

RISK MANAGEMENT PRACTICES IN THE MALAYSIAN PUBLIC SECTOR

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Abstract

The public sector is not an exception when it comes to risks that can challenge its service delivery system and growth sustainability. While the notion of modern accountability demands demonstration of risk management initiatives, less attention was given to the variation in risk management (RM) practices due to the effect from different drivers and the impact of RM practices on accountability. Drawing from institutional theory and resource-based view, this study attempted to investigate the predictive effects of performance measurement system (PMS) and regulatory pressure on risk management practices. This study also attempted to investigate the effect of risk management practices on accountability. Cross-sectional survey was proposed to collect data from the top management of the Malaysian Federal Statutory Bodies. The data will be analysed using structural equation modelling techniques with the use of partial least squares approach. The findings of this study will provide valuable insights to the public sector authorities on ways to enhance public sector governance through new mechanism of accountability, RM practices.

Keywords: Risk Management; Performance Measurement System; Accountability

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Introduction

Organizations around the world are exposed to a range of risks every day varying from market and compliance risk to operational and reputational risk. Vulnerabilities of these organizations to uncertainties and intense competition from the effect of globalisation and market liberalisation (Azizan & Lai, 2013) has raised the awareness of managers of the potential benefits of risk management. In fact, RM practices could lead to better project management, effective use of resources and better service delivery (Collier et al., 2007). Many studies have considered risk management as component of the organization's management control system (MCS) (Beasley et al., 2005; Gordon et al., 2009; (Subramaniam

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et al., 2011). RM literature indicate that many studies have investigated the factors that affect the usage of RM. Most of the factors affecting RM dealt with accounting ratios, corporate governance structure and company characteristics which are suitable for private sector organizations. However, these studies have paid less attention to the variation in risk management (RM) practices due to the effects of different drivers. Moreover, the variances in the practice of RM in places (Arena et al., 2010; Mikes, 2011; Mikes, 2009) pose further challenges to the isomorphism perspectives of institutional theory. Therefore, this study investigates the effect of the two crucial drivers of RM practices, particularly regulatory pressure and performance measurement system (PMS).

While the notion of modern accountability in the public sector demands demonstration of risk management initiatives (Nyland and Petterson, 2015), continuous effort has been taken to mitigate the adverse effects of risk and to exploit arising opportunities. However, RM was found to be rationalized by either compliance or performance, ignoring accountability as one of the rationalities of risk management (Arena et al., 2010). Hence, this study also attempted to investigate the effect of risk management practices on accountability.

The effect of external pressure on the institutionalization of RM and the similarity of RM practices across diverse organizations can be explained better from institutional theory (Collier and Woods, 2011). In addition, both strategic information produced from PMS and the RM system are considered as resources (intangible assets) under the resource-based view (RBV), which could lead to superior performance and competitive advantage (Barney, 1991). Thus, this study is grounded in institutional theory and resource-based view.

Literature Review

Risk Management Practices

Risk management has gone through a tremendous evolution where it was initially linked to the use of market insurance to protect organizations against accidental losses (Dionne, 2013). The revolution in RM practices has culminated in the publication of Integrated RM Framework-Enterprise Risk Management (ERM) by the COSO in 2004, particularly to substantiate the inadequacies and failures of internal control systems (Hayne & Free, 2014). In the same year, the revised AS/NZS4360:2004 risk management standard was published and later became the ISO 31000:2009. Since COSO's ERM was subjected to various criticism (Fraser *et al.*, 2011; Power, 2009; Samad-Khan, 2005; Quinn, 2006), the present study applies the RM processes by MSISO 31000:2010. Furthermore, MSISO 31000:2010 provides principles and generic guidelines on integrated RM for managing any form of risk that can be applied in various contexts.

Referring to MS ISO 31000:2010, this study examines the three main processes of RM, which include risk identification, risk assessment and risk monitoring. The first dimension of RM practices used in this study is risk identification which is concerned with recognizing risk sources and their causes as well as future consequences (MS ISO 31000: 2010). The next process is risk assessment which include risk analysis and risk evaluation. Basically, risk analysis envisions risk and determines the organization's risk level (MS ISO 31000: 2010).

Risk analysis considers the causes and sources of risk as well as the likelihood of occurrence and the impact of risk on the achievement of objectives. The consequences and likelihood are combined to determine a level of risk. Last, monitoring and review of RM process involves continual observation of any variance from the target, regular checking and surveillance (MS ISO 31000, 2010). Monitoring processes encompass all aspects of RM to: (1) assure the effectiveness of RM control, (2) evaluate the effectiveness of risk assessment, (3) monitor changes in risk criteria, and (4) revise risk treatment or priorities (MS ISO 31000: 2010).

To conclude, the RM framework acts as raw guidelines to control risk from operational environments. However, the implicit interpretation of the RM framework can be observed from the practices in the organization. Therefore, it is crucial to gain knowledge of the factors that influence the RM practices for its effective execution in organizations and in producing information for risk-based decisions and control. The repeating trend of RM research with a technical focus by using secondary data (Mikes & Kaplan, 2014) followed by primary data has resulted in inconclusive findings. Therefore, the technical focus of risk management in the public sector context with different drivers and consequences are the main concern of the present research and will be explained in the following section.

Regulatory Pressure

Regulatory pressure is a vague concept but widely used (Gestel & Hertogh, 2006) with no general agreement on its definition. Most commonly regulatory pressure has been associated with too much government interference. Regulation as mechanism of regulatory pressure has been defined in a consensus manner in the literature (Ashworth et al., 2002; Coglianese, 2012; Hood & Scott, 1996). Regulation is referred to as effort of regulators to control or modify the behavior of the regulatees (Ashworth et al., 2002). In other words, authorities that have direct control over the operation of public agencies (Hood & Scott, 1996) enforce this regulation, however, they can be backed up by penalties in the case of non-compliance (Coglianese, 2012).

External pressure is being exerted (coercive isomorphism) on public organizations to reduce certain problems and the extent of compliance is evaluated through accountability mechanisms. Although empirical evidence associating regulatory pressure with accountability is limited, past studies have indicated central government regulations or regulatory pressure to be predictive of accountability (Aucoin & Heintzman, 2000; May, 2007). Extending Wood's (2009) work, the present study intends to provide better understanding of the Institutional Theory by testing the influence of regulatory pressure on RM practices. Woods (2009) referred to central government policies to centralize performance management, promote knowledge sharing by government and statutory duties. However, the present study defines regulatory pressure as the pressure exerted on FSBs in the form of regulations issued by the central government, regulatory bodies, other stakeholders and professional bodies to enhance public sector governance and accountability.

There are several reasons for choosing regulatory pressure: first, changes in government policies and regulations could lead to major changes in the control system, which can incur high cost and wastage of resources if not considered wisely. Second, government reform

initiatives and projects involve large amounts of investment and pose new challenges to hybridized control and accountability of FSBs (Nyland & Petterson, 2015). Third, many regulations and RM related frameworks have been published globally which have been interpreted differently by organizations (COSO, 2004). Therefore, this study attempts to investigate the effect of regulatory pressure on RM practices in the Malaysian federal statutory bodies.

Performance Measurement System

Among the internal factors that drive RM practices in the public sector is PMS, also known as the use of key performance indicators (KPI) (Loosemore, 2006; Woods, 2008). PMS refers to goal setting (identify and develop metric set) and interpreting collected data to assess the effectiveness and efficiency of action (Melnyk et al., 2014; Neely et al., 1995). Several studies have demonstrated PMS as an important tool for discharging accountability in the public sector (Abdali et al., 2013; Bakar et al., 2011; Bolton, 2003; Cunningham & Harris, 2005; Kloot, 2009; Saliterer & Korac, 2013; Tan, 2014). Although PMS such as the balanced scorecard and internal control framework by COSO were both introduced in 1992, the notion to assess the relationship between strategies and ERM were discovered by COSO's ERM framework in 2004.

Since then, there were calls from academics to investigate PMS and risk management from strategic management lenses (Arena & Arnaboldi, 2014; Azizan & Lai, 2013; Ballou et al., 2006; Beasley et al., 2006; Calandro & Lane, 2006; Rasid et al., 2012; McWhother et al., 2006). In fact, several field-based studies investigated the variance in ERM practices (Mikes, 2011; Mikes, 2009; Woods, 2008), for instance, Woods (2008) demonstrated how risk control and strategic control can be used to achieve a common objective in Tesco, United Kingdom. On the other hand, Mikes (2009; 2011) observed that in practice, quantitative enthusiast (calculative culture) top managers used risk-based management by focusing on risk management and strategic planning. Despite Woods' (2008) notion to perform further research on the interplay between strategic control (PMS) and risk management, to-date there is a dearth of studies examining PMS use as driver for RM practices.

The rationale for choosing PMS as a driver of RM practices is due to the fact that it is a crucial element related to RM practices (Loosemore et al., 2006). Organization's objectives are measured by defining PMS or KPI associated with each objective and help management to focus on what they are trying to control. PMS use for various purposes provide crucial information for RM practices initiatives particularly in identifying cause of risk and ensure visibility of results and control through organizational accountability. PMS provide strategic information which can be considered as resources under resource-based view, leading to competitive advantage. In fact, performance measures allow managers to identify risk and opportunities associated with an objective or decision (Loosemore et al., 2006). Therefore, this study attempts to investigate the effect of PMS on RM practices in the Malaysian federal statutory bodies.

Accountability

Accountability has various meanings. Basically, accountability refers to the need to give reasons for certain actions (Parker & Gould, 1999) to those who deserve clarification. Previous studies have demonstrated that accountability is the delegation of power from stakeholders (principal) to managers (agents) and their relationship (Broadbent *et al.*, 1996; Sinclair, 1995; Gray & Jenkins, 1993). Traditional accountability begins with Stewart's (1984) ladder of accountability which varies from probity and legal accountability to programme, performance, process and policy accountability. Subsequently, Sinclair (1995) revealed five distinct dimensions of accountability including managerial, public, fiduciary, political, and personal accountability.

Existing accountability literature indicates that PMS is a factor that affects public sector accountability (Abdali *et al.*, 2013; Bolton, 2003; Halachmi, 2002a; Hoque, 2008; Kloot, 2009; Saliterer & Korac, 2013). Studies that examined the impact of RM practices on organizational accountability, are next to none. Nonetheless, the idea of modern accountability in the public sector, known as result-based, demand some demonstration of risk management initiatives (Nyland & Petterson, 2015; Spira & Page, 2003). Furthermore, mission based management practices are required to demonstrate high level of accountability (Said *et al.*, 2014). There was even call for more frontier research in governance and accountability, to consider RM as mechanism for accountability (Brennan & Solomon, 2008). Consistent with the empirical and theoretical support, it is proposed that RM practices may be one of the proximal variables to predict accountability. Therefore, the present study attempts to fill the gap in the previous studies by examining the impact of the RM practices on accountability and to explain this relationship from the resource-based view (Andersen, 2008; Wang *et al.*, 2003).

Hypotheses Development

The conceptual framework of this study theorized the relationship between PMS (resource of RBV) and RM practices (resource of RBV) from the perspective of resource-based view (RBV). Based on institutional theory, the conceptual framework theorized the relationship between regulatory pressure and RM practices in the public sector environment. The conceptual framework also theorized the relationship between RM practices and accountability using RBV. The existing theoretical link between PMS, regulatory pressure and accountability is further developed by investigating under what circumstances PMS and regulatory pressure would be predictive of accountability. Overall, the conceptual framework of this study predicts the relationship among exogenous variables, PMS and regulatory pressure, endogenous variable, accountability and mediating variable, RM practices.

Relationship between Regulatory Pressure and RM Practices

Within the RM literature, compliance to rules and regulations are identified as important determinant of risk management control (Kleffner *et al.*, 2003; Paape and Speklé 2012). Previous studies have also shown the prominence of central government policies and regulations as drivers of RM system (Woods, 2009; Collier and Woods, 2011; Hudin and

Hamid, 2014). In fact, the adoption of ERM in different industries are determined by, among others, regulatory scrutiny. For instance, financial institutions have been leaders in the adoption of ERM as a result of global regulatory pressures on capital requirements (e.g. Bank for International Settlements-Basel II). This is followed by the education and insurance industry which are open to greater regulatory scrutiny (Beasley et al. 2005). This study uses institutional theory to predict that the regulatory pressure from the central government, regulatory bodies, professional bodies and other stakeholders that provide regulation (coercive isomorphism) will encourage RM practices adoption in the public sector for legitimization. However, poor enforcement of regulations and resistance by public agencies may hinder the effective implementation of RM system. Based on the above argument, it is proposed that there is a relationship between regulatory pressure and RM practices.

Hypothesis 1: There is a positive relationship between regulatory pressure and risk identification within the organization.

Relationship between PMS and RM Practices

Earlier, Henri (2006a), put forward a resource-based framework to leverage PMS use (diagnostic and interactive use) through capabilities of strategic choices to generate superior performance. Following Henri (2006a), the present study proposed that through investment in RBV resource (risk management), the RM activities are organized according to the influence from PMS information which is based on organizational objectives. This will subsequently promote accountability in terms of risk-based decision and control. PMS is used to define targets, measure results and support decisions based on results whereas RM practices focus on events that determine a variation from achievement of objectives especially events that cause variation (COSO, 2004). Hence, the use of PMS to accomplish organizational strategic objectives would further trigger the need for RM practices to determine events that could cause variation from target. Therefore, it is predicted that organizations which use PMS will implement RM practices. The use of PMS to a higher extent would lead to more frequent execution of RM processes.

Hypothesis 2: There is a positive relationship between PMS and risk management practices within the organization.

Relationship between RM Practices and Accountability

Previous study has found mission based management practices as factors that influence accountability in non-profit organizations (Said *et al.*, 2014). As risk management practices are associated with organizational mission accomplishment, it can be classified as mission based management. Moreover, Halachmi (2003) recommended to connect accountability and risk management in a RM system design. Although there is lack of empirical evidence on the effect of RM practices on organizational accountability, risk management as a control mechanism has the potential to promote public sector accountability. The resource-based view supports this notion where organizations could employ different strategies to outperform each other and achieve competitive advantage using different resources. To relate with the present study, risk management system as resource of RBV, based on the information from PMS, produces FSBs risk position information to improve accountability. Hence, organization with RM practices and the growing public sector reputation (resource of RBV) could lead the Federal Statutory Bodies (FSBs) to gain competitive advantage.

Therefore, by sustaining these resources FSBs could attract future investment (Wang *et al.*, 2003). This argument led to the prediction that RM practices will promote accountability in terms of risk-based control and decision.

Hypothesis 3: Risk management practices are positively related with accountability.

The Mediating Effect of RM Practices on Accountability

The positive relationship between PMS and accountability was demonstrated in many studies. In fact, PMS is inseparable from risk management (Arena *et al.*, 2010; Arena & Arnaboldi, 2014; Beasley *et al.*, 2006; Beasley *et al.*, 2010b; McWhother *et al.*, 2006; Mikes, 2009; Rasid *et al.*, 2012; Söderholm & Norrbin, 2013; Woods, 2008). Furthermore, there were notions which suggest the potential relation between risk management public sector accountability (Heilig *et al.*, 2012; Halachmi, 2003). There was even calls to enhance risk disclosure in the UK companies, to aid stakeholder to have more knowledge of companies risk profile (Linsley & Lawrence, 2007). Considering the positive relation between PMS on RM practices (Loosemore *et al.*, 2006; Chapman, 2006), it is presumed that systematically practiced RM would promote accountability.

Regulatory pressure from the central government influences the development of structures in an organization (institutionalization of RM) (DiMaggio & Powell, 1983) which is needed to gain legitimacy (Brignal and Modell, 2000). Considering regulatory pressure as one of the factors investigated in this study, the relationship between regulatory pressure and RM practices has been explored in earlier studies. For example, central government policy and regulations are the major driver of risk management in various sectors (Collier and Woods, 2011; Hudin and Hamid, 2014; Kleffner *et al.*, 2003; Paape and Speklé 2012; Woods, 2009). Organization's control system and its components have been proven to as act mediator on organizational performance (Chenhall, 2003). However, the literature insufficiently addressed the mediating role of RM practices, except for Roslan & Dahan (2013a; 2013b). Since it is hypothesized PMS and regulatory pressure are related to RM practices and RM practices are related to accountability, it can be hypothesized that the RM practices play a mediating role in the relationship between PMS use and accountability as well as the relationship between regulatory pressure and accountability.

Hypothesis 4: RM practices mediate the relationship between PMS and accountability.

Hypothesis 5: RM practices mediate the relationship between regulatory pressure and accountability.

Methodology

This study aimed to investigate the predictive effects of PMS and regulatory pressure on RM practices and the impact of RM practices on accountability. This study uses quantitative research design (survey) to examine the specified constructs as experienced and perceived by the top management in the actual work place settings. As this study focuses on the firm characteristics such as regulatory pressure, PMS, RM practices and organizational level accountability, the most appropriate unit of analysis is the organization. The cross-sectional survey is employed to gather responses once in the research period from the participants who are dealing with risk management and strategic management (Sekaran, 2003). Since RM

practices in the Federal Statutory Bodies of Malaysia are the focus of this study, the samples should have adopted RM. The data of this study will be collected through self-administered questionnaires. The targeted respondents of the study are chosen from the Federal Statutory Bodies (FSBs) that have complete organization structure with more than 100 employees. This criteria ensures that a formal performance measurement system (Henri, 2006b) and risk management are being practiced by the participating organization. The key informants of this study include Chief Risk Officers, Management Accountants, Strategic Planning Managers and Internal Auditors. This resulted in a population of five hundred and twelve, consisting of FSBs and their main branch offices. Further review revealed that only 217 of them have adopted and practiced risk management.

Table 1. Construct Indicators

Construct	Items	Description
PMS	PMS_1	To track progress towards goals.
	PMS_2	To review key performance measures.
	PMS_3	To compare outcomes to expectations.
	PMS_4	To monitor results.
	PMS_5	To focus on your critical success factors.
	PMS_6	To enable discussion in meetings.
	PMS_7	To debate underlying results, assumptions and action plans.
Regulatory Pressure	Reg_1	Central government policy
	Reg_2	Regulatory bodies
	Reg_3	Expectation from other stakeholders that provide regulation or guideline
	Reg_4	Professional bodies (standard setters)
Risk Management Practices	Risk_1	Systematic identification of risks.
	Risk_2	Changes in risk are recognized with roles.
	Risk_3	Procedures for identification of risk and opportunities.
	Risk_4	Assesses the likelihood of risk.
	Risk_5	Assesses risk using qualitative analysis methods.
	Risk_6	Analyses and evaluates opportunities.
	Risk_7	Assesses the cost and benefits of addressing risk.
	Risk_8	Monitors the effectiveness of RM.
	Risk_9	Level of control of risk is appropriate.
	Risk_10	Reporting processes support RM.
Accountability	Acco_1	Evaluates the efficiency and effectiveness of its service.
	Acco_2	Responses to complaints.
	Acco_3	Revises mission and goals frequently.
	Acco_4	Written conflict-of-interest policy.

The instruments for RM practices, PMS, regulatory pressure and accountability as illustrated in Table 1, were previously used by Collier et al. (2007), Geer et al. (2008), Henri, (2006b) and Al-Tamimi & Al-Mazrooei (2007). In fact, the original scales of the questionnaire were revised to suit the need of the present study and to reduce method bias due to same scale format (Podskoff, 2003). The variables that are being measured in this study include PMS, regulatory pressure RM practices and accountability. Accordingly, the final version of the questionnaire consisted of indicators related to the four variables aimed to gather data regarding the (a) extent of PMS used by the top management in the organization, (b) the extent of regulatory pressure on organizational practices, (c) the emphasis placed on RM practices in the organization and (d) the emphasis placed on accountability in the organization. Consequently, the goodness of measures was checked by assessing its reliability and validity. To assess reliability of measures, the questionnaire items were used to run a pilot test among thirty respondents. The internal consistency test of constructs from the pilot test revealed Cronbach's alpha values ranging between 0.877 and 0.900 (Nunnally, 1978). Therefore, all the measures are reliable and these questions were confirmed to be valid for further data collection.

Conclusion

This study provides several contributions to the body of knowledge, particularly in conceptual terms for researchers in management control system and risk management as well as practical implication to the management of Federal Statutory Bodies. First, rather than investigating the adoption of RM, this study provides insights and understanding of the different processes of RM. Second, this study provides useful insights on which RM processes can contribute in improving organizational accountability by investigating the relationship between these RM processes and accountability. In fact, this is the first study to examine the effect of RM practices on accountability consequence. Third, this study contribute to the body of knowledge with regard to the new drivers that affect the different processes of RM to include PMS and regulatory pressure. This study also provides understanding of the relationship between regulatory pressure and the different processes of RM in a way not previously addressed in the existing literature. The findings of the study are important because with the appropriate use of PMS, RM practices and regulatory pressure can contribute to better accountability and this study contributes significantly to the literature on the mediating role of RM practices. With combination of variables of institutional theories (regulatory pressure) and variables of resource-based view (RM system, strategic information-PMS use), this study introduces a new framework into risk management, MCS and accountability literature. This study provides the public sector employers with new ways to improve accountability in their organization.

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