Discussion of "Expansionary Effect of an Anticipated Fiscal Policy on Consumption in Japan"

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Effects of Fiscal Policy

1. Classic question in macroeconomics: How does the economy respond to a change in fiscal policy?

2. Two major approach

   (a) Narrative approach

   (b) VAR model approach

3. Narrative approaches

   (a) Ramey and Shapiro (1997), Edelberg, Eichenbaum, Fisher (1999, JET), Burnside, Eichenbaum, Fisher (2004, RED), Eichenbaum and Fisher (2005, JMCB)

   (b) Use specific events (e.g. war) to identify the fiscal policy shock

   (c) Fiscal policy shocks are identified relatively precisely

   (d) Can take into account the anticipated government spending

   (e) Small number of observations

   (f) Only consider positive fiscal policy shocks

4. VAR approach

   (a) Blanchard and Perotti (2002, QJE), Galí, Lopez-Salido, and Valles (2007, JEEA), Perotti (2007, NBER Macro)

   (b) Use VAR (with Choleski decomposition) to identify fiscal policy shocks

   (c) Can use many observations

   (d) Both positive and negative shocks

   (e) Cannot take into account the anticipated nature of fiscal policy

5. Morita uses VAR approach but with identifying anticipated fiscal policy shocks

Anticipated policy

1. Why we should care anticipated policy?

2. Sims (1992, EER)

  (a) Analyze monetary policy effects using VAR

  (b) Identify monetary policy shocks as an innovation in interest rate

  (c) Money supply and output respond negatively to monetary policy

  (d) Price puzzle: monetary tightening is associated with an increase in the price level

  (e) Can solve price puzzle by including commodity price

  (f) Interest rate innovations partially reflect inflationary pressure that lead to price increases

  (g) Commodity price can capture additional information about future inflation

  (h) Important to include expectation variable to evaluate the policy correctly

3. Kuttner (2001, JME)

  (a) r_t: fed fund target rate

  (b) f_t: ffr implied by the front month fed fund futures contract

  (c) Decompose the monetary policy into two parts based on fed fund futures

    i. Unanticipated monetary policy
$$\Delta r_t^u = f_t - f_{t-1}$$
    ii. Anticipated monetary policy
$$\Delta r_t^e = \Delta r_t - \Delta r_t^u$$

  (d) Two regressions

    i. $\Delta R_t = \alpha + \beta \Delta r_t + \varepsilon_t$

    ii. $\Delta R_t = \alpha + \beta_1 \Delta r_t^e + \beta_2 \Delta r_t^u + \varepsilon_t$

Table 1
The 1-day response of interest rates to changes in the Fed funds target[a]

Maturity	Intercept	Response	R^2	SE	DW
3 month	− 3.6	26.8	0.42	9.8	2.04
	(2.3)	(5.4)			
6 month	− 5.2	21.9	0.37	9.0	2.04
	(3.6)	(4.6)			
12 month	− 5.1	19.8	0.29	9.5	2.07
	(3.3)	(4.1)			
2 year	− 5.2	18.2	0.26	9.6	2.28
	(3.4)	(3.7)			
5 year	− 4.5	10.4	0.10	9.8	2.40
	(2.9)	(2.1)			
10 year	− 4.0	4.3	0.02	8.5	2.50
	(2.9)	(1.0)			
30 year	− 3.6	0.1	0.00	6.9	2.47
	(3.2)	(0.0)			

[a] *Note*: The change in the target Fed funds rate is expressed in percent, and the interest rate changes are expressed in basis points. The sample contains 42 changes in the target Fed funds rate from 6 June 1989 through 2 February 2000. Parentheses contain t-statistics.

Table 3
The 1-day response of interest rates to the Fed funds surprises[a]

Maturity	Intercept	Response to target change		R^2	SE	DW
		Anticipated	Unanticipated			
3 month	− 0.7	4.4	79.1	0.70	7.1	1.82
	(0.5)	(0.8)	(8.4)			
6 month	− 2.5	0.6	71.6	0.69	6.3	2.06
	(2.2)	(0.1)	(8.5)			
12 month	− 2.2	− 2.3	71.6	0.64	6.9	2.10
	(1.8)	(0.5)	(7.8)			
2 year	− 2.8	− 0.4	61.4	0.52	7.8	2.25
	(2.0)	(0.1)	(6.0)			
5 year	− 2.4	− 5.8	48.1	0.33	8.6	2.37
	(1.6)	(0.9)	(4.3)			
10 year	− 2.4	− 7.4	31.5	0.19	7.8	2.37
	(1.8)	(1.3)	(3.1)			
30 year	− 2.5	− 8.2	19.4	0.13	6.5	2.46
	(2.2)	(1.7)	(2.3)			

[a] *Note*: Anticipated and unanticipated changes in the Fed funds target are computed from the Fed funds futures rates, as described in the text. Parentheses contain *t*-statistics. See also notes to Table 1.

(e) Interest rates respond positively to monetary policy change

(f) Small response of interest rates to anticipated monetary policy

(g) Interest rates' response to unanticipated monetary policy is much larger

(h) Important to distinguish between anticipated and unanticipated policy

(i) Too late to evaluate the policy when the actual policy was conducted

(j) Should evaluate the policy when the market realizes it

4. Hamilton (2008, JME)

(a) Examine the daily monetary policy effects on the housing markets using fed fund futures

5. Morita evaluates the fiscal policy using the market expectation

Identification of anticipated fiscal policy

1. Based on Fisher and Peters (2010, EJ)

2. Treat current and expected fiscal policy (public investment) shock as exogenous

3. Positive anticipated fiscal policy shock will increase the future earnings of construction firms

4. Increase the current stock returns of construction industry

5. Use accumulated excess stock returns of construction industry

$$aer_t = \sum_{j=1}^{t} (r_{cj} - r_{mj})$$

   (a) r_{cj}: Stock return on construction industry
   (b) r_{mj}: Stock return on whole market

Contributions and main results

1. Examine the effects of Japanese fiscal policy with taking into account the market expectation

2. Japanese fiscal policy stimulates GDP and consumption

3. Detect a decline in the effects of fiscal policy recently

4. Develop and investigate the DSGE model to characterize the empirical findings

5. High elasticity of labor supply and a large share of Non-Ricardians could be consistent with the empirical findings

Comments

1. Need more careful identification of anticipated policy shocks

    (a) Why employ cumulative excess returns instead of excess returns?

    (b) Using all construction firms could cause weak identification

    (c) Fisher and Peters (2010)

        i. Concentrate on the military related firms

        ii. Ever ranked in the top 3 in value of primary contracts awarded in a given year

    (d) Could use selected firms to obtain better identification

        i. Large construction firms

        ii. Local construction firms

建設投資、許可業者数及び就業者数の推移（全国）

○ 建設投資額（平成22年度見通し）は約40.7兆円で、ピーク時（4年度）から約52％減。
○ 建設業者数（21年度末）は約51万業者で、ピーク時（11年度末）から約15％減。
○ 建設業就業者数（21年平均）は517万人で、ピーク時（9年平均）から約25％減。 ※22年6月は487万人（前年同月比19万人減。）
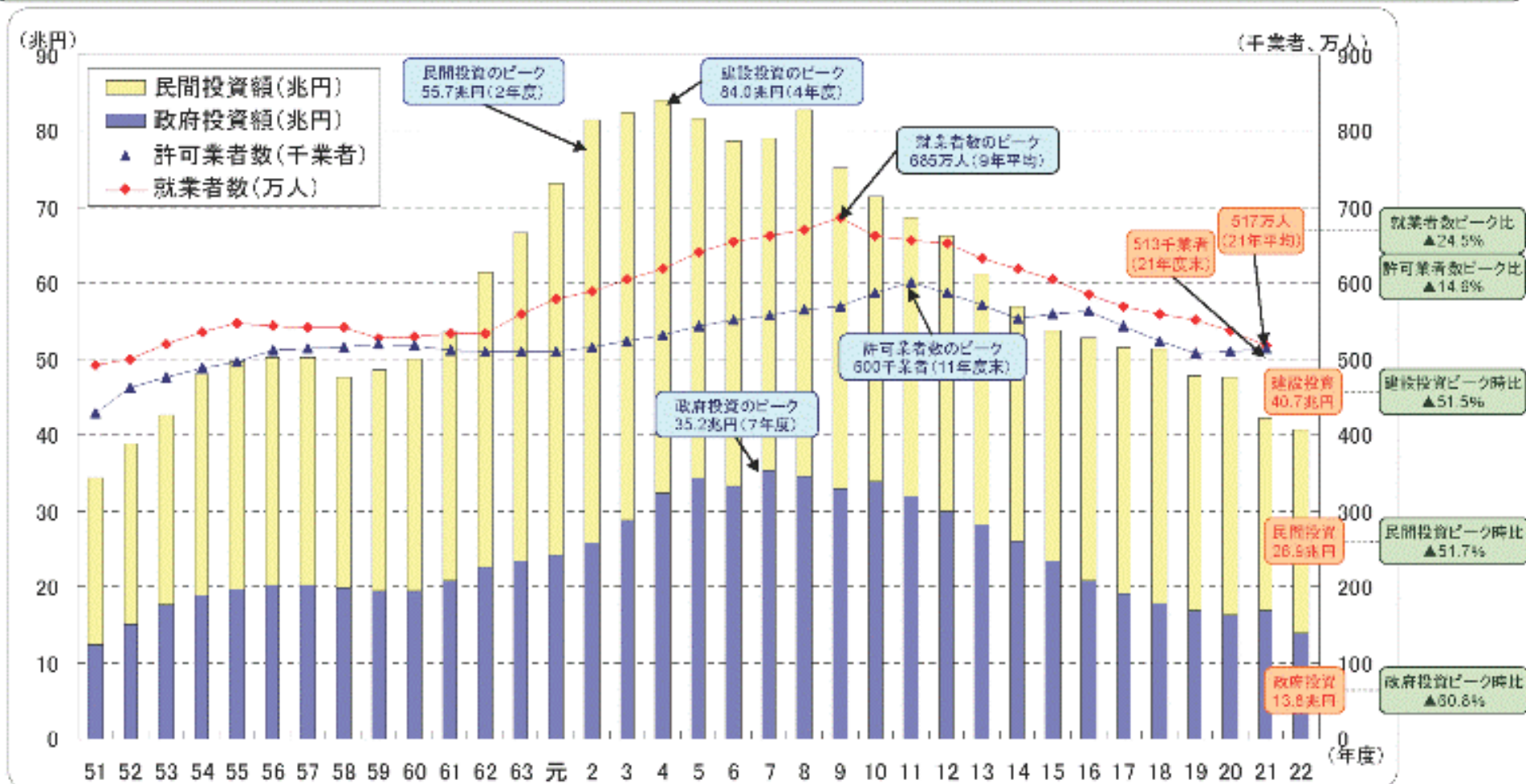
出所：国土交通省「建設投資見通し」・「許可業者数調べ」、総務省「労働力調査」
注1　投資額については平成19年度まで実績、20年度・21年度は見込み、22年度は見通し
注2　許可業者数は各年度末（翌年3月末）の値
注3　就業者数は年平均

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建設業の利益率・規模別売上高営業利益率の推移

○ 産業全体において利益率が大幅に低下、建設業も投資の減少等により、利益率が低迷している。
○ 企業規模の小さい建設業者ほど、利益率が低迷している。

建設業の利益率の推移
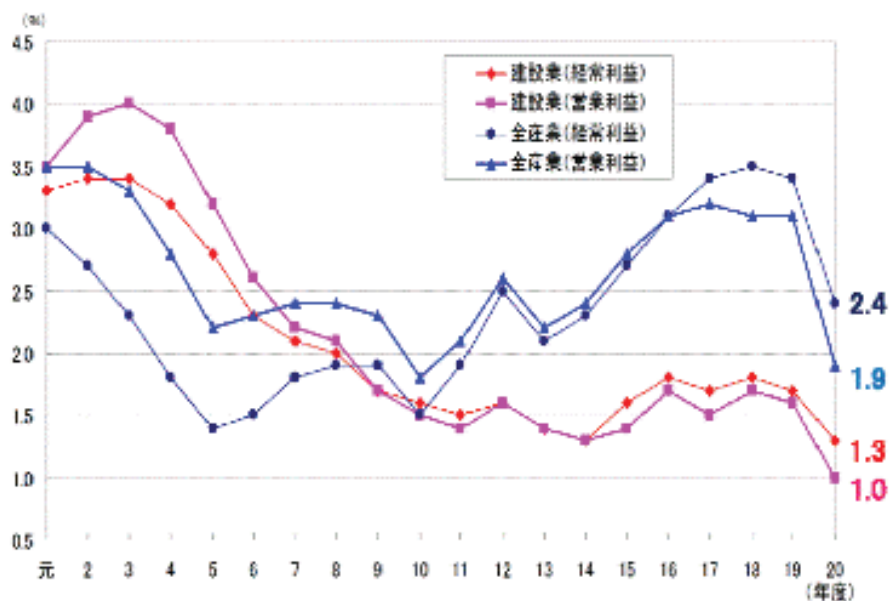
建設業の規模別売上高営業利益率の推移
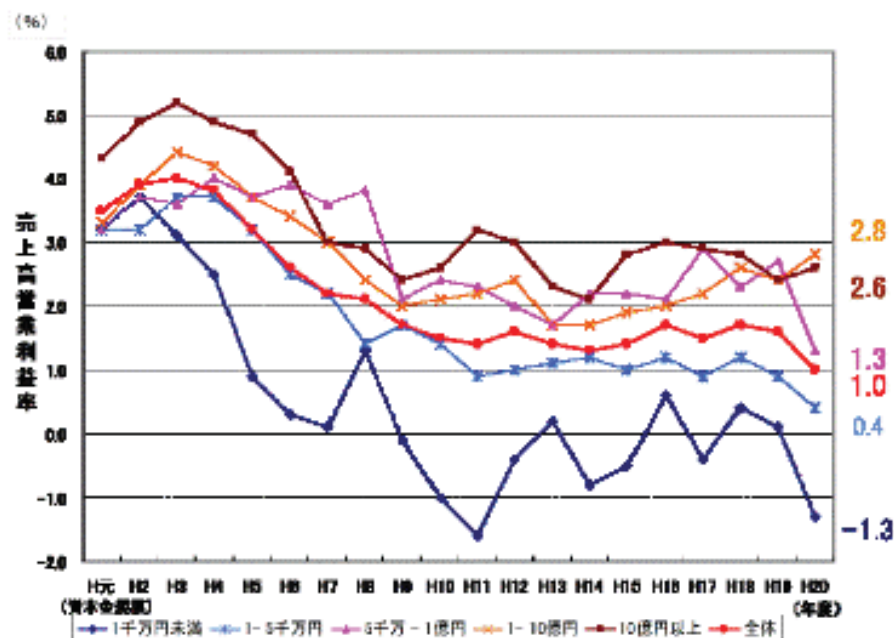
建 設 業	平成3年度 （利益率のピーク）		平成4年度 （建設投資のピーク）		平成20年度 （対ピーク比）
営業利益率	4.0%	→	3.8%	→	1.0% （▲3.0pt）
経常利益率	3.4%	→	3.2%	→	1.3% （▲2.1pt）

出所：財務省「法人企業統計」

2. Better check the validity of the sign restrictions

(a) Uhlig's (2005, JME) sign restriction is strong tool to identify the shocks

(b) Easy to impose too much restrictions

(c) Derive the sign restrictions from the DSGE model

(d) Heavily depends on the model

(e) Choice could be subjective

(f) What if the sign restriction for GDP was dropped?

(g) How many samples were discarded?
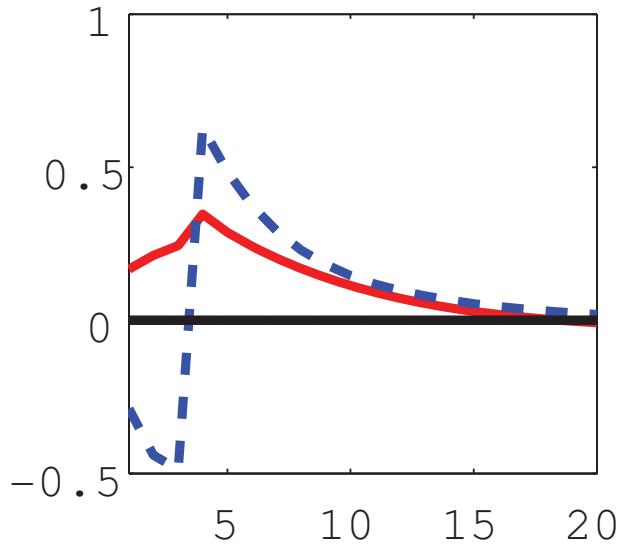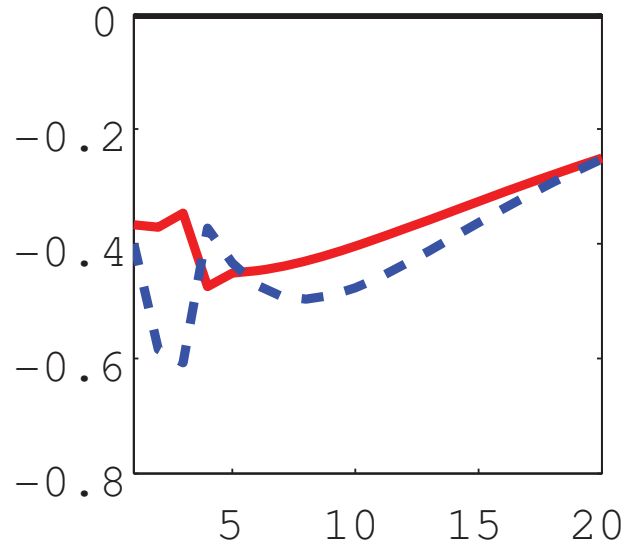
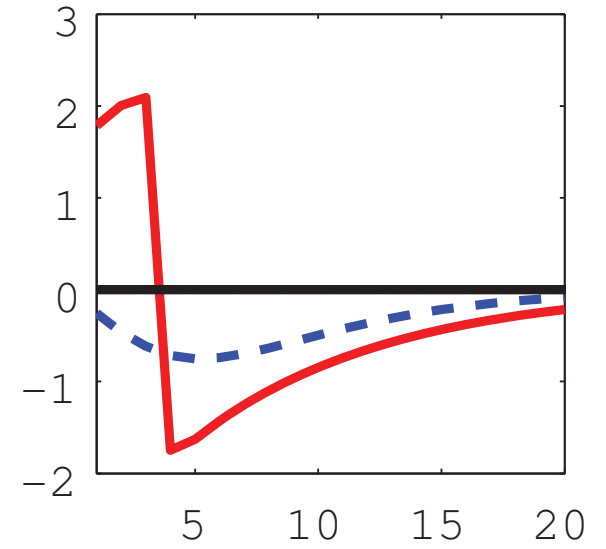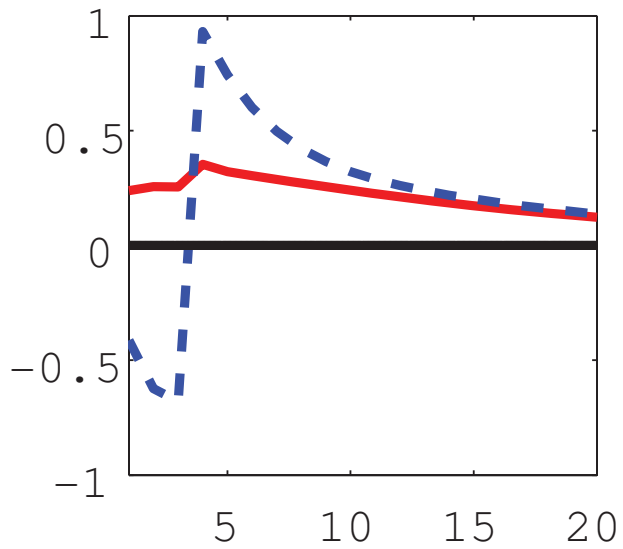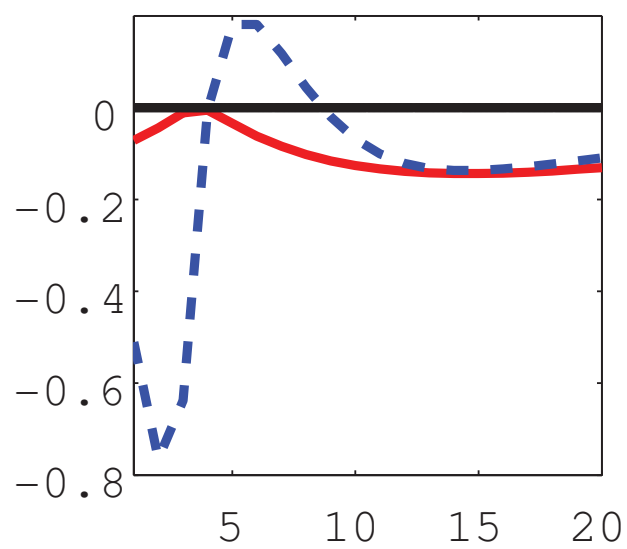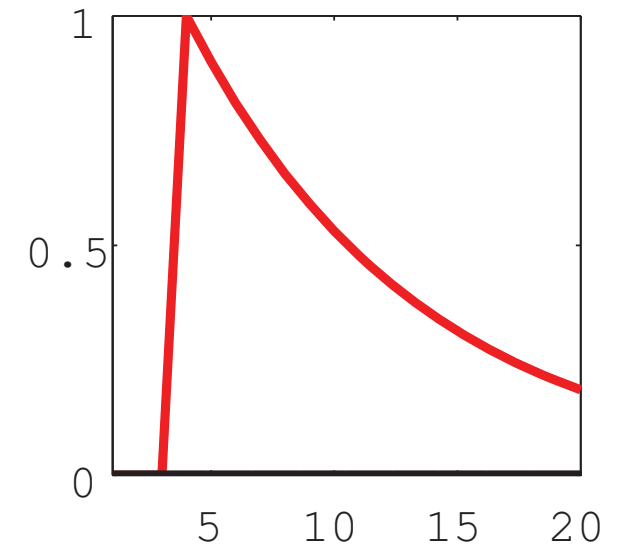3. Examine possible structural change statistically

  (a) Timing of the structural change is determined with little justification

     i. 1968Q1-1986Q4 Pre-bubble period

     ii. 1987Q1-2009Q4: Post-bubble period?

  (b) Conduct some tests for the structural change

     • Miyao (2000, JJIE)

  (c) Estimate Markov switching model

     • Fjiwara (2006, JJIE), Inoue and Okimoto (2008)

4. Effects of fiscal policy shocks could be unstable

 (a) Do not have anticipated fiscal policy shocks very often

 (b) Effects could be smaller gradually

 (c) Fraction of Non-Ricardians could be time-varying

  i. Ogawa (1990, JJIE)

  ii. Business cycle

  iii. Interest rates

  iv. Duration of unemployment

  v. Aging society

 (d) Consider time-varying VAR model

  • Ko (2010)

Conclusion

1. Interesting paper

2. Making good point with intriguing idea

3. Find reasonable results

4. Valuable contribution for the Japanese economic analysis

5. Need some robustness check about the identification of fiscal policy shocks

6. Would be more compelling by accommodating time-varying feature

7. Could be applied to many macroeconomic analysis