

Innovativeness and SME Performance: The Mediating Role of Resource Leveraging in Tanzania's Agro-Processing Sector.

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Abstract

Small and medium enterprises (SMEs) play a crucial role in economic growth, particularly in resource-constrained environments like Tanzania's agro-processing sector. Utilising Dynamic Capability Theory (DCT) and Resource Dependence Theory (RDT), this study examines the relationship between innovativeness and resource leveraging in enhancing SME performance. Data were collected using stratified random sampling from 254 agro-processing SMEs and analysed using Partial Least Squares Structural Equation Modelling (PLS SEM). The findings indicate that due to contextual constraints, innovativeness alone does not significantly affect performance. Instead, its impact is fully realised only when combined with effective resource leveraging, which serves as a critical mediator. Resource leveraging optimises resources and alleviates constraints, confirming its contribution to competitive advantage. This emphasises the need to integrate innovation with strategic resource management to address issues such as funding, access to technology, and skilled labour shortages in Tanzania's agro-processing sector. The study advances understanding of SME performance by linking DCT and RDT and offers insights applicable to similar developing economies. Practical implications include recommendations for managers to promote innovation and optimise resource use, as well as policy suggestions to enhance access to resources and infrastructure.

Keywords: Innovativeness; Resource Leveraging; Agro Processing SMEs; SME Performance

Introduction

Small and Medium Enterprises (SMEs) are critical drivers of global economic growth, contributing significantly to employment, innovation, and GDP. They account for about 90% of businesses and over 50% of jobs worldwide (OECD, 2023). Their resilience and adaptability make them essential for financial stability and innovation. In emerging economies, SMEs reduce poverty, drive industrialisation, and facilitate wealth distribution. However, SMEs in resource-intensive sectors, such as agro-processing, face several challenges, including intense competition, limited funding, and dependence on external resources (Nkwabi & Mboya, 2019). To navigate challenges, SMEs are increasingly adopting entrepreneurial strategies that focus on developing dynamic capabilities, such as innovation and strategic resource leveraging, to maintain competitiveness. In Tanzania, SMEs significantly contribute to the national economy by providing employment and accounting for a substantial portion of GDP (Abdul Azeez et al., 2024). However, Tanzanian agro-processing SMEs face varied challenges, including inadequate infrastructure, complex regulations, and limited access to advanced technologies, which hinder innovation and scalability (Nkwabi & Mboya, 2019; Rutta, 2022). Addressing these barriers necessitates innovative marketing, management approaches, and strategies to manage resource dependencies. The agro-processing sector is crucial to Tanzania's economic

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development, as it adds value to agriculture, creates jobs, and alleviates poverty (FAO, 2018). By processing agricultural products for local and international markets, the sector strengthens the farm value chain, particularly in rural areas. Nevertheless, SMEs in this sector face persistent issues, including limited financing, outdated technology, and skills shortages, which constrain their competitiveness. Their reliance on raw materials exposes them to risks such as supply chain disruptions and climate change. Many SMEs struggle to secure capital for advanced machinery and infrastructure, which directly impacts their competitiveness (Traboulsy, 2023).

Overcoming these challenges requires a focus on resource leveraging and innovation. Dynamic Capabilities Theory (DCT) underscores the importance of innovation and adaptability in complex environments. Resource Dependence Theory (RDT), on the other hand, highlights the need to manage external dependencies, including securing supply chains and accessing funding. Despite this, there is limited understanding of how resource leveraging and dynamic capabilities interact to influence performance in Tanzania's agro-processing sector (Lwesya & Achanta, 2023). This study examines this interaction, focusing on innovativeness and its impact on SME performance. In scholarly discussions, resource leveraging and innovativeness are often treated separately in relation to firm performance. Zhang et al. (2022) emphasise that innovation, particularly through research and development (R&D) and patents, greatly enhances sustainable performance in SMEs, suggesting a direct link between innovativeness and positive economic outcomes. Dynamic capabilities, including the capacity to innovate and reconfigure resources, are critical for enabling SMEs to remain competitive in changing environments. Conversely, Oduro and De Nisco (2023) discuss how Industry 4.0 technologies facilitate innovation ambidexterity, which in turn mediates the relationship between technological adoption and firm performance. This highlights the importance of leveraging practical resources to maximise the benefits of technology for sustainable performance gains. Interestingly, Zhang et al. (2020) argue that industry- and country-level innovation can exceed firm-level innovation.

However, existing literature often neglects the synergies between resource leveraging and innovation (Carnes et al., 2017; Monteiro et al., 2019). By framing resource leveraging as a means of managing dependencies and fostering adaptability, we can better understand their interplay, particularly in Tanzania's agro-processing sector. Treating these elements as distinct may lead to missed opportunities for effective strategies that integrate dynamic capabilities with external resource management to drive performance improvements. Additionally, empirical research on the interaction between innovativeness and resource reallocation is limited in resource-constrained settings like Tanzania (Lwesya & Achanta, 2023; Abid et al., 2024). Previous studies have investigated entrepreneurial orientation, innovation capabilities, and resource management to enhance SME performance in emerging economies, often focusing on countries such as Pakistan and Lebanon while overlooking the unique challenges faced by Tanzanian SMEs (Aslam et al., 2018; Deku et al., 2023). Thus, further investigation is warranted. This study aims to analyse how innovativeness and resource leveraging interact to influence SME performance in Tanzania's agro-processing sector, using Dynamic Capabilities Theory (DCT) to examine resource reconfiguration for adaptation and innovation, and Resource Dependence Theory (RDT) to explore how external resource constraints impact strategic decisions. Does combining these elements yield better performance than considering them separately? Understanding how resource leveraging enhances innovation, and vice versa, provides a holistic perspective on their interaction, contributing to the overall knowledge in this area.

Literature Review

Theoretical Perspective

The Dynamic Capabilities Theory (DCT) emphasises a firm's ability to adapt, integrate, and reconfigure resources in response to changing environments. Dynamic capabilities encompass the processes and routines that enable firms to innovate, respond to market shifts, and replenish their resource base to sustain competitive advantage (Teece et al., 1997; Denrell & Powell, 2016). For SMEs in dynamic industries like Tanzania's agro-processing sector, quick adaptation and innovation are vital for survival and growth. Innovativeness enables firms to utilise existing resources in novel ways, addressing evolving customer demands and capitalising on new opportunities (Carnes et al., 2017; Monteiro et al., 2019). Resource Dependence Theory (RDT) complements this by focusing on how firms manage their reliance on external resources and navigate the uncertainties associated with these dependencies. SMEs, especially in resource-constrained environments, often depend on external suppliers, funding institutions, and infrastructure, making effective dependency management essential for maintaining competitive advantage (Gorton et al., 2024). RDT highlights the importance of strategically leveraging resources to secure critical access, minimise vulnerability, and ensure operational continuity in uncertain conditions (Jiang et al., 2023). Furthermore, RDT points to the significance of power dynamics and negotiation strategies in resource exchanges. Firms with strong bargaining power can influence suppliers, obtain favourable terms, and secure essential resources for operations.

In Tanzania's agro-processing sector, managing external dependencies may involve forming collaborative networks, nurturing long-term supplier relationships, and engaging policymakers to enhance access to funding and infrastructure (Kundu et al., 2024). These strategies mitigate risks associated with resource scarcity and external shocks, helping SMEs maintain competitiveness. RDT also stresses the importance of diversifying resource acquisition to reduce reliance on single sources (Jiang et al., 2023). SMEs that develop multiple partnerships or diversify their supply chains are better equipped to adapt to disruptions and ensure operational continuity. This aspect resonates with DCT, where adaptability and resource reconfiguration are crucial to sustaining performance. By integrating DCT and RDT, this study investigates how SMEs can leverage both internal and external resources while dynamically adapting to environmental challenges. This integrated framework enhances our understanding of how firms achieve superior performance in resource-constrained contexts. In summary, firms must cultivate dynamic capabilities to deploy resources effectively and manage external dependencies to mitigate risks and uncertainties.

Hypotheses Development

Innovativeness and Performance

In the evolving business landscape, innovativeness is a key driver of firm performance. Research shows that an innovation-oriented approach positively affects entrepreneurial orientation and marketing performance in SMEs. Different forms of innovativeness, including product, process, marketing, and value innovation, significantly influence market share, sales, turnover, return on investment, and overall profitability. Fegada and Veres (2024) highlight the role of innovation orientation in enhancing SMEs' performance, particularly when combined with technological capabilities. This intersection emphasises the importance of entrepreneurial marketing strategies for competitiveness. Additionally, Hanaysha and Al Shaikh (2022) note that innovativeness positively influences firm performance from an entrepreneurial marketing standpoint within SMEs. Furthermore, Zhang et al. (2022) demonstrate that innovation contributes to sustainable performance, especially in SMEs following circular economy principles. Investments in research and development (R&D) further enhance economic

performance, and DCT underscores the importance of adaptability and innovation in responding effectively to market changes. In summary, empirical evidence supports the assertion that SMEs that prioritise innovation can adapt more effectively to market changes, thereby improving overall performance. We therefore formulate hypothesis 1 (H1):

H1: *Innovativeness has a positive influence on SMEs' performance.*

Resource Leveraging and Performance

It has been argued that resource leveraging significantly influences firm performance, especially for small and medium enterprises (SMEs). Resource leveraging entails the strategic identification, acquisition, and utilisation of resources to exploit market opportunities. Studies consistently highlight its positive impact. Resource Dependence Theory (RDT) emphasises the need for firms to strategically manage and optimise their external resource dependencies to maintain competitiveness and achieve superior performance. Khan et al. (2022) explore how resource leveraging affects entrepreneurial firm performance through both inside-out and outside-in marketing capabilities. Panjaitan (2022) stresses the importance of leveraging entrepreneurial creativity and product innovativeness in enhancing marketing performance. Additionally, Sadiku Dushi et al. (2019) confirm the positive relationship between resource leveraging and SME performance, particularly when viewed through an entrepreneurial marketing lens. In summary, SMEs that strategically focus on resource leveraging consistently achieve improved performance by managing dependencies and maximising resource utilisation. We therefore formulate hypothesis 2 (H2):

H2: *Resource leveraging has a positive influence on SMEs' performance.*

The Mediating Role of Resource Leveraging

Numerous empirical studies highlight the crucial role of resource leveraging as a mediator in the relationship between innovativeness and SMEs' performance. Yoshikuni and Dwivedi (2023) indicate that resource orchestration, enabled by enterprise information systems, enhances organisational innovativeness and improves performance. Similarly, Cai and Wang (2009) discuss how entrepreneurial orientation and learning capabilities drive resource leveraging, strengthening SMEs' performance. RDT reinforces this by asserting that effective management of external resources is vital to maximising the benefits of innovation in resource-constrained contexts. The strategic bundling of resources, illustrated by Carnes et al. (2017), significantly enhances a firm's ability to innovate and outperform competitors during growth and maturity stages. Furthermore, Fu et al. (2021) and Gao et al. (2021) emphasise that effective resource allocation is essential for sustaining innovation activities amidst resource constraints. Dynamic Capabilities Theory (DCT) supports this view, highlighting that leveraging both internal and external resources amplifies the impact of innovation on performance. This body of evidence suggests that innovativeness alone is insufficient; rather, resource leveraging serves as a critical mediator, enhancing the relationship between innovativeness and SMEs' performance. We therefore formulate hypothesis 3 (H3):

H3: *Innovativeness has a positive influence on SMEs' performance, with resource leveraging acting as a mediator.*

Conceptual Model

Drawing on Dynamic Capability Theory (DCT), Resource Dependence Theory (RDT), and existing empirical literature, the study proposes a conceptual framework to examine the interplay between innovativeness, resource leveraging, and SME performance. As illustrated

in Figure 1, Innovativeness (IN) is posited as the independent variable affecting SME Performance (PM) directly and indirectly through Resource Leveraging (RL). Resource Leveraging acts as a mediating variable, consistent with RDT’s premise that managing external dependencies is crucial for capitalising on dynamic capabilities.

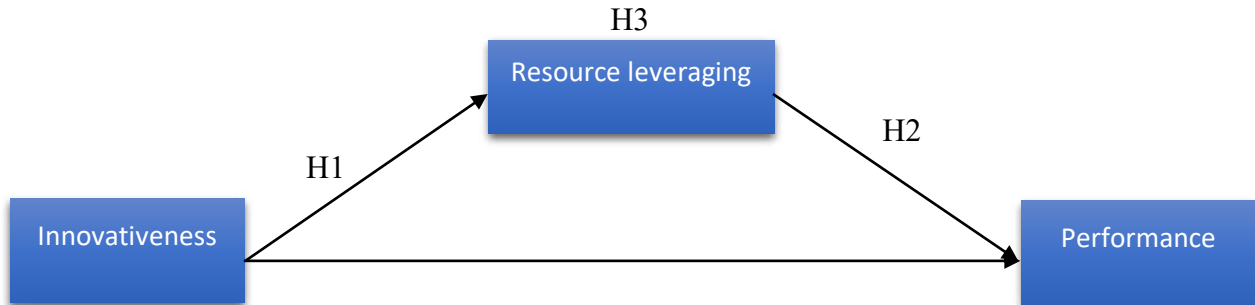


Figure 1: The Conceptual Model
 Source: Developed from literature review (2025)

Methodology

Research Philosophy and Design

This study adopts a positivist research philosophy, emphasising objective measurement and empirical testing of observable phenomena. Positivism supports hypothesis testing using statistical methods, ensuring objectivity and replicability. The study employs an explanatory research design to analyse the causal relationships among innovativeness, resource leveraging, and SME performance. A cross-sectional survey strategy was used to collect primary data from Tanzanian SMEs using structured questionnaires. This approach facilitates hypothesis testing and broad participation while managing time and resource constraints.

Sampling Design

The study was conducted from August to December 2022, gathering data from 254 usable responses from small and medium-sized enterprises (SMEs) engaged in agro-processing. Participants were owner-managers or managers with an average of 3 years of experience in both domestic and international trade. The sampling frame was based on a list of registered agro-processing SMEs from the Tanzania Regulatory Authority (TRA) as an internal, unpublished report from 2022. Access to the data was granted for academic research purposes under a formal agreement with the TRA, which permitted the use of the registry for constructing a representative sample of agro-processing SMEs operating in Tanzania. The registry included firm names, locations, contact information, and primary business activities, enabling stratified random sampling by subsector and geographic region. Due to the confidential nature of the data, the registry is not publicly available; however, its use aligns with established practices in survey research for ensuring sample validity and representativeness (Saunders et al., 2023).

To ensure comprehensive representation across various agro-processing subsectors (e.g., food processing, beverages, grain milling), we used stratified random sampling by firm size and location. The population in Dar es Salaam was divided into strata based on the central industrial districts, including Kinondoni and Ilala, and then randomly selected from each subgroup. This method ensures balanced representation across firm sizes and geographical regions. The sample size was determined to align with the study objectives and the statistical power requirements for Structural Equation Modelling.

Data Collection and Measures

Survey questionnaires were distributed to SMEs in Dar es Salaam, Tanzania's primary commercial hub, via email and in-person visits to maximise response rates. Of the 300 questionnaires distributed, 257 were returned and deemed usable, yielding a response rate of 84%. We employed a five-point Likert scale (1 = "strongly disagree" to 5 = "strongly agree"). The measurement instruments were adapted from established studies, Innovativeness was adapted from Becherer et al. (2012), using three items. Resource Leveraging was adapted from Sadiku Dushi et al. (2019), measured using six items. SME Performance included financial indicators (profitability, market share, sales growth) adapted from Çağlıyan et al. (2022) and non-financial indicators (managerial capability, product quality) adapted from Yu et al. (2017).

Data Analysis Methods

Data analysis was conducted using Partial Least Squares Structural Equation Modelling (PLS-SEM) via the SEMinR package in R version 4.3.3. SEMinR provides a robust domain-specific language for estimating and validating structural equation models. This method was selected for its flexibility, reproducibility, and ability to handle non-normal data distributions. The analysis followed a two-step approach recommended by Hair et al. (2021). First was Measurement Model Assessment, we evaluated the reliability and validity of the constructs. The model uses a mixed-methods approach: SME Performance was assessed as a reflective construct (using Outer Loadings, Composite Reliability, and AVE), while Innovativeness and Resource Leveraging were assessed as formative constructs (using Weights, t-values, and VIFs) to capture the composite nature of entrepreneurial inputs. Second was Structural Model Assessment, we tested the hypothesised relationships and the mediating effect of resource leveraging. To assess the significance of path coefficients, we employed a bootstrapping procedure with 10,000 replications as recommended by Hair et al. (2021) and Henseler et al. (2015)

Research Findings and Measurement Model Assessment

Descriptive Analysis

The sample of 254 agro-processing SMEs is robust for descriptive analysis, meeting recommended sample size thresholds for both descriptive and subsequent inferential analysis (Hair et al., 2021). Table 1 summarises the characteristics of the sampled SMEs (n=254) in Tanzania's agro-processing sector. The majority of firms are microenterprises with fewer than five employees (55.1%). Regarding business maturity, the largest group (35.0%) has been in operation for 6–10 years. The most common sub-sectors represented are grain milling (20%), bakeries and confectionery (19%), and fruit processing (15%).

Table 1: Descriptive Results of SMEs

Firm Characteristic	Group	Frequency	Percentage (%)
Firm Size (Employees)	< 5 employees	140	55.1
	5 - 49 employees	107	42.1
	50 -100 employees	7	2.8
Total		254	100
Years in Operation	1- 2 years	20	7.9
	3 5 years	76	29.9
	6 10 years	89	35
	Above 10 years	69	27.2

Total		254	100
Industry Sub Sector	Grain milling	52	20.5
	Bakeries and Confectionery	47	18.5
	Fruit processing	37	14.6
	Fish processing	36	14.2
	Beverages	31	12.2
	Edible oil production	21	8.3
	Milk processing	18	7.1
	Tea and coffee	10	3.9
	Sugar processing	2	0.8
Total		254	100

Assessing Measurement Models

The analysis employed the SEMinR package in R programming version 4.3.3. As detailed in the methodology, the study utilised a mixed measurement model. SME Performance was evaluated as a reflective construct, while Innovativeness and Resource Leveraging were evaluated as formative constructs.

Reflective Measurement Model Assessment

For the reflective construct (SME Performance), we assessed reliability and validity in accordance with the criteria outlined by Hair et al. (2021). As shown in Table 2, all indicator outer loadings exceeded the recommended threshold of 0.708 (ranging from 0.778 to 0.926), confirming indicator reliability. Internal consistency was established with Composite Reliability (rho_c) values exceeding the 0.70 threshold. Convergent validity was confirmed as the Average Variance Extracted (AVE) was 0.731, exceeding the 0.50 threshold.

Table 2: Reflective Measurement Model Evaluation Results

Construct / Indicator	Outer Loading	Composite Reliability (pc)	AVE
SME Performance		0.926	0.731
PM1: Our firm has been highly profitable over the past year.	0.865		
PM2: Our market share has increased over the past three years.	0.894		
PM3: Sales revenue has grown consistently over the past three years.	0.778		
PM4: Our operational costs are efficiently managed.	0.83		
PM5: The quality of our goods or services is excellent.	0.855		
PM6: Our managerial team is competent.	0.901		

Discriminant Validity

Discriminant validity was assessed using the Heterotrait Monotrait ratio (HTMT). As shown in Table 3, all HTMT ratios were below the conservative threshold of 0.85 (maximum = 0.762),

and the bootstrapped confidence intervals did not include 1.0. This confirms that the reflective constructs are empirically distinct from one another.

Table 3: Heterotrait Monotrait Ratio (HTMT)

Construct	Innovativeness (IN)	Resource Leveraging (RL)	Performance (PM)
Innovativeness (IN)			
Resource Leveraging (RL)	0.762		
Performance (PM)	0.293	0.173	

Formative Measurement Model Evaluation

For the formative constructs (Innovativeness and Resource Leveraging), we assessed convergent validity, collinearity, and the significance of weights (see Table 4). Redundancy analysis confirmed convergent validity, yielding correlation coefficients above 0.70. Collinearity was not an issue, as all Variance Inflation Factor (VIF) values were consistently below 3.0 (highest VIF = 1.467). Regarding indicator weights, although several indicators were statistically significant, some (e.g., RL6) showed lower t values. However, following Hair et al. (2022), these indicators were retained because their outer loadings were relevant and theoretically essential for capturing the multidimensional nature of entrepreneurial marketing in the Tanzanian context (Sadiku Dushi et al., 2019).

Table 4: Formative Measurement Model Evaluation Results

Indicators	Outer Weights	t values	Outer Loadings	VIF	Convergent Validity
Innovativeness					0.864
IN1	0.667	2.991**	2.991	1.317	
IN2	0.204	0.843	0.843	1.467	
IN3	0.425	2.362*	0.664	1.22	
Resource Leveraging					0.773
RL1	0.511	3.345**	0.818	1.365	
RL2	0.293	2.249*	0.627	1.227	
RL3	0.146	0.65	0.339	1.111	
RL4	0.145	1.003	0.507	1.244	
RL5	0.404	2.997**	0.745	1.309	
RL6	0.061	0.481	0.409	1.293	

Note: * $p < 0.05$; ** $p < 0.01$

Structural Model Assessment

Having established the reliability and validity of the measurement model, we proceeded to assess the structural model to test the hypothesised relationships. We employed a bootstrapping procedure with 10,000 subsamples to determine the significance of the path coefficients. Figure 2 visualises the resulting PLS path model, showing the path coefficients (β) and the R^2 values for the endogenous constructs.

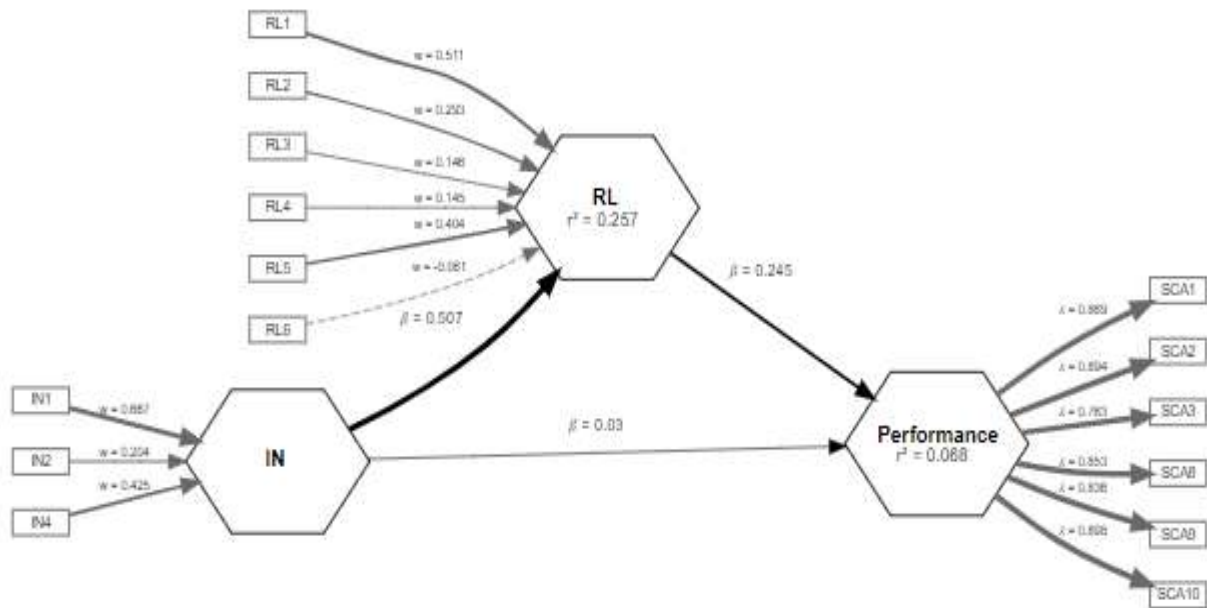


Figure 2: PLS Path Model Result

Source: PLS Path Model generated using SEMinR package in R (2024)

As illustrated in the figure, the model explains 25.7% of the variance in Resource Leveraging ($R^2 = 0.257$) and 6.8% of the variance in SME Performance ($R^2 = 0.068$). The specific results of the hypothesis testing are detailed in Table 5 .

Significance Testing Results of the Structural Model

Table 5 presents the path coefficients and significance levels (two-tailed tests). The results indicate that Resource Leveraging (RL) has a significant positive effect on SME Performance (beta = 0.245, t = 2.105, p = 0.035), thereby supporting Hypothesis 2. However, the direct impact of Innovativeness (IN) on SME performance was not statistically significant (beta = 0.030, t = 0.304, p = 0.761), leading to the rejection of Hypothesis 1. This suggests that, in the context of Tanzanian agro-processing SMEs, innovativeness does not directly translate into performance without enabling mechanisms.

Table 5: Significance Testing Results (Direct Effects)- Two-Tailed Tests

Path	Path Coefficient (β)	t values	p values	95% Confidence Intervals	Decision
IN > Performance	0.03	0.304	0.761 (NS)	[-0.119, 0.201]	H1 Rejected
RL > Performance	0.245	2.105	0.035**	[0.075, 0.419]	H2 Supported

Note: *p < 0.05 (two-tailed test). NS = Not Significant.

Mediation Analysis

To examine the underlying mechanism, we tested whether Resource Leveraging mediates the relationship between Innovativeness and Performance using a two-tailed bootstrapping procedure . As shown in Table 6, the total indirect effect is 0.124, with a t statistic of 2.235.

The 95% confidence interval [0.043, 0.207] does not include zero, confirming that the indirect effect is statistically significant.

This validates Hypothesis 3, confirming that Resource Leveraging acts as a critical mediator. Furthermore, since the direct effect of Innovativeness (Table 5) was insignificant, whereas the indirect effect (Table 6) was significant, this result indicates complete mediation (indirect-only mediation). This implies that innovativeness improves SME performance only when it is successfully channelled through practical resource leveraging.

Table 6: Mediation Analysis Results – Two-Tailed Test

Relationship	Original Est.	Bootstrap Mean	t Stat	95% Confidence Interval	Significance
Total Indirect Effect (IN > RL > Performance)	0.124	0.129	2.235	[0.043, 0.207]	Supported

Note: Significance determined via two-tailed bootstrapping (10,000 subsamples); confidence intervals not containing zero indicate significance at $p < 0.05$

In our mediation analysis (presented in Table 6), we find that Innovativeness (IN) has a notable indirect influence on Performance through Resource Leveraging (RL). The total indirect effect is 0.124, with a bootstrap mean of 0.129 and a standard deviation of 0.056. A t-statistic of 2.235 indicates that this effect is statistically significant at the 0.05 level, with a 95% confidence interval of 0.043 to 0.207. Since the confidence interval does not include zero, the indirect effect is confirmed. This validates Hypothesis 3. Furthermore, unlike partial mediation, in which both direct and indirect paths remain significant, our results (Table 5) showed that the direct path from Innovativeness to Performance was non-significant ($p = 0.761$). Consequently, this suggests a full mediation effect. This finding implies that, in the context of Tanzanian agro-processing SMEs, innovativeness does not directly enhance performance; instead, it must be channelled through practical resource leveraging to achieve performance gains.

Discussion of Findings

This study set out to analyse how innovativeness and resource leveraging interact to influence SME performance in Tanzania's agro-processing sector. The statistical results provide a nuanced perspective on the mechanisms driving performance in resource-constrained environments. First, the statistical analysis reveals that the direct relationship between Innovativeness (IN) and SME Performance (Hypothesis 1) is not statistically significant ($p > 0.05$). This finding is intriguing, as it contrasts with conventional literature that often posits a direct link between innovation and firm success. However, it accurately reflects the specific contextual challenges faced by Tanzanian SMEs, such as limited access to advanced technologies, insufficient funding for research and development (R&D), and a shortage of skilled personnel. These barriers hinder the practical commercialisation of innovative ideas. This observation aligns with Dynamic Capability Theory (DCT), which suggests that the mere possession of dynamic capabilities (like innovativeness) does not yield performance benefits unless supported by adequate resource reconfiguration. Similar patterns have been observed in other emerging economies, where innovation's effectiveness is often dampened by external dependencies and internal capability gaps (Cannavale & Nadali, 2019; Hurtado Palomino et al., 2024).

Second, the results strongly support Hypothesis 2, indicating that Resource Leveraging (RL) has a significant positive impact on SME performance. This highlights the critical importance of effectively utilising both internal and external resources to enhance productivity and reduce costs. In the resource-constrained environment of Tanzania's agro-processing sector, the ability to optimise raw materials, labour, and technology is a more immediate driver of competitiveness than innovation alone. These findings are consistent with Resource Dependence Theory (RDT), which emphasises that strategically managing external dependencies to secure critical resources is essential for survival and growth (Ouragini & Lakhali, 2024; Khan et al., 2022).

Third, and perhaps most significantly, the study validates Hypothesis 3, finding that Resource Leveraging (RL) acts as a full mediator in the relationship between Innovativeness and Performance. Since the direct path from innovativeness to performance was insignificant, this suggests that innovation leads to performance gains only when it is channelled through practical resource leveraging. Innovativeness triggers the need for resources; leveraging these resources then satisfies that need, translating the innovation into tangible market results. This finding clarifies the synergistic relationship between the two constructs (Monteiro et al., 2019; Aslam et al., 2018). It supports the view of Zheng et al. (2013) that network resources, when effectively leveraged, amplify innovation performance. In essence, for Tanzanian SMEs, resource leveraging is the bridge that turns innovative potential into economic performance.

Conclusion

This study integrated Dynamic Capability Theory (DCT) and Resource Dependence Theory (RDT) to analyse SME performance in Tanzania's agro-processing industry. The findings reveal that while innovativeness is a critical capability, it does not directly drive performance in this context. Instead, Resource Leveraging emerges as the essential mediator that translates innovative intent into commercial success. By strategically managing external dependencies and optimising internal assets, Tanzanian SMEs can overcome the "liability of smallness" and resource scarcity to achieve sustainable growth. These findings underscore the importance of synergising innovation with resource leveraging to address challenges related to limited funding, limited technology access, and skilled labour shortages. For SMEs in Tanzania's agro-processing sector, this synergy provides a vital pathway to sustainable competitiveness.

Theoretical Implications

This study offers significant theoretical contributions by demonstrating the boundary conditions of Dynamic Capability Theory in developing economies. While DCT typically emphasises adaptation through innovation, this study extends the theory by showing that in resource-limited settings, the capability to innovate is insufficient without the capacity to leverage resources. Furthermore, by incorporating Resource Dependence Theory, the study highlights the strategic necessity of managing external dependencies. The findings validate resource leveraging as a mechanism for mitigating environmental uncertainties, aligning with RDT's premise that firms must actively manage relationships with external stakeholders to secure essential inputs. Finally, the study challenges the conventional assumption that innovativeness universally drives firm performance, revealing instead that in industries facing severe financial and technological constraints, the benefits of innovativeness are fully mediated by the firm's ability to leverage resources effectively.

Practical Implications

For managers in Tanzania's agro-processing industry, the study suggests that innovation strategies must be supported by robust resource management. Managers should prioritise the efficient use of resources such as raw materials, labour, and technology, and actively pursue collaborative innovation with supply chain partners to amplify their capabilities. Rather than investing in innovation in isolation, managers must align their innovative initiatives with concrete plans for resource acquisition and optimisation to ensure commercial viability. From a policy perspective, the findings highlight the need for an enabling environment that facilitates access to resources for SMEs. Policymakers should focus on initiatives that improve access to financial resources, such as grants and low-interest loans for technological upgrades. Additionally, investing in physical and digital infrastructure is crucial to connecting SMEs to markets. Policies that encourage resource-sharing networks and industrial clusters can further help SMEs leverage economies of scale, thereby maximising their innovative potential and contribution to the national economy.

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