Adoption of Modern Management Accounting Techniques in Small and Medium (SMEs) in Developing Countries: A Case Study of SMEs in Kenya.

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Abstract

Small and Medium scale enterprises (SMEs) play a vital role in economic and social development of developing countries. The critical role of SMEs play in these countries is highly constrained by various forms of knowledge management capital in terms of intellectual capital, structural capital and human capital. Operating at maximum cost efficiency is vital for both survival and enhanced competitiveness since most SMEs in developing countries operate in a crowded and competitive markets. The evaluated the determinants, preference and usage of modern management accounting techniques such as target costing, Activity based costing (ABC), Just in Time method (JIT) as well as other non conventional methods adopted intuitively as an attempt to enhance enterprise efficiency and innovation for better planning and improved product/service pricing.

To achieve the objectives of the study, the researchers conducted a survey. The population of interest was the SMEs stratified in the six pillars of Kenya’s economic blueprint Vision 2030. A sample of 120 respondents was purposively sampled, consisting of entrepreneurs and managers in SMEs. Purposive sampling was adopted to achieve high response rates and to enhance sample representation of the population. A multifaceted data collection approaches consisting of structured questionnaires, ethnographic methods and interview guides were used. The quantitative data was analyzed using Statistical Package for Social Scientists (SPSS).

The findings showed that SMEs in Kenya have intuitively adopted varying management accounting techniques. From the sample, majority of the SMEs are faced with constraints of capital management. On human capital, 85% of the sampled SMEs relies on contract accounts technicians and they rarely subscribe the services of qualified management accountants due to lack of knowledge, perceived difficulties and low compliance levels. There were no recorded attempts to manage intellectual properties though various novel and innovative processes and products were noted. This was attributed to tedious legal requirement and unclear knowledge management practices. Drivers for success and business sustenance were the key internal factor that influences the adoption of management accounting practice. The advent of mobile commerce especially the payment solutions such as MPESA, Airtel Money etc which results to competition and an innovation driven market was attributed as the key external factor for the adoption of prudent management accounting techniques.
Introduction

The SMEs sector has been recognized worldwide for its role in economic advancement through ways various like; wealth generation, employment creation, and poverty reduction (Kithae, Gakure, & Munyao, 2012). Small and medium scale enterprises are a fundamental part of the economic fabric in most developing countries, and they play a very important role in furthering growth, innovation and prosperity (Dalberg, 2011). The European Union gave rise to the term small and medium enterprises (SMEs) in 1996 and defined the term as an organization employing less than two hundred and fifty employees (Commission, 2005). SMEs are defined as non-subsidiary, independent firms which employ fewer than a given number of employees, this number varies across national systems, other parameters other than the number of employees are used in categorizing businesses as SMEs, for instance in the European union SMEs must have an annual turnover of 40 million Euros or less and or a balance sheet valuation not exceeding 27 million Euros (Schreyer, 2000). The Kenyan government micro enterprises session paper number two of the year of 2005 defines a SME as an enterprise with between 1 to 50 employees whereas the World Bank defines an SME as one that fits to either of the following criteria that is to say: A formally registered business with an annual turnover of between Kenya Shillings 8 to 100 million, an asset base of at least Kenya Shillings 4 million and employing between 5 to 150 employees (Moyi & Njiraini, 2005). As per the time of the new millennium SMES accounted for 95% of firms and 60-70% of employment creation in majority countries in the world (OECD, 2000). Small and Medium Scale Enterprises are mostly found in the service sector of various economies which in most countries account for two-thirds of employment levels. In Kenya the SME sector contributes an estimated 18% of the GDP as well as creating employment for 80% of the workforce population (Kithae, et al., 2012). This research paper adopted the working definition by Moyi and Njiraini (Moyi & Njiraini, 2005).
Nurturing of the small to medium size enterprises (SMEs) is being hailed for their pivotal role in promoting grassroots economic growth and equitable sustainable development, this nurturing has resulted in increased entrepreneur activities in the SMEs sector in developing countries (OECD, 2000). SMEs play a key role in transition and developing countries. These firms, constitute a major source of employment and generate significant domestic and export earnings, thus SME development emerges as a key instrument in poverty reduction efforts and their advancement is key to sustained economic growth, for they are an integral part of a country’s economic fabric and their success affects the well being of the society as engines of job creation, economic growth and innovation.

Regardless of the high failure rate by SMEs in Kenya, their enormous contribution to the entire economy cannot be overlooked (Mbogo, 2011). In Kenya, the SMEs play an important role in employment and wealth creation, income distribution, accumulation of technological capabilities and spreading the available resources among a large number of efficient and dynamic small and medium size enterprises (IDRC, 1993).

The SMEs sector acts as the incubating center for emerging entrepreneurial pursuits and thus complementing the process of adjustment in large enterprises by bringing backward and forward linkages for products as well as services previously not available in the market, for the government of Kenya to achieve the intended industrialized middle economy status by the year 2030, commonly referred to as vision 2030 in Kenya (Kithae, et al., 2012). Similar to developing nations, developed nations the SMEs sector encompasses a wide range of businesses, which often differ in their dynamism, technical advance and risk attitude with many being relatively stable in technology and scale and others are more technologically advanced filling crucial product or service niches (Dalberg, 2011). This operational environment that is more dynamic in terms of risk, markets and technological parameters calls for a more efficient oriented business management through innovative planning as well as prudent resource allocation and appraisal systems (Dalberg, 2011). If well utilized, the modern management accounting techniques can provide the firm’s management with the aid to be more efficient in its operations as well as being more effective in its end results.
Statement of the Problem

Most of the existing research literature on accounting in Kenya SMEs tends to be more biased toward the arm of financial accounting, information technology adoption as well as research in credit accessibility for SMEs, more so only remote exists in regard of the adoption of modern management accounting techniques by SMEs in Kenya [(Wairegi, 2011),(Makau, Wawire, & Ofafa, 2013), (Waweru, 2012), (Mugambi, 2010) (Aduda, Mogutu, & Githinji, 2012)] , despite this previous research studies being vital, lack of managerial accounting skills for decision making and lack of technical skills are as much obstacles to developing a small business as is the inability to access credit (Mbogo, 2011). This study thus sought to assess the determining factors and the adoption levels of modern accounting techniques by SMEs in Kenya.

Objective of the Study

i) To evaluate the knowledge levels of management accounting techniques among SMEs sector participants in Kenya and how this affects enterprise growth.

ii) To assess the adoption levels of modern management accounting techniques by SMEs

iii) To evaluate factors hindering and/or enhancing management accounting practices in SMEs in Kenya.

Literature Review

There seems to exist a wide gap between relevant management accounting and it’s fulfillment to managerial needs (Ahmed & Zabri, 2012). This gap is wider in the case of SMEs in developing countries where the management has less or no management accounting knowledge at all. SMEs are found in broad sectors of the Kenyan economy such as; agriculture, manufacturing, construction, transport, hospitality, educational and professional services sectors (Mbogo, 2011).

According to Kaplan (Kaplan, 1984), management accounting must serve the strategic objectives of the firm and it cannot exist as a separate discipline. The study and usage of management accounting practice must be tailored to a firm’s specific objectives and thus cannot be universally applied without regard to the firm’s individual uniqueness. Rapid changes in the business environment coupled by the product diversification and more overhead intensified production by
activities caused rather than volume have caused conventional management techniques to be of less value (Nandan, 2010).

The pace of adoption of modern management accounting techniques has been slow by many organizations, mostly SMEs; this has led to the diminishing relevance of management accounting as a vital aid to managerial decision-making. This gap is commonly referred to as ‘relevance lost” where management accountants have not entirely abandoned concepts of conventional management accounting despite advancements in the firm’s environment (Nandan, 2010). Roles of management accountants have become significant given the importance of various strategic decisions, thus an increasing shift in focus from traditional to modern management accounting techniques in order to fulfill this emerging need for management accounting as an aid to strategic decisions-making.

Management accounting information an analysis is vital in the management of both small and medium scale enterprises, thus as a discipline moving from a passive role as information providers for decision-makers (Kibera, 2000). The trend of this shift has resulted to a range of remarkable innovators in management accounting. This is evident through the adoption of innovative modern management accounting techniques like activity based costing, strategic management accounting, just in time, lifecycle costing and contemporary performance measurement systems such as balance score card. As a result of this new developments some researchers argue that relevant lost may be regained in the near future. This resulting gain seems to be gradually adopted by Kenyan SMEs.

The adoption as well as effectiveness of a particular management accounting technique is resultant from both a combination of various internal factors within the firm as well as external factors that affect the firm. The work of Haldma and Ketu (Haldma & Kertu, 2002) , found that the effectiveness of an accounting systems’ design depends on its ability to adapt to changes both in external circumstances and internal factors not just on its ability to lower real production costs and modernizing cost accounting systems, in effect some changes in cost and management accounting practices are associated with shifts in the business and accounting environment as external contingencies, and with those in technology and organizational aspects as internal contingencies. Timeliness, technology, effectiveness, information needs and an adoption of best
practice are important factors influencing the choice of management accounting practices used (Alleyne & Marshall, 2011).

In his study (Otley, 1980), applied contingency theory to management accounting practices and explained the observation that there is no single generally applicable standard accounting practice that can effectively be applied to all organizations. Each organization will have its own management accounting practices that best suits its conditions, this theory goes further to look at certain influential factors that will assist management to decide on an appropriate management accounting practice, these factors can either be technological changes and the infrastructure of an organization. According to (Sine & Krisch, 2006) management accounting practices differ in organizations as a result of the uniqueness in their operations and environment. Technology has a very significant influence in the choice of a management accounting practice in a firm for instance (Szchta, 2002) found that technology had a significant influence in the adoption of modern management accounting techniques in Polish firms, whereas (AL-Omri & Drury, 2007) found that more sophisticated cost systems were positively associated with the importance of cost information, size, the intensity of competition and the financial sector. In this regard they noted that activity based costing adoption was also associated with the use of other innovative management accounting techniques like lean production and just-in-time in the service sector. Since firms compete on different fronts like, quality, price, reliability on delivery, and customer service there comes a challenge to management accountants to innovate and adapt new methods of management accounting in order to be more relevant on optimal competition fronts. Failure by management accountants to be more adaptive to new effective techniques shall result in other professionals filling the gap and thus in the long-term rendering the management accounting function less relevant (Binnersley, 2008). The method of management accounting adopted should be the most effective to provide the required information from both internal and external environs in a firm. The Australian study by (Birkett, 1989) found that the purpose of management accounting was to “provide management with the necessary key information as quickly and accurately as possible so as to enable appropriate action to be taken in a more timely manner”. According to (Mbogo, 2011) prudent management accounting in aspects like information analyses as well as integrating training level and managerial accounting capabilities
of SME owners and the managers results to a more strong, positive and significant influence on the decision making and consequently are critical for SMEs growth and survival.

Despite various studies indicating relationship between management accounting adoption being in relation with various internal and external contingencies, some studies found no relationship at all between management accounting sophistication and various dynamics in contingency factors, for instance (Luther & Longden, 2001) found no relationship between adaption of new accounting methods and perceived competition in a firm.

**Research methodology**

The study adopted a survey design, whereby the objective was to access the adoption of modern management accounting techniques by SMEs in Kenya, majority of SMEs in Kenya comprise a great reflection and representation of the six strategic pillars sectors that are contained in the Kenyan vision 2030 objective. According to economic blue print namely Kenya Vision 2030 the six business sectors are the ones that are termed as the main sectors that shall help drive Kenya to the status of a globally competitive and prosperous nation with high quality of life by the year 2030 (Planning, 2012). They comprise the six priority sectors that within the medium term plan for the years 2008 to 2012 made the larger part of Kenya’s gross domestic product (57%) and provided for nearly half of the country’s total formal employment, those six pillar sectors include; agriculture, wholesale and retail trade, tourism and hospitality, manufacturing, information technology and financial services (Planning, 2012). A sample of 120 respondents was purposively sampled, consisting of entrepreneurs and managers in SMEs. Purposive sampling was adopted to achieve high response rates and to enhance sample representation of the population. A multifaceted data collection approaches consisting of structured questionnaires, ethnographic methods and interview guides were used. To cater for intra sector heterogeneity mainly caused by environmental differences such as closeness to raw materials, county government focus on given sectors as their core competencies, we drew respondents for each pillar from different counties. In the research where there was no clear distinction of the vision 2030 strata that a given SMEs was, we considered the core business as the basis of classification.
**Selected Findings**

In this section, we present some selected findings of the study.

Based on the literature review on factors influencing the adoption of management accounting techniques, we classified the factors into internal and external factors. The internal factors comprised of: The size of the firm which was an aggregation of various contributing sub-factors such as capitalization level, asset base, number of branches among others; Presence or absence of a well communicated organizational strategy; Perceived critical success factors (due to the diversified nature of the six strata of Kenya Economic Blueprint Vision 2030, Each sector and each SME has critical factors that would determine its overall competitiveness.

The number of years of operations of the firm as a legal entity (Age of the Firm) was evaluated whether it would be a determining factor to the adoption of management accounting techniques. The subsidiary factors noted as other internal factors such as presence of quality control mechanism and knowledge management practices were also included in the survey.

The external factors or the environmental variables included; the level of intra-sector competitiveness i.e. the level and nature of competition in the sector. Raw materials availability where in our context the term raw material indicated tangible and intangible raw materials e.g in tourism subsector raw material may include closeness to animal parks and availability of qualified personnel as input for growth. Access to existing infrastructural network and telecommunication such good road networks, telecommunication and networks was perceived to result to complex business environment e.g. access to broadband internet within the environment increased the market and competition as both the SME and the customers are able a global audience with 24-7 access. On the converse, the access to high data network via optic fiber results to complex management dilemmas as SMEs have to safeguard their data and information resources against global array of challenges such security. Other external factors included county government focus on given economic areas, sector maturity etc.
A likert scale with a range of 5 possible likelihoods was used to measure perception against given factors hence the total score for each factor 600. Ranking was done to indicate the level of importance to the respondents as indicated in Table 1 (Analysis of Factors) below.

<table>
<thead>
<tr>
<th></th>
<th>Total score</th>
<th>Actual score</th>
<th>Percentage score</th>
<th>Standard deviation</th>
<th>Rank</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Internal factors</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Size of the firm</td>
<td>600</td>
<td>545</td>
<td>91%</td>
<td>4.5</td>
<td>3</td>
</tr>
<tr>
<td>Organizational strategy</td>
<td>600</td>
<td>574</td>
<td>96%</td>
<td>4.8</td>
<td>2</td>
</tr>
<tr>
<td>Perceived critical success</td>
<td>600</td>
<td>586</td>
<td>98%</td>
<td>4.9</td>
<td>1</td>
</tr>
<tr>
<td>success factors</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Age of the firm</td>
<td>600</td>
<td>453</td>
<td>76%</td>
<td>3.8</td>
<td>4</td>
</tr>
<tr>
<td>Other internal factors</td>
<td>600</td>
<td>115</td>
<td>19%</td>
<td>0.95</td>
<td>5</td>
</tr>
<tr>
<td><strong>External factors</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Competition</td>
<td>600</td>
<td>588</td>
<td>98%</td>
<td>4.9</td>
<td>1</td>
</tr>
<tr>
<td>Raw materials availability</td>
<td>600</td>
<td>308</td>
<td>51%</td>
<td>2.6</td>
<td>3</td>
</tr>
<tr>
<td>Existing infrastructural network</td>
<td>600</td>
<td>104</td>
<td>17%</td>
<td>0.86</td>
<td>4</td>
</tr>
<tr>
<td>Technological advancement</td>
<td>600</td>
<td>492</td>
<td>82%</td>
<td>4.1</td>
<td>2</td>
</tr>
<tr>
<td>Other external factors</td>
<td>600</td>
<td>56</td>
<td>9.3%</td>
<td>0.47</td>
<td>5</td>
</tr>
</tbody>
</table>

Table 1: Analysis of factors
Based on the descriptive statistics realized from the survey, we derived the array of challenges faced by the SMEs in Kenya. Out of the sample of the respondents, 84% percent of the respondents are faced with Financial challenges such as seed and expansion funds, access to low interest collateral. Regulatory challenges such as tax compliance, statutory deductions and industry controls were highlighted as key challenges to 74% of our respondents. The table below (Table 2: Summary of challenges) shows the summary of challenges faced by SMEs in Kenya.

![Challenges Faced by SMEs in Kenya](chart.png)

**Table 2: Summary of challenges faced by SMEs**

Below is an analysis showing adoption of various management accounting techniques by SMEs in Kenya by sectors in the Vision 2030. It was noted through the ethnographic studies conducted that though the SMEs used some management accounting techniques intuitively; they did not have the theoretical background on the how the techniques work and the ability to compare various techniques in use. The table 3 below (Analysis of various Management techniques).
<table>
<thead>
<tr>
<th>Method of management accounting</th>
<th>Total number of firms applying the method</th>
<th>Percentage of total number of firms utilizing method from entire sampling</th>
<th>Number of respondents adopting management accounting technique (categorized with regards to vision 2030 industry categorization)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Traditional methods</td>
<td>72</td>
<td>60%</td>
<td>Agriculture: 26, Wholesale and retail trade: 21, Tourism and hospitality: 6, Manufacturing: 13, Information technology: 3, Financial services: 3</td>
</tr>
<tr>
<td>Just in time (JIT) method</td>
<td>16</td>
<td>13.3%</td>
<td>Agriculture: 3, Wholesale and retail trade: 0, Tourism and hospitality: 12, Manufacturing: 0, Information technology: 0, Financial services: 1</td>
</tr>
<tr>
<td>Target costing</td>
<td>23</td>
<td>19.2%</td>
<td>Agriculture: 1, Wholesale and retail trade: 1, Tourism and hospitality: 3, Manufacturing: 18, Information technology: 0, Financial services: 0</td>
</tr>
<tr>
<td>Life cycle costing</td>
<td>3</td>
<td>2.5%</td>
<td>Agriculture: 1, Wholesale and retail trade: 0, Tourism and hospitality: 0, Manufacturing: 2, Information technology: 0, Financial services: 0</td>
</tr>
<tr>
<td>Activity based costing method</td>
<td>5</td>
<td>4.1%</td>
<td>Agriculture: 0, Wholesale and retail trade: 2, Tourism and hospitality: 0, Manufacturing: 3, Information technology: 0, Financial services: 0</td>
</tr>
<tr>
<td>Other methods</td>
<td>1</td>
<td>1.0%</td>
<td>Agriculture: 0, Wholesale and retail trade: 0, Tourism and hospitality: 0, Manufacturing: 0, Information technology: 1, Financial services: 0</td>
</tr>
</tbody>
</table>

Table 3: Analysis of various Management techniques
Conclusions and Areas of further Research

The study begins with a general overview of the SMEs and operational definitions of SMEs. A brief and exploratory literature review on management accounting techniques and the domain of operations was conducted. The review unearthed various parameters to be considered as factors influencing the adoption of management accounting techniques, the viability and application of the techniques within various environments. Following an assessment through the study we confer that the use of modern management accounting techniques is still low in use and undocumented in SMEs developing countries yet this SMEs are the social and economic drivers of the target economies. We suggest research be undertaken for determining:

a) Intra sector Comparative effectiveness of the specific modern management accounting technique in developing economies.

b) Role of industry regulators such as Accounting professional bodies in the growth of SMEs in devolved governments and context of emerging economies.
REFERENCES


