

Theme: A1 Global Commons

## **Economic Analysis of Petroleum Taxes in Pollution Control and Prevention in Ghana**

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### **Abstract**

Petroleum taxes are increasingly being used all over the world for pollution control and prevention, oil resource management and for revenue purposes. For sustainable development, countries are expected to use petroleum products in such a way that, it does not compromise the ability of future generation to improve their lives and the environment. In line with this, several countries have introduced various taxes on petroleum products to discourage their excessive use to conserve oil resources for sustainable development. In Ghana, petroleum excise tax has become an important excise tax in terms of revenue and environmental and resource management. The tax was first introduced in 1986, but was redesigned as part of the petroleum price build-up concept in 1989 to raise additional public revenue and cause users of the petroleum products to face the external costs related to traffic congestion and emissions. However, despite the prospects and potential of the tax in environmental and oil resource management in Ghana, the economic analysis of the tax in terms of goal attainment has not been carried out. Thus, the purpose of the study is to analyse the petroleum excise tax using the criteria of goal attainment.

To do this, the qualitative research methodology was adopted where semi-structured interviews were conducted with relevant stakeholders who were selected using purposive sampling technique. In addition, existing statistics, institutional statements and reports, newspaper articles and studies of relevant institutions and individuals were used. The interviews were analyzed qualitatively using the transcription software f4. Additionally, Time series and Stata 9 software were employed along with descriptive statistics to assess the goal attainment of the tax. The analysis revealed the tax has failed to reduce consumption of fuel products, urban congestion and air pollution for the attainment of the tax goal due to inelastic demand of fuel products, limited use of sustainable fuel product alternatives (e.g. biofuels) and transport options (such as bicycle and train systems) and surge in private car ownership (drive alone road users) and general increase in demand for vehicular transport in Ghana. It is against this backdrop that, the paper recommends the design of the petroleum tax in a way that would help stimulate abatement technologies for the attainment of the tax goals.

**Keywords:** Economic analysis, pollution control, sustainable development, petroleum taxes, Ghana