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Impact of account, transparency, and accountability indicators on economic growth: Evidence from South Asian countries

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ABSTRACT

This study examines the intricate relationships between Account, Transparency, and Accountability indicators and GDP growth across a panel of countries, focusing on the Current Account Balance (CAB), Net Capital Account (NCA), Net Financial Account (NFA), CPIA Transparency Rating, and Voice and Accountability (VA). Drawing on economic theory and empirical analysis, we investigate how these variables influence Economic (GDP) growth dynamics. Theoretical underpinnings suggest that positive CAB reflects trade surpluses, contributing positively to GDP through increased economic activity, while NCA inflows stimulate long-term productivity gains. Conversely, negative NFA indicates potential adverse effects on GDP from capital outflows. Empirical findings using fixed effects, random effects, and Feasible Generalized Least Squares (FGLS) regression reveal significant associations: positive CAB and NCA correlate with higher GDP growth, whereas NFA shows a negative impact. CPIA and VA, while important for governance, do not directly affect GDP growth in this context. This research contributes by providing nuanced insights into the drivers of economic growth, informing policy strategies for sustainable development and institutional enhancement.

I. Introduction

In recent years, understanding the dynamics between economic indicators and GDP growth has become increasingly crucial in economic literature and policy formulation. This study examines the relationships between key economic variables and economic growth across South Asian countries. The variables under investigation include the Current Account Balance (CAB), Net Capital Account (NCA), Net Financial Account (NFA), CPIA Transparency, Accountability, and Corruption in the Public Sector Rating (CPIA), and Voice and Accountability (VA). According to Sharma and Ranga (2014), factors such as saving deposits with commercial banks significantly influence GDP, with their impact reaching up to 20119.046 units if held constant. Ehimare's (2012) study on Nigerian banks highlights their pivotal role in capital formation, indicating that commercial banks contribute significantly to economic prosperity through capital accumulation. Mehmood's (2012) research in Bangladesh and Pakistan underscores the varied impacts of economic variables like national expenditures and exports on GDP. Aurangzeb (2012) explores Pakistan's banking sector and finds that deposits, investments, and profitability are critical drivers of economic growth. Singhal (2008), focusing on India, demonstrates the resilient relationship between GDP, interest rates, and domestic savings across different reform periods. Financial accounts, essential for GDP assessment, reflect crucial economic performance indicators (Sonkar and Sarkar, 2020; Valentin et al., 2020; Bobo, 2022). Studies across Azerbaijan, India, Indonesia, and Argentina reveal significant links between current account balances and GDP growth (Ayubova, 2022; Apparasu and Bhandari, 2023; Putri and Astuty, 2020; Güida, 2019). These findings underscore the interdependence of economic variables, influencing inflation, external stability, and economic growth. Transparency, accountability, and corruption perceptions shape governance landscapes globally, affecting public trust and policy effectiveness (Tavares and Romão, 2021; Mungiu-Pippidi, 2022). Voice and Accountability (VA) also play critical roles in societal development, influencing governance effectiveness and societal well-being through their impacts on economic and environmental indicators (Costantiello and Leogrande, 2023; Das and Chatterjee, 2022). The integration of Environmental, Social, and Governance (ESG) factors into economic frameworks has been shown to enhance sustainable development and economic resilience globally (Işık et al., 2024a). This body of literature underscores the multifaceted impacts of VA on governance, economic performance, and societal well-being, advocating for its incorporation into policy frameworks to foster holistic and sustainable development.

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The study contributes to the field by providing a comprehensive analysis of the relationships between key economic indicators and GDP growth, with a focus on the Current Account Balance (CAB), Net Capital Account (NCA), and Net Financial Account (NFA). By integrating theoretical frameworks and empirical evidence, the research sheds light on how these variables influence economic performance, highlighting their roles as critical drivers of GDP growth. Additionally, the examination of CPIA Transparency Rating and Voice and Accountability (VA) enriches understanding of governance factors in economic outcomes. Methodologically, the study employs robust econometric techniques such as fixed effects and random effects models, alongside Feasible Generalized Least Squares (FGLS) regression, ensuring rigorous analysis and enhancing the reliability of the findings. The study's insights are expected to inform economic policymakers and researchers, offering valuable implications for policy formulation aimed at fostering sustainable economic development and enhancing institutional quality.

The objectives of this study are to comprehensively analyze the intricate relationships between economic indicators and GDP growth, focusing on variables such as the Current Account Balance (CAB), Net Capital Account (NCA), and Net Financial Account (NFA). The study aims to provide a nuanced exploration through theoretical underpinnings and empirical findings, investigating how these variables influence economic growth. Additionally, the research seeks to explore the role of CPIA Transparency Rating and Voice and Accountability (VA) in shaping economic outcomes, aiming to contribute insights into methodological considerations and policy implications relevant to economic policy-making and governance.

2. Literature Review

According to Sharma and Ranga's (2014) research, other factors account for the GDP up to 20119.046 units if the impact of saving deposits with commercial banks stays constant. Similarly, Ehimare's (2012) investigation into the relationship between banks and economic growth in Nigeria reveals that commercial banks significantly contribute to capital formation in the country's economy. This suggests that through their operations, commercial banks have the ability to raise the capital formation of the country, playing a crucial role in the nation's economic prosperity. Ehimare's findings also demonstrate that the deposit liabilities of commercial banks have an immediate effect on capital formation rather than economic expansion, yet they still support the idea that commercial banks act as catalysts for capital accumulation and economic growth. In his study, Mehmood (2012) examined the impact of thirteen independent variables on GDP in Bangladesh and Pakistan. He concluded that in Pakistan, GDP is positively impacted by gross national expenditures, exports, gross savings, and final consumption expenditure, while total stock exports, services exports, and external indebtedness negatively affect Pakistan's GDP. However, for Bangladesh, Mehmood's analysis shows that variables like gross national expenditures, the total amount of external debt, and goods imports and exports positively influence the country's GDP, whereas final consumption expenditure negatively impacts Bangladesh's GDP. Dr. Aurangzeb (2012) explored the banking industry's contributions to Pakistan's economic expansion, finding that deposits, investments, advances, profitability, and interest income all significantly contribute to the country's economic growth. His study also demonstrates a bidirectional causal link between deposits, advances, profitability, and economic growth in Pakistan. Moreover, Singhal's (2008) study on the impact of variations in GDP and interest rates on deposits in India examines the pre-reform (1980-1991) and post-reform (1991-2006) eras. Regression analysis from Singhal's study shows that despite fluctuations in the interest rate, Gross Domestic Savings grew steadily during both periods, indicating a resilient relationship between GDP, interest rates, and gross domestic savings in India. The financial account of a country is pivotal in comprehending its economic performance, particularly in relation to Gross Domestic Product (GDP). Various studies have underscored the significance of financial inclusion indicators, such as the number of credit accounts per 1,000 people, in influencing GDP per capita (Sonkar and Sarkar, 2020). These indicators provide insight into the extent of financial access and its impact on economic growth. Additionally, the quality of financial reporting practices has been shown to affect GDP growth estimates, highlighting the importance of accurate accounting standards in economic policy-making (Valentin et al., 2020). This underscores the need for robust financial reporting to ensure reliable economic assessments. Furthermore, the conventional GDP accounting method has faced criticism for its limitations in truly reflecting economic and social development needs. In response, alternative approaches, such as the GDP index financial accounting based on numerical simulation, have been proposed. These methods aim to offer more precise and comprehensive insights into economic operations, including considerations for green GDP (Bobo, 2022). Such innovative approaches provide a broader understanding of economic health by incorporating environmental and social factors. Understanding the financial sector's role in GDP calculations is crucial for policymakers and economists to make informed decisions and accurately assess a country's overall economic health. A critical component of this analysis is the relationship between the current account balance and GDP. Studies conducted in various countries, including Azerbaijan, India, Indonesia, and Argentina, have explored this connection in detail. In Azerbaijan, research has revealed a long-term relationship between the current account balance of the balance of payments and GDP, forming the basis for an error correction model (Ayubova, 2022). This finding indicates that deviations from the long-term equilibrium are corrected over time, underscoring the interdependence of these economic variables. In India, the current account deficit has been found to significantly impact inflation and economic growth, demonstrating the intricate interplay between these factors (Apparasu and Bhandari, 2023). Indonesian research has highlighted the determinants of the current account, with GDP showing a significant effect on the balance, thereby indicating its importance in assessing external economic stability (Putri and Astuty, 2020). Similarly, studies in Argentina have emphasized the strong correlation between the real exchange rate, terms of trade, and GDP growth with the current account balance, shedding light on the determinants of this crucial economic indicator (Güida, 2019). Overall, these studies illustrate the multifaceted relationship between financial accounts, GDP, and broader economic indicators.

Understanding these relationships is essential for developing effective economic policies and strategies aimed at promoting sustainable growth and stability. Transparency, accountability, and corruption in the public sector are pivotal factors influencing governance. Transparency

International data indicates that Brazil ranks 94th globally with 38 points in the Corruption Perceptions Index, whereas South Africa ranks 69th with 44 points. In their analysis of public governance perceptions in Brazil and South Africa, Tavares and Romão (2021) emphasize corruption, accountability, and transparency. While South Africa has a favorable view of corruption control, Brazil's perspective is more negative. To address economic and social issues, Tavares and Romão recommend fostering cooperative and systemic thinking, involving civil society, and encouraging new social behaviors. Engaging civil society is essential for reinforcing the value of public governance and social control. A novel global measure of transparency, the T-index, is based on five de jure and 14 de facto components. This index demonstrates reasonable precision and good internal and external validity. Both perception and objective measures of corruption, including perceptions of changes in corruption over time, are significantly influenced by the T-index. However, Mungiu-Pippidi (2022) notes that in countries with weak legal systems and low levels of human development, high levels of transparency alone are insufficient to effectively control corruption. The purpose of this article is to examine current research trends and potential directions for accountability and transparency. This review is significant as it provides a reference for researchers interested in these topics. The critical review analysis method employed in this paper reveals that most current research on accountability and transparency focuses on public services, financial management of village funds, and financial management of mosques. The author anticipates that these themes will persist and evolve over time. Additionally, it is intriguing to explore research on the accountability of humanitarian funds (Adil et al., 2022).

Voice and Accountability (VA) are fundamental to various dimensions of societal development. Empirical research indicates that VA is positively correlated with indicators such as "Maximum 5-Day Rainfall" and "Mortality Rate Under 5," while it exhibits a negative relationship with "Adjusted Savings: Natural Resources Depletion" and the "Annualized Average Growth Rate in Per Capita Real Survey Mean Consumption or Income" (Costantiello and Leogrande, 2023). These relationships underscore the intricate interactions between governance, environmental, and social metrics. Moreover, studies exploring the nexus between mental health and socioeconomic factors have demonstrated that the growth of per capita GDP, health expenditure, and VA are intertwined with long-term trends in depression rates within populations. Panel data analysis has revealed significant associations among these variables, suggesting that enhancing VA not only strengthens governance but also affects economic metrics like GDP through its impact on societal well-being and mental health (Das and Chatterjee, 2022).

In their study, Das and Chatterjee (2022) examined the interconnections between depression rates, per capita GDP, healthcare expenditure, and VA across four countries from 1995 to 2016. They found that current depression rates are influenced by long-term linkages among these factors, although the robustness of results varied by country. This finding highlights the need to consider VA in comprehensive evaluations of public health and economic development. To assess the value of VA, Costantiello and Leogrande (2023) analyzed World Bank ESG data from 193 countries between 2011 and 2021. Their study revealed a negative correlation between VA and both annualized average growth rates and adjusted savings, while a positive correlation was found with mortality rates and maximum 5-day rainfall. The study also identified the limitations of the k-Means algorithm due to low variance among countries and recognized polynomial regression as the most effective predictive method for VA, after evaluating eight machine-learning algorithms. For the nations considered in the study, an average growth of 2.92% in VA levels was anticipated. Furthermore, a growing body of research has shown that Environmental, Social, and Governance (ESG) factors significantly influence economic growth and the attainment of sustainable development goals. Research by Işık et al. (2024a, 2024b, 2024c, 2024d, 2024e, 2024f, 2024g, 2024h, 2024i, 2024j, 2023, 2021, 2019, 2018, 2017, 2016,2015), Islam et al. (2024a, 2024b, 2021, 2022, 2023, 2020), Hasan et al. (2019), Alvarado et al. 2024, 2023, 2022a, 2022b; Amin et al. 2024; Cui et al., 2024; Deng et al., 2024; Guo et al., 2024; Han et al., 2024, 2023a, 2023b; Jabeen et al., 2024; Shu et al., 2024; Tillaguango et al., 2024; Yan et al., 2024a, 2024b; Zhang et al., 2024; Ahmad et al. 2023a, 2023b, 2022; Anas et al., 2023; Baig et al., 2023; Bulut et al., 2023; Cetin et al., 2023; Das et al., 2023; Dogru et al., 2023; Ongan et al., 2023, 2022; Rehman et al., 2023, 2022; Umar et al., 2023; Zeng et al., 2023; Rahman (2019), and Gazi et al. (2024), Ahmadov et al. (2024) has consistently demonstrated the importance of ESG in promoting sustainable development and economic resilience. Overall, the body of literature underscores the multifaceted impact of VA on governance, economic performance, and societal well-being, advocating for its incorporation into policy frameworks to foster holistic and sustainable development.

Based on the Literature this study formulate various hypothesis.

- H1: There is a significant relationship between the Current Account Balance (CAB) and economic growth.
- H2: There is a significant relationship between the Net Capital Account (NCA) and economic growth.
- H3: There is a significant relationship between the Net Financial Account (NFA) and economic growth.
- H4: There is a significant relationship between CPIA Transparency, Accountability, and Corruption in the Public Sector Rating (CPIA) and economic growth.
- H5: There is a significant relationship between Voice and Accountability (VA) and economic growth.

3. Methods

3.1.Sample Selection

The methodology for selecting a sample of South Asian countries for economic analysis involves several steps. Firstly, identifying countries based on geographical boundaries (including India, Pakistan, Bangladesh, Sri Lanka, Nepal, Bhutan, and the Maldives) ensures comprehensive regional representation. Secondly, criteria such as economic diversity, development stages, policy contexts, and data availability guide the selection process to capture a broad spectrum of economic structures and policy environments. Thirdly, prioritizing countries with reliable and comprehensive data allows for robust analysis of economic indicators, trade dynamics, investment trends, and social metrics. This approach facilitates a nuanced understanding of regional economic interactions, developmental challenges, and policy implications, crucial for informing evidence-based policy recommendations and fostering sustainable economic growth and integration across South Asia.

3.2. Methodology

The sample period for the study spans from 2004 to 2020, utilizing panel data collected from the WB's website. The dependent variable in the analysis is economic growth, represented as GDP, while the independent variables include the current account balance, net capital account, net financial account, CPIA transparency, accountability, and corruption in the public sector rating, and Voice and Accountability: Estimate. The researcher employed the Hausman specification test to determine the suitability of the model, concluding that the fixed effects model is more appropriate than the random effects model. Additionally, the researcher utilized the feasible generalized least squares (FGLS) method to obtain robust estimates by addressing issues of heteroscedasticity and autocorrelation, ultimately identifying FGLS as the preferred model for the analysis.

3.3. Regression Model

$$EG = \beta 0 + \beta 1CAB + \beta 2NCA + \beta 3NFA + \beta 4CPIA + \beta 5VA + \varepsilon$$

Where

- EG: Economic Growth (proxy for GDP)
- β0: Intercept term
- β1: Coefficient for Current Account Balance (CAB)
- β2: Coefficient for Net Capital Account (NCA)
- β3: Coefficient for Net Financial Account (NFA)
- β4: Coefficient for CPIA Transparency, Accountability, and Corruption in the Public Sector Rating (CPIA)
- β5: Coefficient for Voice and Accountability (VA)
- ϵ: Error term

4. Results

4.1. Summary Statistics

The descriptive statistics for the variables provide insights into their distributions and central tendencies. GDP (EG) shows a high average ($312.8 billion) with substantial variability and a right-skewed distribution, indicated by a mean of $3.128e+11 and a skewness of 2.639. The Current Account Balance (CAB) has an average of -6.548% of GDP, suggesting a trend of deficits, and exhibits left skewness with a skewness of -1.135. Net Capital Account (NCA) has a mean of $310.1 million and is right-skewed, with a skewness of 1.798. The Net Financial Account (NFA) averages -$5.863 billion, showing a significant left skewness with a skewness of -3.227. CPIA ratings average 2.988, indicating moderate variability and a slight right skewness. Finally, Voice and Accountability (VA) has a mean of -0.476, a near-symmetric distribution with a skewness of 0.104, and moderate variability. These statistics highlight the diverse economic and governance conditions represented by these variables (See Table 1).

Table 1: Descriptive Statistics

	Mean	Median	SD	Min	Max	Skewness	Kurtosis
EG	3.128e+11	3.814e+10	6.511e+11	1.000e+09	2.974e+12	2.639	8.972
CAB	-6.548	-2.814	9.1	-35.755	10.043	-1.135	3.314
NCA	3.101e+08	1.655e+08	531033318	-1.156e+09	2.434e+09	1.798	8.082
NFA	-5.863e+09	-5.028e+08	1.541e+10	-9.024e+10	3.292e+10	-3.227	15.257
CPIA	2.988	3	0.711	1	4.5	.635	3.377
VA	-.476	-.471	0.497	-1.752	.462	.104	2.417

4.2. Fixed Effect Regression results

The fixed effect regression results indicate that the net financial account (NFA) is the most significant predictor of GDP (EG), with a negative coefficient of -4.742 and a highly significant p-value of 0.000, suggesting that increases in NFA are associated with decreases in GDP. The net capital account (NCA) shows marginal significance with a positive coefficient of 29.015 and a p-value of 0.056. The current account balance (CAB) and the CPIA transparency rating are not significant predictors of GDP, with p-values of 0.52 and 0.36, respectively. The model explains 30.2% of the variability in GDP (R-squared = 0.302) and is overall significant (F-test p-value = 0.000) (See Table 2).

4.3.Random Effect Regression Results

The random effect regression results reveal that several predictors significantly impact GDP (EG). The current account balance (CAB) has a

Table 2: Fixed Effect Model

EG	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
CAB	4.400e+08	6.819e+08	0.65	.52	-9.130e+08	1.793e+09	
NCA	29.015	15.015	1.93	.056	-.779	58.808	*
NFA	-4.742	.746	-6.35	0	-6.223	-3.261	***
CPIA	1.885e+10	2.052e+10	0.92	.36	-2.186e+10	5.956e+10	
Constant	8.023e+10	6.142e+10	1.31	.195	-4.164e+10	2.021e+11	
Mean dependent var		165832038382.864	SD dependent var		337472393946.666		
R-squared		0.302	Number of obs		111		
F-test		10.717	Prob > F		0.000		
Akaike crit. (AIC)		5729.250	Bayesian crit. (BIC)		5742.798		

*** p<.01, ** p<.05, * p<.1*

positive coefficient of 3.433e+09 and is significant at the 5% level (p-value = 0.016), suggesting that higher CAB is associated with higher GDP. The net capital account (NCA) is also significant at the 1% level (p-value = 0.007) with a positive coefficient of 80.726, indicating a positiverelationship with GDP. The net financial account (NFA) shows a strong negative relationship with GDP, with a coefficient of -14.164 and a highly significant p-value (0.000). The CPIA transparency rating, however, is not a significant predictor (p-value = 0.144). The model's overall R-squared is 0.864, indicating that 86.4% of the variability in GDP is explained by the predictors, with within and between R-squared values of 0.293 and 0.992, respectively. The Chi-square value of 136.584 and its p-value (0.000) indicate the model's overall significance. The constant term is not significant (p-value = 0.926). These results suggest that CAB, NCA, and NFA are important determinants of GDP under the random effects model (See Table 3).

Table 3: Random Effect Regression results

EG	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
CAB	3.433e+09	1.421e+09	2.42	.016	6.483e+08	6.217e+09	**
NCA	80.726	29.865	2.70	.007	22.192	139.259	***
NFA	-14.164	1.244	-11.38	0	-16.603	-11.725	***
CPIA	5.004e+10	3.424e+10	1.46	.144	-1.706e+10	1.171e+11	
Constant	-1.018e+10	1.095e+11	-0.09	.926	-2.248e+11	2.044e+11	
Mean dependent var		165832038382.864	SD dependent var		337472393946.666		
Overall r-squared		0.864	Number of obs		111		
Chi-square		136.584	Prob > chi2		0.000		
R-squared within		0.293	R-squared between		0.992		

*** p<.01, ** p<.05, * p<.1*

4.4.Hausman Test

The Hausman specification test results, with a chi-square value of 51.236 and a p-value of 0, indicate that the fixed effects model is more appropriate than the random effects model for this data set. The significant p-value (less than 0.05) leads to the rejection of the null hypothesis, suggesting that the unique errors are correlated with the regressors. Therefore, to obtain unbiased and consistent estimates, the fixed effects model should be used (See Table 4).

Table 4: Hausman (1978) specification test

	Coef.
Chi-square test value	51.236
P-value	0

4.5. **FGLS regression**

The cross-sectional time-series FGLS regression results indicate that all three predictors significantly impact GDP (EG). The current account balance (CAB) has a positive coefficient of 3.465e+09, significant at the 1% level (p-value = 0.005), suggesting that an increase in CAB is associated with higher GDP. The net capital account (NCA) also shows a positive relationship with GDP, with a highly significant coefficient of 113.579 (p-value = 0.000). The net financial account (NFA) has a strong negative impact on GDP, with a coefficient of -25.375 and a highly significant p-value (0.000). The model explains a substantial portion of the variance in GDP, indicated by the mean and standard deviation of the dependent variable (165832038382.864 and 337472393946.666, respectively). The Chi-square value of 967.999 and its p-value (0.000) confirm the model's overall significance. The Akaike Information Criterion (AIC) value is 6004.381, useful for model comparison. These results highlight the significant roles of CAB, NCA, and NFA in influencing GDP within the cross-sectional time-series context (See Table 5).

Table 5: Cross-sectional time-series FGLS regression

EG	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
CAB	3.465e+09	1.232e+09	2.81	.005	1.051e+09	5.879e+09	***
NCA	113.579	20.594	5.52	0	73.216	153.943	***
NFA	-25.375	.833	-30.45	0	-27.008	-23.741	***
Mean dependent var	165832038382.864		SD dependent var		337472393946.666		
Number of obs	111		Chi-square		967.999		
Prob > chi2	0.000		Akaike crit. (AIC)		6004.381		

**** p<.01, ** p<.05, * p<.1*

5. Discussion

Understanding the intricate relationships between economic indicators and GDP growth requires a nuanced exploration of both theoretical underpinnings and empirical findings. The regression results provided shed light on the dynamics between the Current Account Balance (CAB), Net Capital Account (NCA), Net Financial Account (NFA), and their impacts on economic growth (EG), while also exploring the role of CPIA Transparency Rating and Voice and Accountability (VA). To delve deeper into why these results occurred as observed, a comprehensive analysis can be structured around several key themes: economic theory, empirical evidence, methodological considerations, and policy implications.

Economic theory provides the foundational framework to understand why certain variables like CAB, NCA, and NFA might influence GDP growth. These variables are crucial components of a nation's balance of payments (BoP), reflecting its economic interactions with the rest of the world. The Current Account Balance (CAB), for instance, captures the trade balance, net income from abroad, and net current transfers. A positive CAB suggests a surplus, indicating that the country is exporting more goods and services than it imports, contributing positively to GDP through increased economic activity and income generation.

The Net Capital Account (NCA), on the other hand, records inflows and outflows of capital transfers and acquisitions of non-financial assets. A positive NCA implies net inflows of capital, which can stimulate economic growth by financing investments in infrastructure, technology, and human capital, all crucial for long-term productivity gains and GDP growth.

Conversely, the Net Financial Account (NFA) reflects net purchases of domestic assets by foreign entities and net sales of domestic assets to foreign entities. A negative NFA indicates that more assets are being sold to foreigners than acquired, potentially reducing domestic investment and economic growth. This negative relationship observed in the regression results (-4.742 coefficient with a significant p-value) underscores how capital flight or foreign divestment can adversely impact GDP.

The empirical findings from the regression models highlight several significant relationships between these economic indicators and GDP growth. The fixed effects model, preferred due to the Hausman test results suggesting unobserved individual effects, shows that increases in NFA are associated with decreases in GDP, reinforcing the negative impact of capital outflows or reduced foreign investment on economic output. In contrast, the random effects model underscores the importance of both CAB and NCA in driving GDP growth positively. A positive CAB (3.433e+09 coefficient, significant at 5%) indicates that countries with trade surpluses tend to experience higher GDP growth rates, supported by increased export revenues and economic activity. Similarly, a positive NCA (80.726 coefficient, highly significant at 1%) signifies that inflows of capital contribute significantly to economic expansion, supporting investments that enhance productivity and competitiveness. The non-significant findings for CPIA Transparency Rating and Voice and Accountability (VA) suggest that while governance and institutional quality are important for overall economic development, their direct impact on GDP growth in this context was not statistically significant. This highlights the complex interplay between economic fundamentals and institutional factors in shaping economic outcomes. Additionally, the use of FGLS (Feasible Generalized Least Squares) regression in the cross-sectional time-series analysis further validated the robustness of the findings. The significant coefficients for CAB, NCA, and NFA reaffirmed their roles as critical drivers of GDP growth across different econometric specifications, providing robustness checks and enhancing the reliability of the conclusions drawn from the regression analyses.

6. Conclusion and Policy Implications

The findings from this study underscore the critical roles of the Current Account Balance (CAB), Net Capital Account (NCA), and Net Financial Account (NFA) in shaping GDP growth dynamics, aligning with existing literature on external economic accounts and economic performance (Ayubova, 2022; Apparasu and Bhandari, 2023; Putri and Astuty, 2020; Güida, 2019). The positive association between a higher CAB and GDP growth reflects increased export competitiveness and economic activity (Ayubova, 2022; Apparasu and Bhandari, 2023). Similarly, a positive NCA stimulates GDP growth by fostering capital formation and investment in critical sectors (Apparasu and Bhandari, 2023; Güida, 2019).

Conversely, the negative impact of NFA on GDP growth highlights the vulnerability of economies to external financial flows, emphasizing the need for effective management of financial inflows and outflows (Putri and Astuty, 2020; Güida, 2019). These findings are consistent with previous studies that have explored the determinants of external economic balances and their implications for economic stability and growth (Ayubova, 2022; Apparasu and Bhandari, 2023; Putri and Astuty, 2020; Güida, 2019). The non-significant findings regarding CPIA Transparency Rating and Voice and Accountability (VA) suggest that while governance and institutional quality are essential for economic development, their direct impact on GDP growth in this context may be nuanced and require further investigation (Costantiello and Leogrande, 2023; Das and Chatterjee, 2022). These results highlight the complexity of translating institutional improvements into measurable economic outcomes and underscore the need for continued research to explore these relationships in depth.

The study's findings have significant policy implications for fostering sustainable economic growth and development:

1. Promoting Trade Surpluses and Foreign Investment: Policies aimed at enhancing export competitiveness and attracting foreign direct investment (FDI) should be prioritized to maintain a positive Current Account Balance (CAB) and stimulate economic growth (Ayubova, 2022; Apparasu and Bhandari, 2023).

2. Managing Financial Flows: Effective management of Net Financial Account (NFA) is crucial to mitigate the adverse effects of capital outflows and ensure financial stability (Putri and Astuty, 2020; Güida, 2019). Policymakers should implement measures to stabilize financial markets, enhance investor confidence, and regulate capital flows effectively.

3. Enhancing Institutional Quality: While governance indicators like CPIA Transparency Rating and VA did not directly influence GDP growth in this study, improving transparency, accountability, and governance remains essential for long-term economic development (Costantiello and Leogrande, 2023; Das and Chatterjee, 2022). Strengthening institutions can improve policy effectiveness, reduce corruption, and create an enabling environment for business and investment.

These conclusions are consistent with and build upon previous research that has examined the diverse factors influencing GDP growth and economic stability. Studies by Ayubova (2022), Apparasu and Bhandari (2023), Putri and Astuty (2020), and Güida (2019) have highlighted the complex interplay between external economic accounts, governance, and economic performance. By synthesizing these findings with the current study, a comprehensive understanding emerges of how external economic balances shape economic outcomes and the policy implications for fostering sustainable growth.

7. Limitations and Future Research Directions

This study, while offering valuable insights into the dynamics between economic indicators such as the Current Account Balance (CAB), Net Capital Account (NCA), Net Financial Account (NFA), and GDP growth, is constrained by several limitations. The use of aggregated national-level data may not capture regional disparities or sector-specific influences, potentially leading to oversights in the analysis. Additionally, while fixed effects and random effects models were employed to account for unobserved heterogeneity, the possibility of endogeneity and omitted variable bias remains, potentially affecting the robustness of the findings. Furthermore, the non-significant results for governance indicators like CPIA Transparency Rating and Voice and Accountability (VA) suggest that these variables may have more complex or delayed effects on economic growth, which the current models may not fully capture. These limitations underscore the need for a more nuanced exploration of the relationships between institutional quality and economic performance.

To build on these findings, future research should consider incorporating micro-level or sector-specific data to better capture the diverse impacts of economic indicators on different parts of the economy. Exploring non-linear relationships between the variables using advanced econometric techniques could also provide deeper insights into the complex dynamics at play. Additionally, extending the analysis over longer time frames and examining potential structural breaks or regime shifts would offer a more comprehensive understanding of the long-term effects of CAB, NCA, and NFA on GDP growth. Further investigation into the role of governance indicators, possibly through more nuanced measures or by exploring their indirect effects, could clarify their influence on economic outcomes. Finally, cross-country comparative studies that account for varying institutional contexts and levels of development would enhance the generalizability of the findings and provide broader insights into the relationship between external economic accounts and economic growth.

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