

The impact of fiscal policy on the level of economic activity, inflation, and current account balance is the subject of endless disputes between economists and politicians. There is a wide range of views over the strength of fiscal policy's macroeconomic effects. Government spending has drastically different effects in Keynesian models compared to neoclassical models.

In the light of recent events, this issue is particularly important. During the global financial crisis, it was considered whether higher government spending would stimulate private sector economic activity. Later, whether fiscal consolidation (i.e. lower government spending) will harm the private sector. In times of the Covid-19 pandemic many governments introduced an unprecedented fiscal stimulus to support the health sector and counter an economic recession. High inflation in the post-pandemic period raised questions about the impact of fiscal economic stimulus packages on inflation.

The commonly used measure of fiscal policy effectiveness are fiscal multipliers. Fiscal multipliers are often calculated based on structural vector autoregression (VAR) models. The problems, however, are that it is difficult to separate out fiscal policy shock and there is no commonly agreed methodology to calculate fiscal multipliers.

It is because fiscal variables, unlike monetary variables, change for various reasons, rarely due to the stabilization of the level of economic activity. In addition, fiscal policy changes may require more time than monetary policy changes due to the time required for the fiscal legislative process. It is also necessary to take into account the operation of automatic stabilizers, for instance automatic changes in the level of taxes and public benefits and transfers caused by changes in the level of production. For example, during a recession, the government has to automatically pay more benefits to citizens who lose their jobs, and also tax revenues automatically fall.

Identification of fiscal policy shocks is a difficult econometric task. Standard methods turn out to be ineffective. Fiscal shocks are often identified outside the model. One of the methods used is the narrative method, which, for example, may be based on the identification of fiscal shocks through the analysis of legal acts, statements of politicians, or media information. An important issue is that changes in fiscal policy may be announced and expected in advance by market participants.

The main aim of this study is to analyse output and inflation effects of fiscal policy shocks. We will provide updated values of fiscal short-term elasticities and fiscal multipliers. In this project the innovative idea is to use the methodology that, according to our knowledge, has not been applied before to solve the problem of fiscal shocks identification. The method is based on the so-called Bayesian approach, where the researcher can take into account a-priori knowledge around the estimated values, i.e. their statistical distribution. This method allows for greater flexibility and gives the opportunity to take into account the researcher's uncertainty as to the estimated parameters. What distinguishes our method from others is the addition of uncertainty about the value of short-term elasticities.

The project will concentrate on the United States in the first instance. We will, however, carry out a similar study for the Polish economy. Moreover, we will compare the results from individual country models with the results from panel model, that will include several dozen countries. We will show to what extent the deficit exceeds inflation, GDP or current account balance. The panel model will be augmented with nonlinearity interactions. We will, for example, test if fiscal multipliers are different in pandemics when compared to normal times.

Our study will be an interesting econometric project for an application of a new, state-of-the-art method. The study can provide valuable insights into short-term elasticities as well as the value of fiscal multipliers. The results may be useful for econometricians, macroeconomists and fiscal and monetary authorities in planning and forecasting the effects of fiscal policy.