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The effects of tax policy on financial markets: G3 evidence ☆

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ABSTRACT

We investigate the effects of various tax policy innovations on stock market returns. By using a vector autoregressive model that controls for the mutual causality between fiscal policy and financial market performance, we test whether financial markets serve as a transmission mechanism for tax policy innovations. Our findings indicate that indirect taxes have a larger effect on market returns than do labor taxes. Further, corporate tax innovations do not have any statistically significant effect on stock returns. We consider that this finding is a result of a firm's ability to switch between equity financing and bond financing.

1. Introduction

During the past 2 decades, several historical developments have led to a revival of interest in fiscal policy. For instance, the Reagan tax cuts in the United States created a discussion about the supply-side effects of tax policy. Similarly, fiscal consolidations in Europe and Canada that were intended to reduce budget deficits led to an increase in private consumption, and thus generated outcomes contrary to the Keynesian framework. In Europe, the formation of a monetary union, the Maastricht Treaty, the evolution of the euro as a single common currency, and the establishment of the European Central Bank made fiscal adjustments crucially important for the member countries. Yet, despite all these developments, our understanding of the transmission of fiscal policy innovations is far from complete.

Although previous studies broadly document the relation between fiscal policy and financial markets, they analyze this relation at an aggregate level, and they do not identify which particular fiscal tool(s) and, more specifically, which tax instruments, cause a market response. Therefore, the actual causal effect of specific fiscal policy instruments on stock markets is largely unresolved. In this paper, we fill this gap by investigating the response of stock markets and interest rates to various tax policy innovations in G3 countries. Using data from 1967 to 2005, our results show that different tax policy changes produce different financial responses.

Many recent fiscal policy studies based on vector autoregressive (VAR) models document the lack of understanding of how fiscal policy innovations are transmitted. For example, Edelberg, Eichenbaum, and Fisher (1999) find that U.S. government expenditures (particularly defense spending) have a temporary hump-shaped effect on output. In contrast, Fatas and Mihov (2001) use a semi-structural VAR model for the United States and find a more prolonged effect on output.

By using a structural VAR (SVAR) approach, Blanchard and Perotti (2002) estimate the effects of exogenous shocks on real government purchases as well as real net taxes. These authors use institutional information about tax and transfer systems and the timing of tax collections to identify the automatic stabilizing aspects of fiscal policy, and then use that information to derive fiscal shocks. Their results show that positive government spending shocks tend to have a transitory effect on output, while positive tax shocks consistently have a negative effect. Perotti (2002) uses an SVAR approach to study the effects of fiscal policy on gross domestic product (GDP), prices, and interest rates in five OECD countries. He argues that the effects of fiscal policy on GDP and its components have become substantially weaker

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Table 1
Definition and data source for the variables used in this study

Variable	Definition	Data source
Income taxes	Direct taxes on households	OECD Economic Outlook
Corporate taxes	Direct taxes on businesses	OECD Economic Outlook
Indirect taxes	Sales taxes, taxes on goods and services	OECD Economic Outlook
Social Security taxes	Social Security contributions received by the government	OECD Economic Outlook
Labor taxes	Sum of income and Social Security taxes	
GDP deflator	Price level	OECD Economic Outlook
Inflation	Log difference of GDP deflator	
Real GDP	Gross domestic product divided by GDP deflator	
Output growth	Log difference of real GDP	
Interest rate	Federal funds rate, TIBOR, FIBOR	St. Louis Fed Data, and Global Financial data
Excess stock return	Log of quarterly rate of return in excess of T-bill rate	Global Financial data

in the past 20 years. He also contends that in general, the tax multipliers tend to be negative, but small; however, there is some evidence for positive tax multipliers. Net tax shocks appear to have negative small effects on prices. Finally, Perotti indicates that the United States is an outlier in many dimensions, so the responses to fiscal shocks that researchers estimate using U.S. data often do not represent the average OECD country. Perotti's (2002) results are consistent with the findings of Baldacci, Cangiano, Mahfouz, and Schimmelpfennig (2002), who argue that although research generally suggests small, positive spending multipliers and small, negative tax multipliers, there is some evidence for both negative spending multipliers and positive tax multipliers. The conclusions reached by

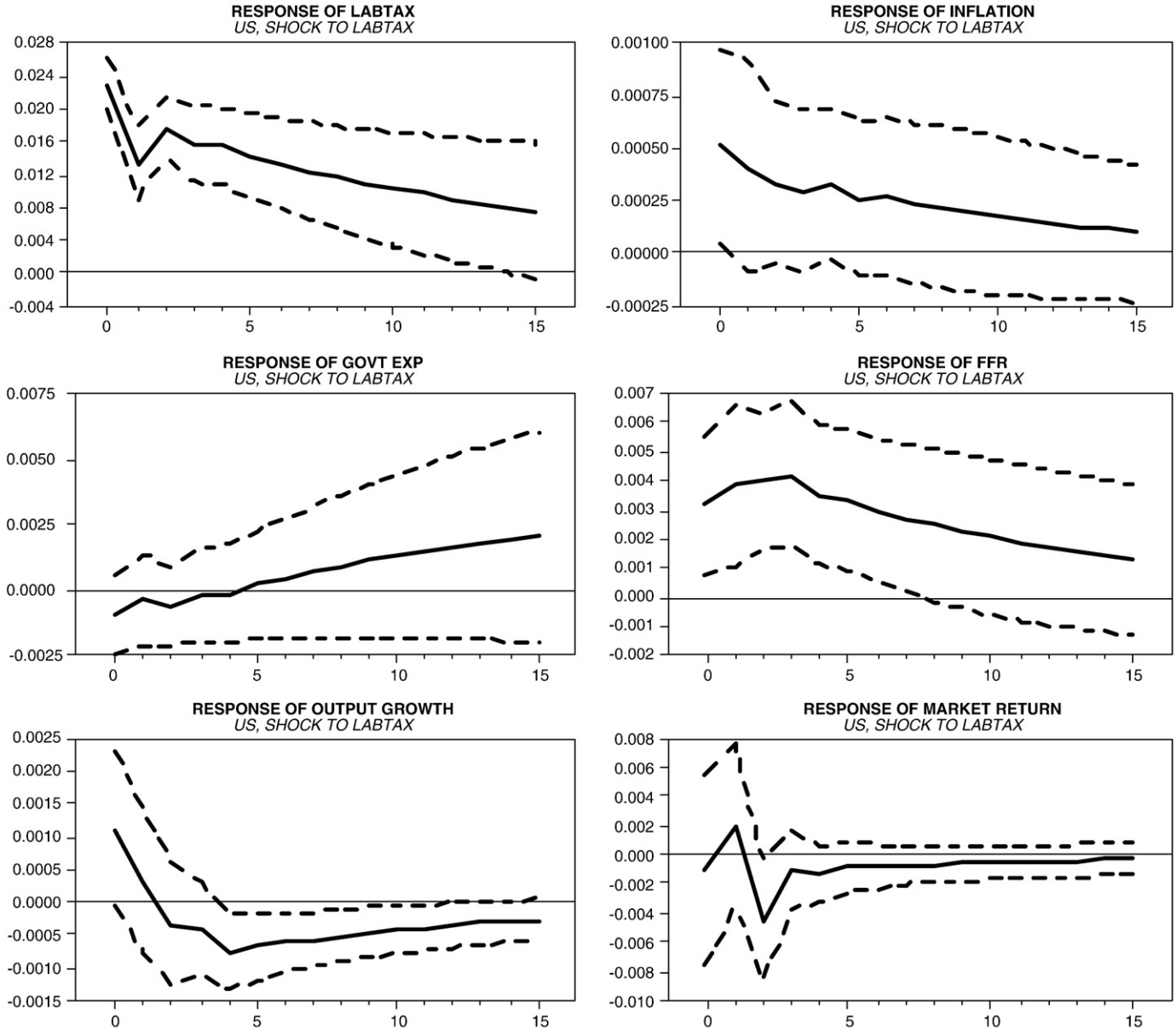

Fig. 1. Impulse response functions of shocks produced by labor tax revenues (United States).