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Agri-SME managers' perception of financial management practices in Tanzania

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ABSTRACT

Agribusiness Small and Medium Enterprises (Agri-SMEs) handle 60 % of all food production and trade worldwide. Despite their crucial contribution to developing economies, there is a widespread concern about their poor performance, largely due to poor Financial Management Practices (FMPs). This study used a survey of 427 Agri-SMEs in Tanzania to investigate managers' perception towards FMPs and whether the implementation of FMPs impact the achievement of Agri-SME business objectives. Descriptive statistics were employed to characterize managers' technological and financial backgrounds. Structural Equation Modeling (SEM) was employed to assess perceived ease of use of FMPs and perceived usefulness of FMPs. The findings revealed that managers' perceptions of financial management practices significantly and positively influence the organizational performance of Agri-SMEs. Specifically, the perceived usefulness and ease of use of financial practices were key drivers of improved performance. Additionally, about 62 % of Agri-SMEs have not adopted Enterprise Resource Planning (ERP) systems. Furthermore, 63 % of Agri-SME managers report limited exposure to financial management training. These findings imply that there is need for enhanced financial management technology adoption and managers' frequency retooling on financial management practices.

Introduction

The successful performance of Small and Medium-sized Enterprises (SMEs) engaged in agriculture is intrinsically tied to the sound implementation of FMPs. According to World Bank [1], agriculture contributes 26 % of the Gross Domestic Product (GDP) in Tanzania. The sector employs approximately 65 % of the workforce through predominantly Agri-SME activities [2]. Effective FMPs play a pivotal role in the survival and growth of agri-SMEs. Financial Management Practices are herein conceptualized as handling of SMEs' finances in such a way that it allows the SME to be successful and compliant with regulations [3]. Examples of FMPs include management of working capital, financial accounting, financial reporting, financial analysis, capital budgeting and capital structure & financing practices. Scholars such as Matare and Sreedhara [4]; Musah et al. [5]; Sa'eed et al. [6] have demonstrated the importance of FMPs for the success of agri-SMEs.

Although Mang'ana et al. [7] reported that Agri-SMEs in Tanzania implement FMPs moderately, performance of Agri-SMEs especially in terms of profitability, growth, and sustainability, is still poor. This study premises that in the context of a developing

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country such as Tanzania, moderate implementation of FMPs should result in moderate performance of Agri-SMEs. However, according to Mang'ana et al. [7], this is not the case in Tanzania. It is against this that the study at hand assessed Agri-SME managers' perception towards FMPs to develop a deeper understanding of the influence of adoption of FMPs by Agri-SME managers. Understandably, Caffaro et al. [8] and Che Nawi et al. [9], explored the impact of FMPs on enterprise performance across various sectors and contexts. While we acknowledge the contribution of their works, they did not explore the perception of Agri-SMEs' managers towards FMPs which have a direct bearing on their implementation. It is therefore imperative to shed light on these fronts in a quest for expanding the scope of FMP literature.

To assess Agri-SME managers' perception towards FMPs, this study integrated the Technology Acceptance Model (TAM) and the Resource-Based View (RBV). On the one hand, TAM posits that perceived usefulness and perceived ease of use are key determinants of an individual's intention to adopt a technology, ultimately influencing behavior [10]. The RBV on the other hand emphasizes the importance of small-scale agricultural enterprises in utilizing their resources (capabilities) to achieve desired performance [11]. With this theoretical integration, we hypothesized that perceived ease of use and usefulness positively influence the adoption of effective FMPs in Tanzanian agri-SMEs, leading to enhanced business performance. Structural Equation Modeling (SEM) is the tool of data analysis that was employed in this study due to its ability to simultaneously test complex relationships between observed and latent variables, providing robust insights that other methods, such as simple regression, do not offer [12]. SEM's capacity to handle multiple dependent relationships allows for a more comprehensive understanding of how managers' perceptions impact the adoption of FMPs and, consequently, Agri-SMEs' performance.

The reminder of this article proceeds as follow: Next to this brief introduction is the literature review conceptual and theoretical clarification on FMPs and Agri-SME performance. The literature review is followed by the methodology where data collection procedure and analysis are presented. Section four of the paper presents and discusses the findings. Finally, section five concludes the paper with recommendations.

Literature review

Theoretical review

Resourced-based view (RBV)

The Resourced-Based View (RBV) asserts that businesses possess specific resources and capabilities that can offer competitive advantage and enhance long-term performance [11]. These capabilities involve repeatable patterns of activities including technical and management skills such as systems implementations [13]. In the context of this study, agri-SMEs recognize that their enterprises are owner-managed and possess resources and capabilities, such as financial resources and embedded FMPs. According to RBV, an enterprise's performance depends on the effective utilization of its resources and capabilities, indicating that the management of these resources, including fund management, significantly influences organizational performance. In shading light on managers' perception of FMPs, this study assumes that effective utilization and deployment of capabilities (resources) are crucial for small–scale agricultural enterprises to achieve their objective performance.

The technology acceptance model (TAM)

The Technology Acceptance Model (TAM) is a theory of information systems developed by Davis in 1989. This model has since become one of the most cited models in the context of technology diffusion and system adoption [14,15]. The basic TAM model tested two beliefs: perceived usefulness (PU) and perceived ease of use (PEOU). Perceived Usefulness is defined as the potential user's subjective likelihood that using a specific system (for example, an accounting system to keep track of book-keeping records and financial reporting) will improve his/her action, whereas Perceived Ease of Use is defined as the potential user's expectation that the target system will be simple to use [10].

TAM explains how people accept and employ technology in information systems. The endpoint is the actual system utilization. The model proposes that the perceived ease of use and usefulness of a technological product determines the extent of consumer acceptance and implementation of the same. The theory posits that a person's intentions to use (acceptance of technology) and usage behavior (actual use) of technology are determined by how they regard or perceive the usefulness (benefit from using the technology) and ease of use of the technology.

Conceptual review

The conceptualization of agri-SMEs is diverse with some scholars referring to them as ``Agribusiness Small and Medium Enterprises,'' while others describe them as ``Agricultural Small and Medium Enterprises``. Recently, the network of smallholder and agri-SME finance and investment (SAFIN) published a taxonomy of Agri-SMEs that defines Agri-SMEs as agricultural enterprises with a profit-oriented motive that are involved in the agricultural value chain directly or indirectly by delivering enabling services to value chain players [16]. Although the Agri-SME nomenclature is comparable, Agri-SMEs are herein referred to as Small and Medium-sized businesses involved in activities, such as processing, marketing, and value addition in the agricultural value chain. This study has also adopted the classification from the Small and Medium Enterprise Development Policy (2003) where Agri-SMEs are considered as all agricultural SMEs that are registered with the Small Industries Development Organization (SIDO) databases and the database of the Tanzania Chamber of Commerce, Industry, and Agriculture (TCCIA).

In terms of FMPs, Nkundabanyanga et al. [17] and Sa'eed et al. [6] argue that FMPs are standard procedures considered to enhance

financial accounting, reporting, budgeting, and related tasks with the ultimate objective of improving the efficiency of the firm. This definition provide a strong foundation for understanding the significance of financial management practices. According to Dwangu and Mahlangu [18], FMPs are core activities that revolve around the process of decision-making regarding enterprises' financial resources. Building on Musah et al. [5] and Sa'eed et al. [6], four operational variables namely the working capital management, financial accounting, information systems & financial reporting, capital structure & budgeting were identified and measured.

As for the enterprise performance, Singh et al. [19] asserts that enterprise performance can be assessed and measured against financial indicators for instance Return on Equity (ROE) and Return on Assets (ROA) or by using non-financial indicators such as market share, profitability, and innovation to capture whether the company has met its goals and objectives. As noted by Dess and Robinson [20] and Singh et al. [21], subjective assessments by managers or key informants are also valid and reliable measures of organizational performance, especially when objective financial data may be unreliable or unavailable due to exaggeration by managers. In this study, the agri-SMEs' performance was assessed based on subjective measures utilizing a validated scale developed by Delaney and Huselid [22]. The adapted perceptual measures of organizational performance were benchmarked in the sense that participants were asked to assess organizational performance over the past three years relative to that of similar organization. The scale was selected for its conciseness, adaptability, and ability to facilitate cross-sector comparisons. Furthermore, as reported by Shea et al. [23], the scale has undergone psychometric testing since its inception, providing further evidence of its suitability for use in this study.

As indicated in section 1, this study hypothesized that a high degree of perceived usefulness and perceived ease of use of the FMPs positively impacts the adoption and implementation of the FMP system in agriculture SMEs, leading to improved job performance and overall organizational performance. This hypothesis is based on the assumption that individuals are more likely to adopt and embrace FMPs that they perceive as being easy to use and useful. Thus, taking into consideration the review of the literature and the objectives of this study. Fig. 1 depicts the conceptual model for the following study hypotheses.

Hypothesis 1. The perceived usefulness of FMPs, namely the working capital management practices (H1a), accounting and financial report practices (H1b), (H1c) Financing management practices, and (H1d) capital budgeting management practices, has a positive influence on the performance of Agri-SMEs in Tanzania

Hypothesis 2. The perceived ease of using FMPs, namely the working capital management practices (H1a), accounting and financial report practices (H1b), (H1c) Financing management practices, and (H1d) capital budgeting management practices, has a positive influence on the performance of Agri-SMEs in Tanzania

Methodology

Population and sample selection

The target population for this study was 13,959 Agri-SMEs registered in the Small Industries Development Organization (SIDO) and Tanzania Chamber of Commerce, Industry, and Agriculture (TCCIA) databases across three regions namely Dar es Salaam (7352),

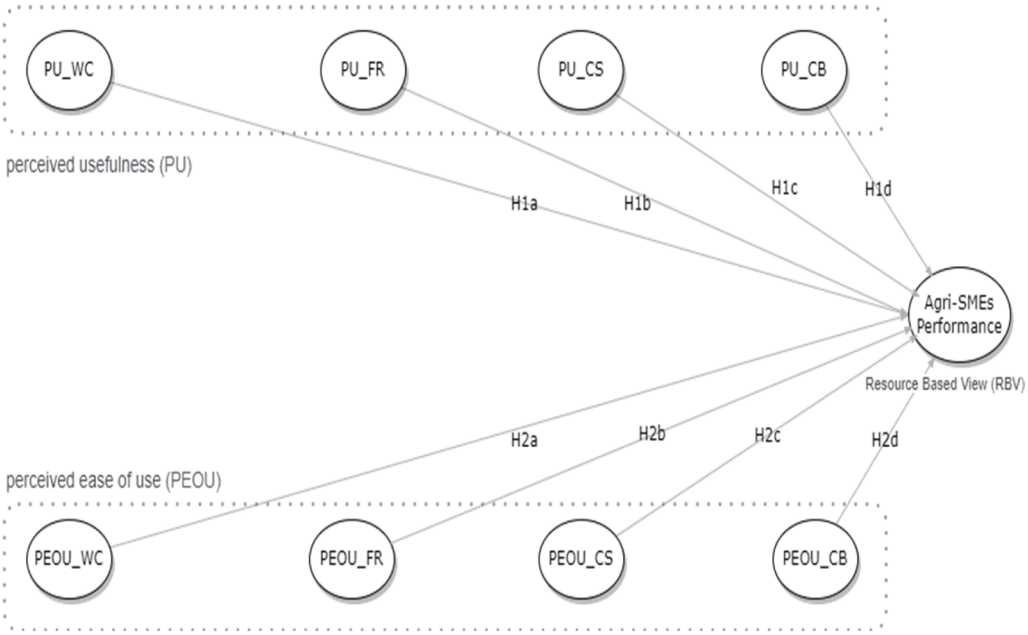

Fig. 1. Conceptual model.

Morogoro (3065), and Mara (3542). Stratified random sampling method was employed to address the challenge of unequal population sizes among the regions and ensure representation. Guided by the Raosoft sample size calculator, the initial calculation resulted in an estimated sample size of 374 Agri-SMEs. This calculation considered a 5 percent margin of error, a 95 % confidence interval, and a 50 % response distribution. Considering the dynamic nature of Agri-SMEs and the potential for incomplete responses, the sample size was then increased by 14 % (i.e. 427 Agri-SMEs). This adjustment enhanced the dataset robustness and completeness [24,25].

Data collection

Empirical data for this study were primarily collected using questionnaires. The questionnaire was pretested with 30 Agri-SMEs in Dar es salaam to ensure reliability and quality. The questionnaire had questions that explored managers' perception towards four key FMPs namely working capital management, financial accounting and reporting, financing management, and capital budgeting. A five-point Likert scale with response ranging from 1 (strongly disagree) to 5 (strongly agree) was constructed and utilized. The performance of Agri-SMEs was assessed using Delaney and Huselid's (1996) scale. This scale is commonly employed in psychometric evaluations [23] similar to the focus of this study.

The questionnaire was created using Kobo-Collect Forms and administered by trained enumerators. Participants were informed of the study objectives, guaranteed anonymity, and confidentiality, and reminded that the data were intended solely for academic purposes. The Kobo-Collect tool was used to ensure data quality and consistency. After the data collection, the responses were checked for completeness, consistency, and accuracy. Harman's single-factor test was applied to verify that any correlations detected were not artifacts of the data collection process.

Data analysis

The quantitative data that were collected were managed and analyzed using Structural Equation Modeling with SmartPLS, version 4.0. SEM is a powerful statistical tool that has gained popularity in social sciences due to its ability to analyze complex relationships among variables simultaneously. It is particularly useful for modeling latent variables inferred from observed variables [26]. SEM allows for a thorough examination of the theoretical model and the relationships between the variables of interest.

The analyses were carried in two main stages: The first stage was an assessment of the measurement model, and the second stage was the evaluation of the structural model. The measurement model assessment involved checking for the reliability and validity of the constructs employed in the study, ensuring that the observed variables accurately reflect the latent constructs. This process is critical to confirm that the data are suitable for SEM analyses.

The structural model evaluation focused on testing the hypothesized relationships between the constructs within the adapted Technology Acceptance Model (TAM). In this study, TAM was modified to directly analyze the influence of perceived ease of use (PEU) and perceived usefulness (PU) of FMP on the performance of Agri-SMEs, bypassing the Behavioral Intention (BI) construct traditionally included in TAM due to immediate and high-stakes nature of financial decisions in these enterprises.

The hypothesized model was specified as follow:

$$Y_i = \alpha + \beta_1 X_1 + \beta_2 X_2 + \varepsilon \tag{1}$$

where, Y_i, Agri-SME Performance; X_1, Perceived Ease of Use (PEU) of Financial Management Practices (FMP); X_2, Perceived Usefulness (PU) of Financial Management Practices (FMP); ε, Random error.

This model reflects a direct relationship between the perceptions of FMP and the performance outcomes of Agri-SMEs, aligning with research that has adapted TAM where the focus is on the direct effects of PU and PEU on actual use or performance, especially in contexts where behavioral intention is not explicitly modeled [27,28].

We employed the bootstrapping technique as a resampling method to assess the robustness of the SEM and validated the significance of path coefficients. Bootstrapping involves drawing multiple samples with replacement from the dataset to generate multiple bootstrap samples, allowing for the calculation of standard errors and confidence intervals. Specifically, we conducted 5000 bootstrap samples to obtain reliable estimates of the path coefficients and their associated statistics. This resampling approach enhances the generalizability of our findings and provides a more accurate representation of the population. The bootstrapping procedure was implemented using the smartPLS software, aligning with established practices in SEM.

Results and discussion

Descriptive statistics

In examining Agri-SME managers' technological and financial backgrounds, it appears that majority (61.72 %) of managers had not used Enterprise Resource Planning (ERP) Accounting Packages in their operations. These findings signal hesitancy or limited adoption of advanced technological solutions within the Agri-SME and are similar to findings of Lackson and Muba, [29]; Bayraktaroglu et al. [30]; Nkwabi [31] (Fig. 2a). Managers' non-use of ERP is attributable to limited financial resources.

Furthermore, a significant proportion (63.37 %) of the Agri-SME managers revealed not to have received financial management training within three years, indicating a knowledge gap. The findings revealed that several factors contribute to this knowledge gap. Nearly half (45 %) of Agri-SME managers lack training programs. Around 30 % of Agri-SME managers are not aware about the

importance of training and about 25 % of Agri-SME have financial limitations and time constraints (Fig. 2b). With these findings, it is high time to develop tailored interventions such as targeted training programs, offer financial support for technology adoption, and fostering awareness about the benefits of technology and financial management.

Measurement model

To ascertain the constructs' validity and reliability, the measurement model was evaluated (Table 1). Most items' factor loadings in the model were found to be greater than the minimum acceptable value of 0.50 [32]. Indicator items with outer loadings below 0.40 were removed. The effect of removal on composite reliability, content, and convergent validity was examined. In this study, removing the items (D1_3_1, loading = 0.392; D2_2_1, loading = 0.218; D2_2_2, loading = 0.280; D2_4_4, loading = −0.389) resulted in an increase of Composite Reliability (CR) and Average Variance Extracted (AVE) significantly bringing the values for the item construct above the commended threshold, specifically, the CR values exceed the acceptable threshold of 0.70 and the AVE values surpass the satisfactory level of 0.50 [12]. This indicates enhanced internal consistency and convergent validity, respectively.

Other triangulated questions were asked in the survey to capture the use of both internal (equity) and external (debt/borrowing) financing. Similarly, the removed items (D2.2.1 and D2.2.2) which aimed to explore managers' perceptions of the ease of preparing budgets and financial statements, respectively, were also triangulated by other questions in the survey to capture this concern. Therefore, despite the removal of these specific items, the overall construct of financing and financial reporting management practices remained valid and meaningful and did not significantly compromise the meaning or validity of the survey's findings on financing and financial reporting management practices.

Discriminant validity refers to the extent to which a construct in a structural model is distinct from other constructs in the same model. It was assessed in the study using the Fornell and Larcker criteria and a Heterotrait-Monotrait ratio (HTMT) with a recommended threshold value of less than 0.90. The results indicated that the discriminant validity was good for all items in the model, as all Fornell & Larcker criteria and HTMT values were below 0.90 (Tables 2 and 3). This suggests that the constructs in the model are distinct and that their measures are not contaminated by other constructs in the model. This also ensures that the reflective constructs are strongly associated with their indicators [33]. Thus, analysis of the assessment model indicates that the measurement model is reliable and valid.

Structural model assessment

The structural paths were examined with several key indicators being evaluated in the process. These include the coefficients of determination (R^2), the predictive relevance (Q^2), size and the significance of the path coefficients [12]. According to Falk and Miller [34], an R^2 value of 0.10 or higher is regarded as the minimum threshold for the variance explained by the endogenous constructs to be deemed acceptably sufficient. This allows for examination and synthesis of the proportion of variance in the endogenous construct that is accounted for by the exogenous construct. Predictive relevance is determined by a positive Q^2 value, which indicates that the exogenous construct has a relevant predictive influence on the concerned endogenous construct [12].

In the structural model, the endogenous construct is the ``Perceived organizational performance of Agri-SMEs,'' representing the outcome of interest. The exogenous constructs encompass the perceived usefulness and perceived ease of using FMPs. These FMPs include working capital management practices, accounting and financial report practices, financing management practices, and capital budgeting management practices. In addition to these key indicators, collinearity issues in the predictor (exogenous) constructs must be addressed. Based on the analysis of Variance Inflation Factor (VIF) values, it appears that most of the predictor variables have VIF values below 5 (with a range of 1.085 to 3.193), which suggests that there were no collinearity issues present in the model [35,36].

The path analysis from (smartPLS) reveals that three of the eight hypotheses tested are significant (Table 4). Specifically, Hypotheses H1c, H2c, and H2d demonstrate significant relationships between the independent variables namely Perceived Usefulness in Financing Management Practices (D1_3_PU_CS); Perceived Ease of Use in Financing Management Practices (D2_3_PEOU_CS); Perceived Ease of Use in Capital Budgeting Management Practices (D2_4_PEOU_CB)) and the dependent variable namely Performance of Agri-

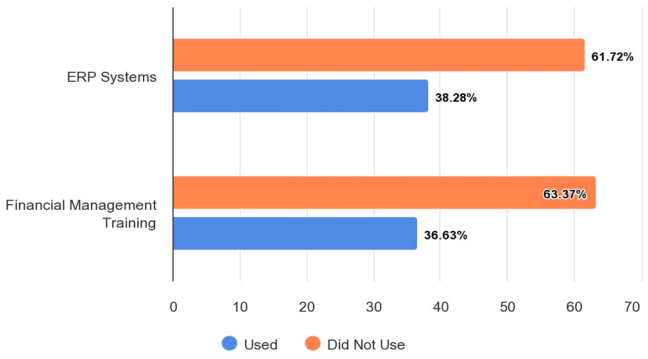

Fig. 2a. Agri-SME managers' use of ERP system and training on financial management.

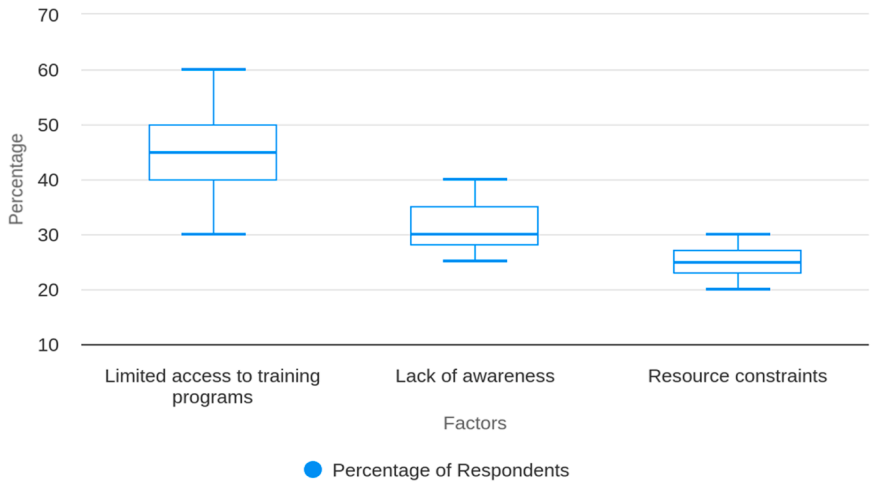

Fig. 2b. Barriers to Agri-SME managers' participation in financial management training.

Table 1
Reliability and validity of constructs.

Construct	Items	Loadings	Alpha	rho-A	CR	AVE
PU_WC	D1_1_1	0.601	0.796	0.873	0.852	0.539
	D1_1_2	0.803				
	D1_1_3	0.793				
	D1_1_4	0.638				
	D1_1_5	0.806				
PU_FR	D1_2_1	0.867	0.863	0.872	0.894	0.679
	D1_2_2	0.740				
	D1_2_3	0.850				
	D1_2_4	0.834				
PU_CS	D1_3_2	0.654	0.594	0.631	0.785	0.552
	D1_3_3	0.700				
	D1_3_4	0.859				
PU_CB	D1_4_1	0.911	0.861	0.909	0.914	0.780
	D1_4_3	0.935				
	D1_4_4	0.797				
PEOU_WC	D2_1_1	0.922	0.720	1.042	0.822	0.614
	D2_1_2	0.812				
	D2_1_4	0.576				
PEOU_FR	D2_2_3	0.850	0.773	0.898	0.893	0.807
	D2_2_4	0.945				
PEOU_CS	D2_3_1	0.831	0.700	0.987	0.812	0.603
	D2_3_2	0.508				
	D2_3_4	0.928				
PEOU_CB	D2_4_1	0.886	0.839	0.877	0.901	0.752
	D2_4_2	0.869				
	D2_4_3	0.846				
E_Agri-SMEs Performance	E1_1	0.714	0.903	0.916	0.920	0.562
	E1_2	0.726				
	E1_3	0.648				
	E1_4	0.675				
	E1_5	0.786				
	E1_6	0.797				
	E2_1	0.774				
	E2_2	0.803				
	E2_3	0.803				

SMEs in Tanzania (E). The T-statistics for these paths (i.e. 2.649, 4.347, and 4.817 respectively) exceed the critical value, and the corresponding P-values (i.e. 0.008, 0.000, and 0.000 respectively) are less than the alpha level (<0.05), providing evidence to reject the null hypothesis that there is no relationship between the specified variables.

On the other hand, hypotheses H1a, H1b, H1d, H2a, H2b exhibited non-significant relationships between the independent variables (D1_1_PU_WC, D1_2_PU_FR, D1_4_PU_CB, D2_1_PEOU_WC, and D2_2_PEOU_FR) and the dependent variable (E). The T-statistics for these paths were lower than the critical value, and the corresponding P-values were higher than the alpha level (>0.05), indicating

Table 2
Heterotrait-monotrait ratio (HTMT) for discriminant validity assessment.

	D1_1_PU_WC	D1_2_PU_FR	D1_3_PU_CS	D1_4_PU-CB	D2_1_PEOU_WC	D2_2_PEOU_FR	D2_3_PEOU_CS	D2_4_PEOU_CB	E_ Agri-SMEs
D1_1_PU_WC									
D1_2_PU_FR	0.191								
D1_3_PU_CS	0.391	0.738							
D1_4_PU_CB	0.199	0.579	0.688						
D2_1_PEOU_WC	0.341	0.383	0.605	0.506					
D2_2_PEOU_FR	0.271	0.289	0.344	0.268	0.758				
D2_3_PEOU_CS	0.268	0.314	0.463	0.311	0.576	0.764			
D2_4_PEOU_CB	0.107	0.085	0.109	0.111	0.296	0.260	0.198		
E_ Agri-SMEs	0.148	0.136	0.320	0.194	0.234	0.185	0.310	0.253	

Table 3
Fornell–Larker criterion results for discriminant validity.

	D1_1_PU_WC	D1_2_PU_FR	D1_3_PU_CS	D1_4_PU-CB	D2_1_PEOU_WC	D2_2_PEOU_FR	D2_3_PEOU_CS	D2_4_PEOU_CB	E-Agri-SMEs
D1_1_PU_WC	0.734								
D1_2_PU_FR	0.178	0.824							
D1_3_PU_CS	0.287	0.512	0.743						
D1_4_PU-CB	0.182	0.500	0.481	0.883					
D2_1_PEOU_Wc	0.302	0.353	0.395	0.434	0.783				
D2_2_PEOU_FR	0.245	0.260	0.233	0.240	0.463	0.899			
D2_3_PEOU_CS	0.231	0.238	0.290	0.250	0.362	0.598	0.777		
D2_4_PEOU_CB	−0.063	−0.082	−0.074	−0.080	−0.242	−0.198	−0.079	0.867	
E_ Agri-SMEs	0.148	0.152	0.258	0.182	0.246	0.171	0.293	−0.234	0.749

Note: D1_1_PU_WC Perceived usefulness of working capital practices.
D1_2_PU_FR – Perceived usefulness of financial reporting practices.
D1_3_PU_CS – Perceived usefulness of financing practices.
D1_4_PU-CB – Perceived usefulness of capital budgeting practices.
D2_1_PEOU_WC – Perceived ease of use of working practices.
D2_2_PEOU_FR – Perceived ease of use of financial reporting practices.
D2_3_PEOU_CS – Perceived ease of use of financing practices.
D2_4_PEOU_CB – Perceived ease of use of capital budgeting practices.
E-Agri-SMEs – Perceived organizational performance of Agricultural Small and Medium Enterprises (Agri-SMEs).

Table 4
Model path and hypotheses testing results.

Hypothesis	Path	Path coefficient	Standard deviation (STDEV)	*T* statistics	*P* values	Supported
H_{1a}	D1_1_PU_WC -> E	0.033	0.048	0.691	0.489	No
H_{1b}	D1_2_PU_FR -> E	−0.022	0.050	0.442	0.658	No
H_{1c}	D1_3_PU_CS -> E	0.152	0.057	2.649	0.008	Yes
H_{1d}	D1_4_PU_CB -> E_	0.024	0.058	0.408	0.683	No
H_{2a}	D2_1_PEOU_WC -> E	0.079	0.059	1.350	0.177	No
H_{2b}	D2_2_PEOU_FR -> E	−0.104	0.068	1.519	0.129	No
H_{2c}	D2_3_PEOU_CS -> E	0.258	0.059	4.347	0.000	Yes
H_{2d}	D2_4_PEOU_CB -> E_	−0.202	0.042	4.817	0.000	No

Note: 1 *t*-values were obtained with the bootstrapping procedure (5000 samples).
Note: 2 WC: working capital management practices, FR: accounting and financial reporting management practices, CS: financing management practices, CB: capital budgeting management practices.

insufficient evidence to reject the null hypothesis and support the presence of a relationship (Table 4).

The Q^2 values for the endogenous construct, Agri-SME performance, were found to be above 0, demonstrating predictive relevance. This suggests that the eight dimensions of managers' perception towards financial management practices significantly impact the performance of agri-SMEs in the model. (Table 5)

Fig. 3 show coefficient of determination's (R^2) results on managers' perception towards FMPs. Managers' perception of the four FMPs explain 17 % of the variance of the perceived enterprise performance which is considered to be adequate as suggested by Falk & Miller [34]. These results indicate that the perceived usefulness of financing management practices significantly and positively influences the perceived performance of Agri-SMEs ($\beta = 0.152$, $t = 2.649$, $p < 0.005$), supporting hypothesis 1c. It can be established that hypothesis 1 is partially supported by the study findings. These findings are in line with findings of Kesale [37] and Lubawa et al. [38], who highlighted the importance of financing management practices in enhancing firm performance, particularly in the context of Agri-SMEs. Lanlan et al. [39] have shown that effective financing management practices can help firms optimize their use of financial resources and improve their overall financial performance. Perceived usefulness is an important determinant of the adoption and use of management practices, such as financing management practices, and this can have a positive impact on firms' performance.

Furthermore, the results indicate that the perceived ease of use or adoption of financing management practices has a positive and significant impact on the perceived performance ($\beta = 0.258$, $t = 4.347$, $p < 0.001$). Surprisingly, despite the significance level, hypothesis H2d is not supported as it was observed that the perceived ease of use or adoption of capital budgeting practices negatively and significantly influenced the perceived enterprise performance ($\beta = -0.202$, $t = 4.817$, $p < 0.001$). These findings support hypothesis 2, suggesting that ease of use can impact the adoption and success of management practices. However, the negative and significant influence of perceived ease of use of capital budgeting practices on performance is unexpected and requires further investigation. The current study cannot definitively explain this contradictory finding.

One potential explanation based on Rappaport's [40] suggestion is that overly simplified capital budgeting practices, perceived as easy to use, might lead to inadequate consideration of critical factors during the decision-making process. For instance, traditional techniques such as Payback Period and simple Rate of Return might neglect the time value of money, cash flow variability, and project risk [40]. Overreliance on such methods could lead to suboptimal investment decisions and potentially lower performance in the long run. In addition to this, Pike and Brown [41] highlights the potential dangers of overreliance on ease of use which could lead to lack of attention to detail in implementation. Their work discusses the ``tyranny of simplicity'' in project appraisal, where overly simplified methods can create a false sense of security and potentially poor investment choices [41].

There was no statistical evidence to support hypotheses that the perceived usefulness of working capital practices ($\beta = 0.033$, $t = 0.691$, $p > 0.005$), financial reporting practices ($\beta = -0.022$, $t = 0.442$, $p > 0.005$), and capital budgeting practices ($\beta = 0.024$, $t = 0.408$, $p > 0.005$) influences perceived Agri-SMEs performance. Similarly, there was no statistical evidence to support hypotheses that the perceived ease of use of working capital practices ($\beta = 0.079$, $t = 1.350$, $p > 0.005$) and financial reporting practices ($\beta = -0.104$, $t = 1.519$, $p > 0.005$) influence perceived performance. While these FMPs are generally considered important for financial management, the current study does not provide conclusive evidence regarding their impact on the perceived performance of Agri-SMEs in this context. More inquiry is needed to explore the influence of these specific practices on the performance of Agri-SMEs.

Conclusion, recommendations and areas for further research

The findings of this study provide evidence that Agri-SME managers perceive usefulness of FMPs to be significantly important in enhancing firm performance. Interestingly, the perceived ease of use of capital budgeting practices was found to negatively influence Agri-SMEs' performance. However, the perceived usefulness of working capital, financial reporting, and capital budgeting as well as

Table 5
Predictive relevance (Q^2) for Agri-SMEs performance.

	Q^2 predict
Agri-SMEs performance	0.121

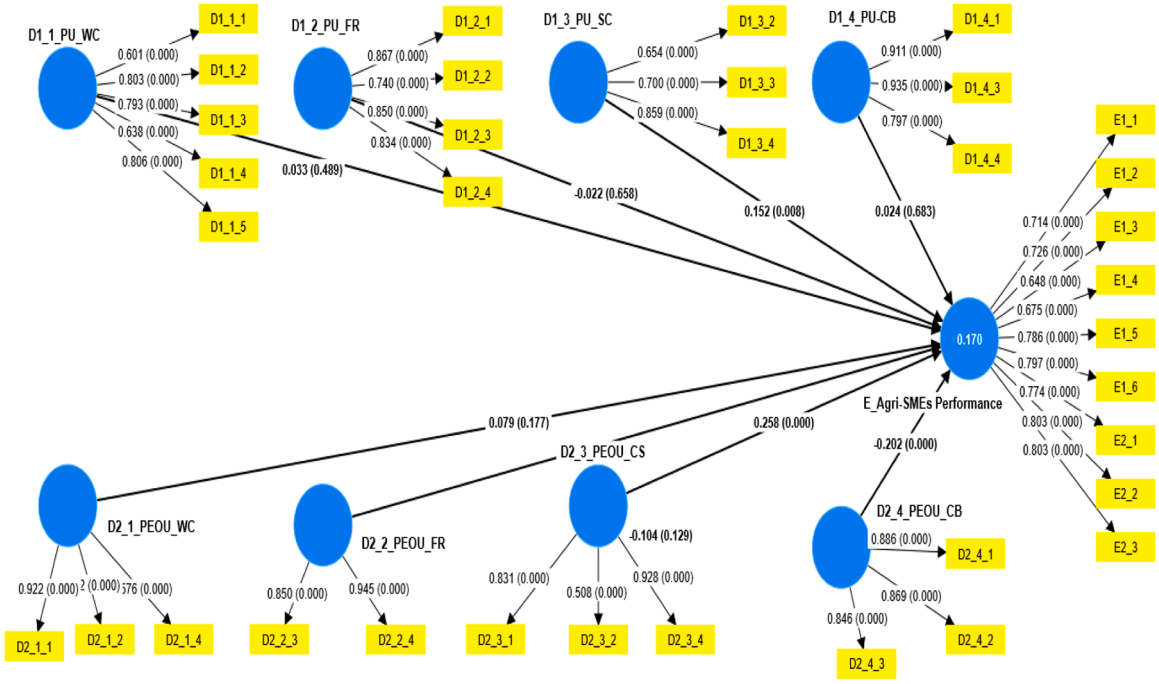

Fig. 3. SEM results from Smart-PLS software 4.

the perceived ease of use of working capital and financial reporting practices, did not have a statistically significant influence on perceived Agri-SME performance.

While managers' positive perception towards financing management practices is associated with improved performance, the influence of other FMPs remains inconclusive within the context of this research. Further inquiry is needed to explore the non-significant relationships and identify potential moderating factors that might influence the impact of these practices on Agri-SME performance.

This study contributes to the understanding of FMPs in agribusiness by highlighting the importance of managerial perception. It emphasizes the need to consider not just the technical aspects of financial management practices, but also how managers view their usefulness and ease of implementation. Future research should explore how training interventions can be designed to improve managers' perception and ultimately lead to more effective adoption of financial management practices in Agri-SMEs.

This study recommends that Agri-SMEs should prioritize improving their managers' understanding and perception of FMPs. This can be done through provision of tailored trainings focusing on enhancing managers' understanding and perception of FMPs. The trainings should highlight the usefulness and ease of implementation of financial management practices while addressing concerns such as limited resources and unfamiliarity with technology. Moreover, collaboration between the Government of Tanzania and private organizations such as the Financial Sector Deepening Trust (FSDT) is crucially important. Financial educational programs should be established to address the knowledge gap in financial literacy and promote the adoption of effective FMPs. Public-private partnerships can play a significant role in financing these initiatives, ensuring their accessibility and sustainability.

While the findings of this study have provided valuable insights, the study does not go without limitations. The cross-sectional design employed in this study restricts causal inference, and the study primarily examined perceived usefulness and ease of use of FMPs, leaving out potential influences of external and internal factors. Additionally, the unexpected negative association between perceived ease of use of capital budgeting practices and performance warrants further investigation. Future research could address these limitations by employing longitudinal designs and incorporating the approach with objective performance measures and exploration of external/internal factors. Examining specific capital budgeting methods used by managers, their understanding of potential limitations, and conducting qualitative interviews or case studies could provide valuable insights into these dynamics.

CRediT authorship contribution statement

Kulwa Mwita Mang'ana: Conceptualization, Resources, Data curation, Writing – original draft, Writing – review & editing, Visualization, Methodology, Project administration, Supervision. **Silver John Hokororo:** Methodology, Validation, Supervision, Project administration. **Daniel Wilson Ndyetabula:** Writing – review & editing, Methodology, Validation, Supervision, Project administration.

Declaration of competing interest

The authors declare that they have no conflict of interest.

References

[1] World Bank. (2023). Tanzania economic update: transforming agriculture, realizing the potential of agriculture for inclusive growth and povery reduction. https://www.worldbank.org/en/country/tanzania.
[2] Food and AgricultureTanzania at a glanceOrganization2023https://www.fao.org/tanzania/fao-in-tanzania/tanzania-at-a-glance/ar/.
[3] K.M. Mang'ana, S.J. Hokororo, D.W. Ndyetabula, An investigation of the extent of implementation of the financial management practices of Agri-SMEs in developing countries: evidence from Tanzania, Sustain. Technol. Entrep. 3 (1) (2024) 100049, https://doi.org/10.1016/j.stae.2023.100049.
[4] P.G. Matare, T.N. Sreedhara, Financial management practices and growth of MSMEs of Tanzania, MUDRA: J. Finance Account. 7 (1) (2020) 30, https://doi.org/10.17492/mudra.v7i1.195417.
[5] A. Musah, E.D. Gakpetor, P. Portia, Financial management practices, firm growth and profitability of small and medium scale enterprises (SMEs), Inf. Manag. Bus. Rev. 10 (506) (2018) 25–37. https://ojs.amhinternational.com/index.php/imbr/article/view/2461/1696.
[6] A. Sa'eed, N. Gambo, I.I. Inuwa, I. Musonda, Effects of financial management practices on technical performance of building contractors in northeast Nigeria, J. Financ. Manag. Prop. Constr. 25 (2) (2020) 201–223, https://doi.org/10.1108/JFMPC-07-2019-0064.
[7] K. Mang'ana, D. Ndyetabula, S. Hokororo, Financial management practices and performance of Agri-SMEs in Tanzania: a structural equation modeling analysis, SSRN Electron. J. 7 (1) (2022) 54–59, https://doi.org/10.2139/ssrn.4305705.
[8] F. Caffaro, M. Micheletti Cremasco, M. Roccato, E. Cavallo, Drivers of farmers' intention to adopt technological innovations in Italy: the role of information sources, perceived usefulness, and perceived ease of use, J. Rural Stud. 76 (March) (2020) 264–271, https://doi.org/10.1016/j.jrurstud.2020.04.028.
[9] N. Che Nawi, A. Mamun, N. Al Hayat, L Seduram, Promoting sustainable financial services through the adoption of eWallet among Malaysian working adults, Sage Open 12 (1) (2022), https://doi.org/10.1177/21582440211071107.
[10] F.D. Davis, Perceived usefulness, perceived ease of use, and user acceptance of information technology, MIS Q. 13 (3) (1989) 319–339, https://doi.org/10.2307/249008.
[11] J. Barney, Firm resources and sustained competitive advantage, J. Manag. 17 (1) (1991) 99–120, https://doi.org/10.1177/014920639101700108.
[12] J.F. Hair, J.J. Risher, M. Sarstedt, C.M. Ringle, The results of PLS-SEM article information, Eur. Bus. Rev. 31 (1) (2020) 2–24.
[13] S.A. Alvarez, U. Zander, J.B. Barney, A. Afuah, Developing a theory of the firm for the 21st century, Acad. Manag. Rev. 45 (4) (2020) 711–716, https://doi.org/10.5465/AMR.2020.0372.
[14] R. Fauzi-Irviani, C. Jatiningrum, A. Halim, Supriyadi, Financial management information system within government institution and supply chain strategy: implementation technology acceptance model (TAM), Int. J. Supply Chain Manag. 8 (3) (2019) 380–388.
[15] K. Mangana, M. Katundu, Determinants for effective implementation of electronic payment system by hospitals in Tanzania: a Case of the Kilimanjaro Christian Medical Centre, Bus. Manag. Horiz. 6 (2) (2018) 47, https://doi.org/10.5296/bmh.v6i2.14083.
[16] M. Shakhovskoy, Rethinking our understanding of Agri-SMEs: a comprehensive taxonomy. RAFLearning. Rural & Agricultural Finance, 2021. https://www.raflearning.org/post/rethinking-our-understanding-agri-smes-comprehensive-taxonomy.
[17] S.K. Nkundabanyanga, B. Akankunda, I. Nalukenge, I. Tusiime, The impact of financial management practices and competitive advantage on the loan performance of MFIs, Int. J. Soc. Econ. 44 (1) (2017) 114–131, https://doi.org/10.1108/IJSE-05-2014-0104.
[18] A.M. Dwangu, V.P. Mahlangu, Accountability in the financial management practices of school principals, Int. J. Educ. Manag. 35 (7) (2021) 1504–1524, https://doi.org/10.1108/IJEM-06-2021-0243.
[19] K. Singh, M. Misra, M. Kumar, V. Tiwari, A study on the determinants of financial performance of u.S. agricultural cooperatives, J. Bus. Econ. Manag. 20 (4) (2019) 633–647, https://doi.org/10.3846/jbem.2019.9858.
[20] G.G. Dess, R.B. Robinson, Measuring organizational performance in the absence of objective measures: The case of the privately-held firm and conglomerate business unit, Strategic Manag. J. 5 (3) (1984) 265–273, https://doi.org/10.1002/smj.4250050306.
[21] S. Singh, T.K. Darwish, K. Potočnik, Measuring Organizational Performance: A Case for Subjective Measures, Br. J. Manag. 27 (1) (2016) 214–224, https://doi.org/10.1111/1467-8551.12126.
[22] T.J. Delaney, A.M. Huselid, The Impact of Human Resource Management Practices on Perceptions of Organizational Performance, Acad. Manag. J. 39 (4) (1996) 949–969, https://doi.org/10.17576/pengurusan-2010-30-01.
[23] T. Shea, B.K. Cooper, H. de Cieri, C. Sheehan, Evaluation of a perceived organisational performance scale using Rasch model analysis, Aust. J. Manag. 37 (3) (2012) 507–522, https://doi.org/10.1177/0312896212443921.
[24] W.G. Cochran. *Sampling Techniques*, 3rd Edition, John Wiley, New York, 1977.
[25] R. Valliant, J.A. Dever, F. Kreuter. Practical tools for designing and weighting survey samples 1, Springer, New York, 2013.
[26] J.F. Hair Jr, L.M. Matthews, R.L. Matthews, M. Sarstedt, PLS-SEM or CB-SEM: updated guidelines on which method to use, Int. J. Multivar. Data Anal. 1 (2) (2017) 107, https://doi.org/10.1504/ijmda.2017.10008574.
[27] F.D. Davis, User acceptance of information technology: system characteristics, user perceptions and behavioral impacts, Int. J. Man-Machine Stud. 38 (3) (1993) 475–487, https://doi.org/10.1006/imms.1993.1022.
[28] V. Venkatesh, F.D. Davis, A theoretical extension of the technology acceptance model: four longitudinal field studies, Manag. Sci. 46 (2) (2000) 186–204.
[29] B. Lackson, S. Muba, Factors affecting the adoption of financial reporting standards by micro, small and medium enterprises in Tanzania: the case of Mbeya City Council, East Afr. J. Bus. Econ. 4 (1) (2021) 46–61, https://doi.org/10.37284/eajbe.4.1.480.
[30] S. Bayraktaroglu, V. Kahya, E. Atay, H. Ilhan, Application of expanded technology acceptance model for enhancing the HRIS usage in SMEs, Int. J. Appl. Manag. Technol. 18 (1) (2019) 48–66, https://doi.org/10.5590/ijamt.2019.18.1.04.
[31] J.M. Nkwabi, A review of factors affecting the growth of small and medium enterprises (SMEs) in Tanzania, Eur. J. Bus. Manag. 2016 (2019) 1–8, https://doi.org/10.7176/ejbm/11-33-01.
[32] M.E. Kite, B.E. Whitley, Factor analysis, path analysis, and structural equation modeling, Princ. Res. Behav. Sci. (2018) 466–495, https://doi.org/10.4324/9781315450087-12.
[33] J. Hair, A. Alamer, Partial Least Squares Structural Equation Modeling (PLS-SEM) in second language and education research: Guidelines using an applied example, Res. Methods Appl. Linguist. 1 (3) (2022) 100027, https://doi.org/10.1016/j.rmal.2022.100027.
[34] R.F. Falk, N.B. Miller, A Primer for Soft Modeling, The University of Akron Press, 1992.
[35] G.T.M. Hult, D.J. Ketchen, D.A. Griffith, B.R. Chabowski, M.K. Hamman, B.J. Dykes, W.A. Pollitte, S.T. Cavusgil, An assessment of the measurement of performance in international business research, J. Int. Bus. Stud. 39 (6) (2008) 1064–1080, https://doi.org/10.1057/palgrave.jibs.8400398.
[36] D.J. Ketchen, A primer on partial least squares structural equation modeling, Long Range Plan. 46 (1–2) (2013) 184–185, https://doi.org/10.1016/j.lrp.2013.01.002.
[37] A.M. Kesale, Barriers facing startup small and medium enterprises (SMEs) in accessing external capital in Tanzania, Int. J. Acad. Res. Bus. Soc. Sci. 7 (3) (2017) 55–72, https://doi.org/10.6007/IJARBSS/v7-i3/2692.
[38] G. Lubawa, A. Shirima, F.A. Nandonde, Financing preference for MSMEs in Rural Tanzania, Int. J. Res. Methodol. Soc. Sci. 4 (May) (2018) 18–35.
[39] Z. Lanlan, A. Ahmi, O.M.J. Popoola, Perceived ease of use, perceived usefulness and the usage of computerized accounting systems: a performance of micro and small enterprises (MSEs) in China, Int. J. Recent Technol. Eng. 8 (2 Special Issue 2) (2019) 324–331, https://doi.org/10.35940/ijrte.B1056.0782S219.
[40] Rappaport, A. (1998). Capital Budgeting and Project Selection. Prentice Hall.
[41] R.H. Pike, T.R. Brown, The tyranny of simplicity in project appraisal, Proj. Manag. J. 48 (1) (2017) 3–18.