

# **Oil price volatility and demand in Tanzania**

**John Lameck Butoto**

**M.A. (Applied Economics)**

**University of Dar es Salaam, College of Social Sciences, 2017**

The main objective of the study was to analyze the relationship between oil price volatility and demand in Tanzania for the period 1972 to 2010.

Oil price shocks have impacted businesses, consumers and government budgets inter alia thus worsen the terms of trade, balance of payment positions and more so impede the growth of economies.

The Generalized Auto Regressive Conditional Heteroscedasticity (GARCH) model was used to estimate the oil price volatility variable. A log-linear Error Correction Model (ECM) was employed in pursuing the study. The short run relationships and long run adjustments between oil demand (dependent variable) along with per capita income, oil price volatility and population (independent variables) were found in pursuing the study. In order to capture for the episodes of staggered occasional changes in oil prices, variables to account for geo-political changes like the Asian crisis, weak global oil demand and the structural changes like the global financial crisis were used.

The results indicated positive non-significant impacts of income per capita and population, positive significant effects of the Asian crisis of 1997 and the weak global oil demand of 2001 as well as a significant negative impact of oil price volatility on oil demand in Tanzania. The estimated error correction coefficient of co-integrating vector indicated that the long run adjustment speed of 72.5% of this equilibrium is corrected in 1 year and the overall predictability of the model was 64.87% (R- squared). Finally, the Granger causality test established that among all variables, only the oil price volatility Granger causes Oil consumption (a unidirectional causality). Since the results indicated a very minimal response of oil demand towards oil price volatility while significantly rising in periods of rampant falls in oil prices, the Country remains vulnerable to oil price shocks.

