

THE IMPACT OF ACCOUNTING SYSTEM ON THE ORGANISATIONAL PERFORMANCE: EVIDENCE FROM MALAYSIAN GOVERNMENT AGENCIES

Wan Zuriati Wan Zakaria¹
Norazlina Ilias²

Abstract

In the current information technology era, most of the government agencies are using computerised accounting information system in preparing their financial statements. An effective fully integrated accounting information system is important in order to improve the transparency and accountability of the government's financial management, and also to increase the efficiency of public resources management. With the effective system, it is possible to avoid wastage and inefficiency in the usage of public resources. Realise the benefits of the effective accounting information system in the government financial management system, therefore, this study is conducted to examine the impact of computerised accounting information system on organisational performance. Data was collected by questionnaire survey and a sample of 643 of government agencies in Putrajaya, Kuala Lumpur and Selangor. A descriptive statistical tools and structural equation modelling were employed in the data analysis. From the users' perspectives, they perceived that the effectiveness of accounting information system has significant contribution on organisational performance. While, a path analysis showed that the effectiveness of accounting information system has insignificant relationship with the organisational performance but indirectly has significant relationship on the organisational performance.

Keywords: organisational performance, accounting system, government agencies

2016 GBSE Journal

Introduction

The current technological revolution has encouraged organisations to acquire and implement advanced computerised systems that enable organisations to efficiently accomplish all undertakings including financial administration. Realise the benefits of the technology, most of the organisations, including government agencies, they have attempted to embrace the advancement of the technology to improve the efficiency of their organisations. In accounting field, this evolution has transformed the accounting information flow within and outside the organisations (Wan Zakaria, 2011). It replaces inefficient traditional paper-based manual accounting system to the more advanced system.

For the government agencies, the purpose of accounting system is to prepare the government's financial statements to demonstrate government's financial position, cash flows and financial performance. In Malaysia, especially financial statements of the Federal Government agencies, their financial statements are prepared annually by the Accountant General in accordance with Section 16 [1] of the Financial Procedure Act 1957 [Act 61], the Government Accounting Standards and International Public Sector Accounting Standard

¹ Senior lecturer, School of Maritime Business and Management, University of Malaysia Terengganu, 21030 Kuala Nerus, Terengganu, Malaysia. Tel: +609-6684172 Email: wzuriati@umt.edu.my

² Lecturer, Centre for Fundamental and Liberal Education, University of Malaysia Terengganu, 21030 Kuala Nerus, Terengganu, Malaysia. Tel: +609-6684182 Email: nor_azlina@umt.edu.my

(IPSAS). The Accountant General consolidates financial information from all the accounting offices of the Accountant General of Malaysia (AG) and the Ministries. The common elements of government financial statements are Statement of Financial Position, the Statement of Cash Receipts and Payments, Statements of Financial Performance, Memorandum Account Statement with Notes to Financial Statements. According to Malaysia National Audit Department's report, there were several shortcomings concerning the financial management system of the Malaysian Government for many years such as:

-) Expenditure over and above what was necessary;
 -) Extra allocation requested by appropriate agencies not correctly spent;
 -) Auditing records not updated;
 -) Stores and accounting assets not appropriately managed;
 -) Insufficient internal control for earning collection; and
 -) Weak in management system of development projects.
- (Yaakob et al., 2009 & Ahmad Sarji, 1994)

Therefore, a number of concrete actions have been taken including the implementation of computerised accounting information systems (CAS) in the government agencies in order to assist them to discharge their accountabilities in an efficient, effective and responsive way (Siddiquee, 2005; Tayib et al., 1999). An effective accounting information system may provide proper accounting records to help the organisations to achieve the desired outcomes (effectiveness), to meet the needs of the public and as a safeguard against corruption and fraud. With the effective system, it might able to tackle large-scale government deficits for the sustainability and long-term stability of public resources. On the other hand, a poor system will adversely affect the efficiency and accountability of public sector agencies, which is linked to the failure of public sector accounting, expenditure control, cash management, auditing, management of financial records and defective deficit financial system. This indicates that effective systems result in organisational growth with the optimisation of their operation and national economic development. Since the Malaysian Government has spent millions of dollars over the years in implementing and maintaining the sustainability of the accounting information systems within government agencies (Wan Zakaria, 2011), therefore it is important for the government to measure the benefits of the system for the following reasons (MAMPU, 2011):

-) To evaluate the actual performance versus what is expected or targeted;
-) To budget so as to ensure that resources are allocated to the right areas of concern and for specific goals to be achieved;
-) To control so as to ensure the objectives are achieved and the spending stays within budget;
-) To motivate by setting significant goals to achieve and celebrate the accomplishments made;
-) To promote success to the stakeholders and clients;
-) To learn the reasons behind a poor or good performance; and
-) To improve service delivery based on performance measurements and feedback.

Literature Review

Government agencies in most developing countries have adopted computerised accounting information systems to improve their public financial management such as to support the general management and budgetary decisions, to discharge fiduciary responsibilities, and to prepare financial reports and statements for the ministries, funding agencies and other government agencies (Rodin-Brown, 2008). As an important organisational mechanism, the

system can also help to achieve organisational strategic goals, to strengthen internal control (Ilias et al., 2007; Sottie, 2003) and to enhance accountability and corporate governance in public agencies (Chene, 2009; Namogang, 2007; Sottie, 2003). It shows that the system has had a positive impact on a broad range of areas, such as aggregate financial management, operational management, public governance and fiduciary risk management (ACCA, 2010).

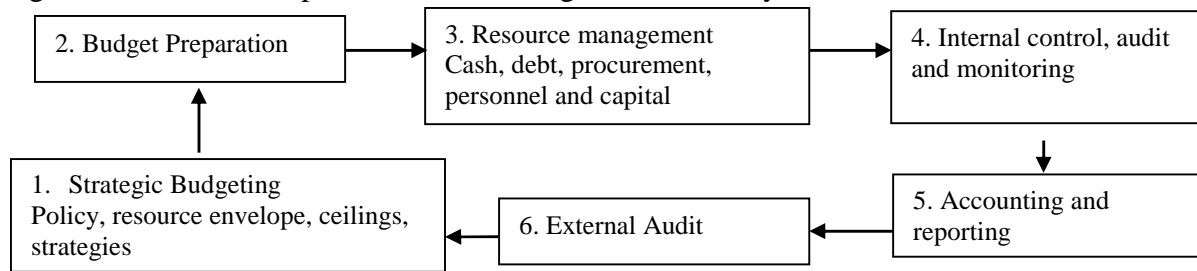
Though, in many developing countries, the government accounting information systems (i.e. budget execution and accounting information systems) are still not developed enough to achieve the desired functionality and have limited benefits. Their accounting and financial management systems are relatively deficient or imperfect and described as inadequate by some prior studies that may adversely affect the systems (Onumah & Simpson, 2008; Aziz, 2003; Nur Barizah & Suhaiza, 2010). Therefore, it is also possible that the adoption of computerised systems in their financial and accounting information system may come with some unintended consequences and adverse effects on the functioning of the system used (Diamond & Khemani, 2005). For example, the system adopted in the Canadian Government have failed to generate the quarterly financial and non-financial reports needed (Walker, 2009). As a result, the system unable to provide accurate, complete and transparent accounting information to demonstrate their financial position to the parliament or other interested parties (Diamond & Khemani, 2005). Due to complexities of public financial management, it is important to keep the system up to date and adequate to be used by federal government, state government and local authorities in managing public resources.

Government Accounting Information System

In government agencies, the most common term used for the accounting information system is government financial management information system (GFMS). It is automated financial management operation system to track financial events and summarise information, support adequate management reporting, policy decisions, fiduciary responsibilities, and prepare auditable financial statements. With the advancements in technology, the system allows accountants to manage financial information relating to their specific accounting tasks. It seems that the appearance and expansion of the concept and practice of computerised accounting information systems means the full computerisation of business accounting information flows, and how to achieve the processing and storage of information, irrespective of whether it is an internal activity or business relations with the outside (Radu & Necula, 2011).

The system is normally designed to allow for decentralised data entry, reliability, accuracy and generation of timely information (Namogang, 2007), compliance with budget laws and other public finance rules and restrictions that require an entirely different set of accounting and reporting (Rodin-Brown, 2008). The system can store, organise and access all financial and approved budget information easily, and complete inventories of financial assets and liabilities (Rodin-Brown, 2008). Additionally, the system not only helps governments to control their finances, but can enhance transparency and accountability, reduce political discretion and act as a deterrent to corruption and fraud (Rodin-Brown, 2008). It also processes financial information and supports decision tasks in the context of coordination and control of organisational activities (Nicolaou, 2000) with the continuous access to information updated in real time, which favourably influences the quality of decisions (Radu & Necula, 2011). In other words, the system should able to support capacity building in the area of financial administration in the Ministry of Finance, line ministries (all other ministries), budgetary units, governorates and districts by providing greater fiscal transparency in posting the approved budgets, allocations and monthly, quarterly and annual budget execution reports (Darem et al., 2008).

Figure 1: Basis of Computerised Accounting Information System



Source: World Bank (2005)

However, as a computerised system is complicated, expensive and difficult to manage and maintain (Rodin-Brown, 2008), it may lead to deleterious effects on the whole public financial management system causing unreliable revenue and expenditure data for budget planning, monitoring, expenditure control and reporting (Diamond & Khemani, 2006). The problems may result in the poor management of public resources with a large build-up of arrears, excessive borrowing, pushing up interest rates, crowding out private sector investments, misallocation of resources, and undermining the effectiveness and efficiency of service delivery (Diamond & Khemani, 2006). Therefore, it is important to evaluate the ability of the existing system in order to avoid or eliminate potential and existing problems within organisations.

Information Technology and Organisational Performance

Organisational performance indicates the effect or contribution of information technology on overall organisational performance (Cho, 2007; DeLone & McLean, 2003). It is related to the intermediate process level and the organisation-wide level, and comprises both efficiency impacts and competitive impacts, which may improve, reduce or have no effect on organisational performance (Melville et al., 2004). The purpose of performance measures is to achieve goals, monitor, guide and improve all the business functions of the whole organisation (Marri et al., 2000). However, it is difficult to measure directly the IT/IS contribution to organisational performance (Gelderman, 1998). As each of the organisations has gone through an adaptation adjustment or change process (Bi & Zhang, 2008), different approaches have been used to assess the impact of IT on organisational performance. In general, organisational performance can be measured on the improvement of operational performance and profitability (Olugbode et al., 2008), current performance relative to past performance (Grover et al., 1996), productivity improvement (Banker et al., 2002b), organisational process improvement (Bi & Zhang, 2008; Chang & King, 2000), achieving stated goals (United Nations, 2003), improvement in work processes, effectiveness in decision-making and intensification in controlling the organisation (Saarinen, 1996). However, Rom et al. (2007) claimed that performance can be measured by a number of variables, including share prices and the financial matrices available from archival databases. Therefore, the common practice to measure the performance of any business is using a financial scale (Sedera et al., 2001), such as return on investment (ROI), return on capital employed (ROCE), and economic value added (Ling et al., 2005). However, the use of only financial measures for evaluating the success (or failure) of an organisation can be misleading because the measuring method must encompass the tangible as well as the intangible resources of an organisation (Sedera et al., 2001). It is important to incorporate appropriate measures that are linked to the system's strategic role, and even the organisation's strategic objectives (Heo & Han, 2003). However, the results produced from previous studies were inconclusive (Rangriz, 2011).

There are various angles to organisational performance measurement for both the government and private agencies. The performance level of the private and government sectors are expected to be similar whereas the performance quality of the government service is to match with the quality in the private sector (Parhizgari & Gilbert, 2004). However, since the nature of the business of each sector is different, not all the criteria used in measuring performance of the private agencies are suitable for the government agencies (Agourram, 2009). The uniqueness of each sector should dictate the criteria or the measurements used in the particular sector. Parhizgari et al. (2004) believed that the internal structures and processes can be used to benchmark and demonstrate the performance of each sector. However, due to such differences, some studies have used different criteria of organisational performance. For example, the private agencies mainly focus on profit making (profit-driven) and are usually customer-oriented. Naturally, the measurements used are closely associated with financial measures (Parhizgari & Gilbert, 2004; Sedera et al., 2001), such as share prices and financial matrices (Rom & Rohde, 2007). However, the government agencies are generally not profit-oriented. They are more politically driven and are led by elected officials who are supposed to be accountable to their constituents or stakeholders (Parhizgari & Gilbert, 2004). Therefore, Cao et al. (2009) made a comparison of the organisational impacts from two perspectives: private (Chinese agencies) and government (Malaysian government agencies). They found that some respondents in Chinese private agencies emphasised that organisational impacts are related to changes in the business process, while Malaysian respondents indicated that organisational impact has a significant impact on cost reduction and overall productivity. In addition, Rangriz (2011) believed that to achieve a better situation the contributions of ICT on private agencies and their impact on corporate performance, five approaches were identified as follows: evaluation approach based on the social psychology, evaluation approach based on the analysis competitive, evaluation approach based on strategic alignment, approach based assessment process and the evaluation approach resource-based.

In the government sector, the use of IT has helped governments in administrative modernisation in the areas of accounting, finance, project management, inventory control and counter service operations. The quality of service in PSAs is generally perceived to be poor, the use of IT is widely expected to improve the quality of services and productivity in the government sector. Therefore, Garicano (2007) examined to what extent IT is related to an organisation's effectiveness, organisation's change and productivity in the sector. However, they found that IT makes a small contribution to productivity compared to organisational effectiveness and change. This is because public sector agencies are only likely to enjoy the benefits of computerisation when they identify the specific ways the new information and data availability interact with existing organisational practices and make adjustments accordingly. In contrast, Bierstaker et al. (2001) indicated significant productivity gains following IT implementation, documenting the value impact of IT on an organisation from quantitative analysis. However, the best way to measure the impact in the government sector is through improved performance in achieving their stated goals (United Nations, 2003).

Methodology

This study employs a questionnaire-based survey for the data collection and SEM as its tool for data analysis. Data were collected from users CAS in Malaysian federal ministries and agencies in the Federal Administrative Centres of Putrajaya, Kuala Lumpur and Selangor. AMOS 18.0 was used to analyse the hypotheses generated by following the two-step analytical procedure suggested by Hair et al. (2010). In the analysis, the measurement model was evaluated first then followed by the structural model. The structured questionnaire measured

the impacts of the system on organisational performance in terms of service efficiency, organisation's productivity, organisation's facilities, internal process efficiency, quality of customer service and coordination with other departments.

Findings and Discussions

Employing IT such as computerised accounting information system into organisations processes and activities has led to the changes in the organisational structures and strategies which affects the performance of organisations, such as through the elimination of inefficiency; reduction of long-term cost; improved service reliability and reduced transaction errors (Tippins & Sohi, 2003). Therefore, the organisational performance is defined as an accumulated end result of the organisational process and activity, which are measured by an organisation's working and activity (Wheelen & Hunger, 2000). Therefore, with regard to organisational performance, this study examined the perceptions of the users of CAS regarding the organisation's mission related outcomes. The results showed that the users perceived that the system has most significant impact on the efficiency of internal control (93.6%, mean=4.26), followed by organisations' productivity (mean=4.17), efficiency and expeditious services (87.6%, mean=4.14), quality of customer service (87.4%, mean=4.13) and organisation's facilities (77.8%, mean=3.93). In general, it seems that the users perceived that the CAS is an appropriate tool to improve the performance of the organisation. For individual item reliability, composite reliability, and average variance extracted (AVE), the outputs of the analysis are shown in the tables below.

Since the objective of this study is to examine whether any relationship exists between the effectiveness of CAS (*caseff*) and organisational performance (*org*), this study proposed that:

H1: Accounting information system has significant impact on the organisational performance.

H0: Accounting information system has no significant impact on the organisational performance.

Previous studies (Bani-Hani et al., 2009; Shaukat & Zafarullah, 2009) indicated that there is a significant positive relationship between management information system (MIS) and organisational performance (i.e. efficiency and effectiveness), which implies that the higher the efficiency of the management information system, the higher the organisation's performance. In contrast, this present study found that the statistical analysis result showed that the path is not significant at the significance level of 0.05 with a negative value of -0.231. Hence, the alternate hypothesis is rejected while null hypothesis is accepted which describes that accounting information system has no significant impact on the organisational performance. However, it was revealed that CAS effectiveness has an indirect impact on the organisational performance which is positive and significant with a value of 0.204. This finding is supported and consistent with the study done by Stone et al. (2007) which is tasks performed will improve individual performance, and, ultimately, organisational performance. The evidence indicated that the effectiveness of the system used was more likely to improve the system in performing specific tasks, which, indirectly, reflects on individual performance and organisational performance.

Table 1: Result of the Structural Equation Model

Hypotheses	Standardised loadings
caseff → org	-0.231

Table 2: The Correlation between Constructs

Constructs	caseff	org
caseff	1.000	
org	0.543	1.000

Table 3: Squared Correlation Values and Average Variance Extracted

Constructs	caseff	org
caseff	1.000	
org	(0.73) <i>0.30</i>	1.000

Note: The AVE in parentheses and squared correlation values in italic.

Table 4: Squared Multiple Correlation for the CAS Effectiveness Model

Variables	Estimate (SMC)
casef	0.816
f	
org	0.597

Table 5: Regression Weights for the CAS Effectiveness Model

Correlations	Estimate	S.E.	C.R.	P value
org <--- caseff	-0.308	0.155	-1.992	0.046*

*** p value is statistically significant at the 0.01 level (two-tailed)

* p value is statistically significant at the 0.05 level (two-tailed)

There were mixed results concerning the impact of computerised accounting information system in the government sector. From this study, it concludes that the CAS effectiveness had no direct impact on the organisational performance outcomes, however, indirectly, the CAS did impact on the organisational performance.

References

- ACCA. (2010). Improving public sector financial management in developing countries and emerging economies. *Accountants for Business*, 1-29.
- AGD. (2006). *Annual report 2005*: Accountant General's Department of Malaysia.
- AGD. (2007). *Annual report 2006*: Accountant General's Department of Malaysia.
- AGD. (2008). *Annual report 2007*: Accountant General's Department of Malaysia.
- AGD. (2009). *Annual report 2008*: Accountant General's Department of Malaysia.
- AGD. (2010). *Annual report 2009*: Accountant General's Department of Malaysia.
- AGD. (2011). *Annual report 2010*: Accountant General's Department of Malaysia.
- AGD. (2012). *Annual report 2011*: Accountant General's Department of Malaysia.
- Agourram, H. (2009). Defining information system success in Germany. *International Journal of Information Management*, 29, 129-137.
- Ahmad Sarji, A.H. (1994). *The civil service of Malaysia: A paradigm shift*. Kuala Lumpur: Percetakan Nasional Malaysia Bhd.

- Aziz, K. (2003). *Accounting information system satisfaction and job satisfaction among Malaysian accountants*. Paper presented at the 7th Pacific Asia Conference on Information Systems (PACIS), Adelaide, Australia.
- Bani-Hani, J. S., Al-Ahmad, N. M. M., & Alnajjar, F. J. (2009). The impact of management information systems on organizations performance: Field study at Jordanian universities. *Review of Business Research*, 9(2), 127-138.
- Banker, R. D., Chang, H., & Kao, Y.-C. (2002b). Impact of information technology on public accounting firm productivity. *Journal of Information Systems*, 16(2), 209-222.
- Bi, X., & Zhang, H. (2008). *An empirical research on relationship between information technology capability and firm performance: The evidence from listed companies and information power 500 in China*. Paper presented at the International Conference on Computer Science and Software Engineering, Wuhan, China.
- Bierstaker, J. L., Burnaby, P., & Thibodeau, J. (2001). The impact of information technology on the audit process: An assessment of the state of the art and implications for the future. *Managerial Auditing Journal*, 16(3), 159-164.
- Cao, G. (2009). *A contingency and resource-based view of fit between IT and organisational factors*. Paper presented at the International Conference on Management and Service Science (MASS), Wuhan, China.
- Cao, L., & Elias, N. F. (2009, July 10-12). *Validating the IS-Impact model: Two exploratory case studies in China and Malaysia*. Paper presented at the 13th Pacific Asia Conference on Information Systems (PACIS), Hyderabad, India.
- Chang, J. C.-J., & King, W. R. (2000). *The development of measures to assess the performance of the information systems function: A multiple-constituency approach*. Paper presented at the International Conference on Information Systems, Brisbane, Australia.
- Chene, M. (2009). *The implementation of Integrated Financial Information Management Systems (IFMIS): Transparency International*.
- Cho, V. (2007). A study of the impact of organizational learning on information system effectiveness. *International Journal of Business and Information*, 2(1), 127-157.
- Darem, A. B., B. Mand, S., & Al-Hashmi, A. (2008). *Critical thinking in E-Governance*. New Delhi: GIFT Publishing.
- DeLone, W. H., & McLean, E. R. (2003). The DeLone and McLean model of information systems success: A ten year update. *Journal of Management Information Systems*, 19(4), 9-30.
- Diamond, J., & Khemani, P. (2005). *Introducing financial management information systems in developing countries*: International Monetary Fund.
- Diamond, J., & Khemani, P. (2006). Introducing financial management information systems in developing countries. *OECD Journal on Budgeting*, 5(3), 97-132.
- Elbashir, M. Z., Collier, P. A., & Davern, M. J. (2008). Measuring the effects of business intelligence systems: The relationship between business process and organizational performance. *International Journal of Accounting Information Systems*, 9, 135-153.
- Gargallo-Castel, A., & Galve-Gorriz, C. (2007). Information technology, complementarities and three measures of organizational performance: Empirical evidence from Spain. *Journal of Information Technology Impact*, 7(1), 43-58.
- Garicano, L., & Heaton, P. (2007). *Information technology, organization and productivity in the public sector: Evidence from police departments*: Centre for Economic Performance.
- Gefen, D., Straub, D. W., & Boudreau, M. (2000). Structural equation modelling techniques and regression: Guidelines for research practice. *Communications of AIS* 4, 1-79.
- Gelderman, M. (1998). The relation between user satisfaction, usage of information systems and performance. *Information & Management*, 34, 11-18.
- Grover, V., Jeong, S. R., & Segars, A. H. (1996). Information systems effectiveness: The construct space and patterns of application. *Information & Management*, 177-191.

- Hair, J. F., Jr., Black, W. C., Babin, B. J., & Anderson, R. E. (2010). *Multivariate data analysis* (7th ed.). Upper Saddle River, New Jersey: Prentice Hall.
- Ilias, A., Yasoa, M. R., Abd Razak, M. Z., & Abdul Rahman, R. (2007). The study of end-user computing satisfaction (EUCS) on Computerised accounting system (CAS) among Labuan F.T. Government Sectors: A case study in the responsibility centres. *Labuan e-Journal of Muamalat and Society* 1, 1-13.
- Ling, P. S., Pan, G., & Devadoss, P. R. (2005). E-Government capability and crisis management: Lessons from combating SARS in Singapore. *MIS Quarterly Executive*, 4(4), 385-397.
- Ling-Fang, Z. (2007). Influences and countermeasures of computerized accounting on modern auditing. *Journal of Modern Accounting and Auditing*, 3(2), 77-81.
- MAMPU. (2003). *The Malaysian public sector ICT strategic plan*. Putrajaya: Prime Minister's Department.
- MAMPU. (2009). Government to government (G2G). *E-Government: "Transforming lifestyles"*. Putrajaya: Prime Minister's Department.
- MAMPU. (2010). Electronic government coordination committee. *Info EG*, 1, 9-11.
- MAMPU. (2011a). Electronic governance benchmarking: Waseda University world E-Government ranking. *Info EG*, 2, 27.
- MAMPU. (2011b). *The Malaysian public sector ICT strategic plan: Powering public sector digital transformation 2011-2015*. Putrajaya: Prime Minister's Department.
- Marri, H. B., Gunasekaran, A., & Grieve, R. J. (2000). Performance measurements in the implementation of CIM in small and medium enterprises: An empirical analysis. *International Journal of Production Research*, 38(17).
- Melville, N., Kraemer, K., & Gurbaxani, V. (2004). Review: Information technology and organizational performance: An integrative model of IT business value. *MIS Quarterly*, 28(22), 283-322.
- NAD. (2001). *Annual Report 2000*. Putrajaya, Malaysia: National Audit Department.
- NAD. (2004). *Annual Report 2003*. Putrajaya, Malaysia: National Audit Department.
- NAD. (2007). *Annual Report 2006*. Putrajaya, Malaysia: National Audit Department.
- NAD. (2007). *Emerging issues and global challenges in the public sector audit in the 21st century - Malaysian Perspective*. Paper presented at the Seminar on Public Sector Audit, Jakarta, Indonesia.
- NAD. (2007). *Auditor General's of Malaysia report: Federal statutory bodies 2007 "Approval of financial statements and financial performance"*. Putrajaya, Malaysia: National Audit Department, Malaysia.
- NAD. (2009). *Annual Report 2008*. Putrajaya, Malaysia: National Audit Department.
- NAD. (2011). *Annual Report 2010*. Putrajaya, Malaysia: National Audit Department.
- Namogang, P. E. (2007). *The report of the Auditor General on the government accounting & budgetary system (GABS)*. Botswana: Office of the Auditor General.
- Nicolaou, A. I. (2000). A contingency model of perceived effectiveness in accounting information systems: Organizational coordination and control effects. *International Journal of Accounting Information Systems*, 1, 91-105.
- Nur Barizah, A. B., & Suhaiza, I. (2010). *Financial management accountability index (FMAI) in Malaysian public sector: A way forward*. Paper presented at the 6th Asia Pacific Interdisciplinary Research in Accounting Conference, Sydney, Australia.
- Olugbode, M., Elbeltagi, I., Simmons, M., & Biss, T. (2008). The effect of information systems on firm performance and profitability using a case-study approach. *Electronic Journal Information Systems Evaluation Volume*, 11(1), 35-40.
- Onumah, J. M., & Simpson, S. N. Y. (2008). The accounting discipline and the government budgeting concept. *International Journal on Governmental Financial Management*, 8(2), 1-18.

- Parhizgari, A. M., & Gilbert, G. R. (2004). Measures of organizational effectiveness: Private and public sector performance. *The International Journal of Management Science*, 32, 221-229.
- Radu, L.-D., & Necula, S.-C. (2011). *Decision-making processes and their implementation in digital accounting practices*. Paper presented at the 10th WSEAS International Conference on Telecommunications and Informatics Lanzarote, Canary Islands, Spain.
- Rangriz, V. (2011). Information and communication technology & organisational performance: Different approaches to evaluation. *International Journal of Global Business*, 4(2), 73-90.
- Rodin-Brown, E. (2008). *Integrated financial management information systems: A practical guide*. USAID-funded fiscal reform and economic governance project.
- Rom, A., & Rohde, C. (2007). Management accounting and integrated information systems: A literature review. *International Journal of Accounting Information Systems*, 8, 40-68.
- Saarinen, T. (1996). An expanded instrument for evaluating information system success. *Information & Management*, 31, 103-118.
- Sedera, D., Rosemann, M., & Gable, G. (2001). *Using performance measurement models for benefit realization with Enterprise Systems - The Queensland Government approach (Case Study)*. Paper presented at the 9th European Conference on Information Systems (ECIS), Bled, Slovenia.
- Shaukat, M., & Zafarullah, M. (2009). Impact of information technology on organizational performance: An analysis of qualitative performance indicators of Pakistan's banking and manufacturing companies. *European Journal of Economics, Finance and Administrative Sciences*, 16, 37-49.
- Shaukat, M., Zafarullah, M., & Wajid, R. A. (2008). *Impact of information technology on organizational performance: A comparative quantitative analysis of Pakistan's banking and manufacturing sectors*. Paper presented at the Oxford Business & Economics Conference Program (OBEC), St. Hugh's College Oxford, United Kingdom.
- Siddiquee, N. A. (2005). Public accountability in Malaysia: Challenges and critical concerns. *Journal of Public Administration*, 28, 107-129.
- Sottie, C. T. (2003). Implementing financial and accounting systems for government. Accountant General, Ghana.
- Stone, R. W., & Good, D. J. (2002). A model of information technology impacts: An invariance analysis by executive position. *The Review of Business Information Systems*, 6(2), 17-27.
- Stone, R. W., Good, D. J., & Baker-Eveleth, L. (2007). The impact of information technology on individual and firm marketing performance. *Behaviour and Information Technology*, 26(6), 465-482.
- 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. *The International Journal of Public Sector Management*, 12(2), 103-120.
- Tippins, M. J., & Sohi, R. S. (2003). IT competency and firm performance: Is organizational learning a missing link? *Strategic Management Journal*, 24, 745-761.
- United Nation. (2003). *Improving public sector effectiveness*. Paper presented at the United Nations Expert Group Meeting, Dublin, Ireland.
- Walker, C. (2009). *Finance and technology for more effective systems: A CFO perspective*. Paper presented at the International Consortium on Governmental Financial Management (ICGFM), Washington DC, United States of America.
- Wheelen, T.L & Hunger, J.D. (2000). *Strategic Management*. USA: Prentice Hall.
- Yaakob, A. F., Kadir, N. A. & Jusoff, K. (2009). Accountability from the perspective of Malaysian Governance. *Journal of Politics and Law*. 2(3), 48-60.

- Wan Zakaria, W. Z., Rahman, S. F., & Elsayed, M. (2011). An analysis of task performance outcomes through e-accounting in Malaysia. *Journal of Public Administration and Governance, 1*(2), 124-139.
- Zahri, N. A. M. (2010). Public sector ICT strategic directions. *Info EG, 3*, 11-15.