

# Analysis of Effect of Institutional Isomorphism on Cashew Nut Farming Business Sustainability in Tanzania: Mediating Role of Market Stakeholder's Action

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## **Abstract**

*The effect of institutional isomorphism on cashew nut farming business sustainability in Tanzania through market stakeholders' action was analysed in this study. The study explicitly sought to examine the effect of institutional isomorphism on business sustainability, market stakeholders' actions on business sustainability, and the mediating effect of market stakeholders' actions on the association between institutional isomorphism and business sustainability. An explanatory design, backed by simple random sampling, was utilized in choosing 360 respondents. Information for the study was gathered using a structured questionnaire and analysed by structural equation modelling. Outcomes show that institutional isomorphism had a positive and significant effect on business sustainability. Market stakeholders' action was also found to have a positive and significant effect on business sustainability. Further results exposed the partial mediation effect of market stakeholders' action on the relationship between institutional isomorphism and business sustainability. The study concluded that the prediction of business sustainability can be precisely articulated by institutional isomorphism and market stakeholders' actions. Market stakeholders' action was also proved to mediate the relationship between institutional isomorphism and business sustainability partially. Thus, the study recommends that, for the cashew nut farming business in Tanzania to be sustainable, farmers should comply with isomorphic pressures issued by governing institutions. It is also recommended that market stakeholders' actions should be given consideration by governing institutions as they have effects on achieving sustainability.*

**Keywords:** Business sustainability, Institutional isomorphism, Market stakeholders' action

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## 1. Introduction

The rising and continuous desire for business sustainability (BSS) in emerging economies has drawn much research focus over the past decade (Shubham et al., 2018). The use of institutional and stakeholder theories in understanding the effect of institutional isomorphism (ISO) on attaining BSS was recognized in previous studies (Acquah et al., 2021). The relevance of these theories, especially the institutional theory, can be attributed to the fact that BSS has become widespread in ISO studies (Shubham et al., 2018). This is because, as sustainability practices become predominant in institutions, stakeholders from the external environments ensure conformance (Baah et al., 2020).

Sustainability in agribusiness is concerned with ensuring compliance with social, economic, and environmental requirements (Morioka & Carvalho, 2017). The need to analyse the effect of ISO on BSS particularly for cashew nut farming business in Tanzania through market stakeholders' action (MSA) was triggered by the fact that researchers (Kadigi et al., 2017; Barreiro-Hurle & Nkonya, 2019) have reported a number of unresolved challenges facing cashew nut farming business since independence regardless the number of institutions established. Some of the challenges are high prices of inputs and handling costs charged by cooperatives which, to a great extent, tend to affect the economic growth of farmers (Lukurugu et al., 2022). Sulphur dust used to treat cashew nut trees was also reported to cause great negative environmental effects (Nene et al., 2022).

A Cashew nut selling system known as the Warehouse Receipt System (WRS) in which farmers send their cashew to nearby cooperatives and receive some advance amount of money based on the loans obtained from banks by these primary cooperatives such as Agricultural Marketing Cooperative Society (AMCOS) is another challenge. In this system, the remaining sum of money is paid to the farmer after selling cashew nut through auction conducted in the warehouses under the supervision of Cashew Nut Board of Tanzania (CBT) and regional cooperative societies (Mgonja & Shausi, 2022). The system discourages farmers, since most of the time they are paid less than the actual cost incurred in the entire farming activities (Lukurugu et al., 2022).

The institutionalist approach in the analysis of BSS, which has flourished since the early 1990s, emphasises on institutional isomorphic pressure that enables and restricts stakeholders' behaviour (Scott, 2005). Key institutionalist isomorphic pressure is coercive, mimetic, and normative (DiMaggio & Powell, 2004). Coercive pressure is applied by institutions on other entities that are dependent on them while mimetic pressure is observed when an entity copies from the most

successful or legitimate firms ideas, business models, or processes in order to reduce uncertainty (Brammer et al., 2012). Normative pressure is observed when an entity tends to adopt best practices or employs professionalism to run its activities (Bejaković, 2018).

Institutions are concerned with managing market dynamics for which the basic element is how the business creates and exchanges value with others who have a stake (Svensson et al., 2018). This is due to the fact that entities' operations in current business environments are inseparable from their stakeholders (Baah et al., 2021). According to Svensson et al. (2016), the behaviour of entities is a consequence of stakeholders' action effect. The author highlighted market stakeholders, among others, to be key stakeholders in any business. In the Tanzania's context, CBT introduced WRS as a way of attending to market fluctuation of cashew nuts and ensuring the sustainability of the produce (Barreiro-Hurle & Nkonya, 2019).

Entities have been implementing diverse economic, social, and environmental practices due to increased institutional isomorphic pressure and market stakeholders' demand in order to be sustainable (Zhu et al., 2013). Based on this fact, the research used institutional and stakeholder theories to analyse the effect of ISO on BSS, taking into account the mediation effect of MSA. Mainly, the paper intended to broaden the understanding of institutional isomorphic pressures applied by various institutions on the achievement of BSS from previous scholars (Sancha et al., 2015). It also intended to contribute to institutional theory by incorporating the mediating effect of MSA on the relationship between ISO and BSS.

According to DiMaggio and Powell (2004), institutional isomorphism refers to the coercing process that forces an entity in a group of institutions to resemble others that face the same set of business conditions. The author proposed three isomorphic pressures that affect entities' survival which are coercive, mimetic, and normative pressure. Coercive pressure occurs through the effect exerted by those in power (Huang & Chen, 2023). Mimetic pressure occurs when an entity mimics actions of successful competitors (Kumari et al., 2022). Normative pressure emanates from best practices from individuals of similar occupations to describe the ways and processes of their work to stay sustainable (Bananuka et al., 2021). Therefore, it was hypothesized that:

H<sub>1</sub>: Institutional isomorphism has a significant effect on business sustainability.

Market stakeholders are the ones who determine the survival or death of any business through their actions (Litrico & Lee, 2018). Most business scholars appreciated the importance of MSA in attaining BSS (Fobbe & Hilletoft, 2021; Min et al., 2020). Other scholars (Litrico & Lee, 2018; Svensson et al., 2018) went further and classified market stakeholders according to their dominant power. Stakeholder theory acknowledged the importance of market stakeholders in the survival of the business (Fobbe & Hilletoft, 2021). Market stakeholders that are treated well tend to reciprocate with positive action toward the entity (Ferro et al., 2019). Those positive actions assist entities to create value and stay longer in business (Venkatesh et al., 2020). Therefore, it was hypothesized that: H<sub>2</sub>: Market stakeholder's action has a significant effect on business sustainability.

Isomorphic pressures are exerted by powerful formal and informal institutions to the entities which depend on them for survival (DiMaggio & Powell, 1983). These pressures can be in the form of rules and regulations demanding the implementation of environmental, social and economic aspects of sustainability (Wang et al., 2018). Entities in the current business environment are inseparable from their stakeholders (Bananuka et al., 2021). Market stakeholders' demands to adopt environmental, social, and economic aspects of business are of paramount (Baah et al., 2021). Literature suggests that mimetic pressure is exerted by regulators to encourage entities to copy the practices of large and successful ones to achieve sustainability (Juárez-Luis et al., 2018). Normative pressures stem from associated networking (Moser et al., 2020). Thus, within a sustainability context, these pressures can be exerted by sustainable trading alliances in the desire of an entity to be associated with them (Hermosa et al., 2014).

Svensson et al. (2016) emphasised the importance of considering the effect of MSA on attaining BSS. Environmental, social and economic aspects of BSS in modern business require combination of both institutional effects in the form of isomorphism and market stakeholders' actions (Glover et al., 2014). While institutional theorists emphasise the importance of firms and entities to respond to isomorphic pressure as a way of achieving sustainability, Svensson et al. (2016) highlighted the role of MSA in any business survival. Therefore, this research claims that:

H<sub>3</sub>: Market stakeholders' action has significant mediating effect on the relationship between institutional isomorphism and business sustainability.

*Conceptual framework*



Figure 1

**2. Methodology**

This study used a deductive approach and positivism philosophy which employs empirical data (Scotland, 2012). Explanatory design, coupled with a survey strategy was applied (Saunders et al., 2009). The population of interest was 273,663 registered cashew nut farmers in Tanzania from 5 regions of Mtwara, Lindi, Ruvuma, Coast and Tanga as per CBT registration statistics of 2022. The regions were selected because more than 97% of cashew nut produce in Tanzania is from them (Kadigi et al., 2017). The sample size used was of 360 respondents who were selected using simple random technique. Jackson (2003) recommends that N: q is a rule of thumb when Structural Equation Modelling (SEM) is used and proposes that an ideal sample size to a parameter is 20:1 or at least 10: 1. N stands for the number of respondents per parameter and q for the parameter used in the study. The total number of parameters was eighteen (18). Therefore, based on the 20:1 rule, the sample size was 360 farmers.

According to Kothari and Gard (2014), proportional allocation allows the sample to be kept proportionate to the established area of the research. Calculations that led to the arrival of proportional allocation of questionnaire to be distributed in each region were as follows: Mtwara –  $99,672/273,663 \times 360 = 131$ ; Lindi –  $73,206/273,663 \times 360 = 96$ ; Ruvuma –  $39,708/273,663 \times 360 = 52$ , Coast –  $49,847/273,663 \times 360 = 66$ ; Tanga –  $11,230/273,663 \times 360 = 15$ .

The dependent variable in this study was BSS which was measured by nine items as adapted from Laurell et al. (2019). ISO was the independent variable which

was measured using five items as adapted from Juárez-Luis et al., (2018) and MSA was a mediating variable measured using four items (Svensson et al. (2016). All these items were measured using a five-point Likert-like scale with items to each of which the respondents replied Strongly disagree (1 point), Disagree (2 points), Undecided (3 points), Agree (4 points) or Strongly agree (5 points). The unit of analysis was an individual cashew nut farmer.

SPSS software version 25 was used in performing descriptive analysis and evaluating exploratory factor analysis (EFA) so as to determine the validity and reliability of constructs as well as evaluating the assumptions of a structural equation model. IBM AMOS software version 23 was used during the construction of measurement and structural models through Confirmatory Factor Analysis (CFA). The relationship between independent and dependent variables was determined to be significant at the 5% level of significance whereby mediation effect was determined using Sobel test. Goodness of fit indices with their acceptable threshold level was adapted from Hooper et al. (2008), Gupta (2015), Hair et al. (2006) and Malhotra et al. (2017) as follows: CMIN/DF ( $X^2/df$ )  $\leq 3$ , RMR  $\leq 0.08$ , GFI  $\geq 0.90$ , CFI  $\geq 0.90$ , NFI  $\geq 0.90$ , TLI  $\geq 0.90$ , RFI  $\geq 0.90$ , PCFI  $\geq 0.50$ , and RMSEA  $\leq 0.08$ .

### 3. Findings and Discussion

Before engaging in further analysis, SEM assumptions were verified whereby linearity between independent and dependent variables was established. Skewness and kurtosis were used to prove normality of study data basing on their cut-off points which lied between -3 and 3 as well as -2 and 2 respectively as pointed out by (Cangur & Ercan, 2015).

**Table 1: Assessment of normality assumption**

Variable	min	max	skew	c.r.	kurtosis	c.r.
BS9	1.000	5.000	-.864	-7.315	.748	3.166
BS8	1.000	5.000	-.976	-8.262	1.377	5.829
BS7	1.000	5.000	-1.078	-9.125	1.286	5.443
MSA4	1.000	5.000	-.882	-7.468	.658	2.786
MSA3	1.000	5.000	-.896	-7.583	.769	3.255
MSA2	1.000	5.000	-.713	-6.037	-.010	-.044
MSA1	1.000	5.000	-.667	-5.646	.296	1.255
ISO2	1.000	5.000	-.638	-5.403	.144	.611
ISO3	1.000	5.000	-.479	-4.055	-.089	-.375
ISO4	1.000	5.000	-.773	-6.547	.887	3.755
ISO5	1.000	5.000	-.638	-5.404	.248	1.049

Variable	min	max	skew	c.r.	kurtosis	c.r.
BS6	1.000	5.000	-.842	-7.131	.270	1.141
BS5	1.000	5.000	-.809	-6.848	.291	1.232
BS4	1.000	5.000	-.626	-5.302	.014	.059
BS3	1.000	5.000	-.901	-7.626	.455	1.926
BS2	1.000	5.000	-.590	-4.991	.041	.176
BS1	1.000	5.000	-.947	-8.017	.470	1.990
Multivariate					28.935	11.804

Construct reliability and validity were established using Cronbach’s Alpha and Average Variance Extracted (AVE). Results proved that the study constructs were reliable because their Cronbach’s Alpha was above 0.7 as stipulated by Palos-Sanchez & Saura (2018 and Vaske et al. (2017). As the AVE value of all constructs was above or approximated to 0.5, which is the cut-off point proposed by (Fornell & Larker, 1981), it is evident that they were valid. Although the AVE value of BSS was 0.485, which is slightly below 0.5, it was approximated to 0.5. We confidence in internal reliability as its composite reliability (CR) was above the recommended cut-off point of 0.6 (Lam, 2012).

**Table 2: Construct’s reliability and validity**

Construct	No items	Cronbach’s Alpha	CR	AVE
BSS	9	0.901	0.893	0.485
ISO	4	0.833	0.861	0.608
MSA	4	0.754	0.813	0.523

Evaluation of the number and set of items forming a particular construct was performed using exploratory factor analysis. The study revealed that, of the three latent variables under consideration, all the observed variables defining a given construct fitted for EFA as their KMO was above 0.7, which implies good sampling adequacy. Similarly, the determinants for each construct were above 0.0001, which is the recommended cut-off (Rousseuw & Driessen, 1999). Furthermore, Bartlett’s test of sphericity was large enough to reject the null hypothesis that the correlation matrix was identical. This was evidenced by the smallest p-values below 0.001 for each construct (Zou et al., 2020).

**Table 3: Construsts' KMO and Batlett's test of sphericity**

Construct	Number of items	Determinant	KMO	Bartlett's Test
BSS	9	0.008	0.940	2076.338 (p<0.001)
ISO	5	0.304	0.822	507.916 (P<0.001)
MSA	4	0.282	0.794	540.038 (P<0.001)

Articulation of construct explained variances, number of formulated components and factor loadings were also executed. Three components with eigenvalues above 1.0 were formed. The percentage of variance due to the rotation sum of squared loadings for the first, second and third components were 27.09, 15.93, and 14.71 respectively (Table 4). All items forming a particular component had factor loadings above 0.5 (Hair et al., 2014; Yong & Pearce, 2013) as shown in Table 5 except ISO1 which overlapped with BSS and hence removed in further analysis.

**Table 4: Total Variance Explained**

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	7.081	39.338	39.338	7.081	39.338	39.338	4.876	27.087	27.087
2	1.785	9.917	49.225	1.785	9.917	49.225	2.868	15.931	43.018
3	1.524	8.469	57.724	1.524	8.469	57.724	2.647	14.706	57.724

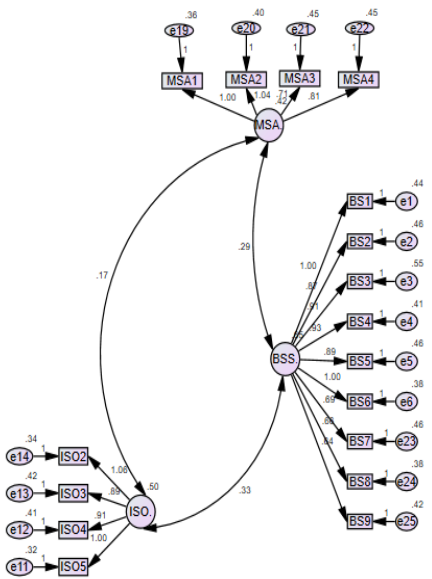
**Table 5: Factor Loadings**

	Components		
	1	2	3
BS6	.793		
BS1	.776		
BS4	.775		
BS5	.752		
BS2	.748		
BS3	.685		
BS8	.579		
BS7	.572		



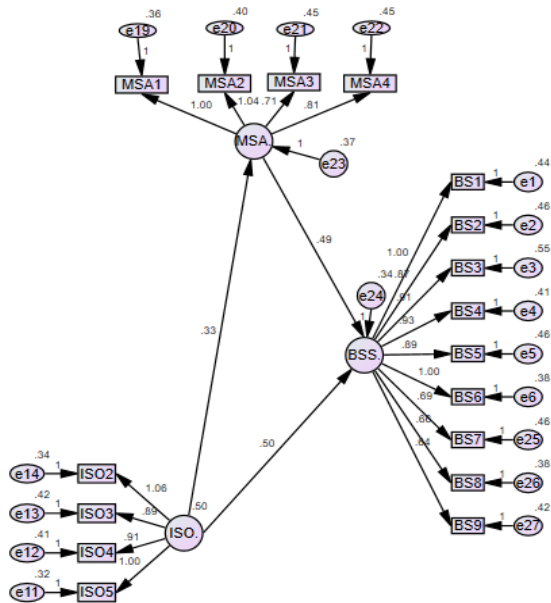
BS9	.527		
ISO1	.412		
ISO5		.820	
ISO2		.780	
ISO4		.774	
ISO3		.742	
MSA1			.781
MSA2			.776
MSA4			.724
MSA3			.596

The following fit indices; with their cut-off points  $CMIN/DF (X^2/df) \leq 3$ ,  $RMR \leq 0.08$ ,  $GFI \geq 0.90$ ,  $CFI \geq 0.90$ ,  $NFI \geq 0.90$ ,  $TLI \geq 0.90$ ,  $RFI \geq 0.90$ ,  $PCFI \geq 0.50$ ,  $RMSEA \leq 0.08$  were utilized to approve the models. Overall measurement model was drawn and all fit indices; were within the recommended cut-off points, suggesting that the model well fitted the data (Figure 2). Structural model was fitted later and confirmed through indices which were within the cut-off points (Figure 3).



Chi-square=218.791 (116 df) p = .000  
 model fit indices: CFI=.967 RMR=.038 TLI=.961 RFI=.921  
 PCFI=.825 RMSEA=.045 NFI=.933

Figure: 2



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 model fit indices: CFI=.967 RMR=.038 TLI=.961 RFI=.921  
 PCFI=.825 RMSEA=.045 NFI=.933

Figure: 3

The study further revealed that each score increases in ISO led BSS to increase by 0.662. The increase was deemed to be statistically significant at 1% level ( $p < 0.001$ ) as indicated in Table 6. Controlling for MSA for each score increase in ISO made BSS to increase by 0.498 which is statistically significant at 1% level ( $p < 0.001$ ), as shown in Table 7. Consequently, we had statistical evidence to reject the null hypothesis and conclude that ISO had a positive and statistically significant effect on BSS.

**Table 6: Effect of ISO on BSS before including the mediator (MSA)**

Relationship			Estimate	S.E.	C.R.	P	Label
BSS.	<---	ISO.	0.662	0.066	10.057	<0.001	par_9

**Table 7: Mediating effect of MSA on the relationship between ISO and BSS**

			Unstandardized Estimate	S.E.	Standardized Estimates	C.R.	P	Label
MSA	<---	ISO.	.331	.056	.361	5.859	***	par_14
BSS	<---	ISO.	.498	.062	.440	8.021	***	par_12
BSS	<---	MSA.	.489	.071	.396	6.939	***	par_13

Evaluation of mediation conditions was carried out as indicated in Table 7. Direct effects of ISO on BSS, MSA on BSS as well as that of ISO on MSA were positive and statistically significant at 1% level ( $p < 0.001$ ). Controlling for ISO for each score increase in MSA resulted to increase of BSS by 0.489, which is statistically significant at 1% level. Also, each score increase in ISO made MSA to increase significantly at 1% level by 0.331. Then, controlling for MSA made the direct effect of ISO on BSS to decrease but continued to be significant at 5% level.

More results exposed that effects of ISO on BSS were 0.498, 0.162 and 0.660 respectively for direct, indirect and total effect (Table 8). These results corresponded with the prior hypotheses that MSA mediates the relationship between ISO and BSS. Hence, the study comprehended that MSA had a partial mediation effect on the relationship between ISO and BSS as it fulfilled the partial mediation condition.

**Table 8: The direct and indirect effect of ISO on BSS**

			Direct effect	Indirect effect	Total effects
MSA	<---	ISO.	.331	NA	.331
BSS	<---	ISO.	.498	.162	.660
BSS	<---	MSA.	.489	NA	.489

The results maintained H<sub>1</sub> of the study, in which ISO was assumed to have positive and statistically significant effect on BSS as proved by the effect of 0.662 ( $p < 0.001$ ) of ISO on BSS. This finding is consistent with findings by Ahmed et al. (2020) and Bananuka et al. (2021) but are contrary to findings by Famiyeh & Kwarteng (2018) and Yang (2018) who found positive but insignificant effect of ISO on BSS.

The effect of MSA on BSS was positive and statistically significant at 1% level ( $p < 0.001$ ) as it was hypothesized in H<sub>2</sub> at the beginning. The result is consistent with results by Lee et al. (2021) and Svensson et al. (2018) but is contrary to results by Meixell & Luoma (2015) who found negative and insignificant effect of MSA on BSS.

The study also comprehended that MSA had a partial mediation effect on the relationship between ISO and BSS. This was due to the fact that, before introducing MSA, the effect of ISO on BSS was positive and significant. Introducing MSA made the effect to decrease from 0.662 to 0.498 but was still significant at 5% level.

#### 4.0 Conclusions and Recommendations

The paper analysed the effect of ISO on cashew nut farming BSS in Tanzania with the mediation role of MSA. The findings revealed that both ISO and MSA have positive and significant effect on BSS. Thus, it is concluded that ISO and MSA are predictors of cashew nut farming BSS. The findings also revealed that MSA partially mediated the relationship between ISO and BSS. Hence, it is concluded that the best way of attaining BSS is to consider both direct and indirect effects of ISO on BSS. The study recommends that, for the cashew nut farming business in Tanzania to be sustainable, farmers should comply with isomorphic pressures issued by governing institutions. Moreover, market stakeholders' actions should be given consideration as it has been proved that they have effect on achieving business sustainability.

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