

IPN Journal of Research and Practice in Public Sector Accounting and Management

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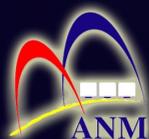
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Essential Traits, Relevant Skills and Ethical Values of Public Sector Forensic Accountants: An Empirical Survey.

Kalsom Salleh, Noni Abdul Razak, Usha Rani

Accounting Research Institute, Universiti Teknologi MARA, Shah Alam, Selangor

Email: kalsom816@salam.uitm.edu.my

Shahril Baharim

The National Accounting Institute, Accountant General Department, Malaysia

Email: shahril.baharim@anm.gov.my

Abstract

Forensic accountants play an important role in government where they need to look for signs of suspicious financial activity and fraudulent activities. According to Digabriele (2008), forensic accountants should possess various combinations of skill and knowledge including accounting, auditing, law, investigation techniques along with strong ethical values and soft skills. There is no research carried out in Malaysia which investigates on the essential traits, relevant skills and ethical values of forensic accountants in the public sector organisations. Therefore, the main objective of this empirical survey is to investigate the perceptions of public sector accountants who are employed by the Accountant General Department (AGD) in Malaysia's Ministry of Finance on the essential traits, relevant skills and ethical values of public sector forensic accountants. The scope of ethical values focused on the Islamic values and ethics to enhance the forensic accountant's skills in the AGD. Through statistical techniques such as factor analysis, t-test and ANOVA, the empirical data collected from survey questionnaires are tested to investigate the relationships among the study variables and to compare the perceived relationships among the different groups of accountants and accounting offices in the AGD with the objective to identify the top ten information on the traits, relevant skills and Islamic ethical values for the forensic accountants in the public sector.

Keywords: Traits, Relevant Skills and Ethical Values of Forensic Accountants, Public Sector Accountants, Malaysia

1. Introduction

Public sector governance requires controlling and accounting officers to discharge their responsibilities of stewardship of public resources by being open, accountable, prudent in decision making, managing and delivering results (Buang, 2008). The provision of the Financial Procedure Act 1957 also places a high premium for controlling officers to be personally responsible and accountable for propriety and accountability. Therefore, the need to be aware of fraud in all its manifestations is an essential component of good governance

in public sector.

Some of the most typical frauds in the government sector are bribery, false statements and false claims, embezzlement, conflict of interest, phantom contractor, collusive bidding, progress payment fraud, over or under invoicing, extortion, nepotism and favouritism, loss of revenues on account of tax or duty evasion, unfair recruitment, computer frauds and others (Buang, 2008). With the increase use of information technology systems in the function of government entities, the prevention of fraud, corruption and consequently the detection of such activities become more complicated (Buang, 2008).

Therefore, the use of forensic accounting procedures or services to detect financial reporting frauds and corruption practices should be increased in the public sector organisations by having and recruiting more forensic accountants. Forensic accountants should play a crucial role in the public sector where they need to look for signs of suspicious financial activities and frauds by individuals and management.

Although the main thrust of forensic accounting is involved with the financial aspects of an investigation, it encompasses all the necessary investigative expertise and experience such as interrogative skills, knowledge of law and rules of evidences, investigative proficiency and interpersonal skills (Syed Ahmad, 2008).

Forensic accountants utilise an understanding of business information and financial reporting systems, accounting and auditing standards and procedures, evidence gathering and investigative techniques, and litigation processes and procedures to perform their work (Crumbley & Smith, 2009). The skills and preparation for precision, attention to detail, objectivity, problem-solving ability, and strong oral and written communication skills are important for forensic specialists (Torpe, 2009). Forensic accountants are also required to see beyond financial records and to examine financial transactions related to a legal case or issue to help identify fraudulent or illegal activity (Torpe, 2009).

The introduction of Islamic values recently in the Malaysian public administration was intended to ensure greater accountability, integrity, transparency and good public governance in the public service delivery. The concept of Twelve Pillars is one of the government's efforts to absorb good values and ethics among public officers (Md Zain, 2008). Islam Hadhari Principles are another national approach of Islamic Civilisation being adopted by government that focus on the development of good practices towards ethical public services (Ahmad Badawi, 2006). In the case of Muslim accountants, the Quran highlights an important aspect of Islam's concept of leadership in forensic skills. In Islam, leadership is a trust and the job of the leader is to discharge this responsibility to the best of his abilities through personal sacrifice, courage and the ability to keep the group focused on the goal (Ismail, 2009).

1.1 The Problem Statement, Objectives and Scope of Research

Management of government entities should have the primary responsibility for the prevention, detection and investigation of fraud. All public officers have to be alert to the possibility of fraud and misconduct. To meet this responsibility, public officers must possess some knowledge of fraud indicators or symptoms that will enable them to evaluate accounting frauds/ errors and materially misstated financial statements (Buang, 2008).

There is no research carried out in a public sector accounting organisation in Malaysia which investigates on the relevant skills of forensic accountants as well as the focus on the Islamic values and work ethics to combat financial fraud in the public sector.

Therefore, the following are the objectives of this paper to investigate the perceptions among public sector accountants on the traits, relevant skills and ethical values of forensic accountants:

1. To identify essential traits for a forensic accountant in the public sector.
2. To identify the basic skills and the relevant enhanced skills for a forensic accountant in the public sector.
3. To determine whether Islamic ethical values (religiosity concept) can enhance the essential traits and relevant skills of a forensic accountant in the public sector.

The scope of this empirical survey research on the traits, relevant skills and ethical values of forensic accountants in the public sector will be focused on the perceptions among public sector accountants employed by the Accountant General Department (AGD) in the Ministry of Finance, Malaysia. Public sector accountants in the AGD are identified as the controlling officers and they are therefore required to provide forensic services for the prevention, detection and investigation of fraudulent activities and corruption practices in the government departments and agencies.

2. Literature Review And Research Model

Forensic accounting is defined as the application of financial skills and an investigative mentality to unresolved issues conducted within the context of the rules of evidence (Bolgna and Linquist, 1995). Syed Ahmad (2008) reiterated that it is the combination of the expertise in the accounting discipline and the investigation skills in which the findings are used to prosecute a suspect in the court of law.

Forensic accounting is more than counting numbers. It involves solving complex financial puzzles, particularly in fraud, insurance, disputes, and providing legal evidence for presentation in a legal forum (Grippio & Ibex, 2003). Activities include investigations of business information and data. These investigations can be used to establish employee fraud, provide litigation support such as substantiation of insurance claims, analysis of facts, formulation of questions and examination of accounting systems and also business valuations. The accountant

is already trained in many of the skills required for such tasks but needs some additional specialised skills to the skills of a traditionally trained accountant.

Digabriele (2008) had identified and suggested the relevant skills for forensic accountants from a nationwide survey on a random sample of 1,500 accounting academics, forensic accounting practitioners and users of forensic accounting services,. The relevant skills of forensic accountants as being identified by Digabriele (2008) are 1) deductive analysis, 2) critical thinking, 3) unstructured problem solving, 4) investigative flexibility, 5) analytical proficiency 6) oral communication 7) written communication, 8) specific legal knowledge and 9) composure.

Digabriele (2008) had surveyed practitioners, academics and users of forensic accounting services throughout the United States to determine whether there were differences in views of the relevant skills suggested in the practitioner literature. Digabriele had identified nine competencies of forensic accountants. Digabriele was able to group the competencies into those related to knowledge, ability and those related to performance. The knowledge and abilities component relates to whether an individual has the background knowledge and thinking skills to be effective whereas the performance component relates to the individual's ability to turn this knowledge and ability into an effective presentation. Results from Digabriele's study suggested that the three major stakeholder groups differ on all of the knowledge and ability items but agree on all of the performance items. His results also suggested that academics and practitioners have more agreement over the important forensic accountant skills than the users of forensic accounting services. His research revealed that practitioners and academics agreed that critical thinking, unstructured problem solving, investigative flexibility, analytical proficiency and legal knowledge are important skills of forensic accountants. The respondent groups did not differ on oral communication, written communication or composure rankings.

Another study carried out by American Institute of Certified Public Accountants (AICPA) in United states of America (USA) found that communications skills, the ability to simplify the complex and the ability to present opinions in a legal setting are critical to the effectiveness of the forensic accountants (Davies, Farrell & Ogilby, 2008). In other words, non-technical skills such as communication, problem solving and interpersonal skills were important for the accounting professionals besides the accounting and legal knowledge. This is proven with the results obtained by AICPA (USA) in 2008 from the survey questionnaires conducted on the characteristics and skills of the forensic accountants. The results obtained from the attorney, academicians and CPA (practitioners) revealed that analytical characteristics remain the foremost trait that forensic accountants are expected to possess. The results also revealed that communication skills, the ability to simplify the complex and the ability to present legal opinions in a legal setting are critical to the effectiveness of the forensic accountants.

Since Malaysia is an Islamic country with a multi-culture society, the practice of the Islamic Work Ethics is encouraged in the public sector organizations. From the Islamic knowledge and moral values, ethics in Islam is a reflection of good values whether in behavior, action, thinking or even heart. Ethics must be a good attitude, behavior and discipline in any spheres

of human living whether it can be seen or not by the people. To uphold the integrity of the Malaysian civil service, the government continuously emphasises the need for civil servants to maintain the trust that the public has in them through the inculcation of Islamic values to encourage ethical practices (Ismail, 2007). The following are the Islamic Values adopted for the practice of the Islamic Work Ethics (Ismail, 2007):

1. Trustworthiness
2. Sincerity
3. Accountability
4. Dedication
5. Gratefulness
6. Moderation
7. Consistency
8. Cleanliness
9. Discipline
10. Cooperation
11. Justice

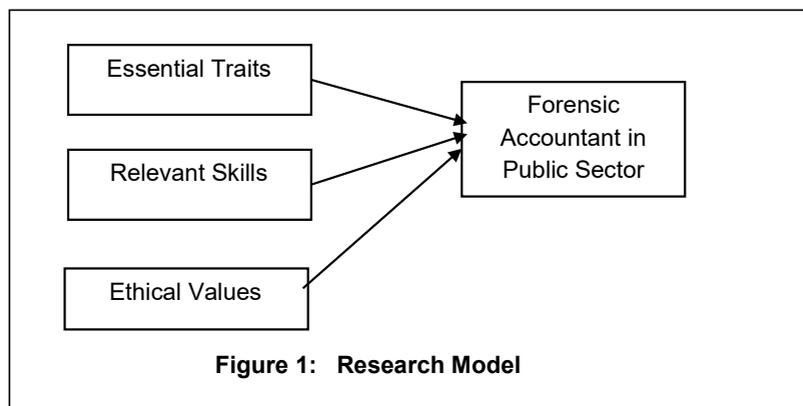
The twelve (12) pillars of ethical values for the civil service in Malaysia based on the concept of Islamic values established by the National Institute of Public Administration in Malaysia (Md Zain, 2008) are as follows:

1. Value of time
2. Success of Perseverance
3. Pleasure of Working
4. Dignity of Simplicity
5. Worth of Character
6. Power of kindness
7. Influences of Examples
8. Obligation of Duties
9. Wisdom of Economy
10. Virtue of Patience
11. Improvement of Talent
12. Joy of Originating

The former Prime Minister of Malaysia, Dato' Seri Abdullah Ahmad Badawi had introduced the Islamic Hadhari (Civilisation Islam) approach in 2004 which emphasizes civilization and is consistent with the tenets of Islam with a focus on enhancing the quality of life through the mastery of knowledge and the development (physical and spiritual) of the individual and the nation as a whole. Islam Hadhari summarizes ten (10) principles for the nation to take on global challenges in ensuring that its approach and implementation are acceptable to the multiracial, multicultural and multi religious society of Malaysia (Kumar & Che Rose, 2010). The following are the ten (10) principles of Islamic Hadhari for the Islamic work ethic that emphasized on the cooperation in work and consultation for creativity and innovation in the public sector (Badawi, 2006):

1. Faith and piety in Allah
2. A Just and trustworthy government
3. A free and independent people
4. A vigorous pursuit and mastery of knowledge
5. A balanced and comprehensive economic development
6. A good quality of life for the people
7. The protection of the rights of minority groups and women
8. Cultural and moral integrity
9. The safeguard of natural resources and the environment
10. Strong defenses capabilities

The following figure 1 is the research model for the empirical investigation of this study.



3. Research Methodology

A postal survey with the aid of a questionnaire was carried out in September 2010. A self-administered survey questionnaire was used in this study as the main research instrument to collect data from all public sector accountants employed by the AGD.

Part 1 of the questionnaire focuses on the profile of the respondents such as gender, age, education, professional membership, working experiences, job position and respondents' awareness on forensic accounting. In part 2 of the questionnaire, a list of line-items on the traits and skills of a forensic accountant was adapted from previous tested and validated survey instrument established by Davies, Farrell & Ogilby (2008) and Digabriele (2008). The ethics and moral values based on the Islamic concept and the work ethics of the AGD was added in part 3 of the questionnaire. In total, 84 line-items of the forensic accountant's characteristics were incorporated in the questionnaire of which 16 items were on the essential traits, 17 items related to basic skills, 13 items related to relevant enhanced skills, 33 items related to Islamic values and ethics and 5 items on the work ethics of the AGD. Pre-testing and pilot testing of the questionnaire were undertaken and some revisions were made prior to

the full administration of it.

A Likert scale was employed to obtain the perceptions of the respondents on the importance of traits and skills of forensic accountants in the public sector. The respondents were asked to state to what extent (from '1' to '7' where '1' is for 'not important at all', '2' is for 'not important', '3' is for 'less important', '4' is for 'neutral', '5' is for 'slightly important', '6' is for 'important' and '7' is for 'very important') the 46 line-items of traits and skills were important in determining the quality of the forensic accountant in the public sector.

Respondents were also asked to state the extent (using Likert scale) to which they agree with seven statements on 38 items related to Islamic values and work ethics which can strengthen the effectiveness of the forensic accounting services in the public sector of Malaysia. A '1' is given if they 'strongly disagree', a '2' if they 'disagree', a '3' if they 'slightly disagree', a '4' if they are 'neutral', a '5' if they 'slightly agree', a '6' if they 'agree' and '7' if 'strongly agree' with the statements.

Table 1 shows the reliability coefficients for the 84 question - items instrument to measure the identified seven study variables of forensic accountants in the public sector. The closer the Cronbach alpha is to 1, the higher the internal consistency reliability of a measure indicated by the study variable. Pallant (2001) suggested that the value for Cronbach alpha greater than 0.70 is preferred.

Table 1: Reliability Test of Survey Instrument

	Study Variables	Question Items	Reliability Statistics (Cronbach's Alpha)
1	Essential Traits and Characteristics	16	0.910
2	Core/ Basic Skills	17	0.924
3	Relevant Enhanced Skills	13	0.927
4	Islamic Values in Public Administration	11	0.909
5	Islamic Hadhari Principles towards Ethical Public Services	10	0.918
6	Twelve Pillars of Good Values for Public Officers	12	0.923
7	Work Ethics of the AGD for Excellent Accounting Services	5	0.799

4. Data Analysis And Discussions Of Results

4.1 Descriptive Analyses on the Profile of Respondents

Questionnaires were distributed to 731 respondents and 361 useable responses (49.4% response rate) were received. The details concerning the distribution and collection of questionnaires are provided in Table 2.

Table 2: Distribution and Collection of Questionnaires

Accounting Offices	Number of Questionnaires Distributed	Number of Questionnaires Returned and Analysed
Headquarter Offices (HQ)	206	96 (46.6%)
Branch Offices & Self Accounting Departments (Branch/SAD)	237	150 (63.3%)
Responsibility Centers at Ministries/ Government Departments (RC)	288	115 (39.9%)
Total	731	361 (49.4%)

Based on the descriptive statistics, about 67% of the respondents who completed the survey questionnaires were female and 33% were male accountants. About 64% of the respondents were between the ages of 24 and 33 years old and the balance 36% were between 34 and 59 years old. The mean age of respondents is 34 years old and the average working experiences of respondents in the AGD is seven (7) years with 30 years as the maximum work experiences and one (1) month is the minimum work experiences. The majority (75%) of the respondents was junior accountants and the remaining respondents (25%) were senior accountants (20%) and top management level of accountants (5%).

All respondents had at least graduated with a first degree in accounting (89.7%) and 2 respondents (0.6%) had obtained a professional degree in accounting i.e. MICPA and ACCA. However, 35 respondents (9.7%) had continued their education in Master in Accounting or Master in other related disciplines.

About 48.8 % or 176 respondents had registered with Malaysian Institute of Accountants (MIA) as Chartered Accountants, 3.8% or 14 respondents had also chosen to be member of other accounting professional membership such as MICPA, ACCA, CIMA and IIA. The non-member group of MIA was about 171 respondents (47.4%) who have less than 5 years working experiences.

In terms of awareness of forensic accounting among the surveyed public sector accountants,

about 98.3% of them have heard about forensic accounting either through seminar/conferences attended, internet, newspapers and education.

4.2 Inferential Analysis For Research Objectives

Data collected from the survey questionnaires were analysed using the statistical package for the social science (SPSS Version 17). Data were analysed using several statistical tests such as factor analysis and correlation test to explore the relationships between the study variables and using t-test and ANOVA to investigate the perceptions among public sector accountants on the possession of essential traits, relevant skills and Islamic ethical values for the forensic accountants in the public sector i.e. between junior (75%) and senior accountants (25%) and between headquarter office (26%), branch offices and self accounting offices (35%) and responsibility centers at Ministry & Government Departments (39%).

4.2.2 Factor Analysis, Independent Samples of T-Test and ANOVA for Group Comparisons

Factor analysis is used as a method of testing for the construct validity of each factor extracted from the 84 line-items of the survey questionnaire. With 361 respondents received from the survey questionnaire, factor loading of 0.40 is considered to be more appropriate to meet the minimal level of practical significance for this study (Tabachnick & Fidell, 2001). The Kaiser-Meyer-Olkin (KMO) which is more than 6 and Bartlett's test of sphericity which is large and significant (p -value < 0.05) are used as part of the appropriateness of data for Factor Analysis (Tabachnick & Fidell, 2001). For the purpose of this study, the 84 line-items of the questionnaire were subjected to principal components analysis with Varimax rotation. With the KMO index of 0.942 & Bartlett's test: 0.000, Eigenvalue: 55.943, p -value of 0.001 obtained, the results confirmed the seven (7) extracted study variables for this study are valid and are in conformity to the literature review and prior empirical evidences.

The following Table 3 shows the results of factor analysis on the respondents' perceptions or opinions for question-items from the entire set of variables of this study. Using KMO and Bartlett's test results for the goodness of data, the summarized results highlight the significant criteria of factor extractions and factor loadings based on the eigenvalue and percentage of variance explained for each factor or study variable extracted.

**Table 3: Summarised Results of Factor Analysis
– Goodness of Measures of All Study Variables**

Factors	Items	Factor Loading	KMO = 0.942	Eigenvalue	Percentage of Variance Explained	Cronbach's Alpha
1. Relevant Enhanced Skills	18	0.758 - 0.418		27.210	32.393	0.937
2. Islamic Pillars of Ethics	13	0.735 - 0.472		6.584	7.838	0.924
3. Essential Traits and aracteristics	16	0.671 - 0.472		3.580	4.261	0.942
4. Islamic Values for public ministration	12	0.743 - 0.418		3.176	3.781	0.918
5. Basic / Core Skills	11	0.651 - 0.496		2.389	2.844	0.904
6. Islam Hadhari Principles	9	0.777 - 0.400		2.083	2.480	0.914
7. Islamic Work Ethics	4	0.674 - 0.520		1.971	2.346	0.869

An independent samples t-test (test of differences in mean score) was conducted to compare the mean scores of all study variables between two different types of accountants i.e. senior and junior accountants. While, one-way between groups ANOVA with post-hoc comparisons is used to compare mean scores of perceived opinions of all study variables between three different types of accounting offices i.e. 1)headquarter office, 2)branch offices and self accounting offices, and 3)responsibility centers at Ministry & Government Departments.

4.2.3 Top Ten Information on the Essential Traits, Relevant Skills and Islamic Ethical Values for the Forensic Accountants in the Public Sector

The following section highlights the top ten information on the essential traits, relevant skills and Islamic ethical values for the forensic accountants in the public sector based on factors extracted (factor analysis) as perceived by two different types of accountants (t-test) and three different types of accounting offices (ANOVA) in the AGD.

i. Essential Traits of the Forensic Accountant

The results of Factor Analysis, T-Test and ANOVA in Table 4 indicate all respondents have collectively agreed and gave high ratings on the essential traits for forensic accountants in the public sector except there is a significant difference on the mean score of analytical issue from different groups of accountants and accounting offices. There is also a significant difference on respondents' perception in terms of detail-oriented level from the different accounting offices. The different background characteristics of respondents (senior and junior accountants) and different functional areas of accounting offices (headquarter offices and responsibility centers at different ministerial level) can therefore be considered as representative views of disagreements.

Table 4: Essential Traits of the Forensic Accountant

FACTOR ANALYSIS		MEAN	T-TEST Sig. (p < 0.05)	ANOVA Sig. (p < 0.05)
Essential Traits & Characteristics		Population	Accountants	Accounting Offices
Factor Extracted	Factor Loading	N = 361	Senior = 91 Junior = 270	HQ = 95 Branch/SAD = 126 RC = 140
KMO: 0.942 & Barlett's test: 0.000, Eigenvalue: 3.580 Cronbach Alpha = 0.910				
1. Analytical	0.671	6.45	0.010*	0.016* (HQ & RC)
2. Evaluative	0.669	6.34	0.161	0.387
3. Confident	0.666	6.28	0.937	0.585
4. Detail - Oriented	0.631	6.43	0.547	0.016* (HQ & RC)
5. Function well under pressure	0.631	6.23	0.319	0.570
6. Inquisitive (curious)	0.622	6.35	0.675	0.982
7. Ethical	0.607	6.47	0.885	0.280
8. Persistent	0.602	6.02	0.319	0.540
9. Generate new ideas and scenarios	0.592	6.12	0.982	0.542
10. Responsive	0.585	6.14	0.663	0.217
Note: The mean difference is significant * 5% level of significance test				

The above finding for the top ten information on the essential traits that forensic accountants in the public sector should possess is consistent with another study carried out by AICPA, USA (Davies, Farrell & Ogilby, 2008) which revealed that all three respondents i.e. CPA practitioners, attorneys and academician had agreed for the forensic accountants in the private sector need to be analytical, detail-oriented and ethical.

ii. Basic /Core Skills of the Forensic Accountants

The results of Factor Analysis, T-Test and ANOVA in Table 5 have also indicated that all respondents have collectively agreed and gave high ratings on the basic skills of the forensic accountants in the public sector. However, there is a significant difference on the mean score of the issue of solving the unstructured problem by respondents from different types of accounting offices. The different background characteristics and functional areas of accounting offices i.e. in the headquarter offices and responsibility centers at different ministerial level are expected to be the reasons for those significant differences of respondents' perceptions.

Table 5: Basic Skills of the Forensic Accountant

FACTOR ANALYSIS		MEAN	T-TEST Sig. (p < 0.05)	ANOVA Sig. (p < 0.05)
Basic/Core Skills		Population	Accountants	Accounting Offices
Factor Extracted	Factor Loading	N = 361	Senior = 91 Junior = 270	HQ = 95 Branch/SAD = 126 RC = 140
KMO: 0.942 & Barlett's test: 0.000, Eigenvalue: 2.389 Cronbach Alpha = 0.904				
1. Organise an unstructured situation	0.651	6.14	0.771	0.630
2. Solve unstructured problem	0.642	6.27	0.413	0.054* (HQ & RC)
3. Simplify the information	0.639	6.11	0.141	0.868
4. Solve structured problems	0.625	6.24	0.375	0.197
5. Synthesis results of discovery and analysis	0.624	6.23	0.266	0.389
6. Tell the story	0.563	5.78	0.992	0.938

7. See the big picture	0.554	6.28	0.100	0.882
8. Investigative intuitiveness	0.553	6.35	0.532	0.426
9. Think like the wrongdoer	0.536	6.04	0.817	0.747
10. Research Skills	0.500	6.15	0.285	0.962
Note: The mean difference is significant * 5% level of significance test				

Basic skills of forensic accountants in the public sector such as 1) simplify the information, 2) investigative intuitiveness, 3) synthesis results of discovery and analysis and 4) think like the wrongdoer are found to be consistent with the survey research carried out by AICPA, USA (Davies, Farrell & Ogilby,2008).

While, the effective oral and written communication are not in the top ten information from the present study as compared to the top ten information provided by the survey research carried out by AICPA, USA (Davies, Farrell & Ogilby,2008) for the forensic accountants in the private sector whose three respondents are from CPA practitioners, attorneys and academicians.

iii. Relevant Enhanced Skills of the Forensic Accountant

The results of Factor Analysis, T-Test and ANOVA in Table 6 showed that all accountants at junior and senior level in the AGD have collectively agreed and gave high mean score for those identified relevant enhanced skills for the public sector forensic accountants. However, both junior and senior level of accountants do not agree with the issue of internal controls to be associated with this study variable.

Table 6: Relevant Enhanced Skills of the Forensic Accountant

FACTOR ANALYSIS		MEAN	T-TEST Sig. (p< 0.05)	ANOVA Sig. (p < 0.05)
Relevant Enhanced Skills		Population	Accountants	Accounting Offices
Factor Extracted	Factor Loading	N = 361	Senior = 91 Junior =270	HQ = 95 Branch/SAD = 126 RC = 140
KMO: 0.942 & Barlett's test: 0.000, Eigennvalue: 27.210 Cronbach Alpha = 0.937				
1. Audit Evidence	0.758	6.52	0.475	0.459
2. Asset Tracing	0.712	6.29	0.844	0.120

3. Gen. Knowledge of rules of evidence and civil procedure	0.711	6.32	0.183	0.583
4. Knowledge of relevant professional standards	0.685	6.29	0.409	0.336
5. Knowledge of law enforcement	0.677	6.26	0.500	0.106
6. Fraud detection	0.656	6.57	0.653	0.246
7. Conflict negotiation and resolution	0.591	6.17	0.313	0.312
8. Internal Controls	0.579	6.42	0.024*	0.602
9. Interviewing Skills	0.574	6.17	0.102	0.416
10. Analyse and interpret financial statements	0.570	6.53	0.696	0.190
Note: The mean difference is significant * 5% level of significance test				

About eight (8) from the top ten information for the relevant enhanced skills for the forensic accountants in public sector are consistent with the top ten information reported by another study carried out by AICPA, USA (Davies, Farrell & Ogilby, 2008) for the forensic accountants in the private sector whose three respondents are from CPA practitioners, attorneys and academician.

iv. Islamic Pillars of Ethics

Through factor analysis, the construct validity of the concept of twelve pillars established for public officers was evaluated. The results of Factor Analysis, T-Test and ANOVA in Table 7 highlight the concept of twelve pillars of good values and ethics (Md Zain, 2008) among public sector accountants in the AGD. For the purpose of this study, all respondents have collectively agreed and gave high ratings on the **thirteen** Islamic pillars of ethics for the forensic accountants in the public sector. It is observed that two pillars i.e. the worth of character and the obligation of duties from the original concept of twelve pillars were dropped/excluded because the respondents perceived and strongly agreed that the three relevant aspects of work ethics in the AGD should be included to modify the twelve pillars concept as well as to enhance the forensic skills of public sector accountants.

Table 7: Islamic Pillars of Ethics for the Forensic Accountant

FACTOR ANALYSIS		MEAN	T-TEST Sig. (p < 0.05)	ANOVA Sig. (p < 0.05)
Islamic Pillars of Ethics		Population	Accountants	Accounting Offices
Factor Extracted	Factor Loading	N = 361	Senior = 91 Junior =270	HQ = 95 Branch/SAD = 126 RC = 140
KMO: 0.942 & Barlett's test: 0.000, Eigennvalue: 6.584 Cronbach Alpha = 0.924				
1. The joy of originating (nikmat mencipta)	0.735	6.02	0.385	0.471
2. The dignity of simplicity (kemuliaan kesederhanaan)	0.718	6.17	0.063	0.836
3. The power of kindness (kekuatan sifat baik hati)	0.703	6.10	0.554	0.899
4. The improvement of talent (peningkatan bakat)	0.696	6.11	0.967	0.283
5. The influences of examples (pengaruh teladan)	0.647	6.19	0.283	0.659
6. The success of perseverance (ketekunan membawa kejayaan)	0.612	6.44	0.616	0.685
7. The virtue of patience (keutamaan kesabaran)	0.610	6.39	0.898	0.557

8. Priority to the client (mengutamakan pelanggan)	0.597	6.31	0.512	0.744
9. Loyalty (kesetiaan)	0.552	6.45	0.904	0.345
10. Wisdom of economy (kebijaksanaan berhemat)	0.539	6.44	0.327	0.294
11. Teamwork (kerja berpasukan)	0.529	6.63	0.741	0.092
12. The pleasure of working (keseronokan bekerja)	0.521	6.39	0.651	0.217
13. The value of time (menghargai masa)	0.472	6.55	0.361	0.914
Note: The mean difference is significant * 5% level of significance test				

v. Islamic Values for Public Administration

The introduction of eleven Islamic values in public administration was intended to ensure greater accountability, integrity and transparency in the public services (Md Zain, 2008). For the purpose of the first top ten information, the results of Factor Analysis, T-Test and ANOVA in Table 8 showed that all accountants in the AGD have collectively agreed and gave high mean score for seven (7) Islamic values only and they perceived to include other Islamic values from other Islamic concepts such as the twelve pillars of public administration and Islam Hadhari perspective. However, there is a significant different in the mean score of respondents in the headquarter offices and responsibility centers in respect to the vigorous pursuit and mastery of knowledge to be acquired by the forensic accountants.

Table 8: Islamic Values for Public Administration for the Forensic Accountant

FACTOR ANALYSIS		MEAN	T-TEST Sig. (p < 0.05)	ANOVA Sig. (p < 0.05)
Islamic Values for Public Administration		Population	Accountants	Accounting Offices
Factor Extracted	Factor Loading	N = 361	Senior = 91 Junior = 270	HQ = 95 Branch/SAD = 126 RC = 140
KMO: 0.942 & Barlett's test: 0.000, Eigenvalue: 3.176 Cronbach Alpha = 0.918				
1. Justice (Keadilan)	0.743	6.67	0.434	0.174
2. Discipline (Disiplin)	0.706	6.65	0.061	0.737
3. Cooperation (Kerjasama)	0.662	6.55	0.645	0.301
4. Accountability (Akauntability)	0.662	6.74	0.513	0.348
5. Obligation of duty (Kewajiban menjalankan tugas)	0.638	6.67	0.551	0.205
6. Worth of Character (Ketinggian Peribadi)	0.558	6.56	0.302	0.190
7. Consistency (Konsistensi)	0.553	6.47	0.262	0.757
8. Dedication (Dedikasi)	0.537	6.45	0.175	0.150
9. Integrity (Integriti)	0.526	6.82	0.971	0.147
10. A vigorous pursuit and mastery of knowledge (Penguasaan ilmu pengetahuan)	0.519	6.61	0.548	0.018* (HQ & RC)
Note: The mean difference is significant * 5% level of significance test				

vi. Islam Hadhari Principles For Ethical Public Services

In respect to Islamic Hadhari Principles, the results of Factor Analysis, T-Test and ANOVA in Table 9 reveal that all respondents have collectively agreed for the adoption of this approach on the development of good practices towards ethical public services. The top nine information of Islam Hadhari Principles need to be integrated for the effectiveness of forensic accounting services or to strengthen the quality of the public sector forensic accountants are listed in Table 9.

Table 9: Islamic Hadhari Principles Approach for the Forensic Accountant

FACTOR ANALYSIS		MEAN	T-TEST Sig. (p < 0.05)	ANOVA Sig. (p < 0.05)
Islam Hadhari Principles		Population	Accountants	Accounting Offices
Factor Extracted	Factor Loading	N = 361	Senior = 91 Junior =270	HQ = 95 Branch/SAD = 126 RC = 140
KMO: 0.942 & Barlett's test: 0.000, Eigennvalue: 2.083 Cronbach Alpha = 0.914				
1. A good quality of life for the people	0.777	6.26	0.413	0.137
2. A free and independent people	0.777	6.10	0.895	0.232
3. A balanced and comprehensive economic development	0.774	6.22	0.075	0.599
4. Protection of the rights of minority groups and women	0.738	5.94	0.104	0.812
5. Safeguard of natural resources and the environment	0.726	6.00	0.253	0.630
6. Strong defences capabilities	0.660	6.14	0.963	0.651
7. Cultural and moral integrity	0.622	6.35	0.132	0.238
8. A just and trustworthy government	0.484	6.57	0.497	0.151
9. Faith and piety in Allah	0.400	6.75	0.646	0.187
Note: The mean difference is significant * 5% level of significance test				

vii. Islamic Work Ethics For Forensic Accountants

The top four information for the Islamic work ethics for forensic accounting services in the AGD are listed in Table 10. However, the results of Factor Analysis, T-Test and ANOVA in Table 10 show that there is a statistically significant difference in the mean scores among senior and junior accountants on the Islamic work ethics i.e. gratefulness and cleanliness. This could be likely due to their different level of authorization and leadership functions in the operational and decision making involvement.

Table 10: Islamic Work Ethics for the Forensic Accountant

FACTOR ANALYSIS		MEAN	T-TEST Sig. (p < 0.05)	ANOVA Sig. (p < 0.05)
Islamic Work Ethics		Population	Accountants	Accounting Offices
Factor Extracted	Factor Loading	N = 361	Senior = 91 Junior = 270	HQ = 95 Branch/SAD = 126 RC = 140
KMO: 0.942 & Barlett's test: 0.000, Eigenvalue: 1.971 Cronbach Alpha = 0.869				
1. Moderation (Kesederhanaan)	0.674	6.43	0.050	0.293
2. Gratefulness (Bersyukur)	0.668	6.13	0.046 *	0.734
3. Cleanliness (Kebersihan)	0.537	5.98	0.033*	0.615
4. Sincerity (Keikhlasan)	0.520	6.08	0.408	0.868
Note: The mean difference is significant * 5% level of significance test				

5. Conclusion And Recommendations

The results of this study are intended to provide an insight on the level of awareness and commitment by the government organisations in managing knowledge workers such as public sector accountants to be forensic accountants and in promoting ethical practices in forensic accounting services.

The main objective of this empirical survey is to investigate the perceptions of public sector accountants who are employed by the AGD in the Malaysia's Ministry of Finance on the

essential traits, relevant skills and Islamic ethical values of public sector forensic accountants. Through statistical techniques such as factor analysis, t-test and ANOVA, the empirical data collected from survey questionnaires are tested to compare among the different groups of accountants who are working in the different accounting offices in the AGD to identify the top ten information on the essential traits, basic and relevant enhanced skills and Islamic ethical values for the forensic accountants in the public sector.

The top ten information on the **essential traits that forensic accountants in the public sector** should possess are 1) analytical, 2) evaluative, 3) confident, 4) detail oriented, 5) function well under pressure, 6) inquisitive, 7) ethical, 8) persistent, 9) generate new ideas/scenarios and 10) responsive. The top ten information on the **basic /core skills of the public sector forensic accountants** are 1) organize an unstructured situation, 2) solve unstructured problem 3) simplicity the information, 4) solve structured problems 5) synthesis results of discovery and analysis 6) tell the story 7) see the big picture, 8) investigative intuitiveness, 9) think like the wrongdoer and 10) research skills. The top ten information of **relevant enhanced skills for the public sector forensic accountants** are 1) audit evidence 2) asset tracing, 3) general knowledge of rules of evidence and civil procedure 4) knowledge of relevant professional standards 5) knowledge of law enforcement 6) fraud detection 7) conflict negotiation and resolution 8) internal controls 9) interviewing skills and 10) analyze and interpret financial statements.

Under the concept of religiosity, the thirteen **Islamic pillars of ethics for the forensic accountants in the public sector** are 1) the joy of originating 2) the dignity of simplicity 3) the power of kindness 4) the improvement of talent 5) the influences of examples 6) the success of perseverance 7) the virtue of patience 8) priority to the client 9) loyalty 10) wisdom of economy 11) teamwork 12) the pleasure of working 13) the value of time. In addition, the top ten information on **Islamic values for public administration** which provide greater accountability, integrity and transparency in the public services are 1) justice 2) discipline 3) cooperation 4) accountability 5) obligation of duty 6) worth of character 7) consistency 8) dedication 9) integrity 10) a vigorous and mastery of knowledge. The top nine information of **Islam Hadhari Principles to strengthen the effectiveness of the forensic accountants** are 1) a good quality of life for the people 2) a free and independent people 3) a balanced and comprehensive economic development 4) protection of the rights of minority groups and women 5) safeguard of natural resources and the environment 6) strong defenses capabilities 7) cultural and moral integrity 8) a just and trustworthy government 9) faith and piety in Allah. Primarily, the top four information of **Islamic Work Ethics for the effectiveness of forensic accounting services** in the AGD are 1) moderation 2) gratefulness 3) cleanliness and 4) sincerity.

The overall result from this survey research as revealed by all public sector accountants in the AGD is concluded that the forensic accountants in the public sector have to be analytical, detailed-oriented and ethical. Thus, it is found that the conclusion for this study is consistent with the prior study carried out by AICPA in USA which revealed that all three types of survey respondents i.e. CPA practitioners, attorneys and academician had agreed for the forensic

accountants in the private sector to be analytical, detail-oriented and ethical (Davies, Farrell & Ogilby, 2008).

This empirical investigation also recommends that a forensic accountant in the public sector must be open to consider all alternatives, scrutinize the fine details and at the same time able to see the big picture of the issue or scenario based on the Islamic work ethics.

Therefore, job rotation programmes in the AGD can help the forensic accountants to gain more knowledge and experiences through working in different accounting offices and in different government agencies. This valuable working experience and exposure will help public sector accountants in the AGD to be more prepared to become a forensic accountant apart from attending trainings on the forensic accounting and auditing. It is also fundamentally necessary for newly appointed accountants in the AGD to have the required skills set of a forensic accountant. Furthermore, it is encouraged for the forensic accountants in the AGD to have a Certified Fraud Examiner (CFE) certificate for the forensic accounting services.

Forensic accounting and auditing should also be taught to the lower level of management staff in order to create awareness and to promote anti-fraud culture and anti-corruption practices in the AGD. All accounting departments in the AGD should have at least few forensic accountants or the department/unit of forensic accounting services with the purpose to prevent or to detect fraud cases or corruption practices.

Most of all, Islamic values and Islamic related work ethics should be promoted and practiced in order to make forensic accounting services a success in the AGD. All staff in the AGD should know their roles and carry out their tasks with integrity and ethical values based on the Islamic concept of work ethics.

References

- Ahmad Badawi, A. (2006), *Islam Hadhari – A Model Approach for Development and Progress*, MPH Publishing.
- Buang, Ambrin (2008), "Financial Fraud in the Public Sector: Detection and Preventive Measures", *National Seminar on Forensic Accounting and Financial Criminology*, 28 October 2008, Securities Commission, Kuala Lumpur.
- Bolgna, J.G. & Linquist, R. J. (1995), *Fraud Auditing and Forensic Accounting*, New York, Wiley
- Crumbley, D.L., & Smith, G.S. (2009), "How divergent are pedagogical views toward the fraud/ forensic accounting curriculum?", *Global Perspectives on Accounting Education*, 6, 1-24
- Davies, C., Farrell R. & Ogilby, S (2008), "Characteristics and Skills of the Forensic Accountant", *AICPA Report*
- Digabriele, J.A. (2008), "An Empirical Investigation of the Relevant Skills of Forensic Accountants", *Journal of Education for Business*, July/August 2008

Financial Procedure Act 1957

Grippio, F.J. & Ibex, J.W. (2003). Introduction to forensic accounting. *The National Public Accountant*, June, 4-8.

Md Zain, H. (2008), Pengarah, Intan Kampus Wilayah Tengah, Slide Presentations for Islamic Values and Ethics Workshop organized by National Institute of Public Administration

Ismail, A.S.H. (2009). 'Values and Ethics Towards Quality Public Delivery System of Malaysia: An Islamic Perspective'. *JurnalsyariahBARU.pmd*

Kumar, N. & Che Rose, R. (2010). "Examining the link between Islamic Work Ethics and Innovation Capability". *Journal of Management Development*, 29 (1), 79 -93

Pallant, J. (2006), *SPSS Survival Manual: A Step by Step Guide to Data Analysis using SPSS for windows(version 12)*: Open University Press, Buckingham, UK

Tabachnick, B.G & Fidell, I.S. (2001), *Using Multivariate Statistics (4th ed.)*: Allyn and Bacon, A Pearson Education Company, USA.

Torpe, E.M. (2009), "Careers in Forensics: Analysis, Evidence and Law", *Occupational Outlook Quarterly (Spring)*.

Syed Ahmad, S. N., (2008), Chapter 6, Developing Expertise in Forensic Accounting, Forensic Accounting Courses in Malaysia, ADB/OECD Anti Corruption Initiative for Asia and the Pacific.

Public Sector Accounting Research In Malaysia: Identifying Gaps And Opportunities

Nur Barizah Abu Bakar

Faculty of Economics and Management Sciences, International Islamic University Malaysia

Email: nur.barizah@gmail.com

Zakiah Saleh

Faculty of Business and Accountancy, University of Malaya

Abstract

This study aims to identify gaps that exist in academic literatures on public sector accounting (PSA) in Malaysian context. Sixty five journal articles and dissertations dated from year 1981 to 2010 available on the web were extracted. These literatures are then being classified into four classifications including the research setting, research area, research method, and journal type. Overall, the study found a scarcity of literature on Malaysian PSA. Specifically, it was found that the literatures do not sufficiently covers the various types of Malaysian public sector for example, statutory bodies, and different accounting issues such as accountability reporting. Furthermore, high proportion of studies used questionnaire survey as its data collection method and the preferred mixed method approach to research appears to be lacking. It is suggested that accounting researchers do take this challenge to explore the numerous research opportunities available in this area. This study would be resourceful for practitioners who needs to identify the research trends in public sector accounting in the context of a developing nation, particularly in terms of the issues covered and the type of public sector entities being researched. Knowing this would assist them into having a better insight and understanding on the developments of the researches in the area and more importantly to be able to later suggest future research areas that will result in them managing the public administration offices efficiently and effectively.

Keywords: accounting, government, literatures, Malaysia, public sector, review, studies

1.0 Introduction

Malaysia as a developing economy that aspires to become a developed nation by the year 2020 is challenged with various accountability issues in its public sector, such as issues pertaining to corruption and lack of public transparency. In this context, accounting will play a major role in the country's development and change agenda (Goddard, 2010). Academics, through their research activities, can in fact play an important role in providing useful inputs by identifying critical issues that need to be addressed by the public sector and subsequently recommends necessary measures to improve the public sector accountability. In this regard, Goddard (2010) has highlighted that developing countries have more reasons to conduct

public sector accounting (or PSA) research than that of developed ones, mainly due to the relatively higher reliance by the former on its public sector to drive the economy further in addition to the widespread accountability issues in these countries.

Despite the importance of conducting studies on emerging economies such Malaysian, prior studies have noted that most studies on public sector accounting (PSA) have been largely conducted in the context of more developed nations such as the UK, US, Australasian, and European countries. Studies on other countries in the world only represent a small proportion of studies on PSA (Broadbent & Guthrie, 2008). In response to this, this study is conducted to gather more insights on the extent of PSA research that has been conducted in one of the developing countries, namely Malaysia. Its main objective is to identify the existing gaps in Malaysian PSA research in various contexts, including the research settings, research areas and research methods. From this structured review, future studies are then recommended with the hope that the accounting academic researchers' community will be able to explore those opportunities and more importantly to be able to provide inputs for the government to achieve its developed nation aim.

In fulfilling the above objective, the paper first discusses prior PSA review studies that have been conducted. It then briefly delineates the research scope and methodology. Findings are then presented according to the various literature classifications. At the same time, proposals for future researches are discussed. The paper then concludes.

2.0 Prior Reviews Of PSA Literatures

There are several studies that reviewed the PSA literatures including Broadbent & Guthrie (1992), Shields (1997), Broadbent (1999), van Helden (2005), Broadbent & Guthrie (2008) and Gordon (2010). **Table 1** summarised these literatures and shows the scope of these papers in reviewing the extant literatures on PSA.

Table 1: Summary of prior reviews of PSA literatures

Studies	No. of articles	Journals	Area	Years	Settings
Broadbent & Guthrie (1992)	Not identified	AOS, FAM, CPA, AAAJ, other journals, books, monographs, conference proceedings	'Alternative' accounting in public sector	Most recent	Mainly UK and Australia
Shield (1997)	152	6 journals; AOS, AR, CAR, JAE, JAR, JMAR	PSMAR	7 years; 1990-1996	North America (mainly US) authors
Broadbent (1999)	16	All PSA papers in APIRA (1998) conference	All PSAR	1 year; 1998	Any country

Van Helden (2005)	55	5 journals: AAAJ, AOS, EAR, FAM, MAR (no US journal)	PSMAR	3 years; 1999-2001	International
Broadbent & Guthrie (2008)	452	8 journals; AAAJ, AF, AOS, BAR, CPA, EAR, FAM, MAR (exclude American positivistic journals)	'Alternative' accounting in public sector	15 years; 1992-2006	All (5 regions; North America, Australasia, UK, rest of Europe, others)
Goddard (2010)	188	9 journals: AAAJ, AOS, CPA, EAR, FAM, MAR, BAR, JAPP, RGNPA, JPBAFM	All PSAR	3 years; 2005-2007	All (US & rest of the world)

The abbreviations refer to Accounting, Organisation & Society (AOS), Financial Accountability & Management (FAM), Critical Perspectives on Accounting (CPA), Accounting, Auditing & Accountability Journal (AAAJ), Accounting Review (AR), Contemporary Accounting Research (CAR), Journal of Accounting & Economics (JAE), Journal of Accounting Research (JAR), Journal of Management Accounting Research (JMAR), Management Accounting Research (MAR), Accounting & Finance (AF), British Accounting Review (BAR), Journal of Accounting and Public Policy (JAPP), Research in Government and Nonprofit Accounting (RGNPA) and Journal of Public Budgeting, Accounting and Financial Management (JPBAFM).

As can be seen in **Table 1**, most of these review studies include only the leading academic journals in accounting. These studies have noted that PSA studies in the context of less developed countries (or LDC) have been very minimal. While it is inevitably true, it is argued that at the same time, PSA studies on LDC have not been sufficiently captured by these reviews due to the restriction imposed by these reviews regarding their journal selection. From casual observation, many accounting research, both in private and public sector, conducted in the context of LDC do not make much appearance in these reputable journals - for a reason that would make an interesting study by itself. Malaysia as one of those countries is facing similar situation, making this particular study important to provide a more inclusive overview on studies conducted in this country's context as it does not limit its review to only the leading accounting journal.

In terms of coverage of PSA areas, many of these studies have also limited its review on certain aspects of PSA. For instance, Shield (1997) and van Helden (2005) focus only on public sector management accounting researches (PSMAR), while Broadbent & Guthrie (1992) and Broadbent & Guthrie (2008) limits its review to 'alternative' accounting research, i.e. those that are not highly positivist. They also have limited the number of years of studies to be included in the review such as van Helden (2005) and Goddard (2010) who includes only literatures for three years, i.e. 1999-2001 and 2005-2007 respectively. Furthermore, a few of the earlier review studies only focuses on specific countries such as in the case of Broadbent & Guthrie (1992) and Shields (1997) who focused on only studies authored by European and

Australian authors as well as North American authors, respectively.

Therefore, for all the above reasons, this study is targeted to provide a more country-specific review study for new insights of PSA research in the respective countries and thus would usefully add to the existing PSA review literature. Specifically, this study will address the shortcomings of prior studies in reviewing PSA literatures in the context of a developing country, namely Malaysia. It will cover any journals available from the online database and search engines, and is not restricted to the years and areas of PSA research. Apart from that, it also includes unpublished research conducted by Master's and doctoral students on Malaysian PSA.

3.0 Research Domain And Methodology

The review cannot be exhaustive, and some restrictions need to be imposed to ensure the review is within a manageable proportion (Broadbent & Guthrie, 1992). This study therefore only includes studies that focuses on Malaysia either as the sole focus or as a comparative study with another country. It excludes studies which discuss Malaysia simply as a part of big group of countries such as Asia or developing countries. On sources of literature, the study includes only academic journal articles and dissertations. Books, book chapters, articles in professional magazines, conference papers were not included mainly because of its less academic nature. Even if some of these references may be an academic output, it would be too demanding for the author to identify this. Taking into account only academic journals is consistent with prior review studies such as Goddard (2010), Broadbent & Guthrie (2008), van Helden (2005) and Shield (1997). Additionally, this study includes Master's and doctoral thesis to enrich its findings as it is expected that there will be very limited number of published journal articles on Malaysian PSA as noted by prior review studies. Further, only articles in English and Malay language are included.

Online databases such as Emerald and ProQuest as well as GoogleScholar search engine have been used to search for literatures. For dissertations, the Malaysian Theses Online (MYTO) database which record all theses archived by the libraries of Malaysian public institutions of higher learning have been utilized. In doing the search, combinations of several keywords and phrase including 'Malaysia', 'public sector', 'government', 'federal', 'state', 'local government', 'account*', 'audit*', 'tax', 'performance', 'religious council', 'state', 'statutory bod*' have been used. Backward and forward search techniques have also been adopted to trace relevant prior and later literatures.

Once literatures are found, they are classified into various meaningful classifications. The classification criteria are: (i) research settings, (ii) areas of research, (iii) research method, and, (iv) nature of journal. Then frequency counts and percentages were computed to help analyzing the results. In the case of the first three classifications, whenever a literature falls into more than one category, the score of one (1) will be divided into the respective numbers of categories they fall into. For example, if a study covers two settings such as federal and state

government, 0.5 marks will go to each setting. If it covers three settings, a score of 0.33 will then go to each setting. This method of scoring, which is consistent with van Helden (2005), is primarily used to facilitate analysis through consistency in total number of studies (i.e.65).

4.0 Results And Discussions

4.1 Overall

From the search process, a total of 65 literatures spanning thirty years, from year 1981 to 2010 have been identified (refer **Appendix 1** for the full list). Apparently, more than half of them are journal articles (refer **Table 2**), almost one-third of the literatures are Master's theses and the rest being PhD thesis.

Table 2: Cross-tabulation of literature type and years/decade

Years	Journal articles	Doctoral theses	Master's theses	Total	Percentage (%)
1981-1990	3	0	0	3	4.5%
1991-2000	6	3	3	12	18.2%
2001-2010	26	8	16	51	77.3%
Total	35	11	19	65	100%
Percentage	53.8%	17%	29.2%	100%	
Average per year	1.16 ¹	0.36	0.63	2.15	

On average, approximately one journal article is published every year, one PhD theses is produced every three years and Master's theses is produced every alternate year. Overall, these numbers can be regarded as very small considering the number of accounting academicians cum researchers in Malaysian higher learning institutions, which is not less than 167². If we were to compare the number of Malaysian-context accounting studies on public sector to that of private sector, by assuming those researchers who do not do PSA research did on private sector accounting instead, we may find the number of PSA research is again relatively very small³. The small number of Malaysian PSA studies found here is also consistent with Goddard's (2010) and Broadbent & Guthrie's (2008) findings which noticed

1 Computed by dividing total publication (i.e.35) by 30 years.

2 This data is extracted from the Directory of Academic Profile, a website hosted by the Ministry of Higher Education. The directory contains information on personal data, areas of specialization, and contributions of academicians from institutions of Higher Learning throughout Malaysia. The web address is <https://www.mohe.gov.my/malimsarjana/index.cfm>

3 As an illustration, assuming each academic produce a minimum of 1 article per year, for a duration of 30 years there would be a total of 5010 (i.e. 30 multiply by 167 academics). Out of this, only 35 (or 1.2 per cent) are on public sector accounting.

that PSA studies in emerging economies only represent a small proportion of studies on PSA globally (Goddard, 2010; Uddin & Hopper, 2001). Most studies on PSA have been conducted in the context of more developed economies particularly US, UK, Scandinavian countries, Australasian and the rest of Europe (Broadbent & Guthrie, 2008; Goddard, 2010; van Helden, 2005). In the case of UK and Australasian, the high number of studies is reflective of the fact that these regions are the pioneers in public sector financial management reforms (Broadbent & Guthrie, 2008).

Analysis has also been made to observe the trends in PSA researches for the three decades (refer **Table 2**). The findings indicated an increasing number of researches for all reference types (i.e. journal articles, PhD and Master's theses), implying a growing and healthy interest among accounting researchers to explore PSA issues and therefore an encouraging and favorable trend. Findings also showed that most researchers are Malaysians or working in Malaysia with few exceptions such as Dean (1986a, 1986b), McKinnon (1996) and Mucciarone (2008). This is similar to observations made by van Helden (2008) where the location of research is identical to the country where the author or authors is currently employed.

4.2 Malaysian PSA research categorized by research settings

Literatures are then categorised into several categories according to the types of public entities being included in their studies. For this purpose, the classification is based on the three tiers of Malaysian government (Z. Ahmad, Mohammad, & Ahmad, 2009; Rauf, et al., 2008):

- i- Federal government (25 ministries)
- ii- State government (13 states)
- iii- Local government (97 local authorities)

The classification scheme is basically adapted from van Helden (2005) with modifications to suit the Malaysian context of public sector. It was found that public sector accounting research in Malaysia has covered all the three tiers of government, as follows;

- (i) federal governments
 - *ministries*
 - Ministry of Defense (i.e. Yahya, Nik Ahmad, & Abdul Hamid, 2008),
 - Treasury, Ministry of Finance (i.e. Dean, 1986a, 1986b; Doh, 1981; John Antony Xavier, 1996; John Anthony Xavier, 1996; Xavier, 1998),
 - *public enterprises - statutory bodies (SB)*
 - universities (i.e. Z. Azhar, 2005; Z. Azhar & Abdul Rahman, 2009; J. Ismail, 1999; Joseph, 2000; Tayib & Hussin, 2005; Wahid, 1997; Zakaria, Selvaraj, & Zakaria, 2006),
 - University Utara Malaysia (i.e. Mustafa, 2000),
 - Universiti Teknologi MARA (i.e. Abd Rahman, 2002),
 - an unnamed public utility enterprise (i.e. Mail, Mohamed, & Atan, 2006),
 - Employee Provident Fund (i.e. McKinnon, 1996),

- various/more than half (60 per cent) of statutory bodies (i.e. Azis, 2008),
 - *public enterprises - non-statutory bodies (NSB)*
 - Telekom Malaysia (i.e. I. K. Abdul Rahman, 1993; Md. Salleh, 2002; Mohamed, 1996)),
 - *independent agencies*
 - National Audit Department (i.e. Mat Daud, 2007),
 - Public Accounts Committee (i.e. Samsudin & Mohamed, 2009)),
 - *various agencies* (i.e. A. S. Yaacob, 2002)
- (ii) state governments
- *state governments*
 - Sarawak state government (i.e. Udin, 2002),
 - *state Islamic religious councils (SIRCs)* (i.e. Abd Majid, 2004; Abdismamad, 2008; A. R. Abdul Rahman & A.R, 1998; Md. Zain, 2005; H. Yaacob, 2006),
 - *state mosques* (i.e. Siraj, 2003; Siraj, Mohamed Ibrahim, & Sulaiman, 2007; Sulaiman, 2007; Sulaiman, Siraj, & Mohamed Ibrahim, 2008)
- (iii) local governments (i.e. Abdul Wahid, 2002; N. Ahmad & Abdul Aziz, 2005; Awg Drahan, 2002; Basnan, 2010; Joseph, 2010; Rohana Othman, 2005; Rohana Othman, Taylor, Sulaiman, & Jusoff, 2008; Singaravelloo, 2008; Tayib, Coombs, & Ameen, 1999; Tooley, Hooks, & Basnan, 2010; Zakaria, Zakaria, & Idris, 2007)

Some other studies have also combined the different types of public organizations. The combinations involves are; (i) federal and state governments (i.e. Mohamad, 2004; Mohamad & Karbhari, 2009; Mucciarone, 2008; Saleh, 2002; Saleh & Pendlebury, 2006), (ii) federal, state and local government (i.e. Johl, 1993), (iii) federal and other unidentified public sector entities (i.e. A. E. O. Nichol, 1997; E. Nichol & Taylor, 2001), and, (iv) state and local government (i.e. Ali, Gloeck, Ali, Ahmi, & Shahdan, 2007). The remaining studies have actually discussed Malaysian public sector in a general manner without specifying the different public sector groups (i.e. Abdul Khalid, 2008; H. N. Ahmad, Othman, Othman, & Jusoff, 2009; R. Azhar, 2009; Radiah Othman & Said, 2007; Saleh, 2007; Siddiquee, 2002, 2005; Siddiquee, 2006a, 2006b, 2010).

Table 3 shows the number of studies for each government tier and public sector group. From the statistic, overall (i.e. by referring to the total column), federal governments have been the most researched group (i.e. 43.8 per cent). This is then followed by state (21.5 percent) and local government (19.2 per cent). The quantum of research conducted on each tier of government generally reflects their ranks in the tiers and therefore it can be said that the higher the tier, the more importance attached by researchers to conduct research. This finding partly points out some inconsistencies with Goddard's (2010) findings. In his review of 188 articles published in nine leading journals which studied PSA in the context of various countries worldwide, he had found local government as the most researched setting, followed by the central government which comprises federal and state government. Broadbent &

Guthrie (2008) – who reviewed only ‘alternative’ PSA literatures - on the other hand found that most studies conducted have been of organisationally based or industry-specific studies such as schools and universities, partly influenced by the nature of that review itself which focused only on the alternative or contextual PSA studies (Broadbent & Guthrie, 2008). They also found state or provincial level of government as the least popular research setting. Overall, there seems to be a mixed result among review studies surrounding the research settings, depending on the context of the review itself.

Table 3: Number of studies based on research settings

Government tier	Subgroup	Freq.	Focus on one group only	Combine with other groups	Total	Percentage
Federal government	Ministries	7	25	3.5	28.5	43.8%
	Public enterprises: Statutory bodies	12				
	Public enterprises: Non-Statutory bodies	3				
	Independent agencies	2				
	Multiple entities	1				
State government	State government	1	10	4	14	21.5%
	SIRCS	5				
	Mosques	4				
Local government	N/A	11	11	1.5	12.5	19.2%
TOTAL		46	46	9	55	
Public sector in general/ non-specific	N/A	10	10		10	15.4%
TOTAL					65	100%

Note: If two settings are addressed, each will count for one half; if three topics are addressed, each will count for one third, etc. (van Helden, 2005). Most figures have been rounded up to the nearest number.

Further, within federal government, almost half of the research (42.1 per cent) were conducted on statutory bodies (refer **Table 3**) and out of this, highest proportion (75 per cent) was on universities (refer **Table 4**). They either cover many universities or specific universities such as Universiti Teknologi MARA. This supports international review studies such as Broadbent

& Guthrie (2008) who have also found high proportion of studies on universities. While these studies are indeed very useful in understanding the accounting and accountability issues in this type of institution and to provide inputs for these organisations to improve further, it can be regarded as less useful if one were to get some insights into the accounting and accountability aspects in the context of the larger body it constitutes, i.e. statutory bodies.

Table 4: Number of studies on federal government

Type of public sector entity	Public sector entity	Number of studies	Total	Percentage
Ministries	Ministry of Defence	1	7	28%
	Treasury, Ministry of Finance	6		
Public enterprise – Statutory bodies	Various statutory bodies	1	12	48%
	Universities	7		
	Universiti Utara Malaysia	1		
	Universiti Teknologi MARA	1		
	A public utility enterprise	1		
	Employee Provident Fund	1		
Public enterprise – Non-statutory bodies	Telekom Malaysia	3	3	12%
Independent agency	National Audit Department (NAD)	1	2	8%
	Public Accounts Committee (PAC)	1		
Various agencies		1	1	4%
TOTAL		25	25	100%

As such, it is argued that more comprehensive and inclusive research on statutory bodies is needed. This is because statutory bodies in Malaysia are in fact diverse in terms of its functions and roles, and universities are only one of the many types of statutory bodies available in Malaysia. There are at least five non-mutually exclusive types of statutory bodies in Malaysia including: (i) regulatory, (ii) research and education, (iii) sosioeconomy, (iv) public utilities, and, (v) business enterprises (Treasury of Malaysia, 2007). Universities would fall into the second category along with some other agencies which are not covered in any of the literatures identified, for instance the Forest Research Institute Malaysia (FRIM) and Academy of Science Malaysia (ASM). In terms of percentage, universities would only represent around 16 per cent (19 out of 118) of the total statutory bodies in Malaysia (National Audit Department Malaysia, 2008). For these reason, focusing on only universities definitely may not give a fair and comprehensive picture of accounting practices and accountability status in statutory bodies as a whole.

More importantly, there have been already numerous accounting and accountability problems

in Malaysian statutory bodies that have been officially documented in the annual Auditor-General reports. Also there were raising public concerns regarding the accountability of statutory bodies such as on the issue of financial mismanagement in the Council of Trusts for the Bumiputra (MARA) (Azizan, Loh, & Bedi, 2009; National Audit Department Malaysia, 2008) and alleged bankruptcy of Federal Land Development Authority (FELDA) (BERNAMA, 2010). Despite all these issues, studies on public sector accounting and accountability in Malaysia have remained limited and not much effort has been harnessed by researchers to address the highlighted issues in these entities.

Similarly, in the case of other settings such as ministries, there are only two ministries that have been the focus of researches (i.e. Ministry of Finance and Ministry of Defence), out of the total of 25 ministries (Government of Malaysia, 2010) in Malaysia. Therefore, research opportunities are so wide given the number of un-researched ministries and considering some are with controversial accounting and accountability issues such as in the case of the Works Ministry. As has been publicised in the public media, the Auditor-General report 2008 revealed there were major lack of proper planning that resulted to increased in projects' costs and unutilised facilities upon completion by the Works Ministry (National Audit Department Malaysia; The Star Online, 2009a) and the suspected fraud in the procurement of training equipment of the Ministry of Youth and Sports (Buang, 2008). This is despite the Works Ministry being the only ministry being rated the full five-star in a star rating assessment⁴ conducted by the Malaysian Administrative Modernisation and Management Planning Unit or MAMPU in year 2008. Studies could also be conducted on public schools and hospitals as what has been done by the more advanced countries (Ballantine, Forker, & Greenwood, 2008; S. Ismail & Pendlebury, 2006; Jones, 1999; Karsten, Visscher, Dijkstra, & Veenstra, 2010; Tooley & Guthrie, 2007) which would be under the purview of the Ministry of Education and the Ministry of Health respectively, given the huge amount of money allocated for them to manage these entities (Razak, 2009).

Studies on state government on the other hand, tend to focus on state Islamic religious councils (SIRCs) and state mosques. In Malaysia, accountability of state governments in handling public money is often becoming a national issue for example in the case of un-collected revenues by Seremban municipal council (The Star Online, 2009b, 2009c) and therefore researchers could see these highlighted issues as an opportunity to contribute to the government by embarking on related researches. Also, there have been no studies focusing on any of the state statutory bodies such as state museums, state libraries, or state economic development council (SEDCs). Although in these institutions there have not yet been any negative publicised issues of public accountability, it is best for researchers to play a more proactive role as part of their contribution to improve the public sector accountability in Malaysia. In developed countries such as New Zealand and UK, museums for example has been receiving growing interest by accounting researchers simply due to the nature of these organisations as the entity to preserve national heritage to be passed to future generations (Christensen & Mohr, 2003; Thompson, 2001; Wei, Davey, & Coy, 2008) and therefore should demonstrate certain level of accountability.

⁴ This star-rating system assessed agencies on their organizational performance culture

4.3 Malaysian PSA research categorised by research areas

Literatures have also been classified based on its areas of research, adapted from the call for papers advertisement of one of the prominent public sector conference (i.e. the International Conference on Accounting, Auditing, and Management in Public Sector Reforms) with its sixth conference to be held in Copenhagen in September 2010⁵. This classification – which comprises six categories – was deemed to be the most contemporary way to categorize the diverse research areas in PSA. For the purpose of this research and in order to enhance the meaningfulness and clarity of the categorization, an additional category was added - i.e. reporting - which categorized the classification into seven broad categories (i) management accounting and control, (ii) financial accounting, (iii) auditing, (iv) risk management, (v) changes in organizational culture, (vi) governance, and, (vii) reporting,

The findings showed that research areas and sub-areas/ topics covered by Malaysian PSA research include:

- (i) management accounting and control: *management accounting technique* (i.e. Z. Azhar, 2005; Z. Azhar & Abdul Rahman, 2009; Joseph, 2000; Wahid, 1997), *budgeting* (i.e. Dean, 1986a; Dean, 1986c; Doh, 1981; Mohamad, 2004; Mohamad & Karbhari, 2009; Siddiquee, 2010; Tayib & Hussin, 2005; John Antony Xavier, 1996; John Antony Xavier, 1996; Xavier, 1998; Yahya, et al., 2008), *management control* (i.e. Mail, et al., 2006; Rohana Othman, 2005; Radiah Othman & Said, 2007), *performance measurement and management* (i.e. Abd Majid, 2004; Abd Rahman, 2002; Abdul Khalid, 2008; R. Azhar, 2009; Z. Azhar & Abdul Rahman, 2009; Mohamad, 2004; Mucciarone, 2008; Singaravelloo, 2008), *financial management and internal control* (i.e. Abdisamad, 2008; McKinnon, 1996; Siraj, 2003; Siraj, et al., 2007; Sulaiman, 2007; Sulaiman, et al., 2008), *culture influence* (i.e. A. R. Abdul Rahman & A.R, 1998)
- (ii) financial accounting: *system effectiveness* (i.e. Mustafa, 2000), *accrual accounting* (i.e. Saleh, 2002, 2004; Saleh, 2007), *waqf accounting* (i.e. H. Yaacob, 2006), *regulatory* (i.e. Mustafa, 2000)
- (iii) auditing issues: *audit expectation gap* (i.e. Mat Daud, 2007), *internal audit* (i.e. H. N. Ahmad, et al., 2009; Ali, et al., 2007; Udin, 2002; A. S. Yaacob, 2002; Zakaria, et al., 2006; Zakaria, et al., 2007), *audit lag* (i.e. N. Ahmad & Abdul Aziz, 2005; Awg Drahman, 2002)
- (iv) reporting issues: *financial reporting* (i.e. Abdisamad, 2008; Abdul Wahid, 2002; N. Ahmad & Abdul Aziz, 2005; Awg Drahman, 2002; Johl, 1993; Md. Zain, 2005; Tayib, et al., 1999), *performance reporting* (i.e. Azis, 2008; Basnan, 2010; J. Ismail, 1999; Mucciarone, 2008; A. E. O. Nichol, 1997; E. Nichol & Taylor, 2001; Tooley, et al., 2010) and *sustainability reporting* (i.e. Joseph, 2010).
- (v) changes in organizational structure: *privatization* (i.e. I. K. Abdul Rahman, 1993; Md.

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More information on the conference is available at http://www.eiasm.org/frontoffice/event_announcement.asp?event_id=692

Salleh, 2002; Mohamed, 1996), *corporatization* (i.e. Mail, et al., 2006; Wahid, 1997), *New Public Management* (i.e. Abdul Khalid, 2008; Mohamad, 2004; Mohamad & Karbhari, 2009; Siddiquee, 2002, 2006b, 2010)

- (vi) governance issues (i.e. Rohana Othman, et al., 2008; Siddiquee, 2005, 2006a)
The above has been summarized in **Table 5** as below.

Table 5: Number of studies based on areas of research

Area	Topic	No. of studies	Total	Percentage
Management accounting and control	Management accounting technique	3	27.16	41.8%
	Budgeting	9.33		
	Management control	2.5		
	Performance measurement and management	5.83		
	Financial management and control	5.5		
	Culture influence	1		
Reporting	Financial reporting	5.5	13	18.8%
	Performance reporting	6.5		
	Sustainability reporting	1		
Auditing	Audit expectation gap	1	8	12.5%
	Internal audit	6		
	Audit lag	1		
Changes in organizational culture	Privatisation	3	7.83	12.2%
	Corporatisation	1		
	New public management	3.83		
Financial accounting	System effectiveness	1	6	9.2%
	Accrual accounting	3		
	Waqf accounting	1		
	Regulatory	1		
Governance		3	3	4.6%
Risk management		0	0	0%
Total		65	65	100%

Note: If two research areas are addressed, each will count for one half; if three topics are addressed, each will count for one third, etc. (van Helden, 2005). Most figures have been rounded up to the nearest number.

The most researched area has been management accounting and control (41.8 per cent). This

is consistent with the international development on PSA research as identified by Broadbent and Guthrie (2008). In their research, management accounting research represents 41.6 per cent (188 out of 452) of the total research published in eight selected journals for a 15-years span. In addition, consistent to the scenario of PSA research globally, this study found budgeting as the most common research topic within management accounting, followed by performance measurement (refer **Table 5**). These two topics appears to be able to attract the interest of international PSA researchers as evidenced in van Helden's review studies - with budgeting appears to be more popular than performance measurement. However, the most recent PSA review study (i.e. Goddard (2010)) witnessed an emerging international trend in PSA research whereby accountability and governance to be receiving the greatest attention from researchers – followed by budgeting and performance management. In Malaysian context, as evidenced in this study, contradictory results is found with regards to this topic (i.e. accountability and governance) whereby it does not seem to be sufficiently addressed here. It would be interesting to identify reasons for this but it is beyond the scope of this study therefore will not be discuss here.

Further, in Malaysia, budgeting has been consistently being receiving attention for all the three decades beginning 1981 (i.e. Doh, 1981) up to 2010 (i.e. Siddique, 2010). Whereas performance measurement and management (i.e. second most researched issue) seems to be the issue of the decade whereby most research from year 2001-2010 focus on this issue with its first debut dated in year 2002 (i.e. Abd Rahman, 2002).

Table 6: Cross-tabulation between research areas and years of studies

Areas Years	1981-1990	1991-2000	2000-2010	Total	Percentage
Management accounting & control	3	5.5	18.66	27.16	41.8%
Reporting	0	3	10	13	18.8%
Auditing	0	0	8	8	12.5%
Changes on organizational structure	0	2.5	5.33	7.83	12.2%
Financial accounting	0	0	6	6	9.2%
Governance	0	0	3	3	4.6%
Risk management	0	0	0	0	0%
Total	3	11	51	65	100%

Note: If two research areas are addressed, each will count for one half; if three topics are addressed, each will count for one third, etc. (van Helden, 2005). Most figures have been rounded up to the nearest number.

Studies on reporting also seem to gain much interest from Malaysian PSA researchers implying the importance and the need of transparency and accountability in the Malaysian public sector as attached by the researchers. Thus far, studies in this area tend to focus on financial reporting (i.e. Abdisamad, 2008; Abdul Wahid, 2002; N. Ahmad & Abdul Aziz, 2005; Awg Drahan, 2002; Johl, 1993; Md. Zain, 2005; Tayib, et al., 1999) and performance reporting (i.e. Azis, 2008; Basnan, 2010; J. Ismail, 1999; Mucciarone, 2008; A. E. O. Nichol, 1997; E. Nichol & Taylor, 2001; Tooley, et al., 2010). Other similarly important issues under the regime of reporting have not been well researched, for instance, the extent and quality of annual reporting which may cover numerous aspects of disclosure including both the mandatory and voluntary disclosures such as disclosure on budget information, key statistics, report on government assistance, benchmarking report, personnel information, remuneration of key personnel, internal control information, environmental and sustainability report, welfare performance and customer satisfaction indicator, to name a few, have not been discussed or researched. This kind of reporting which is more comprehensive than focusing on only certain aspects of reporting can be perhaps termed as 'accountability reporting'.

A number of international PSA studies have in fact highlighted the above issues in their studies (e.g. Carlin & Finch, 2007; Coy & Dixon, 2004; Farneti & Guthrie, 2009; Lim & Mckinnon, 1993; Robbins & Austin, 1986; Ryan, Stanley, & Nelson, 2002; Tooley & Guthrie, 2007; Wei, et al., 2008). Including these disclosure elements in the assessment of a quality annual reporting or 'accountability reporting' would make a more inclusive and comprehensive study on reporting compared to a study focusing on only financial or performance information per se. Through 'accountability reporting', public entities could demonstrate to the public and other stakeholders their accountability in managing public money and the public at the same time would be able to assess the agency's accountability in performing their prescribed duties. In short, being a public-funded body, reporting quality accountability information to the stakeholders is considered indispensable and for this reason it is necessary to have more researched delving into this issue in various settings.

Other issues that may be considered would be intellectual capital reporting (e.g. Schneider & Samkin, 2008) and public infrastructure asset disclosure (e.g. Lee & Fisher, 2004). It would also be beneficial to identify factors influencing disclosure (e.g. Janet, 2006; Smith, 2001) of the above mentioned information, which are still lacking among Malaysian PSA research. Identifying the determinants for disclosure could help in both ways, which is in proposing measures to promote greater disclosure as well as in help reducing the possibility of lack of disclosure. On a separate note, only four out of thirty five published Malaysian PSA articles are on reporting (refer **Appendix 1**).

Areas including auditing, financial accounting and governance, are the three emerging areas in the latest decade. There was no study conducted in the area of risk management. Further, among the less researched issues include the influence of culture on accounting, effectiveness of accounting system, regulatory issues and audit expectation gap.

Besides all of these, there are in fact numerous other PSA issues that may be explored in the context of Malaysian public sector. Many of these have in fact been conducted in the context of other countries and appeared to be meaningful studies. This would include compliance by public sector entities with accounting guidelines and regulations, benchmarking and performance improvement (e.g. Tillema, 2010), risk measurement and management (e.g. Umehara & Ohta, 2009), factors influencing performance (e.g. Cohen, 2008), XBRL and financial reporting (e.g. Kull & Abraham, 2008), internet financial reporting (e.g. Groff & Pitman, 2004; Laswad, Fisher, & Oyelere, 2005), financial management reform (e.g. Jonas, 2008), performance auditing (e.g. Athmay, 2008), performance reporting standard (e.g. Webster, 2007), accessibility of financial reporting on the internet (e.g. Styles & Tennyson, 2007) and financial resource erosion in government (e.g. S. Newberry, 2002; S. M. Newberry, 2002), to name a few.

In Malaysia, among the critical issues also include compliance to accounting guidelines and procedures. Many circulars, for example those related to accounting and accountability have been issued by the Treasury, Ministry of Finance as well as MAMPU, Prime Minister's Department and the Auditor-General Department. These circulars have been developed and issued by these authoritative bodies with the objective to ensure that public entities fulfill their accountability to the public. Therefore compliance is necessary otherwise the circulars would have been pointless due to lack of effective implementation. An example of a circular is the Treasury circular No.4/2007 (replacing Treasury circular no.15/1994), issued by the Malaysian Treasury to statutory bodies primarily to guide them on the preparation and presentation of financial statements and annual reports. There had been no study thus far conducted to assess the level of compliance to this circular although there had been one study (i.e. Azis, 2008) assessing the compliance level of the older or replaced circular. A fresh study therefore is certainly needed to gain insight on the accountability level of these bodies. These kinds of studies are important as it may help the public to assess the level of seriousness of public sector entities in ensuring a good governance and accountability system in their organization.

4.4 Malaysian PSA research categorized by methods adopted

To classify methods adopted by the literatures, this study only include journal articles due to the lack of full accessibility of the many of the thesis and therefore unable to confirm the method adopted. The classification schema is adapted from van Helden (2005) and Goddard (2010). In Goddard (2010), when a paper uses more than one method, it will be categorized according to the principal methods. In this study, the one mark belong to each paper are distributed or divided among or between the methods, similar to the scoring method used for research setting and research area. While other categories of method seem to be self-explanatory, it would be helpful to explain on a few terms. Analytic or reflection papers refer to those that critically appraise certain policies etc. general descriptions of institutional changes, using information about legislation and economic and financial developments (van Helden, 2005). Archival method on the other hand would include content analysis.

Table 7: Number of studies based on adopted method

Method	Frequency (one method)	Frequency (combine methods)	Total frequency	Percentage
Questionnaire survey	10	2.5	12.5	35.7%
Analytic/ reflection	11	0	11	31.4%
Interview	2	2.5	4.5	12.9%
Archival	4	0	4	11.4%
Case/field study	3	0	3	8.6%
Literature review	0	0	0	0.0%
Mathematical analyses	0	0	0	0.0%
Experiment	0	0	0	0.0%
Total journal articles	30	5	35	100.0%

Note: If two research methods are adopted, each will count for one half. Most figures have been rounded up to the nearest number.

From result in **Table 7**, questionnaire appears to be the most used method for data collection purpose with most studies (10/35) used it as the only method and others (2.5/35) used it together with interview. This result seems to contradict with Broadbent & Guthrie (2008) which found survey/questionnaire to be the least used method for 'alternative' PSA research across a 15-year period (i.e.1992-2006). In addition, analytical/ reflection studies have been the next most adopted approach (31.4 per cent) indicating the need for more empirical studies on Malaysian PSA research. The least used method appears to be case studies. This again contradicts with findings from a prior review study particularly by van Helden (2005) where he found case studies have been used in more than half (i.e.53 per cent) of literatures on public sector management accounting across three years (i.e.1999-2001), making it the most used method. Interviews on the other hand have been moderately used, somewhat inconsistent with the recent trend on international PSA studies as evidenced in Goddard's (2010) review which observed interview as the most adopted method On the other hand, content analysis, which was categorized as archival method, has only been used once. In the review study by Broadbent & Guthrie (2008) for example, content/ historical analysis have been used as much as case/field studies, which is the second most used method for 'alternative' PSA research. As we can agree, among the final outputs of accounting are the financial statements and annual reports. Annual reports and financial statements are also the key document for public entities to discharge its accountability. It is therefore argued that it is important to have more studies using content analysis to assess the quality of these documents produced by the different types of public entities. This may help them to improve their transparency and accountability as expressed to the public.

The results also show that there are only five or 14.3 per cent of the studies using a mixed method approach. All these studies combined questionnaire survey with interviews (i.e. Dean,

1986b; Mohamad & Karbhari, 2009; Siraj, et al., 2007; Sulaiman, 2007; Sulaiman, et al., 2008). Mixed method or multi-method approach to research is believed to be able to provide better insights and explanations of research findings. Similarly, it was argued that by having more than one paradigm or even interdisciplinary research would enhance knowledge discovery as it allows knowledge to be comprehended from various perspectives (Goddard, 2010; Merchant, 2008). For instance, integrating the functionalist with the alternative paradigms such as critical or radical give way to a more in-depth appreciation of the topic under study (Merchant, 2008). Looking at an issue from both accounting and political science or public administration viewpoint shall add towards better understanding of the subject. Therefore, it would be more advantageous for any research and particularly in this context, Malaysian PSA research to use a multi-method and multi-paradigmatic or even interdisciplinary approach to research, which appears to be lacking in the Malaysian PSA research arena. Future research may in fact combine, for instance, archival research with interviews, or perhaps archival combined with mathematical analyses or experiments, the two methods which are still in absence from the Malaysian PSA research landscape. Finally, there appear to be no literature review study available and therefore this study would serve as a groundbreaking effort for such studies.

4.5 Malaysian PSA research categorized by journal type

Next classification is based on the types of journal where the literatures were published. Journals have been categorised into two groups, i.e. accounting/business journals or other journals. Accounting/business journals here refer to journals that are regularly published accounting and business literatures. Other journals would include journals from other disciplines such as political science and public administration.

Table 8: Number of studies based on journal types

Journal type	Journal title	Freq.	Total
Accounting	International Journal of Public Sector Management	5	25
	Financial Accountability & Management	4	
	Journal of Financial Reporting & Accounting	3	
	Malaysian Accounting Review	2	
	Indonesian Management and Accounting Research	2	
	Journal of Modern Accounting and Auditing	1	
	Managerial Auditing Journal	1	
	Journal of Finance and Management in Public Services	1	
	Asia Pacific Business Review	1	
	Journal of Contemporary Issues in Business and Government	1	
	International Journal of Management Studies	1	
	Southern African Journal of Accountability and Auditing Research	1	
	International Review of Business Research Papers	1	
Revista Universo Contábil	1		

Non-accounting	Public Administration & Development	3	10
	Asian Social Science	1	
	American Journal of Islamic Social Sciences	1	
	Public Budgeting and Finance	1	
	International Journal of Interdisciplinary Social Sciences	1	
	International Public Management Review	1	
	International Journal of Public Administration	1	
	Asian Journal of Political Science	1	
TOTAL		35	35

Result shows that the number of literatures published in accounting/business journals are more than double than that of other journals. Still, given the size and importance of public services (Broadbent & Guthrie, 2008), as well as owing to the large number of accounting journals locally, regionally and internationally, publication of 28.6 per cent of PSA research in other journals could be an indication of marginalisation of PSA research in the accounting journals.

In the international context, similarly, Broadbent & Guthrie (2008) highlighted the marginalisation of PSA research in accounting journals. In their study, they expressed their disappointment as they found the paucity of PSA research published in other accounting journals besides the FAM - a journal dedicated to public services - and the AAAJ – a generalist accounting journal. In the context of Malaysia, thus far there had been no journal dedicated for PSA research. Having one would perhaps partly address the issue of marginalisation of accounting journals towards PSA research, particularly those related to developing countries such as Malaysia. It would also promote the dissemination of knowledge in this area and could possibly encourage more Malaysian PSA research to be conducted.

5.0 Conclusion And Limitations

The study in general provides evidence on the scarcity of literatures on Malaysian public sector accounting. From a search of literatures through online databases and the world wide web, the study was able to identify 35 journal articles, 11 doctoral theses and 19 master's theses produced for a duration of three decades, i.e. 1981-2010. On average, only one journal article was published every year, and one master's and doctoral thesis was produced every three and alternate years, respectively. Literatures have been categorised into four types of classifications, namely research settings, research areas, research method and journal types.

In general, all the three government tiers, i.e. federal, state and local governments have been researched with the federal governments been the most researched group, followed by the state and local government, indicating the higher the rank in government tier, the more importance attached by researchers in the need to conduct research on that setting.

Nevertheless, it was noted that in all settings, research have been limited and not inclusive nor comprehensive. As a case in point, studies on federal government do not sufficiently covers federal statutory bodies. Studies on statutory bodies are lacking and those available tend to focus only on universities, entities which partly represents only one of the five different types of statutory bodies in Malaysia, i.e. research and education category. A more inclusive study on statutory bodies would be very useful in understanding accounting and accountability aspects of these organisations. Similarly, studies on state governments have not been comprehensive where state statutory bodies such as museums, libraries and state economic development councils have been sidelined.

On research areas, management accounting appears to be the most researched areas particularly on the issues of budgeting and performance measurement whereas governance does not seem to be receiving much attention from researchers, in total opposite with the international development of PSA research. Reporting, although appear to be the second most researched area, again the issues covered tend to be rather limited in scope. Only financial and performance reporting have been addressed while other broader aspect of reporting such as annual and accountability reporting are still lacking.

Further, highest proportion of studies adopted questionnaire survey as its data collection method while case studies being the least used research method. Only a handful number of research adopted mixed method approach of research, a method which may be highly useful in gaining deeper insights into issues under study. There was also lack of multi-paradigmatic and interdisciplinary PSA research. Finally, PSA research does not appear to be well represented in accounting/business journals, implying a marginalisation of PSA research from the accounting journals.

As an additional note, casual observation indicates that among the reasons for the lack of interest among academic researchers to pursue this important area is due to perceived difficulties of getting the needed cooperation from public sector in order to collect the necessary data for the research. Although there have been no empirical data to support this, this is believed to be the main hindrance for accounting researchers to take up the many opportunities in this area. This by itself would make an interesting research area by future researchers. For example, studies in the U.S. have examined the accessibility of acquiring government financial information (Styles & Tennyson, 2007). Other reasons include the general public fear that additional information obtained from the public sector should be regarded as confidential and therefore should not be released. To the extent that this is regarded true, dissemination of research output would therefore be problematic for researchers.

As in any other studies, this study is subject to limitation. Literatures included are only those which abstracts are accessible from the web and thus the results presented may not accurately represent the whole population of available articles. Despite this limitation, it is hoped that this paper is able to provide a useful framework for future interested researchers and trigger and challenge more accounting researchers to explore this scare area for the benefit of the

Malaysian public sector, in particular and the other parts of the world, in general.

Bibliography

- Abd Majid, J. (2004). *Performance Measurement Of Malaysian Zakat Institutions : Perceptions Of The Senior Managers Of The Malaysian Zakat Institutions*. International Islamic University Malaysia.
- Abd Rahman, M. A. (2002). *Study Of Financial Performance Measurement Practices In Public Sector : A Case Study Of Universiti Teknologi Mara (UITM) Universiti Teknologi MARA Malaysia*.
- Abdisamad, B. (2008). *The financial control practices of zakat institutions in State Islamic Religious Councils in Malaysia*. International Islamic University Malaysia.
- Abdul Khalid, S. N. (2008). New public management in Malaysia: in search of an efficient and effective service delivery. *International Journal of Management Studies*, 15, 69-90.
- Abdul Rahman, A. R., & A.R, G. (1998). An interpretive Inquiry of Accounting Practices in Religious Organisations in Malaysia - Emergent Theoretical Perspectives. *Financial Accountability & Management*, 14(3), 183-202.
- Abdul Rahman, I. K. (1993). *Privatisation In Malaysia With Special Reference To Changes In Accounting Systems* University of Hull.
- Abdul Wahid, E. (2002). *Financial Reporting Of Negeri Sembilan Local Authorities : An Exploratory Study On Audit Report* Universiti Teknologi MARA Malaysia, Shah Alam.
- Ahmad, H. N., Othman, R., Othman, R., & Jusoff, K. (2009). The effectiveness of internal audit in Malaysian public sector. *Journal of Modern Accounting and Auditing*, 5(9), 53-62.
- Ahmad, N., & Abdul Aziz, A. (2005). Timeliness of Local Authorities' Financial Reports. *Journal of Financial Reporting and Accounting*, 3(1), 111 - 127.
- Ahmad, Z., Mohammad, J., & Ahmad, A. (2009). *The public sector accounting and accountability*. Kuala Lumpur: McGraw-Hill.
- Ali, A. M., Gloeck, J. D., Ali, A., Ahmi, A., & Shahdan, M. H. (2007). Internal audit in the state and local governments of Malaysia. *Southern African Journal of Accountability and Auditing Research*, 7, 25-57.
- Athmay, A.-A. A. R. A. A. (2008). Performance auditing and public sector management in Brunei Darussalam. *International Journal of Public Sector Management*, 21(7), 798 - 811.
- Awg Drahman, D. N. (2002). *Study On Audit Lag In Financial Reporting Of Sarawak Local Authorities* Universiti Teknologi MARA Malaysia.
- Azhar, R. (2009). *Adoption of Performance Measurement among Public Sectors in Malaysia*. University of Malaya.
- Azhar, Z. (2005). *Application Of Management Accounting Techniques In Malaysian Higher Learning Institutions : A Survey Of Practices*. Universiti Teknologi MARA, Shah Alam.
- Azhar, Z., & Abdul Rahman, I. K. (2009). Managerial performance measures in management accounting practices of Malaysian Institutions of Higher Learning. *Malaysian Accounting Review*, 8(1), 37-61.
- Azis, S. (2008). *The performance reporting practices of Malaysian federal government statutory bodies: An evaluation of accountability development*. International Islamic

University Malaysia, Kuala Lumpur.

- Azizan, H., Loh, J., & Bedi, R. S. (2009). Focus - Where's The Action? :
- Ballantine, J., Forker, J., & Greenwood, M. (2008). Public and private sector auditors and accruals quality in English NHS hospital Trusts. *The British Accounting Review*, 40(1), 28-47.
- Basnan, N. (2010). *An investigation into the performance reporting practices and accountability of Malaysian local authorities*. Massey University.
- BERNAMA. (2010). Felda to sue PKR members for RM200 million. *Malay Mail Online*. Retrieved from http://mmail.com.my/content/46511-felda-sue-pkr-members-rm200-million?quicktabs_2=1
- Broadbent, J., & Guthrie, J. (1992). Changes in the public sector: a review of recent "alternative" accounting research. *Accounting, Auditing & Accountability Journal*, 5(2), 3-31.
- Broadbent, J., & Guthrie, J. (2008). Public sector to public services: 20 years of "contextual" accounting research. *Accounting, Auditing & Accountability Journal*, 21(2), 129-169.
- Buang, A. (2008). *How National Audit Department plays its role in mitigating fraud and enhances the public accountability in Government Financial Management System* Paper presented at the ECONOMIC CRIME IN ASIA: A GLOBAL PERSPECTIVE: Dealing With Public Sector Fraud: Enhancing Integrity And Transparency In Government Financial Management.
- Carlin, T. M., & Finch, N. (2007). Turmoil in Government Disclosure: An Investigation of Budget Disclosures in Australia. *Journal of Business & Management*, 13(2), 97-113.
- Christensen, A., & Mohr, R. (2003). Not-for-profit annual reports: what do museum managers communicate? *Financial Accountability & Management*, 19(2), 139-158.
- Cohen, S. (2008). IDENTIFYING THE MODERATOR FACTORS OF FINANCIAL PERFORMANCE IN GREEK MUNICIPALITIES. *Financial Accountability & Management*, 24(3), 265-294.
- Coy, D., & Dixon, K. (2004). The public accountability index: crafting a parametric disclosure index for annual reports. *British Accounting Review*, 36, 79-106.
- Dean, P. N. (1986a). Assessing the performance budgeting experiment in four developing countries. [Article]. *Financial Accountability & Management*, 2(1), 1.
- Dean, P. N. (1986b). Programme and performance budgeting in Malaysia. [Article]. *Public Administration & Development*, 6(3), 267-286.
- Dean, P. N. (1986c). Programme and performance budgeting in Malaysia. *Public Administration and Development*, 6, 267-286.
- Doh, J.-C. (1981). Modernizing the Budget System: the Malaysian Experience. [Article]. *Public Administration & Development*, 1(4), 291-305.
- Farneti, F., & Guthrie, J. (2009). Sustainability reporting by Australian public sector organisations: Why they report. *Accounting Forum*, 33(2), 89-98.
- Goddard, A. (2010). Contemporary public sector accounting research – An international comparison of journal papers. *The British Accounting Review*, 42, 75-87.
- Government of Malaysia. (2010). Federal government machinery. Retrieved 19 August 2010, from <http://www.malaysia.gov.my>
- Groff, J. E., & Pitman, M. K. (2004). Municipal Financial Reporting on the World Wide Web. *Journal of Government Financial Management*, 53(2), 20-20.
- Ismail, J. (1999). *Accountability And Performance Indicators Of Malaysian Universities*.

- Universiti Teknologi MARA Malaysia.
- Ismail, S., & Pendlebury, M. (2006). THE PRIVATE FINANCE INITIATIVE (PFI) IN SCHOOLS: THE EXPERIENCES OF USERS. [Article]. *Financial Accountability & Management*, 22(4), 381-404.
- Janet, L. (2006). Performance reporting by Australian government trading enterprises: an empirical study 1998-2002. *Australian Accounting Review*, 16(2), 34.
- Johl, S. K. (1993). *Accountability in the public sector in Malaysia*. University of New England.
- Jonas, T. (2008). Reforming Financial Management at the DEPARTMENT of DEFENSE. *The Journal of Government Financial Management*, 57(3), 20.
- Jones, C. S. (1999). Developing financial accountability in British acute hospitals. *Financial Accountability & Management*, 15(1), 1.
- Joseph, C. (2000). *Management Accounting Practices In The Malaysian Public Universities*. Universiti Teknologi MARA Malaysia, Shah Alam.
- Joseph, C. (2010). *Sustainability reporting on Malaysian local authority websites*. Curtin University of Technology Perth.
- Karsten, S., Visscher, A. J., Dijkstra, A. B., & Veenstra, R. (2010). Towards standards for the publication of performance indicators in the public sector: the case of schools. [Article]. *Public Administration*, 88(1), 90-112.
- Kull, J. L., & Abraham, C. (2008). XBRL & Public Sector Financial Reporting. *Journal of Government Financial Management*, 57(2), 28-32.
- Laswad, F., Fisher, R., & Oyelere, P. (2005). Determinants of voluntary Internet financial reporting by local government authorities. *Journal of Accounting and Public Policy*, 24(2), 101-121.
- Lee, J., & Fisher, G. (2004). Infrastructure assets disclosure in Australian public sector annual reports. *Accounting Forum*, 28(4), 349-368.
- Lim, S., & Mckinnon, J. (1993). Voluntary Disclosure by NSW Statutory Authorities: The Influence of Political Visibility. *Journal of Accounting and Public Policy*, 12(1), 189-217.
- Mail, R., Mohamed, N., & Atan, R. H. (2006). Leadership Factors in Organizational Change Process: Observations from the Perspective of Management Accounting. *Journal of Financial Reporting and Accounting*, 4(1), 103 - 128.
- Mat Daud, Z. (2007). *The Study of The Audit Expectations Gap in The Public Sector of Malaysia*. University of Stirling, Scotland.
- McKinnon, R. (1996). The public management of national provident funds for state-led development: The case of Malaysia's Employees' Provident Fund. *International Journal of Public Sector Management*, 9(1), 44 - 60.
- Md. Salleh, J. (2002). *Privatisation Of Telekom Malaysia Berhad : Accounting And Reporting Change For The Period Of 1991 To 2000*. Universiti Teknologi MARA Malaysia, Shah Alam.
- Md. Zain, S. (2005). *Determinants of Financial Reporting Practices on Waqf by Malaysian's State Islamic Religious Councils*. International Islamic University Malaysia, Kuala Lumpur.
- Merchant, K. (2008). Why interdisciplinary accounting research tends not to impact most North American academic accountants. *Critical Perspectives on Accounting & Business Research*, 19(6), 901-908.
- Mohamad, M. H. S. (2004). *The impact of financial and managerial reforms on accounting*,

- effectiveness and performance measurement in Malaysian central government organisations*. University of Wales, Cardiff, Cardiff.
- Mohamad, M. H. S., & Karbhari, Y. (2009). The NPFM in Emerging Economies: The Modified Budgeting System (MBS) in Malaysian Government. *Indonesian Management and Accounting Research*, 8(1), 47-89.
- Mohamed, N. (1996). *Privatization of Malaysian telecommunications: accounting and reporting change*. University of Aberdeen.
- Mucciarone, M. A. (2008). *Accountability and Performance Measurement in Australian and Malaysian Government Departments*. Curtin University of Technology.
- Mustafa, H. (2000). *Measurement Of Integrated Financial Accounting System Effectiveness in University Utara Malaysia*. Universiti Utara Malaysia.
- National Audit Department Malaysia. *Reaksi terhadap Laporan Ketua Audit Negara 2008*.
- National Audit Department Malaysia. (2008). *Auditor General's Report: Federal Statutory Bodies for the year 2008*
- Newberry, S. (2002). Intended or Unintended Consequences? Resource Erosion in New Zealand's Government Departments. *Financial Accountability & Management*, 18(4), 309-330.
- Newberry, S. M. (2002). *New Zealand's Public Sector Financial Management System: Financial Resource Erosion in Government Departments*. University of Canterbury.
- Nichol, A. E. O. (1997). *Disclosure Of Performance And Accountability Information : The Malaysian Government Annual Reports* Curtin University of Technology.
- Nichol, E., & Taylor, D. (2001). Accountability and performance reporting in the Public Accounts of Malaysian government. *Journal of Contemporary Issues in Business and Government*, 7(2), 33-41.
- Othman, R. (2005). *Accountability And Levers Of Management Control In Local Government Departments In Malaysia : A Path Analytic Study Within A Contingency Framework*. International Islamic University Malaysia.
- Othman, R., & Said, J. (2007). Enhancing Control Through Participation: Issues of Conflicts in Public Sector Organizations. *Journal of Financial Reporting & Accounting*, 5(1), 71-86.
- Othman, R., Taylor, D., Sulaiman, M., & Jusoff, K. (2008). Perceptions of Malaysian Local Government Managers on Accountability Typology. *Asian Social Science*, 4(8), 55-63.
- Rauf, F. A., Yatim, N., Salleh, S. C., Yusoff, H., Poobalan, U. R., & Othman, R. (2008). *Public sector accounting: Malaysian context* (3 ed.). Selangor: Prentice Hall.
- The 2010 Budget speech (2009).
- Robbins, W. A., & Austin, K. R. (1986). Disclosure Quality in Governmental Financial Reports: An Assessment of the Appropriateness of a Compound Measure. *Journal of Accounting Research*, 24(2), 412-421.
- Ryan, C., Stanley, T., & Nelson, M. (2002). Accountability disclosure by Queensland local government councils:1997-1999. *Financial accountability and management*, 18(3), 261-289.
- Saleh, Z. (2002). *Governmental accounting in Malaysia*. University of Wales, Cardiff.
- Saleh, Z. (2004). Accruals Accounting in Government - Developments in Malaysia *Asia Pacific Business Review*, 12(4), 421-435.
- Saleh, Z. (2007). Malaysia governmental accounting: National Context and User Orientation. *International Review of Business Research Papers*, 3(2), 376-384.

- Saleh, Z., & Pendlebury, M. W. (2006). Accruals Accounting in Government – Developments in Malaysia. [Article]. *Asia Pacific Business Review*, 12(4), 421-435.
- Samsudin, R. S., & Mohamed, N. (2009). THE MAGNITUDE OF PUBLIC ACCOUNTS COMMITTEE'S (PAC'S) WORK IN REVIEWING AND REPORTING ON STATE GOVERNMENT'S FINANCIAL STATEMENTS. [Article]. *Malaysian Accounting Review*, 8(2), 1-15.
- Schneider, A., & Samkin, G. (2008). Intellectual capital reporting by the New Zealand local government sector. *Journal of Intellectual Capital*, 9(3), 456 - 486.
- Siddiquee, N. A. (2002). Administrative reform in Malaysia: Recent trends and developments. *Asian Journal of Political Science*, 10(1), 105 - 130.
- Siddiquee, N. A. (2005). Public Accountability in Malaysia: Challenges and Critical Concerns. *International Journal of Public Administration*, 28(1/2), 107-129.
- Siddiquee, N. A. (2006a). Paradoxes of public accountability in Malaysia: Control mechanisms and their limitations. *International Public Management Review*, 7(2), 43-65.
- Siddiquee, N. A. (2006b). Public management reform in Malaysia: Recent initiatives and experiences. *International Journal of Public Sector Management*, 19(4), 339 - 358.
- Siddiquee, N. A. (2010). Managing for results: lessons from public management reform in Malaysia. *International Journal of Public Sector Management*, 23(1), 38-53.
- Singaravelloo, K. (2008). *Measuring Performance Of Local Authorities Using Composite Performance Index And Perceived Performance Score* Universiti Putra Malaysia, Serdang.
- Siraj, S. A. (2003). *Financial management practices in state mosques of Peninsular Malaysia* International Islamic University Malaysia, Kuala Lumpur.
- Siraj, S. A., Mohamed Ibrahim, S. H., & Sulaiman, M. (2007). The financial management practices of state mosques in Peninsular Malaysia. *Indonesian Management and Accounting Research*, 6(2), 65-86.
- Smith, K. A. (2001). *Towards an understanding of the factors associated with municipal service efforts and accomplishments reporting: An investigation of economic and political incentives*. Unpublished Ph.D., University of Missouri - Columbia, United States -- Missouri.
- Styles, A. K., & Tennyson, M. (2007). The accessibility of financial reporting of U.S. municipalities on the internet. *Journal of Public Budgeting, Accounting & Financial Management*, 19(1), 56-92.
- Sulaiman, M. (2007). The internal control procedures of mosques in Malaysia. *Revista Universo Contábil*, 3(2), 101-115.
- Sulaiman, M., Siraj, S. A., & Mohamed Ibrahim, S. H. (2008). Internal control systems in West Malaysia's state mosques. *American Journal of Islamic Social Sciences*, 25(1), 63-81.
- Tayib, M., Coombs, H. M., & Ameen, J. R. M. (1999). Financial reporting by Malaysian local authorities: A study of the needs and requirements of the users of local authority financial accounts. *International Journal of Public Sector Management*, 12(2), 103 - 121.
- Tayib, M., & Hussin, M. R. A. (2005). Good Budgeting Practices in Malaysian Public Universities. *Journal of Finance and Management in Public Services*, 3(1), 41-51.
- The Star Online. (2009a, 26 October). A-G's 2008 Report Shows Project Delays, Lack Of Oversight Continue To Cost Govt Millions Of Ringgit. *The Star Online*. Retrieved from <http://thestar.com.my/news/story.asp?file=/2009/10/26/starprobe/4965804&sec=starprobe>

- The Star Online. (2009b). Johor charges inconsistent rates for raw water. *The Star Online*,.
- The Star Online. (2009c, 22 October 2009). Seremban fails to collect RM400K yearly. *The Star Online*,.
- Thompson, G. (2001). The Impact of New Zealand's Public Sector Accounting Reforms on Performance Control in Museums. *Financial Accountability and Management*, 17, 5-21.
- Tillema, S. (2010). Public sector benchmarking and performance improvement: what is the link and can it be improved? [Article]. *Public Money & Management*, 30(1), 69-75.
- Tooley, S., & Guthrie, J. (2007). Reporting performance by New Zealand secondary schools: an analysis of disclosures. *Financial Accountability & Management*, 23(4), 351-374.
- Tooley, S., Hooks, J., & Basnan, N. (2010). Performance reporting by Malaysian local authorities: identifying stakeholder needs. *Financial Accountability & Management*, 26(2), 103-133.
- Treasury Circular Number 4 of 2007: Guideline for Preparation and Presentation of Annual Reports and Financial Statements of Statutory Bodies (2007).
- Uddin, S., & Hopper, T. (2001). A Bangladesh soap opera: privatisation, accounting, and regimes of control in a less developed country. *Accounting, Organizations & Society*, 26(7-8), 643-672.
- Udin, J. (2002). *Internal Auditing - Public Sector Of The Sarawak State Government*. Universiti Malaysia Sarawak.
- Umehara, E., & Ohta, T. (2009). Using Game Theory to Investigate Risk Information Disclosure by Government Agencies and Satisfying the Public - The Role of the Guardian Agent. *IEEE Transactions on Systems, Man & Cybernetics: Part A*, 39(2), 321-330.
- van Helden, G. J. (2005). Researching Public Sector Transformation: The Role of Management Accounting. [Article]. *Financial Accountability & Management*, 21(1), 99-133.
- Wahid, S. (1997). *Corporatization : A Determinant Of An Activity-based Approach To Accounting And Management In Public Universities* Curtin University of Technology.
- Webster, A. (2007). We need more focus on service performance reporting standards. *Chartered Accountants Journal*, 86(10), 34-38.
- Wei, T. L., Davey, H., & Coy, D. (2008). A disclosure index to measure the quality of annual reporting by museums in New Zealand and the UK. *Journal of Applied Accounting Research*, 9(1), 29 - 51.
- Xavier, J. A. (1996). Budget reform - the Malaysian experience. [Article]. *Public Administration & Development*, 16(5), 485-501.
- Xavier, J. A. (1996). Budgetary control and management at the Malaysian central budget process-principles and practice. [Article]. *Financial Accountability & Management*, 12(4), 303.
- Xavier, J. A. (1998). Budget reform in Malaysia and Australia compared. *Public Budgeting and Finance*(Spring), 99-118.
- Yaacob, A. S. (2002). *Commitment towards Internal Auditors Association at Federal Agencies*. Universiti Utara Malaysia.
- Yaacob, H. (2006). *Waqf accounting in Malaysian state Islamic religious institutions: The case of Federal Territory SIRI*. International Islamic University Malaysia, Kuala Lumpur.
- Yahya, M. N., Nik Ahmad, N. N., & Abdul Hamid, F. (2008). Budgetary participation and performance: some Malaysian evidence. *International Journal of Public Sector Management*, 21(6), 658 - 673.

Zakaria, Z., Selvaraj, S. D., & Zakaria, Z. (2006). Internal auditors: their role in the institutions of higher education in Malaysia *Managerial Auditing Journal*, 21(9), 892-904.
 Zakaria, Z., Zakaria, Z., & Idris, D. M. (2007). The Role of Internal Auditors in Malaysian Local Authorities. *International Journal of Interdisciplinary Social Sciences*, 2(2), 237-244.

APPENDIX 1: List of literatures identified and its details

JOURNAL ARTICLES

No.	Studies	Journal	Type of public agency	Research area	Method
1	Tooley et al. (2010)	Financial Accountability & Management	Local government	Performance reporting	Questionnaire
2	Siddique (2010)	International Journal of Public Sector Management	Public sector as a whole	New public management (NPM), budgeting	Analytical
3	Ahmad et al. (2009)	Journal of Modern Accounting and Auditing	General	Internal audit	Questionnaire
4	Mohamad & Kahbhari (2009)	Indonesian Management and Accounting Research	Federal, state government	NPM, budgeting	Questionnaire, interview
5	Azhar & Abdul Rahman (2009)	Malaysian Accounting Review	Universities	Performance measurement (PM), MA technique	Questionnaire
6	Samsudin & Mohamed (2009)	Malaysian Accounting Review	Public accounts committee (PAC) - independent	Regulatory	Archival
7	Othman et al. (2008)	Asian Social Science	Local government	Accountability/governance	Questionnaire
8	Sulaiman et al. (2008)	American Journal of Islamic Social Sciences	State mosques	Internal control	Questionnaire, interview
9	Yahya et al. (2008)	International Journal of Public Sector Management	Ministry of Defence -federal	Budgeting	Questionnaire
10	Abdul Khalid (2008)	International Journal of Management Studies	General	NPM, PM	Analytical
11	Ali et al. (2007)	Southern African Jour of Accountability and Auditing Research	State and local government	Internal audit	Interview

12	Othman & Said (2007)	Journal of Financial Reporting & Accounting	General	Management control	Case study
13	Saleh (2007)	International Review of Business Research Papers	General	Accrual accounting	Archival
14	Siraj et al. (2007)	Indonesian Management and Accounting Research	State mosques	Financial management	Questionnaire, interview
15	Sulaiman (2007)	Revista Universo Contábil	State mosques	Internal control	Questionnaire, interview
16	Zakaria et al. (2007)	International Journal of Interdisciplinary Social Sciences	Local government	Internal audit	Questionnaire
17	Mail et al. (2006)	Journal of Financial Reporting and Accounting	A Public utility co. - previously SB	Mgmt control, corporatization	Case study
18	Siddique (2006)	International Public Management Review	General	Accountability/governance	Analytical
19	Siddique (2006)	International Journal of Public Sector Management	General	NPM	Analytical
20	Zakaria et al. (2006)	Managerial Auditing Journal	Universities-Public enterprise (SB)	Internal audit	Questionnaire
21	Ahmad & Abdul Aziz (2005)	Journal of Financial Reporting and Accounting	Local government	Audit lag in financial reporting	Archival
22	Siddique (2005)	International Journal of Public Administration	Public sector as a whole	Accountability/governance	Analytical
23	Tayib & Husin (2005)	Journal of Finance and Management in Public Services	Universities-Public enterprise (SB)	Budgeting	Questionnaire
24	Saleh (2006)	Asia Pacific Business Review	Federal and state government	Accrual accounting	Questionnaire
25	Siddique (2002)	Asian Journal of Political Science	General	NPM	Analytical
26	Nichol & Taylor (2001)	Journal of Contemporary Issues in Business and Government	Government, federal and others	Performance reporting	Content analysis – archival
27	Tayib et al. (1999)	International Journal of Public Sector Management	Local government	Financial reporting	Questionnaire

28	Abdul Rahman & Goddard (1998)	Financial Accountability & Management	State Islamic Religious Councils	Culture and accounting	Ethnography case studis
29	Xavier (1998)	Public Budgeting and Finance	Treasury - Ministry of Finance	Budgeting	Analytical
30	McKinnon (1996)	International Journal of Public Sector Management	EPF	Financial management	Analytical
31	Xavier (1996)	Public Administration & Development	Treasury - Ministry of Finance	Budgeting	Analytical
32	Xavier (1996)	Financial Accountability & Management	Treasury - Ministry of Finance	Modified Budgeting System	Analytical
33	Dean (1986)	Public Administration & Development	Treasury - Ministry of Finance	Budgeting	Questionnaire, interview
34	Dean (1986)	Financial Accountability & Management	Treasury - Ministry of Finance	Performance budgeting	Interview
35	Doh (1981)	Public Administration & Development	Treasury - Ministry of Finance	Budgeting	Analytical

DOCTORAL THESES

No.	Studies	Type of public agency	Area of Research	Method
1	Joseph (2010)	Local government	Sustainability reporting	Content analysis, interview
2	Basnan (2010)	Local government	Performance reporting	Questionnaire, content analysis, interview
3	Mucciarone (2008)	Federal, state government	Performance measurement and reporting	Content analysis, interview, questionnaire
4	Singaravelloo (2008)	Local government	Performance measurement	Questionnaire
5	Mat Daud (2007)	NAD - Federal independent agency	Performance audit expectation gap	Interview and Audit report analysis
6	Othman (2005)	Local government	Management control	Not known
7	Mohamad (2004)	Federal, state government	NPM, budgeting, performance measurement	Questionnaire, interview
8	Saleh (2002)	Federal, state government	Accrual accounting	Archival, questionnaire, interview
9	Mohamed (1996)	TM -Previously NSB	Privatisation	Case study
10	Johl (1993)	Federal, state, local government	Financial reporting	Content analysis
11	Abdul Rahman (1993)	TM -Previously NSB	Privatisation	Case study

MASTER'S THESES

No.	Studies	Type of public agency	Area of Research	Method
1	Azhar (2009)	Public sector in general	Performance measurement	Questionnaire
2	Azis (2008)	Federal statutory bodies	Performance reporting	Content analysis
3	Abdissamad (2008)	State Islamic Religious Councils	Financial control and financial reporting	Questionnaire

4	Yaacob (2006)	State Islamic Religious Councils	Waqf accounting practices	Case study, document review, interviews
5	Md. Zain (2005)	State Islamic Religious Councils	Financial reporting of Waqf (Endowment)	Questionnaire
6	Azhar (2005)	Universities-Public enterprise (SB)	Management accounting technique	Questionnaire
7	Abd Majid (2004)	State zakat institutions	Performance measurement	Not known
8	Siraj (2003)	State mosques	Financial management	Questionnaire and interview
9	Abdul Wahid (2002)	Local government	Financial reporting	Not known
10	Awg Drahman (2002)	Local government	Audit lag in financial reporting	Not known
11	Md. Salleh (2002)	TM -Previously NSB	Privatisation	Not known
12	Udin (2002)	Sarawak State Government	Internal audit	Not known
13	Yaacob (2002)	Federal agencies	Internal audit	Not known
14	Abd Rahman (2002)	UiTM - Public enterprise (SB)	Performance measurement	Not known
15	Joseph (2000)	Universities-Public enterprise (SB)	Management accounting	Not known
16	Mustafa (2000)	UUM - Public enterprise (SB)	Financial accounting system effectiveness	Not known
17	Ismail (1999)	Universities-Public enterprise (SB)	Performance reporting	Not known
18	Wahid (1997)	Universities-Public enterprise (SB)	Activity-based accounting & corporatisation	Not known
19	Nichol (1997)	Government, ministries & others	Performance reporting	Not known

Exploring End-Users Computing Satisfaction (EUCS) Towards the Government Financial and Management Accounting System (GFMAS)

Azleen Ilias, Mohd Zulkeflee Abd Razak, Siti Fara Fadila Abd Razak

College of Business and Accounting, Universiti Tenaga Nasional

Sultan Haji Ahmad Shah Campus

Pahang, Malaysia

Email: Azleens@uniten.edu.my / azleenilias@yahoo.com

Abstract

The purpose of this study is to examine the difference perception among end-users (gender, education background, position, year of service (tenure), and attending computerised accounting course). towards The Government Financial and Management Accounting System (GFMAS). GFMAS is one of Computerised Accounting System (CAS) which has been developed for Malaysian Federal Government particularly for Accountant General's (AG) Department. The research respondents for this study consist of two groups namely executive and non-executive of Accountant General Department staffs; 140 GFMAS's users. The dimension of Exploring End-Users Computing Satisfaction (EUCS) adopted from Doll and Torkzadeh (1988) and Chin and Lee (2000). In addition, this instrument is very useful in practice, not only for private sector but also for public sector. Indeed, this is an exploratory study in the public sector towards the achievement of the excellent and better performance. However, the results show no different perception among gender, education background, position, year of service (tenure), and attending computerised accounting course. Probably, the rationale behind this finding is that GFMAS is new for end- users and also to AG department. Since this system is relatively new compared to prior BAS (Branch Accounting System) which has been used more than 18 years old, it would not generate a difference of satisfaction among demographic variables. In addition, this small sample size may be jeopardizing the population of the end user among the AG departments. Although the results did not support the hypotheses, researchers suggest the study still need to be explore in future in order to improve the quality of accounting information due to some improvement in computerised accounting system.

Keywords: End-User Computing Satisfaction, Computerised Accounting System, Accounting Information System, End-User, The Government Financial and Management Accounting System (GFMAS) & Public Sector.

Introduction

Accounting Information System

Accounting is the service function that seeks to provide the users with quantitative information. On the other hand, AIS (Accounting Information System) is an information system that is

designed to make the accomplishment of accounting function possible. AIS processes data and transactions to provide users with the information they need to plan, control, and operate their businesses (Romney et al., 1997:2). Previously, AIS (Accounting Information System) were performed manually on recording, summarizing and validating of data associated with financial accounting, managerial accounting, and tax compliance issues (Hollander et al. 1996). Now, AIS (Accounting Information System) can be performed with the help of computers. Contemporary IS (Information System) cannot function without computers and other technical means to measure primary information, gather and register it in carriers, process and transmit it to consumers. For this reason computerized accounting system (CAS) or computerized information systems (CIS) are designed and implemented (Mahdi, S., Vahab., R., & Abdolkarim, M. (2010).

Accounting information plays an important role in the process of managing an enterprise's activity. In the last ten years, there has been an intensive process of implementing AIS in the world. These systems were implemented in large industrial and small trade enterprises. Later, implementation of AIS started in other enterprises and state institutions. The implementation of AIS is quite an expensive investment project for most Enterprises (Mahdi, S., Vahab., R., & Abdolkarim, M.,2010). Although the cost of AIS implementation is quite expensive, there also provide a lot of benefits. According to some researchers, AIS will help in improving performance measures and productivity. Gelinas (1990) considers the effectiveness of AIS as a measure of success to meet the established goals. The success of AIS implementation can be defined as profitably applied to area of major concern to the organization, is widely used by one or more satisfied users, and improves the quality of their performance. In addition, the quality of accounting information is also determined by other factors such as the level of primary information automation, functionality of computer software, integration of accounting and other types of economic information (Mahdi, S., Vahab., R., & Abdolkarim, M.,2010). Thus. the Usage of AIS or CAS or CIS is very crucial tool in producing useful and high quality information either in private or public organization.

Malaysian Government

Malaysian government is distributed into three tiers of government namely Federal Government, State Government and Local Government. The Federal Government is the highest tier, which comprises of ministries, departments and public enterprises. Second tier is State Government, which comprises of ministries, departments and public enterprises. The last tier of the government is Local Government comprises of city council, municipal council and district council. In addition, there are Statutory Bodies which are incorporated under respective acts and Government Linked Companies which are incorporated under the Companies Act 1965. Malaysia does not prepare whole of government account as each level of government is an accounting entity by itself and is subjected to different laws and regulations that are being enforced.

Public Sector Accounting

Public sector accounting practices in Malaysia comprises of three major components. First,

maintenance of books and records especially vot book as a financial record that must be kept by the government agencies for recording expenditures, liabilities, and changes in budget. Second, all public sectors organisations' accounts are required to be prepared in compliance with rules and regulations set by the Federal Constitutions, Financial Procedure Act 1957, Audit Act 1957, Treasury Instructions and Treasury Circulars. The last component is preparation of reports and statements to be laid in parliament for approval.

Since there are differences between the practices in the public and the private sectors, the application of the CAS in this organisation is also different from one to another. For instance, the private organisation utilizes the general ledger system and the accounting principles employed is based on accrual basis. However, the public organisations employ vot accounting system, which is based on cash basis. The financial management of the organisation is also related to budgeting using a code and warrant system (Statutory Bodies Act 1980 (Account and Annual Report) (Act 240)). Thus, it seems to be interesting to investigate the level of user satisfaction in government sector, since it is different as compared to the company or business organisation.

The emergence of the computerised system gives an impact to both users regardless in the private sector as well as in the public sector. Due to the claim that there is an advantage of ICT usage and application, the government steps forward to implement the CAS in most of the government departments. Subsequently, they are able to manage the increasing volume of the financial data transactions, which seem impossible to compile them manually or using outdated system. The implementation of CAS is believed to enhance the performance and productivity, which lead to better administration of financial and accounting management. The CAS does not provide the accounting report only, but it also enables the user to evaluate the output of the system and the system itself.

The size and the complexity of government functions and the demand for timely and accurate information are also necessitate the use of ICT in the area of record keeping functions by increasing the number of ICT systems. Recently, the AG Department has introduced the Standard Computerised Accounting System for State Government in Malaysia. This system will help the auditors to minimise their time in doing the audit since the preparation of the State Government Financial Statement will be computerized (Buang, 2007).

Besides, AG Department has streamlined transactions towards accrual processing by considering the process of refinement to align cash accounting used by the system with accrual accounting (Pelan Strategik Jabatan Akauntan Negara Malaysia 2008-2012 (2008). Accrual accounting, previously thought to be only suitable in the private sector, has been seen to be an alternative for better reporting of government activities (Zakiah, 2007). In fact, the accrual accounting has been adopted in the governments of several countries including Australia, New Zealand and the United Kingdom. The adoption and use of accrual accounting in Malaysia is seen feasible as the privatisation and corporation of major government projects has proven to be successful. The adoption of full accrual accounting system can show precisely

the true financial position of the public sector agencies (Buang, 2007). Thus, having a good financial or computerised accounting information system will increase the performance of an organisation. Eventually, this enables the public sector to increase productivity and efficiency while improving the service quality to their stakeholders and customers.

The Government Financial and Management Accounting System (GFMAS)

The Accountant General's (AG) Department has begun its operation since 1946 headed by Accountant General as Chief Accountant of Federal Government. This department is responsible to manage the Federal Government's consolidated fund and to formulate government accounting policies. In its continuous efforts towards becoming a leading organization in accounting services and to fulfill e-government requirement, the department has been re-engineering and developing its new accounting system to replace its previous system which is 18 years old.

The new application system is known as Government Financial and Management Accounting System or GFMAS was developed in year 2005 and began its operation in 2006 at 25 AG branch offices together with 10 self-accounting departments. This system will enhance operational efficiency and effectiveness to enable AG Department to deliver value-added service especially to Federal Government. This system also will be able to capture accounting transactions and prepare financial statements based on accrual basis of accounting. In order to ensure the effectiveness of the project, The GFMAS Project Management team is adopting the Accelerated System Application Program (ASAP) methodology to manage the implementation activities and deliverables of the project.

GFMAS has been developed with several objectives. First is to improve services quality of AG Department through the usage of the latest information technology application. Second, it may provide a standard mechanism to monitor all government accounting transactions. Third, due to problems arose from the legacy or existing government accounting system, GFMAS emerges to overcome these problems and setbacks. Finally, GFMAS could assist AG Department in providing value added services to government and its agencies in the accounting and financial matters (Kok Ming, 2006).

Obviously, the current move to GFMAS is viewed as an approach to enhance government payment process and accounting for the government's receipts in a fast and efficient manner. In fact, this is in line with AG's Department tagline "Excellent Accounting at Your Service". GFMAS is an integrated system which is capable of allowing acceleration in financial planning, budget control and government accounting. It combines all the accounting functions that cover payment, receipts, remuneration control, unclaimed monies, government loans, loans and advance payment to public sector personnel, investment and preparation of the Public Accounts in one integrated platform.

With this new system, a data warehouse was established called the Business Warehouse (BW). This data warehouse represents the central data repository for the public sector accounting systems managed by AG's Department. The initiative to move from older system to a

new GFMAS is an attempt to improve the accounting and financial management in the public sector's departments. At the same time, this move is also seen to be an attempt to increase the quality of data produced and the performance of the accounting systems (Abd Rahman, 2008).

Legacy System -Branch Accounting System (BAS) vs. GFMAS

Prior to the launching of GFMAS, AG Department has utilized Branch Accounting System (BAS) for over 18 years. Technologically, BAS has been developed based on mainframe system. Thus, neither the system is fully integrated with the other department nor with module itself. Figure 1 below depicts BAS Accounting System Flow.

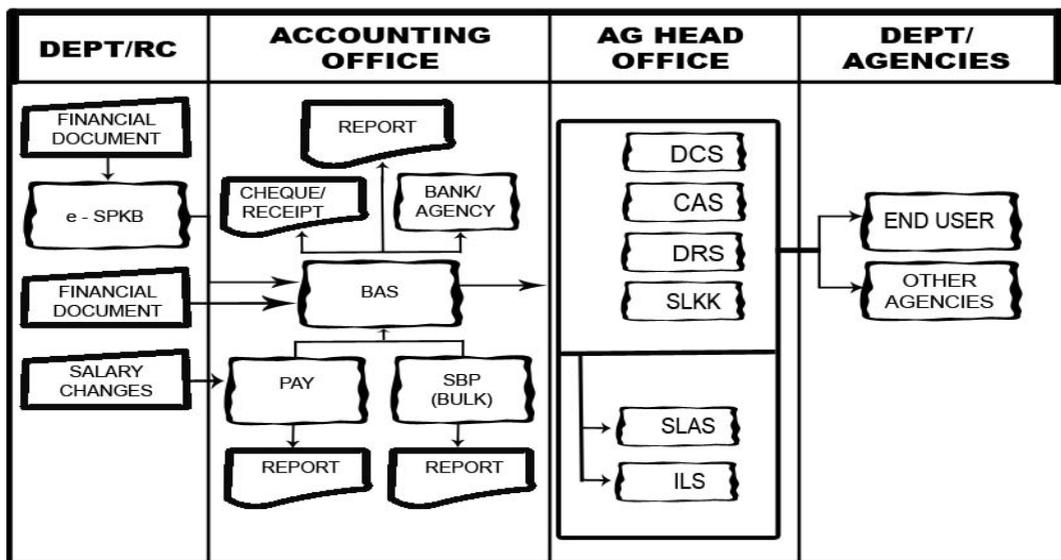


Figure 1: BAS Accounting System Flow

From the workflow or work process point of view, BAS user should complete the task according to the batch. Moreover, the user performs a repetitive routine work which required manual checking process. Since there were so many manual involvements, this in turn has created high risk in erroneous and negligence. Consequently, this has resulted in shortage of career development among employees since they are constantly busy with the routine manual tasks rather than formulating the strategic planning for the department, system and also career advancement (Kok Ming, 2006).

As a comparison, GFMAS as presented in Figure 2 below has been developed based on web-enabled system. This foundation has enabled GFMAS to overcome the problem whereby it has allowed more integrated data to fulfill demand from AG customers and stakeholders. In addition, unlike the mainframe used under BAS system which was obsolete, GFMAS has been provided by scaleable system which can be upgraded in the future.

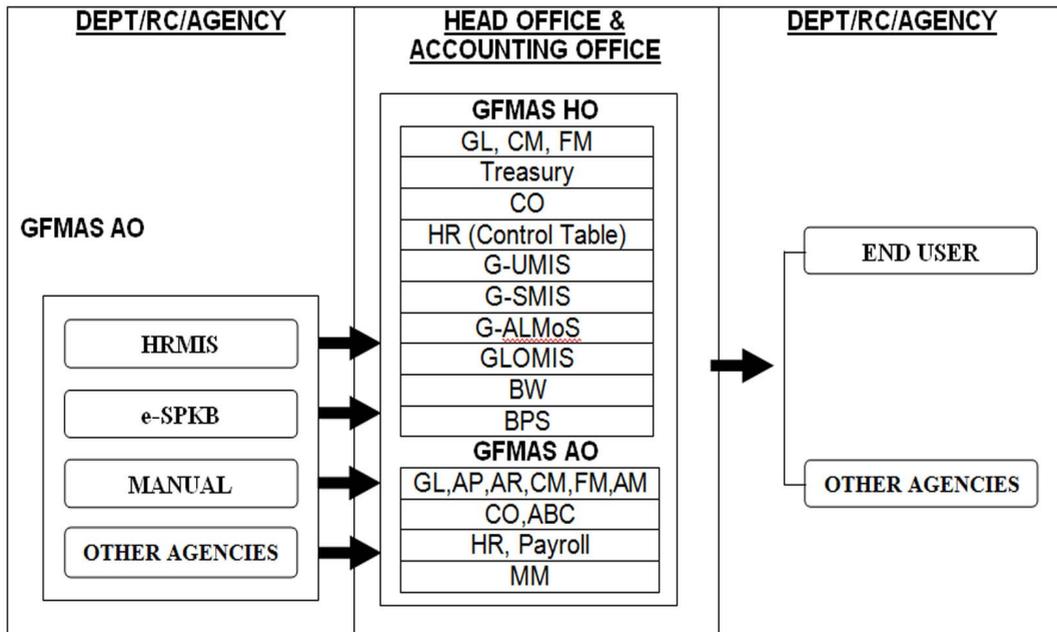


Figure 2: GFMAS Accounting System Flow

GFMAS user may complete their job based on real time information which provides the consistency and efficiency in completing the task. All routine works can be done efficiently and productively while reducing mistakes and errors drastically.

In general, GFMAS provides many advantages to users and departments. All system legacies such as payroll, loans and assets have been integrated into a platform to provide tighter and better control. Inter module coordination in accounting process provides comprehensive control and supervision to enhance monitoring. Hence, all the transactions can be monitored properly and this has provided the transparent supervision to prevent any omission and erroneous.

In addition, the tight integration of all the modules saves time in account and ledger reconciliation. In terms of data integrity, single point data entries to GFMAS reduce duplications and errors and accounting entries will be updated automatically. Besides, with the system, the user is able to provide fast and efficient feedback to customers due to easy access to database. This actually has been contributed by real time data processing which has enabled fast access to accurate information timely.

Since GFMAS is a combination of world public sectors accounting process best practices, it has improved working process. For instance, the availability of updated data enables good decision can be made by the users and managers. Complete operational data are available online to assist decision maker when changes required. Consolidated human resources and

personnel data are stored in a single database for easy consumption by all parties. It also avoids data entries repetition and duplication in salary payment. Finally, online data entries and access encourage paper less environment since all the transactions have been recorded online (Jabatan Akauntan Negara, 2006).

Significance of the Study

It seems clear that there is a lack of study has been conducted in the area of EUCS among government sectors, particularly in AG Department. Thus, the study aims to contribute to the existing body of knowledge in the area of information technology. Further, the study provides the constructs to measure and evaluate EUCS among the government sectors in Malaysia. Theoretically, this study measures and validates the instrument of Doll and Torkzadeh (1988)'s EUCS (with some additional dimensions) among government sectors. In addition, this instrument is very useful in practice, not only for private sector but also for public sector. Indeed, this is an exploratory study in the public sector towards the achievement of the excellent and better performance.

Purpose of the Study

The purpose of this study is:

1) To test any difference of satisfaction among demographic variables (gender, education background, position, attending computerised accounting course and additional skills) of GF-MAS users.

The remainder of this paper is organized as follows. A review of related literature on End-Users Computing Satisfaction and hypotheses is discussed. Next, the methodology employed in this study, research instruments used and data analysis method involved are described. Finally, the empirical results and discussion of the study are drawn.

Literature Review

End User Computing Satisfaction (EUCS)

According to Doll and Torkzadeh (1988), EUCS is the affective attitude towards a specific computer application by someone who interacts with the application directly. End-user satisfaction can be evaluated in terms of both the primary (application) and secondary user roles (inquiry and decision support application). This study deployed Doll and Torkzadeh definition of the end user computing and EUCS. The end user computing in this study is the people who interact and use GFMAS such as accountant, financial officer, information system officer, data processing operator, account clerk and etc, and eventually they can interpret the report as in needed by the organisation. These end users were asked to reflect their satisfaction or perception towards GFMAS in their own organisation.

Dimensions of EUCS

As explained earlier in this study, the dimensions of the study consist of content, accuracy, format, ease of use, timeliness, system speed, and system reliability. The prior researches

and hypothesis development is discussed for every those dimensions.

Content

The use of information system reports is one of the most frequently reported measures of the success of an information system (Delone & McLean, 1992). The end user perceived that the content of information is important especially for the purpose of decision-making process. This argument is proved by the research done by Blaylock and Rees (1984) that employed MBA students in evaluating the perceived usefulness of specific report contents. Meanwhile, Jones and McLeod (1986) used several information sources in order to test the perceived importance of each information item among senior executives. Mahmood and Medewitz (1985) reported that 48 graduate students satisfied with the usefulness of the report.

In the study by Rivard and Huff (1988), they evaluated the usefulness of the content produced by information system, which is user developed, among 272 end-users. Edmundson and Ross (1994) suggested measuring system characteristics such as content of the database, aggregation of details, human factors, response time and system accuracy. In Doll and Torkzadeh study, they labelled content of information as the most important dimension in evaluating EUCS. They also suggested that content is one of the factors that represent the satisfaction. Therefore, this study proposes that content has a significant effect on end user computing satisfaction towards GFMAS.

Accuracy

Accuracy of information produced by the system is important to measure the overall EUCS. Consequently, it might lead the good perception of the end user to overall satisfaction. Bailey and Pearson (1983) proposed 39 system-related items for measuring user satisfaction. Among their ten most important items, in descending order of importance, were information accuracy, output, timeliness, reliability, completeness, relevance, precision, and currency.

In the early study, Ahituv (1980) incorporated five information characteristics into a multi-attribute utility measure of information value namely accuracy, timeliness, relevance, aggregation and formatting. Also, Olson and Lucas (1982) proposed report accuracy and appearance as measures of information quality in office automation systems.

Subsequently, it seems to suggest that accuracy is one of the factors that represent the satisfaction. The respondent who is satisfied with the accuracy of information is also satisfied with overall system. Thus, this study suggests that accuracy has a significant effect on end user computing satisfaction towards GFMAS.

Format

Bailey and Pearson (1983) classified format of information reported as the one of the description measures in their study. Doll and Torkzadeh (1988) used format in their study as the second dimensions in determining EUCS. Mihir and Bijan (2002) identified six relevant dimensions (relevance, confidence, usefulness, ease of use, format and playfulness) of user

satisfaction under a research framework for user satisfaction with decision support and usability of a DSS.

In Malaysia, format of the report should be in accordance with the standard stated in the Statutory Bodies Act 1980 (Account and Annual Report) (240 Act). End user is expected to satisfy with the format of accounting report produced by CAS. Thus, the study expects that the satisfaction with the format of the report might have the relationship with the overall satisfaction towards GFMAS.

Ease of Use

Ease of use has become increasingly important in software design (Branscomb and Thomas, 1984). There is increasing evidence that the effective functioning of an application depends on its ease of use or usability (Goodwin, 1987). If end users find an application easy to use, they may become more advanced users, and therefore, better able to take an advantage of the range of capabilities the software has to offer. Also, ease of use may improve productivity or enable decision makers to examine more alternatives (Doll and Torkzadeh, 1988).

Ease of use is a multi-faceted problem (Michael, 1981). Many guidelines are contradictory, for increasing one aspect of ease of use may in turn decrease another aspect (Gebhardt and Stellmacher, 1978). A system that follows ease of use guidelines may turn out to be easy to use in one aspect but not in another. The goals of each system determine what factors of ease of use are the most important.

If the system is not easy to learn, it will not be used. Management will be reluctant to invest a large amount of time in the training of the clerical and sending them to the computerised accounting course. In addition, managers will invest even less time in any attempts to learn to use the system themselves. Ease of use is expected to increase the level of overall EUCS. It shows that ease of use is one of the factors that represent the overall EUCS. The respondent who is satisfied with ease of use of the system is expected to satisfy with overall system. Hence, this study suggests that ease of use has a significant effect on end user computing satisfaction towards GFMAS

Timeliness

According to Chang et al. (2003), timeliness is referring to the speed and frequency of information provided by accounting information system (AIS). Consistent with Chenhall and Morris (1986) and Choe (1996), they measured timeliness with two items, namely speed and frequency, using a seven-point Likert type scale.

Bailey and Pearson (1983) ranked timeliness as the forth dimensions in determining the information quality among 8 organisations. King and Eipstein (1983) evaluated 76 managers and included timeliness as one of the dimensions in the field of information. Miller and Doyle (1987) and Bell (1985) conducted studies and employed report timeliness as their descriptions of measures.

In general, if the end-users satisfy with the timeliness of the report produced by the CAS, they

may be satisfied with the overall of the system. Hence, timeliness is assumed to increase the level of overall EUCS. This study suggests that timeliness is one of the factors that represent the overall EUCS towards GFMAS.

System Speed

Chin and Lee (2000) extended the existing research by providing a new conceptual perspective on how EUCS is formed and how does it going to be measured. In addition, they operationalised this new perspective by providing a new measurement instrument for empirical testing. Beyond the EUCS context, they suggested that their model and approach were too general to be used in creating new measures in other IS satisfaction areas where concerns have been raised (i.e. service quality, Van Dyke et al. 1997). As for comparison, they used Doll and Torkzadeh's (1991) EUCS set of measures given that it is probably known as one of the best and frequently employed sets in the literature. They also developed additional measures for Doll and Torkzadeh's five constructs.

Thus, they constructed another dimension as one of the factors contributing to EUCS. They proposed that overall operating speed might also represent another factor. The argument is that, within the human computer interaction literature, the speed with which a computer system responds has been argued to be an important factor influencing the usability and emotional responses among users. This in turn makes satisfaction with the operating speed of a system should have a strong impact on the overall satisfaction with system used above and beyond the other functional attributes being considered (i.e., content, accuracy, format, ease of use, and timeliness).

They defined that satisfaction with operational speed as the extent to which an individual is satisfied with the operational speed of the system. Therefore, another dimension that has been added in this model is satisfaction with system speed. Thus, this study suggests that satisfaction with system speed has a significant effect on end user computing satisfaction towards GFMAS.

System Reliability

Providing a reliable and effective information protection requires an approach which needs some considerations from variety of areas, either within or outside the information technology area (Capron and Perron, 1993). An information protection program is more than establishing controls for the computer held-data; but it should also address all forms of information.

It should be noted that the information, data, programs and applications, transactions, and systems are extremely valuable. Therefore, the amount of protection of these items should be exactly the same as protection of computer hardware. The following items are generally accepted standards for a security program:

- (1) Protect classified data
- (2) Protect against unauthorised access, modification, disclosure or destruction of data.

- (3) Ensure the ability of the organisation to survive the loss of computing capacity (disaster recovery planning).
- (4) Prevent employees from probing the security controls as they perform their assigned tasks.
- (5) Ensure management support for the development and implementation of security policies and procedures.

Swanson (1974) used several dimensions to measure MIS appreciation among managers. These include the reliability of a computer system, on-line response time, the ease of terminal use and so forth. Hamilton and Chervany (1981) proposed data currency, response time, turnaround time, data accuracy, reliability, completeness, system flexibility, and ease of use among others. King and Epstein (1983) proposed multiple information attributes to yield a composite measure of information value. Reliability is one of the proposed information included in his study.

Generally, this study focuses on components in reliability dimension, either in internal or external point of view. The latter dimension deals with downtime and disruption of CAS. While the former studies on security system, password installation and back-up system of internal reliability dimension.

Gosney (1995) stated that back up or saving of data and software held in the system disk is an important precaution steps that should be in concerned by the end user. The failing to do so will lead to the possibility of time-consuming reconstruction of lost information. Worse than that irretrievable lost of data and software might happen.

The computer system would not be able for processing should there be unavailability of essential software and data. Eventually, the system can be retrieved should there are back ups. Thus, this study expects that when the end user satisfies with the system reliability, it will lead them to be satisfied with the overall EUCS to the system. Thus, this study hypothesises that system reliability has a significant effect on end user computing satisfaction towards GFMAS.

Conclusively, even though the results are mixed, most of the previous studies shown that this instrument is valid and reliable to measure the satisfaction among the end user computing towards GFMAS.

The scope of the discussion is related to EUCS; the previous factors that contribute to the EUCS, Doll and Torkzadeh Model (1988); i.e., content, accuracy, format, ease of use, and timeliness and the modification made by Chin and Lee (2000), i.e. satisfaction with system speed, and system reliability. The model will become the fundamental guideline to examine factors contributing to EUCS generally in government sector and specifically at AG Department.

Research Methodology

Theoretical Framework of EUCS towards GFMAS

The Dependent Variable (DV) for this study is overall EUCS (The seven factors consist of content, accuracy, format, ease of use, timeliness, system speed and system reliability). The items, which represent overall EUCS, are combined from every EUCS dimensions. The demographic factors are the Independent Variable (IV) for this study. The demographic factors consist of gender, education background, position, year of service (tenure), and attending computerised accounting course.

Research Respondents

The research respondents for this study consist of two groups namely executive and non-executive of Accountant General Department staffs in Federal Territory of Labuan, Kota Kinabalu, Keningau, Tawau and Sandakan. The sampling technique for this study has applied convenient sampling because the staff for each branch have been determined based on their experience of GFMAS usage. Initially, we expect to distribute approximately 167 respondents. However, we received 140 respondents only which represent 84% of the total sample.

Table 1 Respondents

Accountant General Department (Branch)	Number of staffs for each branch	Number of respondents
Tawau	20	14
Sandakan	25	23
Kota Kinabalu	80	73
Federal Territory of Labuan	22	20
Keningau	20	10
Total	167	140

Research Questionnaire

The questionnaire is divided into two sections. The first section is for the dimension of EUCS adopted from Doll and Torkzadeh (1988) and Chin and Lee (2000). While, the second section is for the personal information. For the first section, it is divided into seven parts namely: (1) Part A -Content, (2) Part B - Accuracy, (3) Part C - Format, (4) Part D - Ease of Use, (5) Part E - Timeliness, (6) Part F - System Speed and (7) Part G – System Reliability. The last question for each factor will provide overall satisfaction towards each factor. The second section is about the personal information of the respondent. These include their gender, education background, position, year of service (tenure), and experience attending computerised accounting course.

Respondent Profiles

A total of 33.6 percent are male respondents. More than half of the respondent (55.8 percent) work as Administrative Assistant and Accountant Assistant, followed by Senior Accountant Assistant (10.7 percent). 74.3 percent of them have been working with the organization for

15 years and below. Meanwhile, only 8.9 percent of them have been working between 25 to 35 years.

The survey also shows that 48.6 percent of the respondents are SPM/STPM holders and 32.1 percent are Diploma holders. More than 50 percent of the respondents have attended computerised accounting course and 56 percent had additional computerised accounting skill such as LOTUS 123 and UBS (Table 2).

Table 2: Socio-demographic Profiles of Respondents

Profile		Frequency	Percent
Gender	Male	47	33.6
	Female	93	66.4
Education Level	Degree	27	19.3
	Diploma	45	32.1
	SPM / STPM	68	48.6
Position	Director	2	1.4
	Deputy Director	1	.7
	Chief of Assistant Director	1	.7
	Assistant Director	4	2.9
	Accountant	3	2.1
	Chief of Administrative Assistant	1	.7
	Finance Assistant Officer	1	.7
	Senior Accountant Assistant	15	10.7
	Information System Officer	1	.7
	Information Technology Assistant Officer	4	2.9
	Data Processing Operator	12	8.6
	Data Processing Assistant Operator	2	1.4
	Administrative Officer	1	.7
	Administrative Assistant	39	27.9
	Accountant Assistant	39	27.9
	Account Clerk	4	2.9
Others (please state):	10	7.1	
Year of Service With the Organization	less than 3 years	44	31.4
	3-15 years	60	42.9
	15-25 years	24	17.1
	25-35 years	12	8.6
Attending Computerised Accounting Course	Yes	81	57.9
	No	59	42.1
Additional Computerised Accounting Skill	UBS	61	43.6
	LOTUS 123	18	12.9
	MrAccounting	5	3.6
	QuickBook	1	.7
	Others	55	39.3

Findings Reliability

Analysis

A reliability analysis is carried out to check for the underlying dimension of the EUCS variables. A rule of thumb suggests that the acceptance Cronbach alpha value should exceed 0.5 (Hair et al., 1998). Table 4.3 depicts a summary of the Cronbach's alpha values. All factors exhibit a Cronbach's alpha coefficient of at least 0.587, indicating that the questionnaire has attained rather high level of reliability. Hence, all variables are retained. Among the factors, format factor has the highest ranking of Cronbach alpha of 0.936, followed by the content factor with 0.933. The timeliness factor has the lowest ranking with 0.587.

Table 3: Reliability Analysis

Variable	Cronbach's Alpha	No. of Items
Content	.933	9
Accuracy	.889	7
Format	.936	7
Ease Of Use	.915	7
Timeliness	.587	6
System Speed	.808	6
System Reliable	.826	7

Analysis of Variance (ANOVA)

This paper identifies the differences of satisfaction among the demographic variables (gender, education background, position, attending computerised accounting course and additional skills)

The association between demographic variables (gender, education background, position, attending computerised accounting course and additional skills) and satisfaction towards GF-MAS are investigated by one-way analysis of variance (ANOVA). It is expected that end users of GF-MAS will be more satisfied if they have an experience in attending computerised accounting course and having additional computerised accounting skills such as UBS, LOTUS 123, MrAccounting and etc. In addition, this study anticipates that male will be more satisfied than female since naturally male is expected to be easy to understand the procedures and mechanisms in certain system as compared to female. This study also predicts that end users that hold higher level of education and rendered long years of working service as well as hold higher rank of position in the department will be more satisfied as compared to their counterparts.

Hypothesis 1 proposes that there is a significant difference of satisfaction towards GF-MAS among different position. Results in Table 4 shows that the hypothesis proposed is rejected as p-value of 0.122 is greater than 0.05 with F-value is 1.457. Thus, the more satisfied end users

of GFMAS do not necessarily possess higher rank of position as frequent users of GFMAS are administrative assistant and accountant assistant of the organization.

H1: There is a significant difference of satisfaction towards GFMAS among different position

Table 4: ANOVA Table (Position and Satisfaction)

	Sum of Squares	df	Mean Square	F	Sig.
Position * Satisfaction Between Groups (Combined)	445.927	17	26.231	1.457	.122
Within Groups	2196.673	122	18.006		
Total	2642.600	139			

Next, Hypothesis 2 claimed that there is a significant difference of satisfaction towards GFMAS among gender. Between male and female, there is no difference in terms of their satisfaction level towards GFMAS. Table 5 proves that its p value is greater than 0.05 thus the hypothesis proposed is not supported. Therefore, there is no sufficient evidence to support that the more satisfied end users of GFMAS either male or female even though the majority of the sample in this study is female.

H2: There is significant difference of satisfaction towards GFMAS among gender

Table 5: ANOVA Table (Gender and Satisfaction)

	Sum of Squares	df	Mean Square	F	Sig.
Gender * Satisfaction Between Groups (Combined)	4.038	17	.238	1.066	.395
Within Groups	27.184	122	.223		
Total	31.221	139			

The following hypothesis, Hypothesis 3, postulates that there is a significant difference of satisfaction towards GFMAS among different level of education. It was expected that the more satisfied end users of GFMAS would hold higher level of education. The justification behind this argument is that employee with higher level of education is anticipated to be more educated and easy to understand GFMAS system as compared to employee with low level of education. However, Table 6 below shows that the hypothesis proposed is rejected ($F=1.243$, $p>0.242$). Thus, satisfaction towards GFMAS cannot be differentiated by their level of education, for instance SPM/STPM, Diploma or Degree.

H3: There is a significant difference of satisfaction towards GFMAS among different level of education.

Table 6: ANOVA Table (Level of Education and Satisfaction)

			Sum of Squares	df	Mean Square	F	Sig.
Level of Education * Satisfaction	Between Groups	(Combined)	12.254	17	.721	1.243	.242
		Within Groups	70.739	122	.580		
		Total	82.993	139			

Hypothesis 4 proposes that there is a significant difference of satisfaction towards GFMS among different tenure been with AG Department. Result in Table 7 below confirms that the hypothesis is rejected as p-value of 0.755 is greater than 0.05. Thus, the more satisfied end users of GFMS do not necessarily have rendered long years of working service with AG Department. Apparently, only 8.6 percent of the respondents have been working with the organization for 25 to 35 years.

H4: There is a significant difference of satisfaction towards GFMS among different tenure been with the organization.

Table 7: ANOVA Table (Tenure / Year of Service and Satisfaction)

			Sum of Squares	df	Mean Square	F	Sig.
Tenure / Year of Service * Satisfaction	Between Groups	(Combined)	10.847	17	.638	.741	.755
		Within Groups	105.039	122	.861		
		Total	115.886	139			

The subsequent hypothesis, Hypothesis 5, postulates that there is a significant difference of satisfaction towards GFMS among attending and non attending course related to computerised accounting system. It was expected that the more satisfied end users of GFMS would have attended computerised accounting system course. Anova table below proves that the hypothesis proposed is rejected ($F=1.094$, $p=0.367$, $p>0.05$). Thus, satisfaction towards GFMS cannot be differentiated whether they have attended the course of computerised accounting system or not.

H5: There is a significant difference of satisfaction towards GFMS among attending and non attending course related to computerised accounting system.

Table 8: ANOVA Table (Attending Computerised Accounting Course and Satisfaction)

			Sum of Squares	df	Mean Square	F	Sig.
Attending Computerised Accounting Course * Satisfaction	Between Groups	(Combined)	4.517	17	.266	1.094	.367
		Within Groups	29.619	122	.243		
		Total	34.136	139			

Finally, Hypothesis 6 claimed that there is a significant difference of satisfaction towards GF-MAS among different possession of additional computerised accounting skills. AG Department staffs with additional computerised accounting skills are expected to be more satisfied with GF-MAS system since they possess this technical accounting expertise. However, between the additional and non-additional computerised accounting skills, there is no difference in terms of their satisfaction level towards GF-MAS. This has been verified by Table 9 whereby its p value is greater than 0.05 thus the hypothesis proposed is not supported. Therefore, there is no sufficient evidence that the more satisfied end users of GF-MAS having additional computerised accounting skills such as UBS, LOTUS 123, MrAccounting and etc.

Ironically, accounting skills is based on the level of learning or possession of computerized accounting skills. Based on the interviews conducted, most of the staffs have learned how to use Branch Accounting System (BAS) previously and very rare of them to have another accounting skills. These experiences do not really influence their level of satisfaction in using GF-MAS.

Even though system developer has developed several modules in GF-MAS, every module has their own purpose in accordance to the department requirement and complexity. In addition, every module in this system cannot be operated easily and the end users need to take some time to learn and test the system to ensure the system would operate smoothly soon.

H6: There is a significant difference of satisfaction towards GF-MAS among different possession of additional computerised accounting skills.

Table 9: ANOVA Table (Additional Computerised Accounting Skill and Satisfaction)

			Sum of Squares	df	Mean Square	F	Sig.
Additional Computerised Accounting Skill * Satisfaction	Between Groups	(Combined)	105.168	17	6.186	.786	.706
		Within Groups	959.824	122	7.867		
		Total	1064.993	139			

Conclusion

This study attempts to determine the level of satisfaction among 140 end users of GF-MAS at AG Department specifically in East Malaysia (Labuan and Sabah branches). This paper identifies the difference of satisfaction among demographic variables (position, gender, level of education, tenure been with organisation, attending computerised accounting course and additional computerised accounting skills). However, based on the results produced by one-way analysis of variance (ANOVA), it shows that there is no significant difference of satisfaction towards GF-MAS among all demographic variables. Probably, the rationale behind this finding is that GF-MAS is new for end users and also to AG department. Since this system is relatively new, it would not generate a difference of satisfaction among demographic variables.

Even though the finding of this study is preliminary in nature, it could be generalized to the other AG departments especially in Peninsular Malaysia. This is due to the different geographical location whereby AG departments in peninsular Malaysia are nearby with the AG headquarter thus those departments and their staffs are expected to received more information and expertise pertaining to GFMAS.

References

- Abd Rahman, M.S (2008) Utilisation of data mining technology within the accounting information system in the public sector: A country study – Malaysia, Unpublished PhD thesis, University of Tasmania.
- Act 240, Statutory Bodies (Accounts And Annual Reports) Act 1980, Laws Of Malaysia, Incorporating all amendments up to 1 January 2006, The Commissioner Of Law Revision, Malaysia Under The Authority Of The Revision Of Laws Act 1968, In Collaboration With, Percetakan Nasional Malaysia Bhd, 2006. Available : <http://www.agc.gov.my/Akta/Vol.%205/Act%20240.pdf>. Achieved : 1st September 2009.
- Ahituv, N. (1980). A systematic approach toward assessing the value of an information system. *MIS Quarterly*. Vol. 4, Issue 4, pp. 61-75.
- Bailey, J.E., and Pearson S.W. (1983). Development of a tool for measuring and analyzing computer user satisfaction. *Management Science*. Vol. 29, Issue 4, pp. 519-529
- Bell, J. (1985). The effect of presentation form on the use of information in annual report. *Management Science*. Vol. 30, Issue 2, pp. 169-185.
- Blaylock, B.K. and Rees, L.P. (1994). Cognitive style and the usefulness of information. *Decision Sciences*. Vol. 15, Issue 1, pp. 74-91.
- Branscomb, L.M. and Thomas, J.C. (1994). Ease of use: a system design challenge, *IBM Systems Journal*, Vol. 23, pp. 224-235
- Buang, A. (2007) Emerging Issues and Global Challenges in the Public Sector Audit in the 21st Century - Malaysian Perspective Speech by Auditor General of Malaysia.
- Capron, H.L. and Perron, J.D (1993). *Computers & Information Systems, Tools for An Information Age*, (3rd edition, The Benjamin / Cummings Publishing Company, Inc
- Chang, R.D., Chang, Y.W., and Paper, D. (2003). The effect of task uncertainty, decentralisation and AIS characteristics on the performance of AIS: An empirical casse in Taiwan. *Information & Management*. Vol.40, pp. 691-703
- Chenhall, R.H., and Morris, D. (1986). The impact of structure, environment, and interdependence on the perceived usefulness of management accounting system. *The Accounting Review*. Vol. 61, Issue 1, pp. 16-35.
- Chin, W.W., & Lee, M. K. O. (2000). A proposed model and measurement instrument for the formation of is satisfaction: The case of end-user computing satisfaction. *Proceedings of The Twenty First International Conference On Information Systems*. 175-186.
- Choe, J.M. (1996). The relationships among performance of accounting information systems, influence factors, and evolution level of information systems, *Journal of Management Information Systems*. Vol.12, Issue 4, pp. 215-239.

- DeLone, W.H., & McLean, E.R. (1992). Information systems success: The quest for the dependent variable. *Information Systems Research*. 3(4), 60-95
- Doll, W. J., & Torkzadeh, G. (1988). The measurement of end-user computing satisfaction. *MIS Quarterly*, 12(6), 259-274.
- Edmundson, B. and Ross, J. (1994) The impact of requirements analysis upon user satisfaction with packaged software. *Information & Management*. Vol. 7, Issue 2, pp. 83-90.
- Gebhardt, F. and Stellmacher, I. (1978). Design criteria for documentation retrieval languages. *Journal American Society for Information Science*. Vol. 29, pp. 191-199.
- Gelinas U., A. Oram, W. Wriggins (1990). *Accounting information systems*, PwsKent Publishing Company: Boston.
- Gosney, J. (1995). *Computer Administration*. Brisbane: John Wiley & Sons
- Hollander, A., E. Denna, and J. Cherrington, (1996). *Accounting, Information Technology, and Business Solutions*. Chicago, IL: Richard D. Irwin.
- Jabatan Akauntan Negara (2006) *Government Financial and Management Accounting System*, Bahagian Pengurusan Operasi Cawangan, Kota Kinabalu, Sabah.
- Jabatan Akauntan Negara Malaysia (JANM). *Accountant General Department (AGD)* Available at: www.anm.gov.my
- Jones, J.W. and McLeod, R. (1996). The structure of executive information systems: An exploratory analysis. *Decision Sciences*. Vol. 17, Issue 2, pp. 220-249
- King, W. R. and Epstein, B. J. (1983). Assessing information systems value. *Decision Sciences*. Vol. 14, Issue 1, pp.34-35.
- Kok Ming, M.W (2006) *Pengenalan GFMAS*, Jabatan Akauntan Negara, Kota Kinabalu, Sabah.
- Mahmood, M.A. and Medewitz, J.N. (1995). Impact of design method on decision support system success: An empirical assessment. *Information & Management*. Vol. 9, Issue 3, pp. 137-151.
- Mahdi, S., Vahab., R., & Abdolkarim, M.(2010). Usefulness of Accounting Information System in Emerging Economy: Empirical Evidence of Iran. *International Journal of Economics and Finance*. Vol. 2, No. 2; May 2010. pp.186-195
- Michael, G. (1981). An ease of use evaluation of an integrated document processing system. *Communications of the ACM*. Vol. 5, Issue 1, pp. 142-147.
- Mihir, A.P. & Bijan, F. (2002). Analysing user satisfaction with decisional guidance. *Decision Sciences Institute 2002 Annual Meetings Proceedings*. 128-135.
- Miller, J. and Doyle, B.A. (1997). Measuring effectiveness of computer based information system in the financial services sector. *MIS Quarterly*. Vol. 11, Issue 1, pp. 107-124.
- Olson and Lucas, H. C. (1982). The impact of office automation on the organisation: some implications for research and practice. *Communications of the ACM*. Vol. 25, Issue 11, pp. 838-847.
- Pelan Strategik Jabatan Akauntan Negara Malaysia 2008-2012 (2008) presented at Putrajaya by Accountant's General Department Malaysia, Putrajaya.
- Rivard, S., and Huff, S. (1988). Factors of success for end-user computing. *Communications of the ACM*. Vol. 31, Issue 5, pp. 552-561.

- Romney, Marshall B., Steinbart, Paul John, Cushing, E. Barry (1997). Accounting Information System, Seventh Edition, Addison-Wesley.
- Swanson, E.B. (1974). Management Information Systems: appreciation and involvement. *Management Science*. Vol. 21, Issue 2, pp.178-188
- Van Dyke T. P., Kappelman, L. A., & Prybutok, V. (1997). Measuring information systems service quality: Concerns on the use of the SERVQUAL questionnaire. *MIS Quarterly*, 21(2), 195-208.
- Zakiah, S. (2007) Malaysian Governmental Accounting: National Context and User Orientation, *International Review of Business Research Papers* Vol.3 No.2, pp.376 – 384

End-Users Computing Satisfaction (EUCS) Towards the Government Financial and Management Accounting System (GFMAS): Case Study in Malaysian Accountant General's (AG) Department

Azleen Ilias, Mohd Zulkeflee Abd Razak, Siti Fara Fadila Abd Razak

College of Business and Accounting

Universiti Tenaga Nasional

Sultan Haji Ahmad Shah Campus

Pahang, Malaysia

Email: Azleens@uniten.edu.my / azleenilias@yahoo.com

Abstract

The importance of computerised accounting system (CAS) is indisputable for private as well as public sector. One of the continuous efforts in the public sector can be seen through the introduction of Government Financial and Management Accounting System or GFMAS by Accountant's General (AG) Department in year 2005. GFMAS has been expected to enhance operational efficiency and effectiveness to enable the department to deliver value-added service. As far as the researchers are concerned, no attempt has been made to examine End-User Computing Satisfaction (EUCS) towards GFMAS especially in AG Department. Thus, the purpose of this study is to determine the level of satisfaction among the end users of GFMAS at AG Department specifically in East Malaysia (Labuan and Sabah branches). By distributing questionnaires to 140 AG staffs that using GFMAS, descriptive analysis throughout EUCS factors (content, accuracy, ease of use, format, timeliness, system reliability, system speed) have been drawn successfully. Probably, the result will be able to assist The Accountant General's (AG) Department to improve every aspect in The Government Financial and Management Accounting System (GFMAS).

Introduction

The successful use of IT depends on the technology itself and the level of expertise of the end user using the technology (M.Zain et al, 2005). One of the measurements to evaluate this success is End User Computing Satisfaction or EUCS. A number of studies have attempted to capture the overall evaluation perceived by the end users regarding the use of an information system; i.e. satisfaction, as well as the most immediate factors that form satisfaction (Doll et al. 1995; Doll and Torkzadeh 1988, 1991; Henry and Stone, 1994; Torkzadeh and Doll 1991).

However, it seems clear that previous research have not attempted to discover the factors affecting the satisfaction of the end users of the computerised accounting system (CAS) especially in the government sectors. Yet, it is essential to determine the factors that contribute to EUCS while assessing the overall evaluation of information system. This study attempts to examine the factors that contribute to the user satisfaction towards GFMAS (Government Financial Management Accounting System) at AG Departments in Malaysia.

The Government Financial and Management Accounting System (GFMAS)

The Accountant General's (AG) Department has begun its operation since 1946 headed by Accountant General as Chief Accountant of Federal Government. This department is responsible to manage the Federal Government's consolidated fund and to formulate government accounting policies. In its continuous efforts towards becoming a leading organization in accounting services and to fulfill e-government requirement, the department has been re-engineering and developing its new accounting system to replace its previous system which is 18 years old.

The new application system is known as Government Financial and Management Accounting System or GFMAS was developed in year 2005 and began its operation in 2006 at 25 AG branch offices together with 10 self-accounting departments. This system will enhance operational efficiency and effectiveness to enable AG Department to deliver value-added service especially to Federal Government. This system also will be able to capture accounting transactions and prepare financial statements based on accrual basis of accounting. In order to ensure the effectiveness of the project, The GFMAS Project Management team is adopting the Accelerated System Application Program (ASAP) methodology to manage the implementation activities and deliverables of the project.

GFMAS has been developed with several objectives. First is to improve services quality of AG Department through the usage of the latest information technology application. Second, it may provide a standard mechanism to monitor all government accounting transactions. Third, due to problems arose from the legacy or existing government accounting system, GFMAS emerges to overcome these problems and setbacks. Finally, GFMAS could assist AG Department in providing value added services to government and its agencies in the accounting and financial matters (Kok Ming, 2006).

Obviously, the current move to GFMAS is viewed as an approach to enhance government payment process and accounting for the government's receipts in a fast and efficient manner. In fact, this is in line with AG's Department tagline "Excellent Accounting at Your Service". GFMAS is an integrated system which is capable of allowing acceleration in financial planning, budget control and government accounting. It combines all the accounting functions that cover payment, receipts, remuneration control, unclaimed monies, government loans, loans and advance payment to public sector personnel, investment and preparation of the Public Accounts in one integrated platform.

With this new system, a data warehouse was established called the Business Warehouse (BW). This data warehouse represents the central data repository for the public sector accounting systems managed by AG's Department. The initiative to move from older system to a new GFMAS is an attempt to improve the accounting and financial management in the public sector's departments. At the same time, this move is also seen to be an attempt to increase the quality of data produced and the performance of the accounting systems (Abd Rahman, 2008).

End User Computing Satisfaction (EUCS)

According to Doll and Torkzadeh (1988), EUCS is the affective attitude towards a specific computer application by someone who interacts with the application directly. End-user satisfaction can be evaluated in terms of both the primary (application) and secondary user roles (inquiry and decision support application). This study deployed Doll and Torkzadeh definition of the end user computing and EUCS. The end user computing in this study is the

people who interact and use GFMAS such as accountant, financial officer, information system officer, data processing operator, account clerk and etc, and eventually they can interpret the report as in needed by the organisation. These end users were asked to reflect their satisfaction or perception towards GFMAS in their own organisation.

The scope of the discussion is related to EUCS; the previous factors that contribute to the EUCS, Doll and Torkzadeh Model (1988); i.e., content, accuracy, format, ease of use, and timeliness and the modification made by Chin and Lee (2000), i.e. satisfaction with system speed, and system reliability (self developed). The model will become the fundamental guideline to examine factors contributing to EUCS generally in government sector and specifically at AG Department.

The Benefits of GFMAS to Users

Apparently, GFMAS has provided several benefits to the internal as well as external end user computing. Top Management will enable to make a better decision due to reliable and real time data. This in turn will ensure the formulation of better planning and faster reporting to Ministry of Finance. In addition, as a result of more streamlined process, it has produced less errors and inefficiencies (Jabatan Akauntan Negara, 2006).

Head office will experience more efficient and effective consolidation of accounts for public accounts reporting due to in-built data synchronization and control function. Moreover, it will provide better integration of the treasury, loan and investments functionalities which enables Head Office to track their budgets, loan and investments made. As compared to the legacy system, GFMAS is also much faster in terms of generation of monthly, quarterly and even ad-hoc reports due the availability of online and real time data.

Finally, as a result of workload reduced in the consolidation activities at Head Office, they will have a better focus on more strategic work. From Accounting Offices view, single-point data entries have enabled an effective and accurate procession. This will create a better internal control which may eliminate manual reconciliation and reduce errors (Jabatan Akauntan Negara, 2006).

External user's feedback and satisfaction are also important for the betterment of the system. Ministries, central agencies, RC and other beneficiaries are those who get a benefit from GFMAS system. Other than enhancing transparency in accounting operations, GFMAS has also ensure faster payments and provide a better channel of access to their transactions status. The Controlling Officers will enable to understand current health of organisation through timely consolidated budgets versus actual performance. Subsequently, it will reduce costs and provide a greater budget control. Last but not least, community or public at large will receive a better and more efficient service from the government departments and agencies (Jabatan Akauntan Negara, 2006).

Significance of the Study

It seems clear that there is a lack of study has been conducted in the area of EUCS among government sectors, particularly in AG Department. Thus, the study aims to contribute to the existing body of knowledge in the area of accounting information system for public sector.

Purpose of the Study

Researchers has come out with this preliminary purpose in order to find the satisfaction level. The purpose of this study is:

- i) To explore the level of satisfaction among end users of GFMAS in Accountant General Department.

Theoretical Framework of EUCS towards GFMAS

The items, which represent EUCS, are content, accuracy, format, ease of use, timeliness, system speed and system reliability. Doll and Torkzadeh (1988) previously used this method in their initial study of EUCS. The demographic factors consist of gender, education background, position, year of service (tenure), and attending computerised accounting course.

Respondents

The research respondents for this study consist of two groups namely executive and non-executive of Accountant General Department staffs in Federal Territory of Labuan, Kota Kinabalu, Keningau, Tawau and Sandakan. The sampling technique for this study has applied convenient sampling because the staff for each branch have been determined based on their experience of GFMAS usage. Initially, we expect to distribute approximately 167 respondents. However, we received 140 respondents only which represent 84% of the total sample.

Findings and Discussions

Content

The use of information system reports is one of the most frequently reported measures of the success of an information system (Delone & McLean, 1992). The end user perceived that the content of information is important especially for the purpose of decision-making process. This argument is proved by the research done by Blaylock and Rees (1984) that employed MBA students in evaluating the perceived usefulness of specific report contents. Meanwhile, Jones and McLeod (1986) used several information sources in order to test the perceived importance of each information item among senior executives. Mahmood and Medewitz (1985) reported that 48 graduate students satisfied with the usefulness of the report.

In the study by Rivard and Huff (1988), they evaluated the usefulness of the content produced by information system, which is user developed, among 272 end-users. Edmundson and Ross (1994) suggested measuring system characteristics such as content of the database, aggregation of details, human factors, response time and system accuracy. In Doll and Torkzadeh study, they labelled content of information as the most important dimension in evaluating EUCS.

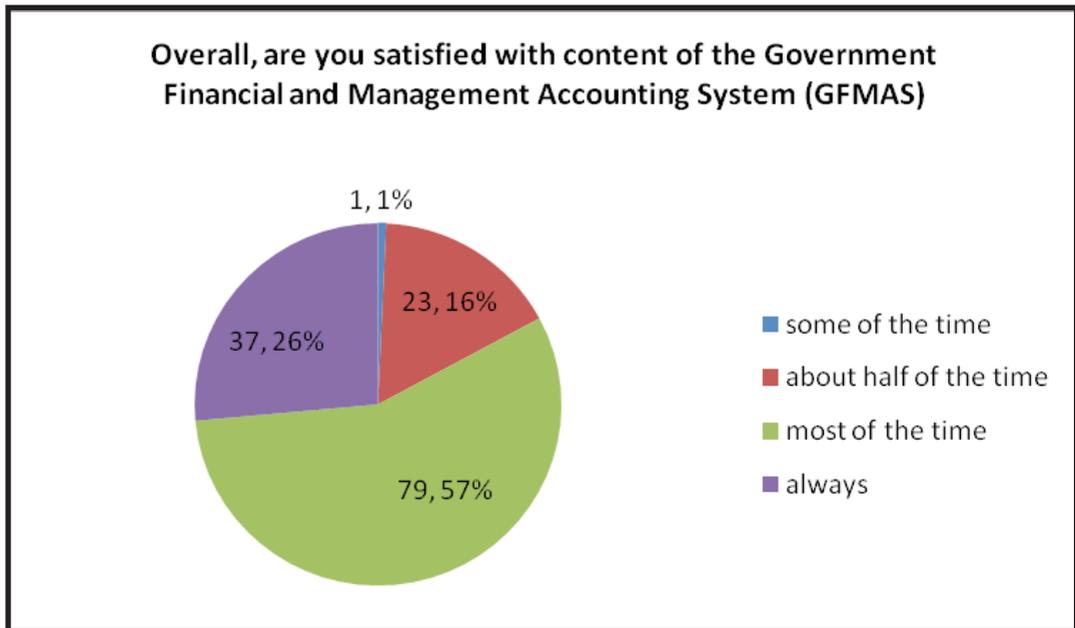


Figure 1: The satisfaction with content of the Government Financial and Management Accounting System (GFMAS)

From the survey that has been done, most of the time about 57% satisfied with the content of the GFMAS. This is because the system seems to provide the information that sufficient, fit and adequate for their need. The content information that has been provided by the system is considered understandable by most of the users.

Accuracy

Accuracy of information produced by the system is important to measure the overall EUCS. Consequently, it might lead the good perception of the end user to overall satisfaction. Bailey and Pearson (1983) proposed 39 system-related items for measuring user satisfaction. Among their ten most important items, in descending order of importance, were information accuracy, output, timeliness, reliability, completeness, relevance, precision, and currency. In the early study, Ahituv (1980) incorporated five information characteristics into a multi-attribute utility measure of information value namely accuracy, timeliness, relevance, aggregation and formatting. Also, Olson and Lucas (1982) proposed report accuracy and appearance as measures of information quality in office automation systems. Subsequently, it seems to suggest that accuracy is one of the factors that represent the satisfaction. The respondent who is satisfied with the accuracy of information is also satisfied with overall system.

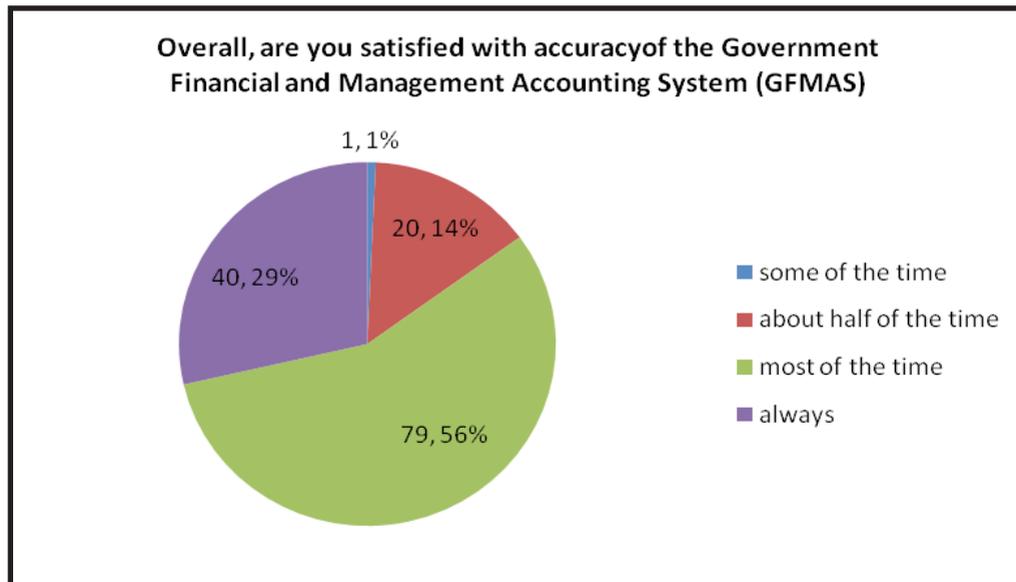


Figure 2: The satisfaction with accuracy of the Government Financial and Management Accounting System (GFMAS)

From this result, it shown that 79 from 140 staffs are perceives to be satisfied with the accuracy of the GFMAS. Although the system is still new, the system manages to provide the accurate, correct and error free information to their users. Perhaps, the system can be dependable by the users in order to make decision.

Format

Bailey and Pearson (1983) classified format of information reported as the one of the description measures in their study. Doll and Torkzadeh (1988) used format in their study as the second dimensions in determining EUCS. Mihir and Bijan (2002) identified six relevant dimensions (relevance, confidence, usefulness, ease of use, format and playfulness) of user satisfaction under a research framework for user satisfaction with decision support and usability of a DSS. In Malaysia, format of the report should be in accordance with the standard stated in the Statutory Bodies Act 1980 (Account and Annual Report) (240 Act). End user is expected to satisfy with the format of accounting report produced by CAS.

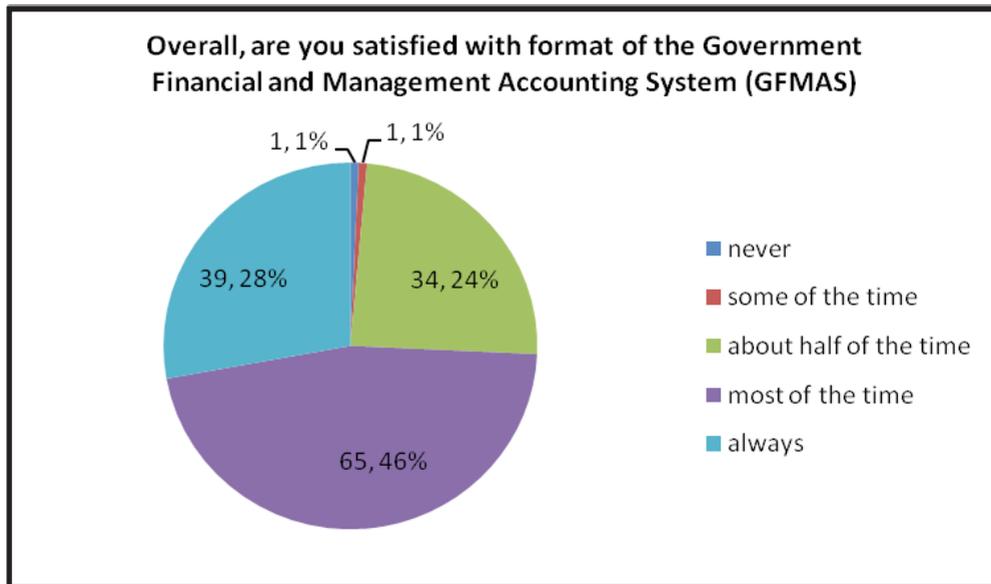


Figure 3: The satisfaction with format of the Government Financial and Management Accounting System (GFMAS)

From the figure, more than 50% feel satisfied for the most of the time because the output and layout of information that has been provided by the system is presented in useful format. Furthermore, the format is prepared according to the financial standard such as the journal, ledger, financial statement, invoice, voucher and receipt.

Ease of Use

Ease of use has become increasingly important in software design (Branscomb and Thomas, 1984). There is increasing evidence that the effective functioning of an application depends on its ease of use or usability (Goodwin, 1987). If end users find an application easy to use, they may become more advanced users, and therefore, better able to take an advantage of the range of capabilities the software has to offer. Also, ease of use may improve productivity or enable decision makers to examine more alternatives (Doll and Torkzadeh, 1988).

If the system is not easy to learn, it will not be used. Management will be reluctant to invest a large amount of time in the training of the clerical and sending them to the computerised accounting course. In addition, managers will invest even less time in any attempts to learn to use the system themselves. Ease of use is expected to increase the level of overall EUCS. It shows that ease of use is one of the factors that represent the overall EUCS. The respondent who is satisfied with ease of use of the system is expected to satisfy with overall system.

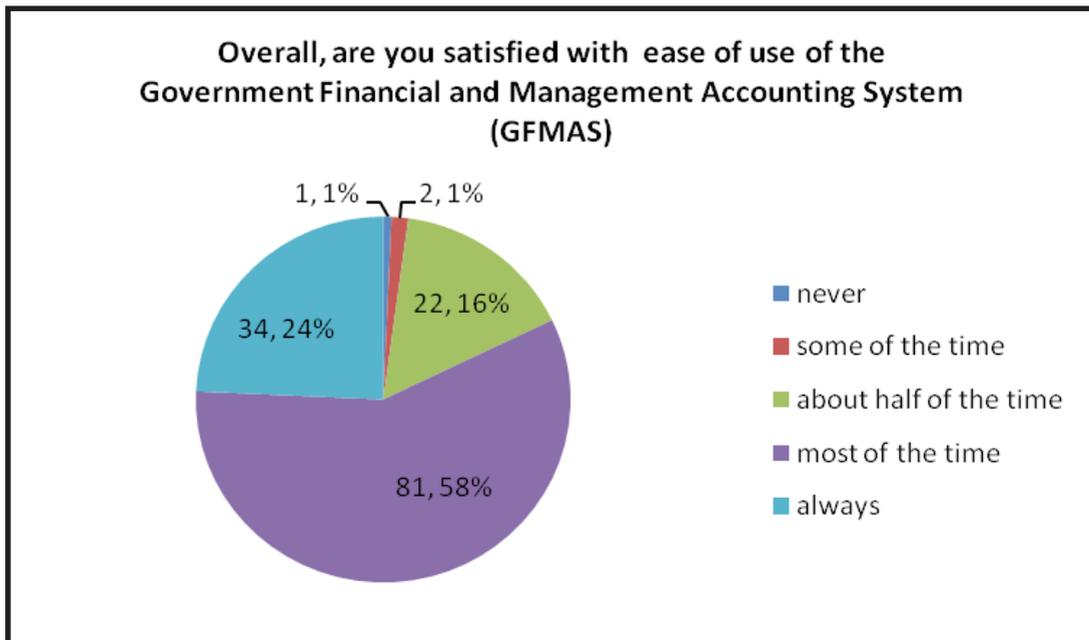


Figure 4: The satisfaction with ease of use of the Government Financial and Management Accounting System (GFMAS)

For ease of use, most of the time about 58% of end-users feels that they satisfied with the GFMAS. Furthermore, less of 30% feels unsatisfied with the system. This is due to the user-friendly system, easy to use, interaction and operates among users. Besides that, users have been provided a user manual and help tools to solve a problem in operating the system.

Timeliness

According to Chang et al. (2003), timeliness is referring to the speed and frequency of information provided by accounting information system (AIS). Consistent with Chenhall and Morris (1986) and Choe (1996), they measured timeliness with two items, namely speed and frequency, using a seven-point Likert type scale. Bailey and Pearson (1983) ranked timeliness as the fourth dimensions in determining the information quality among 8 organisations. King and Eipstein (1983) evaluated 76 managers and included timeliness as one of the dimensions in the field of information. Miller and Doyle (1987) and Bell (1985) conducted studies and employed report timeliness as their descriptions of measures. In general, if the end-users satisfy with the timeliness of the report produced by the CAS, they may be satisfied with the overall of the system. Hence, timeliness is assumed to increase the level of overall EUCS. This study suggests that timeliness is one of the factors that represent the overall EUCS towards GFMAS.

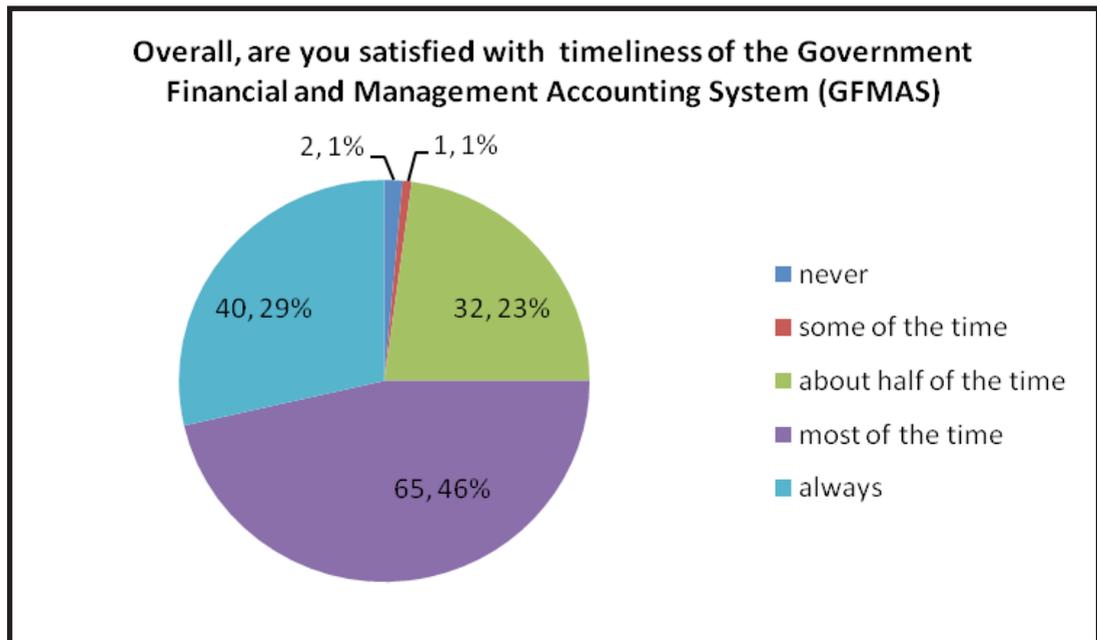


Figure 5: The satisfaction with timeliness of the Government Financial and Management Accounting System (GFMAS)

In measuring the timeliness towards the GFMAS, the study has found that most of the users satisfied with this factor due to the reason that this system has provide up-to-date, useful and in time information to be used in decision making.

System Speed

Chin and Lee (2000) extended the existing research by providing a new conceptual perspective on how EUCS is formed and how does it going to be measured. In addition, they operationalised this new perspective by providing a new measurement instrument for empirical testing. Beyond the EUCS context, they suggested that their model and approach were too general to be used in creating new measures in other IS satisfaction areas where concerns have been raised (i.e. service quality, Van Dyke et al. 1997). As for comparison, they used Doll and Torkzadeh's (1991) EUCS set of measures given that it is probably known as one of the best and frequently employed sets in the literature. They also developed additional measures for Doll and Torkzadeh's five constructs.

Thus, they constructed another dimension as one of the factors contributing to EUCS. They proposed that overall operating speed might also represent another factor. The argument is that, within the human computer interaction literature, the speed with which a computer system responds has been argued to be an important factor influencing the usability and emotional responses among users. This in turn makes satisfaction with the operating speed of a system should have a strong impact on the overall satisfaction with system used above and beyond the other functional attributes being considered (i.e., content, accuracy, format, ease of use, and timeliness).

They defined that satisfaction with operational speed as the extent to which an individual is satisfied with the operational speed of the system. Therefore, another dimension that has been added in this model is satisfaction with system speed.

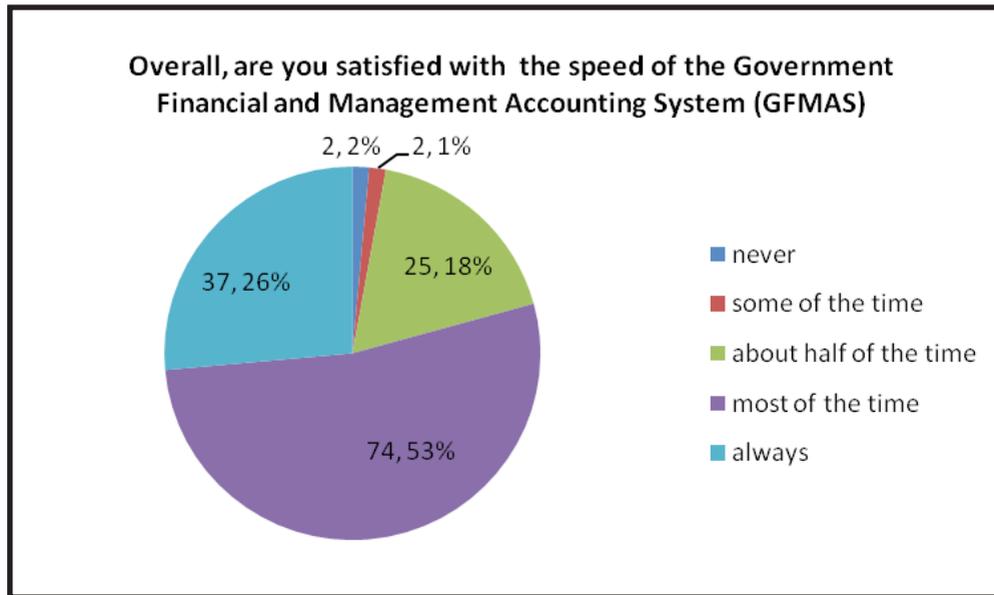


Figure 6: The satisfaction with speed of the Government Financial and Management Accounting System (GFMAS)

From the result, the study has found that users are satisfied with the system speed because the system is able to operate quickly with the huge number of report to be process in one time. Furthermore, the system seems to be capable to produce a useful information and report in sufficient time.

System Reliability

Providing a reliable and effective information protection requires an approach which needs some considerations from variety of areas, either within or outside the information technology area (Capron and Perron, 1993). An information protection program is more than establishing controls for the computer held-data; but it should also address all forms of information.

It should be noted that the information, data, programs and applications, transactions, and systems are extremely valuable. Therefore, the amount of protection of these items should be exactly the same as protection of computer hardware. The following items are generally accepted standards for a security program:

- (1) Protect classified data
- (2) Protect against unauthorised access, modification, disclosure or destruction of data.
- (3) Ensure the ability of the organisation to survive the loss of computing capacity (disaster recovery planning).
- (4) Prevent employees from probing the security controls as they perform their assigned tasks.

- (5) Ensure management support for the development and implementation of security policies and procedures.

Swanson (1974) used several dimensions to measure MIS appreciation among managers. These include the reliability of a computer system, on-line response time, the ease of terminal use and so forth. Hamilton and Chervany (1981) proposed data currency, response time, turnaround time, data accuracy, reliability, completeness, system flexibility, and ease of use among others. King and Epstein (1983) proposed multiple information attributes to yield a composite measure of information value. Reliability is one of the proposed information included in his study.

Generally, this study focuses on components in reliability dimension, either in internal or external point of view. The latter dimension deals with downtime and disruption of CAS. While the former studies on security system, password installation and back-up system of internal reliability dimension.

Gosney (1995) stated that back up or saving of data and software held in the system disk is an important precaution steps that should be in concerned by the end user. The failing to do so will lead to the possibility of time-consuming reconstruction of lost information. Worse than that irretrievable lost of data and software might happen.

The computer system would not be able for processing should there be unavailability of essential software and data. Eventually, the system can be retrieved should there are back ups. Thus, this study expects that when the end user satisfies with the system reliability, it will lead them to be satisfied with the overall EUCS to the system.

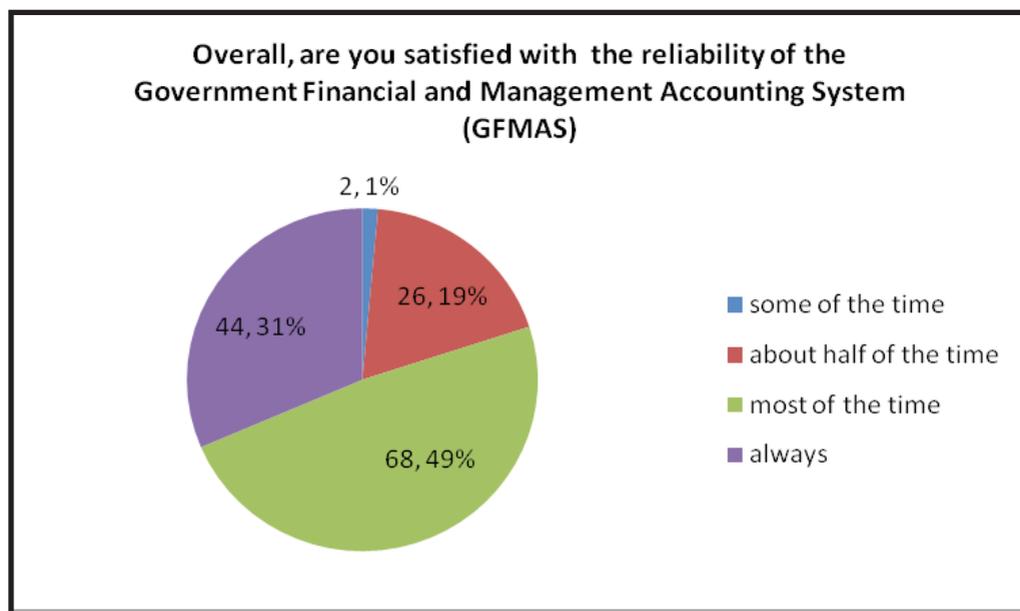


Figure 7: The satisfaction with reliability of the Government Financial and Management Accounting System (GFMAS)

The last factor that has been measured is system reliability, where most of them are satisfied towards the system. The reason seems because of rarely experience with inconvenient and system interrupted during system operation. The GFMAS also has provided with effective and efficient system security, password and recovery system. As a result, most of end-users will rely and feels reliable with the system usage.

Conclusion

This study attempts to determine the level of satisfaction among 140 end users of GFMAS at AG Department specifically in East Malaysia (Labuan and Sabah branches). The proposed model has a number of implications for research and practice. However, this study extended Doll and Torkzadeh (1988) and Chin and Lee (2000) works by considering the additional dimension in EUCS model. The study demonstrates the EUCS factors in the government sectors specifically AG department with GFMAS. The study also suggests that content, accuracy, format, ease of use, timeliness, system speed and system reliability must be emphasized to the efficiency and effectiveness of GFMAS. Thus, software developers must address rich system features and powerful system speed and functionality as important design objectives when developing systems in ensuring better output.

Even though the finding of this study is preliminary in nature, it could be generalized to the other AG departments especially in Peninsular Malaysia. This is due to the different geographical location whereby AG departments in peninsular Malaysia are nearby with the AG headquarter thus those departments and their staffs are expected to received more information and expertise pertaining to GFMAS.

References

- Abd Rahman, M.S (2008) Utilisation of data mining technology within the accounting information system in the public sector: A country study – Malaysia, *Unpublished PhD thesis*, University of Tasmania.
- Ahituv, N. (1980). A systematic approach toward assessing the value of an information system. *MIS Quarterly*. Vol. 4, Issue 4, pp. 61-75.
- Bell, J. (1985). The effect of presentation form on the use of information in annual report. *Management Science*. Vol. 30, Issue 2, pp. 169-185.
- Bailey, J.E., and Pearson S.W. (1983). Development of a tool for measuring and analyzing computer user satisfaction. *Management Science*. Vol. 29, Issue 4, pp. 519-529
- Blaylock, B.K. and Rees, L.P. (1994). Cognitive style and the usefulness of information. *Decision Sciences*. Vol. 15, Issue 1, pp. 74-91.
- Branscomb, L.M. and Thomas, J.C. (1994). Ease of use: a system design challenge, *IBM Systems Journal*, Vol. 23, pp. 224-235.
- Capron, H.L. and Perron, J.D (1993). *Computers & Information Systems, Tools for An Information Age*, (3rd) edition, The Benjamin / Cummings Publishing Company, Inc
- Chang, R.D., Chang, Y.W., and Paper, D. (2003). The effect of task uncertainty, decentralisation and AIS characteristics on the performance of AIS: An empirical case in Taiwan. *Information & Management*. Vol.40, pp. 691-703.
- Chenhall, R.H., and Morris, D. (1986). The impact of structure, environment, and interdependence on the perceived usefulness of management accounting system. *The Accounting Review*. Vol. 61, Issue 1, pp. 16-35
- Chin, W.W., & Lee, M. K. O. (2000). A proposed model and measurement instrument for the formation of is satisfaction: The case of end-user computing satisfaction. Proceedings

- of The Twenty First International Conference On Information Systems. 175-186.
- Choe, J.M. (1996). The relationships among performance of accounting information systems, influence factors, and evolution level of information systems, *Journal of Management Information Systems*. Vol.12, Issue 4, pp. 215-239.
- DeLone, W.H., & McLean, E.R. (1992). Information systems success: The quest for the dependent variable. *Information Systems Research*. 3(4), 60-95.
- Doll, W. J., & Torkzadeh, G. (1988). The measurement of end-user computing satisfaction. *MIS Quarterly*, 12(6), 259-274.
- Doll, W. J., & Torkzadeh, G. (1989). The measurement of end-user computing involvement, *Management Science*, Vol.35, No.10., pp.1151-1171.
- Doll, W. J., & Torkzadeh, G. (1991). Issues and opinions-The measurement of end-user computing satisfaction: Theoretical and methodological issues. *MIS Quarterly*, Vol. 15, Issue 4, pp. 5-10.
- Doll, W. J., Raghunathan, T. S., Lim, J.S., & Gupta, Y. P. (1995). A confirmatory factor analysis of the user information satisfaction instrument. *Information Systems Research*, 6(6), 177-188.
- Doll, W. J., Xia, W., & Torkzadeh, G. (1994). A confirmatory factor analysis of the end user computing satisfaction instrument. *MIS Quarterly*, 1(2), 453-461.
- Edmundson, B. and Ross, J. (1994) The impact of requirements analysis upon user satisfaction with packaged software. *Information & Management*. Vol. 7, Issue 2, pp. 83-90.
- Goodwin, N.C (1997). Functionality and usability, *Communications of the ACM*. Vol. 30, Issue 3, pp. 229-233.
- Gosney, J. (1995). *Computer Administration*. Brisbane: John Wiley & Sons
- Hamilton, S., & Chervany, N. L. (1981). Evaluating information system effectiveness. Part I comparing evaluation approaches. *MIS Quarterly*, 5(3), 55-69.
- Henry, J. W. and Stone, R. W. (1994). A structural equation model of end-user satisfaction with a computer-based medical information system. *Information Resources Management Journal*. Vol. 7, Issue 2, pp. 21-33.
- Jabatan Akauntan Negara (2006) Government Financial and Management Accounting System, Bahagian Pengurusan Operasi Cawangan, Kota Kinabalu, Sabah.
- Jabatan Akauntan Negara Malaysia (JANM). Accountant General Department (AGD) Available at: www.anm.gov.my
- Jones, J.W. and McLeod, R. (1996). The structure of executive information systems: An exploratory analysis. *Decision Sciences*. Vol. 17, Issue 2, pp. 220-249.
- King, W. R. and Epstein, B. J. (1983). Assessing information systems value. *Decision Sciences*. Vol. 14, Issue 1, pp.34-35.
- Kok Ming, M.W (2006) *Pengenalan GFMAS*, Jabatan Akauntan Negara, Kota Kinabalu, Sabah.
- Mahmood, M.A. and Medewitz, J.N. (1995). Impact of design method on decision support system success: An empirical assessment. *Information & Management*. Vol. 9, Issue 3, pp. 137-151.
- Mihir, A.P. & Bijan, F. (2002). Analysing user satisfaction with decisional guidance. *Decision Sciences Institute 2002 Annual Meetings Proceedings*. 128-135.
- Miller, J. and Doyle, B.A. (1987). Measuring effectiveness of computer based information system in the financial services sector. *MIS Quarterly*. Vol. 11, Issue 1, pp. 107-124.
- M.Zain, Raduan, C.R., Iskandar, A., & Maslin., M. (2005). The relationship between information technology acceptance and organizational agility in Malaysia. *Information & Management*, Volume 42, Issue 6, September 2005, pp. 829-839. doi:10.1016/j.im.2004.09.001.
- Olson and Lucas, H. C. (1982). The impact of office automation on the organisation: some implications for research and practice. *Communications of the ACM*. Vol. 25, Issue 11, pp. 838-847.

- Rivard, S., and Huff, S. (1988). Factors of success for end-user computing. *Communications of the ACM*. Vol. 31, Issue 5, pp. 552-561.
- Swanson, E.B. (1974). Management Information Systems: appreciation and involvement. *Management Science*. Vol. 21, Issue 2, pp.178-188
- Torkzadeh, G., & Doll, W. J. (1991). Test-retest reliability of the end-user computing satisfaction instrument. *Decision Sciences*, 22(3), 26-37.
- Van Dyke T. P., Kappelman, L. A., & Prybutok, V. (1997). Measuring information systems service quality: Concerns on the use of the SERVQUAL questionnaire. *MIS Quarterly*, 21(2), 195-208.

Performance Measurement in Malaysian Public Sectors: An Exploratory Study

Ruzita Jusoh, Rudy Hartono, Haslida Abu Hassan

Faculty of Business & Accountancy,

University of Malaya

E-mail: geee@um.edu.my / haslida@um.edu.my

Abstract

The purpose of this paper is to look at the adoption of performance measurement in public sectors in Malaysia by specifically examining the extent to which performance measurement is designed, implemented, and used. A survey was conducted to senior civil servants of federal government agencies in Putrajaya, Malaysia. This study found that the public sectors in Malaysia have been to a moderate extent designing their performance measurement system to align to the organizational strategy. This study shows a fairly extensive use of inputs, activities as well as a moderate use of efficiency and quality measures as compared to outcome measures. The results suggest that the Malaysian public sector performance measurement system is seemingly lacking in terms of balanced driver-outcome indicators. Indicators for sustainability, innovation, environmental and social responsibility are also not used extensively. The relatively small sample size causes a limitation to this study which might provide a potential source of bias to generalizability. Besides, the evidence from this study is only descriptive, thus it ignores other variables that can be associated with the performance measurement in use. One important implication of this study is to encourage the Malaysian Government to increase efforts in adopting outcome-based performance monitoring and evaluation method on the governments' projects and programs. Findings from this study provide insights into the design of performance measurement system and would have drawn attention to its implementation and usage in the public sector.

Keywords : Performance measurement, Public sector, Balanced scorecard, Government

Introduction

There is an increasing interest on the performance measurement in government since late 1980s encouraged by the new public management movement (Osbourne and Gaebler, 1992). Reform in the public sector has received worldwide attention, particularly on the performance measurement and management aspects (Kloot and Martin, 2003). Many governments have adopted some sort of performance measurement initiatives to enhance their services and promote transparent and accountable government. However, implementations and practice of performance measurement has been recognized as much less than comprehensive (Niven, 2002). Much has been written in theory about performance measurements. However, less is known in practice about their operation, especially in the public sector and in Malaysian context. Therefore this paper reports an attempt to investigate the perception of senior civil servants of Malaysian public sector on the performance measurement design and implementation. A study was conducted to examine the extent to which performance measurement is designed

in line with the strategy, how it has been implemented and the extent to which it has been used. This study resembles partly the research done by Hoque and Adams (2008) in the Australian government.

There were several reasons for undertaking this study. The first reason is to date, the design and choice of the performance management systems within government departments received minimum attention from researchers and least explored especially in Malaysia. The most recent study was conducted by Hoque and Adams (2008) in Australia. A quite similar study was done much earlier on state and local governments by the Government Accounting Standards Board and National Academy of Public Administration in the USA in 1997. Both studies looked into the performance measurement practices in the public sectors. Therefore, this study adopting a survey approach using questionnaires developed partly based on these earlier studies by Hoque. Within Malaysia, recent studies in regard to performance measurement were done on the private sector by Othman et al. (2004) on the limitations faced by a Malaysian telecommunication company in implementing balanced scorecard (BSC) and Jusoh et al. (2006, 2008a, 2008b) on performance measurements and balanced scorecard usage in Malaysian manufacturing firms. It is hoped that this short exploratory study will promote researchers' interest to investigate further into the issues of adapting and sustaining performance in the Malaysian public sector.

The second motivation for conducting this study is due to increasing efforts taken by the Government of Malaysia in adopting outcome-based performance monitoring and evaluation method on the governments' projects and programs. These efforts emphasizes on outcome/ impact instead of processes. In line with this new development, the Malaysian government has also introduced the use of key performance indicators (KPIs) to all ministers which has resulted in the creation of a new unit called 'Unity and Performance Unit' under the Prime Minister's Department. It is therefore timely to examine if the BSC or its distinguishing characteristics can be used as an effective performance measurement and management tool for the government sector especially its application in the government of Malaysia.

Furthermore, as pointed out by Speckbacher et al. (2003), this study is warranted as to provide more empirical evidence on performance measurement system, its content, implementation and applications as well as the individual user's experience, expected benefits and satisfaction as the type of performance measurement system used may vary from one organization to another.

Hence, focusing on the Malaysian public sectors, this paper attempts to answer the following questions related to the design, implementation, uses, and benefits as well as shortcomings of performance measurement system:

1. How is the performance measurement being designed?
2. How is the performance measurement being implemented and used?
3. What are the benefits and important aspects of successful implementation of performance measurement system?

Literature Review

Evolution of Performance Measurement

The concept of performance management has been going through a gradual change over the years. Performance measurement is defined as management and control systems that produce information to be shared with internal and external users (Henri, 2004). Furthermore, as it encompasses all aspects of the business management cycle, performance measurement constitutes a process for developing and deploying performance direction (Nanni et al., 1992). Neely et al. (1995) view performance measurement as the process of quantifying the efficiency and effectiveness of action while the performance measure represents the metric used to quantify the efficiency and/or effectiveness of this action. Performance measurement based on traditional cost or management accounting system that was introduced in early 1900s is more for fulfilling the requirement of external reporting and government (Johnson & Kaplan, 1987). Johnson and Kaplan (1987) argued that traditional performance measurement systems focus too heavily on the accounting or financial based measures and tend to ignore the non-financial measures. In other words, no or less emphasis is given on long-term value creation, particularly for the intangible and intellectual assets, that generate future growth to the organization. This is because these intangible assets could not be easily quantified in terms of financial or monetary values. Managing organization's intangible assets such as customer relationships, innovative products and services, high-quality and responsive operating processes, and employee capabilities and skills can only be done through the use of non-financial measures.

Accordingly, during the last two decades, an increasing number of companies have implemented performance management systems (PMS) that are based on critical success factors (CSF) and key performance indicators (KPI). Organisations, especially those in the private sector, have implemented a number of broader performance measurement and management system (PMS) tools such as Activity-Based Costing/Management (ABC/M), Benchmarking, Total Quality Management (TQM), Business Process Reengineering (BPR) and arguably the so-called best tool, the Balanced Scorecard (BSC). In a recent survey, Rigby (2003) reported that the BSC is one of the key "compass setting" tools used by managers. Lingle and Schiemann (1996) describe the results of a study that confirms that companies who balance financial and non-financial measurements, but also link strategic measures to operational ones, update their strategic scorecard regularly and clearly communicate measures and progress to all employees, are better performers. Surveys among corporate executives conducted by the consulting firm Bain and Company revealed that by 2004, 64 percent of their respondents in North America and 57 percent of the respondents worldwide were using BSCs in their companies (Rigby and Bilodeau, 2005).

Increasingly, managers have found value in monitoring indicators other than the financial measures. A recent survey of senior executives reveals that short-term financial measures rank fifth behind four non-financial measures in terms of perceived importance (Ittner and Larcker 2001). Atkinson et al. (1997, 25) also conclude that "performance measurement systems based primarily on financial performance measures lack the focus and robustness needed for internal management and control". This is because the information developed using traditional performance measurement framework for external users is inadequate and insufficient for internal users. The perceived restrictions of traditional accounting-based measures are numerous of which Ittner and Larcker (1998a) listed eight most common limitations, namely, too historical and "backward-looking", lack of timely signals, lack of predictive ability to explain future performance, reward short-term or incorrect behaviour, lack of actionability, too aggregated and summarized to guide managerial action, reflect functions

instead of cross-functional processes, and give inadequate guidance to evaluate intangible assets. Traditional financial ratios have worked as important tools of measuring organisational performance in the past. Kaplan and Norton (1992, 71) suggest that they “worked well for the industrial era, but they are out of step with the skills and competencies companies are trying to master today”. Their relevance in the information age where the market has no boundary and organisations are competing for talents is questionable. The situation may worsen when the firm is compelled to pursue short-term goals at the cost of the organisation’s long term objectives (Anand, Sahay, & Saha, 2005). Eccles, (1991) felt that the leading indicators of business performance cannot be found in the financial data alone.

Performance Measurement in Public Sector Organisations

In the public sector, measuring performance emerged with the drive to revive the management of the sector. ‘New public management’ discussion surrounds only one key word, which is ‘performance’ (OECD, 1993: p.7). Performance has been the agenda for new way of doing business in the public sector and that involves paradigm shift towards entrepreneurial government (Osbourne and Gaebler, 1993). In the public sector context, Nyhan and Martin (1999, p. 348) defined performance measurement as “the regular collection and reporting of information about the efficiency, quality, and effectiveness of government programs”. According to Pollanen (2005, p. 5), “an ideal performance measurement system in public organizations can enable an evaluation of the effects of programs on the well-being of multiple stakeholders. Thus, public sector nowadays needs to be managed like their business counterpart. However, the design of performance indicators in both private and public sectors are very difficult to match because performance is a broad concept which has various meanings for different audience in a different context (Carter, 1991). Nevertheless, managers of public sector have to face a number of performance measurement-related challenges resulting from the new public management initiative. Public agencies are becoming more aware of their necessity to develop and implement practices and procedures that will make them more business-like (Dixon, Kouzmin and Korac-Kakabadse, 1998). Governments around the world are under pressure to control their costs and improve their services. They are expected to be responsive and accountable not only to their departmental secretary, minister and parliament but also to client groups in the marketplace, even when their respective interests are in conflict (Dixon, Kouzmin and Korac-Kakabadse, 1996).

US Comptroller General David M. Walker, in testimony to a US Senate subcommittee on how to improve the federal government’s approach to managing its people, noted that the landmark federal management reforms of the 1990s signaled the arrival of a new era of accountability for results (Walker, 2000). The US federal government will have to go beyond a zero tolerance for waste, fraud and abuse and create a government that is better equipped to deliver efficiently, economically and effectively on its promises to the US people. Randor and Lovell (2003) believe that there is a need to reinforce accountability, so that they are clearly held accountable for the resources they use and the outcomes they achieve. In response, government administrators have begun introducing changes and implementing modern private sector management tools in their organisations to deal with the financial constraints and increasing demand in terms of accountability to stakeholders (Ho & Chan, 2002). According to the World Bank’s Independent Evaluation Group’s report, growing number of governments are working to improve their performance by creating systems to measure and help them understand their performance (Mackay, 2007).

A measurement system consists of practices, procedures, criteria, and standards that govern data collection, the analysis of data and the compilation of results into quantitative

or qualitative forms (Halachmie and Bouckaert, 1996). The system of measurement can be simple or complex, temporary or permanent. Depending on the desired performance information, agencies may have to use more than one kind of measurement. A properly designed performance measurement system may allow assessment of an agency's various attributes such as size or source of fundings, employees' activities, relationship among different activities, and the resulting goods and services and how they are perceived by various stakeholders. A well-designed performance system may allow an agency to arrive at an index that represents the combination of several measurement efforts.

There are two postures apparent in government measurement systems (Halachmie 1982, 1992; Wholey, 1983): (i) results, outcome oriented management; or (ii) process-oriented management. The two postures might be conflicting (Wholey, 1983, p. 5), which explains why many performance evaluation efforts tend to focus either on the results or on the process for attaining the results (Halachmie and Bouckaert, 1996). Results-oriented systems will target the desired results and specifications of process are derived from the attributes of the desired results. This approach is consistent with total quality management core teaching which treat the outcome as essential. Process-oriented systems involve efforts to re-engineer the business processes of organizations (Hammer and Champy, 1993). Selection of emphasis on results or process for performance measurement should be based on the objective of the assessment (Halachmie and Bouckaert, 1996). The reasons for assessing performance determine the necessary perspective of the evaluation, whether to look at process or impact (Halachmie, 1992). A different perspective of assessment may generate valid evaluation but will not be useful. In example, examining the changes in teachers' proficiency in specific subject areas may not help determine the proficiency of students in a particular grade (Halachmie and Bouckaert, 1996, p. 5). Students' achievement may be poor because of various other reasons such as learning or behavioural problems and little support from parents.

The World Bank's report also highlights various whole-of-government monitoring and evaluation initiatives around the world. Niven (2002), among others, has been actively working with a number of local authorities, i.e. the City of Charlotte and Transport Department of Michigan, USA, to adopt balanced scorecard for monitoring. Performance measurement in European countries like the United Kingdom, Finland, the Netherlands and Sweden has been implemented rather pervasively (Pollit, 2005). Pollit (2005) emphasizes that the UK's public sector has had the strongest history on performance measurement and that performance measurement has become almost universal in the northwestern European governments and it goes well beyond rhetoric and into practice.

However, there are underlying differences between the private sector and the government sector. Private sector and government sector organisations organize functions differently, because their budgeting processes, regulatory and accountability regimes are different (Dixon et al., 1998). Consequently, priority objective would have been different too as the "financial" perspective (which is understandably the most important aspect of a profit oriented organisation) cannot be a bottom-line objective for government organisations, but rather may provide a constraint by limiting spending to budgeted amounts (Kaplan & Norton 1996: pp.179-80). Two important features of the public sector are (Dixon, 2002):

- i) bureaucrats often serve several masters which include services' users, services' payers, politicians and professional organizations;
- ii) the consequence of serving different masters resulting in the bureaucrats often have several ends to achieve, i.e. they are often expected to increase both efficiency and equity when delivering services to the public.

Steven Van de Walle (2007) highlights that the main problem of measuring public sector performance lying on a conceptual instead of measurement. It is a conceptual problem because in order to measure government and government performance, you first have to define government and agree on its objectives. Failure to define those areas would render the measuring effort as technically correct, but at the same time meaningless. Objectives, as in most cases of governments in the world, may not be revealed – objectives may be contradictory, or policy makers may just not know what exactly their objectives are. When conflicting and/or vague objectives is an essential feature of governing, measuring government performance will be merely a political exercise at best.

Balanced Scorecard (BSC) in Public Sectors

Kaplan and Norton (1992) define the “balanced scorecard” (BSC) as a set of measures that gives top managers a fast but comprehensive view of the business. The BSC includes financial measures that tell the results of actions already taken which is then complemented by the operational measures on customer satisfaction, internal processes, and the organisation’s innovation and improvement activities. They identified the operational measures as the drivers of future financial result. Basically, a scorecard can be considered “balanced” if it contains financial and non-financial measures, driver and outcome measures, tangible and intangible measure and internal and external constituents.

Niven (2003) describes a BSC as a carefully selected set of quantifiable measures derived from an organisation’s strategy. Strategy is an integral element of a BSC framework which suggests that the foundation of measuring organisational performance should be derived from its vision and strategy. Therefore, any measurements chosen within the four perspectives (financial, customer, internal processes, and learning and growth) should be able to explain the level or extent of achievement of the strategy. In linking strategy to balanced scorecard, it is important to translate strategy into measurable achievement so that it can help to guide the organisation in explaining those typically mouthful words into simple and achievable adverbs and nouns (Kaplan and Norton, 1996). Hence, this study attempts to explore the extent to which performance measurement in the public sector is being developed based on their strategy.

Despite some underlying differences between the private and the government sector, government organisations are increasingly recognizing the BSC as an important performance measurement and management tool. They are also looking for appropriate performance measurement systems to ensure employees are rewarded for good performance. Effective performance management requires fact-based decision making and one of the first requirements is relevant and reliable data. With multiple perspectives (one of the important elements of the current version of the BSC) data at hand, government agencies can show the outcomes and effects of their efforts as real as possible, and taxpayers can judge the agencies’ accomplishments across a range of measures and decide whether they are getting the best possible service value for their tax dollars.

Apparently, there has been very little research done on how a standard BSC (originally developed for the private sector), can be effectively applied in the public sector. The effective use of the BSC in the public sector as a performance measurement and management tool represents a gap in the literature (Chan, 2002). Major concern would be on the potential adjustment to the BSC should it be adopted in a public sector. Potential adjustment to the structure of the BSC and the use of composite measures in evaluating an organization is worth to be discussed further.

Structure of BSC

There are some obvious weaknesses of the current version of the BSC when it is applied in the government sector especially with regard to its design and structure. The differing objectives of the government sector indicate some problems of the application of the current version of the BSC in government organisations. Government organisations often place their customers or constituents (not the financials) at the top of their strategy maps (Kaplan & Norton 1995, p.79). But the current version of the BSC fails to provide a blueprint as to how other perspectives (learning and growth, internal business process and financial) may ultimately influence and affect customers.

A clear distinction between the private and the public sector is that in the private sector, it is the customer who pays for the service and receives the service (Kaplan & Norton 2001, p.134). In the public sector, however, the customers or citizens do not necessarily pay for the service they receive (or perhaps pay only proportionately). In other words, the citizens do not receive service in direct proportion to their tax payments and any form of fiscal contribution. Therefore, unlike the private sector, the "financial" perspective is not the bottom-line objective for government organisations (Kaplan & Norton 1996, pp.179-80), but customer perspective is. Hence, in a causal relationship manner, it is very important that a BSC translates all relationships into customer satisfaction but not necessarily into financial success. In fact, in the government sector, it is most often that financial success leads to customer satisfaction (as contrasted with the private sector, where customer satisfaction usually leads to increased revenue).

This has been clearly experienced by the City of Charlotte, USA as highlighted by Kaplan & Norton (2001, p.138) where they placed the customer perspective at the top of their corporate scorecard. They experienced that financial objectives became the enablers for helping the city to achieve its customer objectives by ensuring that the city's services such as sewage treatment, garbage collection, city cleanliness etc are delivered at a reasonable price. They also have seek competitive funding from external partners while maintaining a solid and sustainable tax base and credit ranking in order to fund high-priority projects towards providing better service delivery. All these financial objectives led them to a higher customer satisfaction. The BSC can be effective in the government sector, if and only if, the current perspectives are rearranged as shown in Figure1.



Figure 1: Rearrangements of balance scorecard for public sector

According to Niven (2003), the four perspectives of the current version of the BSC can still be applied in public sector as long as they are rearranged according to governmental priorities. The primary intention of a government agency is to serve the people; hence its main reason for existence or its mission would be at the top of every other objective. The strategy still remains at the focal point of the perspectives however, meeting the people's or customers' expectations is now considered to be the most critical perspective among the four in determining whether the agency has accomplished its mission or otherwise. Another consideration as suggested by the revised framework above is on the rephrasing of the strategic questions to suit the public sector environment. These considerations, if positively dealt with, may contribute to employee satisfaction, superior employee performance, sound internal business process and in turn, may lead to efficient stewardship of taxpayers' dollars which may eventually lead to achieving the main objective - absolute customer satisfaction. In conclusion, in the light of the above observations, it is clear that some modifications are needed to the current version of the BSC albeit having a similar set of performance perspectives for it to be used in the public sector. This study attempts to investigate the design and structure of performance measurement in the public sector in terms of its strategic alignment and balanced characteristics.

Strategic Alignment

The issue of alignment between strategy and performance measures provides a problem with the performance measurement being used in many organizations. In tackling this issue, Banker, Janakiraman and Konstans (2001) have suggested the use of the BSC as it provides the articulation of linkages between performance measures and strategic objectives. Within

BSC framework, performance measures can be aligned with business strategy where its alignment can be essential for successful implementation of strategy (Kaplan and Norton, 2001; Fonvielle and Carr, 2001). Kaplan and Norton (1996, p.149) noted that “all balanced scorecards use certain generic measures which reflect the common goals of many strategies, as well as similar structures across industries and companies.” They also noted that the BSC provides a framework for a strategic management system that organizes issues, information, and a variety of important management processes.

In line with this, Neely et al. (1994) argued that performance measures can encourage the implementation of strategy by matching measures and strategies. Specifically, Chenhall and Langfield-Smith (1998, p. 243) argued that “strategic priorities should be supported by appropriate and effectively implemented manufacturing processes and information systems, including those providing management accounting information.”

Balance

Besides the issue of alignment, performance measurement systems that are able to capture information on all aspects of business are essential in today's changing business environment. The traditional performance measurement tools are no longer adequate in providing the information needs of today's managers. Thus, it is necessary for organizations to deemphasize the use of simple, aggregate, short-term financial measures and to develop indicators that are more consistent with long-term competitiveness and profitability (Kaplan, 1983). Kaplan and Norton (1996) argued that financial measures are lagged measures that report on how the organization has performed and provide relevant information on the firm's physical capabilities and resources, while non-financial measures are considered as leading measures because they provide information on future performance (Ittner and Larcker, 1998; Kaplan and Norton, 1996; Wallman, 1995). The use of multiple performance measures, both financial and non-financial, is very important for management as these measures have the added advantage of providing enhanced protection against the consequences of uncontrollable outside events (Bruns, 1992; Bruns and McKinnon, 1993). In order to manage the critical success factors and strategic resources such as physical resources, structural resources, and human capital in this new business environment, performance measurement systems should also rely on the use of non-financial measures pertaining to employees, operations, and customers (Widener, 2006). Hendricks *et al.* (1996) and Lynch and Cross (1995) pointed out that organizations need a balanced set of financial and non-financial performance measures that are customer-driven and with operational acceptance in order to remain competitive. Consequently, the balanced scorecard (BSC) was developed by Kaplan and Norton in 1992 as a way of addressing the traditional performance measurement limitations. The word balance refers to the types of performance measures included in the scorecard. These performance measures may include financial and non-financial measures, leading and lagging measures, short-term and long term measures, quantitative and qualitative measures, and internal and external measures.

Implementation and Use

To implement a successful strategy, many people from various levels of the organization should participate and be involved in implementing a BSC. Kaplan and Norton (1996) suggested that organizations should ensure that every employee contributes to the implementation of the strategy by communicating and sharing with them their long-term vision and strategy as embodied in the unit's balanced scorecard. At the same time, the BSC's strategic objectives and measures need to be communicated throughout organization as to signal to all employees the critical objectives that should be accomplished if an organization's strategy is to succeed. The process of communicating and linking is a critical step in the BSC/strategic management system implementation. Furthermore, as communicating business strategy

and aligning individual goals with corporate goals are critical in many organizations (Simons, 1995), BSC can provide a means for communication and alignment of corporate strategies by cascading and linking measures to each level of organization. For example, Malina and Selto (2001) provided empirical evidence that emphasizes the role of BSC in providing effective communications of strategy and knowledge and distributing information. In this manner, BSC may become a source of competitive advantage (e.g. Malina and Selto, 2001; Tucker et al., 1996). Besides providing effective communication, alignment of an organization and scorecard measures towards strategy must ultimately be motivated through the incentive and reward systems. Thus, there must be a link between reward system and scorecard measures. Kaplan and Norton (1996, p. 222) noted that "attempting to gain organizational commitment to balanced performance across a broad set of leading and lagging indicators will be difficult if existing bonus and reward systems remain anchored to short-term financial results. However, a study by Speckbacher et al. (2003) found that even though more than two-thirds of the BSC users linked their reward system to the BSC, they do not actually see cause-and-effect chains as a prerequisite for a BSC-based reward system.

Research Methods

Sample and Survey Procedure

There are more than 900 federal and state government agencies throughout Malaysia. According to listings by federal government ministries and agencies in the website, there are approximately 77 ministries and federal government agencies having headquarters in Putrajaya. The scope of this study was limited to the government agencies having their head offices at Putrajaya in view of the vast locations and respondents which may include many groups and sub-groupings. This would be more practical and achievable given the time and resource constraints of the study. Furthermore, the questionnaire designed demands responses from the senior executives and most senior executives normally are positioned at the head offices in Putrajaya. Concurrent with time constraint and position of the participants, the questionnaires were administered personally to respondents' offices in Putrajaya. All respondents were assured that their responses will be treated confidential; the cover letter states that 'only aggregates will be used for the research and that no individual organisation will be linked to specific responses'. The cover letter also states that filling up of personal information at the end of the questionnaire is optional. Out of 73 questionnaires sent out, only 51 were returned (70 percent), seven via fax and the rest were personally collected.

Respondents' Profile

Demographic information of the respondents is presented in Table 1. Majority responses obtained were from the divisional level (38 respondents, 74.5 percent), followed by sectoral (12 respondents, 23.5 percent) and organisational level (1 respondent, 2 percent). The respondents were divided into three position groupings: Senior Management, Middle Management, and others. There are 28 males respondents as compared to 20 females, while 3 respondents' data were missing. Forty seven respondents (92.2 percent) have been in the government service for 12 years and above and among them, 24 (47.1 percent) respondents have been with the same unit between 2 to 4 years. Twenty four of the respondents (47.1 percent) have a university degree while 21 of them graduated with a master's degree.

Questionnaire Design

The questions in the questionnaire were formulated after a lengthy review of the literature

in performance measurement and balanced scorecard. A total of 35 questions derived selectively from various previous researches such as Hoque and Adams (2008), Kald and Nilsson (1999), and Marr (2005). Majority of the questions were adapted from Hoque and Adams (2008). The questionnaire is broadly divided into three sections, namely: Strategy, Performance Measurement, and Respondent's Background. Strategy section gives the respondents an opportunity to present his/her understanding of his/her unit's strategy and its possible relationship with performance measurement system. Performance measurement section deals with questions related to the design, implementation, and use of the PMS in his/her organisation, sector or division. Majority of the questions were being rated on a 5-point Likert Scale where 1= "To a little or no extent", 2= "To some extent", 3= "To a moderate extent", 4= "To a large extent" and 5= "To a very large extent".

Table 1: Respondents' Profile

	Frequency	Percentage
Levels in organization		
Entire organization	1	2
Sector	12	23.5
Division	38	74.5
Total	51	100.0
Post		
Senior Management	6	11.8
Middle Management	24	47.1
Others	14	27.5
Missing	7	13.7
Total	51	100.0
Gender		
Male	28	54.9
Female	20	39.2
Missing	3	5.9
Total	51	100.0
Tenure		
1 year and below	6	11.8
2 years – 4 years	24	47.1
5 years – 7 years	11	21.6
8 years – 10 years	5	9.8

11 years and above	2	3.9
Missing	3	5.9
Total	51	100.0
Qualification		
Diploma	0	0
Degree	24	47.1
Masters	21	41.2
Ph.D.	2	3.9
Professional qualification	1	2.0
Missing	3	5.9
Total	51	100.0

Results

Survey data of this study was analyzed using descriptive statistics to answer the three research questions posed earlier. As the study was an exploratory in nature, analysis using descriptive statistics deems to be sufficient in order to give a general idea about the current state of nature of performance measurement systems practiced in the Malaysian public sector. Therefore, findings will be presented according to the three research questions.

General Findings

Before the respondents were asked on the specific questions relating to the design of performance measurement, two questions were asked regarding the business performance measurement (BPM) approaches. Out of 44 responded (7 were missing), 41 of them (93.2 percent) said that they had heard and are aware of the balanced scorecard (BSC) approach. In another question asking them whether their performance measurement system is a balanced scorecard, only 7 out of 51 who responded (13.7 percent) say that their performance measurement system is to a large and very large extent resembles a BSC whilst 27 respondents (52.9 percent) reply that their performance measurement systems least likely to resemble a BSC. Among 51 who responded (see Table 2), only five respondents' organisations (9.8 percent) have actually implemented BSC whilst 28 organisations (54.9 percent) are still in the consideration stage, while 12 have rejected the idea and six have not considered it at all.

Table 2: Business Performance Management (BPM) Approaches

	Percentages				
	Not considered	Considering	Considered then rejected	Implemented	Implemented then abandoned

ISO	3.9	21.6	9.8	62.7	2.0
Six Sigma	26.0	38.0	28.0	6.0	2.0
Activity Based Costing	44.9	12.2	24.5	16.3	2.0
Balanced Scorecard	11.8	54.9	23.5	9.8	
Customised KPIs	2.0	15.7	19.6	62.7	

This study also attempts to find out if the unit is using any other performance measurement approaches than the balanced scorecard. This is because in Marr's (2005) study, out of 276 respondents, 167 (61.0 percent) are using BSC together with other quality-based approaches such as total quality management, Baldrige, Six Sigma and economic value added (EVA). The results of this study (see Table 2) show that 32 organizations (62.7 percent) have implemented ISO and some sort of a customized KPI system. Eight organizations (15.7 percent) have implemented activity based costing and only 3 (5.9 percent) have implemented six sigma. What is interesting to note is that there is one respondent from each of those who had implemented ISO, Six Sigma and activity based costing had eventually abandoned the approach.

By using cross tab analysis (see Table 3), the result shows that 43.1 and 39.2 percent of those who have implemented ISO and a customized KPI system respectively are also considering implementing BSC. With a move towards outcome-based performance measurement and in increasing awareness towards employing a balanced set of KPIs, there is a high probability that the public sectors will increasingly adopt the BSC approach.

Table 3: BSC with other BPM approaches

	Percentages			
	ISO	Six Sigma	Activity Based Costing	Customised KPIs
Considering BSC	43.1	2.0	4.1	39.2
Considered then rejected BSC	7.8	2.0	8.2	9.8
Implemented BSC	2.0	2.0	4.1	5.9

How is the Performance Measurement Being Designed?

On the specific questions concerning the design of performance measurement system, questions relating to the extent of performance measures being derived from the organisational strategy and the extent to which performance measures are used in a balanced manner in accordance to the BSC approach were asked (see Table 4 and Table 5).

Table 4: Performance measurement design – Derived from strategy

Performance measurement design – Derived from strategy	Percentages			
	Little or no extent	Moderate Extent	Large and Very large extent	Mean
Our unit's strategy is officially documented	11.8	37.3	51.0	3.45
Our unit's organisational strategy is well understood by employees	25.5	49	25.5	2.98
Our unit's operational strategy is influenced by organisational strategy	13.7	23.5	62.7	3.90
Our unit's Key Performance Indicators (KPIs) are derived from the unit's organisational strategy	13.7	47.1	39.2	3.25
We review and reassesses the KPIs used by our performance measurement system whenever our unit's strategy changes	33.3	37.3	29.4	2.98

As shown in Table 4, there are five questions relating to performance measurement design-derived from strategy. Results show that 51 percent of respondents declare that their unit's strategy is officially documented, while 62.7 percent of respondents feel that their operational strategy is to a large and very large extent influenced by the organisational strategy. The overall mean for performance measurement deriving from strategy is 3.31, hence, it can be deduced that the performance measurement of Malaysian public sectors is to a moderate extent being developed based on organisational strategy. This result is somewhat inconsistent with the findings by Kald and Nilsson (1999) on 800 business units in the Nordic countries where there is a relatively strong connection between strategic plan and the measures used. This could be perhaps due to the difficulties in translating the strategy into operational and measureable terms within a public sector as strategy is often nebulous and visionary as Kaplan (1996) suggests that strategy can be a foreign concept to a public sector organisation.

Table 5 shows the scores for questions relating to the extent of performance measures being used in a balanced manner in accordance to the approach of the BSC. The evaluations of balanced indicators are in terms financial vs. non-financial, input vs. output, driver vs. outcome measures as well as internal vs. external constituents. In addition, balanced indicators should reflect the multidimensional nature of performance measurement.

As shown in Table 5, all the ten performance measurement dimensions are used only to some extent by the Malaysian public sectors (mean scores are below 3.0). However, among the 10 dimensions, activity/process measures are used most extensively (mean= 2.49), followed by output measures (mean= 2.29), financial measures (mean= 2.25), inputs measures (mean = 2.25), and customer satisfaction measures (mean = 2.24). Majority of the respondents reported that they use activity/process measures (60.8 percent) and output measures (58.8 percent) to

a large and very large extent. The findings on output and activity/process measures are quite similar to the findings reported by Hoque and Adams (2008) in the Australian government. The results also seem to be consistent with some other studies done in the USA, UK, and Australia where the performance measures have tended to be more output measures rather than more desirable efficiency and effectiveness measures (Pollanen, 2005). However, Chan (2004) revealed that the adoption rate for financial and efficiency measures was up to 70 and 80 percent of Canadian and US municipalities. With lower extent of use of cost and processes efficiency and quality measures, it can be reasonably concluded that Malaysian public sector less emphasizes on internal business process reform and financial accountability where services must be delivered in a cost-effective, high-quality manner. This would suggest that efforts taken to reform processes and systems to reduce cost is lacking. Besides, moderate use of financial measures is basically for annual budget purpose and for financial reports on expenditure against budget.

Table 5: Performance measurement structure – Balanced

Performance measurement dimension – Balanced	Percentages			
	Little or no extent	Moderate Extent	Large and Very large extent	Mean
Output	29.4	11.8	58.8	2.29
Cost & processes efficiency & quality measures	33.3	41.2	25.5	1.92
Activity/process	11.8	27.5	60.8	2.49
Customer satisfaction	13.7	49	37.3	2.24
Outcomes	47.1	37.3	15.7	1.69
Financial	9.8	54.9	35.3	2.25
Inputs	19.6	35.3	45.1	2.25
Learning and growth	41.2	45.1	13.7	1.73
Socially and environmentally related measures	60.8	31.4	7.8	1.47
Innovation	58.8	29.4	11.8	1.53

As expected, socially and environmentally related measures (mean=1.47) and innovation related measures are used least by the Malaysian public sectors. The former is reported to have been used to a little or no extent by 60.8 percent of respondents and the latter by 58.8 percent. The lack of such measures is evident as government agencies seldom undertake extensive market research to gauge people perceptions of their performance across both these dimensions. Lower extent of use of innovation measures was also found in Chan's (2004) study which compared the adoption of balanced scorecards in Canadian and US municipalities. Lower use of innovation measures indicates that little recognition of the importance of learning by individuals in the Malaysian public sector. This suggests that staff development programs and trainings for specific skills and knowledge are not greatly

emphasized, thus lead to a low level of innovation. In relation to this, Kloot and Martin (2000) found that innovation and learning occur largely on an ad hoc basis and not formally addressed in Victorian local government.

The mean score for all 10 dimensions is 2.94, and therefore, it can be concluded that Malaysian public sectors use balanced performance measures only to some extent. It seems that the measurements are to some extent being balanced between financial and non-financial indicators because the financial measurements are being used to some extent (mean= 2.25), while other non-financial performance measurement dimensions such as customer satisfaction and process efficiency and quality are being used to some extent too.

In addition, from the mean scores, the results also indicate that there seems to be a somewhat balanced set of performance measurements between input and output indicators as both types of measurements are being used to large and very large extent by 45.1 percent and 58.8 percent of respondents, respectively. This could be due to the current Malaysian government initiative of implementing Annual Work Target which was enhanced in 2002 (JPA, 2002) that requires every public servant to plan and document all core and non-core activities and deliverables to be accomplished for that particular year which include planned budgets, manpower, activities and trainings. However, with regard to input measures, this finding is quite different from Hoque and Adams's (2008) study whereby inputs and learning and growth measures were the least used in the Australian government.

Not surprisingly, the least used performance measurement dimensions are socially and environmentally related measures (mean= 1.47), measures on innovation (mean= 1.53) and outcomes measures (mean= 1.69). An outcomes measure is defined as the measure that tracks the benefit received by stakeholders as a result of the organisation's operations (Niven, 2002). Outcome measure relates to the achievement of the organisation's overall goals such as reduced incidence of HIV, increased perception of public safety etc. The low percentage of usage of outcome measures among Malaysian public sector might not augur well with the aspiration of the Chief Secretary to the Government to institute outcome measurements in evaluating the achievement of the Ninth Malaysian Plan.

Another possible balanced set of indicators are between a driver and an outcome indicators. A driver indicator is a measure that leads to the achievement of outcome indicators and often includes the measurement of processes and activities (Niven, 2002). Since this study shows an extensive usage of inputs, activities as well as a moderate use of efficiency and quality measures as compared to outcome measures, therefore, we can fairly deduce that the public sector performance measurement system is seemingly lacking in terms of balanced driver-outcome indicators. Tomkins (1987) wrote that measuring outcomes links closely to the concept of effectiveness – the extent to which a public sector program objective has been met. Thus assessing effectiveness is impossible without satisfactorily measuring the outcome (Smith, 1996).

The last aspect of a balanced set of measurements is from the perspective of internal vs. external stakeholders (Kaplan and Norton 1992; 1996). From our results, internal related measurements such as inputs, financial, activity/process, as well as output, are being used to a larger extent as opposed to external related measures. Except for customer satisfaction that were reported to have been used to a moderate extent (49.0 percent), other external related measures such as outcomes (47.1 percent) and social and environmental (60.8 percent) related measures have been used to little or no extent. Therefore, it seems that the Malaysian public sector has been measuring their achievement based most on internal yardstick instead of taking the cues from the stakeholders, customers or the public.

To explore further on the use of socially and environmentally related measures, respondents were asked to rate on the extent of use of nine socially and environmentally related measures as shown in Table 6.

Table 6: Social and environmental related performance measures

Performance measurement structure –Social and Environmental related performance measures	Percentages			
	Little or no extent	Moderate Extent	Large and Very large extent	Mean
Employee diversity	86.3	9.8	3.9	1.18
Economic impacts	54.9	35.3	9.8	1.55
Occupational health and safety	62.7	21.6	15.7	1.53
Stakeholder involvement in community, social and environmental issues	54.9	19.6	25.5	1.71
Community relations	60.8	23.5	15.7	1.55
Employee satisfaction	9.8	74.5	15.7	2.06
Other community, ethical, social and environmental issues	60.8	19.6	19.6	1.59
Natural resource conservation and emission levels	70.6	19.6	9.8	1.39

The mean score of overall nine social and environmental related measures is 2.28 suggesting that the social and environmental related measures are only being used to a little or no extent by the Malaysian public sectors. Among the nine measures, employee satisfaction measures received the highest mean score (2.06) with 74.5 percent of the respondents used these measure to a moderate extent. Interestingly, employee diversity measures received the lowest mean score with 1.18 and were used to little or no extent by 86.3 percent of the respondents. This is particularly interesting given the racial composition in the public sector has been a hot and sensitive issues debated recently (Ahmad, 2007; Abdullah, 2008). Ahmad and Abdullah wrote that according to the Public Services Commission's (PSC) statistic, only 1.78 percent of Chinese and 2.5 percent of Indian had applied to join the public sector in 2006 out of 486,802 total applicants. This goes to show how unpopular the work in public sector is to the non-Malays. According to the Director General of Public Service Department (PSD), his department and the PSC have been relentlessly doing their level best to eliminate the racial gap in the public sector (Ahmad, 2007; Abdullah, 2008). This survey however, shows that employee diversity is not one of their key indicators.

Another interesting observation from the results shown in Table 6 is on the usage of natural resource conservation and emission level measure. A mean score of 1.39 suggests that they have little or no extent of use of the said measure. As alarming as it might suggest, the study by Hoque and Adams (2008) also reveals similar pattern. As part of government's efforts to preserve the environment, the new Prime Minister has taken the lead in restructuring the

Ministry of Energy, Water and Communication into Ministry of Energy, Green Technology and Water effective 9 April 2009 (Prime Minister's Office, 2009). With the new name, perhaps there will be more attention and importance given to the natural conservation measures. There is also little recognition of the need for community measures, suggesting that little efforts have been taken to gauge community perceptions relating to leadership, image, customer service and service delivery.

Another social and environment related measure that is worth mentioning is the low attention given to the economic impact measures (mean = 1.55). Being one of the key tenets in the New Economic Policy as well as in the Ninth Malaysia Plan, one would expect quite a number of ministries, departments and agencies would be addressing the eradication of hard core poverty, reducing overall poverty, tackling the socio-economic inequalities and bridging the income gap between rural and urban area as well as among races. These findings are in line with arguments by various literatures that outcomes of the public sector activities have been rarely measured (i.e. Hood et al, 1999; Schick, 1999; Sanderson, 2001).

How is the Performance Measurement Being Implemented and Used?

Several questions relating to performance measurement implementation and use were asked. The following sub-sections discuss the management/employee participation and communication channels involve in performance measurement system implementation as well as recording, updating and analysis of performance data involved. As part of performance measurement implementation and use, questions about the purposes and users of reports generated from the performance measurement system as well as its specific uses were also asked.

Participation and Communication Channels

Table 7 looks into the intricacies of deployment activities of performance management initiative that entails participation of various functional areas during performance measurement development and the communication channels employed. With regard to participation in the implementation process, the senior management team comprising those in the corporate planning, services and operations as well as the policy groups are to a large and very large extent involved in development of performance measurement (mean = 3.59). Overall results indicate that employees from various functional areas do participate in the performance measurement and management initiatives. Results also indicate that 62.7 percent of the respondents have reported use of information sessions (mean, 3.86) and 60.8% have used memo (mean = 3.69) as their major communication channels to a large and very large extent. Even though community and social performance are weakly measured, government agencies seem to have reasonably good communication channels, thus, suggesting that people in the community are quite well-informed about the services, programs and activities undertaken by the government agencies.

Recording, Updating, and Collecting Performance Data

The survey also asked the respondents to indicate the extent of use of methods or system to track, record, and collect data for performance measurement. The results are as shown in Table 8. The results indicate that spreadsheet application is being used to a large and very large extent (47.1 percent; mean, 3.18) as compared to ERP and specialized packaged PMS which are the being used to a little or no extent. The dominant method of data collection is found to be through manual basis where 51.0 percent (mean = 3.33) have used it to a large and very large extent such as via hardcopy or email submission of spreadsheet and words document.

Table 7: Participation and Communication Channels

	Little or no extent	Moderate Extent	Large and Very large extent	Mean	Valid N
Participation in the development	Percentages				
Accounting / Finance	43.1	41.2	15.7	2.67	51
Policy	9.8	37.3	52.9	3.59	51
Human Resources	31.4	47.1	21.6	2.88	51
Corporate Planning	15.7	25.5	58.8	3.59	51
Services / Operations	9.8	31.4	58.8	3.59	51
Information Technology	41.2	43.1	15.7	2.76	51
Communication	Percentages				
Brochures	74.5	9.8	15.7	1.92	51
Newsletter	35.3	31.4	33.3	2.92	51
Memo	11.8	27.5	60.8	3.69	51
Information sessions	5.9	31.4	62.7	3.86	51
Organisation unit's website	64.7	25.5	9.8	2.02	51

Table 8: Recording, Updating, and Collecting Data

Recording, updating and collecting data	Little or no extent	Moderate Extent	Large and Very large extent	Mean	Valid N
Method / system	Percentages				
Spreadsheet applications	33.3	19.6	47.1	3.18	51
Enterprise Resource Planning (ERP) system	72.5	19.6	7.8	1.73	51
Specialised packaged performance measurement system	49	35.3	15.7	2.33	51
Custom-built applications environmental issues	39.2	45.1	15.7	2.51	51
Data collection method	Percentages				
Manual	23.5	25.5	51	3.33	51
Batch interface	45.1	41.2	13.7	2.57	51
Online	64.7	27.5	7.8	1.98	51

The highly use of spreadsheet applications and manual data collection indicates that the level of use of IT and information system sophistication (ISS) is still low among many Malaysian public agencies. Classe (1999), for example, noted that simple spreadsheet tools might

be sufficient at the initial stage of implementing PMS, but to make the method an integral part of the strategic performance measurement and management, automation will usually be necessary. Bernard Marr (2005) reports in his study that even though 45 percent of respondents use spreadsheet applications, such as Microsoft Excel, as the prime tool for the business performance measurement and management (BPM) activities, the users are not satisfied with their spreadsheet applications as 18 percent felt that they worked poorly as tools to measure and manage performance.

The lack of suitable IT platform could be due to the cost of acquiring ERP that might run into millions of ringgit as according to Spathis and Constantinides (2003), the cost is not correlated to the sum of benefits of its implementation. This finding aggravates the concern stated earlier about the issue of changing or rotating the staff assigned to collecting, analysing and reporting performance measurement. Without a standard process supported by an established IT platform and dedicated staff, there could be a further challenge in monitoring and evaluating governance that could go undetected and might jeopardize the whole integrity and sustainability of the PMS initiative.

To make matters worse, online collection method for performance measurement data is still not prevalent among public sector as 64.7 percent (mean, 1.98) say that they use to a little or no extent of such method. Shaman and Kavan (1999) observe that paper-based measurement systems are too slow, cumbersome, labour intensive and unreliable. This might just compound the issue of governance as stated above.

Analysis Methods

The questions attempt to find out the extent of analysis done on the performance result. The analysis activity is very crucial if the results are going to be used regularly by the executive leadership as well as to help staff monitor progress toward intended program or service results. The findings are presented in Table 9. Results show that majority (58.8%, mean = 3.55) of respondents use qualitative analysis to validate their data through interviews and personal observations. Knowing that there is a lack of technology enabler that is supporting the data collection and recording as found earlier, thus validation tool using interviews and observation is justifiable.

With regard to the role of performance data in benchmarking activities, the results reveal that performance data are often being benchmarked with the established targets (68.6 percent, mean = 4.06), the national standards or guidelines from federal agencies and/or professional groups (62.7 percent; mean, 3.60), prior periods (41.2 percent; mean, 3.26) and with established thresholds (41.2 percent; mean, 3.18). The overall mean for Analysis is 2.97 which imply that the performance measurement result analysis has only been done in a little extent. These findings are almost similar to Hoque and Adams' (2008) survey that the Australian government uses prior periods (75.0 percent; mean, 3.77) and established targets (60.0 percent; mean, 2.62) as their main benchmarks.

The qualitative analysis may not be suitable in most situations as empirical data need to be collected from district, state and departmental levels for purpose of analysis. This finding would reflect that many government agencies do not actually have a robust qualitative analytical tool, well-defined methodologies and IT platform to facilitate them in project measurement/evaluation especially those with multi-billion worth of projects.

The following sub-sections also discuss about the implementation and use of performance

measurement system with respect to the users/recipients of the performance measurement reports, the reporting purpose and the specific uses of performance measurement system in the Malaysian public sector.

Table 9: Analysis

Analysis	Little or no extent	Moderate Extent	Large and Very large extent	Mean	Valid N
Validation tool	Percentages				
Statistical analysis (e.g. regression, correlation)	66.7	23.5	9.8	2.16	51
Qualitative analysis (e.g. interviews, personal observations)	11.8	29.4	58.8	3.55	51
Validation of relationships between measures are done	39.2	27.5	33.3	2.98	51
Benchmarking data	Percentages				
With prior periods	23.5	35.3	41.2	3.26	51
With established targets	5.9	25.5	68.6	4.06	51
With established thresholds	27.5	31.4	41.2	3.18	51
With national standards or guidelines from Federal agencies, and/or professional groups	15.7	21.6	62.7	3.60	51
With other programs/agencies of other governments	51	25.5	23.5	2.46	51
With other programs/agencies within your governments	60.8	19.6	19.6	2.42	51
With private sector organisations	60.8	23.5	15.7	2.10	51

Users

From Table 10, majority of the respondents reveals that from large to the very large extent, the recipients of the performance measurement reports have been the Implementation Coordination Unit (ICU) (52.9 percent, mean = 3.43) and followed by Economic Planning Unit (EPU) (49.0 percent, mean = 3.43). Other users are the operating managers (39.2 percent, mean = 3.10) and elected officials (37.3 percent, mean = 2.84). This result is understandable because ICU and EPU are two of the four central agencies under the Prime Minister's Office who are involved in planning the country's and policy direction as well as monitoring the physical development throughout the country. Hence, as a large percentage of measurements consist of input, activity/process and outputs, the results would have been useful for EPU and ICU.

Surprisingly, Ministry of Finance has had little to no extent of use of the performance report. This might be due to the availability of an automated finance systems like the Electronic Budget Planning and Control System (e-SPKB) and the Standard Accounting System for Government Agencies (SAGA) that link finance divisions of each ministry and agency to the Ministry of Finance and Auditor General's Office, hence reducing the need for additional finance related measures.

Table 10: Users

User	Percentages			Mean	Valid N
	Little or no extent	Moderate Extent	Large and Very large extent		
Finance Ministry	49	27.5	23.5	2.71	51
Public service department	13.7	56.9	29.4	3.16	51
Economic Planning Unit	23.5	27.5	49	3.27	51
Implementation & Coordination Unit	15.7	31.4	52.9	3.43	51
Parliament	31.4	49	19.6	2.84	51
Program managers	7.8	52.9	39.2	3.33	51
Elected officials	31.4	31.4	37.3	2.84	51
Operating managers	21.6	39.2	39.2	3.10	51
Financial managers	17.6	56.9	25.5	3.12	51
Budget analysts	37.3	39.2	23.5	2.71	51
Citizens	58.8	19.6	21.6	2.47	51
Media	51.0	29.4	19.6	2.57	51
Human resource managers	45.1	41.2	13.7	2.65	51
Sustainability, environmental or social responsibility managers	60.8	27.5	11.8	2.02	51

There were 58.8 percent and 51 percent of the respondents respectively declare that the citizen and media have little use of the performance report. These results however are somewhat different from Hoque and Adam's findings on the Australian government whose 60 percent of respondents replied that the reporting outputs are for the citizens and media. Does this show that the Australian government practices a more open and transparent administration than the Malaysian government? Or does it mean that our citizens are less concern about our right? This study does not have the answer for either question but based on the results, the Malaysian public sector could have been more transparent in its performance reporting especially on issues related to environmental sustainability and social responsibility in order to prevent any environmental mishaps like landslides or cracked highways from happening. In a study conducted by Pollitt (2005) on the European governments, the respondents cited that the only regularly active external scrutiny seemed to occur when state agencies are engaged in commercial activities with private sector. Although transparency is claimed to be drivers for public trust and confidence (Hood, 2006, O'Neill, 2002), little evidence is available in terms of public's utilization of governments' disclosure (Abu Hasan, 2009). The general public

somehow does not seem to have much interest in performance measures published (Abu Hasan, 2009). Public's demand to transparency always differs, which explain why sometimes disclosure was unable to gain interest (Piotrowski et al, 2007).

Reporting purpose

As shown in Table 11, the results indicate that the main purposes of reporting have been to a large and very large extent for internal managerial control (68.6 percent, mean = 3.92) and followed by budget execution (45.1 percent, mean = 3.37). This result substantiates the remark by Pollit (2005) that performance measurement and management system is carried out by and for managers. Interestingly, the results reveal that performance measures are not supposed to be reported for external financial reporting, indicating that external reporting of performance measures in Malaysian public sectors is not mandatory. This could be the reason why community, social and environmental related measures are not used extensively. This outcome is expected as external reporting of performance measures has not received widespread attention even among the developed countries like US, UK and Australia, although it is considered critical for external program accountability purposes (e. g. Pollanen, 2005; Smith, 1993; Kloot, 1999). For example, a study conducted by GASB and national Academy of Public Administration (1997) shows that only three percent of municipal respondents in the US stated that performance measures are required by law or ordinance. In Canada, mandatory reporting requirements do not exist in other provinces except for the Province of Ontario (Pollanen, 2005).

Table 11: Reporting Purpose

Reporting purpose	Percentages			Mean	Valid N
	Little or no extent	Moderate Extent	Large and Very large extent		
External financial reporting	51	25.5	23.5	2.71	51
Internal managerial control	5.9	25.5	68.6	3.92	51
Budget preparation	19.6	52.9	27.5	3.10	51
Budget execution	13.7	41.2	45.1	3.37	51
Legal requirements	68.6	19.6	11.8	1.94	51

Uses

On the question relating the uses of performance measurement system, 60.8 percent of respondents use from large to a very large extent the results of performance measures as a basis for taking actions (mean = 3.76), to manage activity or program (mean = 3.59) and for strategic planning (mean = 3.47), while 45.1 percent are using it to a large and very large extent for measuring program and project performance (mean = 3.10). The results also indicate that performance measures are used at a little or no extent to satisfy professional associations (64.7 percent, mean = 1.98), to follow others (62.7 percent, mean = 2.08), to measure goals in relation to community impacts (62.7 percent, mean = 2.33) and to measure environmental goals (60.8 percent, mean = 2.27). A little or no extent of use of performance measurement system for social responsibility and environmental goals is expected as it was found earlier that the socially and environmentally related measures are used least by the organizations. The results also indicate that performance measurement system is used at a

moderate extent for punish or reward staff. This shows that there is some awareness among the Malaysian public sectors about rewarding the staff on the basis of performance measures. Albeit not extensively, it does indicate some attempts to steer the organizations according to the strategy as the findings earlier show that the performance measurement of Malaysian public sectors is to a moderate extent being developed based on organizational strategy.

Table 12: Uses

Uses	Percentages			Mean	Valid N
	Little or no extent	Moderate Extent	Large and Very large extent		
Measure program and project performance	35.3	19.6	45.1	3.10	51
Satisfy legislative requirement(law, ordinance, policy)	47.1	25.5	27.5	2.59	51
Manage an activity or program	7.8	31.4	60.8	3.59	51
Budget formulation	27.5	49.0	23.5	2.98	51
Taking actions based on the results	9.8	29.4	60.8	3.76	51
Budget execution	13.7	47.1	39.2	3,31	51
Strategic planning	17.6	21.6	60.8	3.47	51
Satisfy community expectations	47.1	23.5	29.4	2.76	51
Social responsibility goals	47.1	25.5	27.5	2.67	51
Goals in relation to local community impacts	62.7	23.5	13.7	2.33	51
Environmental goals	60.8	25.5	13.7	2.27	51
Satisfy professional associations	64.7	23.5	11.8	1.98	51
Punish or reward staff	35.3	43.1	21.6	2.94	51
Follow others	62.7	21.6	15.7	2.08	51

What are the benefits and important aspects of successful implementation of performance measurement system?

Benefits

Performance measurement has promised many benefits since Argyris (1977) claims that performance measurement should contribute to a better understanding of how business works. In this survey, we attempt to identify the extent of benefit of the performance measures that are being used in various managerial activities. Performance measurement system seems to provide benefit largely in improving programmes/service quality (56.9 percent; mean, 3.51), cross agency cooperation /coordination (56.9 percent; mean 3.41), increasing awareness of factors that affect performance results (54.9 percent; mean 3.71), increasing awareness of and focus on result (54.8 percent; mean 3.24) and improving effectiveness of agency programmes (52.9 percent; mean 3.41). The least benefits expected from the performance measurements are to reduce environmental effect (58.8 percent; mean 2.39), changing appropriation level (56.9 percent; mean 2,27), changing the questions the legislators ask government managers or executives (54.9 percent; mean 2.49) and communicating with the public about performance (52.9 percent; mean 2.57).

Table 13: Benefits

Benefits	Percentages			Mean	Valid N
	Little or no extent	Moderate Extent	Large & Very large extent		
Increasing awareness of and focus on results	31.4	13.7	54.9	3.24	51
Increasing awareness of factors that affect performance results	13.7	31.4	54.9	3.71	51
Improving responsiveness to customers	13.7	39.2	47.1	3.41	51
Improving programs/service quality	15.7	27.5	56.9	3.51	51
Communicating with the public about performance	52.9	27.5	19.6	2.57	51
Improving effectiveness of agency programs	17.6	29.4	52.9	3.41	51
Changing strategies to achieve desired results	11.8	45.1	43.1	3.37	51
Changing the substance or tone of discussion among legislators about agency budgets	17.6	41.2	41.2	3.20	51
Improving communication with the legislature and legislative staff	49.0	25.5	25.5	2.53	51

Changing the questions legislators or their staff ask government managers/ executives	54.9	19.6	25.5	2.49	51
Reducing duplicating services	19.6	37.3	43.1	3.16	51
Changing the substance or tone of discussion among legislators about oversight of agency	43.1	25.5	31.4	2.65	51
Improving external government cooperation / coordination	21.6	45.1	33.3	3.12	51
Cost savings	15.7	51.0	33.3	3.16	51
Improving cross-agency cooperation /coordination	15.7	27.5	56.9	3.41	51
Changing appropriation levels	56.9	23.5	19.6	2.27	51
Reducing environmental impacts	58.8	9.8	31.4	2.39	51

On the question about the important aspects of successful implementation of performance measurement system, results shown in Table 14 indicate that respondents perceived that performance measures that help staff monitor progress toward intended program/ service results (mean=3.72), training for management and staff about performance measurement development and selection (mean=3.54) and communication of purpose (mean=3.52) are most important (see Table 7). They also consider that staff participation (mean=3.44), regular use by executive leadership (mean=3.40) and the adequacy of technology for collecting, analyzing and reporting performance measures (mean = 3.28) as critical to ensure successful implementation of PMS initiative. These results are quite comparable to those of Hoque and Adam's (2008) study that reveals regular use of performance measures by executive leaderships is the most important, followed by performance measures that help staff monitor progress towards intended program/service results and the adequacy of technology. Consistent with Hoque and Adam's study, results also reveal that additional or changed staffing for collecting, analysing and reporting performance measures is the least important aspect of successful implementation of performance measurement system (mean= 2.42).

Table 14: Important aspects of successful implementation

Important aspect of successful implementation	Percentages			Mean
	Little or no extent	Moderate Extent	Large & Very large extent	
Regular use of performance measures by executive leadership	31.4	15.7	52.9	3.40
Performance measures that help staff monitor progress toward intended program/ service results	7.8	39.2	52.9	3.72
Adequacy of technology for collecting, analyzing and reporting performance measures	25.5	25.5	49.0	3.28
Communication of the purpose for using performance measurement to employees	11.8	33.3	54.9	3.52
Staff participation in the process of developing performance measures	13.7	33.3	52.9	3.44
Training for management and staff about performance measurement development and selection	7.8	37.3	54.9	3.54
A link of performance measures to budget decisions	21.6	41.2	37.3	3.22
Citizen, client/customer or stakeholder interest in government program performance	19.6	43.1	37.3	3.22
Additional or changed staffing for collecting, analysing and reporting the performance measures	56.9	31.4	11.8	2.42
Regular use of performance measures by elected officials	11.8	49.0	39.2	3.28

Shortcomings

The respondents were also asked to state their opinion on whether their current performance measurement system experiences any shortcomings or weaknesses. These shortcomings are expected to hinder the successful implementation of performance measurement system. Table 15 shows the results of shortcomings of performance measurement system as perceived by the respondents.

The most obvious shortcomings of the performance measurement are that the information is to a large and very large extent, not available on time (70.6 percent; mean, 3, 84) and imprecise (68.5 percent; mean, 3.76). These results seem consistent with those found in Table regarding the data recording, updating, and collection methods. The overly use of spreadsheet applications and manual data collection indicates that the level of use of IT and information system sophistication (ISS) is still low, hence results in data being not available on

time and imprecise. There are 37.3 percent of respondents who say that they have to a large and very large extent too much information and that the information is easy to manipulate.

Table 15: Shortcomings

Shortcomings	Percentages			Mean	Valid N
	Little or no extent	Moderate Extent	Large and Very large extent		
Overly focused on the past	70.6	11.8	17.6	2.31	51
Overly focused on the short run	21.6	49.0	29.4	3.06	51
Overly focused on financial performance	37.3	33.3	29.4	2.84	51
Overflow of information	35.3	27.5	37.3	2.86	51
Information not available in time	11.8	17.6	70.6	3.84	51
Easy to manipulate	35.3	27.5	37.3	3.10	51
Too aggregated	35.3	35.3	29.4	3.00	51
Imprecise, often provides erroneous information	5.9	25.5	68.5	3.76	51

The KPI results information are very crucial for the analysis activities, hence their absence and possible erroneous facts may impede or taint some critical decisions. Marr (2005) observes that even though excel has been primarily used as data collection and analysis tool, most organizations are not happy with the system. PAIB (2008) also concludes that respondents of their survey are much more satisfied with their performance measurement system if it has the capability for capturing, processing and reporting useful information on both financial and non-financial developments. Therefore, it can be concluded that the use of excel and manual data collection would result in major shortcomings as reported above.

Discussion and Conclusion

Assumption that performance measurement will bring real and tangible benefits to organizations has made almost every organization occupied with measuring performance. Meyer (1994) suggested that performance measurement has been useful in clarifying where the organization is at achieving its objective but not explaining what to do differently. Findings from this study provide insights into the design of performance measurement system and would have drawn attention to its implementation and usage in the public sector. This study attempts to provide exploratory empirical evidence on how the Malaysian public sectors design their performance measurement system by specifically looking into two aspects: strategic alignment and balanced characteristics. This study found that the public sectors in Malaysia have been to a moderate extent designing their performance measurement system to align to the organizational strategy. However, the KPIs are found to be less dynamic to reflect the changes in strategy. In examining the balanced nature of performance measurement, this study reveals that there is an overall lack of balanced indicators except for indicators on financial and non-financial such as input, activity and output indicators. Other indicators are

not extensively being used such as outcomes, sustainability, innovation, environmental and social responsibility indicators. Hence, the findings suggest that Malaysian public sector need to measure and manage how the general community and customers views their performance. Mandatory external reporting requirements would force the public sector to enhance their efficiency, effectiveness, and managerial accountability. As the top echelons of the civil servants are calling attention to outcomes-based evaluation of performance, this survey has established to some extent that they might not be quite ready for the push just yet. Direct adoption from private sector practices is not possible as the public sector objectives differ from the private sector. Ferlie and Steane's (2002) study reports that adoption of private sector practices has created ambiguity between public and private sectors where the role of government has become much more of a facilitator of services compared to the the frontline provider. Although outcomes has been recognized as important measures for performance but arguments in terms of how to measure outcome are also intense (e. g. Hood, 1991; Meyer, C; 1994)

A successful adoption of performance measurement system is not just about giving the right training nor having the technology to support it; it is about holistic change which involves the people's readiness and their willingness to embrace and institutionalise a transparent and outcome oriented measurement goals and is accountable to it. Without doubt performance and its measurement should be driven from the top management level (Fitsgerald and Moon, 1996). Leaders who understand subordinates' emotions appear to motivate them more effectively and efficiently (Grossman, 2000).

The overall findings are nevertheless, subject to several limitations. As the questionnaire demands responses from senior executives in order to elicit the prevailing practice of performance measurement in public sector, this study is not able to claim with full certainty that the responses have been made by the senior executives per se. Perhaps due to higher and more critical work obligation, the task might have been delegated to a more junior officer. Other limitation includes the use of survey to capture perceived subjectivity of an issue. Use of survey will not likely be able to dig deeper into a subject matter and solicit better insights from the respondents. Perhaps, a case-study with face-to-face interviews with a number of senior civil servants at various central, federal and state level agencies coupled with a time-series performance data rather than a snapshot of evidence at one time would reveal a much more color to the study. Another limitation is the relatively small sample size which might provide a potential source of bias to generalizability. Furthermore, the evidence from this study is descriptive, thus it ignores other issues that can be associated with the performance measurement in use.

Given the possible impact of the performance measurement results on the management and individual's reputation, it may also be deemed as sensitive to question the strategy. It may even be construed as questioning the management's capability because the senior management has been actively involved in determining the strategy and KPIs. In addition, since the cultural dimension of management style within the Malaysian Public Sector who are coincidentally, predominantly Malay, who according to Asma Abdullah (1996) have the main work values of "preserving face", hence, it is possible that the act of questioning other people's performance would have been deemed as obtrusive which would have been avoided at all cost and blame the data integrity for the poor performance.

The lack of questioning and analysis may be due to the inside-out practice of choosing performance measurement. This could potentially be detrimental to the implementation initiative as the integrity of the whole system may be questionable. As a result, everyone

would be starting to lose faith and interest in the PMS and may decide to abandon the whole initiative, which in the end, would put the whole government machinery at risk.

References

- Abdullah, R. T. (2008), "Bukan Melayu Dipinggirkan?" Utusan Online 25/11/2008. Available online at: http://www.utusan.com.my/utusan/info.asp?y=2008&dt=1125&pub=utusan_malaysia&sec=Rencana&pg=re_02.htm&arc=hive
- Abu Hasan, Haslida (2009), "The Impact of External Audit and Use of Resources Assessment on Local Authorities: A Case Study of Yorkshire and The Humber Region", PhD Thesis, University of Sheffield
- Ahmad, F. (2007), "Cina, India tak minat", The Malaysian Bar. 24/12/2007. Available online at http://www.malaysianbar.org.my/berita/komen_undang_undang/cina_india_tak_minat.html
- Anand, M., Sahay, B. S. & Saha, S. (2005), "Balanced scorecard in Indian companies", *Vikalpa*, 30 (2), pp. 11-25.
- Atkinson, A. A., Waterhouse, J. H. and Wells, R. B. (1997). "A stakeholder approach to strategic performance measurement", *Sloan Management Review* Spring: 25-37.
- Banker, R. D., Janakiraman, S. N., and Konstans, C. (2001), "*Balanced scorecard: linking strategy to performance*", New York: Financial Executives International.
- Bertok, J., Hall, J., Kraan, D.-J., Malinska, J., Manning, N., & Matthews, E. (2006), "Issues in outcome measurement for 'Government at a glance", OECD project on Management in Government Technical Paper 3. Paris: OECD.
- Bruns, W. J. (Ed.) (1992), "*Performance Measurement, Evaluation and Incentive*"s, Boston, MA: Harvard Business School Press.
- Bruns, W. J. and McKinnon, S. M. (1993), "Information and managers: a field study", *Journal of Management Accounting Research*, Vol. 5, pp.84-123.
- Carter, N. (1991), "Learning to measure performance: the use of indicators in organizations", *Public Administration*, Vol. 69(1), pp. 85-101
- Chan, Y. L. (2002), "The benefits of balance: the balanced scorecard is not yet embraced by Canadian municipal governments, but it could be exactly what they need", *CMA Management*, December.
- Chan, Y. L. (2004), "Performance measurement and adoption of balanced scorecards: a survey of municipal governments in the USA and Canada", *International Journal of Public Sector Management*, Vol. 17, No. 3, pp. 204-221.
- Chenhall, R. H. & Langfield-Smith, K. (1998), "The relationship between strategies priorities, management techniques and management accounting: An empirical investigation using a systems approach", *Accounting, Organization and Society*, 23(3), pp. 243-264.
- Classe, A. (1999), "Performance anxiety". *Accountancy*, Vol. 123 (1267), pp. 56-58
- Dixon, John et al. (1996), "The commercialization of the Australian public service and the accountability of government: A question of boundaries", *The International Journal of Public Sector Management*, Bradford, Vol. 9(5/6), p.23
- Dixon, John et al. (1998), "Managerialism – something old, something borrowed, little new Economic prescription versus effective organisational change in public agencies", *The International Journal of Public Sector Management*, Vol.11(2/3), p.164
- Dixit, A. (2002), "Incentives and Organizations in the Public Sector: An Interpretive Review", *Journal of Human Resources*, Vol. 37 (4), pp. 696-727
- Eccles, R. G. (1991), "The Performance Measurement Manifesto", *Harvard Business Review* .
- Ferlie, E. And Stearne, P. (2002), "Changing developments in NPM", *International Journal of Public Administration*, Vol. 25 (12), pp. 1459-1469
- Fitzgerald, L. and Moon, P., (1996), "*Performance Measurement in Service Industries: Making it Work*", CIMA: London

- Fonvielle, W. and Carr, L. P. (2001), "Gaining strategic alignment: making scorecards work", *Management Accounting Quarterly*, Vol. 3, No. 1, pp.14-24.
- GASB and National Academy of Public Administration (1997). Report on survey on state and local government use and reporting of performance measures: first questionnaire results. Available at: http://www.seagov.org/sea_gasb_project/1997_Survey.pdf (as of April 19, 2010).
- Grossman R. J. (2000), "Emotions at work", *Health Forum Journal*, Vol. 43(5), pp. 18–22
- Halachmie, A. (1982), "Purpose and Perspective in Evaluation: A Case Study", *Administrative Science Review*, Vol. 12(2), pp. 1-16
- _____ (1992), "Evaluation Research: Purpose and Perspective" Chapter 11 in Marc Holzer (ed.) *Handbook of Public Sector Productivity*, Marcell Dekker: New York, pp. 213-226
- Halachmie, A. and Bouckaert, G. (1996, "Performance appraisal and Rubik's Cube", in Halachmie, Arie and Bouckaert, Geert (ed.), *Organizational Performance and Measurement in the Public Sector*, United States: Quorum Books, pp.1-9
- Hammer, M. and Champy, J. (1993) *Reengineering the Corporation*, Harper Collins: New York
- Hendricks, J. A.; Defreitas, D. G. and Walker, D. K. (1996), "Changing performance measures at Caterpillar", *Management Accounting*, December, pp. 18-24.
- Henri, J. F. (2004), "Performance Measurement And Organisational Effectiveness: Bridging The Gap", *Managerial Finance* Vol. 30(6), pp. 93-123
- Herzlinger, E. R. (2000), *Businessline*, Chennai: Jul. 13, p.1
- Ho, S. K. and Chan, Y. L. (2002), "Performance measurement and the implementation of balanced scorecards in municipal governments", *The Journal of Government Financial Management*, Alexandria: Winter, Vol. 51(4), p. 8
- Hood, C (1991), "A Public Management for All Seasons?", *Public Administration*, Vol. 69(1), pp. 3-19
- Hood, C (2006), "Transparency in Historical Perspective" in Hood, Christopher and Heald, David (ed.), *Transparency, The Key to Better Governance?*, Oxford University Press: US, 2006, pp. 3-23
- Hood, C., Scott, C., and James, O., Jones, G. and Travers, T. (1999), "*Regulation inside Government: waste watchers, quality police and sleazebusters*", Oxford University Press: Oxford
- Hoque, Z. and Adams, C. (2008), "Measuring public sector performance. A study of government departments in Australia. Publication pending in 2009. Research summary is available online at: http://www.cpaaustralia.com.au/cps/rde/xbcr/SID-3F57FECB-C5784B9E/cpa/measuring_public_sector_performance_200808.PDF
- Jusoh, R., Ibrahim, D. N. and Zainuddin, Y (2006), "Assessing the alignment between business strategy and use of multiple performance measures using interaction approach", *The Business Review. Cambridge*, Vol 5 (1), pp 51-60.
- Jusoh, R., Ibrahim, D. N. and Zainuddin, Y. (2008). "The performance consequence of multiple performance measures usage: Evidence from the Malaysian manufacturers", *International Journal of Productivity and Performance Management*, Vol. 57(2), pp. 119-136
- Jusoh, R. and Parnell, J. (2008), "Competitive strategy and performance measurement in the Malaysian context: An exploratory study", *Management Decision*, Vol. 46(1), pp. 5-31
- Ittner, C. D. and D. F. Larcker (1998). "Are nonfinancial measures leading indicators of financial performance? An analysis of customer satisfaction." *Journal of Accounting Research*, Vol. 36(Supplement), pp. 1-35.
- Ittner, C. D. and D. F. Larcker (2001). "Assessing empirical research in managerial accounting: a value-based management perspective", *Journal of Accounting and Economics*, Vol,

32, pp. 349-410

- Kald, M. and Nilsson, F. (1999), "Performance measurement at Nordic companies", *European Management Journal*, Vol. 18(1), pp. 113-127
- Kaplan, R. S. (1983), "Measuring manufacturing performance: A new challenge for managerial accounting research", *The Accounting Review*, 4, pp. 686-705.
- Kaplan, R. S. and D. P. Norton (1992), "The balanced scorecard - Measures that drive performance", *Harvard Business Review*, January-February, pp. 71-79
- Kaplan, R. and D. Norton. (1996). *The Balanced Scorecard: Translating Strategy into Action*. Harvard Business School Press, Boston, MA.
- Kaplan, R. S. and Norton, D. P. (2001). *The Strategy-focused Organization: How Balanced Scorecard Companies Thrive in the New Business Environment*. Boston, MA:Harvard.
- Kloot, L. (1999), "Performance measurement and accountability in Victorian local government", *International Journal of Public Sector Management*, Vol. 12, No. 7, pp. 565-583.
- Kloot, L. and Martin, J. (2000), "Strategic performance management: A balanced approach to performance management issues in local government", *Management Accounting Research*, Vol. 11, pp. 231-251.
- Lynch, R. L. and Cross, K. F. (1995), "*Measure Up! Yardsticks for Continuous Improvement*", Cambridge: Basil Blackwell.
- Mackay, Keith (2007), "*How to build M&E systems to support better government*", The International Bank for Reconstruction and Development / The World Bank. Available online at <http://www.worldbank.org/ieg>
- Malina, M. A. & Selto, F. H. (2001), "Communicating and controlling strategy: An empirical study of the effectiveness of the balanced scorecard", *Journal of Management Accounting Research*, 13, pp. 47-90.
- Marr, B. (2005), "Business performance measurement: an overview of the current state of use in the USA", *Measuring Business Excellence*. 2005. Vol. 9, No. 3. pp 56-62
- Meyer, C. (1994), "How the right measures help teams excel", *Harvard Business Review*, Vol. 70 (3), pp. 99-122
- Nanni, A. J., R. Dixon and T. E. Vollmann (1992). "Integrated performance measurement: management accounting to support the new manufacturing realities", *Journal of Management Accounting Research*, Vol. 4 (Fall), pp. 1-19
- Neely, A. Mills, J., Platts, K., Gregory, M. and Richards, H. (1994), "Realising strategy through measurement", *International Journal of Operations & Production Management*, 15(4), pp 140-152.
- Niven, P.R. (2002), "*Balanced Scorecard Step-By-Step*", John Wiley & Sons, Inc., New York
- Niven, P. R. (2003), "*Balanced Scorecard Step-By-Step for Government and Non-profit Agencies*", 2nd Edition, John Wiley & Sons, New York
- Nyhan, R. C. and Martin, L. L. (1999), "Comparative performance measurement", *Public Productivity & Management Review*, Vol. 22, No. 2, pp. 348 – 364.
- OECD (1993), "*Public Management Developments: Survey 1993*", OECD, Paris
- O'Neill, Onora (2002), "*A Question of Trust*", The BBC Reith Lectures, 2002, Cambridge University Press: Cambridge
- Osbourne, D. and Gaebler, T. (1992), "*Reinventing Government*", Lexington, MA, Addison-Wesley
- Osborne, D. and Gaebler, T. (1993), "*Reinventing Government: How the Entrepreneurial Spirit is Transforming the Public Sector*", New York: Penguin
- Othman, Rozhan et al. (2004) *A Case Study Of Balanced Scorecard Implementation: The Hidden Problems*. Available online at [http://faculty.kfupm.edu.sa/coe/sadiq/proceedings/SCAC2004/40.ASC017.EN.Othman.A percent20Case percent20Study percent20of percent20Balance percent20Scorecard percent20Im percent20 1 .pdf](http://faculty.kfupm.edu.sa/coe/sadiq/proceedings/SCAC2004/40.ASC017.EN.Othman.A%20percent20Case%20Study%20of%20Balance%20Scorecard%20Im%201_.pdf)
- Piotrowski, S. J. and Van Ryzin, G. G. (2007), "Citizen Attitudes towards Transparency in Local Government", *The American Review of Public Administration*, Vol. 37(3),

pp. 306-323

- Pollanen, R. M. (2005), "Performance measurement in municipalities: Empirical evidence in Canadian context", *International Journal of Public Sector Management*, 18(1), pp. 4-24.
- Pollit, Christopher (2005), "Performance management in practice: A comparative study of executive agencies" *Journal of Public Administration Research and Theory*. Vol. 16, pp. 25-44
- Prime Minister's Office (2009). "*Senarai anggota pentadbiran kerajaan persekutuan*". Available on line at www.pmo.gov.my
- Quade, E. S. (1980), "*Pitfalls in formulation and modelling. G. Majone, and E. S. Quade Pitfalls of analysis*", Chichester: John Wiley & Sons, pp. 23-43
- Randor, Zoe and Lovell, Bill (2003), "Defining, Justifying and Implementing the Balanced Scorecard in the National Health Service", *International Journal of Medical Marketing*, London, June, Vol. 3, Iss. 3, p.174.
- Rigby, D. (2003), "Management tools survey: Usage as companies strive to make headway in tough times", *Strategy & Leadership*, 31 (5), pp. 4-11
- Sanderson, I (2001), "Performance Management, Evaluation and Learning In 'Modern' Local Government", *Public administration*, Vol. 79(2), pp. 297-313
- Schick, A. (1999), "Opportunity, Strategy, and Tactics in Reforming Public Management, Paper presented at the OECD Symposium", *Government of the Future, Getting from Here to There*, September, 14-15th, Paris
- Sharman, P. and Kavan, C.B. (1999), "Software is not the solution: software selection's effect on implementing the balanced scorecard", *Journal of Strategic Performance Management*. February/March, pp. 7-15
- Simons, R. (1995), "*Levers of Control: How managers use innovative control systems to drive strategic renewal*", Boston, MA: Harvard Business School Press.
- Smith, P. (1993), "Outcome-related performance indicators and organizational control in the public sector", *British Journal of Management*, Vol. 4, No. 3, pp. 135-151.
- Smith, P. (1996), "A Framework for analysing the Measurement of Outcome" in Peter Smith, *Measuring Outcome in the Public Sector*, eds, Taylor & Francis: London, pp. 1-19
- Spathis, Charalambos and Constantinides, Sylvia (2003). "The usefulness of ERP systems for effective management", *Journal of Industrial Management and Data System*, Vol 103(9), pp 677-685
- Speckbacher, G., Bischof, J. and Pfeiffer, T. (2003), "A descriptive analysis on the implementation of Balanced Scorecards in German-speaking countries", *Management Accounting Research*, 14, pp. 361-387.
- Tomkins, C. R. (1987) *Achieving Efficiency, Economy and effectiveness in the Public Sector*, Kogan Page: London
- Tucker, M.L., Meyer, G. D., Westerman, J. W. (1996). Organizational communication: development of internal strategic competitive advantage. *Journal of Business Communication*, 33(1), pp. 51-69.
- Van De Walle, S. (2007), "International Comparisons Of Public Sector Performance: How To Move Ahead? Presented At IRSPM XI, Potsdam, 2-4 April 2007
- Walker, D.M. (2000), "*Managing Human Capital in the 21st Century*", GAO/T-GGD-00-77, United States General Accounting Office, Washington, DC
- Wallman, S. M. H. (1995), "The future of accounting and disclosure in an evolving world: The need for dramatic change", *Accounting Horizons*, September, pp. 81-91.
- Widener, S. K. (2006), "Associations between strategic resource importance and performance measure use: the impact on firm performance", *Management Accounting Research*, Vol. 17, No. 4, pp.433 – 457.
- Wholey, Joseph S. (1983), "*Evaluation and Effective Management*", Little Brown and Co: London

Governance, Accountability and Performance Measurement: An Analysis of the Systems and Practices in the Malaysian Public Sector

A.K Siti-Nabiha

Graduate School of Business, Universiti Sains Malaysia, 11800 Penang, Malaysia

Danilah Salleh

College of Business, Universiti Utara Malaysia, Sintok, Kedah

Corresponding author: nabiha@usm.my

Abstract

Accountability is one of the elements of good governance in the public sector. Various countries, including Malaysia, have used performance measurement, especially the system of key performance indicators, as one of the ways to improve performance and subsequently show accountability to their citizens. As such, in this paper, an analysis of the performance measurement initiatives and practices of the Malaysian public sector are discussed with specific emphasis on the Government Transformation Program (GTP) which was introduced in 2009. As compared to the previous systems implemented in the Malaysian public sector, the GTP uses a more integrated performance measurement system. However, there are various issues pertaining to the new GTP program, which are also discussed and elaborated in this paper.

1.0 Introduction

It has been accepted that good governance is seen as essential for poverty eradication and also in achieving sustainable development (Grindle, 2002; Abdellatif, 2003). Thus, good governance and sustainable development are tied together. It has been argued that a country's standards of governance influence the quality of life and welfare of its people. As such, countries with similar resources and structures but with different standards of governance will have different improvements in the welfare and quality of life of its citizens. A study by the World Bank, *Assessing Aid – What Works, What Doesn't and Why* (1998), found that aid worked well in a country with sound management.

With good governance, an additional one percent of GDP in aid will result in one percent decline in poverty and also infant mortality. However, aid has lesser impact in country that has weak management and policy. Bad governance leads to wastage of public resources and citizen especially the poor and disadvantages are not given the social, legal and economic protection (Grindle, 2002). Accountability, citizen participations and transparency are heralded as some of the factors that constitute elements of good governance in the public sector. Since accountability requires openness, transparency, information, and the agreement of responsibility for one's actions, it has been argued that performance measurement system is a tool and mechanisms that should be used to ensure greater accountability.

Thus, it is not surprising that various countries including Malaysia have used performance measurement system especially the use of key performance indicators and ranking of

government departments as one of their ways to improve performance and subsequently to show government accountability to its citizens. For instance, the Malaysian government followed the global trend by introducing results based management in public governance by practicing the concept and practices of 'new public management' and managerialism since the 1980s. The path for result based management culminated with the implementation of the Government Transformation Program that was introduced to meet the challenges standing in the way of achieving Vision 2020 for Malaysian to be a fully developed nation. As such, in this paper the various efforts and initiatives for result based management are discussed. The issues pertaining to the implementation and results of these initiatives are also discussed in this paper. The concept of governance, accountability and the link between performance measurement to enhancement of accountability and governance are elaborated in the next section.

2.0 The Link Between Governance, Accountability And Measurement

The term governance has several facets and distinct meanings (Rhodes, 1996, Huther and Shah, 1998). It is defined by the United Nations Economic and Social Commission for Asia and Asia Pacific as "... the process of decision making and the process by which decisions are implemented (or not implemented) (UNESCAP website). UNDP (1997, pg 2-3) provides a more comprehensive definition since take into consideration on how the various stakeholders role within the decision making process. Governance is defined as:

"the exercise of economic, political and administrative authority to manage a country's affairs at all levels. It comprises mechanisms, processes and institutions, through which citizens and groups articulate their interests, exercise their legal rights, meet their obligations and mediate their differences".

Whereas, Huther and Shah (1998) viewed decision making process as related to management of a country's resources since governance is seen as "encompassing all aspects of the exercise of authority through formal and informal institutions in the management of the resource endowment of a state".

The definitions by the various parties have some common ground in that governance is seen as a process. It relates to how decisions are made and the role of both formal and informal actors as well as the formal and informal structures that are put in place in the decision making process and the implementation of those decisions pertaining to the management of a country's resources.

What constitutes good governance? As mentioned, good governance leads to improvements of quality of life of the citizens as a result of competent, open, transparent and accountable management of the country's resources and affairs (Huther and Shah, 1998). There are three elements of good governance which are (i) systemic; which means the distribution of both internal and external political and economic power, (ii) political; which means that "a state enjoying both legitimacy and authority, derived from democratic mandate" and (iii) administrative; which means "an efficient open accountable and audited public service which has bureaucratic competence to help design and implement appropriate policies and manage whatever public sector there is" (Leftwich 1993 as quoted by Rhodes, 1996, pg 656).

According to the United Nations Economic and Social Commission, good governance has eight major characteristics; participatory, consensus oriented, accountable, transparent, responsive, effective and efficient, equitable and inclusive, and follows the rule of law as illustrated in Figure 1



Figure 1: Elements of good governance

Source: UNDP Report (1997), Governance for Sustainable Development,

Therefore, it can be seen that accountability is an important and crucial element of good governance in the public sector. The concept of accountability is very broad and affects on all features of government operations. Accountability can mean responsibility, answerability, blameworthiness, liability, and other terms related to the expectation of account-giving (Gray and Jenkins, 1993). The fundamental ideas consist of accounting for, reporting on, explaining and justifying activities, and accepting responsibility for the outcomes. Accountability is an obligation to respond for decisions and actions made on behalf of stakeholders (Brennan and Solomon, 2008; Oakes, and Young, 2008). Accountability in public sectors requires public participation and cooperation, because not only the public is being served but they are also playing significant roles indirectly in the operations and the activities of public sectors.

The view of accountability takes into account all accounting and the operations of governments (Barton, 2006; Humphrey, Miller, and Scapens, 1993; Mayston, 1993) throughout every level in the entire structure of government departments and agencies (Cochrane, 1993; Rivenbark and Allison, 2003). Governments are accountable to the general public for the effective and efficient governance of the country; ministers and cabinet to the parliament for policy making and general implementation; and ministers and their staff for policy execution and the provision of public services as authorized by parliament (Cochrane, 1993; Ezzamel and Willmott, 1993). The most elementary form of public accountability in financial management is the requirement that local authorities give an account of their activities to the public and provide justification of what have been done (Local Government Act 1976).

Since accountability requires openness, transparency, information, and the agreement of responsibility for one's actions, it has been argued that performance measurement system is a mechanism that should be used to ensure greater accountability. The performance

information contribution conveyed by performance measurement systems to the promotion of accountability in the public sector has been widely emphasized in the literature (see for example, Modell 2005, Hoque 2008). Boyne and Law (1991) clearly emphasized the roles of performance measures in government agencies by maintaining that:

“...effective accountability in practice is impossible without accurate information of local authority performance. . . In the absence of performance data, the concept of accountability and indeed the whole democratic process is simply a sham. (p.179)”

Once the performance measurement system is appropriately used, the public sector can deliver greater accountability since their performance can be better communicated which can lead to stakeholders to have better understanding of the services and performance of the agencies (Bolton 2003, p. 24). Through the process of formulating and setting indicators to quantify the “efficiency and effectiveness of actions (Neely, 1995) and to compare the results with the targets, the government agencies can evaluate whether they are fulfilling their mission and the information gathered can be used to improve the service delivery (Rouse and Putterill, 2003).

Furthermore, it was argued that through the process of formulating measures, monitoring of activities and programs that were undertaken by the agencies would ensure a better management of public funds, which is one of the facets of good governance. A measurement system will enable gathering of data on effectiveness and efficiency of public service delivery and enable public sector to either do internal or external benchmarking. The agencies can subsequently report their performance to their stakeholders which will leads to greater transparency. Valid judgment by the users on how the government had been performing could not be easily made unless the information about performance is available (Moullin 2009). Thus, accountability and transparency are linked together since transparency means “being held into account”.

It is not surprising that for various public sector reform programs, particularly based upon the philosophy of the new public management, place a strong emphasis on performance management as one of the key drivers in the modernization of public organization (Sotirakou and Zeppou, 2006). Subsequently, since the past few decades, tremendous amounts of performance measurement systems and models originated from the private sector were imported to the public sector (Figlio & Kenny, 2009).

Various countries have implemented and used these performance measurement tools and techniques. For example, Australia and United States have introduced performance strategic plans which are linked and integrated into their yearly governmental budgets while New Zealand and United Kingdom used performance agreement between the head of governmental bodies and agencies with the respective ministers (Kusek et al, 2005). Similarly, Malaysia has also used performance measurement system over the last four decades in a move towards more results based performance and subsequently enhancing governance and accountability. Consequently, the system of measuring performance in the public sectors in Malaysia has been subjected to major changes over the years as explained in the next section

3.0 Initiative to Improve Accountability and Performance

There are various mechanisms used by Malaysian government to ensure accountability in the public sectors. For example, management audits are introduced by Auditor General to accommodate the flaw and weakness in public sector as well as to enhance accountability. The “performance audit” or the “value for money audit” is introduced to ensure efficiency

and effectiveness of public sector in pursuing their departmental objectives. Evaluation and benchmarking of the government agencies are also done. For example, the use of accountability Index (AI), introduced in 2007, where the main objective is measuring and comparing financial management compliance of the government departments and agencies (National Audit Department, 2008, pg.3). Another benchmarking activity is by using the “Star Rating System” introduced by Ministry of Housing and Local Government in 2008 to ensure better service delivery by the local authorities.

Besides these external evaluation system and benchmarking activities, the usage of performance management system for target setting and evaluation have been widely encouraged by the Malaysian government to increase public management focus on achieving results over the last four decades. As such, as mentioned, the system of measuring performance in the Malaysian public sector has been subjected to major changes over the years.

The earliest performance measurement system in Malaysian government focused primarily on financial management process. In the earliest development of performance evaluation in the Malaysian Government, budgeting had a pivotal, important role in the entire performance measurement systems in the Malaysian history (Doh, 2003). Started with the use on one line item budgeting system emphasizing mainly on the input evaluation and later shifted to the program and process evaluation through the a new framework called Program and Performance Budgeting Systems (PPBS).

The use of PPBS can be simply the rationalization of the allocated resources and the assessment of such allocation on the basis of quantifiable and measurable objectives as well as the performance measurement of all projects (Xavier, 2007). This system enables the government to link the planning with the budgeting as well as providing small responsibility centers in each public unit. The local government or agencies need to specify and submit the inputs, outputs and impacts of each program/activity to the Treasury to be evaluated (Dean 1989, 2006).

The PPBS can be considered as the early attempts to focus on results and outcomes achievements (Koshy, 2008). However, the implementation seems to be input-oriented. As a result, governmental budget was seen as the cash allocations “software” instead of strategic management tool with no clear relationship established between the fund resource management and performance management. In 1990, the government replaced the PPBS with Modified Budgeting Systems or Integrated Results based Management Results rationalizing the needs for achieving results through systematic goals and objectives and clearly states how results ought to be achieved. Although, the RBM has proved to be suitable for several years, its effective and productive use however remains questionable due to several reasons.

First, RBM has been proved to be less practical due to its lack of ability to create some meaningful linkages between budget performance, resource usage and policy implementation (Rasappan, 1999). Therefore, in 1999, based on the historical lessons learned and the identified shortcomings of the previous systems, the government introduced new Integrated Results based Management using integrated performance management framework. The most distinguishing feature of IRBM as compared to the conventional RBM was its ability to integrate the critical performance components such as Results based budgeting system and the Personnel Performance System. IRBM in short is a systematic approach to integrate the strategic planning, systematic implementation and resource usage and performance monitoring, measurement and reporting.

The new system however, required top management within the Ministry and Departments to be actively involved in strategic performance planning, consultation efforts and close interaction with lower management levels. This system, therefore, highlights the analysis of stakeholders' demands and problems and focuses more on the results instead of the process such as efficient resources utilization, activities completion, outputs completion and outcome achievement.

The IRBM system comprised of five components that can be decomposed into two primary components and three complementary components. The primary components are:

i. Results-based Budgeting (RBB)

RBB is a strategic management tool that assists in improving resource management and public sector accountability. It focuses on performance measurement and its linkages with policy making and resource management (i.e. results from operations of programs and activities conducted by government using public money). The results under RBB are classified under various components of inputs, processes, outputs, impact, and activity completion.

ii. Results-based Personnel Performance System (PPS)

Results-based Personnel Performance System (PPS) is to be considered as one of major components and the driver for new performance initiatives. The role of PPS is important in establishing and urging the accountability of the public officers in the Malaysian government. Accountability can be achieved through linking the agencies/ central government performance and individual performance. This system also drives the essential role of appraisal systems to be linked to the work activities. This system consequently also forces the Human Resource Department (HRD) and Human Resource Management (HRM) to be more specific and focus. It also provides better foundation for HRD and HRM in the planning and implementation stages.

While the three complementary components are:

i. Results Based Management Information System

As the previous components of RBB and PPS sets the framework for performance planning by setting the overall objectives and goals in the public organization. The implementation of the programs needs to be monitored to ensure that the planned objectives are consistent with the predetermined parameters. In order to do this, the frameworks above have to be able to provide comprehensive, but not overloaded, information. The role of Management Information System is by identifying information needs at the different levels. The managements' involvement in the planning process must be highly prioritized since they are the user of the information which is to be used for effective planning and informed decision making.

ii. Results based monitoring and evaluation framework

The dynamics of RBM can only be achieved when there is a closed association between the MIS and Monitoring and Evaluation Framework. Monitoring and Evaluation refers to the on going process of tracking key performance indicators at different program levels so that timely and appropriate measures can be taken to keep a program on track and to ensure that all the objectives and goals are achieved at the most efficient

and effective manners.

iii. E-Government System

However the use of Integrated Results based Management was not pivotal and ingrained in the public consciousness. It does not seem to be integrated throughout the whole governmental bodies including at the executive level. Generally, the public was not made aware of the whole targets set in the system and the achievement of those targets. The performance of the ministers was not linked to the performance of their agencies. It was only by 2005 that the use of key performance indicators were introduced and subsequently in 2009, a more integrated approach involving those at the executive levels were put in place.

3.2 An Integrated Performance Measurement framework: The Government Transformation Programme

The origin of KPIs in Malaysia started with the GLC Transformation Program in 2004 in which the employment contracts for the heads of state controlled organisation are to be renewed based on their organisational performance. A year later, key performance indicators were introduced and used in the public sector. It could be said that the intensification of the measurement pathway culminated with the issuance of DAC circular 2/2005 which required all government agencies to formulate key performance indicators. Public agencies in Malaysia were to be measured in terms of (i) the efficiency and effectiveness of the process of service delivery (ii) the human resource and financial productivity and (iii) the customers' satisfaction towards the service received (DAC2, 2005, p 10). KPIs should be formulated based on the agency's current process of service delivery. The performance targets set can be based either on the agency's workload, the past experience, their existing capability or trend analysis.

However, the indicators formulated were mainly process based indicators with the main intention of ensuring faster service delivery (Siti-Nabiha, 2008). Even though cost based indicators were part of the indicators, cost perspectives were not emphasized. Furthermore, not all agencies fully implemented system of indicators. Similar to the previous framework, reporting of these indicators to the public was not made since the emphasis is more on improvement on the process of service delivery. Nevertheless, there are various improvements made by government departments or local agencies that have used this system of performance indicators.

The process of formulating indicators has ensured that government agencies reviewed the whole process of service delivery and made improvements where necessary. Case study research undertaken in governmental authority has shown that the process of developing indicators has lead to simplification of the workflow process and faster service delivery (see Siti-Nabiha, 2008, 2010). The data provide from the KPIs system has lead to head of agencies to do better planning and allocation of resources. However, the time needed for the collection of the data is one of the issues arises from the implementation of the system of key performance indicators. Not all governmental agencies implemented and put in effect the KPIs practice as required by DAC 2/2005.

In 2009, with the mantra of "people first, performance now" of the new prime minister, the government pushed for more emphasis on KPIs and accountability. A more integrated and strategic system of performance measurement was put in place under the ambit of the Government Transformation Program. Consequently, a unit under the Prime Minister office,

i.e. the performance management and delivery unit (PEMANDU) headed by a minister was formed in 2009, with the responsibilities of facilitating, evaluating as well as taking overall in charge of the GTP program.

The GTP objectives are "to transform the government to be more effective in its delivery of services and accountable for outcomes that matter most to the Rakyat; and second, to move Malaysia forward to become an advanced, united and just society with a high standards of living for all (GTP website). In line with the GTP, the new KPIs will emphasize on impact rather than input, on outcome rather than output.

Six major policy areas, called the national key results areas (NKRAs) were identified with specific KPIs formulated in each of these areas. The NKRAs are reducing crime, fighting corruption, improvement of students' outcomes, improvements in the standard of living for low income groups, upgrades and improvement of rural infrastructure, and improvements in urban public transportation (GTP Annual Report, 2011). The NKRAs are headed by the respective ministers and they are held accountable for the results achieved. The ministers have also specific key performance indicators set under the minister key results areas (MKRAs) which are need to be achieved but are not covered under the NKRAs.

The KPIs provide a mechanism for the evaluation of ministries and other government agencies including performance reviews carried out every six months. Each ministry has been required to establish specific KPIs that focus on policy outcomes over the traditional emphasis on inputs typically found in government performance assessments and planning (Siti-Nabiha 2010). KPIs include detailed job descriptions and goals for ministers, deputy ministers, and some other senior government officials. Thus, in this new system, the ministers are also made accountable for the achievement of results. However, the penalty for the ministers for not achieving the performance targets was not clearly stated.

The GTP program was initiated in 2009 and it is supposed to be aligned to the new economic model and the tenth Malaysian plan (GTP Annual Report, 2010). The GTP covers the period from 2010-2020 whereby the first three years was on setting indicators and also measuring performance and achievement. It is expected that the results of the GTP will bear fruit and by 2020, Malaysia will achieved it fully developed status with a just and equitable society.

4.0 Discussion and Conclusion

Malaysia has implemented and instituted various public sector reforms programs over the years, specifically those related to enhancing performance and accountability. The consequences of these programs have brought along attitudinal changes towards the private sector and the public at large. Similar to the private sector, civil servants are supposed to think and treat the citizens as customers of their services.

Regardless of all reformations and improvements, the civil service in Malaysia still continues to suffer from inefficiency, corruption and many other problems. Thus, various authors have argued that the public management transformations offered neither the improving of such mechanisms nor the change of bureaucratic ethics and work performance (see for example Siddiquee, 2010; Agus, Barker, and Kandampully, 2007).

The implementation and the achievement of those reform programs are far from satisfactory. Public sector in Malaysia continues to suffer from low level of efficiency and organizational competence and continued to be impeded with a host of problems including the lack of financial discipline and accountability (see for example the yearly Auditor-General' Reports). Despite these criticisms, improvements made the service delivery should not be negated. However, the core issues of governance and accountability have not shown much progress.

Due to the lack of public confidence in the public sector and with the need to show change after the disastrous results for the ruling party in 2008 general election, the Malaysian government under the new Prime Minister instituted a more comprehensive and integrated performance management system which was rolled out in 2009. After a year of GTP, the official results showed that the performance in 2010 generally was better than expected (see GTP annual report, 2011). Annual report of the performance was made public. Most of the targets were achieved and as stated in the GTP 2011 annual report (pg 6) "unprecedented success" with a lot of "big wins" was attained. However, such success should be taken with caution since it begs the question of whether the targets set are as "stretch" as they are intended to be or due to the inherent inefficiency existed in the system.

Since the key to successful accountability is the access to relevant information on performance (Funnell and Cooper, 1998), the indicators formulated are too comprehensive and negates the use of key performance indicators which are supposed to be a way of trimming down extensive information. Moreover, GTP focuses on managerialist accountability and not governance accountability. Performance is assessed in term of its compliance to measurable outcomes rather than whether it has improved performance and enhanced justice (Dubnick, 2006). The focus is mainly on managerialist accountability which may not be internalized by the person held to account. As Dubnick (2007, pg 3) succinctly states managerialist accountability '... tells that third grade teacher that his relationship with his students must be defined in terms of higher test scores. It assesses the firefighters' performance on the basis of measurable such as emergency response times. And in both instances the account giver does not take personal ownership of those standards—they are never internalized, but remain associated with the outside source". Dubnick (2007, pg 3) further argues for governance accountability in which:

"it is an embedded and internalized commitment to account giving. It is embedded in the very relationships that the individual has with those she serves, or the clientele group he works with. It is found in the way a third grade teacher relates to his students, or the obligation a firefighter feels to those who might be trapped in a burning building. It is internalized to the extent that the account giver regards the commitment to accountability to come from within and not be a reaction to some outside pressure".

In addition, not all relevant and important activities can be quantified especially in public service delivery. For example, how do we know that students have learned? There are instances where countries have achieved better educational performance results without the intensive and extensive use of performance measurement system. A good example in the field of education is Finland, which is one of the top countries where the students have achieved the top rating in test undertaken by the OECD. Interestingly, there are not league tables, ranking or inspection of schools in the Finnish education system (Vasagar, 2010). This is not to say that we should go to the Finnish route since the institutional structures are different. In Finland, the teaching profession is valued and has a high status and all teachers are required to have Masters degree (Mansell, 2009; Vasager, 2010) which may contribute to

the educational achievement of the students.

Another major issue regarding the full implementation of the system of indicators is requirement of data collection to ensure monitoring of performance and effective corrective actions. However, the activities pertaining to data collection and performance monitoring consume time and financial resources. The time and discipline needed to measure and collect data of these indicators means less time could be devoted on the promised objective of improved performance (Dubnick, 2006). Even more so in the case of the GTP program with its extensive administrative support put in place which consumes financial resources. Thus, the issue is not only to know whether the government "is doing the right things right", but cost effectiveness of the program should also be weighted in. As such, the money worth test also needs to be taken into consideration in the implementation of the transformation program. For example, is the operating budget for PEMANDU and consultancies fees' paid and financial resources diverted to the activities are really worth the effort or should it be used for other productive activities? Could GTP leads to more governance accountability of the ministers and civil servants and subsequently lead to a more just and equitable society?

References

- Abdellatif, A.M. (2003). Good Governance and Its Relationship to Democracy and Economic Development. Global Forum III on Fighting Corruption and Safeguarding Integrity, Seoul 20-31 May 2003.
- Agus, A., Barker, S. and Kandampully, J. (2007). An exploratory study of service quality in the Malaysian public service sector. *The International Journal of Quality & Reliability Management*. Bradford: Vol. 24, Iss. 2; p. 177
- Barton, A.D. (2006). Public sector accountability and commercial-in-confidence outsourcing contracts. *Accounting, Auditing & Accountability Journal*. Bradford: Vol. 19, Iss. 2; pg. 256, 16 pgs
- Bolton, M. (2003). Public sector performance measurement: delivering greater accountability, Work Study, 52/1, pp.20-24
- Boyne, G. and Law, J. (1991). Accountability and local authority annual reports: the case of Welsh district councils, *Financial Accountability and Management*, 7(3), 179-94
- Brennan, N.M. and Solomon, J. (2008). Corporate governance, accountability and mechanisms of accountability: an overview. *Accounting, Auditing & Accountability Journal*. Bradford: Vol. 21, Iss. 7; p. 885
- Cochrane, A. (1993). From financial control to strategic management: The changing faces of accountability in British local government. *Accounting, Auditing & Accountability Journal*. Bradford: Vol. 6, Iss. 3; p. 30
- Dean, P.N. (1989). Government budgeting in developing countries. New York: Routledge.
- Dean, P.N. (2006). Government budgeting in developing countries. New York: Routledge. Wiley Online Library.
- Doh, J.C. (2003). Budgeting as an Instrument of Development: The Malaysian Experience. *Public Budgeting & Finance*, 4(1). 64-75
- Ezzamel, M., and Willmott, H. (1993). Corporate governance and financial accountability: Recent reforms in the UK public sector. *Accounting, Auditing & Accountability Journal*. Bradford: Vol. 6, Iss. 3; p. 109 (24 pages)
- Figlio, D. and Kenny, L. (2009). Public sector performance measurement and stakeholder

- support. *Journal of Public Economics*, doi: 10.1016/j.jpubeco.2009.07.003
- Funnell, W. and Cooper, K. (1998), *Public sector Accounting and Accountability in Australia*, UNSW Press, Sydney.
- Gray, A., and Jenkins, B. (1993). Codes of accountability in the new public sector. *Accounting, Auditing & Accountability Journal*. Bradford: Vol. 6, Iss. 3; p. 52 (16 pages)
- Grindle, M.S. (2002). *Good Enough Governance: Poverty Reduction and Reform in Developing Countries*. Prepared for the Poverty Reduction Group of the World Bank.
- GTP Annual Report 2010. www.pemandu.gov.my/gtp
- GTP Annual Report 2011. www.pemandu.gov.my/gtp
- Hoque, Z. (2008). Measuring and reporting public sector outputs/outcomes: exploratory evidence from Australia, *International Journal of Public Sector Management*, 21(5), 468-493
- Humphrey, C., Miller, P., and Scapens, R.W. (1993). Accountability and accountable management in the UK public sector. *Accounting, Auditing & Accountability Journal*. Bradford: Vol. 6, Iss. 3; p. 7 (23 pages)
- Huther, J. and Shah, A. (1998). Applying a Simple Measure of Good Governance to the Debate on Fiscal Decentralization. World Bank Policy Research Working Paper No. 1894 (Washington: World Bank)
- Koshy, T. (2008). *Performance Measurement and Program Evaluation*. Ministry of Finance Malaysia.
- Leftwich, A. (1993). Governance, Democracy and Development in the Third World, *Third world Quarterly*, Vol. 14 (3): 605-624.
- The Local Government ACT 1976 (ACT 171) & Subsidiary Legislation as at 25 August 2005. Percetakan Nasional Malaysia Bhd
- Mayston, D. (1993). Principals, agents and the economics of accountability in the new public sector. *Accounting, Auditing & Accountability Journal*. Bradford: Vol. 6, Iss. 3; p. 68 (29 pages)
- Modell, S. (2005). Performance management in the public sector: past experiences, current practices and future challenges, *Australian Accounting Review*, 15 (3), 56-66.
- Moullin, M. (2009). What's the score. *Public Finance*, May, 26-27
- National Audit Department (2008). www.audit.gov.my
- Neely, A.D., Mills, J.F., Gregory, M.J. and Platts, K.W. (1995). Performance measurement system design—a literature review and research agenda. *International Journal of Operations and Production Management*. Vol. 15, No. 4, pp.80–116.
- Oakes, L.S. & Young, J.J. (2008). Accountability re-examined: evidence from Hull House. *Accounting, Auditing & Accountability Journal*. Bradford: Vol. 21, Iss. 6; pg. 765
- Pemandu. www.pemandu.gov.my
- Rasappan, A. (1999). Budget Reform – Malaysia. Paper presented at World Bank Budgeting & Performance Management Workshop, Washington, DC.
- Rhodes, R.A.W. (1996). The New Governance: Governing without Government. *Political Studies* XLIV: 652-667.
- Rivenbark, W.C., and Allison, G.S. (2003). The GFOA and professionalism in local government. *Journal of Public Budgeting, Accounting & Financial Management*. Boca Raton: Vol. 15, Iss. 2; p. 228
- Rouse, P.; Putterill, M. (2003). An integral framework for performance measurement. Emerald Group Publishing. *Management Decision*, no.41/8, 791-805.
- Sotirakou, T. and Zeppou, M. (2006). Utilizing performance measurement to modernize the Greek public sector. *Management Decision*, 44 (9), 1277 – 1304.

- Siddiquee, N.A. (2010). Managing for results: lessons from public management reform in Malaysia. *The International Journal of Public Sector Management*. Bradford: Vol. 23, Iss. 1; p. 38
- Siti-Nabiha, A.K (2010) Improving the Service Delivery: A Case Study of Local Authority in Malaysia, *Global Business Review* 11(10), pg 85-77
- Siti Nabiha, A.K. (2008). New Public Management in Malaysia: In Search of Efficient and Effective Service Delivery. *International Journal of Management Studies*, September 69-90
- UNDP Report 1997, Governance for Sustainable Human Development, 1997
- UNESCAP. www.unescap.org/.../governance.asp
- Xavier, J.A. (2007). Budget reform- the Malaysian experience. *Public administration and development*, 16(5), 485-501

Effect of Transformational and Transactional Leadership Style Towards Employee Commitment in the Organization

Khairunesa Isa, Wan Hanim Nadrah Wan Muda,
Universiti Tun Hussein Onn Malaysia

Email: nesa@uthm.edu.my ; wanhanim@uthm.edu.my

Bukryman Sabri

Universiti Putra Malaysia

Email: Bukryman@putra.upm.edu.my

Abstract

This concept paper focused on the critical discussion of the leadership style and employee commitment in the organization. Past researchers in leadership studies have observed a shift in the dimensions of new leadership behavior such as transformational and transactional styles. For the past few decades, leadership styles continue to be one of the most exciting issues for organizations. Many studies have attempted to explore its effect on work outcomes especially towards employees commitment. Leadership styles exhibited by the managers have often been known as the essence of leaders' behavior which is the main actor that forced behind this continuous recognition of employees' behavior in the management literatures. Hence, a better understanding of the dimension leadership style is needed to further understanding about leadership style and employee commitment framework. Thus, the goal of this paper are to (a) describe all the dimension of transformational and transactional leadership style; (b) describe the element of employee commitment; (c) explore the relationship between transformational and transactional (how each dimensional of transformational and transactional can effect towards employee commitment).

Keywords: Transformational and Transactional Leadership Style, Employee Commitment.

Introduction

Leadership is one of the important elements in an organization. It serves as a key driver of performance in the organization. Leadership is the most widely studied concept in social sciences (Greenberg & Baron, 2003). There are many opinions about the leadership. Researchers usually define leadership based on their individual perspective and the aspect of the phenomenon of most interests them. Differences between researcher in their conception of leadership lead to differences in the choice of phenomena to investigate and to differences in explain the result. Whenever feasible, leadership research should be designed to provide and contribute information relevant to the entire range of definitions.

Leadership style is a factor that construct composed of consideration and structure. An individual's leadership style is the mix of consideration and structure that is exhibited in the

leader role (Fleishman, 1969). Generally, leadership style is the manner and approach of providing direction, implementing plans, and motivating people. According to Lewin (1939), early study has been done to identify three major different styles of leadership. The three major style of leadership are authoritarian or democratic, participative of democratic and delegative. A good leaders usually used all three styles of leadership with one of them normally dominant in an appropriate situation but at certain situation two types style are dominant. To be an effective leader, they should know what are the best leadership style that they need to apply in an appropriate situations.

Presently, almost an organization realized that humanities oriented in leadership style is more affective towards an organization than command orientation or autocratic style. Thus, some researcher (Burns, 1978; and Bass and Avolio, 1996) come out with interesting humanities conceptual and model of leadership style for the purpose to motivate and influence employee commitment in their organization.

Transactional and transformational leadership has been of great interest to many researchers in the current era. Using either transformational or transactional leadership behaviour helps in the success of the organization achievement (Laohavichien et al., 2009). Both transformational leadership and transactional leadership help in predicting subordinates' satisfaction with their leaders (Bennett, 2009).

Burn (1978) identified two types of leadership styles; Transformational and Transactional. Transformational leadership is based on more than compliance of followers that involve shift in the belief, the needs, and the values of followers. Transactional leadership involves an exchange relationship between leaders and followers such that followers receive wages or prestige for complying with a leader's wishes.

1. The Dimension of Transformational and Transactional Leadership Style

The theory of transformation-transactional leadership can be best explained as a difference in what leaders and subordinates have to offer in a work relationship. Transformational leadership influences both the micro (individual) and macro level of an institution by transforming followers from their "everyday selves" to "better selves", by appealing to their higher order intrinsic needs, bypassing vision of short-term goals, and becoming motivated by organizational goals rather than self-interests (Judge & Piccolo, 2004; Yukl, 1989).

In contrast transactional leadership is a more conventional style in which work is exchanged for resources. A transactional leader influences subordinates by rewards in exchange for their efforts (contingent rewards), follows workers closely and takes corrective actions when required (management by exception – active), or passively manages employees and takes measures when necessary (Bono & Judge, 2004; Judge & Piccolo, 2004).

Study of Chen et al., (2005) found that followers were satisfied with the contingent reward dimension of transactional leaders and individualize consideration of transformational leaders. The study of Jansen et al., (2009) concluded that the transformational leadership behaviors

contribute significantly to exploratory innovation while transactional leadership behaviors facilitate improving and extending existing knowledge and are associated with exploitative innovation. In another study transformational leadership had big influence on employees' performance and innovation than transactional leaders (Boerner et al., 2007) as well as it was more significantly associated with team cohesiveness, work unit efficacy and organizational learning as compared to transactional leadership (Stashevsky and Koslowsky, 2006).

Table 1: The Dimension of Transformational and Transactional Leadership

Transformational Leadership	Transactional Leadership
<ul style="list-style-type: none"> I. Charisma: provide vision and mission, increase respect and belief II. Inspiration: provide challenge and meaning for the subordinates in performing their jobs. III. Intellectual stimulation: gaining others to involve in problem solving to creating awareness of problems and stirring their imagination to create high-quality solutions. IV. Motivation: advice and guidance, offering special rewards, more individualized consideration 	<ul style="list-style-type: none"> I. Reward: to high achievement and good performance II. Management-by-exception: active- Active leaders monitor follower behaviour, anticipate problems and take corrective actions before the behaviour creates serious difficulties. III. Management-by- exception: Passive- wait until the behaviour has created problems before taking action.

Bass and Avolio (1989) explained the charismatic leaders as a leader that provides vision and a sense of mission, and gains respect and trust. It is the influence based upon perception and behavior of the leader as charismatic. Some behaviors such as persistence determination and risk-taking can influence the subordinates, included as charismatic. Inspiration is determined from some leaders that provide challenge and meaning for the subordinates in performing their jobs. These behaviors may be done by using simple language, and other symbols. They create attractive futures for their followers with high expectations. The third dimension is intellectual stimulation. The transformational leader stimulates followers intellectually, arousing them to develop new ways to think about problems. This dimension is a leader that provides subordinates with a flow of challenging new ideas that are supposed to stimulate

rethinking of old ways of doing things. This type of leader commits people to action and converts followers into leaders.

Yammario and Bass (1990) indicated that subordinates' conceptualization, comprehension, and analysis of the problems will be indicator of leaders' intellectual stimulation. The last dimension that was identified is motivation or individual consideration which are coaching and mentoring to provide continuous feedback and links individual's needs to the organization's mission (Bass & Avolio, 1990). Such leaders provide continuous follow-up and feedback, and, perhaps more importantly, link an employee's current needs to the organization's mission, and elevate those needs when it is appointed to do so.

Transactional leadership is based on the notion of a social exchange, as opposed to personal growth and change. Leaders control followers' behaviors by authority and power on the one hand and satisfying followers' needs on the other. The type of leader believes that the unfair evaluation of staffs opinion and feelings result in job dissatisfaction, and by eliminating any evaluation, they will free the staff to perform to their peak ability. Leaders offer organizational resources in exchange for followers' compliance and responsiveness.

According to Barnard M. Bass (1985), transactional leaders predetermine what their followers should do to realize their personal and organizational aims, while transformational leaders motivate and stimulate their followers to surpass their own self-interests and direct themselves to a higher level of motivation linked to the interests of the team, organization or larger community (Bass and Avolio 1990). Bass considers the leader–follower interactive effects from the perspective of an effective transactional leader who acts as a source of feedback, as communicator, as a model and a source of influence. Gardner and Clevenger (1998) found that the study of Bass rests on a basis distinction between transactional and transformational as transformational leaders motivate follower by offering them rewards that are lower order material and psychic needs in exchange for their performance. On the contrary, transformational leaders communicate an idealized vision, and motivate followers to expend extraordinary levels of effort to perform beyond expectations.

Bass (1997) stated that this form of leadership goes beyond traditional forms of transactional leadership. Transactional leadership emphasizes corrective action, mutual exchanges, and rewards when performance expectations are met. On the other hand, transformational leaders trust their subordinates and leave them space to breathe and grow. The base line of transformational leadership is a more developmental and constructive form of leadership for the employees and the organization as a whole compared to transactional.

2. Employees' Commitment

There are many factors of employees' commitment such as organizational culture, leadership style, job satisfaction, personal characteristics, employees' power their attitude, work behavior, motivation and performance. According to Shirbagi (2007), there is positive relationship between leadership and overall employees' commitment; he also stated that positive relationship of leadership style with three components of employees' commitment.

Employee commitment has typically been viewed as the relative strength of an individual's identification with the involvement in an organization as well as his or her willingness to exert effort and remain in the organization. Commitment as outcome has been related to leadership (Walumbwa, et.,al. 2005). It is important for the organisation to know what are the factors that contribute and plays important role or have big impact in boosting the commitment of the employees. Leadership styles is essential in order for an organization to successfully implement business strategies, achieving their goals, gain competitive advantage and optimizing human capital that encourage employee commitment.

A review of organizational commitment research literature by Meyer and Allen (1991), and corroborated by Dunham, Gruba and Castaneda (1994), identified three types of organizational commitment: *affective, continuance and normative*. Affective commitment is defined as employee emotional attachment to, identification with, and involvement in the organization and its goals. It results from an individual and organizational value congruency. Steers (1977) identified factors which help create intrinsically rewarding situations for employees to be antecedents of affective commitment. These factors include such job characteristics as task significance, identity, skills variety and feedback concerning employee job performance, perceived organizational support or dependence (the feeling that the organization considers what is in the best interest of employees when making decisions that affect employment conditions and work environment), and the degree that employees are involved in the goal-setting and decision-making processes.

Continuance commitment is defined as willingness to remain in an organization because of personal investment in the form of nontransferable investments such as close working relationships with coworkers, years of employment in a particular organization, involvement in the community in which the employer is located, and other benefits that make it too costly for one to leave and seek employment elsewhere.

Normative commitment is induced by a feeling of obligation to remain with an organization. This is an almost natural predisposition to be loyal and committed to institutions such as family, marriage, country, religion and employment organization as a result of socialization in a culture that places a premium on loyalty and devotion to institutions. This view of commitment holds that an individual demonstrates commitment behavior solely because she or he believes it is the moral and right thing to do. This feeling of moral obligation is measured by the extent to which a person feels that he or she should be loyal to his or her organization, make personal sacrifice to help it out and not criticize it (Wiener and Verdi, 1980).

Committed employees are more motivated and dedicated towards meeting and achieving organizational goals (Pfeffer, 1998). Employees with sense of organizational commitment are less likely to engage in withdrawal behaviour and more willing to accept change (Iverson and Buttigieg, 1998). Transformational leaders have great ability to influence organizational commitment by promoting the values which are related to the goal achievement, by emphasizing the relation between the employees' efforts and goal achievement.

According to Walumbwa and Lawler (2003), that leaders who exhibit transformational leadership styles are more effective in achieving significantly higher commitment levels than transactional leadership. They stated that, transformational leaders can motivate and increase employees' motivation and organizational commitment by getting them to solve problems creatively and also understanding their needs.

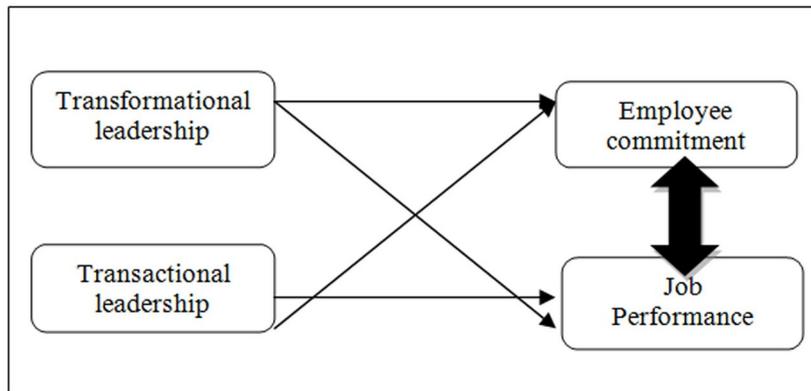


Figure 1: Framework of Employee Commitment Towards Leadership Styles

Although the relationship is not strong, there is a positive relationship between the transformational leadership and commitment. This shows that, leadership behaviours which involve building trust, inspiring a shared vision, involve them in problem solving and emphasizing development is somewhat positively related to employee commitment (Nyengane, 2007). Improving the employees' working situations, fulfilling their needs, and helping them perform better are positively related to transformational leadership (Liu *et al.* 2003).

3. Relationship of Transformational and Transactional Leadership Toward Employee Commitment

Transformational leaders are expected to increase the performance capacity of their followers by setting higher expectations and generating a greater willingness to deal with difficult challenges (Avolio, 1999; Bass, 1998). Transactional contingent reward leadership should also relate positively to performance in that such leaders clarify expectations and recognize achievements that positively contribute to higher levels of effort and performance.

The difference between transactional and transformational is commonly emphasized in leadership studies. In spite of the fact that transformational theories have been a popular topic in leadership literature, transactional leadership constitutes a foundation for it and the two approaches are not necessarily in opposition to one another (Northouse, 2004). Nonetheless, most advocates of the distinction persist in describing leaders as one or the other. While transactional leaders motivate followers to fulfill leader's requests and organizational role through an exchange process, transformational leaders motivate followers by encouraging them to transcend their self-interests for the sake of the organization and shared goals. Study

from Nyengane, (2007) suggests that transformational leadership behaviours are positively related to how employees feel about wanting to stay with the company. Therefore, using transformational leadership style will encourage employees to commit highly with their work.

According to Viator and Ralph (2001) is transformational leadership is directly and positively associated with role clarity, job satisfaction and affective organizational commitment, and indirectly associated with job performance. The mechanisms such as psychological empowerment and structural distance analyzed the researched by Weichun, Koh, William, Bhatia and Puja (2004) stated that transformational leaders to influence the followers towards motivation and organizational commitment is addressed. Study from Marmaya et.al., (2010) shows transformational and transactional leadership style is related to employees' organizational commitment.

Another finding from Mert et al. (2010) states that transformational leadership style positively affect organizational commitment of followers. Similar findings by Tseng and Kang (2008) found that there is positive and significant relationship between transformational leadership style and organizational commitment.

Conclusion

Affective commitment which is known as the employee's positive emotional attachment to the organization. An employee who is affectively committed strongly identifies with the goals of the organization and desires to remain a part of the organization. Organizations that applied either transformational or transactional leadership style can change their management approach to further improve their performance.

References

- Bass, B.M., (1985). *Leadership and Performance beyond Expectation*. New York: Free Press.
- Bass, B.M (1997) *Personal Selling and Transactional/Transformational Leadership*. The Journal of Personal selling & Sales Management; New York. Volume 17. Summer p.19-28
- Bass, B.M., and Avolio, B.J. (1990). The Implications of Transactional and Transformational Leadership for Individual, team, and organizational development. *Research in Organisational Change and Development*, 4, 231-272
- Bennet, T. (2009). The relationship between the Subordinate's Perception of the leadership style of it managers and the subordinate's perceptions of manager's ability to inspire extra effort, to be effective, and to enhance satisfaction with management", *Proceedings of the Academy of Strategic Management*, Vol. 8, No.1.
- Bensimon, E.M., (1989) *Transactional, transformational And " Trans-Vigorational."*Volume 2, Number 6. [Online]. Retrieved 15 November 2002
- Boerner, S., Eisenbeiss, S., and Griesser, D., (2007). "Follower behavior and organizational performance: The impact of transformational leaders", *Journal of Leadership and Organizational Studies*, Vol. 13, No.3, pp.15-26.

- Bono, J.E., & Judge, T.A. (2004). Personality and transformational and transactional leadership: A meta-analysis. *Journal of Applied Psychology*, 89, 901-910.
- Burns, J.M. (1978). *Leadership*. New York: Harper & Row
- Chen, H., Beck, S., and Amos, L., (2005). "Leadership Style and Nursing Scholarship, Vol. 4, No. 37, pp. 374-380.
- Fleishman, E.A. (1969). *Manual for leadership opinion questionnaire*. Chicago: Science Research Associates,
- Greenberg, R.A., Baron, R. (2003). "Behavior in Organizations," Prentice-Hall (8th)
- Iverson, R.D., and Buttigieg, D.N., (1998). *Affective, Normative and Continuance Commitment: Can the 'Right Kind' of Commitment be manager?*. Department of Management, University of Melbourne.
- Jansen, J., Vera, D., and Crossan, M. (2009) "Strategic leadership for exploration and exploitation: The moderating role of environmental dynamism", *The Leadership Quarterly*, Vol. 20, pp.5-18.
- Judge, T. A., & Piccolo, R. (2004). Transformational and transactional leadership: A meta-analytic test of their relative validity. *Journal of Applied Psychology*, 89, 755-768
- Liu, A.M.M., Fellow, R.F. and Fang, Z. (2003). *The Power Paradigm of Project Leadership, Construction Management and Economics*, Vol. 21, No. 8, pp. 819-29.
- Laohavichien, T., Fredendall, L., and Cantrell, R., 2009. "The effects of transformational and transactional leadership on quality improvement", *The Quality Management Journal*, Vol. 16, No. 2, pp. 7-24.
- Marmaya, N.H., Hitam, M., Muhamad Torsiman, N. and B. KPD Balakrishnan, B. KPD. (2010). *Employees' Perceptions of Malaysian Managers' Leadership Styles and Organisational Commitment*. *African Journal of Business Management* Vol. 5(5), pp. 1584-1588
- Mert S. I, Keskin, N and Bas, T (2010) *Leadership Style And Organizational Commitment: Test Of A Theory In Turkish Banking Sector*, *Journal of Academic Research in Economics*, 2, 1-20
- Northouse, P. G. (2004). *Leadership: Theory and practice* (3rd ed.). London: Sage.
- Nyengane MH (2007). *The relationship between leadership style and employees' commitment: An Exploratory Study in an Electricity Utility of South Africa*. Masters thesis, Rhodes University.
- Pfeffer, J. (1998). *The Human Equation*. Boston, MA. Harvard Business School Press.
- Stashevsky, S., and Koslowsky, M., (2006). "Leadership team cohesiveness and team performance" *Top of Form International, Journal of Manpower*, Vol. 27, No. 1, pp.63-74
- Tseng H-C, Kang L-M, (2008) *How Does Regulatory Focus Affect Organizational Commitment? Transformational Leadership as a Mediator*, AIMS International Conference on Management
- Walumbwa FO, Lawler JJ (2003). *Building effective organizations: transformational leadership, collectivist orientation, work-related attitudes and withdrawal behaviors in three emerging economies*. *Int. J. Hum. Res. Manage.* 14: 1083-1101.
- Walumbwa, F. O., Lawler, J.J., Avolio, B.J., and Wang, P.S.K., (2005). *Transformational Leadership and Work-Related Attitudes: The Moderating Effects of Collective and Self-Efficacy across Culture*.

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All figures (charts, graphs, drawings etc) and tables should be titled and numbered. Figures and Tables should supplement the text and not duplicate it. Here are some examples:

Figure 2.5 Evolution of Training's Role

Source: Noe, RA 2005, *Employee Training and Development*, p.41.

Table 6.20 Fit Indices for Hypothesised Structural Model

Appendices

Use a separate page for appendices (if required). Provide each appendix with a title.

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Use author-date method. Here are some examples:

If one author:

Laker (1990) proposed

If two authors:

Broad and Newstrom (1992) also noted that

If two or more works cited at the end of the text:

Transfer of training is generally defined as the degree to which trainees apply the knowledge, skills and attitudes gained in training to their job (Ford & Weissbein 1997; Tannenbaum & Yulk 1992; Wexley & Latham 1991).

If more than two authors and their work is again cited in the text, use 'et al.'. For example,

First citation in text:

For instance, Tziner, Haccoun and Kadish (1991) noted that the fundamental purpose of training is to help people develop skills and abilities which, when applied at work, will enhance their average job performance in their current job.

Subsequent citation in text:

The definition provided by Tziner et al. (1991) links the acquisition of knowledge and skills gained through training to an application in the workplace.

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Books

Cohen, JW 1988, *Statistical power analysis for the behavioural sciences*, 2nd edn, Lawrence Erlbaum Associates, Hillsdale, NJ.

Cormier, SM & Hagman, J 1987, *Transfer of learning: contemporary research and applications*, Academic Press Inc, London.

Book Chapters

Kozlowski, SW & Salas, E 1997, 'An organisational systems approach for the implementation and transfer of training', in Ford, JK., Kozlowski, SW., Kraiger, K., Salas, E & Teachout, MS (eds), *Improving training effectiveness in work organisation* (pp.247-87), Lawrence Erlbaum, New Jersey

Encyclopaedia

Tuijnman, AC (ed.) 1996, *International Encyclopaedia of Adult Education and Training*, Pergamon, NY

Journals

Bates, RA 2001, 'Public sector training participation: an empirical investigation', *International Journal of Training and Development*, vol.5, no.2, pp.136-152

Connelly, CE & Kelloway, EK 2003, 'Predictors of employees' perceptions of knowledge sharing cultures', *Leadership & Organisation Development Journal*, vol.24, no.5, pp.294-301.

Colquitt, JA., LePine, JA & Noe, RA 2000, 'Toward an integrative theory of training motivation: a meta-analytic path analysis of 20 years of research', *Journal of*

Applied Psychology, vol.85, pp.679-707

Internet

Ahmad Badawi, A 2006, 'Strengthening resilience, meeting challenges', The 2006 Budget Speech, viewed 20 February 2007, <http://www.treasury.gov.my/index.php?ch=12&lang=eng>

Proceedings

Bates, RA & Holton, EF III 1999, 'Learning transfer in a social service agency: test of an expectancy model of motivation', in KP Kuchinke (eds.), *Academy of Human Resource Development 1999 Conference Proceedings* (pp.1092-1099), Academy of Human Resource Development, Baton Rouge, LA.).

Dissertation

Chen, CH 2003, *Cross cultural construct validation of the learning transfer system inventory in Taiwan*, Unpublished Doctoral Dissertation, Louisiana State University.





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