An Empirical Test of Phillips Curve: A Case Study of Nigeria and Sri Lanka

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ABSTRACT

This thesis empirically tests the existence of Phillips Curve and determines the determinants of inflation in Nigeria and Sri Lanka over the period 1980 - 2012. Inflation and unemployment are perhaps the two most important macroeconomic challenges that developing countries face today and one of the most important economic theories that link these two macroeconomic variables is Phillips Curve. The four objectives are associated with this work namely, ascertain the existence or otherwise of Phillips Curve in Nigeria and Sri Lanka by identify the nature of relationship that exists between inflation and unemployment, identification of the relevant variables that are important in the explanation of Phillips Curve and determination of the most significant explanatory variables of inflation dynamics in Nigeria and Sri Lanka as research question principally based on why upward trends in the two variables?

Two approaches were used: theoretical and empirical with use of the derived baseline model that almost similar to the model of Fumitaka (2007) which has its foundation on the traditional Phillips Curve and Expectations-Augmented Phillips Curve. The study adopted the Classical Linear Regression Model (CLRM) for empirical estimation and evaluation with utilization of the techniques of Ordinary Least Squares (OLS), Vector Auto-Regressive (VAR), and Error Correction Mechanism (ECM), after tests of unit root, cointegration, causality and multicollinearity and necessary corrections made, the Heteroscedasticity and Autocorrelation-Consistent (HAC) was used to take care of heteroscedasticity and autocorrelation (Newey-West Standard Error). The results for Traditional Phillips Curve and Expectation-Augmented Phillips of both long-run and short-run for Nigeria and Sri Lanka are presented and discussed and their empirical performance evaluated.

From the empirical approach of OLS, VAR for the Traditional Phillips Curve, the results indicated that there is a negative but insignificant relationship between inflation and unemployment in Nigeria and Sri Lanka. The results for Expectation-Augmented Phillips Curve of ECM for both short-run and long-run indicate that there exist Expectation-Augmented Phillips Curve in Nigeria and Sri Lanka, as the results conform to the Friedman and Phelps' explanation of this theory and are significant from theoretical and statistical perspectives. In the case of Nigeria, past inflation, exchange rate, interest rate, GDP, unemployment level and election period/activities impact positively on inflation and therefore are important determinants of inflation in the long-run in Nigeria, although in the short-run, past inflation and GDP contribute negatively. In the case of Sri Lanka, the study reveals also that past inflation as proxy of expected inflation in Sri Lanka, importation, exchange rate, unemployment, GDP, and election period/activities are the major variables that impacts positively on inflation rate and therefore consider to be determinants of inflation rate in Sri Lanka in the long-run.

The study then recommended amongst others that the policy makers and most especially the monetary policy makers/analysts in Nigeria and Sri Lanka to always consider better procedures for making policy decisions when information about the state of economy is limited and knowledge of how the economy works is incomplete. Since inflation expectations play a very important role in determining the actual rate of inflation in Nigeria and Sri Lanka and maximum attention should be given to unnecessary and uncoordinated expansion of fiscal stimulus before and during election.

Keywords: Phillips curve, inflation determinants, unemployment, Nigeria, Sri Lanka, error correction technique, vector auto-regressive