Computerized Accounting Systems Usage by Small and Medium Scale Enterprises in Kumasi Metropolis, Ghana

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Abstract
The study focused on establishing the level of usage, benefits and challenges of computerized accounting systems (CAS) by small and medium scale enterprises (SMEs) operating in the Kumasi Metropolis. Systematic sampling technique was used to select 367 SMEs for the study. Descriptive statistics and inferential statistics were used to analyse the data. The results of the study revealed that only a few SMEs are using computerised accounting software. The low level of usage is attributed to cost, personnel and lack of education on the benefits of using CAS. Those using CAS indicated that the systems play an important role in the achievement of their business objectives including timely information management, large data storage capacity, reduction of clerical works and enhanced customer satisfaction. In conclusion, usage of CAS by SMEs has the potential to improve their performance; however, cost, lack of education on the benefits of the usage and knowledgeable personnel are negatively affecting the usage of the software. It is therefore recommended that SMEs be educated on the benefits of using CAS and accounting training institutions should do well to incorporate a segment on computerized accounting systems into their training modules.
Keywords: Small and Medium Scale Enterprises, Computerised Accounting Systems, Kumasi, Ghana.

1. Introduction

Accounting assumes an important role in the success or failure of contemporary business organizations. Every business must keep track of the financial data that identifies with its business exercises. It likewise has various procedures; some basic, others cumbersome and confusing. Modern accounting is founded on the system developed by an Italian monk *Luca Pacioli* over 500 years ago. This great scientific system was so well executed that even current accounting principles are based on it (deSantis 2010).

In keeping track of financial information businesses are concerned primarily with methods for recording transactions, keeping records, performing audits, reporting and analysing financial to the management, and receiving advice on tax matters. As a result, organisations puts in place a systematic process that identifies, records, measures, classifies, verifies, summarizes, interprets and communicates financial information. This reveals the profit or loss for a given period, and the value and nature of the organisation's assets, liabilities and equity. Accounting provides information on the resources available to a firm, the means employed to finance those resources, and the results achieved through their use. Manual accounting systems provide a useful way of recording business transactions and can deliver an accounting information system for the small and medium enterprise business owner. Even though the manual accounting system requires a greater understanding of how to book keep, it can be easier to manage once the key concepts of double entry bookkeeping have been learnt. Tavakolian (1995) emphasized that the manual accounting systems consisted of book ledgers and 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.

An alternate evident challenge is the likelihood of harm to the records themselves. It may appear an undeniable drawback, yet the records in a paper based accounting system are susceptible to harm by water, fire and different hazards. What's more, where there exists numerous transactions to record in a business the sheer volume of transactions can be a disadvantage of a manual accounting systems. This has led to the development and introduction of computerized accounting systems (CAS).

Gupta (2008) defines a computer as a programmable machine that responds to a specific set of instructions in a well-defined manner and can execute a pre-recorded list of instructions. The widespread utilization of computers has effectively given a certain simplicity, speed, and precision to the way in which business organizations are run. From basic entering of figures to recording and examining complex information, computers have become essential to the survival of any business in present times.

The Information Technology (IT) revolution that brought in computers has experienced a number of changes. The most noticeable one being in the 1960s, when large organizations needed to store a lot of information. The use of computers at first was for complex databases only. Nonetheless, individuals understood the numerous uses that computers brought to the table for everybody for every day utilization. Two noteworthy achievements were the introduction of personal computers (PCs) and the Mac computers, which encouraged organizations and working individuals to adopt computerisation in a many ways. Aside from that, equipment, for

example, scanners, CDs, floppy drives, and printers, have changed the operations of work places in a huge manner.

Prior to computers being introduced in organizations, there were various gadgets in work places, for example, fax machines, typewriters, telefax gear, stenography equipment, and filing cabinets that were utilized widely. Computers effectively replaced all these office instruments. Offices were basically being decongested of numerous equipment to bring about the ideal utilization of the accessible space.

The Internet has profited organizations enormously, as information, letters, illustrations, applications, and pretty much any kind of correspondence can be transmitted from individual to individual, at remote areas, in a matter of seconds. The Internet additionally encourages correspondence to the masses. Stock speculators, Forex brokers, media organizations, money related organizers, and organization holders depend heavily on electronic correspondence for moment exchange of data.

Specialized programs are utilized by endless individuals around the world, for example, engineers, modellers, logistics faculty, and so on. These products are easy to use, exact, helpful, and quick. A large number of things can now be carried out and made with the assistance of computers, in the same way as plans, representation, diagrams, project codes, and so forth.

These days, when an organization needs information, it is accessible at the click of a button. It additionally permits businesses to obtain data about competitors, suppliers, clients, and so forth, which clearly helps in the better running of any business organization.

In contrast to past times, data and information storage now takes up almost everywhere. Gone are the days when businesses required huge storerooms to store many documents of critical information. PCs and servers have permitted the advantage of putting away a great deal more information in substantially less space.

Information Communications Technology (ICT) infrastructural development in Ghana is progressing comparably to other low-income countries globally and above the 1.1% average for Sub-Saharan Africa. Over the years, several initiatives have been made by the Government of Ghana and other agencies to develop the ICT-infrastructure so as to bridge the digital divide between Ghana and the developed world. ICT is important for all firms: it is even more important for small and medium sized ones that need this information in order to survive the high degree of uncertainty in the competitive market (El Louadi 1998).

A CAS records accounting transactions utilizing a computer and an accounting software. It is one of the database-situated applications where the transaction information is stored in a well-composed database. The user works on such a database using the required interface and furthermore obtains reports by suitable transformation of the data. Computerized accounting is the beneficial use of current technological advances. The system has not only revolutionized the practice of accounting, but has also created new types of accounting applications for businesses (Burdick 2010).

As a result of the quick change in technology, numerous small and medium scale enterprises like to track financial transactions with computerized software rather than to rely on a manual system of bookkeeping recording entries in large books. The advancement in data innovation has eventually prompted the introduction of computerized accounting systems to help produce relevant financial reports for both management and outside clients for decision making (Mtetwa 2010)

Computerized accounting tends to involve dedicated accounting software and digital spreadsheets to keep track of a business or client's financial transactions. It is a beneficial use of current technological advances. Organizations now employ full accounting software that can coordinate all business operations, including outside suppliers and sellers. Computerized accounting systems have replaced manual-based accounting in virtually all businesses and organizations, providing accountants, managers, employees and shareholder's access to vital accounting information at the touch of a button.

Computerized accounting systems automate the accounting process, enhancing productivity and cutting down expenses. What's more, it has a tendency to be more exact, quicker to utilize, and less subjected to error than the manual system (Alexis 2010). In today's automated, interconnected, worldwide business environment, CASs have become the 'engine of growth' in small and medium scale enterprises. It therefore involves the computerization of accounting information systems, which is established in order to facilitate decision making. These are associated with a numbers of benefits like speed of carrying out routine transactions, timeliness, quick analysis, accuracy and reporting.

The contribution of SMEs to the growth of national economies is significant. In the developed economies such as Germany and the United Kingdom small businesses are recognized as the main engines for growth and development. Indeed, studies conducted in recent years in developed markets, including the Freedman studies done in the United Kingdom, confirm that small businesses account for the highest number of registered companies and make significant contributions to economic growth and prosperity.

In Ghana, readily available data on SMEs is scarce but statistics from the Registrar General's Department suggests that 92 per cent of companies registered are micro, small and medium enterprises. SMEs in Ghana have also been noted to provide about 85 per cent of manufacturing employment, contribute about 70 per

cent to Ghana's GDP, and therefore have a catalytic impact on economic growth, income and employment (Awunyo-Vitor & Mbawuni 2015).

SMEs are therefore important players to national development, whether one considers the situation of a developed economy or a developing economy. Aside from being important sources of employment and income in many developing countries, SMEs with their flexible nature have better adaptability to changing market conditions, making them better suited to withstand cyclical downturns. The dispersion of SMEs across the nation also promotes better distribution of income, and generates additional value in raw materials and products, and bring about efficiencies in domestic markets.

The research work has focused on SMEs because these firms in Ghana account for more than 92 per cent of the country's businesses (Ministry of Trade and Industry 2013) (Ministry of Trade and Industry, 2013). An optimal implementation of computerized accounting systems by SMEs means adapting more successfully to a changing environment and shows a high degree of competitiveness, thus enhancing the dynamic character of a company (even when a company is small, it must assimilate the use of CAS). In other words, there are improvements in administrative management regarding accountancy and finance. By using CAS, it is possible to gauge the risk of some operations or predict future earnings with sophisticated statistical software applications. All these benefits have been developed and tested in larger companies and it should be possible to extend them to SMEs.

The structure of this research is as follows: first, a literature review on this issue was conducted; from this, the research questions were designed. After the methodology is described and the statistics analysis is applied; finally results discussion is made and main conclusions drawn. Accounting systems (manual or computerized) have a positive or negative impact on the productivity and performance of SMEs. The main problem is that inaccurate and inefficient accounting systems have been recognised as the reason behind the collapse of many SMEs in Ghana.

This has contributed negatively by decreasing the quality of services, increasing costs and resource-wasting activities. It also contributes to decreasing the competitiveness of SMEs through the systems' inability to provide the right information at the right time (Perez, Estebanez, Urquia & Munoz 2011). Despite the significance of computerized accounting systems and its widespread use, there has been relatively little research in the area. This study therefore contributes to filling the gap by exploring the adoption and use of CAS in Ghana. It aimed to provide the necessary information about level of usage among SMEs in Kumasi. Thus, the objective of the study was to examine the level of usage of CAS by SMEs in Kumasi and identify the challenges they faced in the use of the systems.

2. Literature Review

2.1 Small and medium enterprises (SMEs) in Ghana

The criteria for defining SMEs in Ghana is largely determined by the number of employees in the fold of the enterprise. There exists several definitions for SMEs worldwide; however, the most widely used parameter is the number of employees of the enterprise. Using this parameter most often generates certain ambiguities in respect of the inconsistencies and cut off points used by several official sources. As stated in its statistics for industries, the Ghana Statistical Service (GSS) (2012) regards firms with less than 10 workers in its employment as small scale enterprises and those with more than 10 employees as medium and large-sized enterprises. In another context, the GSS in its national enumeration rendered firms with up to 9 workers as small and medium enterprises.

Another possible guiding principle that can be used to define firms as small and medium enterprises is the value of fixed assets in the organisation. Nonetheless, the National Board of Small Scale Industries (NBSSI) (1990) in Ghana combines both the fixed asset classification and total number of employees criteria. They describe a small scale enterprise to be one with not more than 9 workers, and has plant and equipment (excluding landed property and vehicles) not exceeding 10 million Cedis (US$ 9506, using 1994 exchange rate). The Ghana Enterprise Development Commission (GEDC) (1986) also classifies SMEs using a 10 million Cedis ceiling for plant and equipment. One important thing to note is that the valuation of tangible assets in itself comes with its own challenges. The frequent depreciation of the local currency as against major foreign currencies often makes such definitions problematic.

Steel & Webster (1990) and Osei *et al*. (1993), in expounding SMEs in Ghana, used an employment ceiling of 30 employees to describe small scale enterprises. They, however, classified small and medium enterprises into 3 distinct categories: [i] micro - employing less than 6 workers; [ii] very small - those employing 6-9 workers; and [iii] small – between 10 and 29 workers.

SMEs in Ghana can again be grouped into urban and rural enterprises. Urban enterprises can be further divided into 'organised' and 'unorganised' enterprises (Adusei & Awunyo-Vitor 2014). The organised ones are prone to have formal structures with paid employees and having registered offices; whereas the unorganised category is mostly made up of artisans who operate from open spaces, temporal structures, or at home and

employ few or, in some cases, no salaried employees. They mostly rely on the services of family relations or apprentices. Rural enterprises are largely composed of small family businesses, individual artisans and women who process food from local crops. The major activities within this sector includes: soap-making; clothing and textile; leather; blacksmith; ceramics; timber and mining; brick making; food and beverage processing; bakery; furniture; and mechanics (Bank 1992; Gray, Cooley & Lutabingwa 1997; Liedholm & Mead 1987; Osei *et al*. 1993).

One notable point is that small and medium enterprises make better use of the limited resources at hand than large scale enterprises. Studies in Ghana and many other countries have suggested that productivity is often higher in SMEs than it is with large scale enterprises (Steel 1977). This is mainly due to the fact that SMEs are labour-intensive and have very small amounts of investment capital at their disposal, which often leads to high productivity. Based on this, it has been argued that promoting the SME sector in developing countries will offer more employment opportunities and result in a fairer distribution of national income and will ensure increased sustainable productivity with better technology (Steel & Webster 1991).

2.2 Manual Vs computerised accounting
Weber (2011) points out that accounting can be divided into two basic categories: those which apply manual accounting; and those which prefer computerized accounting systems. A system is a set of thing working together as parts of a mechanism or an interconnecting network. A system is a set of interacting or interdependent groups or components forming an integrated whole or interacting elements forming a collective entity; a methodical or coordinated assemblage of parts, facts, concepts etc. Hartzell (2006) defines system as "any series of interconnected elements forming an organized whole with a common objective". Examples can range from an individual central nervous system to a society's family and kingship arrangements.

An accounting system is an organised set of manual and computerized accounting methods, procedures, and controls established to gather, record, classify, analyse, summarize, interpret, and present accurate and timely financial data for management decisions (http://www.businessdictionary.com 2010). Every organisation must operate an accounting system due to the fact that it is generally recommended for companies to report on its financial position to the stakeholders for better decision-making and other policy implementations. The decision to choose whether a company would operate a manual or computerized accounting system depends on the company itself.

Whether manual or computerized, accounting in itself is known to have a cycle that includes the following steps: journalizing the transactions; posting them to ledger accounts; preparing a trial balance; making adjustment entries; preparing adjusted to end-of-period trial balance; preparing financial statements and appropriate disclosures; journalizing and posting the closing entries; and preparing after-closing trial balance (Weber 2011). From the first look of the accounting cycle, it is not very difficult and it is so indeed, but when there are thousands or millions of transactions to be handled, the situation dramatically changes. Lots of transactions that must be processed in the accounting cycle make this process routine and even a little mistake or inaccuracy can cause all the cycle from the very beginning to fail which will therefore require extra effort to find and correct the mistake.

In discussing the three stages of data processing - input, process and output - one can observe the difference between a computerized accounting system and a manual accounting system (http://www.sharepointsecurity.com 2015).

Figure 1. The relationship between the three stages of data processing
(Source: http://www.sharepointsecurity.com/sharepoint/microsoft-dynamics-gp, 25 Feb 2015)
Inputs represent data from source documents, such as sales receipts, bank deposit slips, and fax orders and other telecommunications. Inputs are usually grouped by type. For example, a firm would enter cash-sale transactions separately from credit sales and purchase transactions.

In manual accounting system, processing includes journalizing transactions, posting to the accounts, and preparing the financial statements. A computerized system also processes but without the intermediate steps (journal, ledger, and trial balance).

Outputs are the reports used for decision-making, including the financial statements (income statement, balance sheet, and so on). Many companies make better decisions and are prospering because of the reports

produced by their accounting system. From computer's viewpoint, a trial balance is also a report. But a manual system would treat the trial balance as a processing step leading to the statements.

2.3 Computerized accounting systems

Waburoko (2001) defines a computer as a general purpose machine, which can receive, store, manipulate and output information. It is therefore agreeable that a computer is an electronic device that operates and runs under the control of instructions or commands stored in its own memory unit, accepts data through input, stores it, processes the data and produces output. Computerized accounting is defined by Wood & Sangster (2005) as a total suit of components that together comprises all inputs, storage, transactions, processing, collecting and reporting of financial transaction data. Individuals and companies both big and small manage their money and assets one way or another. They hire accountants to help them carry out the mathematical requirements of accounting and balancing their books. Before the introduction of information technology into accounting, these accounting protocols were performed manually.

Today many accountants and non-accountants like to use computer software to perform these duties. Whereas manual accounting is very detailed since accountants must carefully enter information into physical books, computerized accounting uses software programs designed from traditional manual accounting systems and involves the use of computers, spreadsheets and programs designed to record and report financial information electronically (Osmond 2011). Meigs, Meigs & Meigs (1998) posits that a computerized accounting system is a system that uses computers to input, process, store and output accounting information for financial reports. He adds that an accounting system records all transactions that routinely deal with events that affect the financial position and performance of an entity. Marivic (2009) described a computerized accounting system as a method or scheme by which financial information on business transactions are recorded, organised, summarized, analysed, interpreted and communicated to stakeholders through the use of computers and computer based systems such as accounting packages. He emphasised that it's a mechanized process of facilitating financial information inflows as well as the automation of accounting tasks such as database recording and report generation.

Marivic (2009) adds that keeping accurate accounting records is a vital part of any organization. Apart from helping it to keep afloat financially and legally, it is a requirement of funding bodies or donors. However, computerized accounting systems involves the use of computers to handle large volumes of data with speed, efficiency and accuracy aimed at overcoming fundamental challenges which do not change the basic accounting principles. The principles of accounting remains the limitations of many accounting and hence producing quality and reliable work. Mcbride (2000) explained that computerized packages can quickly generate all types of reports needed by management, for instance, budget analysis and variance analysis. Data processing and analysis are faster and more accurate which meets the managers' need for accurate and timely information for decision making.

A computer-based accounting system processes data in basically the same manner as does a manual system. Transactions are initially recorded manually on sources documents, the data from these source documents are then key-punched into punched cards, which can be read by the computer. The computer process the information and performs such routine tasks as printing journals, posting to ledger accounts, determining account balances and printing financial statements and other reports.

2.4 Factors that influence computerized accounting systems (CAS)

Studying the factors that influence computer adoption, internet adoption and accounting software adoption, Taragola, Lierde & Huylenbroeck (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'.

3. Methodology

3.1 Population and sampling method

The available data from the Registrar General's Department suggests that about 92 per cent of all establishments are SMEs and Kumasi Metropolis has an estimated figure of over 4500 registered SMEs. The study adopted a method used by Yamane (1967) to determine the sample size. According to Yamane (1967) sample size can be estimated using the following formula

$$n = {}^N\!/_{1 + N(e)^2}$$

Where n is the sample size, N is the population size, and e is the level of precision. Assuming e = 0.05 and there are an estimated 4500 SMEs in the Kumasi Metropolis, a sample size of 367 SMEs was selected for the study. The sample size of 367 was further stratified into the categories of small and medium scale enterprises with common characteristics. A questionnaire was the main instrument used to collect data and information from the respondents. Data collected was analysed using descriptive statistics with the help of SPSS software.

4. Results and discussion

4.1 Characteristics of sampled firms

Out of a total of 367 SMEs sampled and presented with questionnaires only 337 questionnaires were returned and found useful for the analysis, giving a response rate of 92 per cent. The survey captured the characteristics of firms sampled in terms of ownership structure, type of business, number of years in business and number of employees, as shown in Table 1. On the ownership structure of the SMEs, the results indicated that 49.55 per cent are sole proprietors, 19.58% are partnership businesses and 30.86% are limited liability companies. Most of these businesses were managed by their owners. This confirms Schmitz's (1995) position that the largest employment category is working proprietors.

Nine kind of businesses were identified using a quota of almost equal proportions per the sample size. They are manufacturing, representing 11.57 per cent of valid respondents; building and construction (11.28%); retailing (11.57%); services (11.28%); motor and spare parts trade (11.87%); both wholesale and retail trade (10.68%); road transport (10.09%); and catering (10.98%). The results fairly represent the kind of businesses most SMEs are engaged in. As suggested by Fischer & Reuber (2000), in terms of activity, they are mostly engaged in retailing, trading, or manufacturing.

In addition, 17.8 per cent have existed for less than 1 year; another 29.97 per cent have existed for 1 year and up to 3 years; 26.11 per cent have existed between and 5 years; and 26.11 per cent have existed for more than 5 years. These results agree with those of Agbozo & Yeboah (2012), which shows that more than 25% of SMEs in Ghana have existed for more than 3 years.

On the size classifications, the firms were grouped as: small: representing 93% of valid respondents employing between 1-49 employees and medium (7%) employing between 50-249 employees. This is consistent with the criteria of the European Union based on number of employees. However in the Ghanaian local context no medium sized company employed more than 100 people. This really indicates that firms sampled classified are indeed among the small and medium scale enterprises.

Table 1. Characteristics of sampled firms

Items	Sub-level	Frequency	Percentage
Ownership structure	Sole proprietorship	167	49.55%
	Partnership	66	19.58%
	Limited liability company	104	30.86%
Type of business	Manufacturing	39	11.57%
	Building and construction	38	11.28%
	Retailing	39	11.57%
	Services	38	11.28%
	Motor and spare parts trade	40	11.87%
	Wholesale	36	10.68%
	Both retailing and wholesale	36	10.68%
	Road transport	34	10.09%
	Catering	37	10.98%
Number of years in business	More than 5 years	88	26.11%
	3 to 5 years	88	26.11%
	1 to 3 years	101	29.97%
	Less than 1 year	60	17.80%
Classification of firms using number of employees (using EU classification)	Small (including very small): 1-49 employees	315	93%
	Medium: 50-249 employees	22	7%

Source: Primary data, Field Survey July 2015

4.2 Background and training of business owner/CEO

Under this section, the entrepreneurs and CEOs of respondent firms were classified according to their gender, age and their level of education. Out of 337 valid responses in the survey, 192 representing 56.97 per cent were males, whilst 145 representing 43.03 per cent were females (Table 2). The findings further indicate that, of the 337 respondents, 94 were between the ages of 18-30 years; 83 were between the ages of 31-40 years; 60 were

between the ages of 41-50 years; 69 were between the ages of 51-60 years; and lastly, 31 were aged 61 years and above.

Again, as shown in Table 2, 17.21 per cent of the owners/CEOs do not have any formal educational qualification; 18.10 per cent have basic educational qualification; 21.96 per cent have Senior Secondary School certificate qualification; 16.62 per cent have diplomas; 19.88 per cent have degrees or higher education; and 6.2 per cent have professional qualifications.

Table 2. Background and training of business owner/CEO

Items	Sub-level	Frequency	Percentage (%)
Gender	Male	192	56.97%
	Female	145	43.03%
Age	18-30	94	27.89%
	31-40	83	24.63%
	41-50	60	17.80%
	51-60	69	20.47%
	61 and above	31	9.20%
Educational qualification	No formal education	58	17.21%
	Basic education	61	18.10%
	S.S.S.C.E.	74	21.96%
	Diploma	56	16.62%
	University/post graduate	67	19.88%
	Professional qualification	21	6.23%

Source: Primary data, Field Survey July 2015

It must be noted that the study was gender sensitive in that respondents of both sexes were represented. Also, the study was able to capture responses from owners/CEOs of various ages, from those in their youth to the very aged. An important factor used in understanding how business owners and managers make business decisions is their educational qualification. Most Ghanaians believe that, to be successful in understanding the dynamics and challenges posed by entrepreneurship, one needs some level of education whether formal or informal. The level of one's education affects the understanding of the importance of implementing good accounting and bookkeeping practices. In addition, it is expected that if a business owner has a reasonable level of education this is likely to influence the adoption of computerized accounting systems. These findings are consistent with results of Amidu, Effah & Abor (2011) on e-accounting practices and SMEs in Ghana, which showed that most of the owners/CEOs sampled had higher levels of education such as diplomas, degrees and professional qualifications. However, in sharp contrast, an insignificant percentage of their respondents were women with males dominating; whereas in this study an appreciable number of the respondents were women. The most likely explanation for this inconsistency is the scope and target of respondents.

4.3 Accounting skills of business owner/CEO

The study sought to understand respondent's own rating of their level of accounting skills. From the findings (Table 3) the skills included ability to record business expenses and sales. It turned out that close to 41 per cent rated their ability to record business expenses and sales as good. 36 per cent, 13 per cent and 9 per cent rated their ability to record business expenses and sales to be fair, excellent and poor respectively. From Table 3, 41 per cent rated their ability to calculate profits as good; and 31 per cent, 13 per cent and 12 per cent rated their ability to calculate profits to be fair, poor and excellent respectively.

As shown in Table 3, 39 per cent rated their ability to prepare salaries of staff as good; and 34 per cent, 14 per cent, 12 per cent and 1 per cent rated their ability to prepare salaries of staff to be fair, poor, excellent and not sure respectively. Illustrated in Table 3, 39 per cent rated their ability to keep track of inventory as good; and 31 per cent, 15 per cent, 14 per cent and 1per cent rated their ability to keep track of inventory to be fair, excellent, poor and not sure respectively. As shown in Table 3, 40 per cent rated their ability to write receipts, cheques and invoices as good; and 30 per cent, 15 per cent, 14 per cent and 1 per cent rated their ability to write receipts, cheques and invoices to be fair, poor, excellent and not sure respectively. From Table 3, 40 per cent rated their ability to calculate tax and file tax returns as good; and 28 per cent, 17 per cent, 14 per cent and 1 per cent rated their ability to calculate tax and file tax returns to be fair, poor, excellent and not sure respectively.

As shown in Table 3, 35 per cent rated their ability to read and interpret bank statements as good; and 27 per cent, 22 per cent, 15 per cent and 1 per cent rated their ability to read and interpret bank statements to be fair, excellent, poor and not sure respectively. As illustrated in Table 3, 36 per cnet rated their ability to ensure safe custody of business documents as good; 28 per cent, 21 per cent, 14 per cent and 1per cent rated their ability to ensure safe custody of business documents to be fair, excellent, poor and not sure respectively.

Table 3. Accounting skill of business owner/CEO

		Poor		Fair		Good		Excellent		Not Sure		
		Freq.	%	Freq.	%	Freq.	%	Freq.	%	Freq	&	Total
a.	The ability to record business expenses and sales	31	9%	123	36%	138	41%	45	13%		0%	337
b.	The ability to calculate Profits	43	13%	105	31%	147	44%	42	12%		0%	337
c.	The ability to prepare payroll (salaries of staff)	47	14%	116	34%	130	39%	41	12%	3	1%	337
d.	The ability to keep track/record inventory (stock)	48	14%	103	31%	132	39%	49	15%	5	1%	337
e.	The ability to write receipts, cheques and invoices	52	15%	102	30%	134	40%	46	14%	3	1%	337
f.	The ability to calculate tax and file tax returns	58	17%	94	28%	136	40%	47	14%	2	1%	337
g.	The ability to read and interpret bank statements	52	15%	92	27%	117	35%	73	22%	3	1%	337
h.	The ability to ensure safe custody of business documents and papers and books	47	14%	95	28%	122	36%	70	21%	3	1%	337

Source: Primary data, Field Survey July 2015

On the whole the study revealed that over 75 per cent of the entrepreneurs operating SMEs in the Kumasi Metropolis sampled had skills in one or several accounting and bookkeeping task even though some of the respondents had no or minimal formal education. For those with minimal levels of formal education in accounting or business they undertook such tasks without consciously knowing that they were bookkeeping tasks. The results thus obtained indicate that the respondents had a fair chance of appreciating a computerized accounting system. These findings are in contrast to that of Amoako (2013) whose results on SMEs in the Kumasi Metropolis revealed that close to 50% of entrepreneurs rated their accounting skills as below average, with only a little over 10% of respondents ranking their accounting skill as average or above average. This contrast may be due to the fact that, in this study, the assessment of the respondents' skills employed a series of questions relating to bookkeeping to help them with the rating.

4.4 Staff characteristics

Out of the valid respondents firms, 66 per cent of the firms have specific accounting staff: about 34% of the firms do not have specific accounting staff. Those firms who did not have staff specifically in charge of accounting gave varied reasons as to why they could not keep dedicated staff. The reasons included the proprietors own ability to undertake accounting task; the fact that the business is a small startup; and lastly, outsourcing to a small accounting firm at the end of the year to prepare the books of accounts for tax purposes only. The findings is consistent with that of Amidu, Effah & Abor (2011) whose results showed that 78 per cent of SMEs sampled had dedicated accounting staff.

Table 4. Staff characteristics

Statement/Items	Sub-level	Frequency	Percentage (%)
Are you in charge of accounts?	Yes	221	66%
	No	116	34%
Academic qualification of those is charge of account	Secondary certificate	85	38%
	Diploma	95	43%
	First degree/post graduate	30	14%
	Chartered accountant	11	5%
Number of accounting staff	1 – 5	197	89%
	6 – 10	22	10%
	11 – 15	2	1%
Academic qualification of other accounting staff	RSA	12	8%
	D.B.S.	71	49%
	Secondary school certificate	56	38%
	First degree/postgraduate	7	5%

Source: Primary data, Field Survey July 2015

4.5 Background and training of accounting head

Table 5 gives a breakdown of the educational level of the accounting head. Accounting heads with professional accounting qualifications make up 5 per cent of valid respondents. Those with a degree account for 14 per cent. Accounting heads with diploma make up 43 per cent and 38 per cent of accounting heads have secondary

education. These results show that more than 6 per cent of accounting heads of the SMEs who kept dedicated accounting staff had higher levels of education and this would likely influence whether they will adopt CAS or not.

Table 5 gives a detailed summary of the accounting staff strength of the firms. Most of the firms sampled (89 per cent of valid respondents) have an accounting staff strength of about 1-5. This is followed by about 6-10 (10%) and 11-15 (1%). The results obtained broadly concur with that of Amidu, Effah & Abor (2011) whose findings on e-accounting practices and SMEs in Ghana showed that 78 per cent of the firms had between 1 and 5 dedicated accounting staff. In addition to the number of accounting staff, the education level of the staff was analyzed: 7 accounting staff who have degrees make up 5% of the firms; diploma holders are 49 per cent, 8 per cent have RSA those with Secondary Certificate are 38 per cent.

4.6 Status of computer and software usage
The study sought to assess the state of the art of computerized accounting systems use among SMEs in the Kumasi Metropolis. The results as indicated in Table 6 suggests that 74 per cent of the respondent firms use computers in their operations. The broad reasons firms who do not use computers in its operations its use being cumbersome, expensive, risk of data loss and the fear of a virus infecting the computers. 62% of SMEs contacted who used computers in its operations also indicated that they use CAS.

Most of the SMEs who did not have CAS admitted that they do not use such systems because they believed it was expensive, stood the risk of corrupted data, complicated and that they did not have trained staff to handle a computerized accounting system.

This implies that the majority of SMEs operating in the Kumasi Metropolis have adopted CAS. The result of this study showed that Excel, Tally, Sage, Pastel, and QuickBooks are the types of accounting software that the SMEs have adopted. The result revealed that 40 per cent of the SMEs sampled use an excel based accounting system; 21 per cent preferred the use of Sage accounting software; and 17 per cent, 15 per cent, and 6 per cent use Tally, Pastel and QuickBooks respectively. These results agree with the findings of Amidu, Effah & Abor (2011), which revealed that the majority of the SMEs (25%) sampled were using Excel based accounting systems. One likely reason why most SMEs in the Kumasi Metropolis adopted an Excel based accounting system is because it is the least expensive and most common spreadsheet application in Ghana. Excel is also a system, which can be easily understood and used, and can be easily modified to meet user needs.

Table 6. Status of computer and software usage

Items	Sub-level	Frequency	Percentage
Use of computers in operations	Yes	249	74%
	No	88	26%
Use of accounting software in operations	Yes	155	62%
	No	94	38%
Kinds of accounting software	Excel	62	40%
	Sage	33	21%
	Tally	26	17%
	Pastel	24	15%
	QuickBooks	10	6%

Source: Primary data, Field Survey July 2015

4.7 Uses of computerized accounting systems
With regard to the use of accounting software (Figure 2), respondents indicated that they use the software for the following: entering of receipts and payments (20%); payroll management (8%); inventory management (6%); ledger entries (10%); bank reconciliation and cash management (4%); and generation of reports and analysis (10%). The majority of the respondents (representing 42%) indicated that they use their software for all of the above stated uses. These findings suggest that computerized accounting systems are basically no different from manual accounting systems and can be used for all the tasks performed manually.

Figure 2. Uses of computerized accounting systems
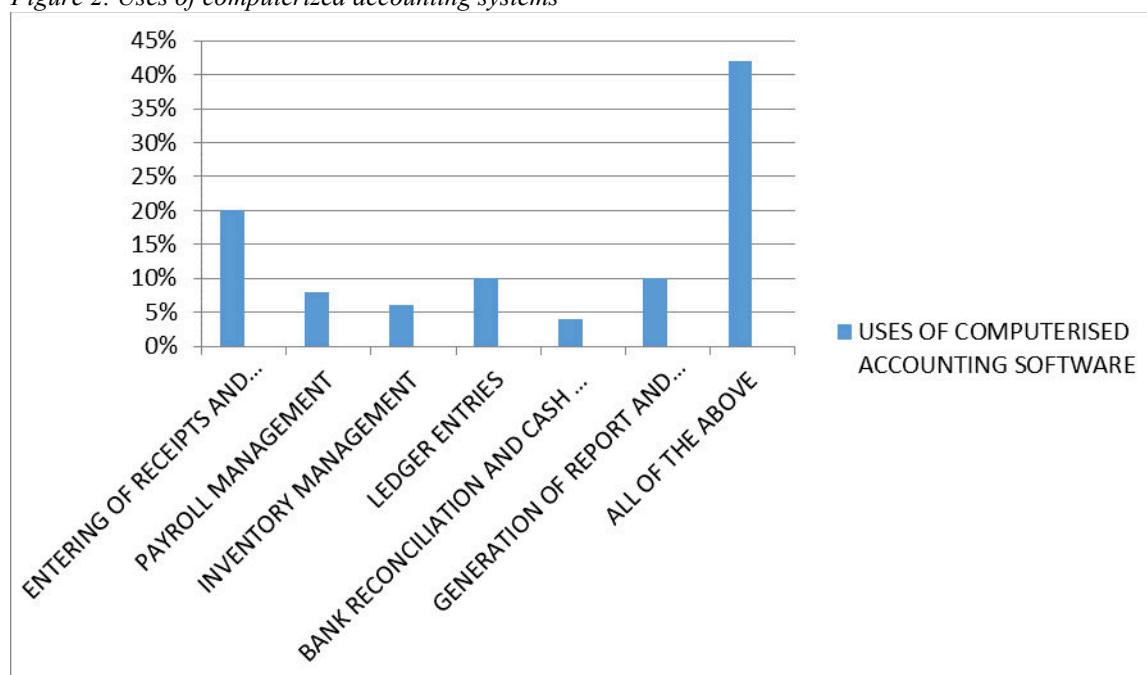
Source: Primary data, Field Survey July 2015

4.8 Challenges with existing computerized systems
The challenges that respondents face from the use of CAS captured in Table 6. The result shows that almost all the SMEs who use CAS representing about 150 respondents contacted indicated that frequent power failure is their biggest problem. A high number of these same SMEs representing 78 respondents had the challenge of computer viruses infecting the system. Another challenge confirmed was that computerization encourages frauds. Sixty-one respondent firms admitted this challenge. This clearly indicates that SMEs stand the risk of losing money from unknown hands therefore regular resetting of password is the way forward to deal with system hackers thus increasing cost of operation which may not be planned for. Lastly, 31 of the respondents confirmed the challenge of wrong input and wrong output. Basically this challenge is the result of not having staff with the required know-how to operate the CAS. These results concur with earlier studies (Amidu, Effah & Abor 2011; Bitwababo 2011; Kisakye 2013) whose respondents experienced similar challenges with the use of computerized accounting systems.

Table 7. Challenges with existing accounting systems

Response	Frequency
Frequent power failure	150
Computer viruses infecting the system	78
Problem of garbage in (wrong input) and garbage out (wrong output)	31
Computer fraud	61

Source: Primary data, Field Survey July 2015

5. Conclusions and recommendations

Based on the results of the study, it can be concluded that computerized accounting systems play an important role in order for SMEs to achieve their objectives such as timely information management, large data storage capacity, reduction of clerical works and enhanced customer satisfaction. Undoubtedly, with the adoption of CAS there are inherent problems and challenges such as frequent power failure; computer virus attack; computer failure; and computer fraud.

However, the advantages from the use of a computerized accounting system far outweighs the problems and challenges as it has impacted positively on the performance and productivity of SMEs. Hence, there is the need for all SMEs to adopt CAS.

It is recommended that the Government of Ghana, through the Ministry of Trade & Industry and the NBSSI, provide the enabling environment to help SMEs computerize their accounting function. Small and medium scale enterprises in Ghana need to adhere to good and standard accounting practices in their operations. From that, the adoption of CAS would ensure proper accounting practices, which will result in several benefits for entrepreneurs and SMEs.

Computer software should be updated on a regular basis such that it is up-to-date with technological changes; and data or information should be backed up so that, in case of any breakdown, it can easily be recovered. SMEs who intend to utilize CAS should undertake more detailed cost-benefits analysis so as to identify the benefits that can be derived from using a computerized accounting system. Accounting training institutions should do well to incorporate the study of Computerized Accounting Systems as part of their courses to ensure that accountants are equipped with both accounting knowledge and the required information technology skills. There should be restricted user access to ensure the segregation of duties and to ensure checks and balances.

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