The thesis investigates the efficiency of monetary policy using the New Keynesian Dynamic Stochastic General Equilibrium (NKDSGE) model in an economy reliant on oil exports and a large informal sector. The model is calibrated for the Iraq case to capture macroeconomic variables' responses to oil price shocks. The study aims to explore the impact of the shock on macroeconomic variables in the presence of the informal sector and how responses might change assuming a small informal sector. The model shows that the informal economy increases home prices and inflation, but the model does not reveal a Dutch disease. The study concludes that monetary policy, represented by the Taylor rule, is an inefficient tool for affecting macroeconomic variables.