



Governance Distance as a Catalyst of Trade: Insights from Tanzania's Exports to Sub-Saharan Africa

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Received 14/03/2025

Accepted : 14/05/2025

Published : 31/12/2025

<https://doi.org/10.52919/arebus.v6i2.101>

ABSTRACT

This study investigates how governance distance affects Tanzania's exports to sub-Saharan Africa (SSA) countries. The study is based on the new institutional economics and the augmented gravity model. The Poisson Pseudo-Maximum Likelihood (PPML) estimation is used to analyse panel data from 2002 to 2023. The study used the fuzzy index to compute the governance similarity index based on the Worldwide Governance Indicators (WGI). The results reveal that closer alignment of governance dimensions to Tanzania by the SSA country fosters Tanzania's exports, confirming that governance similarities reduce transaction costs and expand trade. Gravity model variables, such as Tanzania's and SSA countries' GDPs, positively affected exports, and distance adversely affected trade as anticipated. Thus, policymakers should strive to improve Tanzania's governance quality, reduce governance distance with developed countries, and improve Tanzania's global exports.

Keywords: Governance distance, Governance similarity, Worldwide governance indicators, Export performance, Sub-Saharan Africa, Augmented Gravity Model.

JEL Codes: F14, F15, F50, O43

How to cite this article

Shio, R. L., Suphian, R., & Masanja, C. (2024). Governance Distance as a Catalyst of Trade: Insights from Tanzania's Exports to Sub-Saharan Africa. *Advanced Research in Economics and Business Strategy Journal*, 6(2), 196-210. <https://doi.org/10.52919/arebus.v6i2.101>

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1. INTRODUCTION

Since the emergence of new institutional economics in the 1990s, the significance of good governance in shaping cross-border transactions, through lower transaction costs, reduced uncertainty, and ultimately boosting bilateral trade, has been well acknowledged (Álvarez et al., 2018; De Groot et al., 2004; Miura & Takechi, 2014; Pavel et al., 2019; Wang, 2023). Since the inception of the broad concept of governance quality and international trade (North, 1990), a new notion has emerged, known as governance distance. Governance distance refers to the extent of divergence or convergence of institutional environments between trading partners (De Groot et al., 2004; Li & Samsell, 2009).

A large governance gap can create obstacles for exporters due to the need to adapt to varied regulations, administrative processes, and perceived risks (Kuncic, 2024; Miura & Takechi, 2014). In contrast, countries with a similar governance framework require less adaptation, facilitating trade expansion (Wani et al., 2024). In the context of developing countries, Nunn & Trefler (2014) argued that a moderate divergence in governance quality may not drastically affect trade amongst low-income countries, as exporters are used to suboptimal governance conditions. While Kuncic (2024) and Pavel et al. (2019) posit that even in low- or middle-income countries, minor convergence of governance quality frameworks may yield significant improvements in bilateral trade.

Governance distance underneath is computed by similar indices as the governance quality, encompassing corruption control, regulatory quality, the rule of law, political stability, Voice and accountability, regulatory efficiency and other dimensions of institutional performance (Elattar & Ye, 2023). Some studies aggregate these constructs into one for the computation of governance similarities (Heshan Sameera, 2023; Miura & Takechi, 2014; Wang, 2023). This study examines the governance distance for these constructs separately, similar to the work of De Groot et al. (2004), Elattar & Ye (2023) and Martínez-Zarzoso & Márquez-Ramos (2019), which provides a nuanced view of the distance effects of each governance construct. This study employs the fuzzy index to compute the similarity index, borrowed from the work of Alamá-Sabater et al. (2016).

Despite Tanzania being one of the fastest growing economies in East Africa, it is still grappling with governance challenges, Sub-Saharan Africa (SSA) as a region is characterised by a mix of a few members with strong governance and select members with weak governance (World Bank, 2023). Tanzania's exports to SSA have recently grown due to strategic regional trade agreements (RTAs), but the role of institutional closeness has been less explored in this context. This leaves an empirical gap regarding the role of governance distance on Tanzania's export performance in the SSA.

This study aims to examine how the convergence or divergence of governance quality between Tanzania and Sub-Saharan African (SSA) countries affects Tanzania's exports to these countries. This provides insights into factors shaping Tanzania's exports in the SSA.

2. LITERATURE REVIEW

2.1.Theoretical Literature

The new institutional economics theory (NIE) offers a framework through which to understand how governance structures and variations in governance quality, which include formal institutions such as laws, regulations and government policies, and informal institutions

such as social norms, cultural beliefs, and enforcement mechanisms, influence trade flows (North, 1990; Williamson, 1985). North (1990) argued that governance quality determines the effectiveness of the “rules of the game”. The central concept of NIE is that economic transactions are not frictionless; they entail costs associated with negotiations, market research, contract enforcement, and uncertainty management (Coase, 1937; Williamson, 1985). Weak governance results in transaction costs due to corruption, bureaucratic inefficiencies, or cumbersome regulations (Rodrik, 2000). NIE also highlights the roles of well-defined property rights and effective contract enforcement (Alchian & Demsetz, 1972; Barzel & Allen, 2023). Transparent and safe ownership rights encourage domestic firms to invest in expanding production capacity, as they are assured of the protection of their investments.

Based on the concept of transaction costs, which arises from market research and uncertainty management (Williamson, 1985), higher governance similarity among trading partners can lower informational asymmetries, uncertainty and these associated costs. When institutional frameworks and regulatory environments are closely aligned, the burden of compliance, dispute resolution and contract negotiations significantly reduces (North, 1990). Thus, reduced transaction costs may stimulate higher trade flows due to reduced risks and increased familiarity with and confidence in the institutions of the trading partners.

2.2. Empirical Literature Review

Since the emergence of new institutional economics in the 1990s, supported by the work of (North, 1990), empirical literature has consistently emphasised that the governance environment of a country significantly influences trade flows by reducing transaction costs and uncertainty (Bah et al., 2021; Gammadigbe, 2021; Huyen et al., 2017; Nguyen & Wu, 2020; Olalekan Oshota et al., 2022; Soeng & Cuyvers, 2018). Then, the notion of “institutional distance” emerged, which explains that not only is governance quality what matters, but also the difference between the quality of governance for the trading countries shapes the trade patterns. This can be traced to the pioneering work of De Groot et al. (2004), which emphasised that institutional similarities, especially alignment in regulatory framework and corruption control standards, result in sturdier bilateral trade relations, and firms experience fewer setbacks when trading with countries with similar institutional settings. Álvarez et al. (2018) used a framework similar to the work of De Groot et al. (2004). Using the WGI, the study examined the effects of governance quality and similarity on bilateral trade flows of 186 countries. Its results showed that similarity in governance facilitated bilateral trade flows.

Kuncic (2024) and A. Liu et al. (2020) found that high governance distance, characterised by bureaucratic procedures and legal frameworks, may create frictional costs that inhibit trade flows. In contrast, higher institutional homogeneity fosters trust and coordination, boosting bilateral trade flows. Miura & Takechi (2014) also found that institutional similarities significantly encourage trade and FDI flows by minimising the local adaptation costs while enhancing contract enforcement. Pavel et al. (2019) suggest that institutional similarities, specifically regulatory quality, control of corruption and rule of law, are crucial drivers of exports in developing countries. Wani et al. (2024) discovered that when institution elements between trading countries align, firms will likely face fewer compliance barriers and lower enforcement risks. Wang (2023) discovered that the greater the institutional distance,

specifically legal institutional distance and political institutional distance, the more it inhibited the development of bilateral trade between China and the EU.

3. METHODOLOGY

3.1. Introduction

The analysis adopts a single exporter focus of Tanzania and SSA partners, a context previously unexplored, unlike cross-country analysis that handles exporter and importer pairs symmetrically as mutual averages, such as the works of Lavallée (2005), Li & Samsell (2009) and Miura & Takechi (2014). The study combines bilateral fixed effects with a transparent two-stage imputation strategy for missing WGI values, thereby retaining zero-trade observations without suffering from data loss as previous SSA studies. The study uses the fuzzy metric by Alamá-Sabater et al. (2016) to compute the governance similarity, which preserves information and captures partial convergence in the bounded WGIs score, rather than the absolute differences or Mahalanobis distance used in most previous studies. The study disaggregates the WGI's multicollinearity nature by estimating six distinct PPML gravity models and gaining pillar-specific similarity effects.

3.2. Research design

The study employed quantitative panel data on the Governance similarity index (GSI), computed from the WGIs, a regional trade agreement dummy variable, and fundamental gravity variables, to analyse the effects of governance convergence or divergence on Tanzania's exports to SSA. This research design was adopted to allow a nuanced examination of variations in governance similarity over time and across SSA counties and their subsequent effects on Tanzania's exports to these countries.

3.3. Data collection and sources

The study used quantitative secondary data from various reputable sources. The Governance similarity index (GSI) was calculated using the Worldwide Governance Indicators (WGI) data from the World Bank Governance Indicators database. Tanzania's exports to the SSA were obtained from the International Trade Centre (ITC) trade map. The GDPs for Tanzania and all SSA countries were obtained from the World Bank's Development Indicators database. The pane data set spans 2002 to 2023 for Tanzania and 46 SSA countries. Due to the nature of the trade data, there are some missing data points, either due to zero trade between Tanzania and the SSA partner or the unavailability of governance data for some newly established states.

The missing data due to zero trade flow were included because zero trade flow is economic zero, not a statistical blank. Also, PPML is robust and efficient in dealing with a high number of zero trade flows and naturally accommodates unbalanced panel data.

3.4. Analytical techniques

The study employed an augmented gravity model using governance similarity indices and regional trade agreements, similar to the studies by Alamá-Sabater et al. (2016) and Martínez-Zarzoso & Márquez-Ramos (2019). Due to the inherent nature of trade data being characterised by heteroscedasticity and zero trade flows, the study chose the Poisson Pseudo-Maximum Likelihood (PPML) estimation method. The PPML controls for heteroscedasticity and zero trade flows and is well-fitted for the gravity model's multiplicative structure (Krisztin & Fischer, 2015; Martin & Pham, 2020; Mnasri & Nechi, 2019).

3.5. Model Specification

The gravity model of trade has been extensively used to analyse the determinants of trade, capturing the effects of economic size, geographical distance, and trade policies. Our study hypothesises that similarities in governance structures influence export performance (Horsewood & Voicu, 2012; Levchenko, 2007; Martínez-Zarzoso & Márquez-Ramos, 2019). We augment the gravity model of trade with governance similarity indicators to determine their influence on Tanzania's export performance in the SSA.

The basic form of the gravity model posits that trade between countries is directly related to a country's economic size and inversely related to the distance between them (De Benedictis & Taglioni, 2011). Exports from Tanzania i to an SSA country j , X_{ijt} , are explained by the countries' economic sizes (proxied by their GDPs) and geographical distances. The specification of the gravity model of trade in its original multiplicative form for a single year is given by:

$$X_{ij} = \alpha GDP_i^{\beta_1} GDP_j^{\beta_2} DIST_{ij}^{-\beta_3} \epsilon_{ijt}$$

Where X_{ijt} represents the exports from Tanzania (i) to a Sub-Saharan African country (j) at time t . GDP_{it} , GDP_{jt} represents the GDP of Tanzania and the SSA importing country, respectively. $Dist_{ij}$ = Distance between Tanzania and the trading partners' capital cities. ϵ_{ijt} is the Error term. and $\alpha, \beta_1, \beta_2, \beta_3$ are parameters to be estimated. As this gravity model of trade is estimated using panel data, the time dimension is introduced into the model. GDP , X and $Dist$ are converted to natural logarithms to help linearise the multiplicative relationship and typically stabilise the variance of the residuals.

$$\ln X_{ijt} = \beta_0 + \beta_1 \ln GDP_{it} + \beta_2 \ln GDP_{jt} + \beta_3 \ln Dist_{ij} + \beta_4 RTA_{ijt} + c_{ij} + \pi_{i,t} + \sigma_{j,t} + \epsilon_{ijt}$$

Where RTA_{ijt} is the dummy for regional trade agreements between Tanzania and the SSA importing country, either EAC or SADC. c_{ij} which is the unobserved country-pair fixed effects and $\pi_{i,t}$, $\sigma_{j,t}$ which are time-varying exporter and importer fixed effects, are introduced to obtain unbiased estimates of the model parameters.

To capture the similarity in governance quality across Tanzania and its SSA trading partner, the study developed a government similarity index. The study adopted the fuzzy metrics to create a governance similarity model (Alamá-Sabater et al., 2016). The Governance Similarity Model:

$$GSI_{kijt} = \frac{\min(WGI_{it}, WGI_{jt}) + 1}{\max(WGI_{it}, WGI_{jt}) + 1}$$

GSI_{kijt} is the similarity measure for corresponding governance indicators k . $GSI_{kijt} \in [0,1]$ ranges between 1 and 0, it is higher (approaching 1) when Tanzania (i) and the SSA partner (j) have the same level of governance in time (t). However, when it is lower (approaching 0), the level of governance is diverging. The governance similarity index is incorporated in the gravity model:

$$\ln X_{ijt} = \beta_0 + \beta_1 \ln GDP_{it} + \beta_2 \ln GDP_{jt} + \beta_3 \ln Dist_{ij} + \beta_4 RTA_{ijt} + \sum_k \beta_k GSI_{kijt} + c_{ij} + \pi_{i,t} + \sigma_{j,t} + \epsilon_{ijt}$$

The underlying structure of the governance similarity index (*GSI*) is the worldwide governance index (*WGI*), which is highly intercorrelated in nature as it explains an overarching concept of governance quality. As a precaution, this paper separates the *GSI* of each governance indicator into separate models to avoid multicollinearity.

Model 1: *GSI* Control of Corruption

$$\ln X_{ijt} = \beta_0 + \beta_1 \ln GDP_{it} + \beta_2 \ln GDP_{jt} + \beta_3 \ln Dist_{ij} + \beta_4 RTA_{ijt} + \beta_6 GSI_{CCijt} + c_{ij} + \pi_{i,t} + \sigma_{j,t} + \epsilon_{ijt}$$

Model 2: *GSI* Government efficiency

$$\ln X_{ijt} = \beta_0 + \beta_1 \ln GDP_{it} + \beta_2 \ln GDP_{jt} + \beta_3 \ln Dist_{ij} + \beta_4 RTA_{ijt} + \beta_6 GSI_{GEijt} + c_{ij} + \pi_{i,t} + \sigma_{j,t} + \epsilon_{ijt}$$

Model 3: *GSI* Political stability

$$\ln X_{ijt} = \beta_0 + \beta_1 \ln GDP_{it} + \beta_2 \ln GDP_{jt} + \beta_3 \ln Dist_{ij} + \beta_4 RTA_{ijt} + \beta_6 GSI_{PSijt} + c_{ij} + \pi_{i,t} + \sigma_{j,t} + \epsilon_{ijt}$$

Model 4: *GSI* Rule of Law

$$\ln X_{ijt} = \beta_0 + \beta_1 \ln GDP_{it} + \beta_2 \ln GDP_{jt} + \beta_3 \ln Dist_{ij} + \beta_4 RTA_{ijt} + \beta_6 GSI_{RLijt} + c_{ij} + \pi_{i,t} + \sigma_{j,t} + \epsilon_{ijt}$$

Model 5: *GSI* Regulatory Quality

$$\ln X_{ijt} = \beta_0 + \beta_1 \ln GDP_{it} + \beta_2 \ln GDP_{jt} + \beta_3 \ln Dist_{ij} + \beta_4 RTA_{ijt} + \beta_6 GSI_{RQijt} + c_{ij} + \pi_{i,t} + \sigma_{j,t} + \epsilon_{ijt}$$

Model 6: *GSI* Voice and accountability

$$\ln X_{ijt} = \beta_0 + \beta_1 \ln GDP_{it} + \beta_2 \ln GDP_{jt} + \beta_3 \ln Dist_{ij} + \beta_4 RTA_{ijt} + \beta_6 GSI_{VAijt} + c_{ij} + \pi_{i,t} + \sigma_{j,t} + \epsilon_{ijt}$$

Each model isolates each governance indicator's similarity index to evaluate its impact on Tanzania's export performance to an SSA member state, reducing the risk of multicollinearity and ensuring more reliable statistical analysis.

4. DATA ANALYSIS AND ROBUSTNESS CHECK

4.1. Data Analysis

4.1.1. Descriptive statistics

Table 1 shows the descriptive statistics of the study's main variables. The dependent variable is Tanzania's exports to the SSA importers in their natural logarithmic form. The independent variables include the original gravity variables GDP (Tanzania's and SSA partners') and distance, with the augmenting GSI variables. The GSI is constructed using the fuzzy similarity metrics on Kaufmann et al. (2003) WGIs. *GSI* ranges from 1 to 0, with values closer to 1 indicating higher similarity and those closer to 0 indicating lower similarity between Tanzania and the SSA countries' governance indices. Some variables have fewer observations than others, reflecting missing data, as some countries are missing WGI data, and some countries did not import commodities from Tanzania in certain years.

Table 1. Descriptive statistics

Variable	Obs	Mean	Std. dev.	Min	Max
Tanzania's Exports ($\ln x$)	934	14.18318	2.128809	7.896924	20.34585
<i>GSI</i> Control of Corruption (GSI_{CCijt})	1,026	.8870654	.0850673	.5376493	.9999912
<i>GSI</i> Government efficiency (GSI_{GEijt})	1,025	.8889403	.0851458	.6139205	.999983
<i>GSI</i> Political Stability (GSI_{PSijt})	1,025	.8480975	.1201658	.3195735	.9999573
<i>GSI</i> Regulatory Quality (GSI_{RQijt})	1,025	.8819942	.0868125	.5528737	.9999608
<i>GSI</i> Rule of Law (GSI_{RLijt})	1,025	.8941221	.088486	.5827976	.9998669
<i>GSI</i> Voice and Accountability (GSI_{VAijt})	1,025	.8612014	.0996366	.4842621	.999952
Tanzania's GDP ($\ln GDP_{it}$)	1,034	24.41673	.3721296	23.76777	24.97978
Partners' GDP ($\ln GDP_{jt}$)	997	22.92081	1.45882	18.8078	27.03436
Distance ($\ln DST_{ijt}$)	1,034	7.872387	.6494065	6.322888	9.158438

4.1.2. Interpretation of Summary Statistics

In logarithmic form, Tanzania's exports to the SSA have an average of 14.18 and a standard deviation of about 2.13, indicating moderate variation in export levels over the observed periods. A minimum of 7.90 and a maximum of 20.35 imply that Tanzania's export levels vary widely across SSA partners and over different years.

The *GSI* of the rule of law has the highest mean of 0.894, implying that Tanzania's rule of law is closely matched with that of its SSA partners. The standard deviation of 0.088 indicates moderate dispersion. The *GSI* of government efficiency is the second highest, with a mean of 0.889, which suggests that Tanzania's government efficiency level is also, on average, relatively close to that of its SSA partners. Its standard deviation is 0.085, and the minimum of 0.614 implies that the lowest-similarity case is still moderately aligned with Tanzania.

The mean *GSI* of control of corruption is 0.887, which suggests that, on average, Tanzania's corruption control indicator is reasonably close to its SSA trading partners' scores. Its standard deviation is 0.085, which is relatively low, indicating that most SSA counties are clustered around a high degree of similarity to Tanzania's. The mean *GSI* of regulatory quality is 0.882, implying a high similarity in regulatory quality between Tanzania and its partner countries, and a standard deviation of about 0.087 shows limited dispersion. Voice and accountability and political stability have the least *GSI*, with values of 0.862 and 0.848, respectively. This implies that, on average, Tanzania's voice and accountability and political stability are less similar to those of SSA partners.

4.2.The Poisson Pseudo-Maximum Likelihood (PPML) results

Table 2. The Poisson Pseudo-Maximum Likelihood (PPML) results

Regressor	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
<i>GSI</i> CC	0.0283*** (0.0457)					
<i>GSI</i> GE		0.0118*** (0.0455)				
<i>GSI</i> PS			0.0861*** (0.0212)			
<i>GSI</i> RL				0.0680** (0.0342)		
<i>GSI</i> RQ					0.0389*** (0.0369)	
<i>GSI</i> VA						0.0227* (0.021)
<i>ln</i> Tanzania's GDP	0.2332*** (0.7464)	0.2860*** (0.7543)	0.2720*** (0.7751)	0.3050*** (0.7740)	0.3016*** (0.7772)	0.3399*** (0.7604)
<i>ln</i> Partner's GDP	0.0852*** (0.0201)	0.0841*** (0.0199)	0.0861*** (0.0194)	0.0835*** (0.0194)	0.0832*** (0.0195)	0.0842*** (0.0193)
<i>ln</i> Distance	-0.0286*** (0.0668)	-0.0324*** (0.0720)	-0.0351*** (0.0655)	-0.0340*** (0.0690)	-0.0353*** (0.0674)	-0.0365*** (0.0628)
RTA	0.0474*** (0.0757)	0.0567*** (0.0793)	0.0658*** (0.0657)	0.0619*** (0.0724)	0.0636*** (0.0737)	0.0639*** (0.0709)
Constant	0.1230*** (0.1939)	0.1603*** (0.1936)	0.3128*** (0.1894)	0.2520*** (0.1878)	0.2727*** (0.1895)	0.2386*** (0.1870)
Observations	913	913	913	913	913	913
Importer fixed effect	Yes	Yes	Yes	Yes	Yes	Yes
R square	0.7194	0.7010	0.7021	0.6991	0.6982	0.7169

Robust standard error in parentheses. ***p < 0.01, **p < 0.05, *p < 0.1.

4.2.1. Interpretation of the PPML regression

The coefficient on *GSI* of control of corruption is 0.0283 and statistically significant at the 1% level. This implies that a unit increase in corruption control similarity increases Tanzania's exports to the SSA partner by approximately 2.8%. The coefficient for Government Efficiency similarity is 0.0118 and is statistically significant at the 1% level. Even though notably smaller than that of corruption control, a one-unit increase in efficiency similarity corresponds to a 1.2% increase in exports. Political Stability similarity has the greatest effect, with a coefficient of 0.0861 and statistical significance at the 1% level. A unit improvement results in an 8.9% increase in Tanzania's exports to the SSA partner. The rule of law is the

second most effective *GSI*, with a coefficient of 0.068, statistically at a 5% level. This implies that a unit increase in the similarity of the rule of law results in a 6.8% increase in Tanzania's exports. Similarity in Regulatory Quality has a coefficient of 0.0389, statistically significant at the 1% level, implying that a unit increase in similarity results in a 3.9% increase in exports. Voice and accountability have a coefficient of 0.0227, which is statistically significant at the 10% level. A one-unit increase in the Voice and Accountability similarity is associated with a 2.3% increase in exports.

Tanzania's GDP coefficients range from 0.2332 to 0.3399, all highly significant at the 1% level. This implies that a 1% increase in Tanzania's GDP results in a 23.3% to 34% increase in exports to the SSA partners. SSA Partners' GDP coefficient ranges from 0.0832 to 0.0861, all of which are significant at the 1% level. This implies that a percentage increase in the SSA partners' GDP results in an 8.3 to 8.6 percentage increase in Tanzania's exports to the SSA partner.

The distance coefficient ranges from -0.0286 to -0.0365 and is statistically significant in all models at the 1% level. This implies that a percentage increase in distance from Tanzania to an SSA country reduces Tanzania's exports by approximately 2 to 3 percent. The regional trade agreement dummy coefficients are positive and statistically significant across all models. This implies that Tanzania trades more with countries within the same trade bloc, EAC and SADC member states.

4.2.2. Economic magnitude of the governance-similarity coefficients

Political stability similarity is the most influential factor, as a partner improves their political stability towards Tanzania's stability level, it would significantly boost Tanzania's exports to that country by almost 1%. While having similar rule of law standards with a partner has about two-thirds of that impact, improvements in the other governance indicators contribute less than a third of a percent. From a monetary perspective, Tanzania exported about USD 3 billion in 2023. Thus, a 0.1 increase in political stability similarity could generate approximately USD 26 million in additional annual sales. A similar improvement in the alignment of the rule of law would result in roughly USD 26 million in additional annual sales. Gains in alignment of other governance indicators would result in the single-digit millions per partner. Although these individual gains seem modest, they accumulate quickly when several SSA trading partners focus on governance reforms and align with Tanzania's governance level. Importantly, these export increases do not require fiscal cost like tariff reductions or export incentives. Thus, the overall results imply that even incremental convergence in governance level results in commercially meaningful export growth for Tanzania.

4.2.3. Robustness Check

Trade data is commonly characterised by heteroscedasticity in nature and other econometric issues resulting in the linearisation of the gravity model (Bojnec et al., 2014); thus, the study employs the PPML estimation technique with bilateral fixed effects to control for heteroscedasticity and zero trade flows (Krisztin & Fischer, 2015; Martin & Pham, 2020; Mnasri & Nechi, 2019). Also, due to the highly correlated nature of the WGI, which are the foundations for the *GSI*, the study estimated six distinct models for each *GSI* to avoid the risk of multicollinearity.

Table 3. Robustness check using Breusch-Pagan/Cook-Weisberg, White's Test and Wooldridge Test

Test	Test Statistic	p-Value	Interpretation
Breusch-Pagan/Cook-Weisberg	$\chi^2(1) = 0.03$	0.8674	No evidence of heteroskedasticity
White's Test	$\chi^2(64) = 72.15$	0.1364	No evidence of heteroskedasticity
Wooldridge Test for Autocorrelation	$F(1, 46) = 2.104$	0.1534	No evidence of serial correlation

The Breusch-Pagan/Cook-Weisberg and White tests were used to ensure the absence of heteroscedasticity. The null hypothesis could not be rejected in both tests, with p-values of 0.8674 and 0.1364, both above 5%. These p-values suggest no evidence of heteroscedasticity in the dataset, implying that the error terms have constant variance. The Wooldridge test for autocorrelation was used to test for serial correlation in the dataset. The p-value of 0.1534 means that the null hypothesis cannot be rejected. This implies that no first-order autocorrelation was detected in the panel data.

Table 4. Robustness check Cameron and Trivedi's Decomposition of the IM-Test

Test Component	Chi-squared (χ^2)	Degrees of Freedom (df)	p-value	Result
Heteroskedasticity	72.15	64	0.1364	No evidence of heteroskedasticity
Skewness	15.75	10	0.1042	No significant skewness
Kurtosis	1.11	1	0.2919	No excessive kurtosis
Total	89.01	75	0.1135	No significant misspecification

Cameron and Trivedi's Decomposition of the Information Matrix (IM) tests the specification of a regression model by testing for heteroskedasticity, skewness, kurtosis, and general model misspecification. The model shows no evidence of heteroskedasticity ($\chi^2(64) = 72.15$, $p = 0.1364$), skewness ($\chi^2(10) = 15.75$, $p = 0.1042$), or excessive kurtosis ($\chi^2(1) = 1.11$, $p = 0.2919$). The total test statistic ($\chi^2(75) = 89.01$, $p = 0.1135$) also indicates no significant misspecification in the model.

5. DISCUSSION

All of the governance similarity indexes have a positive effect, with varying levels of statistical significance. This implies that the similarity of governance quality between Tanzania and a Sub-Saharan African trading partner generally propagates Tanzania's exports. These results mirror findings by De Groot et al. (2004), Heshan Sameera (2023), Long et al. (2023), Pavel et al. (2019) and Wang (2023). Similarities in the control of corruption suggest that Tanzania's exports thrive when the SSA trading partner has anti-corruption regulations similar to those at home. This finding is similar to Li & Samsell (2009), who discovered that shared institutional characteristics, such as control of corruption and legal enforcement, reduce uncertainties.

The *GSI* of regulatory efficiency signals that Tanzanian exporters are attracted to export to countries in the SSA with similar bureaucratic procedures. This is because the exporters are accustomed to the paperwork, licensing requirements, customs procedures, and firm registration processes, which are similar to the domestic procedures (X. Liu et al., 2010; Wani et al., 2024). The *GSI* of political stability implies that when trading partners share political stability, similar to Tanzania, exporters are exposed to fewer risks, uncertainty, and policy fluctuations (Kuncic, 2024; Li & Samsell, 2009). The *GSI* of the rule of law's positive effects indicates that when the SSA trading partner's legal framework closely resembles Tanzania's, its exports to the SSA partner increase. This is because exporters experience less uncertainty in legal proceedings and clearly understand the procedures of negotiations and business dispute settlements (Miura & Takechi, 2014; Pavel et al., 2019).

The *GSI* for regulatory quality implies that when the SSA importing country has similar customs procedures, licensing requirements, product certifications, and safety measures, it facilitates Tanzania's exports. This is because it reduces the administrative burden of getting accustomed to new regulatory systems and reduces compliance costs (Kuncic, 2024; Miura & Takechi, 2014; Wani et al., 2024). The *GSI* for Voice and Accountability's positive effect implies that Tanzania exporters prefer countries with levels of civic freedoms, media independence, and political inclusiveness, as it creates a sense of safety for Tanzania exporters in the SSA (Rodrik, 2000).

Tanzania's GDP is positive and highly statistically significant across all models. This result aligns with the predictions of the standard gravity model, which predicts that a country's size and production capacity predict its export supply capacity (Anderson & Van Wincoop, 2003). The GDP of partner SSA countries is positive and highly significant. This result is as expected, as the standard gravity model predicts that higher-income or larger economies import more (Head & Mayer, 2014).

Distance has a statistically significant negative effect on all six models. This is as predicted by the standard gravity model, corroborating the "distance puzzle" in modern trade literature, as geographical distance still impedes trade in the current era of improved connectivity (Disdier & Head, 2008). The RTA is positive and highly statistically significant across all models, aligning with the evidence that preferential trade blocks facilitate intra-regional trade due to simplified rules of origins and regulatory alignment (Baier & Bergstrand, 2007; Magee, 2016).

6. CONCLUSIONS & RECOMMENDATIONS

6.1. Conclusion

The findings confirm that similarities in governance quality between Tanzania and its sub-Saharan African countries facilitate Tanzania's exports, aligning with the existing empirical literature on institutions and trade. Alignment in the level of political stability, enforcing the rule of law, upholding voice and accountability, controlling corruption and maintaining efficient regulations all support exports by lowering transaction costs, reducing uncertainty, and creating more transparent legal and bureaucratic frameworks for Tanzanian exporters. Also, the standard gravity factors, such as Tanzania's GDP, GDP of SSA countries, and distance, perform as anticipated. Tanzania's economic size and SSA partner facilitate

Tanzania's exports, while the distance impedes Tanzania's exports. Participation in RTAs boosts Tanzania's exports, underscoring the benefits of trade facilitation policies.

6.2.Recommendations

The results imply that Tanzania needs to improve the quality of its governance to expand its export horizons regionally and globally. While Tanzania exports more to sub-Saharan African countries with similar governance levels, many SSA countries have relatively low levels of governance quality and are mostly ranked low globally. Thus, Tanzania maintaining the status quo of governance quality may hinder Tanzania's ability to compete in the global markets, specifically in countries with higher governance standards.

Therefore, policymakers should improve Tanzania's governance quality by implementing reliable anti-corruption initiatives, safeguarding political stability, uniformly enforcing the rule of law, promoting transparent decision-making and inclusive institutions, and creating a fair and predictable environment that facilitates trade. Such reforms will elevate Tanzania's governance standards and ranking closer to those of higher-income, better-governed economies, opening up Tanzania to larger markets. Over time, rising governance standards will make Tanzania's market more appealing to global trade partners, thereby diversifying export growth.

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