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ESTIMATING THE CRITICAL BANDS FOR NIGERIA'S CRUDE OIL PRICE AND PRODUCTION: EVIDENCE FROM GARCH MODELS AND INTERVAL ADJUSTMENTS

Abstract:

Answers to the price and production range and minimum benchmark required for Nigeria's 2015 budget, considering the short, medium and long-term breaks that could emanate from the recent conundrums, are provided. Following trend analyses, a pattern recognition procedure when series are known, GARCH modeling, and the confidence interval approach, it was found that the crude oil price benchmark for the country can be revised downward and the production benchmark can be revised upward to reduce the effect of geopolitics and upside risks amidst the prevailing challenges in the international market. The minimum benchmark varies according to the periods. Longer term necessitates rising oil production, which suggests that a longer duration of oil price falls, lowers uncertainty surrounding it - as the expectation of rebound will set in, coupled with behavioral adjustments. The crude oil price (Brent) will be near US$40 per barrel for the next 90 days. It is concluded that Nigeria should not be concerned about revising the benchmark of oil production volume downward and should also bear in mind that the crude oil price will stabilize for a longer period - i.e. three months at around US$40-$67 per barrel. This, however, accommodates raising volatility and an international supply glut.

Keywords:

Crude Oil Price and Production, Pattern Recognition, GARCH model, MTEF/FSP Report, Nigeria

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