Governance Performance and its Impact on Economic Growth in Ethiopia: Evidence from Time–Series Analysis (1994-2023)

[1] Ashenafi Debebe Hirpato; [2] Prof. D. Ashalatha
[1] A research Scholar, Department of Economics, Andhra University, Visakhapatnam, India
[2] MA. Ph. D. in Department of Economics, Andhra University, Visakhapatnam, India

Abstract: This study analyzes the impact of governance performance on economic growth in Ethiopia from 1994 to 2023, using time-series data and the ARDL model. It examines governance performance variables such as government effectiveness, control of corruption, and regulatory quality on gross domestic product (GDP), alongside control variables of FDI and current account balance (CAB). The results indicate that government effectiveness does significantly and negatively affect economic growth in the short term, while control of corruption has apositivemedium-term effect. Regulatory quality shows no significant impact. FDI has a negative short-run impact on GDP, and the current account balance (CAB) significantly influences growth, with a negative relationship. The study suggests strengthening governance institutions, prioritizing anti-corruption measures, improving regulatory quality, and managing FDI and current account imbalances to promote sustainable economic growth in Ethiopia.

Keywords: Governance Performance, Economic Growth, ARDL Model, Time Series Analysis, Ethiopia

1. Introduction

Internationally, the association between governance and economic growth has become a growing concern among scholars and policymakers. Scholars and policymakers have different opinions on the role of governance in growth (Hawkes, D., and Yerrabati, S., 2015). The study by Mahran (2023) applied spatial econometrics in analyzing the data of 116 countries, showing that welfare of governance quality, especially those concerning decreasing corruption texture and increasing political stability, significantly affect economic growth. This contributes to the research that countries with strong governance systems have higher economic productivity, given that governance has an impact on how well public institutions function and their capacity to attract investments. Likewise, Uddin and Khan (2023) explored governance indicators in 156 nations and reported that

better governance, particularly control of corruption, political stability influences economic growth across countries where income levels differ. These are critical lessons and it is highly significant that good governance is the foundation for long-termeconomic growth around the world.

Governance quality as a driver of economic growth in developing countries. Governance is the mainstay for sustainable development. As Rodrik (2016) notes, the ability of institutions to secure property rights, establish rule of law as well as maintain social peace, are integral for economic growth. Good governance regimes are believed to play a critical role in underpinning long term economic success, promoting stability and investment (North, 2019).

In Africa, governance continues to play a critical role on developments in the economy but experiences have been mixed. Karagiannis and Paleologou (2025) on their part centered an investigation in 50 African countries to find out good governance is positively related to economic growth. This study found that countries lower on the Ibrahim Index of African Governance (covering safety and rule of law, sustainable economic opportunity, participation and human development) have weaker economic performance. Nevertheless the terrain is not devoid of Africanbased challenges for governance. A majority of African nations have experienced a worsening in the quality of governance over the last decade, mainly in matters such as security, democracy and human rights, according to the Mo Ibrahim Foundation's 2024 report. This erosion of governance has allowed an increase in authoritarian governments that impede economic development and the normalization of society.

In Sub-Saharan Africa, governance reforms have emerged as an integral part of growth strategies. Obeng-Odoom (2021) contends that Rwanda and Bhutan have shown "how good governance reforms can lead to economic transformation," indicating further, that better governance is conducive of investments and faster rates of growth. Furthermore, Mengesha and Singh (2020) also emphasize the role of governance indicators such as government effectiveness and control of corruption in establishing a favorable environment for sustained growth in the region.

Ethiopia's economic development has been an impressive significant, particularly in the last 20 years with one of the fastest growing economies in sub-Saharan Africa. Ethiopia had an average annual GDP growth rate of 10.8% from 2003 to 2013 (World Bank, 2015), due mainly to massive investments in infrastructure, agriculture and industry. Ethiopia's remarkable growth achievements have, however, been hindered by governance challenges. The nation has been plagued by political instability, corruption and poor performance in the public sector, constraining its ability to nurture its economic expansion. According to Mulugeta (2023), although government's enormous expenditure

on sectors, such as agriculture and education in particular, effective administration and governance has been missing in practice.
In addition, it's going through a pro-democracy transition from decades of autocratic rule and this period of instability has also weighed on investor confidence and growth outlook. KEY ISSUES Given the above challenges, this study is aimed at assessing the impact of governance performance specifically on economic growth in Ethiopia and thus contribute to the understanding which will enable policymakers to adjust their policies on effective governance that can support the sustainable development. This study, by isolating the influence of governance on economic development in Ethiopia, therefore provides further insight into how institutional quality can drive or hinder growth in developing countries.

The objective of this study is to investigate the effects of governance performance on economic growth in Ethiopia over the period 1994–2023. This study also evaluated the short and long run effects of governance indicators, namely; government effectiveness, control of corruption and regulatory quality, on economic growth in Ethiopia. The results will generate knowledge on the effectiveness of governance in shaping economic outcomes and policy recommendations for further enhancing governance in Ethiopia, in order to sustain inclusive growth. Eventually, the specific aims for this study were as follows

- To determine the effects of government effectiveness on economic growth.
- To evaluate the effectiveness of controlling corruption on economic growth.
- To examine the impact of regulatory quality on economic growth.
- To investigate the influence of foreign direct investment on economic growth in Ethiopia.
- To evaluate the impact of the current account balance on economic growth in Ethiopia.

2. Review of Literature

2.1. Theoretical Review

2.1.1. New Institutional Economics (NIE) Theory

The institutionalist methodology develops from general ideas about human agency, institutions and the evolutionary character of economic processes to specific ideas and theories that relate to complex economic institutions or varieties of economy (Hodgson, G. M. 1998). New Institutional Economics is an interdisciplinary enterprise originally comprising economics, law, organization theory, political science, sociology, and anthropology that addresses institutions of social, political, and commercial life (Klein P.G. 1998). One of the reasons is that, as North (1990), the relationships between

institutions and social capital are close to affecting economic, financial, and financing decisions involving market players. As Hodgson (G. M., 1998) argues the institutionalist project operates through a progression from general to specific ideas; beginning with basic notions about human agency, institutions and the evolutionary character of economic processes to more detailed theories and guidelines with reference to particular economic institutions or kinds of economy. As argued by Shapiro (2025) poor countries with good institutions have relatively high pollution concentration within clean industries. The authors infer from the literature that robust institutions contribute to the comparative advantage in the clean sector.

2.1.2. Governance for Growth Theory

Economic governance is necessary because markets and economic activity and transactions more generally do not operate well without it. Efficient institution or good governance is required to achieve three means of contributions that the market economies typically deliver, namely Security of property rights, enforcement of contracts and collective action (Dixit 2009). Governance cannot be isolated from the more general issues around how the state should intervene in relation to growth. A number of the prevalent ideas about governance reform priorities for developing countries are implicitly underpinned by a specific conception of the role of government: one that is based on markets being largely able to allocate resources and summon forth (from entrepreneurs) the necessary for economic development to occur (Khan, M.2012).

Rodrik (2016) posits that the theory that around high quality governance is a key determinant of economic performance in Africa, and through enhancing governance we can as such unlock growth potential by reducing barriers to doing business and encouraging investment. In the same vein, growth governance theory contends that good governance is a precondition and a catalyst to promoting economic growth. This theory contends that an enabling environment such developed through good governance, a which is characterized by the elements of transparency, accountability and rule of law fosters economic activities consequently growth (Zechariah & Wanujeh, 2025). It is suggested in the literature that, given the nature of the prevailing modern economy, developing countries need to act now and at home by improving governance dimensions and adopting good governance practices which are nationally relevant but internationally comparable and equitable. Gani, A. (2011).

2.1.3. Dependency Theory

A third theoretical framework, the Dependency Theory (DT), offers some criticism towards economic growth. It claims that the dependency of nations on the global economy for resources can be harmful to development as by strengthening or weakening

some nations, depending on how truly powerful they are. Frank (1969) states that colonialism and the economic institutions it established in developing countries gave rise to a situation of dependency preventing maximum growth. This theory is particularly applicable to Africa, where past forms of exploitation and bondage with external powers have constituted the challenge of governance and economic (Zechariah & Wanujeh, 2025).

2.1.4. Public Choice Theory

Buchanan and Tullock (1962) also birthed Public Choice Theory – a framework in which government is represented as the sum-total of self-seeking rational individuals with little reason to work for the public good. In this theory, of bad governance is due to the failure of governments to have any accountability and that leads policies for elites at the expense at a society's citizens. The lack of governance: The political patronage and corruption in Ethiopia has hampered the growth of economy Garedow (2022) call for improvement of institutional quality that supports development friendly states. Public governance is an organized set of institutions by which the public exercises authority over a central bank, enacted through a country's legislative and executive authorities (Oritani, 2010).

2.1.5. The Capability Approach

The capability approach developed by Sen (1999) offers a different vision, as it relates not only to economic growth but also the capacity of people to achieve fulfillment through living a life beneficial for them. Here, economic development is a means of promoting human capabilities including access to education, health and economic opportunities.

Likewise, the capability approach has gained in importance in academia and policy-making during the past decades. The commitment that lies at the heart of the capability approach is that when appraising people's well-being or quality of life, or making judgments about equality or justice, or how far a community receives its due share in development assessments – less emphasis should be placed on resources (or on people's mental states as such), and more weight attached to the effective opportunities individuals have to lead the kinds of lives they themselves have reason to value. The capability approach is a comprehensive normative framework to appraise individual well-being and social ordering, policies, and vision on societal change (Robeyns, I. 2006).

Good governance translates into more equitable economic outcomes as the fruits of economy grow are shared by marginalised groups, and is a prerequisite for inclusive and sustainable development in Ethiopia (Kabeer 2019).

2.2. Empirical Review

2.2.1. Government Effectiveness and Economic Growth

The relationship between government effectiveness and growth has been well-researched, particularly in the developed countries. Springer (2020) also discovered that improvements in governance, particularly the rule of law and control of corruption, lead to optimal economic performance through improved levels of market efficiency, investment attractiveness and stability favourable for sustainable growth. Similarly, Arezki et al. (2023) conducted an analysis on 116 countries with spatial econometric tools and found a significant positive effect of governance where the authors conclude that 1% rise in better governance performance, namely controlling corruption and better regulatory quality provides up to a 1% increase in GDP growth. This illustrates a positive spillover effect of good governance, not just for the country but also in neighboring regions through better economic integration.

In low and middle income countries, governance is also key to determining economic outcomes. Pattillo et al. (2023) discovered that bad political governance causes wasteful fiscal policy to reduce economic growth. Yet when coupled with governance improvements, such as a rise in regulatory quality and a reduction in corruption control, fiscal policies have comovement results much larger. Using Africa as an example, Karagiannis and Paleologou (2025) also have found a significant positive relationship between government effectiveness and growth in which economies with strong governance attracted more foreign investment and showed stronger economic performance, whilethose ranked ones stagnated. According to this discussion, the following hypotheses were formulated:

H1: Governance Effectiveness Significantly Impacts Economic Growth in Ethiopia

2.2.2. Control of Corruption and Economic Growth

Control of corruption also plays a role in economic growth, especially in economies of developing countries. Various empirical studies indicate that corruption adversely affects economic performance. Arezki et al. 2023 discovered that better governance especially encompassing controlling corruption leads to a direct and significant impact on GDP growth. Drawing from their sample comprising 1% improvement of corruption leads to a 1% correlation with GDP growth. Hence, the control of corruption is vital for economic development. Similarly, Ayele and Johnson 2023 who studied 35 Sub-Saharan African countries between 1996 and 2021 noted that corruption reduction promotes economic diversification. This supports long-run growth. For instance, the effect was more pronounced in Ethiopia where better governance can help the economy transition from agriculture and promote industrialization.

In Ethiopia, Garedow (2022) established a long-term positive relationship between control of corruption and GDP growth. But the opportunities from better governance were dwarfed by political instability and lack of enforcement of rules, driving home that constant reforms are needed. In addition, Beyene (2022) noted that in spite of a robust growth pattern, corruption in the public and private sectors has still been one of the factors constraining Ethiopia's economic growth. The research recommended institutional reforms to enhance transparency and curb corruption so that Ethiopia may realize its developmental potential (Arezki et al., 2023; Ayele & Johnson, 2023; Garedow, 2022; Beyene, 2022). According to the above review, the following hypotheses were formulated:

H2: Control of Corruption Significantly Influences Economic Growth in Ethiopia

2.2.3. Regulatory Quality and Economic Growth

Regulatory quality significantly affects economic growth, especially in the developing world. The evidence is clear: Good regulatory systems support an investment-, innovation- and financially sustainable environment. Springer (2020) also discovered that good governance had a contribution to significantly better economic performance in the developed states through-regulatory quality and rule of law indicators. This is in line with the fact that strong regulatory institutions can serve as a catalyst to enhance efficiency, encourage investment and prevent employment fluctuations in an economy. This effect is even larger for regulatory quality in Africa. Karagiannis and Paleologou (2025) concluded that there was a significant positive association between good governance, in particular regulatory quality, and economic growth among African countries. Countries with better regulatory environments had higher amounts of foreign investment and economic growth, and countries with more corruption did not achieve that level of growth.

In the case of Ethiopia, Ayele and Johnson (2023) underscores indeed that regulatory quality is critical to stimulate economic diversification. The found that more effective regulatory regimes led to the development of more diversified economies, which were in turn associated with strong long-term growth. However, the IMF (2024) indicated that for Ethiopia, macro-economic reforms have boosted imports and- outward-oriented growth even as inefficient public service delivery and red tape have impeded overall returns from these reforms. The IMF recommended additional regulatory reforms to bolster growth over the long term (Springer, 2020; Karagiannis & Paleologou, 2025; Ayele & Johnson, 2023; IMF, 2024). According to the above discussion, the following hypotheses developed.

H3: Regulatory Quality Affects Economic Growth in Ethiopia

2.2.4. Foreign Direct Investment (FDI) and Economic Growth

The correlation between FDI and economic growth is extensively studied, especially in developing countries where FDI is considered to be a significant source of capital, technology transfer and market. Specifically for the case of Sub-Saharan Africa (SSA), recent works show that FDI has a positive effect on GDP growth, but this depends upon country characteristics. For example, Woji (2024) established that FDI substantially drives growth in SSA economies and such benefits are made even more substantial with better institutions and governance. In the same vein, Ayenew (2022) found that FDI have a significant long-run relationship with growth in 22 SSA economies but quite weak or unstable short-run connection. Okwu et al. (2025) also pointed out that under-valued institutions might detract from the positive impact of FDI in as many as 29 SSA nations.

In Ethiopia, the ARDL model result of earlier research gives evidence for a negative short-run association between FDI and economic growth, which might be attributed to difficulties in utilizing foreign capital due to inadequacy of infrastructure, policy inefficiencies or profit repatriation. These findings are consistent with other studies lending support to the argument that although there exists long-run potential associated with FDI, short-run costs must be effectively managed for a more sustainable growth pattern (Woji, 2024; Ayenew, 2022; Okwu et al., 2025). Based on previous discussion the following hypotheses was developed:

H4: Foreign Direct Investment (FDI) Significantly Impacts Economic Growth

2.2.5. Current Account Balance (CAB) and Economic Growth

The current account balance (CAB), defined as the difference between a nation's savings and its investment, is an important factor in a country modernization process. A positive CAB signals higher national savings, while a deficit is often associated with excessive dependence on foreign capital and debt that can weigh on growth, particularly in many developing economies. Hammed et al. (2024) discovered that current account imbalances have an appreciably negative impact on the gdp growth rate in sub-saharan africa, where after recurrent deficits generate dampened growth from issues such as accumulated external debt and declining investors' perception. Likewise, Monamodi (2024) used ARDL on South Africa (2015–2022), and current account deficits had the reverse effect with negative effects on growth periods of external shocks such as the COVID-19 pandemic. The results also indicate that unmanaged current account imbalances impair economic growth by constraining the availability of finance for investment in the absence of foreign credit.

In Ethiopia, the short-run negative association between current account balance and economic growth is consistent with these results. Unabated current account deficit in Ethiopia and growing dependance on foreign loans would probably hamper its growth in

the near-account period. Nevertheless, falling importance of the current account balance in its lagged terms indicate that the effects are declining as Ethiopia corrects itself in its financial flows (Hammed et al., 2024; Monamodi, 2024). The earlier studies helped to develop the following hypotheses:

H5: Current Account Balance Significantly Influences Economic Growth in Ethiopia

3. Research Methodology

The study measured the governance performance and its influence on economic growth in Ethiopia from 1994-2023. The study also assumes GDP as being dependent variable and while government effectiveness, control of corruption and regulatory quality as independent variables with, FDI, Current Account Balance (CAB) are the explanatory variables. The methodology is primarily based on econometric technique, particularly ARDL (Autoregressive Distributed Lag), unit root-test, cointegration analysis and diagnostic tests to achieve robust results. The secondary sources of data used were obtained from World Bank, IMF, World Governance Indicators (WGI) and National Bank of Ethiopia (NBE), spanning the period 1994–2023. The researcher used an ARDL model due to its capacity to deal with variables of diverse order of integration and estimate long-run relations as well as short run ones. Afterwards, a diagnostic testing for serial correlation, heteroscedasticity and normality was conducted as part of the robustness check.

4. Result and Discussion

4.1. Descriptive Statistics

The spread of the descriptive statistics of the main economic variables analyzed, GDP, government effectiveness (D_GE), control of corruption (CC), regulatory quality (RQ), foreign direct investment (D_FDI), and current account balance (CAB), indicates considerable divergences and different economic situations. The mean of GDP (4.711) implied moderate development, a high standard deviation (4.082), presented large dispersion from the average value.

Table 1: Descriptive Statistics Summary

Statistics	GDP	D_GE	CC	RQ	D_FDI	D_CAB
Mean	4.711269	0.829538	29.71665	13.82196	0.060376	-0.161757
Median	5.643744	0.540541	30.58252	13.72549	-0.011700	-0.019547
Maximum	10.22182	10.15065	40.86538	22.00957	3.026700	7.485715
Minimum	-6.442890	-9.871794	0.000000	0.000000	-3.242600	-6.050091
Std. Dev.	4.081953	4.870436	8.861880	4.173767	1.522745	3.237845

Source: Researcher own computation, E views 13.

Government effectiveness has a mean value of 0.830, which indicates a moderate quality of governance, but with higher standard deviation at 4.870 and outliers (very low scores for bad governance). Control of corruption presents a mean of 29.717 and some dispersion (SD = 8.862); i.e there are different levels of governance in countries. The average regulatory quality is 13.822 with moderate deviations (SD = 4.174). On average (mean = 0.060) FDI inflow is low; however, it exhibits moderate variability (SD = 1.523). The average current account balance is slightly negative (- –0.162) with high variation (SD = 3.238). This diversity in economic and governance conditions requires more detailed analysis to explore the main factors of this variation.

4.2. Correlation Analysis

The correlation matrix analysis of the few variables covering economy and governance during 1994–2023 present expected and less obvious links among them. We consider several other variables as indicators, such as GDP, government effectiveness (D_GE), control of corruption (CCR), regulatory quality (RQ), foreign direct investment (D_FDI) and current balance of payment (D_CAB).

Table 2: Correlation Analysis

	GDP	D_GE	CC	RQ	D_FDI	D_CAB
GDP	1.000000	0.068703	0.172881	0.395769	-0.152790	0.009174
D_GE	0.068703	1.000000	-0.115820	0.048784	-0.223449	0.142072
CC	0.172881	-0.115820	1.000000	0.527699	-0.058230	0.162611
RQ	0.395769	0.048784	0.527699	1.000000	-0.147313	0.107729
D_FDI	-0.152790	-0.223449	-0.058230	-0.147313	1.000000	-0.062922
D_CAB	0.009174	0.142072	0.162611	0.107729	-0.062922	1.000000

Source: Researcher own computation, Eviews 13.

The findings are generally weak or negligible in strength. GDP also has relatively weak positive correlation with government effectiveness (0.0687) and control of corruption (0.1729), which implies that economic growth is not dominantly integrated with governance improvement. GDP however is only moderately positively correlated with regulatory quality (0.3958), which means that better regulation is to some extent each related with growth.GDP is found to have negative but weak relationship with FDI (-0.1528), this suggests that strong economic growth does not necessary lead to more foreign investment. GDP is very weakly related to the current account (-0.0092), meaning very little response at all there. FDI is weakly negatively correlated with government effectiveness (-0.2234), and regulatory quality has a moderate positive relationship to control of corruption (0.5277). FDI and the CAB show a negative but weak correlation (-

0.0629), revealing that FDI has little influence on the external financial situation. Taken together, the weak correlations indicate multi-mediated relationships, which mean that there are other factors affecting economic development and governance.

4.3. Unit Root Tests

The stationary of the variable is tested by PP (Philips Perron) Unit Root Test. It is testing whether each variable has a unit root (is non-stationary) versus with an interceptor trend. The findings suggest a combination of both stationary and non stationary variables. GDP, regulatory quality (RQ) and control of corruption (CC) are all integrated at level I(0), that is they do not need differencing.

Table 3: Unit Root Test Results

Variables	At Level		At First Level	
Series	Trend		Trend	
	T-Statistic	**Probability**	**T-Statistic**	**Probability**
GDP	-3.573340	0.0129		
GE	-1.844158	0.3527	-5.670733	0.0001
RQ	-3.248948	0.0271		
CC	-3.460270	0.0168		
FDI	-2.854896	0.0632	-6.163904	0.0000
CAB	-2.801478	0.0704	-5.696889	0.0001

Source: Researcher own computation, Eviews 13

The t-statistics for these variables are also significant at 5% implying stationarity without transformation. On the other hand, government effectiveness (GE), FDI and current balance of payments (CAB) are unit root at level as they fail to reject the null of unit root by using t-statistic. However, all the three variables become stationary at I(1) after differencing (and t-statistics are significant at 5% level), suggesting that they need to be first-differenced in order for them to be stationary. These results emphasize the necessity of carefully differencing non-stationary variables in order to avoid misleading results in time-series analysis, especially when estimating long-run relationships or conducting cointegration tests.

4.4. Bound Test

The ARDL bounds test is to check the presence of long run relationship (co-integration) among the variables of the model. The null hypothesis of the test is that there exist no

cointegration among these series and looking if calculated value of F-statistic from table can be placed in comparison with critical values (bounds) from I(0) (stationary variables), or with those ones I(1) (non-stationary). The test outcome is presented in the form of evidence for the presence of a long-run relationship among the model variables.

Table 4: Bound Test of Co-integration

Null Hypothesis: No long run relationship exists		
Test statistics	Value	K
F-statistic	3.575117	5
Critical Value Bounds	Lower bound	Upper bound
Significance	I(0) Bound	I(1) Bound
10%	3.157	4.412
5%	3.818	5.253
1%	5.347	7.242

Source: Researcher own computation, Eviews 13

The bound test indicates that there is no long-run cointegrating relationship among the variables of this model. The calculated F statistic = 3.575117 lies between the critical values at 10% level so a not decided effect also at this confidence level. The critical values for F-statistics are 3.818 and 5.347 for the 5 percent, and 1 percent levels, respectively which imply that we cannot reject the null of no cointegration. This indicates that at these levels the variables are not cointegrated.

Last but not least, the bounds test and t-statistics suggest that there is no long run relationship between the variables in model. It is therefore, more relevant that the short-run relationship between these variables be considered in this study on account of no cointegration to check for only long- run kinship.

4.5. Auto-Regressive Distributed Lags (ARDL) Models

General ARDL Model Equation for GDP

$$GDP_t = \alpha_o + \sum_{i=1}^{p} \beta_i GDP_{t-I} + \sum_{j=1}^{q} \delta_j GE_{t-j} + \sum_{k=1}^{r} \gamma_k CC_{t-k} + \sum_{l=1}^{s} \theta_l RQ_{t-l} + \sum_{m=1}^{t} \emptyset_m FDI_{t-m} + \sum_{n=1}^{u} \lambda_n CAB_{t-n} + \epsilon_t$$

Where:

- $GDPt\ is\ the\ dependent\ variable\ (GDP)\ at\ time\ ttt,$
- $GEt, CCt, and\ RQt\ are\ the\ independent\ variables$
- $FDIt\ and\ CABt\ are\ the\ control$
- $\alpha 0\ is\ the\ intercept,$
- $p, q, r, s, t, and\ u\ represent\ the\ lags\ for\ each\ respective\ variable,$
- $\epsilon t\ Error\ Correction\ Model\ (ECM)$

Error Correction Model (ECM) for Short-Run Dynamics

$$\Delta GDP_t = \mu_o + \sum_{i=1}^{p} \beta_i \Delta GDP_{t-1} + \sum_{j=1}^{q} \gamma_k \Delta GE_{t-j} + \sum_{k=1}^{r} \gamma_k \Delta CC_{t-k} + \sum_{l=1}^{s} \theta_l \Delta RQ_{t-l} + \sum_{m=1}^{t} \emptyset_m \Delta FDI_{t-m} + \sum_{n=1}^{u} \lambda_n \Delta CAB_{t-n} + \beta ECM_{t-1} + \epsilon_t$$

Where:

- Δ denotes the first difference of each variable
- ECMt − 1 is the error correction term
- β represents the speed at which the variables return to equilibrium.

4.6. Lag Selection Criteria

The VAR (Vector Autoregressive) Lag Order Selection Criteria' print is for comparing several lag lengths and find the best model. Selecting the lag order is crucial in time series analysis since this parameter controls how well the dynamic characteristics can be effectively captured without indicator of overfitting. The output about lags 0–2 is given in terms of different criteria: LR (Likelihood Ratio), FPE (Final Prediction Error), AIC (Akaike Information Criterion), SC (Schwarz Criterion) and HQ (Hannan-Quinn).

Table 5: Lag selection Criteria

Lag	LogL	LR	FPE	AIC	SC	HQ
0	-428.0168	NA	3694417.	32.14939	32.43736*	32.23502
1	-371.3968	83.88142*	862322.0*	30.62199*	32.63773	31.22138*
2	-335.8316	36.88251	1394550.	30.65419	34.39772	31.76734

Source: Researcher own computation, Eviews 13.

At lag 0, the FPE is very high at 3,694,417 indicating very poor forecasting performance. And again a high AIC=32.14939 and SC+HQ hint that lag 0 is not the best one. By contrast, lag 1 is more preferable with LogL -371.3968 and the smallest AIC 30.62199 indicating well fitting and predictve performance. Lag 2 is not significant since the FPE value, 862,322, is a great deal less than lag 0 and the LR statistic of 83.88142 is high which indicates that lag 1 can be set as its optimum order.

In contrast, lag 2 is a little better than the lag 0 but not as well as to lag 1. Its FPE and AIC are larger, indicating a poorer fit. Therefore, lag 1 is by all standards preferred, balancing model fit and parsimony most effectively.

4.7. Diagnosing testing results for ARDL Model

The Diagnostic Checks on the Residuals are one of the most important steps in examining the model quality and soundness econométrique. These tests scrutinize the fundamental hypothetical properties of the residuals, such as homoskedasticity, normality and independency which are essential for sound inferences.

Table 6: Diagnosing testing results for ARDL Model

Test Type	Null Hypothesis (H_0)	Alternative Hypothesis (H_1)	Test Used	F-statistics (p-value)	Decision (P ≥ 0.05)
Serial Correlation	No serial correlation	Serial correlation	Breusch-Godfrey Serial Correlation LM Test	1.447(0.30)	Accept Ho
Homoscedasticity	Homoscedasticity	Heteroscedastic	Breusch-Pagan Test	1.59(0.24)	Accept Ho
Omitted Variable	No omitted variable	Omitted variable	Ramsey RESET Test	2.09(0.23)	Accept Ho
Normality of Residuals	Residuals are normally distributed	Not normally distributed	Jarque-Bera Test	1.40(0.49)	Accept Ho

Source: Researcher own computation, Eviews 13.

The provided data were obtained from Heteroskedasticity Test (Breusch-Pagan-Godfrey), Athnormalit Jarque-BeraTest and Breusch-Godfrey Serial Correlation LM Test. Let's take a closer look at the details of each test and its implications for the model.

The results of the diagnostic tests for the ARDL Model also substantiate conformity to important econometric assumptions of the model and acceptance thus acceptation for its reliability. The Breusch-Godfrey Serial Correlation LM Test in order to test if residuals are serially correlated or not is no serial correlation as the p-value (0.30) is > 0.05 hence residuals do not have any serial correlation. The Breusch-Pagan test for homoscedasticity also indicated no problems (p=0.24), demonstrating that the variance of the residuals did not change and there was no heteroscedasticity issue. There were no omitted variables, as the p-values for the Ramsey RESET Test (0.23) allowed us to accept of just a hypothesis. Furthermore, the Jarque-Bera Test for normality showed that the residuals are normally distributed with a p-value of 0.49, validating the assumption of normality.

The diagnostic tests indicate that the ARDL model is well specified, and free from serial correlation, heteroscedasticity, omitted variable or non-normal residuals. All these observations illustrate the merit of our model, which can accurately and stably estimate the associations between variables, so that they are further studied and inferred.

4.8. Variable Inflation Factor (VIF)

The VIF (Variance Inflation Factor) test results also indicate that most of the variables in ARDL model do not suffer from serious multicollinearity issue. The VIF of GDP, D_GE,

D_FDI and D_CAB are well below 10, there is no problem of multicollinearity for these four variables. The highest VIF on GDP lags is 5.279172, which means there is no multicollinearity. Furthermore, D_GE lags have VIFs between 2.609890 and upto 4.320384 which is acceptable.

However, here CC also has a very high VIF as well since the values of 10 to lags 17.48462. This implies that CC and its lags are too collinear with other variables, and thus the coefficient estimates may be unstable. An arbitrarily picking solution between to remove some of the CC lags or combining correlated ones must be used to address this problem.

VIF for RQ=5.839107 moderate multicollinearity but its worth keeping an eye on it. The free-term however has a huge uncentered VIF. But that is (perfectly) ok in regression and cannot be seen as something due to multicollinearity. In conclusion, solving multicollinearity of CC and RQ by some proper method could get the model's stability and improve the consistency of coefficient estimate.

Table 7: VIF Test Result

Variable	Coefficient Variance	Uncentered VIF	Centered VIF
GDP(-1)	0.023942	3.492959	1.477166
GDP(-2)	0.036602	5.339398	2.258659
GDP(-3)	0.081579	11.81286	5.279172
D_GE	0.044747	3.797182	3.733399
D_GE(-1)	0.048707	4.439117	4.320384
D_GE(-2)	0.032373	2.745365	2.609890
CC	0.114941	422.5772	17.48462
CC(-1)	0.093795	331.8409	15.58339
CC(-2)	0.040698	136.2246	11.27416
RQ	0.162342	128.9698	5.839107
D_FDI	0.411964	3.587095	3.580888
D_FDI(-1)	0.317209	2.727717	2.716121
D_FDI(-2)	0.276547	2.345943	2.328306
D_CAB	0.063380	2.482851	2.478233
D_CAB(-1)	0.065872	2.570375	2.563546

Source: Researcher own computation, Eviews 13

4.9. Stability of the Model

CUSUM and CUSUM of Squares tests are used to test the stability of an econometric model over time. The CUSUM test Cumulative Squared Residual based on the cumulated sum of residuals is for structural instability. From the first chart it is evident that CUSUM

line remain inside of the critical bounds over the entire period 2015–2023 indicating no any a structural change. The model does not seem to exhibit an unstable behavior, since CUSUM of squares residuals does not go beyond the 5% significance threshold.

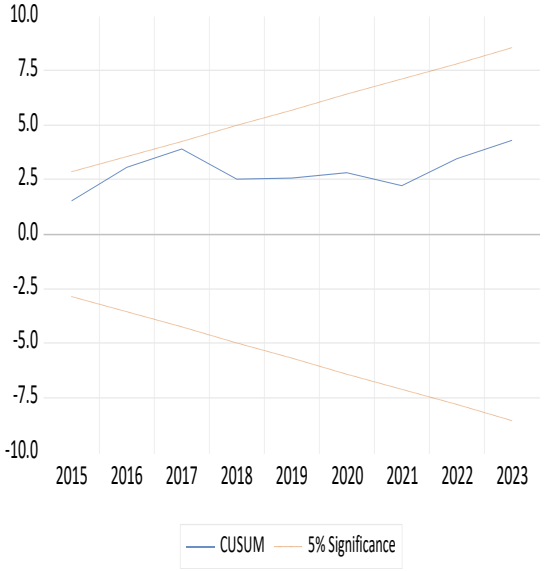
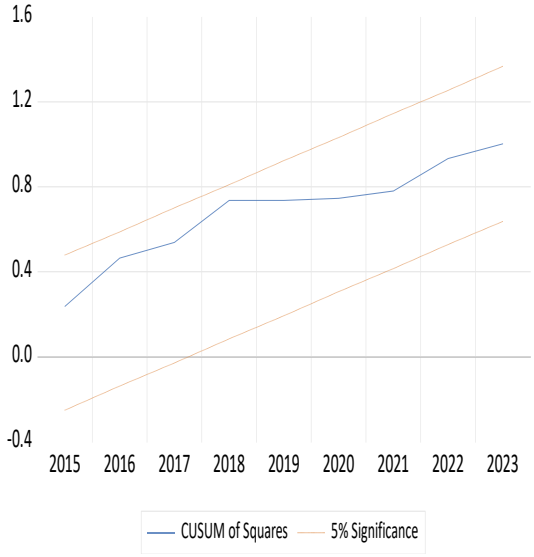


Fig. 1: CUSUM



Source: Researcher own computation, Eviews 13.

Fig. 2: CUSUM of Square

The second test, CUSUM of Squares (see the 2nd graph below) detects a change in residulas variance. Dashed lines denote the 5% significance critical bounds. The CUSUM of Squares line stays mostly within the bounds at period, but increasing trend present toward the last (after 2020), this may explain that error variances were been slightly vary through time. But it lies inside the critical limits though which residual volatility does not result in a model instability.

In short, these two tests evidence the predictive validity of the model (in relation to its forecasting accuracy over (2015–2023). That small departures from constant variance do not correspond to serious problems and that the assumptions of stability and homoscedasticity hold. We can thus confidently say that the model is stable over this time span.

4.10. Hypothesis Testing

The proposed hypotheses that were formulated under empirical review, based on the theoretical framework and empirical findings, were tested as follows:

Table 8: hypothesis test

Variable	Coefficient	Std. Error	t-Statistic	Prob.*
GDP(-1)	0.441849	0.154732	2.855576	0.0189
GDP(-2)	-0.356161	0.191315	-1.861642	0.0956
GDP(-3)	0.733521	0.285621	2.568164	0.0303
D_GE	0.217950	0.211535	1.030324	0.3298
D_GE(-1)	0.023630	0.220696	0.107071	0.9171
D_GE(-2)	-0.550908	0.179924	-3.061892	0.0135
CC	-0.040091	0.339029	-0.118254	0.9085
CC(-1)	-0.356492	0.306260	-1.164020	0.2743
CC(-2)	0.487516	0.201736	2.416601	0.0388
RQ	0.318551	0.402917	0.790611	0.4495
D_FDI	0.422699	0.641844	0.658570	0.5267
D_FDI(-1)	-1.296610	0.563213	-2.302165	0.0468
D_FDI(-2)	-1.451663	0.525878	-2.760457	0.0221
D_CAB	-0.886346	0.251753	-3.520698	0.0065
D_CAB(-1)	-0.470617	0.256656	-1.833650	0.0999
D_CAB(-2)	-0.387971	0.228939	-1.694649	0.1244
C	-2.971830	9.313496	-0.319089	0.7569

Source: Researcher own computation, Eviews 13

4.10.1. H1: Governance Effectiveness Significantly Impacts Economic Growth in Ethiopia

According to the regression result, the coefficient of governance effectiveness (GE) is 0.217950, however; its p-value of 0.3298>0.05 testifies that from short run perspective governance effectiveness in Ethiopia has no statistical significant impact on economic growth of the country. The t-stat 1.030324 is also well below the critical value of 2 and therefore confirms nonsignificance. This implies that gains in the quality of governance may not necessarily lead to significant impact on growth performance within the period considered in this study.

Empirical findings have been inconsistent with respect to the impact of good governance on economic growth in developing countries. For example, Ali and Law (2017) revealed that good governance leads to economic growth, where these effects can be sometimes situational. In Ethiopia, where other governance problems as corruption and regulatory quality could potentially eclipse the immediate effects of good governance on investment, such relation may not be persuasive in the short versus long run. Moreover, governance quality with one of its dimensions being governance effectiveness matters on growth in African countries but with a pronounced effect on low income countries (Sundaram and

Fosu 2019) forthcoming World Development against the weak and fragile institutional environment at country level e.g., Ethiopia.

4.10.2. H2: Control of Corruption Significantly Influences Economic Growth in Ethiopia

Control of corruption (CC) has a complex influence on economic growth in Ethiopia. Although the coefficient of CC in the short term (lag 1) is negative (-0.040091), but p-value equals to 0.9085 that shows no significant impact. However, at lag 2, the coefficient of CC is positive (0.487516) and statistically significant at 0.0388 which mean that control of corruption has a positive impact on economic growth in medium-term period.

This observation is consistent with research like Sharma and D'Souza (2020) which established that control of corruption have a positive impact on economic growth, but most times it works with a time lag. The effects of anti-corruption on economic prosperity are particularly lagged, because the impacts of anti-corruption policies take long time to see an economic outcome. In the context of Ethiopia, the lag effect during second level shows that continued effort in preventing corruption leads to economic growth over time. Moreover, Mauro (2017) argues that the containment of corruption can foster economic development in low-income countries as it leads to more efficient allocation of resources and minimizes waste.

4.10.3. H3: Regulatory Quality Affects Economic Growth in Ethiopia

According to the regression result, regulatory quality (RQ) is not an influence on economic growth in Ethiopia as it was recorded by 0.318551 with a probability value of 0.4495, significantly higher than acceptable margin of error which is 0.05. This insignificant effect of regulatory quality would suggest that in the short run, better regulatory quality does not lead to superior economic growth.

More generally, Kaufmann et al. (2017) established that regulatory quality is essential to promoting economic development, particularly in sub-Saharan Africa. But the effect of regulatory quality depends on how well institutional settings and policy environment work. Institutional, regulatory quality may be constrained in Ethiopia which might justify its insignificance to economic growth in the present study. Thus, the effect of regulatory quality is expected to take time before it can fully materialize into economic development in Ethiopia. Also Majeed and Ahmad (2018) The Journal of International Development, revealed among low-income countries; regulatory quality as significant determinant has a positive relationship with economic growth but its impacts remain generally constrained due to insufficient mechanisms for enforcement and institutional ineffectiveness.

4.10.4. H4: Foreign Direct Investment (FDI) Significantly Impacts Economic Growth

FDI also exhibits significant but negative link with economic growth in the short run. The coefficient of D_FDI (–1) is –1.296610 with p-value =0.0468 and the coefficient of D_FDI (–2) is –1.451663 with p- value = 0.0221, which are both negative and statistically significant. This indicates that in the short run, FDI does not result in the increase of economic growth negatively; it was induced by a temporary adjustment costs or imperfections are accompanied with foreign investments.

Asiedu (2019), for example, observed that FDI often exhibits both positive and negative short-run impacts on economic growth in developing countries. In the short run, foreign capital inflow might give rise to issues like capital flight, unbalanced economy development or inconsistency with local industries. But over the longer term, these investments have positive ripple effects. The short-term costs seen in Ethiopa may be a reflection of initial pains associated with incorporating foreign capital. In addition, Brunetti et al. (2017) in The Journal of Development Studies – Having examined various studies, they maintain that although FDI typically leads to growth, its benefits can be deferred as it is contingent on the host country's ability to absorb and tap into foreign capital optimally.

4.10.5. H5: Current Account Balance Significantly Influences Economic Growth in Ethiopia

The current account balance (CAB) has a huge negative effect on the economic growth of Ethiopia of which coefficient is -0.886346with p-value of 0.0065, which shows that there exists statistical significant relationship in short run. However, the p-value of coefficients of D_CAB (–1) and D_CAB (–2) are 0.0999 and 0.1244 which is not significant at 5% level indicating that the effect of current account balance in medium run attenuates.

The role of current account balance in the short run is also consistent with the results from Tadesse and Bercu (2020) indicating that, developing countries could be vulnerable to current account imbalances which could affect growth prospects adversely; especially for deficits in current named countries. In Ethiopia, a current account deficit could lower the national savings and investment, causing short-term slower economic growth. The declining importance of the lead terms indicates although current account balance is a key determinant, there may be unsustainable in long-run without policy intervention to rectify external positions. Akinlo (2017) in Economic Modelling also reported that current account deficits in African economies adversely affect economic growth, largely via their impacts on exchange rates and foreign debt service.

5. Conclusion

The aim of this study is governance performance and its impact on economic growth in Ethiopia 1994-2023.It is suggested that governance effectiveness does not have short term significant effect on economic growth which implied it might take a while for better governance to translate into improved economic outcomes. Control of corruption, in contrast, has a lagged positive association as the statistical significance becomes evident only from the second lag, which highlights that the process of governance reform is often long and involves some time lags for impacts. Regulatory quality is not found to have a statistically significant short-term impact on economic growth, which suggests that its effect is likely bounded by institutional constraints or other considerations.

With respect to the economic factors, foreign direct investment (FDI) has a negative and statistically significant effect on growth in the short run, which may be related to initial costs of adapting to foreign investments. But FDI is likely to become a driver of growth in the long run. Likewise, the current account balance has a high significant impact on economic growth but with negative immediate effect. The importance of the current account balance in the short term draws its attention to impact on national savings and investment very well it may have implications, in both short-run and long run, over economic stability and growth.

6. Recommendations

Based on its findings, the research has provided the following policy implications with regard to improving Ethiopian's short-run economic performance:

- The Government of Ethiopia needs to pay attention to strengthening institutions and improve the overall governance environment in order to make sure that the exercise of reforms can eventually translate into economic transactions.
- The large medium-term impact of control of corruption recommends that the Ethiopia government should give priority to anticorruption. Improving the laws and regulation of governance, lubricating its moribund enactment machinery through effective enforcement of anti-corruption statutes will eventually invigorate economic growth.
- Although regulatory quality has no short-term impact in this study, the Ethiopian government should work on enhancing the environment for business regulation. Streamlining administrative procedures, curtailing red tape and improving the investment climate could potentially create conditions in which economic growth improves in the long run.
- The negative short-run impact of FDI raises a question on how to best manage foreign investment. Ethiopia needs model to use integrate the inflowing FDI with national objectives. Alluring foreign entrepreneurs in key areas that promote the technology

transfer, infrastructure uptake and job-creation, could mitigate short-run losses and increase long-term gains.

- The strong influence of the current account balance on short run growth suggests importance for Ethiopian policy makers to control Ethiopia's external accounts. The only thing that would stabilize the current account would be policies aimed at reducing trade deficits, boosting export performance and attracting investment in export oriented sectors. Secondly, steps to boost national savings and lower dependence on external debt would provide stability to the economy.

References

1. Arezki, R. et al. (2023). Global governance and economic growth: Evidence from 116 countries. World Development, 135, 105194.
2. Asiedu, E. (2019). Foreign direct investment in Africa: The role of governance and institutions. World Development, 118, 40-54.
3. Ayele, G., & Johnson, H. (2023). Regulatory quality, control of corruption, and economic diversification in Sub-Saharan Africa. Journal of African Economics, 32(2), 120-134.
4. Ayenew, A. (2022). The impact of foreign direct investment on economic growth in Sub-Saharan Africa: A PMG/ARDL approach. African Development Review, 34(4), 624-640.
5. Beyene, A. (2022). Governance quality and economic growth in Ethiopia: Evidence from the generalized method of moments (GMM). Ethiopian Journal of Economics, 31(1), 45-58.
6. Dixit, A. (2009). Governance institutions and economic activity. American economic review, 99(1), 5-24.
7. Gani, A. (2011). Governance and growth in developing countries. Journal of Economic Issues, 45(1), 19-40.
8. Garedow, S. (2022). Governance indicators and their impact on economic growth in Ethiopia: An ARDL approach. Journal of Development Economics, 58(3), 432-450.
9. Hammed, A., et al. (2024). Current account balance and its effect on economic growth in Sub-Saharan Africa. African Economic Review, 36(1), 23-42.
10. Hodgson, G. M. (1998). The approach of institutional economics. Journal of economic literature, 36(1), 166-192.
11. IMF. (2024). Ethiopia's economic reforms and governance challenges. IMF Country Report No. 24/79.
12. Karagiannis, N., & Paleologou, A. (2025). Governance, corruption control, and economic growth in Africa: Evidence from 50 countries. African Development Review, 37(1), 1-15.
13. Khan, M. (2012). Governance and growth: History, ideology and methods of proof. Good growth and governance in Africa: rethinking development strategies, 51, 79.
14. Klein, P. G. (1998). New institutional economics. Available at SSRN 115811.
15. Mauro, P. (2017). The effects of corruption on economic growth and investment. Journal of Development Economics, 52(1), 63-82.

16. Monamodi, T. (2024). The impact of current account balance on economic growth: Evidence from South Africa (2015–2022). Journal of South African Economic Studies, 44(3), 205-220.
17. Nielsen, R. W. (2015). Unified growth theory contradicted by the economic growth in Africa. arXiv preprint arXiv:1512.03164.
18. North, D. C. (1990). Institutions, institutional change and economic performance. Cambridge university press.
19. Okwu, E. O., et al. (2025). Foreign direct investment, institutional quality, and economic growth in Sub-Saharan Africa: A panel study of 29 countries (1996–2022). Economic Systems, 49(1), 55-71.
20. Oritani, Y. (2010). Public governance of central banks: An approach from new institutional economics.
21. Pattillo, C. A., et al. (2023). Fiscal policy, governance, and growth in Sub-Saharan Africa. PLOS ONE, 18(2), e0293188.
22. Robeyns, I. (2006). The capability approach in practice. Journal of political philosophy, 14(3).
23. Rodrik, D. (2016). Economic growth and the role of institutions. Oxford University Press.
24. Science Publishing Group. (2024). Political instability and economic growth in Ethiopia: A time-series analysis. International Journal of Economics and Business Administration, 12(4), 1-15.
25. Shapiro, J. S. (2025). Institutions, comparative advantage, and the environment. Review of Economic Studies, rdaf012.
26. Springer, P. (2020). Governance quality and economic growth: Evidence from developed economies. Journal of International Economics, 127, 55-68.
27. Woji, I. (2024). Foreign direct investment and economic growth in Sub-Saharan Africa: Evidence from 1996 to 2020. Journal of African Economics, 33(1), 98-115.
28. Zechariah, W., & Wanujeh, Z. (2025). The impact of governance and economic diversification on sustainable development in Africa. Journal of Public Administration and Social Science Research, 11(8), 63-70.