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Research Article

Unpacking the Impact of Political Instability on Economic Growth in Ethiopia: Analysis of the Direct and Indirect Pathways (1995-2020)

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Abstract

Political stability is extensively recognized as a crucial determinant of economic growth and development in a broader context. Grounded in this assertion, this research endeavor sought to explore the correlation between political instability and economic growth within the Ethiopian context from 1996 to 2020. Throughout the duration of the study, Ethiopia has implemented various institutional reform initiatives aimed at fostering economic growth and establishing a stable political environment. Macro-level trend analyses substantiate that, over the last twenty years, Ethiopia has achieved significant economic growth, albeit hampered by macroeconomic mismanagement; nevertheless, the federation has not succeeded in attaining a stable political framework. In this context, employing the Autoregressive Distributed Lag (ARDL) approach, this investigation has revealed a long-term co-integration between political instability and economic growth in Ethiopia, with political instability exerting a negative and significant impact on economic growth in both the short and long term. Additionally, the study has identified that political instability adversely influences economic growth by diminishing investment, human capital, labor, and the country's exports. Consequently, it is proposed that ensuring political stability constitutes one of the essential prerequisites for achieving sustainable and accelerated economic growth in Ethiopia.

Keywords

Political Instability, Economic Growth, Autoregressive Distributed Lag (ARDL), Ethiopia

1. Introduction

1.1. Background of the Research

Rapid and sustained economic growth has consistently been one of Ethiopia's key objectives throughout its political and economic history, similar to the aspirations of many other nations [1]. Successive regimes in modern Ethiopian history have pursued various development paths and adopted ideologies inspired by Eurasian models, aiming to eradicate the pervasive and deeply rooted poverty that has long afflicted the country. The overarching goal has been to transform Ethiopia's agrarian-based economy into one characterized by modernization, development, and prosperity [2, 3].

Over the past decade, Ethiopia has witnessed remarkable and sustained economic growth, accompanied by significant

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improvements in social and human development [4, 5]. However, despite these economic advancements, Ethiopia continues to rank among the world's poorest nations, facing numerous challenges on its path to sustained economic success. One of the most frequently cited impediments is the country's institutional limitations, particularly political instability [6-8].

1.2. Statement of the Problem

Political institutions are now widely recognized as critical determinants of overall economic development [9-19]. Numerous empirical studies have examined the relationship between political stability and economic growth to better understand the complex interplay between politics and economic outcomes. Despite these efforts, there remain notable gaps within the existing body of knowledge that justify further investigation.

Most empirical studies affirm that political stability fosters favorable conditions for economic growth, whereas political instability poses a significant obstacle [20-25]. However, there are differing viewpoints, with some studies suggesting a negative relationship between political stability and economic growth over certain periods [26], or indicating no or only a weak correlation between political stability and economic growth [27-29]. This inconsistency highlights the ongoing debate and inconclusive findings within the literature regarding the nature and magnitude of this relationship. Furthermore, existing research presents mixed results about the direction of causality. While some studies argue that political (in)stability influences economic growth [30-32], others posit a bidirectional causality between political instability and economic growth [33-35].

Additionally, while much of the existing empirical research focuses on the direct relationship between political instability and economic growth, the complex nature of macroeconomic performance often involves unobservable and nontrivial elements [36]. Empirical evidence also demonstrates that political instability affects key economic drivers such as investment [37, 21, 38, 39], human capital [40], inflation [41], and trade [37], as well as various socio-economic channels [42]. However, research on the indirect effects of political instability on economic growth remains limited. Methodologically, the majority of existing empirical research relies on panel data collected across multiple countries [27, 20, 21, 41, 43-47]. Although cross-country studies provide valuable insights, they often fail to account for institutional differences, uncertainties, and variability in model parameters [48]. In contrast, country-specific time-series studies are relatively scarce [49-53].

This study aims to contribute empirical evidence on the impact of political instability on economic growth in Ethiopia, addressing two main research questions: the long-term and short-term effects of political instability on economic growth, and the channels through which instability influences economic growth. The study also seeks to contribute to the existing discourse on the relationship between political instability and economic growth, offering valuable insights for Ethiopian policymakers, development partners, political parties, and civil society.

Focusing on the period from 1996 to 2020, the study examines the impact of political instability following Ethiopia's 1995 constitution, excluding post-2020 political changes. It is structured into five sections: an introduction, literature review, research methodology, results, and conclusions with recommendations.

2. Review of Related Literature

2.1. Understanding Political (In)stability

Political stability is a term that varies across different schools of thought. It is often defined as the regularity of political interactions within a system, with greater stability emerging from consistent political exchanges [54]. This consistency is seen as a marker of stable governance, while disruptions or irregularities in these interactions are typically associated with instability. Some scholars extend this definition to encompass key elements of governance, such as the preservation of democratic structures, maintenance of civil order, the legitimacy of the political system, and the efficiency of its functioning [55]. Others suggest that political stability should also be linked to a reduction in violence, increasing legitimacy, and a more effective governance system [56].

Conversely, political instability is generally understood as the absence of such stability over time. It often refers to periods marked by the collapse or disruption of political structures, the absence of governance, and the breakdown of law and order [57]. Political instability has been linked to several forms of unrest, including social violence, government dysfunction, and other forms of societal disruption [58]. Political instability may also manifest in a more systematic way through a failure to uphold the democratic system, lack of civil liberties, or an inability to maintain institutional order [59].

In scholarly discourse, political instability is often broken down into categories based on the nature of the disturbance. These categories include coercive behaviors such as terrorism and armed conflicts, changes in governance such as revolutions and coups, and large-scale political protests that lead to significant unrest or division within a society [60]. Some scholars make further distinctions between elite instability, which tends to involve less violent transitions like shifts in government, and non-elite instability, characterized by more violent upheavals such as civil wars or coups [61].

2.2. Defining Economic Growth

Growth is typically defined as the increase in the total

production of goods and services within an economy. This increase is viewed in terms of higher output per capita, along with broader improvements in the material standard of living of a population [62]. Economic growth, however, is distinct from the broader concept of economic development, which also incorporates changes in economic structures and inequalities within society [63]. While economic growth emphasizes quantitative improvements in output, development focuses on broader qualitative transformations in the economy and society, such as poverty reduction, the expansion of freedoms, and improvements in equity [64].

Economic development is often understood as the process of improving human well-being through the reduction of poverty, unemployment, and inequality [65]. However, these two concepts—growth and development are closely linked, with growth providing the foundation for development and the latter enhancing the sustainability of long-term growth.

2.3. Theoretical Approaches to the Link Between Political Stability and Economic Growth

Theories examining the relationship between political stability and economic growth have evolved over time, with various perspectives on how political institutions and actors shape economic performance. Classical and neoclassical growth theories traditionally emphasized the importance of economic factors, such as capital accumulation and technological progress, but increasingly recognized the role of political institutions in shaping growth trajectories. In recent years, scholars have integrated political factors more explicitly into economic growth models, particularly through the lens of new institutional economic theories.

2.3.1. New Institutional Economic Theories

Building on the insights of neoclassical economics, scholars have increasingly emphasized the role of institutions, rules and frameworks that govern economic and political life—as key drivers of growth. These institutions create the "rules of the game," guiding economic behavior and shaping incentives within a society [66]. According to these theories, political stability can promote growth in the short run by providing a stable environment for investment and economic activity. However, prolonged political stability may also give rise to powerful interest groups that could undermine economic performance by blocking reforms or impeding technological innovation [67].

Institutions play a crucial role in shaping economic outcomes, as the structures and quality of political institutions influence the design of economic institutions. Countries with inclusive political institutions, where power is broadly distributed and property rights are secured, tend to develop inclusive economic institutions that foster broad-based economic growth. Conversely, extractive political institutions—where power is concentrated in the hands of a few often lead to the development of extractive economic institutions, which impede growth and widen inequalities [67, 68].

2.3.2. Political Instability and Its Impact on Growth

While the importance of political stability in fostering economic growth is widely acknowledged, scholars have also pointed out that excessive stability can sometimes lead to economic inefficiencies. Some researchers argue that political stability over the long term may encourage the formation of special-interest groups or distributional coalitions that capture economic rents, reduce competition, and slow technological progress [67]. Nonetheless, this should not be interpreted as suggesting that political instability is beneficial for economic growth. On the contrary, high levels of instability, such as violent upheavals or frequent changes in government, can severely disrupt economic activity, discourage investment, and hinder development.

More recent approaches have expanded the analysis by considering the broader role of cultural values alongside political institutions. Scholars argue that societies with values emphasizing collective organization and social consensus are more likely to experience economic growth when these values are aligned with supportive political institutions [69].

2.4. Empirical Literature

Several empirical studies have examined the relationship between political instability and economic growth, with mixed results. Some studies found no significant relationship between political instability and growth, while others observed a negative association, particularly in countries with high levels of government instability [70]. A more recent analysis found that periods of high political instability are typically associated with lower rates of economic growth, especially in regions with weaker governance structures [71].

Further empirical studies, using advanced econometric methods, have confirmed that political instability undermines economic growth by lowering productivity, discouraging investment, and limiting capital accumulation [72]. For instance, terrorism, poor governance, and social unrest have been found to have significant negative effects on growth [73]. In recent studies, political instability has been shown to act as a major deterrent to economic growth, particularly in lower-income countries [74].

Using time-series data, some studies have shown that political instability negatively affects growth directly and indirectly, particularly by undermining investment [75]. Other research has suggested that political instability has a negative long-term effect on economic performance, while its short-term effects may vary [76]. In some cases, researchers found that the detrimental impact of political instability is more pronounced in certain forms, such as political violence or regime changes, rather than in less direct forms like strikes or protests [77].

In Ethiopia, a few studies have specifically explored the

link between political instability and economic performance. One study found that political instability significantly hampers enterprise innovativeness, while another observed that political instability is a key determinant of capital flight, with instability leading to higher outflows of capital [78, 79]. Moreover, political violence and the erosion of democratic institutions were found to negatively affect the country's economic performance, particularly in the long term [80].

3. Model Specification and Methodology

3.1. Research Paradigm and Design

This study adopts a *positivist research paradigm* and employs both descriptive and explanatory research designs. The descriptive design is used to analyze trends in political instability and economic growth in Ethiopia (1996–2021), while the explanatory design employs time series analysis to determine causal relationships between political instability and economic growth [81].

3.2. Data and Data Sources

Annual time series data from 1996 to 2021 is sourced from the World Bank Development Indicators (WDI), Armed Conflict Location & Event Data (ACLED), and Worldwide Governance Indicators (WGI). The WGI's "Political Stability and Absence of Violence/Terrorism" index, ranging from -2.5 to +2.5, measures political instability. Economic growth is assessed using GDP growth rate [82].

3.3. Theoretical Model

The study draws on the *Solow-Swan growth model*, incorporating labor (L), capital (K), human capital (H), trade (T), and political stability (P) as determinants of economic growth. Political instability affects growth directly and indirectly through investment, human capital, trade, and labor [9, 20, 14, 19]. The growth function is extended as follows:

$$Y = f(L, K, H, T, P) \quad (1)$$

Where: Y represents economic growth, L is labor, K is capital, H is human capital, T is trade, P is political (in)stability.

3.4. Empirical Model Specification

This study aims to examine the causal relationship between political instability and economic growth in Ethiopia. Building on theoretical frameworks and empirical studies that examine the links between political instability and economic performance, the econometric model is based on the augmented Solow-Swan neoclassical growth model. This model includes critical factors such as physical capital, human capital, and international trade, which significantly influence economic growth in the long run [9, 11, 15, 17, 19, 24, 34, 63]. The basic form of the model is expressed as:

$$Y_t = \beta_0 + \beta 1 P_t + \varepsilon t \quad (2)$$

Where Y_t is the annual growth rate in GDP per capita at time t, β0 is constant, and β1 are coefficients; P_t is Political instability measured by Political stability index.

Moreover, political instability is hypothesized to indirectly affect economic growth by influencing key growth determinants such as investment, human capital, international trade, and labor. To test this, four supplementary regression models are built to examine how political instability influences these factors:

$$I_t = \beta_0 + \beta_2 P_t + \varepsilon_t \quad (3)$$

$$H_t = \beta_0 + \beta_2 P_t + \varepsilon_t \quad (4)$$

$$T_t = \beta_0 + \beta_2 P_t + \varepsilon_t \quad (5)$$

$$L_t = \beta_0 + \beta_2 P_t + \varepsilon_t \quad (6)$$

After estimating these models, mediation analysis is employed to calculate the indirect effect of political instability on economic growth through its influence on investment, human capital, trade, and labor.

3.5. Test for Stationarity

Since the study uses time series data, the Augmented Dickey-Fuller (ADF) unit root test is conducted to check for stationarity. A stationary time series has a constant mean and variance over time, and the regression results are reliable only when the data is stationary [86, 87]. The ADF test is used to determine the degree of integration of the data, whether it is integrated of order zero (I(0)), one (I(1)), or two (I(2)).

the ADF statistic is based on the following model:

$$\Delta Yt = \phi yt - 1 + \beta \sum_{i=1}^{p} \Delta yt - t + \mu \quad (7)$$

Because a random walk process can have no drift, drift, or both deterministic and stochastic trend, let us include an intercept β1 as well as a time trend t in the model.

$$\Delta Yt = \beta 1 + \beta 2 + \phi yt - 1 + \beta \sum_{i=1}^{p} \Delta yt - t + \mu \quad (8)$$

Where t is linear time trend; β1= constant; Δ is differencing operator, μ is the error term, β2 the coefficient on a time trend series; Φ is the coefficient of Yt−1; p is the lag order of the autoregressive process, ΔYt = Yt - Yt−1; Yt−1 is lagged values of order one of Yt; ΔY t−i are changes in lagged values.

The parameter of interest in the ADF model is Φ and the null and alternative hypothesis that will be tested are as follows:

Ho: $\Phi = 0$

Ha: $\Phi < 0$

The decision to reject or not to reject the null hypothesis needs to compare the calculated test statistic in the equation with the critical value from the ADF table.

3.6. Cointegration Analysis

After testing for stationarity, the Autoregressive Distributed Lag (ARDL) model is applied to examine the long-run relationship among political instability and economic growth. The ARDL approach is particularly useful for small sample data and provides unbiased long-run and short-run estimates [88]. The generalized equation of the ARDL model is:

$$y_t = \beta_0 + \beta_1 y_{t-1} + \ldots. + \beta p y_{t-m} + \alpha_0 x_t + \alpha_1 x_{t-1} + \alpha_2 x_{t-2} + \ldots + \alpha_q x_{t-n} + \varepsilon_t \quad (9)$$

Where, m and n are the number of years, ε_t is the error term and β_i's are coefficient for short run and α_i's are coefficients for long run relationship. The cointegration test will determine whether a long-term relationship exists between the variables. The null hypothesis of no cointegration is rejected if the F-statistic exceeds the upper bound critical value.

3.7. Long-Run and Short-Run Estimation Models

Once the long-run relationship among the variables is confirmed using Cointegration analysis, the next step is to estimate the long-run coefficients of the model. The Autoregressive Distributed Lag (ARDL) model, as proposed by [88], is used for this purpose. The ARDL model is specified as an unrestricted error correction model (ECM) as follows:

$$\Delta Yt = \beta 0 + \sum_{n=1}^{p} \beta 1 \Delta yt - i + \sum_{n=1}^{p} \beta 2 \Delta pt - i + \beta 3 pt - i + \mu t. \quad (10)$$

Where Y_t is GDP growth rate and GDP per-capita at time t; and P is political stability. Whereas β_0 is constant, $\beta_1 - \beta 3$ are coefficients that measure short run relationships. To test whether there is a long run equilibrium relationship between the variables; bounds test for co- integration is carried out as proposed by [88].

The hypotheses are:

Ho: means there is no long run relationship among the variables; and

Ha: means there is a long run relationship among the variables.

The non-standard F-statistics is used to test the above hypothesis. The critical values for this test, provided by [88], are used to assess the F-statistic. If the F-statistic exceeds the upper bound of the critical value, the null hypothesis is rejected, indicating co-integration. If the F-statistic falls below the lower bound, the null hypothesis cannot be rejected; otherwise, the result is inconclusive.

Based on the Cointegration result, the long run relationship between variables of interest is by the ARDL model specified as:

$$Yt = \beta 0 + \beta 1 lnyt - 1 + \beta 2 pt - 1 + \mu t. \quad (11)$$

On the other hand the short run dynamic relationship is estimated by error correction model (ECM) specified as:

$$\Delta Yt = \beta 0 + \sum_{n-1}^{p} \beta 1 \Delta yi - t + \sum_{n-1}^{p} \beta 2 \Delta pt - i + \delta ECMt - 1 + \mu t. \quad (12)$$

Where Y_t is GDP per-capita at time t and P is political instability. Whereas β_0 is constant, $\beta_1 - \beta_3$ are coefficients of short run dynamics of the model and μ is error term, ECMt-1 is the error correction term lagged for one period; δ is coefficient of speed of adjustment back to equilibrium; and Δ is the first difference operator.

3.8. Post-Estimation Diagnostic Tests

Following the estimation of the long-run and short-run models, several diagnostic tests were conducted to assess the model's robustness and validity. These tests included checks for normality, serial correlation, heteroskedasticity, and model stability.

Accordingly, the Jarque-Bera test was employed to evaluate the normality of the residuals. The null hypothesis posits that the residuals are normally distributed, while the alternative hypothesis suggests they are not. The LM (Lagrange Multiplier) test was used to detect serial correlation in the residuals. The null hypothesis assumes no serial correlation, while the alternative hypothesis indicates the presence of serial correlation. The heteroskedasticity test evaluates whether the residuals exhibit constant variance. The null hypothesis assumes homoscedasticity (constant variance), while the alternative suggests the presence of heteroskedasticity (non-constant variance). And the CUSUM test was conducted to check the stability of the model over time.

3.9. Causality Test

This study also investigates the causal relationship between political instability and economic growth in Ethiopia. Among various methods for testing causality in time-series data, the [89] approach was selected due to its flexibility and robustness. This method uses a modified Wald test to assess causality within a Vector Autoregressive (VAR) model, without requiring cointegration or stability conditions, making it suitable even when these assumptions are not met.

The following hypotheses were tested:

$$\Delta lnYt = \beta 0 + \sum_{i=1}^{k} \beta 1 \Delta lnyi - t + \sum_{n=1}^{k+dmax} \beta 2 \Delta lnyi.t - i + \sum_{n=1}^{k} \beta 3 \Delta pt - i + \sum_{n=1}^{k+dmax} \beta 4 \Delta pt - i + \mu t \quad (13)$$

$$\Delta lnpt = \beta 0 + \sum_{i=1}^{k} \beta 1 \Delta lnyi - t + \sum_{n=1}^{k+dmax} \beta 2 \Delta lnyi.t - i + \sum_{n=1}^{k} \beta 3 \Delta pt - i + \sum_{n=1}^{k+dmax} \beta 4 \Delta pt - i + \mu t \quad (14)$$

Where, βs are parameters of the model; k is the optimal lag length; μ are the residuals of the model; ln represents natural logarithm. The null hypothesis $H0$: $\beta 3i = 0$ in equation (13) is a test that political instability do not granger-cause economic growth. Similarly, equation (14) the null hypothesis, $H0$: $\beta 3i = 0$ means economic growth do not granger cause political instability [89].

3.10. Estimation of Direct and Indirect Effect of Political Instability on Growth (Mediation Analysis)

As previously discussed, in addition to the long run and short run direct effect of political instability on economic growth, it exerts indirect effect/relation which can be obtained by mediation analysis. Accordingly, the following four supplementary regression models have been built to determine how political instability influences economic growth through its main determinants. According to [90], a variable can function as a mediator in the causal chain if regression studies show statistically significant links given the following conditions: First, the independent variable predicts the dependent variable in a statistically meaningful way. Second, the independent variable predicts the mediator in a statistically meaningful way. Third, after controlling for the impact of independent factors, the mediator is a statistically significant predictor of the dependent variable.

For proper analysis of mediation, a bootstrap method on a computer technique (Process Macro on SPSS) has been used which requires fewer assumptions, yields the highest power, and diminishes the risk of type 1 error [91]. According to [91] bootstrapping statistical computer programs are used to examine the effect of one or more mediating variables on the relationship between the independent and dependent variables. The program calculates the direct, indirect, and total effects of independent variables on dependent variables, as well as the unstandardized and standardized regression coefficients, standard errors, and other statistics such as t and p values and R^2.

4. Results and Discussion

4.1. The Trends of Political Instability and Economic Growth in Ethiopia (1996-2020)

4.1.1. The Political Economic Context and Institutional Changes in Post-1995 Ethiopia

From 1996 to 2020, Ethiopia underwent significant political and economic transformations. Following the collapse of the socialist regime in 1991, the EPRDF led government introduced institutional reforms such as ethnic federalism, political devolution, and economic liberalization, aligning with global neoliberal trends like market liberalization and privatization [1, 94-95, 100]. These reforms aimed to transition from a state-led to a market-oriented economy, emphasizing political stability and growth. With IMF and World Bank support, early reforms included agricultural tax removal, trade tariff reductions, privatization, and market liberalization [101]. Development programs like the Peace, Democracy, and Development Program (1992–1996) and the Agricultural Development Led Industrialization (ADLI) strategy emphasized poverty alleviation, industrialization through agriculture, and leveraging labor and land resources [102, 103]. The Foreign Policy and National Security Strategy (2002) linked economic development and democracy to national security [104].

Development programs such as the Sustainable Development and Poverty Reduction Program (SDPRP, 2002–2005) and the Plan for Accelerated and Sustainable Development to End Poverty (PASDEP, 2005–2010) focused on free-market growth, reduced food aid reliance, rural development, and governance reforms [105, 106]. Growth and Transformation Plans (GTP I & II, 2010–2020) aimed to modernize agriculture, expand industrialization, and strengthen governance, targeting Ethiopia's transition to a lower-middle-income country by 2025 [117, 118].

Despite economic growth, the centralized authoritarianism of the EPRDF led to unrest by 2015 [95-97]. Reforms initiated in 2018, including the release of political prisoners and promises of free elections, marked a shift, culminating in the Prosperity Party's formation in 2019 and its 2021 electoral victory, symbolizing a new political direction [98-100].

Post-2018 reforms under Prime Minister Abiy Ahmed included the Home Grown Economic Reform and the Ten-Year Development Plan (2021–2030), which promised democratization, macroeconomic reforms, and structural transformation to position Ethiopia as an "African beacon of prosperity" by 2030 [109-111].

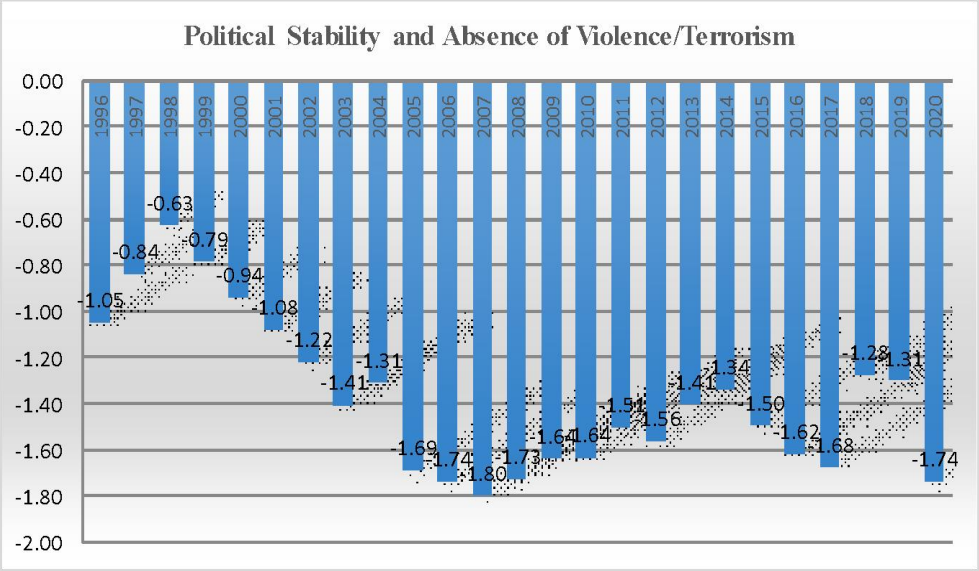
4.1.2. Trends of Political Instability in Post-1991 Ethiopia

Following the fall of the Marxist Derg regime in 1991, Ethiopia embarked on a process of constitutional and institutional reforms aimed at creating a stable democratic political order and fostering economic growth. However, the state of political stability in the country has been turbulent, with significant political instability and organized violence affecting its governance landscape. This section explores the trends of political instability in Ethiopia from 1991 onward, examining political stability, violence, and the institutional reforms implemented by successive Ethiopian governments.

(i). Political Stability and Absence of Violence (1996-2020)

As indicated below in the figure, Political stability in

Ethiopia after 1991 has fluctuated significantly, as measured by the World Bank's governance indicators [114], which assess political stability and the absence of violence and terrorism on a scale from -2.5 (weakest) to 2.5 (strongest).



Source: Authors computation based on the data from World Bank Governance indicators (2021)

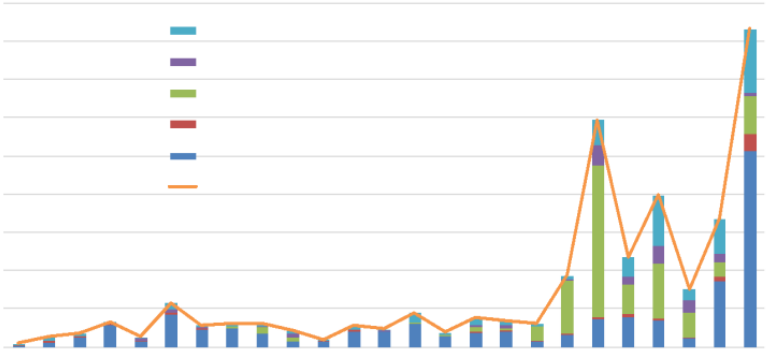
Figure 1. *Political Stability and Absence of Violence/Terrorism.*

From 1996 to 2020, Ethiopia's political stability indicator averaged -1.44, reflecting a generally unstable political environment. Political stability peaked at -0.63 in 1998 but hit its lowest point of -1.8 in 2007 [115]. Initial improvements in political stability between 1996 and 1998 coincided with early democratization efforts under the EPRDF, marked by multiparty politics, a growing civil society, and economic reforms. However, the outbreak of the Ethio-Eritrean war in 1998, internal conflicts, and crackdowns on opposition parties led to a decline in stability [116].

In the 2000s, authoritarian governance, suppression of civil society, and contested elections—especially in 2005—fueled protests and state violence, intensifying instability [117]. Although the period from 2015 to 2019 saw slight improvements, tensions in the Oromia and Amhara regions led to significant unrest. The rise of Prime Minister Abiy Ahmed in 2018 brought initial optimism through reforms and leadership changes. However, renewed political violence and ethnic tensions culminated in the Tigray civil war in 2020, underscoring persistent volatility [118, 119].

(ii). Organized Political Violence in Ethiopia (1996-2020)

Ethiopia has endured significant levels of organized political violence, which have deeply impacted its political and social stability. Between 1996 and 2020, the frequency and intensity of political violence, including protests, demonstrations, and armed conflicts, fluctuated but trended upward over time, reflecting the interplay of political instability and ethnic tensions [120].



Source: Author's computation based on data from ACLED (2022)

Figure 2. *Trends of organized political violences in Ethiopia (1996-2020).*

During the early years (1996–1998), violence was relatively low, reflecting optimism around the Ethiopian People's Revolutionary Democratic Front's (EPRDF) democratic reforms, including the adoption of a federal constitution and the first national elections [120, 151, 152]. However, violence escalated sharply between 1998 and 2007, driven by the Ethio-Eritrean War and controversial elections in 2000 and 2005, which triggered widespread protests, civilian deaths, and repression of opposition groups [153]. From 2005 to 2014, violence persisted despite modest political stability improvements. Authoritarian measures, such as the 2009 Anti-Terrorism Proclamation, stifled dissent but failed to address underlying grievances. Elections in 2010 and 2015 reinforced EPRDF's dominance, exacerbating political exclusion and unrest [154]. Political violence intensified from 2015 to 2020, with protests in Oromia and Amhara regions over land disputes, ethnic marginalization, and demands for autonomy. The government's harsh crackdowns, including states of emergency, led to significant casualties [155-157].

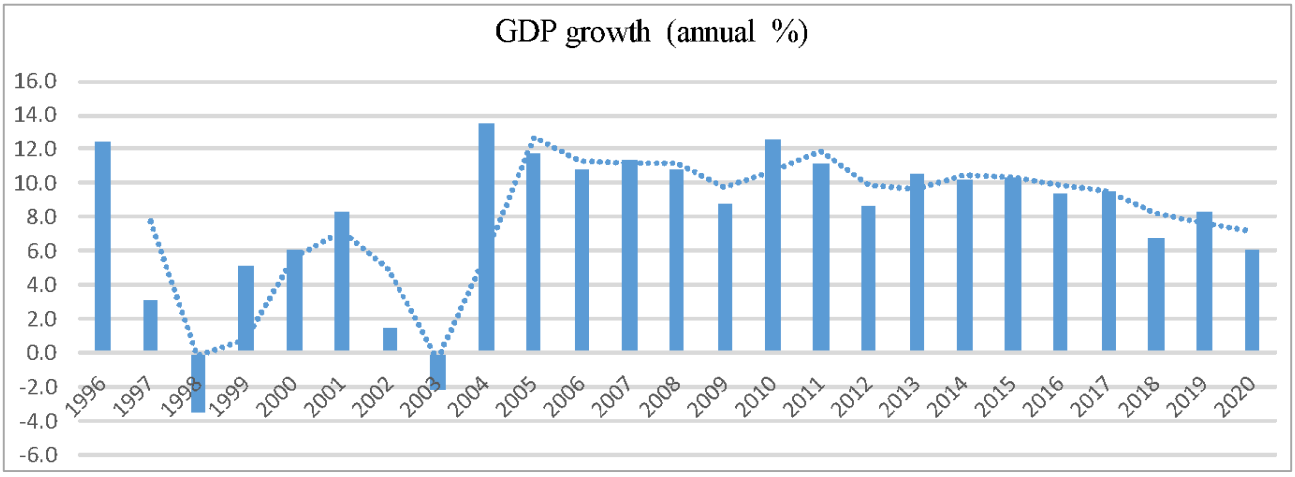
Prime Minister Abiy Ahmed's rise in 2018 initially brought hope through reforms and the establishment of the Prosperity Party. However, ethnic tensions persisted, and high-profile assassinations in 2019 and 2020 triggered violent clashes [154, 155, 158]. The Tigray conflict in 2020, stemming from disputes over postponed elections and Tigray's unilateral poll, escalated into a devastating civil war. This conflict caused mass casualties, displacement, and entrenched ethnic divisions, further destabilizing Ethiopia [124, 125, 158, 159].

In this regard, the ethnic federalism, which was introduced by the EPRDF as part of its 1995 constitution, is blamed to be a key factor in both Ethiopia's political stability and instability. The system was designed to manage the country's ethnic diversity by granting ethnic groups a degree of autonomy, including the right to self-determination and the establishment of ethnic-based regional states. However, the system has also contributed to political instability by exacerbating ethnic tensions and fostering competition for resources and political power between regional states [126-130]. The introduction of the Prosperity Party under Abiy Ahmed in 2019, raised hopes of national reconciliation, but ethnic tensions continued to persist, culminating in violent clashes in various regions and the outbreak of the Tigray conflict.

4.1.3. The Trend of Economic Growth in Ethiopia

Ethiopia transitioned from a socialist command economy to a market-oriented model in the early 1990s, aiming to spur growth and reduce poverty. From 1996 to 2020, its economic performance fluctuated, with slow growth before 2004, including a -3.5% GDP contraction in 1998 due to the Ethiopia-Eritrea conflict, poor weather, and limited liberalization [131, 132].

Post-2004, reforms such as the Sustainable Development and Poverty Reduction Program (SDPRP), the Plan for Accelerated and Sustained Development to End Poverty (PASDEP), and the Growth and Transformation Plans (GTP I and II) propelled an average annual GDP growth of 10.1%, peaking at 11% during PASDEP (2005–2010) and maintaining around 10% during GTP I (2010–2015) and GTP II (2015–2020) [133, 134].



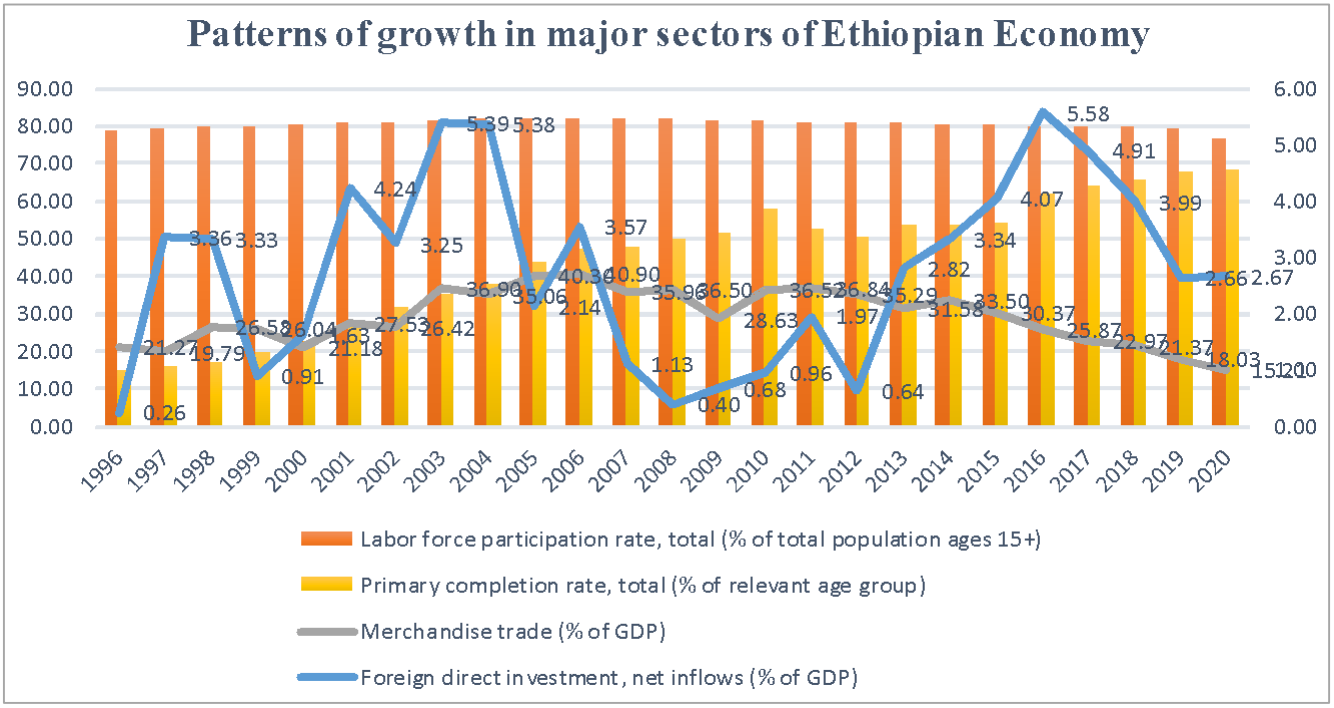
Source: author's computation based on data from World Bank (2022)

Figure 3. *The state economic growth of Ethiopia: 1996-2020.*

Sectoral shifts saw agriculture's GDP share decline from 54% in 1997 to 35.5% in 2020, while industry grew from 9.8% in 1996 to 27% in 2018, and services expanded from 27.4% in 1997 to 37.1% in 2019, reflecting diversification and urbanization [135, 136]. This diversification suggests that Ethiopia has undergone a gradual structural transformation from an

agrarian-based economy to one with more balanced contributions across sectors such as finance, education, and telecommunications [135, 136]. Furthermore, Ethiopia's investments in infrastructure, trade, and human capital have played a crucial role in this transformation.

However, challenges persist. Inefficiencies in public investments, exemplified by delays and overruns in infrastructure projects like the Grand Ethiopian Renaissance Dam, increased national debt [138, 139]. The dominance of state-owned enterprises and party-affiliated firms limits private sector growth, stifling competition, job creation, and innovation [141, 142]. Macroeconomic issues, including high inflation, low revenue generation, and governance problems, are compounded by illicit financial outflows estimated at $3.1 billion between 2005 and 2018, undermining development [143]. Ethiopia's significant growth has yet to translate into inclusive and sustainable development. Addressing investment inefficiencies, enhancing private sector engagement, improving governance, and tackling macroeconomic constraints are essential for long-term prosperity [143].



Source: Author's computation

Figure 4. *Sectoral growth patterns in major sectors.*

4.2. The Long-Run and Short-Run Effects of Political Instability on Economic Growth in Ethiopia (1996-2020)

In the previous section, we discussed the significant legal and institutional reforms that Ethiopia has undertaken since the 1990s, with the goal of establishing a stable and prosperous political economy. Despite facing structural bottlenecks and challenges in macroeconomic management, Ethiopia has managed to achieve impressive economic growth over the past few decades. However, while there have been relative improvements in the economy, the country has struggled to establish a stable political order. Political instability has remained a persistent challenge, one that has significantly impeded the potential for sustained and inclusive economic growth.

This section examines the impact of political instability on Ethiopia's economic growth, considering both its short-run and long-run effects. Prior to conducting the econometric analysis to estimate these relationships, a stationarity test of the variables is performed. The results reveal that some variables are integrated of order one, I(1), while others are integrated of order zero, I(0) (see Table 3). This distinction is crucial for determining the appropriate methodology for assessing the effects of political instability on growth.

4.2.1. Descriptive Statistics Interpretation

The descriptive statistics: mean, median, maximum value, minimum value, standard deviation, skewness, kurtosis, Jarque-Bera and probability of Jarque-Bera of the data set collected is presented in the following table.

Table 1. *Table summary of descriptive statistics.*

	GDPR	Political instability
Mean	8.084348	-1.378322
Median	9.433483	-1.408554
Maximum	13.57260	-1.803412
Minimum	-3.458139	-0.630291
Std. Dev.	4.352417	0.328195
Skewness	-1.260363	0.696679
Kurtosis	3.902718	2.469066
Jarque-Bera	14.93533	4.631948
Probability	0.000571	0.098670

Source: author's computation

The descriptive statistics for the dataset, which includes variables for political instability and economic growth (GDP growth), are summarized in Table 1. These statistics provide insights into the central tendency, variability, and distribution of the data.

The mean value for political instability is -1.38, indicating that, on average, the level of political instability in Ethiopia during the period 1996-2020 was negative. The lowest recorded level of instability was -1.80, while the highest was -0.63, reflecting some fluctuations within this negative range. The standard deviation of 0.33 suggests that political instability data are relatively concentrated around the mean, with only modest variation.

The mean annual GDP growth rate is 8.08%, indicating that, on average, Ethiopia's economy grew at a robust pace during the period. The maximum recorded growth rate was 13.57%, while the minimum was -3.46%, showing both periods of significant expansion and contraction. The standard deviation of 4.35% indicates substantial volatility in Ethiopia's economic growth over the period, which is consistent with the country's fluctuating growth trajectory.

While measuring the distribution of the data, Skewness measures the asymmetry of the distribution. For political instability, the skewness value of 0.70 indicates a right-skewed distribution. This suggests that most of the data points are clustered toward the lower end of the instability scale, with fewer occurrences of high instability. In contrast, GDP growth has a negative skewness of -1.26, implying a left-skewed distribution. This indicates that the distribution of GDP growth is more heavily concentrated on the positive side, with fewer extreme negative growth periods.

Kurtosis indicates how sharply peaked or flat a distribution is compared to a normal distribution. The kurtosis value for political instability is 2.47, which is less than 3, indicating that the data for political instability is platykurtic (i.e., less peaked than a normal distribution). In contrast, the kurtosis value for GDP growth is 3.90, which is greater than 3, indicating that the distribution is leptokurtic (more peaked than a normal distribution). This suggests that while political instability has a more flat, spread-out distribution, GDP growth exhibits higher concentration around the mean, with more frequent periods of moderate growth and fewer extreme fluctuations.

The Jarque-Bera test is used to assess the normality of the data. For political instability, the p-value is 0.10, which indicates that the data do not significantly deviate from normality. Therefore, we can conclude that the distribution of political instability is approximately normal. On the other hand, the p-value for GDP growth is 0.00057, which indicates a significant departure from normality. This suggests that the GDP growth data deviate from a normal distribution, although it is still relatively close to normal for further analysis.

4.2.2. Correlation in Economic Growth and Political Instability

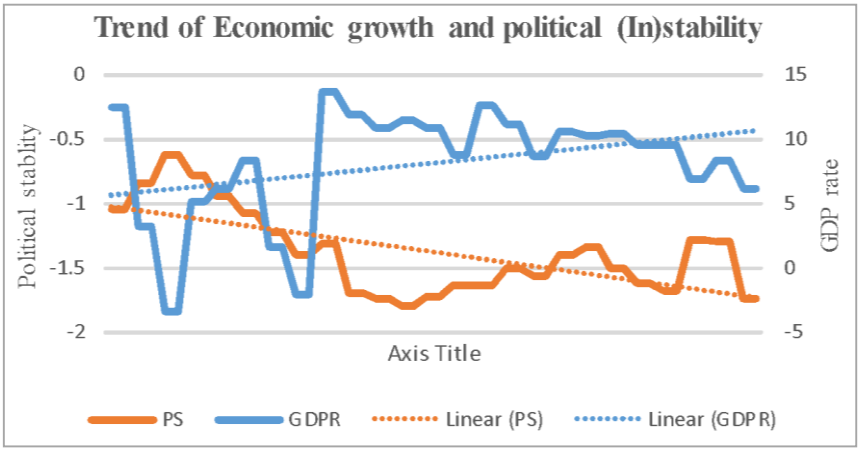
The Pearson correlation between political instability and GDP growth is -0.56, which suggests a moderate negative relationship between the two variables. This implies that higher levels of political instability tend to be associated with lower economic growth in Ethiopia. Conversely, periods of relative political stability are likely to correspond with higher GDP growth.

Table 2. *Correlation between political instability and economic growth.*

	GDPR	PS
GDPR	1.00	
Political instability	-0.56	1.00

Source: author's computation

Likewise, the following figure (Figure 5) illustrates the trends and relationship between political instability and economic growth in Ethiopia over the period from 1996 to 2020. The trend line for economic growth shows a general upward trajectory, indicating that Ethiopia's economy has experienced overall growth during the study period. However, the trend for political instability shows a negative trajectory, reflecting increasing political instability over time, as indicated by the corresponding variable.



Source: Author's computation

Figure 5. *Economic growth and political instability trends and relationship in Ethiopia: 1996-2020.*

These trends support the correlation analysis, suggesting that the fluctuations in political instability have had a significant influence on the economic performance of the country, with higher instability corresponding to lower growth.

Generally, the analysis indicates that Ethiopia's political instability is predominantly negative with slight variations. Conversely, the economic growth in Ethiopia shows relative positivity but with substantial volatility. The political instability data exhibits a right-skewed and platykurtic distribution, while GDP growth displays a left-skewed and leptokurtic distribution, signifying distinct distribution characteristics. Pearson correlation analysis substantiates a moderate negative correlation of -0.56 between political instability and economic growth. The observed trends of rising political instability and variable economic growth underscore the detrimental impact of political instability on Ethiopia's economic sustainability. The Jarque-Bera test suggests that political instability data approximates normal distribution, while GDP growth data deviates significantly from normality yet is adequate for further econometric analysis.

4.2.3. Augmented Dicky-Fuller Unit Root Test

The Augmented Dickey-Fuller (ADF) test was conducted to assess the stationarity of the variables, with the test including both the intercept and the intercept & trend alternatives. The Durbin-Watson statistic was also calculated to check for autocorrelation. The null hypothesis of the ADF test posits that the series has a unit root (i.e., the series is non-stationary), and the rejection of this null hypothesis is based on the critical values provided by [145]. To determine the optimal lag length for the unit root test, the Schwarz criterion was used.

Table 3 presents the results of the ADF test, with the test performed at both the level and first differences. The variables tested include GDP growth rate (GDP r) and Political Stability (PS).

Table 3. *Unit-Root Test Results.*

Variables	At Level		At First Differences		Stationarity
	Intercept *t*-statistics (*p*-values)	Intercept & trend *t*-statistics (*p*-values)	Intercept *t*-statistics (*p*-values)	Intercept & trend *t*-statistics (*p*-values)	
GDP r	-3.01 (0.05)	-3.33 (0.07)	-6.77 (0.00)	-4.88 (0.00)	I(1)
PS	-1.35 (0.60)	-1.78 (0.70)	-6.86 (0.00)	-6.79 (0.00)	I(1)

Source: Author's computation

From the table, it can be observed that both the GDP growth rate (GDP r) and political stability (PS) variables are non-stationary at levels (with p-values greater than 0.05), but they become stationary at first differences (with p-values less than 0.01). Thus, both variables are integrated of order 1, denoted as I(1). Hence, the unit root test results show that both GDP growth rate and political stability are non-stationary at levels but become stationary at first differences (I(1)). This indicates that the variables can be validly included in an ARDL model.

As a result, the next step involves utilizing the bounds-testing approach for cointegration to estimate the Autoregressive Distributed Lag (ARDL) model, taking into account the identified integration orders of the variables.

4.2.4. The Test for Cointegration

The optimal lag length for the ARDL model was determined using the Akaike Information Criterion (AIC). The optimal lag length for economic growth rate (GDP r) was found to be 4, while for political stability (PS), it was 2. Hence, the selected model is ARDL (4, 2).

The F-test was then applied to assess the existence of a long-run relationship between GDP growth (economic growth) and political stability. The null hypothesis for the ARDL bounds test states that no long-run relationship exists, while the alternative hypothesis posits the presence of cointegration (a long-run relationship between the variables).

As indicated in Table 4, the computed F-statistic (13.63) exceeds the upper-bound critical value at the 1% significance level. This allows us to reject the null hypothesis and conclude that there is sufficient evidence to support the existence of a long-run cointegrating relationship between GDP growth and political stability.

Accordingly the optimal lag length has been determined to be a maximum lag order of economic growth rate is 4 while it is two for the level of political stability. Hence the Selected Model is: ARDL (4, 2), based on Akaike Information Criterion.

Table 4. *The Bounds Test for Cointegration.*

F-Bounds Test		**Null Hypothesis: No levels relationship**		
Test Statistic	**Value**	**Signif.**	**I(0)**	**I(1)**
F-statistic	13.63	10%	2.12	3.23
		5%	2.45	3.61
K	1	1%	3.15	4.43

Source: Author's computation

The results from the bounds test indicate a statistically significant long-run relationship between economic growth and political stability in Ethiopia, supporting the hypothesis that political stability plays a key role in shaping economic growth in the long term. The computed F-statistic of 13.63 exceeds the critical values at the 1% significance level, confirming that political stability has a long-term impact on Ethiopia's economic growth.

4.2.5. Long Run Estimation Results

Following the confirmation of a long-run cointegration relationship between the variables, we estimated the stable long-run relationship between the dependent variable (economic growth) and the independent variable (political instability) using the Autoregressive Distributed Lag (ARDL) model. The ARDL(4, 2) model was selected based on the Akaike Information Criterion (AIC), which balances model fit and complexity.

Table 5 presents the long-run coefficients derived from the ARDL model.

Table 5. *Long-Run Model Results.*

Dependent Variable: GDPR				
Variable	**Coefficient**	**Std. Error**	**t-Statistic**	**Prob.**
C	-2.12	2.25	-0.95	0.03
Political instability	-7.41	1.59	-4.67	0.00
R-squared	0.31	Mean dependent var		8.08
Adjusted R-squared	0.30	S.D. dependent var		4.35
S.E. of regression	3.65	Akaike info criterion		5.46

Dependent Variable: GDPR				
Variable	**Coefficient**	**Std. Error**	**t-Statistic**	**Prob.**
Sum squared resid	638.67	Schwarz criterion		5.54
Log likelihood	-134.63	Hannan-Quinn criter.		5.49
F-statistic	21.76	Durbin-Watson stat		0.93
Prob(F-statistic)	0.00			

Source author's computation

The results presented in Table 5 reveal a statistically significant negative relationship between political instability and economic growth in Ethiopia over the long run. The coefficient of -7.41 for political instability suggests that, ceteris paribus, a one-unit increase in political instability is associated with a 7.41% decrease in economic growth. This result is consistent with the observed downward trend in political stability in Ethiopia during the study period, which, as previously discussed, reflects a period of heightened political unrest and instability.

The negative relationship indicates that political instability has a substantial adverse impact on economic growth in Ethiopia, which aligns with the findings from the descriptive statistics that showed a decline in the political stability indicator. Therefore, the results imply that had Ethiopia experienced greater political stability, its economic growth could have been significantly higher. This finding is consistent with the literature on the subject, particularly studies by [6] who found that political instability negatively influenced Ethiopia's economic performance.

Further, the model's R-squared value of 0.31 suggests that the model explains about 31% of the variation in economic growth, indicating a moderate fit. The adjusted R-squared value of 0.30 reflects the model's capacity to account for variability while adjusting for the number of predictors. While these values are not high, they are typical for macroeconomic models, where external factors not included in the model could also affect growth.

The F-statistic of 21.76 with a p-value of 0.00 confirms that the model is statistically significant overall, meaning the independent variables, including political instability, jointly explain a meaningful portion of the variation in economic growth. However, the Durbin-Watson statistic of 0.93, which is below the ideal value of 2, suggests potential issues with autocorrelation in the residuals. This implies that the model may need further refinement to account for potential serial correlation, which could bias the coefficient estimates.

In general, the long-run estimation results provide robust evidence of a negative and significant impact of political instability on economic growth in Ethiopia. The findings underscore the importance of political stability in fostering economic development and suggest that political unrest has significantly hindered the country's economic potential. Given these results, it is critical for policymakers to address the underlying causes of political instability in order to unlock higher economic growth. These findings are in line with previous research and contribute to a deeper understanding of the relationship between political stability and economic growth in developing economies. Further research could refine the model to account for autocorrelation and other potential confounding factors.

Table 6. *The Long Run Model Result.*

Dependent Variable: GDPR				
Variable	**Coefficient**	**Std. Error**	**t-Statistic**	**Prob.**
C	-2.12	2.25	-0.95	0.03
Political instability	-7.41	1.59	-4.67	0.00
R-squared	0.31	Mean dependent var		8.08
Adjusted R-squared	0.30	S.D. dependent var		4.35
S.E. of regression	3.65	Akaike info criterion		5.46
Sum squared resid	638.67	Schwarz criterion		5.54

Dependent Variable: GDPR				
Variable	**Coefficient**	**Std. Error**	**t-Statistic**	**Prob.**
Log likelihood	-134.63	Hannan-Quinn criter.		5.49
F-statistic	21.76	Durbin-Watson stat		0.93
Prob(F-statistic)	0.00			

Source author's computation

The result in the table above illustrates that there is Negative and significant effect running from the political instability towards economic growth in Ethiopia, in the long run. As we have seen in the descriptive analysis above, the state of political stability is characterized by decreasing trend over the study period, hence it is generally taken as a period of unstable political order, as measured by Political stability/Absence of violence and terrorism. In this regard, the result of this study can be interpreted as, other things remain constant, a unit increase in the level of political instability, will result in 7.4 unit decrease in the rate of economic growth in Ethiopia, in the long run. Thus, having seen the past two decade's political economic trajectory, it can be said that the decreasing trend of political stability or the increase in political instability, has been retarding the fast growing economy, which might grow more than it did if the country has been politically stable. This finding is in conformity with other studies like [6], who claimed that political instability led to poor performance of Ethiopian economic growth.

4.2.6. The Short Run Estimation Results

Table 7 presents the estimated results of the short-run error-correction ARDL model, focusing on the dependent variable.

Table 7. *Short Run estimation results.*

Dependent Variable: D(GDPR)				
Variable	**Coefficient**	**Std. Error**	**t-Statistic**	**Prob.**
C	0.11	0.37	0.31	0.04
D(GDPR(-1))	0.36	0.16	2.21	0.03
D(GDPR(-2))	-0.02	0.16	0.13	0.89
D(GDPR(-3))	0.24	0.14	1.77	0.09
D(GDPR(-4))	-0.20	0.12	1.67	0.10
D(Political instability (-1))	4.37	3.66	1.19	0.24
D(Political instability (2))	-6.38	2.96	-2.16	0.04
Error Correction term(-1)	-0.62	0.21	-3.00	0.01
R-squared	0.54	Mean dependent var.		0.27
Adjusted R-squared	0.45	S.D. dependent var.		3.20
S.E. of regression	2.37	Akaike info criterion		4.73
Sum squared residual	196.12	Schwarz criterion		5.06
Log likelihood	-93.64	Hannan-Quinn criter.		4.85
F-statistic	5.96	Durbin-Watson stat		0.89
Prob(F-statistic)	0.00		0.27	

Source: author's computation

The short-run analysis, consistent with the findings of the long-run examination, underscores that political instability negatively influences economic growth in Ethiopia. The estimation results highlight that the second lag of political instability has a statistically significant and adverse impact on economic growth. Specifically, when controlling for other variables, an increase of one unit in the second lag of political instability corresponds to a 6.38-unit reduction in the GDP growth rate within the short run. This suggests that disruptions or uncertainties due to political instability can have a lingering effect on economic performance, manifesting most notably after a delay captured in the second lag.

In contrast, the analysis shows that the first lag of political instability does not have a significant impact on economic growth, implying that immediate effects of political disturbances may not be as pronounced or detectable in the short term as those observed after a delay. The broader implication of these findings is that while Ethiopia experienced significant economic growth during the study period, this growth could have been even stronger in the absence of political instability. The presence of such instability acts as a drag on potential economic performance.

The error correction term, with an estimated coefficient of -0.62, is statistically significant at the 1% level. This indicates a robust mechanism for adjusting short-term deviations back toward long-run equilibrium, with approximately 62% of such deviations being corrected semi-annually. The significance of this term reflects the model's ability to realign the economy toward stable growth after temporary shocks, reinforcing the resilience of the economic system to adjust despite short-term disturbances.

Moreover, the adjusted R^2 value of 0.45 signifies that the model explains 45% of the variation in economic growth, indicating that the variables included offer a moderate level of explanatory power. This level of variation could be attributed to the fact that political stability is the primary focus of the model. If other relevant economic variables were incorporated, the adjusted R^2 might present a different, potentially higher figure, reflecting a more comprehensive model. Despite this, the current model suggests that a significant portion (55%) of the variability in economic growth remains unexplained, pointing to factors not included in the analysis. These could encompass un-modeled economic variables, external shocks, policy shifts, global economic trends, or broader social and environmental influences beyond the model's current scope. This finding highlights the inherent complexity of economic growth and emphasizes the importance of further research to identify and integrate additional key variables. Doing so could provide a more holistic understanding of the drivers behind economic growth in Ethiopia.

4.2.7. Model Diagnostic Tests

To validate the reliability of the short-run estimation model, various diagnostic tests were conducted. The normality test for the distribution of error terms yielded a significant p-value at the 1% level, which supports failing to reject the null hypothesis of normality. This confirms that the error terms in the model are normally distributed.

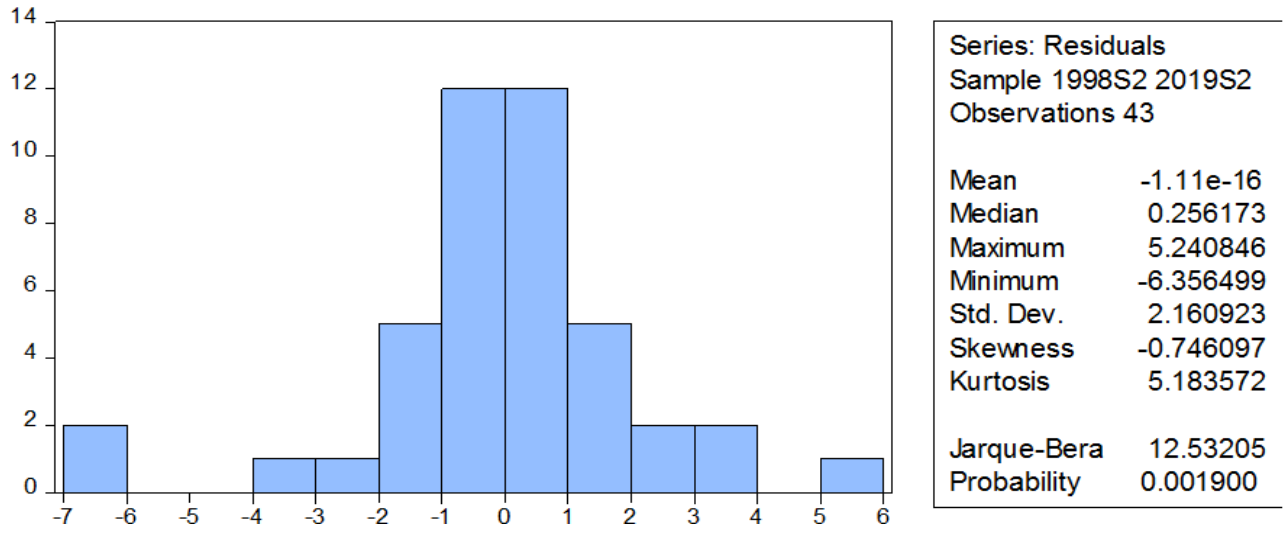
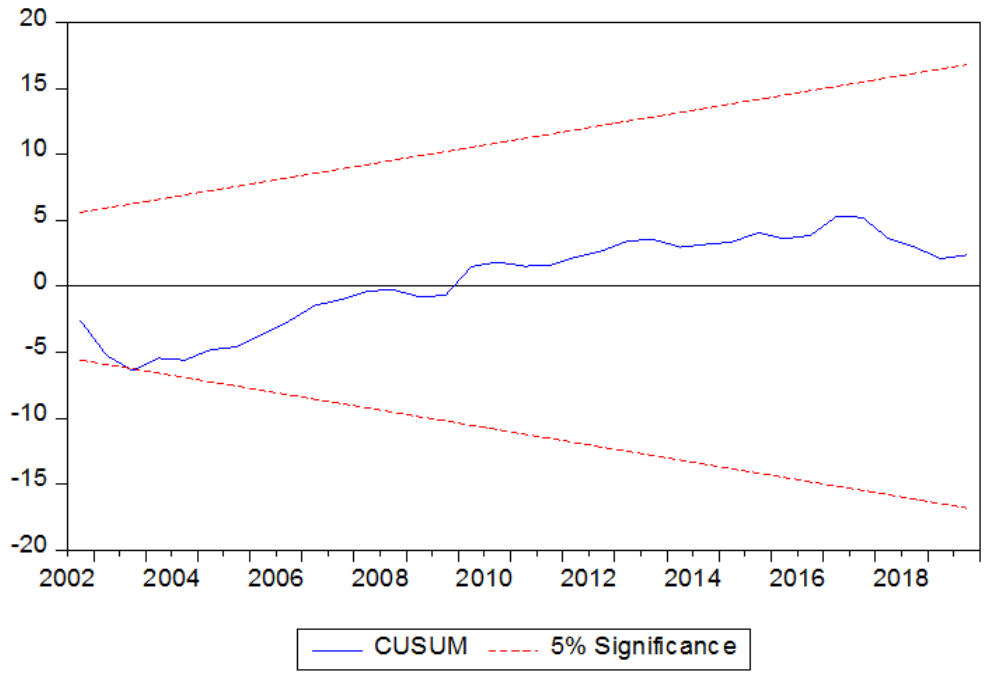


Figure 6. *Normality Test.*

Table 8. *Test for serial correlation and Heteroskedasticity.*

Breusch-Godfrey Serial Correlation LM Test:			
F-statistic	1.021568	Prob. F(4,31)	0.4116
Obs*R-squared	5.007934	Prob. Chi-Square(4)	0.2865
Heteroskedasticity Test: Breusch-Pagan-Godfrey			
F-statistic	1.729842	Prob. F(7,35)	0.1340
Obs*R-squared	11.05274	Prob. Chi-Square(7)	0.1363
Scaled explained SS	15.31745	Prob. Chi-Square(7)	0.1210

Source: Author's computation using Eviews 10



Source: Author's computation using Eviews 10

Figure 7. *Model stability test.*

The results of the Breusch-Godfrey Serial Correlation LM test indicate that the null hypothesis of no serial correlation cannot be rejected. This demonstrates that the model does not suffer from serial correlation issues.

The Breusch-Pagan-Godfrey heteroskedasticity test results show that the null hypothesis of homoscedasticity is not rejected, indicating that there is no heteroskedasticity present in the model. This confirms that the model's variance is consistent across observations.

To further assess the stability of the model, the CUSUM test was applied. The graphical representation (Figure 7) shows that the CUSUM line lies within the 5% significance level boundaries, as indicated by the red lines. This confirms that the model remains stable throughout the period of analysis.

Thus the diagnostic tests confirm that the short-run estimation model is free from serial correlation and heteroskedasticity and meets the criteria for stability. These results validate the model and support the reliability of the relationship between the variables studied.

4.2.8 Causality Test

This study also aimed to investigate the direction of causality between political instability and economic growth using the Toda and Yamamoto method. The results of this analysis are presented in Table 9.

Table 9. Causality test.

Dependent variable: GDPR			
	Chi-sq	Df	Prob.
Political instability	10.99	2	0.00
All	10.99	2	0.00
Dependent variable: Political Instability			
	Chi-sq	df	Prob.
GDPR	0.63	2	0.72
All	0.63	2	0.72

The results indicate a unidirectional causality running from political instability to economic growth, as evidenced by the statistically significant Chi-squared value of 10.99 (p = 0.00). This finding implies that past values of political instability possess predictive power for current values of economic growth, suggesting that political instability is a determinant of economic performance. Conversely, the analysis found no causality running from economic growth to political instability, with a non-significant Chi-squared value of 0.63 (p = 0.72).

These results suggest that there is no endogeneity issue affecting the long-run and short-run estimates in this study. Additionally, this finding aligns with previous research conducted by [29-31] which similarly concluded that causality flows from political instability to economic growth, not the reverse.

4.3. The Channels Through Which Political Instability Affects Economic Growth in Ethiopia

As previously discussed, we have proven that there is a significant causal effect running from political instability towards economic growth. To make this finding more meaningful a mediation analysis has been done to identify and explain the channels through which political instability affects economic growth. Accordingly the following table presents the effect of political instability mediated by foreign direct investment, net inflows, Labor force participation rate, Primary completion rate, and Merchandise exports.

As mentioned above, the mediation effects of political instability on economic growth are estimated by the bootstrap method on a Process Macro technique on SPSS, which is developed by [91]. The analysis followed following [90], the suggestion about conditions of mediation analysis. Accordingly, firstly, it was examined that the independent variable predicts the dependent variable in a statistically significant way (this has been proved in section 4.2). Secondly, it was examined that the independent variable predicts the mediator in a statistically significant way. Thirdly, it was examined that, when adjusting for the influence of the independent variable, the mediator is a statistically significant predictor of the dependent variable.

The effect of Political instability on mediator variables

As indicated in the table below, it has been found that political instability is a statistically significant predictor of the mediating variables. The result indicates, the level of political instability is significantly and negatively affects foreign direct investment net inflows, Labor force participation rate, Primary completion rate, and Merchandise exports in Ethiopia.

Table 10. The effect of Political instability on mediating variables.

Predictor variable: political instability					
	Unstandardized Coefficients	**Sig**	**Standardized Coefficients**	**T**	**Sig.**
PECOM	-39.15	4.78	-0.76	-8.20	0.00
LogMEX	-1.53	0.27	-0.63	-5.56	0.00
LPR	-1.13	0.53	-2.15	-0.30	0.04
LogFDI	-1.33	0.55	-0.33	-2.44	0.02

Source: author's computation using SPSS

First, political instability was found to have a statistically significant negative effect on primary completion rate (PECOM), with a coefficient of -0.76. This suggests that as political instability increases, the level of primary school completion decreases, reflecting how instability can disrupt education systems. This finding is consistent with research by [19], who argued that political instability often results in the deterioration of public services, including education, leading

to long-term negative effects on human capital development.

Second, political instability negatively affected merchandise exports (MEX), with a coefficient of -0.63. This indicates that a higher level of instability corresponds to a reduction in exports. Previous studies, such as [20], have shown that political instability can create an unpredictable environment, increasing risks and transaction costs for traders, which consequently reduces export activities. Trade disruptions, caused by government instability or policy changes, tend to undermine a country's competitiveness in global markets.

Third, the analysis revealed a significant negative impact of political instability on labor force participation rate (LPR), with a coefficient of -2.15. This finding suggests that as political instability increases, labor force participation tends to decrease. This result aligns with [63], who found that instability leads to economic disruption, reducing employment opportunities and thus causing people to withdraw from the labor market, either due to a lack of jobs or concerns over economic stability.

Lastly, political instability was found to negatively affect foreign direct investment (FDI), with a coefficient of -0.33. This result indicates that as political instability increases, net FDI inflows decrease. This finding is supported by [146], who highlighted that political instability acts as a deterrent to foreign investors, as it raises the perceived risks and uncertainties involved in doing business in an unstable political environment. FDI, which is crucial for economic growth, technology transfer, and job creation, is particularly sensitive to political risks.

The Effect of Mediating Variables on Economic Growth

The analysis also examines the impact of each mediating variable on economic growth, providing insights into how foreign direct investment (FDI), labor force participation rate (LPR), primary completion rate (PECOM), and merchandise exports (MEX) individually contribute to economic growth in Ethiopia. These mediating variables are tested to assess their direct effect on the country's economic performance, and the results indicate both positive and negative relationships.

Table 11. *The Effect of Mediating Variables on Economic Growth.*

OUTCOME VARIABLE: LogGDPR						
	Coefficients	**Se**	**T**	**P**	**ULCI**	**LLCI**
PECOM	0.01	0.00	6.83	0.00	0.01	0.02
LogMEX	0.22	0.03	8.77	0.00	0.17	0.27
LPR	-0.08	0.01	-9.89	0.00	-0.09	-0.06
LogFDI	0.03	0.01	2.84	0.01	0.01	0.05
Model Summary						
R	R-sq	MSE	F	df1	df2	p
0.99	0.98	0.00	523.50	5.00	44.00	0.00

Source: author's computation using SPSS

As indicated in the table, the analysis examined how these mediating variables themselves affect economic growth. The findings show that primary completion rate (PECOM) positively influences economic growth with a coefficient of 0.01 ($p = 0.00$), which is consistent with Solow- Swan model, which emphasized the importance of education in driving long-term economic development by enhancing human capital. Similarly, merchandise exports (MEX) have a strong positive relationship with economic growth, with a coefficient of 0.22 ($p = 0.00$), supporting the view that trade and exports stimulate economic activity and growth by increasing market access and fostering competition, as suggested by the neoclassical growth model.

However, labor force participation rate (LPR) exhibited a negative relationship with economic growth, with a coefficient of -0.08 ($p = 0.00$). This could be explained by the notion that political instability negatively affects the quality of labor and employment, causing a contraction in economic activity. This aligns with [147], who found that political instability often leads to a decrease in effective labor force participation due to uncertainty about employment opportunities.

Lastly, foreign direct investment (FDI) was found to positively influence economic growth with a coefficient of 0.03 ($p = 0.01$), aligning with the work of [148], who demonstrated that FDI is a crucial factor in driving economic growth, as it brings in capital, technology, and expertise.

Generally, these results underline the critical role of political stability in fostering a conducive environment for economic growth, as it directly influences key mediators human capital, trade, labor force participation, and investment which, in turn, shape economic performance. The findings confirm the broader theoretical frameworks of classical and neoclas-

sical economics, where stability and the effective functioning of these variables are essential for sustained economic development. Moreover, the overall model demonstrates a high level of explanatory power, indicating that the mediating variables collectively account for a significant portion of the variation in economic growth. The statistical significance of these variables highlights the importance of factors such as education, trade, investment, and labor force participation in shaping the economic trajectory of Ethiopia.

The total, direct and indirect effects of political instability on economic growth

The analysis of the total, direct, and indirect effects of political instability on economic growth in Ethiopia reveals important insights into how political instability influences economic performance. Using a parallel mediation analysis procedure, the study estimates the effects and decomposes them into direct and indirect paths, providing a comprehensive understanding of the relationships between political instability and economic growth.. The following table presents mediation estimates.

Table 12. *The total, direct and indirect effects of political instability on economic growth.*

Total (direct + indirect) effect of Political instability on economic growth

Effect	Se	t	P	LLCI	ULCI	c_cs
-0.67	0.16	-4.29	0.00	-0.99	-0.36	-0.53

Direct effect of Political instability on economic growth

Effect	Se	t	P	LLCI	ULCI	c'_cs
0.12	0.05	2.11	0.04	0.01	0.23	0.09

Indirect effect(s) of Political instability on economic growth

	Effect	BootSE	BootLLCI	BootULCI
TOTAL	-0.79	0.14	-1.04	-0.45
PECOM	-0.50	0.09	-0.64	-0.30
LogMEX	-0.34	0.06	-0.48	-0.22
LPR	0.09	0.07	0.00	0.27
LogFDI	-0.04	0.02	-0.10	0.00

Source: author's computation using SPSS

Where LogGDPR is log of GDP per-capita, PECOM is Primary completion rate, LogMEX is log of Merchandise exports, LPR Labor force participation rate and LogFDI is log of foreign direct investment net inflows.

The total effect of political instability on economic growth is found to be negative and statistically significant. Specifically, a unit increase in the political instability index corresponds to a 0.67% decrease in economic growth, as measured by the per capita GDP growth rate. This result aligns with previous studies, such as, [19, 20, 152, 150, 34, 35], which have argued that political instability is detrimental to economic growth, as it creates an environment of uncertainty, reduces investor confidence, and leads to economic inefficiencies. The negative total effect suggests that political instability broadly harms the economic growth trajectory of Ethiopia.

When decomposing the total effect, the direct effect of political instability on economic growth is positive and significant, with a coefficient of 0.12. This implies that, in the short run, political instability may have some positive impacts on economic growth. One potential explanation for this could be that certain periods of instability may lead to reforms or policy adjustments that stimulate economic activity. However, this positive direct effect does not outweigh the negative indirect effects.

The indirect effect of political instability on economic growth is negative and significant, with a coefficient of -0.79. This finding suggests that political instability adversely affects growth through several key channels, including primary education completion rates (PECOM), merchandise exports (MEX), labor force participation rates (LPR), and foreign direct investment (FDI). The results indicate that political instability leads to a 0.50% decrease in economic growth through the reduction in primary education completion rates,

which affects human capital development. This is consistent with the findings of [19], who emphasized the role of education in fostering economic growth, and [34, 35], who found that instability reduces investments in human capital.

Moreover, the study reveals a 0.34% decrease in economic growth through the channel of merchandise exports. This suggests that political instability negatively affects the country's ability to trade and engage with the global market, which is vital for economic expansion. This finding is supported by [146], who argued that political instability reduces export activities by creating an unpredictable environment that deters foreign buyers and hinders trade agreements.

The results also show that political instability has a marginally positive indirect effect on economic growth through the labor force participation rate (LPR), with a 0.09% increase in growth. This counterintuitive finding could be explained by the potential for increased labor force participation during periods of instability, as individuals may seek employment opportunities in response to economic challenges or unrest. However, the positive effect of LPR is overshadowed by the other negative effects of instability.

Furthermore, political instability leads to a 0.04% decrease in economic growth via foreign direct investment (FDI), consistent with the findings of [92] who noted that political unrest deters both foreign and domestic investment. In Ethiopia, political instability has resulted in a loss of investor confidence, leading to capital outflows and reduced economic activity, particularly in sectors that rely on foreign investment.

In general, the econometric analysis confirms two key hypotheses of the study. First, political instability has a significant negative effect on economic growth in Ethiopia, both in the short and long run. Second, political instability exerts a negative indirect effect on economic growth by reducing investment, human capital, labor participation, and trade. These findings highlight the complex and multifaceted nature of political instability's impact on economic performance and underscore the need for stability and governance reforms to foster sustainable growth in Ethiopia.

5. Conclusion and Policy Recommendations

Conclusions

Despite the constitutional promises and institutional reforms aimed at ensuring a stable and democratic political order, Ethiopia has experienced persistent political instability, which has worsened over time. This instability implies that there has been a high probability of the government being destabilized or overthrown through unconstitutional or violent means, including internal conflicts. Moreover, the legitimacy of the Ethiopian government has remained low, and the state-society relationship has not been in accordance with constitutional norms, leading to irregular political exchanges. These issues have significantly undermined the overall stability of the political system.

This study examines both short- and long-run effects of political instability on economic growth in Ethiopia from 1996 to 2020 using the ARDL approach. The results reveal a long-run negative relationship between political instability and economic growth, with political instability significantly hindering economic growth over time. In the short run, political instability, particularly its second lag, also exhibits a negative and significant effect on economic growth. The error-correction term shows that 62% of any short-term deviation from equilibrium is corrected towards long-run stability every six months. These findings imply that Ethiopia's unstable political environment has been a major barrier to higher economic growth, as the country could have experienced more robust growth had it maintained political stability.

Additionally, the study found that there is a unidirectional causality from political instability to economic growth, suggesting that political instability drives economic stagnation, while economic growth does not significantly influence political stability. The study also identified several channels through which political instability negatively impacts economic growth. These include reduced foreign direct investment, lower human capital (as measured by primary school completion rates), a decline in trade (as measured by merchandise exports), and a reduction in labor force participation.

Based on the findings of this study, it is clear that Ethiopia must prioritize the stabilization of its political environment to foster sustainable economic growth. While constitutional and institutional reforms have aimed to ensure political stability and economic growth, the country has struggled to maintain a stable political order, which has directly and indirectly harmed economic performance.

To address this issue, the following policy recommendations are proposed:

1) Addressing Sources of Conflict and Promoting Inclusive Political Settlements: It is crucial to tackle both intra-state and interstate conflicts through inclusive political settlements. To resolve interstate conflicts, the Ethiopian government should expedite the resolution of boundary disputes and promote regional economic and political integration. For internal conflicts, a broad range of stakeholders—including the federal and regional governments, political parties, civil society organizations, and the public—must commit to upholding a democratic order. This can be achieved through inclusive national dialogues and, if necessary, a new social contract (including constitutional changes) that reconciles the divergent interests of key political actors. Establishing independent and trusted conveners for such dialogues is critical to ensuring their success.
2) Strengthening Democratic Governance: Enhancing the legitimacy of the government is essential for fostering political stability. This requires conducting free, fair, and regular elections, respecting human rights, and ensuring the rule of law so that the government is not

vulnerable to destabilization or violent overthrow. Strengthening democratic institutions, including the judiciary, is also vital in creating an environment where political conflicts are resolved peacefully rather than through violence. To further support democracy, there should be a concerted effort to promote democracy and peace education, particularly targeting the youth, who are often involved in politically motivated violence.

3) Building Inter-Ethnic Social Cohesion: Inter-ethnic conflicts have exacerbated political instability in Ethiopia. To mitigate this, stakeholders must prioritize efforts to strengthen inter-ethnic social cohesion. Initiatives aimed at reducing ethnic tensions and fostering mutual understanding among Ethiopia's diverse groups should be promoted. This could involve educational programs, cultural exchanges, and community dialogue initiatives that encourage peaceful coexistence.
4) Enhancing Security Capacity: A strong, capable security apparatus is necessary for maintaining law and order and preventing the escalation of violence. The Ethiopian government should focus on building the capacity of its security forces to monopolize the legitimate use of force. Cooperation between the federal government, regional states, and other informal actors is essential in strengthening the national security apparatus and avoiding the proliferation of paramilitary groups.
5) Coordinating Security and Economic Sectors: Effective coordination between security institutions and economic agencies is vital to achieving long-term economic stability. The Ethiopian Constitution and development policies emphasize the importance of political stability for economic growth, but there is a gap in the coordination between the security and economic sectors. Security agencies should collaborate closely with economic sectors such as investment, planning, and export agencies to ensure that investments are protected and the broader economy remains stable. A common forum for coordination between these sectors should be established to promote organizational coherence and enhance the country's ability to attract investment and sustain growth.

While Ethiopia has made strides in institutional and constitutional reforms aimed at ensuring political stability and economic growth, the ongoing political instability continues to undermine these efforts. Addressing the root causes of instability, strengthening democratic governance, and promoting inter-ethnic cohesion are essential steps toward fostering a stable political environment that can support sustainable economic growth.

Abbreviations

GDP	Gross Domestic Product
FDI	Foreign Direct Investment
LPR	Labor Force Participation Rate
IMF	International Monetary Fund
FDRE	Federal Democratic Republic of Ethiopia
GTP	Growth and Transformation Plan
GTP I & II	Growth and Transformation Plan I & II
SDPRP	Sustainable Development and Poverty Reduction Program
OECD	Organisation for Economic Co-operation and Development
MoFED	Ministry of Finance and Economic Development
WGI	World Governance Indicators
UNDP	United Nations Development Programme
FDI	Foreign Direct Investment
ADF	Augmented Dickey-Fuller (Unit Root Test)
ARDL	Autoregressive Distributed Lag
VAR	Vector Autoregressive
ADF	Augmented Dickey-Fuller
VECM	Vector Error Correction Model
MNC	Multinational Corporation
OECD	Organization for Economic Cooperation and Development
TGR	Tigray (conflict or region)
EIAF	Ethiopian Investment and Advisory Forum
ACLED	Armed Conflict Location & Event Data
R2	Coefficient of Determination
p-value	Probability Value (Statistical Significance)
t-stat	t-statistic

Author Contributions

Fikre Kura is the sole author. The author read and approved the final manuscript.

Conflicts of Interest

The author declares that there are no conflicts of interest regarding the publication of this paper. The research was conducted without any financial or personal relationships that could influence the findings or interpretations presented in this study.

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