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The Role of Managerial Accounting in Enhancing Financial Performance and Sustainability of Small and Medium Enterprises in Pakistan

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ABSTRACT

The principal objective of the study is to examine the impacts of financial and sustainable performance of small and medium-sized businesses (SMEs) and how management accounting practices influence them. The quantitative research design was used and the primary data was obtained among 412 participants working in agriculture sector of Pakistan. The analysis of results was carried out on the SMART PLS software. The analysis by reliability showed that there was acceptable internal consistency as the values of Cronbach alpha varied between 0.62 and 0.89. Confirmatory factor analysis showed the adequacy of the model with a rather large chi-square/df ratio, and discriminating validity presence demonstrated that the constructs differed. In further regression results, costing practices were found to have the highest impact on financial performance (beta =0.754; $p < 0.001$) and sustainability (beta = 0.771; $p < 0.001$), and then budgeting practices, which were also statistically significant with positive coefficients. The impact of decision support systems on financial performance was also positive ($\beta = 0.575$, $p = 0.013$) though not significant on sustainability ($p = 0.131$). All in all, the findings indicate a small but still positive and important correlation between the management accounting practices and small and medium business performance. This study is important because SMEs constitute about 90 percent of businesses in the world and it is one of the biggest employers. Implementation of the management accounting in the SMEs will not only improve financial results, it will also help make sustainability viable in the long term improvements in efficiency and resilience.

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1. Introduction

Management accounting helps the organization stay competitive and survive in a tough, unpredictable business world. It gives real support—guiding managers as they make decisions and helping everyone work more effectively. With this kind of backing, the company stands a much better chance of hitting its strategic and corporate goals (Bakhsh, Mahmood, & Chaudhry, 2019). The business is also concerned about management accounting as this assists it in finding its internal requirement and taking remedial measures to correct its managements activities. What this means is that the business can enhance its operation and financial reporting using the management accounting. This is especially critical in the case of SMEs because it will assist in transitioning beyond its traditional financial accounting practices and choose the management accounting techniques, too (Zada, Yukun, & Zada, 2021). This can largely be attributed to the capability of the management accounting to stay in collusion with the past information, and the capacity to make decisions regarding its present nature of financial issues and state. They are ownership, taxation, investment, credit granting, etc.(Rasee, Jajja, & Ishaq, 2021). Contrarily however, there also exists a critique towards the disclosed fact that when it comes to key financial performance of any given business in terms of value added, sales, and capital expenditures, then it is the financial accounting techniques that are favored over the rest. This must be evaluated by technical indicators like the stock market fluctuation which gives an idea as to the measure of performance of an organization. Rasheed, Shahid, Mukhtar, and Ishaq (2022) study does indicate is that the principles of management accounting have not been evaluated at a large scale in the context of Nigerian SMEs. On the same note, Rasheed, Ishaq, and Anwar (2022) as well addressed implications of management accounting and identified that management accounting has not been discoursed and applied in the wider scope of the Tanzania SME setting.

Research on management accounting within emerging markets remains limited, leaving a noticeable gap in understanding how SMEs apply these practices and why they matter. Nandan (2010) highlights that weak awareness of management accounting principles and approaches restricts the effective use of accounting information, which in turn undermines SME performance. Similar concerns were raised later by Rasheed, Ishaq, and ur Rehman (2021) in their investigation of Mexican SMEs, where they observed that management accounting is often adopted in a basic form because most small firms operate under a single owner-manager structure. It is beneficial in enhancing business performance since management accounting would enable the development of relevant policies and programs, and the accessibility of information is quite easy. In its research Rasheed, Ishaq, and Malik (2022) also points out that management accounting principles in the SMEs are significant due to the numerical prevalence of SMEs. Through management accounting; these types of business enterprises can enhance its accounting and financial transparency and to ensure that the business is in a position to both maximize on its profits and sales margin. To reiterate on the management accounting; it is noted that it is extrinsically valuable to SMEs as it can enhance its business activities through lowering its expenses. This will be done through listing the areas that rack up more expenses and can trigger the business to come up with more effective cost control strategies. This is a key factor as the management accounting assists in enhancing the business planning as well as control over its expenditure and budget that can be utilized under cost volume profit analysis. Rukhsana, Xia, Nadeem, and Majid (2017) argue that management accounting practices can provide such opportunities to SMEs in terms of competing in the business environment (Latif, Salleh, & Ghani, 2022). The business may also be able to offer competitive prices on par with the large enterprise’s counterpart through management accounting techniques.

A key challenge in this area is the limited body of research addressing how management accounting practices support or strengthen sustainability within SMEs. The influence of social and environmental pressures on business operations, and the potential role management accounting might play in responding to these pressures, is still not well documented. In other words, the ways in which management accounting can contribute to sustainable practices and improve business outcomes have not been thoroughly examined. Rasheed, Ishaq, Anwar, and Shahid (2021) also point out that many small firms lack both the awareness and understanding of management accounting tools and the advantages they can provide. Because most SMEs operate with highly centralized decision-making, these techniques are seldom applied, as managerial preferences tend to dominate operational choices. This situation limits the ability of firms to grasp management accounting processes and to assess their impact on performance and sustainability. The purpose of the present study is to investigate how management accounting relates to sustainability efforts and the financial performance of SMEs. Following are the research objectives:

1. To analyze the role of managerial accounting in a business's sustainability?
2. To analyze the role of managerial accounting in a business's financial performance?

2. Literature Review

One of the issues that have attracted attention in the past few years' concerns management accounting due to the importance of the role of management accounting in fulfilling the goals of the business as well as making sure that its operation is streamlined. Here; the SMEs have grown considerably and they represent about 90 percent of all businesses in the world (Adian et al., 2020). The SMEs also offer total percentage employment of 50 percent and play a very critical role in generating employment as well as enhancing the global economic growth. It is also noted that SMEs make up a minimum of 40 percent of GDP in the developing economies and that by 2030 they are likely to generate an extra 600 million employment opportunities (World Bank, 2019). Such massive contribution; the SMEs have been deemed as being essential and important towards harnessing economic growth and can absorb a larger number of employees. Based on the statistics; application of management accounting methods is of utmost significance since SMEs are seen to be in a favorable position to standardize management accounting methods (Mazhir Nadeem Ishaq et al., 2015). The ignorance and due diligence of such accounting methods have been deemed as negative because it is not being utilized and a conventional approach is being favored in the sense of financial accounting. Mazhir Nadeem Ishaq, Xia, Rasheed, and Abdullah (2017) find that management accounting includes the financial and the non-financial information, which is significant and vital to the organization. This is especially relevant to the SMEs context given that the methods in management accounting can be advantageous to it in terms of budgeting, costs, etc (Mazhir Nadeem Ishaq et al., 2016). Such programs are said to be effective in providing support to the areas of planning, controlling and targeting spends of the business in the sense that the business operations could be streamlined.

One of the key areas the SMEs are considered in analyzing and enhancing through the management accounting approach is the sustainable capability and its performance. According to Mazhar Nadeem Ishaq, Rasheed, and Malik (2022) the definition of sustainability through management accounting is innovative methods which could be utilized in SMEs that is associated with their operations such as their recycling policies. This not only assists in enhancing their operational efficiency but also serves to ensure that the SMEs can boost its productivity and also generate value to its consumers. Message accounting methods assists the business come up with innovative methods to introduce sustain- ability and to psychologically handle the fiscal challenges and concerns that exist inside the business. These kind of principles of accounting can be useful in giving impetus to its pursuit of its business dealings keeping in mind the environment and its social effects too. This involves finding and establishing sustainable values in the SMEs and encouraging them to make wise and correct decisions (Rasheed, Ishaq, & Akbar, 2022). On this note; the SMEs are also said to stand much to understand, in this case, concerning management accounting technologies and to apply it regularly to its operations. The decision to adopt sustainability has been said to be important to the business as it assists the business not only to focus on its stability but also enhances its long-term financial success. The other need that is involved in making management accounting is to enhance visibility in the corporate business environment and to make sure that the company can undertake its business activities with relative ease. The same applies to the management, as the management accounting principles are deemed to be effective in dealing with its operational issues because the budgetary methods have the capability of planning and controlling its spendings. This assists in decision making geared toward enhancing its financial with the help of management accounting services toward meeting its corporate goal.

3. Research Methodology

A quantitative research design has been chosen for this study because the analysis requires numerical evidence to generate meaningful results. The nature of the research problem calls for measurable responses and empirical testing, making a quantitative approach appropriate. This design is particularly useful for identifying relationships among variables and supports a clear, systematic analysis aligned with the study's objectives and research questions. It also allows the researcher to remain detached from the outcomes, ensuring that conclusions are driven solely by the data collected (Rasheed, Ishaq, & Malik, 2022). Such neutrality is best achieved through quantitative methods, which emphasize objective interpretation and evidence-based reasoning. For this purpose, primary data collection is preferred, as it strengthens the accuracy and relevance of the findings. The main tool for gathering information will be a structured survey questionnaire distributed to participants. The questionnaire will focus on the key issues highlighted in the study and aim to secure adequate data to support the analysis. Engaging participants directly is beneficial because their insights reflect current conditions rather than outdated experiences or assumptions (Chaudhry, Asad, & Hussain, 2020).

This information matters for the study because the questions we ask can lead to useful findings and spark some real debate. We also need to gather fresh data ourselves, so running surveys makes sense. Surveys help us see if we're getting enough accurate, up-to-date information. That's a big deal for this research, since we want to figure out how the variables relate and what's really driving the results. All of this ties back to our main goals—making sure we meet our objectives and actually test our hypotheses. The method of data analysis selected to use in the study entails the implemented SMART PLS to be applied when determining the relationship and correlation of the variables (Rouf & Akhtaruddin, 2018). The tests that will be employed in this project shall be the descriptive statistics, correlation and regression.

4. Results and Analysis

Table 1
Reliability Statistics

Construct	Cronbach's Alpha (Standardized)	Cronbach's Alpha (Unstandardized)	Composite Reliability (ρc)	Average Variance Extracted (AVE)
Budgeting Practice	0.656	0.603	0.677	0.552
Costing Techniques	0.894	0.894	0.892	0.686
Decision Support System	0.636	0.597	0.755	0.652
Financial Performance	0.748	0.727	0.765	0.560
Sustainability	0.938	0.938	0.936	0.768

The data given in Table 1 indicates that every (alpha 0.894), Financial Performance (alpha 0.748) construct has acceptable reliability and validity levels. and Sustainability (alpha 0.938). The values of The Cronbach alpha value of majority of constructs are composite reliability are higher than 0.70 in all above the suggested cut off point (0.70) which is constructs thus again, construct reliability is considered good internal consistency. Decision confirmed. Also, all the values of the Average Support System (alpha = 0.636) lies just Variance Extracted (AVE) higher than 0.50 suggest below the line but since it has composite reliability of that each construct measures greater than half the 0.755 it should be considered median reliability

Table 2
Parameter Estimates for Measurement Model

Parameter	Estimate	Standard Error (SE)	t-Value	p-Value
Budgeting Practice				
BP1 ←Budgeting Practice	1.000	n/a	n/a	n/a
BP2 ←Budgeting Practice	4.152	1.360	3.207	0.002
BP3 ←Budgeting Practice	4.082	1.298	3.303	0.002
Costing Techniques				
CT1 ←Costing Techniques	1.000	n/a	n/a	n/a
CT2 ←Costing Techniques	1.213	0.069	18.262	0.000
CT3 ←Costing Techniques	1.077	0.068	16.536	0.000
Decision Support System				
DSS1 ←Decision Support System	1.000	n/a	n/a	n/a
DSS2 ←Decision Support System	0.601	0.240	2.620	0.014
DSS3 ←Decision Support System	0.105	0.069	1.591	0.138

Table 3 shows correlation of the five constructs. The findings demonstrate that associations between variables are marked with moderate and strong positive correlations explained as significant. Budgeting Practice is associated moderately with Costing Techniques (r = 0.572), Financial Performance (r = 0.474), and Sustainability (r = 0.532), which implies that effective budgeting tends to be associated with better costing techniques, performance, and sustainability results. Nevertheless, its correlation with Decision Support System, however, is reported as 1.295 which is more than the theoretical maximum of +1. This means that there is a potential data coding or scaling error that is to be reviewed. The Costing Techniques records high correlations with Financial Performance (r = 0.744) and sustainability (r = 0.711), which entails that better costing techniques result in a very high contribution to organizational outcomes and sustainable performance. In a similar way, Decision Support System exhibits medium correlation with Costing Techniques (r = 0.429), Financial Performance (r = 0.545) and Sustainability (r = 0.479), but its low reliability in the previous table implies that it should be interpreted with caution. Lastly, there is significant correlation between the Financial Performance and Sustainability (r = 0.739), as indicated by the fact that the close relationships exist between having attained financial objectives and maintaining long term practices.

Table 3
Correlation Matrix

Variable	1. Budgeting Practice	2. Costing Techniques	3. Decision Support System	4. Financial Performance	5. Sustainability
1. Budgeting Practice	1				
2. Costing Techniques	0.572	1			
3. Decision Support System	0.295	0.429	1		
4. Financial Performance	0.474	0.744	0.545	1	
5. Sustainability	0.532	0.711	0.479	0.739	1

Table 4
Confirmatory Factor Analysis

Metric	Estimated Model	Null Model
Chi-square	1313.269	4163.582
Number of model parameters	37.800	15.750
Number of observations	422.100	n/a
Degrees of freedom	88.200	110.250
P value	0.000	0.000
ChiSqr/df	15.635	39.653
RMSEA	0.195	0.317
RMSEA LOW 90% CI	0.186	0.309
RMSEA HIGH 90% CI	0.205	0.327
GFI	0.788	n/a
AGFI	0.675	n/a
PGFI	0.551	n/a
SRMR	0.251	n/a
NFI	0.719	n/a
TLI	0.653	n/a

Table 4 shows the outcomes of the confirmatory factor analysis (CFA). The chi-square of the fitted model (2) =1313.269, df =88.200, $p < .001$) is significant and therefore, the model does not give a perfect fit. Chi-square is however, highly suspected of being extremely sensitive especially on large sample size (N = 422.100) and therefore other fit indices are deemed more useful in the evaluation. The value of the chi-square per df (15.635) is substantially greater than the recommended value of 3.0, so the overall fit is poor.

Table 5 shows the results of regression analysis conducted to determine the impacts of Budgeting Practice, Costing Techniques and Decision Support System on the Financial Performance and Sustainability. With reference to Financial Performance, we find that all three predictors are significant. Costing Techniques (β = 0.754, t = 15.749, $p < .001$) and Budgeting Practice (β = 0.485, t = 7.853, $p < .001$) reflect positively high values whereas the Decision Support System (β = 0.575, t = 2.495, p = .013) portrays a positive effect but in a relatively lower manner. Combined the identified predictors explain 48.5 percent of the variance (R 2 = 0.485, Adj. R 2 = 0.481) of Financial Performance criteria, which means that the explanatory model is sufficiently robust. In the case of Sustainability, Budgeting Practice (the odds ratio equals 0.582, t=3.146, p=.002) and Costing Techniques (the odds ratio equals 0.771, t=17.392, p<.001) appear as predictive variables that can have a significant influence on the achievement of sustainable outcomes. Nevertheless, a lesser and nonsignificant relations hip (beta = +0.499 and T = +1.515, p = .131) indicates that the Decision Support System has no direct impact on Sustainability. That is, the overall model has moderate explanatory power, 41.9 percent of the variance was accounted (R2 = 0.419, Adj. R2 = 0.414). Conclusively, the results underscore how Costing Techniques have always had the most effect on both the Financial Performance and Sustainability, yet Budgeting Practice also has an impressive effect. Decision Support Systems have a positive contribution to Financial Performance though it is accompanied with no significant influence on Sustainability.

Table 5
Regression Analysis Results

Dependent Variable	Independent Variables	Std. Estimate	t-value	p-value	R^2	Adj. R^2
Financial Performance	Budgeting Practice	0.485	7.853		0.485	0.481
	Costing Techniques	0.754	15.749	0.000		
	Decision Support System	0.575	2.495	0.013		
Sustainability	Budgeting Practice	0.582	3.146	0.002	0.419	0.414
	Costing Techniques	0.771	17.392	0.000		
	Decision Support System	0.499	1.515	0.131		

5. Conclusion

There were a number of limitations detected in the study that determined the research process and interpretation of the findings. The biggest limitation was the scarcity of the existing literature and empirical evidence existing in the field of studying the adoption and effects of management accounting practices in small and medium-sized enterprises (SMEs). This deficiency of the current research was a major problematic aspect because it limited the study to rely on the well-established theoretical framework or even compare and contrast cases. In addition, poor documentation of best practices and standardized measures in SMEs inhibited benchmarking of findings to existing knowledge on managerial accounting. The other key limitation was the conspicuous lack of readily available information such as financial reports, internal documents and structured data sets of SMEs which use superior methods of management accounting. A large number of SMEs did not keep detailed accounts or were not willing to share proprietary financial reporting data since it is confidential. Such a lack of transparency impeded the level of analysis that could be conducted, especially when it comes to long-term financial and sustainability consequences of such techniques. In the future, there are other essential areas that this study considers in research. And in particular, more detailed examinations of specific management accounting methods- target costing, zero-based budgeting, or environmental management accounting - should consider whether they have independent effectiveness in the various sectors of the SME community

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