Recommendation of Information Systems to Motivate Accounting Firm in South Africa

Oluwaseun J. Awosejo, Raymond M. Kekwaletswe, and Pieter Pretorius
Tshwane University of Technology, Department of Informatics, Soshanguve South Campus, Pretoria, South Africa
Email: Contactyobo@yahoo.com, ray.kekwaletswe@wits.ac.za, pretoriusp@tut.ac.za

***Abstract*—When accounting firms enter the global market, all managers have to cope with severe strain to facilitate business growth and success of the firm. In recent year, recommendation of Information systems has motivated accounting industry, making their work to be unique. A set of 150 respondents were surveyed with the use of questionnaire to test the acceptance and usage of Accounting Information Systems (AIS). A good number of respondents are aware of AIS and it is accepted for usage. They strongly believe that AIS is user friendly and enhance their work. Therefore the software is recommended for usage in South African Accounting firms. However many are not aware of the software, thus more awareness is needed in South Africa. This study contributed to the growth of accounting information system usage at BDO accounting firm. Accounting Information Systems (AIS) was motivated by the CEO of the company, chief accountant, and the management to adopting the new systems to facilitate accounting work and maintain the competitive advantage of accounting work while it facilitate the economic growth and profit of a firm in South Africa.**

***Index Terms*— information and communication technology, accounting information systems, professional practice, accounting organization.**

I. Introduction

The importance of AIS in the economy of a nation has been recognized worldwide, especially in the contribution to the accounting systems of South Africa, where the contribution of AIS towards growth, job creation and social progress is highly valued. The role played by accounting firms has been enhanced by the development of AIS, which has contributed to the professional values added to these organisations [1]. In fact, automated AIS employed by software experts to process accounting information systems with a good support of financial statements have reduced the human error factor, compared to non-automated systems[2]. AIS also provide information on actual budgets of the organisation that will help the company's management to plan and control business operations. Good management of resources and better control of costs, budgeting and forecasting encourage the wellbeing of AIS to continually generate profits. AIS played a crucial role that contributed to value-added aspects by providing internally-generated input from financial statements. Reference [3] believed that viable strategic plans must have a basis in the history of the organisation, the current assets and capabilities of the organisation, and the trends in the operation of the organisation.

A. Important of Information Systems

An information system is an organized means of collecting, entering and processing data and storing, managing, controlling and reporting information so that an organisation can achieve its objectives and goals [3]. This definition of information systems shows that an information system has the following components: ***Goals and Objectives*** – an information system is designed to accomplish more goals and objectives. For example, an information system may be designed to collect and process data about employees to help the manager prepare payroll reports**.** ***Inputs*** -Data must be entered into the information system before it is processed, as data are the facts that are being collected and processed by the information systems. Data are meaningless and useless if they are not processed, therefore they must be processed and transformed into a meaningful, organized and useful form that is called information. ***Output*** - Output is the meaningful and useful information produced by the information systems. For example, the weekly payroll report produced by the information systems is an output. ***Data storage*** - In addition to the external data entry into the information systems, there should be internally-stored data used for processing**.** ***Processors*** **-** In order to produce useful and meaningful information, data must be processed by companies by using computers. ***Instructions and procedures*** - An information system produces data by way of the following instruction and procedures. In a computerized information system, software includes procedures and instructions that direct the computer to process the data. Users are people who use the information produced by the system and who interact with the systems. For example, the manager who uses financial statements that are produced by an accounting information system is the user of the information system. ***Control Measures*** - In order to make the information system produce correct and error-free information, necessary measures should be taken to protect and control the information system. Thus, any system that includes the above components is known as an information system.

Manuscript received May 30, 2014; revised December 15, 2014.

doi: 10.12720/lnit.2.4.328-334

B. Accounting Information System

Accounting is the service function that seeks to provide the users with quantitative information. On the other hand, AIS is an information system that is designed to make the accomplishment of accounting functions possible. AIS processes data and transactions to provide users with the information they need to plan, control and operate their businesses [3]. An accounting information system is a computerized system using computers designed to collect data, enter, process, store, and report data and information. The acceptance and improvements in the technology have facilitated an information system which started in the early 1950s when the first business computers become available and is still in progress [4]. Large mainframe computers have been replaced by small and fast personal computers at lower costs. As a result, accounting information systems that were previously performed manually are now performed by computers in most companies [5]. Companies can now capture, process, store and transmit data with the help of computers. Whereas data collection and processing were performed manually in historical systems, on-line collection and processing of data were performed by computerized systems [6]. In manual accounting work, systems were very slow and tedious, which led to errors and mistakes. Fortunately, improvements in technology have enabled companies to collect process and retrieve data quickly. In this case, the function of manual systems that were explained in the preceding section can be explained for computerized systems as follows:[7], *Data input function* -In manual accounting work, accountants carry out their work through the sourcing of documents and later post all the account entries to the ledger accounts by use of a pen. On the other hand, in computerized AIS, after data are captured, it can be converted into a readable form [8]. In most computerized AIS, source data automation devices that capture data at the time and place of their origin are used. For example, the bar code scanner used in retail stores can record the sale transaction, just as the scanning device reads the code located on the products [9]. In addition, a Master File is used to store data about entities in a database computerized AIS. Master files have replaced the subsidiary ledgers that are used in manual systems. For example, records in an account receivable Master File includes Customer Names, Customer Account Numbers, Addresses and Balance due. Master files are frequently updated automatically as transactions are taking place. For example, as sales are made or receivables are collected, accounts receivable master files are changed. In addition to the accounts receivable master file, other master files are kept for all other balance sheets and income statement items such as accounts payable, fixed assets and expenses [4]. *Data processing* – In computerized systems, records are updated by using primary keys that uniquely identify each record. For example, when a sales transaction takes place, the relevant customer file should be updated, in order to find the customer's master file. Customer account numbers can be used as the primary key, because every customer has a unique customer account. In other words, it is not possible for two or more customers to have a common customer account number.

II. Background of Research Problem

Although the information generated from an accounting information system can be effective in the decision-making process, the purchase, installation and usage of such a system are beneficial when the benefits exceed the costs [10]. In South African business organisations today, data are the most important things, as different types of information are produced from data. When the amount of data is large, it becomes more difficult to process manually. In order to get quick results and timely information, information systems are used in almost all organisations [11]. As a business grows, the amount of data also increases, so as a result of this, it becomes more difficult to process this data manually. With the use of information systems, data can be processed with rapid speed as information is generated quickly. To run a business successfully and effectively, timely decision-making is very important. This decision-making is based on the information we get from the stored data [7]. An information system provides the required information in a complete and comprehensive way. It helps in taking decisions about the business in such a way that the information can be sent to many people in less time. The following are some of the benefits of information systems in an accounting environment: central access, easy backup, central distribution of information, easy record-keeping and easy customer trait identification [12]. Before accounting information systems came into existence, accounting professionals were using traditional methods (also known as conventional methods) which did the following: assign and allocate the factory's indirect costs to the items manufactured on the basis of volume, such as the number of units produced, the direct labour hours, or the production machine hours, through the use of typewriters, calculators, rulers, pens and pencils. These made accountants spend copious amounts of time mathematically checking numbers in the company [5]. Elementary mistakes such as transposing numbers or entering information into the incorrect column could create significant errors. Information systems have become so significant in anyways (a) they enable an organisation to control, reduce costs and increase performance. (b) They enable it to manage, control the finances and resources. (c) They help to operate in dynamic, long-term strategic plans. (d) They make the AIS user detect simple mistakes and errors easily. (e) They also enable the accounting information user to know the usefulness of various kinds of organisational information, in order to perform his/her role, [9]. In South Africa today, usage of information systems is growing, which has brought some challenges to business organisations and to South Africa as a nation. The way an individual in an organisation adopts an accounting information system's operational method, the structure of the information system meeting the demand of the individual organisation and the challenges being faced in

such a competitive environment may well vary. Perhaps the effect of such challenges has not made accounting information systems grow as quickly as expected in this country. But it is inevitable that IT has altered the nature of old accounting operations, especially in the way such organisations conduct their business activities.

III. Motivational Factors for the Adoption of Accounting Software

The advent of powerful, low-cost micro-computers, together with user-friendly accounting software, has allowed a great number of SMEs to implement IT in recent years [13]. The need to facilitate financial management is another motivating factor for adopting accounting software. Moreover, some researchers have identified a link between the uses of a competency assessment system (CAS) to enhance business performance in AIS [14]. This section includes the most-frequently used software tools and their most appropriate use. Accountants were not so familiar with all the software tools because they were using different software packaging in different organisations, but by using accounting software packaging, the user performs the accounting work more effectively and efficiently. ***Accounting software****;* Reference [15] describes accounting software that contains the basic accounting functions such as input, processing and output. There are two classifications of accounting software: low-end and high-end. Low-end is all-in-one software, which means that all of the functions of the accounting information system are complied with in the software. Therefore, low-end software is used for small companies, whereas on the other hand, in high-end software each accounting function comes in a separate module. Each module checks data for correctness, processes it, updates all relevant accounts, and finally produces output, such as documents and reports. ***Personal computer*** (PC) based accounting software allows companies to computerize their manual systems and to provide better and more timely information. In addition, PCs have been connected to other PCs via network. These allow companies to process an indefinite number of transactions occurring in different locations simultaneously within several minutes. ***Income tax:*** As tax laws are frequently changing, it is becoming exceedingly difficult to deal with them. Therefore, manual tax preparation is becoming more and more difficult and time-consuming. Fortunately, tax preparation software is currently available for companies. Therefore, instead of processing tax manually, companies can use computer software to perform the same functions. As a result, even complex calculations can be performed via computers in a short period of time. ***Audit****:* Information technology has also computerized the auditing profession. If auditors perform auditing functions manually, it takes time. However, audit software packages are currently available for auditors. For example, trial balance software enables auditors to input the working trial balance, handle all types of adjusting entries, and automatically compute the adjusted trial balance. In addition, software packages can access customer files, select a statistical name sample of the accounts, and print a working paper sheet, [15]. ***Word Processing****:* Word processing is computer-assisted creation, editing, correcting, manipulation, storage and printing of textual data [3]. Accountants use word processing software to prepare reports, billings, memos and financial statements. *Graphics Software:* Graphics can be prepared using graphics software. Graphics can be printed on paper or displayed on slides, transparencies and photos. Many auditors and managerial accountants use the graphics software to graph the data in financial statements and reports**.** ***Image Processing****:* Creating, storing and updating paper forms of documents takes time. In addition, it is very costly to process and store documents. Fortunately, these costs can be eliminated with the help of document-imaging systems. Image processing captures electronic images of data so that they can be stored and shared. With the help of document imaging, accountants can scan paper documents into the computer and process the entire file electronically. Companies that use document imaging are moving into a paperless office**.** ***Electronic data interchange (EDI)****:* Electronic data interchange enables companies to communicate with each other electronically. Therefore EDI enables companies to exchange documents electronically with each other. For example, a computerized network enables the purchaser and the supplier to exchange purchase orders and invoice electronically in the form of an image. ***Electronic fund transfer (EFT):*** Companies can now connect to banks through EFT, a system which enables companies to make payments and collections electronically. In a situation where a company wants to pay an account payable to a supplier, transactions are immediately charged to the customer's bank account and simultaneously credited to the company's account. In addition, all relevant accounts such as accounts receivable and cash are updated immediately by the computerized system. The use of the computerized system mentioned above has led to the automation of the accounting information system. Accounting information systems equipped with these kinds of technologically-advanced tools can now perform accounting functions more effectively and reduce costs The major benefit of implementing accounting software is to increase business performance efficiency and to facilitate timely information [16].

IV. Computerized (AIS) Facilitates the Application of the Pull Method

Automating production procedures facilitate the application of a just-in-time production system. Sequential processes in the production system can be connected via electronic data interchange systems to exchange information on a timely basis. The assembly department can be connected with the warehouse electronically. The computerized accounting information systems (AIS) can keep track of raw materials on hand in the manufacturing area and automatically send an order to the warehouse where these materials are, whenever they are needed. In addition, the computerized AIS can

update related accounts quickly [17]. For example, when raw materials are sent from a warehouse to a production department, the computer immediately updates the raw-materials inventory and work-in-process accounts. When a production department runs out of materials, a signal is sent instantly to the preceding department. In this case, the preceding department can supply the necessary materials at once. This means that automation of accounting systems eliminates the causes of delay in the production processes. Thus, the risk of running out of raw materials, even if sufficient quantities are available in the warehouse, is minimized. As a result, the risk of late deliveries of products to customers is eliminated.

V. Creating Clean, Orderly Work Environment by AIS

As explained in the preceding sections, the use of computerized accounting information systems (AIS) can help companies to reduce the amount of paperwork and leads to the use of a paperless office. Use of electronic data interchange (EDI) and electronic fund transfer (EFT), as seen in the above schedules, has enabled companies to exchange documents in the form of images. Furthermore, image processing reduces the space and cost associated with storing paper documents. The saving in the area can be substantial, as one optical can store up to 20,000 documents in a fraction [18]. The movement towards paperless offices creates a clean and orderly work environment that uses fewer employees than before.

VI. Total Quality Management (TQM)

As explained in the preceding sections, in a just-in-time production system, everything must be of high quality because there is no allowance for the stoppage caused by poor quality raw materials and work-in-processes. Application of total quality management (TQM) should be applied in a just – in –time (JLT) environment in order to assure quality. A clean and orderly work environment is one of the most important aspects of TQM. If some materials are proved to be defective, companies must ship a replacement as soon as possible. If the product is not delivered on time, the schedule goes wrong and the costs are huge [16]. In the case of finding some materials to be defective, a message can easily be sent to the supplier and transportation firms instantly via electronic data interchange (EDI). Therefore, materials can be received within a short period of time and the operation can be continued without much delay, in order to keep the factory running. All of the above contribute by the use of computerized AIS towards making the important facilities move towards better achievement. Information to support monitoring and control, of accounting information is also useful for firms operating in a dynamic and competitive environment, as it can help them integrate operational initiatives within a long-term strategic plan [19].

VII. Social Factors Influencing use of Accounting Information Systems

As mentioned previously, social influence was motivated by an interest in using accounting information systems and the changes about individual attitude by external inputs, such as information communicated to them [20]. Specifically, this research attempts to understand how an attitude resulting from external stimuli is a temporary superficial change, with the aim of making it a lasting change that becomes integrated in the person's value system. They both suggested that changes in attitude and action produced by social influence occur at different levels. One of them explained that the nature and level of changes that take place correspond to differences in the process whereby the individual accepts an influence or conforms. More recently, social factors have been found to influence attitudes and the intention to act with illegal and unethical behaviour [21]. It is suggested that social factors such as norms, roles and values at society level can influence an individual consumer. The expectations, perceptions and interactions from peers such as friends, associates and family constitute social factors and can influence the attitudes and perception towards a specific behaviour in accounting information systems. [20] Applied to the use of an information system, those social factors influence the process that determines the individual user's commitment or specifically, psychological attachment to the use of any new information technology. In other words, the underlying processes in which an individual engages when he or she has adopted induced behaviour may be different, even though the resulting overt behaviour may appear the same. Reference [20] distinguished between three different aspects that cause social factors to influence accounting information systems and they are: compliance, identification and internalization. ***Compliance:*** when an individual adopts the induced behaviour, not because he or she believes in its content, but with the expectation of gaining rewards or avoiding punishments. ***Identification****:* when an individual accepts an influence because he or she wants to establish or maintain a satisfying, self-defining relationship with another person or group**.** ***Internalization***: when an individual accepts an influence because it is congruent with his/her value system, by distinguishing between these processes, one could ascertain if usage behaviour is caused by the influence of referents on one's intent or by one's own attitude. Reference [20] observed that each of the above three processes are characterized by a distinctive set of antecedent conditions, corresponding to a characteristic pattern of internal responses (thoughts and feelings) in which the individual engages while adopting the induced behavior. Reference [20] described social factors as a group of people, in conjunction with systems, who perceive the use of accounting information systems and support them, and that have an influence on consumers' attitudes and behaviour towards the act. It means that if the group was to perceive the use of AIS as an acceptable act, then they would have a positive attitude towards AIS. However, Kelman concluded that social influences generate a feeling of internalization and identification on the part of the user. The support of a

positive influence towards the acceptance and internalization of the induced behaviour for the adoption of accounting information systems plays a stronger role in shaping acceptance and usage of AIS than perceived usefulness. Reference [21] explains how the functions of social factors influence and affect the commitment of the user towards the use of accounting information systems, which seems important to understanding, explaining and predicting system usage and acceptance behaviour. Several competing theories have been used to investigate and determine the acceptance and use of new information technology in an accounting information system [22].

VIII. Organisational Factors Influencing the use of Accounting Information Systems

According to [23], organizational factors in the contemporary world have much more focus on systematic issues than was previously required, as an accounting information system (AIS) is one of the most critical systems in the organisation that changes its way of capturing, processing, storing and distributing information. Nowadays, more and more on-line information is utilized in the accounting information systems. Organisational factors take an approach which puts systems at the forefront, and considers both the system and the human relation factors while managing their accounting information systems, as well as aiming for a high quality of accounting information. Reference [24] describes organisational factors as an opportunity for the end-user to participate in the decision to adopt the new information system. Such participation increases the likelihood that chosen information systems fit into an accounting information system and provide value. Reference [25] states that organisational factors increase the level of commitment of the end-users by educating them about the need and relevance of choosing information technologies for individuals and enhancing organizational performance. Reference [26] suggests that the organisational culture would also have an impact upon data quality in AIS. Good organisational structure, such as segregation between relevant functional departments, could provide efficient controls to ensure data quality in AIS. An additional factor was added: namely, organisational culture, which means that the organisation has a positive culture on effective data quality management. Based upon the pilot case study, it seemed that professionals from other disciplines did not really understand the process of AIS, and therefore, few organisations understand much about the data quality control approaches that should be used in AIS. [23] Data quality approach in AIS was only understood by accounting professionals. Despite the lack of widespread understanding of the data quality control in AIS, it is essential to have appropriate activities and control to ensure the quality of accounting information. This factor is heavily linked to other factors. For example, in order to have successful and efficient data quality controls and AIS process management, organisations should have training, sufficient communication and good employee relations.

In addition, the study suggested that organisations should invest more in process improvement, and therefore, need to realign employee training to meet this need. Training is critical for an organisation's quality improvement effort to achieve its goal. The challenges for organisations that are already aware of quality improvement lies in their unfamiliarity with the amount of training and educational help required to support the implementation of effective quality improvement strategies [27]. Because a lack of appropriate training has led to negative outcomes or not being able to achieve the proposed objectives, some organisations have failed in their quality initiatives. Therefore, proper investment in the workforce's education and training is crucial in ensuring the success of the implementation of quality strategies. However, many quality initiatives have failed, in spite of the large amount of resources spent on training [28], because many obstacles impeded the effectiveness of training, such as improper needs assessment, unskilled trainers and poor training techniques. Organisations have often rushed into training programmes without thoughtful needs assessment [27]. Overly ambitious quality directors sometimes implemented unnecessary training programmes that were exercises in information overload, dooming them to failure [28]. Therefore, in order to ensure positive training results, organisations need to complete necessary phases for training: first, needs assessment; second, development; and third, evaluation. There has been research into the evaluation of the effectiveness of different training techniques in meeting different training objectives. The result of this study is important, in emphasizing the training performance for the quality of accounting information systems.

IX. Research Methodology

Sample size; A total 150 respondents have been surveyed from different types of financial institution on random sampling that are familiar with use of AIS. ***Data collection:*** The study is mainly based on primary data. A structured survey questionnaire was used to carry out the research. While the user of AIS were interested, and fully participated to filling the questionnaire provided. ***Unit of analysis***; The Unit of analysis are set of people in an organization, mainly using AIS and by accountants.

A. Summary of the Findings

In summary, the respondents were mostly female between the ages of 18 to 25 years, their highest educational level was a diploma and their current position in the organisation they work for is account manager. The quantitative analysis conducted revealed that the majority of the respondent have been privileged to personally use the computer for about 1 to 4 years, during which their use of AIS was considered to be equivalent to their use of computers and they have been aware of AIS ever since. They make use of AIS more than four times a month on average. The respondents have used two different types of AIS packages/Software. According to the social factors influencing use of accounting information systems of AIS, the majority of the respondents strongly agreed

that their use of AIS would improve how their data is kept, facilitate the growth of their organisation, enable them to process accounting work quickly, improve the process of publishing work and that overall AIS was very useful. The respondents also strongly agreed that AIS was easy to use, as it was easy to learn to operate the system. It was equally easy to operate AIS within the work schedule, it made work easy and it was also capable of making the publication of accounting work easy. Teaming the different aspects of AIS together was equally strongly agreed to be easy and, finally, their interaction with AIS was clear and understandable. Considering the facilitating condition of the respondents, the entire group of respondents had undergone a training section at some point in time concerning the usage of AIS. They were trained within five or more days and the majority of them agreed that the AIS training they received was satisfactory in terms of its quality. A larger percentage of the respondents agreed that they were satisfied with the duration of their training on AIS. Most of the respondents agreed they were also satisfied with the pace of the training and the competence of their trainers. A little above average of the respondents can operate AIS with confidence. According to the majority of the respondents it could be concluded that AIS is always available, reliable and effective, thus there was a strong agreement to this effect. AIS was agreed upon to be flexible and also easy to use, but on the overall satisfaction rate, 70% agreed to this. There is a strong agreement that information required from AIS is always reliable. It was also agreed that the information required from AIS has been found to be accurate, timely, precise, adequate and meaningful. From the information extracted from the 104 respondents, they strongly agreed that they usually get help from IT support personnel in the organisation when difficulties are encountered during the usage of AIS. Aside from this, help can also be assessed easily from the Institute of Chartered Accountants, the AIS manual and from colleagues. The support services provided by AIS head office staff were agreed to be always adequate, relevant, provided within an acceptable time frame, provided with a positive attitude and overall was regarded as satisfactory. Considering the organisational factors influencing the use of accounting information systems, it was agreed that the encouragement of AIS usage comes from the support from circuit office, availability of computers in the organisation, follow-ups made after the implementation of the system, encouragement from the head office and finally commitment from the Institute of Chartered Accountants supporting AIS. Socially, respondents agreed that their use of AIS had been influenced by their colleagues, circuit office officials, head of department, accountant, head office management, head office AIS staff and subordinates. The use of AIS was generally agreed upon by the organisation of the respondents to be productive, rational, efficient and effective. There arose a strong agreement that AIS introduction was aimed at centralizing the control by the Institute of Chartered Accountants. It was agreed that its introduction improves organisational administration, the work of accountants, the administrative and management skills of organisation personnel and equally so makes the work of organisation personnel easier.

B. Conclusion

From the results of the statistical analysis, it can be deduced that the use of AIS is relatively accepted within accounting firms, which is largely as a result of the 'change' that comes with the use of such application. The use of AIS which is a computer- based application brings a new trend of change from the conventional way of accounting to a computerized way which most people are not prepared for or find very difficult to adapt to. It is seen that its usage is majorly influenced by the institution. It was also found out that the majorities of recent users are within the diploma level of education and have minimal experience with the use of computers. This therefore creates a level of difficulty for effective usage of the applications available. The use of AIS is seen to have improved the productivity and delivery of the users' work, although this was not quantified in this study. In addition, this study found out that all three factors influencing the AIS process were found to have a direct effect on attitude, although no direct effect of this process on behavioral intentions were observed. Hence, this emphasis on innovation adoption and diffusion initiatives should be focused on developing user attitudes that are conducive to effective utilization and acceptance behaviour.

C. Recommendation

For proper and effective usage of AIS, there must be an increased awareness of the usage and of AIS to facilitate its wide adoption. Therefore, higher levels of formal education should be encouraged, alongside workshops, training and re-training of users for adequate improvement. In addition, further studies should be conducted to quantify the impact of AIS on accounting firms, in order to be able to establish its full potential.

D. Suggestion for Future Works

Based on the suggestion for future work by the researcher, he observed that, there is still a dearth on the study on impact and outcome of accounting information systems; therefore it is open for further studies. This will help us to evaluate the impact of these systems in various services. However the suggestion for the future work will also shed light on software application usage in different organisation on the ease of job performance, skill generation and the professional improvement and productivity as a whole.

ACKNOWLEDGEMENT

The authors would like to acknowledge Tshwane University of Technology for providing findings and required resources to complete this work. It would have been impossible to complete this effort without their continuous support.

REFERENCES

[1] M. Nasrin, "'User's perception towards using computerized accounting software in leasing companies in Bangladesh," *Journal of Socio Economic Research and Development*, vol. 7, no. 6, December 2010.

[2] H. Xiang and K. Yin, "Research on the construction on accounting information based on events approach," *American Journal of Engineering and Technology Research*, vol. 11, pp. 9, 2011.

[3] M. B. Romney, B. Marshall, and P. J. Steinbart, *Accounting Information Systems*, Upper Saddle River, NJ, vol. 2, 2009, pp. 4-52.

[4] A. Ismil, "Factors influencing the alignment of accounting information systems in small and medium sized Malaysian manufacturing firm," *Journal of Information Systems and Small Business*, vol. 1, 2007.

[5] F. Odubanjo, "Effect of information and communication technology on banking operation in Nigeria," *Journal of Information Technology*, vol. 1, pp. 1-2, April 2009.

[6] Z. M. Sori, "Accounting information systems (AIS) and knowledge management: A case study," *American Journal of Scientific Research*, vol. 4, pp. 36-44, 2009.

[7] M. Olugbode, I. S. Elbeltagi, and T. Biss, "The effect of information systems on firm performance and profitability using a case –study approach," *The Electronic Journal Information System Evaluation*, vol. 11, no. 1 pp. 35-40, 2008.

[8] M. Olugbode, "The effect of information systems on firm performance and profitability using a case- study approach," *The Electronic Journal Information System Evaluation*, vol. 11, no. 1, pp. 35 - 40, 2008.

[9] M. Sealehi and A. Abdipour, "A study of the barrier of implementation of accounting information systems," *Journal of Economic and Behavioral Studies*, vol. 2 no. 2, pp. 76-85, 2011.

[10] J. F. Nash, *Accounting Information Systems*, Second Edition, Upper Saddle River, NJ, 1989, pp. 5-12.

[11] J. Kim, "An empirical investigation of factors influencing the utilization of executive information systems," *ETD Collection for University of Nebraska – Lincoln*, January 1996.

[12] C. H. Chang and C. W. Jevons Lee, "Information acquisition as business strategy," *Southern Economic Journal*, vol. 58, no. 3, pp. 750-761, 1997.

[13] L. A. Raymomd and F. Bergeron, "Planning of information systems to gain a competitive edge," *Journal of Small Business Management*, vol. 30, no. 1, 1992.

[14] J. Smith, "Information technology in the small business: Establishing the basis for a management information systems," *Journal of Small Business and Enterprise Development*, vol. 6, no. 4, pp. 326- 340, 1999.

[15] Ġ. A. Dalci and V. N. Tanis, "Benefits of computerized accounting information systems on the JIT production system," *Çukurova Üniversitesi SBE Dergisi*, vol. 13, no. 1, pp. 21-36, 2004.

[16] S. Burgess, *A Categorised Study of the Use of IT in Small Business Detailed Survey Report*, Small Business Victoria, Melbourne, Australia, 1997.

[17] B. J. Dennis and F. Goates, *Researching Information Systems and Computing*, London, Sage Publications, vol. 2, 2006.

[18] G. M. Alves, "Information technology roles in accounting task-Amultiple-Case study," *International Journal of Trade, Economics and Finance*, vol. 1, June 2010.

[19] N. A. Ismail and M. King, "Firm Performance and AIS alignment in Malaysian SMEs," *International Journal of Accounting Information Systems*, vol. 6, pp. 241-259, 2005.

[20] E. M. A. Kelman and C. Conca, "Use response data; Rhe potential for errors and biases," *Information Systems*, vol. 5, pp. 48-73, 1999.

[21] F. D. Davis, R. P. Bargozzi, and P. R. Warshaw, "User acceptance of computer technology: A comparison of two theoretical models," *Management Science*, vol. 35, pp. 982-1003, 1993.

[22] V. Venkatesh and F. D. Davis, "A model of the antecedent of perceived ease of use: Development of a test," *Decision Science* vol. 27, pp. 451-481, 1996.

[23] X. Hongjiang, "Data quality issues for accounting information systems' implementation: Systems, stakeholders, and organizational factors," *Journal of Technology Research*, vol. 2, no. 1, 1999.

[24] K. C. Laudon, "Data quality and due process in large interorganizational record systems," *Communications of the ACM*, vol. 29, no. 1, pp. 4-11, 1991.

[25] D. G. Johnson, M. King, R. A. Lee, and J. A. Piper, "Studying the impact of information technology on the role of the management accountant - a conceptual framework and research method," *Management Research*, News, vol. 9, no. 1, pp. 4-6, 1986.

[26] S. Sarantakos, *Social Research*, 2nd edn, Maclillian Publisher Australia Pty ltd 2002.

[27] D. C. Johnston, "Computers clogged, IRS seeks to hire outside processors," *New York Times*, Jan. 31, 1997.

[28] R. Chang, "When TQM goes nowhere," *Training and Development*, vol. 47, no. 1, pp. 22-29, 1993.

Oluwaseun J Awosejo is a postgraduate student of the department Informatics at Tshwane University of Technology, South Africa. He has published and presented in several international journals and conferences. He is presently pursing his PhD. He is a member of Institute of Information Technology Professionals of South Africa and is also a member of the Southern Africa Business Accountants. His research interests on acceptance of accounting information systems.

Raymond M. Kekwaletswe is currently a Professor at the University of the Witwatersrand, South Africa. He has published and presented in several international journals and conferences and are an experienced supervisor to a large number of Post Graduate students. Currently he is active in supervising both students from Tshwane University of Technology and the University of the Witwatersrand.

Pieter Pretorius is currently an acting HoD in department of Informatics at Tshwane University of Technology Soshanguve-South campus in South Africa. His current position has impacted on many students in different research disciplines. He has published and presented in several international journals and conferences and are a co-supervisor for a number of Master students.

