

# Influence of Success Factors associated with Frugal Business Modelling on the Agribusiness Sustainability: The Moderating Effect of Capacity Building

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## **Abstract**

This study explores the role of capacity building as a moderating variable in the relationship between success factors and the sustainability of agribusinesses. The study employed a cross-sectional survey design and targeted managers and operational staff working in agribusinesses affiliated with the National Association of Seed Traders of Ghana (NASTAG). The collected data underwent a series of statistical analyses, including the data analysis method used for this research is the Structural Equation Model Partial Least Square (SEM- PLS) with the help of the SmartPLS 4.0 application. These analyses were performed on the questionnaires, which contained variables assessing the success factors related to frugal business modelling, variables assessing the determinants of agribusiness sustainability as well variables assessing capacity building. It is therefore concluded that the capacity building moderation impact on success factors associated with frugal business modelling had significant positive but weak effect on the sustainability of agribusinesses in Ghana. The findings contribute to the growing body of literature on the multidimensional nature of agricultural sustainability, reinforcing the need for a holistic, systems-oriented approach. The positive and statistically significant relationship between success factors and agricultural sustainability underscores that sustainable agricultural development requires addressing individual, organisational, and environmental factors in an integrated manner. The exploration of capacity building as a moderating variable enhances the understanding of the complex interplay between various factors shaping the long-term viability of agribusinesses. The results offer valuable insights for practitioners and policymakers, highlighting the importance of investing in the capabilities of farmers, cooperatives, and other agricultural stakeholders through capacity building initiatives co-created with the intended beneficiaries. The study recommends further research to deepen the understanding of the mechanisms and pathways through which capacity building can drive sustainable outcomes in different agricultural contexts. Comparative case studies, longitudinal assessments, mixed-methods approaches, and participatory research agendas can contribute to a more comprehensive, evidence-based understanding of this crucial relationship.

**Keywords:** Agribusiness sustainability, capacity building, frugal business modelling, frugal innovation, strategic constituency model

## 1.0 Introduction

Agribusiness, the integration of agriculture and business, has emerged as a critical sector driving economic development, particularly in developing nations (Davis & Goldberg, 1957). A key aspect of agribusiness is the application of frugal business methods, where inexpensive yet effective models enable profitable agricultural operations (Musona, 2021). Frugal business modelling, aimed at generating more value with fewer resources, has gained increasing popularity in regions like Africa, where it supports the affordability and accessibility of goods and services for underserved and low-income markets (Osongo *et al.*, 2023).

Research on frugal innovation has underscored the importance of a viable financial framework and the strategic alignment of businesses' value proposition with upstream and downstream activities in the value chain (Vellema *et al.*, 2023). In the context of agribusiness, frugal business modelling can leverage human capabilities and specific tools and techniques to navigate resource constraints and foster sustainable practices (Vellema *et al.*, 2023). By cutting costs, preserving resources, and minimising environmental impact, frugal innovation has the potential to enhance the sustainability of African agribusinesses (Investing in Africa is Sound Business and a Sustainable Corporate, 2020).

However, the successful implementation of frugal business models in the agribusiness sector may face challenges, such as the need for a mental shift and potential resistance to change (Osongo *et al.*, 2023). Capacity building, the process of developing and strengthening the skills, instincts, abilities, processes, and resources that organisations and communities need to survive, adapt, and thrive in a fast-changing world (UNDP, 2009), may play a crucial moderating role in this context.

This study aims to investigate the impact of critical success factors associated with frugal business modelling on the sustainability of agribusinesses, with a particular focus on the moderating effect of capacity building. By examining the interplay between frugal business modelling, sustainability, and capacity building, the findings of this research will provide valuable insights for both practitioners and policymakers in the African agribusiness sector, informing strategies to enhance the long-term viability and resilience of the industry.

## 2.0 Review of Related Literature

### 2.1 Frugal Innovation Theory

In an era marked by resource scarcity and growing global inequalities, the concept of frugal innovation has emerged as a transformative approach to value creation (Radjou & Prabhu, 2015). Frugal innovation, at its core, is the ability to achieve more with less, minimising the use of scarce resources such as time, energy, and capital, while simultaneously generating social and business value (Radjou & Prabhu, 2015). This innovative mindset represents a profound departure from traditional innovation models, offering a compelling alternative that is particularly relevant in the context of emerging markets and sustainable development (Basu *et al.*, 2013).

The foundations of frugal innovation draw from several established theoretical perspectives, including the concept of "jugaad" – an Indian term that refers to an innovative fix or a flexible workaround used to address a problem (Radjou *et al.*, 2012). At the heart of frugal innovation are several core characteristics that distinguish it from conventional innovation models, such as affordability, simplicity in design and functionality, sustainability, flexibility, and scalability (Hossain, 2021).

The applications of frugal innovation are far-reaching, with significant impact in several domains. In emerging markets, frugal innovations have been widely adopted, addressing the pressing need for

affordable and accessible solutions (Radjou & Prabhu, 2015). In the realm of social impact, frugal innovations have been instrumental in improving access to essential services, such as healthcare, energy, and education, in resource-constrained settings (Hossain, 2021). Furthermore, frugal innovations have the potential to contribute to environmental sustainability by minimising resource consumption and waste (Hossain, 2021). The concept of "reverse innovation," where frugal innovations developed for emerging markets can be adapted and diffused to more affluent markets, also challenges traditional innovation processes (Govindarajan & Trimble, 2012).

Within the context of the agribusiness sector, the application of frugal business modelling holds significant promise. By leveraging human capabilities and specific tools and techniques to navigate resource constraints, frugal innovation can foster sustainable practices and enhance the long-term viability of African agribusinesses (Vellema *et al.*, 2023). However, the successful implementation of frugal business models in the agribusiness sector may face challenges, such as the need for a mental shift and potential resistance to change (Osongo *et al.*, 2023).

## 2.2 Strategic Constituency Theory

The strategic constituency theory has evolved and gained prominence in the field of strategic management, as organisations navigate increasingly complex and dynamic environments. One of the key developments in this area has been the growing emphasis on stakeholder engagement and management. Researchers such as Bridoux and Stoelhorst (2021) have explored how organisations can effectively balance the competing demands of different stakeholder groups to achieve strategic objectives. Their findings suggest that firms must carefully assess the salience and power of various stakeholders, and tailor their engagement strategies accordingly, in order to maintain legitimacy and support.

Building on this, Kapoor and Klueter (2022) investigated the role of corporate social responsibility (CSR) in the strategic constituency theory. Their study revealed that firms can strategically leverage CSR initiatives to strengthen their relationships with key stakeholder groups, such as local communities, environmental organisations, and government agencies. This, in turn, can enhance the firm's ability to navigate complex regulatory and sociopolitical landscapes.

Furthermore, the COVID-19 pandemic has served as a significant test for the strategic constituency theory, as organisations have had to quickly adapt to rapidly changing circumstances and stakeholder demands. Researchers such as Kano and Verbeke (2021) have examined how multinational corporations have responded to the crisis, highlighting the importance of flexible, adaptive strategies that prioritise the needs of various stakeholders, including employees, customers, suppliers, and local communities.

In parallel, scholars have explored the intersection of strategic constituency theory and technological innovation. Rietveld and Eggers (2023) investigated how digital platforms can enable more effective stakeholder engagement and management. Their findings suggest that platform-based business models can provide organisations with greater visibility into stakeholder preferences and behaviours, allowing them to better anticipate and respond to their evolving needs.

Moving beyond the traditional focus on organisational-level strategies, Fisch *et al.* (2020) have examined the strategic constituency theory at the individual and team levels. Their research indicates that effective leadership and decision-making within organisations are contingent upon the ability to navigate the diverse interests and perspectives of key stakeholders, including employees, functional experts, and middle managers.

Importantly, the recent literature has also highlighted the need for a more holistic, systems-level understanding of strategic constituencies. Researchers such as Jiang and Cao (2022) have called for the integration of the strategic constituency theory with other complementary frameworks, such as the resource-based view and the dynamic capabilities approach. This would enable a more comprehensive understanding of how organisations can build and leverage their strategic resources and capabilities to address the demands of various stakeholder groups.

### 2.3 Agribusiness and Frugal Business Modelling

The fields of agribusiness and frugal business modelling have seen significant advancements in the past few years, driven by the need for more sustainable and inclusive approaches to economic development, particularly in emerging markets.

In the domain of agribusiness, recent studies have highlighted the critical role of technological innovation in enhancing the productivity and resilience of agricultural systems. Malek *et al.* (2021) examined the impact of digital technologies, such as precision farming and blockchain, on smallholder farmers in developing countries. Their findings suggest that the adoption of these technologies can improve supply chain traceability, reduce post-harvest losses, and empower farmers to make more informed decisions, ultimately increasing their incomes and food security.

Concurrently, researchers have explored the potential of frugal business models to address the unique challenges faced by agribusinesses. Zeschky *et al.* (2022) investigated the strategies employed by agri-tech startups in Sub-Saharan Africa, revealing how they have leveraged frugal innovation to develop affordable, accessible, and context-appropriate solutions for smallholder farmers. These solutions, such as low-cost irrigation systems and mobile-based advisory services, have enabled agribusinesses to reach previously underserved populations and drive inclusive growth in the agricultural sector.

Building on this, Thakur and Hale (2023) conducted a comparative analysis of frugal business models across different industries, including agribusiness, healthcare, and energy. They found that successful frugal business models share common characteristics, such as a deep understanding of customer needs, a focus on simplicity and affordability, and the ability to repurpose existing resources in innovative ways. These insights have important implications for agribusiness leaders seeking to develop sustainable and scalable business models.

Furthermore, the COVID-19 pandemic has highlighted the vulnerabilities of global food systems and the need for more localised, resilient approaches to agribusiness. Researchers such as Neilson and Wright (2022) have explored how agribusinesses have responded to the disruptions caused by the pandemic, emphasising the importance of supply chain diversification, digital transformation, and collaboration between different stakeholders in the agricultural ecosystem.

Alongside these developments, there has been a growing emphasis on the intersection of agribusiness and environmental sustainability. Srivastava *et al.* (2020) investigated the adoption of regenerative agriculture practices, such as no-till farming and cover cropping, by large-scale agribusinesses. Their findings suggest that these practices can enhance soil health, biodiversity, and water conservation, while also improving long-term profitability for farmers.

In the broader context of frugal business modelling, recent studies have examined the application of these principles beyond the agricultural sector. Ramdorai and Herstatt (2020) explored frugal innovations in the healthcare industry, highlighting how resource-constrained organisations have developed affordable, accessible, and user-friendly medical devices and services. These insights have

important implications for the development of frugal solutions in other sectors, such as energy, education, and housing.

## 2.4 Success Factors associated with Frugal Business Modelling

As the global economy continues to grapple with the challenges of resource scarcity, income inequality, and environmental sustainability, the focus on frugal business modelling has intensified. Researchers have made significant strides in identifying the key success factors that enable organisations to develop and scale innovative, affordable, and accessible products and services. One of the primary success factors highlighted in recent studies is a deep understanding of customer needs and preferences. Radjou and Prabhu (2021) examined the strategies of frugal innovators in emerging markets, emphasising the importance of ethnographic research and co-creation with end-users to ensure that solutions are truly tailored to their unique requirements. This customer-centric approach helps frugal businesses overcome the constraints of limited resources and infrastructure, and develop offerings that resonate with their target market.

Closely related to this is the ability to rapidly prototype and iterate on product designs. Zeschky *et al.* (2022) found that successful frugal businesses often leverage agile development methodologies and rapid feedback loops to quickly test and refine their offerings, ensuring that they remain relevant and responsive to evolving customer needs. This flexible, iterative approach enables these organisations to achieve greater speed and agility in their innovation processes.

Another key success factor lies in the effective leveraging of existing resources and infrastructure. Srinivas and Sutz (2020) explored how frugal innovators in the healthcare and energy sectors have repurposed and recombined readily available components and technologies to create affordable alternatives to traditional, high-cost solutions. This ability to "do more with less" is a hallmark of successful frugal business models, as it allows them to minimise capital investment and operational costs.

Alongside these technical and operational factors, recent research has also highlighted the importance of organisational culture and leadership in driving the success of frugal business models. Herstatt and Tiwari (2023) found that frugal innovators often foster a mindset of resourcefulness, creativity, and entrepreneurship throughout their organisations, empowering employees to experiment and challenge traditional assumptions. This cultural orientation, combined with visionary leadership that champions frugal innovation, can be a powerful enabler of long-term success.

Furthermore, the integration of frugal business models with digital technologies has emerged as a critical success factor in the past few years. Ramdorai and Herstatt (2020) examined how the convergence of frugal innovation and digital platforms has enabled organisations to reach new customer segments, streamline operations, and enhance the scalability of their offerings. This digital-frugal convergence has been particularly prominent in sectors such as fintech, healthcare, and agriculture, where it has helped to address the needs of underserved populations.

The ability to effectively navigate the regulatory and institutional environments in which they operate has been identified as a key differentiator for successful frugal businesses. Bound and Thornton (2021) explored how these organisations have leveraged their deep understanding of local contexts, as well as their ability to collaborate with government agencies and other stakeholders, to overcome bureaucratic hurdles and create enabling ecosystems for their innovations.

## 2.5 Theory of Sustainability

In the face of mounting global challenges such as climate change, biodiversity loss, and social inequality, the theory of sustainability has gained significant momentum and refinement. Researchers have delved deeper into the conceptual foundations, practical applications, and emerging frontiers of this critical framework for understanding and addressing the long-term viability of human and environmental systems. One of the key areas of focus has been the expansion of the traditional three-pillar model of sustainability (environmental, social, and economic) to incorporate a more holistic, systems-level perspective. Scholars such as Rockström and Sukhdev (2021) have advocated for the adoption of a "doughnut economics" approach, which situates economic activity within the safe and just operating space defined by planetary boundaries and social foundations. This shift in mindset has highlighted the inherent interdependencies and trade-offs between different sustainability dimensions, and the need for integrated, cross-cutting solutions.

Closely related to this is the growing emphasis on the role of resilience in the theory of sustainability. Folke *et al.* (2022) have explored how organisations, communities, and ecosystems can build the capacity to anticipate, adapt, and transform in the face of shocks and stresses, ensuring their long-term viability. Their research has underscored the importance of factors such as diversity, modularity, and adaptive capacity in enhancing resilience across social-ecological systems.

Another area of significant advancement has been the integration of the sustainability theory with emerging technological paradigms, such as the circular economy and the Fourth Industrial Revolution. Researchers like Geissdoerfer *et al.* (2020) have investigated how the circular economy's focus on resource efficiency, closed-loop systems, and value creation can be leveraged to drive more sustainable production and consumption patterns. Similarly, Schwab and Malleret (2020) have examined how digital technologies, automation, and the Internet of Things can be harnessed to create more sustainable and equitable outcomes, while also highlighting the potential risks and trade-offs that must be carefully navigated.

Alongside these conceptual and technological developments, the theory of sustainability has also been increasingly applied to specific domains, such as urban planning, agriculture, and supply chain management. Bai *et al.* (2022) have explored how the principles of sustainability can be integrated into the design and governance of smart, resilient cities, while Eisenack *et al.* (2021) have investigated the role of sustainability in enhancing the adaptive capacity of small-scale farmers in the face of climate change.

Recent literature has highlighted the importance of transdisciplinary collaboration and knowledge exchange in advancing the theory of sustainability. Researchers such as Lang *et al.* (2022) have explored how the co-creation of knowledge between academia, industry, government, and civil society can lead to more robust and impactful sustainability solutions, capable of addressing the complex, multifaceted challenges facing the world today.

## 2.6 Moderating Variable of Capacity Building

In this study, capacity building is seen as a moderating variable. The degree of staffing and competency, personnel qualified to provide the services, institutional investment in staff assistance and training, an adequate pool of internal trainers, etc. are the metrics used in this study to quantify capacity building. It is often acknowledged that human resource development, education, and training are closely related to

capacity building. Enhancing a worker's capacity to perform the right tasks is known as employee capacity building (Yamoah & Maiyo, 2013).

Researchers like Kessler and Kretzmann (2022) have emphasised the need for capacity building initiatives to be co-created with the intended beneficiaries, ensuring that the training, resources, and support provided are truly aligned with their needs and priorities. When stakeholders are actively involved in the design and implementation of capacity building efforts, the resulting outcomes are more likely to be sustainable and impactful.

Closely related to this is the role of external partnerships and collaboration. Rolfstam and Petersen (2020) found that the ability of organisations to leverage the expertise, networks, and resources of external stakeholders, such as government agencies, academic institutions, and civil society organisations, can be a powerful enabler of capacity building. These cross-sector partnerships can help to overcome institutional barriers, share best practices, and mobilise additional support for capacity building efforts.

### 3.0 Methodology

This study used a cross-sectional survey approach to gather data from managers and operational staff working in fifty-eight (58) agribusinesses affiliated with the National Association of Seed Traders of Ghana (NASTAG). The purpose of the survey was to examine the relationships among the variables under investigation. The choice of this design was appropriate because the study adopted a quantitative approach, necessitating the measurement of variables. The researchers used the Purposive Sampling Technique to select participants, focusing on managers, administrators, and operational staff from agribusinesses registered with NASTAG. Including top-level managers as subjects allowed the authors to gain insights into how these managers perceive the success factors and sustainability of agribusinesses as well as the moderating impact of capacity building on the relationship. The total population of NASTAG is 289, and the sample size was determined using the Slovin (1960) formula. According to Slovin's formula, when the error tolerance is not specified, the researcher can determine their error tolerance by subtracting 1 from an estimate of the confidence level. In this case, the researcher aimed for a 95 percent confidence level, resulting in a sample size of 205. The researchers distributed questionnaires through an online Google Form and received 205 responses from the participants. The Statistical Package for Social Scientists (SPSS) was used to examine the acquired data using exploratory factor analysis and descriptive statistics.

### 4.0 Results and Findings

#### 4.1 Structural Equation Model (SEM) Analysis - Reliability and Viability

The extracted variables success factors associated to FBM moderated by the variable capacity building were used to evaluate the construct for this phase of the study. Similar to the previous analysis, reliability and validity were evaluated using Cronbach's Alpha, Composite Reliability, Average Variance Extracted (AVE), and Heterotrait-Monotrait Ratio (HTMT). The following metrics should be used to show the model's applicability, in accordance with Vinzi et al. (2010)'s suggested values: Cronbach's Alpha ( $\geq 0.70$ ), Composite Reliability ( $\geq 0.70$ ), AVE ( $\geq 0.70$ ), and HTMT ( $\leq 0.85$ ). All variables meet the criterion, as shown in Tables 1 and 2, indicating that there is substantial support for the reliability and validity of the constructs included in the study's proposed model.

**Table 1: Convergent Validity for Variables Moderating Effect of Capacity Building on the Relationship between level of Success Factors associated FBM and the Sustainability of Agribusinesses**

Latent Variables	CA (≥0.70)	rho_a (≥0.70)	rho_c (≥0.70)	AVE (≥0.50)
Success Factors of FBM	0.889	0.896	0.919	0.694
Sustainability	0.778	0.778	0.871	0.693

Source: Field Data (2023) | CA = Cronbach's alpha; rho\_a = Composite reliability; rho\_c = Composite reliability; AVE = Average Variance Extracted

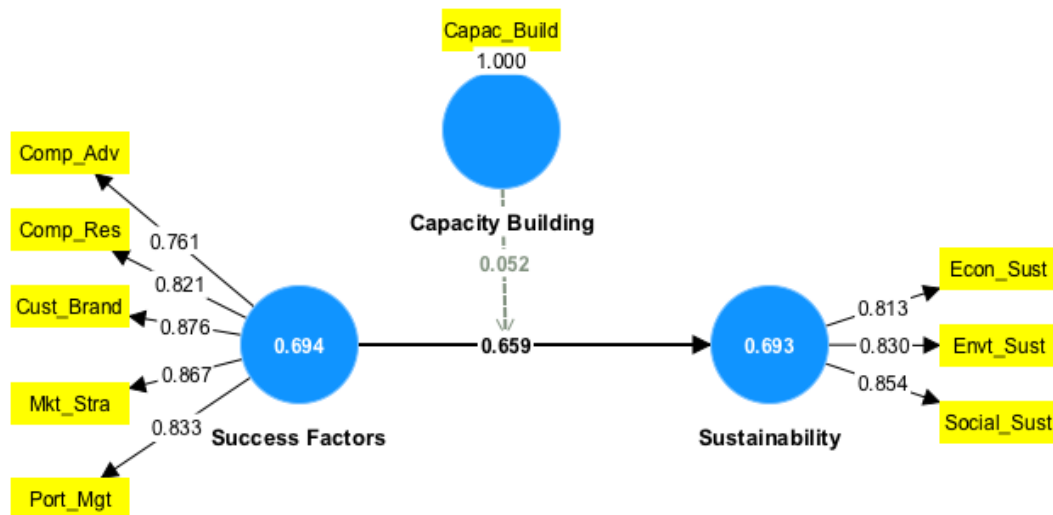
**Table 2: Discriminant Validity for Variables Moderating Effect of Capacity Building on the Relationship between level of Success Factors associated FBM and the Sustainability of Agribusinesses**

	HTMT	Threshold
Success Factors <-> Capacity Building	0.315	≤ 0.85
Sustainability <-> Capacity Building	0.557	
Sustainability <-> Success Factors	0.893	

Source: Field Data (2023) | HTMT = Heterotrait-monotrait ratio

#### 4.2 Path Analysis

The path diagram is shown in Figure 1 below. The study of the path diagram's path coefficients is shown in Tables 3 and 4. In the conceptual model, all directed arrow pathways (Figure 1) denote causal interactions. The paths of the full model serve as the underlying structure to research objective.



**Figure 1: Path Diagram for capacity building moderation impact on the relationship between Success Factors associated with FBM and Sustainability of Agribusinesses**

Source: Field data (2023)

Table 3 shows that the capacity building moderation impact on success factors associated with FBM have positive coefficient and statistically significant influence on the sustainability of agribusinesses. The path coefficient of moderation constructs as shown in table 4.47 is 0.052 at a significance p-value which is less than 0.05. It is therefore concluded that the capacity building moderation impact on success



factors associated with FBM had significant positive but weak effect on the sustainability of agribusinesses in Ghana. The  $R^2$  value from Table 4 of the model is 0.643 who shows the model has a high degree of explanatory power. The  $R^2$  value shows that the explanatory power of sustainability contributed by success factors associated with FBM moderated by capacity building is 64.3%. Effect size is the effect of exogenous variables on endogenous variables using the explanatory effect value  $f^2$  of capacity building and success factors to sustainability as shown by Table 4 is 0.011. This displays a small-effect explanatory ability. This represents that exogenous variables may be mildly capable of explaining endogenous variables, with a small degree of explanatory effect value. Therefore, the model in this study explains the latent variables well and it has a small degree of explanatory power.

**Table 3: Path Coefficient of Moderating Effect of Capacity Building on Success Factors associated with FMB and Sustainability of Agribusinesses**

Path Analysis	Path coefficient	P Values
Capacity Building x Success Factors -> Sustainability	0.052	0.000

Source: Field Data (2023)

**Table 4:  $R^2$  Value and  $f^2$  Value**

Path Analysis	$R^2$	$R^2$ Adjusted	$f^2$
Capacity Building x Success Factors -> Sustainability	0.643	0.638	0.011

Source: Field Data (2023)

### 4.3 Model Fit

Table 5 shows a model without a multicollinearity problem because all of the variables' VIF values were below the threshold of 3, indicating that there is no multicollinearity problem and that the model fit is satisfactory. The model evaluation verification's SRMR value was 0.082 and its NFI value was 0.795, as shown in Table 6. The range of the SRMR value is from 0 to 1 (Hu & Bentler, 1998). The NFI value spans from 0 to 1, and according to Bentler and Bentler (1980), the higher the number, the better performance is obtained. Therefore, although SRMR value is low, NFI values are high and considered to be acceptable. As a result, the model can be said to be generally reasonably fitted.

**Table 5: Collinearity Statistics for Moderating Effect of Capacity Building on Success Factors associated with FBM and Sustainability of Agribusinesses (VIF)**

Variables	VIF
<b>Outer Model List</b>	
Market Strategy	3.141
Customer/Brand Loyalty	3.238
Competitive Advantage	2.049
Company Resources	2.456
Portfolio Management	2.684
Social Sustainability	1.787

Economic Sustainability	1.487
Environmental Sustainability	1.652
Capacity Building	1.000
Capacity Building x Success Factors	1.000
<b>Inner Model List</b>	
Capacity Building -> Sustainability	2.396
Success Factors -> Sustainability	1.098
Capacity Building x Success Factors -> Sustainability	2.300

Source: Field Data (2023)

**Table 6: Model Fit for Moderating Effect of Capacity Building on Success Factors associated with FBM and Sustainability of Agribusinesses**

Model Evaluation	Value
SRMR	0.077
NFI	0.788

Source: Field Data (2023)

### 5.0 Conclusions

The results indicate that success factors were positively correlated and statistically significant with agricultural sustainability. Additionally, the study discovered that, following capacity building as a moderator, the success factors was positively correlated and statistically significant with sustainability of agribusinesses.

The findings of this study contribute to the growing body of literature on the multidimensional nature of agricultural sustainability (Sharma & Jain, 2021). The positive and statistically significant relationship between success factors (such as access to resources, management practices, and stakeholder engagement) and agricultural sustainability reinforces the notion that sustainable agricultural development requires a holistic, systems-oriented approach (Kessler & Kretzmann, 2022; Smits & Kuhlmann, 2020). The study's exploration of capacity building as a moderating variable further enhances the understanding of the complex interplay between individual, organisational, and environmental factors in shaping the long-term viability of agribusinesses (Zhao & Murrell, 2023).

The findings of this study offer valuable insights for practitioners and policymakers seeking to promote more sustainable agricultural practices and outcomes. The identification of the success factors that are positively correlated with agricultural sustainability can inform the design and implementation of targeted interventions and support programs, ensuring that limited resources are channelled towards the most impactful levers of change. The discovery that capacity building acts as a potent moderator, amplifying the positive relationship between success factors and sustainability, underscores the crucial importance of investing in the capabilities of farmers, cooperatives, and other agricultural stakeholders.

The results of this study point to the need for a more holistic, integrated approach to agricultural development that goes beyond traditional productivity-focused interventions. Policymakers should prioritise the creation of enabling environments that foster the growth and strengthening of agricultural enterpris-

es, with a particular emphasis on building the institutional, organisational, and individual capacities required for sustainable management and innovation.

## 6.0 Recommendations

The research findings demonstrate as the global population continues to grow and the demand for food increases, the need for sustainable agricultural practices has become ever more pressing. Achieving a balance between productive, profitable farming and environmental stewardship is a complex challenge that requires multifaceted solutions. One key lever that has emerged as a critical component in this endeavour is capacity building.

The study recommends further research to deepen our understanding of the mechanisms and pathways through which capacity building can drive sustainable outcomes in different agricultural contexts. Comparative case studies, longitudinal assessments, mixed-methods approaches, and participatory research agendas can all contribute to a more comprehensive, evidence-based understanding of this crucial relationship.

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