

Expansionary Fiscal Consolidation in the United States and the Euro Area

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IMFS-HoF Lunchtime-Conference

FISCAL AND MONETARY POLICY CHALLENGES IN THE UNITED STATES AND THE EURO AREA

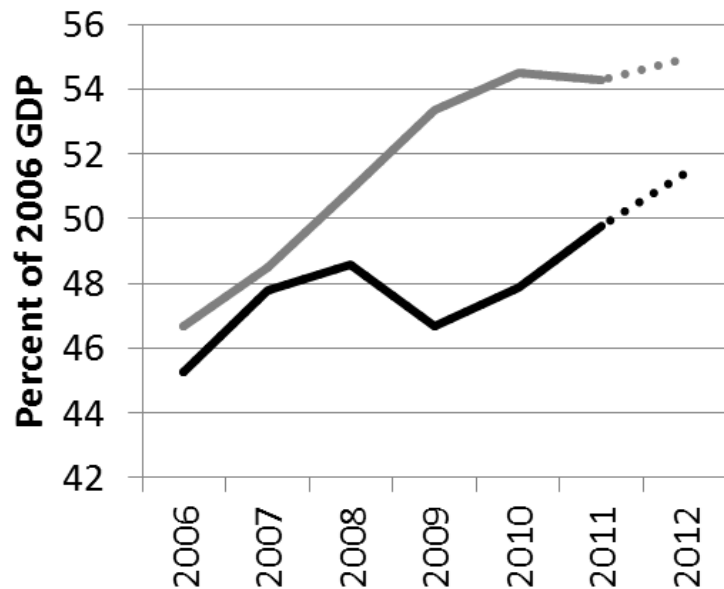
29 November 2012

Outline

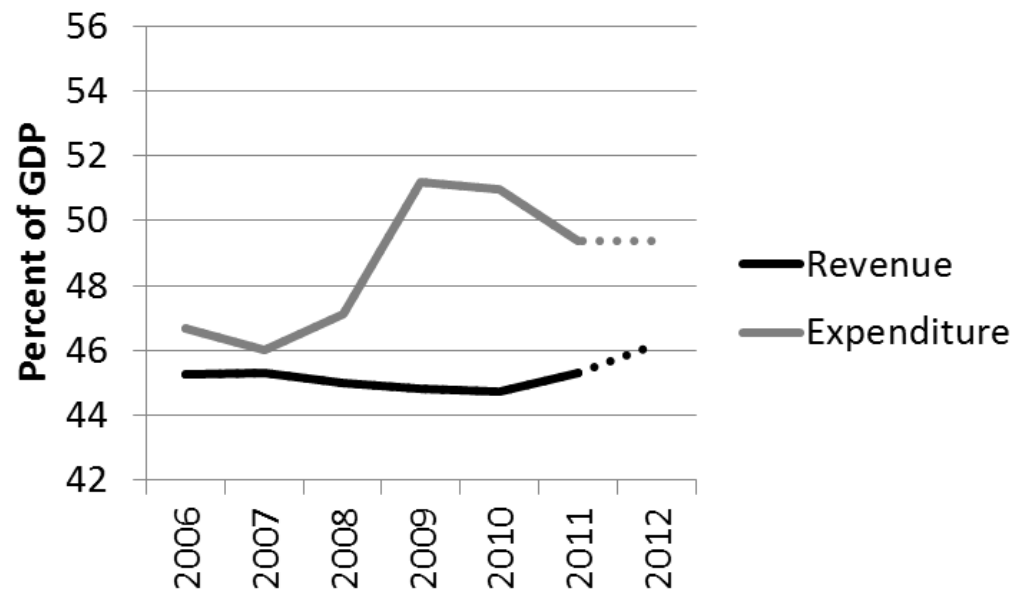
1. The need for fiscal consolidation
2. Recent studies of expansionary consolidations
3. A model for monetary/fiscal analysis
4. The role of tax policy in consolidation
5. The zero-interest bound on monetary policy

1. Need for fiscal consolidation: Euro area government expenditure and revenue

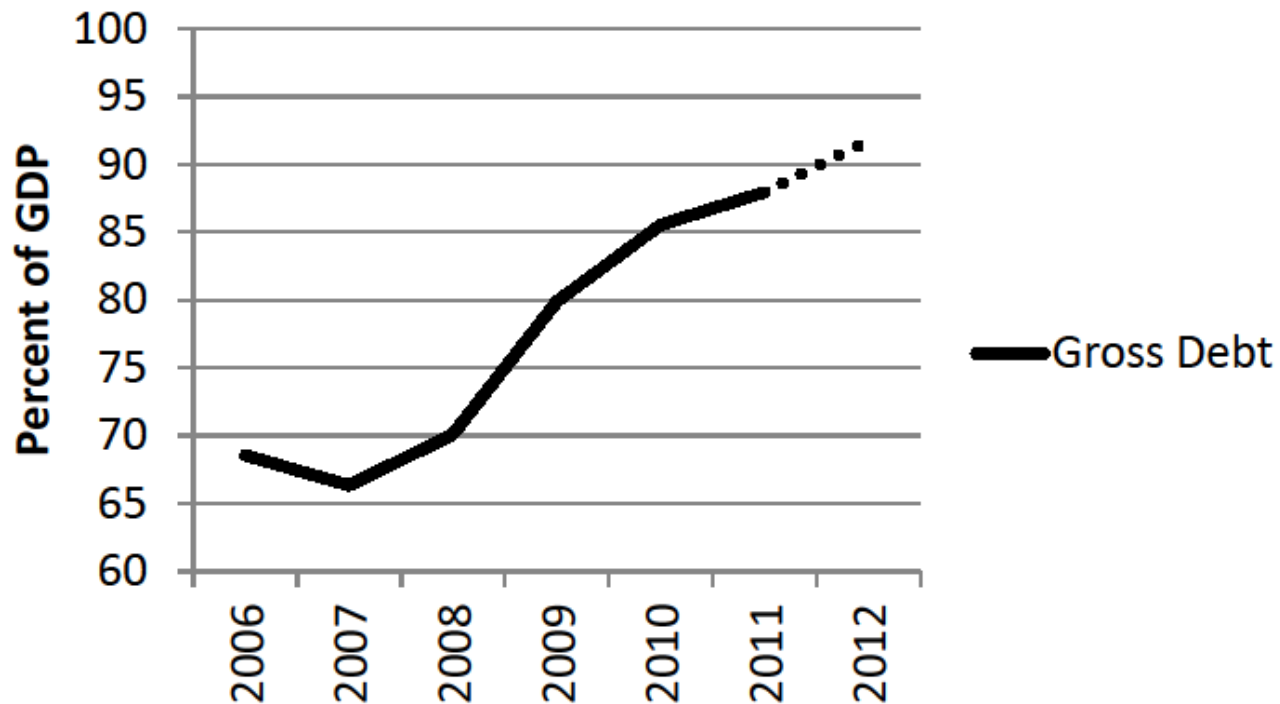
In percent of 2006 GDP



In percent of current GDP



1. Need for fiscal consolidation: Euro area gross government debt



Notes: Data are taken from the European Commission's AMECO database. The chart shows gross debt relative to current euro area GDP. The dotted line indicates the 2012 estimate of the European Commission.

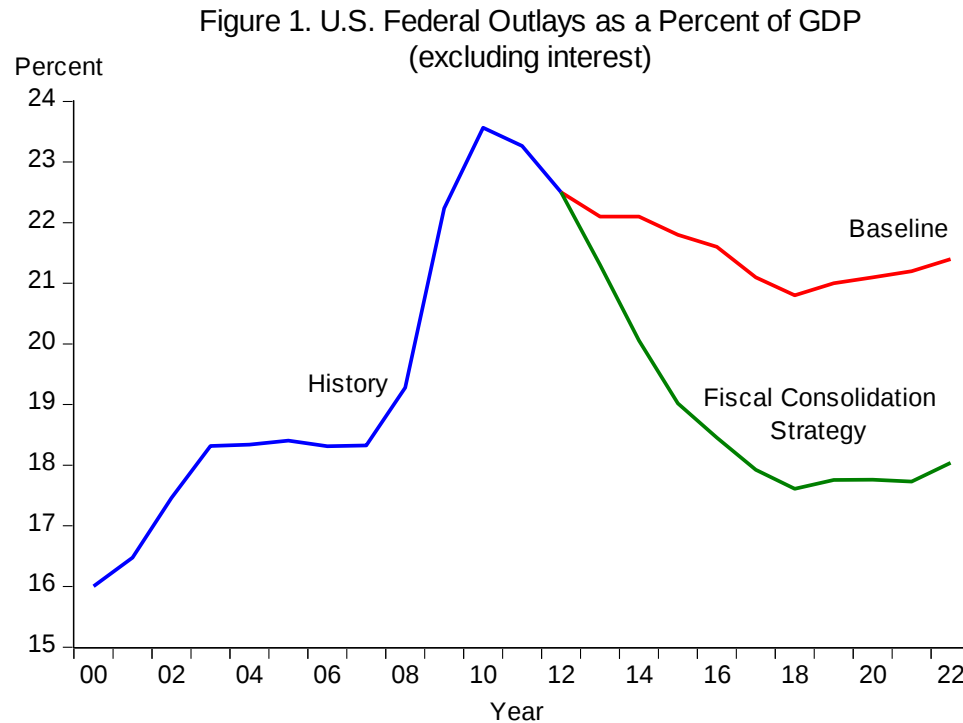
2. Recent studies on expansionary fiscal consolidation: Alesina et al.

- Alesina and Ardagna (2012) and Alesina, Favero and Giavazzi (2012) and earlier work:
 - Empirical, narrative approach, case studies
 - Spending based adjustments associated with mild, short-lived or no recession at all
 - Tax based adjustments associated with deep and prolonged recessions

2. Recent studies on expansionary fiscal consolidation: Cogan et al.

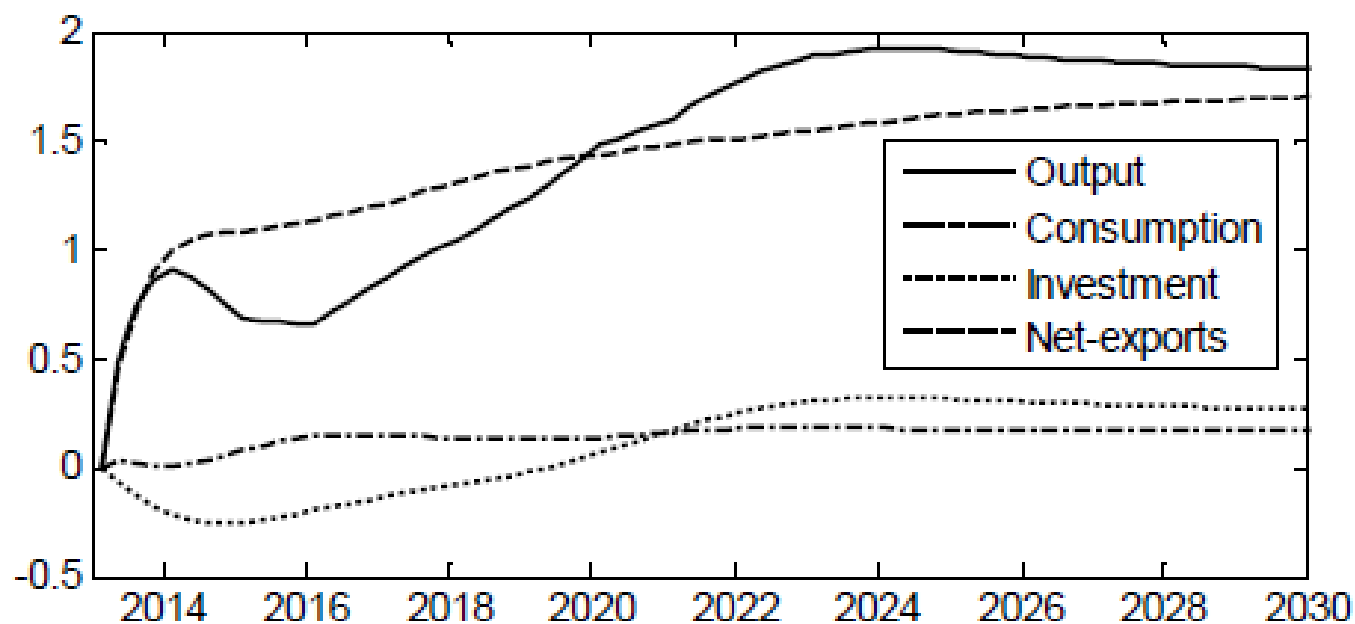
- Cogan, Taylor, Wieland, Wolters (JEDC forth.) use a two-country model of U.S. and euro area developed at ECB (Coenen-McAdam-Straub 2008).
- Simulation of U.S. House of Rep. 2013 Budget Reform Proposal.
- Reduction in spending is used to reduce debt level and to reduce income tax rate (relative to baseline) by 5 percentage points.

2. Recent studies on expansionary fiscal consolidation: Cogan et al.



- Reduction in spending is used to reduce debt level and to reduce income tax rate (relative to baseline) by 5 percentage points.

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Notes: Values shown are percentage deviations from baseline.

3. A Model for Monetary-Fiscal Analysis

ECB's New Area-Wide Model: Coenen, McAdam and Straub (2008)

- two-country DSGE model of the euro area and the US, non-Ricardian households, disaggregate government spending, distortionary taxes, lump-sum taxes which feedback to government debt

The Fiscal Authority in NAWM

Fiscal authority's budget constraint:

$$\begin{aligned} P_{G,t}G_t + TR_t + B_t + M_{t-1} = \\ \tau_t^C P_{C,t}C_t + \tau_t^N (W_{I,t}N_t^I + W_{J,t}N_t^J) + \tau_t^{W_h} (W_{I,t}N_t^I + W_{J,t}N_t^J) + \tau_t^{W_f} W_t N_t + \\ \tau_t^K (R_{K,t}u_t - (\Gamma_u(u_t) + \delta)P_{I,t})K_t + R_t^{-1}B_{t+1} + M_t \end{aligned}$$

Fiscal rule:

$$\frac{TR_t}{P_{Y,t}Y_t} - TR_t^* = \varphi_{B_Y} \left(\frac{B_t}{P_{Y,t}Y_t} - B^* \right)$$

4. The role of tax policy in fiscal consolidation

- Burgert-Wieland (2012), paper prepared for European Commission, October conference on role of tax policy in fiscal consolidation.
- Derives insights from macroeconomic models: ECB's NAWM model, European Commission's QUEST model.
 - available from Frankfurt-based model comparison project on www.macromodelbase.com

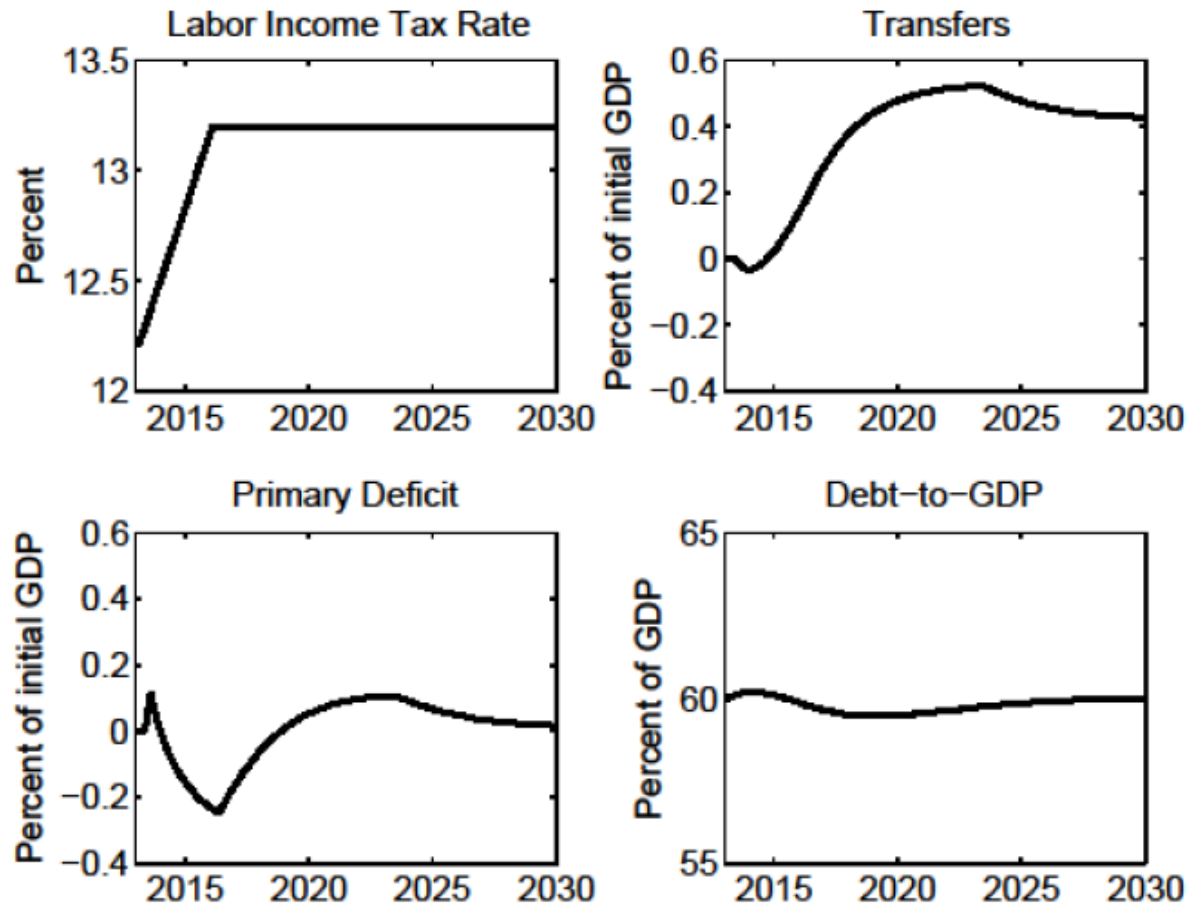
Four Scenarios: Taxes, expenditures and debt consolidation in model economy

- a) Increase labor tax rate to finance higher government expenditure while stabilizing government debt at initial level.
- b) Increase tax rate and borrow to finance higher expenditure. Stabilize debt at higher level with interest covered by additional tax revenue.

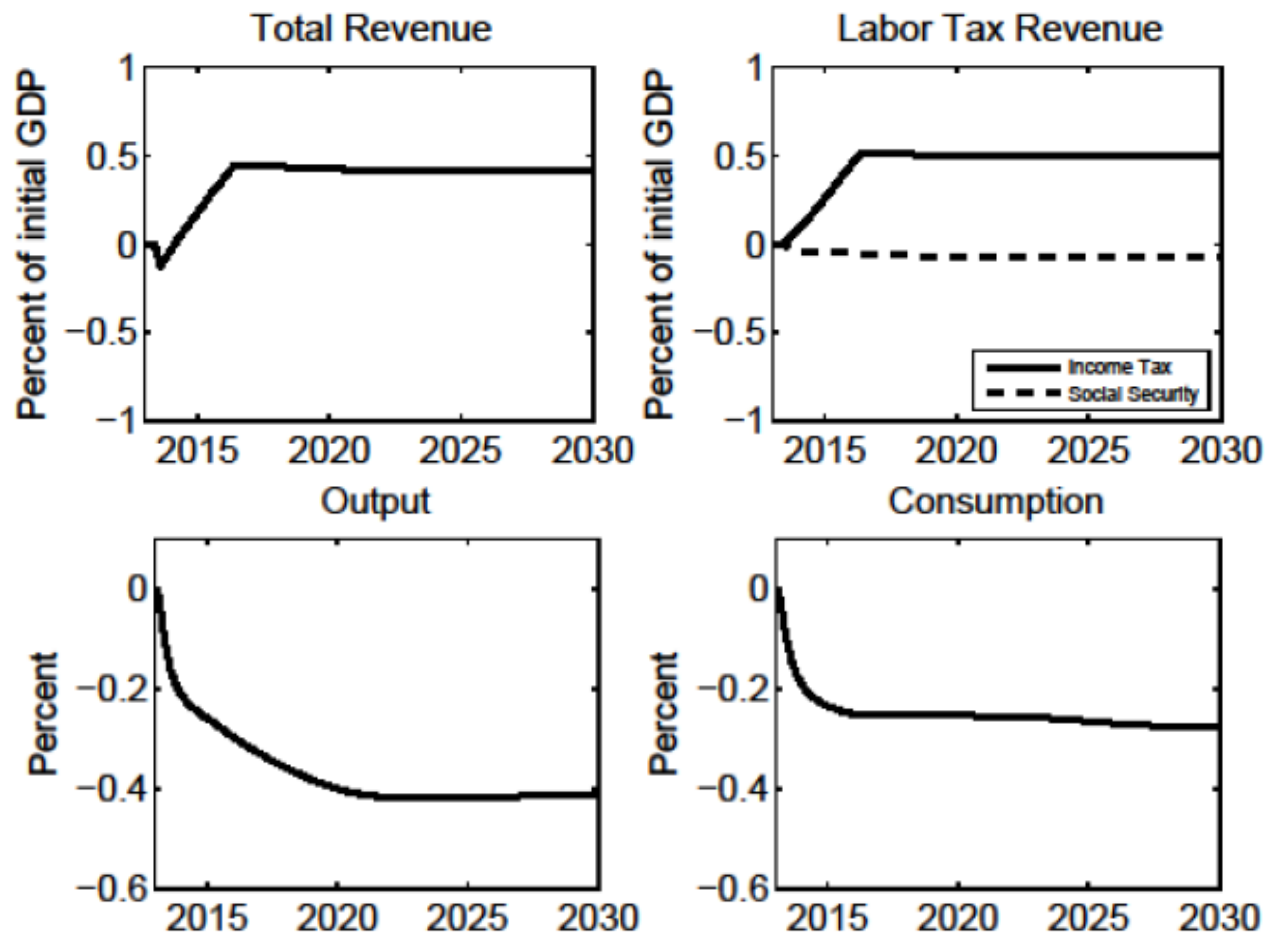
Four Scenarios cont.

- c) Reduce labor tax rate and cut expenditures.
Stabilize government debt at lower level, such that interest savings just make up for lost tax revenue.
- d) Reduce labor tax rate and cut expenditures.
Stabilize government debt at initial level.

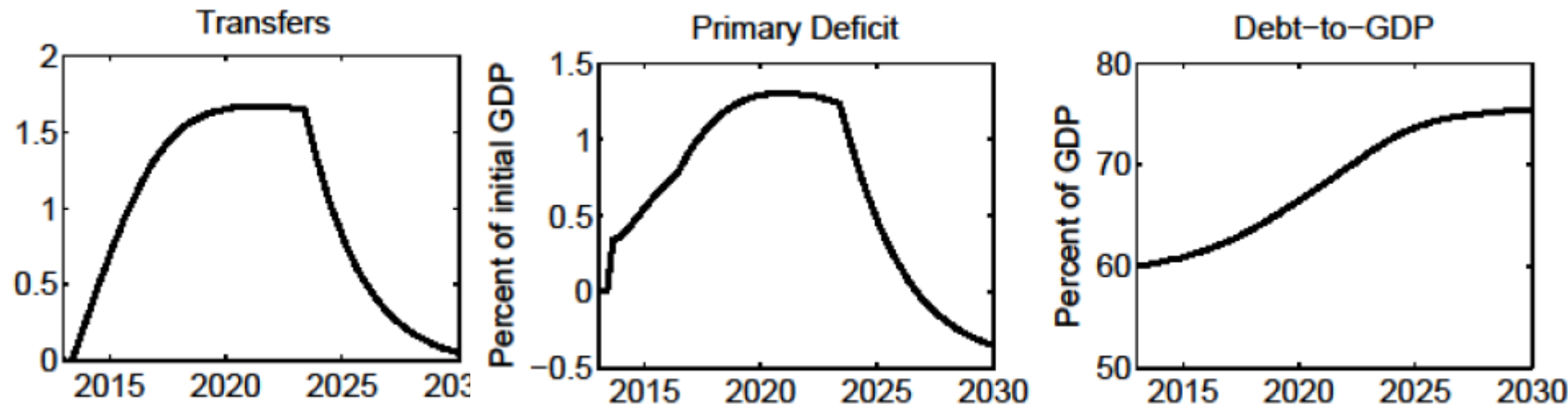
4.a) Permanent increase in labor income tax rate, constant government debt



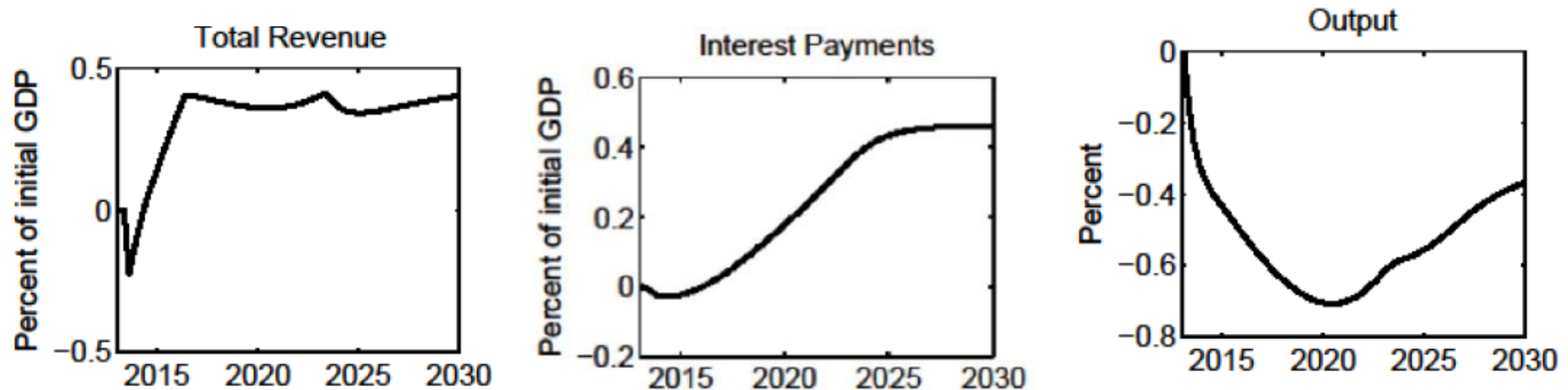
4a. Permanent increase in labor income tax rate, constant government debt



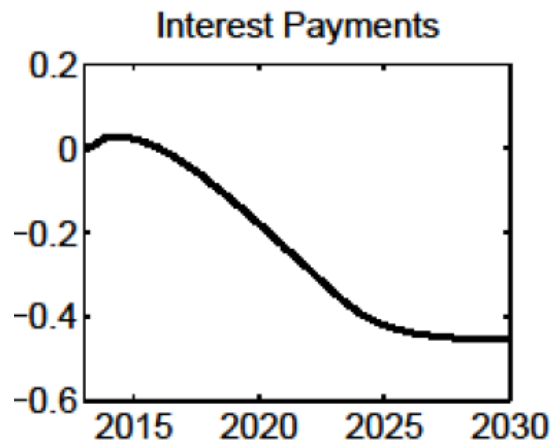
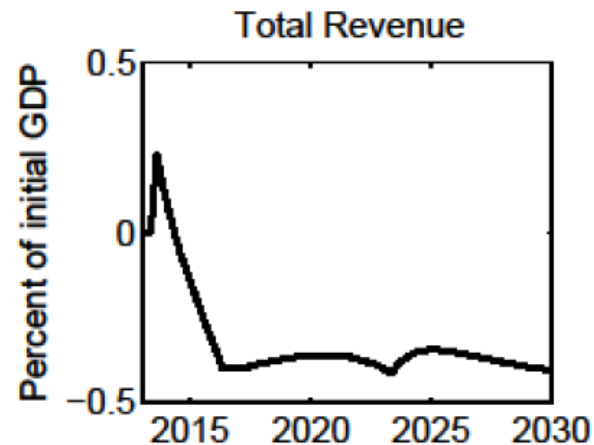
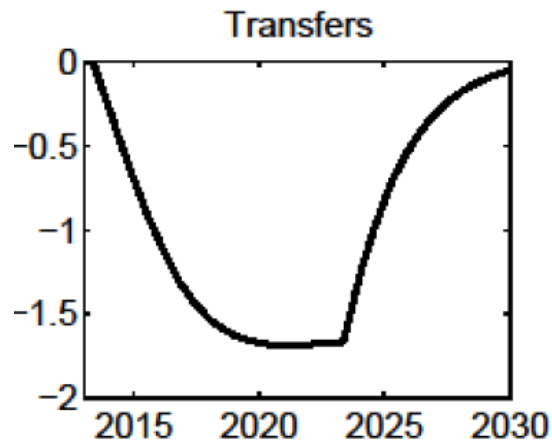
4.b) Permanent increase in labor income tax rate, higher government debt



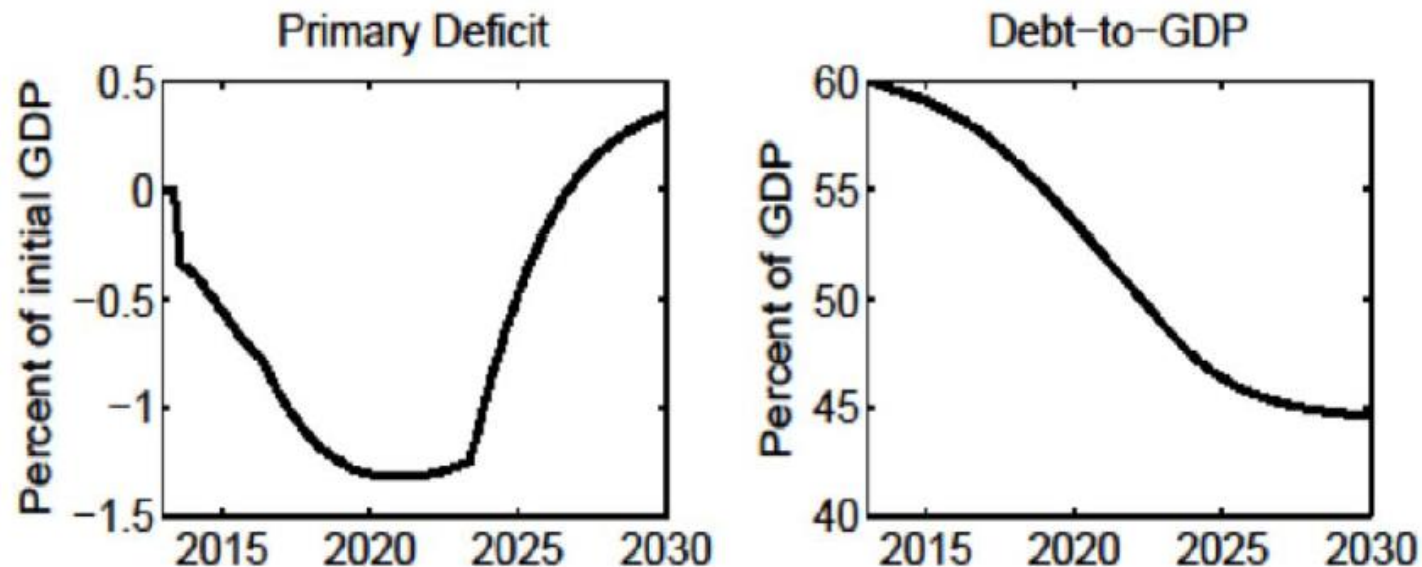
4.b) Permanent increase in labor income tax rate, higher government debt



4.c) Permanent reduction in labor income tax rate, lower government debt

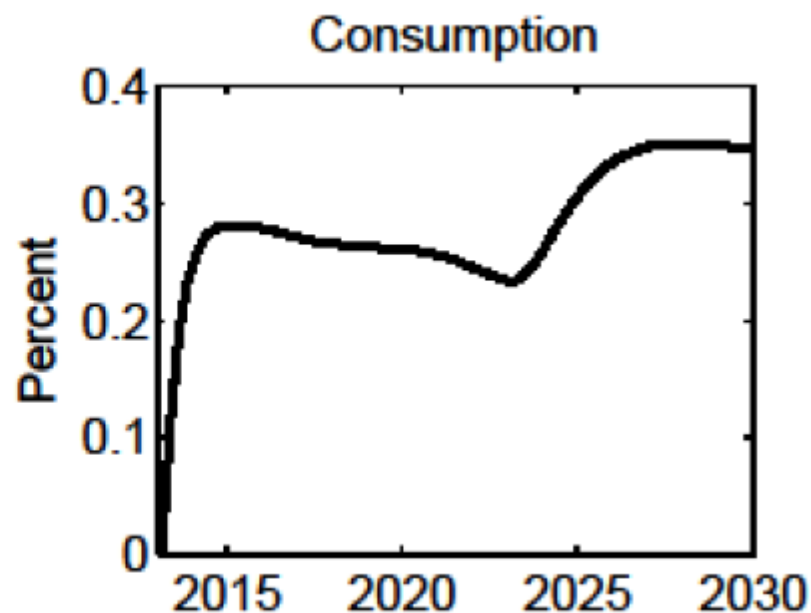
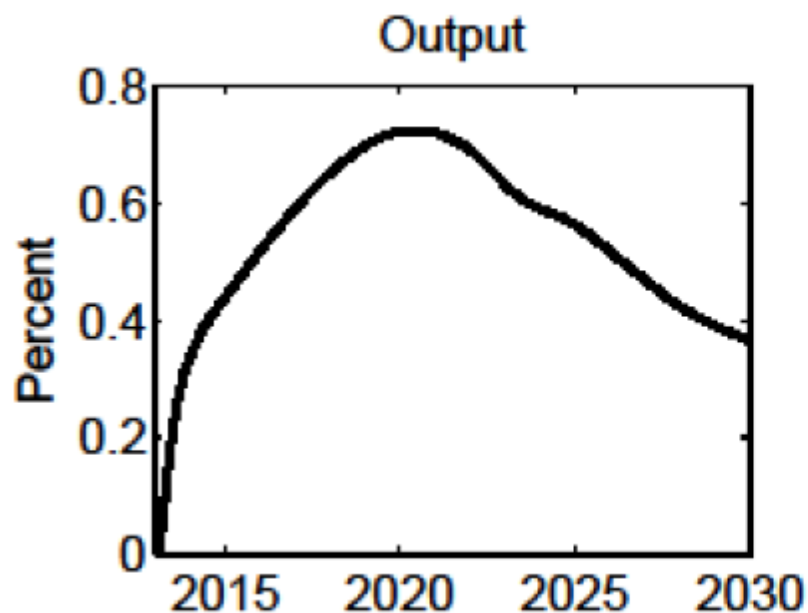


4.c) Permanent reduction in labor income tax rate, lower government debt



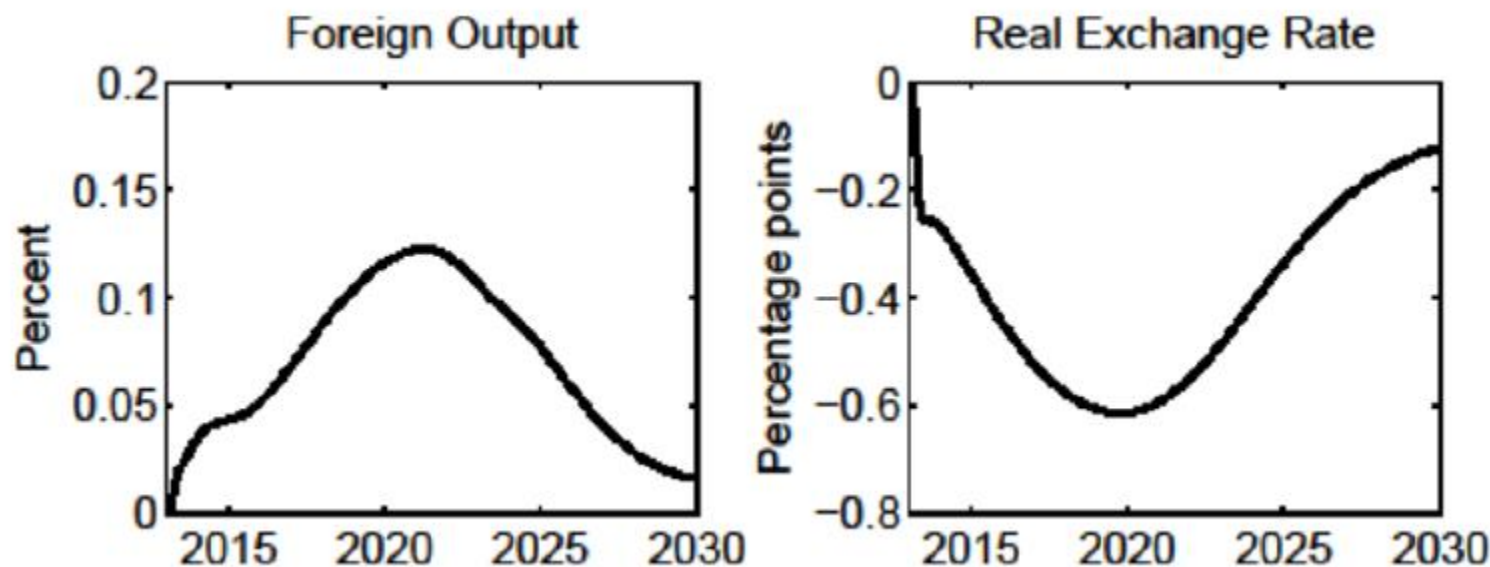
4.c) Permanent reduction in labor income tax rate, lower government debt

➔ Expansionary consolidation.



4.c) Permanent reduction in labor income tax rate, lower government debt

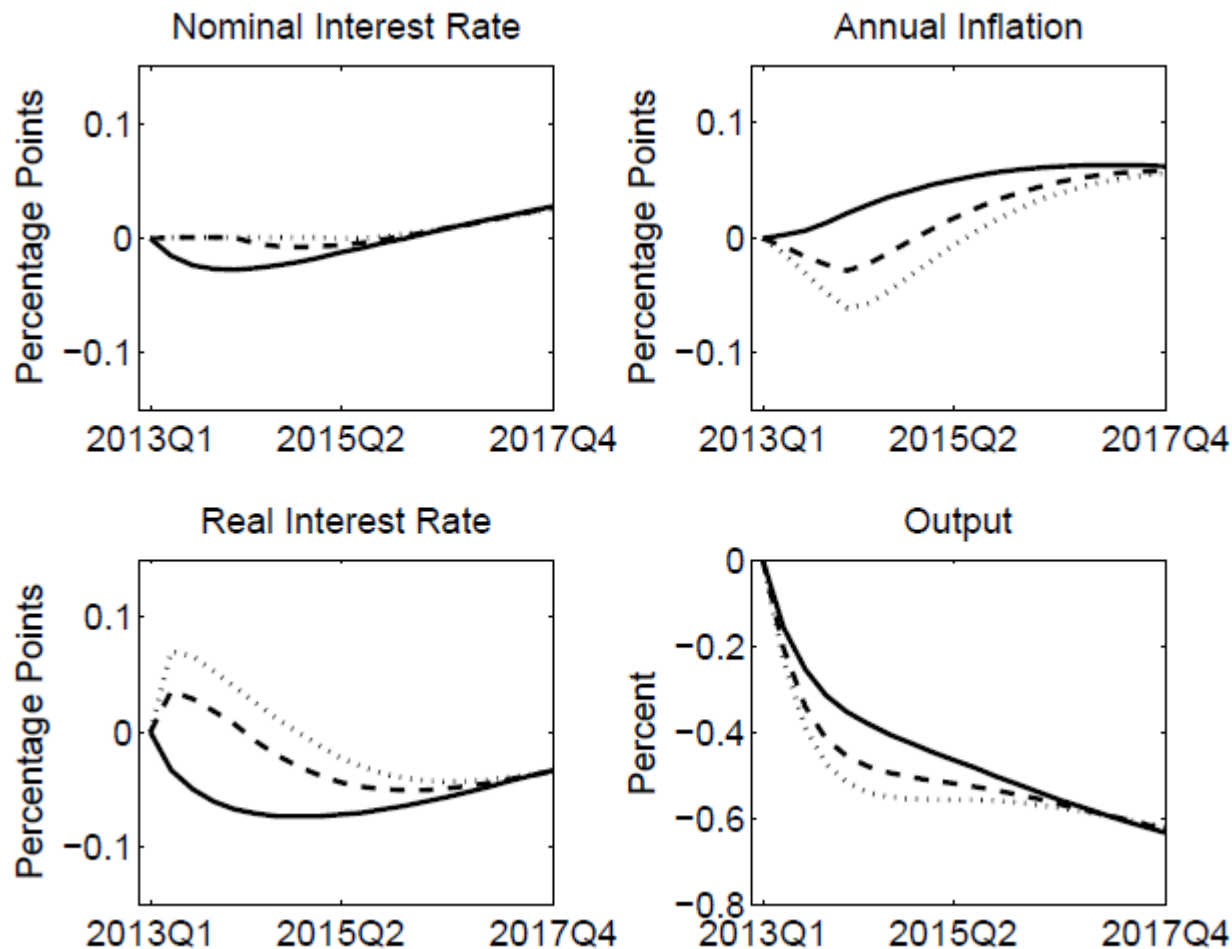
➔ Positive international spillovers.



5. Consequences of the zero-interest bound on monetary policy

- Reconsider scenarios assuming that central bank is prevented from lowering interest rate because it is already near zero.
- Constraint effective for one or two years.
- Taylor rule determines nominal interest rate afterwards.

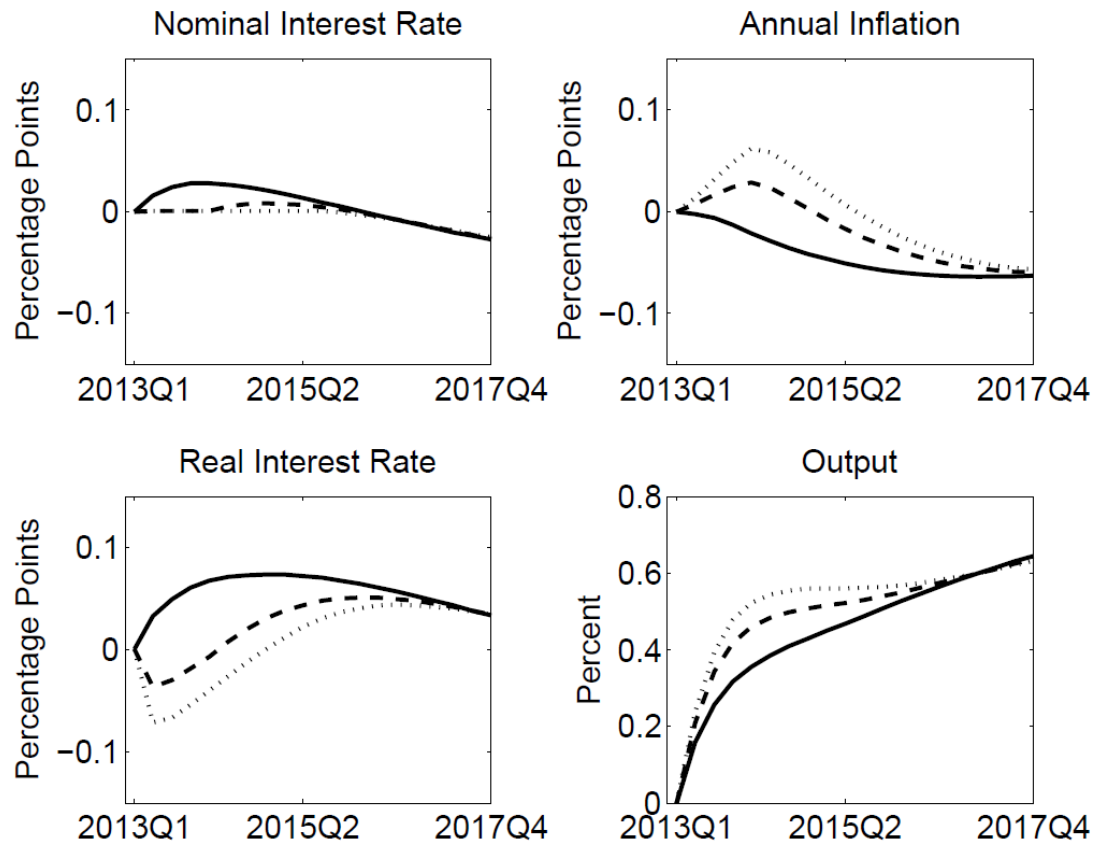
Permanent increase in labor income tax rate, higher government debt



Solid lines:
Baseline scenario
Dashed lines:
Interest rate
constant for 1 year
Dotted lines:
Interest rate
constant for 2
years

5.c Permanent reduction in labor income tax rate, lower government debt

- Assume interest rate held at zero, when Taylor rule would prescribe higher rates.



Solid lines:
Baseline scenario
Dashed lines:
Interest rate
constant for 1 year
Dotted lines:
Interest rate
constant for 2
years

6. Conclusion

- Distortive effect of taxes depresses economic activity in the long-run.
- Permanent tax reduction and debt consolidation financed by temporary transfer cuts leads to expansionary consolidation.
- Well designed expenditure-revenue program for consolidation can stimulate growth in the short-run **and** long-run

6. Conclusion cont.

- If the current baseline implies tax increases to achieve consolidation, then reduction of transfers to pre-crisis levels (relative to GDP) would avoid such tax increases.
- ➔ no explicit tax reductions would be needed to achieve expansionary path relative to such a baseline.

Permanent **reduction** in labor income tax rate, lower government debt

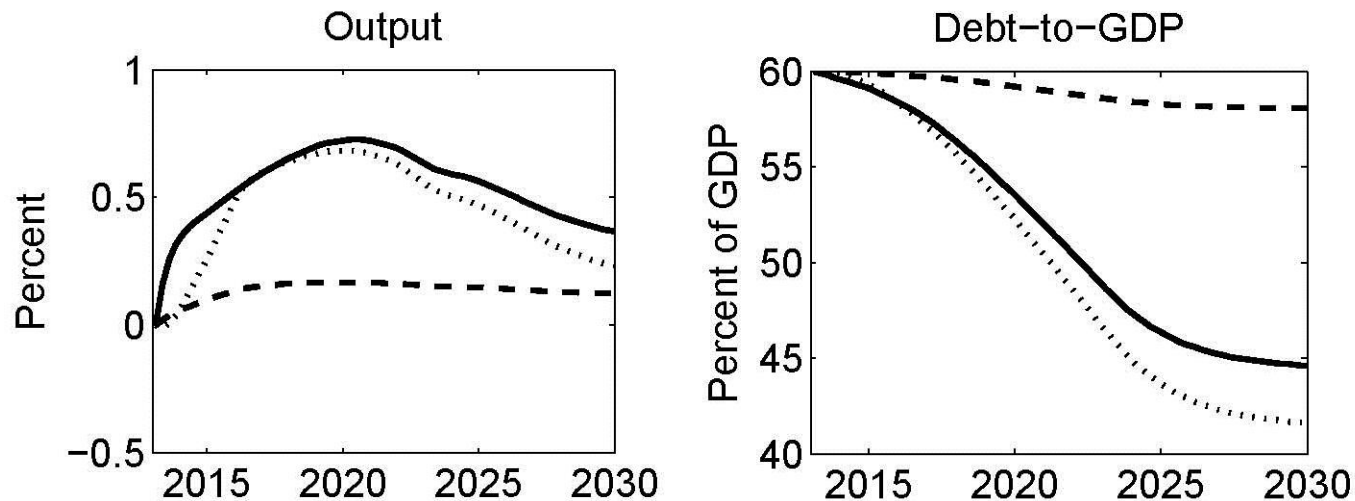
- Long-run effects

Table 1: New Steady-State versus old Steady-State (percentage change)

Labour income tax rate	-1	Total revenue	-0.45	Consumption	0.22
Primary deficit	0.45	Income tax revenue	-0.52	Investment	0.04
Debt-to-GDP	-15.49	Social security contribution	0.06	Net exports	0.03
Total expenditures	-0.45	Capital tax revenue	0.00	Hours worked	0.35
Transfers	0.00	Consumption tax revenue	0.04	Capital	0.20
Government Purchases	0	Real interest rate	0.00		
Interest paid on gov. debt	-0.45	Output	0.30		

Notes: Table reports percentage changes or percentage point changes in the new steady state relative to the initial steady state.

Fiscal consolidation with lower consumption and capital taxes



Notes: **Dotted lines**: reduction of consumption tax by 1 pp. **Solid lines**: Reduction of income tax by 1 pp, **Dashed lines**: Reduction of capital tax by 1pp.

Fiscal consolidation with lower consumption and capital taxes

- Long-run effects

Variables	income tax reduction 1pp	consumption tax reduction 1pp	capital tax reduction 1pp
Debt-to-GDP	-15.49	-18.49	-1.99
Total expenditures	-0.45	-0.54	-0.06
Total revenue	-0.45	-0.54	-0.06
Output	0.30	0.15	0.12
Consumption	0.22	0.11	0.01
Investment	0.04	0.02	0.07
Net exports	0.03	0.02	0.03
Hours worked	0.35	0.17	0.03
Capital	0.20	0.10	0.33

Notes: Table reports percentage changes or percentage point changes in the new steady state relative to the initial steady state.

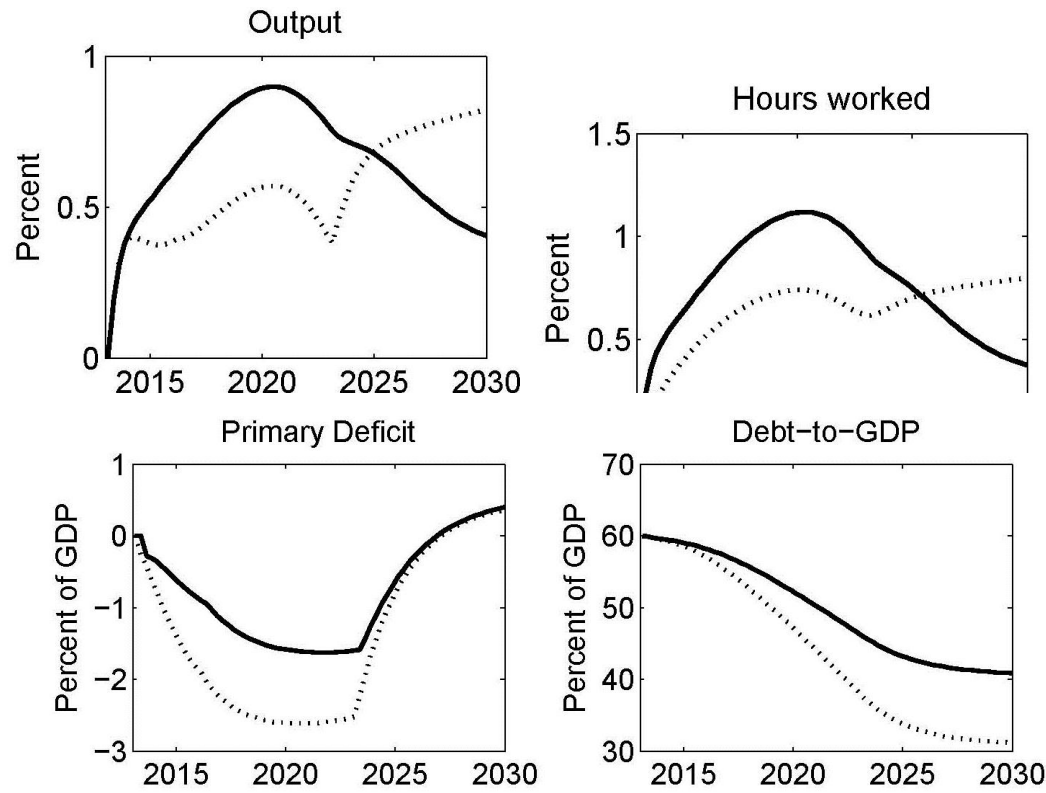
Extra: EU-Quest

- EU-Quest: Ratto, Roeger and int'Veld (2009)
 - Open-economy model of the euro area
 - Estimated with euro area data from 1981 to 2006
 - Fiscal policy rules for government consumption, government investment and government transfers
 - Distortionary taxation in capital, consumption and labor income
 - “rule of thumb” households

5.1 Comparison across Models

- Compare results from benchmark scenario (income tax reduction by 1 p.p. and debt reduction) in different models
 - Coenen et al. (2008)
 - EU-Quest
 - More models to be added at later stage: Make use of the Macroeconomic Model Data Base (www.macromodelbase.com)

5.1 Permanent **reduction** in labor income tax rate, lower government debt



Dotted lines:
EU-Quest
model
Solid lines:
Coenen et al.
model

5.1 Permanent **reduction** in labor income tax rate, lower government debt

- Long-run effects

Variables	Coenen et al model	EU Quest model
Debt-to-GDP	-19.5	-29.0
Total expenditures	-0.57	-0.47
Total revenue	-0.57	-0.47
Output	0.31	0.84
Consumption	0.18	0.56
Investment	0.05	0.15
Net exports	0.03	0.02
Hours worked	0.35	0.91
Capital	0.21	1.13

Notes: Table reports percentage changes or percentage point changes in the new steady state relative to the initial steady state.