

# **FURTHER ANALYSIS OF THE CRITICAL LEVELS OF EXTERNAL DEBT AND ITS IMPLICATION ON ECONOMIC GROWTH IN NIGERIA**

**CALLISTAR KIDOCHUKWU OBI**

Department of Economics, Delta State University, Abraka  
obicallistar@yahoo.com

## **Abstract**

Developing countries are faced with the problem of high consumption rate, hard budget constraint, amongst other challenges, thereby contracting foreign loans to ameliorate these challenges. Recent studies had shown that there is a given threshold of debt contraction that can augment growth or constraint growth. In a similar studies carried out on external debt using Nigeria data, it was observed that at lower debt thresholds up to 14%, debt acquisition augments growth and the maximum attainable real growth rate is 6.3%. The debt threshold converges at 15%. Beyond this threshold, debt acquisition begins to backtrack growth. This was obtained by taking the first order derivative (necessary condition) of the debt-growth model in order to ascertain the critical levels of debt that is consistent with the countries growth objective. This current study tried to extend further the analysis by taking the second order derivative (necessary and sufficient condition) of the debt-growth model in order to determine the optimal level of debt contraction and its implication on economic growth. Adopting Gauss, Berndt, Hall, Hall, Hausman and Marquardt algorithm as the two variant optimization algorithm, and estimating these using Generalized Linear Model which was cross matched with Least Square and Maximum Likelihood Autoregressive Conditional Heteroscedasticity, the result revealed amongst others that at lower thresholds up to 17%, debt acquisition at optimal level augments growth with a maximum attainable growth rate of 8.2%, and begins to backtrack growth at 17.5% threshold, attain a zero growth rate at 33% and negative growth rate beyond 33%. Therefore, debt accumulation at optimal level increases the country's borrowing space and gives a higher economic growth rate. It was recommended that Nigeria should borrow at that threshold that gives maximum attainable growth rate.

**Keywords:** Critical Debt Levels, Debt Threshold, Economic Growth Rate, Nigeria, Optimal Debt Levels

**JEL Classification:** H63, O47.