

The Impact of Fiscal Policy on GDP

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Abstract. GDP is an important indicator of a country's economic development and an economic variable that countries are concerned about. High and stable growth of real GDP is the goal of governments. So governments achieve this goal by adopting a number of economic policies, such as the fiscal policy discussed in this paper. Fiscal policy is the sum of fiscal measures taken by a country to achieve its macro-control objectives. The good or bad fiscal policy of a country directly affects economic development, political stability, and the improvement of people's living standards. For example, the fiscal investment policy determines the rate of economic growth of a country: the fiscal taxation policy is an important guarantee for the state to exercise. The fiscal policy of taxation is an important guarantee of the state's ability to exercise macro-control and an important means to solve the problem of equity: the fiscal policy of price subsidies can protect the low-income class; the fiscal policy of transfer payments can provide assistance to poor areas.

Keywords: Fiscal Policy; GDP; Macroeconomy.

1. Introduction

Fiscal policy refers to the financial strategies and fiscal tactics formulated by the government to achieve the expected economic and social development goals. As an important part of the national economic policy, it is the basic policy and basic guideline for dealing with financial allocation relations and guiding financial work formulated by the government in accordance with objective economic laws in order to achieve the tasks of a certain historical period.

2. The Main Ways in Which Fiscal Policy Affects Economic Activity Way

The main components of fiscal policy include government spending and taxation. Government expenditures include government purchases and transfers; taxes are mainly personal income taxes, corporate income taxes and other taxes. Fiscal policy generally involves the use of changes in taxes and government spending to regulate the aggregate level of economic activity *the level of aggregate demand or supply. When unemployment is too high, tax cuts - lower taxes on income and consumption expenditures - are introduced, the full impact of which on economic activity depends on the size and multiplier of the tax cuts. The full impact of a tax cut on economic activity depends on the size of the cut and the multiplier. In general, government spending in Western developed countries is divided into two major components: spending on goods and services, i.e., purchases and transfers, such as student grants, social security payments, unemployment benefits and various kinds of assistance, and interest payments on government debt.

2.1 Purchase Expenditure

Purchased expenditures are expenditures on goods and services purchased by the government in the goods and services market. This includes the purchase of goods and services required by government departments to carry out daily governmental activities or for the amount needed to make national investments. The former includes government departments' business. The latter includes investment allocations for various government departments, such as agriculture, infrastructure, basic industries, pillar industries, and residential construction, which are government investment expenditures.

According to the constant equation $GDP=C+I+G+NX$ of the total social demand of the four sectors of the economy, government purchasing expenditure G directly affects GDP because it purchases and directly consumes a part of the total social demand formed by economic resources, and therefore its

quantitative changes have a direct and significant impact on the economic aggregate. In cases where productive resources are not fully utilized and real GDP is less than potential GDP, an increase in government purchase-based spending can increase aggregate demand and increase real GDP. government purchase-based spending has a multiplier effect on GDP, the size of which depends on the marginal propensity to consume.

2.2 Transfer Expenditures

Transfer payments are expenditures in which the government unilaterally transfers a portion of its income ownership without compensation, including various social security expenditures, various financial subsidy expenditures, as well as interest payments on government debt and tax rebates or subsidies from the central government to local governments. In transfer payments, social welfare payments actually transfer a portion of income from the high-income class to the low-income class to promote fair distribution. Financial subsidies are another form of transfer payments, which are divided into two major categories, one is productive subsidies and the other is consumption subsidies. Production subsidies are mainly subsidies for specific production investment activities of producers, which are equivalent to tax breaks for producers and can directly increase the income of producers; consumer subsidies are mainly price subsidies for people's daily necessities, which serve to directly increase the disposable income of consumers and encourage them to increase their consumption demand. Since transfer expenditures directly affect consumption C and investment I, and according to the above constant equation, C and 3I in turn directly affect GDP, therefore, transfer expenditures indirectly affect GDP. government transfer expenditures are mostly in the nature of welfare expenditures, which form part of the process of redistribution of the volume of output of the national economy, and they have different degrees of impact on total social supply, total social savings, and the total and structure of the economy.

2.3 Taxation

As a means of government revenue, taxation transfers part of the resources from the private sector to the government sector, thus realizing the reallocation of resources. As a regulatory instrument, taxation regulates the relationship between total social supply and total social demand, and the relationship between income distribution. Taxes mainly include personal income tax and corporate income tax, thus, changes in taxes will directly affect the disposable income of consumers and producers and influence their consumption and investment activities, and according to the above constant equation, it will also indirectly affect GDP.

3. Establish the Model and Analyze the Data

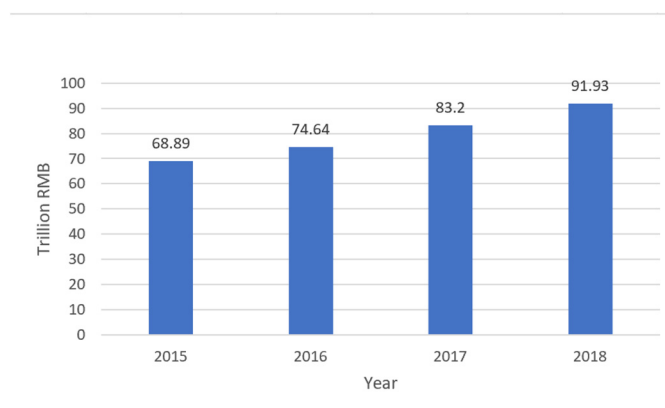


Fig 1. A regression models

According to macroeconomic theory, purchasing expenditure, transfer expenditure and tax in fiscal policy all directly or indirectly affect GDP, then what are their specific impacts on GDP? By

finding data on China's GDP from 2015-2018, I found that I could test this by building a regression model.

Purchase expenditure, transfer expenditure, and tax is four groups of time series data, and the four sets of data are tested separately for stationarity. Firstly, we find that they are all non-stationary time series through the line graph and they all have intercept terms; then we test whether they obey the cointegration relationship by the EG two-step method, and the test results find that there is a cointegration relationship between GDP and purchase expenditure, transfer expenditure and taxation, i.e. long-run equilibrium relationship. Therefore, we can say that there is a regression relationship between these four variables and we can build a regression model for them. The model is a single equation trinomial linear regression model $y = a + b \cdot x_1 + c \cdot x_2 + d \cdot x_3$, where y --- GDP, x_1 --- purchased expenditure, x_2 --- transferred expenditure, x_3 --- tax revenue, a --- intercept term. b , c , d --- regression coefficients. In order to prevent heteroskedasticity of residuals and serial autocorrelation, we use weighted least squares to estimate the parameters in the model. After analyzing the data, we found that the purchasing expenditure in fiscal policy generally accounts for more than 70% of fiscal expenditure, therefore, its direct impact on GDP is relatively large, the government can increase purchasing expenditure by increasing social public consumption expenditure and government investment expenditure, thus increasing GDP. The indirect effect of taxation on GDP has a negative correlation, when the government increases personal income tax and corporate income tax, it reduces the disposable income of residents and enterprises, reduces the consumption of residents and the investment of enterprises, and thus indirectly reduces GDP. and thus indirectly reduces GDP. Therefore, the government can formulate fiscal policies in different periods to increase or decrease GDP and regulate the relationship between aggregate demand and aggregate supply in the economy to promote economic development based on the effects of fiscal policy on GDP by purchasing expenditures, transfer expenditures and taxes.

4. The Impact of Fiscal Policies on GDP in Different Periods

Fiscal policy is to use government spending and taxation to regulate the economy. Specifically, in times of economic depression, when aggregate demand is less than aggregate supply, the government has to stimulate aggregate demand through expansionary fiscal policy, increase aggregate demand when aggregate supply is constant, make it gradually close to aggregate supply, increase GDP, and promote economic development. Expansionary fiscal policy includes increasing government spending and reducing taxes. The increase in government spending on public works and purchasing expenditures helps stimulate private investment, and the increase in transfer payments can increase personal consumption, which will stimulate aggregate demand. Reducing personal income tax (mainly by lowering interest rates) can increase personal disposable income and thus increase consumption; reducing corporate income tax can increase corporate income and thus increase investment, which will also stimulate aggregate demand to achieve price stability, increase employment rate, and make the economy prosperous. Active fiscal policy plays an important role in promoting stable national economic growth, advancing social development and further deepening reform. In a boom period, when aggregate demand is greater than aggregate supply, the government has to suppress aggregate demand through a tight fiscal policy, so that aggregate demand gradually declines and approaches aggregate supply, curbing inflation, lowering prices, reducing GDP, and preventing economic development from overheating. Austerity fiscal policy includes reducing government spending and increasing taxes. The reduction of government spending on public works and purchasing expenditures facilitates.

The reduction of transfer payments helps to reduce personal consumption, which can suppress aggregate demand. Increasing personal income taxes (mainly by raising interest rates) can reduce personal disposable income and thus consumption; increasing corporate income taxes can reduce corporate income and thus investment, which can also dampen aggregate demand. This would also dampen aggregate demand, reduce inflation, and stabilize the economy.

5. Conclusion

Government purchase expenditure is a substantial expenditure that directly creates social demand and purchasing power, and is an important component of national income. And the effect of fiscal policy is the change in government revenue and expenditure (including taxation, government purchase expenditure, and government transfer payment). When the domestic economy is in recession, the government adopts expansionary fiscal policy to increase government fiscal spending, expand people's consumption demand, make people's consumption desire rise, thus boosting domestic demand, and to a certain extent, contribute to the growth of GDP.

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