Sectoral uncertainty and Nigeria's economic performance: A Monte Carlo Simula

Nigeria is heavily endowed with human and material resources. The discovery of oil pre-independence in 1958 resulted in huge revenue inflows from oil export, which amounted to a total sum of about N4.57 trillion between 1970 and year 2000 (CBN, 2008). While it is posited that the ultimate goal of economic development is the welfare of the individual (Okojie, 2003), thiscolossal revenue inflow does not seem to have reflected in obvious national development or clear evidence of improved welfare for the populace, hence the situation has been described as growth without development (Yesufu, 1995). Besides, there appears to have been skewed focus on the development of the oil and gas sector to the detriment and utter neglect of the sectors of the economy, especially agriculture and manufacturing. This over-dependence on oil as the main revenue-earner for the country also exposed the economy to the slightest shocks from local and foreign sources to the extent that it has been remarked that when the oil sector sneezes, the rest of the economy catches a deep cold (Iyayi, 2003). Unfortunately, oil is a dwindling, exhaustible and non-renewable resource, and it is estimated that Nigeria's oil resources may not last mor than about four decades. Indeed, the Royal Swedish Academy of Sciences (2005) confirms that of the sixty-five most important oil-producing countries, fifty-four of them already have declining oil production. Confronted with this dilemma, and in an effort to address the growth and development problems already highlighted, as well as examine the possibility of other sectors in the economy complementing or replacing the revenue profile of the oil sector, a number of researchers analysed the performance of the economy from the point of view of the contributions of the constituent economic sectors to national economic development. This study chose to look at the same problem differently. First we posit that every sector is confronted with varied types and amounts of uncertainty, and that these may have constrained optimum development in the sectors. We further argue that identifying these uncertainty variables and mitigating their effects would help to enhance optimum performance of the economy as a whole. To achieve this objective, we aggregated the Nigerian economy into twelve sectors, and subjected the time series data to Monte Carlo simulation (MCS) modelling in a spread sheet format, and carried out uncertainty analysis over a fifty year period (1960-2009). The complete analysis includes correlation and regression analyses, tornado chart and spider web analysis among others. Our result revealed that uncertainty in the Agricultural and Manufacturing sectors had the greatest impact on economic performance, followed by the Financial Services, Oil and Gas sector and then the Whole Sale and Retail Trade. The findings have great implications for Government, for business men and investors, as well as the academia. Ultimately, "the only certainty is uncertainty" (Galewey, 2010).