

ENTERPRISE RISK MANAGEMENT: IMPACT ON PERFORMANCE OF PRIVATE HIGHER EDUCATIONAL INSTITUTIONS IN MALAYSIA

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Abstract: Risk management is not something new. It is traceable as a valid decision-making process in companies in the late 1940s and early 1950s. A “silo” or “stovepipe” approach was practiced in traditional risk management where risks are usually managed individually without accepting the interrelationship of each risk. However, Enterprise Risk Management (ERM) was introduced as a new, board-supervised method that intends to identify, evaluate and manage corporate risks in an integrated structure. Specifically, in Malaysia, a few private higher educational institutions (PHEIs) were in trouble due to many causes such as management, finance and marketing. In relation to this main idea and the current issues regarding PHEIs, the aim of this study is to develop a conceptual framework of ERM drivers and its impact on the performance of Malaysian PHEIs. Using probability sampling techniques namely simple random sampling, the questionnaires were distributed to 510 respondents from top managerial posts. However, an exact sample size required was 217. Independent variables were identified as internal factor, size and types of institution, and external factor. The dependent variable was the performance in the particular institution which consisted of three elements (e.g.: management, finance and marketing). Knowledge management was chosen as a mediator in this study. Data were analysed using SPSS statistical tool and SmartPLS 3.0. Results indicated that both internal factor and size and types of institution were related with performance in the particular institutions, and the external factor showed a negative relationship with performance. It was also found that only internal factor was mediated by knowledge management in terms of their performances. Finally, it was suggested for future research to use multiple methods and multiple sources to avoid any possibility of common method bias and to enhance the findings to be generalised, which can prevent overestimate of the structural model. Indeed, at present, general research in ERM is well established, but it is still in its infancy for educational institutions.

Key words: drivers of ERM, Malaysia, performance, private higher educational institutions, enterprise risk management.

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Introduction

Risk is something that needs to be monitored and controlled effectively. As businesses grow, risk is unavoidable. Due to the complexity of business situation today, business players are considering the best way to control and monitor risks. Hence, the introduction of Enterprise Risk Management (ERM) gives them an idea to handle several of the risks.

ERM involves improving the procedure by which risks are taken. In the 1990s, this became a serious problem as companies had begun experiencing huge losses usually from risks they should not have taken in the beginning. For instance, the drawback with ERM was not the financial tools because even though many financial tools are new, the likelihood of people behaving fraudulently or negligently, had always ensued (Holton, 1996).

In relation to the recent movement in private education institutions, there were many ERM cases reported in Malaysia. For instance, Allianze University College of Medical Sciences (AUCMS) in Penang ceased its operation at the end of 2014 affecting all of its students and staff. Likewise, in early 2014, Al-Bukhari International University in Kedah declared that it would have to close down while Masterskill Education Group Berhad, the owner of ASIA Metropolitan University, witnessed its share price dropped from RM4.24 (USD 1.03) in August 2010 to a low RM0.30 (USD 0.07) in May 2014 and RM0.68 (USD 0.17) in April 2015. Similarly, Wawasan Open University in Penang declared an increasing deficit of RM87.96 million (USD 21.36 million) in 2013, followed by UNITAR which also announced financial stress in its Companies Commission of Malaysia (SSM) filing for the year 2013 resulted in the university selling its assets in 2014. Finally, Perdana University announced ending its affiliation with Johns Hopkins University due to alleged non-payment of fees. In addition, 46 per cent of all PHEIs suffered losses after tax in 2013 (Lim & Williams, 2015).

Due to a growing number of losses among private institutions, there is a need to have a systematic management so that they are able to manage risk properly. The Board of Directors (BODs), as well as its members, need to know about risk management. The rationale of having this kind of knowledge might reduce uncertainties within the institutions. Moreover, identifying and responding to risks in an institution strongly depend on corporate intellectual capital and all levels of employees are responsible to give their insights towards potential risks (Neef, 2005). Faculties within the universities and other learning institutions had been concerned with knowledge management (KM) as it makes the institution act intelligent to secure its viability and overall success (Wiig, 1997).

Over the last few years, KM had turned into an important topic of discussion in business literature. It is a common belief among business and academic communities that by leveraging knowledge, businesses are able to maintain its long-term competitive advantages (Bhatt, 2001). Effective KM may require a calibre and dedicated person in-charge who is responsible to conduct it in the right

place at the right time. At the same time, it also required institutions to create among their staff an environment of participation, coordination and knowledge sharing (Bhatt, 2001).

After reviewing the PHEIs briefly and ERM as a general concept, understanding the basic impact of ERM and having a clear picture of ERM, the researcher seeks to examine the impact of ERM adoption on performance, especially in the PHEIs. The research also aims to establish whether institutions that have adopted ERM truly attained noticeable results which were claimed as one of the benefits of ERM. Thus, it is crucial to develop a conceptual framework of ERM driver and its impact on performance. In addition, this framework will include KM as a mediator.

Literature review

Risk management is not something new. It was traceable as a valid decision-making process in companies in the late 1940s and early 1950s. A “silo” or “stovepipe” approach was practiced in traditional risk management where risks are usually managed individually without accepting the interrelationship of each risk. People who handle risks had risk experiences and skills. Along with time and technology, organisations have started to realise the importance of managing risks in a proper way. Ever since the mid-1990s, ERM has developed into a concept and as a management function in corporations (Dickinson, 2001) which expressed a managerial focus (Wu & Olson, 2010). ERM is a vital instrument in organisations which could minimise negative impacts and bring positive impacts.

However, there are several organisations that have fully implemented ERM in their operations. According to research conducted by previous authors, ERM seems odd and new to many organisations, locally or internationally. This is due to the lack of knowledge, information and awareness among the administrators, barriers in implementing ERM, minimal effort and cooperation from top management, incomplete understanding of ERM and resistance by the CEO and top management (Brancato, 2005; Tang et al., 2007; Yusuwan, 2008; Bainbridge, 2010; Zadeh, 2010; Jalal et al., 2011; Razali et al., 2011 & Daud, 2011).

ERM can be defined in many ways. For instance, the Committee of Sponsoring Organisation of the Treadway Commission, (COSO, 2004), a U.S.-based organisation formed to enhance financial reporting in the U.S. (Wu & Olson, 2010), defined ERM as “a process affected by the entity’s BOD and other personnel, applied in a strategic setting and across the enterprise, designed to identify potential events that may affect the entity, and manage risk to be within its risk appetite, in order to provide reasonable assurance regarding the achievement of the entity’s objectives”. In addition, it could be a process that covered the entire areas in organisations and involve all levels of management that are exposed to risks and affect the aimed goals.

Stephen, (2008) defined ERM as a procedure through which businesses anticipate, prevent and respond to uncertainties that accompanied organisations’ strategic

objectives. He also expanded the above definition as a procedure that enables businesses to proactively ascertain the types and levels of risks suitable for accomplishing their strategic objectives. This means that organisations are able to achieve the stated target by adopting ERM.

According to Bainbridge, (2010), ERM is the process by which the companies' BODs and executives defined the firm's strategies and objectives as "to strike an optimal balance between growth and return-goals and related risks". Both parties are responsible to set up strategies and goals and expect the uncertainties that might arise within the organisation.

In relation in Malaysia, it was proven that the PHEIs' role offers the best access to higher education in Malaysia. They are vital in their contributions to make Malaysia a world-class education hub and centre of excellence. Through the National Higher Education Strategic Plan 2007, the government was focused on transforming the education sector into world-class institutions. Therefore, PHEIs had the opportunity to ensure this aspiration is fulfilled by offering good and high-quality teaching and learning, research and development which also focused on the enhancement of the quality of human capital.

By year 2007, Malaysia had 11 private universities and university colleges and four branch campuses of foreign universities. An amendment to the Education Act in 1995 resulted in the establishment of private colleges which leads to the introduction of the Private Higher Education Act 1996. Following this act, a number of major corporations were licensed to run private universities. For example, Telekom Malaysia Berhad (TM) established the Multimedia University, the petroleum giant Petronas set up Petronas University of Technology and Tenaga Nasional Berhad (TNB) established Universiti Tenaga Nasional (Sohail & Daud, 2009).

The establishments of PHEIs were located all around Malaysia and most of them are situated in the Klang Valley, central Selangor, being one of the developed states in Peninsular Malaysia (Padlee et al., 2010). Through these PHEIs, it is obvious how important it is to support national economic objectives of a country and the development of the indigenous labour force. Within this positive impact, the government of Malaysia announced the establishment of Pelan Pembangunan Pendidikan Malaysia (Pendidikan Tinggi) (PPPM-PT) (2015-2025) that focused on several components such as holistic, entrepreneurship and excellent graduates, talent appreciation, lifelong learning and global online learning. Finally, this plan also aims to provide opportunities for the public and private institutions in order to encourage innovation and excellence in all facets of the institutions.

ERM is an ongoing process (Beeler, 2011), where their activities are focused on identifying, documenting and prioritising strategic risks of the company (Lipsky, 2010). Therefore, being able to manage it properly would bring benefits to the company itself, such as enhanced definition and measurement of risks within the company, focused execution on mitigating risks, designing an internal audit plan to

ensure that business processes and systems are managing risks effectively. However, ERM also relies on several drivers such as internal factors which include size and types of institution, and external factors that should be considered in order to increase efficiency and improve risk management efforts across the firm (Danjou, 2010).

A study conducted by Holton, (1996) reviewed three underlying aspects comprising of risk management strategy that is corporate culture, procedures and technology. According to Holton, in terms of corporate culture, an organisation will handle risk only if its members are willing to since they cannot make an institution manage risk effectively. No one is able to manage risks if they are unprepared. They are the ones who can decide whether or not they are going to manage organisational risks. This poses a challenge for ERM to truly evaluate an organisation's culture and then work to improve it. In this study, three dimensions of internal factors had been identified which were Chief Risk Officer (CRO), the influence of the top management and training and education.

Typical characteristics of the firm provide an insight into the challenges in their organisations. A suitable and strong management system allows them to handle the challenges, thus, achieve the organisations' goals. An organisation's size and types are also the determining factors in implementing ERM. According to Manab et al., (2010), ERM implementation among financial companies is higher than in non-financial companies. This is supported by the higher percentage of the financial sector that has risk management, linked to decision-making activities that is higher than the non-financial sector, as well as the internal risk reporting process. Paape and Spekle, (2011) confirmed the findings that the financial sector is more likely to have more advanced ERM system. On the other hand, Beasley et al., (2005) asserted that since the financial industry and educational institution are operating in a complex and dynamic environment of high uncertainties, they seem to recommend efficient risk management. Besides, Beasley et al., (2007) subscribe to the notion that companies in the non-financial sector benefitted from ERM, while other companies observe no benefits from it and could even destroy their values by spending corporate resources on risk management.

On the other hand, the size of the institution also pushes for the adoption of ERM. According to Hoyt and Liebenberg, (2008) large institutions are more likely to have and engage in ERM programmes rather than smaller institutions. For instance, larger institutions usually deal with various risks and need to be managed properly. They also face a more complex situation and the best decision-making process is needed to reduce uncertainties. Compared to smaller institutions, larger institutions basically engaged with small-scaled risks. According to Hoyt, (2011) there are evidence to show that large organisations are more likely to have ERM programmes. Furthermore, Liebenberg and Hoyt, (2003) found that size influences the decision to implement ERM.

The decision to implement ERM in organisations is concentrated on the external surrounding conditions such as corporate governance, compliance to law and regulation and external auditors. A study by Simkins and Ramirez, (2007) found that corporate governance gave the autonomy to corporate management in deciding whether or not to implement ERM. Moreover, regulators also have a crucial role in ERM programmes. They have to ensure that good business practices are employed and that business operations comply with regulatory requirements. Besides, during inspections, regulators focus on all aspects of risks and aim to strengthen the vital roles that the BODs and senior management have in the risk management process (Lam, 2000). According to Beasley et al., (2005) external auditors have positive significant relationship with the adoption of ERM. They also argue that high quality audit firms are more inclined to assign high quality auditors in developing effective risk management. Beasley et al., (2008) also suggested that the outsourcing of risk management to external auditors would facilitate the audit committee in defying the completeness of risk identification by the management. Presently, risk management has become a major concern in the dynamic global environment. A firm's performance can be improved with the implementation of an ERM system (Barton et al., 2002; Lam, 2003; Stulz, 1996, 2003; COSO, 2004; Nocco & Stulz, 2006; Hoyt & Liebenberg, 2009). Thus, as suggested by Daud and Yazid (2009), as a new holistic approach to managing corporate risks, ERM can be used to achieve companies' objectives. Organisations that had implemented ERM experienced substantial and noticeable benefits which include a boost in financial value, reduction in losses and overall improvements in risk management. ERM implementation presents many benefits to organisations, especially in the aspect of management. In Lai and Samad (2010)'s empirical study, it was claimed that ERM does not only guarantee the reduction of the likelihood of performance interruption, but it also fosters confidence and collaboration among the management team in realising the success of the organisation. In a study by Ryu, (2008), it was suggested that the implementation of ERM could boost the firm's value due to the decrease in the conflict of interest between managers and shareholders and reduce deadweight losses which will have an impact in reducing manager's risks. It is also noted that an efficient risk management programme enhances shareholders' value and companies' survival. Furthermore, Ryu (2008) also reported that by improving their capabilities to exploit risks, companies are able to improve management's decision making, thus, lowering the cost of under-investment problem. Moreover, according to Arene et al., (2010), due to its role in supporting the management at decision making and planning, ERM also provides a detailed guide for its design and implementation. Furthermore, Shaw (2008) reported that ERM can reduce costs due to cost saving consolidations, and, through financial instruments such as hedging and derivatives, it can also ensure a secure operating environment. Besides, ERM can also assist in coordinating resources or reducing redundancies. ERM is useful in anticipating

performance especially in the financial aspect. There were many researches that focused on the impact that ERM has on financial performance. For instance, in their study, Lai and Samad, (2010) pointed out that by implementing ERM programme in Malaysian public-listed companies, the companies will be rewarded with reduced expected costs of financial distress, lowered expected tax burden, reduced cost of external financing and improved company's credit rating. This showed that by implementing ERM programme within the organisation, it would give benefits to the organisation in the financial aspect and reduce financial distress. This is supported by Ryu, (2008) who discovered that ERM can lessen financial distress.

Besides that, ERM also contributed a positive impact to other marketing aspects. In a study, Ryu (2008) found that companies that implement ERM experienced a reduction in systematic risks, thus, reducing their exposure to market and environmental changes. More than a decade ago, when risk management focused primarily on financial risks, companies can calculate and handle their exposures to market rates. Adopting ERM helped them to maintain access to the capital markets and other necessary resources in order to carry out their business plan and strategies (Nocco, 2006). However, there are still a few arguments that say ERM would not affect marketing, as mentioned by Pagach and Warr, (2010) who claimed that ERM will not affect firms' market risk unless the firms change their fundamental business lines.

ERM is an approach that is purposely implemented to expect risks and monitor it. As an organisation that always faces risks, a generally successful organisation requires a disciplined approach that balances objectives with management practices especially in forming expectations, planning expenditures and monitoring key activities. Accordingly, Manning, (2010) asserted that risk management enables marketing to confront various market obstacles required in facilitating business growth in this complex environment. Anderson, (2008) states that the implementation of ERM enhanced a company's capability to identify market risks and, therefore, to stabilise earnings (Hussain et al., 2018).

Several studies indicate that a firm's performance depends on the efficiency of KM (Brush, 1992; Nonaka & Takeuchi, 1995; Davenport & Prusak, 1998; Yusof & Abu Bakar, 2012). For example, Yusof and Abu Bakar, (2012) conducted a study on KM and performance among construction firms in Malaysia. The study showed that KM is considered as a push factor for companies to attain success and growth. KM was identified as a valuable resource to enhance company performance in the volatile business environment. Knowledge is the most valuable resource amid the numerous resources available for companies as it represents the best practices, routines, lessons learned, problem-solving methods and creative processes that are usually difficult to replicate. They concluded that KM is a vital resource that must be managed well in order to realize a firm's performance, especially in the financial aspect.

In their study, Rodriguez and Edwards, (2009) investigated the application of KM processes among financial firms which could be related to the ERM implementation. The findings showed that there is a positive correlation between variables representing people-related KM concepts, namely the perceived quality communication among groups and the perceived quality of risk knowledge sharing, with the perceived value of ERM implementation. Inversely, the other three technology-related KM concepts had no significant effects on perceived value of ERM implementation. They concluded that the respondents might regard ERM implementation as the issue of people rather than technology.

A majority of previous studies revealed a significant relationship between ERM drivers and its impact on performance (Lam, 2000; Kleffner et al., 2003; Beasley et al., 2005; Beasley et al., 2007; Hussin et al., 2008; Hoyt & Leibenberg, 2008; Brown et al., 2009; Manab et al., 2010; Daud, 2011, Bilan et al., 2020). In contrast, Razali et al., (2011) suggested that there is no significant relationship between some of these drivers to ERM practices. For internal factor, there were three main elements in this driver which was CRO, top management and education and training. In a study by Daud, (2011), it was agreed that there is a significant positive relationship between ERM adoption and CROs in public-listed companies in Malaysia. In addition, Kleffner et al., (2003) claimed that the top management entity will influence ERM adoption effectively. Furthermore, Hussin et al., (2008), also noted that education and training in risk management will present a continuous improvement for the entire entity and is crucial to gather corporate knowledge about risks (Brown et al., 2009). This becomes one of the treats for organisations to implement ERM effectively. Thus, the author proposes that:

H1: Internal factor for ERM driver is positively significant with its impact on performance.

According to Beasley et al., (2005), the financial and educational industries seem to recommend effective risk management and agree that firms in non-financial industries get more benefits from ERM when compared to others (Beasley et al., 2007). On the other hand, it is more likely for large companies to have and engage in ERM programmes than small companies (Hoyt & Liebenberg, 2008). Accordingly, the author proposes that:

H2: Size and types of institution for ERM driver is positively significant with its impact on performance.

External factor consisted of three elements which were corporate governance, law and regulation compliance and external auditors. Firstly, corporate governance is the key driver in implementing ERM in companies (Manab et al., 2010). Secondly, Lam (2000), said that in risk management, regulators were focusing on all aspects of risk during examinations for particular situations. Beasley et al., (2005) observed that external auditors have a positive significant relationship with ERM adoption. Accordingly, the author proposes that:

H3: External factor for ERM driver is positively significant with its impact on performance.

In a study, Rodriguez and Edwards, (2009) investigated the application of KM processes among financial firms which will be related to ERM implementation. The findings showed that there is a positive correlation between variables representing people-related KM concepts, namely the perceived quality communication among groups and the perceived quality of risk knowledge sharing, with the perceived value of ERM implementation. Several studies indicated that a firm's performance depends on the efficiency of KM (Brush, 1992; Nonaka and Takeuchi, 1995; Davenport & Prusak, 1998; Yusof & Abu Bakar, 2012). For example, Yusof and Abu Bakar, (2012) conducted a study on KM and performance among construction firms in Malaysia. The study showed that KM is known as a push factor for firms to achieve success and growth. They concluded that KM is a crucial resource that needs to be well managed to achieve firm's performance, especially in the financial aspect. McKeen et al., (2006) observed significant positive links between the adoption of KM practices and high performance, while Liao and Chuang, (2006) inferred that there is a positive relationship between KM resources and KM process capabilities which, in turn, positively influence a firm's performance. Accordingly, Kridan and Goulding, (2006) also discovered the significant role of KM in enhancing organisations' performance. Based on the above discussion, the role of KM as a mediator seemed to be very influential to determine the performance of firms reflected by the adoption of ERM. Thus, the author proposes that:

H4: Internal factor for ERM driver is positively correlated with Knowledge Management.

H5: Size and types of institution for ERM driver is positively correlated with Knowledge Management.

H6: External factor for ERM driver is positively correlated with Knowledge Management.

Figure 1 illustrated the relationships of the hypotheses H4, H5 and H6 and those between the ERM drivers and the impact of ERM on performance with KM as a mediator.

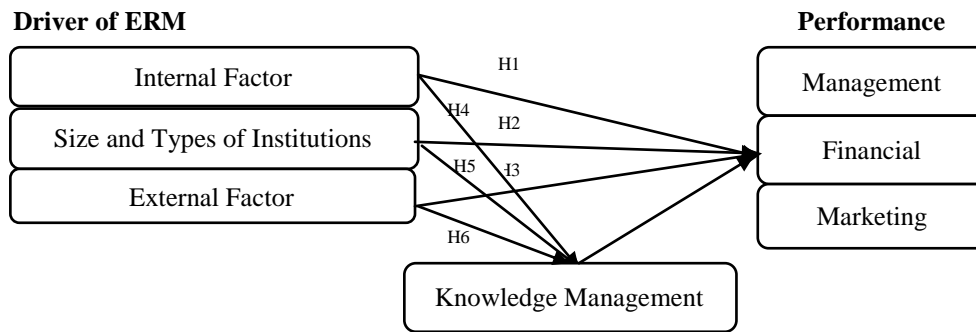


Figure 1: A proposed conceptual framework between drivers of ERM and impact ERM on performance with mediator

With reference to reviews from previous studies, a proposed conceptual framework is presented by the author to study the relationship between the drivers of ERM adoption and the impact of ERM on performance plus the mediator factor which was KM, as shown in Figure 1.

Research methodology

Table 1 illustrated the category of PHEIs in Malaysia. The population of PHEIs in Malaysia could be categorised to four including private universities, university colleges, foreign universities campuses and colleges. It also showed the population size based on their category. The majority of PHEIs was from colleges with 406 respondents, while the private universities with 61 respondents, university colleges with 34 respondents, followed by foreign universities campuses with 9 respondents.

Table 1. Category and population size

Population		Category	
Private Higher Education Institutions in Malaysia		Private University	61
		University Colleges	34
		Foreign Universities Campuses	9
		Colleges	406
		Total	510

Sampling is crucial in determining sufficient respondents from the total number of target population in order to warrant generalisation of the population (Field, 2009). It is suggested that a sample size is at least 150 and not exceeding 500, which is adequate for SEM (Hair, 2010). Consistent with the above suggestions, the minimum respondents targeted in this study was set at 217 for SEM.

According to Saunders *et al.*, (2009) a generalisation about the population was directly related to sample size. Sampling was “the procedure through which we

pick out from a set of units that make up the object of the study (the population), a limited number of cases (sample) chosen according to criteria that enabled the results obtained by studying the sample to be extrapolated to the whole population” (Piergiogio, 2003).

In determining the best number of respondents that should be involved in this study, the accurate number of PHEIs was accumulated. Based on the minimum sample size required, Table 3.5 below illustrated the population of this study which consisted of 510 respondents with the minimum required sample size at 217 (5% error).

To assess the relationship between the drivers to ERM adoption, the effects of KM towards ERM and its impact on performance, the process of data analysis begins after the data had been collected. To conduct preliminary data analysis inclusive of frequencies, means, standard deviations and, in general, preliminary information about the sample descriptive statistics, SPSS version 22.0 was used. This information will provide a big picture about the collected data and representativeness of the sample. In the next phase, Partial Least Square-Structural Equation Modelling (PLS-SEM) will be used to examine the research model presented in the second chapter. Moreover, PLS does not demand for normality of the data distribution and also does not require any particular minimum sample size (Hair *et al.*, 2014).

Based on the sampling, 217 respondents were selected. After the data were obtained through questionnaires answered by the respondents, the data would be keyed-in into the software for analysis. For this study, the data were analysed using frequency analysis, reliability analysis, means analysis, correlation coefficient analysis and regression analysis. Results obtained from these tests were utilised to identify the relationship between drivers to ERM adoption, the effect of KM towards ERM and the impact of ERM on performance.

Prior to the final survey, a pilot study was conducted. A total of 30 surveys were distributed to officers of the randomly selected institutions. Out of 30 surveys, 27 were returned, equivalent to a 90 per cent response rate.

Result discussion

The first element investigated was the respondents’ general background which included gender, age, ethnic group, qualification, position, years with the institution, years the institution was established, ownership, knowledge of ERM, source of ERM knowledge and level of ERM adoption. Based on the results, 114 respondents (55.3 per cent) were male and 92 respondents (44.7 per cent) were female. The majority of them were aged between 41 – 50 years old. Most of them were from the Malay ethnicity (75.7 per cent) and held Masters Degree (61.7 per cent).

In terms of position, the majority (62.1 per cent) of them were from the other categories such as Deputy Director, Registrar, Academic Director, Dean, Deputy

Vice Chancellor, Head of Department, Executive and Senior Manager. These positions were obtained from a question where the respondents wrote in the space provided. Meanwhile, 45.6 per cent served the institution between one to five years. From all the institutions which participated in this study, most of them (58.7 per cent) had been established for more than 16 years. In terms of ownership, 68.9 per cent belong to Bumiputeras. With regards to the ERM questions, most of them (59.7 per cent) had knowledge of a particular item, gained the knowledge from reading (72.3 per cent) and basically, most of the institutions were partially practicing ERM (33.5 per cent).

The researcher employed the PLS-SEM analysis technique using the SmartPLS 3.2.1 software (Ringle *et al.*, 2015) to analyse the research model. Following Anderson and Gerbing, (1988)'s recommended two-stage analytical procedure, the researcher tested the measurement model (validity and reliability of the measures) and examined the structural model (testing the hypothesised relationships). A bootstrapping method was used to test the significance of the path coefficients and the loadings (Hair *et al.*, 2014). In summary, the researcher overviewed the summary for the whole findings with regard to the hypotheses as stated in the previous section. Table 2 presented the findings based on the structural model (H1 – H3) and Table 3 presented the bootstrapping for mediation (H4 – H6), using PLS-SEM algorithm in SmartPLS3.2.1 software.

Table 2. Results of the structural model analysis (hypotheses testing)

	Relationship	Std Beta	Std Error	t-value	f ²	Q ² >0	Decision
H1	Internal Factor -> Impact of ERM on Performance	0.310	0.060	5.135**	0.104	0.367	Supported
H2	Size and Type of Institution -> Impact of ERM on Performance	0.420	0.057	7.416**	0.204	0.330	Supported
H3	External Factor -> Impact of ERM on Performance	0.062	0.070	0.886	0.005	0.382	Not Supported

* 1.645 - 2.32

** 2.33 and above

**p<0.01

Table 3. Summary test of mediation by bootstrapping approach

	Effect of	Direct effect	Indirect effect	Total effect	VAF (%)	Mediation	Conclusion
H4	Internal factor	0.039	0.039	0.078	50%	Partial	H4

	→ knowledge management → impact of ERM on performance							Supported
H5	Size and type of Institution → knowledge management → impact of ERM on performance	-0.016	-0.016	-0.032	50%	Partial		H5 Not Supported
H6	External factor → knowledge management → impact of ERM on performance	-0.005	-0.005	-0.01	50%	Partial		H6 Not Supported

The research partially supported the three hypotheses of ERM that would be decided for adoption in the institutions. Findings in this area included adopting ERM to improve performance in areas such as management, finance and marketing. Obviously, the research indicated that both internal factor and size and type of institutions would impact ERM on these performances. These were in line with the research by previous researchers (Manab *et al.*, 2010; Paape and Spekle, 2011; Beasley *et al.*, 2005; Beasley *et al.*, 2007; Hoyt and Liebenberg, 2008; Hoyt, 2011; Liebenberg and Hoyt, 2003). However, the relationship between the external factor and the impact of ERM on performance was negative and it also conflicted with other previous researchers such as Simkins and Ramirez, (2008) and Beasley *et al.*, (2005).

KM was identified as a mediator in relations between the internal factor and the impact of ERM on performance. These findings also supported the research by Rodriguez and Edwards, (2009) who stated that the KM processes among financial firms would be related to ERM implementation. In conclusion, ERM is believed to improve the performance of the institutions and the adoption of ERM must get cooperation from all members within the organisations.

Conclusion

This research investigated the relationship between drivers of ERM adoption with its performance within Private Higher Education Institutions (PHEIs) throughout Malaysia. It also looks at the effect of mediator (Knowledge Management-KM) to those relationships. This research contributes to knowledge enhancement in the Enterprise Risk Management (ERM). First, this research extended the research in the area of educational institutions, particularly in a developing country like

Malaysia. Some authors have pointed out the need for more empirical research to get more evidence of ERM performance (Daud *et al.*, 2010; Razali *et al.*, 2011; Soltanizadeh *et al.*, 2014) because research on the issue of ERM in developing countries, especially in Malaysia is scarce. Second, this study has developed a conceptual framework to assess not only the impact of ERM adoption towards performance, but also the impact of knowledge management as mediator and performance. There is increasing recognition of the importance of ERM adoption. Previous works had limitedly examined the mediating effect of KM, thus providing a theoretical gap.

The findings motivate Board of Directors (BODs) to invest in time and resources, such as financial resource and training in ERM adoption. The needs of effective ERM strategy are important in order to survive and compete in the global market. The research findings lead to a better understanding on the importance of ERM in improving firm performance. The effective ERM implementation will generate better performance, reduce uncertainty, decrease the cost of failure such as lost or closed up the operation.

A number of limitations were found when interpreting the results presented and conclusions drawn from this research. First, this research was based on cross-sectional data, which used samples at one specific point in time. Another limitation is that the scope of this research only focused on the relationship between drivers of ERM, KM and performance in PHEIs in Malaysia. It may include other techniques and other mediators and moderators that should thus be examined. There may be other critical factors that influence the higher educational institutions to be included and considered in ERM and performance.

Completion of this research work reveals that much work is required to further research the relationship between ERM and performance in educational institutions. This research suggest for future researchers to conduct longitudinal studies based on long-term observations or interviews regarding ERM and performance after a period of time to determine the consistency of ERM impact.

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**ZARZĄDZANIE RYZYKIEM PRZEDSIĘBIORSTWA:
WPŁYW NA DZIAŁALNOŚĆ PRYWATNYCH INSTYTUCJI
WYŻSZEGO KSZTAŁCENIA W MALEZJI**

Streszczenie: Zarządzanie ryzykiem nie jest czymś nowym. Można go prześledzić jako ważny proces decyzyjny w firmach późnych lat czterdziestych i wczesnych pięćdziesiątych XX wieku. Podejście „silosowe” lub „od dołu do góry” było praktykowane w tradycyjnym zarządzaniu ryzykiem, w którym ryzyko jest zwykle zarządzane indywidualnie, bez akceptowania wzajemnych powiązań każdego ryzyka. Jednak Enterprise Risk Management (ERM) został wprowadzony jako nowa metoda nadzorowana przez zarząd, która ma na celu identyfikację, ocenę i zarządzanie ryzykiem korporacyjnym w zintegrowanej strukturze. W szczególności w Malezji kilka prywatnych instytucji szkolnictwa wyższego (PHEI) miało kłopoty z wielu przyczyn, takich jak zarządzanie, finanse i marketing. W odniesieniu do tej głównej idei i aktualnych zagadnień dotyczących PHEI celem niniejszego badania jest opracowanie ram koncepcyjnych kierowców ERM i ich wpływu na działanie malezyjskich PHEI. Stosując techniki losowania prawdopodobieństwa, a mianowicie proste losowanie, kwestionariusze zostały rozesłane do 510 respondentów z najwyższych stanowisk kierowniczych. Jednak dokładna wymagana wielkość próby wynosiła 217. Zmienne niezależne zidentyfikowano jako czynnik wewnętrzny, wielkość i rodzaje instytucji oraz czynnik zewnętrzny. Zmienną zależną były wyniki w danej instytucji, na które składały się trzy elementy (np. : zarządzanie, finanse i marketing). Na mediatora w tym badaniu wybrano zarządzanie wiedzą. Dane analizowano za pomocą narzędzia statystycznego SPSS i SmartPLS 3.0. Wyniki wskazały, że zarówno czynnik wewnętrzny, jak i wielkość i rodzaje instytucji były powiązane z wynikami poszczególnych instytucji, a czynnik zewnętrzny wykazywał negatywny związek z wynikami. Stwierdzono również, że tylko czynnik wewnętrzny był zapośredniczony przez zarządzanie wiedzą w zakresie ich wyników. Na koniec zasugerowano, aby w przyszłych badaniach korzystać z wielu metod i wielu źródeł, aby uniknąć jakiegokolwiek możliwości typowego błędu metodycznego i ulepszyć wyniki do uogólnienia, co może zapobiec przeszacowaniu modelu strukturalnego. Rzeczywiście, obecnie ogólne badania nad ERM są dobrze ugruntowane, ale dla instytucji edukacyjnych są one jeszcze w powijakach.

Słowa kluczowe: motory ERM, Malezja, wyniki, niepubliczne uczelnie, zarządzanie ryzykiem w przedsiębiorstwie.

企业风险管理:对马来西亚民办高等教育机构绩效的影响

摘要:风险管理不是什么新鲜事物。它可以追溯到1940年代末和1950年代初的公司中有效的决策过程。在传统的风险管理中,通常采用“单独”或“烟囱式”的方法,即通常单独管理风险而不接受每个风险之间的相互关系。但是,企业风险管理(ERM)是作为一种新的,受董事会监督的方法而引入的,该方法旨在识别,评估和管理集成结构中的企业风险。具体而言,在马来西亚,由于管理,财务和市场营销等多种原因,一些私立高等教育机构(PHEI)遇到了麻烦。关于这一主要思想和有关PHEI的当前问题,本研究的目的是建立一个ERM驱动因素的概念框架及其对马来西亚PHEI绩效的影响。使用概率抽样技术(即简单随机抽样),将调查表分发给来自高层管理职位的510名受访者。但是,所需的确切样本数量为217。独立变量被确定为内部因素,机构的规模和类型以及外部因素。因变量是特定机构的绩效,它由三个要素(例如:管理,财务和营销)组成。这项研究选择了知识管理作为中介。使用SPSS统计工具和SmartPLS 3.0分析数据。结果表明,内部因素,机构的规模和类型都与特定机构的绩效有关,而外部因素则与绩效呈负相关。还发现,就知识绩效而言,知识管理仅介导内部因素。最后,建议将来的研究使用多种方法和多种来源,以避免任何可能的通用方法偏差并增强要概括的发现,这可以防止对结构模型的过高估计。的确,目前,关于ERM的一般研究已经建立起来,但是对于教育机构来说仍处于起步阶段。

关键词:企业风险管理的驱动力,马来西亚,绩效,私立高等教育机构,企业风险管理。