

VOLUME 3 NO. 1
JUNE 2006

ISSN 1675-7017

SOCIAL AND MANAGEMENT RESEARCH JOURNAL



SOCIAL AND MANAGEMENT RESEARCH JOURNAL

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Social and Management Research Journal is jointly published by Institute of Research, Development and Commercialization (IRDC) and University Publication Centre (UPENA), Universiti Teknologi MARA, 40450 Shah Alam, Selangor, Malaysia.

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The Structural and Functional Changes of Management Accountants

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ABSTRACT

Management accounting is regarded as an essential part in any organizational activity. Management accounting information will enable internal users to make decision effectively and contribute to the improvement of the efficiency and effectiveness of existing operation. According to International Federation of Accountants Committee (IFAC), management accounting has evolved from focusing on cost determination and financial control to creation of value through effective use of resources. The roles of management accountants have also changed in line with the changes in management accounting techniques. Nowadays they act as the organization's internal business consultants and part of the multi-functional team. Management accounting has faced a sustained challenge in recent years as debate intensifies over the future shape and form, which it should take. The purpose of this study was to examine Malaysian management accountants' tasks, roles, management accounting tools within a specified period - 2000 to 2004 and 2005 to 2009. The factors that drive these changes were also examined. The results provide evidence that management accountants' task, roles, management accounting tools and techniques changed overtime.

Keywords: Correlation Analysis, Structural Change, Accounting Skill

Introduction

Management accounting has faced a sustained challenge in recent years as debate intensifies over the future shape and form, which it should take. According to Kaplan and Johnson (1987) today's management accounting information, driven by the procedures and cycle of the organization's financial reporting system, is too late, too aggregated and too distorted to be relevant for manager's planning and control decisions. Indeed, they went further by arguing that

“...by 1925 virtually all management accounting practices used today had been developed”.

The theme pursued by Johnson and Kaplan (1987) in their known study of the ‘lost relevance’ of much of management accounting as currently practiced. As a consequence, management accounting is seen to be subservient to financial reporting.

Since the Relevant Lost, there has been a burgeoning of new management practices introduced. These include Activity-Based Costing and Management (Cooper and Kaplan, 1991; Cooper et al., 1992); Balanced Scorecard (Kaplan and Norton, 1992); Quality Management (Deming, 1986 and Oakland, 1989) and Benchmarking (Balm, 1992; Bogan and English, 1994). However, an unsettled issue is whether these emergent practices complement or act as substitution on to the traditional management accounting practices such as Budgeting, Absorption Costing, Cost-Volume-Profit Analysis, Variable and Target Costing.

The management accounting changes can take in different stages and this variety demonstrates that change is not a uniform phenomenon. Consequently one might expect the causal factors of change to vary also, and indeed it is confirmed by management accounting researchers that change in practice is due to numerous factors. Examination of these factors shows that they can be organized into two major categories ie: the macro-context factors and the micro-organizational aspects. These correspond respectively to external factors and internal factors. Amat et al., 1994 also used these two categories in their case study of management accounting system (MAS) change. Besides these two major categories, there are other environmental factors such as economy, political and social contexts (Hopwood, 1983; Oakes and Miranti, 1996 and Amat et al., 1994) which react as the ‘overarching factors’ to the two major categories. These three factors create key aspects of the organizational environment which may be unstable or turbulent (Klamer and Walker, 1984). They therefore create varying levels of uncertainty for an organization and this is likely to impinge on internal information demand.

Management accounting refers to the process of identifying, measuring, analyzing, interpreting and communicating information in pursuit of an organization's goals (IFAC, 1998). The management accounting system should

provide timely and accurate information for decision making process. In addition, the system should facilitate efforts for costs control, measure and improve productivity as well as production processes. Equally important is to provide accurate product costing and signals to managers in different functions, diverse products and processes in large decentralized companies. There must also be a two-way communication link between senior and subordinate managers. Hence, management accounting of today has become an integral part of the management process.

Management accountants according to IFAC (1998) provide the financial information necessary for the planning and control of organizations and commercial companies. They establish and maintain financial policies and management information systems, as well as liaise with management colleagues on all aspects of finance. Management accountants are also required to understand operational processes together with the need to embed management accounting systems within operational activities (Yazdifar, 2003). He further added that accounting personnel should be working very closely with manufacturing managers, product and process engineers.

Problem Statement

Globalization, intense competition, governmental regulations and innovation in technology have changed the market environment (Allott, 2000). Several researches however claimed that management accounting had lost its relevancy and has been slow to change despite the rapid changes in technology and organizational environment in recent years. Consequently, management accountants have been criticized for their inability to innovate (Kaplan and Johnson, 1987) and this was described as 'accounting lag' that needs to minimize in order to keep management accounting relevant to the changing information needs of managers.

Management accountants have long been known to have multiple roles. They have been known as scorekeeper and played directing and problem solving roles. From the late 1980s both the professional and academic literatures began to examine how these roles have changed (Bromwich and Bhimani, 1989; Burns et al., 1996 and Atkinson et al., 1997). A number of commentators have suggested that the problem solving role has become relatively more important as business unit managers have faced increasingly uncertain environments where new and different information is needed to manage those uncertainties (Granlund and Lukka, 1998). Where management accounting information has not kept pace with these uncertainties, the relevance of management accounting has been increasingly questioned by business unit managers (Kaplan, 1986). To more closely meet the changing information needs of business unit managers, there have been calls for management accountants to spend less time working within

the accounting function and more time working in business units with the users of management accounting information (Copper, 1996; Evans and Ashworth, 1996). Management accountants whose role involvement is orientated greater mutual understanding and empathy towards the information needs for business unit managers. The ways in which management accountants interact with others have increasingly been of concern.

Burns and Yazdifar (2001) studied factors that drive the changes in the UK management accountants' key tasks and the tools and skills required to perform the tasks. Therefore it is also important to analyse the driving factors for changes in the structure and function of management accountants in Malaysia. The findings in this study can be viewed as providing additional insight into what is expected from Malaysian management accountants in the near future.

Objectives of the Study

The overall objective of this study was to examine past and future Malaysian management accountants' tasks, skills, management accounting tools and techniques within a specified period - 200 to 2004 and 2005 to 2009 respectively. Specifically, the past and expected tasks, skills and tools and techniques were compared and several factors that drive these changes were also analyzed.

Research Method

A survey method was employed in this study. Data were gathered through structured mail questionnaires, sent to 2346 Malaysian Registered CIMA members. The questionnaire was pilot tested for logical inconsistencies, questions sequence and task relevance (Chau and Tam, 1999). The distribution of the questionnaire was administered by a professional body as the members list is kept confidential. The questionnaire used in this survey was adapted from Burns and Yazdifar (2001) and other related literature to gather the views of practicing accountants. The reliability and comparability of the findings would be enhanced since the questions contained in the questionnaire were developed from existing instrument (Ezzamel, 1990). An overall response rate of 11 percent (251/2346) was obtained. In line with Burns and Yazdifar (2001), only responses from management accountants who had worked with the present organization for at least five years had been analysed. The survey results were tested for non-response bias using t-test (Edwards and Emmanuel, 1990). Consequently, no significant bias was detected.

Data Analysis and Findings

This section discussed the results for the descriptive analysis (respondents' and their organization), the correlation and regression analysis.

The Respondents' Organizations

Majority of the respondents (62 percent) or 110 were employed by organizations established locally and about 42 percent were involved in trading and services. The other respondents were employed by several industries such as consumer and industrial products. Majority of the organizations had total employees of less than 300. A large proportion of the organizations or 79 percent (193) had less than five qualified management accountants. More than half of the organizations or 64 percent had their management accountants centrally located along with other members of the finance function.

The Respondents' Background

CIMA members in the survey hold various job titles. Approximately 45 percent (109) of CIMA members were managers to various functional areas such as auditing, contract and procurement, information technology, operation, taxation and quality assurance and control. Whilst, the remaining respondents are known as accountants, consultants, directors, vice president, auditor, CEO, controller, executives and analyst of their organization. At least 55% of the respondents have been with their current organization for a minimum of five years.

Factors Drive Management Accounting Changes

15 factors were used in the questionnaire to measure changes on management accountants' tasks, skills and management accounting tools revealed a Cronbach's Alpha of 0.791. the Alpha value exceeded the minimum accepted level of 0.70 (Nunnally, 1978), hence indicating all the items that measure the importance of factors that drive changes in management accountant skills, tasks and management accounting tools were appropriate.

These factors were adapted to measure respondent's perception toward factors that drive management accountant to change. Table 1 show that large proportion of respondents (60 percent) has equally ranked both customer-oriented activities and core competency aims as the significant change drivers. This is followed with 58 percent of respondents choosing globalization as the vitally important factor that also drive the change. In addition, both information technology and corporate governance are believed as the key change drivers by 53 percent respondents. The external consultants' advice and takeover or merger factors are however ranked as the least important factors.

Table 1: Factors Drive Change Over the Past Five years (2000-2004)

Change drivers	Frequency	%
Customer-oriented activities	78	60
Core competency aims	78	60
Globalization	77	58
Information technology	70	53
Corporate governance	70	53
Organizational restructuring	59	45
New management styles	57	43
Quality-oriented initiatives	53	41
External reporting requirements	50	37
New accounting techniques	43	33
E-commerce/electronic business	35	27
Production technologies	31	23
New accounting software	31	23
External consultant's advice	26	20
Takeover/merger	22	17

According to Allott (2000), management accounting has constantly evolved as a result of the change in requirements of competitive business environment. Hence, focus of an organization has been geared towards customer-oriented activities in order to succeed in this era (Drury, 2000 and Hilton, 2000). Organizations seemed to focus more on their core business activities (e.g. Product quality and service) and outsourcing other activities in order to be competitive. In addition, due to intense international and local competition majority of the respondents' also perceived globalization to be of the important 'push factor'. Advance in information technology has contributed to increased capacity level and rate of provision of information amongst various levels and thus changes management accountant (Burns and Yazdifar, 2001). Concentration on their governance structure which focused on the importance of investors, regulators, creditors and customers have also contributed to management accounting changes.

Past management Accountant Tasks, Skills and Management Accounting Tools (2000-2004)

Past management accountant task and skills and management accounting tools are discussed in this section.

Management Accounting Tools

Table 2: Top Ten Vitally Important Tasks & Skills (2000-2004)

Top Ten tasks	Freq	%	Top Ten Skills	Freq	%
Business performance evaluation	106	80	Analytical/Interpretative	121	90
Cost/financial control	98	74	Professional/Ethical	106	79
Interpreting/presenting the management accounts	95	71	Strategic thinking	103	77
Planning/Managing budgets	87	69	Broad business knowledge	102	76
Cost cutting	80	61	Team-work	102	76
Profit improvement	79	63	Decision-making	101	76
Functional cost analysis	79	63	Leadership	97	72
Interpreting operational information	79	63	Integrating financial & non-financial information	92	69
Operational planning/projects /decision making	78	59	Presentational	88	66
Implementing business strategy	77	58	Written communication	84	63

Management Accountant Task and Skills

Table 2 shows that majority or 80 percent of the respondents perceived business performance evaluation as the top ranked task in the past five years. This is followed by 74 percent and 71 percent respondents who identified cost/financial control and interpreting/presenting management accounts as a vitally important management accountant tasks, respectively. In addition, planning and managing budgets was ranked fourth with 69 percent choosing this task. Implementing business strategy is however ranked the lowest in the top ten key tasks by 58 percent or 77 respondents.

As for management accountant skills, being able to analyze and interpret information for management is perceived as the most significant skill over the past five years. This is supported by almost 90 percent of the respondents. Management accountants are also perceived to be ethical in conducting their professional tasks. Strategic thinking and broad business knowledge on the organization are also considered essential skills of management accountants.

Table 3: Past Management Accounting Tools

Top Ten Tools	Frequency	%
Budgets	107	80
Variance analysis	81	61
Strategic management accounting	73	57
Rolling forecast	55	43
Standard costing	53	41
Activity-based-costing	45	34
Activity-based management	40	31
Balanced scorecard	40	31
Total quality management	37	29
Target costing	33	26

Budgeting is ranked at the top of the list with 80 percent or 107 of respondents' choices (Table 3). This is followed with variance analysis with 61 percent or respondents' choice. Subsequently, slightly more than half or 57 percent of respondents perceived strategic management accounting as a vital important tool. Additionally, rolling forecast and standard costing however were perceived as fundamentally important tools by only 43 and 41 percent of respondents respectively.

Expected Management Accountant Tasks, Skills and Management Accounting Tools by 2009

The expected management accountant tasks and skills are discussed in this section followed by the management accounting tools needed by 2009.

Management Accounting Tasks and Skills

Table 4 shows that 63 percent or 78 respondents have identified business performance evaluation as the highest rank expected task by 2009. This is followed with strategic planning and decision making by 54 percent respondents and followed by implementing business strategy as the most important tasks in the next five years. Traditional management accountant tasks such as cost and financial control seemed as vital tasks in the future.

A large majority, 73 percent or 95 respondents believed that analytical and interpretative are one of the most important skills management accountants' need to have in the next five years. This is followed by 69 percent having broad business acumen as the key skill to be acquired by most management accountants. Decision making skill is another important skill that is expected

Table 4: Management Accountant Vitrally Important Tasks & Skills (2005-2009)

Top Ten tasks	Freq	%	Top Ten Skills	Freq	%
Business performance evaluation	78	63	Analytical/Interpretative	95	
Strategic planning/decision making	66	54	Broad business knowledge	90	
Implementing business strategy	60	48	Decision-making	80	
Cost/financial control	58	47	Strategic thinking	76	
Planning/managing budgets	58	47	Leadership	68	
Profit improvement	54	44	Integrating financial & non-financial information	59	
Creation of value	40	40	Professional/Ethical	54	
Competitive intelligent analysis	48	39	Change management	43	
Risk Management	47	38	Presentational	42	
Cost cutting	39	32	Team-work	42	

out of future management accountants. Other most important skills expected are leadership qualities, able to integrate financial and non-financial information and being ethical.

Management Accounting Tools

Table 5 shows that strategic management accounting is expected to be the most popular and important tool over the next five years by 66 percent or 87 respondents. Additionally, variance analysis was chosen by 55 percent respondents and half of them believed that the Activity-Based-Costing are important by the year 2009. In a similar vein, value creation tools such as the Economic Value Added and Value management are perceived as amongst the expected most important tools by year 2009.

Comparisons between Past and Expected Tasks, Skills and Tools

Both past and future ranked business performance evaluation task as the first ranked task. This indicated that evaluating organizations performance is essential. However, strategic planning/decision making and implementing business strategy skills are expected to gain prominence in the future. External factors need to be incorporated in the business plan in order for organizations to remain competitive. Similarly, value creation and managing business risk skills are expected to become significant. However, some traditional tasks still remain important for the future.

Table 5: Management Accounting Tools & Techniques (2005-2009)

Management Accounting Tools	Frequency	%
Strategic Management Accounting	87	66
Variance analysis	72	55
Activity-based-costing	62	50
Standard costing	55	42
Rolling forecast	54	41
Total quality management	54	41
Economic value added	49	37
Value management	44	33
Six sigma	40	30
Just-in-time	39	30

Some of the management accountants' skills are maintained as before. For example, analytical and interpretative skill has been ranked first by both past and expected future years. Management accountants are required to be analytical and able to interpret information for management decision-making process. They are also expected to have a sound understanding of the business broad operation, environments, able to make decisions and strategic thinking for the organization. Decision-making skills seemed more important in the decision making process rather than just providing information only.

Strategic management accounting significance is expected to continue as it is perceived to be the most popular tool by 2009. Organizations have begun to realize the vital importance of strategizing business activities by incorporating external factors. Analyzing the variances between actual costs and standard costs are still seemed vital in the next five years. These tools are still required as they provided management with the best correction actions. In addition, value creation tools (economic value added and value management) are expected by organizations in the next five years as these tools could ease providing customer needs. In contrast, budget has been replaced with rolling forecast as the need for continuously updating targets seemed to become significant for future businesses to remain competitive.

In summary, traditional tools are still considered important along with new tools. The paradigm however, have shifted to more strategic oriented and value creating tools. This is due to the intense competition environment, which, have forced organizations to adopt new tools which able to add value to products and strategize business activities. This is supported by Yazdifar's (2003) studies that noted that organization success cannot be achieved only through excellent management accounting system. However, the organizations success depends heavily on the products and services that focus on meeting customers' needs.

Results of Correlation Analysis

The Pearson Coefficient Correlation was conducted between factors that drive change and tasks, skills and tools. The correlation coefficients were 0.299, 0.401 and 0.382 which indicate relatively weak positive relationships. Therefore, it can be concluded that factors that drive change are significantly associated with management accountant tasks and skills and management accounting tools. In other words, the identified factors have caused changes in the tools, tasks and skills in the past five years.

Table 6: Correlations between Factors and Tasks, Tools and Skills

		Summated score for factors that drive change from 15 items	Summated score for BPTask from 32 items	Summated score for CPTool from 19 item	Summated score for EPSkill from 20 items
Summated score for factors that drive Change from 15 items	Pearson Correlation		.288**	.382**	.401**
	Sig. (2-tailed)		.001	.000	.000
	N (132)				
Summated score for BP task From 19 items	Pearson Correlation				.291**
	Sig. (2-tailed)				.001

**Correlation is significant at the 0.01 level (2-tailed).

Correlation between the management accountant tasks and skills was also shown by the Pearson Coefficient Correlations.

Results of Regression Analysis

Since there are correlation between the factors and management accountants tasks and skills and management accounting tools, regression analysis was further conducted.

i. Investigation on Influence of Factors that Drive Change Towards Tasks

Table 7 presents the results of simple linear regression that was used to investigate how much the factors that drive change influence the management accountant tasks. Regressing factors (X_1) on tasks (Y) led to the following model:

Table 7: Simple Linear Regression Tests of Factors Influence Towards Tasks

Tasks = X ₀ + X ₁ Factor + K _i				
Expected sign	X ₀	X ₁	Model P-value	Adjusted R ²
Full sample (n = 129)	47.380 (0.000)	.0641 (0.000)	0.001	.074

X₀ = Constant; X₁ = Factors + K_i
Tasks = 47.380 + 0.641 FACTORS

In assessing how good was the model, as a whole, revealed that the model was significant (p-value = 0.001). In Addition to testing for the significance of the model, the coefficient of multiple determinations, Adjusted R₂, value was also sought. The value of 0.074 indicated that 7.4% of the variation in management accountant tasks is accounted for by the factors that drive change.

ii. Investigation on Influence of Factors that Drive Change Towards Skills

Simple linear regression was applied to determine how much factors that drive change influence management accountant skills. Table 8 shows the results of the analysis. Regressing factors (X₁), on skill (Y) led to the following model:

Table 8: Simple Regression Tests of Factors Influence Towards Skills

Skills = X ₀ + X ₁ Factor +K _i				
Expected sign	X ₀	X ₁	Model P-value	Adjusted R ²
Full sample (n = 129)	36.020 (0.000)	.463 (0.000)	0.000	0.178

X₀ = Constant; X₁ = Factors + K_i
SKILLS = 36.020 + 0.463 FACTORS

The goodness of the model was assessed, as a whole, revealed that the model was significant with p-value 0.000. In addition to testing for the significance of the model, the coefficient of multiple determination, Adjusted R² (0.178), value was also sought. The Adjusted R² value indicates 17.8% of the variation in skills is explained by the variable factors.

iii. Investigation on Influence of Factors that Drive Change Towards Tools

Table 9 tabulated the results of simple linear regression that was use to investigate how much the factors that drive change influence the management accounting tools. Regressing factors (X₁) on tools (Y) led to the following model:

Table 9: Simple Linear Regression Tests of Factors Influence Towards Tools

$$\text{Tools} = X_0 + X_1 \text{ Factor} + K_i$$

Expected sign	X_0	X_1	Model P-value	Adjusted R^2
Full sample (n = 129)	11.907 (0.007)	.734 (0.000)	0.000	0.199

X_0 = Constant; X_1 = Factors + K_i
 TOOLS = 11.907 + 0.734 FACTORS

In assessing how good was the model, as a whole, revealed that the model was significant (p-value = 0.000). Besides testing for the significance of the model, the coefficient of multiple determinations, Adjusted R^2 , value was also sought. The value of 0.199 indicated that 19.9% of the variation in management accounting tools is explained by the factors that drive change.

iv. Investigation on Influence of Management Accountant Skills Towards Management Accounting Tools

Table 10 shows the result of the simple linear regression of how much management accounting skills influence the management accounting tools adopted. Regressing skill (X_1) on tools (Y) led to the following model:

Table 10: Simple Linear Regression tests of skills Influence Towards Tools

$$\text{Tools} = X_0 + X_1 \text{ Skills} + K_i$$

Expected sign	X_0	X_1	Model P-value	Adjusted R^2
Full sample (n = 129)	16.350 (0.015)	.3920 (0.003)	.003	0.061

X_0 = Constant; X_1 = Factors + K_i
 TOOLS = 16.350 + 0.392 SKILLS

The goodness of the model was assessed as a whole, the results revealed that the model was significant (p-value = 0.000). In addition to testing for the significance of the model, the coefficient of multiple determinations, Adjusted R^2 , value was also sought. The value of 0.061 indicated that 6.1% of the variation in management accounting tools adopted is accounted for by the management accountant skills.

In summary, the results from the regression analysis indicated that the factors that drive change provide significant distinctive contribution to the management accountant tasks, skills and management accounting tools changes. Also, management accountant skills make a significant unique contribution to the prediction of management accounting tools adopted.

Conclusion and Future Research

Contemporary economic and fast-changing environment demands excellent changes from organization management accountants. Intense global competition, fast-changing technology and management of innovation require accurate and timely information to facilitate management decision-making in fashioning competitive advantage (Yazdifar, 2003). These factors have also been identified as important factors that contribute to changes in management accountant roles and tasks in Malaysia. Management accountants are expected to develop skills which able them to evaluate the business performance, participate in decision-making process and setting business strategies. Future management accountants are expected to be more analytical and able to interpret all situations. These expectations can only be met with broad business knowledge which could help them to provide more accurate, timely and relevant information towards decision-making process. Therefore, a technique such as strategic management accounting carries higher important weightage as against previous traditional methods. If organizations expect to enjoy competitive advantage, evaluations on the traditional methods to more relevant methods are therefore required. For example, rolling budget is introduced due to the limitation of the traditional budgeting system that is unable to reflect latest environmental changes.

Using simple regression analysis, the results indicated that; (1) the factors that drive change provide significant distinctive contribution to the management accountant tasks, skills and management accounting tools changes and (2) management accountant skills make a significant unique contribution to the prediction of management accounting tools. Overall, the results provided evidence that management accountants' task and skills, management accounting tools changed overtime which is in line with environmental changes.

Given that the study was conducted in Malaysia with different national culture as compared to countries in the west, the question as to the impact of culture on changes in management accountant roles and skills and management accounting tools adopted should be investigated. Also, further research on comparing both management accountants' opinion from Malaysia and other countries should be conducted. As the Adjusted R² is small (R² = 7.4% and 6.8%), there are about 93 percent - not explained. Numerous factors have not been picked-up by this study. Further study should consider many other variables to explain management accountant's tasks as skills and management accounting tools changes.

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Appendix

Table 1: Respondents Organisations

		Frequency	Percent
Country of origin:	Local	151	62
	Foreign	92	38
	Total	243	100
Trading/Services *Other industries		106	43
		139	57
	Total	245	100
Total Employees:	< 300	123	50
	300-600	46	19
	601-900	9	3
	901-1200	17	7
	>1200	52	21
	Total	247	100
No. of qualified MA staff:	<5	193	77
	<5	53	23
	Total	100	100
Physical location:	All centralized	153	64
	All decentralized	48	20
	Majority centralized	27	11
	Majority decentralized	10	4
	Total	238	100