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The Impact of Demand Management Policies on the Local Economy Under the Background of the Domestic Big Cycle

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Abstract: In this paper, the important background factor of the domestic big cycle is incorporated into the DSGE model. On the basis of this model, this paper uses actual data of China's economy, through Bayesian estimation and dynamic simulation methods, and believes that in this context, in order to stimulate the economy, the country has adopted a combination of expansionary fiscal policy and expansionary monetary policy. While curing diseases, macroeconomic policies inevitably have some side effects on the local economy, such as increasing the financial burden of local governments and increasing the uncertainty of the number of orders for export enterprises.

Keywords: Demand management policy; Local economy; Response strategy

1. Introduction

According to the International Monetary Fund's recently released "World Economic Outlook Report", the global economy will shrink by 4.9% in 2020, of which developed economies will shrink by 8%, and emerging markets and developing economies will shrink by 3%. In this context, the proposal of China's "dual cycle" strategic pattern has received close attention from all parties. Domestic and international double cycles promote each other, Emphasizing that focusing on the domestic economic cycle does not mean closing the door, but by leveraging the potential of domestic demand to better connect and promote the domestic market and the international market. The Central Economic Work Conference emphasized that it is necessary to innovate and improve macro-control, implement a proactive fiscal policy and a prudent monetary policy, improve the economic policy coordination mechanism, and keep the economy operating within a reasonable range. This shows that fiscal policy and monetary policy play an important role in my country's macro-control system. [1]

Generally speaking, monetary policy will affect the cost, scale and duration of local government debt issuance through risk channels, signal channels, and inflation expectations channels, which will significantly affect the development of local economy. Fiscal policy will be based on different industries and different regions to invest in local governments. [2-3] Produce squeeze-in or squeeze-out effects, thereby affecting local economic development.

2. Theoretical analysis

The basic assumptions of this model are: First, time is discrete, in a four-sector economy, and the factor input is only labor. The world consists only of domestic and foreign families. Domestic families and foreign families are composed of [0, n] and (n, 1] point composition. Second, family life is unlimited and fixed in number. The utility of the household comes from consumption and real money balances, and the negative utility comes from the supply of labor. Family goal is to maximize $E_0(\sum_{t=0}^{\infty}\beta^t(u(C_t,m_t,N_t)))$ false. Third, there are two types of assets in the economy, namely monetary assets and non-monetary assets. The family budget constraint is $M_t+\frac{B_{t+1}}{R_t}+\frac{e_tF_{t+1}}{R_t^*}=M_{t-1}+B_t+e_tF_t+W_tN_t-T_t-P_tC_t$ false.

Family Behavior Analysis: The goal of the family is to maximize $E_0(\sum_{t=0}^{\infty}\beta^t(u(C_t,m_t,N_t)))$ false. The constraints are budget constraints, $M_t+\frac{B_{t+1}}{R_t}+\frac{e_tF_{t+1}}{R_t^*}=M_{t-1}+B_t+e_tF_t+W_tN_t-T_t-P_tC_t$ false. Manufacturer behavior analysis: the goal of the manufacturer is to maximize $E_t(\sum_{t=0}^{\infty}\gamma^tQ_{t+1}(X_{it}Y_{t+1}-W_{t+1}N_{t+1}))$ false. Analysis of government behavior: The government in the model actually includes two government authorities, one is the fiscal authority and the other is the monetary authority. [4] The fiscal authority actively determines government purchase expenditures based on the level of output, and the monetary authority sets benchmark interest rate targets based on interest rate rules.

3. Empirical research

In the above basic model, the first-order conditions of the optimal behavior of the family, the first-order conditions of the optimal behavior of the manufacturer, the policy behavior equations of the fiscal authority and the monetary authority, the equilibrium conditions of the labor market and the product market, and the corresponding foreign equations are set in the steady state value. [5-6] Near logarithmic linearization, you can get a DSGE model based on the linear approximation framework. Taking into account the impact of the 2008 international financial crisis and the amount of time series data required for simulation, the data used in this article are the quarterly data of China's GDP from the first quarter of 2009 to the fourth quarter of 2019 and the domestic price index

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calculated using CPI over the same period. These original data mainly come from the statistical database of China Economic Network and the EPS global statistical data platform.

In this paper, the weighted average of CPI monthly data is quarterly data, and then the X-12 method is used to eliminate seasonal factors with the GDP quarterly data. Finally, the HP filtering method is used to eliminate trend items in the time series. In order to ensure the feasibility of the simulation, we used the ADF method to perform unit root tests on the two sets of time series data. The final result shows that under the 10% significance level, both sets of variables are zero-order single integers. The parameter assignment of the model refers to the method of Liu Bin (2014), that is, ordinary static parameters are assigned using calibration methods, and dynamic parameters are estimated using Bayesian estimation. After completing the aforementioned preparations, we use the Dynare toolkit in Matlab software to perform Bayesian estimation and impulse response analysis on the model in this paper. The results are shown in the table below:

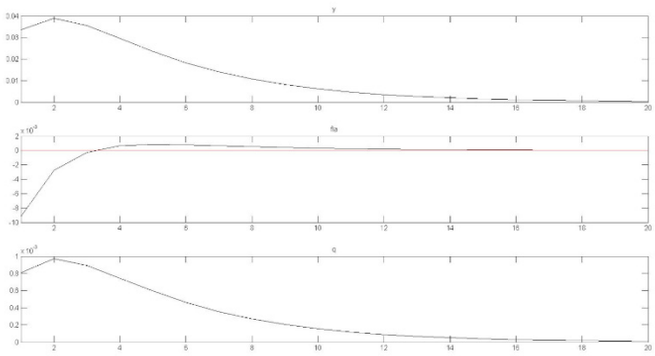

Figure 1

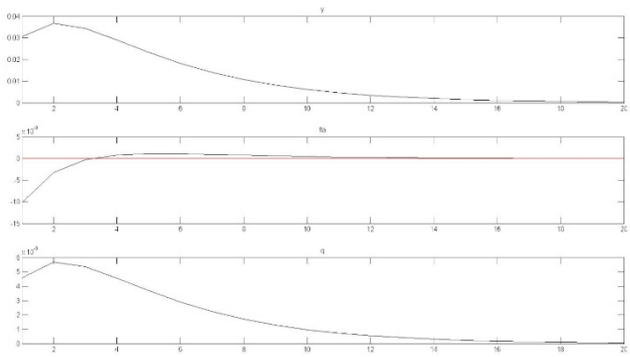

Figure 2

From the comparison of the simulation results in Figure 1 and Figure 2, it can be seen that when subjected to external shocks, the fluctuation range of GDP y under the conditions of the domestic big cycle is smaller than that under the past conditions, which shows that when domestic manufacturers generally improve the level of production technology When changing production conditions, the domestic big cycle will hinder the contribution of this improvement in production technology to GDP. [7] Similarly, when subjected to external shocks, the fluctuation of the domestic price level fla under the conditions of the domestic big cycle is greater than that under the past conditions, which shows that the domestic big cycle will make it more difficult for the monetary authority to stabilize the price level. In addition, when the real exchange rate q is subject to external shocks, its volatility under the conditions of the domestic big cycle is also greater than that under the past conditions, which will also increase the difficulty for the monetary authority to stabilize the exchange rate level.

4. Conclusion

In the context of the domestic big cycle, the beneficial stimulus effect of the improvement of production technology level on GDP will be suppressed, and the fluctuation range of the price level and the real exchange rate level will be magnified. In response to this situation, the country adopted a combination of expansionary fiscal policy and expansionary monetary policy. While curing diseases, macroeconomic policies inevitably have some side effects on the local economy, such as increasing the financial burden of local governments and increasing the uncertainty of the number of orders for export enterprises. In response to this situation, the policy recommendations of this article are as follows: First, in order to ensure that the local fiscal revenue has a sufficient tax base, it is necessary to attract local and foreign companies to increase investment projects. Secondly, in order to ensure the smooth circulation of the domestic economy itself and develop the local economy, it is necessary to open up those potential points that may exist, such as reducing the cost of the circulation link of production enterprises. Finally, the purpose of our economic development is to meet the increasing demands of the people, and the realization of enterprise production profits is also inseparable from the needs of the people.

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