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Deficits, debt financing, monetary policy and inflation in developing countries: Internal or external factors? Evidence from Iran

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Abstract

This paper focuses on internal and external factors which influence the inflation rate in developing countries. A monetary model of inflation rate, capable of incorporating both monetary and fiscal policies as well as other internal and external factors, was developed and tested on Iranian data. It was found that, over the long run, a higher exchange rate leads to a higher price and that the fiscal policy is very effective to fight inflation. The major factors affecting inflation in Iran, over the long run, are internal rather than external. However, over the short run, the sources of inflation are both external and internal.

JEL classification : E31; E41 and E62

Keywords: Demand for money; Inflation; Fiscal and monetary policies; External and internal factors

1. Introduction

The determinants of inflation rate in developing countries are extremely important for policy makers as when the causes of inflation are correctly specified the appropriate policy change can be easily diagnosed and effectively implemented. Inflation in a small-open economy can be influenced by both internal and external factors. Internal factors include, among others, government deficits, debt financing, monetary policy, institutional economics (shirking, opportunism, economic freedom, risk, etc.) and structural regime changes (revolution, political regime changes, policy constraints, etc.). External factors include terms of trade and foreign

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interest rate as well as the attitude of the rest of the world (sanctions, risk generating activities, wars, etc.) toward the country. The objective of this paper is to develop and test a model of inflation rate, which takes into account all of these factors. To the best knowledge of the author, no such study for developing or developed countries exists. The model is tested on Iranian data. The choice of Iran is based on the fact that it has witnessed several changes in policy regimes and undergone numerous exogenous shocks during the past two decades. This makes Iran an ideal case to test whether external or internal shocks or a combination of these shocks cause inflation.

The channels through which government deficits and debt financing influence inflation include the formation of capital (crowding out effect), the monetization of debt and the wealth effect of debt. Institutional economics by reducing information costs can also reduce the inflation rate in a country. Furthermore, the change on terms of trade and foreign interest rates can influence the inflation rate in a country for which the economy is heavily dependent on imports and foreign financing of its debt. This is particularly important for developing/emerging countries.

The model used in this study is an augmented version of the monetarist model which, contrary to the existing literature, is designed in such a way to incorporate both external and internal factors, which cause inflation in the country. Furthermore, since the model also incorporates government deficits and debt, we can test Sargent and Wallace's (1986) views that (i) the tighter is the current monetary policy, the higher must the inflation rate be eventually and (ii) that government deficits and debt will be eventually monetized over the long run.

The contribution of this paper to the literature is as follows. The model developed in this paper is unique in the sense that it is capable of taking into consideration both monetary and fiscal policies as well as debt management. Furthermore, the model allows external and institutional shocks to affect the inflation rate in the country. It was found that the model is successful in capturing the impact of both anticipated and unanticipated effects of fiscal instruments, i.e., deficits, debt and debt management and of monetary instruments on the inflation rate in an emerging country like Iran. Moreover, a policy toward a stronger currency is deflationary and most sources of inflation in Iran are domestic factors. Finally, it was found that Sargent and Wallace's view on a tight monetary policy leading to higher inflation over the long run does not necessarily apply to a country like Iran, which, at least officially, banned predetermined interest rates.

Section 2 gives a brief background and is followed by a section on the development of the theoretical model. Section 4 describes the data and the long-run empirical methodology and results. Section 5 is devoted to the short-run dynamic model for the country. Section 6 evaluates the impact of unanticipated domestic factors on the inflation rate. The final section provides some concluding remarks.

2. Background

The impact of government deficits and debt financing on inflation rate can be thought of through different channels. Higher government deficits result in higher interest rates, which then leads to lower domestic investment. This crowding-out effect of deficits will eventually translate into a lower formation of capital and lead to a lower aggregate supply and a higher price. However, the impact of deficit on interest rates is still debatable. For example, Bradley (1986) lists twenty-one studies on the deficit-interest rate link and finds that only four provided supporting evidence for a positive and statistically significant impact of the deficit on interest rates. The rest of the studies finds either no evidence of a significant impact or produces mixed