Journal of Macroeconomics 57 (2018) 71–82

Contents lists available at ScienceDirect

Journal of Macroeconomics

journal homepage: www.elsevier.com/locate/jmacro

Fiscal foresight: Do expectations have cross-border effects?

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ARTICLE INFO

Keywords:
Fiscal foresight
Fiscal spillovers
VAR model
Fiscal policy

JEL classification:
C32
E62
F42
H68

ABSTRACT

This paper estimates the cross-border effects of U.S. fiscal shocks on four main trading partners within a two-country Bayesian VAR framework. Using an identification strategy which differentiates between expected and unexpected government spending shocks, it provides evidence in support of the hypothesis that expectations alter fiscal policy transmission at both national and international level.

While an unexpected fiscal stimulus yields negligible cross-border effects, the anticipation of an increase in government spending produces sizable positive spillovers in the medium run.

1. Introduction

The empirical evidence about the effects of fiscal policy, though heterogeneous, has reached consensus on three aspects: the variable size of multipliers, the importance of cross-border effects and the predictability of fiscal measures.

It is by now well-understood that the size of the fiscal multiplier depends on the state of public finances, the stance of monetary policy, the presence of a financial crisis, the exchange rate regime (Chinn, 2013) and the business cycle (Corsetti et al., 2012; Arin et al., 2015 and Auerbach and Gorodnichenko, 2012). Regarding international transmission, several contributions (Auerbach and Gorodnichenko, 2015; Beetsma and Giuliodori, 2011 and Caporale and Girardi, 2013 among many others) document sizable cross-country effects of fiscal shocks, albeit there is no clear consensus on the dimension and the sign of these effects. Regarding foreseeability, Yang (2008) and Leeper et al. (2012) and others demonstrate that fiscal policy can be easily anticipated because of legislative and implementation lags, leading to fiscal foresight. Agents anticipate the effects of fiscal measures by modifying their actions according to the signals they receive, so well before these measures are actually implemented. This implies that economic variables may move before estimated shocks take place, creating a problem of non-fundamentalness in VAR models (Lippi and Reichlin, 1994).

Most studies overlook the impact of foresight on spillovers, yet economic theory suggests expectations can affect key variables for international transmission, such as interest rates and exchange rates. This paper aims at revisiting the empirical evidence on fiscal spillovers in the light of fiscal foresight.[1] The analysis investigates the extent to which the anticipation of future policy stances affects the international transmission of actual measures. I use a set of two-country VAR(4) models.[2] In each model, the U.S. is the domestic economy because of its leading role in the global economy. As foreign countries, I include Canada, France, Germany and UK because

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[1] Cavallari and Romano (2017) used a similar approach to study the transmission of fiscal shocks inside the European monetary union.

[2] For a more detailed description of VAR models as tools to assess the macroeconomic effects of fiscal policy see, among others, Blanchard and Perotti (2002), Fatas and Mihov (2001) and Caldara and Kamps (2006).

https://doi.org/10.1016/j.jmacro.2018.05.001
Received 9 November 2017; Received in revised form 4 May 2018; Accepted 4 May 2018
Available online 18 May 2018
0164-0704/

they represent the lion share of U.S. foreign trade.[3]

The baseline VAR specification comprises eight endogenous variables representing indicators of realized and expected fiscal policy in the U.S. (Government spending and its forecasts), economic activity in both countries (U.S. and foreign country GDPs) and transmission channels (foreign bilateral net exports, long-term nominal interest rate spreads and real exchange rates). The Philadelphia FED Survey of Professional Forecasters provides the data used to construct the indicators of fiscal forecast.

The identification strategy differentiates an unanticipated or surprise shock from a foresight or news shock (following Forni and Gambetti, 2016). The former is similar to shocks identified in standard VAR models, representing an unexpected increase in government spending. This identification strategy allows to "clean" it from its anticipated component. The latter represents news received by agents which affect their expectations about prospective policy actions. This approach has twofold advantages: it allows to address the problem of non-fundamentalness while assessing the international repercussions of both surprise and foresight shocks.

The results of this paper show the relevance of expectations for the international transmission of fiscal policy and, consequently, the importance of taking them into account when studying fiscal spillovers. A surprise government spending shock yields negligible cross-border effects – with output multipliers close to 0 in the medium term (3 to 5 years) – exactly as the shock identified with standard Cholesky identifications. The inclusion of the forecast indicator as an endogenous variable allows to show that the anticipation of a decrease in future public expenditure, associated with the surprise shock, may contribute to explain the described outcome: it triggers a drop in domestic interest rates and, consequently, a negative response of both spread and net exports.

On the contrary, foresight shocks, associated with expectations of increasing government spending, produce positive spillovers in the medium run, with cumulative multipliers above unity.

These dynamics have important policy implications that would be overlooked if the distinction between anticipated and unanticipated shock was not applied to the proposed bilateral setting. The evidence produced by this paper suggests the need for policy makers to carefully consider the impact on forecasts of their fiscal manoeuvres if they want to boost their efficacy. This makes forward guidance an appropriate tool for fiscal policy just as it already is for monetary policy.

The sign and magnitude of these external effects are country sensitive, with some countries (France) more responsive than others (Germany). This might suggest an active role for country-specific factors in affecting the international transmission of U.S. fiscal policies, with spillovers that might depend on the structural characteristics of the foreign economy, such as the institutional framework, the structure of the international asset market, the dimension and the characteristics of the international trade flows (Ciccarelli et al., 2012).[4] Moreover, as shown in the robustness analysis, the international transmission of both foresight and surprise shocks may very well change over time, depending on factors like monetary policies or the business cycle. Future research developments may contribute to shed further light on these aspects.

Regarding the transmission channels, the results in this paper confirm the puzzling response of the exchange rate to an expansionary fiscal measure, documented by Kim and Roubini (2008). In contrast with the predictions of the Mundell and Fleming model, an unexpected increase in government expenditure triggers a depreciation of the domestic currency in the medium run. My findings suggest this depreciation may be due to expectations of a declining or negative path for government spending in the future associated with positive surprise shocks. When an unexpected increase in government spending takes place, agents anticipate that substantial expenditure cuts will materialize in the future. This in turn causes an immediate reduction of long-term interest rates which provokes a depreciation of the domestic currency. On the contrary, the anticipation of a future rise in government spending – the foresight shock – leads to an increase in long-term interest rates (through the expectation of higher future interest rates), resulting in an appreciation of the national currency.

The remainder of the paper is organized as follows. Section 2 outlines the econometric approach and the identification procedure. Section 3 illustrates and discusses final results. Section 4 concludes.

2. Econometric approach

This empirical analysis assesses how surprise and foresight shocks affect economic activity in the country where fiscal policy is implemented, the U.S., and in some of its major trade partners (Canada, France, Germany and UK). For this purpose I propose a two-country VAR model which includes variables that are expressions of the fiscal stance in the U.S. (both implemented and anticipated), the economic activity in both countries and commercial and financial transmission channels.

2.1. Data

The dataset comprises quarterly time series for the period 1985:q1 – 2013:q4. The availability of data imposes the starting date.

Real Government Consumption Expenditure and Gross Investment is chain quantity index from the U.S. Bureau of Economic Analysis (BEA).[5] U.S. GDP is from the BEA, the GDP series for Canada, France and UK are from the OECD StatExtract database while the one for Germany is from the German National Statistical Office. All these series are in millions of national currency. The U.S. Federal Surplus is Federal receipts minus Federal expenditure over GDP and all the three series are from the BEA. Bilateral net exports

[3] China, Mexico and Japan have been excluded due to problems with the availability of data.

[4] A substantial increase of the number of countries comprised in the analysis would help to better define the determinants of the different national responses, constituting an avenue for future research.

[5] The choice of the quantity index is due to the lack of a series in 2009 chained U.S. dollars which was available for the entire time span considered in the analysis.