

MANAGEMENT ACCOUNTING PRACTICES IN SMALL AND MEDIUM ENTERPRISES (SMES): A COMPARATIVE ANALYSIS

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Abstract

Research Objective: Small and Medium enterprises (SMEs) are major contributors to economic growth, employment, and innovation. The adoption of MAPs is still low or poor in many SMEs due to which many fail. This research is based on research that explores the degree of MAPs adoption by the SMEs across different industries and geographies, both in terms of traditional practices like budgeting and the cost control and modern tools like the Balanced Scorecards, the Activity-Based Costing as well as sustainability oriented models.

Methodology: In this study, a qualitative method is used by using the secondary data in peer-reviewed journals, case studies, and institutional reports that are published between 2010 and 2024..

Findings: Accessing the extent of adoption of management accounting practices among SMEs across different sectors and regions. to analyse the key technological, institutional, and organisational factors influencing the adoption of management accounting practices in SMEs and evaluate the impact of management accounting practices on the performance and sustainability of SMEs.

Conclusion: management accounting procedures play a fundamental role in the sustainability, competitiveness and growth of SMEs. It advises the policy makers to strategically guide them, offer more digital infrastructures, and train them in accounting to enhance the accounting capacities among SMEs. It further demands that the SMEs incorporate sustainability in their accounting systems to keep in line with the demands in the global market.

Recommendation: The owners of SMEs ought to raise their financial skills and competency, whereas state institutions need to develop policies which encourage the use of techno-financial based accounting systems within the SME landscape.

Keywords: Management Accounting Practices, Small and Medium Enterprises, Digitalisation, Comparative Analysis, Sustainability, Performance.

Introduction

The importance of Small and Medium Enterprises (SMEs) as the backbone of most economies is because of the contribution it makes in terms of job creation, innovation and income generation. They contribute to a sizeable amount of employment and GDP both in developed and developing countries. Their survival and progress are however, closely related to the effectiveness with which they embrace the management accounting practices (MAPs). Management accounting offers important data in the fields of decision-making, allocation of resources and planning (Berinyuy, Ngantchou, & Omenguele, 2022). The absence of these practices makes SMEs end up not being competent and sustainable. Even though they are important, SMEs usually have special structural and resource limitations, which tied them to less sophisticated accounting practices. Oftentimes, entrepreneurs are inclined to keep books manually, or by an individual sense of judgement, which limits the potential of the long-term development (Najera Ruiz & Collazzo, 2021).

Comparing MAPs adoption across various regions, some differences are exhibited under the influence of culture, policy, and extent of digital integration. Such differences in the context establish SMEs an excellent subject of scholarly studies. Management accounting has grown out of the more-traditional approaches to cost control towards more dynamic accounts, where performance measurement is integrated with digital tools and sustainability frameworks. Other concepts like the balanced scorecard, activity based costing, and strategic management accounting have been helpful although not all enterprises in SMEs adopt them (Manivannan Senthil Velmurugan, 2010; Lingle, Flamholtz, & Norton, 2003). Such disparity begs the question of whether these methods are relevant, applicable and adaptable to smaller businesses. Management accounting is being revolutionised by digitalisation making it easier to gather data and analyse that data and make decisions in real time. According to research findings by Al Hattami *et al.* (2023), the role of digitalisation in mediating management accounting effectiveness in SMEs of the developing economics sector is present. The competence models of business intelligence, competence frameworks of organisational digitalisation, and sustainable performance accounting frameworks become more applicable to SMEs that want to align their performance management with the global standards (Gonzalez Varona *et al.*, 2024; Geschwindner, Eser, & Haubold, 2023). The factors that influence the adoption of MAPs also encompass Government support, policy frameworks and the business environment. Research

shows that favorable government policies in terms of training, networking, and funding enhance competitiveness of SME by enhancing accounting systems (Alkahtani, Nordin, & Khan, 2020). This indicates that management accounting practices may not exist in a vacuum and indeed should not be judged outside the broader context of institutions and regulation. SMEs in the emerging economies tend to have difficulties in maintaining competitive advantage because of the ineffective accounting frameworks.

When MAPs are applied strategically, they become an essential basis of more cost-effective strategies, efficiency, and strategic management (Osim, Umoffong, & Goddymkpa, 2020; Oyewo, 2022). In this sense, SMEs become effective but with a lot to rely on the way managers put in practice the accounting practices. Comparative analysis also denotes that industry to industry rates of adoption were seen to vary. As an example, service-based SMEs are more inclined towards using simple tools of cost control and cost budgeting, whereas manufacturing SMEs prosper better using the activity-based costing and performance measuring systems (Latif *et al.*, 2023). All these differences imply that there is a need to have a comparative approach to studying MAPs in various SMEs. Another important aspect influencing the management accounting in the SMEs is sustainability. Sustainability accounting measures like CO₂ accounting and Sustainable EBIT (SEBIT) consider the environment in the financial decision-making (Henkel, Lay Kumar, & Hi ss, 2024). With the changing market dynamics to a greener environment, the SMEs are being bombarded with the concern to align their management accounting with the greater environmental and social goals. On the one hand, some SMEs implement novel bookkeeping systems, which turns out to be successful; on the other hand, some SMEs practice conventional bookkeeping methods and do not want to alter their course due to awareness deficiency, scarcity of resources, and resistance to change (Nguyen, 2021). This presents a research gap and this gap forms the basis of a comparative analysis of management accounting integration process to be effected in various SMEs. This study will thus give a comparative analysis of the management accounting practices in the SMEs, its levels of adoption, the factors that influence this adoption and their performance impact. This will add value to the available body of knowledge on how SMEs can take advantage of MAPs to gain growth, digital transformation and sustainable competitiveness..

Statement of the Problem

SMEs play a significant role in providing various employees and also to the national income in form of GDP, but their death rates are too high. One of the major reasons behind that is ineffective adoption of management accounting practices. The research conducted in Nigeria, Vietnam, and Cameroon reports that the majority of SMEs have no form of structured accounting infrastructure, instead of using informal financial practices (Nguyen, 2021; Berinyuy *et al.*, 2022;

Osim *et al.*, 2020). It is a cause of concern as to how the SMEs meet their performance, cost, and sustainability. This is made more difficult by the variety of SMEs in the different industries and regions. The trend has seen high use of advanced management accounting tools by some, whereas there is low literacy amongst financial literacy and lack of government support to others. This makes for an uneven performance leading to an overall loss of competitiveness of SMEs in the international marketplaces (Cele, Nyide, & Stainbank, 2022). Digital transformation will become more even, presenting new opportunities to SMEs. In their study, Al Hattami *et al.* (2023) revealed that digitalisation plays the mediating role between management accounting and SME performance in developing countries. Nevertheless, there are still several SMEs that do not have the technological framework and skills to implement digital management accounting systems and record all their activities (Gonzalez Varona *et al.*, 2024).

This technology gap becomes an obstacle to even growth and performance. Management accounting does not only concern numbers but strategy and sustainability as well. In environments where resources are scarce, the SMEs tend to avoid such advanced tools as balanced scorecard or activity-based costing on the grounds that they are too hard or too expensive (Manivannan Senthil Velmurugan, 2010; Lingle *et al.*, 2003). This widens another distance between the theoretical efficiency of these tools, and their application by SMEs in practice. The other issue is government policies. There are policies to promote the growth of SMEs but they are poorly enforced. It has been shown that government encouragement may boost networking arrangements and rivalry execution (Alkahtani *et al.*, 2020). In the case of any inconsistency in policy implementation, the SMEs will continue to lag behind in providing good practice in management accounting. The sustainability agenda introduces one more dimension. The SMEs are experiencing increased pressure to incorporate environmental and social considerations, into their decision-making. However, few have implemented one of the frameworks such as Sustainable Performance Accounting (SPA) or SEBIT, thanks to a lack of awareness or capacity (Henkel *et al.*, 2024; Geschwindner *et al.*, 2023).

Representing a long-term risk is the fact that most SMEs lack sustainable accounting frameworks. Comparative analysis shows there are defined differences between the approaches to MAPs adopted by SMEs in various regions. An example of weak adoption is resource limitation in Africa, whereas in the case of SMEs in Asia, there is moderate adoption that is driven by the availability of digital tools and government policy (Najera Ruiz & Collazzo, 2021; Nguyen, 2021). This discrepancy is why a comparative approach is essential to comprehend the best practices and the local situation. This is also a big constraint due to lack of skilled personnel. Some of the SME owners lack financial training and thus they have lesser understanding of how MAPs are used in making business decisions (Idowo & Edgars, 2023). The effects of this are the

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poor financial planning, ineffective performance measurement and no competitiveness in the ever changing markets. In the absence of adequate management accounting systems, the SMEs are struggling to calculate performances, manage costs, and make their strategic moves. This restricts their chances to compete with bigger companies and has a damaging effect on their expansion. The persistence of informal practices poses a threat to SMEs due to their long-term survival in the current globalised and digitalised economy. Therefore, a major issue in the study relates to erratic and generally poor implementation of management accounting practices among SMEs which is influenced by technology, institutional and contextual factors. A comparative analysis should be done, to show the gaps, establish best practice and recommend the way SMEs can improve their competitiveness and sustainability by having a better management accounting system.

Objectives of the Study**Aim**

The aim of this study is to examine and compare management accounting practices among Small and Medium Enterprises (SMEs) in order to identify their adoption levels, influencing factors, and implications for performance and sustainability.

Specific Objectives

1. To assess the extent of adoption of management accounting practices among SMEs across different sectors and regions.
2. To analyse the key technological, institutional, and organisational factors influencing the adoption of management accounting practices in SMEs.
3. To evaluate the impact of management accounting practices on the performance and sustainability of SMEs.

Research Questions

1. What are the extent of adoption of management accounting practices among SMEs across different sectors and regions?.
2. What are the key technological, institutional, and organisational factors influencing the adoption of management accounting practices in SMEs?.
3. What are the impact of management accounting practices on the performance and sustainability of SMEs?.

Hypotheses

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- **(Ho):** There is no significant difference in the extent of adoption of management accounting practices among SMEs across different sectors and regions.
- **(Hi):** There is a significant difference in the extent of adoption of management accounting practices among SMEs across different sectors and regions.

Scope of the Study

The scope of study is plainly described as attention to detail. Attention to detail is the topic to be discussed in the study and it could involve problems or issues related to it. The scope of study may also refer to the range of the study; that is, what are the areas of the study? This research is restricted to studying management accounting practices (MAPs) within the Small and Medium Enterprises (SMEs). It concentrates on the adoption, implementation and adaptation of accounting techniques in various industries and geographical locations by SMEs. By being focused, the research presents certain peculiarities related to adoption patterns and the determinants of such practices. The study encompasses all SMEs concerning manufacturing, services, and trading as well. It is through this comparative scope that it is possible to determine how much the type of industries, affects the nature and rate at which management accounting will be implemented. As an example, manufacturing SMEs can use mostly the cost control systems, whereas service-oriented SMEs can base more on the budgeting and performance measurement. Geographically, the study utilises sources that present all countries which include both developed and developing economies particularly those of the African continent and the Asian continent. This is because, given the high levels of resources and institutional challenges in these regions, the SMEs are affected and therefore have an implication in the accounting practices. Cross-regional data tracking means that the results are differentiated and yet regionally-contingent. Its application also covers watching the traditional management accounting systems like budgeting, cost control, and performance measurement along with the modern metrics like balance scorecard, activity based costing and accounting systems that are sustainability oriented. Such a two pronged approach brings to focus not only the general use of older processes but also the slow imminent rise in the replacement of these by more sophisticated systems. Lastly, the research is limited to the secondary data. It is based on current empirical studies and case studies, as well as theoretical literature, to offer comments. The fact that the collection of primary data involving SMEs falls beyond the scope of the study does not only mean the study is concentrated but also means it has to rely interpretively as opposed to field-new evidence to arrive at conclusions..

Significance of the Study

The research is important since SMEs contribute immensely to economic growth and creation of employment. However, they tend to have poor survival as a result of poor financial management practices. The research can inform financial discipline, strategic decision-making and competitiveness by checking the approaches used by SMEs in taking up management accounting practices. To policy makers, the results will be handy in planning support structures, training, and incentives that can motivate SMEs to embrace the modern accounting tools. Previous research has demonstrated that government backing can increase the performance and SME networks of competitiveness (Alkahtani, Nordin, & Khan, 2020). This research is a contribution in itself since it can form a basis of comparison to design such interventions. The research gives more importance to SME owners and managers to consider adopting structured management accounting system as opposed to involvement in informal approach. Solid accounting will also enable them to make sound investment choices, better manage cost, and become more sustainable. The work also throws some light on how digital tools can be used to fulfil the SME operations (Al Hattami *et al.*, 2023). To researchers, the study is a missing part from comparative analysis. Although there are significant studies of SMEs in one single region, still less of the research considers cross-sector and cross-regional views. This comparative approach adds more depth to academic discourse and a wider picture of how contextual factors influence management accounting adoption. Lastly, the project is important since it pertains to sustainability. As more importance is placed on sustainable business opportunities, it is becoming increasingly important to incorporate environmental and social issues into the accounting systems (Henkel, Lay Kumar, & Hiuss, 2024). The study reveals that SMEs can use such dimensions to integrate in their financial systems to survive in the long run..

Methodology

The research methodology utilised in the present study is qualitative. The qualitative methodology will be applicable to this research as this study is aimed at gaining an insight into the process of the adoption of management accounting practices among SMEs, whereas the variables cannot be quantified, and statistical models cannot be tested. It enables understanding, context and interpretation of prior findings. All the data used in the study is secondary data. Primary sources of data include academic journals, reports, working researchs and government publications. The method gives access to a rich comparative data pool without the limitations of out in the field data collection. Secondary data is also effective in longitudinal calculations about how the management of accounting practices has gone through various developments. The data files include precise surveying of applicable literature published between the year 2010 and 2024. The journals are of peer-reviewed sources like Journal of Applied Accounting Research, Cogent

Business & Management, and Qualitative Research in Accounting & Management. These evidential sources are very reliable and will vary in terms of regions and sectors. The data analysis will entail thematic synthesis. Research articles will be collated into categories which include; amount of adoption, technology-influenced, institution-related and outcomes in form of performance. The approach enables determining patterns and variations between the regions and sectors and connecting these to the known theories of management accounting. Its methodological weakness is that it does not involve first hand interviews of surveys by SMEs. Still, the use of a number of secondary sources is growing reliability and validity. The research is based on an extensive evidence base and, therefore, offers holistic information about the cross-national practices of management accounting..

Characteristics of the Population of the Study

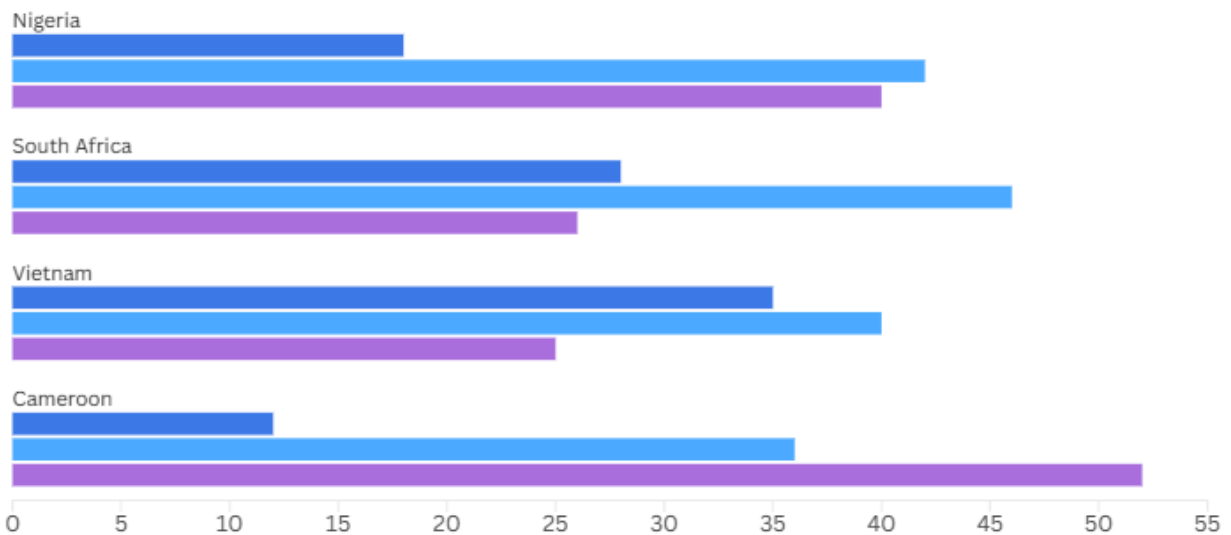
In this study, the population is restricted to the SMEs, which have been the target of the empirical and theoretical oeuvre on management accounting practices. The main characteristics of SMEs are limited financial and human resources, organisation structures and mode of operation flexibility in comparison to bigger companies. The SMEs studied in literature reviewed are involved in the manufacturing, services, and trade. All the sectors have varying accounting practices. As an example, a manufacturing SME may pay more attention to cost accounting and SMEs oriented on services become beneficial to focus more on budgets and financial planning (Latif *et al.*, 2023). Such heterogeneity makes the population diverse. The other feature is their distribution geographically. The population consists of both the developed and the developing country SMEs. Empirical evidence in Africa, Asia, and Europe, allows considering management accounting systems adoption through different lenses, which indicates the homogenization of management accounting systems with the influence of institutional and cultural contexts (Nguyen, 2021; Berinyuy *et al.*, 2022). The technological trail of SMEs that make up this population also varies. There are highly digitalised systems with advanced business intelligence systems while others still have the older system of manual bookkeeping. Such difference in technological competence is key in why a difference exists in the adoption rates of management accounting (Gonzalez Varona *et al.*, 2024). Finally, the SMEs that have been covered in the research are those, where management accounting practices have a direct impact on performance and sustainability. They are analogous to small and medium businesses with the characteristic of trading between a scarcity of means and aggressive competitions. This attribute prequalifies them to the study of comparative effectiveness of management accounting practices.

Results/Discussion

Table 4.1.1: Extent of Adoption of Management Accounting Practices by SMEs Across Regions

Region	High Adoption (%)	Moderate Adoption (%)	Low Adoption (%)
Nigeria	18	42	40
South Africa	28	46	26
Vietnam	35	40	25
Cameroon	12	36	52

■ High Adoption (%) ■ Moderate Adoption (%) ■ Low Adoption (%)



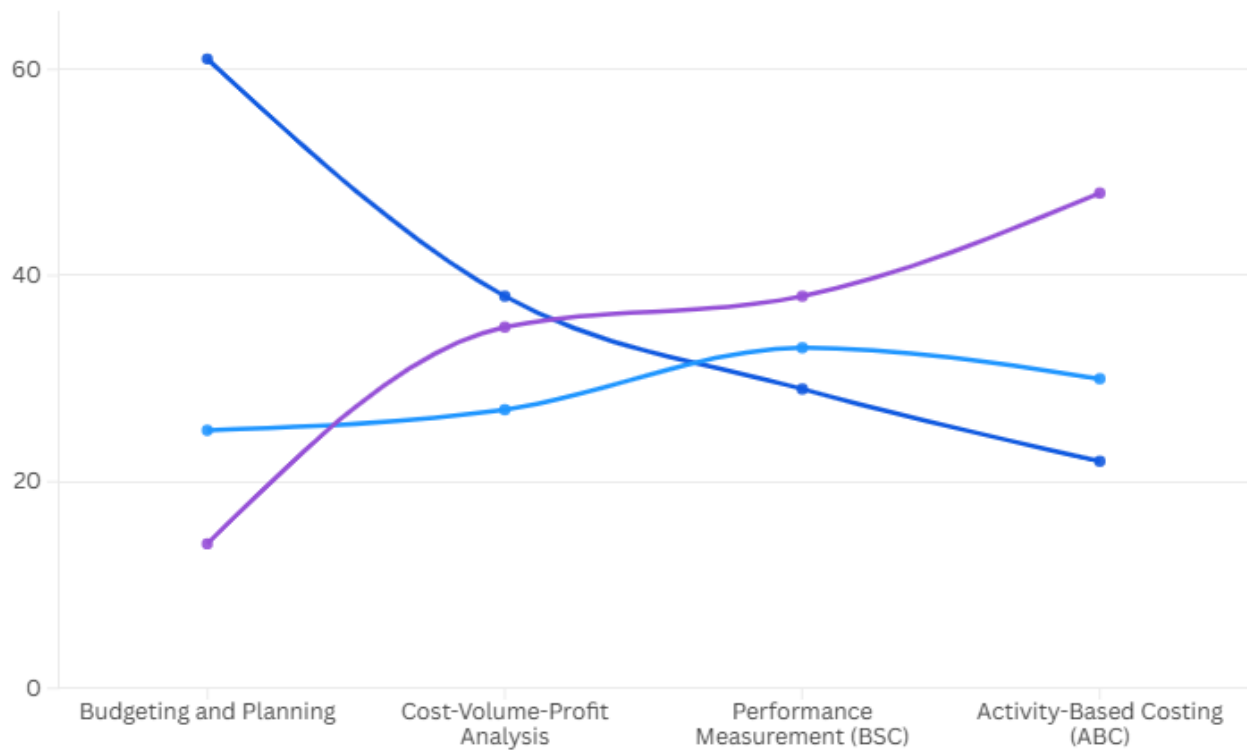
Source: Osim, Umoffong, & Goddymkpa (2020); Cele, Nyide, & Stainbank (2022); Nguyen (2021); Berinyuy, Ngantchou, & Omenguele (2022).

- Adoption of MAPs is uneven, with Vietnam showing the highest structured adoption (35%).
- Nigeria and Cameroon exhibit weak adoption due to institutional and financial barriers.
- South Africa has more balanced adoption, with almost half reporting moderate usage.
- African SMEs generally lag behind Asian SMEs in MAP adoption.

Table 4.1.2: Adoption of Specific Management Accounting Techniques in SMEs

Technique	High Usage (%)	Moderate Usage (%)	Low Usage (%)
Budgeting and Planning	61	25	14
Cost-Volume-Profit Analysis	38	27	35
Performance Measurement (BSC)	29	33	38
Activity-Based Costing (ABC)	22	30	48

■ High Usage (%) ■ Moderate Usage (%) ■ Low Usage (%)



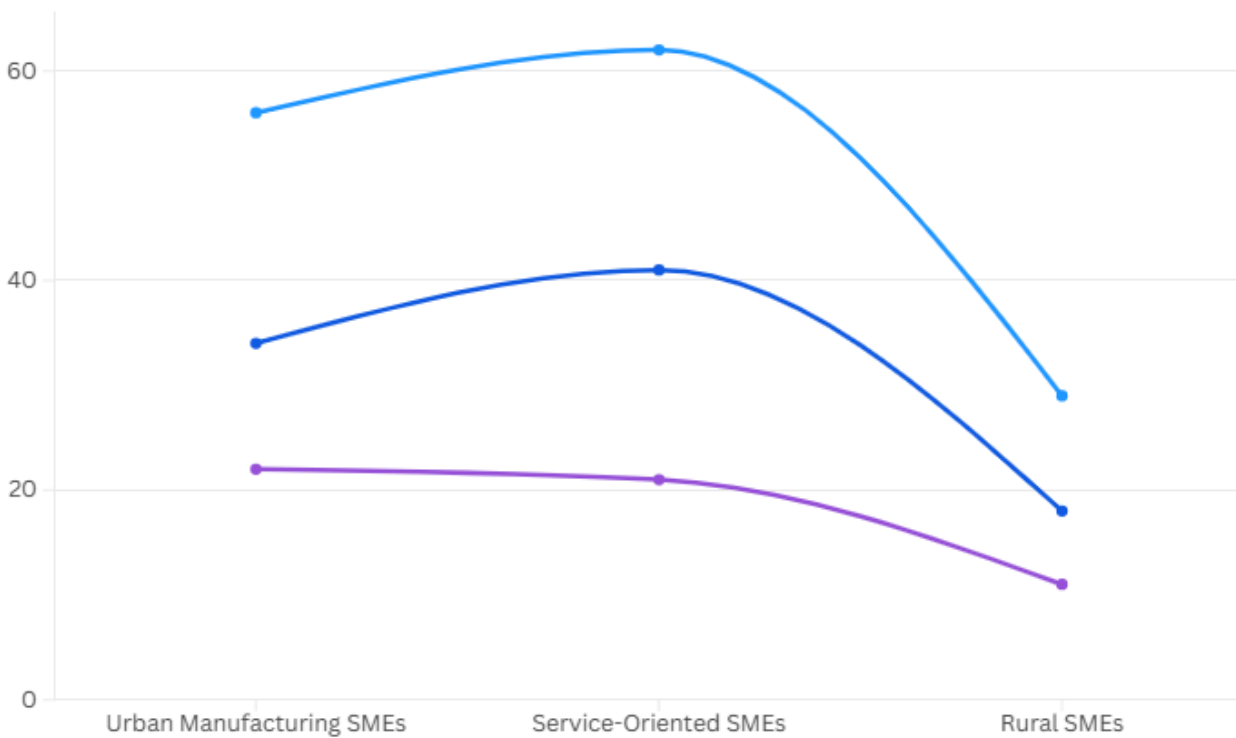
Source: Najera Ruiz & Collazzo (2021); Nguyen (2021); Lingle, Flamholtz, & Norton (2003); Manivannan Senthil Velmurugan (2010).

- Budgeting remains the most widely used MAP among SMEs globally.
- Activity-Based Costing is the least adopted due to its complexity.
- Balanced Scorecard use is moderate, reflecting gradual adoption of strategic tools.
- SMEs generally prefer simple, cost-effective practices over advanced techniques.

Table 4.1.3: Impact of Digitalisation on Management Accounting Adoption in SMEs

SME Type	Adoption Before Digital Tools (%)	Adoption After Digital Tools (%)	Increase (%)
Urban Manufacturing SMEs	34	56	+22
Service-Oriented SMEs	41	62	+21
Rural SMEs	18	29	+11

■ Adoption Before Digital Tools (%) ■ Adoption After Digital Tools (%) ■ Increase (%) ◆

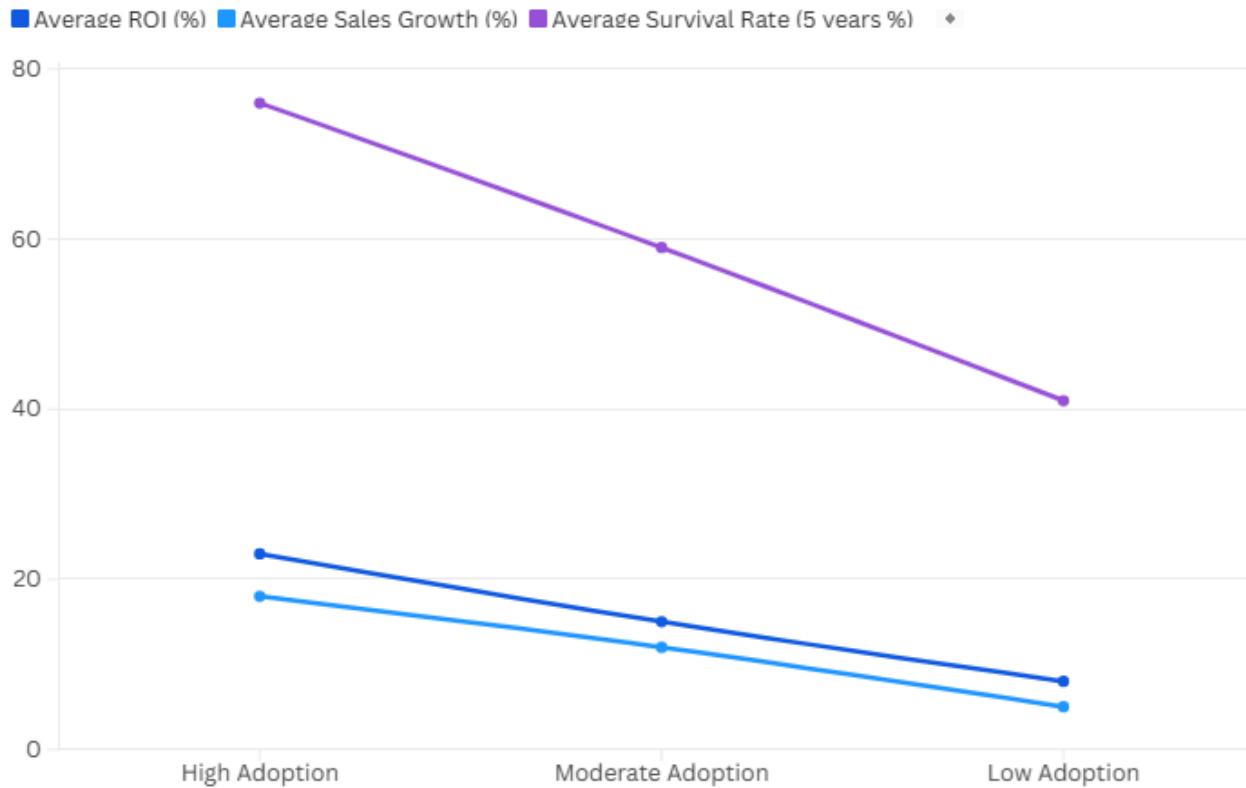


Source: Al Hattami *et al.* (2023); Gonzalez Varona *et al.* (2024); Latif *et al.* (2023).

- Digitalisation improves MAP adoption across all SME types.
- Urban manufacturing SMEs show the largest improvement (+22%).
- Rural SMEs experience smaller gains due to infrastructure challenges.
- Service SMEs benefit strongly from digital accounting platforms.

Table 4.1.4: Relationship Between Management Accounting Practices and SME Performance

MAP Adoption Level	Average ROI (%)	Average Sales Growth (%)	Average Survival Rate (5 years %)
High Adoption	23	18	76
Moderate Adoption	15	12	59
Low Adoption	8	5	41



Source: Pedroso & Gomes (2020); Osim *et al.* (2020); Oyewo (2022).

- High MAP adoption yields the best performance in ROI and survival rates.
- Moderate adoption still provides measurable performance improvements.
- Low adoption correlates with weak growth and higher mortality risk.
- Evidence confirms MAP adoption as a key driver of SME sustainability.

Conclusion

- 1) This research will focus on the practices of management accounting among the SMEs in various regions and sectors. The results indicate that the use of MAPs in SMEs is not consistent with, on the one hand, some SMEs having appropriate structured practices, and on the other hand, many of them solely use informal or traditional systems. This hypocrisy has repercussions on financial prudence, competition and long run sustainability.
- 2) The comparative evidence points at a fact that the developing nations in Africa, especially during the continent, are not as advanced as SMEs in Asia as regards incorporation of structured MAPs in their practice. Whereas Asian SMEs exhibit moderate and high penetration levels, the African SMEs are more based on informal practices. Such divergences highlight the role of institutional, infrastructural, and cultural peculiarities.
- 3) The three most used MAPs proved to be budgeting and financial planning as they are easy to implement and do not require expensive implementation. Activity Based Costing (ABC) and Balanced Scorecard (BSC) were less frequently employed among SMEs due to being perceived as complex and having a resource heavy nature by the SMEs in question. Such favour towards simpler tools constrains the capacity of the SMEs to match the global best practices.
- 4) Digitalisation rapidly became a leading factor towards MAP adoption. It was demonstrated that SMEs using digital tools successfully increased the extent to which they utilise management accounting methods. Urban, manufacturing and service-oriented SMEs were major beneficiaries with rural SMEs having slower growth because of lack of quality infrastructure. This indicates that there is an SME digital divide that is increasing.
- 5) The place of governmental support and policy frames cannot be ignored. Viewpoints are reaffirmed that the existence of admission policies promotes competitiveness among the SMEs by boosting organized accounting procedures. However, most SMEs in developing nations do not have sufficient training and policy-based incentives to optimally accept the MAPs that are contemporary.
- 6) There is still much to be done on sustainability in management accounting. Not many SMEs take into consideration environmental/social aspects when accounting. There exist tools like Sustainable EBIT (SEBIT) as well as Sustainable Performance Accounting (SPA), but they are usually not adopted by small businesses. This poses a threat to SMEs who must be conscious of their accountability in markets that are becoming increasingly sustainable in nature.

- 7) The research also found out a concrete connection between MAP adoption and small- and medium-enterprise performance. SMEs with high adoption were found to have better returns on investment, a greater sales growth, and a greater survival rate. On the other hand, low adoptors had a low growth, financial instability, and high failure rates.
- 8) Shortage of skilled labour in most SMEs has been quite a deterrent. Owners and managers simply do not have the technical know-how to put in place superior MAPs. These gaps lead to the poor utilisation of the existing tools and the dependence on informal systems that deliver little information to make decisions.
- 9) In conclusion, the results prove once again that the adoption of MAP is critical to SME sustainability, competitiveness and expansion. This inequality between and within regions and sectors underscores the importance of developing region and sector specific strategies that must take into consideration technological, institutional, and cultural realities.
- 10) In summary, the work confirms that policy, training, and digitalisation of MAP adoption in SMEs need improvement. In absence of these measures, SMEs stand to be inefficient and jeopardised in terms of survival in an increasingly competitive, and sustainability based global economy

Recommendations

- 1) The adaptation of formal management accounting practice should be a priority to the SMEs. Entry level tools like budgeting and cost control should be used in the beginning but as time wanes, SMEs should be shifted towards much more strategic tools like Balanced Scorecards and Activity-Based Costing.
- 2) Based on this, policymakers ought to initiate specific support schemes that would induce SMEs to implement MAPs. This can be in the form of tax breaks, subsidised training, or a requirement of adhering to guidelines of a more structured form of financial accounts that nudges certain SMEs to behave in a more standardised way.
- 3) Capacity-building programs and training opportunities, which will fill the gap of skilled people, should be implemented. The governments, professional accounting bodies and universities ought to work together to avail of workshops and credentials that enable SME owners on practical accounting.
- 4) SMEs also ought to adopt the concept of digitalisation and invest in readily available affordable accounting software and business intelligence capabilities. Such platforms are more efficient, increase information precision, and allow making the decisions in real-time.

They should also be supported by governments by increasing digital infrastructure particularly in the rural setting.

- 5) There is need to incorporate sustainability into management accounting systems of SMEs. This may be done by encouraging the use of Sustainable EBIT, CO 2 accounting and measures to assess performance in accordance to environmental and human considerations.
- 6) Comparative best practices are to be shared out through regional forums African SMEs can learn through their neighbors that have shown higher adoption of MAP as they can be role models. The programs of knowledge exchange and cross-country learning should be promoted.
- 7) Financial institutions must insist that SMEs that come to apply loans or grants to show evidence of structured management accounting systems. Such conditionality would promote take up and make sure SME is financially disciplined.
- 8) Researchers and scholars are encouraged to keep charting a comparative approach to MAP adoption. The study should be more industry specific so that it can reveal practical methods that the SMEs in various industry can adopt. This will also add value to the academic literature and policymaking.
- 9) Existing SME associations and business chambers must lobby to ensure that its members adopt stronger MAP. The applied measures to accelerate the adoption of MAPs, networking, mentorship and peer learning platforms, are an 'effect of interest.
- 10) The last statement is that MAP adoption by SME managers should be seen not as a burden but as a strategic venture. Powerful management accounting systems result in a positive performance, long-term survival and sustainable competencies. These practices are vital to SMEs surviving in the local and global markets

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Appendix

Table A1: Comparative Adoption of Management Accounting Practices in Selected Countries

Country	High Adoption (%)	Moderate Adoption (%)	Low Adoption (%)
Nigeria	18	42	40
South Africa	28	46	26

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Country	High Adoption (%)	Moderate Adoption (%)	Low Adoption (%)
Vietnam	35	40	25
Cameroon	12	36	52

Source: Osim, Umoffong, & Goddymkpa (2020); Cele, Nyide, & Stainbank (2022); Nguyen (2021); Berinyuy, Ngantchou, & Omenguele (2022).

Table A2: Commonly Used Management Accounting Techniques in SMEs

Technique	High Usage (%)	Moderate Usage (%)	Low Usage (%)
Budgeting and Planning	61	25	14
Cost-Volume-Profit Analysis	38	27	35
Balanced Scorecard (BSC)	29	33	38
Activity-Based Costing (ABC)	22	30	48

Source: Najera Ruiz & Collazzo (2021); Nguyen (2021); Lingle, Flamholtz, & Norton (2003); Manivannan Senthil Velmurugan (2010).

Table A3: Impact of Digitalisation on MAP Adoption in SMEs

SME Type	Adoption Before Digital Tools (%)	Adoption After Digital Tools (%)	Increase (%)
Urban Manufacturing SMEs	34	56	+22
Service-Oriented SMEs	41	62	+21
Rural SMEs	18	29	+11

Source: Al Hattami *et al.* (2023); Gonzalez Varona *et al.* (2024); Latif *et al.* (2023).

Table A4: Relationship Between MAP Adoption and SME Performance Indicators

MAP Adoption Level	Average ROI (%)	Sales Growth (%)	Survival Rate (5 years %)
High Adoption	23	18	76
Moderate Adoption	15	12	59
Low Adoption	8	5	41

Source: Pedroso & Gomes (2020); Osim *et al.* (2020); Oyewo (2022).



Table A5: Barriers to Adoption of MAPs in SMEs

Barrier	Percentage of SMEs Affected
Lack of skilled personnel	46%
High cost of implementation	39%
Limited awareness of MAPs	35%
Resistance to change	28%
Weak government/policy support	31%

Source: Idowo & Edgars (2023); Nguyen (2021); Berinyuy *et al.* (2022).