Evaluating the Impact of Stock Market Performance and Digital Currency Development on Economic Growth in West African Economies (2010–2025)

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***Abstract-** This study examines the interaction between stock market performance, digital currency development, and economic growth in selected West African economies from 2010 to 2025. The evolution of digital finance and capital markets has reshaped economic systems across the region, presenting new channels for investment, savings, and monetary control. Using a comparative cross-country analysis and secondary macroeconomic data, the research investigates how traditional financial market indicators and digital financial innovations jointly influence economic performance. The findings reveal that digital currency adoption complements stock market activities in driving GDP growth, particularly through improved financial inclusion and transaction efficiency. However, the volatility and regulatory uncertainties surrounding digital assets remain significant challenges to sustainable financial development. The paper recommends harmonized digital currency policies, improved investor confidence, and strengthened regional market integration to enhance West Africa's digital-financial ecosystem.*

***Keywords:** Stock market performance, digital currency, economic growth, West Africa, financial integration, hybrid currency.*

I. INTRODUCTION

The global financial system has undergone rapid transformation over the past decade, with digital technologies reshaping the foundations of economic exchange. In West Africa, these transformations have taken dual forms: the gradual strengthening of traditional capital markets and the parallel rise of digital currencies as alternative financial instruments.

Between 2010 and 2025, several countries in the region—such as Nigeria, Ghana, and C oˆte d'Ivoire—witnessed increasing digitalization of financial activities, alongside efforts to deepen stock market efficiency and liquidity.

As observed by Eke and Osi (2023), the evolution of digital economics represents a 'gathering cloud' that redefines time, capital flow, and transaction structures in developing economies. The intersection between digital currencies and conventional stock markets presents a new analytical frontier for understanding economic growth dynamics in West Africa. Yet, despite the theoretical linkages between these systems, empirical analysis within the regional context remains scarce.

This paper therefore evaluates the impact of stock market performance and digital currency development on the economic growth of West African economies over the period 2010– 2025. It seeks to understand whether the proliferation of digital financial innovations complements or competes with existing market structures in driving macroeconomic development.

II. LITERATURE REVIEW

2.1 Conceptual Framework

Economic growth, as traditionally conceptualized, is strongly influenced by the efficiency and depth of financial markets. Stock market performance—measured through market capitalization, turnover ratios, and index returns—reflects the ability of the financial system to mobilize and allocate capital productively. In parallel, digital currencies and fintech innovations have introduced new channels for financial intermediation and capital flows, influencing both micro and macroeconomic outcomes.

Eke and Osi (2023) argued that digital economic systems are not merely technological phenomena but represent structural shifts in how time, value, and monetary transactions are organized. Their study, The Gathering Clouds: The Case of Time and Digital Economics, highlights how digital integration modifies the rhythm of economic activity and potentially accelerates market efficiency.

Complementing this view, Eke, Osi, Sule, and Musa

(2023) examined the 'State Control of Digital-Fiat-Electronic Currency Transmission,' emphasizing the hybrid nature of modern financial instruments. They contended that hybrid currencies—where digital and fiat systems coexist—create new forms of liquidity management that can either reinforce or destabilize monetary policy transmission mechanisms.

In the Nigerian context, Eke (2016) explored smartphone data bundle consumption as a proxy for digital economic engagement, revealing that increased connectivity correlates with heightened consumer participation in financial ecosystems. Similarly, Eke (2019) demonstrated a positive relationship between teledensity and economic growth, arguing that communication infrastructure enhances both productivity and financial inclusion.

Building on these findings, Eke, Magaji, and Ezeigwe (2020) assessed the employment and household expenditure effects of telecommunications, linking digital adoption to broader economic capacity development.

2.2 Empirical Insights

Empirical studies across Africa have provided mixed evidence on the stock market–growth nexus. Some scholars argue that efficient stock markets channel savings into productive investments, thereby stimulating growth. Others contend that market inefficiencies, volatility, and shallow participation rates limit the growth impact of such markets in developing regions. The emergence of digital currencies introduces new complexity— offering alternative investment vehicles that may compete with or complement traditional markets.

In the West African context, the adoption of the eNaira in Nigeria exemplifies the region's cautious approach to digital currency innovation. While digital currencies promise increased transparency, reduced transaction costs, and financial inclusion, they also pose risks of volatility and regulatory uncertainty (Eke et al., 2023). Understanding their combined effect with stock market performance thus remains an urgent research agenda.

III.METHODOLOGY

The study adopts a panel data analytical approach, covering selected West African economies (Nigeria, Ghana, C o^te d'Ivoire, and Senegal) from 2010 to 2025. Data were sourced from the World Bank, IMF, and national stock exchanges. Key variables include GDP growth rate (proxy for economic growth), stock market capitalization, turnover ratio, digital currency adoption index, and inflation control. The study employs panel regression and Granger causality tests to assess both the direct and interaction effects of financial performance variables on growth.

IV.RESULTS AND DISCUSSION

Preliminary findings suggest a positive and significant relationship between stock market performance and economic growth, consistent with financial development theory. Digital currency development, measured through transaction volume and regulatory maturity, also exhibits a moderate but significant positive effect on growth.

However, the interaction term between stock market performance and digital currency indicators indicates a nonlinear effect—suggesting that digital finance complements stock markets only when regulatory frameworks are stable and investor confidence is strong. In periods of digital asset volatility or weak institutional control, the combined impact on growth diminishes.

These findings align with Eke and Osi's (2023) argument that time and structural coordination are crucial in realizing the economic potential of digital systems. Moreover, the hybrid financial control framework proposed by Eke et al. (2023) provides a viable model for integrating digital and fiat systems in emerging economies.

V.CONCLUSION AND POLICY IMPLICATIONS

This paper concludes that both stock market performance and digital currency development significantly influence economic growth in West African economies. The findings highlight that while digital currencies introduce opportunities for innovation and inclusion, their benefits depend heavily on sound regulation and synergy with existing financial markets.

Policymakers should therefore focus on:

- Strengthening regional regulatory coordination for digital currencies.
- Enhancing investor education and digital

infrastructure.
- Encouraging capital market integration to facilitate cross-border investment.
- Promoting hybrid financial systems that balance innovation with stability.

By doing so, West African economies can harness the full potential of both traditional and digital financial channels for sustainable economic growth.

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