

E-Accounting Practices among Small and Medium Enterprises in Ghana

Mohammed Amidu
University of Ghana

John Effah
University of Ghana

Joshua Abor
University of Ghana

This study explores the e-accounting practices among SMEs in Ghana. The study also looks at the expectations, realities and barriers in adopting e-accounting. The research design is based on a survey methodology using a sample of systematically selected SMEs throughout the country. The findings reveal that SMEs put in place accounting softwares to generate their financial information. The main value of this paper is the discussion of e-accounting practices of SMEs in Ghana.

INTRODUCTION

Accounting plays a critical role in the success or failure of contemporary business institutions. Accounting systems are responsible for recording, analysing, monitoring and evaluating the financial condition of companies, preparation of documents necessary for tax purposes, providing information support to many other organizational functions, and so on. Prior to the advent of personal computers, businesses were limited to manual methods for keeping track of financial data. According to Tavakolian (1995), the manual accounting systems consisted of paper ledgers, typewriters and calculators. Typewriters were used to type invoices and cheques, and all calculations were performed using calculators. However, with this system it was possible for errors to be introduced into the data since they could go undetected for quite some time. Like many other industries, the accounting industry changed with the arrival of personal computers. A computerized accounting system is able to handle financial data efficiently, but the true value of an accounting system was that it was able to generate immediate reports regarding the company. What is therefore e- accounting practice?

E-Accounting refers to Electronic Accounting, a term used to describe an accounting system that relies on computer technology for capturing and processing financial data in organizations. In the literature, two more terms have been used to describe E- accounting: computer-based Accounting System and Accounting Information System (AIS). Stefanou (2006) observed that although accounting information system does not require a computer to function, the computerisation of the accounting function, the term AIS is used primarily to denote the computer-based AIS. In this study the terms E-Accounting and financial information system are used to refer to any accounting system that depends on Information and Communication Technology (ICT) for performing its information system functions.

Unlike other information systems, Accounting was one of the first functional areas to benefit from computerization when computers were initially introduced to organizations (Doost, 1999). Furthermore, Tavakolian (1995) noted that an accounting package is usually one of the first major computer packages that a company purchases and it is one of the two business applications often used, with word processing being the other. It should not be a surprise because Accounting plays a very significant role in the performance of organizations. According to Stefanou (2006) the primary purpose of an accounting information system (AIS) is the collection and recording of data and information regarding events that have an economic impact on organisations and the maintenance, processing and communication of such information to internal and external stakeholders. The information is used for the evaluation of the financial position of the organization and for decision-making purposes.

Despite the significance of E-Accounting and its widespread use, there has been relatively little research in the area. Stefanou (2006) noted that a number of authors in various countries share similar views on the lack of research in the area of AIS. This study therefore contributes to filling the gap by exploring the adoption and use of E-Accounting in Ghana. The specific objectives are to assess the state of the art of e-accounting systems use among Small and Medium Enterprises (SMEs) in Ghana, and to examine the benefits and obstacles facing SMEs in the adoption of e-accounting systems.

The rest of the paper is structured as follows: Section two discusses the extant literature. Section three describes the methodology used. Section four discusses the results of the study and finally section five concludes the study.

LITERATURE REVIEW

Small businesses remain an important part of the business environment ((Holmes & Nicholls, 1988; Norwell, 1998; Mitchell, Reid & Smith, 1998). Mitchell, Reid & Smith (1998), underscoring the strategic importance of accounting to firms, noted that the use of management accounting information could be linked to the success or failure of an SME.

In order to survive, SME owners and managers need updated, accurate and timely accounting information (Lohman, 2000; Amidu and Abor, 2005). Accounting systems are responsible for analysing and monitoring the financial condition of firms, preparation of documents necessary for tax purposes, providing information to support the many other organizational functions such as production, marketing, human resource management, and strategic planning. Without such a system it will be very difficult for SMEs to determine performance, identify customer and supplier account balances and forecast future performance of the organisation. The primary purpose of an accounting information system (AIS) is the collection and recording of data and information regarding events that have an economic impact upon organisations and the maintenance, processing and communication of such information to internal and external stakeholders (Stefanou, 2006). When organizations adopt e-accounting, they usually discover that even though computerized accounting systems handle financial data efficiently, their true value is that they are able to generate immediate reports regarding the organization (Hotch, 1992).

Prior to the advent of personal computers, businesses were limited to two methods for keeping track of financial data (Tavakolian, 1995). One method was to install a mainframe computer and set up a data processing department. This approach had its own difficulties: the mainframe computer was expensive and many qualified ICT personnel were required to handle the various tasks involved in processing the accounting data. In most cases, large corporations were the only organizations that could afford such an expensive system.

The other option was to have a manual accounting system. Such a system consisted of paper ledgers, typewriters and calculators. Each customer or vendor was on a separate ledger card which contained all the transactions for that company. Typewriters were used to type invoices and cheques, and all calculations were performed using calculators. The key drawback of the manual system was that it was possible for errors to be introduced into the system and that the error could go undetected for quite some time.

Initially SMEs had no option but to adopt manual systems since the mainframe accounting system was not within their means. However, with the introduction of PC-based Accounting Systems, both the computer hardware and the accounting software have become cheaper, creating an opportunity for SMEs to adopt e-accounting. Nevertheless, there are several factors that determine whether an organization adopts e-accounting or not. Such factors have created a division between e-accounting adopters and non-adopters.

Although the proliferation of accounting software and PC has created an opportunity for SMEs to adopt e-accounting, it also creates problems for innovation adoption. Accounting is a critical application in companies of all sizes, computer managers are hence caught in a no-win situation. They are encouraged to embrace new technologies or face obsolescence. On the other hand, experimenting with new technologies at the expense of the accounting data can be a risky proposition (Preston, 1993). Changing accounting systems to fit new technology can be a very difficult task: data needs to be converted from the existing system to new system, accounting staff and all users need to be retrained and sometimes source documents and reports need to be redesigned.

Studying the factors that influence computer adoption, internet adoption and accounting software adoption, Taragola et al (2001) concluded that the probability of computer adoption is significantly influenced by business size, importance of creativity and innovation, education level and computer training of the firm manager and the partner. However, internet adoption is positively related to computer training of the firm manager, creativity and innovation, growth, stabilisation and negatively related to intrinsic objectives (being independent). Nevertheless, the intention to adopt accounting software is positively related to a favourable attitude towards accountancy and 'intrinsic objectives'. The conclusion of the study shows that factors determining e-accounting adoption are actually different from those determining ICT adoption in general.

The theory of diffusion of innovations (Rogers, 1995) offers a conceptual framework for analysing the adoption of ICT by firms. According to the theory, besides external variables, personal characteristics of the firm manager and firm characteristics do have an impact on the adoption of innovations.

One issue that remains is whether adopters of e-accounting make maximum use of the system. Marriott and Marriott (2000) noted that companies used computers for the preparation of management accounting information, but usually not to their full potential. It is therefore important that the research in e-accounting adoption is not limited to adopters and non-adopters, but that for even adopters the extent to which e-accounting is used to the maximum be studied.

RESEARCH METHODOLOGY

This study relied on a sample of systematically selected SMEs throughout the country. We sampled 200 SMEs from the NBSSI database. SMEs in Ghana are defined as firms employing less than 100 workers. Out of the 200 questionnaire sent out, 58 were received, representing 29%. The resulting response rate was expected for a survey of this type considering that empirical studies involving SMEs have been known to generate far lesser percentage response rates. The sample included both users and non users of e-accounting systems. The survey instruments included open ended and closed ended questionnaires. We also followed up with personal or telephone interviews with managers of these firms. In order to ascertain the benefits of e-accounting, we focused on SMEs that adopt accounting software in their operations. Users of accounting software were selected from the cliental lists of some accounting software application providers. The benefits of e-accounting adoption were also measured with a five point Likert-type rating scale. Data obtained from respondents was entered into an SPSS database application for analysis. The findings are presented by the use of descriptive statistics.

ANALYSIS OF RESULTS

In this section, we present an analysis and discussion of the empirical results.

Characteristics of the Sampled Firms

Table 1 presents the characteristics of the firms based on, size, form, ownership, gender and industry classifications. On the size classifications, the firms were grouped as: micro representing 10% of valid respondents, small (31%) and medium (59%). The form of business organisation was also identified: Sole proprietorships were made up of 17% of the total respondent firms, 7% of the valid respondent firms were organised as partnership and the remaining 76% were organised as limited liability companies. In terms of ownership, majority (85%) of the firms were Ghanaian owned. Foreign firms were made up of 10% of respondents and 5% of total valid respondent firms were owned by both Ghanaians and foreigners. Majority (79%) of the firms were male owned. Eight industries were identified and they are agriculture, representing 15% of valid respondents, manufacturing (40%), mining and construction (5%), wholesale and retail trade (16%), hotel and hospitality (9%), information technology (5%), medical service (7%) and general services (3%).

TABLE 1
CHARACTERISTICS OF SAMPLED FIRMS

	Frequency	Percentage
<i>Size</i>		
Micro	6	10
Small	18	31
Medium	34	59
<i>Form</i>		
Sole-proprietor	10	17
Partnership	4	7
Limited Liability Company	44	76
<i>Ownership</i>		
Ghanaian	49	85
Foreign	6	10
Both	3	5
<i>Gender</i>		
Male	38	79
Female	4	8
Both	6	13
<i>Industry</i>		
Manufacturing	23	40
Agriculture	9	15
Construction & Mining	3	5
Hotel & Hospitality	5	9
Information Technology	3	5
Medical Services	4	7
Wholesale & Retail Trade	9	16
General Services	2	3

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Table 2 illustrates the background and training of the CEOs of respondent firms. As shown in Table 2, 76% of the CEOs have degrees or higher education and 17% have a diploma. CEOs of the respondent firms also have professional training in diverse disciplines: accounting and finance (22%), Economics (12%), management (26%), engineering (17%), law (7%), I.T (7%) and human resource (7%).

TABLE 2
BACKGROUND AND TRAINING OF CEO

	Frequency	Percentage
<i>Education of CEO</i>		
Primary	1	2
Secondary	3	5
Diploma	10	17
Degree or Higher	44	76
<i>Professional Training of CEO</i>		
Accounting & Finance	13	22
Economics	7	12
Marketing	15	26
Human Resources	4	7
Law	5	9
Engineering	10	17
Information Technology	4	7

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Table 3 gives a breakdown of the educational level of the accounting head and accounting staff of the firms. Accounting heads with professional qualification make up 26% of valid respondents. Those with a degree are 19%. Accounting heads with both degrees and professional qualifications are 24% and only 2% of accounting heads have secondary education. The accounting heads have the following professional designation: ACCA (29%), CA (21%) and CIMA (6%).

TABLE 3
BACKGROUND AND TRAINING OF ACCOUNTING HEAD

	Frequency	Percentage
<i>Education of Accounting Head</i>		
Secondary	1	2
Diploma	7	12
Degree	11	19
Professional Qualification	15	26
Professional Qualification plus Degree	14	24
<i>Professional Qualification</i>		
CA(Ghana)	12	21
ACCA	15	26
CIMA	2	4
Others	29	50

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Table 4 below gives a detailed summary of the accounting staff strength of the firms. Out of the valid respondents firms, 78% of the firms have a dedicated accounting staff. About 22% of the firms do not have dedicated accounting staff. Majority of the firms have accounting staff strength of about 1-5 making up 64% of valid respondent, this is followed by about 6-10 (24%), 11-20 (10%) and above 20 (2%). In addition to the number of accounting staff, the education level of the staff was analysed. Accounting staff

who have degree make up 14% of the firms. HND holders are 26%, 19% are Chartered Accountants, those with postgraduate degree are 16%.

TABLE 4
ACCOUNTING STAFF

	Frequency	Percentage
<i>Have a Dedicated Accounting Staff</i>		
Yes	45	78
No	13	22
<i>Number of Accounting Staff</i>		
1-5	37	64
6-10	14	24
11-20	6	10
Above 21	1	2
<i>Qualification</i>		
RSA	6	10
DBS	3	5
GCE/SSCE	6	10
HND	15	26
Degree	8	14
Postgraduate Degree	9	16
Chartered Accountant	11	19

Survey results 2008

Corollary to the above is to assess the state of the art of e-accounting systems use among SMEs in Ghana. The results as indicated in Table 5 suggest that almost all the respondents use computers in their operations and that all SMEs contacted use accounting softwares in their operations. This implies that majority of SMEs in Ghana have adopted e-accounting systems. The result of this study showed that Pastel, Sun business System, Tally, Sage, Excel and QuickBooks are the kinds of accounting softwares that SMEs have adopted. The result revealed that majority of the SMEs (25%) are interested in excel based accounting system while 9% preferred the use of Sage accounting software. However, a study is needed to investigate how firm-level characteristics influence the adoption of e-accounting system. On platform of the accounting usage, majority of the respondents have some form of network. While 59% use network, 13% adopt peer-to-peer platform. Sixteen, representing 28% adopt standalone system.

TABLE 5
STATUS OF COMPUTER USAGE

Use of computers in operations	Respondents	Percentage
Yes	56	97
No	2	3
Total	58	100
Use of accounting softwares in operation		
Yes	56	100
No	0	0
Total	56	100
Kinds of accounting softwares		
Pastel	7	13
Sun business systems	6	11
Tally	13	23
Sage	5	8
Excel	14	25
QuickBooks	4	7
Others	7	13
Total	56	100
Platform		
Network	33	59
Standalone	16	28
Peer-to-peer	7	13
Total	56	100

Survey results 2008

Table 6 shows the goals for implementing computerised accounting systems among SMEs in Ghana. Out of 56 SMEs who use computers in their operations, 44 representing 79% of the respondents reiterated that the use of computer enables them to reduce cost, enhance clerical works, provide sufficient space to store data and process information for management decision. Two (4%) indicate that the use of computer has enabled them to effectively manage their cost of operation, 5% mentioned that their computer usage reduces clerical works, 4% use computer to facilitate storage of data while 8% of the respondents use computers to provide timely management information for decision making.

With regard to accounting and finance functions of accounting software, almost all the respondents indicated that they use the software for accounts receivables functions as well as accounts payables, inventory management, payroll, general ledger, fixed assets management, bank reconciliation and cash management. Eighty four percent of the SMEs are satisfied with the performance of their accounting software. It is only small number of the firms selected who were not very satisfied with the results of their accounting software.

TABLE 6
GOALS OF IMPLEMENTING COMPUTERISED SYSTEMS

Benefits	Respondents	Percentage
Timely information management	5	8
Large storage capacity	2	4
Reduction of clerical works	3	5
Cost effectiveness	2	4
All the above	44	79
Total	56	100
Functionality		
Account receivables	2	4
Account payables	2	4
Inventory management	2	4
Pay roll	2	4
General ledger	3	5
Fixed assets management	1	2
Bank reconciliation and cash management	2	4
All the above	42	75
Total	56	100
Performance		
Very satisfied	22	39
Somewhat satisfied	25	45
Somewhat dissatisfied	6	11
Very dissatisfied	3	5
Total	56	100

Survey results 2008

With the issue of the benefits of computerised accounting information in mind, a question was designed to explore the significance, prevalence and potential problems and challenges inherent in most Ghanaian SMEs. The survey result shows that majority of the respondents encounter problems in supply of electricity as 38% of the respondents say they have problems in accessing uninterrupted supply of power. The result shows that 25% of the SMEs contacted indicated that frequent breakdown of their accounting system is their next biggest problem. However, only 5 firms representing 8% indicated that they face all the problems listed. These include, inaccurate reports generated by the accounting systems, frequent breakdown of the system, inability of the system to support large volumes of data, lack of constant supply of power, inability to import or / and export data, and inability to fully comprehend and interpret the results from the system.

TABLE 7
PROBLEMS AND CHALLENGES OF IMPLEMENTING COMPUTERISED SYSTEMS

Problems	Respondents	Percentage
Inaccuracy of reports	1	2
Frequent breakdown of the system	14	25
Inability of the system to support large volume of data	6	11
Lack of constant supply of electricity	21	38
Inability to import or / and export data	5	9
Inability to fully comprehend and interpret the results	4	7
All the above	5	8
Total	56	100

Survey results 2008

Table 8 shows how SMEs can manage and improve upon their accounting systems. Almost all the respondents contacted suggest that the system should be easier to up-date, the use of multiple window operations at the same time should be encouraged and the need to use the firm logo on the invoice within the system should be included in the package. In addition, customisation of report will solve the problem of the inability of the SMEs to fully comprehend and interpret the results generated from the system.

TABLE 8
WAYS OF IMPROVING THE SYSTEM

Ways of improving the system	Respondents	Percentage
The needs to be easier for updates	2	4
Multiple window operations at the same time	2	4
The need to use the firm logo on the invoice within the system	2	4
Customisation of report	1	2
All the above	49	87
Total	56	100

Survey results 2008

CONCLUSION

The study examined the e-accounting practices among Ghanaian SMEs. The study revealed that almost all the SMEs sampled attach a lot of importance to financial information by employing at least degree /HND holders and Chartered Accountants to handle their accounting information. The study also showed that majority of the firms put in place accounting softwares to generate their financial information. This has the tendency to reduce cost, enhance clerical works, provide sufficient space to store data and process information for management decision in a timely manner. In terms of functionality, the results of the study showed that almost all the SMEs use the software for accounts receivables functions as well as accounts payables, inventory management, payroll, fixed assets management, bank reconciliation and cash management. The results of the study also revealed that majority of the SMEs encounter problems in supply of electricity with the frequent breakdown of their accounting system. We found that almost all the SMEs are generally satisfied with the performance of their accounting software.

It is recommended that SMEs in Ghana adhere to good and standard accounting principles in their operations. The adoption of e-accounting would ensure proper accounting practices as good accounting practices have several implications for entrepreneurs and SME managers. Good accounting and control systems could assist in evaluating the performance of the organisation and its managers. SMEs with proper books of accounts are often capable of attracting external financing easily than those with no good

records. SMEs that maintain good accounting and management information tend to be viewed favourably by finance providers. Following from these findings, it would be useful to also consider the following directions for future research:

- What determines the decision to adopt e-accounting system by SMEs in Ghana?
- Examining the benefits and obstacles facing hospitals in the adoption of e-accounting systems; and
- Looking at future plans that Ghanaian SMEs have regarding e-accounting systems

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