

The Financial Crisis and Economic Policy: Three Years On

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The Revival of Keynesian Discretionary Fiscal Policy in the 2000s

- Economic Growth and Tax Relief Reconciliation Act of 2001 (June)
 - Refund checks; first installment of 2001 tax rate cuts
- Economic Stimulus Act of 2008 (February)
 - Rebate checks and credits
- American Recovery and Reinvestment Act of 2009 (February)
 - One-time payments, withholding change, refunds
 - More government spending too
- Miscellaneous interventions in 2009-10
 - Cash for clunkers program
 - First time home buyers program
- Tax Relief , Unemployment Insurance Reauthorization, and Job Creation Act of 2010 (December)
 - Temporary cut in payroll tax

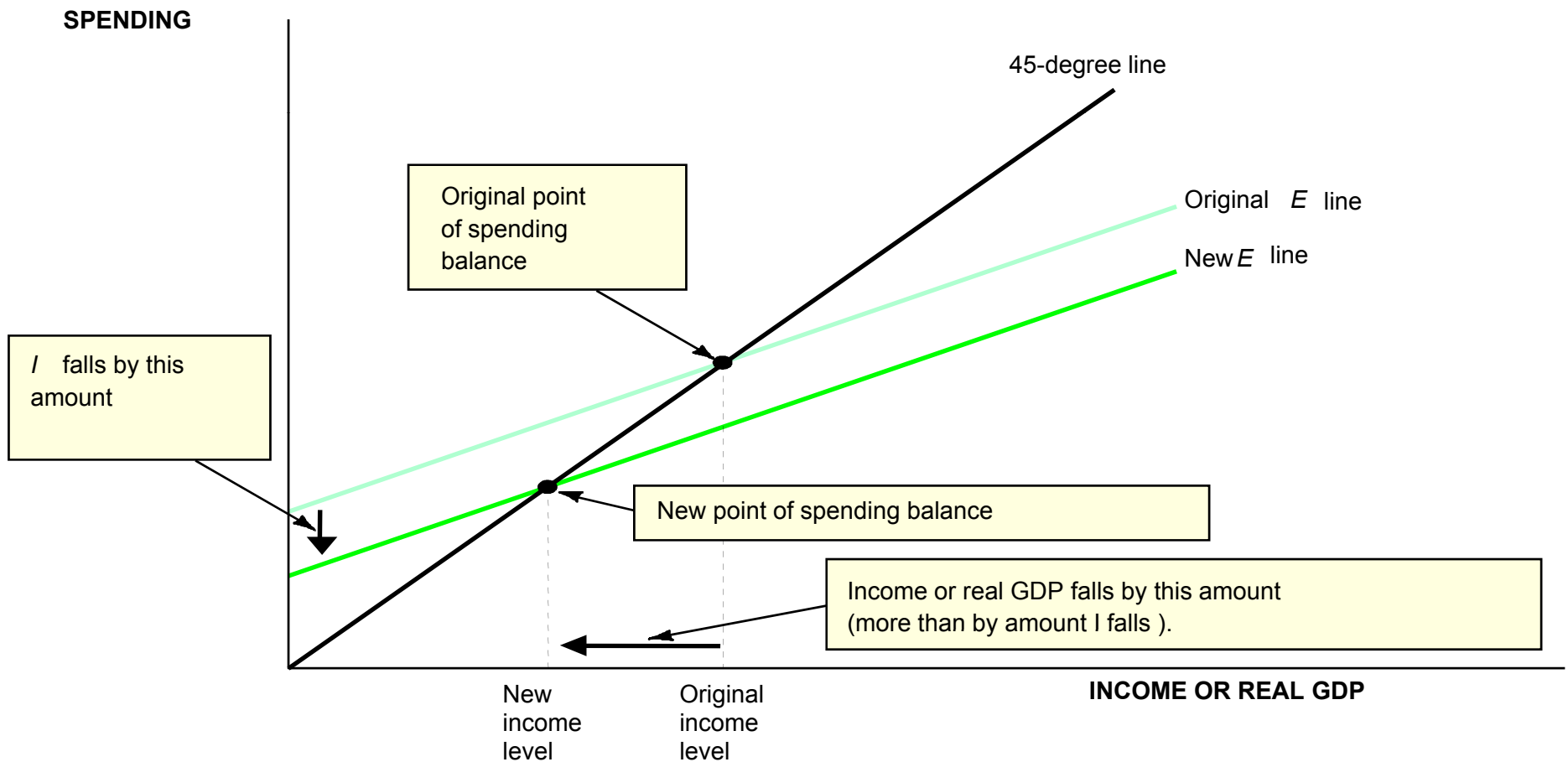
Keynesian Discretionary Fiscal Policy First Became Popular in the '60s & '70s

- First in academia in the 1950s and 1960s
 - Arguments appeared in the major textbooks (Samuelson).
 - Keynesian econometric models
- Then in practice: 1962 *Economic Report of the President*
 - “The task of economic stabilization cannot be left entirely to built-in stabilizers,” the report warned. “Discretionary budget policy, e.g. changes in tax rates or expenditure programs, is indispensable—sometimes to reinforce, sometimes to offset, the effects of the stabilizers.”
 - investment tax credit (1962), tax surcharge (1968)
 - tax rebates (1975)
 - countercyclical grants to states for infrastructure (1977-78)
- Keynesian discretionary policy continued to the late 1970s.

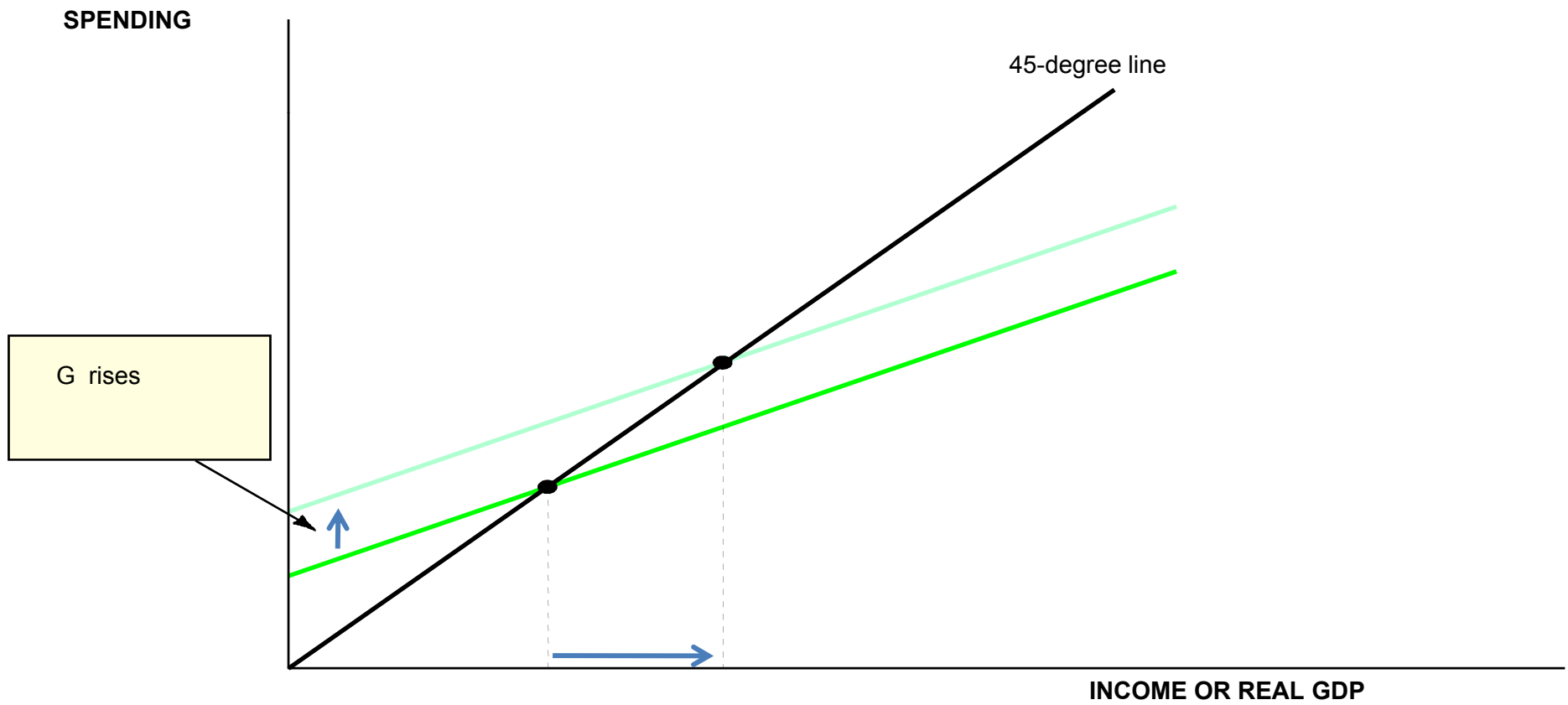
Keynesian Policy Fell Out of Favor in '80s & '90s

- Research raised doubts about discretionary policy
 - Lucas and Sargent “After Keynesian Economics”
 - Gramlich “the general idea of stimulating the economy through state and local governments is probably not a very good one”
- Soon automatic stabilizers dominated the budget cycle
- Bush 41: proposed tiny stimulus package in 1992
 - Shift \$10 billion in G from future to the present
 - did not pass the Congress
- Clinton: proposed tiny stimulus in 1993
 - \$16 billion more G
 - did not pass the Congress.
- Eichenbaum (1997) “there is now widespread agreement that countercyclical discretionary fiscal policy is neither desirable nor politically feasible.”

The Basic Model: A decline in I causes the aggregate expenditure line to shift down



Countercyclical discretionary fiscal policy: Increase in G raises GDP depending on size of the multiplier and amount of crowding out



But Macro Models Differ Greatly

- Romer and Bernstein (Jan 2009) used estimated old Keynesian models (without RE) to predict ARRA effect
 - Large multipliers, around 1.5.
- Cogan, Cwik, Taylor and Wieland (Feb 2009) used estimated New Keynesian model to predict ARRA effect
 - Much smaller multipliers, around 0.5.
- What not use these existing macro models for the *evaluation* of actual packages?
 - Because they simply repeat the same *prediction* story over again.
- So you learn virtually nothing

A Stylized Illustration

Consider two models relating stimulus S to output Y .

Model A is $Y = \alpha S + Z$

Model B is $Y = Z$

where Z is a shock and $\alpha = 1.5$

Now, suppose that a stimulus is enacted: $S = 2$ and Y decreases by -1

According to Model A, $Z = -4$

According to Model B, $Z = -1$

Now consider policy evaluation with counterfactual: $S = 0$

Economists using Model A say:

Just as we predicted, the stimulus package worked.

Without it, Y would have fallen to -4 rather than -1 . The decline in output would have been 4 times as deep, a Great Depression 2.0.

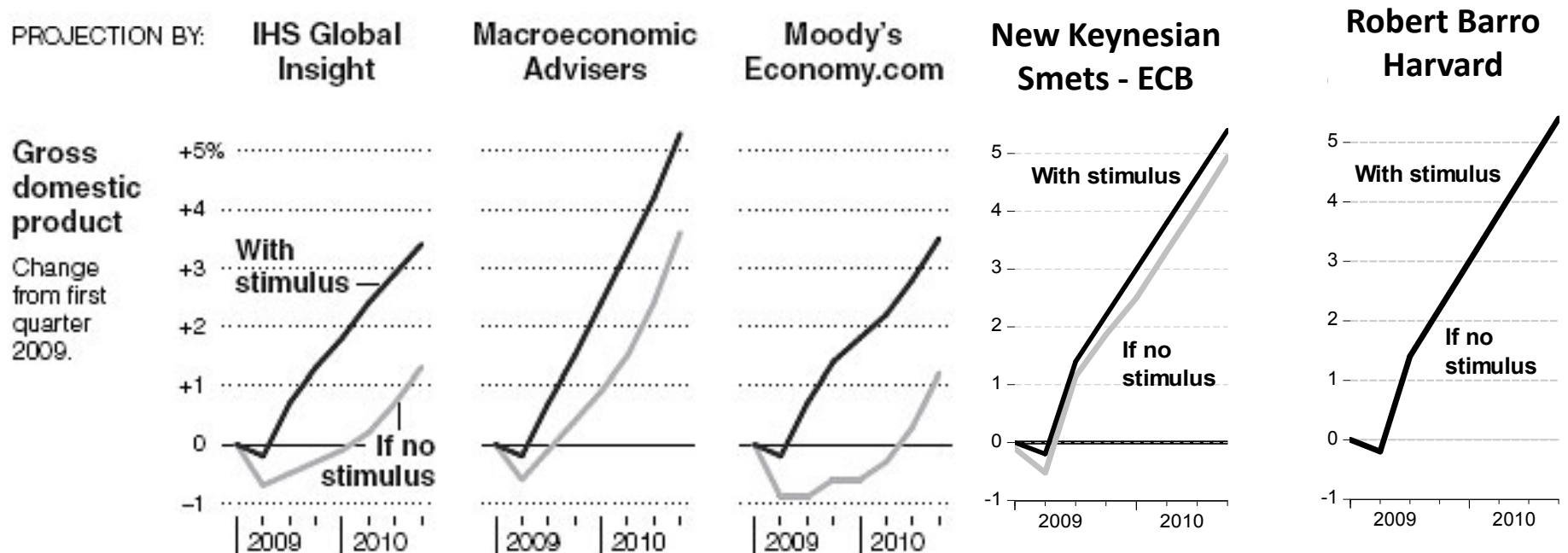
Economists using Model B say

Just as we predicted the stimulus package did not work.

A Less Stylized Illustration

Projections Show It Could Have Been Worse

Projections of economic indicators by three companies that specialize in macroeconomic forecasting show similar trends when comparing how each indicator would do with and without the federal stimulus package.



“The accumulation of hard data and real-life experience has allowed more dispassionate analysts to reach a consensus that the stimulus package, messy as it is, is working”

New York Times November 12, 2009

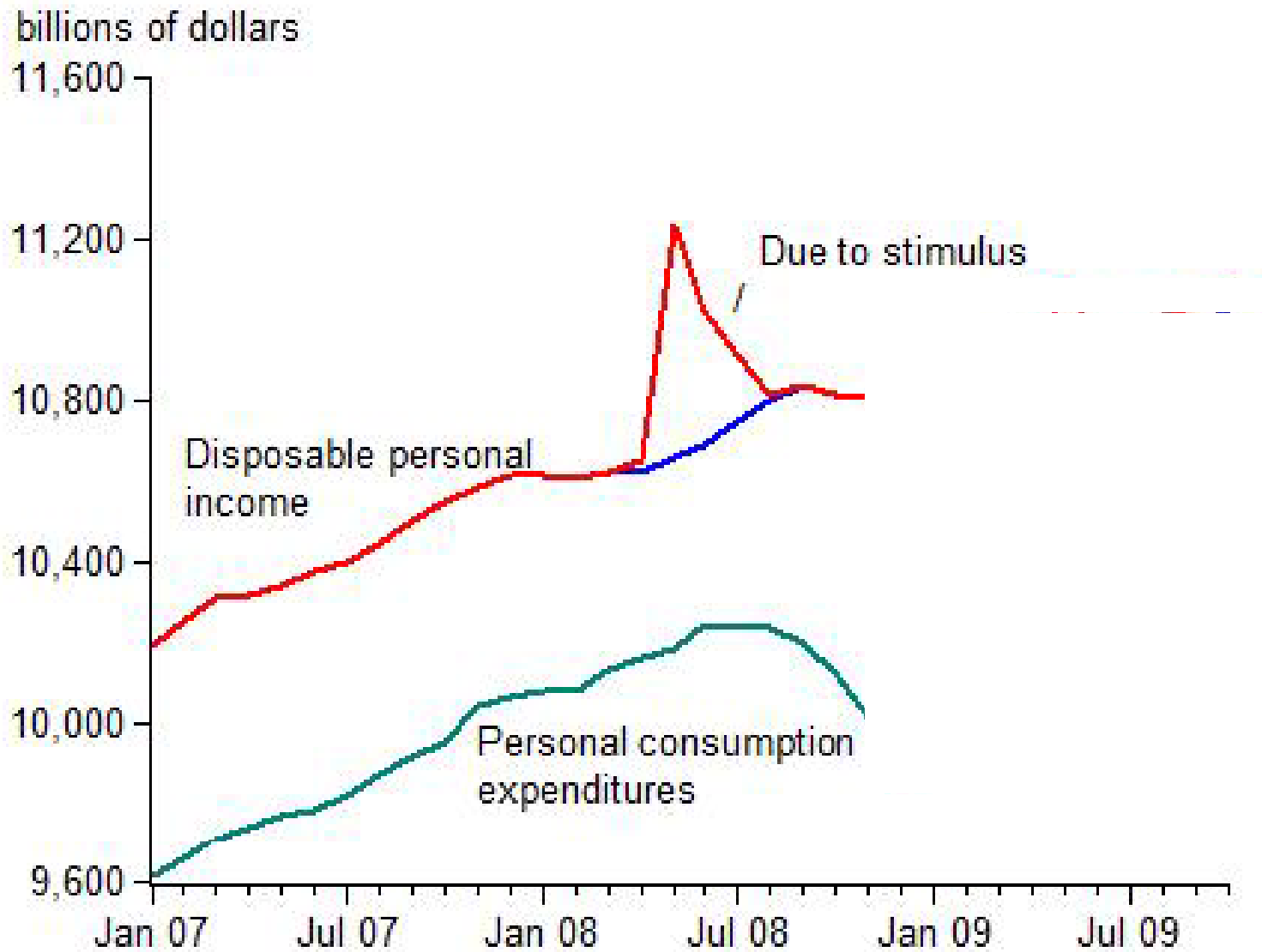
Use a Direct Approach

- Micro data (used in 2001, 2008)
 - Shapiro and Slemrod (2003, 2009),
 - Johnson, Parker, Souleles (2006)
 - Parker, Souleles, Johnson, and McClelland (2009).
- Macro data
 - Special BEA satellite account
 - “Personal Income and Output” (monthly to mid ’09)
 - “Effect of the ARRA on Selected Federal Government Sector Transactions” (quarterly)

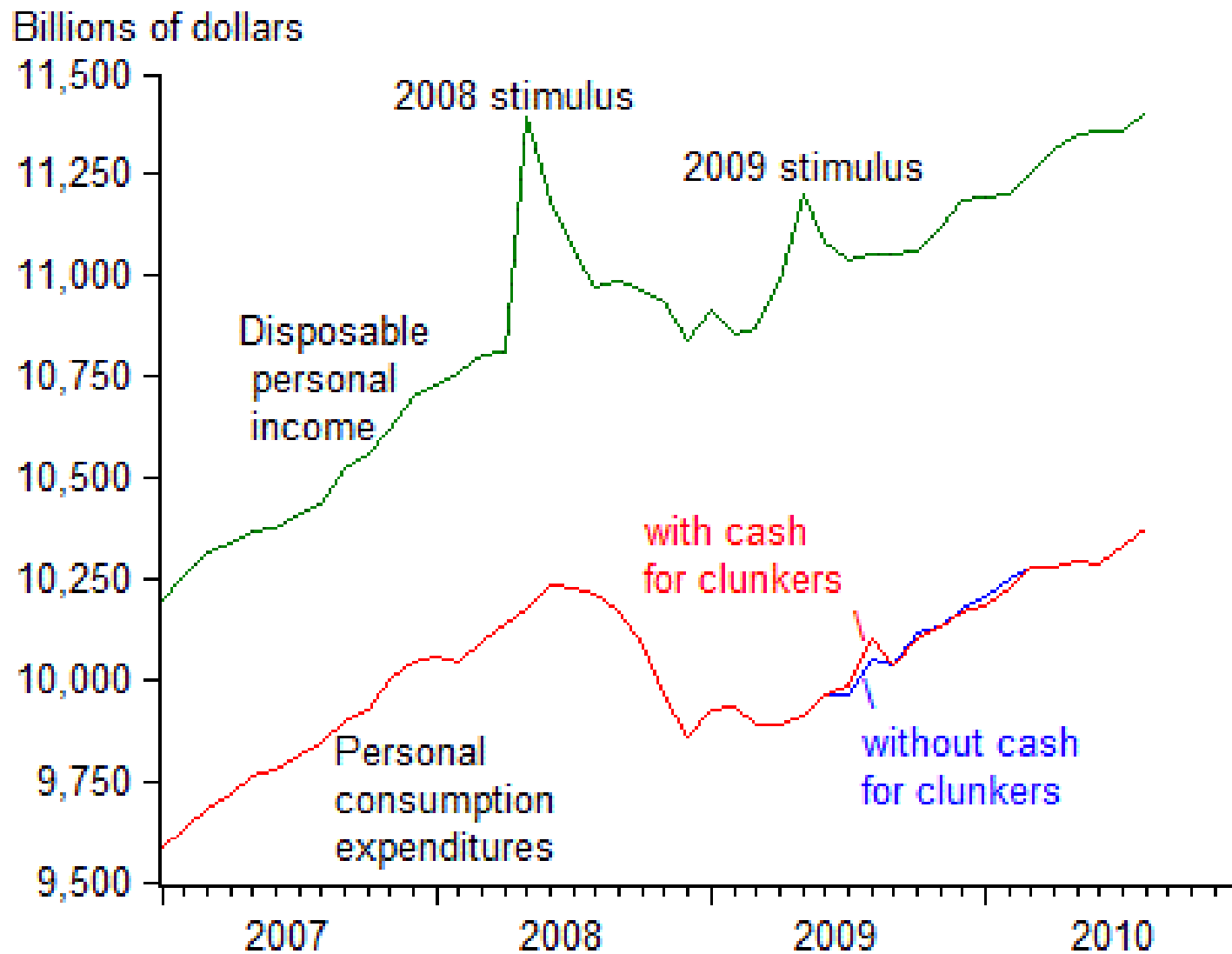
Monthly Data on Rebate Payments in 2001 and 2008
(\$ billions, annual rates)

	<u>2001</u>	<u>2008</u>
April	0	23.3
May	0	577.1
June	0	334.4
July	95.1	164.1
August	223.1	12.4
September	144.9	0
October	2.5	0

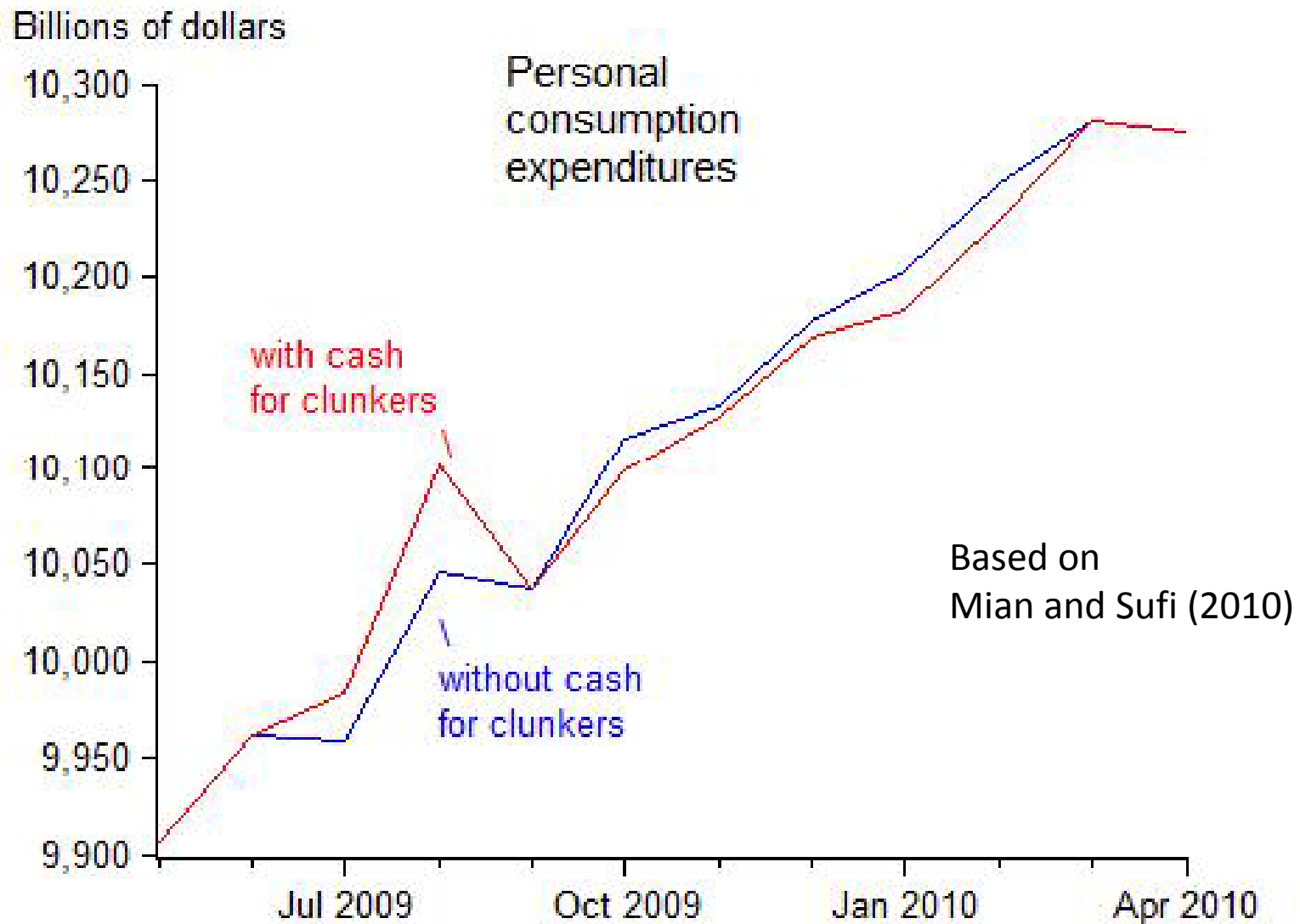
Temporary stimulus meets permanent income hypothesis



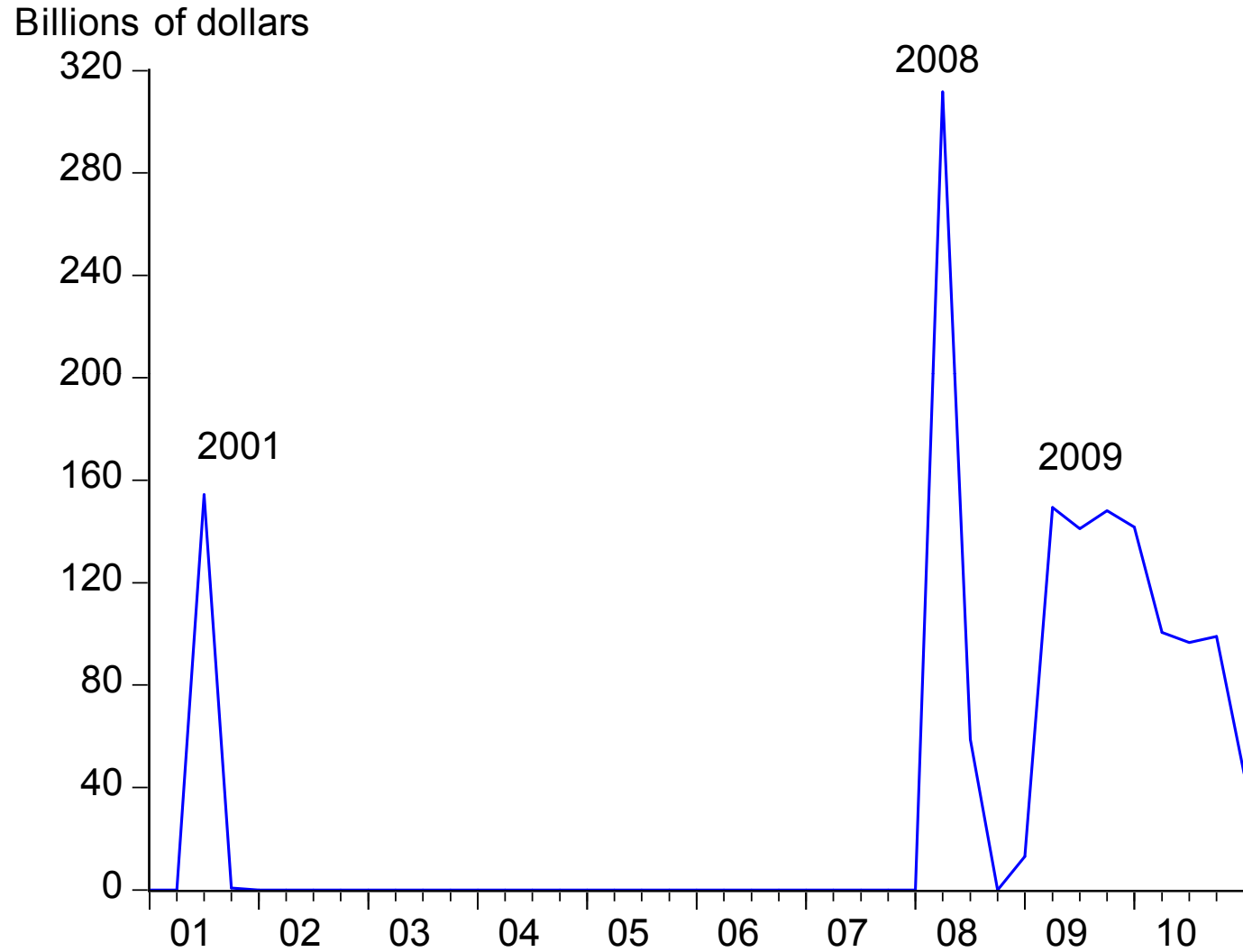
Temporary stimulus meets permanent income hypothesis again



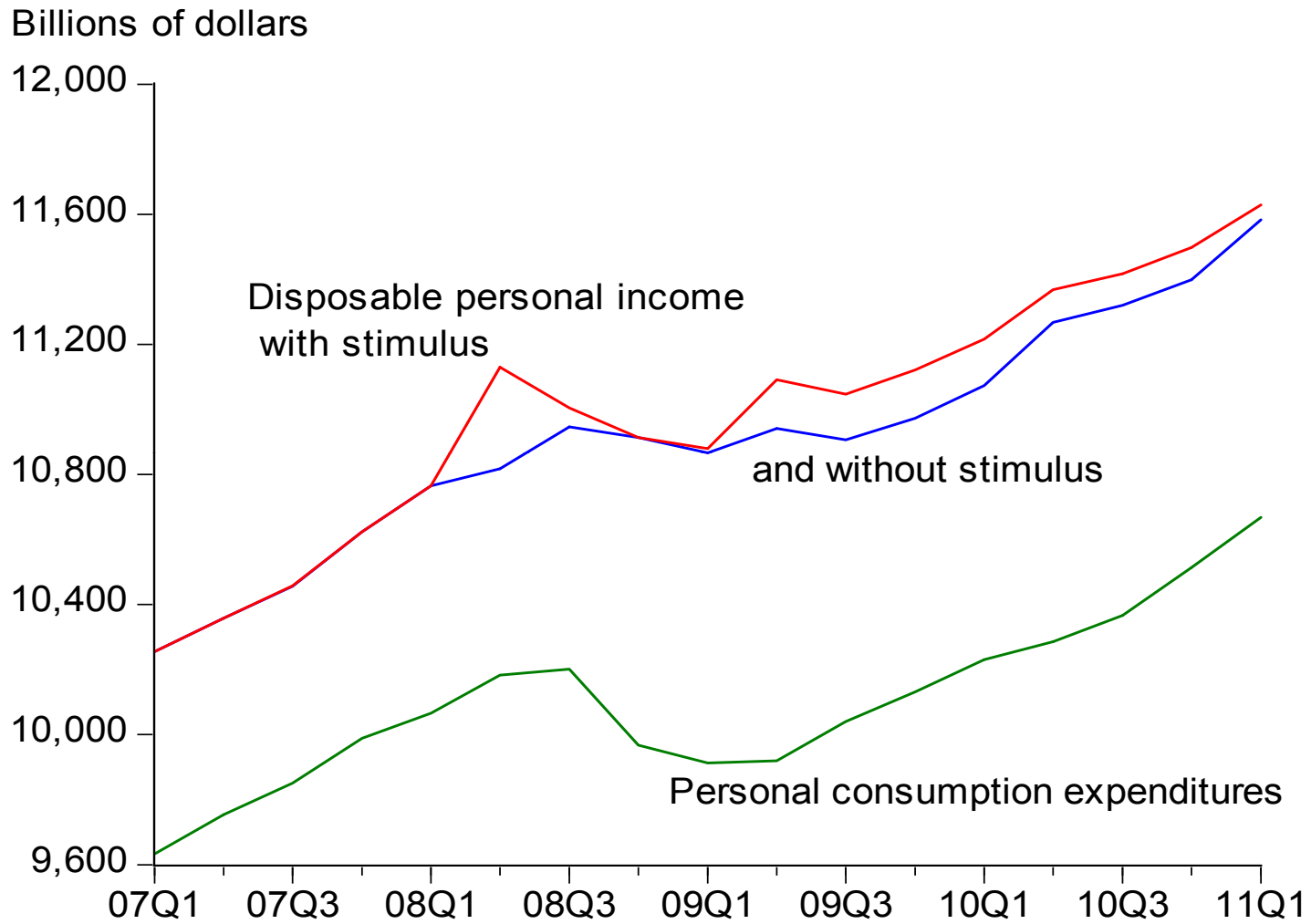
Cash for clunkers: incentives really matter



Quarterly Data



Effects of Three Stimulus Packages on Disposable Personal Income

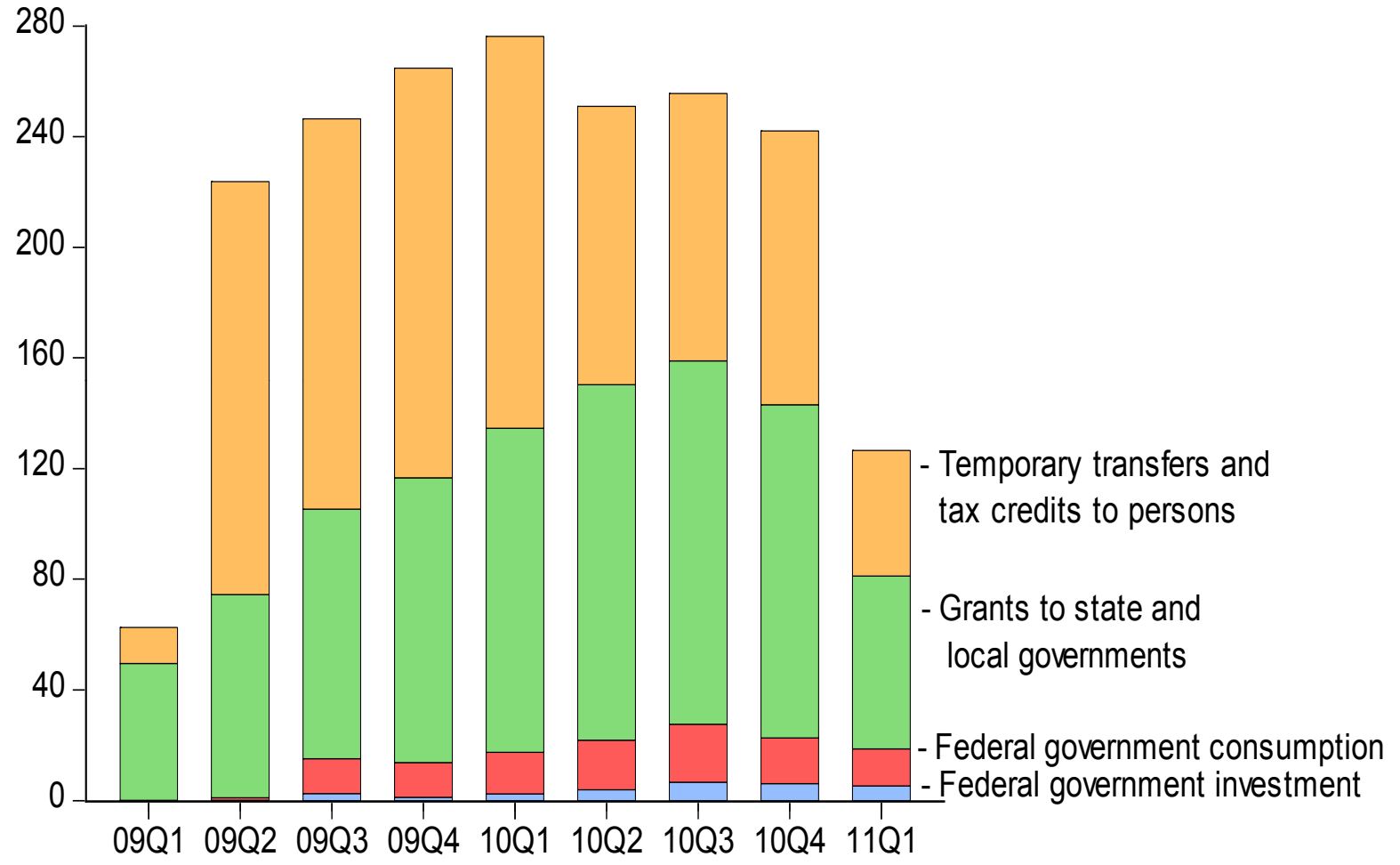


Quarterly disposable personal income, with and without stimulus, and personal consumption

Quarterly PCE Regressions With and Without Stimulus Payments

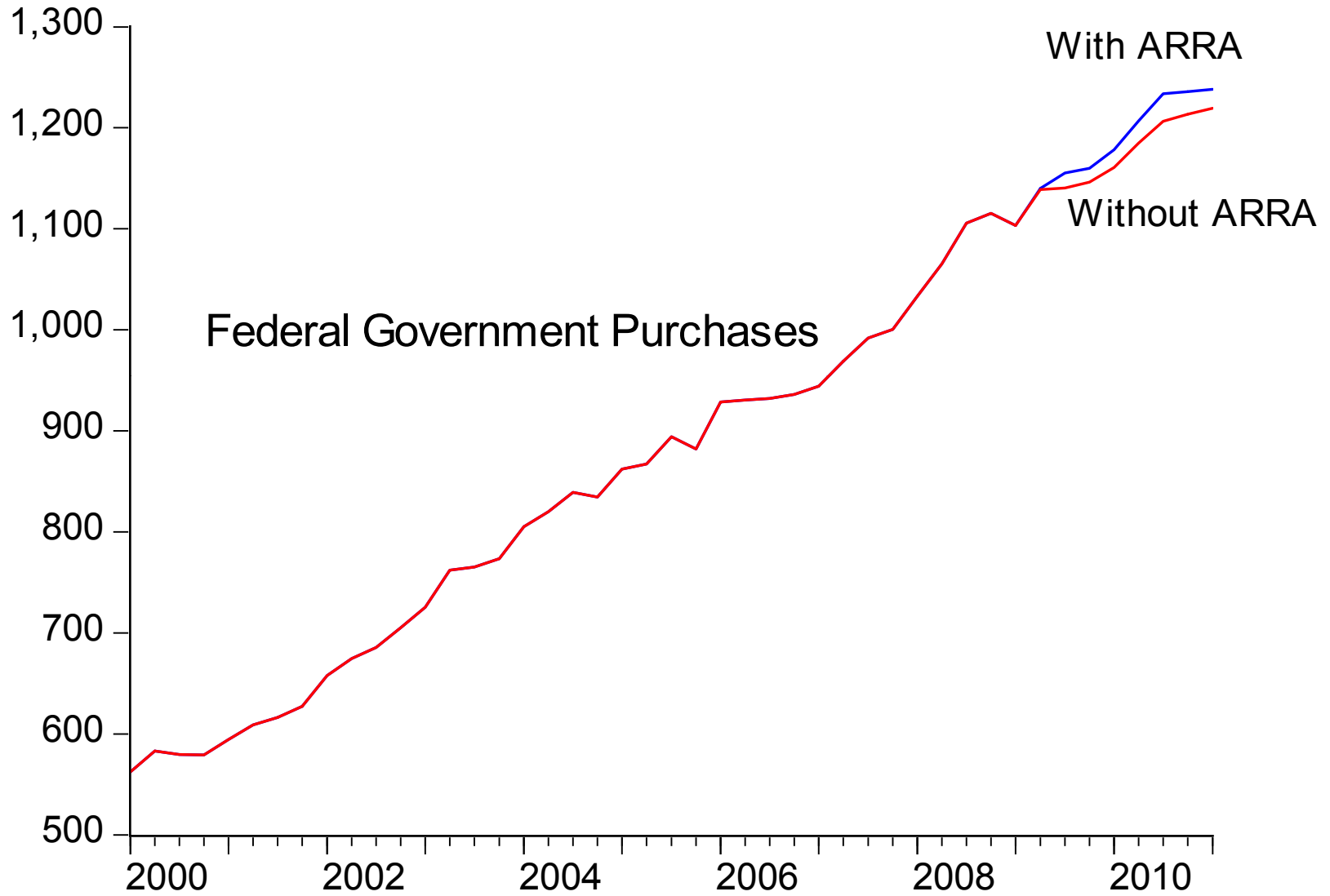
	(1)	(2)	(3)
Disposable Personal Income	.817 (40.9)	----	-----
Disposable Personal Income--Without Stimulus	----	.857 (73.0)	.851 (60.4)
Stimulus Payments	-----	-----	0.128 (0.81)
Oil Price (\$/bbl lagged 2 quarters)	-2.41 (-4.71)	-2.55 (-4.14)	-2.55 (-4.61)
Net Worth (lagged 2 quarters)	.021 (8.53)	.017 (7.32)	.018 (7.97)
Standard error of regression	76.9	65.8	66.3

Billions of dollars
(annual rates)

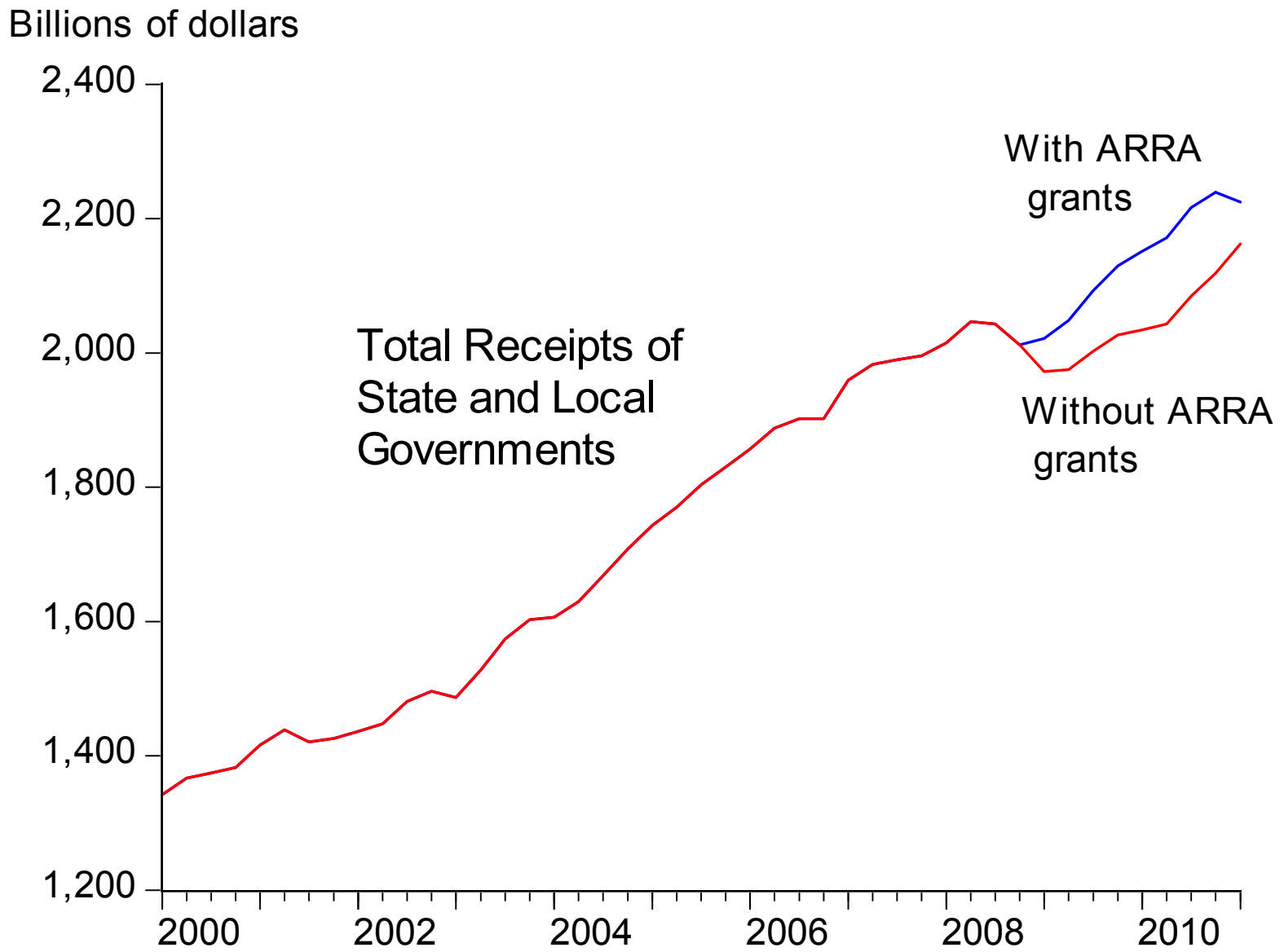


Major Federal Budget Categories of ARRA

Billions of dollars

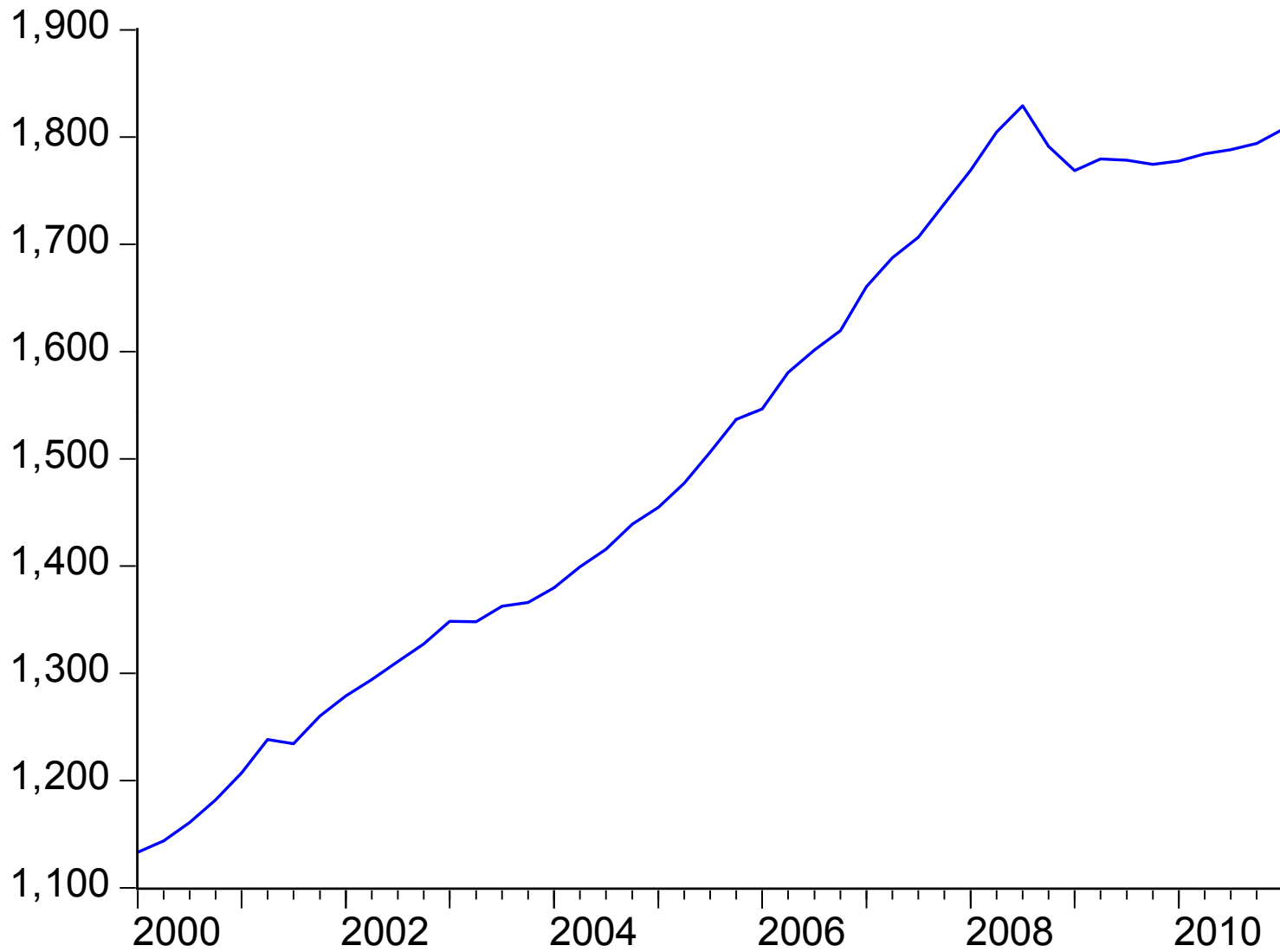


Effect of ARRA on Federal Government Purchases



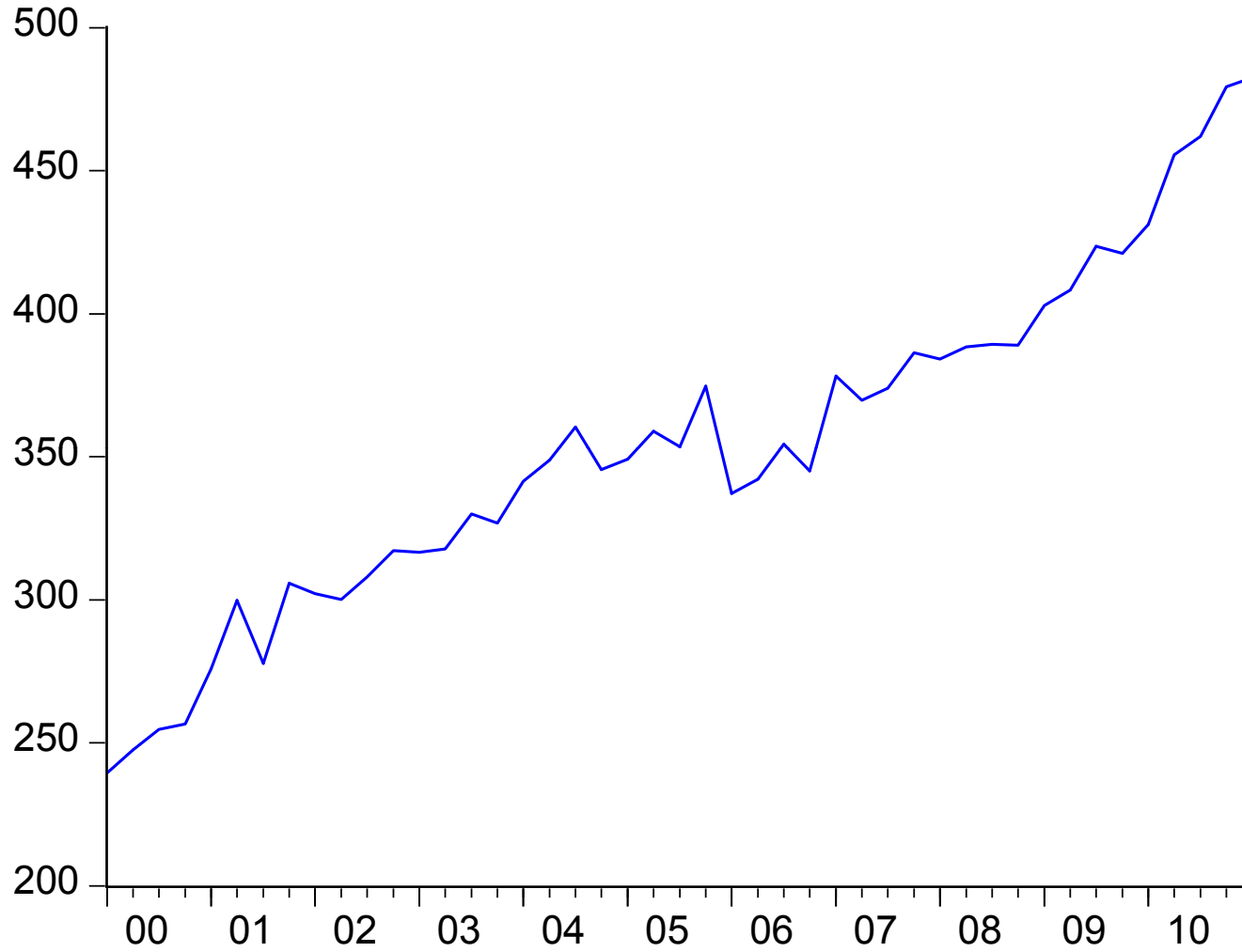
Effect of ARRA on Receipts of State and Local Governments

Billions of dollars



State and Local Government Purchases: 2000.1 - 2011.1

Billions of dollars



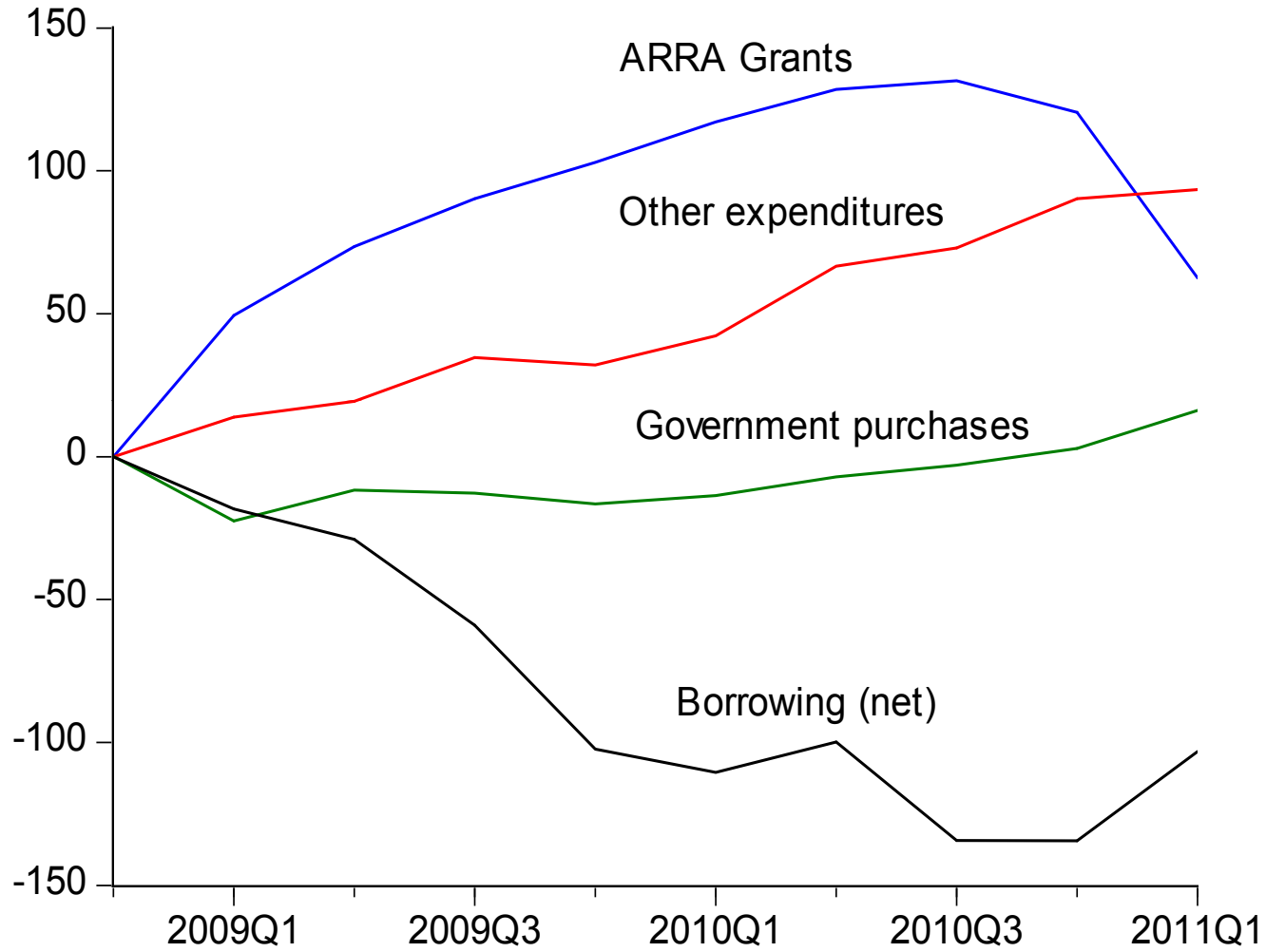
*State and Local Government Expenditures
Other Than for Purchases of Good and Services*

Billions of dollars



Net Borrowing By State and Local Governments

Billions of dollars
(annual rates)



ARRA Grants and State and Local Budgets
(change from 2008.4 when ARRA grants were zero)

State and local government budget constraint

$$G_t + E_t + L_t = R_t + A_t$$

where

G = Government purchases of goods and services

E = Expenditures other than for the purchases

L = Lending or borrowing (-), net

A = ARRA grants (exogenous)

R = Revenues excluding ARRA grants (exogenous)

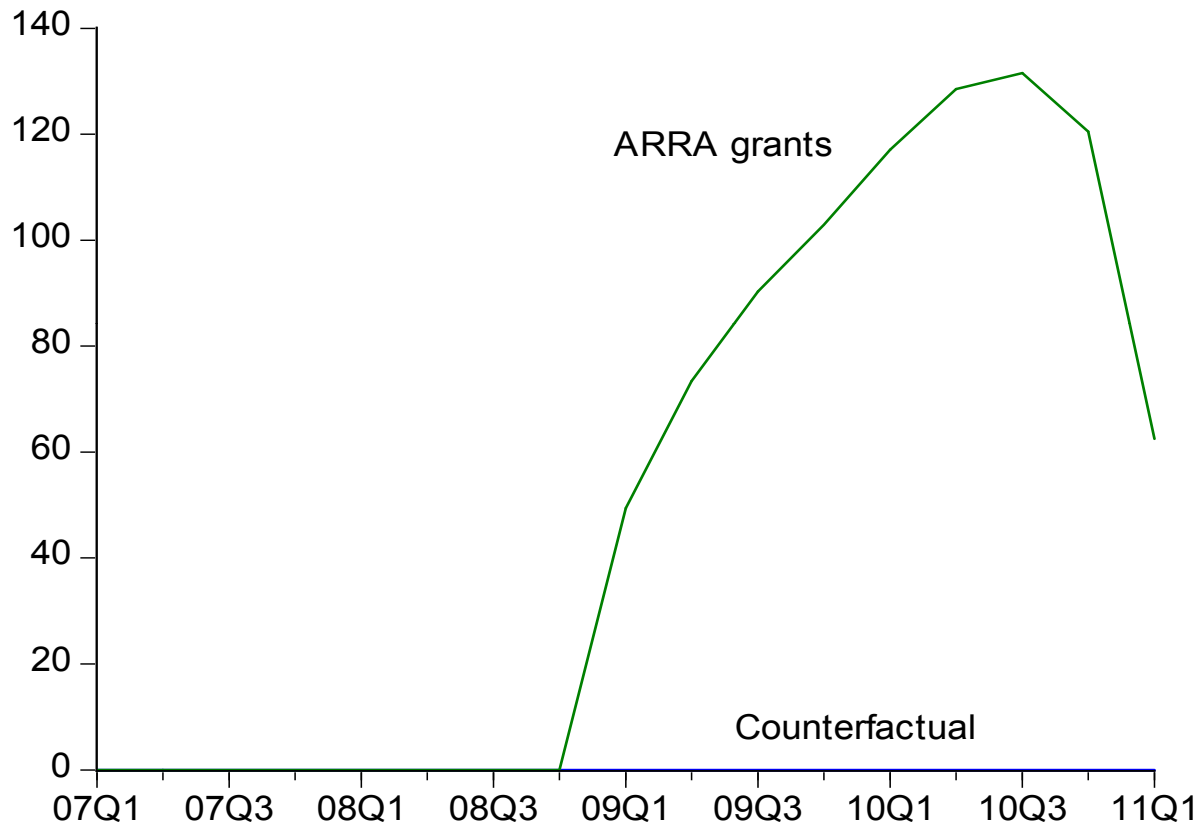
Estimated 3-equation system (1969Q1- 2011Q1)

$$G_t = 3.86 + 0.864G_{t-1} + 0.124R_t - 0.114A_t$$

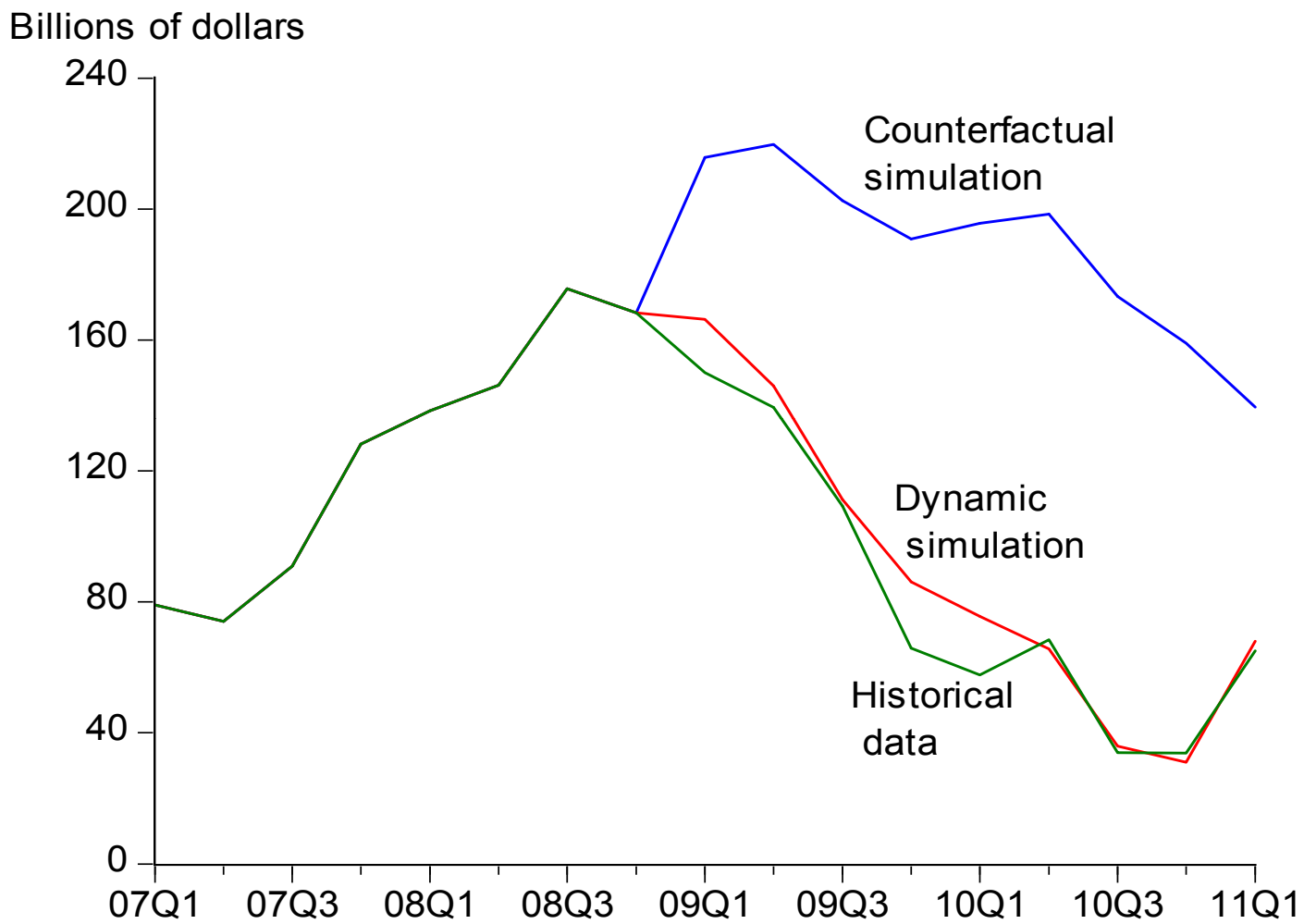
$$E_t = -3.83 + 0.818E_{t-1} + 0.0398R_t + 0.113A_t$$

$$L_t = .0321 - 0.864G_{t-1} - 0.818E_{t-1} + .836R_t + 1.001A_t$$

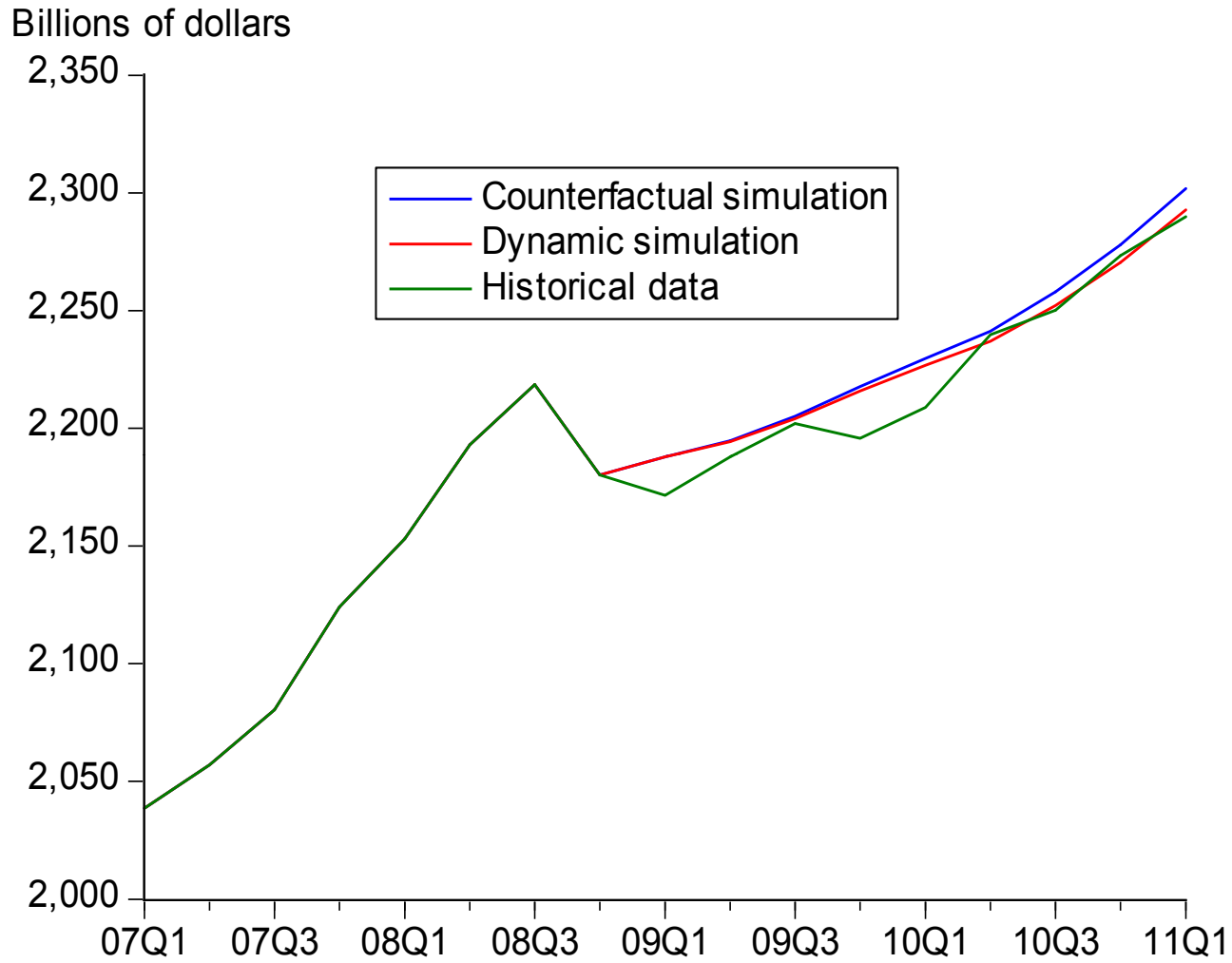
Billions of dollars



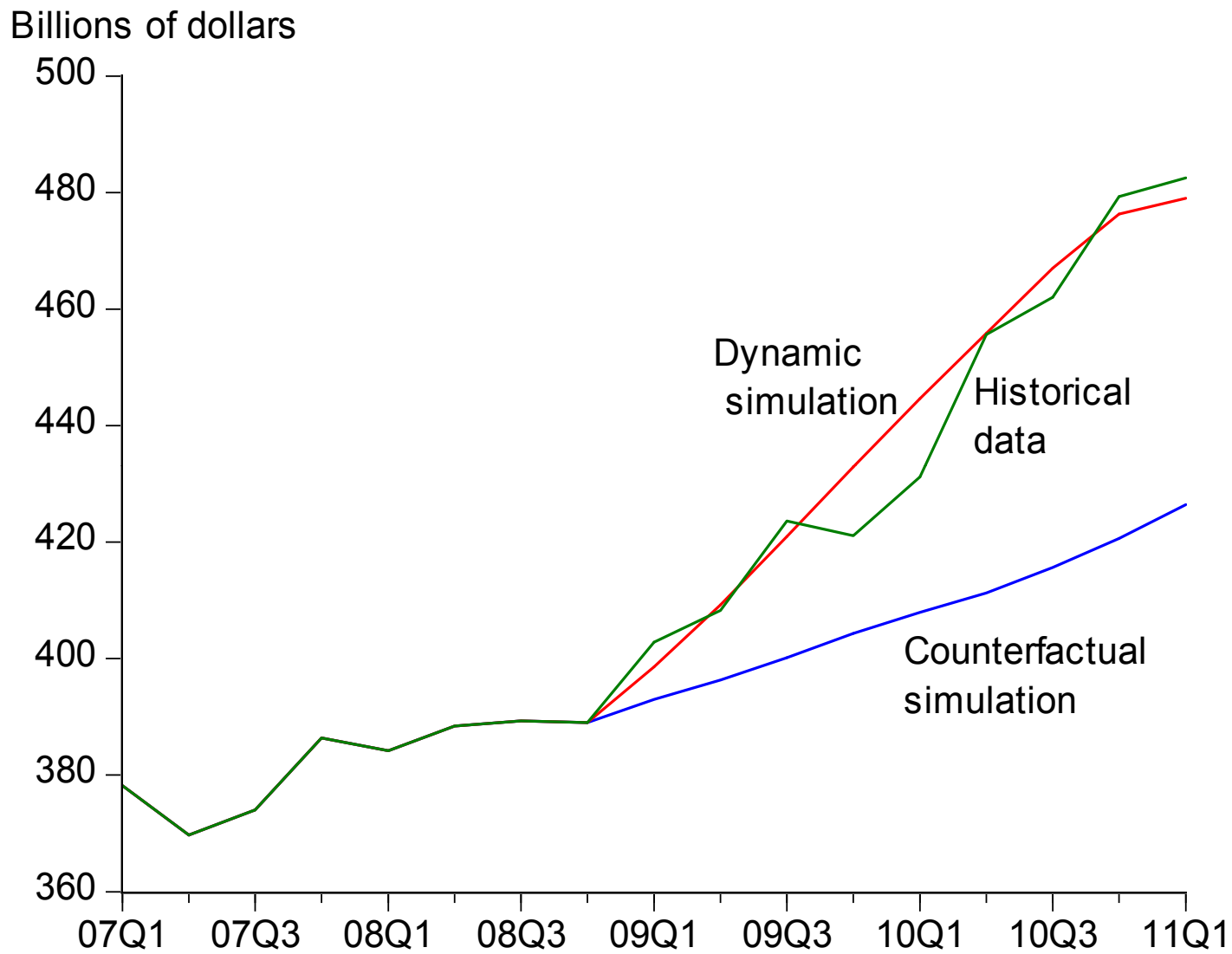
Actual and Counterfactual ARRA grants to State and Local Governments



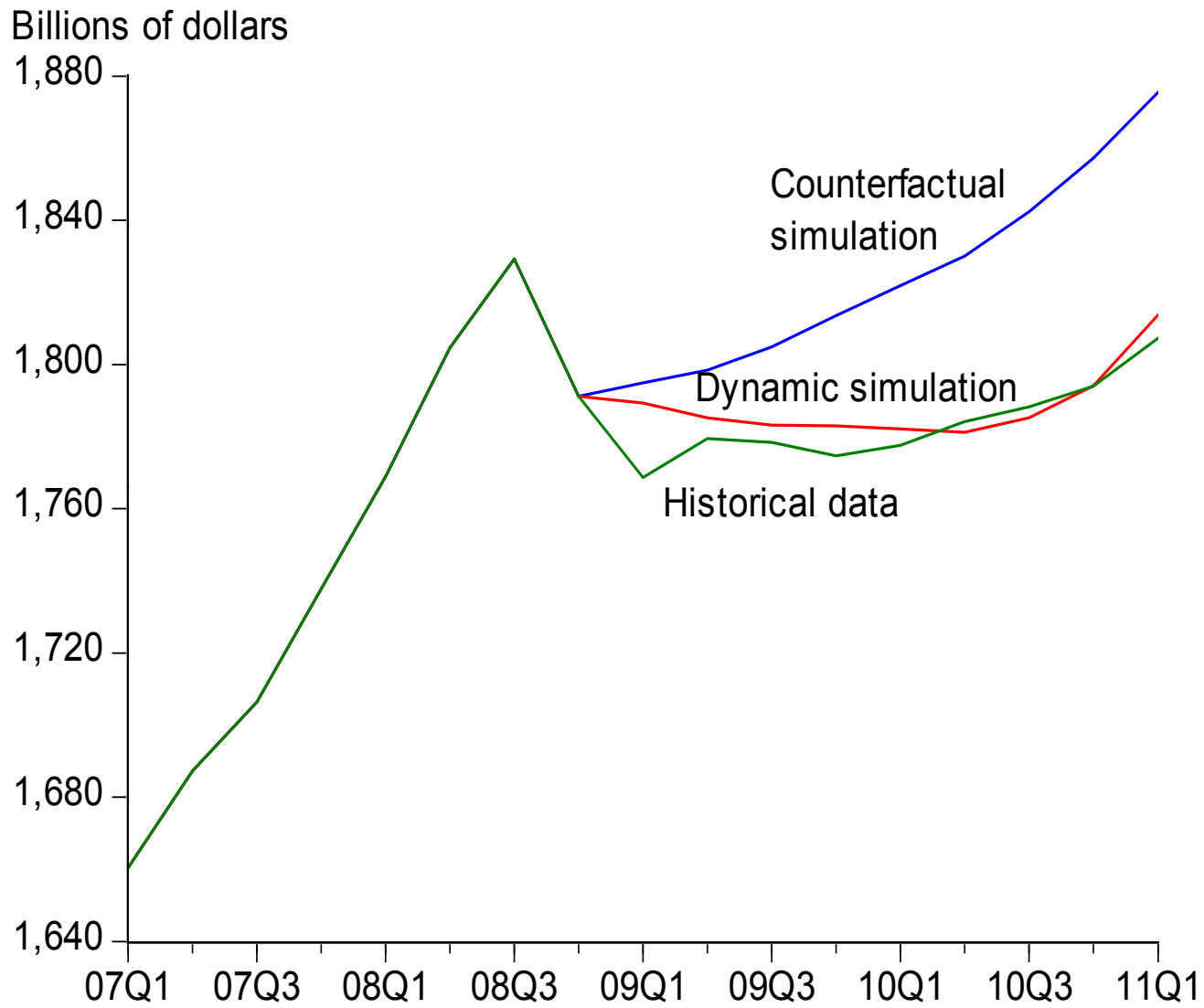
Borrowing (net) by State and Local Governments:
 Historical and Counterfactual without ARRA



Total Expenditures by State and Local Governments:
 Historical and Counterfactual without ARRA



Other Expenditures by State and Local Governments:
Historical and Counterfactual without ARRA

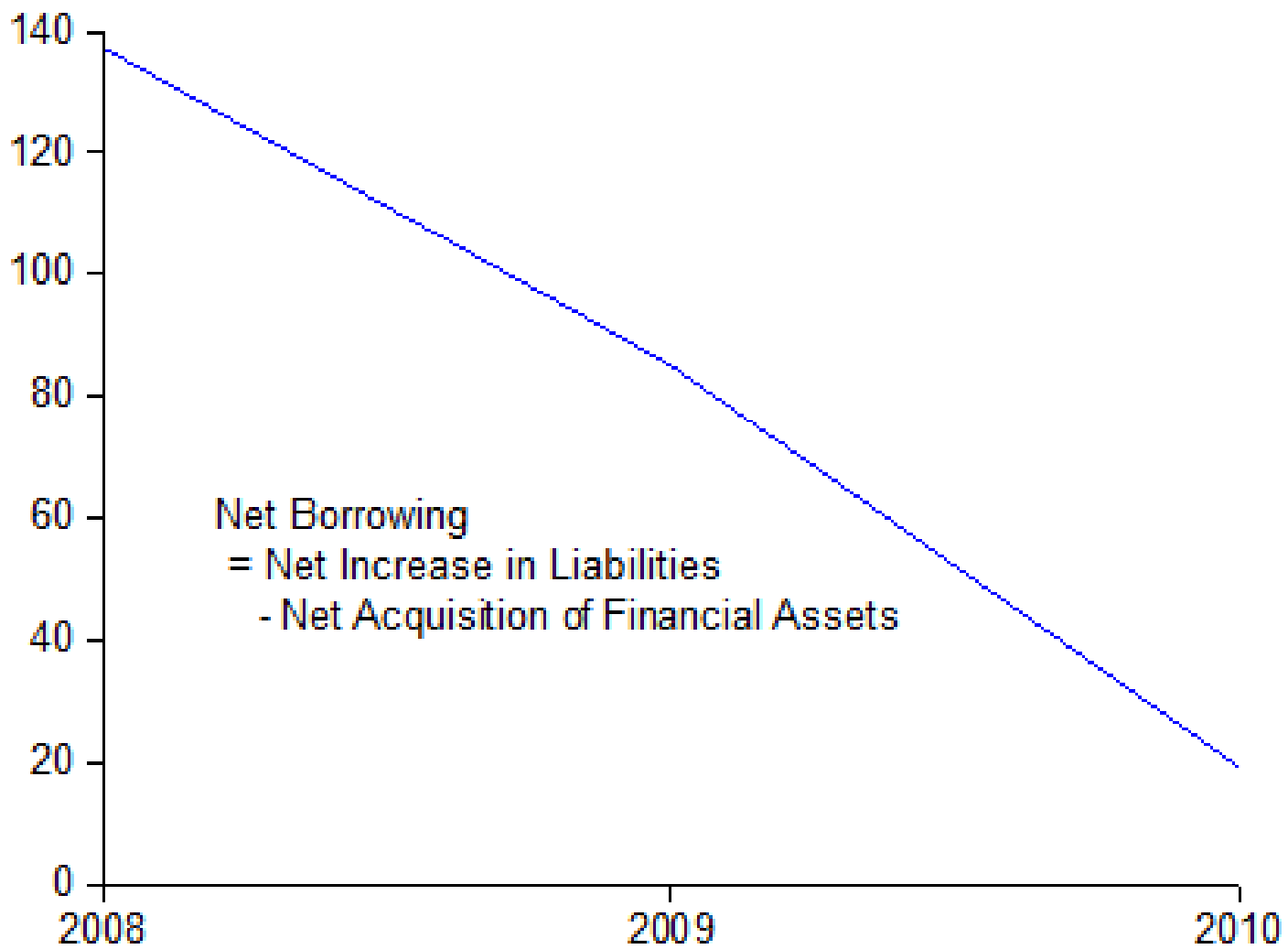


Purchases of Goods and Services by State and Local Governments:
 Historical and Counterfactual without ARRA

The Plausibility of the Counterfactual

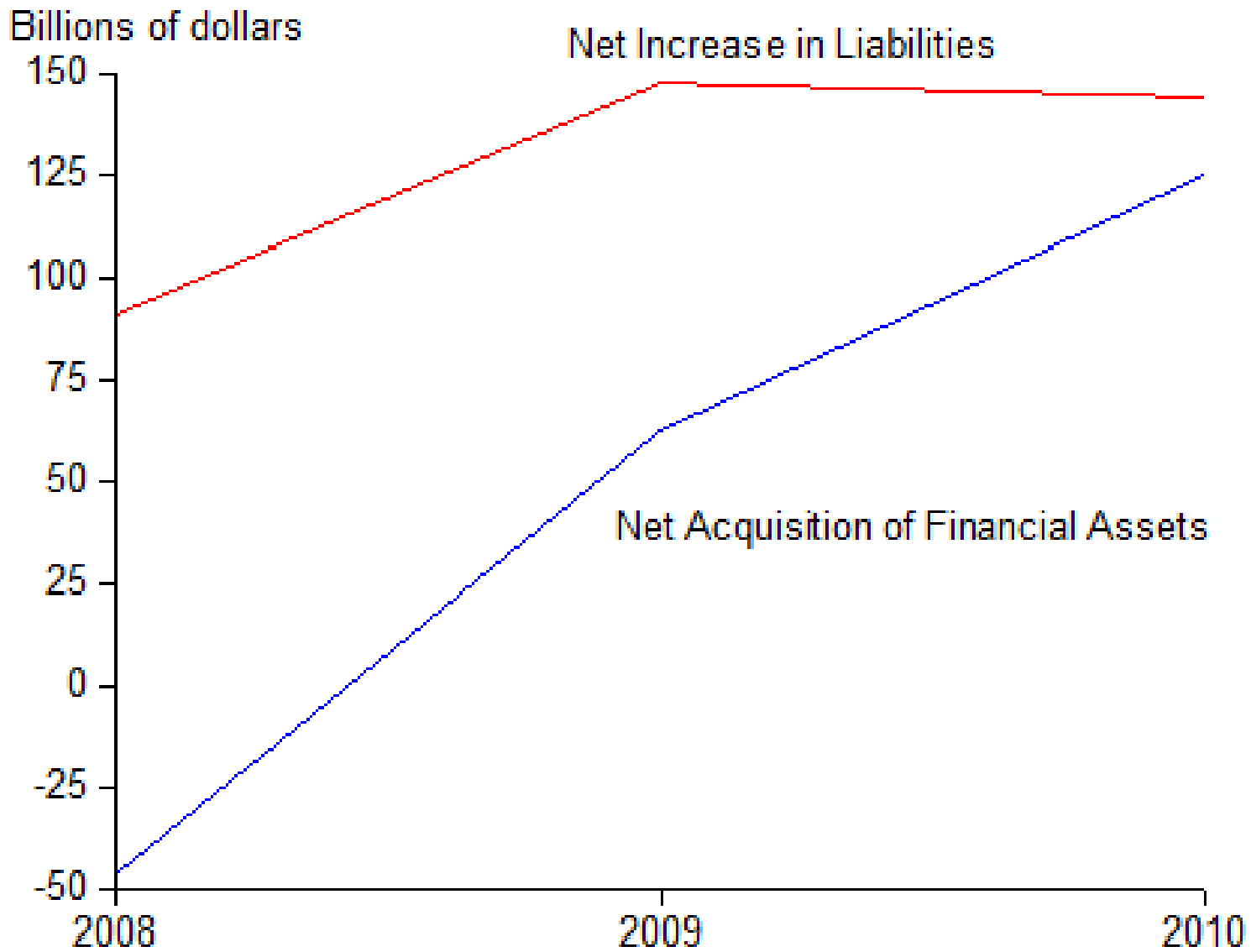
- Weren't many states borrowing constrained after the crisis?
- Not clear but in any case Fed's Flow of Funds data show that that net borrowing would have increased even with such borrowing constraints.
- Net borrowing =
net increase in liabilities - net acquisition of financial assets
- Net borrowing = - \$118 billion from 2008 to 2010.
Net increase in liabilities = \$53 billion
Net acquisition of financial assets = \$171 billion.
- Thus state and local government added significantly to their financial assets as ARRA grants came in.
- With no ARRA they would not have done so.

Billions of dollars



Net Borrowing
= Net Increase in Liabilities
- Net Acquisition of Financial Assets

State and Local Governments

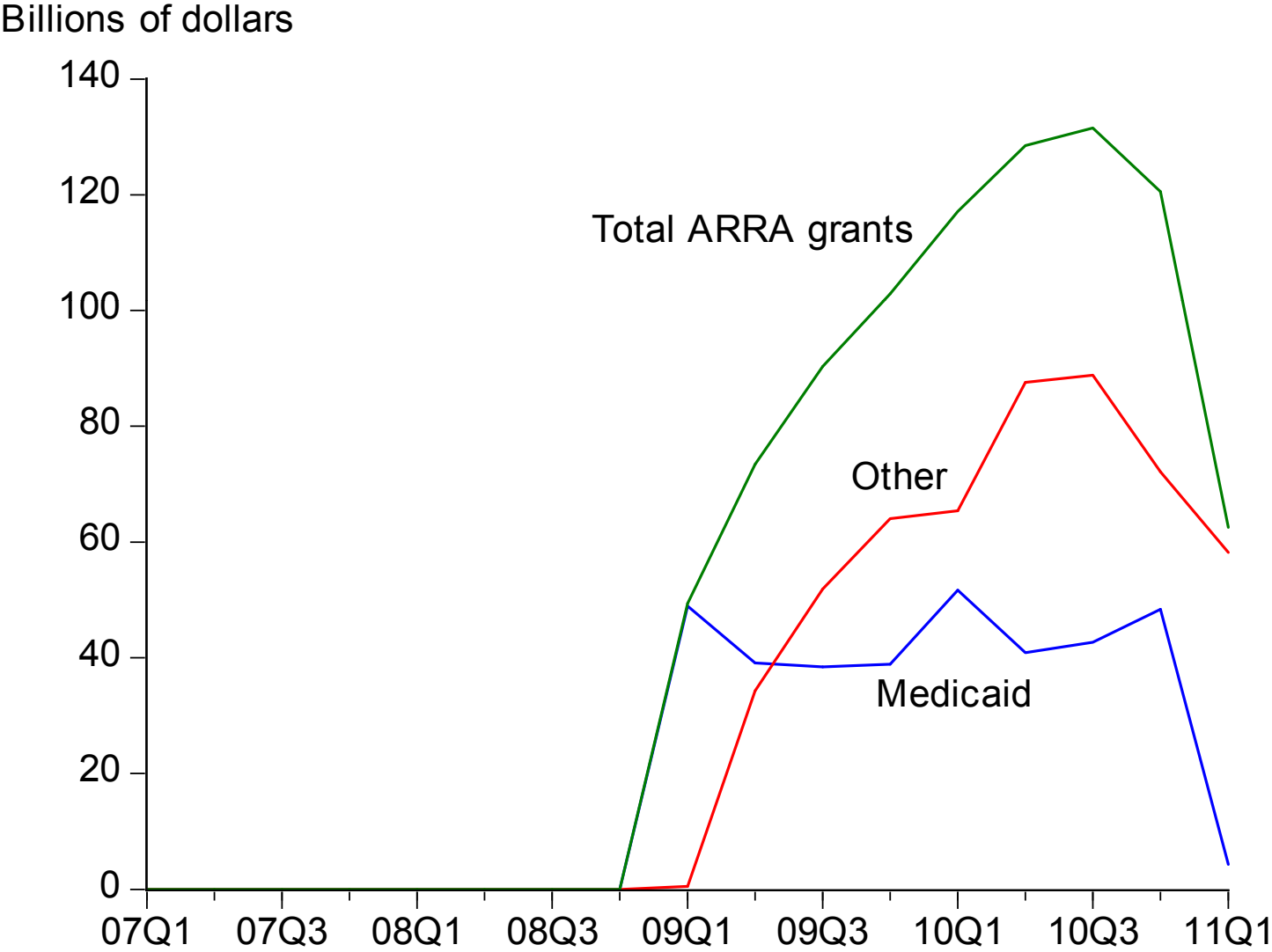


State and Local Governments

Why the Negative Effect on Purchases?

- “Other expenditures” consist largely of Medicaid, TANF, and other transfer programs
- ARRA conditioned states’ receipt of additional Medicaid grants on their not reducing benefits or restricting eligibility rules
- In some states, this meant undoing benefit reductions or eligibility restrictions that were implemented in the previous 6 months
 - July 1, 2008 is the date in Section 5001 of ARRA
- This “hold-harmless” provision, may have forced states to reallocate funds that would have been used for purchases

Test By Splitting ARRA Grants into Medicaid and Other



Regressions with ARRA grants split into Medicaid (M) and other (N)

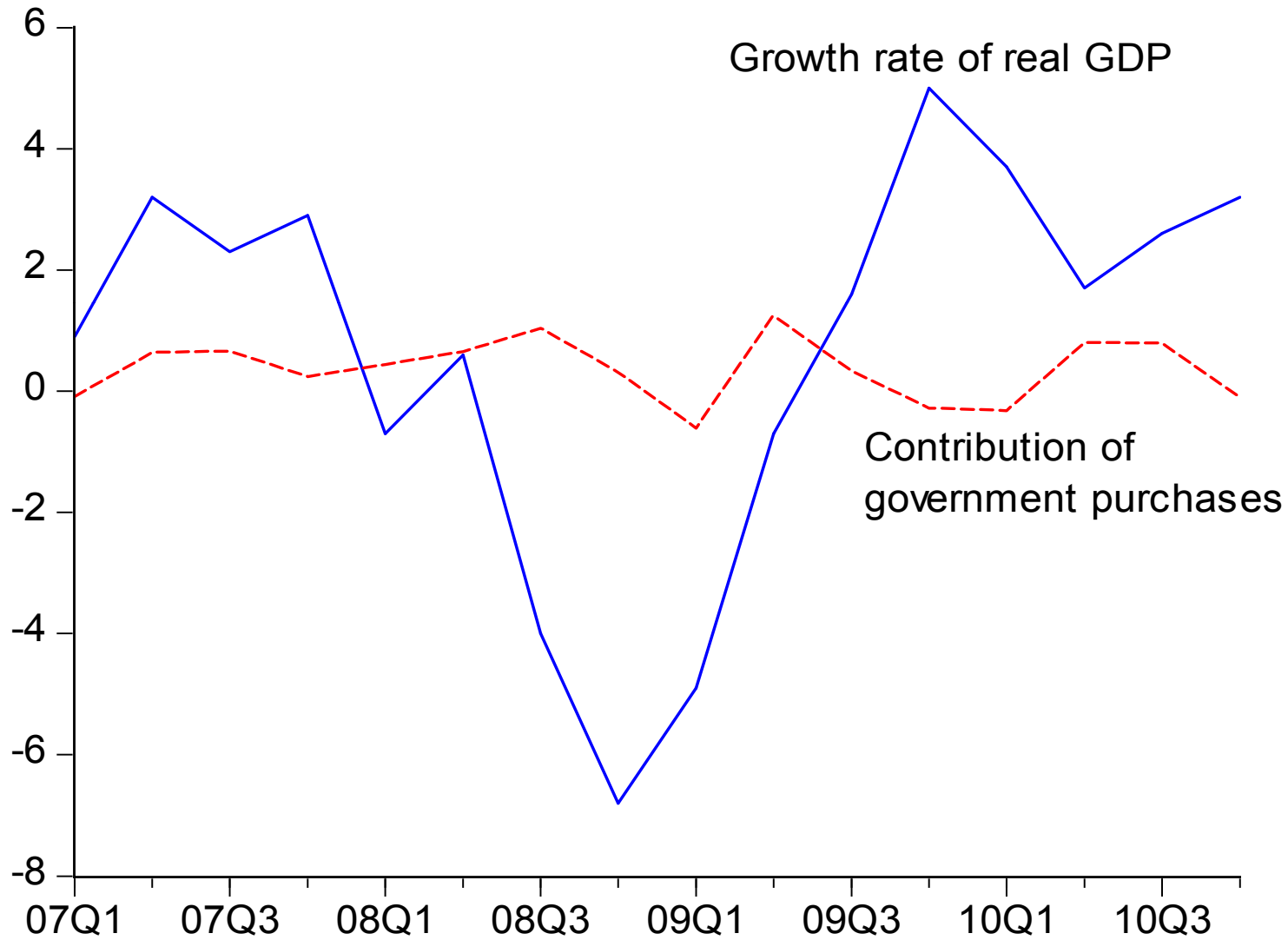
	Dependent Variables		
	G	E	L
Constant	3.356 (3.5)	-2.471 (-2.1)	2.691 (1.3)
G(-1)	0.882 (17.8)	-----	-0.877 (-12.8)
E(-1)	-----	0.875 (20.2)	-0.734 (-11.0)
R	0.108 (2.6)	0.028 (3.2)	0.829 (13.8)
M	-0.318 (-2.3)	0.129 (2.6)	1.200 (6.7)
N	-0.002 (-0.03)	0.076 (1.6)	0.851 (13.0)

Net Effect on Federal, State & Local Government Purchases

- If government purchases have a greater impact on GDP than temporary transfers—which the permanent income theory predicts—then ARRA could have had a negative effect
- According to the simulations the cumulative negative effect on state and local government purchases was \$85 billion (341/4). Larger than the \$30 billion (119/4) cumulative positive effect of ARRA on federal government purchases.

Cross check on GDP growth and G-contribution

Percent, annual rate

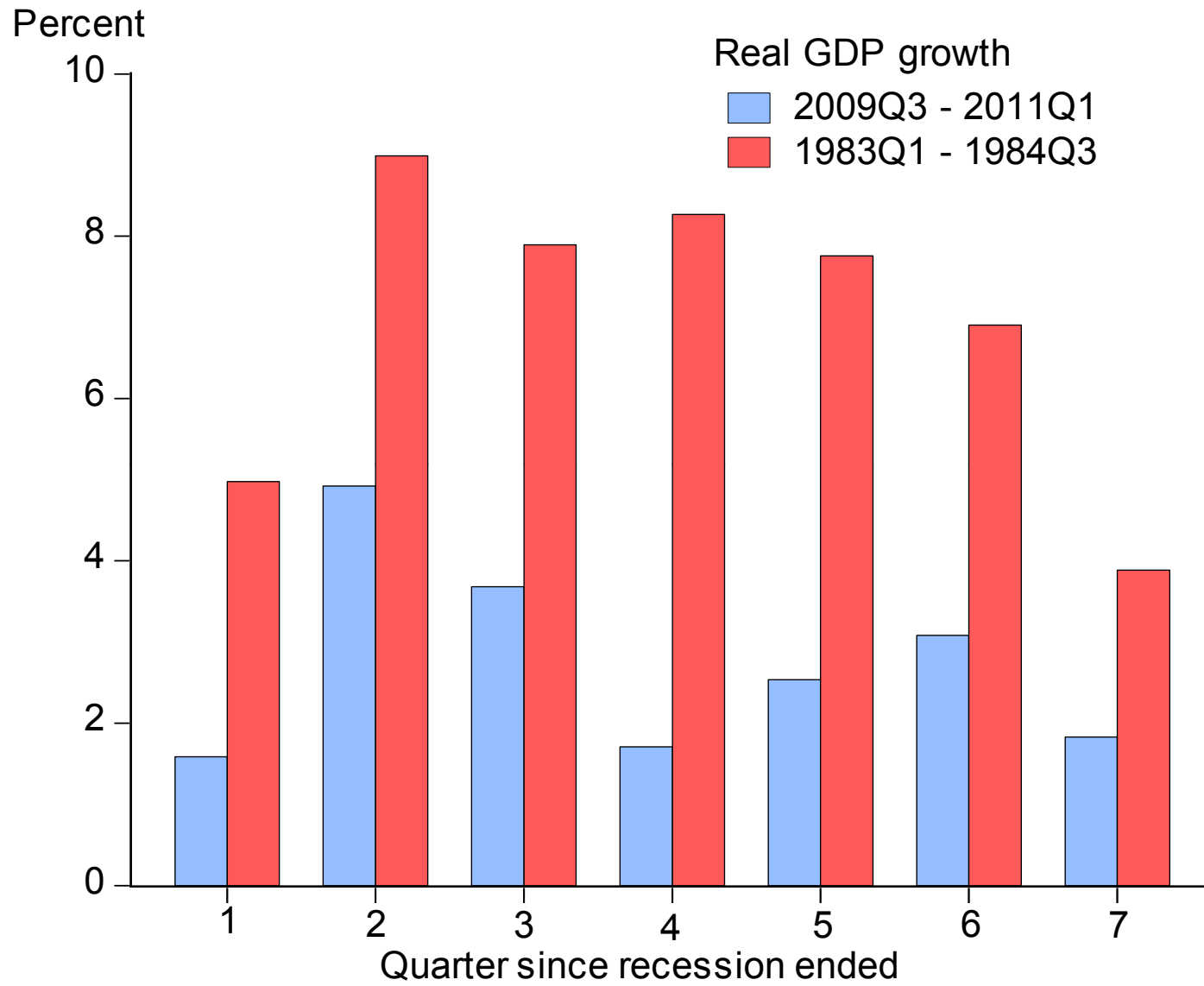


Conclusion

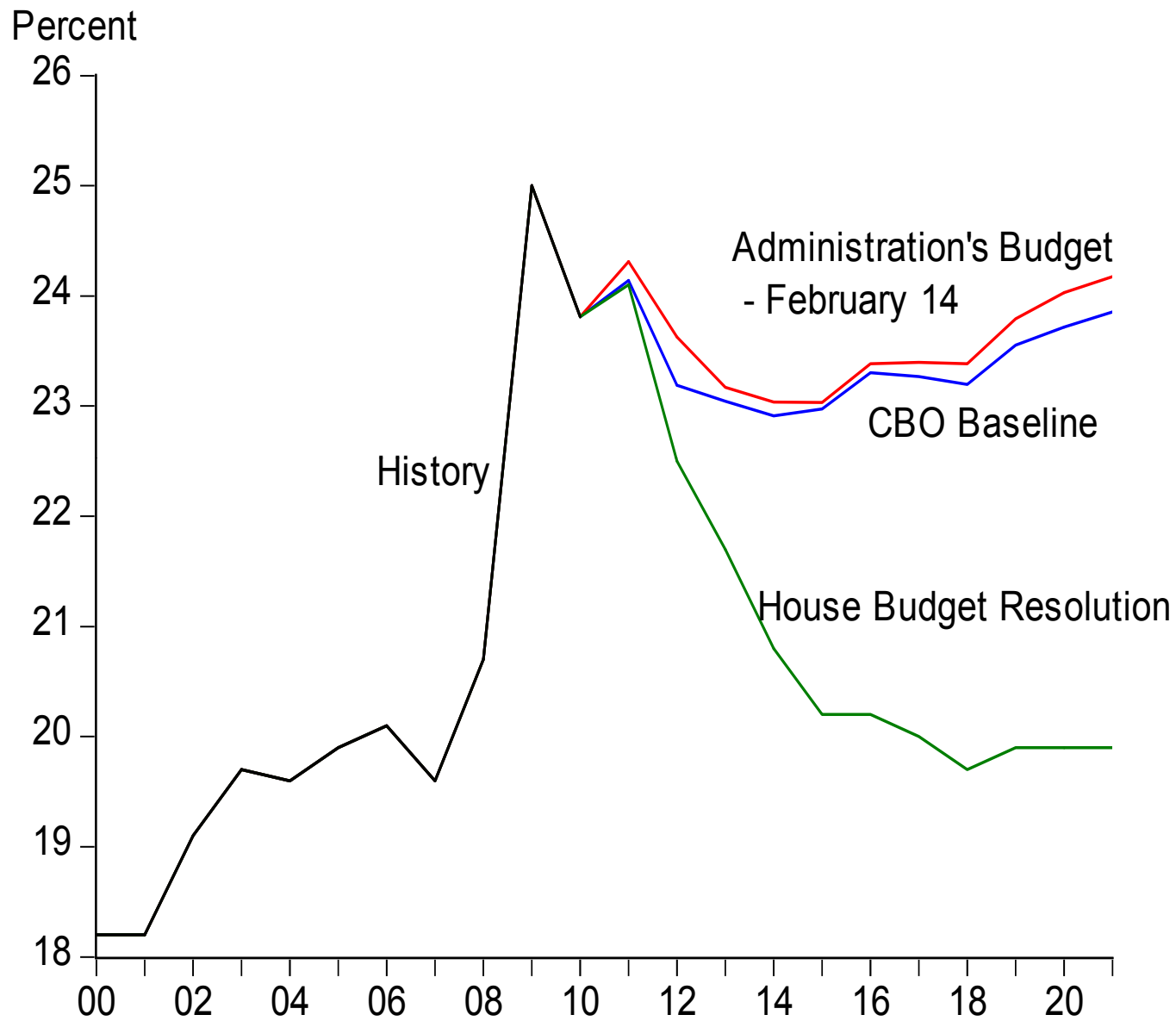
- Revival of discretionary fiscal policy has not been effective
 - People largely saved the transfers and tax rebates
 - Federal government increased purchases by a tiny amount
 - State and local governments used stimulus grants to reduce borrowing rather than increase expenditures, and they shifted expenditures away from purchases
- The results do not support the view that things would have been worse
 - Provide evidence against “Model A”
 - Plus counterfactual simulations
- Results are consistent with consensus prior to the revival, based on experience of 30 years ago

What Do We Do Now?

- This month marks the two year anniversary of the end of recession and start of recovery.
- But the recovery is weak, almost nonexistent.
- Unemployment rate is still over 9 percent.
- Not just this year, weak from the start
- Growth only 2.8 percent compared with 7 percent after the 1981-82 recession.



The Recovery in Historical Context



Federal Government Outlays as a Percent of GDP