

THE ROLE OF REGULATORY PRESSURE, PERFORMANCE
MEASUREMENT AND RISK MANAGEMENT IN ENHANCING
ACCOUNTABILITY IN MALAYSIAN PUBLIC SECTOR

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DEDICATION

To my beloved husband,
Hassan Husin

To my loving son,
Hafidz Hassan

To my dearest parents,
Abu Bakar Ali and Kamariah Ido

To my loving siblings,
Alimah, Mohd Ali, Mohd Ilham, Mohd Isham and Noor Liza

Thanks for your encouragement and prayers
I love you all dearly

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ABSTRACT

The public sector is not an exception when it comes to risks, and the notion of modern accountability demands demonstration of risk management (RM) initiatives. However, the increasing trend of irregularities, non-compliance with regulation and mismanagement of government assets are deteriorating public sector accountability. This scenario has placed existing mechanisms of accountability under challenge as they have eroded public trust and confidence. There are scarce empirical studies on the effect of RM practices on accountability and the drivers of RM practices, in particular regulatory pressure and performance measurement system (PMS) use. To investigate the role of RM practices in enhancing public sector accountability, this study drew upon institutional theory and resource-based view to examine the relationships of regulatory pressure and RM practices, PMS use and RM practices, RM practices and accountability, mediating effect of RM practices in the relationship between regulatory pressure and accountability, and mediating effect of RM practices in the relationship between PMS use and accountability. Survey questionnaires were distributed to 217 Chief Risk Officers, top management and branch managers from the Malaysian Federal Statutory Bodies and their main branch offices. 110 usable responses were analyzed using partial least squares structural equation modeling (PLS-SEM) techniques. The results of the study demonstrated that regulatory pressure and all the dimensions of PMS use except for legitimization have significant positive effects on different dimensions of RM practices. In testing the relationship between RM practices and accountability, it indicated that only risk identification has a significant positive effect on accountability. Furthermore, although risk identification did not mediate the relationship between regulatory pressure and accountability, it mediated the relationship between PMS use for monitoring and accountability as well as the relationship between PMS use for attention-focusing and accountability. These findings have provided knowledge and guidance to public sector managers on the implementation of effective RM to enhance accountability and develop a comprehensive RM policy leading to competitive advantage and sustainable growth.

ABSTRAK

Sektor awam tidak terkecuali dari berhadapan dengan risiko, dan idea akauntabiliti moden menuntut demonstrasi inisiatif pengurusan risiko. Walau bagaimanapun, peningkatan trend penyelewangan, ketidakpatuhan kepada peraturan dan salah guna aset kerajaan telah menjadi punca kepada kemerosotan akauntabiliti di sektor awam. Senario ini mencabar mekanisma akauntabiliti yang mana kepercayaan dan keyakinan orang awam semakin terhakis. Kajian empirikal tentang kesan amalan pengurusan risiko ke atas akauntabiliti dan kesan faktor penggerak seperti tekanan regulatori dan penggunaan sistem pengukuran prestasi ke atas amalan pengurusan adalah terhad. Bagi menyelidik peranan amalan pengurusan risiko dalam meningkatkan akauntabiliti sektor awam, kajian ini berlandaskan teori institusi dan perspektif berasaskan sumber untuk mengkaji perhubungan tekanan regulatori dan amalan pengurusan risiko, penggunaan sistem pengukuran prestasi dan amalan pengurusan risiko, amalan pengurusan risiko dan akauntabiliti, kesan pengantara amalan pengurusan risiko dalam hubungan antara tekanan regulatori dan kesan pengantara amalan pengurusan risiko dalam hubungan antara penggunaan sistem pengukuran prestasi dan akauntabiliti. Soal selidik telah diedarkan kepada 217 Pengurus Risiko, pengurusan atasan dan pengurus cawangan daripada Badan-Badan Berkanun Persekutuan di Malaysia dan pejabat cawangan utama. 110 maklum balas telah dianalisis menggunakan teknik pemodelan persamaan struktur (PLS-SEM). Keputusan kajian menunjukkan bahawa tekanan regulatori dan semua dimensi penggunaan sistem pengukuran prestasi kecuali pengesahan mempunyai kesan positif yang signifikan ke atas pelbagai dimensi amalan pengurusan risiko. Bagi ujian hubungan antara amalan pengurusan risiko dan akauntabiliti, menunjukkan hanya dimensi pengenalpastian risiko mempunyai kesan positif yang signifikan ke atas akauntabiliti. Tambahan lagi, walaupun pengenalpastian risiko tidak menjadi pengantara pada perhubungan antara tekanan regulatori dan akauntabiliti, ia menjadi pengantara pada hubungan antara penggunaan sistem pengukuran prestasi bagi dimensi pemantauan dan akauntabiliti dan juga pada hubungan antara penggunaan sistem pengukuran prestasi bagi dimensi memfokus perhatian dan akauntabiliti. Dapatan ini memberikan pengetahuan dan panduan kepada pengurus di sektor awam mengenai kaedah melaksana pengurusan risiko yang berkesan bagi meningkatkan akauntabiliti dan menggubal satu polisi pengurusan risiko yang komprehensif menjurus ke arah kelebihan berdaya saing dan pertumbuhan yang mampan.

TABLE OF CONTENTS

CHAPTER	TITLE	PAGE
	DECLARATION	ii
	DEDICATION	iii
	AKCNOWLEDGEMENT	iv
	ABSTRACT	v
	ABSTRAK	vi
	TABLE OF CONTENTS	vii
	LIST OF TABLES	xiv
	LIST OF FIGURES	xvi
	LIST OF ABBREVIATIONS	xvii
	LIST OF APPENDICES	xix
1	INTRODUCTION	1
	1.1 Chapter Overview	1
	1.2 Background of the Study	2
	1.21 Malaysian Federal Statutory Bodies	6
	1.3 Problem Statement	10
	1.4 Research Questions	14
	1.5 Research Objectives	14
	1.6 Research Significance	15
	1.6.1 Theoretical	16
	1.6.2 Empirical	17
	1.7 Scope of the Study	18
	1.8 Operational Definitions	19

	1.8.1 Risk Management Practices	19
	1.8.2 Accountability	19
	1.8.3 Regulatory Pressure	20
	1.8.4 PMS Use	20
	1.9 Structure of the Thesis	21
2	LITERATURE REVIEW	22
	2.1 Chapter Overview	22
	2.2 Management Control System	23
	2.2.1 MCS and Risk Management Practices	26
	2.3 Evolution of Risk Management	28
	2.4 Overview of Risk Management Practices	30
	2.4.1 Dimensions of RM Practices	35
	2.4.2 RM Literature in General	38
	2.4.3 Studies Related to RM Practices	39
	2.4.4 Magnitude of RM Adoption and its Determinants	40
	2.4.5 Consequences of RM Practices	46
	2.4.6 RM Practices in the Public Sector	52
	2.4.7 Summary of Previous Works on RM Practices	54
	2.5 Regulatory Pressure in the Public Sector	57
	2.5.1 Regulatory Pressure and RM Practices	61
	2.6 Overview of Performance Measurement System	68
	2.6.1 PMS Use	69
	2.6.2 Dimensions of PMS Use	72
	2.6.3 Consequences of PMS	74
	2.6.4 PMS and Accountability	76
	2.6.5 PMS and RM Practices	79
	2.7 An Overview of Accountability	80
	2.7.1 Previous Studies Related to Accountability	84
	2.7.2 Accountability in Malaysian Public Sector	91
	2.7.3 Accountability and RM Practices	92

2.8	Underpinning Theories	94
2.8.1	Institutional Theory	96
2.8.2	Resource-based View	99
2.9	Conceptual Framework and Hypotheses	
	Development	103
2.9.1	Relationship between Regulatory Pressure and RM Practices	106
2.9.2	Relationship between PMS Use and RM Practices	107
2.9.2.1	PMS Use for Monitoring and Risk Identification	108
2.9.2.2	PMS Use for Attention-Focusing and Risk Identification	109
2.9.2.3	PMS Use for Strategic Decision- Making and Risk Assessment & Risk Monitoring	110
2.9.2.4	PMS Use for Legitimization and Risk Monitoring	112
2.9.3	Relationship between RM Practices and Accountability	112
2.9.4	The Mediating Effects of RM Practices on the Relationship between Regulatory Pressure and Accountability	114
2.9.5	The Mediating Effects of RM Practices on the Relationship between PMS Use and Accountability	115
2.10	Research Hypotheses	116
2.11	Chapter Summary	119
3	RESEARCH METHODOLOGY	120
3.1	Chapter Overview	120
3.2	Preliminary Field Research	121
3.3	Research Philosophy	122

3.4	Research Design	123
3.4.1	Sampling and Procedure	126
3.4.2	Data Collection Procedure	128
3.4.3	Survey Instrument Development	129
3.5	Measures	130
3.5.1	Respondent's Demographic Profile Assessment	130
3.5.2	Measurement for Variables of the Study	131
3.6	Content Validity	133
3.6.1	Expert's Recommendation	133
3.6.2	Pre-test and Pilot Study	134
3.7	Reliability	135
3.7.1	Measurement Tool for Regulatory Pressure	136
3.7.2	Measurement Tool for PMS Use	137
3.7.3	Measurement Tool for RM Practices	138
3.7.4	Measurement Tool for Accountability	139
3.7.5	Summary of the Findings on Reliability	139
3.8	Questionnaire Administration and Response Rate	140
3.9	Data Analysis Techniques	141
3.9.1	Structural Equation Modeling	142
3.9.2	Partial Least Squares Path Modeling	144
3.9.3	Mediation Effects and PLS	146
3.10	Chapter Summary	147
4	ANALYSIS AND RESULTS	149
4.1	Chapter Overview	149
4.2	Analysis of Responses	150
4.2.1	Test of Non-Response Bias	150
4.2.2	Verifying Data Characteristics	152
4.2.3	Missing Values	152
4.2.4	Data Normality	153
4.2.5	Outliers	154
4.3	Descriptive Analysis of Respondent's Demographic	154

4.4	Descriptive Statistic of Constructs	157
4.5	Evaluation of Path Model using PLS-SEM	162
4.5.1	Reflective Measurement Model Assessment	163
4.5.2	Internal Consistency Reliability	164
4.5.3	Convergent Validity	164
4.5.4	Discriminant Validity	166
4.6	Evaluation of the Structural Model	171
4.6.1	Coefficient of Determination (R^2)	172
4.6.2	Effect Size f^2	173
4.6.3	Predictive Relevance (Q^2)	176
4.6.4	Structural Model Path Coefficients	177
4.6.5	Hypothesis Testing	180
4.7	Mediator Analysis	181
4.8	Split Sample Analysis	185
4.9	Chapter Summary	188
5	DISCUSSION AND CONCLUSION	190
5.1	Chapter Overview	190
5.2	Summary of Hypothesis Testing Results	190
5.3	Discussion of Findings	193
5.3.1	Research Objective 1- Regulatory Pressure and RM Practices	193
5.3.1.1	Hypothesis 1 - Regulatory Pressure and Risk Identification	194
5.3.1.2	Hypothesis 2 - Regulatory Pressure and Risk Assessment	195
5.3.1.3	Hypothesis 3 - Regulatory Pressure and Risk Monitoring	196
5.3.2	Research Objective 2 - PMS use and RM Practices	198
5.3.2.1	Hypothesis 4 - PMS Use for Monitoring and Risk Identification	198

5.3.2.2	Hypothesis 5 - PMS Use for Attention-Focusing and Risk Identification	200
5.3.2.3	Hypothesis 6 - PMS Use for Strategic Decision-Making and Risk Assessment	201
5.3.2.4	Hypothesis 7 - PMS Use for Strategic Decision-Making and Risk Monitoring	202
5.3.2.5	Hypothesis 8 - PMS Use for Legitimization and Risk Monitoring	203
5.3.3	Research Objective 3 - RM Practices and Accountability	204
5.3.3.1	Hypothesis 9 - Risk Identification and Accountability	204
5.3.3.2	Hypothesis 10 - Risk Assessment and Accountability	206
5.3.3.3	Hypothesis 11 - Risk Monitoring and Accountability	207
5.3.4	Research Objective 4 - Indirect Effect of Regulatory Pressure	209
5.3.4.1	Hypothesis 12 – The Mediating Effect of Risk Identification on the Relationship between Regulatory Pressure and Accountability	209
5.3.5	Research Objective 5- Indirect Effect of PMS use	211
5.3.5.1	Hypothesis 15 – The Mediating Effect of Risk Identification on the Relationship between PMS Use for Monitoring and Accountability	211

5.3.5.2	Hypothesis 16 – The Mediating Effect of Risk Identification on the Relationship between PMS Use for Attention-Focusing and Accountability	212
5.3.6	Conclusions Drawn From the Findings	214
5.4	Theoretical and Practical Implications	218
5.4.1	Theoretical Contribution	218
5.4.2	Practical Implication	220
5.5	Limitation of Study and Recommendation for Future Research	223
5.6	Concluding Remarks	224
	REFERENCES	226
	Appendices A-I	250-285

LIST OF TABLES

TABLE NO.	TITLE	PAGE
1.1	Audit findings of FSBs	9
2.1	Category of risk	31
2.2	Studies related to RM practices	40
2.3	Determinants of RM adoption	44
2.4	Consequences of RM practices	49
2.5	Previous studies on RM practices and regulation	65
2.6	Types of regulatory pressure	66
2.7	The nature of PMS uses	72
2.8	Accountability studies in the public sector	85
2.9	List of research hypotheses	118
3.1	Statutory bodies by ministries	127
3.2	Measurement and conceptual definition of constructs	132
3.3	Reliability of variables	137
3.4	Rate of response of previous studies in public sector	141
3.5	Guidelines for assessing reflective measurement model	145
4.1	Analysis of responses	150
4.2	Comparison of means	151
4.3	Respondent's demographic information	155
4.4	RM framework and government grant	156
4.5	RM framework and duration of establishment	156
4.6	Mean score and standard deviation for regulatory pressure	158
4.7	Mean score and standard deviation for PMS use	159
4.8	Mean score and standard deviation for RM practice	161

4.9	Mean score and standard deviation for accountability	162
4.10	Reflective measurement model	165
4.11	Inter-correlation matrix (Fornell-Larcker Criterion)	168
4.12	Cross loadings for reflective measurement model	169
4.13	Collinearity assessment (VIF)	171
4.14	Summary of results	175
4.15	Results of R ² and Q ² values	176
4.16	Structural estimates for hypotheses testing	178
4.17	Mediating effects of risk identification	182
4.18	Mediating effects of risk assessment and risk monitoring	183
4.19	Summary of hypothesis testing	184
4.20	Comparison of structural estimates between groups	187
4.21	Mediating effects in split sample data sets	188
5.1	Summary of research objectives, hypotheses and findings	192

LIST OF FIGURES

FIGURE NO.	TITLE	PAGE
2.1	Controlling business strategy: key variables to be analysed	24
2.2	RM process	34
2.3	Conceptual framework	105
2.4	Research hypotheses	117
3.1	Research process	125
4.1	Structural model with path coefficient and t-statistics values	179
5.1	Research hypotheses	191

LIST OF ABBREVIATIONS

AI	-	Accountability Index
AS/NZS	-	Australian and New Zealand Standard
BASEL	-	Basel Committee on Banking Supervision
BOD	-	Board of Director
CEO	-	Chief Executive Officer
COSO	-	Committee of Sponsoring Organizations of the Treadway Commission
CRO	-	Chief Risk Officer
ERM	-	Enterprise Risk Management
ERMIF	-	Enterprise Risk Management Integrated Framework
FSBs	-	Federal Statutory Bodies
i.e.	-	Id Est (That Is)
IFRS	-	International Financial Reporting Standard
ISO	-	International Organization for Standardization
KPI	-	Key Performance Indicator
KRI	-	Key Risk Indicator
MAS	-	Management Accounting System
MCS	-	Management Control System
NPL	-	Non-Performing Loan
PI	-	Performance Information
PLS	-	Partial Least Squares
NSW	-	New South Wales
PBU	-	Perceived Business Uncertainty
PMM	-	Performance Measurement and Management
PMS	-	Performance Measurement System
RBV	-	Resource-based view

RMI	-	Risk Management Index
ROI	-	Return on Investment
RM	-	Risk Management
RMS	-	Risk Management System
SEM	-	Structural Equation Modeling
SIRIM	-	Standards and Industrial Research Institute of Malaysia

LIST OF APPENDICES

APPENDIX	TITLE	PAGE
A	Questionnaire	250
B	Results of Mann-Whitney U test	268
C	Test of Normality (Shapiro-Wilk)	270
D	Test of Normality (Skewness & Kurtosis)	271
E	Univariate Outliers (Z-scores)	272
F	PLS Results	273
G	Standard Error Calculation (Indirect Path)	283
H	Structural Model for Complete RM Framework Data Set	284
I	Structural Model for Partial RM Framework Data Set	285

CHAPTER 1

INTRODUCTION

1.1 Chapter Overview

The Malaysian Federal Statutory Bodies (FSBs) are no exception when it comes to risks that can challenge its service delivery system, accountability and growth sustainability. To stay abreast with the competition in other sectors, there has been increasing initiatives to mitigate risk through the adoption of risk management. However, not much empirical discussion is found on the effect of RM practices on public sector accountability. Therefore, this thesis aims to investigate the role of RM practices in enhancing accountability particularly in the Malaysian FSBs. Furthermore, RM practices in the public sector is driven by regulatory pressure and performance measurement system (PMS) use. Hence, there is a need to study the different drivers of RM practices and the impact of different RM processes on organizational level accountability. The dimensions of PMS use are monitoring, attention-focusing, strategic decision-making and legitimization while the dimensions of RM practices include several incremental processes of identification, assessment and monitoring of risk. This study also measures the mediating effect of RM practices to clarify how RM practices affect accountability.

This chapter presents the introduction of the thesis that contains seven main sections. The first section presents the background of the study, which describes the importance of RM practices to enhance accountability in Malaysian FSBs. The second section presents the gaps in the literature forming the problem of the study and further explains the rationale of the study. The third section discusses the

research questions and objectives. The following section outlines the theoretical and empirical significance of the study. Subsequently, the scope of the study and the operational definition of the related constructs of the research encompassing RM practices, accountability, regulatory pressure and PMS use are discussed. Finally, the chapter ends with the explanation on the structure of thesis.

1.2 Background of the Study

FSBs are the operating arm of the Federal Government to implement all programs related to public sector reform initiatives. The alignment of the FSB's strategic mission with government's aspirations has led the FSBs to pursue new performance measures and more challenging targets. Hence, the FSBs have to comply with the related financial management and internal control regulations that emphasize better results and value-for-money in relation to reform initiatives. However, unexpected implications on public sector reform initiatives could erode control effort and have effect on accountability (Nyland and Petterson, 2015). Furthermore, the transformation of the public sector in terms of restructuring and operation through hybrid forms of organization such as public-private collaboration and private financing initiatives have exposed the public sector to greater risk which further challenges its control structure and accountability (Nyland and Petterson, 2015). Therefore, the risk management practices (RM) of the Malaysian FSBs need further validation.

Many studies have considered RM as component of the organization's management control system (MCS) (Bhimani, 2003; Beasley *et al.*, 2005; Gordon *et al.*, 2009; Subramanian *et al.*, 2011) and demonstrated their association from various aspects including its comparative definitions (Mikes, 2011), the levers of control of MCS (Simons, 1995; Widener, 2007; Mikes, 2009), through MCS's component, PMS (Widener, 2007; Simons, 2000) and from the perspectives of management accounting system (Rasid *et al.*, 2014; Rasid *et al.*, 2011; Rasid and Rahman, 2009; Bhimani, 2009; Collier *et al.*, 2007). Thus, it can be concluded that RM stems from MCS to further substantiate controls in the organization, to form better governance

practices and encourage a common focus towards achieving targeted goals. Risk management is a new idea (Arena *et al.*, 2010; Power, 2007; Power, 2013; Spira and Page, 2003) that is related to the accomplishment of organization's objectives (Woods, 2008).

RM involves the identification and mitigation of risk in accordance with organization's capacity and it is a crucial mechanism for strategic planning, control and decision making (Mikes, 2009). 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 globalization and market liberalization (Azizan and Lai, 2013) has raised the awareness of managers of the potential benefits of risk management. In addition, RM could lead to better project management, effective use of resources and better service delivery (Collier *et al.*, 2007). RM provides several other benefits to the public sector including the ability to prioritize resources, improve decision making, better stakeholder relations, increased ability to meet organizational goals and accountability, assurance and governance (Public Accounts Committee NSW, 2005).

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 Committee of Sponsoring Organizations of the Treadway Commission (COSO) in 2004, particularly to substantiate the inadequacies and failures of internal control systems (Hayne and Free, 2014). In the same year, the revised AS/NZS4360:2004 risk management standard was published and later became the ISO 31000:2009. ERM has transformed risk management from an external technical tool into a unified technique of managing risk organization-wide (Mikes, 2009; Power, 2007; Woods, 2009; Arena *et al.*, 2011) which is aligned with organizational objectives (Woods, 2008; Power, 2009). ERM's capability to improve organizational efficiency and value (Sobel and Reding, 2004; Beasley *et al.*, 2006; Lam, 2006) has been acclaimed as best practice template (Power, 2007).

Notably, the creation of specific risk functions to manage risks in fragmented manner will only burden organizations in terms of cost and time (Togok *et al.*, 2014). However, as 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 MS ISO 31000:2010. In fact, MS ISO 31000:2010 provides principles and generic guidelines on integrated RM for managing any form of risk that can be applied in various contexts.

Existing literature indicates that PMS is a factor that affects public sector accountability (Halachmi, 2002a; Kloot, 2009; Hoque, 2008; Bolton, 2003; Tan, 2014; Abdali *et al.*, 2013; Saliterer and Korac, 2013). However, the immaturity of risk management in most organizations is in relation to the lack of its alignment with corporate strategy and strategic planning. Since the goals of RM system and performance management system are identical (Collier and Berry, 2002; Ferreira and Otley, 2009; Ojiako, 2012), they could improve decision-making quality. Performance measurement systems guide organizational efforts towards objectives and determines attainment of key success factors through indicators and results of activities (Hoque, 2008). In fact, organizational objectives are input to RM identification process (Chapman, 2006) and PMS or Key Performance Indicator (KPI) could provide this information for managers to focus on what to control. Hence, PMS use for various purposes could influence RM in assuring the achievement of organizational objectives (Loosemore *et al.*, 2006).

Regulatory pressure encourages adherence to laws and regulations which in turn promote organizational transparency and accountability. Notably, accountability denotes control over abuse of power by authorities and misuse of public resources and organizational learning towards service improvement (Aucoin and Heintzman, 2000). Regulation is referred to as the 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 and Scott, 1996) enforce this regulation. Despite various institutional pressure, central government policy is observed as the prominent external factor that drives RM practices in the public sector (Woods, 2009; Collier and Woods, 2011). However,

many organizations have yet to adopt RM (Beasley *et al.*, 2005), and in particular, the variance of RM practices in Federal Statutory Bodies (FSBs) in Malaysia is unknown. Less attention was given to the extent that RM practices can vary due to the effects from different drivers: regulatory pressure and PMS use and how different RM processes can have an impact on accountability.

In the public sector, good governance considers both performance and accountability within a RM framework rather than trading one off against the other (Walker *et al.*, 2010). Greater accountability refers to providing more visibility and transparency for organizational activity and promoting appropriate behaviour which ultimately leads to improved organizational performance (Dubnick, 2005). Since the existing mechanisms of accountability is under challenge, sophisticated tools/strategies are needed to enforce responsible administrative behavior (Siddiquee, 2006). In addition, Said *et al.* (2014) claimed that mission based management practices are required to demonstrate high level of accountability. Notably, RM system is an integral part of mission based management system. While the notion of modern accountability in the public sector demands demonstration of risk management initiatives (Spira and Page, 2003), 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).

In relation to government aspirations, a sophisticated RM practice is required to improve FSBs' performance, ensure the efficient use of resources, promote innovation (Chapman, 2006; Ene and Dobra, 2006) and with stand stringent auditing and stakeholder scrutiny. Central government policy which emphasizes results, best value and centralized performance assessment has been discovered as factor that drives RM implementation in many public sectors in United Kingdom, Canada and Australia (Woods, 2009; Collier and Wood, 2011; Leung and Isaacs, 2008). In addition, PMS use for various purposes could influence RM in assuring the achievement of organizational objectives (Loosemore *et al.*, 2006; Chapman, 2006). Thus, the successful implementation of RM is heavily dependent on the external and internal drivers that trigger RM practices. Therefore, this study suggests

PMS use (Henri, 2006b) and regulatory pressure, more widely known as central government policies, (Woods, 2009; Collier and Wood, 2011) as potential drivers that influence RM practices in FSBs. There is also a need to examine the variation in RM practices (Arena and Arnaboldi, 2014) in FSBs, and to validate its role in enhancing the public sector accountability.

1.2.1 Malaysian Federal Statutory Bodies

The Statutory Act (Accounts and Annual Report) 1980 (Act 240) defines FSBs as an establishment incorporated in accordance to Federal Laws. FSB was established to implement government policies through pre-determined activities and programs. Accordingly, the Board of Directors are formed to execute good governance practices, management and specified activities. Some of the FSBs depend on government resources while others self-generate their income to finance operation. FSBs legislate their own financial policy, systems, procedures and form its' accounting policies which is in compliance with the applicable accounting standards. By virtue of the Statutory Bodies Act (Accounts & Annual Reports) 1980 (Act 240), FSBs are required to submit an annual report regarding their financial position to the Auditors General for audit purpose. A copy of the audited financial statement must be submitted to the Ministry so that the Ministry can present these reports to Parliament (Auditor General Malaysia, 2013). In addition, FSBs services which span a variety of disparate services including health care, financial services, education and agricultural (Auzair, 2015) can also be affected by volatilities in economic conditions, social and political changes (Saeidi *et al.*, 2013). To gain resilience and to strengthen the financial position for sustainability, the Malaysian government has launched the Fiscal Transformation Program (FTP). The reform initiatives under FTP include good and service taxes (GST), outcome-based budgeting, accrual-based accounting, subsidy rationalization, improving spending efficiency and stringent auditing. With these reforms, the Federal Government's deficit level is expected to decline to 3% of GDP (2014: 3.5% and 2013: 3.9%) (Ministry of Finance, 2014).

By 2015, there were one hundred and twenty three (123) FSBs under twenty two (22) different Ministries undertaking various economic and social activities covering several sectors namely agriculture and commodity, regional development, trade and industry, education and training, ports, finance and others. The increasing autonomy for resource management at the FSBs level highlights the need for reliable RM practices, effective control, achievement of organizational goals and greater accountability on the part of top management.

For instance, in 2010, the FSBs generated operational revenue of RM78.69billion, which encapsulates government grant of RM15.01billion (19.1%) and self-generated income of RM63.68billion (80.9%). In addition, the FSBs recorded net surplus of RM41.31billion in 2010 where eighty-three (83) FSBs recorded surplus of RM42.07 billion while thirty-five (35) FSBs incurred deficit of RM753.25million. Statistics revealed that the Ministry of Higher Education (MOHE) received the highest amount of operating grant from the government, which amounted to RM7.80billion (equivalent to 52% of total grant disbursed in 2010) and self-generated only RM2.98billion of revenue (4.7% of total revenue generated by the FSBs).

Realizing the huge amount of grants disbursed annually to the Public Sector, the Chief Secretary's Office issued a guideline on *Enhancing Public Sector Governance in 2007*. This guideline highlighted the importance of four main principles of good governance encapsulating integrity, accountability, stewardship and transparency. The guideline further stipulated the responsibility of Agency Head to ensure management commitment to governance, good relationship with stakeholders, external and internal accountability, strategic management, performance monitoring and risk management. In addition, all resource entrusted civil servants are required to identify and manage risk encountered in their respective programs or projects. Furthermore, risk information is necessary for crucial decision making such as investment and budgeting in the public sector (Lai and Samad, 2011). Subsequently, the Prime Minister's Order No. 1, 2009 – *Initiative to Enhance Integrity in the Administrative Management of the Malaysian Government: Establishment of the Committee on Integrity and Governance* was released. The

main aim of this initiative was to establish Committee on Integrity and Governance to ensure the quality of the service delivery system is based on good governance, integrity and free from bureaucracy. Simultaneously, the service delivery system should be free from corruption, malpractice and abuse of power. Among the Committee's terms of reference was internal control, which requires the public sector to practice risk management techniques to minimize the exposure to business risk. Therefore, non-compliance to the government regulations could challenge public sector accountability (Siddiquee, 2006).

The government introduced various control systems to expel or restrict negligence or mismanagement of government funds and to ensure accountability in public sector spending. These include the Malaysian Institute of Integrity (IIM), the Malaysian Public Complaint Bureau, various audits by Auditor General and Star Rating system (Said *et al.*, 2015). In 2009, six National Key Results Areas under Government Transformation Programs were designed to enhance public sector accountability. Despite efforts to improve service delivery, criticisms and complaints on public service continue to exist. Several issues of negligence and failure to discharge government duties were reported by the Auditor General, namely improper payment, procurement work that did not follow specifications, low quality, or unsuitability to a project; unreasonable delays, waste, weakness in managing revenues and government assets (Auditor General Malaysia, 2013).

The financial management and internal control of the FSBs are audited periodically by the Auditor General of Malaysia, to provide reasonable assurance of their strength. Specifically, this audit is performed to ensure that organizations' financial management and internal control adhere to several internal control objectives (COSO, 2013). The ranking system based on an accountability index is used to assess the FSBs' performance from 8 aspects of financial management and internal control: top management control, budget control, collection control, expenditure control, trust fund management, assets management, investment and loan management and financial statement submission (Bakar and Ismail, 2011). The accountability index assigns star ratings based on the total scores and level of control.

In addition, the Auditor General is empowered to conduct a detailed audit of FSBs accounts and the management of FSBs activities as well as the activities of their subsidiaries (Siddiquee, 2006). A glance at the auditor's report revealed irregularities, non-compliance to regulation and mismanagement of government assets. The findings of the audit for the past four years revealed 102 cases of mismanagement and financial irregularities (Auditor General Malaysia, 2014; 2013; 2012; 2011). For example, the report as presented in Table 1.1 observed that 15 FSBs did not comply with the procurement policy while 13 FSBs were involved in irregularities concerning various construction projects. Furthermore, the management of subsidiary companies by 24 FSBs was not satisfactory. In particular, this report shows the FSBs have failed to comply with regulation and government circular (Siddiquee, 2006) leading to various operational and non-compliance risk which has somehow eroded public sector accountability (Said *et al.*, 2015).

Table 1.1: Audit findings by FSBs

	2014	2013	2012	2011
Procurement management	11	3	1	-
Plantation/estate management	1	4	2	1
Construction management/ renovation	1	6	4	2
Asset/land management	-	1	2	1
Investment management	-	-	1	3
Loan management	1	1	-	-
Mandatory contribution	-	1	1	1
Other cases	4	3	7	15
Subsidiary management	5	8	8	3
Total	23	27	26	26

1.3 Problem Statement

The increasing trend of irregularities, non-compliance to regulation and mismanagement of government assets is deteriorating public sector accountability. Hence, the existing mechanisms of public sector accountability are under challenge and are eroding public trust and confidence (Siddiquee, 2006). The audit finding for the past four years revealed 102 cases of mismanagement and financial irregularities (Auditor General Malaysia 2011; 2012; 2013; 2014). In addition, the latest financial management and internal control of FSBs indicated that 77% of the rotationally audited agencies in 2013 were ranked below excellent level (four star) in terms of their ranking (Auditor General Malaysia, 2013). Even though there was slight improvement compared to 89% in 2011, these prolonged weaknesses have eroded public trust in public sector agencies and pose further challenges to its' accountability particularly in demonstrating excellent results and value-for-money. In fact, Malaysian voters expressed their deep discontent with government services in the 2008 elections when Barisan Nasional, the ruling coalition, experienced its worst election performance since independence in 1957 (Iyer, 2011 cf Said *et al.*, 2015). Hence, sophisticated tools/strategies are needed to enforce responsible administrative behavior (Siddiquee, 2006) to regain public confidence. Therefore, RM practices could be used to address the issues related to FSB's accountability in delivering better results, value-for-money (Collier and Woods, 2011; Leung and Isaacs, 2008) and for control purpose.

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. These studies have ignored the context and the institutional setting in which different organizations operate (Woods, 2009; Collier and Woods, 2011; Azizan and Lai, 2013). However, most factors have been considered from the perspective of contingency theories (Woods, 2009; Mikes and Kaplan, 2014; Gordon *et al.*, 2009; Nedaei *et al.*, 2015) which is situation specific (Collier and Woods, 2011). Moreover, the variances in the practice of RM in places (Mikes, 2011; Mikes, 2009; Arena *et al.*, 2010) pose further challenges to the isomorphism perspectives of

institutional theory. In fact, 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). Thus, this study is grounded in institutional theory.

The institutional theory posits that the institutional environment has a strong influence on the development of structures in an organization and specifically, pressure from external constituencies is the primary determinant of organizational structure (DiMaggio and Powell, 1983) which needs to be conformed to gain legitimacy (Brignal and Modell, 2000). Organizations in the same line of business will try to change constantly where powerful external and internal forces lead them to become homogenous or similar to one another. The concept that explains homogenization is isomorphism (DiMaggio and Powell, 1983). While institutional theory has been used in many MCS studies (Hoque, 2008; Cavalluzzo and Ittner, 2004; Tessier and Otley, 2012; Burns and Scapens, 2000; Modell, 2001; Carpenter and Feroz, 2001) the studies on RM as subset of MCS are scarce (Collier and Woods, 2011).

Among the determinants of RM practices in the previous studies, regulatory pressure and PMS use are the most significant drivers of RM in the public sector. The central government policy was discovered as the most powerful contingent factor that affects RM control system implementation (Woods, 2009; Collier and Woods, 2011). In addition, the central government and the regulatory bodies not only regulate the operation and internal control system of FSBs but also exert reform initiatives through issuance of regulations and policies, making regulatory pressure the most powerful driver for RM practices (Woods, 2009). 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 and Petterson, 2015). Third, many regulations and RM related frameworks have been published globally which have been interpreted differently by organizations (COSO, 2004).

PMS use is also 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 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. Since risk management is also about achieving objectives, the quantifiable performance measures provide input and become targets for RM success (Loosemore *et al.*, 2006; Chapman, 2006). This study refers to the nature of performance measures as PMS use for monitoring, attention-focusing, strategic decision-making and legitimization (Henri, 2006b). Despite the importance of these two variables, limited studies have investigated these factors in relation to RM practices (Woods, 2009; Collier and Woods, 2011; Loosemore *et al.*, 2006; Arena and Arnaboldi, 2014). Thus, this study has filled the theoretical gap by focusing on the institutional theory and resource-based view with consideration given the two prominent drivers, regulatory pressure and PMS use.

Most of the studies on RM consequences focused on the usage and design of ERM and have occupied secondary data to indicate RM adoption. For example, researchers used various measures as indicators including: the appointment of CRO (Liebenberg and Hoyt, 2003; Beasley *et al.*, 2008; Pagach and Warr, 2011), stages of ERM practices (Beasley *et al.*, 2005), 'standard & poor' ERM ratings (McShane *et al.*, 2011; Baxter *et al.*, 2012) and use of secondary data filings to identify ERM activities. However, apart from the adoption of RM to improve performance, emphasis on different processes of RM practices (Al-Tamimi and Al-Mazrooei, 2007), which are determined by their drivers is scarce. Since there are limited studies which examined RM processes in detail, and to have a broader understanding of RM practices in the FSBs, this study examined three crucial processes of RM namely risk identification, assessment and monitoring (Mikes and Kaplan, 2014; Al-Tamimi and Al-Mazrooei, 2007). The previous researches have also ignored the impact of these processes on accountability.

Previous studies have investigated RM with either compliance or performance consequences (Arena *et al.*, 2010; Mikes, 2009; Mikes, 2011) but ignored the accountability rationale of public sector organizations. However, regulatory bodies have always emphasized internal control system as mechanism to protect organization against risk and improve accountability (Woods, 2008). RM is a subset to internal control which could overcome the unfavorable effects of risk and at the same time, the idea of accountability requires evidence of RM initiatives (Spira and Page, 2003). However, there are lack of studies that investigate the relationship between regulatory pressure, PMS use, RM processes and accountability. Furthermore, recommendations for frontier research in governance and accountability pointed out RM as mechanism for accountability (Brennan and Solomon, 2008), that require further research.

This study is also grounded by resource-based view (RBV) which seeks to explain that internal scarce resources can lead to competitive advantage and these resources need to be sustained (Barney, 1991). Following Hooley *et al.* (1998), the prominent variables of this study, RM system and PMS information, are resources (intangible assets) which are key to superior performance. These resources enable organizations to gain competitive advantage if they comply with the specified criteria. With resources which are heterogeneous and imperfectly mobile, organizations could employ different strategies to outperform others to achieve competitive advantage. This study focused on the PMS information deployed through RM practices (resources) to produce risk-based control and decision which will enhance accountability. The FSBs capability to deal with risk exposure enhances the reputation (intangible asset) of FSBs and will eventually attract future in flow of investment to create competitive advantage for sustainability. MCS literature has devoted scant attention to RBV model (Henri, 2006a; Theriou *et al.*, 2009) and only a few RM studies have applied this perspective (Andersen, 2008; Oliveira *et al.*, 2011; Wang *et al.*, 2003).

Another area which requires attention is related to the effect of RM practices on accountability under different circumstances. Further studies are needed to investigate which RM process is suitable to enhance accountability when initiated by

different drivers. This leads to another theoretical gap, the mediating effect of RM processes (risk identification, risk assessment and risk monitoring). By considering the issues highlighted above, this study shed light on the RM practices of the Federal Statutory Bodies of Malaysia. The proposed research framework examine the effect of regulatory pressure and PMS use on RM practices to enhance accountability in the Malaysian FSBs.

1.4 Research Questions

Based on problem statement, this study attempts to answer several research questions as follows:

- a) What is the relationship between regulatory pressure and RM practices among FSBs in Malaysia?
- b) Is there a positive and significant relationship between PMS use and RM practices among FSBs in Malaysia?
- c) Is there a positive and significant relationship between RM practices and accountability among FSBs in Malaysia?
- d) Do RM practices mediate the relationship between regulatory pressure and accountability among FSBs in Malaysia?
- e) Do RM practices mediate the relationship between PMS use and accountability among FSBs in Malaysia?

1.5 Research Objectives

In light of the rationales presented, the aim of this study is to investigate the predictive effects of regulatory pressure, PMS use and RM practices on accountability using mediation framework that is grounded in institutional theory and resource-based view. The objectives of this study are as follows:

- a) To examine the relationship between regulatory pressure and RM practices among FSBs in Malaysia.
- b) To investigate the relationship between PMS use and RM practices among FSBs in Malaysia.
- c) To examine the relationship between RM practices and accountability among FSBs in Malaysia.
- d) To assess if RM practices mediate the relationship between regulatory pressure and accountability among FSBs in Malaysia.
- e) To assess if RM practices mediate the relationship between PMS use and accountability among FSBs in Malaysia.

This study suggests that in FSBs, accountability can be enhanced through practice of RM. Based on resource-based view, risk management is a form of the organization's key resources that need to be sustained to gain competitive advantage which could also lead to better organizational performance and accountability. In line with institutional theory, FSBs gain legitimacy by practicing RM which is exerted by pressure external to the organizations. In addition, PMS developed and used in FSBs to ensure concerted effort towards achievement of FSBs objectives can also influence RM practices to control risk related to the objectives.

1.6 Research Significance

This study contributes to the literature by addressing the importance of RM practices for FSBs in Malaysia, highlighting the significance of risk tolerance in strategic decision making for sustainability. The findings aimed at improving the public sector accountability by providing insights on the variance in RM practices which could contribute to policy revision. At present, the debate on the contributors of RM and variance in RM practices are focused on private sector. Hence, there is lack of empirical evidence on the relevance of RM practices for public sector accountability. It is hoped this study will contribute to awareness and understanding of the potentials of RM and shed light on their relevance to

minimize risk related problems and issues in the public sector globally. The significance of this study with regard to theory and empirical are discussed in the following subsections.

1.6.1 Theoretical

This study contributes to the body of knowledge in several ways. First, it integrates both institutional theory (DiMaggio and Powell, 1983) and resource-based view (RBV) (Barney, 1991) in one conceptual framework for further testing to provide understanding on how these theories complement each other in enhancing accountability. Second, with combination of variables of institutional theories (regulatory pressure) and resources of RBV (RM system and PMS information) (Hooley *et al.*, 1998), this study introduces a new control mechanism into RM, MCS and accountability literature.

Third, far too little attention has been given to investigate the effect of RM practices on public sector accountability. Past studies on RM have concentrated on firm-specific contingency factors and several consequences including organizational performance and firm value (Subramaniam *et al.*, 2011; Gordon *et al.*, 2009), shareholder wealth (Beasley *et al.*, 2008) and corporate governance (structure) (Baxter *et al.*, 2012; Liebenberg and Hoyt, 2003; Beasley *et al.*, 2005). In fact, result and risk control-based accountability would further contribute to the emergence of public sector reputation (intangible resource of RBV) crucial for competitive advantage and sustainability.

Fourth, the new conceptual framework provides insights into the mediating role of RM practices on accountability. To date RBV framework has not been used to investigate the mediating effect of RM practices simultaneously, either in the private or public sector. From the perspectives of RBV, RM system is considered as scarce intangible asset (resource) that need to be sustained to gain competitive advantage. This study tends to blend resource from strategic management literature

with RM practices from MCS literature. This study also establishes the importance of appropriate uses of PMS as RBV resource and regulatory pressure to trigger RM practices in enhancing accountability.

Fifth, it is important to note that the concept of RM control in this study is different from the perspective of RM control in Woods (2009), Gordon *et al.* (2009) and Mikes and Kaplan (2013) study. This study extends the concept of RM practices from the view of public sector accountability. This study also extends the existing list of factors or drivers in the RM literature to include a new driver of RM practices, PMS use (Henri, 2006b). The study also introduced RM practices as mediator variable in the RM literature, whereas regulatory pressure is viewed from the aspect of regulations issued by external bodies to reduce problem (Ashworth *et al.*, 2002) and to control the operation of FSBs towards improved result and value for money (Collier and Woods, 2011).

1.6.2 Empirical

The findings of this study could provide useful information to politicians and key management who are seeking to reduce losses or the impact of compliance, operational and reporting risk at work place. In line with the government's effort to enhance public sector governance, the study will also aid the Integrity and Governance Committee to provide assurance on the quality of service delivery system in the public sector. The result of the study is expected to assist Auditor General to assess the RM practices and provide assurance on financial management and internal control, which consequently will improve the Financial Management Accountability Index (AI) rating of the public sector. The results of this study will be valuable to the policy makers especially the Treasury in developing RM guidelines for the public sector, particularly FSBs.

1.7 Scope of the Study

The study investigates the effects of regulatory pressure and four dimensions of PMS use (monitoring, attention-focusing, strategic decision-making and legitimization) on RM practices (consisting of three RM processes risk identification, risk assessment and risk monitoring). This study also examines the mediating effects of these RM processes on accountability. To test the predicted hypotheses, the population of the study is chosen from Malaysian FSBs which are the operating arm of Federal Government to perform reform initiatives. The FSBs are also main consumer of government funds and subject to government regulation and shareholders demand for good governance. List of FSBs is obtained from Ministry of Finance and Auditor General Department.

The information on FSBs that are practicing RM and their contact information are captured from the Auditor General's Report and their respective website. However, FSBs with less than 100 employees are excluded from this study as they do not justify the presence of formal organizational practice (Henri, 2006b) including RM. As the population is geographically dispersed, data was collected using self-administered questionnaire, which was emailed to two hundred and seventeen FSBs and their main branch offices that have adopted RM. The respondents were the persons responsible for RM including Chief Risk Officers, top management and branch managers.

Although Enterprise Risk Management offers an integrated framework to manage risk, the scope of this study is limited to RM. This study applies the MS ISO 31000:2010 RM processes due for several reasons: (1) the RM framework has been successfully implemented in Malaysia and audited for compliance certification by SIRIM, (2) the RM framework is more suitable for non-commercial environment like FSBs of Malaysia which consist of individual organizations (majority of the FSBs are without business unit and subsidiary) and (3) FSBs have complex structure with different autonomy to plan spending and operate. However, this study has cited ERM related articles to reveal the current development in the area of study.

1.8 Operational Definitions

In this section, the operational definitions of key terms of the study are provided. This study focused on RM practices, accountability, regulatory pressure and PMS use.

1.8.1 Risk Management Practices

This study investigates the mediating role of RM practices by empirically assessing three main processes of RM practices namely: risk identification, assessment and monitoring. The Malaysian Standard of ISO31000:2010 defines risk management as ‘coordinated activities to direct and control organization with regard to risk’. The RM process of this particular standard includes establishing the context, identifying, analysing, evaluating and treating risk. The RM process also includes communication and consulting along the different process of RM and monitoring and reviewing overall RM framework (MS ISO31000:2010). However, since this research intends to investigate the emphasis placed for RM practices in FSBs and not to compare the details of RM activities among FSBs, only crucial RM processes of risk identification, risk assessment (Mikes and Kaplan, 2014) and risk monitoring (Al-Tamimi and Al-Mazrooei, 2007) were considered and included in the survey instrument.

1.8.2 Accountability

Since this study is performed in FSBs, it is appropriate to examine accountability as endogenous variable. In this study, accountability refers to FSBs requirement to justify their actions to multiple stakeholders (Parker and Gould, 1999) in regard to organizational service, performance and risk management control. Apart from meeting stakeholders demand for good governance in terms of improved

performance and accountability (Walker *et al.*, 2010), this study aims to introduce RM practices as new initiative for discharging accountability (Spira and Page, 2003).

As spillover effect, accountability encourages organizational learning (based on stakeholder's feedback) and enhances public sector reputation which are crucial for public sector sustainability. Specifically, accountability requires governance arrangement such as RM being practiced to provide visibility of results and control to both internal and external stakeholders within applicable rules and regulations.

1.8.3 Regulatory Pressure

The first exogenous variable of the study is regulatory pressure. In this study, regulatory pressure refers to 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. This regulation is intended to reduce certain problems (Ashworth *et al.*, 2002) and to control the operation of public sector to achieve better results and value-for-money.

The pressure exerted on the FSBs emerges in the form of coercive (DiMaggio and Powell, 1983) due to resource dependence (Collier and Woods, 2011) or other regulatory compliance reason including central government policy, regulatory bodies, other stakeholders and professional bodies such as standard-setters (Collier *et al.*, 2007).

1.8.4 PMS Use

The second exogenous variable of the study refers to an organization characteristic factor known as PMS use. PMS use refers to the different uses of performance measures to influence the behavior of managers so that their actions are

aligned toward organizational goals. In this study, PMS use is classified into four dimensions: for monitoring, attention-focusing, strategic decision-making and legitimization (Henri, 2006b).

First dimension is PMS use for monitoring, refers to the use of performance measures by top management for tracking progress towards goals and for comparing the actual outcome to the target. Second dimension is PMS use for attention-focusing, refers to the use of performance measures by top management to send a signal across the organization and to provide common focus of the organizations critical success factors, goal targets and uncertainty. Third dimension is PMS use for strategic decision-making, refers to the use of performance measures by top management to choose among the best alternatives (for example investment decision based on ROI) and to consider different ideas in relation to problem solving. Fourth dimension is PMS use for legitimization, refers to the use of performance measures by top management to justify or rationalize past decisions made in uncertain conditions and to validate current and future action (Henri, 2006b).

1.9 Structure of the Thesis

This thesis consists of five chapters. Chapter 2 reviews the literature on RM practices, PMS use, regulatory pressure and accountability as well the underpinning theories, specifically highlighting the need to examine these variables within a mediation framework of accountability. This chapter also discusses the research hypothesis to be tested based on the proposed conceptual framework. Chapter 3 describes the methodology applied in the research including the research design, sampling and data collection procedure, measurement instrument, pilot study and plans for data analysis. Chapter 4 discusses the analysis results of the hypothesis test. Finally, Chapter 5 discusses the findings of the study, theoretical contribution and practical implications, limitations of the study and provides suggestion for future research.

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