


## USING A STRUCTURAL EQUATION MODEL TO EVALUATE THE ROLES OF TRADITIONAL INSTITUTIONS IN RURAL AGRICULTURE SUCCESS AND SUSTAINABILITY

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### ABSTRACT

Integrating and facilitating effective participation of the Traditional Leadership Institution (TLI) in rural development remains a challenge to date. It remains unclear what the agriculture sector-specific institutional roles are and how they impact the success and sustainability of agriculture. Furthermore, the barriers to institutional effectiveness remain unknown. A structural equation model was used to evaluate the moderating effect of barriers to institutional effectiveness on the relationship between TLI roles and agriculture success and sustainability. ATLAS.ti version 8 and Statistical Package for Social Sciences Amos version 26 were used for the analysis. In the first part of the study, participants' views on the three variables were explored through focus groups and interviews (N = 103). Next, construct measures for each scenario were modeled in a self-administered survey questionnaire (N = 211). Farmers, traditional leaders, and key informants in the Vhembe and Mopani districts of Limpopo province, South Africa, provided data for the study. It emerged that of the five identified TLI roles, four had a significant impact on the success and sustainability of agriculture projects. Promoting social capital (networks, partnerships, and collaborations) among farmers and development actors had the greatest effect. The barriers to institutional effectiveness were significant and moderated how the TLI influenced rural agriculture success. Resultantly, the impact of institutional contributions on agriculture remained negative despite improved participation by the TLI. Minimizing the effects of the identified barriers while enhancing the institutional capacity to promote the success and sustainability of rural agriculture is recommended.

**Contribution/Originality:** A structural equation model is used as a multivariate technique to test and evaluate how specific traditional leadership institutional roles impact agriculture success and sustainability. Through systems analysis, the study gives new empirical insights into how the traditional leadership institution can be effectively integrated into rural agriculture development.

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## 1. INTRODUCTION

Several studies have attempted to understand the participation of traditional leadership institutions (TLI) in rural development in a novel way (Chinsinga, 2006; Kamoto, Clarkson, Dorward, & Shepherd, 2013; Kuswardinah, Ansori, Rachmawati, & Fajri, 2021; Mathonsi & Sithole, 2017). However, while these prior studies offer insights into the institutional roles in rural development, many of them are not sector-specific, and little evidence exists regarding the specific roles TLI plays in rural agriculture (Baramiya, 2017; Oomen, 2000). Studies investigating specific aspects include the roles the TLI plays in social cohesion, policing, local governance, social development, land use planning, environment, rural development projects, and development in general (Baramiya, 2017; Bikam & Chakwizira, 2014; Koeneke, 2018; Logan, 2009). Nevertheless, institution-specific activities and practices that promote rural agriculture development have not yet been fully investigated in Southern Africa (Baldwin, 2016; Baramiya, 2017). To date, the specific set of TLI activities, community decisions, and practices that influence agriculture development and sustainability are not known and have not been critically studied (The Republic of South Africa, 2003). Hence, important sets of TLI practices and activities that affect rural farming are identified in this work.

Evidence detailing the specific TLI roles and how they affect the success and sustainability of rural agriculture projects is still lacking. Though the evidence is available, it is scattered and not scientifically evaluated. To unpack this complex relationship, the agriculture success and sustainability factors influenced by institutional practices or roles were identified. The direct relationship between institutional practices and the success and sustainability of rural agricultural projects was assessed. The literature shows the existence of barriers to the institutional effectiveness of the TLI in rural development. Notably, poorly defined roles, limited sources of income to support own initiatives, and limited administration-enabling infrastructure are barriers noted in the literature (Bikam & Chakwizira, 2014; Mathonsi & Sithole, 2017). Barriers to institutional effectiveness influence the strength and impact of the relationship between TLI roles and the success and sustainability of agriculture projects. Hence, the moderating effects of these barriers to institutional effectiveness were also evaluated.

Agriculture is an important economic sector. In rural economies, it has the potential to alleviate poverty and hunger. Limited support and the absence of clear comprehensive roles of major traditional and rural institutions threaten the success of the sector (Fokwang, 2005). The systematic integration of traditional local players establishes constraints, facilitates decision-making, minimizes the costs of doing business, and increases benefits to rural farmers (Haven-Tang & Jones, 2012; Kamoto et al., 2013; Mutenje, Ortman, & Ferrer, 2011). Horlings and Padt (2013) posited that sustainable rural development is the product of shared leadership in which collective values, feelings, trust, and energy provide the basis for both private and public actors to mobilize resources to attain regional development goals.

Successful agricultural and regional development requires supportive, involved, and accountable local institutions (Sustainable Development Goal number 16; (Food and Agriculture Organisation of the United Nations, 2016)). Similarly, in South Africa, supportive institutions are instrumental in fighting rural poverty and hunger, as stipulated in the South African National Development Plan 2030 (National Planning Commission, 2010). The quality and effectiveness of institutional contributions largely lie in their internal and external environments. For instance, their history, available skills capital, leadership approach, and ability to adapt to rapidly changing community needs. Ewell (2011) described institutional effectiveness as a process of ongoing institutional self-evaluation to systematically measure and re-evaluate achievements and approaches used to achieve the institution's mission or roles. Against this backdrop, the current study explored, estimated, and evaluated the impact of TLI roles on the success and sustainability of agriculture. In addition, the moderating effects of barriers to institutional effectiveness were evaluated.

First, evidence-based conceptual and theoretical measurement scales concerning the roles of TLI in agriculture, as well as the sustainability and success factors for rural agricultural projects and the barriers to institutional effectiveness were developed exploratively. Next, the direct and indirect relationships between the three concepts were statistically evaluated. Figure 1 illustrates the conceptual model that formed the basis for the evaluation. The following hypotheses guided this study:

*H<sub>1</sub>: Traditional leadership institution roles positively influence the success and sustainability of rural agricultural projects.*

*H<sub>2</sub>: Barriers to institutional effectiveness moderate how the TLI roles impact agriculture projects' success and sustainability factors.*

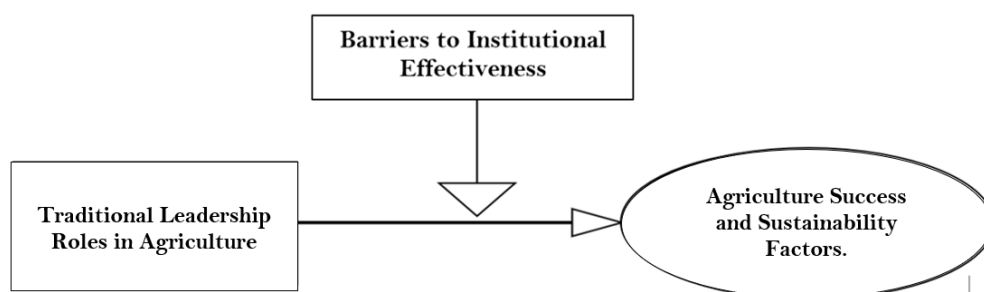


Figure 1. Conceptual framework of the direct and indirect effects of the studied variables.

## 2. METHODS AND MATERIALS

### 2.1. Study Design

An exploratory sequential mixed method design was adopted in this work. Firstly, the views and lived practical experiences on TLI roles in rural agriculture, the sustainability and success factors for agricultural projects, and the

barriers to institutional effectiveness were explored to develop measurement models for the evaluation. Next, direct and indirect effects were quantitatively tested and evaluated using structural equation modeling (SEM). Ethical clearance was sought from the University of Venda Social Research Ethics Committee, certificate no: School of Agriculture Rural Development and Forestry (SARDF)/18/Institute for Rural Development (IRD)/06/2111.

## 2.2. Study Population

Data was collected from five traditional authorities in three local municipalities located in Vhembe (Thulamela & Collins Chabane local municipalities) and Mopani (Greater-Giyani local municipality) districts in Limpopo province, South Africa. One hundred and three ( $n = 103$ ) and 211 respondents participated in the first and second studies, respectively (see Figure 2). In the first study, respondents were purposively recruited, while in the second study, farmers from agricultural projects were census sampled. Key informants (municipal officials, extension officers, and non-governmental organizations) were purposively sampled. The inclusion of multiple stakeholders assisted in the triangulation and cross-validation of the findings. Only consenting and available farmers and key informants were included. Ten agriculture projects were initially identified for the study; however, one project in Collins Chabane municipality was withdrawn due to its operational closure.

## 2.3. Data Collection and Analysis

An interview guide with semi-structured questions was utilized to facilitate the discussions with the participants in the focus groups and the one-on-one interviews with farm managers and key informants. Twenty-one (21) focus group discussions and 24 interviews were conducted. Focus groups had a mean of 4 members and a range of 4 to 5 people. Two (2) research assistants were recruited for the data collection process. Local languages (Venda and Xitsonga) were used to ensure that the participants understood the issues. Research assistants were inducted and oriented on interview administration, farmer engagement, the study purpose, how to facilitate focus group discussions, and questionnaire administration. Detailed notes of interviews and audio recordings were collected to ensure the accuracy of the data. Transcribed qualitative data was cleaned and captured in Microsoft Excel. Then it was imported into ATLAS.ti version 8 to perform thematic content analysis. Through a process of coding, decoding, and re-coding, major themes on TLI roles, agriculture projects' sustainability and success factors, and barriers to institutional effectiveness were developed. ATLAS.ti version 8's visual network diagrams showing the relationships between three measurement models enhanced the analysis and understanding of issues. The resultant themes in each measurement model were developed into a questionnaire for quantitative data analysis.

In the second study, the measurement scales (TLI roles in rural agriculture, agricultural projects' sustainability and success factors, and barriers to institutional effectiveness) were first tested for convergent and discriminant validity, as well as reliability, using confirmatory factor analysis (CFA) and Cronbach's alpha coefficient, respectively (Fan et al., 2016; Segars & Grover, 1993). Thus, the factors in each measurement model were validated through CFA. Mean scores were calculated and observed to rank the emerging factors by their level of importance to each measurement model. Validated and reliable factors were then regressed to determine the direct effect of TLI contributions on the success and sustainability factors. Lastly, the moderating/indirect effects of the barriers to TLI participation in agriculture development were modeled and tested using SEM. Statistical Package for Social Sciences (SPSS) version 26 was utilized for the evaluation. SEM was used to evaluate the measurement models and estimate the predictive power of the exogenous variable (TLI roles) to maximize or minimize the endogenous variables (success and sustainability factors). Also, SEM was employed to estimate the moderating effect of the barriers to institutional effectiveness using SPSS Amos version 27.

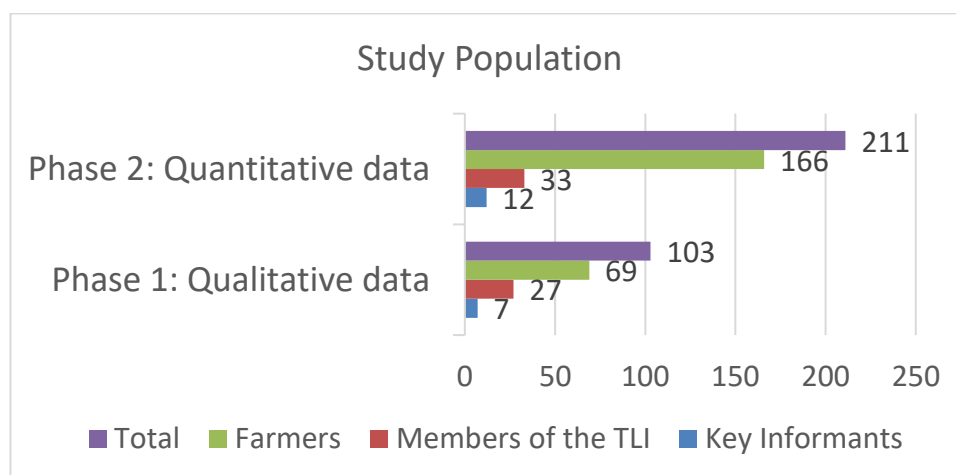


Figure 2. The study population.

### 3. RESULTS

#### 3.1. Exploratory Study Results

##### 3.1.1. Traditional Leadership Institution Roles

A 31-item questionnaire was developed and used to measure the TLI roles and practices that influence the success and sustainability of agricultural projects. These are agricultural policy development and representation (APDR), oversight & support for agricultural development programs (OSADP), service delivery advocacy (SDA), easing funding access (EFA), land access promotion (LAP), information relay (IR), attracting agro-processing industry and infrastructure development (AAID), and ensuring social capital promotion (SCP).

##### 3.1.2. Barriers to Institutional Effectiveness

Human resources barriers (HRB), political and relational barriers (PRB), capital and financial resources barriers (CFRB), and organizational barriers (OB) represented the broad categories in a 14-item questionnaire. These are the factors that make it difficult for the TLI to effectively partake in community decision-making practices and activities that influence rural farming outcomes. In summary, the institutional barriers reflect the TLI's immediate environment, settings, and organization. Barriers provide a possible explanation as to why the TLI is considered a weak partner in rural development.

##### 3.1.3. Agriculture Projects' Success and Sustainability Factors

A 22-item, six-factor questionnaire on the success and sustainability factors was developed. The factors included active, responsive, and inclusive stakeholder participation (ARISP), open and accessible markets (OAM), access to land and financial resources (ALFR), a skilled, innovative, and learning workforce (SILW), effective project management and control (EPMC), and the right number of workers (RNW). The study went on to observe how TLI roles and practices affect these conditions.

#### 3.2. Cross-Sectional Study Results

Factors from all three measurement models were evaluated for item analysis, convergent, and discriminant validity using CFA. Also, Cronbach's alpha coefficients were used to test the instrument's reliability. Kurtosis and skewness tests were also performed to measure the suitability of the normal distribution assumption in the data set prior to using SEM.

##### 3.2.1. Testing of the Normality Assumption

Data was assessed for normality by testing for skewness and kurtosis. The cut-off point for skewness was set at -2 to +2 (Hair, Black, Babin, & Anderson, 2010), while that for kurtosis was -7 to +7 (Bryne, 2010). Normal distribution of data is the underlying assumption in multivariate analysis, and its absence affects the reliability and validity of results (Hair et al., 2010). It is also where direct and indirect effects are based in SEM. Finally, it is important to note that although the scales in the data collection instrument were the same, the variables were standardized in SPSS before exportation to SPSS Amos for SEM analysis. This mitigates problems associated with an abnormality in the data distribution.

##### 3.3. Confirmatory Factor Analysis

To test the validity of the measurement models, a combination of model fit indices was used. Specifically, the root mean square error of approximation (RMSEA) and the Comparative Fit Index (CFI) were the model fit indices applied (Hair et al., 2010). The two indices are considered reliable in both large and small samples, Chi-square, and Normed Fit Index (Bollen & Pearl, 2012).

##### 3.3.1. Traditional Leadership Institution Roles

An eight-factor measure was specified in the path analysis and tested for factor structure validity using CFA. The initial assessment showed unsatisfactory validity using recommended model fit indices (CFI 0.748; RMSEA 0.075) compared to the recommended cut-off points of CFI  $\geq$  0.90 (Tabachnick & Fidell, 2007) and RMSEA  $\leq$  0.08 (Hooper, Coughlan, & Mullen, 2008). The path diagram model matrices were observed to improve fitness. Items with lower factor loadings/regression weights were targeted first and systematically deleted (Segars & Grover, 1993). After each item deletion, model fitness indices were assessed to check for value improvement of the indices. Five of eight factors emerged as valid and reliable to represent impactful TLI contributions to the success and sustainability factors of agricultural projects (CFI = 0.916; RMSEA = 0.059). These were SDA, EFA, II, AAID, and SCP; therefore, these were used in the model evaluation in SEM.

##### 3.3.2. Barriers to Institutional Effectiveness

All four factors of the barriers to participation were proven valid in this data set (CFI = 0.901; RMSEA = 0.052). However, this was only achieved after deleting item CFRB from the initial unfit model.

##### 3.3.3. Agriculture Projects' Success and Sustainability Factors

Except for OAM, all the factors were consistent with the data set. Thus, they were valid and reliable measures of the success and sustainability of agricultural projects. Also, some items in other factors were deleted to improve the fit of the model. The fit indices improved from (CFI = 0.828 and RMSEA = 0.083) to (0.912 and RMSEA = 0.067), and SILW, ARISP, EPMC, ALFR, and RNW were judged to be valid factors.

### 3.4. Item Analysis

For each factor structure in the measurement models, all items were tested for scale reliability. Standardized regression weights, which examine item loading and the correlation between each item and its corresponding construct, were observed. Items with factor loadings below 0.6 were deleted in CFA (Hair et al., 2010).

### 3.5. Construct Validity

The model variables were assessed for convergent and discriminant validity. The average variance extracted was examined to see how the items in each construct converged with each other. In line with Hair et al. (2010) recommendation for convergent validity, the AVE cut-off value was set at  $\geq 0.5$ . All the factors satisfied the minimum threshold, see Table 1, and were hence judged to be valid. Moreover, no discriminant validity was found as the squared AVE was higher than the correlation value.

Table 1. Construct validity and reliability.

Factor	CR	AVE	TLIC	FHTLIC	APSF
TLI Roles	0.788	0.539	0.734		
Barriers to Institutional Effectiveness	0.719	0.893	0.707	0.893	
Agriculture Projects' Success and Sustainability Factors	0.884	0.780	0.412	0.320	0.780

Note: Factor correlation matrix with the square root of AVE on the diagonal. CR = construct validity; AVE = average variance extracted; TLIC traditional leadership institution contributions; FHTLIC = barriers to participation; APSF = agricultural projects' success factors.

### 3.6. Construct Reliability

The Barriers to Institutional Effectiveness measure yielded a Cronbach's alpha coefficient of 0.719, whereas TLI Roles and Agriculture Projects' Success and Sustainability Factors scored 0.788 and 0.884, respectively, as shown in Table 1. A coefficient value of 0.6 was utilized (Robinson, Shaver, & Wrightsman, 1991). However, there are different rules of thumb for satisfactory reliability, such as 0.5 (Pallant, 2001), 0.7 (DeVellis, 2003), or 0.8 (Nunnally, 1970). All constructs were judged reliable.

### 3.7. Regression Analysis

The results of the F test revealed a significant value ( $p < 0.05$ ). Thus, the model used in the study was feasible. In other words, TLI roles and practices validly predict or influence agriculture projects' success and sustainability factors. The TLI roles explained 24.9% of the variance ( $R$ -squared = 0.249;  $F = 13.613$ ;  $p = .000$ ) of the agriculture projects' success and sustainability factors, using  $R$ -squared in linear multiple regression analysis, as shown in Table 2. All the factors in TLI roles, except for information intermediary, significantly predicted agriculture projects' success and sustainability factors. For instance, a significant prediction was observed for the service delivery advocacy role ( $t = 2.826$ ;  $p = 0.005$ ;  $sr = 0.256$ ). Furthermore, the results showed that the social capital promotion role predicted the most variance ( $\beta = 0.325$ ;  $t = 4.982$ ;  $p = 0.000$ ), followed by promoting infrastructure development and agro-processing ( $\beta = 0.315$ ;  $t = 4.966$ ;  $p = 0.043$ ). Information intermediary had no significant effect ( $\beta = 0.110$ ;  $t = 1.475$ ;  $p = 0.114$ ). Given the results, the null hypothesis is rejected.

Table 2. Direct effects of traditional leadership institution contributions on success factors.

Dependent variable: Success factors (Constant)	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	4.269E-15	0.060		0.000	1.000
Infrastructure and agro-processing promotion	0.315	0.069	0.315	4.966	0.000
Easing access to funding	0.218	0.069	0.218	3.139	0.002
Social capital promotion	0.325	0.076	0.325	4.981	0.043
Service delivery advocacy	0.256	0.090	0.256	2.826	0.005
Information intermediary	0.110	0.085	0.110	1.475	0.114
R-Squared	0.249				
F	13.613				

### 3.8. Moderating Effect

SEM was used to evaluate the moderating effects of barriers to institutional effectiveness on the direct effect of TLI roles on agriculture projects' success and sustainability factors. The model fitness was achieved using the recommended threshold of ( $CFI > 0.90$ ;  $RMSEA < 0.08$ ), as shown in Figure 3. Thus, there was a good structural model fitness with the data. Table 3 presents the direct and indirect effects. The results indicate that TLI roles and practices had a significant direct impact on agriculture projects' success and sustainability factors ( $B = 0.32$ ;  $p = 0.000$ ). It was observed that the interaction effect was negative and significant ( $B = -0.070$ ;  $p = 0.024$ ). The results suggest that barriers to institutional effectiveness significantly reduce the impact of TLI roles and practices in fostering the success and sustainability of agriculture projects. Thus, moderation occurred, and the null hypothesis is accepted. The interaction slope was plotted using unstandardized regression estimates (Aiken, West, & Reno, 1991; Dawson, 2014; Dawson & Richter, 2006). As illustrated in Figure 4, the combination of a high level of TLI participation with the low effect of the barriers to institutional effectiveness significantly enhanced the agriculture projects' success and



sustainability factors, as shown by the upward slope (solid line). On the other hand, the graphs show that when the barriers have a large effect and there is a high level of TLI participation, the impact on agriculture projects' success and sustainability factors is significantly reduced.

Table 3. Moderating coefficients of regression weights in the model.

Model: TLI Roles and Practices; Barriers to Institutional Effectiveness; Agriculture Projects' Success and Sustainability Factors	Estimate	S.E.	Sig.
TLI Roles and Practices → Agriculture Projects' Success and Sustainability Factors (a)	0.320*	0.086	0.000
TLI Roles and Practices _X_ Barriers to Institutional Effectiveness → Agriculture Projects' Success and Sustainability Factors (b)	-0.070*	0.670	0.024
Barriers to Institutional Effectiveness → Agriculture Projects' Success and Sustainability Factors (c)	-0.096*	0.174	0.000

Note: \* indicates significance (p < 0.05).

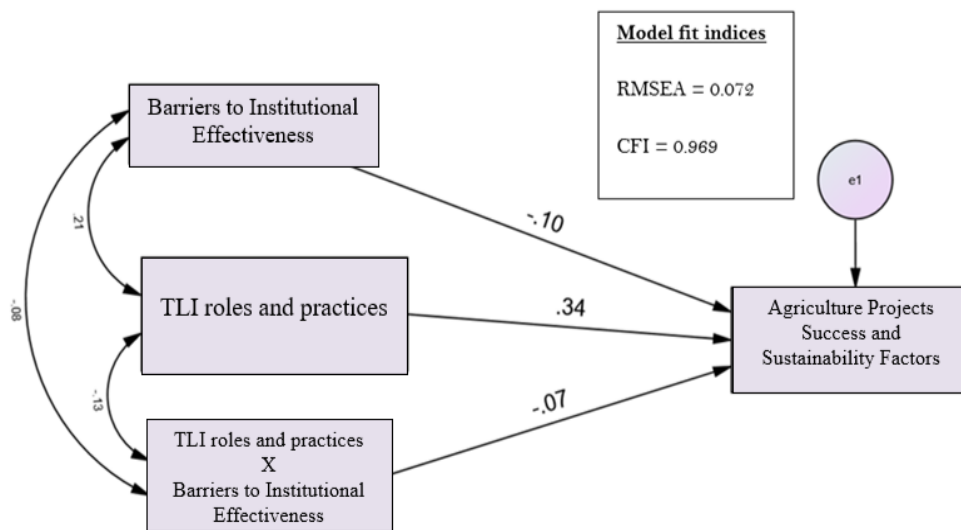


Figure 3. Amos graphics diagram of the moderating effect of traditional leadership contributions to agriculture projects' success and sustainability factors.

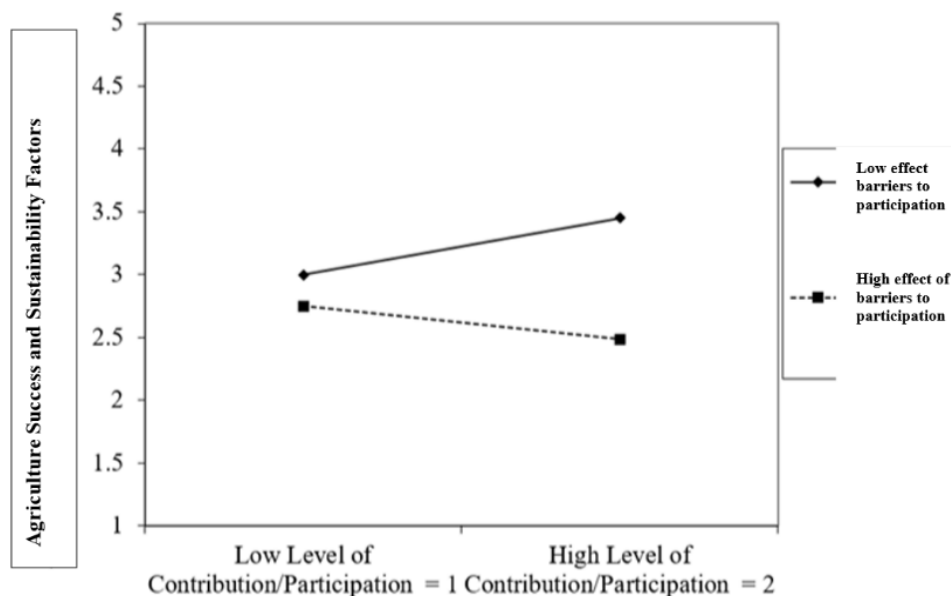


Figure 4. Interaction slope for the participation of the traditional leadership institution in agriculture.

#### 4. DISCUSSION

The results revealed that the identified TLI roles and practices, apart from information intermediary, significantly and positively influenced the success and sustainability of rural agriculture projects. The TLI acts as a representative voice of the community during the decision-making process of agricultural policy development. For instance, the TLI has a seat on the local council to represent the community in matters affecting them, including rural agriculture

development during the mandatory and statutory Integrated Development Planning (IDP) process in South Africa. Different tribal authorities have a responsibility to shape and mold local community development policies, including those concerning agriculture. [Bikam and Chakwizira \(2014\)](#) and [Pike, Marlow, McCarthy, O'Brien, and Tomaney \(2015\)](#) showed that the comprehensive integration of key institutions like the TLI into the fiber of local community planning yields positive outcomes. Their inclusion results in adaptive and responsive local-level development policies that address the immediate needs of the different sectors of their communities.

The TLI also plays a crucial role in building and strengthening social capital among development actors. It promotes and fosters reciprocal relations between agriculture projects and local stakeholders such as the local municipality, extension services, non-governmental organizations, businesses, and the community. Enhanced social capital is crucial for agricultural support partnerships and development programs for mutual convergence among the involved stakeholders. Moreover, social capital helps foster collective action when mobilizing resources in support of projects. In short, local institutions connect people or organizations from similar and different backgrounds, creating strong bonds for collective action and support ([Beugelsdijk & Smulders, 2009](#); [Sutherland & Burton, 2011](#)). Stronger social capital results in shared leadership, in which collective values, feelings, mutual trust, and energy provide the basis for the mobilization of private and public actors around joint local or regional agriculture development goals in support of agricultural projects.

Service delivery advocacy is another significant TLI role with positive outcomes for rural agriculture development. The TLI acts as a service delivery advocate in local communities. It oversees and helps negotiate the relationships between projects and local service providers such as the municipality, extension services, and other stakeholders involved in agriculture development in their locality, as evidenced by the collected data. Its non-political affiliation is cited as a strength that should be taken advantage of and used to put pressure on local service providers from a neutral standpoint. [Wekwete \(2014\)](#) in Zimbabwe, [Islam and Nursey-Bray \(2017\)](#) in Bangladesh, and [Bikam and Chakwizira \(2014\)](#) in South Africa have shown that TLIs facilitate and advocate for efficient service delivery in support of local farmers. Thus, the service delivery advocacy TLI role is important in negotiating with local actors in the public, private, and civic sectors to ensure they render adequate support and services.

The roles of the TLI also include easing access to funding for farmers and agriculture development programs. The TLI plays this role by issuing land or funding support letters, signature support, partnering with external stakeholders to fund local projects, and giving guarantees to landowners. Its ability to work with and connect different development actors and support institutions emerged as a key attribute in mobilizing finance for projects and obtaining funds for agricultural development programs. Similarly, [Dzvimbo, Monga, and Mashizha \(2017\)](#) found that TLIs in Zimbabwe partner with donors and private institutions to fund agricultural development programs that support the growth and development of small-scale farmers in rural areas.

Furthermore, the results indicate that such collaborations potentially attract agro-based industrial and infrastructural development. As an important player in community development, TLIs have a responsibility to create a conducive environment for local investment. For example, as the land administrator, the institution may release land and lobby private and public stakeholders to establish local industry and infrastructure development. Similarly, potential agro-processing support programs and industries can be mobilized. Furthermore, TLI indirectly supports the success and sustainability of agriculture by mobilizing development actors to establish development-enabling infrastructure, for instance, by lobbying the government to build roads that improve farmers' access to services and markets. As supported by [Basurto and Coleman \(2010\)](#) and [Deneke, Mapedza, and Amede \(2011\)](#), local institutions influence the investment environment. Hence, the actions or inactions of the TLI affect the level and extent of investment in the locality. Therefore, an effective TLI that works and partners with the private sector, the community, and the government has the potential to enhance the success and sustainability of agricultural projects. This role also results in improved resource mobilization and a reduction in the cost of doing business for agricultural projects.

## 5. IMPLICATIONS OF THE MODERATING EFFECT

The moderating effect of the barriers to participation was examined in SPSS Amos using regression weights estimates. The results revealed that barriers to institutional effectiveness moderated the relationship between TLI roles and agriculture projects' success and sustainability factors. The results are supported by the previous literature. [Bikam and Chakwizira \(2014\)](#) revealed that barriers to participation, such as the inability to vote in local policymaking, made it difficult for the TLI to effectively influence conditions that support the success and sustainability of projects. According to the Municipal Systems Act 41 of 2000, traditional leaders form part and parcel of local council meetings; however, they are not allowed to vote along with councilors.

Limited modern governance skills in rural development were also cited as a cause of poor TLI participation in local-level decision-making. Limited skills were also associated with inadequate financial resources to support TLI activities with the potential to effectively contribute to the development of agriculture. Adequate financial resources could, for example, allow TLI council members to be deployed to perform various functions of the institution, such as gathering information to assess farmers' challenges. Also, with the right modern skills, members of the TLI can help farmers build stronger collaborations and partnerships. An institution with a clearly spelled out mandate and roles that has the necessary pool of skills is more effective in executing its duties ([Middlehurst, 1995](#); [Shibru, Bibiso, & Ousman, 2017](#)). It is, therefore, critical to consider skills development for members and leaders of the traditional leadership council to improve the effectiveness of the institution in line with this function.

Weak and badly managed relations among the TLI, projects, and local service providers such as municipal officials and extension services pose a challenge to the effective participation of the institution in promoting local development. The results revealed that poor relations were mainly caused by a lack of clarity and specificity of institutional roles in

various sectors, including agriculture. The result was that conflicts ensued. For example, conflicts between the TLI and municipal officials over roles have been reported. This was also observed by Tshitangoni and Francis (2016). Islam and Nursey-Bray (2017) in Bangladesh, Walo (2016) in Ethiopia, and Walo (2016) and Wekwete (2014) in Zimbabwe posited that clear lines of communication and good working relations with development partners and community-based organizations are the cornerstone of sustainable local economic development programs and augment service delivery. Uphoff (2004) and Pike et al. (2015) noted that effective multiple-stakeholder participation requires clearly defined roles to usher in context-relevant policies and intervention mechanisms. Dzvimbo et al. (2017) found that the success of rural smallholder farmers in funded agricultural development programs in Zimbabwe benefitted from functional working relations between TLI, donors, and private organizations.

The results indicated that political and relational barriers were a major barrier to the effective participation of the TLI in activities and community decisions that create a conducive environment for the success and sustainability of agriculture projects. This barrier negatively impacts and interferes with TLI roles that have a positive effect on the success of agricultural projects. Although the empirical and literature evidence suggests that political and relational barriers negatively affect the TLI's role in attracting agro-based industrial and infrastructural development, this was not supported by the SEM evaluation of this data set. This might be explained by the fact that there are available national, regional, provincial, and local level legal instruments and provisions available for the TLI to partner with the private and public sectors to attract investment in the locality. Although the empirical evidence suggests that poor working relations between TLI and local government structures, such as the municipality, interfered with this role, the effect was insignificant. Thus, in the presence of political and relational barriers, partnerships with various stakeholders to support the agro-processing industry remain possible. Available legal provisions and institutional legitimacy give the TLI support to lobby and advocate for rural infrastructure development, which may include agriculture hubs and the construction of roads.

In short, the results indicate that in the current situation, the TLI is faced with several obstacles that hinder its effective participation in creating a conducive environment for rural agricultural projects' success and sustainability.

## 6. CONCLUSION

The findings suggest that TLI participation in community decision-making platforms and practices is strongly associated with the success and sustainability of rural agriculture. It contributes to creating conditions that are conducive to the success of agricultural projects. Of the five validated TLI roles, promoting social capital among stakeholders such as the local community, government, and external partners explained the most variance. The analysis did not support the role of TLI as an information intermediary. Given this result, it can be concluded that the identified institutional roles directly affect the success of rural agriculture projects. The result implies that effective participation of the TLI in community decision-making processes that promote agriculture significantly improves the conditions of rural agriculture projects' performance. For example, it results in improved resource mobilization, access to land, and availability of collaborative opportunities. Furthermore, the results indicate that barriers to institutional effectiveness are a significant moderator in the relationship between TLI roles and agriculture projects' success and sustainability. Overall, with higher levels of TLI participation and a low-level effect of barriers to institutional effectiveness, the agriculture projects' success and sustainability significantly improve. However, a higher-level effect of the barriers to participation decreases the impact of the TLI contribution, even with increased participation. Poor working relations emerged as the most problematic barrier. Regular multi-stakeholder collaboration might enable seamless partnerships, attainment of shared responsibilities, and an improvement in the knowledge and skills that support rural agriculture development. It is further recommended that future research refine the current measurement models; also, there is scope to investigate the moderating effects of the four individual broad barriers in this relationship to improve the functioning of the model.

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Views and opinions expressed in this study are those of the authors views; the Asian Journal of Agriculture and Rural Development shall not be responsible or answerable for any loss, damage, or liability, etc. caused in relation to/arising out of the use of the content.

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