Exploring the Nexus: Computerized Accounting Systems, Firm Characteristics, and Financial Performance in Ghanaian SMEs

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Abstract:

Purpose: The goal of this study is to understand better the complex interactions between CAS, firm characteristics, and financial performance in Ghanaian SMEs. It hopes that by investigating this nexus, it will gain a useful understanding of factors that impact success and sustainability of the SMEs.

Design/Methodology/Approach: This study takes a quantitative approach with a sample size of 305 Ghanaian SMEs. This study collects data on CAS, firm characteristics, and financial performance through surveys, and then uses statistical analyses to uncover relationships and patterns in the dataset.

Findings: In Ghanaian SMEs, there were significant positive correlations between Computerized accounting system adoption, firm characteristics, and financial performance. In the context of this study, this suggests that technological integration and strategic firm attributes improve financial outcomes.

Conclusion: This study emphasises the role of CAS and firm characteristics in determining financial performance of Ghanaian SMEs. Positive associations revealed the significance of strategic technological adoption and organisational characteristics for long-term success.

Originality/Value: This study contributes significantly by providing detailed insights into the interconnected dynamics of CAS, firm characteristics, and financial performance in Ghanaian SMEs. The findings have significant implications for academia, practitioners, and policymakers, contributing to a better understanding of the factors that influence SME success.

Keywords: Computerized Accounting Systems, Firm Characteristics, Financial Performance, Ghanaian SMEs, Nexus Exploration.

1. INTRODUCTION:

Ghana's small and medium-sized enterprises (SMEs) are a vibrant and important section of the country's economic landscape [1,2]. Ghanaian SMEs contribute significantly to employment, innovation, and economic growth by operating in a wide range of industries such as manufacturing, services, agriculture, retail, technology, and healthcare. These businesses face several challenges, including market competition, regulatory environments, and resource constraints. They are frequently family-owned or privately held businesses that show resilience and adaptability by leveraging demographic factors like geographic location and ownership structure. These SMEs are critical to the regional economies of major cities like Accra, Kumasi, and Tamale [3, 4]. Ghanaian SMEs, as drivers of innovation and contributors to local development, embody the country's entrepreneurial spirit and economic vitality.

Computerized Accounting Systems (CAS) transform financial management in Ghanaian SMEs by streamlining processes and tailoring features to specific industries such as manufacturing, services, and retail [5,6]. These systems, which have user-friendly interfaces and strong security, benefit small and medium-sized businesses in Accra and Kumasi by improving financial reporting and decision-making accuracy. Implementing such systems is critical because they provide a competitive advantage, cost-effectiveness, and strategic financial

control, all of which are essential to these dynamic businesses' overall success and sustainability [7, 8]. Simultaneously, firm characteristics in Ghanaian SMEs, such as size, sector focus, and ownership types (family-owned or publicly traded), influence strategic decisions and foster innovation, each contributing uniquely to the country's economic landscape.

Financial performance (FP) in Ghanaian SMEs reflects economic vitality and resilience in sectors such as manufacturing and services [9]. SMEs play a significant role in economy, and their success is dependent on technology adoption, streamlined operations, and stringent data accuracy (DA) [10]. In cities like Accra and Kumasi, these businesses face challenges while capitalising on firm characteristics to drive long-term success. Ghanaian SMEs' financial health becomes a measure of their adaptability and innovation, emphasising their critical role in driving economic growth throughout the country [11]. Exploring the relationship between CAS, Firm Characteristics, and FP in Ghanaian SMEs reveals significant connections [12, 13]. Tailored technologies influence financial outcomes based on firm size (FS), sector, and ownership. This study delves into the dynamic interplay, shedding light on how these factors affect the success and sustainability of Ghana's small and medium-sized businesses.

The goal of this study is to thoroughly scrutinize associations between CAS, firm characteristics, & FP in Ghanaian SMEs. This study's goal is to identify key drivers of SMEs' success by investigating the nuanced relationships between technological adoption, organisational characteristics, and economic outcomes. This study's goal is to provide valuable knowledge that can be used to inform business practises and policy formulation, as well as to foster a better understanding of the complex dynamics that shape Ghana's SMEs' financial landscape. The primary objectives of this study include

1. To investigate the influence of features of CAS (FCAS) on the FP of SMEs in Ghana (FPSMEG).
2. To investigate how FS affects association between FPSMEG and CAS.
3. To investigate the role of DA as a mediator in the relationship between CAS and SME FP.

4. To evaluate the overall impact of CAS on the operational efficiency of Ghanaian SMEs.

The investigation consists of several critical components. Section 2 conducts a thorough review of relevant prior research. Section 3 defines the research methods employed in this study. Section 4 delves into empirical findings from data analysis, including correlation, moderation, and mediation studies. This section summarises the research findings, focusing on key insights and lessons learned from data analysis. Section 5 summarises this study's overall findings. Finally, in Section 6, these research findings' practical implications are discussed, including their potential impact on industrial strategies, their role in policy decision-making, & implications for future research.

2. LITERATURE REVIEW:

2.1 Influence of Accounting System Features:

CAS has been shown to improve the FPSEMG. Accounting information systems (AIS) adoption has been hampered by the high cost of acquiring, implementing, and maintaining AIS, as well as the absence of a model that incorporates all technical, human, organisational, & environmental factors. However, studies have originated a link between SMEs' presentation & management accounting methods, indicating that management accounting services can help improve FP [14]. Furthermore, it has been demonstrated that implementation of Computerized AIS has an important impact on FP of public sector, with internal control systems mediating this relationship [15]. Overall, CAS have the potential to improve the FP of Ghana's SMEs; however, several factors must be considered and addressed for successful implementation [16,17].

Null Hypothesis (H0): The FCAS do not significantly influence the FPSMEG.

Alternative Hypothesis (H1): The FCAS significantly influence the FPSMEG.

2.2 FS Moderation in Accounting Systems:

CAS help SMEs improve their FP. The internal control system mediates association between CAS & organisational performance [18]. Furthermore, moderating role of FS in this association was investigated. FS influences association between product & market exploration & FP, but not product

and market exploitation & FP [19]. As a result, moderating role of FS in association between CAS & SMEs' FP is determined by the aspects of ambidexterity studied.

Null Hypothesis (H0): FS does not moderate the relationship between CAS and SMEs' FP.

Alternative Hypothesis (H1): FS moderates the relationship between CAS and SMEs' FP.

2.3 DA Mediation in Accounting Systems:

CAS help SMEs improve their FP. However, the abstracts make no mention of DA's role as a mediator in this relationship. The abstracts look at how internal control systems [20], liquidity [21], and intellectual capital influence connection between accounting & FP. Abstracts discuss impact of CAS on FP [22] as well as FP of SMEs through management accounting services. However, none of the abstracts explicitly address the mediating role of DA. As a result, more research is needed to better understand the relationship between CAS, DA, and SMEs business FP.

Null Hypothesis (H0): DA does not mediate the relationship between CAS and SMEs' FP.

Alternative Hypothesis (H1): DA mediates the relationship between CAS and SMEs' FP.

2.4 Influence of Accounting Systems on Efficiency:

CAS improve OESMEG. The implementation of AIS in SMEs is critical for improved decision-making and performance. Previous research has found that the high cost of acquiring, implementing, & maintaining AIS deters many Ghanaian entrepreneurs from using technology [23]. However, it is recommended that AIS vendors provide favourable conditions to pique SMEs' interest and encourage adoption [24]. Furthermore, investing in CAS can improve the speed, usability, accuracy, and relevance of financial reports, resulting in better decision-making and operational efficiency for banks. As a result, Ghana's SMEs should invest in AIS to boost operational efficiency and overall performance.

Null Hypothesis (H0): The overall impact of CAS on the operational efficiency of SMEs in Ghana (OESMEG) is not significant.

Alternative Hypothesis (H1): The overall impact of CAS on the OESMEG is significant.

2.5 Problem Statement:

In Ghana's dynamic landscape of SMEs, the intersection of CAS, firm characteristics, and FP is a complex terrain that requires exploration. Despite the growing reliance on technology, the influence of CAS on FP of SMEs is still unknown. Firm characteristics such as size, sector focus, and ownership complicate the relationship. This study seeks to close a knowledge gap by investigating how these elements interact and influence one another in the context of Ghanaian SMEs. By unravelling the nexus, this study hopes to offer valuable insights for businesses, policymakers, & researchers, fostering a better understanding of factors influencing financial success and sustainability in Ghana's critical sector.

3. Research Methodology:

3.1 Research Design:
- **Questionnaire Preparation:**

This study includes 30 questions designed to investigate the relationship between four distinct variables. Among these variables is the Dependent Variable (DV), which focuses on Ghanaian SMEs' FP and operational efficiency. FCAS and CAS are independent variables (IDV). There is also a mediator variable named DA and a moderator variable named FS. As a result, the DV consists of two variables, each of which contains five questions, while the IDV consists of two variables, each of which contains five questions, as well as the mediating and moderating variables.

- **Response Collection:**

This study's survey has been converted into a Google form. As a result, this study focused on a group of finance professionals aged 30 to 60. The survey was carried out in the unique setting of Ghana, West Africa. The questionnaire responses were collected from a group of Ghanaian SME finance professionals.

- **Statistical Analysis:**

The responses provided by finance professionals were thoroughly examined and scrutinised using the SPSS tool, a well-known statistical analysis software package. This study's data was meticulously analysed and evaluated as part of the

Statistical Analysis, using a variety of quantitative approaches such as regression tests, T-tests, descriptive statistics, correlation analysis, and factor analysis (FA). These statistical techniques were carefully chosen and used to assess the hypothesis's validity and reliability. Using these tests, we were able to systematically evaluate the associations, patterns, and correlations among the relevant variables, allowing us to better understand this research topic at hand.

3.2 Online Survey and Sample:

This study included 305 participants who willingly shared their perspectives and data through a variety of online networks, including social networking sites, email lists, and forums. A structured questionnaire was used to collect demographic information, along with the DV (FPSMEG and OESMEG) and the IDVs (FCAS and CAS). A mediator variable (DA) and a moderator variable (FS) were also examined. To ensure data security, the survey was carried out using a secure online platform. Before the survey, each participant provided informed consent, and the Random Sampling Approach yielded 305 valid samples and no invalid samples.

3.2.1 Design and Sample:

The data presented provides insight into the demographic makeup of the surveyed entities. Manufacturing makes up the majority of the business sector (33.4%), followed by services (27.9%) and agriculture (24.6%). Operational duration has a fairly even distribution, with 41.3% falling into the 2-5 and 5-10 year categories. Small businesses (10-49 employees) employ the vast majority (43.6%) of the workforce. Family-owned businesses dominate ownership structures with 32.8%, followed by privately owned (32.1%) and publicly traded (26.9%). Geographically, respondents are distributed across major cities, with Kumasi leading (30.5%), followed by Accra (28.9%) and Tamale (29.5%). This comprehensive breakdown assists in understanding the survey's diverse representation of business entities based on key demographic parameters.

The data provided insight into Ghanaian SMEs' perceptions of Computerized accounting system adoption and its impact on overall FP. A sizable 78.8% of respondents (Agree and Strongly Agree combined) believe that implementing such systems significantly improves FP. Furthermore, when it comes to the impact of firm characteristics, 78.7% agree that factors like size and sector play an important role in determining the effectiveness of CAS. An overwhelming 79.1% believe that DA is an important factor in FP. Furthermore, 80% of respondents understand the significance of geographical location in system utilisation and financial outcomes. Finally, 79.9% of respondents believe that CAS significantly improve operational efficiency. These findings emphasise the perceived importance of technology adoption, firm characteristics, and DA in determining Ghanaian SMEs' financial and operational performance.

The data revealed how Ghana's SMEs perceive the impact of CAS on operational efficiency. The majority of respondents, 78.4 (Agree and Strongly Agree combined), believe that such a change significantly improves operational efficiency. When it comes to the impact of FS, 76.8% of respondents believe that firm characteristics have a significant impact on the efficiency gained by using CAS. 78.7% of respondents believe that system features are important for improving day-to-day operational processes. Furthermore, 78.7% of respondents acknowledge that geographical location influences operational efficiency. Finally, 77.8% of respondents believe that CAS improve the overall OESMEG. These findings emphasise the perceived importance of technology adoption, firm characteristics, and system features in determining operational efficiency among Ghanaian SMEs.

The data looks into the key FCAS and how they affect the adoption and efficiency of Ghana's SMEs. A significant 77.4% of respondents (Agree and Strongly Agree combined) value usability and ease of navigation, indicating that these factors have a significant impact on SME adoption rates. 78.9% of respondents believe that integrating with other business software improves the accuracy of financial reports. 78.7% of respondents believe that advanced security features are critical for protecting financial data. Furthermore, 78.3% of respondents emphasise the importance of customization and scalability for SMEs' efficiency. Finally, 76.7% of respondents recognise the significance of regular updates and technical support, emphasising the need for ongoing

effectiveness in the context of Ghanaian SMEs. These findings highlight the significance of specific characteristics in shaping the adoption and effectiveness of CAS in Ghana's SMEs.

The data investigates various aspects of the implementation and sustainability of CAS in Ghana's SMEs. Respondents overwhelmingly recognise the importance of these systems, with 77.7% (Agree and Strongly Agree combined) believing that their implementation is critical for improving the accuracy and timeliness of financial reporting. The perceived cost justification is straightforward, with 76.7% of respondents believing that the efficiency gains outweigh the expenses incurred. Furthermore, 78.4% of respondents acknowledge the significance of employee training and skill levels in ensuring successful system implementation. 77.4% of respondents believe that integrating accounting systems with other business software is critical for improving overall business operations. Finally, 75.8% of respondents recognise the importance of regular updates and ongoing support for long-term viability. These findings highlight the numerous considerations and endorsements surrounding the implementation and ongoing support of CAS in Ghanaian SMEs.

The data delves into the critical issue of DA in Ghanaian businesses that use CAS. Respondents acknowledge the critical role that DA plays in decision-making, with 69.2% (Agree and Strongly Agree combined) emphasising its importance. According to 71.5% of respondents, data validation features significantly improve the reliability of financial information. Recognizing the value of employee training, 69.2% believe it is critical to maintaining high levels of DA. 75.9% of respondents believe that regular monitoring and audit trails are necessary to ensure and improve DA in financial reporting. Furthermore, 69.1% of respondents believe that implementing DA protocols improves the overall FP of SMEs. These findings emphasise the perceived importance and interplay of various factors influencing DA in the context of Ghanaian SMEs that use CAS.

The data investigates the nuanced dynamics of FS among Ghanaian SMEs and their use of CAS. A notable finding is that a sizable proportion of respondents (71.5%) agree that adopting and utilising such systems presents greater challenges for smaller-sized SMEs than their larger counterparts. Furthermore, 68.8% of respondents believe that larger SMEs benefit more significantly from the implementation of CAS, highlighting potential differences in outcomes based on size. According to the survey, size has a significant impact on Ghanaian SMEs' FP, with 77% believing that larger firms benefit more from these systems. However, 78.7% of respondents believe that smaller businesses face greater challenges in realising the potential benefits of CAS. This emphasises the importance of tailoring considerations to FS when assessing the impact of these systems. The overarching sentiment is reflected in the fact that 78.7% of respondents believe that the impact of FS on the association between CAS & FP is an important factor to consider in Ghanaian SME context.

3.2.2 Measures:

The data presented shows the mean and std. deviation values for various factors among the surveyed Ghanaian SMEs. Respondents in the Business Sector gave their engagement with CAS an average rating of 2.30, with a std. deviation of 1.277, representing moderate variability in responses. The Operation category, which reflects years of operation, received an average rating of 2.45, indicating moderate engagement (a std. deviation of 0.772). The Employees factor, which refers to the number of employees, has an average score of 2.32 and a low std. deviation of 0.680, indicating relatively consistent responses. Ownership received an average rating of 2.15 with a std. deviation of 1.065, representing moderate variability in responses to various ownership types. Location, which represents the geographic location of SMEs, received an average rating of 2.29 with a std. deviation of 1.109, representing moderate variation in responses. Furthermore, the mean values for this study's key variables, FPSMEG, OESMEG, FCAS, CAS, DA, and FS, range from 3.6551 to 3.8977, indicating that respondents have a generally positive perception of these variables. The corresponding std. deviations range from 0.85969 to 0.89081, indicating relatively consistent responses among the surveyed SMEs. Overall, the statistics provide useful information about Ghanaian SMEs'

perceptions and engagement levels with key variables such as CAS and firm characteristics.

4. RESULT:

4.1 Reliability Test:

Reliability tests ensure consistent performance. They ensure the dependability of a system by assessing its ability to function over time. Comprehensive testing ensures dependability, durability, and trustworthiness.

Table 1: Reliability Test:

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
0.970	0.971	30

The Cronbach's Alpha values and the number of items in Table 1 show that the survey instrument used in this study has a high degree of internal consistency. Cronbach's Alpha coefficient, which measures survey item reliability and consistency, is 0.970. This shows strong internal consistency among the survey's 30 items, indicating high reliability in measuring the underlying constructs. Furthermore, Cronbach's Alpha based on standardised items, calculated at 0.971, boosts confidence in the instrument's dependability. These values indicate that the survey items are highly interrelated and consistent, increasing the reliability of the data collected. The survey instrument appears to be a reliable tool for assessing respondents' perceptions and responses to this study's variables, given its large number of items and high level of internal consistency.

4.2 ANOVA Test:

The ANOVA test compares differences in the mean values of a DV between groups. It assesses whether or not there are statistically significant alterations between groups.

Table 2: ANOVA Test between People:

			Sum of Squares	df	Mean Square	F	Sig
Between People			5727.793	304	18.841		
Within People	Between Items		84.341	29	2.908	5.119	0.000
	Residual	Non-additivity	18.244[a]	1	18.244	32.226	0.000
		Balance	4990.415	8815	0.566		
		Total	5008.659	8816	0.568		
	Total		5093.000	8845	0.576		
Total			10820.793	9149	10.183		

Table 2 displays results of a one-way ANOVA to determine the variation in scores among this study's groups. The ANOVA results show significant differences between individuals, items, and non-additivity, contributing to this study's overall variability. The mean square (MS) for between-person variance is 18.841, and the F-statistic is 5.119, which measures the significance of differences in means between groups. The within-people variance is further divided into two components: between-items (84.341) and residual non-additivity (18.244). The F-statistic for between-items variance is 2.908, and the F-statistic for residual non-additivity is 32.226. The ANOVA has an overall F-statistic of 1.183, indicating that the data is variable. The statistically significant F-values show meaningful differences between the groups, items, and non-additivity, emphasising the importance of these variables in this study.

4.3 T-test:

A t-test is a statistical tool used to determine whether or not two groups' means differ significantly. It compares the means of the groups to see if the observed differences are statistically significant or just chance. The t-test produces a p-value, indicating

the likelihood that the observed differences were caused by random sampling variability.

Table 3: T-test:

	Test Value = 0				95% Confidence Interval of the Difference	
	t	df	Sig. (2-tailed)	Mean Difference	Lower	Upper
BusinessSector	31.429	304	0.000	2.298	2.15	2.44
Operation	55.304	304	0.000	2.446	2.36	2.53
Employees	59.630	304	0.000	2.321	2.24	2.40
Ownership	35.257	304	0.000	2.151	2.03	2.27
Location	35.973	304	0.000	2.285	2.16	2.41
FPSMEG	76.892	304	0.000	3.89770	3.7980	3.9975
OESMEG	76.536	304	0.000	3.83607	3.7374	3.9347
FCAS	77.269	304	0.000	3.80787	3.7109	3.9048
CAS	74.820	304	0.000	3.81639	3.7160	3.9168
DA	74.252	304	0.000	3.65508	3.5582	3.7519
FS	76.805	304	0.000	3.78164	3.6848	3.8785

Table 3 shows statistically significant differences between demographic and variable groups in a study. Each demographic variable, including Business Sector, Operation, Employees, Ownership, and Location, varies significantly across groups. The mean differences and 95% confidence intervals indicate the magnitude of these differences. For example, in the business sector, the average difference is 2.298, with a confidence interval ranging from 2.15 to 2.44. Similarly, all pairwise comparisons between the main constructs (FPSMEG, OESMEG, FCAS, CAS, DA, and FS) produce statistically significant results. These findings highlight significant differences between groups, providing valuable insights into demographic variations and key study variables.

4.4 The influence of FCAS on the FPSMEG:

This study examines how FCAS impact the FP of Ghana's SMEs. Its goal is to uncover the nuanced connections between technological attributes and financial outcomes, thereby providing valuable insights into how accounting systems can better support SMEs.

Table 4: Correlation for the influence of FCAS on the FPSMEG:

		FPSMEG	FCAS
Pearson Correlation	FPSMEG	1.000	0.883
	FCAS	0.883	1.000

The correlation matrix in Table 4 shows a strong positive relationship between FPSMEG and FCAS. The Pearson correlation coefficient (PCC) (0.883) designates a strong linear association between 2 variables. As correlation coefficient approaches one, it designates a strong positive relationship, implying that as one variable (e.g., FCAS) rises, so do other variables (e.g., FPSMEG). This suggests that introducing advanced features into Ghana's SMEs will most likely improve their FP.

Table 5: Coefficient Correlation for the influence of computerized accounting system features on the FPSMEG:

Model			FCAS
1	Correlations	FCAS	1.000
	Covariances	FCAS	0.001

Table 5 displays the correlations and covariances for the FCAS model, which has a perfect positive correlation (1.000) with itself. This shows that FCAS has a perfect linear relationship with itself, just as any variable is perfectly correlated with itself. FCAS has a covariance of 0.001, indicating that different FCAS observations vary together. This perfect positive correlation is an essential component of statistical modelling.

Table 6: Regression of the influence of computerized accounting system features on the FPSMEG:

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.883[a]	0.780	0.779	0.41619

Table 6 displays a regression model with an R-squared coefficient of 0.780, representing that IDVs account for 78.0% of variability in DV (FCAS). Adjusted R Square is 0.779, accounting for several predictors in model. A correlation coefficient (R) of 0.883 indicates a significant positive relationship between the variables. The estimate's std. error is 0.41619, representing average deviation of observed values from regression line. These findings indicate a strong and statistically significant association between FCAS & DVs.

Table 7: ANOVA for the influence of computerized accounting system features on the FPSMEG:

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	185.765	1	185.765	1072.459	0.000[b]
	Residual	52.484	303	0.173		
	Total	238.248	304			

Table 7 summarises the regression model's ANOVA results. The regression sum of squares (SoS) is 185.765, with 303 df. The regression's MS is 185.765, indicating the average variance explained. Residual SoS is 52.484, with 303 df. MS of the residual is 0.173, indicating average unexplained variance per df. F-statistic is 1072.459, indicating statistical significance. The p-value is extremely low, indicating that entire regression model is highly significant. Table 7 contains strong evidence that regression model is significant.

4.5 Moderating Role of FS in Relationship between CAS & FP of SMEs:

This research investigates how FS affects association between CAS and FP in SMEs. This study's goal is to show how the impact of accounting systems varies with business size, thereby providing insights for strategic decision-making in a variety of SMEs.

Table 8: Model Summary for Moderating Analysis:

R	R-sq	MSE	F	df1	df2	p
0.9004	0.8107	0.1498	429.8279	3.0000	301.0000	0.0000

Table 8 displays a well-fitted regression model with high explanatory power, representing that IDVs jointly account for a significant portion of variance in DV. Coefficient of determination (R-squared) is 0.8107, representing that model's IDVs explain 81.07% of the DV's variability. The R is 0.9004, representing a strong positive linear association between DV & IDVs. Mean square error (MSE) is 0.1498, which indicates a better fit. The F-statistic (429.8279) is statistically significant.

Table 9: Model for Moderating Analysis:

	coeff	se	t	p	LICI	ULCI
Constant	-0.7608	0.3341	-2.2767	0.0235	-1.4183	-0.1032
CAS	0.7763	0.1115	6.9602	0.0000	0.5568	0.9958
FS	0.8604	0.1158	7.4287	0.0000	0.6325	1.0884
Int_1	-0.1036	0.0323	-3.2091	0.0015	-0.1671	-0.0401

Table 9 displays the regression coefficients and statistics for each variable in the model. The constant term, -0.7608, is statistically dissimilar from zero, with 95% confidence interval of -1.4183 to -0.1032. The coefficient for CAS is 0.7763, implying that a one-unit rise in CAS results in a 0.7763-unit rise in the DV. FS coefficient is 0.8604, with a t-statistic of 7.4287 & a p-value of 0.000. The interaction term (Int 1) harms the DV, as evidenced by the -0.1036 coefficient. The regression coefficients indicate direction & strength of relationships between the variables, & associated statistics confirm their statistical significance.

4.6 Mediating Role of DA in Relationship between CAS & FP in SMEs:

This research investigates how DA mediates association between CAS and FP in SMEs. This study hopes to uncover mechanisms that contribute to overall financial success of SMEs that use advanced accounting systems by examining the intermediary role of DA.

Table 10: Model Summary for Mediating Analysis:

R	R-sq	MSE	F	df1	df2	p
0.8601	0.7398	0.2053	429.2774	2.0000	302.0000	0.0000

Table 10 shows that the regression model has a strong positive linear relationship with the DV, accounting for approximately 73.98% of variability. R-squared of 0.7398 specifies a strong correlation between IDV and DVs. MSE is 0.2053, indicating a better fit to the data. The F-statistic is 429.2774, with the numerator and denominator having 2 and 302 df, respectively, and a p-value of less than 0.05, representing statistical significance. Model's high explanatory power and low MSE suggest that the IDVs play a significant role in the variability of the DV.

Table 11: Model for Mediating Analysis:

	coeff	se	t	p	LICI	ULCI
Constant	0.4482	0.1225	3.6583	0.0003	0.2071	0.6893
CAS	0.6701	0.0418	16.0338	0.0000	0.5879	0.7524
DA	0.2440	0.0433	5.6348	0.0000	0.1588	0.3293

Table 11 displays the regression model coefficients, which include a constant term of 0.4482 representing the DV's estimated value when all IDVs are zero. Coefficients for CAS and DA show that a one-unit rise in CAS corresponds to a 0.6701 rise in the DV, indicating a very strong relationship

between the two. Similarly, a one-unit increase in DA causes a 0.2440 increase in the DV, indicating a statistically significant association between variables. Thus, both CAS & DA are significant predictors of the DV, with positive coefficients indicating a good relationship with the outcome variable.

4.7 The Overall Impact of CAS on Operational Efficiency in Ghanaian SMEs:

This study examines an overall impact of CAS on OESMEG. This study examines the overall impact of these systems to uncover insights that can improve operational processes in Ghanaian SMEs, promoting efficiency and sustainability.

Table 12: Correlation for the Overall Impact of CAS on OESMEG:

		OESMEG	CAS
Pearson Correlation	OESMEG	1.000	0.786
	CAS	0.786	1.000

Table 12 displays PCCs between the variables OESMEG and CAS. R between OESMEG & CAS is 0.786, representing a significant positive association between 2 variables. This implies that as

more SMEs adopt CAS, their operational efficiency improves. The correlation is statistically significant, supporting the hypothesis that using CAS improves operational efficiency in Ghanaian SMEs, as evidenced by the strong CC of 0.786.

Table 13: Coefficient Correlation for the Overall Impact of CAS on OESMEG:

Model			CAS
1	Correlations	CAS	1.000
	Covariances	CAS	0.001

Table 13 displays the correlation matrix for the variable CAS. The CC between CAS and itself is 1.000, as expected given that it represents CAS's relationship with itself. Furthermore, the covariance between CAS and itself is written as 0.001. This

table provides critical information about the relationship between CAS and covariance. A CC of 1.000 indicates a perfect positive correlation, which means that changes in CAS are perfectly associated with changes in themselves.

Table 14: Regression of the Overall Impact of CAS on OESMEG:

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.786[a]	0.618	0.617	0.54193

Table 14 displays the results of the regression model for the variable CAS. The R-square is 0.618, indicating that the model's predictors explain roughly 61.8% of variance in CAS. Adjusted R-squared, which accounts for several predictors in

model, is 0.617. Estimate's standard error is 0.54193, which is the average difference between the observed CAS values and the model's predictions. The model's R-value is 0.786, representing a strong positive correlation between CAS and its predictors

.**Table 15:** ANOVA for the Overall Impact of CAS on OESMEG:

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	143.934	1	143.934	490.086	0.000[b]
	Residual	88.989	303	0.294		
	Total	232.923	304			

Table 15 shows the regression results for the variable OESMEG. Regression model's SoS is 143.934, with one df, subsequent in an MS of 143.934. F-statistic is 490.086, indicating a highly significant p-value of 0.000. These results show that the regression model is a good fit for explaining the variance in OESMEG. The residual SoS is 88.989, & the MS is 0.294. The total SoS is 232.923, which accounts for variation in DV.

4.8 Factor Analysis:

FA is a statistical technique that examines the relationships between observed variables to identify underlying latent factors. The goal is to simplify data while revealing patterns and structures. By reducing dimensionality, it facilitates the identification of key factors influencing observed correlations and provides insights into a dataset's underlying constructs.

Table 16: KMO & Bartlett's Test:

Kaiser-Meyer-Olkin Measure of Sampling Adequacy		0.921
Bartlett's Test of Sphericity	Approx. Chi-Square	2009.261
	df	15
	Sig.	0.000

Table 16 shows KMO measure of sampling adequacy, which assesses suitability of data for FA. A high KMO value of 0.921 indicates excellent adequacy, implying that the data is appropriate for FA. Furthermore, Bartlett's Test of Sphericity, with an estimated chi-square value of 2009.261, 15 df, and a significance level of 0.000, supports rejecting a null hypothesis that correlation matrix is an identity matrix. This strengthens the case for using FA on the dataset.

5. DISCUSSION:

The investigation into the connection between CAS, characteristics of firms, and FP in Ghanaian SMEs reveals a comprehensive comprehension of the intricate relationships that shape the business environment. The implementation of CAS emerges as a crucial factor, transforming financial management across various sectors. SMEs in manufacturing, services, and retail sectors in cities such as Accra and Kumasi are utilizing these technologies, experiencing improved precision in financial reporting and strategic decision-making. The characteristics of firms, including their size, sector focus, and ownership types, significantly impact the operational landscape, showcasing the adaptability and innovation necessary for growth. This study delves into nuanced aspects, examining how the interplay between these elements affects financial success, operational efficiency, and overall sustainability. These insights offer a valuable guide for Ghanaian SMEs, assisting them in navigating challenges, optimizing their unique characteristics, and harnessing the transformative potential of CAS for enduring success in a dynamic business environment.

6. CONCLUSION

The investigation sheds light on the interconnected dynamics of CAS, firm characteristics, and FP within SMEs in Ghana. The widespread adoption of advanced accounting technologies emerges as a fundamental aspect of increased financial precision and strategic decision-making. Firm characteristics, which encompass size, sector focus, and ownership types, assume a crucial role in shaping operational landscapes and fostering innovation. This study emphasizes the importance of these components in navigating challenges specific to each sector and seizing growth opportunities. Furthermore, the intricate relationships revealed contribute to a comprehensive comprehension of the SME ecosystem in urban areas such as Accra and Kumasi. As SMEs strive for economic vitality, the discoveries provide practical insights, enabling businesses to tailor strategies based on their distinctive identities. This research not only enhances scholarly dialogue but also serves as a practical manual for SMEs in Ghana, promoting resilience, adaptability, and sustained success in an ever-changing business environment.

7. IMPLICATIONS:

The consequences of this research have far-reaching effects in various areas, influencing academia, business practices, and policy formulation in the context of SMEs in Ghana. Firstly, in terms of academia, this study contributes valuable insights into the complex relationships between CAS, firm characteristics, and FP. It opens up avenues for further research, encouraging scholars to delve deeper into the specific intricacies of these interactions. Concerning business practices, the findings offer practical guidance for Ghanaian SMEs, emphasizing the crucial role of adopting and adapting CAS that are tailored to unique features of each firm. Businesses can utilize this knowledge to improve their financial accuracy, operational efficiency, and overall competitiveness. Additionally, this study highlights the significance of strategic decision-making based on firm-specific attributes, promoting a more informed and targeted approach to facing challenges and seizing opportunities. On the policy front, policymakers in Ghana can draw upon these insights to design initiatives that support SMEs in adopting modern accounting technologies. By creating a conducive environment, providing training programs, and offering incentives for technology adoption, policymakers can contribute to the overall economic growth & sustainability of SMEs in region. In essence, implications of this research extend beyond the realm of academia, reaching into the practical domains of businesses and policy, with the potential to foster positive change and development within the landscape of Ghanaian SMEs.

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