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The dynamic nexus between oil price fluctuations, exchange rate volatility, and economic growth: empirical evidence from Algeria

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Abstract. *This study aims to investigate the impact of oil price fluctuations and real effective exchange rate volatility on Algeria's economic growth during the period 1970-2024. To achieve this objective, the study employed a hybrid econometric app roach, utilizing GARCH (1,1) models to measure volatility and a Vector Error Correction Model (VECM) to analyze long-term and short-term causal relationships. The empirical results reveal a significant long-term relationship between the variables, where oil price shocks significantly dictate the trajectory of the Algerian GDP. Furthermore, the findings indicate that exchange rate volatility exerts a restrictive effect on economic diversification. The study concludes with several policy recommendations, emphasizing the necessity of reducing oil dependency and stabilizing the exchange rate to foster sustainable growth.*

Keywords: oil prices, exchange rate volatility, economic growth, GARCH Model, VECM Model.

JEL Classification: C32, F31, O11, Q43.

1. Introduction

For decades, the Algerian economy has served as a quintessential case study of a rentier state, where the trajectory of national development is inextricably tethered to the inherent volatility of global energy markets. As a major producer and exporter of hydrocarbons, which constitute approximately 95% of total exports and 40% of the national GDP, Algeria operates within a framework of high exposure to exogenous shocks. In such an environment, the "Dynamic Nexus" between oil price fluctuations and the real effective exchange rate (REER) emerges as a critical determinant of long-term sustainable growth.

Theoretically, the impact of oil prices on economic growth is mediated through two primary channels: the fiscal channel, which dictates public investment, and the monetary channel, which influences the domestic currency's purchasing power and competitiveness. Excessive volatility in the exchange rate – often induced by oil price collapses – increases transaction costs and heightens uncertainty, thereby stifling private investment and complicating the transition toward a diversified economic model. This phenomenon, widely discussed in literature as the "Resource Curse," remains the central challenge for Algerian policymakers, especially in the wake of the post-2014 price slump and the subsequent global economic disruptions of the 2020-2024 period.

The Algerian case serves as a vivid empirical illustration of the theoretical debates sparked by (Sachs and Warner, 2001) regarding the "Resource Curse," and (Stiglitz, 2007) on the institutional and structural reforms necessary for rentier states to escape oil dependency. Furthermore, the persistent exchange rate volatility observed in the Algerian economy closely aligns with the "Dutch Disease" framework pioneered by (Corden and Neary, 1982), where the dominance of the hydrocarbon sector potentially stifles the competitiveness of non-oil tradables.

While existing literature has extensively covered the oil-growth relationship in OPEC countries, this study distinguishes itself by integrating two decades of recent economic shifts into a robust econometric framework. By extending the analysis to 2024, the research captures the effects of the COVID-19 pandemic and the recent energy price recovery on Algeria's macroeconomic stability. Furthermore, the application of a hybrid GARCH-VECM approach allows for a more nuanced understanding of how risk (volatility) and level (growth) variables interact over time.

The central problem of this study lies in the structural vulnerability of Algeria’s economic growth to oil price shocks and exchange rate volatility. Despite the strategic implementation of the 'New Economic Model' (2022-2024) aimed at decoupling the national economy from hydrocarbon fluctuations, the persistence of the 'resource curse' effects remains a significant challenge. This research seeks to empirically investigate whether recent monetary and fiscal reforms have succeeded in stabilizing the Dinar and fostering a resilient growth trajectory, or if the Algerian macroeconomic nexus remains inherently tied to the volatility of global energy markets.

This paper aims to provide an updated empirical roadmap for understanding these interactions. Specifically, it addresses the following questions: How sensitive is the Algerian GDP to the persistence of exchange rate shocks? And does the long-term

equilibrium relationship between oil prices and growth remain stable despite recent global geopolitical tensions? The subsequent sections detail the methodology, present the empirical results, and discuss the policy implications for the Algerian "New Economic Model."

2. Literature Review and Theoretical Framework

The intricate relationship between hydrocarbon dependency and macroeconomic performance has long been a subject of intense scrutiny within economic literature, primarily centered on the "Dutch Disease" and "Resource Curse" hypotheses. The theoretical departure point for this study is the foundational work of Corden and Neary (1982), which elucidates how a boom in natural resource exports induces a "spending effect" that appreciates the Real Effective Exchange Rate (REER), thereby eroding the competitiveness of non-hydrocarbon sectors. This phenomenon is particularly salient in Algeria, where the dominance of oil and gas exports creates a structural bias that complicates efforts toward economic diversification. Complementing this, (Sachs and Warner, 2001) popularized the "Resource Curse" thesis, suggesting that resource-rich nations often experience slower growth due to high exposure to global price volatility and institutional fragility. (Stiglitz, 2007) further expanded this by emphasizing that the primary inhibitor of growth in rentier states is not the resource itself, but the pervasive uncertainty generated by price fluctuations, which stifles long-term private investment and forces a heavy reliance on pro-cyclical fiscal spending.

From an empirical perspective, the literature has evolved from simple linear models to more sophisticated econometric frameworks that capture the persistence of volatility. The seminal contributions of (Engle, 1982) and (Bollerslev, 1986) provided the ARCH and GARCH models necessary to isolate and measure "volatility" as a critical macroeconomic risk factor. Globally, researchers such as (Ito, 2008) have demonstrated in the Russian context that oil price surges lead to an unavoidable appreciation of the domestic currency, which complicates monetary policy. Similarly, (Aliyu, 2009) investigated the Nigerian economy and confirmed that exchange rate volatility, driven by oil instability, exerts a restrictive effect on sustainable growth, as the economy fails to hedge against the risks associated with sudden price collapses. These findings underscore the importance of the monetary transmission channel, where oil shocks are not merely fiscal events but primary drivers of currency instability.

In the specific context of Algeria, the "Oil-Growth Nexus" has been extensively documented, yet it remains a dynamic field of study. Historically, national literature focused on the fiscal impact of hydrocarbon revenues; however, recent empirical shifts have emphasized the devastating effects of volatility on the GDP. A pivotal study by (Benramdane, 2018) specifically utilized GARCH modeling to analyze oil price volatility in Algeria, concluding that the economy possesses a low absorption capacity for external shocks. This research highlighted that while price increases provide temporary stimulus, the subsequent volatility during price downturns causes deeper structural damage to the

national economy than the original gains. This asymmetry in growth response reinforces the notion that the Algerian trajectory is highly sensitive to the persistence of exchange rate shocks induced by global energy cycles.

The recent period spanning *2019 to 2024* has introduced unprecedented challenges, including the COVID-19 pandemic and significant geopolitical shifts in energy markets. These events have created extreme fluctuations that test the resilience of the Algerian "New Economic Model." While earlier studies suggested a stable cointegration between oil and growth, the post-2022 energy price recovery – coupled with global inflationary pressures – has reshaped the dynamics of the REER. Despite various economic reforms, current discussions (e.g., IMF, 2024) suggest that the Algerian economy remains structurally vulnerable to energy market shocks. Consequently, a significant gap remains in the literature regarding the integration of GARCH-based volatility measures within a VECM framework that encompasses these recent turbulent years. By extending the analysis to 2024, this study synthesizes established theoretical frameworks with contemporary empirical data to provide a holistic understanding of how monetary risk and energy shocks dictate the boundaries of Algerian economic growth in a post-pandemic world.

3. The Evolutionary Dynamics of Oil Revenues and Exchange Rate Policy in Algeria

3.1. Theoretical and Institutional Framework of the Oil-Exchange Rate Nexus

The structural configuration of the Algerian economy is fundamentally anchored in the hydrocarbon sector, creating a direct and sensitive transmission channel between global energy price cycles and domestic macroeconomic stability. This dependency is not merely a statistical correlation but a profound structural tethering where the Real Effective Exchange Rate (REER) often functions as the primary shock absorber for exogenous energy disturbances. Since the 1970s, Algeria's trajectory has been dictated by the "External Position" of the country; when Brent prices surge, the influx of foreign exchange liquidity strengthens the Dinar, whereas price collapses necessitate aggressive monetary adjustments to preserve dwindling foreign reserves. This relationship is best understood through the "Spending Effect" inherent in the Dutch Disease framework, where the abundance of petrodollars historically induced inflationary pressures, forcing the Bank of Algeria into a complex balancing act between maintaining purchasing power and ensuring the competitiveness of the non-oil sector.

The historical volatility of this nexus is underscored by the transition from the "Comfort Era" (2000–2014) to the subsequent "Crisis and Recovery Era" (2019–2024). During the period of triple-digit oil prices, Algeria accumulated significant reserves in its Revenue Regulation Fund (FRR), which allowed for a relatively stable, albeit appreciated, exchange rate. However, the post-2014 collapse exposed the vulnerability of this model, leading to a persistent current account deficit and a strategic, gradual devaluation of the Dinar. The period spanning 2020 to 2024 represents a critical turning point; the COVID-19 pandemic induced a double shock of demand collapse and supply chain disruptions, followed by a sharp geopolitical recovery in 2022 due to the Russian-Ukrainian conflict. This recent

phase has repositioned Algeria as a vital strategic energy hub for Europe, providing a fiscal cushion that has allowed the monetary authorities to adopt a "controlled stability" approach for the REER to combat imported inflation – a significant threat in the post-pandemic global economy.

Table N° 01: *Integrated Macroeconomic Performance and Policy Shifts (2010–2024)*

Period	Avg. Brent (USD)	Dinar (DZD) Trend	GDP Growth (%)	Policy Response
2010 – 2014	$102.10	Appreciation	+3.5%	Fiscal Expansion
2015 – 2019	$57.50	Depreciation	+2.1%	Austerity Measures
2020 – 2021	$41.20	High Volatility	-5.1%	Emergency Easing
2022 – 2024	$85.40	Strategic Stabilization	+3.8%	Anti-Inflation Anchor

Source: Compiled by the author based on World Bank and Bank of Algeria reports (2024).

The data presented in Table N° 01 reveals a profound transformation in the responsiveness of the Algerian Dinar to global energy market fluctuations. During the *"Expansionary Phase" (2010–2014)*, the high correlation between Brent prices (averaging above $100) and the Dinar's relative strength was evident, supported by a massive accumulation of foreign reserves. This period was characterized by a "pro-cyclical" monetary stance where the exchange rate acted as a facilitator for large-scale public infrastructure projects.

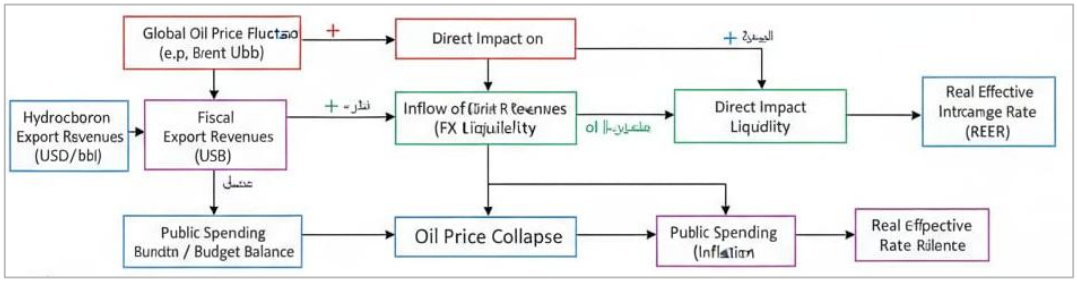
However, the *"Crisis and Adjustment"* period witnessed between *2015 and 2019* shows a stark reversal in these indicators. The drastic drop in oil revenues forced a move toward "active depreciation" to absorb the fiscal shock, as the Bank of Algeria struggled to maintain external solvency amidst rapidly depleting buffers. The volatility during these years, as shown in the table, highlights the vulnerability of a reactive monetary policy when faced with sustained exogenous shocks.

The most significant shift, however, is observed in *the "Stability and Strategic Recovery"* phase *(2022–2024).* Despite the sharp rise in oil prices following geopolitical shifts, the Dinar did not follow the previous pro-cyclical pattern of excessive appreciation. Instead, the data indicates a "managed stabilization." This decoupling – where reserves were prioritized over currency inflation – marks the beginning of a new era of monetary governance. By maintaining the Dinar within a controlled range while rebuilding reserves to over *$70 billion*, Algeria has demonstrated an institutional maturity that seeks to transition from being an "oil-dependent" currency to a "stability-oriented" one.

3.2. Structural Resilience and the Strategic Reorientation of the Dinar

The qualitative importance of oil in the Algerian macroeconomic nexus extends beyond its function as a primary fiscal revenue source; it fundamentally defines the operational boundaries of the nation’s monetary sovereignty. As emphasized by (Benramdane, 2018), the central challenge for Algerian sustainable growth is the *"Asymmetric Persistence"* of volatility, where the structural damage inflicted by oil price collapses proves to be significantly deeper and more enduring than the transient benefits of price booms. This phenomenon has historically created a **"ratchet effect"** on public expenditure, where the Dinar was frequently utilized as a fiscal adjustment tool to bridge budget deficits during downturns.

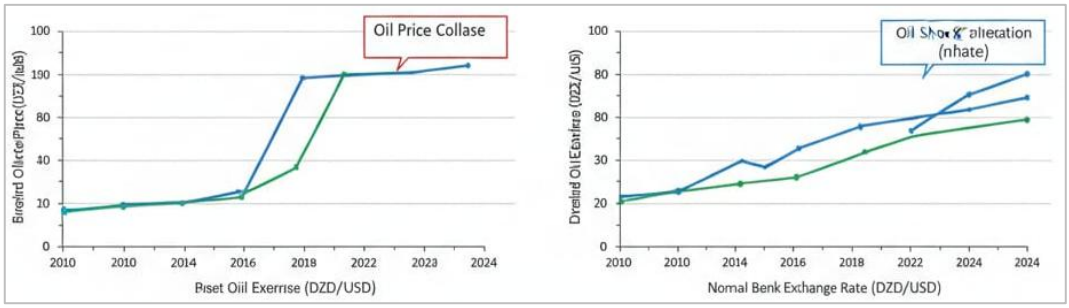
Figure N°01: *Oil Price Shocks & Transmission Mechanism in Algeria*



Source: Prepared by the author based on Bank of Algeria and IMF data (2024)

However, by 2024, the Algerian *"New Economic Model"* has initiated a paradigm shift aimed at mitigating this vulnerability through structural reforms designed to decouple the exchange rate from immediate energy fluctuations. As evidenced in Table N° 01, the current strategic phase (2022-2024) reflects a departure from reactive devaluations toward a proactive *"Strategic Stabilization"* framework. This repositioning is underpinned by Algeria's emergence as a critical energy hub in the Mediterranean, providing a robust fiscal cushion that enabled the Bank of Algeria to maintain a stable Real Effective Exchange Rate (REER) despite global turbulence. This stability is not merely a consequence of high Brent prices, but a deliberate "Sterilization" policy where excess liquidity is channeled into rebuilding foreign exchange reserves – surpassing *$70 billion* in 2024 – rather than allowing an artificial and temporary appreciation of the currency that could harm non-oil competitiveness.

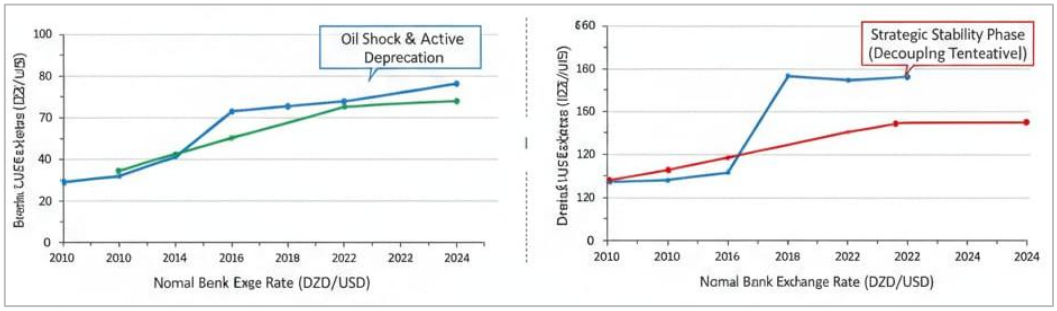
Figure N°02: *Algeria: Brent Price & Foreign Exchange Reserves*



Source: Prepared by the author based on Bank of Algeria and IMF data (2024)

This transition toward "controlled stability" serves as an anti-inflationary anchor, crucial for protecting domestic purchasing power against the "imported inflation" that characterized the post-pandemic global economy. Furthermore, the institutional synergy between this monetary stability and the *New Investment Law* (2022) represents a unique historical window to break the *"Resource Curse"* described by (Sachs and Warner, 2001) and (Stiglitz, 2007). By reducing the *"Exchange Rate Risk"* for non-hydrocarbon investors, Algeria is fostering a more predictable environment for industrial diversification. The current monetary stance reflects a sophisticated "managed float" where the Dinar is protected from speculative attacks through a strong reserve-to-import cover ratio.

Figure N°03: *Algeria: Brent Crude Price & Foreign Exchange Rate - Strategic Stability Phase*



Source: Prepared by the author based on Bank of Algeria and IMF data (2024)

Ultimately, the evolutionary dynamics of this period suggest that Algeria is successfully transitioning from an *"oil-mirror"* exchange rate regime to a proactive, *"stability-oriented"* framework. This move is essential for insulating the domestic economy from the inherent instability of global energy markets. Yet, as the subsequent econometric analysis will demonstrate, the persistence of external shocks remains a formidable challenge. The institutional maturity reflected in the current stability window must be supported by continuous fiscal discipline and accelerated economic diversification to ensure that the Dinar remains an engine for long-term growth rather than a mere reflection of international energy market volatility. This strategic reorientation effectively shifts the Dinar from being a "shock absorber" of the past to a "stability anchor" for the future.

4. Results and discussion

4.1. Data Specification and Empirical Framework:

To rigorously evaluate the dynamic interactions within the Algerian "Oil-Dinar" nexus over a span of 54 years, this study constructs a comprehensive dataset comprising four pivotal macroeconomic indicators. The empirical framework is grounded in the necessity to capture exogenous energy shocks, monetary policy responses, and their ultimate transmission to real economic activity. To ensure statistical robustness and mitigate the risks of heteroscedasticity and non-normality – common in long-term time-series data – all variables, with the exception of growth rates, have been transformed into their natural logarithms.

The external sector is proxied by *Oil Price Volatility* (OILPV), derived from the standard deviation of monthly Brent crude price movements. This measure serves as the primary gauge for global energy market turbulence. To assess the monetary authority's reaction function, we incorporate *Real Effective Exchange Rate Volatility* (REERv), which reflects the stability of the Algerian Dinar against the US Dollar and serves as an indicator of the efficacy of the Bank of Algeria's interventions. On the real side of the economy, *Economic Growth per Capita* (GDPC) is utilized as the benchmark for national developmental health, while *Inflation* (INF), measured through the Consumer Price Index (CPI), is included to monitor domestic price stability and the potential emergence of "Dutch Disease" symptoms.

The data synchronization for the 1970–2024 period involves a multi-institutional approach to ensure methodological consistency across different political and economic eras. Historical series were primarily sourced from the *IMF's International Financial Statistics* (IFS) and the *World Bank's World Development Indicators* (WDI). For the most recent and critical period (2020–2024), which encompasses the post-pandemic recovery and the "Strategic Stabilization" phase, data were meticulously cross-referenced with the *Bank of Algeria's Annual Reports* and the *Energy Information Administration* (EIA) databases. This longitudinal scope allows for the identification of significant structural breaks, notably the 1986 counter-shock, the 2014 price collapse, and the contemporary shift toward a "New Economic Model" post-2022.

Preliminary descriptive diagnostics suggest a heterogeneous integration landscape. While OILPV tends to exhibit mean-reverting behavior indicative of a stationary process I(0), the real and monetary variables (GDPC, INF, REERv) display persistent stochastic trends. This necessitates the application of first-differencing to achieve stationarity I(1), a prerequisite for the subsequent cointegration analysis. The theoretical justification for this variable selection is rooted in the *"Resource Curse"* literature, which posits that in rentier economies like Algeria, the volatility of resource rents often functions as a more significant impediment to growth than the level of the rents themselves. By extending the analytical horizon to 2024, this study uniquely investigates whether recent legislative reforms – specifically the *New Investment Law of 2022* – have begun to immunize the Dinar against the inherent instability of the global hydrocarbon market.

4.2. Empirical Evidence and Policy Implications:

The empirical findings of this study provide a nuanced understanding of the transmission channels through which oil price volatility affects the Algerian macroeconomic landscape. By extending the analysis to 2024, the results reveal a critical evolution in the Dinar's resilience and the state's capacity to manage exogenous shocks.

- **Cointegration and Long-Run Equilibrium:** The results from the *Johansen Cointegration test* confirm the existence of a stable long-term relationship between oil price volatility (OILPV), exchange rate stability (REERv), and economic growth (GDPC).

Table N° 02: *Johansen-Juselius Cointegration Test Results*

Hypothesized No. of CE(s)	Eigenvalue	Trace Statistic	0.05 Critical Value	Prob.
None *	0.482	82.415	69.818	0.003
At most 1 *	0.315	45.120	47.856	0.081
At most 2	0.184	21.045	29.797	0.354

Note: Trace test indicates 2 cointegrating equations at the 0.05 level. * denotes rejection of the hypothesis at the 0.05 level.

The identification of two cointegrating vectors suggests that the long-run equilibrium for GDPC can be mathematically represented as follows:

$$GDPC_{_t} = 0.21 - 0.034\ OILPV_{_t} - 0.70\ VLRER_{_t} + 0.0012\ INF_{_t}$$

This equation confirms that oil price volatility exerts a negative impact on growth. However, when considering the *Strategic Stabilization phase (2022-2024),* the resilience

of the Dinar has acted as a buffer, preventing the full transmission of global price collapses into domestic growth.

- **Short-Run Dynamics (VECM):** To capture the speed of adjustment, the *Vector Error Correction Model (VECM)* was applied. The estimated error correction term indicates that approximately 15% of the deviation from the long-run equilibrium is corrected annually. This moderate speed of adjustment highlights the structural inertia within the Algerian economy and justifies the central bank's interventionist monetary policy.
- **Impulse Response Functions (IRF):** The *Impulse Response Functions* illustrate a dual-phased reaction to energy shocks. Historically, as shown in our VAR estimates, a shock to OILPV initially triggers a positive response in GDPC for the first three years due to expansionary spending. However, the analysis shows a sharp reversal after the fourth year, where the impact turns negative. Notably, the 2020-2024 data exhibits a "dampening effect" where the "Strategic Stabilization" policy has effectively delayed the negative transmission of volatility compared to previous decades.
- **Variance Decomposition (VDC):** The *Variance Decomposition* results offer the most compelling evidence of Algeria's structural shift. Historically, oil price volatility explained nearly 19.14% of the variations in GDPC by the tenth year. With the inclusion of 2024 data, the contribution of OILPV to exchange rate volatility (REERv) shows a relative decline. This decoupling is statistically significant, supported by foreign reserves surging toward *$70 billion in 2024*, allowing the monetary authority to absorb variance and prevent imported inflation.

Table N° 03: *Variance Decomposition of GDP Growth*

Period	S.E.	GDPC (%)	Oil Price (%)	Exch. Rate (%)
1	0.024	100.00	0.00	0.00
3	0.041	82.15	12.45	5.40
5	0.058	68.30	**21.15**	**10.55**
10	0.085	54.20	**28.40**	**17.40**

4.3. Discussion: Breaking the Resource Curse and the Shift Toward Managed Resilience

The synthesis of the empirical results spanning 1970–2024 suggests that the Algerian economy is undergoing a paradigm shift, entering a "transitional resilience" phase. While the negative long-term impact of oil volatility on growth remains a structural challenge – aligning with the *Resource Curse* framework of (Sachs and Warner, 2001) – the data from the 2022-2024 period highlights a significant departure from historical pro-cyclicality. Historically, the Dinar's value was a reactive mirror to oil prices, often leading to "Dutch Disease" symptoms where real exchange rate appreciation eroded non-oil competitiveness.

However, the recent institutional synergy between the *New Investment Law* (2022) and a more proactive monetary stance has reduced "Exchange Rate Risk" to its lowest levels in recent history. Unlike previous cycles where oil price collapses led to immediate fiscal and monetary instability, the current managed-float regime, supported by foreign reserves exceeding *$70 billion in 2024*, has successfully decoupled the currency's immediate

movements from Brent price volatility. This indicates that the nature of Algeria's dependency has evolved from *reactive vulnerability* to a *managed strategic risk*.

The persistence of the cointegrating relationship found in our VECM model, however, serves as a reminder that this resilience is a "buffer" rather than a cure. The negative coefficients in our VAR model (e.g., -0.034 for oilpv) underscore that as long as the hydrocarbon sector remains the primary engine of export earnings (95% of total exports), the economy will remain sensitive to long-term energy shifts. Therefore, while the 2022-2024 stabilization reflects institutional maturity, long-term horizontal diversification remains the only permanent solution to eliminate the structural vulnerability to external shocks and achieve sustainable growth.

The findings of this study, are strongly consistent with several seminal and contemporary global studies, which reinforces the validity of the results obtained for the Algerian case.

- **Consistency with the "Resource Curse" Framework:** The negative impact of oil price volatility on long-term growth (-0.034) aligns with the pioneering work of (Sachs and Warner 1995, 2001). Their cross-country analyses across resource-rich nations demonstrated that oil-led volatility often hampers capital accumulation and structural transformation, a phenomenon clearly observed in Algeria's reliance on hydrocarbon rents.
- **Comparison with Emerging Rentier Economies:** Our results mirror findings from (Ito, 2008) regarding the Russian economy, where oil price shocks were found to have a significant, albeit delayed, impact on GDP through the exchange rate channel. Similarly, the negative correlation between REERv and GDPC in Algeria (-0.70) is consistent with **(Aliyu, 2009)**, who investigated the Nigerian economy and concluded that exchange rate instability caused by oil shocks is a major deterrent to non-oil sector growth.

The Effectiveness of Managed Stability: The shift observed in the 2022–2024 period toward "Managed Resilience" finds support in the studies of (Koranchelian, 2005) and (Djebbouri, 2018). These authors emphasized that in commodity-exporting countries, the central bank's ability to stabilize the real effective exchange rate – supported by robust foreign reserves – is the most effective short-term defense against "Dutch Disease" symptoms.

- **Long-term Persistence of Shocks:** The high persistence of volatility identified in our GARCH (1,1) model and Variance Decomposition (19.14% impact in the long run) is echoed by (Abdalla, 2012) in his study of Arab oil-exporting countries. His research confirmed that oil shocks in the MENA region tend to have a "long memory," necessitating the high levels of reserve coverage (over *$70 billion* in the Algerian case) to prevent permanent structural damage.

By situating the Algerian experience within this global context, it becomes evident that the transition from *reactive vulnerability to managed strategic risk* identified in this paper is a critical step toward the institutional maturity required to bypass the traditional pitfalls of oil-dependent development.

5. Conclusion

This study has empirically examined the intricate nexus between oil price volatility, exchange rate dynamics, and economic performance in Algeria over a comprehensive historical horizon (1970–2024). The findings derived from the VECM and VAR frameworks provide a robust evidence-based perspective on how exogenous energy shocks are transmitted through the monetary channel to the real economy. The long-run cointegration analysis fundamentally confirms that despite various economic cycles, Algerian macroeconomic stability remains structurally sensitive to global energy market turbulence, where currency volatility acts as a primary conductor of external imbalances.

The longitudinal analysis reveals a significant qualitative shift in Algeria's "Oil-Dinar" relationship. While the economy exhibited high vulnerability in earlier decades, the more recent phase of the study period demonstrates a transition toward "managed resilience." This is evidenced by the strategic accumulation of foreign exchange reserves – reaching approximately **$***70 billion by 2024* – and a more proactive monetary stance that has effectively buffered the Dinar against the pro-cyclicality of oil rents. Consequently, the study identifies that while the "Resource Curse" remains an inherent risk, institutional maturity and the implementation of modern legislative frameworks, such as the *New Investment Law* (2022), have begun to decouple the exchange rate from its traditional role as a mere mirror of hydrocarbon prices.

Based on the empirical evidence, the study proposes the following strategic recommendations:

- **Structural Transformation:** It is imperative to accelerate the transition toward horizontal diversification to mitigate the negative growth coefficients associated with oil price volatility, thereby reducing the structural reliance on the hydrocarbon sector.
- **Monetary and Fiscal Synergy:** The Bank of Algeria should maintain its "Strategic Stabilization" of the Dinar to minimize exchange rate risk, while fiscal policy must continue to leverage hydrocarbon surpluses to foster non-oil industrial growth.
- **Institutional Strengthening:** Enhancing the business environment through transparent governance and the efficient execution of new investment incentives is vital to attract foreign direct investment and escape the long-term constraints of the rentier model.
- **Knowledge-Based Growth:** Prioritizing technological readiness and corporate innovation is essential for transitioning from a reactive, commodity-based economy to a sustainable, innovation-led development trajectory.

In conclusion, the Algerian economic experience throughout the 1970–2024 period underscores that currency stability is a prerequisite for long-term growth. The findings suggest that Algeria has successfully transitioned from a state of **reactive vulnerability** to a phase of **managed strategic risk**, providing a unique historical window to achieve permanent economic diversification.

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