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# RATIONALE BEHIND OIL, GAS, AND ELECTRICITY INDUSTRIES REFORMS: IS THERE A CONSISTENCY

## By

Mohammad Mazraati et al
(22<sup>nd</sup> Annual North American Conference of the USAEE/IAEE, 2002)

A Review By I.S. Abdullahi

#### SUMMARY OF THE PAPER

The paper investigated the main rationale behind the energy industry (oil, gas and electricity) reforms. It also sought to examine the relationship between inter-industry reforms and ascertain the soundness of the rationale as well as their consistencies. Although it is often generally opined or rationalised that contemporary reforms bring about improvement in economic efficiency, security of supply, social objectives and environmental issues, a comparison between these and realities would reveal if there is consistency or otherwise. This is important because the rationale for energy sector reform had not been subjected to serious disaggregated analysis in terms of consistency.

The paper was structured into six sections opening with an introduction. Sections two, three and four reviewed reforms in the oil, electricity and gas industries, respectively. Section five discussed the performance against expectation while section six presented the concluding remarks.

# MAJOR HIGHLIGHTS

The authors reviewed the world trend of structural changes in the energy industry covering from 1870s, 1950s and 1980s for electricity, oil and gas sector's reforms, respectively.

The paper identified the emergence of the Organization of Petroleum Exporting Countries (OPEC) as a major player in the oil industry. It also noted technological advancement; introduction of commercialization and privatization policies in 1990s; and mergers and acquisition (M&A) as factors responsible for changes in the industry. In addition, it noted that the philosophy of the "small is beautiful" led to the downsizing of the oil companies for improved economic efficiencies in 1990s.

The paper reviewed five key evolutionary stages of Electricity Supply Industry (ESI) reforms. There were the period 1870s-1920s which witnessed self-production, inadequate transmission, limited distribution grids and large private ownership; the period 1920s to World War II, which featured publicly owned and financed power plants as well as the emergence of large hydro power plants and developed transmission grids; the emergence of vertical integration of generation, transmission and distribution functions which held sway between 1945 – 1960s; the energy crises (the oil shocks) of the 1970s which increased the price of key fuels and led to the operation of independent generators with stability of grids remaining intact. It finally noted that from the 1980s to date, Independent Power Producers (IPPs) became important players in electricity generation.

The paper noted that generally, development in the industry had been anchored on the "theory of natural monopoly", while the integration of generation, transmission and distribution had resulted in efficiencies arising from economies of scale.

In the gas industry, it asserted that the driving force for reforms were technological development, greater industry flexibility, better matches between products and customers needs, and competitively driven reductions in economic rents.

Overall, the paper found among others, that there was an inconsistency in the purported rationales behind the reforms. It therefore concluded that the rationales behind the contemporary reforms were weak in all sectors and there are evidences that these markets are approaching toward oligopolistic or monopolistic structure rather than competitive.

### COMMENTS AND LESSON FOR NIGERIA

The strength of the paper lies in its recognition and acknowledgement of the fact that gas and electricity industries have some distinctive features from the oil industry as well as bringing to the fore, inter-linkages between the industries. The findings of the paper revealed certain critical issues relating to structural reforms, from which Nigeria could learn. For example, the observed inconsistencies in the rationales for reforms signalled the need for proper understanding of the structural rigidities of the economy vis-à-vis other countries experiences on energy industry reforms – 'historical antecedents are presuppose to guide future success', if Nigeria is to make success of embarking on structural changes in her energy sector.

For competitive advantage, efficiency and/or better performance, the Nigerian oil, gas and electricity industries should therefore be deregulated after a thorough evaluation. This would ensure that appropriate policy measures are put in place which would minimise the degree of policy contradiction that had been the bane of development effort. It would also assist in ensuring greater consistency between goals and realities. Of great importance also, is, the need for separate entities to perform identified and recognised functions like strategising and policy formulation, regulation/ supervision and operations.