Petrochemistry-2013

OMICS Group Conferences
Accelerating Scientific Discovery

World Congress on
Petrochemistry and Chemical Engineering

November 18-20, 2013 Hilton San Antonio Airport, USA

The elasticities of demand for highway transportation fuel in Nigeria

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Abstract

One of the main challenges confronting Nigeria is inaccurate forecasting of demand for highway transportation fuel. The forecasted fuel demand which were based on some studies carried out by the Nigerian National Petroleum Corporation has not been able to the demand. This has resulted in severe fuel scarcity and shortages. This situation could be attributed to the inability of the existing fuel forecasts to capture with fair degree of precision, the underlying factors that drive fuel demand in the country. The goal of this study was to determine the elasticities of demand for highway transportation fuel in Nigeria. Data used in this study were collected from primary sources. Four major cities in Nigeria which were used for this study namely Lagos, Kano, Abuja and Enugu was chosen on the basis of size, function and location. A total of 3800 copies of questionnaire were shared, and 2713 copies representing 71.3 percent were returned. Multiple linear regression technique was used to determine the elasticities of fuel demand. The results showed that out of 8 factors that were studied, the elasticities of 4 factors namely price of fuel, stock of vehicles, time spent in purchasing fuel and fuel subsidy were the underlying forces that drives the demand of highway transportation fuel in Nigeria at 97.5 confidence level. Their respective elasticities are as follows: -.999, .111, .637 and .442. This study recommended for the adoption of the elasticities of the four factors in the prediction of demand for highway transportation fuel in the country.