

INTERTEMPORAL OPTIMIZATION OF THE CONSUMPTION OF PETROLEUM STOCK: EMPIRICAL EVIDENCE FROM NIGERIA

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Abstract

The principal objective of this paper is to investigate the consequences of oil stock consumption and depletion on the performance of the Nigerian economy using inter-temporal optimization theoretical framework . It also evaluates the main determinants of oil stock depletion and exhaustibility in Nigeria using the pivotal intuition drawn from Hotelling model. A historical simulation and ex post forecast of oil stock were implemented using the Theil's inequality coefficient and its proportions. The results of the ex post forecast confirm the robustness of both the historical simulation and forecast values. The Johansen cointegration test and error correction mechanism were used as complementary estimation techniques. The results show that oil stock has a long and short run relationships with economic growth, population growth, capacity utilization, oil export, oil energy consumption and oil production.

Keywords: Theil Inequality, Intertemporal Optimization.

JEL classification: C53,C61.