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Examining the Factors Influencing the Growth of Cashew Processing Firms in Tanzania using Smart PLS-SEM

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Abstract: This study explored the influence of financial capability, government support, market accessibility, management and labor, and technological capacity on the growth of cashew processing firms in Tanzania. Collected data from 300 participants, obtained through questionnaires, were analyzed with descriptive statistical methods in SPSS. The theoretically established relationships among the variables were examined through structural equation modeling with Smart PLS. The results revealed that financial capability, government support, market accessibility, and technological capacity had significant and positive effects on the growth of cashew processing firms. On the other hand, the influence of management and labor on the growth of the firms was insignificant. The findings of this study can assist managers, owners, industrial development agencies, and policymakers in making informed decisions and prioritizing efforts to overcome the factors affecting the growth of cashew processing firms. This study recommends that the government design policies and collaborate with financial institutions to provide low-interest, long-term development funds to processing industries, enabling them to operate at their optimum capacity.

Keywords: Cashew processing firms, Financial capability, Government support, Market accessibility, Technological capacity, Tanzania.

JEL Codes: L25, M21, Q13

1. INTRODUCTION

Industrialization has a significant role in developing a nation like Tanzania, where agriculture is the people's primary occupation. The economic importance of the cashew industry and the agro-processing sector is reflected in the extensive employment it generates and the substantial foreign currency earnings from cashew exports. If a higher proportion of the produced raw cashew nuts were domestically processed, it would lead

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to increased household income, greater employment opportunities, and higher foreign exchange earnings from cashew exports.

The essence of value addition has received high recognition in the cashew industry. African countries, traders, and exporters such as the Ivory Coast want to head in a different direction, raising their stakes in the shelled cashew market rather than exporting the raw product. Other exporters are focusing on the market of processed and packed nuts led by packers in consumer countries. Nevertheless, these trade forms are deep-rooted, and altering them requires a strong vision of the competitive features that construct the industry, accompanied by diligence and determination.

Cashew nuts are cultivated across various regions in the United Republic of Tanzania, with small-scale farmers serving as the primary producers of raw cashews. Annually, Tanzania produces between 200,000 and 300,000 tons of cashews. Cashew production has significantly increased, from 130,334 tons in 2013-14 to 313,826 tons in 2017-18, marking the highest output in the past 15 years. (Cashewnut Board of Tanzania, 2021). In 2017-18, the southern regions (Mtwara, Lindi, and Ruvuma) contributed approximately 90% of the total production (Cashewnut Board of Tanzania, 2019).

Raw cashew nuts (RCN) are among Tanzania's top export commodities, playing a crucial role in the agricultural sector and contributing to foreign exchange earnings. After tobacco, cashew was Tanzania's second most significant agricultural export, with the country exporting 170,000 tons of cashew nuts valued at USD 250.80 million in 2015 (Bank of Tanzania, 2018). Rising prices and effective government policies, such as the implementation of the warehouse receipt system, have attracted more cashew producers and expanded the total cultivation area. By 2017, the export value of cashews reached a record high of 1,200.5 billion Tanzanian shillings (approximately USD 522 million). This exceeded the combined export values of tobacco, coffee, cotton, sisal, cloves, and tea, which totaled 1,085.1 billion Tanzanian shillings (approximately USD 472 million) (Tanzania National Bureau of Statistics, 2020). In 2022, raw cashew nut exports generated approximately 520.4 billion Tanzanian shillings, making it the leading cash crop export (Tanzania National Bureau of Statistics, 2022).

The current operational capacity for cashew processing in Tanzania is around 60,000 metric tons (MT). In contrast, average cashew nut production exceeds 200,000 MT, indicating that the current maximum capacity is only 30 per cent of the total output. The cashew industry also produces by-products such as cashew shells and testa, but there is no established practice for collecting cashew apples for further processing. Additionally, the commercial extraction and processing of cashew nut shell liquid (CNSL) is minimal, with only one company starting large-scale CNSL extraction in 2020 (Cashewnut Board of Tanzania, 2022). Small and micro-processing industries often use cashew shells as fuel, indicating a significant underutilization of potential by-

products and highlighting insufficient value addition from raw cashews. It also shows that Tanzania is losing much foreign income due to fewer agro-processing practices in the cashew industry.

Tanzania has the potential to become a prime location for cashew processing due to several attractive factors, including a vast supply of raw cashew nuts, growing demand for cashew kernels, opportunities for partnerships and collaboration, increased income generation and employment, and the potential for government support. These factors should motivate the country to develop a processing-based cashew industry. Given the substantial investment required for cashew processing and the high tax on raw cashew exports, it is worth questioning whether it would be more profitable to reduce exporting raw cashews to the Indian and Vietnamese markets in favor of local processing.

Despite several efforts by the government, processing is still low due to factors such as financial capability, government support, market accessibility, management and labor, and technological capacity.

Financial capability, in terms of access to financial resources, refers to a firm's ability to obtain the necessary funds from various sources to support its operations, investments, and growth initiatives. This is a critical factor that influences the establishment of new firms and the growth of existing firms, often determining their ability to thrive in competitive markets. Setting up a new cashew processing plant, for instance, requires a substantial capital investment in machinery, equipment, and infrastructure (Akyoo & Mpenda, 2014). The growth of micro and small firms is influenced by access to credit facilities, high-interest rates, collateral requirements, and limitations on loan amounts and repayment schedules (Kassa, 2021). The availability of sufficient working capital enables businesses to operate on a larger scale and leverage improved technology, which enhances a firm's productivity and quality (Kanapathipillai & Azam, 2019; Tekele, 2019). Entrepreneurs experiencing startup capital limitations often achieve lesser profits and face a lower survival rate compared to entrepreneurs who start with sufficient capital (Wangari, 2017). Furthermore, access to the required working capital is limited, making it challenging for micro, small, and medium-sized enterprises to secure the necessary funds (Kweka et al., 2022).

Government support, including official timeliness and the provision of sufficient subsidies and tax incentives, can significantly contribute to the success of small and medium-sized enterprises. MSEs that receive support from government agencies are more likely to experience growth than those without such support (Ferejo et al., 2022). Such support is particularly advantageous for women entrepreneurs; however, stringent government policies concerning investments and regulations affecting micro and small-sized enterprises can have a negative impact on the entrepreneurs (Guled & Kaplan, 2018)

Cashew cooperatives, through the warehouse receipt system (WRS), market the best quality raw cashews that follow the best cultivating, harvesting, and storing practices available for their stakeholders. Raw cashews in Tanzania are available from October to January each year, requiring industries to have a large storage capacity and procure enough quantity to work on throughout the rest of the season, the latter being challenging for the micro, small, and medium processors having limited capital. The lack of market information for cashew kernels can make it difficult for buyers and sellers to determine fair prices for the product, resulting in price volatility and uncertainty in the market.

The qualities of the managers and the availability of skillful labor can affect the growth of a processing firm since cashew processing involves several processes requiring frequent quality checks, from grading raw cashew and kernels, properly and timely setting up driers and other machinery temperatures to packaging and storage. These processes require experienced operators, or they can result in losses from improper handling.

Technological capacity in the context of the use of advanced technology, as well as having well-trained technicians and an adequate power supply, is crucial for the growth of a cashew processing firm. The use of outdated machinery in cashew processing industries reduces efficiency, increases costs, and compromises product quality. Processing equipment is subject to repairs and maintenance. If an industry faces a shortage of proficient technicians to work on their machinery, it can prevent processing operations from running smoothly and efficiently. Tanzania sunflower processors suffer from the lack of proper machinery and limited skills and technical know-how, which hinders their growth (Swai, 2017).

The country's raw cashew nut (RCN) production is increasing, but the lack of prioritization for domestic RCN processing means that significant potential gains from value addition are being missed. Given the global demand for cashew kernels and the need to foster sustainable growth in the nation's kernel exports, it is imperative to study the factors influencing the growth of processing units. Therefore, this study examines if financial capability, government support, market accessibility, management and labor, and technological capacity influence the growth of cashew processing firms in Tanzania. The study is beneficial for managers, owners, industrial development agencies, and policymakers in making informed decisions and prioritizing efforts to overcome the factors affecting the growth of cashew processing firms, which will help address the imbalance between cashew production and the current processing capacity.

2. REVIEW OF LITERATURE

A review of literature is crucial in systematic research as it acquaints researchers with existing methodologies, updates the knowledge base, and identifies research gaps. It aids in formulating research questions, setting objectives, and selecting suitable methods. Additionally, it allows researchers to compare previous study results, fostering critical

debate and rationalizing conclusions. This chapter explores various works on issues and challenges that affect the growth and performance of agro-processing firms.

2.1. Firm Growth and Factors of Firm Growth

Firm growth theory, a highly explored field in economics, seeks to comprehend the evolution and transformation of firms over time and comprises various approaches, including theoretical and empirical analyses. Theoretical frameworks aim to identify the determinant factors contributing to a firm's growth, such as availability of resources, entrepreneurial actions, and market demand. On the other hand, empirical studies involve analyzing data on firm growth to determine the underlying trends and patterns. Overall, firm growth theory examines areas like innovation's role, external influences from competition and regulations, and internal factors like management practices and organizational structure. Earlier research on firm growth primarily focused on how size and age impact this process. Storey (1994) identified the factors influencing a firm's growth and categorized them into three groups. Factors (1) related to the entrepreneur, (2) associated with the firm itself, and (3) connected to the market strategy, sector, and size. Understanding firm growth is crucial for policymakers, business leaders, and other stakeholders aiming at promoting economic growth and development.

Firm growth is a measure used to determine a company's growth and includes factors such as an increase in revenue or market share over a specified period. Several influences can impact firm growth, including financial decisions, technical advancements, and effective marketing strategies. Financial strategies, encompassing activities such as securing funding, managing expenses, and optimizing profits, hold significant influence over a company's growth trajectory. For two firms, one successfully procures funds for expansion or research and development while another struggles with funding challenges. The former is poised to experience accelerated growth compared to the latter. When it comes to firm growth, implementing different strategies is crucial. Technical strategies, such as developing innovative products and improving production processes contribute significantly to firms' growth. A firm that successfully designs a highly demanded-product can experience rapid growth. Also, marketing strategies like advertising, promotions, and brand building are crucial in firm expansion. Effectively targeting new customers through comprehensive marketing efforts often increases sales and revenue. Firms must strike a balance in their financial, technical, and marketing approaches to achieve sustainable growth and success in the long run.

2.2. Factors for the growth of agro-processing firms

Several authors have examined various internal and external factors that limit the growth prospects of agro-processing and small and medium-sized firms. The following is a review of their studies.

2.2.1. Studies in Tanzania

Kipene et al. (2015) showed that the small agro-processing industries in Tanzania experienced low growth caused by high raw material costs, limited supply of raw materials, age of the units, and low labor productivity. Ekblom (2016) indicates that the most significant obstacle facing processors is the lack of capital, which triggers many other problems. Other issues include regulation, insufficient market access, insufficient raw materials, inadequate manufacturing equipment, and high power costs. These problems result in poor quality of processed products, making firms unable to compete in the market and leaving the industry stagnant. The study by Charles et al. (2016) shows that the selected business associations have poor management and are associated with low government support. When programs and policies were analyzed, they did not sufficiently aim at domestic businesses' needs. Augustino (2017) reported the challenges as insufficient working capital, unstable market, subpar machinery and low processing technology, inadequate expertise, and lack of approval from the Tanzania Bureau of Standards (TBS) to be the major factors hindering small-scale ginger processing factories in the country. Swai (2017) showed the main constraints to SMEs' growth and performance: the availability of financial resources, technology for processing, and government policy and regulations. Other significant factors were market access, lack of certification, supply of raw materials, and managerial problems. Some factors steered other factors; the lack of international certification and proper technology limited the access to international markets. Achandi et al. (2018) study observed a lack of sufficient labor, the inability to access the market, and insufficient financial resources to match the high costs of acquiring the required technology. The results of the Nkwabi et al. (2019) study showed that financial restraints, technological difficulties, market accessibility, lack of raw materials, and bureaucracy highly challenge most agro-processing firms. Other constraints are poor facilities, supply chain management issues, quality of processed products, and increased costs. Mgonja & Shausi (2022) identifies several challenges in cashew nut processing, including inefficient local processing tools, insufficient access to appropriate equipment and machinery, limited financial resources for acquiring new technology, and limited working capital and investment. Additional obstacles include raw materials availability, insufficient government support, inadequate market information on kernels, and limited access to reliable training facilities required in raw cashew nut processing.

2.2.2. Studies from other developing countries

Hyder and Bhargava (2016) stated that unsuitable processing methods, improper packaging, unreliable transportation, and poor storage facilities were the key challenges in the Indian food processing industry. Patil (2016) noted the critical problems in the

Indian cashew processing industry: poor processing techniques, kernel packaging quality, and insufficient labor. Banana & Veeranjaneya (2017) found the issues in the Indian cashew nut processing industry to be labor shortage, unavailability of skilled labor, huge investment in the purchase of raw materials, high interest rates of bank loans, power supply issues, non-availability of subsidy from the government and low quality of raw materials. The study by Oluwale et al. (2017) showed weak institutional support and no significant efforts to improve internal research and development in the Nigerian cashew industry. Owoo & Lambon-Quayefio (2018) stated that the Ghanaian agro-processing industry has outdated technology and poor backward and forward linkages to finances and marketing. Srinivasan & Mehazabeen (2018) found the significant constraints to the Indian cashew nut industry: low quality and seasonal availability of raw nuts, lack of skilled laborers, high competition and lack of market information. The challenges in Kerala cashew industries in India included declining labor and increased costs in obtaining RCN and cashew processing (Varghese, 2018). Sule et al. (2019) show that a lack of proper infrastructure, insufficient modern technology, inadequate capital, and lack of market information influence entrepreneurial potential in Kogi state, Nigeria. Ojo (2020) study found the cashew nut processing constrictions facing the company. Some of them include challenges in branding and packaging, poor quality of raw materials, a huge demand-supply gap, and high labor costs that delay the payment of workers' salaries. The results also revealed that cashew processing is profitable in the study area but needs enormous capital investment. According to Alene (2020), Meressa (2020), Kassa (2021), and Mamo (2022), many factors, such as access to financial resources and business training, interest rates, tax regulations, owners' age, property ownership, and family business background, have been identified as potential determinants influencing the growth of firms.

Ensermu Gudeta & Tulu (2022) found that MSE growth is influenced by factors such as government support, financial capacity, marketing information access, and entrepreneurial competency. Endris & Kassegn (2023) identified rising input costs, unreliable input supply, inadequate loans, insufficient working capital, and lack of consistent government support as major challenges of agricultural MSEs in the study area.

This study focuses on widely accepted growth measures. Examples include sales growth, which measures the increase in revenue over time, and employment growth, which tracks the rise in the number of employees, indicating operational expansion. Profit growth analyzes improvements in net income, while market share measures the company's competitive strength within an industry. Asset growth reflects the firm's capacity for investment, and output growth assesses the increase in production or service delivery. Other indicators include customer base growth, which shows

market penetration, revenue per employee, indicating workforce efficiency, return on investment, measuring financial efficiency, and geographical expansion, which reflects the company's growth in new markets or regions. Hence, using multiple growth indicators is essential for accurately studying firm growth in this study Mekonnen, 2017).

With the increase in Tanzania cashew production, there have been limited studies on the cashew processing industries' performance in Tanzania to investigate the factors influencing their growth. This study aims to fill the research gaps in cashew processing industries at the national level.

Conceptual Framework

A conceptual model in research represents the researcher's perspective on the problem, guiding the study and illustrating the relationships between various constructs under investigation. It can be an adaptation of a previously used model, modified to fit the current study's context. As such, it serves as an organized framework of concepts that focus the inquiry (Muhammad et al., 2022).

The framework for understanding the factors influencing the growth of cashew processing firms in Tanzania comprises several interconnected variables and elements, as identified through a comprehensive literature review. This study investigates the influence of financial capability, government support, market accessibility, management and labor, and technological capacity on the growth of these firms. A conceptual model is proposed to integrate these key parameters, facilitating the data collection stage of the study. The conceptual framework is presented as follows.

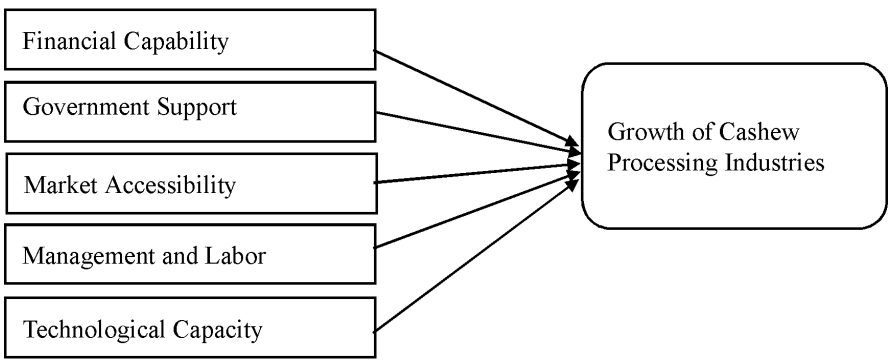

Figure 1: Conceptual framework of the suggested model

HYPOTHESIS

Hypotheses were developed to ascertain the significance and strength of relationships among variables. The hypotheses were as follows.

H1: Financial capability significantly influences the growth of cashew processing firms.
H2: Government support significantly influences the growth of cashew processing firms.
H3: Market accessibility significantly influences the growth of cashew processing firms.
H4: Management and labor significantly influence the growth of cashew processing firms.
H5: Technological capacity significantly influences the growth of cashew processing firms.

3. METHODOLOGY

A quantitative study was conducted using cross-sectional data and a questionnaire to collect information on the factors influencing the growth of cashew processing firms from the respondents.

3.1. Sources of Data

The study used primary data collected through fieldwork surveys conducted using structured questionnaires featuring closed-ended questions. These questionnaires were distributed to the managers and owners of cashew processing firms along with a cover letter explaining the study's objectives. They sought feedback on several areas, including their demographic profile and the factors influencing the growth of cashew processing firms. A questionnaire was utilized to collect more comprehensive data from respondents. It employed a Likert scale from 1 to 5, with 1 signifying a strong disagreement, while 5 denotes a strong agreement.

3.2. Population and sampling

This study focused on the managers and owners of cashew processing industries in Tanzania's southern and coastal regions, specifically Lindi, Mtwara, Pwani, and Ruvuma, which are significant for cashew production and processing. A total of 1203 respondents from around 250 operational units in these districts were considered, from which a sample of 300 participants was selected. The determination of sample size was made with Taro Yamane's formula as adopted by Meressa (2020), Mgonja & Shausi (2022), Ayinaddis (2023) and (Gyamera et al., 2023).

$$n = \frac{N}{1 - N(e)^2}$$

Where n = the sample size, N = Total number of respondents, and e (acceptance sampling error) = 0.05.

Therefore, $n = \frac{1203}{1-1207(0.05)^2} = 300.15 \approx 300$

As a result, the study included a representative sample of 300 respondents.

3.3. Respondents characteristics

The distribution of participants indicates that 183 (61%) were males while 117 (39%) were females. The respondents were categorized into three age groups with five age ranges, with the majority being middle-aged (68%), followed by young adults (27%) and older adults (5%). Most respondents have an education level below high school (54.3%), while smaller percentages have a high school diploma (23.7%), a graduate degree (20.3%), or a postgraduate degree (1.7%). About 26.33% of the respondents' experience varied from 1 to 5 years, with the majority having 6 to 10 years of experience (70%) and only 3.67% having over 10 years of experience in cashew processing. Respondents with this level of experience in cashew processing can provide valuable insights into the study questions.

3.4. Method of Data Analysis

Various techniques were employed to analyze the data. Initially, IBM SPSS version 25.0 was used for data entry, coding, and conducting descriptive analysis. Afterward, the Partial Least Square Structural Equation Modelling (PLS-SEM) version 4.0. was utilized to determine the construct's validity and data reliability by assessing the measurement model. Additionally, PLS-SEM was employed to evaluate the theorized relationships among the latent variables by analyzing the structural model. Financial capability, government support, market accessibility, management and labor, and technological capacity and growth are latent variables. Therefore, the PLS-SEM was chosen for its ability to assess intricate cause-and-effect relationship models through the use of latent constructs (Cepeda-Carrion et al., 2018). Since the early 2000s, PLS-SEM has become increasingly popular among academics and students and has become among the most widely used techniques for assessing multivariate data and analyzing models with latent variables (Memon et al., 2021).

The study evaluated construct reliability by examining rho-A, Cronbach's alpha, and composite reliability (CR), ensuring a minimum threshold of 0.700 (Hair et al., 2022). The construct validity was evaluated through the average variance extracted (AVE), while the discriminant validity was assessed using the Heterotrait-Monotrait Ratio (HTMT) and the Fornell-Larcker Criterion. All established criteria were met. Then, the structural model was examined to assess the effect of the proposed factors on the growth of cashew processing industries.

3.5. Measures

This study consists of six latent variables. Five variables are exogenous: financial capability (FC), government support (GS), market accessibility (MA), management and labor (ML), technological capacity (TC), and one endogenous variable is the growth of cashew processing industries (GR).

The study used six items to measure growth with an example item for this construct, "The firm can transform from small to medium or medium to large," six items to measure financial capability (e.g., "The firm struggles with inadequate working capital"), three items to measure government support (e.g., " inadequate subsidies and incentives"), four items to measure market accessibility (e.g., "The firm lacks essential market information for kernels"), three items to measure management and labor, (e.g., "The firm lacks sufficient professional managers"), and three items to measure technological capacity (e.g., "The firm lacks appropriate processing machinery").

3.6. Ethical considerations

The research adhered to ethical guidelines to ensure participant well-being, rights, anonymity, confidentiality, and study integrity. The study respondents were thoroughly informed about the study's aims, and their consent was secured before the distribution of the questionnaire. Privacy rights were upheld, identities were kept confidential, and generic terms like "respondents" and "participants" were used. Participants were free to choose whether to participate.

4. RESULTS AND DISCUSSION

4.1. Measurement model assessment

Measurement model assessment is a critical step to ensure the validity and reliability of the constructs being measured. For reflective measurement models, the elements are analyzed by checking the indicator reliability, internal consistency reliability, and convergent and discriminant validity using the Smart PLS algorithm. The hypothesized relationships between latent constructs and their respective indicators, along with the outer loadings of these indicators, as well as the relationships between the latent constructs themselves, are illustrated in the Initial Path Model (Fig 2).

4.1.1. Indicator Reliability

The threshold for what is considered an acceptable factor loading differs depending on the field of study, specific research context, complexity of the model, and the researcher's judgment.

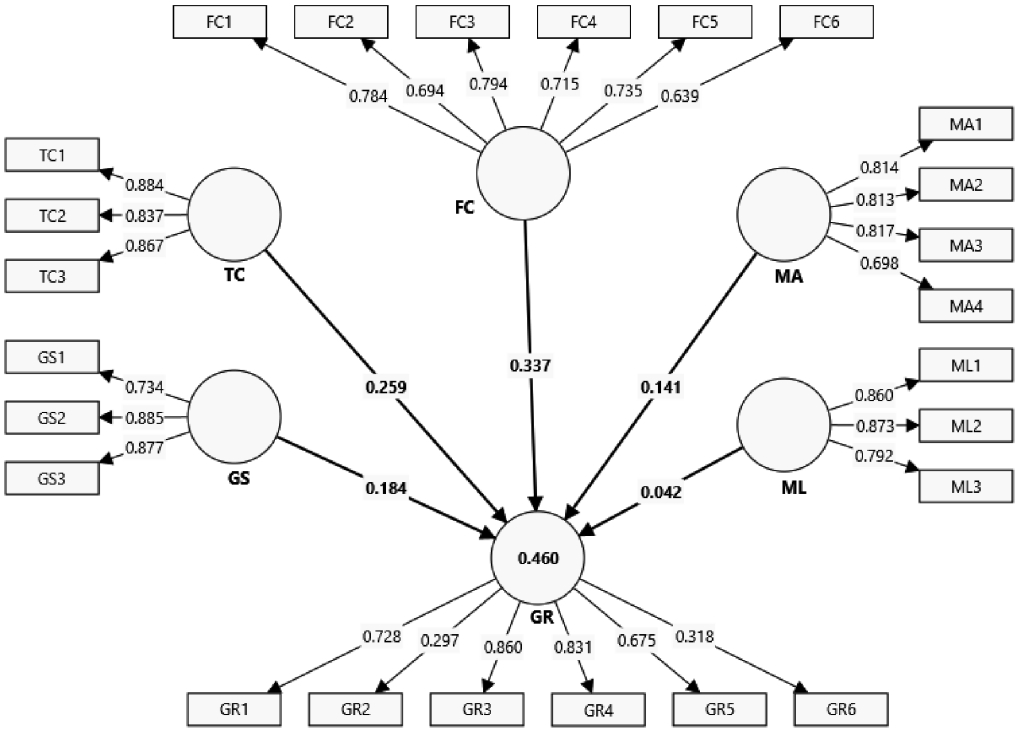

Figure 2: Initial Path Model of SEM Assessment

Hair et al. (2022) have recommendations on the conditions regarding the outer loading relevance testing. First, the reflective indicator must be removed if the obtained outer loading is below 0.4, suggesting that the indicator is not firmly related to the underlying construct. While it may still contribute some information to the measurement model, its contribution is relatively weak compared to indicators with higher loadings. As a result, such indicators may not accurately reflect the core attributes of the construct and may introduce noise or measurement error into the model. For outer loadings falling between 0.4 and 0.7, we should check the effects of removing the indicator on the composite reliability and AVE. If the deletion increases measure(s) above the threshold, then the indicator should be deleted; otherwise, it should be retained.

If removing that indicator results in improvements in the AVE or composite reliability, it suggests that the indicator may not be sufficiently related to the construct and can be removed without compromising the measurement model's reliability or validity. Conversely, if deleting an indicator does not lead to improvements in composite reliability or AVE, it indicates that the indicator is contributing valuable information to the measurement of the construct and should be retained despite its moderate outer loading.

If the outer loading is above 0.7, the reflective indicators should be retained as they signify a strong relationship with the latent construct, ensuring reliable and valid measurements in the model. Accordingly, two components (GR2 and GR6) were omitted as their factor loadings did not meet the threshold of 0.4 (Fig 2), which means that they have less explanatory power. Due to the construct values already meeting the necessary threshold, eliminating items FC2 and FC6, along with GR5 with loadings of 0.694, 0.638, and 0.667, respectively, would not have notably improved the measures in the present study. Consequently, all remaining items in the study were retained for further examination (see Table 1).

4.1.2. Internal Consistency Reliability

The study evaluated internal consistency reliability by examining rho-A, Cronbach's alpha, and composite reliability (CR). All scores exceeded the recommended threshold of 0.70 and were below 0.950, indicating good reliability (Hair et al., 2022) (see Table 1).

4.1.3. Convergent validity

Convergent validity measures the degree of correlation between different measures assessing the same construct. If multiple measures of the same construct yield similar results, it suggests that they are converging on the same underlying concept, indicating good reliability. The convergent validity is evaluated through the use of the AVE. The construct's AVE values exceeded 0.500, indicating acceptable convergent validity (see Table 1). This threshold ensures that the latent construct has accounted for a substantial portion of the variation (not less than fifty per cent) in its constituent elements (Fornell & Larcker, 1981).

Table 1: Reliability and Convergence Validity Test Results

Constructs	*Measurement Items*	*Items Loading*	*Cronbach's Alpha*	*rho_A*	*CR*	*AVE*
Growth of Cashew Processing Industries	GR1	0.727	0.783	0.803	0.860	0.609
	GR3	0.866				
	GR4	0.843				
	GR5	0.667				
Financial Capability	FC1	0.784	0.823	0.835	0.871	0.531
	FC2	0.694				
	FC3	0.796				
	FC4	0.715				
	FC5	0.732				
	FC6	0.638				

Government Support	GS1	0.732	0.789	0.848	0.872	0.696
	GS2	0.887				
	GS3	0.876				
Market Accessibility	MA1	0.812	0.804	0.839	0.867	0.620
	MA2	0.814				
	MA3	0.818				
	MA4	0.700				
Management and Labour	ML1	0.862	0.795	0.799	0.880	0.710
	ML2	0.873				
	ML3	0.790				
Technological Capacity	TC1	0.885	0.829	0.833	0.897	0.745
	TC2	0.838				
	TC3	0.865				

4.1.4. Discriminant Validity

Discriminant validity evaluates if the measures of the different constructs are not strongly correlated with each other. This assessment helps ensure that the measures capture distinct concepts and not just variations of the same thing. Two measures assessed the discriminant validity: The Fornell-Larcker Criterion and the Heterotrait-Monotrait Ratio (HTMT), with the former involving comparing the correlations among the latent constructs with the square root of the AVE for each construct to measure whether each construct discriminates sufficiently from others. In this study, the values attained for each latent construct exceeded the highest correlation with other variables (see Table 2), thus conforming to the Fornell-Larcker criterion.

Table 2: Fornell-Larcker criterion

	FC	**GR**	**GS**	**MA**	ML	TC
FC	0.728					
GR	0.543	0.780				
GS	0.124	0.352	0.835			
MA	0.408	0.429	0.160	0.787		
ML	0.343	0.393	0.230	0.329	0.842	
TC	0.403	0.548	0.389	0.362	0.471	0.863

The HTMT ratio was proposed by Henseler et al. (2015) as a method for evaluating discriminant validity, "which is the average correlation between indicators of different constructs relative to the average correlation between indicators of the same construct." The HTMT ratio has a threshold of 0.85; values below this threshold indicate acceptable discriminant validity. Table 3 shows that all HTMT ratio values are within acceptable limits. Hence, the study constructs conform to the established validity conditions.

Table 3: Heterotrait-Monotrait Ratio (HTMT)

	FC	GR	GS	MA	ML	TC
FC						
GR	0.651					
GS	0.152	0.446				
MA	0.452	0.488	0.175			
ML	0.416	0.502	0.288	0.378		
TC	0.480	0.665	0.471	0.421	0.585	

4.2. Structural model assessment

Path coefficient assessment is a crucial step in structural equation modeling (SEM). It helps in understanding the strength and direction of relationships among variables within the model. When assessing path coefficients, we examine the magnitude and significance of each coefficient.

Before analyzing the significance of these paths, the constructs' multicollinearity was assessed using the Variance Inflation Ratio (VIF) to evaluate the construct multicollinearity of FC, TC, MA, ML GS, and GR. The recommended values for the VIF should ideally be below three, with a maximum threshold of five. The study results indicate that the VIF statistics values are below 2, indicating the absence of collinearity issues (refer to Table 4).

Table 4: Collinearity Statistics (VIF) - (Inner model values)

Construct	*VIF*
Financial Capability -> Growth	1.349
Government Support -> Growth	1.187
Market Accessibility -> Growth	1.299
Management and Labour -> Growth	1.366
Technological Capacity -> Growth	1.610

A bootstrapping resampling technique (Efron & Tibshirani, 1994) is used to ascertain the significance of the paths within the structural model. The hypotheses were assessed to ascertain the significance of the associations among the latent variables. Fig 3 and Table 5 show the findings.

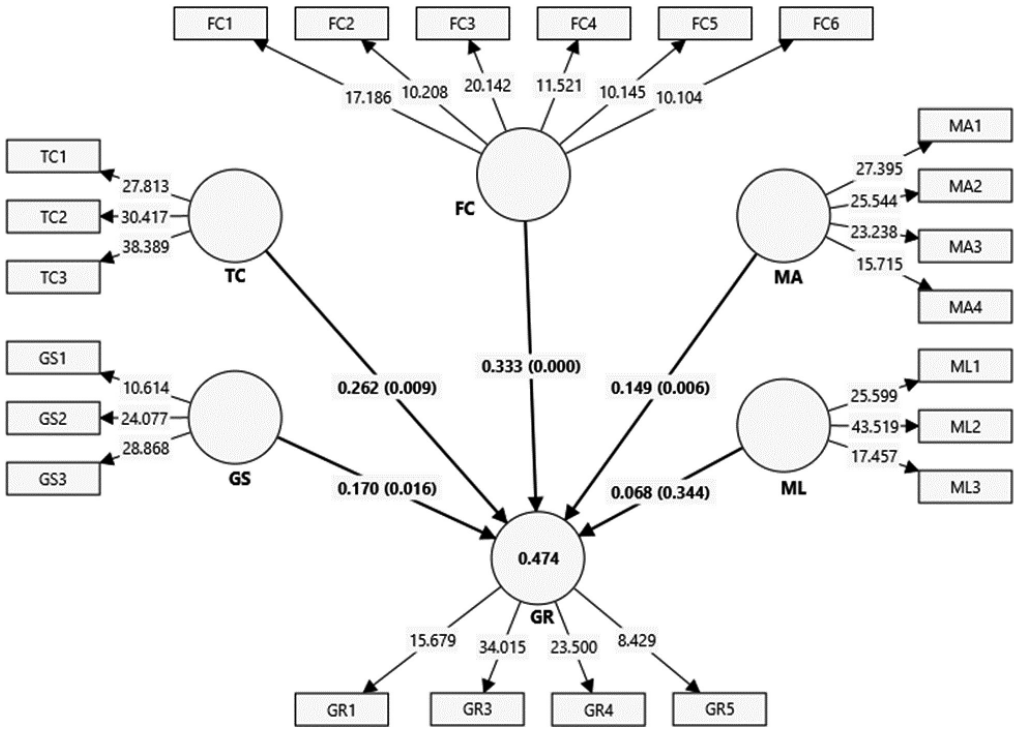

Figure 3: Bootstrapping Diagram

Table 5: Path Coefficients of Structural Model

Constructs	*Path Coefficients*	*SD*	*T statistics*	*P values*	*Supported?*
FC -> GR	0.333	0.084	3.981	0.000	Yes
GS -> GR	0.170	0.070	2.411	0.016	Yes
MA -> GR	0.149	0.054	2.777	0.006	Yes
ML -> GR	0.068	0.071	0.947	0.344	No
TC -> GR	0.262	0.100	2.620	0.009	Yes

H1: Financial Capability → Growth

Financial capability was evaluated using six criteria: access to startup capital, the availability of working capital, interest rates, collateral obligations, loan amount limits, and repayment schedule.

The study findings support the relationship between FC and GR (H1), [(β) = 0.333, t = 3.981, and p < 0.05)], implying that financial capability has a significant effect on the growth of cashew processing. Hence, H1 is accepted, which means that firms with access to financing have the potential for growth.

The study respondents reported facing difficulties in accessing the required working capital. They rely on loans from banks and other financial institutions to fund their daily

operations and production. However, the interest rates charged by these institutions are high, ranging from 16 to 25 per cent, and the repayment schedule was not favorable. The cash flow of these industries does not coincide with these interest rates and the repayment procedures, meaning that the business would struggle to make regular payments on the loan or credit it took out. The amount of loan provision was limited based on the size of operations, the industry's experience, and the associated financial performance. The industries explained that they could not satisfy the required collateral to secure a loan as financial securities owned by the industries were not worth enough to be considered. These conditions put the industries in a difficult financial situation and impact their ability to maintain operations. This study's findings are consistent with prior studies by Nkwabi et al. (2019), who concluded that financial constraints negatively impacted firm growth in Tanzania. The findings also matched with the work of Kassa (2021), who found that the growth of micro and small firms is influenced by access to credit facilities, high-interest rates, collateral requirements, and limitations on loan amounts and repayment schedules. Furthermore, the MSEs that accessed credit from the government had more capital accumulation than those that did not have access (Mamo, 2022).

H2: Government Support → Growth

The second hypothesis, H2, assesses whether GS significantly affects GR. The findings indicate that government support significantly impacts the growth of cashew processing firms ($\beta = 0.170$, $t = 2.411$, $p < 0.05$)]. Therefore, H2 is confirmed, which implies that a firm that has government support has the potential to grow.

The study indicated that the government does not provide sufficient subsidies and incentives, which can result in difficulties for the industry, such as decreased competitiveness and reduced profits. Also, the results show that the cashew processing industry is characterized by insufficient information on government regulations on agro-processing business and complications and delays in obtaining processing certification from the Tanzania Bureau of Standards (TBS). Agro businesses in Tanzania face a lack of government support, as shown by studies by (Lauwo et al., 2016) and (Nkwabi & Mboya, 2019). The agro-processing sector, in particular, has seen a decline in firms due to high taxes and complex regulations discouraging foreign investment (Charles et al., 2016; Swai, 2017). These regulations, particularly for small-scale processors, hinder the growth of these firms as they struggle to meet the strict rules set by the TBS. Also, the results align with Mgonja & Shausi (2022), who studied various constraints facing small-scale cashew processors. Limited access to information about government policy and regulations, a complication of TBS certification processes, and insufficient government support were significant issues reported. This constraint hinders the growth and performance of processing activities in Tanzania.

H3: Market accessibility → Growth

The relationship between market accessibility and growth (H3) is confirmed by the study results (β) = 0.149, t = 2.777, $p < 0.05$, signifying that market accessibility has a significant influence on the growth of cashew processing. This means that a firm that can easily access raw materials, obtain market information, mitigate risks in price fluctuation, and have the best quality of raw cashews can significantly experience growth. The current study results align with Mgonja & Shausi (2022), who state that market constraints that come from poor demand forecasting, inadequate market demand, and a lack of connection with the marketing research firm hinder the performance and progress of the firms.

H4: Management and labour → Growth

The fourth hypothesis was to assess the impact of management and labor on growth. The path analysis results revealed that ML has an insignificant influence on the growth of cashew processing firms (β = 0.068, t = 0.947, $p > 0.05$). Consequently, H4 is not confirmed. This result is in contrast with the study by Gebremariam (2017), which found that the lack of managerial and entrepreneurial skills was among the factors hindering the growth of firms.

H5: Technological capacity → Growth

The relationship between technological capacity and growth (H5) is confirmed by the study results (β) = 0.262, t = 2.62, and $p < 0.05$, signifying that technological capacity significantly affects the growth of cashew processing. The results suggest that a firm can achieve growth if it ensures a reliable power supply, adopts modern technology, and employs skilled technicians to manage repairs as required. The findings align with those of Achandi et al. (2018), who highlighted that a significant challenge for the growth of processing firms is the lack of funds to adopt cost-effective and advanced technologies. Additionally, the instability in the electricity supply, characterized by frequent power cuts and voltage fluctuations, negatively impacts the performance and longevity of electrical equipment, resulting in operational interruptions, reduced productivity, and delays.

In the structural model, the endogenous constructs have to exhibit a high degree of explained variance determined by the R-squared values ranging between 0 and +1. R^2 values ranging from 0 to 0.25 are viewed as weak, 0.25 to 0.50 as moderate, and 0.50 to 0.75 as substantial. This study's findings show that R^2 is 0.474 (refer to Table 6), signifying that the in-sample explanatory power is deemed moderate and adequate.

The variation in the R^2 value when a specific exogenous variable is excluded from the model can be used to determine if the omitted construct significantly affects the

endogenous constructs. This metric is known as the effect size (f^2). According to (Cohen, 1998), values less than 0.02 represent small effects, between 0.02 to 0.15 medium effects, and above 0.35 denotes large effects. The study findings show that most of the variables have exhibited medium effects except for ML, which has small effects.

The Q squared evaluates the predictive relevance of a latent variable by comparing the predicted values with the actual values. The model demonstrates predictive relevance when the Q^2 value is above zero, with higher values indicating greater predictive accuracy, suggesting that the model is able to predict the endogenous constructs accurately. The findings confirm that the predictive significance is sufficient, given that the Q^2 value is above 0, as shown in Table 6.

The Q-squared statistic evaluates the predictive relevance of a latent variable by comparing predicted values with actual values. A model demonstrates predictive relevance when the Q^2 value exceeds zero, with higher values indicating greater predictive accuracy. This suggests that the model can accurately predict the endogenous constructs. The findings confirm that the predictive significance is sufficient, as evidenced by a Q^2 value above zero, as shown in Table 6.

Table 6: Testing the explanatory power, effect size, and predictive relevance

Constructs	R-square	f-square	Q-square
FC		0.156	
GR	0.474		0.433
GS		0.046	
MA		0.032	
ML		0.006	
TC		0.081	

5. IMPLICATIONS OF THE RESULTS

To fully harness the benefits of cashew processing for rural development, it is crucial to implement targeted policies aimed at alleviating the challenges that impede the growth of cashew processing firms. The findings of this research have significant policy implications, urging policymakers to consider these factors in their policy formulations.

Collaboration between the government and financial institutions is crucial for the cashew processing industry, providing low-interest, long-term development funds and access to advanced technology and market opportunities.

Investing in infrastructure and vocational training in cashew-producing districts is essential to increase the skilled workforce in process optimization, quality control, lean manufacturing, and safety regulations.

Introducing cashew kernels to the Tanzania Mercantile Exchange (TMX) will create a reliable, transparent marketplace for processors and exporters, reducing risks.

This initiative must consider market dynamics, regulations, quality control, logistics, and stakeholder engagement.

Tax exemptions for importing cashew processing machinery would lower costs and make advanced equipment more affordable. This would enhance productivity, efficiency, quality, and capacity, fostering industry growth, boosting competitiveness, and contributing to the sector's economic development.

More resources should be allocated to the Rural Electrification Agency's (REA) initiatives to expand electricity access in underserved areas while prioritizing gas and other reliable energy sources for consistent power generation.

Collaborating with processing experts from highly industrialized countries can bring valuable insights and advanced techniques to the cashew processing industry.

Regular assessments and training are essential to ensure compliance with international standards, food safety, and quality control, boosting the competitiveness of Tanzanian cashew kernels in foreign markets.

6. CONCLUSION AND STUDY LIMITATIONS

Cashew processing industries play a crucial role in rural development by generating employment, boosting economic growth, and improving living standards. Leading cashew processing countries increase their income by supplying cashews both domestically and internationally, capitalizing on their advanced technology. These countries enhance value through comprehensive inputs, production, processing, marketing, and trade efforts. Additionally, they import significant quantities of raw cashew nuts (RCN) from top producers to meet and maximize their processing capacities.

Despite being a major raw nut producer, Tanzania's share in the retail cashew market remains minimal, resulting in a loss of potential foreign income. The lack of value-addition processes hinders the development of the cashew industry and limits job creation opportunities.

To address these challenges, Tanzania must capitalize on the country's abundant supply of raw cashew nuts, significantly improve product quality, invest in market research and intelligence, and promote value addition. Diversifying export markets, primarily through the processing and marketing of cashew kernels, is essential. By optimizing the cashew value chain and emphasizing value addition, Tanzania can unlock the untapped potential of its cashew industry, leading to increased foreign exchange earnings, job creation, and economic growth.

This study is region-specific, focusing exclusively on the cashew processing industries in four regions of Tanzania: Lindi, Mtwara, Pwani, and Ruvuma. Hence, the applicability of the study findings to other areas or countries may be limited. Moreover,

the study also depends on secondary data, which could possess inherent limitations regarding completeness, accuracy, and timeliness. The specificity of the geographical focus and potential data constraints highlight the need for caution when generalizing the results beyond the studied areas.

REFERENCES

Achandi, E. L., Mujawamariya, G., Agboh-Noameshie, A. R., Gebremariam, S., Rahalivavololona, N., & Rodenburg, J. (2018). Women's access to agricultural technologies in rice production and processing hubs: A comparative analysis of Ethiopia, Madagascar and Tanzania. *Journal of Rural Studies*, *60*, 188–198. https://doi.org/10.1016/j.jrurstud.2018.03.011

Akyoo, A., & Mpenda, Z. (2014). Policy Imperatives For Control of Market Exchange Failure in the Cashew nut Industry. *Natural Resources, Agricultural Development and Food Security: International Research Network*, *14*(3), 1–38.

Alene, E. T. (2020). Determinants that influence the performance of women entrepreneurs in micro and small enterprises in Ethiopia. *Journal of Innovation and Entrepreneurship*, *9*(1), 24. https://doi.org/10.1186/s13731-020-00132-6

Augustino, I. K. (2017). *Small Agro-Processing Industries and Rural Household Livelihoods in Tanzania: The Case of Ginger Factory in Same District* [Mzumbe University, Tanzania]. http://scholar.mzumbe.ac.tz/handle/11192/2113

Ayinaddis, S. G. (2023). Socio-economic factors affecting women's entrepreneurial performance in MSEs in Bahir Dar City, Ethiopia. *Journal of Innovation and Entrepreneurship*, *12*(1), 23. https://doi.org/10.1186/s13731-023-00289-w

Banana, K., & Veeranjaneya, Kumar. P. (2017). Problems and Prospects of Cashew nut Processing Industry. *International Journal of Research Culture Society*, *1*(9), 126–130.

Bank of Tanzania. (2018). *Annual Report 2016-17*. Bank of Tanzania (BOT), Dar es salaam, Tanzania.

Cashewnut Board of Tanzania. (2019). *Raw cashew nut production trend (2004/2005—2017/2018)*. Cashewnut Board of Tanzania (CBT), Mtwara, Tanzania.

Cashewnut Board of Tanzania. (2021). *Performance of Raw Cashewnuts Exports From 1990/1991 to 2020/2021*. Cashewnut Board of Tanzania (CBT), Mtwara, Tanzania.

Cashewnut Board of Tanzania. (2022). *Cashewnut Processing Industries*. Cashewnut Board of Tanzania (CBT), Mtwara, Tanzania.

Cepeda-Carrion, G., Cegarra-Navarro, J.-G., & Cillo, V. (2018). Tips to use partial least squares structural equation modelling (PLS-SEM) in knowledge management. *Journal of Knowledge Management*, *23*(1), 67–89. https://doi.org/10.1108/JKM-05-2018-0322

Charles, G., Jeppesen, S., Kamau, P., & Kragelund, P. (2016). Firm-level perspectives on state–business relations in Africa: The food-processing sector in Kenya, Tanzania and Zambia. *Forum for Development Studies*, *44*(1), 109–131.

Cohen, J. (1998). *Statistical Power Analysis for the Behavioral Sciences* (2nd ed.). Routledge. https://doi.org/10.4324/9780203771587

Danga, M., Chongela, J., & Kaudunde, I. (2019). Factors Affecting the Performance of Rural Small and Medium Enterprises (SMEs) A Case Study of Tanzania. *Management Research*, *3*(5).

Davidsson, P., Delmar, F., & Wiklund, J. (2006). *Entrepreneurship and the Growth of Firms*. Edward Elgar Publishing.

Efron, B., & Tibshirani, R. J. (1994). *An Introduction to the Bootstrap*. Chapman and Hall/CRC. https://doi.org/10.1201/9780429246593

Ekblom, M. (2016). *Challenges Facing Food Processing MSEs in Tanzania. A Qualitative Case Study of the Sunflower Oil Industry in Babati, Manyara.* Södertörn University. School of Science, Technology and Environmental Studies.

Endris, E., & Kassegn, A. (2023). Analysis of growth and constraints of agricultural micro- and small-scale enterprises in North Wollo Zone, Amhara Regional State, Ethiopia. *Cogent Social Sciences*, *9*(1). https://doi.org/10.1080/23311886.2023.2197291

Ensermu Gudeta, O., & Tulu, D. T. (2022). The role of market linkage in growth of micro and small scale enterprises: The case of Ambo town, Ethiopia. *Journal of Innovation and Entrepreneurship*, *11*(1), 64. https://doi.org/10.1186/s13731-022-00258-9

Ferejo, M. N., Ahmed, H. M. S., Muzeyin, J. R., Amde, S. J., Thomran, M., & Mamuye, F. (2022). Exploring Factors Affecting Growth of Micro and Small Enterprises: Evidence from Ethiopia. *International Journal of Sustainable Development and Planning*, *17*(5), 1523–1533. https://doi.org/10.18280/ijsdp.170516

Fornell, C., & Larcker, D. F. (1981). Evaluating Structural Equation Models with Unobservable Variables and Measurement Error. *Journal of Marketing Research*, *18*(1), 39–50. https://doi.org/10.1177/002224378101800104

Gebremariam, F. M. (2017). Factors Affecting the Growth of Women-Operated Micro and Small Enterprises (MSEs) in Ethiopia. *Üniversitepark Bülten*, *6*(1), 56–66. https://doi.org/10.22521/unibulletin.2017.61.5

Guled, N. S., & Kaplan, B. (2018). Factors Influencing Women Entrepreneurs'Business Success in Somalia. *Research in Business and Management*, *5*(1), Article 1. https://doi.org/10.5296/rbm.v5i1.12341

Gyamera, E., Abayaawien Atuilik, W., Eklemet, I., Henry Matey, A., Tetteh, L. A., & Kwasi Apreku-Djan, P. (2023). An analysis of the effects of management accounting services on the financial performance of SME: The moderating role of information technology. *Cogent Business & Management*, *10*(1), 2183559. https://doi.org/10.1080/23311975.2023.2183559

Hair, J., Hult, G. T. M., Ringle, C., & Sarstedt, M. (2022). *A Primer on Partial Least Squares Structural Equation Modeling (PLS-SEM)* (3rd Edition). SAGE Publications, Inc.

Henseler, J., Ringle, C. M., & Sarstedt, M. (2015). A new criterion for assessing discriminant validity in variance-based structural equation modeling. *Journal of the Academy of Marketing Science*, *43*(1), 115–135. https://doi.org/10.1007/s11747-014-0403-8

Hyder, S., & Bhargava, P. K. (2016). Indian food processing industry—Opportunities and challenges. *International Journal of Economics and Business Research*, *11*(1), 1. https://doi.org/10.1504/IJEBR.2016.074422

Kanapathipillai, K., & Azam, S. M. F. (2019). Women entrepreneurs path to success: An investigation of the critical success factors in malaysia. *European Journal of Human Resource Management Studies*, *3*(1), Article 0. https://doi.org/10.46827/ejhrms.v0i0.615

Kassa, E. T. (2021). Socioeconomic determinants of micro and small enterprise growth in North Wollo and Waghimira Zone selected towns. *Journal of Innovation and Entrepreneurship*, *10*(1), 28. https://doi.org/10.1186/s13731-021-00165-5

Kipene, V., Lazaro, E., & Isinika, A. C. (2015). Growth of Small Agro-Processing Firms in Mbeya and Morogoro, Tanzania. *International Journal of Research in Business Studies and Management*, *2*(10), 33–38.

Kweka, A. E., Makindara, J. R., & Bengesi, K. M. K. (2022). Business Development Services Providers: Pathways and Involvement of Micro, Small and Medium Enterprises in Arusha City and the Moshi Municipality, Tanzania. *African Journal of Innovation and Entrepreneurship*, *1*(2), 29–61. https://doi.org/10.31920/2753-314X/2022/v1n2a2

Lauwo, S. G., Otusanya, O. J., & Bakre, O. (2016). Corporate social responsibility reporting in the mining sector of Tanzania: (Lack of) government regulatory controls and NGO activism. *Accounting, Auditing & Accountability Journal*, *29*(6), 1038–1074. https://doi.org/10.1108/AAAJ-06-2013-1380

Mamo, W. B. (2022). Growth Determinants of Micro and Small Enterprises (MSEs): Evidence from Entrepreneurs in the Eastern Region of Ethiopia. *Journal of the Knowledge Economy*, *14*(1), 138–160. https://doi.org/10.1007/s13132-021-00859-x

Mekonnen, A. (2017). *Factors affecting the growth of small and medium enterprises in bahir dar city administration.* [Masters Thesis, St. Mary's University]. http://www.repository.smuc.edu.et/bitstream/123456789/3278/1/AHMED%20MBA%20THESIS%20PDF.pdf

Memon, M. A., T., R., Cheah, J.-H., Ting, H., Chuah, F., & Cham, T. H. (2021). PLS-SEM statistical programs: A review. *Journal of Applied Structural Equation Modeling*, *5*(1), 1–14. https://doi.org/10.47263/JASEM.5(1)06

Meressa, H. A. (2020). Growth of micro and small scale enterprises and its driving factors: Empirical evidence from entrepreneurs in emerging region of Ethiopia. *Journal of Innovation and Entrepreneurship*, *9*(1), 11. https://doi.org/10.1186/s13731-020-00121-9

Mgonja, N. S., & Shausi, G. L. (2022). Challenges Facing Small-scale Cashew Nut Processors in Ruangwa district, Tanzania: An Implication for Policy Change: An implication for policy change. *European Journal of Agriculture and Food Sciences*, *4*(3), 1–8. https://doi.org/10.24018/ejfood.2022.4.3.492

Muhammad, J. A., Shittu, A. A., Mohammed, Y. D., & Ebohimen, J. (2022). *Development of Model for Implementation of Safety Measures for Small and Medium Sized Construction Firms in Abuja, Nigeria using Partial Least Square-Structural Equation Modelling*. http://www.africanscholarpublications.com/wp-content/uploads/2022/11/AJBEGR_Vol26_No4_Sept_2022-2.pdf

Nkwabi, J., & Mboya, L. (2019). A Review of Factors Affecting the Growth of Small and Medium Enterprises (SMEs) in Tanzania. *European Journal of Business and Management*. https://doi.org/10.7176/EJBM/11-33-01

Nkwabi, J., Mboya, L., Nkwabi, J., & Nkwabi, J. (2019). A Review Of The Challenges Affecting The Agroprocessing Sector In Tanzania. *Asian Journal Of Sustainable Business Research*, *1*(2), 68–77.

Ojo, I. O. (2020). *Economics of Cashew Nut Processing in Ondo State, Nigeria; Evidence from Jof Ideal Family Farms Limited* (pp. 1–25). Leibniz Information Centre for Economics, Kiel, Hamburg.

Oluwale, B. A., Adelowo, C. M., Ocheni, J., & Ilori, M. O. (2017). Technological capability building in Nigerian cashew nut processing industry. *Int. J. Technological Learning, Innovation and Development*, *9*(4), 310–332.

Owoo, N. S., & Lambon-Quayefio, M. P. (2018). *The agro-processing industry and its potential for structural transformation of the Ghanaian economy* (Industries without Smokestacks. Industrialization in Africa Reconsidered, pp. 191–207). United Nations University World Institute for Development Economics Research (UNU-WIDER).

Patil, P. J. (2016). Food Processing Technology and Packaging: A Case Study of Indian Cashew-nut Industry. *Journal of Nutrition and Health Sciences*, *3*(2). https://doi.org/10.15744/2393-9060.3.204

Srinivasan, G., & Mehazabeen, A. (2018). A constraint analysis on small scale cashew nut industiries in Tamilnadu. *International Journal of Information Research and Review*, *5*(7), 5625–5627.

Storey, D. J. (1994). *Understanding The Small Business Sector* (1st ed.). Routledge.

Sule, J. G., Abutu, T. Y., & Nafiu, A. T. (2019). *Analysis of Entrepreneurial Potential and Financial Performance of Cashew Processors in Kogi State*. *3*, 12.

Swai, M. I. (2017). *Factors affecting growth of small and medium agro-processing firms in Tanzania: A case of sunflower oil processors in Dodoma.* [The University of Dodoma, Tanzania]. http://hdl.handle.net/20.500.12661/472.

Tanzania National Bureau of Statistics. (2020). *Tanzania in Figures 2019* (p. 125). National Bureau of Statistics, Ministry of Finance and Planning. Dodoma, Tanzania. https://www.nbs.go.tz/index.php/en/tanzania-in-figures

Tanzania National Bureau of Statistics. (2022). *Tanzania in figures 2022* (p. 177). National Bureau of Statistics, Ministry of Finance and Planning. Dodoma, Tanzania. https://www.nbs.go.tz/index.php/en/tanzania-in-figures

Tekele, A. A. (2019). Factors affecting the performance of micro and small enterprises in Wolita Sodo Town. *International Journal of Research in Business Studies and Management*, *6*(12), 18–26.

Varghese, J. R. (2018). Technological upgradation and sustainability of traditional resource based industries: A study of Cashew Export Processing Sector in Kerala, India. *International Journal of Pure and Applied Mathematics*, *118*(18), 4771–4779.

Wangari, R. W. (2017). *Factors affecting the performance of businesses owned by female entrepreneurs in Kenya* [A Research Project Report Submitted to the School of Business in Partial Fulfillment of the Requirement for the Degree of Masters in Business Administration (MBA), United States International University. Kenya.].