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MANAGEMENT ACCOUNTING SYSTEMS IN FINANCIAL INSTITUTIONS IN MALAYSIA: INFLUENCING FACTORS, ORGANIZATIONAL PERFORMANCE AND RISK MANAGEMENT

BY

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ABSTRACT

The function of management accounting systems (MAS) in an organization has evolved from the traditional cost determination and financial control role to a more sophisticated role of value creation through the effective use of resources. Financial institutions are experiencing rapid transformation due to financial liberalization, rapid advancement in technology, intense market competition, and the emergence of increasingly innovative products and distribution channels. To remain competitive, they need sophisticated MAS information for informed decision making and to create value for the long term success and survival of the organization. Due to the lack of management accounting research for financial services, this study investigates the factors influencing MAS sophistication among financial institutions in Malaysia and examines whether it leads to enhanced organizational performance. Sophistication of MAS is viewed in a broader aspect by focusing on the four dimensions of MAS information – scope, timeliness, integration and aggregation. In addition, since financial institutions are essentially in the business of managing risks, this study also explores the relationship between enterprise risk management (ERM) and MAS. In ERM, performance management, which is the most important role of MAS, is integrated with risk management. With the existence of a dual banking system in Malaysia, it is also important to explore the difference between MAS of Islamic Financial Institutions (IFIs) and that of conventional financial institutions. Based on the contingency theory framework, this study adopts an explanatory sequential mixed method approach that was conducted in two stages. In the first stage a survey was conducted on the banking and insurance companies listed on the Central Bank of Malaysia website, with the chief financial officers (CFO) as the respondents. In the second stage, post-survey semi-structured interviews were conducted with selected respondents. Based on multiple regression analysis, the results indicate that perceived intensity of market competition and technological advancement influence MAS sophistication. The results provide support of a direct relationship between MAS and organizational performance and show some support for the mediating role of MAS between contextual variables and performance. The post-survey interviews further support the results. The findings from the survey and the post-survey interviews also show that MAS and risk management complement each other. However, there was not enough evidence to support the role of risk management in enhancing the relationship between MAS and organizational performance. The post-survey interviews provide some insights into this issue. The findings further show that IFIs use more sophisticated MAS than conventional financial institutions. Overall, this study demonstrates the importance of MAS sophistication for coping with the intensity of market competition and of rapid technological advancement in financial institutions to achieve better performance. In addition, the study also provides evidence of the importance of MAS and risk management as integral management tools for corporate performance management. Finally, as IFIs have to adhere to the *Sharīʿah* compliance framework they require more sophisticated MAS to manage their organizations effectively. The findings contribute to financial institutions and regulators as well as towards testing a comprehensive contingency model that includes multiple contingent factors, multiple elements of accounting systems, and multiple outcome variables.

ملخص البحث

لقد تطورت وظيفة أنظمة ا اسبة الإدارية (MAS) (ماس) ا ؤسسات ا الية من رد وظيفة تقدير التكلفة ودور الرقابة ا الية التقليدي إ دور أكثر تعقيداً متمثلة خلق القيمة من خلال الاستخدام الفعال للموارد. فإن ا ؤسسات ا الية ر بتجربة ول سريع نا ة عن التحرر ا ا ، والتقدم السريع الات التكنولوجيا، و التنافس ا كثف السوق، مع الظهور ا تزايد للمنتجات ا بتكرة وقنوات التوزيع. ولكي تظل هذه ا ؤسسات افظة على مكانتها التنافسية، تاج إ أنظمة معلومات للمحاسبة الإدارية (ماس) ا تطورة لتمكينها من صنع القرارات الراشدة، خلق القيمة الناجحة ا تقود إ بقاء ا ؤسسة على ا دى الطويل. و ا أن هناك ندرة فيما يتعلق بالأ اث الات ا اسبة الإدارية ا اصة بقطاع ا دمات ا الية، فإن هذا البحث يتناول بالتحقيق العوامل ا ؤثرة تطور أنظمة ا اسبة الإدارية (ماس) ا ؤسسات ا الية ماليزيا. ويتفحص البحث حول ما إذا كانت درجة التعقيد أنظمة ا اسبة الإدارية (ماس) يؤدي إ تعزيز الأداء التنظيمي. ومصطلح (sophistication) (ا نكة) الذي يرمز إ أنظمة ا اسبة الإدارية هذه الدراسة، ينظر إليه من منظور عام من خلال التركيز على أربعة أبعاد لأنظمة ا علومات ا اسبة الإدارية (ماس) (MAS) وهذه الأبعاد هي:- البعد النطاقي، البعد الزم ، البعد التكاملي، والبعد التجميعي. وبالإضافة ا سبق، فإن ا ؤسسات ا الية تكون نشاطا ا ال إدارة ا خاطر. وهذه الدراسة تسعي للكشف عن طبيعة العلاقة ب إدارة ا خاطر ا ؤسسات ا الية وأنظمة ا اسبة الإدارية (MAS)(ماس). ويلاحظ أنظمة إدارة ا خاطر ا ؤسسي، أن وظيفة إدارة الأداء وهي أهم دور لأنظمة ا اسبة الإدارية (MAS)(ماس) متكاملة مع عملية إدارة ا خاطر. و ا أن النظام ا صر ا اليزي نظام مزدوج، فمن الطبيعي أيضاً أن اول هذه الدراسة إستكشاف الفروقات ب أنظمة ا اسبة الإدارية (MAS)(ماس) لدى ا ؤسسات ا الية الإسلامية وب ا ؤسسات ا الية التقليدية. وإستنادا على إطار نظرية الطوارئ،فقد اعتمدت هذه الدراسة ا نهج التفس ي التسلسلي ا ختلط كطريقة للبحث والذي إجرائه على مرحلت ، ا رحلة الأو إجراء مقابلة مسحية مع كبار ا سؤول ا الي ا صارف وشركات التأم ا درجة موقع مصرف ماليزيا ا ركزي على شبكة الإنترنت. و ا رحلة الثانية، إعداد مقابلات منظمة أجريت مع موعة تارة من ا يب تابعة ما بعد مرحلة الدراسة ا سحية. وحسب نتيجة ليل الا دار ا تعددة، فإن النتائج تش إ وجود تأث للعوامل التالية: **عامل** تصوري شدة ا نافسة السوقية، وعامل التقدم التكنولوجي على تعقيد أنظمة ا اسبة الإدارية (MAS) (ماس).كما أن النتائج تدعم فرضية وجود علاقة مباشرة ب أنظمة ا اسبة الإدارية (MAS) (ماس) والأداء التنظيمي، كما قدمت دعماً جزئياً لدور الوساطة الذي تقوم به أنظمة ا اسة الإدارية (MAS) ب ا تغ ات السياقية والأداء، وبالإضافة إ ذلك فإن الدراسة ما بعد ا سح قدمت مزيداً من الدعم ذه النتائج. وا ستخلص ذه الدراسة ا سحية والدراسة ما بعد الدراسة ا سحية تبين علاقة تكاملية ب أنظمة ا اسة الإدارية (MAS) وإدارة ا خاطر. ومع ذلك، فإن الدراسة ا الية تتمكن من العثور على أدلة كافية لدعم فرضية وجود دور لإدارة ا خاطر تعزيز العلاقة ب أنظمة ا اسبة الإدارية (MAS) والأداء التنظيمي. وقد ألقت دراسة ا قابلات ما بعد ا سح بعض الضوء على هذه القضية. وتدل النتائج أيضا على أن ا ؤسسات ا الية الإسلامية تقوم باستخدام أنظمة ا اسبة الإدارية (MAS) الأكثر تطوراً مقارنة با ؤسسات ا الية التقليدية. وعموماً فإن هذه

الدراسة قد برهنت على أ ية أنظمة ا اسبة الإدارية (MAS) واكبة التطور والتنافس التجاري الكثيف وسرعة التقدم التكنولوجي ا ؤسسات ا الية من أجل قيق أداء أفضل. وبالإضافة إ ذلك ، فإن هذه الدراسة تقدم دليلا لأ ية أنظمة ا اسبة الإدارية (MAS) وإدارة ا خاطر كجزئ لا يتجزئان من أدوات الإدارة الشركات ال تعمل لغرض الإدارة والأداء. وأخ ا فإن ا ؤسسات ا الية الإسلامية يتحتم عليها الإمتثال لضوابط أحكام الشريعة الإسلامية، لأ ا تاج إ أنظمة ا اسبة الإدارية (MAS) تكون أكثر تطوراً لتحقيق أداء إداري فعال هذه ا ؤسسات. ومن ا توقع أن تكون ذه النتائج آثار إ ابية بالنسبة للمؤسسات ا الية وا هات التنظيمية، فضلاً عن مسا ات هذه النتائج إجراء اختبار وذجي شامل لنظرية الطوارئ يث تضم تلك الدراسة وحدات من العوامل، وعناصر أنظمة ا اسبة ا تعددة، وا تغ ات النا ة عن هذا التعدد.

APPROVAL PAGE

The thesis of Siti Zaleha binti Abdul Rasid has been approved by the following:

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DECLARATION

I hereby declare that this dissertation is the result of my own investigations, except where otherwise stated. I also declare that it has not been previously or concurrently submitted as a whole for any other degrees at IIUM or other institutions.

Siti Zaleha Binti Abdul Rasid

Signature ……………………………………. Date ……………………..

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This PhD work is especially dedicated to my loved ones, my husband Nasir bin Ismail, my mother Hjh. Asnah binti Itam, my late father Hj. Abdul Rasid Abdul Rahman and my beloved children, Farhanah, Asma' Nabihah, Husna Nadhirah, Huda Nadiah and Sarah Nayli.

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AAOIFI	Accounting and Auditing Organizations of Islamic Financial Institutions
ABC	Activity-Based Costing
ABM	Activity Based Management
AGG	MAS Aggregation
ALM	Asset/Liability Management
ATM	Automatic Teller Machines
BAFIA	Banking and Financial Institutions Act 1989
BBA	Bai' Bithaman 'Ajil
BCBS	Basel Committee on Banking Supervision
BI	Business Intelligence
BNM	Bank Negara Malaysia
BSC	Balanced Scorecard
CAR	Capital Adequacy Ratio
CAS	Casualty Actuarial Society Enterprise Risk Management Committee
CFO	Chief Financial Officer
COMP	Perceived Intensity of Market Competition
COSO	Committee of Sponsoring Organizations of the Treadway Commission
CRO	Chief Risks Officer
CVP	Cost-Volume-Profit
DFI	Development Financial Institutions
EDI	Electronic Data Interchange
ERM	Enterprise Risk Management
EVA	Economics Value Added
FIs	Financial Institutions
FM	Financial Management
FPER	Financial Performance
FTP	Fund Transfer Pricing
GATS	General Agreement on Trade and Services
GCC	Gulf Cooperation Council
GDP	Gross Domestic Products
IAS	International Accounting Standard
IFAC	The International Federation of Accountants
IFIs	Islamic Financial Institutions
IFSB	Islamic Financial Services Board
INNO	Innovativeness
INT	MAS Integrativeness
IS	Information Systems
IT	Information Technology
JIT	Just in Time
KMO	Kaiser-Meyer-Olkin Measure of Sampling Adequacy
KPIs	Key Performance Indicators
LOFSA	Labuan Offshore Financial Services Authority
MA	Management Accounting

MAP	Management Accounting Practices
MAS	Management Accounting Systems
MASB	Malaysian Accounting Standard Board
MCS	Management Control Systems
MIFC	Malaysia as an Islamic Financial Centre
MIS	Management Information Systems
MRP	Material Resource Planning
NFPER	Non-financial Performance
NIA	New Investment Agenda
NPAP	New Product Development Process
OC	Organizational Control
PC	Personal Computer
PCA	Principle Component Analysis
PDA	Personal Digital Assistant
PEU	Perceived Environmental Uncertainty
PRISK	Perceived Risk
RMA	Risk Management Activities
ROA	Return on Assets
ROE	Return on Equity
SCOPE	MAS Scope
SDUs	Savings-deficit Units
SEM	Strategic Enterprise Management Systems
SMA	Strategic Management Accounting
SSB	*Sharīʿah* Supervisory Board
SSUs	Saving-surplus Units
STP	Straight Through Processing
SWOT	Strengths, Weaknesses, Opportunities, and Threats
TECH	Technological Advancement
TIME	MAS Timeliness
TMAS	Overall MAS
TPER	Total/Overall Performance
TQM	Total Quality Management

CHAPTER 1

INTRODUCTION

1.1 BACKGROUND OF THE RESEARCH

Management Accounting Systems (MAS) refers to the systematic use of management accounting to achieve organizational goals. The International Federation of Accountants (IFAC, 1998) defines management accounting as the process of identification, measurement, accumulation, analysis, preparation, interpretation, and communication of information (financial and operational) used for the planning, control and effective use of resources by management. Thus, management accounting becomes an integral part of the management process in an organization providing information essential for (i) controlling the current activities of an organization; (ii) planning its future strategies, tactics and operations; (iii) optimizing the use of its resources; (iv) measuring and evaluating performance; (v) reducing subjectivity in the decision making process; and (vi) improving internal and external communication (IFAC, 1998). The MAS of an organization is expected to be available to managers in an appropriate format and on demand to satisfy the information needs of managers (Govindarajan, 1984; Mia and Chenhall, 1994).

MAS are actually part of management control systems (MCS) and are considered as an organizational control sub-system device (Otley, 1980; Gul and Chia, 1994; Chong, 1996; Chenhall, 2003). Chia (1995, p. 812) defined MAS as "an organizational control mechanism which facilitates control by reporting and creating visibility in the action and performance of its members". Thus, well designed and appropriate MAS assist managers to be more effective in decision-making, thereby helping organizations improve their efficiency and remain competitive in an ever challenging environment.

Over the years, the focus of management accounting has shifted from its simple role of cost determination and financial control to the focus of value creation through the effective use of resources (Abdel-Kader and Luther, 2008; Suzana et al., 2005). According to IFAC's (1998) framework, the evolution of management accounting can be categorized into four identifiable stages. In Stage 1, that is prior to 1950, most companies focused on cost determination and financial control. The main sources of data were financial statements consisting of Income Statements, Balance Sheets and Cash Flow Statements. The use of ratio analysis, financial statement analysis and budgeting became widespread with management accounting information becoming defined in quantitative and financial terms. There was greater attention to internal matters, especially production capacity (Abdel-Kader and Luther, 2008).

In the second stage of evolution, 1950–1965, the emphasis shifted to the provision of information for management planning and control. During this stage accounting and management accounting techniques that support decision analysis were introduced. These included marginal costing, standard costing, Cost-Volume-Profit (CVP) analysis, Break-Even Analysis and transfer pricing. However, "the management controls were oriented towards manufacturing and internal administration rather than strategic and environmental considerations" (Abdel-Kader and Luther, 2008: 4). Consequently, the practice of management accounting was still centred on the manufacturing sector with control activities that were more reactive rather than proactive. The emphasis was still very much on the narrow scope of management accounting information.

The world recession in the 1970s, followed by increased global competition and the rapid development of technology in the early 1980s, shifted the focus of management accounting to reducing resources wasted in business processes (Abdel-Kader and Luther, 2008). This represents the third stage of the management accounting evolution – 1965 to 1986 – with the emphasis on the use of process analysis and cost management technologies. The aim was to eliminate non-value added activities with techniques such as Activity-Based Costing (ABC), Total Quality Management (TQM), Management Resource Planning (MRP) and multiple regressions. This was the beginning of the use of sophisticated management accounting information for decision making, planning and control. Besides focusing on internal matters, external factors such as a change in the environment and customers preferences were given priority. Probability analysis was administered for performance evaluation and the development of computers helped information to be more effectively managed than before.

The shift of focus from waste reduction to value creation, through the effective use of resources and technologies, typified Stage 4 (1985 to 1995) of the management accounting evolution. During this stage, it became important to identify the drivers of customer value, shareholder value and organizational innovation. Contemporary management accounting techniques such as Just-In-Time (JIT), Target Costing, Balance Scorecard (BSC) and Strategic Management Accounting (SMA) gained dominance during this period. These management accounting tools and techniques are capable of considering a broad spectrum of information. The BSC for example considers financial and non-financial information while the SMA is externally focused. With the advancement in IT, management accounting information can be highly integrated with many functions in the organization and provision of information can be made in a timely manner. Hence, the sophistication of management accounting information is essential for value creation and for the long term success and survival of an organization (IFAC, 1998).

Although the manufacturing sector has not diminished in terms of its contribution to the economy, advanced economies have become increasingly dependent upon their service sectors since World War II (Lowry, 1990). In fact, the service industry is now the main contributor towards the GDP of most countries. As part of the service sector, financial institutions act as intermediaries between the surplus and deficit units in the economy. This intermediary role is crucial for efficient allocation of resources in the modern economy (Sinkey, 2002; El-Hawary et al., 2007). A collapse of the financial institutions would affect the stability of the whole economy, and hence, it is crucial to maintain the soundness and the stability of the financial institutions in this increasingly competitive and fast changing environment.

Financial liberalization and technological revolution intensify competitive pressures among financial institutions. By liberalization governments provide a more conducive business environment through which the safety and soundness of the sector can be maintained, while financial institutions are given the flexibility to develop their own strategies to remain competitive. Financial institutions were forced by globalisation to become stronger in order to compete better internationally. To remain competitive some financial institutions started to consolidate as mergers appeared to be the best vehicle to realize operating cost efficiencies and profitability gains (Lissette, 1997).

At the same time advances in technology allowed financial institutions to develop new and efficient delivery and processing channels as well as allowing them to be more innovative in delivering new products and services. The complexity of the financial services business also increased due to the emergence of these increasingly innovative products and distribution channels. This highly competitive environment compels financial institution managers to meet their customers and stakeholders' expectations much more closely to ensure the survival and success of the business. Within this uncertain environment managers need more information for decision making. An appropriate information system can help managers satisfy the expectations of their customers and stakeholders and thus achieve organizational goals (Damonte et al., 1997).

Therefore, in line with the focus on the effective use of resources and technologies for value creation, management accounting systems (MAS) need to be designed to provide sophisticated information for decision-making, improvement, and control in organizations (Atkinson et al., 2001). As part of the management processes the management accounting function should be able to provide this sophisticated information, covering a broad spectrum of information, in an integrated, aggregated and timely manner for organizational success and survival.

Also, as financial institutions are essentially in the risk management business they are currently integrating business line performance management with risk management, thereby implementing an essential part of Enterprise Risk Management (ERM) (Bowling and Rieger, 2005; Bowling et al., 2003). The interest in the implementation of ERM among financial services firms has grown steadily as it gives a competitive advantage while facilitating compliance with regulations. Under traditional risk management individual risk categories are separately managed in each risk category, whereas with ERM, firms manage a wide array of risks in an integrated, holistic fashion (Liebenberg and Hoyt, 2003).