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The Effect of Liquidity Volume on Inflation in Iran with Time varying Parameter Model Approach

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EXTENDED ABSTRACT

INTRODUCTION

In the field of the impact of monetary policy on inflation, much research has been done, in most of which structural failure has not been studied and the regression method with a fixed parameter has been used and reached different results. Lucas (1976) argues that any change in policy regime can lead to structural failures in inflation dynamics, and that any policy analysis that does not take these failures into account will naturally have little validity. Therefore, it is important to examine whether the volume of liquidity has a different effect on inflation over time and using new regression model methods with variable time parameters can lead to more accurate policy analysis and thus more accurate economic decisions.

METHODOLOGY

Given the importance of the relationship between liquidity and inflation in monetary policy, it is important to examine whether the volume of liquidity has a different effect on inflation over time and using new regression model methods with variable time parameters can lead to more accurate policy analysis and thus more accurate economic decisions.

Using a regression model with time varying parameter (TVP) and the Kalman filter approach the present study examines the reaction of the inflation rate over time to the influential variables such as the inflation rate of the previous period, the expected inflation rate, the imported inflation rate, the production gap and especially the volume of liquidity in the period under study in which

the application of time-varying parametric technique is considered as an innovation of this research and gives us more accurate results.

FINDINGS

Examining the changes in the growth rate of liquidity, inflation rate and GDP growth rate shows that in most years, the growth rate of liquidity has a positive effect on the inflation rate of the next period. But in some years, despite the increase in the growth rate of liquidity, the inflation rate of the next period has decreased. Also, in some other years, despite the decrease in the growth rate of liquidity, the inflation rate of the next period has increased. It can be said that in short term, inflation in Iran is not just a monetary phenomenon. Also, due to the fact that in some years the inflation rate was relatively high, but in the next period, the growth rate of liquidity increased or in some other years, the GDP growth rate was relatively low, but in the next period, the liquidity growth rate decreased. It can be said that the changes in the growth rate of liquidity in Iran were not commensurate with the changes in inflation rates and economic growth rates and this shows that monetary policy has been wrong.

CONCLUSION

In present study, the results of estimating the regression model as a variable time parameter and examining the trend of coefficients of explanatory variables over time in this study show that these coefficients have not been constant during the period under study and have changed over time due to external shocks such as revolution, war, oil price shocks, applied economic policies, structural changes, international political stances and economic sanctions. That is, in addition to the volume of liquidity, other variables such as delayed inflation rate, expected inflation rate, imported inflation rate and GDP gap also have a variable effect on inflation rate over time.

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