

BUSINESS CYCLES AND OIL RICH ECONOMIES – HODRICK PRESCOTT FILTERING OF OIL REVENUES FOR MACROECONOMIC MODELLING IN NIGERIA¹

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ABSTRACT

The Nigerian economy with a huge public sector is highly dependent on revenues from oil and therefore considerably vulnerable to developments in international business cycles and oil price fluctuations. Such dependence includes financing over 80 per cent of its budget on oil revenues that sometimes result in large surpluses during windfalls and extensive deficits when the contrary is the case. Optimal HP filtering is used in this paper to smooth oil revenue data removing low frequency information in a technique similar to that applied by Leon du Toit (2008) which distorts the information in the time series the least as against the default setting of 1600 lambda suggested by Hodrick and Prescott (1980) for quarterly data. HP filtering has become standard for identifying business cycles from aggregate data and is useful for the case of filtering medium-run revenue trends for Nigeria given its peculiar economic structure, where oil revenues and price have strong linkages to other economic developments. The paper provides a tool to eliminate the transitory effects of income on the Nigerian economy and is useful for macroeconomic modelling. A medium term path for income is determined for Nigeria in the paper and can be used for forecasting.

¹The views expressed in this paper belong to the author and do not represent the views of the Central Bank of Nigeria.