

# Use of management accounting practices and factors affecting its use: A survey of small and medium-sized enterprises in Durban



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**Orientation:** The sustainability of small and medium-sized enterprises (SMEs) in South Africa is important, mainly because of their contribution to the gross domestic product (GDP) and their creation of work opportunities. The high rate of SME failure in South Africa is largely attributable to the lack of management skills by their owners and managers.

**Research purpose:** The objective of the study was to examine owners and managers of Durban SMEs' perceptions of the use of management accounting practices (MAPs) and the factors affecting its use. In addition, the challenges faced by SMEs were also investigated.

**Motivation for the study:** Although the use of MAPs has been investigated in other parts of South Africa, research on Durban SMEs' use of MAPs and factors affecting its use is lacking in KwaZulu-Natal, which is an important contributor to South Africa's GDP. If MAPs are not being used, what strategies could be recommended to advance their use? This important question provided further motivation for this study.

**Research approach/design and method:** The research adopted a quantitative approach in the form of a self-administered questionnaire, which was e-mailed to SMEs.

**Main findings:** Management accounting practices were perceived to be used mainly in assisting planning and in assessing business performance. Factors affecting the use of MAPs were the lack of management accounting knowledge and education and skills. Challenges faced by SMEs were identified as being mainly financial and human resource challenges. Small and medium-sized enterprise owners and managers supported the recommendation that they should go for management accounting training.

**Practical/managerial implications:** The study recommended that SMEs' owners and managers should attend management accounting training. Bodies such as government agencies or educational institutions should ensure that training aimed at SMEs is offered.

**Contribution/value-add:** The study provides new information about the perceptions of owners and managers of SMEs on the use of MAPs, factors affecting its use of MAPs and other challenges. It further provides impetus for the need to provide management accounting training aimed at SMEs

**Keywords:** management accounting practices; small and medium-sized entities; use; challenges; Durban; KwaZulu-Natal.

## Introduction

Small and medium-sized enterprises (SMEs) account for an overwhelming number of businesses worldwide and they contribute considerably to gross domestic product (GDP), employment and growth (Rundora & Selesho 2014). Van Scheers and Makhitha (2016:243) argued that 'SMEs play a vital role in stimulating economic activity, job creation and poverty alleviation' and in the raising of living standards. Management accounting tools may assist managers and owners of businesses by providing information for decision-making through clear target and objective setting, which may lead to improved financial performance (Matambele 2014).

In South Africa, Berry (2011) argued that traditional budgeting, variances, better budgeting and modern management accounting systems such as just-in-time, balanced scorecard, theory of constraints and total quality management supported planning and control in SMEs. However, Berry's (2011) study revealed that modern management accounting systems are not often used by manufacturing SMEs; however, these practices could be helpful to their survival. Mbogo (2011)

observed that similar to large firms, SMEs also require sophisticated management accounting techniques and systems to manage scarce resources. Matambele (2014) claimed that management accounting has an important role in the decision-making processes of a business and that this may determine its success or failure. Van der Poll (2015:1) agreed stating that 'management accounting improves the decision-making process as it communicates decision-relevant insight and analysis to every decision-maker'.

Small and medium-sized enterprises are central to South African economic development (Agbenyegah 2013; Berry 2011; Sharmilee 2014). However, South African SMEs have a high failure rate (Aren & Sibindi 2014). Nandan (2010) suggested that the high failure rate and underperformance of SMEs is often because of SMEs' failure to utilise appropriate management accounting techniques. Most SMEs fail within 2 years of start-up as they lack the necessary managerial skills to sustain their businesses (Govender 2014). Mbogo (2011) observed that the lack of management accounting skills for the decision-making process and the lack of technical skills are as detrimental to developing a small business as is the difficulty in accessing credit. Tauringana and Afrifa (2013) affirmed that SMEs' lack of management competencies results in poor management. Armitage, Webb and Glynn (2016) and Lucas, Prowle and Lowth (2013) argued that management accounting practices (MAPs) could play a critical role in sustaining SMEs. However, they stressed that little is known about the use of MAPs in SMEs.

There is, therefore, a need to understand whether MAPs are used by SMEs, and whether there are some factors preventing their use and any other challenges, which SMEs are facing. The objective of this study is therefore to determine owners and managers of SMEs' opinions on the use of MAPs within their businesses, factors affecting its use and other challenges that they may be experiencing as SMEs. If SMEs are not using MAPs, what recommendations could be made to increase MAPs' usage? Whilst studies have addressed the need for MAPs and factors affecting the use of MAPs in other regions, the SMEs in this study are contractors on the database of a large municipality and this particular area is under-researched.

In the following section the article presents the theoretical framework, which is followed by the literature review. Firstly, the literature review focuses on the uses of MAPs by SMEs before examining the factors affecting its use and other challenges. After this, the research methodology is explained followed by the presentation and discussion of the results. Finally, the conclusion, limitations and areas for further research are provided.

## Theoretical framework

Waweru (2010) explained that four main theoretical frameworks describe the four stages in the development of management accounting. Stage 1 was prior to the 1960s when 'conventional wisdom' was used to identify various cost

control principles based on standards. Stage 2 (1960s to 1970s) focused on the use of agency theory in identifying the contracts between various parties in the organisation. Contingency theory (stage 3) became popular in the 1980s and 1990s and was followed by strategic management accounting (stage 4), which recognises the external environment of the organisation.

This study focuses on SMEs that have characteristics different from that of large organisations; they, nevertheless, 'face similar forms of complexities' (Nandan 2010:69). These complexities are 'strategic, organisational and financial in nature depending on the different stages of growth of the organisation' (Nandan 2010:69) and 'it is argued that their needs for financial and cost management' are influenced by 'contingent complexities' at each stage of their growth. This suggests that contingency theory is applicable to a study on the use of MAPs and factors affecting its use. Contingency theory suggests that general applications are inappropriate and that the appropriateness of an accounting system depends upon the specific circumstances of each organisation (Ahmad 2012). This may indicate that the use of MAPs, the factors that affect its use and the challenges experienced by SMEs are unique to each SME and may even differ per region, implying that contingency theory is the appropriate theoretical framework for this study.

## Literature review

### Definitions

Management accounting systems are internal information systems that provide an organisation with relevant information to add value to the organisation as whole (Nuhu, Baird & Appuhami 2016). Management accounting practices (MAPs) provide management solutions for internal management purposes (Ndwiga 2011). Examples of MAPs include budgeting, performance evaluation, decision-making strategies and strategic analyses, amongst others (Gichaaga 2014).

### The use of management accounting practices in small and medium-sized enterprises

Studies have focused on a range of uses of MAPs such as assisting in decision-making and planning, controlling costs, yielding an advantage over competitors, assisting in choosing the best investment opportunities, ensuring profitability, sustainability, performance and growth and assisting management in running the business successfully, financial reporting and in developing business strategies. The discussion that follows is aligned to the uses outlined here.

Studies have emphasised the use of MAPs for decision-making and planning. In Kenya, Mbogo (2011) studied the influence of management accounting skills on SMEs. Mbogo (2011) established that the training level and management accounting abilities have a positive and important effect on the decision-making of owners and managers and subsequently the success and growth of SMEs. Van der

Poll (2015) argued that MAPs improve the decision-making process as it communicates relevant insights and allows analyses to be put in action. Cuzdriorean (2017), in his survey of 37 SMEs in Romania, found budgeting was used to assist in planning. As the aim of MAPs is to provide information relevant for internal management purposes, decision-making and planning is integral to the efficient functioning of a business and also the need to control costs.

Studies have emphasised that MAPs can help in controlling costs (Cuzdriorean 2017; Lohr 2013). Lohr (2013) identified cost savings, better co-operation and reduced uncertainty as the three constructs expressing the potential net benefits of MAPs. Cuzdriorean (2017) found budgeting was not only used to control costs but also for monitoring cash flow. However, whilst decision-making, planning and controlling costs are important for the efficient functioning of a business, for an SME to survive, it would also need to ensure it is competitive in the market it occupies.

Studies have highlighted that using MAPs may yield an advantage over competitors by helping in choosing the best investment opportunities. Ramljak and Rogošić (2012) studied strategic MAPs in Croatia and found that companies apply different strategies and management accounting to achieve competitiveness. Ramljak and Rogošić (2012:95) concluded that 'costing techniques of strategic management accounting support the enterprise strategy more reliably compared with the customer and competitor-oriented techniques'. Pedroso and Gomes (2020), in their study in Portugal, found that SMEs see management accounting systems as adding to their competitiveness.

Research has also focused on MAPs and its wider use in achieving profitability, sustainability, performance, growth and success. In other words, focusing on a narrow use of MAPs may be insufficient to ensure the success of an SME and a more comprehensive approach to its use should be adopted. In South Africa, Berry (2011) investigated financial planning and control systems as an essential tool for the survival of SMEs and concluded that suitable financial controls and wide-ranging MAPs are two main aspects that are required to ensure the success of SMEs. Maduekwe (2015) reported that SMEs use MAPs to monitor the business, measure its performance and for planning and control. Small and medium-sized enterprises also use MAPs to improve decision-making, business processes, identify problems and communication, develop tactical strategies, optimise the use of the available resources and for motivating employees by, for example, providing target-based incentives. Mbumbo (2015) agreed that SMEs may be more successful if they use MAPs for decision-making. AlKhajeh and Khalid (2018) found MAPs to have an impact on performance. Kefasi (2019) found costing, budgeting and performance measurements to have a moderate positive significant relationship with operating profit and that MAPs' utilisation was linked to increasing operational profits. These studies indicate that integrating MAPs into the business processes may provide

benefits in addition to those of planning, decision-making and controlling costs. The SMEs in this study need to be aware of these uses to increase their chances of success.

Although this study was conducted in a specific region in South Africa, the link between MAPs and profitability and success has also been established in studies outside South Africa. Karanja, Mwangi and Nyaanga (2013) observed that if MAPs are used then the SME is more efficient in its operations, which will be reflected in its final results. Sunarni (2013) argued that the focus of MAPs has always been on improving organisational performance and profitability. Gichaaga (2014) concluded that MAPs have a significant effect on the financial performance of companies in Kenya. Cost efficiencies and performance were also highlighted by Ismail, Meutia and Umami (2019) in their Indonesian study of management control systems. Alvarez et al. (2021) found a positive statistically significant relationship between most MAPs and hotel business performance in their study in Buenos Aires.

In summary, studies both within and external to South Africa have found links between the use of MAPs and profitability, sustainability, performance, growth and success. The next discussion focuses on the use of MAPs in the financial reporting function and in helping to develop business strategies.

The financial reporting function is assisted by MAPs as Sunarni (2013) argued that MAPs help management perform their functions by collecting, processing and communicating information, which is similar to the role of financial accounting. Small and medium-sized enterprises need to be able to compare budgeted amounts to the actual amounts, which makes the need for an efficient financial reporting function imperative. Ahmad (2012) observed that MAPs deliver appropriate managerial information to assist management to meet their strategic goals and objectives. McLellan and Sherine (2013) studied strategy and MAPs' alignment and their effect on organisational performance in Egypt. They concluded that SMEs that plan to adopt a different marketing strategy should also adopt more of the advanced MAPs to achieve greater performance. Similarly, Pedroso and Gomes (2020) found effective management accounting systems supported SMEs' strategic decisions. As the SMEs in this study are on a municipal database, they should be compiling basic financial statements and, therefore, would be able to compare budgeted amounts to actual amounts and in this way assist in strategising.

Expressing a contrary point of view on the use of MAPs, Abogun and Fagbemi (2012:179) argued that the budgeting process is 'time consuming, costly, distorted by tactics employed and focused on cost'. It may be that SMEs do not take budgeting as important to their survival and therefore refrain from using budgets. The criticism of budgeting as a planning and control tool raises questions concerning the efficiency of the budgets used by SMEs and whether the

budgets achieve their purpose and objectives (Alleyne & Marshall 2011). Armitage, Lane and Webb (2020:208) focused on planning and control as separate uses of MAPs and argued that the 'key value of a budget in smaller companies is derived from the discipline it creates in planning activities rather than its use as a control tool'. This key value of planning could be perceived as more important to an SME as it implies a forward-looking perspective. It is possible that the SMEs in this study may be more focused on planning for future operations; however, feedback on differences between actual and budgeted costs may allow the SME to exercise more control over its costs in the future.

Although working capital management practices (WCMPs) and their effect on profitability and growth were not investigated specifically in this study, two studies on WCMPs are detailed. Musah, Gakpetor and Pooma (2018) found a positive relationship between these practices and profitability and growth in their study of 100 SMEs in Ghana. Lyngstadaas (2020) examined the WCMPs of 589 listed manufacturing firms in the United States and found a positive link between 11 WCMPs and profitability; however, his study was not focused on SMEs.

To summarise the use of MAPs by SMEs, the following observations are drawn from the literature. Management accounting practices have positive and important influences on decision-making, are critical for SME survival, have an influence on financial performance, improve decision-making, assist in monitoring and in planning and cost control. Management accounting practices also play an active role in supporting strategies and competitiveness. However, SMEs face challenges that may impact their use of MAPs.

### Factors affecting the use of management accounting practices

Although studies have indicated that there are many uses of MAPs for SMEs, studies have also indicated that SMEs face challenges in implementing MAPs. López and Hiebl (2015) argued that SMEs require special attention when it comes to MAPs because they have different resources and they face different difficulties when compared with larger organisations. It is also possible that SMEs in different areas or regions may face difficulties unique to an area, such as more onerous trading regulations.

The lack of management skills as a factor affecting the use of MAPs has been cited by a number of studies. Giroux (2008) studied the survival rates of SMEs in Vancouver and found that the lack of management skills, amongst other challenges, contributed to the failure of SMEs and that SMEs failed as a consequence of problems in their internal management processes rather than as a result of external circumstances. Smit and Watkins (2012) contended that the barriers to SMEs' success in South Africa vary and include inherent business barriers such as the lack of management skills and the lack of education and training. Lack of management expertise and skills was also identified by Maramba (2013) and Agwu and

Emeti (2014) who also observed SMEs' poor educational backgrounds. In Mwanza and Benedict's (2018) study, SMEs indicated that they lacked knowledge on budget preparation and that they lacked the necessary knowledge and experience to use budgets. As the SMEs in this study are registered on a municipal database, this may imply that these SMEs had enough knowledge and management skills to become registered; however, they may not have sufficient management skills to use MAPs.

The skills gap was also identified in studies external to South Africa. In Thailand, Sumkaew, Liu and McLaren (2012) reported that lack of expertise and the need to save costs and time may lead to financial reporting delays as factors affecting the use of MAPs. In Rwanda, Bosire and Nzaramba (2013) observed skills gaps in areas such as information and communication technology, technical and industrial knowledge, finance and management accounting. They also observed that there is limited innovation and competitiveness in the SME sector, and this is caused by the lack of technical and management skills of the owners and managers. Cuzdriorean (2017) found low management commitment, financial constraints, the excessive amount of time needed and the presumption that the current system was adequate as reasons for not using traditional MAPs. Reasons for not using modern MAPs were the costs of implementation, excessive amount of time, the nature of the operations and financial constraints (Cuzdriorean 2017).

Small and medium-sized enterprises in Mwanza and Benedict's (2018) study indicated that MAPs are expensive to implement and that they lacked resources such as computers. Other challenges indicated were the lack of sufficient data for budget preparation and that an uncertain business environment makes budgeting difficult. Alvarez et al. (2021) observed high consultancy and training costs and the difficulty in data collection and organisation as two reasons deterring the adoption of MAPs.

Kefasi (2019) approached the utilisation of MAPs from a positive viewpoint, that is, what influenced SMEs' choice of MAPs? Kefasi (2019:72) found that 'increases in production and labour costs, changes in technology, and intensity of competition' as the factors that had the highest impact on firms and may have influenced these businesses' choice of MAPs.

The previous discussion has outlined factors affecting SMEs use of MAPs. Because the studies were focused on SMEs and in specific industries or businesses, the studies tended to avoid the impact that size, industry and nature of the business may have on the use of MAPs. For example, Kefasi (2019) focused on manufacturing SMEs and Alvarez et al. (2021) investigated SMEs in the hotel business. However, Lucas et al. (2013) found that the nature of the business affected the use of MAPs as SMEs argued that MAPs were more suited to a standard product produced in a stable market.

Small and medium-sized enterprises face other challenges with respect to their survival and profitability. The following section highlights these other challenges.

### Challenges facing small and medium-sized enterprises

Small and medium-sized enterprises' failure rates have increased over the years to a point where many researchers have felt the need to investigate the challenges facing SMEs (Agbenyegah 2013; Cant & Wiid 2013). Abor and Quartey (2010) argued that South African and Ghanaian SMEs' development are delayed by challenges such as the inability to access appropriate technology, limited contact with international markets, inadequate access to finance, inadequate management skills and the presence of laws and regulations that negatively impacted their operations. Both Mbogo (2011) and Padachi (2012) identified that SMEs face financial challenges. Marembo's (2013) study of 201 SMEs found that 55% of the SMEs identified lack of resources as a major challenge.

Cant and Wiid's (2013) results indicated that government legislation, crime, the unemployment rate, inflation, and interest rates are the main macro-environmental factors affecting South African SMEs. They also identified other factors such as the 'low demand for products, the wrong pricing strategies implemented and the location of the business to be the major problems experienced by SMEs' (Cant & Wiid 2013:707). Nieuwenhuizen (2019) reported that the regulatory environment hinders SMEs' development.

In Malaysia, Isa, Saleh and Sapiei (2007) argued that the lack of appropriate financial management and cost controls such as inaccurate financial records, an inability to manage changing costs and prices efficiently, under-capitalisation, product and credit controls, the lack of financial planning and poor use of assets are factors that contribute to the failure of SMEs. Khalique et al. (2011) added that Malaysian SMEs are also facing challenges such as economic downturns, barriers to global sourcing, low productivity, lack of management abilities, lack of financing, difficulties in accessing technology and strict regulations.

Agwu and Emeti's (2014) study indicated that the main challenges facing SMEs were poor financing, inadequate infrastructure and multiple taxes. These challenges included inadequate working capital, competition from larger organisations, problems in obtaining raw materials, low-capacity utilisation, lack of strategising by management, the low educational background of owners and other financial problems. Agwu and Emeti (2014) also observed other challenges such as the lack of sufficient capital, power supply outages, inadequate infrastructure, lack of focus, insufficient market research, an over-reliance on a few markets for finished goods, lack of successful planning, inexperience, inadequate accounting records, failure to separate business activities from personal activities, lack of business planning, not knowing the difference between revenue and profits,

failure to access the appropriate plant and machinery, failure to employ appropriate staff and competition from other businesses.

Shipulwa (2016) investigated the challenges facing SMEs in Windhoek, Namibia. His results revealed access to land and finance, the high cost of utilities, crime and the lack of skills as major challenges faced by the SMEs. Shipulwa (2016) also emphasised the lack of finance for capital and investments, taxes and levies, skilled labour, labour retention and technical advice and lack of technical and vocational training as important challenges for SMEs.

The literature suggests that managerial competencies have a great influence on SMEs' failure (Agwu & Emeti 2014; Padachi 2012). Olawale and Garwe (2010) emphasised that management capabilities are significant for the survival and development of established SMEs. Mbumbo (2015) observed that having management accounting skills assists owners and managers to make the right decisions and thereby promote SMEs' profitability. However, managers and owners of SMEs are individuals who may not be competent in all areas of the business. McKenzie (2021) revisited and reassessed small business training studies and found that training interventions on business practices impacted positively on profits and sales. It may be necessary for SMEs to acquire the necessary management accounting skills or to outsource MAPs to support the decision-making process. As the SMEs in this study are all situated in a specific municipal area, information on these challenges may be unique to this area; however, it is expected that some challenges may be common to all SMEs including the SMEs in this study.

To sum up, SMEs face many challenges to using MAPs and to their continued existence. The lack of management skills, education and training, financial challenges, access to management accounting systems or technology to manage their businesses, finance for capital and investments, the retention of skilled labour, technical advice, technical skills and management accounting information and experience amongst SME owners and managers were all highlighted as challenges. Limited access to international markets, inflation and interest rates, the location of the business, crime and unemployment, low demand for products and competitiveness in the SME sector are further challenges faced by SMEs and are not always within the SMEs' control.

### Research methodology

A positivist quantitative methodology was chosen using a census sampling strategy and a self-administered questionnaire. The questionnaire was designed to ascertain respondents' opinions on the uses of MAPs within the enterprise, factors affecting the use of MAPs, challenges faced by the SMEs and recommendations, which would facilitate the adoption and usage of MAPs. All the statements were posed using a Likert scale of 1 (strongly disagree) to 5 (strongly agree). In addition, the definitions of the various MAPs and other key words or phrases for the purposes of the

study were shown in an appendix to the questionnaire and cross-referenced to relevant wording in the questionnaire.

After pretesting the questionnaire, getting ethical clearance and the receipt of a signed letter of informed consent, it was emailed to 163 contractors on the database of a large municipality, which actively provides support to SMEs in its municipal area. As these contractors are supported by the municipality with financial opportunities, technical skills and information communication technology, these SMEs were more likely to be using MAPs than SMEs, which do not have any external support.

Table 1 shows the response rate for this study.

### Reliability and validity

As a measure of the internal consistency of the response scale of the questionnaire, Cronbach's alpha was used. Table 2 shows Cronbach's alpha for the key questions.

According to Tavakol and Dennick (2011:54), a Cronbach's alpha of between 0.70 and 0.95 is an acceptable value for reliability.

Content validity was addressed by including definitions of the items used in the questionnaire and by having the questionnaire checked by a person skilled in questionnaire development and a management accounting expert. To ensure construct validity, the questionnaire was developed using existing literature. In addition, the questionnaire was examined by a statistician who confirmed that suitable statistical tests could be generated to measure the concepts, which were intended to be measured.

### Ethical considerations

The article adhered to all ethical standards to comply with research integrity. Ethical approval was obtained from a public university (Ethical clearance number REC 116/16) on 02 March 2018).

**TABLE 1:** Survey size and response rate.

Survey size	Number of respondents	%
Number of contractors in database	163	100
Undelivered emails	15	9.2
Delivered questionnaires	148	90.8
No response	46	28.2
<b>Usable responses</b>	<b>102</b>	<b>62.6</b>

The quantitative data were first entered into a Microsoft Excel spreadsheet. It was then checked for accuracy before being uploaded into the Statistical Package for the Social Sciences (SPSS) Version 25 for data analysis.

**TABLE 2:** Cronbach's alpha for Tables 5 to 7.

Key questions	Number of items	Cronbach's $\alpha$
Use of MAPs (Table 5)	12	0.885
Factors affecting the use of MAPs (Table 6)	8	0.794
Challenges facing SMEs (Table 7)	6	0.742
<b>Overall</b>	<b>26</b>	<b>0.807</b>

MAP, management accounting practice; SMEs, small and medium-sized enterprises.

## Research findings and discussion

A number of background questions were asked. To ensure that the respondents were knowledgeable about their business, they were first asked about their position in the business. The responses revealed that the respondents were either the owner of the business (18 respondents), the manager (31 respondents) or were both owner and manager of the business (53 respondents). This confirmed that these respondents would be able to provide reliable answers to the questionnaire.

A question was also posed asking respondents about the form of the business. The purpose of this question was to ensure that the respondents were small businesses and that it was likely that the owner or manager would have first-hand knowledge of the operations of the business. These results are shown in Table 3.

Table 3 shows that most of the respondents were either sole traders (52%) or were in a partnership (34.3%), with the other categories making up the remainder of the respondents. Sole traders and partnerships are more likely to be SMEs with an owner or partner who would be responsible for all decision-making.

Table 4 shows that the majority of SMEs (73 or 71.5%) have been in existence for less than 10 years. This may be some indication that SMEs have a low survival rate. On the other hand, it could indicate that SMEs do grow and are no longer eligible to be labelled as SMEs.

The SMEs are prone to failure (Aren & Sibindi 2014). A question was posed asking the respondents how long the SME had been operating. These results are shown in Table 4.

### Uses of management accounting practices

The study first investigated the opinions of the SME managers and owners on their use of MAPs within their business. A number of uses of MAPs derived from the

**TABLE 3:** Respondents' form of business.

Form of business	Number	Percentage
Sole trader	53	52.0
Partnership	35	34.3
Close corporation	8	7.8
Co-operative	4	3.9
Franchise or private company	2	2.0
<b>Total</b>	<b>102</b>	<b>100</b>

**TABLE 4:** Respondents' number of years in existence.

Years	Number	Percentage
1–3 years	18	17.6
4–9 years	55	53.9
10–13 years	16	15.7
14–19 years	11	10.8
20 years or more	2	2.0
<b>Total</b>	<b>102</b>	<b>100</b>

literature were listed. Respondents were asked to rate the following uses of MAPs on a scale of 1 (strongly disagree) to 5 (strongly agree). Respondents were also asked to list any other uses of MAPs and rate accordingly. These results are shown in Table 5.

Although Table 5 shows that a number of respondents indicated 'neither agree nor disagree' to a number of the statements, an examination of the mean scores indicated that 'assists in planning' ( $m = 4.41$ ) and 'assists in assessing business performance' ( $m = 4.08$ ) were important uses of MAPs. 'Helps to control costs' ( $m = 3.61$ ) and 'ensures profitability' ( $m = 3.58$ ) had some support. The other uses of MAPs had less support as their means were marginally above 3.00. These were 'ensures sustainability', 'assists in decision making', 'assists in financial reporting', 'assists in running the business successfully' and 'ensures business growth'. Respondents tended to disagree that use of MAPs 'yields an advantage over competitors', 'assists in choosing the best investment opportunities', and 'helps in developing business strategies' as these means were 3.00 or less. In summary, the ratings indicated that MAPs were mainly used in planning and in assessing performance, with some support for controlling costs. As the respondents were SMEs, it is possible that their focus is on planning and controlling costs and that this assists in assessing their performance. As these SMEs grow, their focus may shift to the other uses of MAPs such as strategising, focusing on competition and identifying investment opportunities.

A comparison of these results with that of prior literature confirms the use of MAPs for planning (Armitage et al. 2020; Cuzdriorean 2017; Maduekwe 2015; Mbogo 2011), business performance (Gichaaga 2014; McLellan & Sherine 2013; Sunarni 2013) and controlling costs (Armitage et al. 2020; Cuzdriorean 2017; Lohr 2013). Although the reviewed literature showed support for all the uses of MAPs as shown

in Table 5, previous studies did not always attempt to rank the uses. A general comment is therefore that this study confirms the uses of MAPs found in previous studies with the exception of 'yields an advantage over competitors' and 'helps in developing business strategies' as the mean score for both these uses was less than 3.00.

### Factors affecting the use of management accounting practices

The respondents were then asked to rate the factors affecting the use of MAPs. These statements were posed using a Likert scale of 1 (strongly disagree) to 5 (strongly agree). Respondents were also asked to add any other factors they felt affected the use of MAPs and rate them accordingly. These results are shown in Table 6.

Table 6 shows strong support for 'lack of management accounting knowledge' ( $m = 4.59$ ) and 'lack of education and skills' ( $m = 4.36$ ) as the main factors affecting the use of MAPs confirming previous studies (Cuzdriorean 2017; Rundora & Selesho 2014; Sumkaew et al. 2012) that highlighted the lack of education and management accounting training in SMEs as factors affecting the use of MAPs. Nandan (2010) also observed the lack of knowledge and expertise by SMEs in Australia. These results suggest that SMEs lack the relevant knowledge and skills and the resources to implement MAPs.

The 'cost to outsource MAPs' ( $m = 3.99$ ) and 'cost to employ in-house management accountants' ( $m = 3.74$ ) had some support by the respondents confirming the findings of Sumkaew et al. (2012). There was also some support for the nature of the business ( $m = 3.72$ ) as being a factor affecting the use of MAPs, confirming Lucas et al.'s (2013) findings. However, it must be observed that as the respondents were SMEs, they may have had limited knowledge of other types

**TABLE 5:** Respondents' use of management accounting practices.

MAPs ...	Strongly disagree		Disagree		Neither agree nor disagree		Agree		Strongly agree		Total No.	Mean	s.d.
	N	%	N	%	N	%	N	%	N	%			
Assists in decision-making	3	3.6	12	14.5	26	31.3	34	41.0	8	9.6	83	3.39	0.97
Helps to control costs	4	4.7	4	4.7	27	31.8	36	42.4	14	16.5	85	3.61	0.98
Assists in planning	2	2.0	1	1.0	11	11.1	25	25.3	60	60.6	99	4.41	0.88
Yields an advantage over competitors	6	7.1	17	20.2	43	51.2	12	14.3	6	7.1	84	2.94	0.96
Assists in choosing the best investment opportunities	8	9.6	15	18.1	37	44.6	15	18.1	8	9.6	83	3.00	1.07
Ensures profitability	0	0.0	12	14.5	30	36.1	31	37.3	10	12.0	83	3.47	0.89
Ensures sustainability	0	0.0	10	12.7	26	32.9	30	38.0	13	16.5	79	3.58	0.91
Assists in assessing business performance	1	1.2	4	4.7	20	23.5	22	25.9	38	44.7	85	4.08	0.99
Ensures business growth	5	6.8	15	20.3	31	41.9	15	20.3	8	10.8	74	3.08	1.06
Assists in running the business successfully	7	9.0	10	12.8	36	46.2	13	16.7	12	15.4	78	3.17	1.12
Assists in financial reporting	4	5.3	5	6.7	34	45.3	23	30.7	9	12.0	75	3.37	0.97
Helps in developing business strategies	9	11.8	21	27.6	28	36.8	10	13.2	8	10.5	76	2.83	1.14

Notes: Not all respondents indicated a response to each statement.

MAP, management accounting practice; s.d., standard deviation.

No additional uses of MAPs were suggested by the respondents.

of businesses and industries and this may have affected their responses for the first two statements shown in Table 6.

Lastly, there was some indication that technology was not the most important factor affecting the use of MAPs ( $m = 3.52$ ). Although this finding is in contrast to Karanja et al. (2013) and Ahmad (2012) who found that technology was the highest factor that limited the use of MAPs by Kenyan and Malaysian SMEs, respectively, it is possible that since those studies were carried out, technology has become less of a limiting factor affecting the use of MAPs as many transactions and communications are now performed using computer technology.

### Challenges faced by small and medium-sized enterprises

Small and medium-sized enterprises were then asked to rate a number of challenges, which their businesses may be facing. The statements were posed using a scale of 1 (strongly disagree) to 5 (strongly agree). Respondents could also add other challenges that they may be experiencing, which were not included in the question and rate them accordingly. These results are shown in Table 7.

The results in Table 7 suggest that SMEs are faced mainly with financial and human resource challenges, although the mean scores for these items tended mainly towards 'agree'. Financial challenges ( $m = 3.69$ ) were also cited by Mbogo (2011) and Padachi (2012) as a factor that impedes SME growth. Mwanza

and Benedict (2018) argued that MAPs are expensive to implement and SMEs lack resources such as computers. Human resource challenges ( $m = 3.46$ ) were also perceived as a challenge by the respondents, supporting the findings of Agwu and Emeti (2014) and Marembo (2013). Technological challenges were ranked third amongst the challenges facing SMEs ( $m = 3.36$ ). However, the mean score for this item tended towards 'neither agree nor disagree'. Abor and Quartey (2010) observed that both technology and finance delay the development of SMEs. This finding that technology is not a major challenge for these SMEs further confirms the finding in Table 6 that technology is not perceived as an important factor affecting the use of MAPs and that over time, the lack or use of technology has become a less important inhibiting factor.

The challenges of security, regulatory and environmental were not rated highly. It is possible that regulatory and environmental challenges would become more challenging as the SME grows. For example, SMEs are required to register for value-added tax with the South African Revenue Service (SARS) once its turnover is R1 000 000 or more. Should the SME have employees, it would be also be required to register as an employer with SARS. Thus, as an SME grows, it encounters more regulations, especially those related to tax compliance.

### Recommendations to advance the use of management accounting practices

The final area probed asked the respondents to rate a number of recommendations derived from the literature, which

**TABLE 6:** Factors affecting the respondents' use of management accounting practices.

Statements	Strongly disagree		Disagree		Neither agree nor disagree		Agree		Strongly agree		Total	Mean	s.d.
	N	%	N	%	N	%	N	%	N	%			
The industry where your business operates	7	6.9	15	14.9	3	3.0	55	54.5	21	20.8	101	3.67	1.17
The nature of the business	7	7.0	13	13.0	9	9.0	43	43.0	28	28.0	100	3.72	1.21
The size of the business	5	5.2	16	16.5	10	10.3	50	51.5	16	16.5	97	3.58	1.11
Lack of education and skills	3	3.1	4	4.1	9	9.2	21	21.4	61	62.2	98	4.36	1.02
Lack of technology	3	3.6	9	10.7	31	36.9	23	27.4	18	21.4	84	3.52	1.06
Cost to employ in-house management accountants	5	5.9	7	8.2	12	14.1	42	49.4	19	22.4	85	3.74	1.08
Lack of management accounting knowledge	2	2.0	1	1.0	1	1.0	28	28.0	68	68.0	100	4.59	0.75
Cost to outsource MAPs	3	3.3	7	7.7	7	7.7	45	49.5	29	31.9	91	3.99	1.01

Notes: Not all respondents indicated a response to each statement.

MAPs, management accounting practices; s.d., standard deviation.

No additional factors were suggested by the respondents.

**TABLE 7:** Respondents' rating of challenges facing small and medium-sized enterprises.

Challenges	Strongly disagree		Disagree		Neither agree nor disagree		Agree		Strongly agree		Total	Mean	s.d.	Rank†
	N	%	N	%	N	%	N	%	N	%				
Financial	6	7.1	3	3.6	11	13.1	55	65.5	9	10.7	84	3.69	0.97	1
Human resources	13	13.4	11	11.3	9	9.3	46	47.4	18	18.6	97	3.46	1.29	2
Technology	14	15.2	12	13.0	16	17.4	26	28.3	24	26.1	92	3.37	1.40	3
Security	15	18.3	11	13.4	15	18.3	22	26.8	19	23.2	82	3.23	1.43	4
Regulatory	19	23.5	12	14.8	21	25.9	15	18.5	14	17.3	81	2.91	1.41	5
Environmental	19	22.9	15	18.1	19	22.9	22	26.5	8	9.6	83	2.82	1.32	6

Notes: Not all respondents indicated a response to each statement.

s.d., standard deviation.

†, Rank is based on the mean scores.

No additional challenges were suggested by the respondents.

would facilitate the adoption and use of MAPs. These recommendations were posed using a Likert scale of 1 (strongly disagree) to 5 (strongly agree). Respondents could also add additional recommendations and rate them accordingly. Table 8 presents these findings.

Table 8 shows that most supported recommendation was that owners or managers should go for management accounting training ( $m = 4.57$ ), followed by the recommendation that SMEs should employ management accountants ( $m = 3.91$ ). The recommendation that had the lowest support was that SMEs should outsource the management accounting function ( $m = 3.41$ ). Small and medium-sized enterprises may not have considered that it would be less expensive to outsource the management accounting function than to employ a management accountant; however, it is possible that SMEs would prefer having the necessary skills available to them at all times by either acquiring the skills themselves or employing someone with those skills as the reviewed literature suggests that the lack of managerial competence influences SMEs' failure (Agwu & Emeti 2014; Padachi 2012). Anderson and McKenzie (2020) contended that as SMEs grow, they are more likely to hire persons with accounting and other skills or use external providers instead of acquiring the skills themselves. However, this is only applicable to larger SMEs, which already have several employees. Olawale and Garwe (2010) and Mbumbo (2015) supported the need for owners and managers to have management accounting skills. This finding in Table 8 may suggest that SME owners and managers are aware of their lack of knowledge regarding MAPs and want management accounting training. McKenzie (2021:298) argued that 'one-size-fits-all' training programmes are unlikely to be optimal and suggests that different types of training may be useful for different types of organisations. McKenzie (2021) also cautioned that if an SME lacks key inputs such as finance or customer demand, then unless training can address such constraints, then training may not help SMEs to grow. Therefore, any training aimed at SMEs and entrepreneurs should adopt a holistic approach and focus not only on management accounting.

## Conclusions, recommendations and limitations

The aim of this article was to examine the use of MAPs by SMEs in Durban. To achieve this aim, a survey was

administered to SME contractors on a municipality's database. With reference to the use of MAPs, this study found that the three most supported uses of MAPs were 'assists in planning', 'assists in assessing business performance' and 'helps to control costs'. All three uses of MAPs could be considered crucial to the performance of the SME and confirm the findings of prior research. The main factors limiting the use of MAPs were the 'lack of education and skills' and 'lack of management accounting knowledge'. The costs of implementing MAPs (i.e. cost to employ an in-house management accountant or the cost to outsource the management accounting function) were also considered factors affecting the use of MAPs.

Challenges facing SMEs were that of financial and human resources. Technology is seen as less of a challenge as its mean tended towards neither agree nor disagree. Compared with prior studies, technology is perceived as being less of a challenge for these SMEs. Security, regulatory and environmental matters were not seen to be challenges affecting the SMEs currently; however, as these SMEs grow, these latter challenges may become more important.

The main recommendation concerning the use of MAPs was that SME owners and managers should go for management accounting training. Educational institutions and government agencies should ensure that they offer training in management accounting aimed at SMEs. Training on entrepreneurship should ensure that MAPs are included in the course content and different ways of delivering the training should be explored.

This article makes two important contributions. Firstly, it has contributed to the literature on MAPs and SMEs as it focused on a specific under-researched area in South Africa, and secondly, it has identified a need for training in management accounting aimed at SMEs. However, this study cautions that the training should meet the specific needs of the target audience. As the respondents were on a municipal database, it would seem short-sighted if this municipality did not address this need for training. However, the training could be offered by agencies that have been set up specifically by the government to assist SMEs or other educational institutions.

A limitation of the study is that only SMEs on a municipal database were targeted and this means that other

**TABLE 8:** Recommendations by small and medium-sized enterprise owners and managers.

Statements	Strongly disagree		Disagree		Neither agree nor disagree		Agree		Strongly agree		Total	Mean	s.d.
	N	%	N	%	N	%	N	%	N	%			
SMEs should employ management accountants	4	4.4	2	2.2	14	15.4	49	53.8	22	24.2	91	3.91	0.94
Owners and managers should go for management accounting training	1	1.0	0	0.0	0	0.0	39	38.6	61	60.4	101	4.57	0.61
SMEs should outsource the management accounting function	5	5.7	15	17.0	19	21.6	37	42.0	12	13.6	88	3.41	1.10

Note: Not all respondents indicated a response to each statement.

The suggested recommendations were posed using a Likert scale of 1 (strongly disagree) to 5 (strongly agree).

s.d., standard deviation; SMEs, small and medium-sized enterprises.

No other recommendations were suggested by the respondents.

geographical regions were not represented. Therefore, these findings cannot be generalised to other areas. However, these findings could be used for comparison to other studies or as support for interventions such as training to assist SMEs in using MAPs in their businesses. A further limitation is that it is possible that some of the statements probed areas in which the respondents may have had limited knowledge, which may have affected their responses. Future research could use larger samples focusing on different geographical regions and industries to investigate whether respondents in different areas or industries have similar or dissimilar views on the use of MAPs and factors affecting its use.

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The authors have declared that no competing interest exists.

### Authors' contributions

S.C. was the researcher of the original dissertation from which this article is substantially derived. L.J.S. was responsible for the first version of this article. Later versions of the article were substantially edited and additional research was added by both L.J.S. and C.J.N. Both L.J.S. and C.J.N. were the co-supervisors of the original dissertation.

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### Data availability

Data sharing is not applicable to this article as no new data were created or analysed in this study.

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