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Impact of Fiscal Policy on Unemployment

Jiayi Wu[1,a,*]

[1]*Nanjing University of Finance and Economics, School of Finance and TaxationXianlin Street, Qixia District, Nanjing City, Jiangsu Province, China*
a. 2556238639@qq. com
**corresponding author*

Abstract: Under the conditions of a modern market economy, the employment issue is a difficult problem that governments around the world must face directly. As one of the most important means for governments to implement macroeconomic regulation and control, it is of greater theoretical and practical significance to give full play to the positive role of fiscal policy in promoting employment. This paper introduces the concept of a flow model of unemployment to study the impact of fiscal policy on the labour market and explores the government's role in easing the contradiction between labour supply and demand and unifying the labour market through fiscal expenditure, taxation, social security and other means. This paper consists of four parts. The first part describes a flow model of unemployment in detail and studies how to reduce the unemployment rate theoretically. The second and third parts tell the different effects of expansionary fiscal policy and tight fiscal policy on the unemployment rate respectively, and how the government chooses the appropriate fiscal policy. The fourth part of the article selects the example of Japan in an economic down cycle to illustrate that the government needs to take into account both short-term and long-term factors, as well as the overall and local economic situation, and choose an appropriate direction or combination of fiscal policies in order to reduce the unemployment rate.

Keywords: Fiscal policy, unemployment rate, expansionary fiscal policy, tight fiscal policy

1. Introduction

The unemployment rate refers to the ratio of the number of employed people who are willing to work but have not yet obtained a job to the working population over a certain period, and is usually used as a measure of idle labour capacity, which is the main indicator reflecting the unemployment situation in a country or region, and is also the most sensitive economic indicator in the market. Generally speaking, a fall in the unemployment rate represents a healthy development of the economy as a whole, while a rise in the unemployment rate represents a slowdown in economic development and recession. Therefore, the government needs to pay attention to the changes in unemployment. Fiscal policy, as the main means of achieving macroeconomic goals, is an important method for the Government to reduce unemployment. Next, this paper will take the unemployment rate as the object of research, empirical research on the impact of fiscal policy intervention on the unemployment rate.

The basic model of the impact of fiscal policy on the unemployment rate is set as:

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$$u* = s/(s + f) \tag{1}$$

Where U = stock of unemployment at the beginning of the period t; s = job separation rate and f = job finding rate.

2. A Flow Model of Unemployment

The basic model can help to examine the impact of the movement of unemployed workers on the number of unemployed people in the economy.

Firstly, assume E_t= number of workers who enter unemployment in period t; X_t= number of workers who exit in period t; U_t= stock of unemployment at the beginning of period t. Then provide a stock-flow identity of the dynamic path of unemployment:

$$Ut + 1 = Ut + Et - Xt. \tag{2}$$

In each period, the stock of unemployment in the next period is equal to the stock in the previous period plus incoming minus outgoing flows. Removing the time subscript and expressing it as a difference, then get

$$U = E - X \tag{3}$$

Next, the concept of rate is introduced into the model to shed light on the number of people who are unemployed in a given period

$$E = s(L - U) \tag{4}$$

And the number of people who get out of unemployment,

$$X = fU \tag{5}$$

Where" L" represents the total size of the labour force (a constant).

Then, considering the unemployment rate

$$u = U/L \tag{6}$$

the change in "u" can be expressed as

$$u2 - u1 = (U2 - U1)/L \tag{7}$$

So we arrive at the following equation:

$$u2 - u1 = (U2 - U1)/L = (E - X)/L = (1 - u) - fu. \tag{8}$$

Finally, assume that

$$u2 - u1 = 0 \tag{9}$$

Under this condition, the fundamental equation (1) is obtained.

In this model, the stock of unemployed workers is determined by the flows caused by people entering and leaving the unemployment market.

According to the basic model, reducing the unemployment rate u* requires a reduction in the job separation rate s and an increase in the employment rate f. In other words, national fiscal policy should reduce the unemployment rate by reducing the incidence of job separation and helping more people find jobs.

Fiscal policy is a programme or code of conduct formulated by the government to achieve the social-economic objectives of a certain period, based on the objective law and the requirements of social-economic development to guide the financial distribution activities and deal with the financial distribution relations, and it is the main means to achieve the macro-economic objectives[1]. Therefore, this paper will discuss how fiscal policy affects the unemployment rate.

3. Expansionary Fiscal Policy

Fiscal policy can be divided into expansionary or tight in terms of its impact on aggregate social supply and demand.

Expansionary fiscal policy is a policy to stimulate social demand through tax cuts or increased fiscal spending. It is the primary means of achieving the goal of stimulating the economy by reducing revenues or increasing expenditures. Generally speaking, when the economy is in recession, the unemployment rate is high, and the effective demand is insufficient, this policy tends to increase the after-tax income of enterprises or individuals by reducing the tax rate and implementing tax cuts or exemptions, to stimulate their consumption and investment [2]. At the same time, the government increases government expenditures including public works expenditures, government purchasing expenditures on goods and services, and government transfer expenditures on individuals, etc., which on the one hand, directly increase the aggregate social demand, and on the other hand, it will drive the private investment and indirectly increase the aggregate demand.

As far as the employment effect is concerned, expansionary fiscal policy has a positive impact on employment by facilitating the creation of jobs and increasing the demand for labour by enterprises.

4. Specific measures of expansionary fiscal policy

4.1. Increase in Government Investment

Increased public investment by the Government can create jobs in the short term in three ways. First, direct employment is created by providing on-site employment opportunities in public works projects. Secondly, indirectly through the provision of inputs to industries engaged in public works projects. Third, employment growth is induced through additional demand for goods and services generated by suppliers and inputs to public works projects [3].

One focus of government investment is education spending. Increased spending on education raises the level of knowledge and skills of the population. A high level of education improves employment competence, thereby reducing the overall unemployment rate. In addition, in the distribution of the global industrial chain, a high level of education is conducive to enhancing the competitiveness of high-end industries, further reducing the long-term unemployment rate.

4.2. Increase in Government Transfers

Government transfers mainly include social security expenditures, fiscal subsidy expenditures, donation expenditures and debt interest expenditures, etc., of which social security expenditures (mainly employment security policies) and fiscal subsidy expenditures will have a certain impact on the social employment situation.

Employment protection policy refers to the system of policies implemented by the Government to encourage employment and re-employment. It is a proactive policy that works by expanding the

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demand for labour, improving the quality of labour supply and communicating information on labour supply and demand.

This system mainly includes: Firstly, the policies implemented by the government to encourage enterprises to expand their employment and re-employment activities, such as financial subsidies and interest rate subsidies. Secondly, the policies implemented by the government to encourage workers to actively engage in employment and re-employment, such as the provision of subsidies and incentives for receiving education and employment and re-employment training. Third, government policies support social employment and re-employment institutions, such as social employment guidance and counselling agencies and vocational training institutions.

4.3. Tax Reduction Policies

Tax relief policy with the main objective of promoting employment is to effectively solve the unemployment problem by means of concessions such as tax relief or tax credits. The objective is to influence the quantity and quality of labour supply and labour demand through preferential means such as tax relief or tax credits, so as to achieve full employment under the premise of sustained, coordinated and stable economic development.

It tends to reduce the cost of hiring labour for certain firms and increase their demand for labour, thus increasing employment opportunities. For example, tax breaks and exemptions imposed on the steel industry provide incentives for the industry to hire more labour, which in turn increases the number of jobs [4].

5. Tight fiscal policy

Tight fiscal policy refers to the government's efforts to curb aggregate demand by increasing fiscal revenue or decreasing fiscal expenditure in response to economic overheating and demand expansion. The main measures include reducing government expenditures and increasing tax revenues.

When aggregate demand in the economy expands, the Government reduces the disposable income of enterprises and individuals by raising tax rates, introducing new taxes and reducing the size of tax rebates, thereby reducing the demand for consumption and investment. At the same time, the government reduces spending on the procurement of goods and services and transfers part of the spending to individuals. On the one hand, it reduces aggregate social demand directly, and on the other hand, it reduces aggregate demand indirectly by having an impact on private investment [5].

From the perspective of employment effects, tight fiscal policies are not conducive to promoting employment growth. Reducing public investment and increasing the tax burden on businesses reduces employment opportunities, lowers the demand for labour and has a depressing effect on employment.

In practice, however, the impact of fiscal policy on unemployment depends on the specific policy measures adopted by the Government and the timing. The mix of expansionary and austerity fiscal policies can vary, depending on the economic situation.

6. The Impact of Fiscal Policy on Unemployment in Japan

After the first oil crisis in 1973, Japan implemented a debt-fiscal stimulus. Lower taxes led to higher personal incomes, while the ratio of government spending to GDP rose, which had a positive effect on demand expansion.

Entering the 1990s, the Japanese economy fell into a prolonged recession, with slow investment growth, low inflation, low economic growth and high real unemployment. At this time, Japan adopted an expansionary fiscal policy, mainly expanding public investment to stimulate demand.

Beginning in 1991, public investment in Japan increased several times, with growth rates of 14. 3%、12. 9%、1. 3%、0. 7% and 6. 4% from 1992 to 1996, and public investment-driven economic

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growth rates of 0. 9%、0. 9% and 0. 1%, respectively, from 1992 to 1994. If public investment were eliminated, the real economic growth rates would have been 0. 1%、-0. 7% and 1. 0% respectively, making public investment the main driver of economic growth. However, we can also see that while expansionary fiscal policy prevented the economy from experiencing negative growth, it did not have the desired effect [6].

In 2000, Japan began to implement the New Development Economic Policy (NDEP). Total spending was 11 trillion yen, a significant decrease from 24 trillion yen in 1998 and 18 trillion yen in 1999. Tight fiscal policy became the main tone of Japan's economic policy in 2001-2005. In 2002, Japan's economy began to rebound, and in the years since then, economic growth has performed well.

7. Conclusions

As can be seen from the example of Japan, firstly, an appropriate fiscal stimulus can have a positive impact on reducing unemployment by stimulating demand through increased government spending and expanded public investment. Such stimulus can raise personal incomes and boost economic growth. However, expansionary fiscal policy alone may not be able to fully address the unemployment problem. In Japan, despite its expansionary fiscal policy, it had not achieved the desired results and unemployment remained high. Therefore, there was a need to choose an appropriate direction or combination of fiscal policies, taking into account both short-term and long-term factors, as well as the overall and local economic situation. In summary, fiscal policy plays an important role in reducing unemployment, but appropriate strategies must be formulated on the basis of the economic environment and policy needs.

References

[1] *Fu, B. (2008). Research on Fiscal Policies to Promote Employment [D]. Northeast University of Finance and Economics.*

[2] *Sun, F. (2004). Research on Expansionary Fiscal Policy [D]. Graduate School of Chinese Academy of Social Sciences.*

[3] *Ye, T. (2019). A study on the promotion of unemployment reduction by fiscal policy in a declining economic cycle[D]. Kunming University of Science and Technology.*

[4] *Yin, Y, & Zhang, K. (2001). Analysing and reflecting on the employment effects of the fiscal policy structure. Journal of Southwest Minzu University (Humanities and Social Sciences Edition), 2001(2):21-22.*

[5] *Huang, Y. (2003). An Empirical Study on the Economic Effects of Fiscal Policy in China [D]. Xiamen University.*

[6] *Zhang, J. (2000). Structural Characteristics of Unemployment and Employment Mechanisms in Post-war Japan[J]. The Japan Society, 2000(4):65-79.*