

Cost and Management Accounting Practices, ICT Usage and Performance of Secondary Schools in Uganda: A Case of South Western Uganda

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Abstract

This article accounts for the findings from a study conducted in secondary schools located in south western Uganda. The study was about Cost and Management Accounting Practices, ICT Usage and Financial Performance of Secondary Schools. This study adopted a cross-sectional and correlational design. Questionnaires were administered to 435 secondary schools. The Unit of analysis was secondary schools and the unit of inquiry was head teachers/their representatives. The findings indicate that the adjusted R^2 is 27.4% and the F-ratio ($F = 9.122$) is significant. This means that the total predictive power of cost and management accounting and ICT adoption account for 27.4% in financial performance of secondary schools. ($R^2 = 0.274$, $p < 0.01$). The results supported the earlier set three (3) hypotheses in the literature review. The results emphasize that cost and management accounting practices highly influence financial performance of secondary schools. The study emphasized that Education is acute to the generation of strong, and enlightened countries, to which Uganda aspires to be. In recent years, Uganda Primary Education (UPE) has procreated large proliferations in the number of students yearning secondary education in Uganda. Private secondary schools have been established to encounter the superfluous demand. Without steadfast cost and management systems to guarantee stable financial performance, the secondary schools must, as any other enterprise throughout the world, become financially autonomous, their survival is in doubt.

Keywords: Cost and Management accounting practices, ICT adoption, financial performance, secondary schools.

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1.0 Introduction

Uganda's official education system, as several other African countries, replicates a post-colonial prearrangement with students progressing by examination through pre/primary, secondary, and tertiary/university levels (Ssekamwa, 1997). Factually, education has not been accessible to all, though the government of Uganda introduced Universal Primary Education (UPE) and Universal Secondary Education (USE). inadequate economic resources, religious segregation (Ssekamwa & Lugumba, 2001), and undecorated political strife have been major contributing factors. Under the government of National Resistance Movement (NRM) led by President Yoweri Museveni (1986 to present), great treads have been made in triumphing universal education.

The government of Uganda has lately liberalized the education sector to allow private individuals provide education services. It is of interest that the private schools provide this education consistent with stakeholders' expectations and secondly, according to Uganda Education Statistical abstract (2010) secondary education in Uganda has experienced remarkable achievements especially in student accessibility to secondary education since the introduction of Universal Secondary Education (USE)/Universal Post Primary Education and Training (UPPET) in 2007. However, the Net enrolment ratio for all secondary schools was 24.6% which implies that there were only 24.6% students in school of the total population that would officially be in school at secondary level. The General Enrolment Ratio (GER) at secondary level in all schools was 28.3 and this implies that many children who are of secondary school going age are actually out of school or some are in other post primary institutions. The Net Intake Ratio (NIR) in all schools was at 6.7% meaning that the value of NIR being less than 100 can be attributed to non-schooling children in the population who have reached the official secondary entry age, and to a less extent existence of underage and overage new entrants in the secondary subsector. It is likely that management accounting techniques that would provide information for competitive priorities is not appropriate.

Admissions in primary schools amplified from 2.7 million in 1996 to 7.6 million in 2003 (Miovic, 2004; MOES, 2004a). This was as a result of the introduction of Universal Primary Education (UPE) in 1997 As a borderline standpoint throughout this growth period, it is noted that in 1999/2000, gross primary admissions were considered at 124% and net primary admission was 93% (Liang, 2002).

Evaluating the broad inferences of the increasing admission problem, Yusuf K. Nsubuga, Commissioner for Secondary Education, indicated "inability to captivate the emergent number of primary school leavers will emasculate Universal Primary Education and broader national goals like the eradication of poverty" (Kirungi,

2001).

The government of Uganda acknowledged the prodigious need for secondary schools, but inadequate financial resources fraught its capacity to retort. An unconventional elucidation was offered with the approval of the Local Governments Act of 1997. This Act had the upshot of decentralizing control of education, thus permitting more private secondary schools to be established (Holsinger et al, 2002a; MOES, 2001). A propagation of secondary schools ensued, and by the year 2002 there was a total of 1,390 community and private secondary schools (non-government funded), likened with 490 government secondary schools (partially government funded) (Liang, 2002). Subsequently, total secondary school admissions amplified from 445,000 in 1997 to 759,000 in 2003 (Miovic, 2004). Fundamentally, these upcoming private secondary schools were established and are being run and taxed as business enterprises ("The income tax act cap. 340," 1997, p. 7034).

The prominence of cost and management accounting in its social context as well as organizational performance cannot be over emphasized (Parker and Guthrie, 2013). Cooper (1996) observed that with the occurrence of the slim firms and increased global competition, companies must learn to be more proactive in the way they manage costs as for many, survival is dependent upon their abilities to develop sophisticated cost management systems that create intense pressure to reduce costs. Cooper (1996) further observed that as cost and management accounting befits more acute to a firm's survival, two inclinations surface.

According to Sunday et al (2013) new forms of cost and management accounting are essential, similarly, more individuals in the enterprise become actively involved in the cost and management accounting process. These observations suggest that with the growing number of managers involved in the cost management process, there is an increased need for management accounting information and people who know how to use it. Indeed, a study by KPMG (2007) reported that more than 80 percent of survey participants viewed an efficient cost structure as a source of long-term competitive advantage (strategic priorities). The purpose of this study is two-fold: first, the study aims to examine management accounting proclivity in secondary schools, and second, to establish the effect of management accounting proclivity of secondary schools on competitive advantage. Of interest is whether or not a proclivity for management accounting in secondary schools explains any variance in secondary schools' competitive advantage beyond what is accounted for by other relevant measures of competitive advantage. After all, Granlund and Lukka (1998) argued that firms probably did not intend to gain unique competitive advantage through their management accounting systems, but instead intended to use them to improve their operational, other than strategic effectiveness.

Cost and Management accounting is alarmed with the necessities and use of accounting information to managers within an enterprise, to provide them with the basis to make informed business decisions that will allow them to be better equipped in their management and control functions (Emarix, 2008). Within this complex environment, managers need relevant financial and non-financial information for decision making (Rasid et al., 2011). The aptitude of managers to make cognisant judgments is concomitant to the eminence of management information available to them (Kafafian, 2001; Rezaee, 2005) and good information arises from an effective management accounting system, an important tool in providing decision-making information (Cole, 1988). Management accounting provides information for planning ("ex ante") and control ("ex post") in an organization (Rasid et al., 2011).

Despite the implicit role of management accounting to competitive advantage, many secondary schools in Uganda may not have embraced management accounting tenets. It is common place to read headlines saying: top schools to hike school fees! This means that these schools do not make quality decisions regarding cost-cutting, for example, as a means of competitive advantage. While it may be argued that the higher the school fees, the more quality education offered, it is equally arguable that such schools lack considerable sophisticated cost management systems creating pressure to reduce costs. Competition based on academic performance, while desirable, alone may not lead to sustained competitive advantage. Indeed with competition based on academic performance is seen a number of schools found to have cheated examinations (see Businge and Bwambale, 2013; Musisi, 2013). In this study, we argue that with proclivity to management accounting, schools are better placed to gain competitive advantage in terms of appropriate strategic priorities they choose. But despite management accounting research proliferation in other disciplines and organizational practice, it has not been given serious attention in the education sector (read secondary schools). Indeed Durand (2003) notes that management accounting remains largely unexploited as a powerful approach to accounting for a competitive advantage.

Although it has been used mostly in management accounting change, this study borrows from the framework by Burns and Scapens (2000) who consider management accounting to be organisational rules and routines; where rules are the formalised statement of procedures, while routines are the procedures actually in use. Specifically, for this study, Burns and Scapens (ibid) state that rules comprise the formal management accounting systems, as they are set out in the procedure manuals, while routines are the actual management accounting practices actually in use. Since schools are institutions, this study bases on Barley and Tolbert (1997, p. 96) and Burns and Scapens (2000, p. 8) definition of institutions as "the shared taken-for-granted assumptions which identify categories of human actors and their appropriate activities and relationships".

Burns and Scapens add that these taken-for-granted assumptions inform and shape the actions of individual actors, who simply accept that “this is the way things are done”. In management accounting shared taken-for-granted assumption can be internally or externally imposed: internal assumptions can be developed that are specific or unique to the firm while firms can acquire assumptions that are taken-for-granted by other firms or credible external authorities (Spraaakman, 2006). Other useful insights are drawn from Transaction Cost Economics (TCE) which has been considered a valid theory for management accounting as Baiman (1990, p. 346) reviewed agency research in management accounting and concluded that in general TCE has the “potential to enrich our understanding of the role of management accounting”. A few years later, Spekle (2001) developed a framework that explicates the link between TCE and management control although this has yet to be done for management accounting. However, one can draw some useful theoretical insights.

This study makes an important contribution to management accounting research literature. Basing on the classification of the settings by Shields (1997), the review by Zawawi and Hoque, (2010) found that research in management accounting innovations is centered on the manufacturing industry (29 articles), comprising the production and services activities of manufacturing companies, services (6 articles) which comprises retailing, banking, financial services, hotels, and health care, whereas specific industry (2 articles) comprises telecommunications and the airline industries. Clearly this study contributes to the growing literature on management accounting proclivity by extending to the education sector.

The study setting is unique because: first, the government of Uganda has recently liberalised the education sector to allow private individuals to provide education services. Secondly, McCormick et al (2006) noted from various literature a general consensus in the corporate governance literature that a board has primary responsibility to pursue the interests of the owners of the organization, the members of the organization, and the wider community, through the effective performance of the organization. But, argued that the role of a school board involves more.

2.1 Literature review

2.1.1 Cost and Management accounting

While Bhimani and Bromwich (2010) did not intend to review the history in great detail, citing the works of Edwards and Boyns (2006) and Fleischmann and Tyson (2006) they were able to summarise the past and present of management accounting. These authors trace management accounting from costing in 1840s predominated by bookkeeping for costs. Nevertheless, Bhimani and Bromwich (2010) observed little evidence that such costs were used for cost control or performance measurement. Over a 90-year trajectory, mainline subjects including standard costs, budgetary control, performance measurement and costs for decision-making, occurred within management accounting and this was after the foundation of what was to become CIMA (Bhimani and Bromwich, 2010). Management accounting as a term appears to have been first used by Robert Anthony in 1956 as a title to his book *Management Accounting: Text and Cases* (Anthony, 1956). Thus most of the techniques and methods which form the foundation of today’s management accounting were in existence by mid-1960s. Bhimani and Bromwich (2010) on their part, document three foundational elements of management accounting: standard costing, budgeting and capital budgeting. These foundations can be subsumed in the discussions below.

2.1.2 Budgeting

The literature of cost and management accounting accentuates that budgeting is an indispensable technique for planning and controlling the activities of an entity (Drury et al., 1993). According to Fowler (2009), the management accounting practices of budgeting, and performance measurement and reporting are considered important in the current educational environment. Indeed, Willsmore (1931) emphasized the need to compare plans with actual results. The enhanced systems of managerial co-ordination and control allow the use of responsibility accounting (Bhimani and Bromwich, 2010). These authors document that the advance of management accounting in the US was influenced by the ideas of scientific management or Taylorism between 1880s and 1890s and formed the notion of standards for performance evaluation meaning that incentives and disincentives must be given to employees to ensure the pursuit of standards for efficient management.

2.1.3 Information for decision-making

One of the stated objectives of management accounting in the 1970s was to provide relevant information for internal decision making. According to Abdel-Kader and Luther (2006) for regular or short-term decisions management accountants can use cost-volume-profit (CVP) analysis, product profitability analysis, customer profitability analysis, and stock control models. These authors continue to say that for capital investment decisions management accountants can produce accounting rates of return and payback periods as well as more complex signals based on discounted cash flow. Abdel-Kader and Luther (2006) note that information on non-financial factors, such as quality of output, flexibility of processes and lead-times could affect capital investment projects and, risk analysis techniques such as probability analyses, computer simulation and “what if” analysis can be used.

2.1.4 Strategic analysis

According to Abdel-Kader and Luther (2006), traditional management accounting systems have been criticized for their focus on reporting information related to internal processes with little attention being given to the external environment and the effect of competitors' decisions and cost structures on current and future processes of the business; this externally oriented approach has become known as strategic management accounting. However, a conceptual framework for what constitutes strategic management accounting remains ambivalent (see, for example, Guilding et al., 2000; Ittner and Larcker, 2001; Roslender and Hart, 2003). A number of characteristics of strategic management accounting have been identified by Guilding et al. (2000). These are: a concern with customers and the external environment; a focus on competitors; and a long-term, forward-looking orientation. Cadez and Guilding (2007) have documented a description of 16 strategic management accounting techniques. They are: attribute costing, Benchmarking, brand valuation, competitive position monitoring, competitor cost assessment, competitor performance appraisal, customer profitability analysis, integrated performance measurement, lifetime customer profitability analysis, quality costing, strategic costing or strategic cost management, strategic pricing, target costing, valuation of customers as assets and value chain costing.

Attribute costing is concerned with costing the benefits that products provide to customers (Roslender and Hart, 2003). Benchmarking emphasizes on a search for best practice (Cadez and Guilding, 2007) and involves a continuous proportional process that can be pragmatic to a number of areas of an entity's doings, together with strategic development, operations and customer service (Brownlie, 1999). Brand valuation assigns financial value to the equity associated with the name or image of a brand (Cravens and Guilding, 1999). A formalization of marque value accounting can accentuate the view that brand-related expenditure ought to be considered as a venture reasonably than an expense, thus emphasizing the future and long-term leaning focus of this technique. This breadth of brand valuation can be reflected in the context of Tayles et al. (2002) preferment of SMA as a slant to valuing ventures in other intangibles such as intellectual capital. Competitive position monitoring is an asset with finite earning potential (Simmonds, 1986) and Rangone (1997) pronounces a methodical context that upshots in a single-figure denominated quantitative assessment of an organization's competitive standing. Competitor cost assessment rests on the assessment of a key competitor's relative cost position which can yield an enhanced appreciation of an organization's strategic decision-making environment (Simmonds, 1981; Jones, 1988; Bromwich, 1990; Ward, 1992). Competitor performance appraisal assesses competitive advantage by applying an appropriately conducted analysis of competitors' published financial statements (Moon and Bates, 1993). Customer profitability analysis is concerned with tracing customer specific costs and sales to individual customer accounts (Guilding and McManus, 2002).

More so, integrated performance measurement systems provide financial and non-financial performance measures that cut across a range of organizational perspectives and in combination provide a way of translating strategy into a coherent set of performance measures (Chenhall, 2005). This strategic management accounting technique can be seen to be closely related to the balance scorecard popularized largely by Kaplan and Norton (1996). Life cycle costing promotes the view of classifying costs according to the stages that comprise a product's life (Shields and Young, 1991) and provides a useful counter to short-term management tendencies. Lifetime customer profitability analysis moves beyond computing the annual profit that will be generated from a particular customer to considering all future projected profits that will result from a trading relationship with a particular customer (Guilding and McManus, 2002). Quality costing rests on the understanding by Belohlav (1993) that a common denominator in many discussions on competitiveness and strategy is the issue of quality whose costs according to Kaplan and Atkinson (1989) and Albright and Roth (1992) are classified into four categories: prevention, appraisal, internal failure, external failure. Today, in many firms quality is typically defined in terms of customer satisfaction (Cadez and Guilding, 2007) consistent with the model proposed by Heagy (1991) that places the customer into the equation of quality costs by including the cost of lost sales due to poor quality in the measurement process. Strategic costing or strategic cost management is contrary to the traditional cost analysis and assesses the financial impact of alternative managerial decisions (Cadez and Guilding, 2007). Shank and Govindarajan (1993) and Shank (1996) provide a framework where cost data is used to develop superior strategies in order to gain competitive advantage. Strategic pricing rests on the notion that data used in making pricing decisions should be supplemented with information regarding possible competitor reactions to any proposed change in pricing policy. Indeed Simmonds (1982) and Rickwood et al. (1990) have demonstrated that pricing decisions based on a conventional internally-oriented and historically-based analysis can result in sub-optimality. Target costing supports cost reduction initiatives at the point of new product development or design (Monden and Hamada, 1991) and is derived from estimates of selling volume, price and desired profit (Cooper and Slagmulder, 1999). Valuation of customers as assets rests on the idea that an asset value could be developed by discounting to present value the estimated profits that will be generated by the trading relationship with a particular customer or group of customers (Guilding and McManus, 2002) as it appears commonplace to conceive of customers as assets (Srivastava et al., 1998; Turchan and Mateus, 2001; Guilding and McManus, 2002). Given the importance of customer bases, Foster et al. (1996) propose that

assessments of management performance should be supplemented by tracking how the value of customer bases change in time. Value chain costing involves viewing the organization as a link in the chain of all value-creating activities associated with the provision of a product or service (Cadez and Guilding, 2007).

2.2 ICT Adoption

According to Eremu (2005) Uganda had only 106 of its 13,353 primary and 2,070 secondary schools connected to the Internet. Uconnect and SchoolNet Uganda, two major NGOs involved in ICTs for schools, led these projects. Connectivity is much more ubiquitous in urban than rural schools, essentially because access to ICT infrastructure for schools emulates the national rural-urban divide. The more explicit factors obliging connectivity in rural areas are the overall poor communications infrastructure, low electricity coverage, and high capital costs intricate in setting up computer laboratories. Though several schools have computers as a result of initiatives with NGOs, religious organisations, and international donors, few are connected to the Internet. Those that are in place are typically used for teaching basic computer skills and administrative purposes.

Information and Communication Technologies (ICT) have had a discreet commencement in education institutions, but have become an essential component in preparing today's students for roles in the future workplace (Buabeng-Andoh, 2012). Structural encounters of Uganda's 'top down' education system leave Head Teachers with a complementary act and can craft barricades to ICT adoption. Most decisions about staffing, funding and curriculum are dictated by the Ministry of Education and Sports, leaving Head Teachers with the duty of running day to day operations of the school, guaranteeing curriculum requirements are met, and reporting school conditions back to the Ministry. Staffing and funding are antagonistic issues especially in the days of Universal Secondary Schools (USE) (Blaak et al., 2013).

2.3 Cost and management accounting practices and financial performance of secondary schools

Scanty studies (Tooley and Guthrie, 2007; Agasisti, Arnaboldi and Azzone, 2008; Hutaibat, von Alberti-Alhtaybat, and Al-Htaybat, 2011 and Fowler, 2009 are notable exceptions) have been undertaken in the education sector concerning management accounting. Even then, management accounting proclivity of secondary schools is almost non-existent. Tooley and Guthrie (2007) noted that a change in the New Zealand state education system during the 1980s brought about a transfer of responsibility for school financial management from the centre to the school level. Their study set out to report an investigation of how aspects of this devolved responsibility had been operationalised and managed in a secondary school setting. Based on four case studies, Tooley and Guthrie (2007) found that accounting and management technologies had come to be used as a tool of rhetoric and had served a useful, political purpose, although not in the way intended by the reform architects. They concluded that the expectations of an espoused economic-rationalist approach to school-based management were yet to fully pervade into the schools' way of "doing" devolved financial management.

Agasisti, Arnaboldi and Azzone (2008) investigated management accounting practices in four major Italian universities which were struggling to build their strategy in the context of significant change. They argued that giving more autonomy to universities posed a number of challenges for management and accounting systems in Italian universities. Agasisti et al. (2008) whose study focused on two aspects of decisions (resource allocation and new academic program) considered Strategic Management Accounting (SMA) to be oriented towards market and external shareholders, existing and possible competitors and being long term. Hutaibat, von Alberti-Alhtaybat, and Al-Htaybat (2011) explored the concept of SMA in an English University. Their study was in search and investigation of SMA practices, and processes and their meaning to participants in an English university context. Using an interpretive paradigm, Hutaibat et al. (2011) found that the core concept of the strategizing mindset, which encapsulates the institutional, divisional and individual stance towards strategy and SMA, is understood as the belief system that is adopted with regard to SMA, which is divided into a bureaucratic and an entrepreneurial mindset. According to the respective mindset, the authors found that accounting for strategic management is dealt with and institutional members' perceptions of SMA are shaped. The particular mindset adopted depends on the context members were and are functioning, which reflects Bourdieu's theory of practice. Fowler (2009) set to document the types of and any changes in the budgeting and performance management practices of New Zealand primary educational organisations and explain why they occurred using an institutional theory framework - providing an understanding of past budgeting and performance measurement and reporting practice, as well as consider the policy implications for the contemporary public-provided primary education system. Using a historical archival-based case study approach, Fowler (2009) found evidence suggesting that from 1844 until 1859 budgeting and performance management practices in educational organisations changed as the provision and control of education moved from not-for-profit community-based organisations to become a predominantly public function. The budgeting, inspection and performance management practices and changes observed in the primary education providers were directly related to their need to obtain legitimacy and procure resources (Fowler, 2009).

The preceding review specifies that there is a gap in cost and management accounting practices within

secondary schools. Furthermore, the cost and management accounting techniques appropriate for schools are not readily apparent in literature. We believe filling this gap is important as until recently, management has seen management accounting as only adding by means of the application of some techniques they most value (Bhimani and Bromwich, 2010). Besides, transparency and compliance with regulatory requirements impinge on enterprises and so management accounting should address issues of risk management and sustainable business management.

2.4 Hypothesis Development

According to Guthrie et al (2007) it is indicated little connection between improvements in the quality of education and financial monitoring. Several studies on Activity Based Costing (ABC) have examined, to some extent, the issue of the link between ABC and business strategy. Shields (1995) for example, in exploring the degree of success in ABC implementation, found the link to competitive strategies to be one of the critical variables of ABC success. The widespread use of the balanced scorecard (BSC) is an indication of the need to find integrated/multidimensional management accounting tools to drive organizations strategically (Kaplan and Norton, 1996, 2000). Srimai, Radford and Wright (2011) found that management needs, arriving from the evolving business ecology and focused on creating and sustaining competitive advantage, drive the destiny of performance management systems during their evolutionary progression.

According to Vickers (1967), performance management system can only function when the feedback from performance measurement is available. Information from performance measurement (the inputs) facilitates the facts-based management of the entire organisation but has a trivial meaning until it is implemented as a part of a control system – then it feeds information back to executives for fine-tuning organisational strategy and re-aligning people and resources to realize desired outcomes (the processes). An ultimate output goal of performance measurement systems is to align the strategy of the entire organization's activities and processes.

Morse, Davis and Hartgraves (2003) suggest that managers of successful companies should be aware that they compete in a global market where the instant flow of information exists. These authors argue that competition is always striving to gain a competitive advantage. This means that world-class organisations strive continuously at improving performance in the three interrelated dimensions of price/cost, quality and service. Successful competition in these three dimensions requires the adoption of effective competitive strategies. Thus innovative management accounting strategies may be useful in identifying competitive strategies that lead to a competitive advantage for an organisation.

According to Ketz et al., (1990) it is collective to look for a model of financial health inside the industry of operation (Mandell et al., 1981). These identified models are collations of statistics from concrete entities within each given industry (Dun & Bradstreet, 2003). Owners of secondary schools or various businesses look inwardly at key financial relationships based on figures provided by a reliable accounting system (Turyahebwa et al, 2013). These systems, then can be paralleled with industry averages to monitor the individual organization's financial health. It is normally important to take suitable counteractive action before it is too late (A. Lev, 1969).

Some strategic competitive strategies can be noted. According to Horngren et al. (2009) customer profitability analysis – as a procedure for analysing the profitability of existing account relationships of customers (Koch and MacDonald, 2006) - makes it possible for an organisation to report and analyse revenues earned from customers and the costs incurred to earn those revenues. Innovative management accounting practices in schools provide the necessary tools for performing and analysing profit generated by the various categories of customers and help in identifying the most productive customers. Van der Stede (2000) also notes that in determining the profitability of customers, management accounting strategies need to focus on variable costs and contribution margins associated with various customer groups. This may therefore enable schools to identify and serve the customers that are valuable in terms of creating a competitive advantage to customers who are profitable. The management accounting function has the role of providing the management with an analysis of the cost and revenues earned from a particular customer segment. In addition, it is no longer the case that organisations offer services without considering customers' needs. Iyengar (2007) has noted that in today's challenging and competitive market era, business organisations anticipate the needs of clients and provide products that create positive responses from customers noting that satisfied customers may be a source of free publicity for an organisation such as a school. According to Iyengar (2007) customers have become more demanding as they balance cost and quality.

In essence, the services offered by schools today may be as a result of customer needs. Therefore, schools may have no choice except to alter their corporate structures to serve their current functional role in order to remain competitive and attractive to customers. Moreover, organisations need a measure through which they can verify that they have established both strategic and financial controls in order to assess their performance. According to Ireland, Hoskisson and Hitt (2010) the balanced scorecard may enable an organisation to achieve this goal because organisations may jeopardise their performance possibilities by placing emphasis on financial controls at the expense of strategic controls. Indeed, the balanced scorecard concept reflects the intent to keep the

score on a set of items that maintains a balance between short-term and long-term objectives as well as between financial and non-financial measures (Wu, Lin and Tsai, 2010).

The accomplishment of private secondary schools is, at least in part, reliant on upon their aptitude to remain financially viable (Janet, 2006). In the absence of guaranteed revenue streams, generally through government or any other funding, these entities, like all other business entities, face the realities of competition for clients and the need for profitability while minimizing expenses in order to become liquid (Turyahebwa et al, 2013).

Financial contemplations are of principal prominence (Kapp, 2005). Modestly put, if an entity is unable to maintain its financial health, it will probably fall into financial distress eventually leading to the tragic state of business failure (Gupta, 1983). Replete studies have revealed that financial problems are the foremost cause of business failures (Katz & Cabezuelo, 2004). Given the unsatisfactory statistics of business failure rates worldwide, it is domineering that any entity pay attention to its financial health and look out for early warning signs that may gesture impending areas of distress (Farney, 1995).

Based on the above review, we hypothesise as follows:

H1: *There a significant positive relationship between cost and management accounting practices and financial performance of secondary schools.*

As Uganda adopts ICT in education more so in secondary education, Uganda faces the same trials as most developing economies that is to say; poorly developed ICT infrastructure, very high bandwidth costs, an unpredictable supply of electricity, and inadequate resources to meet a broad continuum of needs. However, with the hurried advent of wireless network capacity and the permeating growth of mobile phones, the milieu of the infrastructure is shifting (Glen Farrell, 2007).

According to Eremu (2005) Uganda had only 106 of its 13,353 primary and 2,070 secondary schools connected to the Internet. Uconnect and SchoolNet Uganda, two major NGOs involved in ICTs for schools, led these projects. Connectivity is much more ubiquitous in urban than rural schools, essentially because access to ICT infrastructure for schools emulates the national rural-urban divide. The more explicit factors obliging connectivity in rural areas are the overall poor communications infrastructure, low electricity coverage, and high capital costs intricate in setting up computer laboratories. Though several schools have computers as a result of initiatives with NGOs, religious organisations, and international donors, few are connected to the Internet. Those that are in place are typically used for teaching basic computer skills and administrative purposes.

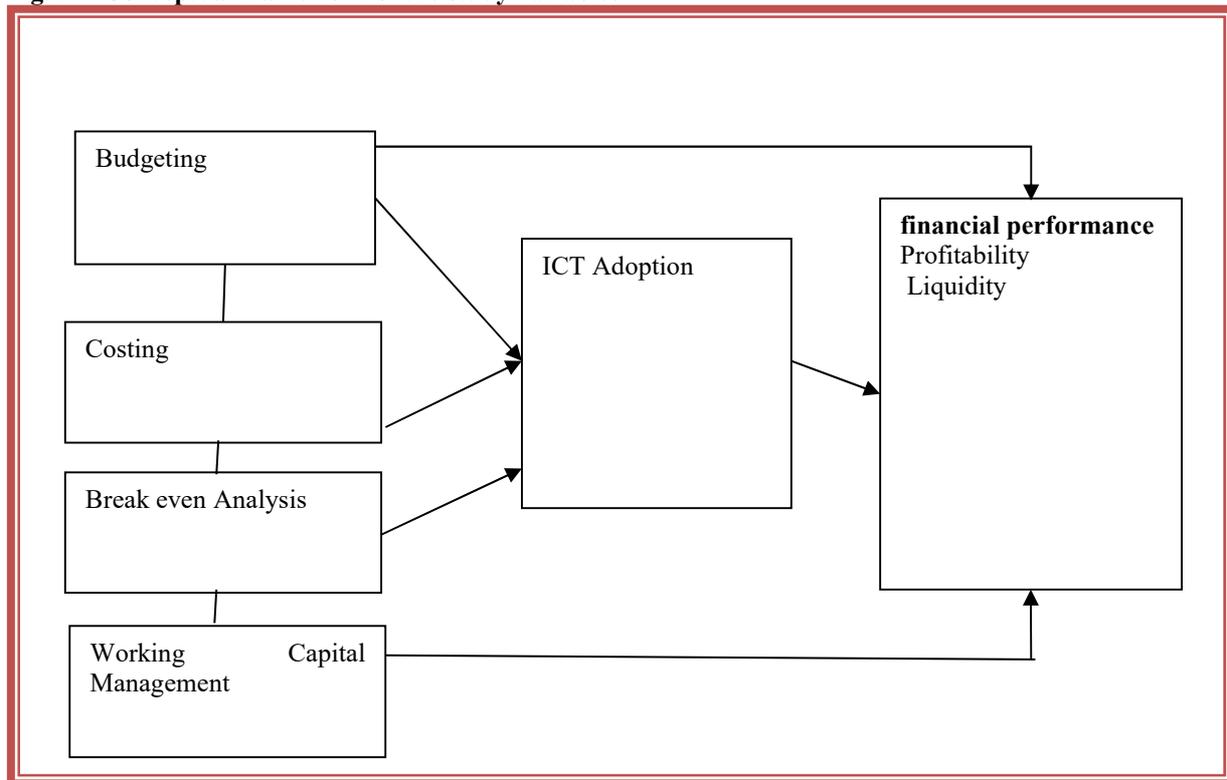
Information and Communication Technologies (ICT) have had a discreet commencement in education institutions, but have become an essential component in preparing today's students for roles in the future workplace (Buabeng-Andoh, 2012). Structural encounters of Uganda's 'top down' education system leave Head Teachers with a complementary act and can craft barricades to ICT adoption. Most decisions about staffing, funding and curriculum are dictated by the Ministry of Education and Sports, leaving Head Teachers with the duty of running day to day operations of the school, guaranteeing curriculum requirements are met, and reporting school conditions back to the Ministry. Staffing and funding are antagonistic issues especially in the days of Universal Secondary Schools (USE) (Blaak et al., 2013).

Chenhall and Langfield (1998) categorized management techniques into Human resource management policies, integrating systems, team-based structures, manufacturing systems innovation, quality systems and improving existing systems. They also identified and categorized management accounting practices/techniques as traditional accounting techniques, benchmarking, activity-based techniques, employee-based measures, strategic planning techniques and balanced performance measures. As already mentioned, a proper combination of management techniques and management accounting practices/techniques, it was argued, should lead to high organizational performance. However, such a combinatory approach obscures the possibility that management accounting techniques together with ICT adoption can aid in financial performance. In addition, management accounting practices can aid in the development of appropriate management techniques. It is possible to study these presumptions independently and while for example Chenhall and Langfield-smith (1998) investigates the way in which management accounting practices combine with management techniques under various strategic priorities to enhance performance, this study addresses the possibility that management techniques act a conduit for management accounting practices to enhance the choice of appropriate strategic priority. This leads to the following hypotheses:

H2: *There a positive and significant relationship between Cost and Management Accounting Practices, ICT Adoption and financial performance of secondary schools.*

H3: *The relationship between ICT adoption and financial performance*

Fig.1 Conceptual framework of the study variables



Source: Reviewed literature

Explanation of the model

The model in Figure 1 implies that where Cost and Management accounting practices and ICT adoption are suitable, this will improve financial performance of Secondary Schools. The cost and management accounting practices are conceptualized to mean budgeting, costing, break even analysis and working capital management are in place. The operationalization of financial performance of secondary schools takes the form of profitability and Liquidity. The model predicts, and consistent with the Stakeholders theory, Stewardship theory (Grant, 1996) and Agency theory (Teece et al. 1997); that owners or managers must possess the skills, knowledge and agility necessary to enable effective cost and management system if good financial performance of secondary schools is to ensue.

3.0 Methodology

3.1 Methods

The study adopted a quantitative paradigm since it involved theory testing and was made of variables which were measured in numbers and they were later analysed with statistical tools as required in positivist realm (Creswell, 2003; Collis et al (2003). The study employed exploratory study design (Cooper & Schindler, 2008). The study used a descriptive design in order to describe the profile of the respondents in terms of age group of head teachers of secondary schools, level of education, number of years the school has been operating and the perceptions of respondents regarding cost and management practices as well as financial performance (Miller, 1998). The study also adopted cross sectional research design as the study intended to obtain a random sample as well as understand a cross section of interest at a particular time. The study used survey design to gather data from a large number of respondents. This method was used because the researcher wanted to generalize from the sample to be used to the whole head teachers of secondary schools in south western Uganda. Furthermore, the descriptive correlation strategies were also used to determine relationships between cost and management practices and financial performance.

The population for this study was 1,061 secondary schools in south western Uganda districts of Kabale, (School guide Uganda Ltd, 2012). The unit of analysis was Secondary schools and the unit of inquiry was head teachers or their representatives like deputy head teacher/ bursar. A total sample of 435 secondary schools for this study was generated using Yamane's (1973) sample selection approach.

3.2 Research Variables and Their Measurement

The independent variables of this study were cost and management accounting practices, ICT adoption. These

variables were measured consistent with Chenhall et al (1998) as Budgeting; Costing; Break Even Analysis and Working Capital Management. The dependent variable was financial performance. This was measured in terms of Profitability and Liquidity.

The study used 5-point likert type scales ranging from strongly agree - 5 to strongly disagree -1. The use of likert scales in this exertion is reliable with prior studies.

4.0 Empirical findings and Discussion

4.1 Descriptive statistics

The study used Means and standard deviations in order to summarize the results. The means were used because they show a summary of data and standard deviation clearly shows how well the means represent the data (Field (2009)). It was important to use means and standard deviation in order to determine whether the statistical means were a good fit of the results (Field, 2009).

Table 1: Descriptive Statistics

Variables	N	Minimum	Maximum	Mean		Std. Deviation	Variance
					Std. Error		
Budgeting	435	1.00	3.75	2.1004	.02698	.49376	.244
Costing	435	1.00	3.56	2.1619	.02404	.43998	.194
ICT Adoption	435	1.17	3.67	2.1915	.02001	.36621	.134
Break Even Analysis	435	1.40	3.00	2.2233	.01882	.34441	.119
Working Capital Management	435	1.37	3.44	2.3477	.01629	.29816	.089
Financial Performance	435	2.03	3.83	2.6913	.01535	.28092	.079
Valid N (listwise)	435						

Source: Primary Data

Table 1 shows that all the mean scores for both the independent and dependent constructs that is to say for cost and management practices which comprised of budgeting with a mean of 2.1004, costing with a mean of 2.1619, ICT adoption with a mean of 2.1915, break even analysis with a mean of 2.2233 and working capital management with the highest mean of 2.3477. The respective standard deviations are in the range of 0.29816 and 0.49376 as seen in table 2 above. The mean scores for financial performance were 2.6913 and the standard deviation was 0.28092. The results indicate small standard deviations as compared to their respective means. Thus it is clearly understood that that the data points are close to the means. It is important to note that the calculated means for cost and management practices and financial performance shows a moderate presentation of reality (Field, 2009).

The mean standard error is a measure of how representative a sample is likely to be of the population. The standard error values computed showed relatively small values. The values ranged from 0.01629 to 0.02698 for cost and management practices constructs and for financial performance, the standard error was 0.01535 which was also considerably very small. Thus this shows that most sample means are similar to the population mean and this clearly shows that study's sample was likely to be an accurate reflection of the population. Confirming evidence is provided by the variance which is the average error between the mean and the observations and the variance ranged from 0.089 to 0.244 for cost and management practices constructs and variance for financial performance was 0.079 and variance is a good measure of how well the model fits actual data (Field, 2009).

Table 2 Correlation results

Control Variables			Cost and Management Accounting Practices	Financial Performance	ICT Adoption
IV	Cost and Management Accounting Practices	Correlation	1		
		Significance (2-tailed)	.000		
DV	Performance	Correlation	.716	1	
		Significance (2-tailed)	.000	.000	
	ICT Adoption	Correlation	.294	.673	1
		Significance (2-tailed)	.000	.000	.
ICT Adoption	Cost and Management Accounting Practices	Correlation	1		
		Significance (2-tailed)	.000		
	Financial Performance	Correlation	.750	1	
		Significance (2-tailed)	.000	.000	

**** Correlations significant at the 0.01 level (2-tailed).**

The study used zero-order correlation to examine whether or not there were connotations between cost and management accounting practices with financial performance as hypothesised from the literature review (Field, 2009). The correlation results in Table 2 indicate bivariate association of cost and management accounting practices, ICT adoption with Financial performance better. From the table above, the findings deliver evidence ($r = .716, p < 0.01$) in support of the first hypothesis H1 which stated that “there is a significant positive relationship between Cost and Management Accounting Practices and financial performance of secondary schools in south western Uganda”. Thus our hypothesis was accepted. These findings are in agreement with the results from a study by Stephen et al, (2018).

The second hypothesis H2 which stated that “there is a significant positive relationship between Cost and Management Accounting Practices, ICT adoption and financial performance of secondary schools” was supported by the findings ($r = .750, p < 0.01$).

The third hypothesis H3 which also stated that “there is a significant positive relationship between ICT adoption and financial performance of Secondary schools” is supported ($r = .673, p < 0.01$).

4.2 Regression results

Table 3: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.518(a)	.274	.169	.96101

a Predictors: (Constant), Cost and Management Accounting, ICT Adoption

Table 4: Regression Analysis

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.978	.961		5.720	.000
	Budgeting	.049	.026	.264	-1.897	.009
	Costing	.508	.048	.480	10.661	.000
	ICT adoption	.178	.037	.246	7.599	.000
	BEA	.118	.037	.324	7.599	.000
	WCM	.378	.037	.544	7.599	.000

Table 3 and Table 4 indicate the multiple regression results which help in testing the validity of the hypotheses. Normally regression coefficients are used as indicators of whether or not the influence of each variable is significant, and the overall contribution of the variables is designated by the variance elucidated (R2)

that also shows the explicatory power of the cost and management accounting practices and ICT adoption. The findings indicate from table 3 that the adjusted R^2 is 27.4% and the F-ratio ($F = 9.122$) is significant. This means that the total predictive power of cost and management accounting and ICT adoption account for 27.4% in financial performance of secondary schools in South Western Uganda. ($R^2 = 0.274$, $p < 0.01$).

The results supported the earlier set three (3) hypotheses in the literature review. The results emphasize that cost and management accounting practices highly influence financial performance of secondary schools. This is indicated by individual predictors in the model such as budgeting, costing, break even analysis and working capital management. Consequently, secondary schools should embrace the use of cost and management accounting techniques so as to have improved profitability as well as liquidity. these findings consistent with Saukkonen et al. (2018).

5.0 Conclusion

The results in this paper have important inferences for both theory and practice. In Uganda, this study would be of particular significance because it informs owners of secondary schools together with head teachers on the impact of cost and management accounting best practices that would overwhelmingly improve financial performance.

The study emphasized the need for optimizing ICT in order for secondary schools to improve their efficiency which in turn leads to increased profitability and liquidity. Given that most secondary schools are trying to recover from the effects of COVID-19, it is imperative to utilize the findings of this study.

The study emphasized that Education is acute to the generation of strong, and enlightened countries, to which Uganda aspires to be. In recent years, Uganda Primary Education (UPE) has procreated large proliferations in the number of students yearning secondary education in Uganda. Private secondary schools have been established to encounter the superfluous demand. Without steadfast cost and management systems to guarantee stable financial performance, the secondary schools must, as any other enterprise throughout the world, become financially autonomous, their survival is in doubt. Thus, Private secondary schools in in Uganda can immeasurably benefit from the study. It should be noted that the current study was only conducted in the districts located in south western Uganda, however, the findings can be generalized in other districts with a lot of caution as the situation in city secondary schools may be quite different.

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