

Effectiveness of Fiscal Policy, the case of Japan:

Fresh water, salt water and real water

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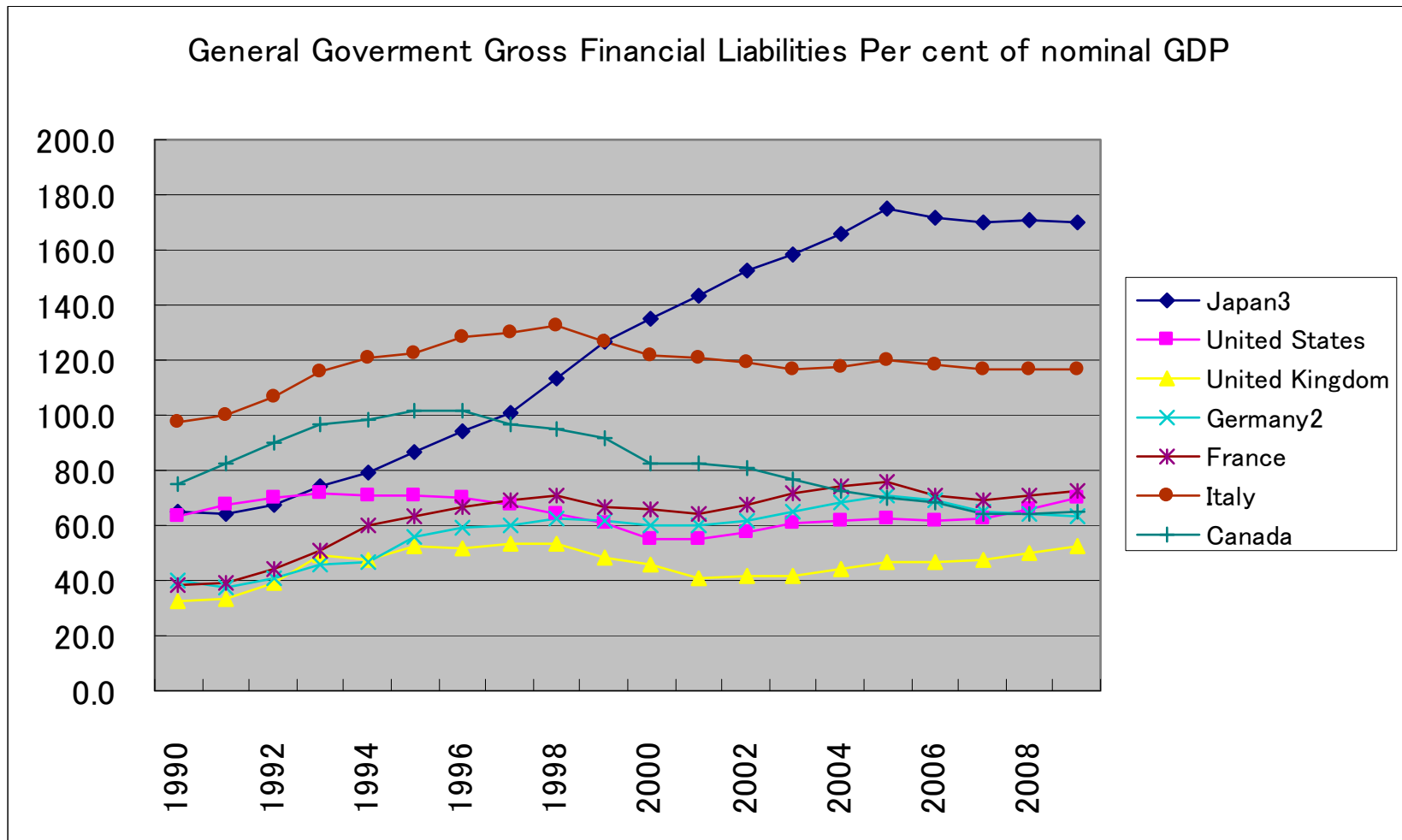
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Outline

- Overview
- (1) Japanese Fiscal Situation Overview
 - (1.1) Debts are very large
 - (1.2) Fiscal Deficits are still large (unsustainable)
- (2) Stimulus package
- (3) Supplementary budget
- (4) Fiscal reaction function
- (5) Effectiveness Debate
- (6) Personal View for the current situation

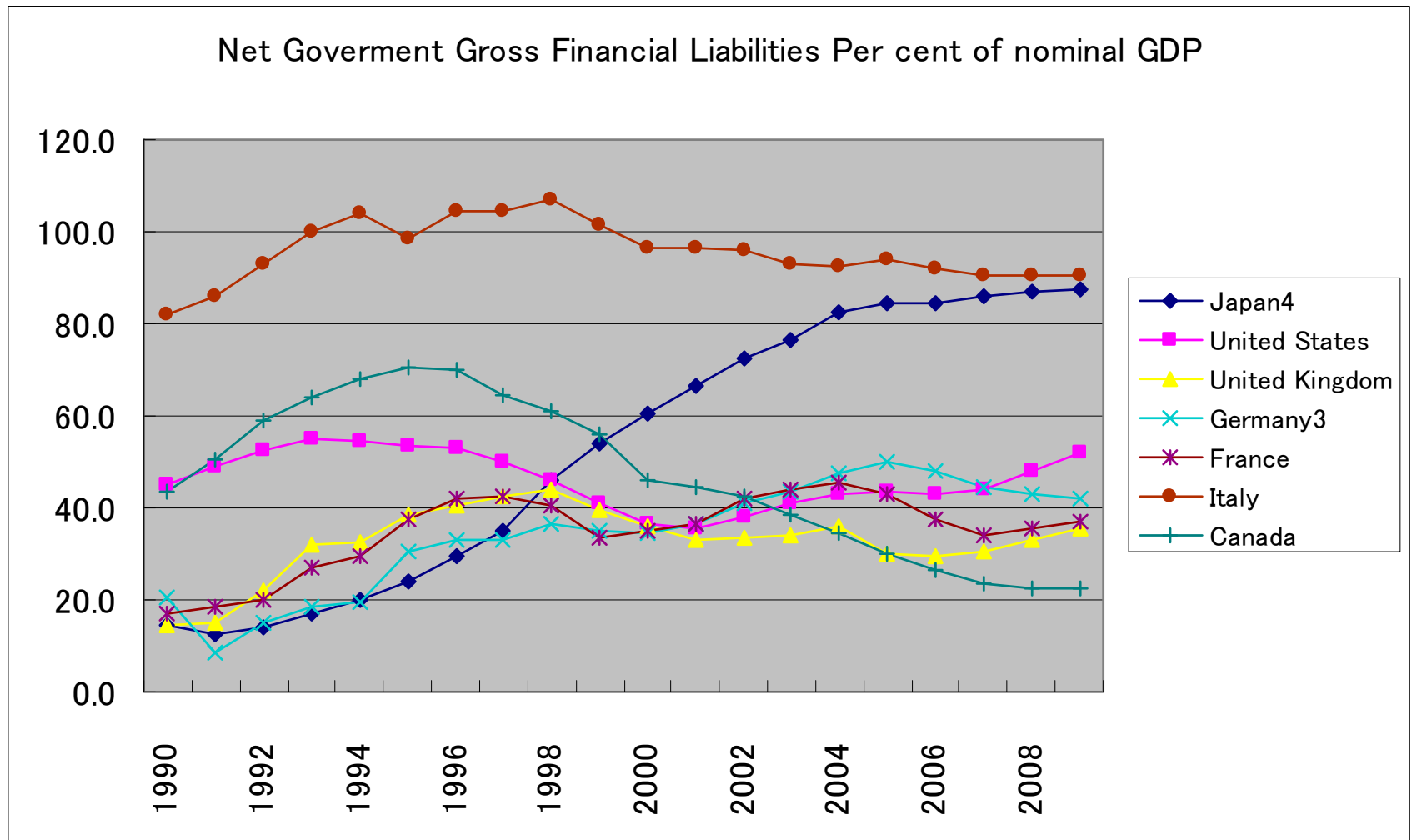
(1.1) Gross Government debt



Gross vs. Net

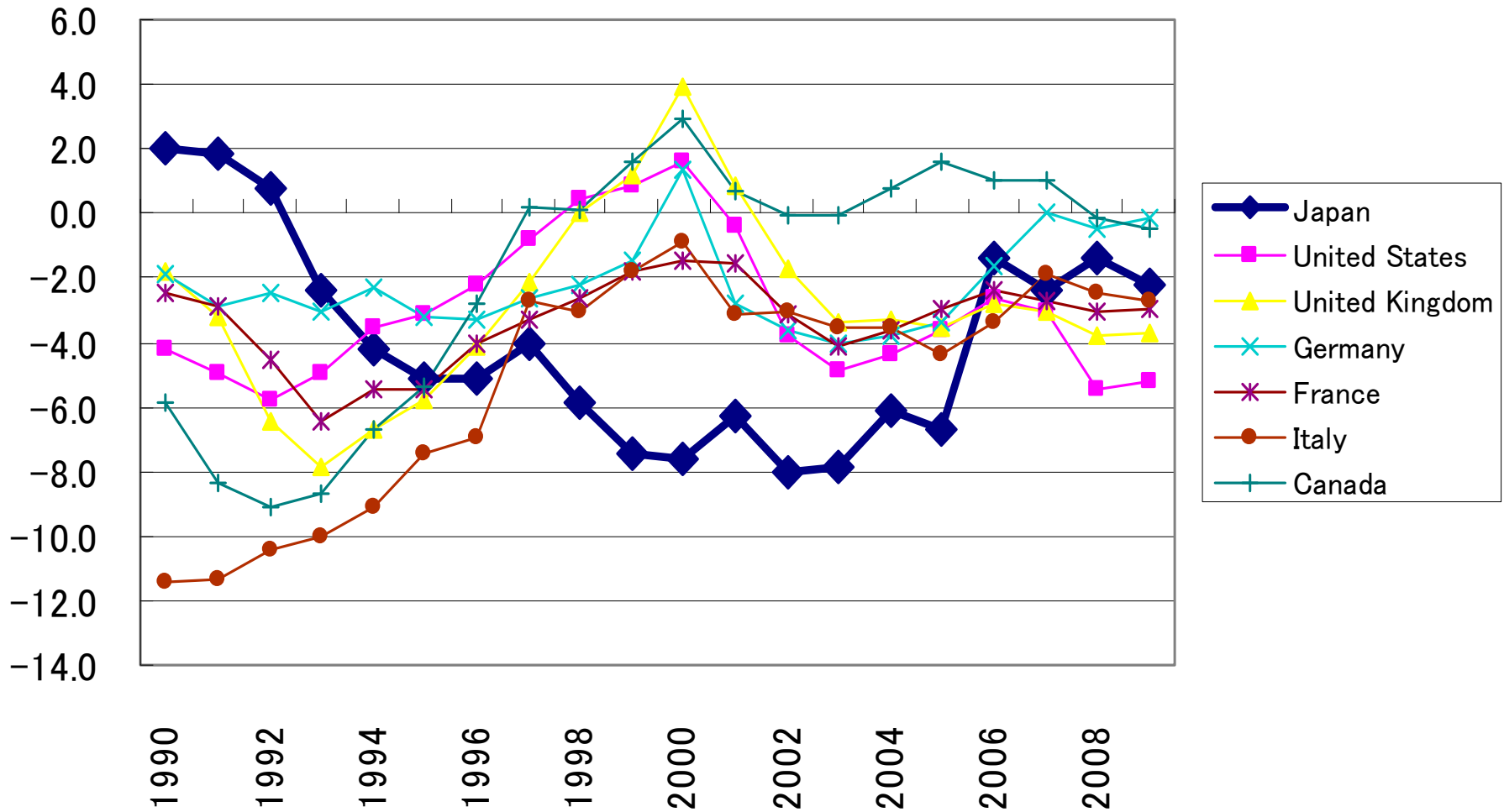
- Broda and Weinstein
 - Japan has large net asset
 - In “net” the Japanese fiscal situation is not bad (see next table)
- Rebut:
 - What is assets that are deducted? Mostly the GPIF (pension fund), 150 trillion yen (30% GDP)
 - It had increased rapidly in the past 15 years

Net Liabilities are smaller, but



(1.2) Fiscal deficits are large

General Government Gross Financial Liabilities Per cent of nominal GDP



(2) How big was fiscal stimulus in the 1990s?

- Stimulus, Total (1992-2000), ¥130 trillion
- Stimulus, Total (2001-2008), ¥57 trillion

- But this is the total of program values, includes non-central-government-budget items, repackaging of already budgeted items, etc
- Pure incremental central government budget (*real water*) may be much less

Fiscal Year	Prime Minister	Total Size (trillion yen)	Major items (trillion yen)				
			Infrastructure	Tax cut	Land Purchase	SME	Housing investment
1992	Miyazawa		-	-	-	-	-
1992		10.7	5.7	-	1.6	2.1	-
1993		13.2	6.6	-	1.6	2.4	0.8
1993	Hosokawa	6.2	2.0	-	-	0.8	2.9
1993		15.3	3.9	5.9	2.8	1.3	1.2
1995	Murayama		-	-	-	-	-
1995			-	-	-	-	-
1995		14.2	9.1	-	3.2	1.3	0.5
1997	Hashimoto		-	-	-	-	-
1998		16.7	7.7	4.6	-	2.0	0.7
1998	Obuchi	23.9	8.1	6.0	-	-	1.2
1999		18.0	6.8	-	-	7.4	2.0
2000	Mori	11.0	4.7	-	-	4.5	1.1
2001			-	-	-	-	-
2001	Koizumi	4.1	1.1				
2001	Koizumi	4.4	2.6			0.5	
2008	Fukuda						
2008	Aso	11.5				9.1	
2008	Aso	26.9				21.8	0.4
2008	Aso	10.0		1.1			
1992-2008	TOTAL	186.1	Fiscal Policy Effectiveness				
1992-2000	TOTAL	129.2					

(3) Supplementary budget

- Technically it is mid-year correction of budget
 - Natural disaster
 - Other unforeseen budget items
 - Keynesian fine-tuning

(4) Fiscal Reaction Function

- Forecast growth $>$ potential growth
 - Initial budget size becomes large
- Forecast error, negative at mid-year
 - Large supplementary budget
- Large supplementary budget (if effective)
 - Large negative is prevented

- Very difficult to solve endogeneity, causality, and effectiveness
 - Weak economy \rightarrow large stimulus package
 - Large stimulus package \rightarrow economy recovers from weakness
 - Moreover, effectiveness of other factors and policies, esp. monetary policy and exchange rate

Mamizu =supplementary budge? (part of stimulus package)	Suppleme ntary Budget	Stimulus Package	Growth rate forecast, Jan t	Ex post Growth Rat (t)	forecast error
	trillion yen	trillion yen			
1992	-0.7	10.7	3.5	1.1	-2.4
1993	5.1	34.7	3.3	-0.8	-4.1
1994	0.3	0.0	2.4	2.3	-0.1
1995	7.0	14.2	2.8	2.5	-0.3
1996	2.7	0.0	2.5	2.9	0.4
1997	1.1	0.0	1.9	0.0	-1.9
1998	4.6	40.6	1.9	-1.5	-3.4
1999	7.2	18.0	0.5	0.7	0.2
2000	4.8	11.0	1.0	2.6	1.6
2001	3.7	8.5	1.7	-0.8	-2.5
2002	2.5	0.0	0.0	1.1	1.1
2003	0.2	0.0	0.6	2.1	1.5
2004	4.8	0.0	1.8	2.0	0.2
2005	4.5	0.0	1.6	2.3	0.7
2006	3.8	0.0	1.9	2.3	0.4
2007	0.9	0.0	2.0	1.9	-0.1
2008		48.4	2.0		

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(5) Effectiveness Debate

- Assessment of Stimulus package of the 1990s
 - What would be a counterfactual?
- Linkage to the literature

Were fiscal policy effective?

- “Effective” camp (Posen): Keynesian (salt water) tradition
 - *Mamizu* (real water) was in general not large
 - When mamizu was large, effects of fiscal policy was large
 - They prevented the economy from melting down
 - Proof in mistake: April 1997 (fiscal contraction → recession)
 - Shopping voucher plan, 1999, limited success because it was tax rebate (-T) and not public spending (G)
 - Multiplier $\Delta G > -\Delta T$
- “Not Effective” camp: Fresh water (RBC) tradition
 - Very low multiplier
 - Financial sector was weak, so that fiscal policy could not “multiply”
 - Encourage wrong allocation of labor and capital to low productive sector (dynamic inefficiency)
 - Ricardian effect (household’s C reaction to G), esp. when Debt became large
 - Risk from large fiscal deficits (concern for sustainability)
 - Effects of April 1997 were not large, but appeared large due to Financial crisis that occurred in the fall

How much was real water?

- *Real water* = incremental spending
 - Proxy, supplementary budget size
 - It may contain unexpected built-in-stabilizer extra spending and plugging holes of shortfall in revenues
- Cyclically adjusted deficits
 - difficult to obtain
- Recall on “Mamizu”

What happened in April 1997?

- Fiscal contraction of 7 trillion yen
 - Consumption tax increase by 2% point (5 trillion yen)
 - Repeal of income tax cut (2 trillion yen)
- “Effective” camp would say, it was a tremendous contractionary effect
- “Ineffective” camp would say, effects were temporary and the economy went down due to banking crisis and Asian currency crisis.

Shopping voucher “experiment”, 1999 and helicopter of 2009

- Shopping voucher (experiment)
 - 0.7 trillion yen was distributed to families with children and with elderly (20,000 yen per eligible person)
 - Voucher was distributed April 1999, and expire in six months—had to be spent—in participating stores in the municipality.
- Helicopter Plan 2009
 - 12,000 yen per person (Ages 19-64)
 - 20,000 yen per person (Ages 0-18 and 65-)
 - Cash payment
 - Budgeted from taking down reserves in the special account for Fiscal Loan and Investment Program
 - More than 70% of surveyed persons are against this plan

Multiplier of voucher, study 1

- Study (1): Survey, June-July 1999
 - Did you buy something extra? Or more expensive items than otherwise? By how much?
 - Additional expenditure was estimated as 32%.
I.e., multiplier=0.32.
 - If this can be applicable to helicopter plan of 2009, 2 trillion, would result in increase of 0.64 trillion yen, mere 0.12% of GDP.

Multiplier of voucher, study 2

- Household Expenditure Statistics, individual responses (confidential)
 - Study of consumption pattern, differentiating
 - Families with kids received 20,000 yen per child
 - Families without a kid did not receive cash
 - Multiplier was estimated as 0.2 – 0.3, but overtime lowered to 0.1
 - Caution 1. Families with low assets had higher multiplier. (liquidity constraint)
 - Caution 2. Multiplier overtime was much lower. Semi-durable goods were purchased within the six months, that would have been purchased in the following months anyway.
 - Examination of retail sales show a similar pattern. An increase might have been 0.1.
 - If this can be applicable to the helicopter plan of 2009, 2 trillion would result in an increase of 0.2 trillion yen, or 0.04% GDP
- Hori, Masahiro, et al. **“Did the Shopping Coupon Program Stimulate Consumption? Evidence from Japanese Micro Data”**, ESRI Discussion Paper Series No.12, April 2002.
http://www.esri.go.jp/jp/archive/e_dis/e_dis020/e_dis012.html

(6) Personal view: What to do?

- Increased fiscal spending when the growth rate is projected to be negative (like now)
- Government spending should be targeted to areas that increase productivities (growth) in the future.
 - Environment
 - Medical and Long-term Care
 - Agriculture
 - Education

Reform, subsidy, and growth

- Environment
 - Subsidies for research and implementing alternative energy
- Medical and Long-term Care
 - Acute crisis, understaffed hospitals
 - Take advantage of globalization
- Agriculture
 - Productivity is low, and reform is needed
 - But, reform (such as abolition of cultivation restriction) would drive rice prices down
 - Promote scale economies and help transition
 - Take advantage of globalization
- Education
 - Skill mismatch due to rigid education system: need reform
 - Take advantage of globalization

Conclusion

- Debates are not conclusive on effectiveness
 - Effectiveness during normal times is not high
 - Effectiveness during a crisis is more or less a consensus
- Japanese experiences of fiscal stimulus in the 1990s provide some (but not much) lessons to current situations in Japan and other countries
- Multipliers may differ significantly from one form of polity to next
- Dynamic perspective is important
- Debt level matters in effectiveness of deficit spending
- Very little room for Japan in 2009
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