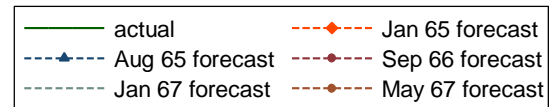
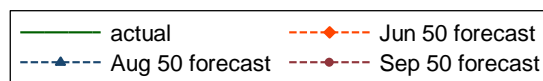
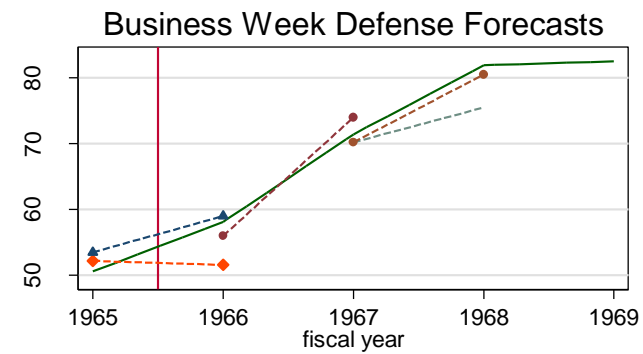
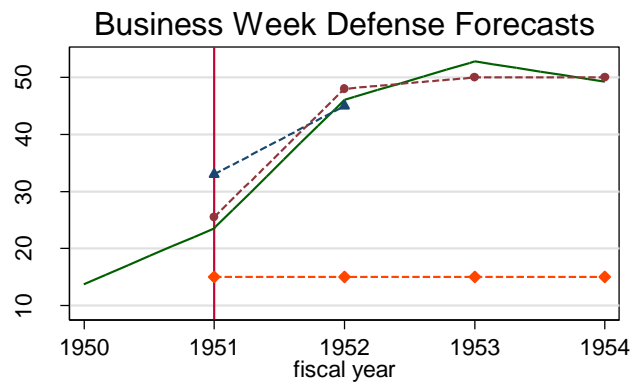
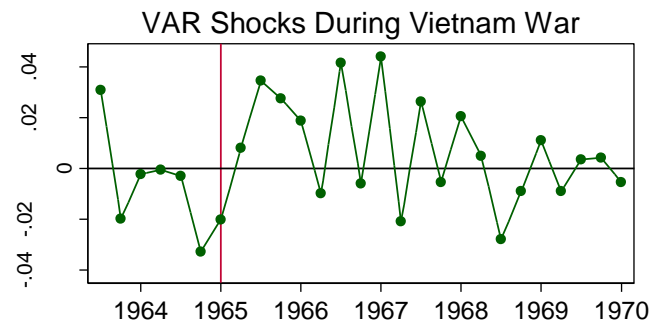
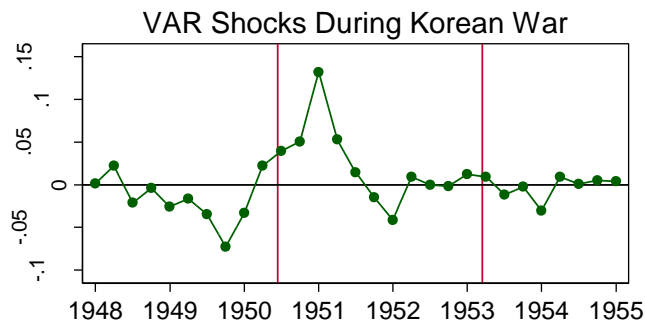
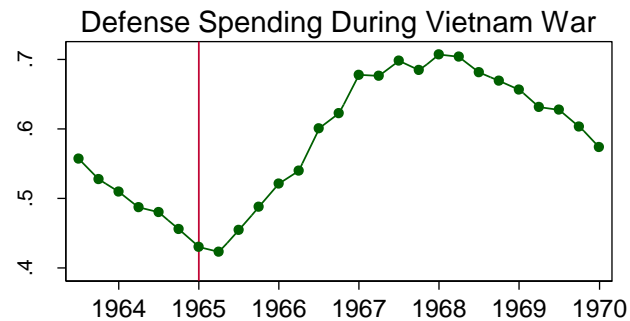
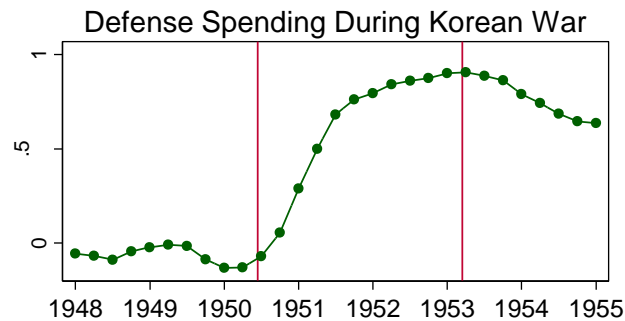
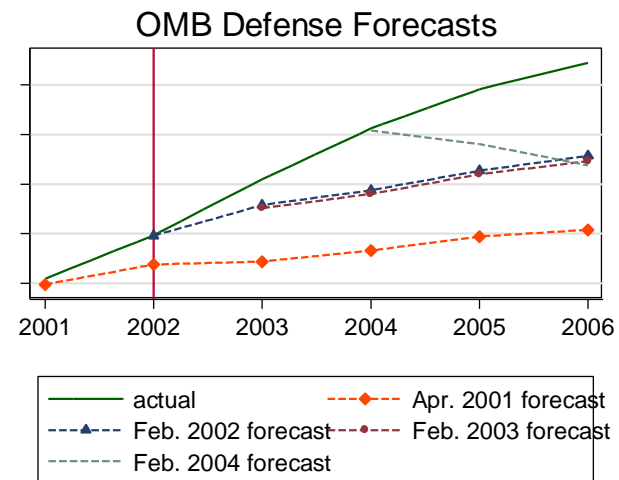
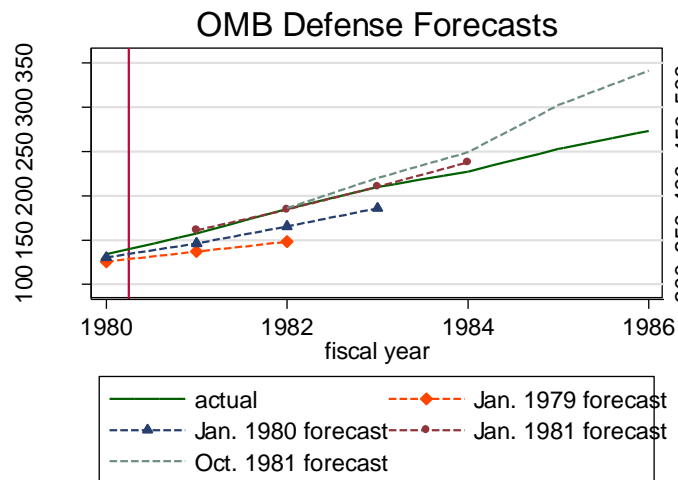
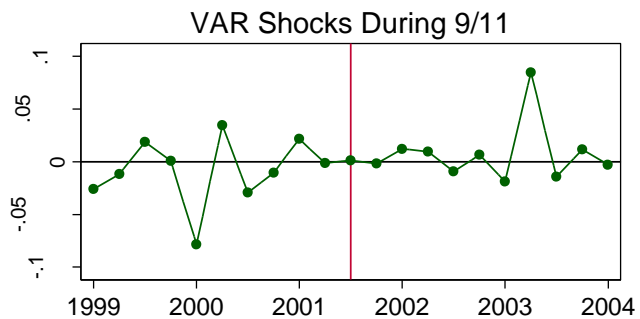
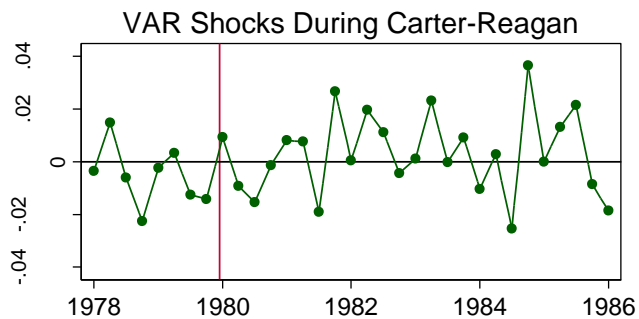
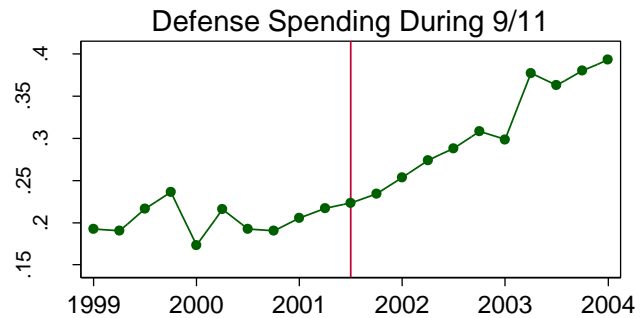
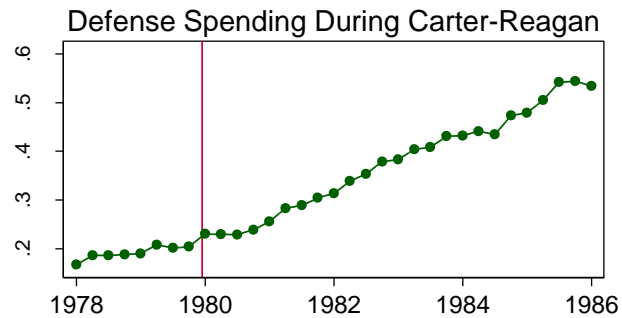


# Anticipation Effects in Fiscal

Ramey QJE (2011)





# Are VAR shocks anticipated? Yes.

Hypothesis Tests	p-value in parenthesis
Do War dates Granger-cause VAR shocks?	Yes (0.017)
Do one-quarter ahead Professional Forecasts Granger-cause VAR shocks? <b>1981:3 – 2008:4</b>	Yes (0.025)
Do four-quarter ahead Professional Forecasts Granger-cause VAR shocks? <b>1981:3 – 2008:4</b>	Yes (0.016)
Do VAR shocks Granger-cause War dates?	No (0.148)

# Model

$$Y_t = (Z_t N_t)^{0.67} K_t^{0.33}$$

$$U = \log(C_t) + \varphi_t \cdot \log(1 - N_t)$$

$$Y_t = C_t + I_t + G_t$$

$$K_{t+1} = I_t + (1 - 0.023)K_t$$

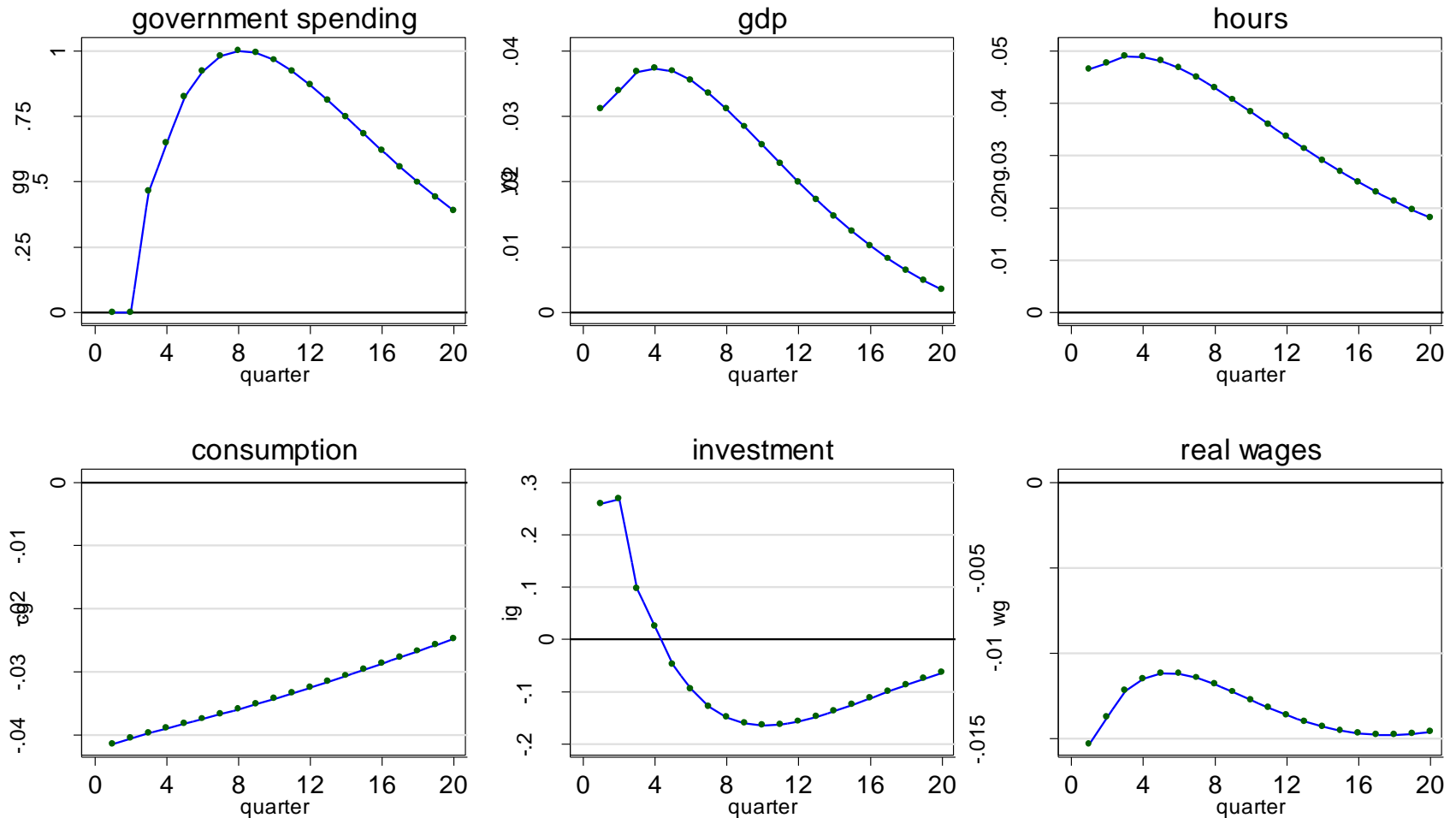
$$\ln Z_t = .95 \cdot \ln Z_{t-1} + e z_t, \quad \sigma_{ez} = 0.01$$

$$\ln \varphi_t = .95 \cdot \ln \varphi_{t-1} + e \varphi_t, \quad \sigma_{e\varphi} = 0.008$$

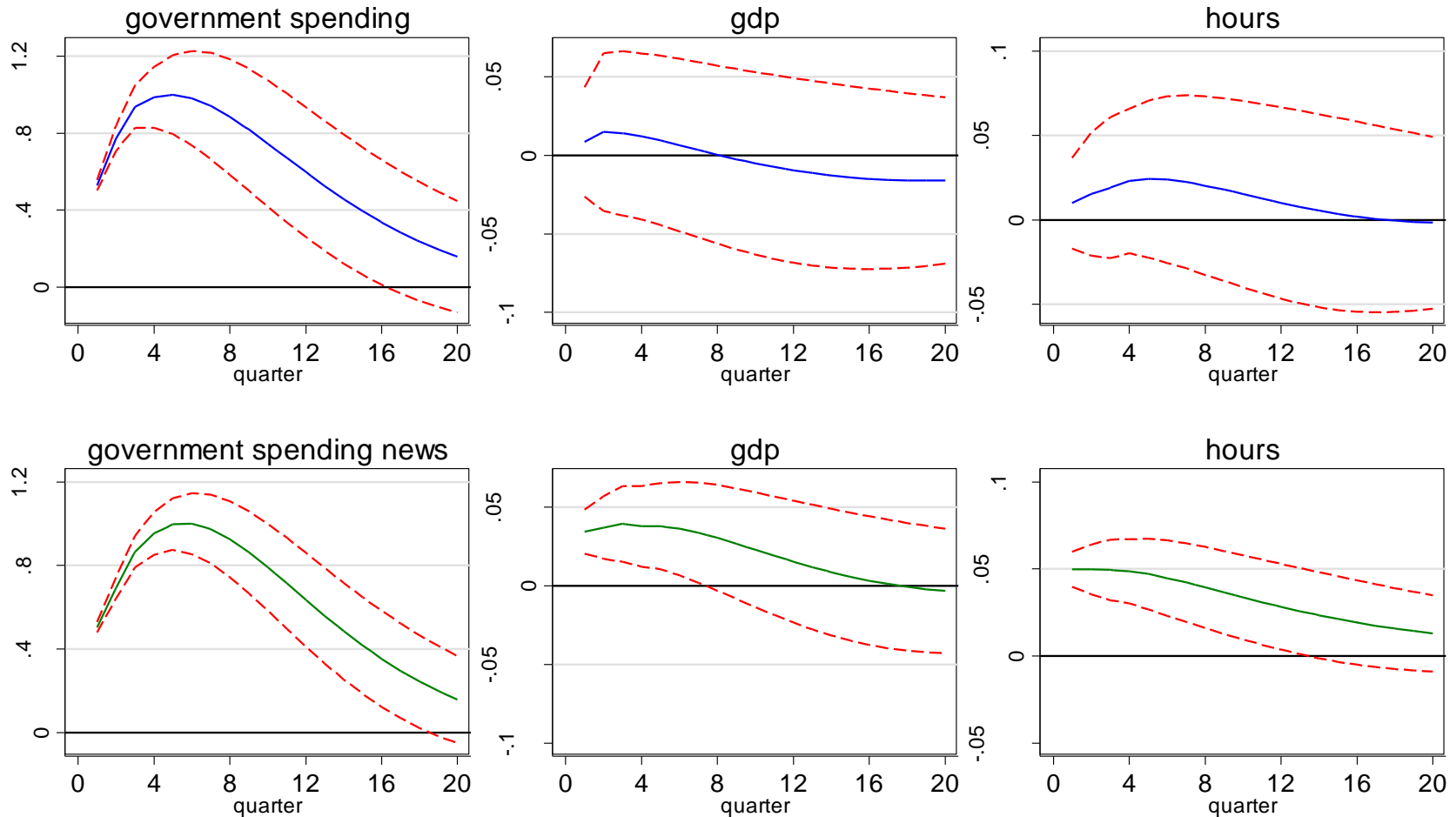
$$\ln GF_t = \text{constant} + 1.4 \ln GF_{t-1} - 0.18 \ln GF_{t-2} - 0.25 \ln GF_{t-3} + e g_t, \quad \sigma_{eg} = 0.028$$

$$\ln G_t = \ln GF_{t-2}$$

# Theoretical Effect of an Increase in Government Spending (announced two quarters in advance)

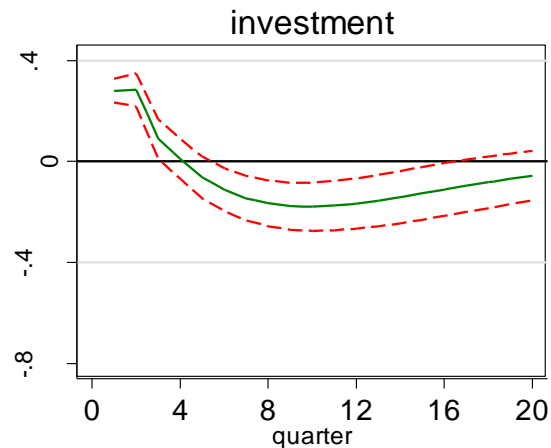
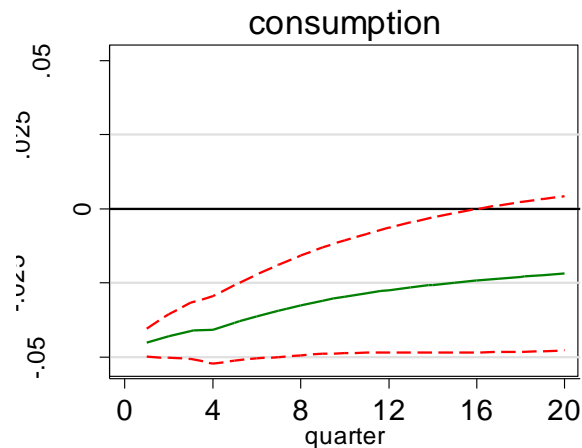
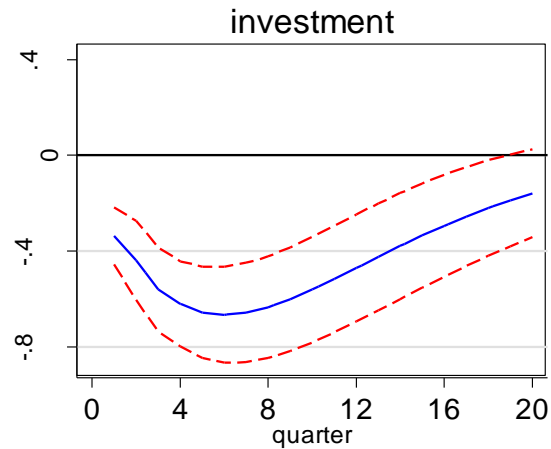
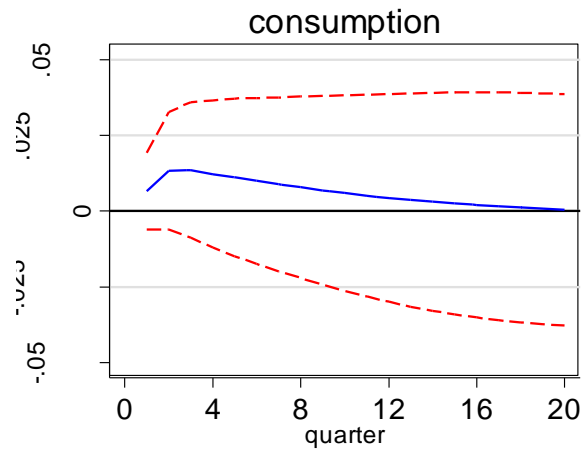


Estimation of VARs on **Simulated Data**  
**Actual Spending Identification** in top row; **News** in bottom row  
68% bands





Estimation of VARs on **Simulated Data**  
**Actual Spending Identification** in top row; **News** in bottom row  
68% bands



# **A New Measure of Defense Shocks**

**The simple dummy variable incorporates only a small part of the information available in the narrative record.**

**Thus, I created a new variable: the present discounted value of the forecasted changes in defense-related spending. This is what matters for the wealth effect.**

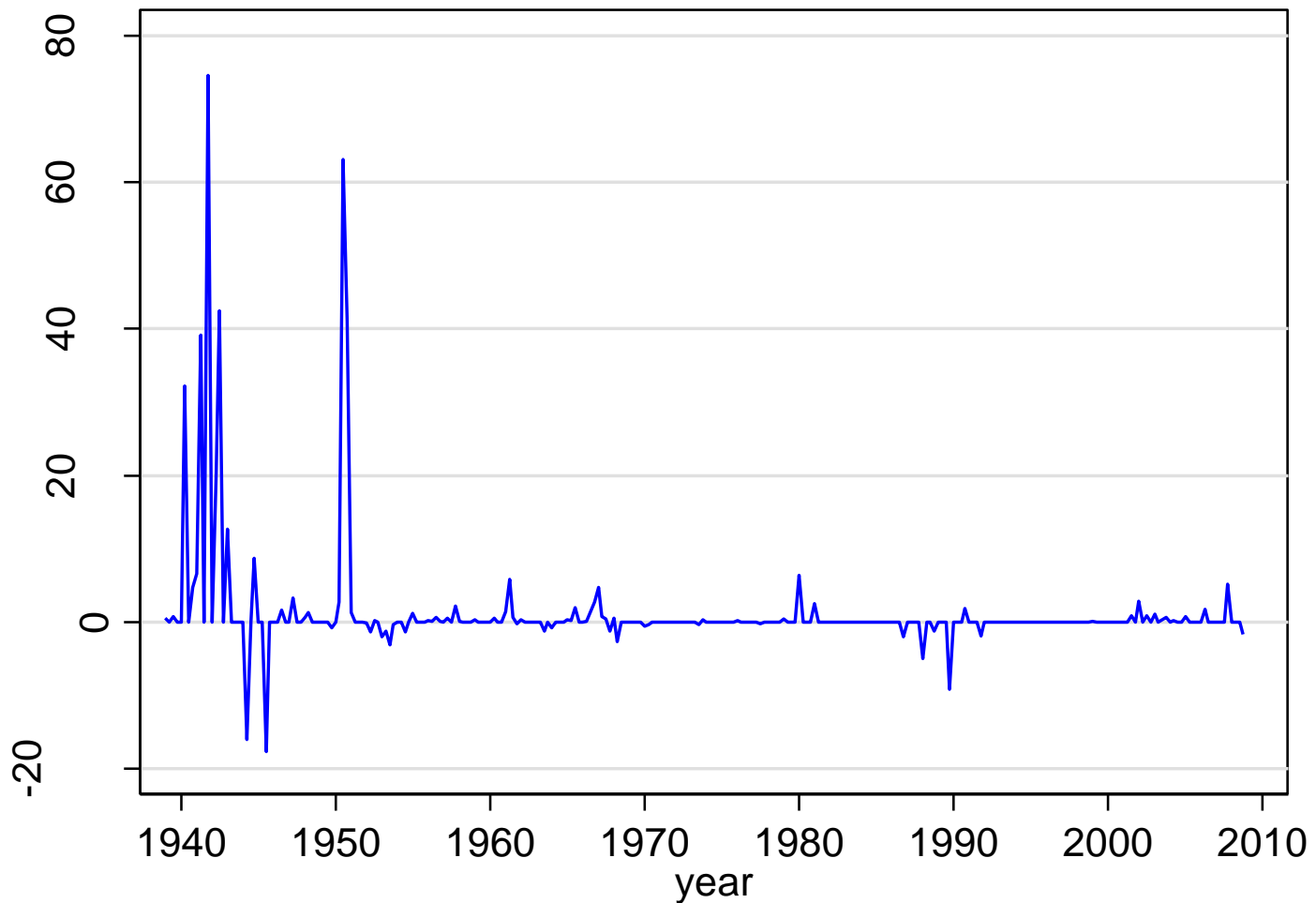
**I created the variable by reading mostly Business Week, but also the New York Times, Washington Post, and Wall Street Journal from January 1939 to December 2008.**

**Business Week 5/25/40, p. 60:** “The German drive to the English Channel this week assured quick adoption of the President’s program to speed up war preparations. But the proposed expenditure of less than \$3.5 billion in the coming fiscal year is only a small beginning; of that, business men can now be certain... In the 1919 fiscal year costs ran to \$11 billion. A major war effort in the ‘40s would come higher... since we have started six years behind, a vast outlay is required if we are to attain military parity with Hitler’s industrial machine. In a major war at least four times the \$3.5 billion we plan to spend in 1941 would be needed, and quite conceivably five to six times that – or anywhere from 20% to 30% of the peacetime national income. However, it is not possible to jump immediately up from a \$3.5 billion to a \$14 billion military effort. It takes time to shift a nation from a peace economy to a war-preparation economy and thence to a war economy. Right now we are at the very beginnings of a war-preparation economy.”

**Business Week 10/25/41:** “Expect dramatic developments in the defense program in the next few weeks. Plans were under way before the Kearny incident and the sinking of two more American ships but they have been speeded by this week’s shocks and by the heartening reports on Russia’s capacity to hold out, brought home by the Harriman mission. Beginning this week, war production –and it’s ‘war,’ not ‘defense’ ...-becomes the No. 1 item on the business docket.” p. 7

“Already, Washington is taking cognizance of the imminence of a shooting war...A year ago, the government thought of armament expenditures of \$10 billion a year; six months ago the goal was \$24 billion; as recently as last month \$36 billion was regarded as a desirable but hard-to-achieve outlay; but now an annual expenditure of \$50 billion is begin seriously discussed – not as the desirable goal, but as an inescapable necessity.” p. 13

# Defense News: PDV of Expected Change in Spending as a % of lagged GDP



## Framework for Defense News VAR

$$X_t = A(L)X_{t-1} + U_t$$

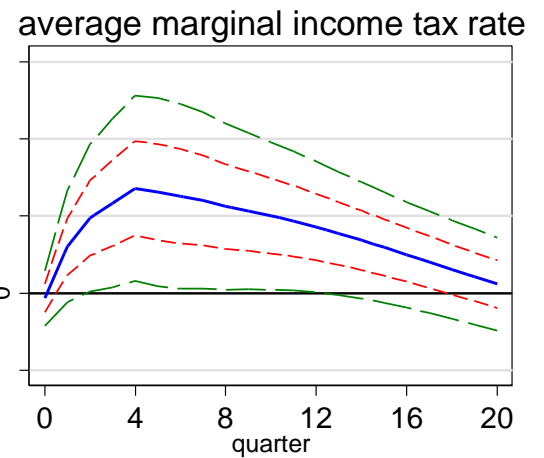
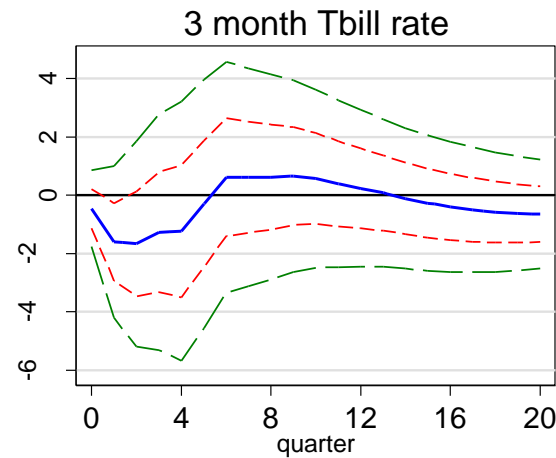
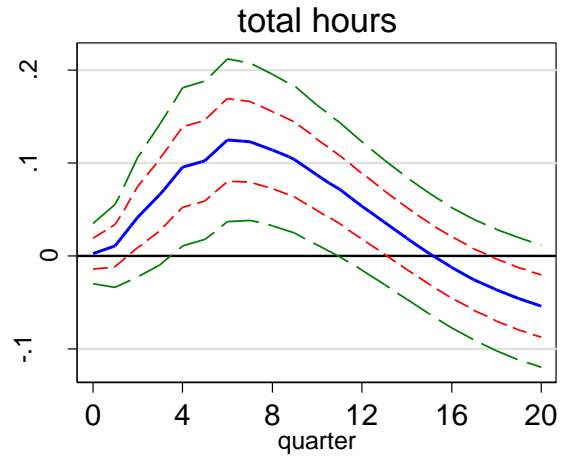
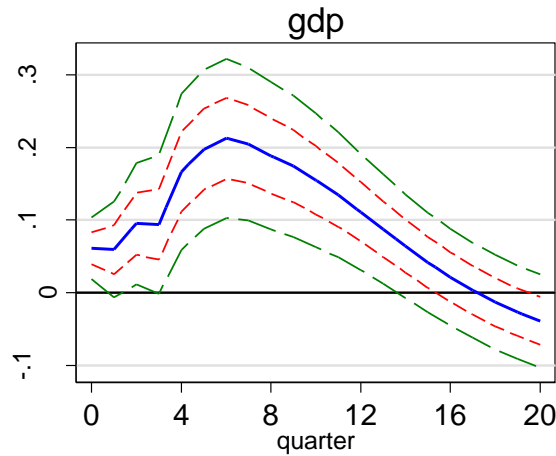
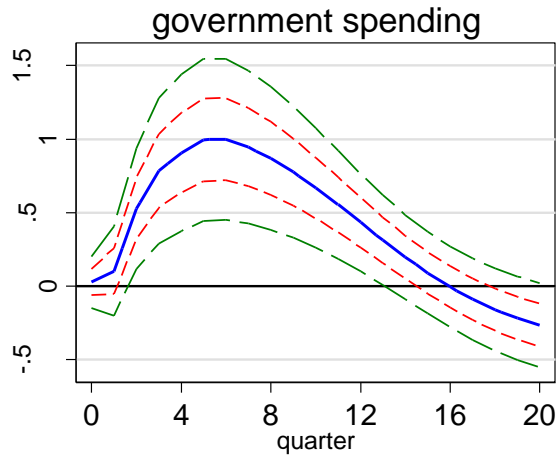
X includes: defense news variable (as a % of lagged GDP), total govt spending, GDP, Barro-Redlick tax rate, 3-month T-bill rate

6<sup>th</sup> variable is rotated in.

Newly constructed Quarterly data: 1939:1 – 2008:4,  
4 lags, quadratic trend

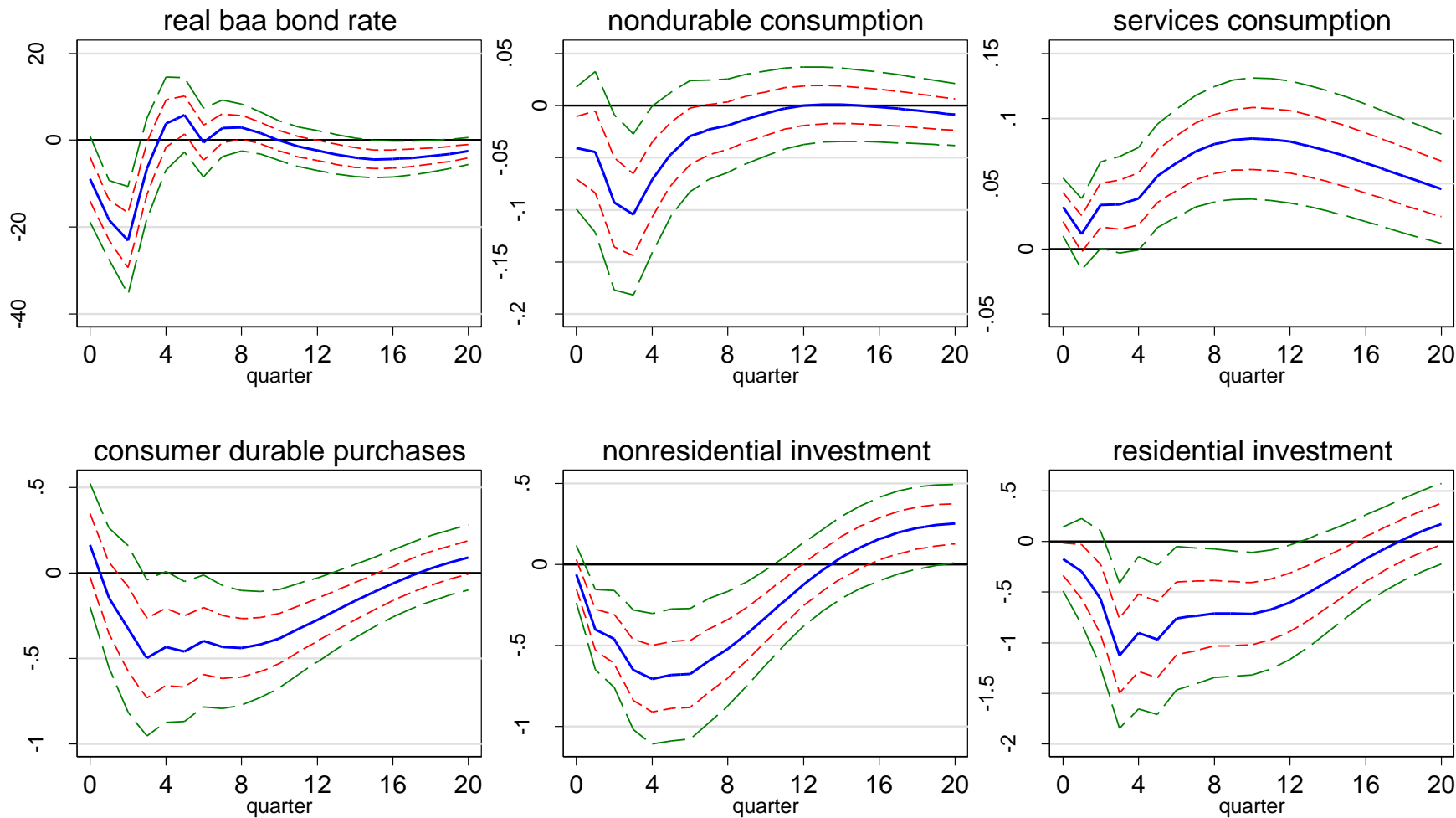
# VAR with Defense News Variable: 1939-2008

(red lines: 68%; green lines: 95%)



# VAR with Defense News Variable: 1939-2008

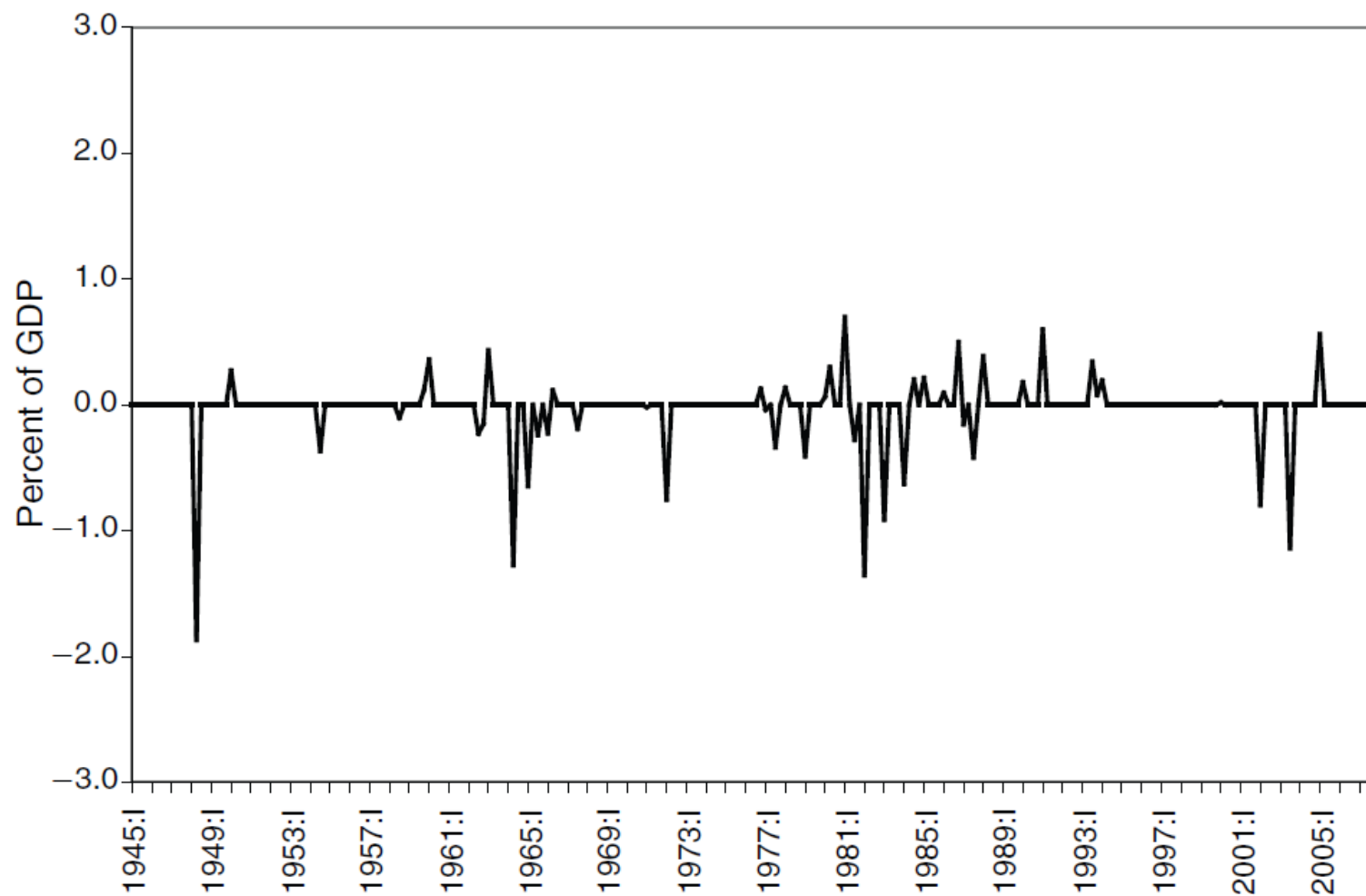
(red lines: 68%; green lines: 95%)





# Romer-Romer AER (2010)

Panel A. All exogenous tax changes



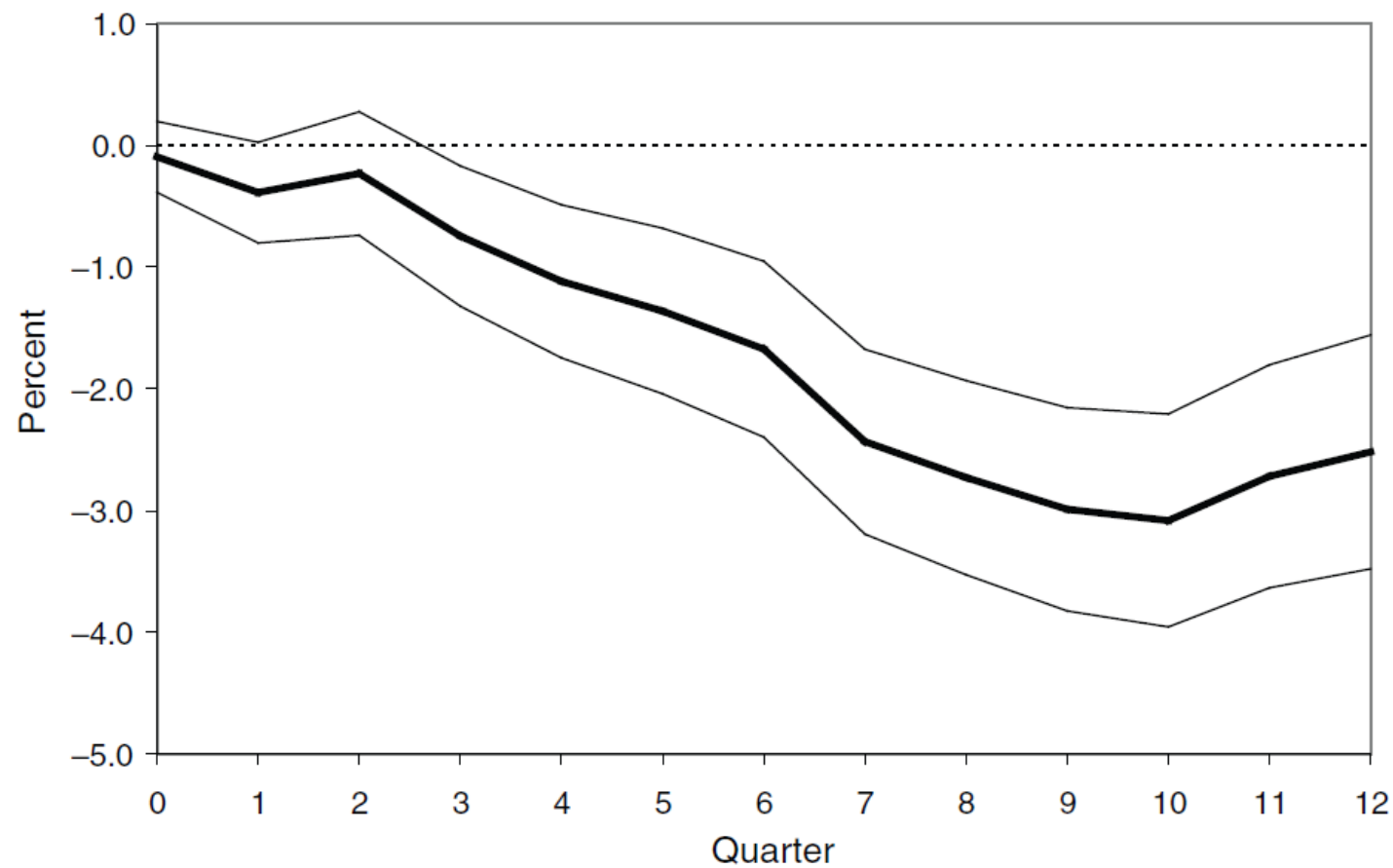


FIGURE 4. ESTIMATED IMPACT OF AN EXOGENOUS TAX INCREASE OF 1 PERCENT OF GDP ON GDP  
(*Single equation, no controls*)

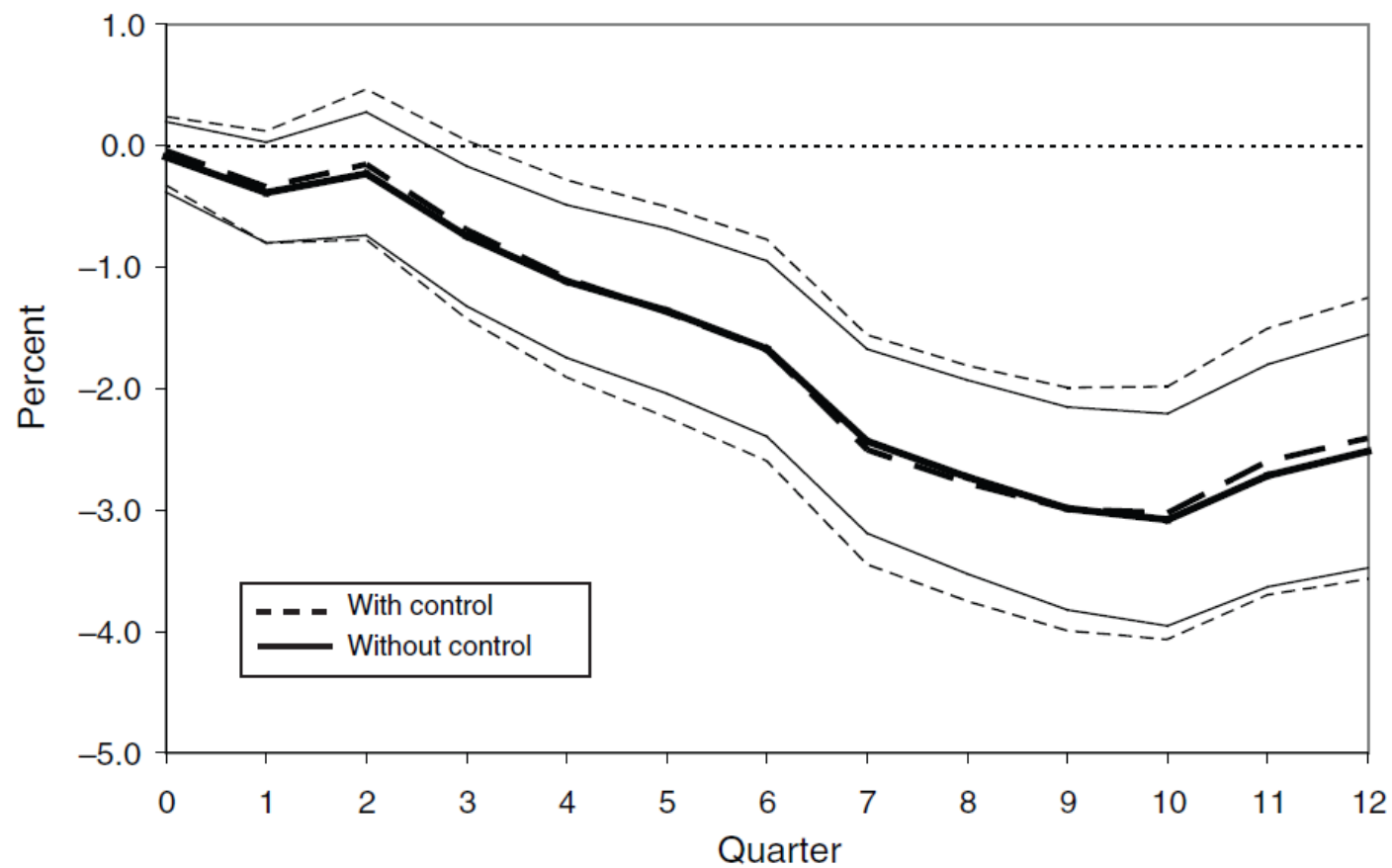


FIGURE 5. ESTIMATED IMPACT OF AN EXOGENOUS TAX INCREASE OF 1 PERCENT OF GDP ON GDP  
(Single equation, controlling for lagged GDP growth)

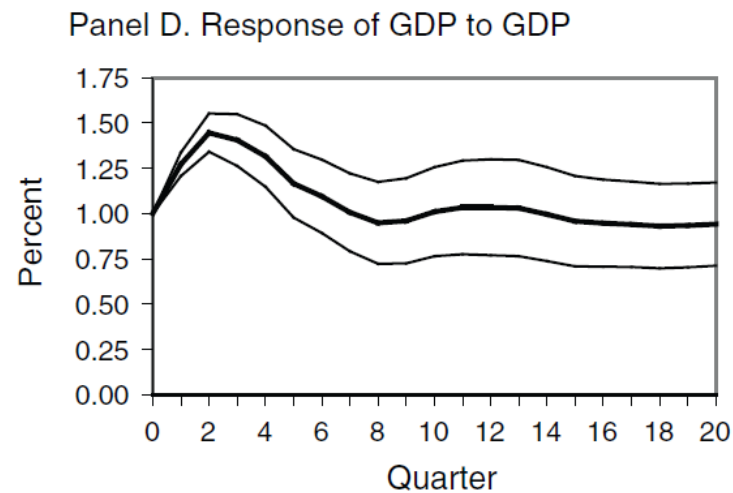
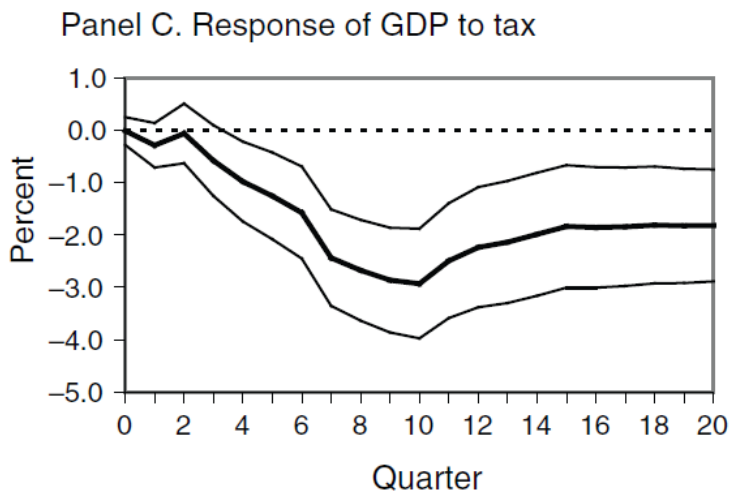
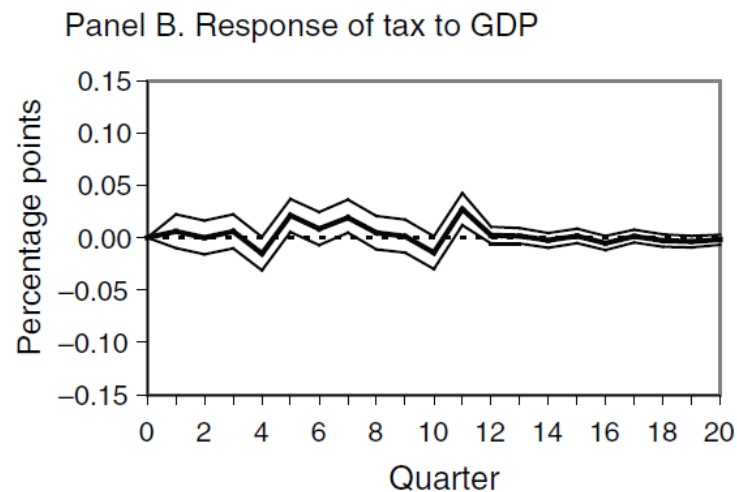
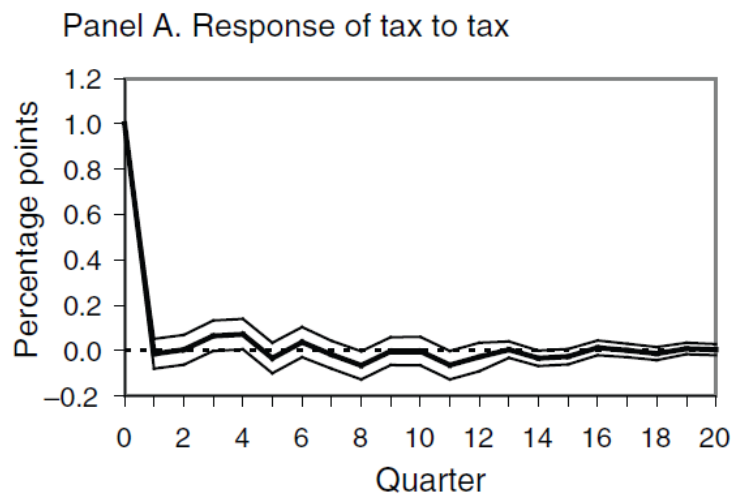


FIGURE 6. RESULTS OF A TWO-VARIABLE VAR FOR EXOGENOUS TAX CHANGES AND GDP

# Mertens-Ravn AEJ:Policy 2012

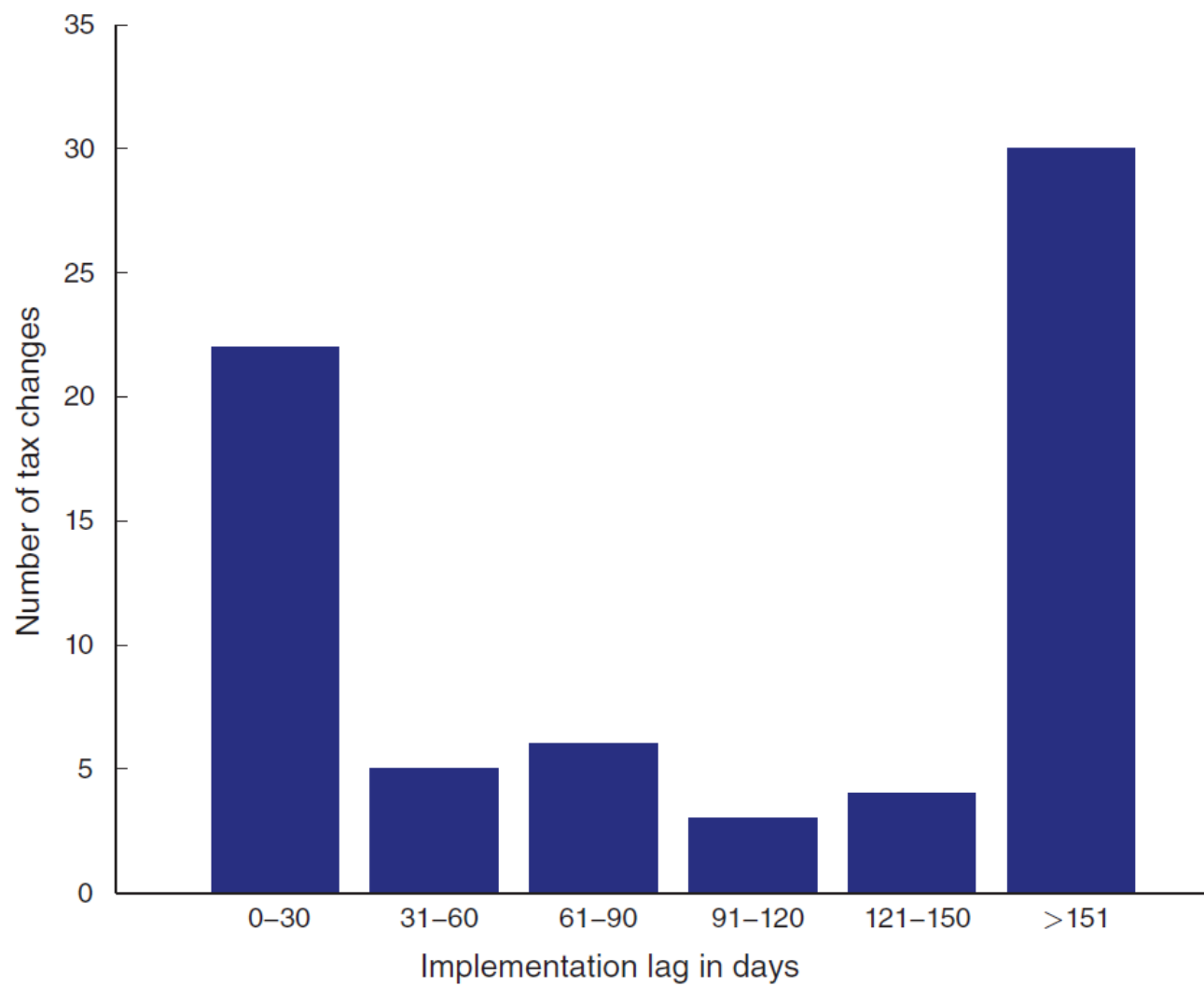


FIGURE 1. THE DISTRIBUTION OF IMPLEMENTATION LAGS ACROSS TAX LIABILITY CHANGES

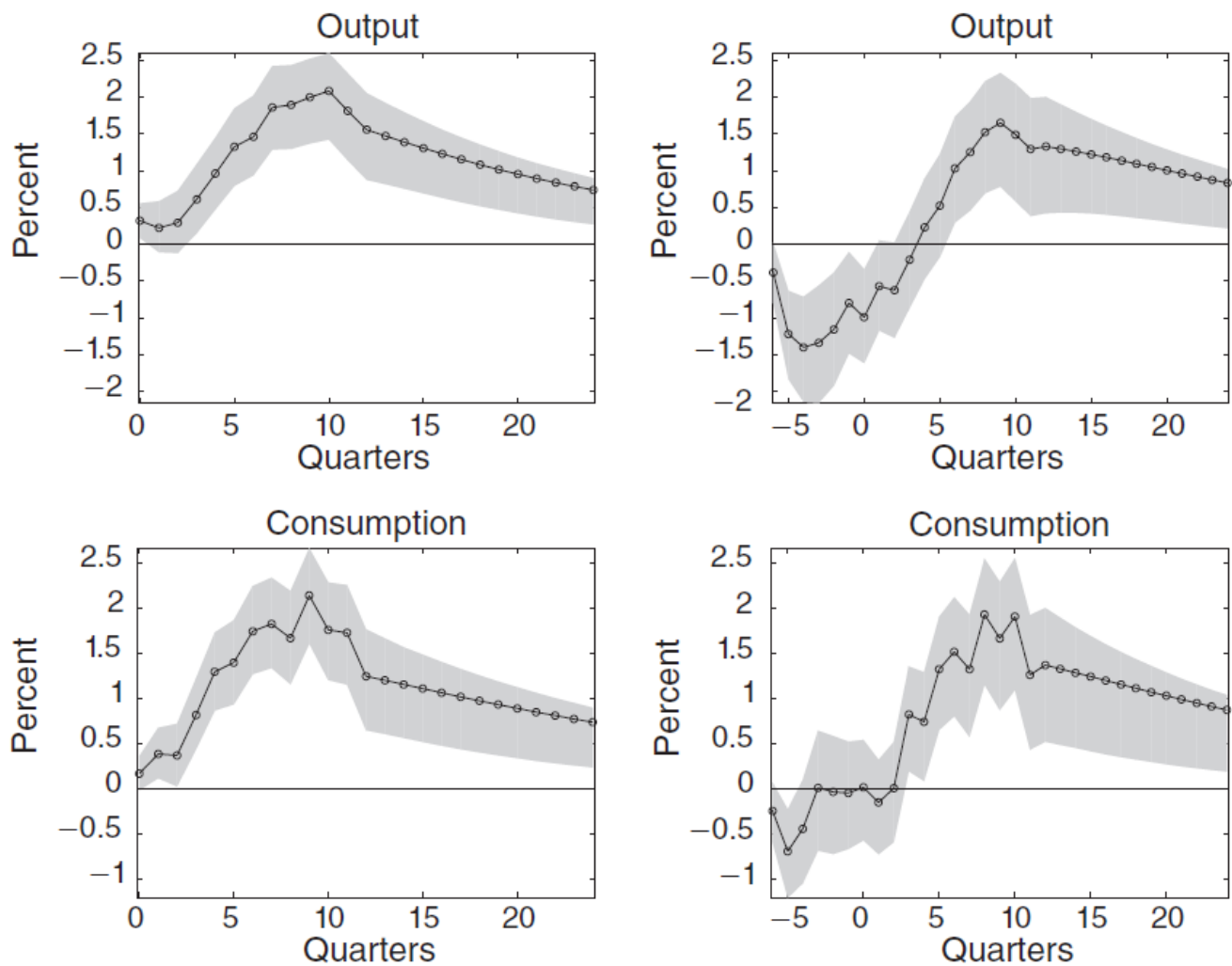


FIGURE 3. THE IMPACT OF A 1 PERCENT TAX LIABILITY CUT

*Notes:* Left column shows the response to an unanticipated tax liability shock. The right column shows the response to an anticipated tax liability shock announced 6 quarters before its implementation. Lines with circles indicate point estimates, grey areas are 68 percent bootstrapped confidence intervals.



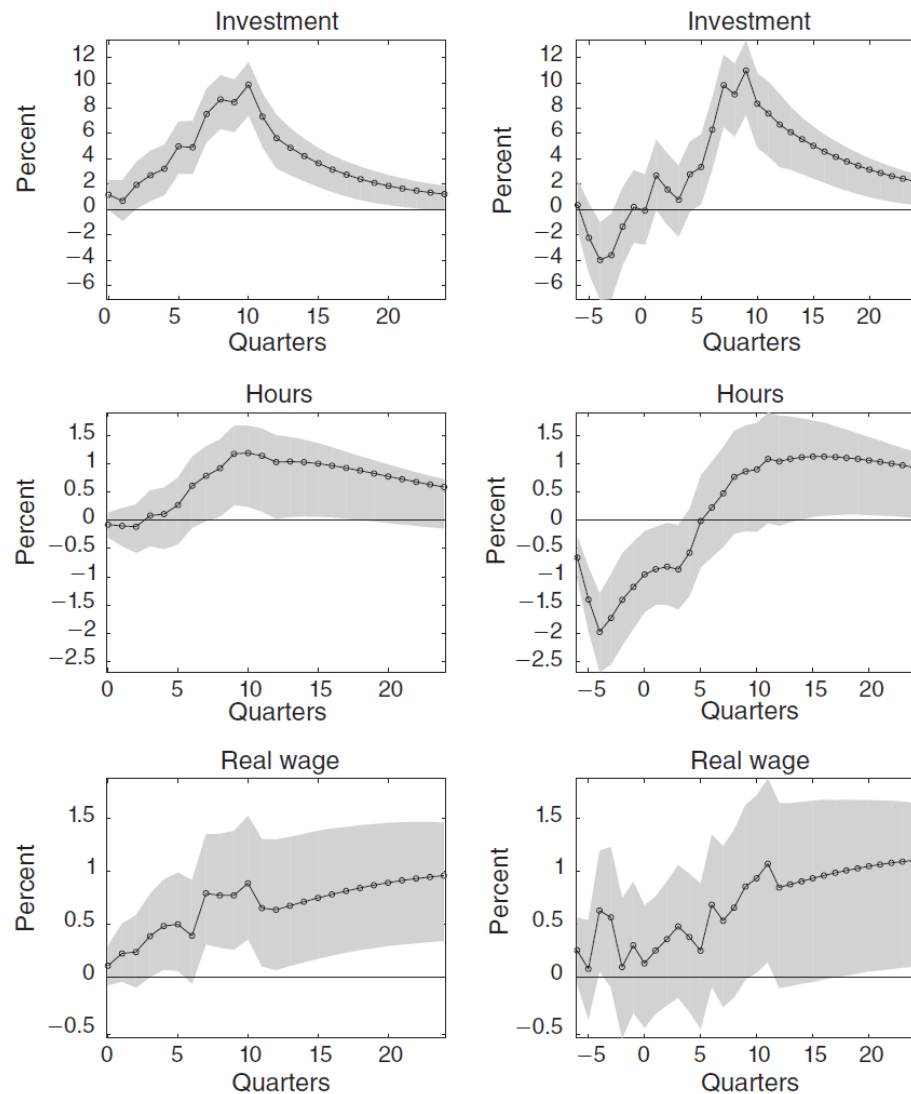


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Lorenz Kueng **TAX NEWS**

## **Identifying the Household Consumption Response to Tax Expectations using Municipal Bond Prices**

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Although theoretical models often emphasize fiscal foresight, most empirical studies neglect the role of news, thereby underestimating the total effect of tax changes. Measuring the path of expected future tax rates from the yield spread between taxable and tax-exempt bonds, this paper finds that consumption of high-income households increases by close to 1% in response to news of a 1% increase in expected after-tax lifetime income, consistent with the basic rational-expectations life-cycle theory. Using novel high-frequency bond data, I develop a model of the term structure of municipal yield spreads as a function of future top income tax rates and a risk premium. Testing the model using the presidential elections of 1992 and 2000 as two natural experiments, this paper shows that financial markets forecast future tax rates remarkably well in both the short and long run. Combining these market-based tax expectations with consumption data from the Consumer Expenditure Survey shows that households who have lower income, less education, or are more credit constrained respond less to news. However, the same households also respond one-for-one with large news shocks, consistent with rational inattention. Overall, the results in this paper suggest that ignoring anticipation effects biases estimates of the effect of fiscal policy downward.

<https://sites.google.com/site/lorenzkueng/>

