

Research Article

The Governance-Development Nexus in Sierra Leone: Exploring Institutional Path to Human Progress

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Abstract

This study examines the long-term effects of governance indicators on human development in Sierra Leone. The analysis utilizes a 20-year dataset covering the period 2004 to 2023, allowing for an assessment of how sustained changes in governance quality have influenced human development outcomes in the country over time. Data for governance indicators were obtained from World Governance Indicators produced by the World Bank, whereas human development data were obtained from the UNICEF's human development index. The study employed the Autoregressive Distributed Lag (ARDL) modeling technique. Unlike in the short-run that shows that governance indicators do not impact HDI, the results indicate that control of corruption and rule of law exert statistically significant long-term effects on human development in Sierra Leone, while the other governance indicators are statistically insignificant. Overall, these findings highlight the pivotal role of corruption control and legal integrity as foundational drivers of sustained human development in Sierra Leone. Consistent efforts to strengthen anti-corruption measures and uphold legal institutions are associated with measurable improvements in key human development dimensions, including education, health, and income. Additionally, these findings highlight the need for governance reforms that focus on enhancing political stability, improving regulatory quality, and addressing inefficiencies in government expenditure, ensuring proper financial management. The policymakers should focus on creating a situation that promotes good governance.

Keywords

ADRL, Governance Indicators, Sierra Leone, HDI

1. Introduction

The interrelationship between governance and human development suggests that countries with better governance system report improvement in education, health and standard of living of their citizens. On one hand, good governance promotes and sustains human development; on the other hand, human resources with a good level of health and education can make a more optimal contribution to the production process [1]. In general, better governance improves human capital development in term of skill development, improved

quality of life, and improved health [2].

Governance factors such as political stability, regulatory quality, government effectiveness, and control of corruption are crucial for fostering economic stability and long-term growth (Poudel, Khatri and Acharya, 2025). [3] highlights how government effectiveness can serve as a gateway for favourable policy environment and competent implementation of the policies, especially in providing public goods. Conversely, ineffective government can trigger political sta-

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bility, impeding political, human and economic development. Political instability often increases inflation and unemployment, creating social unrest and uncertainty that can lead to general strikes and violence. In summary, poor governance delays economic progress and human development due to these negative consequences [4].

The proxies of Human Development Index (HDI) include education, health, poverty and standard of living, moving beyond traditional measures such as Gross Domestic Product (GDP). GDP and related measures are crude indicators of development because they rarely capture essential aspects of human well-being [5]. Viewing development from human welfare perspective ensures that countries focus on addressing poverty and inequality. Essentially, this approach emphasises developing people's abilities and giving them opportunities to utilise them [6]. A long and healthy life, knowledge and a decent standard of living are the three core HDI dimensions [7], directly related to SDGs 3 (Good Health and Well-being), 4 (Quality Education), 1 (No Poverty) and 8 (Decent Work and Economic Growth).

Recognising the significance of human capital development, Sierra Leone has focused on improving its HDI dimensions. For example, the government implemented the Free Quality Secondary Education and Radical Inclusion Policy to improve access to education and reduce illiteracy level. The health sector has also seen progress through infrastructural development and various reforms. However, [8] found that government expenditure on human capital had a negative impact on economic growth. Similarly, [9] argue that the size of the budget allocation cannot influence growth if planning is poor and policy implementation is ineffective.

Despite these efforts, Sierra Leone continues to face challenges such as poverty, corruption, economic recession, substance abuse and high youth unemployment [10-14]. According to [15, 16], high levels of corruption in many countries impede their development process. Consequently, good governance is essential for achieving comprehensive human development, as its absence encourages corruption [17]. However, previous studies have produced mixed conclusions regarding the impact of governance and its indicators on human development. To address these inconsistencies, this study investigates the impact of governance on human development in Sierra Leone.

This study uses data from 2004 to 2023 to determine whether political economy framework can explain the impact of governance on HDI in Sierra Leone. Regression analysis was employed to determine the direction and significance of the relationship between the variables of interest. The political economy framework is appropriate since it explains how interaction between political and economic factors drive development in any given country. Focusing on a single-country context allows for deeper insights specific to Sierra Leone, which is ignored in cross-country panel studies. Furthermore, there is limited empirical evidence on the impact of governance on human development.

2. Literature Review

Research on human development and governance indicators has received increasing attention, with diverse results. Some studies agree that good governance significantly impacts human development either in the short or long term, while others find otherwise. For example, [18] established that good governance is a significant factor in improving citizens' capability. Similarly, [19] found that good governance contributes to sustainable human development in Egypt over the long term. [5] also confirmed a significant positive relationship between good governance and human development in the long-run. These studies collectively emphasize that governance quality plays a vital role in enhancing human capabilities, though its impact may vary depending on time horizons and national contexts.

Other studies assess the individual effects of the World Governance Indicator (WGI) on HDI or its components. Among the six WGI dimensions, [20] found that government effectiveness, political stability, control of corruption, and regulatory quality significantly influence human development. However, [21], in a panel study of 33 European Union (EU) countries, concluded that only government effectiveness, regulatory quality and rule of law significantly correlate with human development levels. Likewise, [22] observed that control of corruption and government effectiveness significantly reduce poverty, unlike political stability and absence of violence/terrorism. Conversely, [23] found no statistical significant relationship between any of the six good governance indicators and human development in Jordan. Taken together, these findings reveal that while certain governance dimensions—particularly government effectiveness and regulatory quality—tend to support human development, their influence is not uniform across countries.

Studies focusing on specific WGI components also yield mixed results. For example, [15, 17] revealed that corruption has a negative and significant effect on human development in both the short and long run. Similarly, [16] showed that corruption stifles human development by diverting resources from education, health, and social protection. However, [24] found that corruption does not significantly affect HDI. These contrasting conclusions suggest that the effect of corruption on human development depends on the institutional strength and governance context of individual countries.

According to [25], government effectiveness and public health expenditure improve HDI; however, [3] found no significant association between these variables. Similarly, [26] observe that while government spending on education positively affects human development, spending on health does not. Likewise, [27] reveal that health care spending has a significant but inverse relationship with HDI. This mixed evidence highlights that not all forms of public spending contribute equally to human development, emphasizing the need for effective allocation and governance of resources.

Beyond direct governance effects, economic variables such

as inflation, economic growth and export - as well as environmental factors like carbon emissions - mediate the relationship between good governance and HDI. [28] found that governance and carbon emissions positively and significantly influence human development. [29] also revealed that government expenditure can positively and significantly influence HDI when moderated by GDP. Furthermore, [30] provided strong evidence that governance quality positively impacts human development in Ethiopia in both the short and long run. [31] proved that corruption indirectly affects HDI through Gross national income (GNI) per capita. These studies underscore that the governance-development nexus is often indirect, operating through economic and environmental channels that shape human well-being.

The literature review reveal that panel studies have been widely used to investigate the impact of governance on human development. Consequently, their findings are not country specific and are contradictory, emphasizing the need for further empirical investigation. The body of research reveals inconsistent evidence explaining how governance influences human development. Variations across contexts, governance structures, and economic conditions make the relationship complex and context-specific, warranting additional country-level analysis such as the present study on Sierra Leone.

In summary, the reviewed literature demonstrates that while governance remains a key determinant of human development, the magnitude and direction of its impact differ across nations, justifying this study's focus on Sierra Leone's unique political economy context. While many studies agree that government effectiveness, corruption and regulatory quality significantly affect human development, rule of law, political stability and accountability and voice have been the hotspot for disagreement.

3. Methodology

In this section, the researcher outlined the methodological approach employed to examine the impact of good governance on human development in Sierra Leone from 2004 to 2023.

The study depends on the governance index issued by the World Bank in the Global Governance Indicators (WGI) project that are published regularly since 1996. The Global Governance Index measures six sub indicators: voice and accountability, Political stability and absence of violence, government effectiveness, regulatory quality, rule of law, and corruption control. The global governance indicators are expressed in standardized normal units with a value ranging from -2.5 (very low score) to 2.5 (very high score). The global governance indicators for each country can also be expressed in the percentile rank, which ranges between zero and 100. According to this indicator, the higher scores, the better performance is. This study however uses the estimated scores that range from -2.5 to 2.5 in the analysis. Governance indicators were obtained from the World Bank website.

The study also used the Human Development Index issued by the United Nations Development Program (UNDP), which began prepared and regularly published in 1990. The Human Development Index (HDI) is a Brief measure of average achievement in the main dimensions of human development such as a healthy life, knowledge, and a decent living level. The Human Development Index is the geometric mean for all indicators and each of the three dimensions. The health dimension is measured by expecting age from birth, and the educational dimension is measured by the average years of schooling for adults aged 25 years and above, and the expected years of teaching children of school age. The level of living dimension is measured by the per capita national income. The HDI uses the logarithm of income to reflect the importance of decreasing income with the increasing GNI. The scores of the three dimensions of the human development index are collected in a composite index using the geometric mean. The data of the Human Development Index were obtained through the website of the United Nations Development Program (UNDP).

Study model:

The study depends on measuring the long-term relationship between the variable of overall good governance and human development by using the Autoregressive Distributed Lag (ARDL). The good governance indicators were obtained from the Worldwide Governance Indicators through the World Bank.

The relationship between overall good governance and sustainable human development can be expressed through the following equation

$$HD_t = \beta_0 + \beta_1 GG_t + \varepsilon_t \quad (1)$$

Whereas:

HD_t = Human Development Index

GG_t = The arithmetic mean of the indicators of good governance

For further analysis to find out which aspects of the four good governance indicators have the most impact on human development in Sierra Leone during the period from 2004 to 2023, this study followed the equation

$$HD_t = \beta_0 + \beta_1 HD_{t-1} + \beta_2 CC_t + \beta_3 GE_t + \beta_4 RL_t + \beta_5 VA_t \quad (2)$$

Whereas:

HD_t = Human Development Index

HD_{t-1} = The first lag of the Human Development Index

CC_t = control of corruption

GE_t = Government Effectiveness

RL_t = Rule of Law

VA_t = Voice and Accountability

Model estimation that was based on the Generalized linear models (GLM) method with the Bootstrap method. This method helps to overcome the estimation problems such as autocorrelation and heteroscedasticity and estimate non-linear regression.

4. Empirical Results

Table 1. Descriptive Statistics.

	HDI	GE	CC	PS	RQ	RL	VA
Mean	0.424300	-1.189554	-0.775675	-0.202199	-0.931082	-0.900879	-0.233258
Median	0.434000	-1.190340	-0.850760	-0.171582	-0.938814	-0.867720	-0.211156
Maximum	0.467000	-1.063283	-0.396056	-0.039427	-0.710573	-0.794501	-0.066452
Minimum	0.363000	-1.343932	-1.085492	-0.514732	-1.142182	-1.151016	-0.530996
Std. Dev.	0.032342	0.062668	0.215850	0.133378	0.136427	0.106264	0.106815
Skewness	-0.523934	-0.364603	0.437497	-0.899956	0.196552	-1.213177	-0.870392
Kurtosis	2.095526	3.616675	1.743877	3.156769	1.896613	3.696652	4.094749
Jarque-Bera	1.596750	0.760024	1.952885	2.720218	1.143327	5.310428	3.524001
Probability	0.450060	0.683853	0.376649	0.256633	0.564585	0.070284	0.171701
Sum	8.486000	-23.79108	-15.51350	-4.043975	-18.62163	-18.01759	-4.665163
Sum Sq. Dev.	0.019874	0.074618	0.885231	0.338004	0.353632	0.214550	0.216778
Observations	20	20	20	20	20	20	20

The mean values presented on Table 1 show that HDI maintained a moderately increased over the 20-year period, while all governance indicators—including government effectiveness, control of corruption, political stability, regulatory quality, rule of law, and voice and accountability—declined, suggesting that governance performance remained generally poor throughout the period. The closeness of the mean and median values indicates that the data are relatively stable around their central tendencies, showing no significant outliers. The low standard deviations also confirm that governance conditions did not fluctuate widely over time

but instead remained consistently poor. Most variables exhibit negative skewness, indicating that more observations fall on the lower end of governance performance, reflecting persistent institutional weaknesses. Kurtosis values above three for several variables suggest peaked distributions with heavy tails, implying occasional years of exceptionally poor governance outcomes. The Jarque-Bera test results show that most variables are normally distributed, although rule of law and voice and accountability demonstrate slight deviations, possibly due to outlier governance events.

Table 2. Correlation Matrix.

Sample: 2004 2023							
Included observations: 20							
Correlation							
Probability	HDI	GE	CC	PS	RQ	RL	VA
HDI	1.000000						

GE	0.068567	1.000000					
	0.7739	-----					

Sample: 2004 2023							
Included observations: 20							
Correlation							
Probability	HDI	GE	CC	PS	RQ	RL	VA
CC	0.791076	0.399125	1.000000				
	0.0000	0.0813	-----				
PS	0.672486	-0.043737	0.450904	1.000000			
	0.0012	0.8547	0.0460	-----			
RQ	0.255792	-0.233493	-0.045257	0.205626	1.000000		
	0.2764	0.3218	0.8497	0.3845	-----		
RL	0.894913	0.176802	0.687401	0.712407	0.394659	1.000000	
	0.0000	0.4559	0.0008	0.0004	0.0851	-----	
VA	0.554725	0.549830	0.695626	0.564046	0.143122	0.640858	1.000000
	0.0111	0.0120	0.0007	0.0096	0.5472	0.0023	-----

The correlation analysis shows strong and statistically significant positive relationships between human development and three of the governance indicators: rule of law, control of corruption, and political stability. This means that improvements in legal institutions, reductions in corruption, and stable political climate enhance human development. The strongest relationship exists between human development and rule of law, highlighting the importance of a functioning justice system in promoting welfare and development. Similarly, strong correlations among rule of law, political stability, and voice and accountability indicate that democratic freedoms and institutional effectiveness reinforce each other. Moderate correlations, such as between control of corruption and political stability, suggest that stable environments support ef-

forts to reduce corrupt practices. In contrast, government effectiveness shows weak and insignificant correlations with most variables, implying that effectiveness alone does not translate into improved development or institutional performance when other governance weaknesses persist. The presence of several strong correlations among governance indicators also suggests potential multicollinearity concerns for regression analysis, indicating that these variables may influence each other closely. Overall, the results imply that development outcomes are highly dependent on institutional quality, legal frameworks, and political stability, reinforcing the argument that strengthening governance structures is essential for improving societal welfare and democratic trust.

Table 3. Granger Causality.

Null Hypothesis:	Obs	F-Statistic	Prob.
GE does not Granger Cause HDI	18	1.59799	0.2396
HDI does not Granger Cause GE		0.34675	0.7133
CC does not Granger Cause HDI	18	0.42722	0.6612
HDI does not Granger Cause CC		0.73207	0.4997
PS does not Granger Cause HDI	18	0.11798	0.8897
HDI does not Granger Cause PS		1.10034	0.3618
RQ does not Granger Cause HDI	18	0.09134	0.9133
HDI does not Granger Cause RQ		0.22480	0.8017

Null Hypothesis:	Obs	F-Statistic	Prob.
RL does not Granger Cause HDI	18	2.95359	0.0876
HDI does not Granger Cause RL		2.67222	0.1066
VA does not Granger Cause HDI	18	0.41143	0.6710
HDI does not Granger Cause VA		0.04373	0.9574
CC does not Granger Cause GE	18	0.54071	0.5949
GE does not Granger Cause CC		2.12908	0.1586
PS does not Granger Cause GE	18	0.41954	0.6659
GE does not Granger Cause PS		2.69059	0.1052
RQ does not Granger Cause GE	18	3.59802	0.0571
GE does not Granger Cause RQ		0.58099	0.5732
RL does not Granger Cause GE	18	0.54145	0.5945
GE does not Granger Cause RL		2.10334	0.1617
VA does not Granger Cause GE	18	0.20068	0.8207
GE does not Granger Cause VA		0.18225	0.8355
PS does not Granger Cause CC	18	0.69476	0.5168
CC does not Granger Cause PS		1.15521	0.3453
RQ does not Granger Cause CC	18	0.17945	0.8378
CC does not Granger Cause RQ		1.03611	0.3824
RL does not Granger Cause CC	18	0.86109	0.4455
CC does not Granger Cause RL		0.49887	0.6184
VA does not Granger Cause CC	18	0.14721	0.8645
CC does not Granger Cause VA		3.53884	0.0593
RQ does not Granger Cause PS	18	0.97722	0.4024
PS does not Granger Cause RQ		1.39144	0.2834
RL does not Granger Cause PS	18	2.25036	0.1448
PS does not Granger Cause RL		1.24270	0.3207
VA does not Granger Cause PS	18	1.31957	0.3008
PS does not Granger Cause VA		0.05115	0.9503
RL does not Granger Cause RQ	18	0.85767	0.4468
RQ does not Granger Cause RL		1.32842	0.2986
VA does not Granger Cause RQ	18	1.61232	0.2369
RQ does not Granger Cause VA		0.98493	0.3997
VA does not Granger Cause RL	18	0.06701	0.9355
RL does not Granger Cause VA		0.12595	0.8827

The Granger causality results reveal that, at 0.05 significance threshold, there is no evidence of predictive relationships among the variables examined. In other words, none of the governance indicators—Government Effectiveness, Con-

trol of Corruption, Political Stability, Regulatory Quality, Rule of Law, and Voice and Accountability—show statistically significant Granger causality with the Human Development Index (HDI), nor does HDI predict any of these gov-

ernance measures. Although Rule of Law and Regulatory Quality produced p-values below 0.10, these do not meet the stricter 0.05 criterion and therefore cannot be considered statistically meaningful within the accepted standard of analysis. This implies that past changes in governance performance do not systematically forecast future changes in human development outcomes, and improvements in human

development similarly do not predict subsequent governance shifts within the period studied. The absence of causality suggests that any relationship between governance and development may be long-term, indirect, or influenced by external factors not captured in the short-run dynamics of the dataset.

Table 4. ARDL Long-Run Result.

Variable	Coefficient	Std. Error	t-Statistic	Prob.
GE	-0.075927	0.066560	-1.140731	0.2746
CC	0.074268	0.023072	3.219016	0.0067
PS	0.022730	0.036193	0.628028	0.5409
RQ	0.001438	0.027632	0.052058	0.9593
RL	0.185462	0.056112	3.305219	0.0057
VA	-0.046458	0.051239	-0.906681	0.3811
C	0.553766	0.083190	6.656666	0.0000
R-squared	0.906819	Mean dependent var		0.424300
Adjusted R-squared	0.863812	S.D. dependent var		0.032342
S.E. of regression	0.011935	Akaike info criterion		-5.749399
Sum squared resid	0.001852	Schwarz criterion		-5.400893
Log likelihood	64.49399	Hannan-Quinn criter.		-5.681367
F-statistic	21.08557	Durbin-Watson stat		1.098760
Prob(F-statistic)	0.000005			

The long-run ARDL results assessed at the 5 percent significance level reveal that among the governance indicators included in the model, only Control of Corruption and Rule of Law exert a statistically significant influence on the dependent variable. Control of Corruption, with a positive coefficient of 0.074268 and a p-value of 0.0067, indicates that improvements in corruption control significantly enhance the dependent variable in the long run, suggesting that reducing corrupt practices strengthens institutional performance and economic outcomes. Similarly, Rule of Law demonstrates a positive and significant long-run effect, with a coefficient of 0.185462 and a p-value of 0.0097, implying that stronger legal frameworks, enforcement mechanisms, and judicial effectiveness contribute meaningfully to long-term improvements in the dependent variable. Conversely, Government Effec-

tiveness, Political Stability, Regulatory Quality, and Voice and Accountability all exhibit p-values greater than 0.05, indicating that their long-run effects are statistically insignificant within the study period. This suggests that changes in these governance dimensions do not reliably influence the dependent variable over time. Overall, the results indicate that only improvements in corruption control and the rule of law have a meaningful and statistically supported long-run impact when evaluated at the 5 percent significance level.

Normality test

The model also passed the Normality test based on the Jarquer-Bera value of 1.554338- and the probability of 0.459706 which is above the required normal 5 percent level. Hence, the residuals are normally distributed across observations as shown in Figure 1.

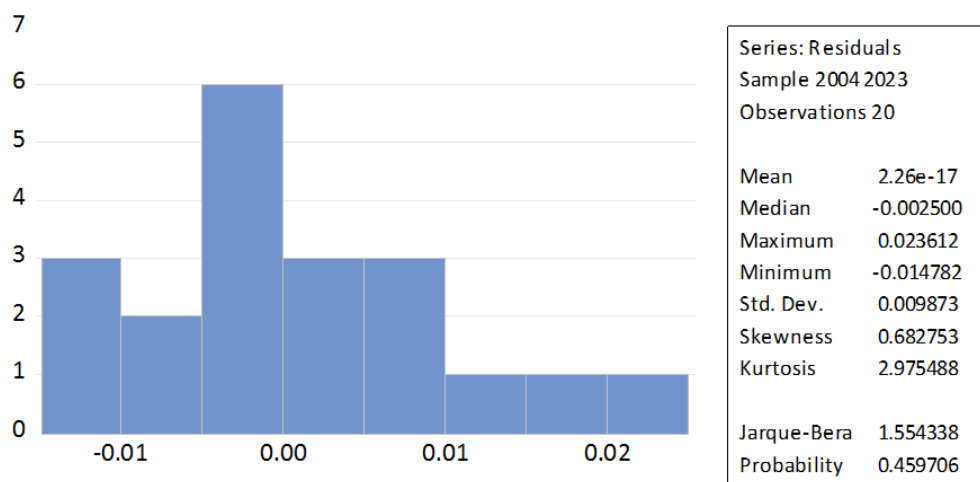


Figure 1. Histogram of Regression Residuals.

Serial correlation Test

The null hypothesis cannot be rejected as the probability value is greater than the normal 5 percent requirement of no

serial correlation in the model. Therefore, the model is free from serial correlation as shown in [Table 5](#).

Table 5. Breusch-Godfrey Serial Correlation LM Test.

Null hypothesis: No serial correlation at up to 2 lags			
F-statistic	1.500937	Prob. F (2,11)	0.2652
Obs*R-squared	4.287817	Prob. Chi-Square (2)	0.1172

Heteroskedasticity test

The estimated model passes the test for heteroscedasticity test based on the regression of squared residuals on squared

fitted values. The White Heteroscedasticity test below clearly shows that the p-value of about 0.4806 which is approximately 48 percent is more than the critical value of 5 percent.

Table 6. Heteroskedasticity Test: Breusch-Pagan-Godfrey.

Null hypothesis: Homoskedasticity			
F-statistic	0.820076	Prob. F(6,13)	0.4806
Obs*R-squared	5.491442	Prob. Chi-Square(6)	0.4825
Scaled explained SS	2.291698	Prob. Chi-Square(6)	0.8910

Stability Test

Pesaran and Pesaran (1997) suggests that the test for the stability for parameters using cumulative sum of recursive residuals (CUSUM) and cumulative sum of squares of recursive residuals (CUSUMSQ) plots be conducted after the model is estimated. This is done to get rid of any bias in the results of the estimated model due to unstable parameters. The

results for CUSUM and the results depict that the plots of CUSUM and CUSUMSQ for the estimated ARDL model shows CUSUMSQ are depicted in [Figure 2](#) and [Figure 3](#) respectively. The absences of instability of the coefficients since the plots of all coefficients fall within the critical bounds at 5 percent significance level. Therefore, the estimated coefficients in the model are stable over the study period.

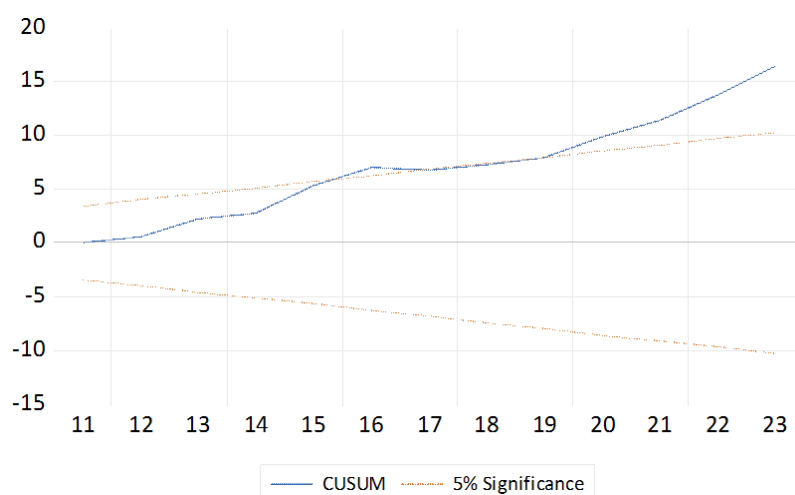


Figure 2. CUSUM Test for Parameter Stability of the Regression Model.

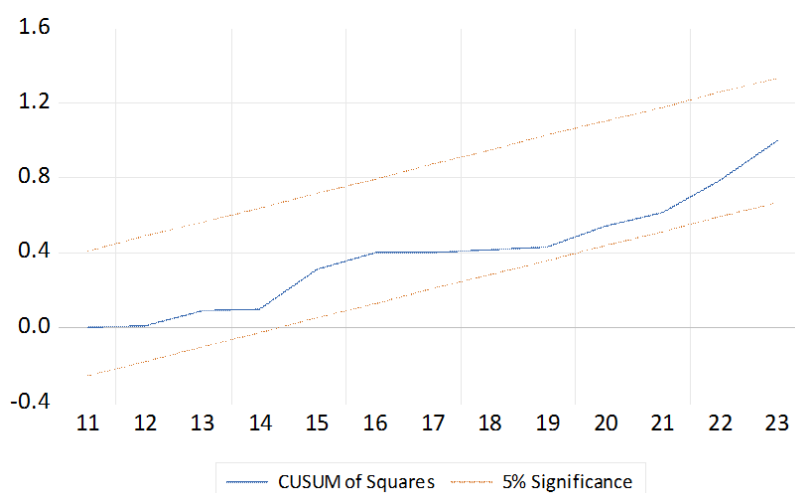


Figure 3. CUSUM of Squares Test for Parameter Stability of the Regression Model.

5. Discussions of Results

The findings of this study reveal that governance is a key factor for human development in the long term. Specifically, Rule of Law and control of corruption significantly and positively influenced human development. The result indicates that stronger judicial independence, predictable legal systems, and equitable law enforcement is relevant for achieving higher levels of human development. It aligns with the findings of [21].

Similarly, the study confirmed that control of corruption has positive significant impact on human development. This is in line with [20] and [16], who explain the negative role of corruption in diverting resources toward personal gain. Hence, the study's finding highlights the critical role of transparency and accountability in fostering efficient resource allocation, service delivery, and public trust, which are vital for improving education, health, and living standards.

In contrast, despite their theoretical importance in the political economy framework, Government Effectiveness, Reg-

ulatory Quality, Political Stability and Voice and Accountability did not show any significant relationships with HDI. With regard to government effectiveness, this study disagrees with [25] and [22]. This contradiction may be due to the difference in the methodology, wherein these studies adopted panel data.

In terms of regulatory quality, the result disagrees with [20], who report that strong and effective regulatory frameworks play a significant role in improving human development by enhancing institutional performance, strengthening accountability, and creating a conducive environment for economic activity. However, the current study finds no significant long-term impact of regulatory quality on HDI, suggesting that regulatory reforms may not yield measurable improvements unless they are accompanied by effective enforcement, institutional coherence, and sustained governance commitments.

The result that political stability insignificantly impacts HDI in the long-term accords with the findings of [23], revealing that the benefits of political stability on human de-

velopment are often indirect and materialize only when stability is sustained over long periods and supported by consistent policy implementation. This aligns with the present finding, indicating that political stability alone is insufficient to drive HDI without accompanying long-term development investments.

Finally, accountability and voice were not a significant determinant for human development. Similar findings have been reported in studies by [23], who did not find any significant relationship between any of the governance indicator and HDI. In the context of Sierra Leone, the finding denotes the mere presence of democratic mechanisms or administrative structures that does not guarantee developmental outcomes by allowing citizens to hold public official responsible for their actions and decisions.

6. Conclusion

The study determines the governance factors drive human development in Sierra Leone. Based on the ADRL long-run results, control of corruption and rule of law are significant governance factors that affect human development. However, government effectiveness, political stability, regulatory quality and accountability and voice lack any impact on HDI. Hence, the study recommends that judicial independence, equitable access to justice, and consistency in law enforcement. Additionally, the fight against corruption should be strengthened and there is a strong need to promote integrity among public servants. Citizens' role in holding public officials accountable is necessary for improving the influence of accountability and voice on human development. Moreover, beyond effective allocation of resources toward health and education, the government should monitor budget implementation to avoid wastages and diversion of resources for personal gain. Finally, based on the limitations of the study - small sample size and the presence of positive autocorrelation, future studies should expand the dataset across a longer time frame or include additional governance indicators to address issues of autocorrelation and capture dynamic interactions. Employing advanced econometric methods such as panel regression or structural equation modelling could further clarify causal pathways between governance and human development.

Abbreviations

HDI	Human Development Index
CC	Control of Corruption
GE	Government Effectiveness
PS	Political Stability
RQ	Regulatory Quality
RL	Rule of Law
VA	Voice and Accountability
ADRL	Autoregressive Distributed Lag

Author Contributions

Shekou Ansumana Nuni is the sole author. The author read and approved the final manuscript.

Conflicts of Interest

The author declares no conflict of interest in any form.

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