

# **Relationship between the price of oil and the cost of living in Cameroon, Ivory Coast and Senegal: a modeling with variable coefficients**

NGUEMENI Jean-Claude

Ministry of Economy, Planning and Regional Development, Yaounde, Cameroon [nguemenij@yahoo.fr](mailto:nguemenij@yahoo.fr)

The economy is generally sensitive to changes in the price of oil. A rise of the price of oil can lead to generalized inflation, which has a negative impact on our economies. In the beginning of year 2008, the increase of oil price has resulted in a high cost of living in some major cities in Africa especially Douala, Yaoundé, Abidjan and Dakar, and was the cause of social unrest in those cities. Further to this social unrest, the Government of Cameroon, for example, has decided to subsidize the price of fuel at the pump. Since then, this subsidy weighs more and more on the budget of the State of Cameroon. Over the period from 2008 to 2011, this bill was 700 billion CFA francs, digging further public deficit, and it is estimated only for year 2012 to 400 billion CFA francs. The present paper analyses the relationship between the price of oil and the cost of living in Cameroon, Ivory Coast and Senegal in order to assess the relevance of the policy of subsidizing the price of fuel at the pump in these countries.

The methodology used is the cointegration with structural change developed by Gregory and Hansen (1996). The state-space representation applying a Kalman filter allows to confirm the instability of this relation and to determine the sources of this variability. The cost of living is apprehended by the Consumer Price Index (CPI).

The application of the methodology of cointegration with structural change allowed us to prove a negative relationship between oil price and cost of living in Cameroon as well as in Ivory Coast. However, this analysis shows a positive long-term relationship between these two variables in Senegal.

Subsidy policies of the price of fuel at the pump would not significantly impact the cost of living in Cameroon, as well as in Ivory Coast. The Senegalese Government would gain to review its policy concerning stop subsidies of the price of fuel at the pump.

**Key words:** policy of subsidizing, cointegration with structural change, Kalman filter, Consumer Price Index