SMES' COMMITMENT TO SUSTAINABILITY PRACTICES IN NIGERIA: EXAMINING THE ROLE OF TECHNOLOGY-BASED ACCOUNTING SYSTEMS

Mohammed Kayode AJAPE
Department of Accounting,
Faculty of Management Sciences,
University of Lagos
majape@unilag.edu.ng

Okwy Peter OKPALA
Department of Accounting,
Faculty of Management Sciences,
University of Lagos
ookpala@unilag.edu.ng

Muinat Wuraola SALAWU
Department of Accounting,
Faculty of Management Sciences,
University of Lagos
Makeem-omosanya@unilag.edu.ng

Abstract

This study investigates the role of technology-based accounting systems in the commitment of SMEs to sustainability practices in Nigeria. We collected data through a questionnaire administered to 387 SME owners and managers in Lagos State, Nigeria. A descriptive and regression analysis was conducted for hypotheses testing using a combination of SPSS and EViews. The study's results indicated that the most critical factors influencing the adoption of a technology-based accounting system are perceived usefulness and technological literacy. In contrast, barriers to adoption include initial cost and complexity. The results further show that adoption heightens the commitment towards more sustainable practices like waste and energy efficiency, which positively impacts sustainability efforts among SMEs in Nigeria. Thus, the study concluded that technology-based accounting systems increase commitment to sustainability, while the impact on sustainability outcomes of energy efficiency is context-specific. The study suggested that SMEs in Nigeria enhance their adoption of technology-based accounting systems for sustainability practices and that regulatory bodies should facilitate access and resources to enhance technological literacy among SMEs.

Keywords: Sustainability, Technology-based Accounting Systems, Small and Medium Enterprises.

1.0 Introduction

The United Nations defines sustainability as meeting the needs of the present without compromising the ability of future generations to meet their own needs (Thottoli, 2020). This definition implies that every decision we make today can hurt those who will come after us socially, economically or environmentally. Growing businesses sustainably requires consideration of not only what the businesses require at present but also what society expects from them in terms of their behaviour and other future-oriented plans, following the idea of wealth creation at no risk to society (Alhadhrami & Nobanee, 2019; Astuti et al., 2023; Chatzistamoulou & Tyllianakis, 2022).

SMEs are also the backbone of any economy and are active agents of economic growth and development, especially in creating and redistributing wealth. SMEs in Nigeria make up

about 86.3% of the entire workforce in the country. They cut across all sectors of the economy, such as agriculture, manufacturing, accommodation, food services, and other services. Even though they are the lifeblood of economies, many need help to remain viable. Often managed by individual business owners, family members, and small groups, only a few SMEs scale and develop beyond five years of operation (Ukairo et al., 2021).

Most SMEs fail due to the poor performance and lack of sustainability from their traditional business processes- marketing and administration, but most importantly, accounting practices. These practices encompass the techniques of gathering, organising, and communicating business information. The advent of technology has transformed many industries, including accounting. In other words, technology-based accounting systems and accounting information systems integrate daily business operations, employing technology to produce useful information that will drive entities to better reporting standards (Dearing & Cox, 2018). As a result, this leads towards an improved accounting environment. However, huge enterprises are more ready for their implementation than small and medium ones, and they usually need to learn how to implement such practices smoothly. Thus, small and medium-sized enterprises need help understanding the link between the system and the benefits of applying sustainable environmental management systems. The small number of studies relating to the adoption of TBAS by SMEs and the impact on sustainability performance indicates a significant gap in the evidence of research studies (Astuti et al., 2023; Dionysus & Arifin, 2020).

Survival of SMEs depends on several factors, including the choice to embrace technologically driven accounting systems in which scarcity of resources hinders them from efficiently implementing these systems (Jasim & Raewf, 2020; Hasbolah et al., 2021; He, Zhang & Li, 2021). According to SMEDAN (2024), only about 42.4 per cent of the owners and managers of SMEs received university-level education with different levels of computer literacy; thus, they are less likely to adopt sustainability practices when compared to larger firms (Ukairo et al., 2021; Kittisak, 2023). Using technology-based accounting systems will help to reduce the level of human error in the processes of SMEs and assist in improving their finances and sustainability activities (Osei-Tutu et al., 2023).

While existing studies admit that there is a potential for TBAS and AIS to enhance the financial performance of SMEs, more research evidence is needed concerning how the adoption and implementation of such accounting systems influence the commitment of SMEs towards sustainability practices. Most studies have concentrated on larger companies, leaving a massive gap in knowing how these systems influence SMEs within Nigeria (Moursellas et al., 2022; Meng et al., 2021). Against this background, the present study examines factors influencing the adoption of TBAS and how TBAS influences the commitment to sustainability behaviour of SMEs in Nigeria.

2.0 Empirical and Theoretical Review

A technology-based accounting system (TBAS) is a method by which financial information is managed and processed using computer software and digital tools. Literature suggests that technology-based solutions offer numerous advantages, such as increased accuracy, efficiency, and data security (Chege, et al., 2019; He, et al. 2021). TBAS comes from improvements in information technology, which have made the traditional accounting methods old-fashioned (Hossan, 2018). The usage of TBAS came to light when business organisations were searching for better, more accurate ways to handle information relating to finance. The

benefits presented by TBAS also include accurate reports, immediate financial reporting and efficiency (Jasim & Raewf, 2020; Hasbolah et al., 2021).

Small and medium-scale enterprises have a limited scale of operations in terms of employees, revenues, or assets. The definition of SMEs is different from one country to another. Economically, SMEs are growth engines with an essential role of ensuring innovations are achieved through job creation and, more importantly, a contributor to GDP within developing nations (Ukairo et al., 2021). Over the years, lack of access to funding, poor infrastructure, and regulatory issues have slowed the growth of this critical economic agent. Authors such as Meng et al. (2021) and Ukairo et al. (2021) have conducted studies about these problems, and the performance of SMEs has been tested using growth indicators, financial viability metrics and sustainable operation practices. In a business context, sustainability refers to an organisation's ability to function to ensure long-term economic, social and environmental viability. This concept became popular after the Brundtland Report issued in 1987 (Chege et al., 2019). It comprises three major parts: environmental responsibility, social equity, and economic performance. The balancing between these significant aspects is the major challenge for future success. Further, there is empirical literature like Astuti et al. (2023) and Moursellas et al. (2022) that have assessed sustainability through practices such as resource efficiency, waste management and corporate social responsibility (CSR) initiatives.

Adoption of TBAS by SMEs has been driven by numerous factors. In the developed economies such as the United States and Europe, these factors include perceived benefits, organisational preparedness, and external pressures, that had or were anticipated to influence innovation (Dearing & Cox, 2018), simplicity of use (He et al., 2021), technology literacy and environmental awareness (Deshmukh & Tare, 2023). Further, studies have also found access to financial resources and a supportive infrastructure (Moursellas et al., 2022) while regulatory restraints and market demand significantly affect the commitment of European SMEs to resource efficiency and the adoption of innovative techniques (Tyllianakis, 2022). Research conducted on women-owned SMEs in Bangladesh (Meng et al., 2021) and Indonesia (Astuti et al., 2023) revealed that support provided through social support networks, training opportunities, financial restrictions and inadequate access to information were essential base for technology adoption.

Research evidence from developing economies like Ghana, South Africa, also showed that cost, compatibility with existing systems, user-friendliness, and support from external experts (Amoako et al., 2020); perceived utility, simplicity of use, and organisational readiness and government support (Neneh & Van Zyl, 2014). Jasim and Raewf (2020), Akabom et al. (2018) found that technological literacy and financial capability while Ukairo, Igwesi and Ijeh (2021) acknowledged knowledge transfer and technological preparedness as significant factors that impacted adoption of technology by SMEs. These studies indicated that businesses are more likely to adopt new technologies when benefits are clear and needed infrastructure is established and that enterprises with greater technological comprehension had a higher adoption of sustainability strategies.

The commitment of SMEs to sustainability practices by leveraging TBAS has been documented in academic literature. Freeman, Harrison, and Zyglidopoulos (2018) and He et al. (2021) discovered that those businesses which utilise integrated technological solutions show more dedication to sustainability and tend to have more robust sustainability reporting and practices in the United States. Deshmukh and Tare (2023) and Moursellas et al. (2022), established that organisations whose accounting systems were effectively developed were

more competent in managing their sustainability practices in and can manage their resources and produce reports on their sustainability in Europe. TBA systems have the capacity to boost the commitment of small and medium firms to sustainability owing to better data management and reporting (Astuti et al., 2023) and enhance SMEs sustainability practices (Meng et al., 2021). Besides, within developing countries, SMEs with more advanced accounting systems are more consistent in their sustainability approach, found it easier to track their progress in sustainable development and were more devoted to sustainability concerns (Neneh & Van Zyl, 2018; Amoako et al., 2020; Jasim & Raewf, 2020) Further studies have also confirmed that business entities integrating their accounting systems were able to perform better in sustainability practices thereby boosting the commitment towards economic sustainability concerns and the social value of SMEs (Akabom et al., 2018; Vrontis et al., 2022).

The diffusion of innovations (DOI) and resource-based view (RBV) theories are deployed to connect the role of TBAs in SMEs sustainability practices. Everett M. Rogers' DOI theory, developed in 1962, explains how new ideas and technologies spread through cultures. The theory classifies adopters into five groups: innovators, early adopters, early majority, late majority, and laggards. While applied to fields like agriculture, health professionals, and business, critics argue that it lacks consideration of socio-cultural and socio-economic elements (Dearing & Cox, 2018). For instance, the theory was used to understand the adoption of health practices, emphasising the importance of communication channels and social systems. The study by Meng et al. (2021) also highlighted the role of early adopters in promoting open innovation practices, particularly in Nigeria.

The Resource-Based View theory, developed by Jay Barney in 1991, suggests that a firm's competitive, sustainable advantage relies on acquiring and managing valuable, rare, inimitable, and non-substitutable resources (VRIN). These resources, such as technology, financial capital, culture, skills, and knowledge, can be tangible or intangible. RBV has been applied to small enterprises, focusing on innovation and technology requirements for ongoing growth (Pozo et al., 2019). Dionysus and Arifin (2020) identified that firms could use their unique resources to improve their performance through this theory. However, the critique it gets is that it needs to be more dynamic and, hence, does not address the issue of how companies can develop and renew their resources over the years appropriately (Ristyawan et al., 2023). These theories provided a framework for SMEs adoption of TBAS as their valuable resources to have better sustainability practices. Moreover, the classification of adopters enables the identification of SMEs based on capacity to adopt TBAs and use them as a source of competitive advantage.

3.0 Materials and Methods

A survey research design is used in this study. This design is suitable, as put by Bell et al. (2022), in that it looks at the relationship between the variables and allows the collection and analysis of numerical data, allowing objective testing of the hypotheses to provide a representative sample and make the findings more generalisable. The target population is all micro, small, and medium enterprises in Nigeria, which stands at about 39,654,385, as disclosed by the Small and Medium Enterprises Development Agency of Nigeria (SMEDAN,2024). These SMEs, in several sectors and regions in Nigeria, provided a large base for the research. This study was limited to SMEs in Lagos State, Nigeria. According to Odusote and Akpa (2022), there are about 11,663 SMEs in Lagos State. Using a stratified sampling technique, we applied the Taro Yamane formula to determine a sample size of 387 selected

SMEs. This method divided SMEs into subgroups or 'strata' based on shared characteristic such as industry sector (Table 1revealed the sectors of the sampled SMEs).

The primary tool for data collection in this study is a structured questionnaire divided into two sections. The section of the questionnaire elicited demographic information from the respondents, which provided context for their replies and helped better understand the backgrounds of the sample population. The second section involves inquiries on the types of accounting software and digital tools used, duration of usage, reasons for acceptance or refusal, and the technological skill of the involved parties and SMEs' commitment to sustainable practices. Accounting experts, sustainability experts, and SME management professionals were also asked for their input, after which the questionnaire was adjusted to make it more transparent and relevant. This expert review process also confirmed that items in the questionnaire represented what was meant to be measured by them. A limited, representative sample of owners and managers of small and medium enterprises (SMEs) was used to conduct a pilot test for the questionnaire. Each variable has Cronbach's Alpha slightly above 0.8 (TBA = 0.82, CSP = 0.88). Usually, a value greater than 0.7 is considered appropriate (Shahzad & Ishaque, 2021).

3.1 Model Specification

Based on the objectives and the hypotheses, the following models are adopted:

$$TBA = \beta0 + \beta1PU + \beta2CI + \beta3TL + \beta4MS + \beta5EP + \beta6EB + \beta7YE + \epsilon \dots\dots\dots\dots.1$$
$$CSP = \beta0 + \beta1TBA + \beta2EB + \beta3YE + \epsilon \dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots 2$$

Where:

TBA = technology-based accounting system

PU = perceived usefulness; CI = cost implication; TL = technological literacy; MS = management support; and EP = external pressure.

CSP = commitment to sustainability practices (waste management, energy efficiency, natural resources conservation, socially responsible practices)

EB, YE = Control variables (educational background, years of experience)

β0 is the intercept.

$\beta1$-$\beta7$ are the coefficients for each independent variable.

ϵ is the error term.

4.0 Results

The demographic characteristics of the SME owners and managers who participated in the study, which include their age, gender, educational background, years of experience in managing or owning an SME, type of SME, number of employees, and annual turnover, are presented in Table 1. These characteristics are essential because they contextualise the respondents' views on adopting technology-based accounting systems.

Table 1: Demographic Characteristics of the Respondents

Category		N	%
Age	18-25	225	58.1%
	26-35	90	23.3%
	36-45	36	9.3%
	46-55	36	9.3%
	Total	**387**	**100%**
Gender	Male	270	69.8%
	Female	117	30.2%
	Total	**387**	**100%**

Educational Background	Primary Education	0	0%
	Secondary Education	9	2.3%
	Tertiary Education	351	90.7%
	PostgraduateEducation	27	7.0%
	Total	**387**	**100%**
Years of Experience in Managing or Owning SME	Less than 1 year	90	23.3%
	1-3 years	216	55.8%
	4-6 years	36	9.3%
	7-10 years	27	7.0%
	More than 10 years	18	4.7%
	Total	**387**	**100%**
Type of SME	Manufacturing	36	9.3%
	Service	171	44.2%
	Retail	99	25.6%
	Agriculture	9	2.3%
	Others	72	18.6%
	Total	**387**	**100%**
Number of Employees	1-5	324	83.7%
	6-10	54	14.0%
	11-35	9	2.3%
	Total	**387**	**100%**
Annual Turnover	Less than ₦1m	198	51.2%
	₦1m-₦10m	153	39.5%
	₦10m-₦100m	27	7.0%
	More than ₦100m	9	2.3%
	Total	**387**	**100%**

Source: Computed by the Authors, 2024

The study reveals that 58.1% of SME managers and owners are young and open to new technologies, with a majority being male (69.8%) and female (30.2%). Most respondents have less than ten years of experience, suggesting they are new to the job and may be open to adopting new technologies like TBAS. The service sector is the most represented, with 44.2% of the sample falling into that category. Most SMEs have between 1 and 5 employees, with 14.0% between 6 and 10 and only 2.3% between 11 and 35. The study also shows that 51.2% of SMEs have an annual turnover of less than ₦1 million, while 39.5% have a turnover between ₦1 million and ₦10 million. These low figures may indicate that small-scale SMEs may struggle to invest in and implement TBAS.

Descriptive Statistics

Table 1 summarises variability, central tendency, and data distribution, helping to understand the sample characteristics.

Table 2: Determinants of TBAS

	TL	CI	MS	EP	PU
Mean	3.60	3.70	3.70	3.51	3.74
Median	4.00	4.00	4.00	4.00	4.00
Maximum	5.00	5.00	5.00	5.00	5.00

Minimum	1.00	1.00	1.00	1.00	1.00
Std. Dev.	1.08	1.13	1.09	1.02	1.08
Skewness	-0.60	-0.44	-0.99	-0.75	-0.80
Kurtosis	2.74	2.14	3.49	2.95	3.08
Jarque-Bera	24.44	24.89	67.95	36.76	42.13
Probability	0.000005	0.000004	0.000000	0.000000	0.000000
Sum	1395.00	1431.00	1431.00	1359.00	1449.00
Sum Sq. Dev.	452.51	495.68	459.63	402.70	451.67
Observations	387	387	387	387	387

Source: Computed by the Authors, 2024

Table 2 surveys respondents' opinions on factors driving technology-based accounting systems' adoption. The mean value of technological literacy (TL) is 3.60, with a median of 4.00, indicating confidence in using these systems. The cost of implementing these systems plays a significant role in decision-making, with a median of 4.00. The supportiveness of management is a critical determinant of adopting these systems, with a median of 4.00. The pressure from competitors or industry trends influences adoption, with a median of 4.00, indicating agreement. The perceived usefulness of technology-based accounting systems leads to increased adoption, with a median of 4.00, indicating that most respondents agree. The distribution is somewhat leptokurtic, with a probability of 42.13, suggesting minor deviations from normality.

Table 3: Commitment to Sustainability Practices

	Waste	Energy	Resources	Materials	Practices
Mean	3.93	3.95	3.65	3.91	3.72
Median	4.00	4.00	4.00	4.00	4.00
Maximum	5.00	5.00	5.00	5.00	5.00
Minimum	2.00	1.00	1.00	1.00	1.00
Std. Dev.	0.82	0.89	1.01	0.94	1.07
Skewness	-0.38	-0.91	-0.48	-0.84	-0.59
Kurtosis	2.58	4.21	2.66	3.68	2.53
Jarque-Bera	12.23	76.39	16.95	52.59	25.76
Probability	0.002212	0.000000	0.000208	0.000000	0.000003
Sum	1521.00	1530.00	1413.00	1512.00	1440.00
Sum Sq. Dev.	259.12	305.16	393.91	338.65	437.86
Observations	387	387	387	387	387

Source: Computed by the Authors, 2024

Table 3 revealed sampled SMEs sustainability practices. Respondents generally agreed that their organization practice efficient waste management, energy efficiency, resource conservation, sustainable sourcing of materials and supplies, and socially responsible practices. The median value of all indices is 4.00, with 'Agree' being the most popular answer. However, the standard deviations range from 0.82 to 1.07, with energy and materials areas showing negative skewness values. The kurtosis index shows higher peak-shaped curves in energy and material products.

Test of Hypotheses

The regression analysis was carried out to test the two null hypotheses of the study. Questions related to TBA, factors influencing its adoption and commitment to sustainability were utilised.

Hypothesis One

This hypothesis was tested using responses from the second section of the questionnaire, which focused on the TBA and factors influencing its adoption by SME owners in Nigeria.

H_{01}: No significant factors influence the adoption of technology-based accounting systems by SME owners in Nigeria.

The results of the regression analysis used to test this hypothesis are presented below:

Table 4: TBA Regression Analysis

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.764058	0.077002	9.922612	0.0000
PU	0.396958	0.079574	4.988568	0.0048
CI	0.389262	0.069758	5.580178	0.0001
MS	0.535122	0.063042	8.488382	0.0009
TL	0.708164	0.060781	11.65110	0.0022
EP	-0.454879	0.056723	-8.019248	0.0007
R-squared	0.846589	Mean dependent var		3.651163
Adjusted R-squared	0.844575	S.D. dependent var		1.010190
S.E. of regression	0.398257	Akaike info criterion		1.011943
Sum squared resid	60.42984	Schwarz criterion		1.073314
Log-likelihood	-189.8110	Hannan-Quinn criteria.		1.036278
F-statistic	420.5035	Durbin-Watson stat		1.874186
Prob(F-statistic)	0.000000			

Source: Author's Computation, 2024 (EViews 10)

The regression analysis reveals that factors such as cost of implementation ($\beta = 0.389$, $p < 0.05$), management support ($\beta = 0.535$, $p < 0.05$), technological leadership ($\beta = 0.708$, $p < 0.05$), and perceived usefulness ($\beta = 0.397$, $p < 0.05$) significantly influence Nigerian SMEs' adoption of technology-based accounting systems (TBAS). On the other hand, external pressure is significantly negative ($\beta = -0.455$, $p < 0.05$), indicating that increased pressure may hinder adoption. The model's R-squared value is approximately 85%. The F-statistics, which is significant at 0.1 level indicates a good fit of the model and thus, the null hypothesis one ($H0_1$) is rejected.

Hypothesis Two

Accordingly, the hypothesis assesses how adopting technology-based accounting systems (TBAS) affects the commitment of SMEs towards sustainability practices in Nigeria.

H_{02}: Adopting technology-based accounting systems has no significant influence on SMEs' commitment to sustainability practices in Nigeria.

Table 5: Commitment to Sustainability Practices

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-0.497957	0.122444	-4.066823	0.0001
Waste	0.966929	0.109977	8.792117	0.0000
Energy	-0.395165	0.112036	-3.527127	0.0005
Resources	0.537476	0.056787	9.464699	0.0000
Materials	0.313232	0.081893	3.824910	0.0002
Practices	-0.330173	0.067205	-4.912917	0.0000
R-squared	0.812312	Mean dependent var		3.697674
Adjusted R-squared	0.809849	S.D. dependent var		0.978563

S.E. of regression	0.426715	Akaike info criterion	1.149982
Sum squared resid	69.37471	Schwarz criterion	1.211353
Log-likelihood	-216.5216	Hannan-Quinn criteria.	1.174318
F-statistic	329.7930	Durbin-Watson stat	1.126806
Prob(F-statistic)	0.000000		

Source: Authors' Computation, 2024 (EViews)

Table 5 revealed how committed the sampled SMEs are to sustainability practices and how TBA drive this commitment. The co-efficient values of waste management (0.967, P<0.01), conservation of natural resources (0.537, P<0.01), and materials sourcing (0.313, p<0.01) are positively significant while the co-efficient of energy efficiency (-0.395, p<0.01) and socially responsible practices (-0.330, p <0.01) are negatively significant. Therefore, the null hypothesis (H0$_2$) is rejected, proving that adopting TBAS significantly influences SMEs' commitment to sustainability practices in Nigeria.

5.0 Discussion and Recommendation

The regression analysis reveals the relationship between TBAS and sustainability practices in Nigerian SMEs. The key drivers for the adoption included perceived usefulness, technological literacy, external pressure from competitors and shifting industrial standards. It also influenced TBAS adoption, driven by rapid digitalisation and market forces, motivating SMEs to keep pace with the ball by implementing TBAS (Deshmukh & Tare, 2023). The analysis thus determined that such adoption is related to an increase in the intensity of sustainability practices, such as waste handling and energy use efficiency. The results emphasised that adopting technology has a positive influence on improving SMEs' sustainability efforts in Nigeria. Efficient waste management positively impacts CSP. Besides, organisations committed to waste reduction are more likely to address broader sustainability issues (Moursellas et al., 2022; Astuti et al., 2023). However, energy efficiency has a negative relationship with CSP, contradicting the positive effect documented by He (2021). This result may indicate that energy efficiency measures need to be appropriately integrated into other sustainability initiatives in Nigerian SMEs. Resource slack and high initial costs can lead to short-term trade-offs for long-term sustainability objectives. Research (Chatzistamoulou & Tyllianakis, 2022; Moursellas et al., 2022) shows that resource efficiency is crucial for sustainability transitions, especially in SMEs. Conservation and better resource allocation can enhance sustainability and innovation capabilities in European and Nigerian contexts (Odusote & Akpa, 2022; Moursellas et al., 2022).

The study suggests that SMEs should seek alternative financing or government incentives to ease the financial burden and create a culture supportive of advanced technologies and sustainability. Energy efficiency should be integrated with other sustainability initiatives for long-term sustainability performance. SMEs should invest in sustainability practices. Waste management also contributes to sustainability and improving financial performance. Industry trends and competitive pressures influence the adoption of TBA, motivating SMEs to stay competitive and improving sustainability commitment.

References
Akabom I. A., Ejabu F. E., Bogbo R. J., Atu O. A., & Adejonpe A. O. (2018). Accounting behaviour of small-scale enterprises in Nigeria: Focus on business sustainability and

growth. *Journal of Business and Economic Development*, 3(2), 43–50. Doi: 10.11648/j.jbed.20180302.12

Alhadhrami, A., & Nobanee, H. (2019). Sustainability practices and sustainable financial growth. *SSRN Electronic Journal*. https://doi.org/10.2139/ssrn.3472413

Amoako, T., Dogbe, C. S. K., & Pomegbe, W. W. K (2020). Effect of internal integration on SMEs' performance: The role of external integration and ICT. *International Journal of Productivity and Performance Management*. DOI: 10.1108/IJPPM-03-2020-0120

Astuti, P. D., Riasning, N. P., Datrini, L. K., & Sunarta, I. N. (2023). Exploration of sustainability accounting practices in small and medium enterprises in Bali province, Indonesia. *Journal of Economics, Finance, and Management Studies*, *06*(11), 5645–5656. https://doi.org/10.47-191/jefms/v6-i11-44

Barney, J. (1991). Firm-based resources and sustained competitive advantage. *Journal of Management*, 17(1), 99–120.

Bell, E., Bryman, A., & Harley, B. (2022). *Business Research Methods*. Oxford University Press. https://doi.org/10.1093/hebz/9780198869443.001.0001

Chatzistamoulou, N., & Tyllianakis, E. (2022). Commitment of European SMEs to resource efficiency actions to achieve sustainability transition. A feasible reality or an elusive goal? *Journal of Environmental Management*, *32*(1), 1–15. https://doi.org/10.1016/j.jenvman.2022.115937

Chege, S. M., Wang, D., & Suntu, S. L. (2019). Impact of information technology innovation on firm performance in Kenya. Information Technology for Development Journal, https://doi.org/10.1080/02681102.2019.1573717

Dearing, J. W., & Cox, J. G. (2018). Diffusion Of Innovations Theory, Principles, And Practice. *Health Affairs*, *37*(2), 183–190. https://doi.org/10.1377/hlthaff.2017.1104

Deshmukh, P., & Tare, H. (2023). Green marketing and corporate social responsibility: A review of business practices. *Multidisciplinary Reviews*, *7*(3), 1–9. https://doi.org/10.318-93/multirev.2024059

Dionysus, R., & Arifin, A. Z. (2020). Strategic Orientation on Performance: The Resource Based View Theory Approach. *Journal of Accounting*, *24*(1), 131–153. https://doi.org/10.249-12/ja.v24i1.661

Freeman, R. E., Harrison, J. S., & Zyglidopoulos, S. (2018). *Stakeholder Theory*. England: Cambridge University Press. https://doi.org/10.1017/9781108539500

Hasbolah, F., Rosli, M. H., Hamzah, H., Omar, S. A., & Bhuiyan, A. B. (2021). The Digital Accounting Entrepreneurship Competency for Sustainable Performance of the Rural Micro, Small and Medium Enterprises (MSMEs): An Empirical Review. *International Journal of Small and Medium Enterprises*, *4*(1), 12–25. https://doi.org/10.46281/ijsmes.v4i1.1471

He, W., Zhang, Z. J., & Li, W. (2021). Information technology solutions, challenges, and suggestions for tackling the COVID-19 pandemic. *International Journal of Information Management*, *57*, 102287. https://doi.org/10.1016/j.ijinfomgt.2020.102287

Hossan, M. T. (2018). Traditional accounting vs. computer-based accounting: Challenges faced by accountants. *American Journal of Trade and Policy*, *5*(2), 73–80. https://doi.org/10.18034/ajtp.v5i2.437

Jasim, Y. A., & Raewf, M. B. (2020). Information Technology's Impact on the Accounting System. *Cihan University-Erbil Journal of Humanities and Social Sciences*, *4*(1), 50–57. https://doi.org/10.24086/cuejhss.v4n1y2020.pp50-57

Kittisak, A. (2023). Challenges and Strategies for Inventory Management in Small and Medium-Sized Cosmetic Enterprises: A Review. *International Journal of Information Technology and Computer Science Applications (IJITCSA)*, 1(2), 71–77. https://shorturl.at/u3DR2

Meng, L., Qamruzzaman, M., & Adow, A. H. E. (2021). Technological Adaption and Open Innovation in SMEs: A Strategic Assessment for Women-owned SMEs Sustainability in Bangladesh. *Sustainability*, *13*(5), 29–42. https://doi.org/10.3390/su13052942

Moursellas, A., De, D., Wurzer, T., Skouloudis, A., Reiner, G., Chaudhuri, A., . . . Dey, P. K. (2022). Sustainability Practices and Performance in European Small-and-Medium Enterprises: Insights from Multiple Case Studies. *Circular Economy and Sustainability*, *3*(2), 835–860. https://doi.org/10.1007/s43615-022-00224-3

Neneh, B. N. & Vanzyl, J. (2014). Growth intention and its impact on business growth amongst SMEs in South Africa. *Mediterranean Journal of Social Sciences*, 5(20), 172-183. DOI:10.5901/MJSS.2014.V5N20P172

Odusote, O. Y., & Akpa, V. O. (2022). Resource Allocation and Innovativeness of Selected SMEs in Lagos State, Nigeria. *Journal of Strategic Management*, *7*(2), 1–13. https://doi.org/10.4-7672/jsm.1050

Osei-Tutu, J., Yeboah-Appiagye, K., & Fentim-Darkwa, B. (2023). Computerised Accounting Practices and Sustainability of Small and Medium Enterprises. *Journal of Small and Medium Enterprises*.https://bit.ly/3p5TzDl e-ISSN: 2963-3664

Pozo, H., Akabane, G. K., & Tachizava, T. (2019). Innovation and technology processes in micro and small business. *Cogent Business & Management*, *6*(1), 3–13. https://doi.org/10.1080/2331-1975.2019.1588088

Ristyawan, M. R., Putro, U. S., & Siallagan, M. (2023). Decision-making mechanism in resource-based theory: A literature review, synthesis, and future research. *Cogent Business & Management*, 10(2), 2247217 https://doi.org/10.1080/23311975.2023.2247217

Rogers, E.M. (1962). Diffusion of Innovations. Free Press, New York.

Shahzad, M. U. & Ishaque, A. (2021). Where You end, and I begin: A new scale development on intimate co-creation. Reviews of Management Sciences, III (2), 64-84.

Thottoli, M. M. (2020). Impact of Accounting Software among SME Accountants in Oman. Financial Markets, Institutions and Risks, 4(2), 25–33. https://doi.org/10.21272/fmir.4(2).25-33.2020 ISSN (online) – 2521-1242

Ukairo, A. K., Igwesi, C. G., & Ijeh, M. C. (2021). Effect of Succession Management on Sustainability of Small and Medium Scale Enterprises (SMEs) in Southeast Nigeria. *European Journal of Management and Marketing Studies*, *6*(3), 1–13. https://doi.org/10.46827/ejmms.v6i3.1112

Vrontis, D., Chaudhuri, R., & Chatterjee, S. (2022). Adoption of digital technologies by SMEs for sustainability and value creation: Moderating role of entrepreneurial orientation. Sustainability, 14, 7949. 10.3390/su14137949