

The Effects of Government Expenditure Shocks on Input Efficiency and Consumer Preferences in Iran

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Abstract:

The role of government expenditure in the economy is studied by many prominent economists. This study investigates the effects of government expenditure shocks on macroeconomic variables in Iran for the period 1978-2016. More specifically, we study the impact of two different government expenditure shocks, namely, government consumption and investment, on output, private consumption, private investment, real wages, and employment are investigated. Moreover, this study examines the relationship between government spending and the behavior of firms and consumers. Hence, our model explores the role of government investment and consumption in the production function and utility function, respectively. To this end, we model the behavior of firms, consumers, government, and monetary authority by using a New Keynesian dynamic stochastic general equilibrium (DSGE) framework. This framework allows us to examine the effects of both real and nominal shocks on macroeconomic variables when markets are imperfect and prices are not fully flexible. To apply the model to the Iranian economy, we assume that the monetary policy of the Central Bank of Iran is based on the money growth rule. Since the government in Iran finances part of its expenditures from oil exports, we assume that the Iranian government budget is financed by oil revenue, tax, issuing bonds, and borrowing from the central bank. The model allows us to examine the effect of different government expenditure shocks on firm productivity and consumer preferences. It shows how dependent is the firm productivity on public capital and the consumer preferences on government consumption.

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After solving the model and deriving the first-order conditions, we linearized the model around the steady state. The model is estimated by the Bayesian method. According to the estimation results of our model with price stickiness, public capital affects production function, and government consumption has a direct impact on the utility function. MCMC univariate and multivariate convergence diagnostic tests, matching priors and posteriors distributions, and the final value of likelihood for pattern evaluation are used to evaluate the model. Moreover, the model is evaluated by matching smoothed shocks figures and historical and smoothed variables figures. The model passes the required diagnostic tests and seems to be appropriate to study the behavior of the Iranian economy. Finally, the impulse response functions for government consumption and investment shocks are used to examine the dynamics of macroeconomic variables, including output, private consumption, private investment, real wages, and employment in Iran. The results show that the accumulation of public capital enhances firm productivity in Iran. Moreover, we find out that consumer preferences are affected by government consumption. Based on our results, a shock to public consumption increases private investment, output, employment, and real wages. However, there is a substitution relationship between public consumption and private consumption. Moreover, a shock to public investment increases output, employment, and real wages and decreases private consumption. Furthermore, we find that there is a complementary relationship between public investment and private investment. Our findings underscore the role of public investment in boosting the economy. Hence, government investment in infrastructures might enhance private investment. This finding might have important policy implications for policymakers in Iran.

JEL classification: O47, E62, E32, E12

Keywords: Government expenditure Shocks, Firm productivity, Consumer preferences, Iran, DSGE