
| Company’s culture & policies support risk management & internal control | 180 | 43.0 | 41.1 | 84.1 |
| Senior management committed to integrity & fostering trust with company | 172 | 47.7 | 33.6 | 81.3 |
| Code of ethics & value system drive organisational long term sustainability | 176 | 43.5 | 40.2 | 83.7 |

Since majority of SMEs are managed by owner or family members, their management abilities and qualities are not keeping up with market changes and economic development, consequently, they are not able to identify potential risk inherent in their business operationally and strategically. In addition, they also cannot see the need to seek external stakeholders’ view in developing risk appetite, such as appointing risk management committee or appoint independent directors on board; absence of these experts caused the SMEs to have immature risk management framework for the enterprises. Such organisational structure is important because Nickmanesh, Zohoori, Musram and Akbari (2013) found that number of independent directors and size of risk management committee have significant positive impact return on asset, and quality of chief risk officer has a strong influence on ERM adoption level within Malaysian public listed companies (Wan Daud, Yazid & Hussin, 2010).

Respondents disagreed to some statements relating to risk appetite, control environment and assessing risk management framework (Table 3). Respondents also gave neutral replies to some statements relating to assessing risk management framework (Table 4). These findings may be due to the lack of ERM knowledge, short of resources or costly and time

consuming to appoint external experts. Studies by Mubarak (2010) and Hwang, Zhao and Toh (2014) also confirmed the lack of time and the lack of dedicated resources as the main barrier for ERM adoption. Others indicated that the lack of experienced manpower as the most significant challenge which affects ERM implementation (Kikwasi, 2011; Chileshe & Kikwasi, 2013).

**Table 3: More than 20 Per Cent of Respondents
“Disagreed” to Following Statements**

| Questionnaire Statements | No of Respondents (N) | Disagree Strongly (%) | Disagree Somewhat (%) | Total Disagree (%) |
|--|------------------------------|------------------------------|------------------------------|---------------------------|
| <i>Risk appetite</i> | | | | |
| Key external stakeholders' views obtained when developing risk appetite | 48 | 7.9 | 14.5 | 22.4 |
| <i>Control environment</i> | | | | |
| 3 lines of defence accurately describes organisation's structure to address risk | 45 | 4.2 | 16.8 | 21.0 |
| 4 lines of defence by audit committee provides high level comfort for board | 43 | 7.0 | 13.1 | 20.1 |
| Internal audit have an independent reporting line to board | 47 | 7.0 | 15.0 | 22.0 |
| <i>Assessing risk management framework</i> | | | | |
| Risk management ownership is clearly defined to/accepted by employees | 43 | 5.1 | 15 | 20.1 |
| There is a Risk Management Oversight Board chaired by an independent director | 52 | 12.1 | 12.1 | 24.2 |
| Co's acceptable risk appetite is defined by Risk Management Committee | 44 | 7.5 | 13.1 | 20.6 |
| Company's risk management is mature | 44 | 4.2 | 16.4 | 20.6 |

Table 4: More than 30 Per Cent of Respondents are “Neutral” to Following Statements

| Questionnaire Statements | No of Respondents (N) | Neutral (%) |
|--|-----------------------|-------------|
| Assessing risk management framework | | |
| There is a Risk Management Oversight Board chaired by an independent director | 87 | 40.7 |
| Risk management policies are formulated by its committee & approved by Audit Committee | 80 | 37.4 |
| Company's risk management is mature | 77 | 36.0 |
| Audit committee have an oversight role on enterprise risk management | 70 | 32.7 |

Regression Analysis

Second research objective tests the effect of enterprise risk management, “risk appetite”, “control environment”, “assessing risk management framework” and “control activities” on sales performance, the following multiple regression was run:

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \varepsilon$$

where Y = Sales; X_1 = risk appetite; X_2 = control environment; X_3 = assessing risk management framework; X_4 = control activities; ε = Error term; β_0 = the intercept; and $\beta_1, \beta_2, \beta_3$ and β_4 = the regression coefficients for the four enterprise risk management components.

The results presented in Table 5 show that the coefficient β_2 (control environment) is positively (and) significantly related to sales performance. The whole model is significant ($F = 4.029$; $p = 0.004$) and explains 26.8% of the sales performance variance. Control environment is an important foundation for risk management; it includes improving the environment with policies and procedures, management to be more committed to competency and integrity with clearer authorities and accountabilities, in addition to 4 lines of defense to address risk, namely 1st line – risk management by business operation, 2nd line independent risk control and compliance, 3rd line – internal audit and 4th line – audit committee (IIA, 2013). This finding is consistent with the studies by Nickmanesh, Zohoori, Musram and Akbari

(2013), Ansong (2013), Nyakundi, Nyamita and Tinega (2014), that internal control structures significant influence financial performance. ERM is critical to SMEs as risk management activities could be value adding to firms (Pagach & Warr, 2010; Anderson, 2008) because it reduces firm’s average capital expenditure and contract costs as it allows firm to have access to finance and persuade stockholders to invest in companies (Wang & Reuer, 2006). These findings suggest that risk management enhance SMEs access to finance and subsequently improve their performance.

Table 5: Enterprise Risk Management and Sales Performance

| Variable | Beta | t-value | Sig. |
|-------------------------------------|--------|---------|--------|
| Constant | 1.828 | 24.080 | 0.000 |
| Enterprise risk management | | | |
| Risk appetite | 0.013 | 1.193 | 0.234 |
| Control environment | 0.020 | 2.176 | 0.031* |
| Assessing risk management framework | -0.008 | -1.117 | 0.265 |
| Control activities | 0.014 | 0.841 | 0.401 |
| R ² | 0.268 | | |
| F-statistic | 4.029 | | |
| Significance | 0.004 | | |

Note: * Significance at the 5% level.

CONCLUSION

This study adds to existing literature of ERM by providing empirical evidence on the extent to which Malaysian SMEs practised ERM framework and their effects on sales performance. The analysis of the data indicates that 80% of the respondents are clear about the importance of risk management to achieve organisational long term sustainability, and senior management is committed to cultivate good culture and have policies to support ERM. However, more than 20% of the respondents failed to appoint independent director to chair risk management committee and to obtain external stakeholders views when developing risk appetite. Regression analysis shows that control environment is positively and significantly related to sales performance. Control environment included to improve SMEs’ policies and procedures, senior management is more committed to competency and integrity with clearer authorities and accountabilities, in addition to 4 lines

of defense to address risk. SMEs need to constantly and extensively work towards improving control environment so as to increase revenue inflow, to adapt to the shifting of customers' demand and priorities and to survive in the rapidly changing economic and competitive environments. Therefore, an absence of this control environment could result in business failure.

This study provides insight into the extent to which SMEs practices ERM, and their effects on sales performance. Study on SMEs is important because of its significant contribution to Malaysian economy. Findings shows that SMEs recognise the importance of ERM, it is recommended that regulators and professional bodies need to develop ERM principles that is applicable to SMEs. The principle should be flexible and dynamic and the developing process should be participatory, because one size does not fill it all. This principle should balance between preferences, requirements and resources within SMEs. SMEs want ERM which is suitable to their needs; as the major obstacle of implementing ERM is the high cost involved. A track record of consistent ERM principles will greatly assist SMEs to solicit external fund. Future research may investigate SMEs' preferences, requirements and resources for ERM adoption in order for SMEs to stay competitive and continue to grow.

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