Extended Abstract

Purpose

Public spending and the role of the government were limited due to the laissez-faire approach until the Great Depression of the 1930s, when Keynes introduced the concept of government intervention in the economy through the use of monetary and fiscal policies. In this regard, fiscal policy is one of the main tools for achieving macroeconomic goals, which includes the use of government spending and taxes to influence the aggregate demand for goods and services. Accordingly, the aim of this study is to examine the effect of a government spending shock on GDP in Iran in the form of a stochastic dynamic general equilibrium model. The calibration results show that a positive government spending shock of one percent increases non-oil production, inflation rate, employment, and GDP by about 0.02, 0.001, 0.06, and 0.01 percent, respectively, and decreases investment and consumption by about 0.69 and 0.19 percent, respectively, in the current period. Meanwhile, the occurrence of oil revenue and technology shocks increase GDP by about 0.2 and 0.96 percent, respectively. Accordingly, the government spending shock has the least impact on GDP, and the technology shock has the greatest impact overall.

Purpose

Achieving macroeconomic goals, including full employment, stability of price levels, and sustainable economic growth is the policy priority of any economy, and fiscal policy is one of the main tools for achieving macroeconomic goals. Fiscal policy is the use of government spending and taxation to influence the economy. Government spending is an important demand management tool and, if properly managed, has the potential to propel the economy towards long-term sustainable development. Government spending has three main components: capital spending, public consumption spending, and transfer payments. There are two types of fiscal policy: expansionary fiscal policy and contractionary fiscal policy. Expansionary fiscal policy involves increasing government spending or reducing taxes, while contractionary fiscal policy involves reducing government spending or increasing taxes. Expansionary fiscal policy can be used during recessions and contractionary fiscal policy can be used during booms. Thus, the aim of this research is to investigate the effects of government spending shock on GDP in Iran, in the form of a dynamic stochastic general equilibrium model.

Methodology

Dynamic stochastic general equilibrium (DSGE) models usually assume optimization agents that maximize their objective function subject to relevant constraints. Almost all models, including DSGE models, have parameters whose values need to be determined. The two main methods for determining these values in DSGE models are estimation and calibration. In this research, parameters are determined based on the calibration method. In addition, the annual data obtained from the Ministry of Economic Affairs and Finance for the period 1380-1402 (at the constant price of 1390) was used.

Finding

To evaluate the model, the moments obtained from the endogenous variables of the model are compared with the moments obtained from the real data. The comparison shows that the model has been able to simulate the behavior and fluctuations of the variables well and indicates the ability of the model to predict the fluctuations of the variables.

The Impulse Response Function is a tool for describing the dynamic effects of shocks on macroeconomic time series. A positive shock in government spending by one percent increases non-oil output, inflation

rate, interest rate, employment, tax revenue, and GDP by about 0.02, 0.001, 0.04, 0.06, 2.2, and 0.01 percent, respectively, and decreases investment, capital stock, and consumption by about 0.69, 0.02, and 0.19 percent, respectively, in the current period. Meanwhile, a positive shock in oil revenues by one percent increases inflation, GDP, consumption, and investment by about 0.72, 0.2, 0.18, and 0.78 percent, respectively, and decreases employment and non-oil production by about 0.06 and 0.018 percent in the current period. Also, a technology shock increases inflation, GDP, consumption, employment, investment, and non-oil production by about 0.02, 0.96, 0.33, 0.27, 5.5, and 1.2 percent in the current period.

Conclusion

Public spending and the role of the government were limited due to the laissez-faire approach until the Great Depression of the ۱۹۳۰s, when Keynes introduced the concept of government intervention in the economy through the use of monetary and fiscal policies. Therefore, this research examines the effect of government spending shock on GDP in Iran using the DSGE approach. The results show that a positive shock to government spending increases non-oil production, inflation rate, interest rate, employment, tax revenue, and GDP, and decreases investment, capital stock, and consumption in the current period. Considering the effects of the shocks, the government spending shock has the least impact on GDP, and overall, the technology shock has the best impact.