European Fiscal Board

European Commission

Scarring effects of major economic downturns: the role of fiscal policy and government investment

Martin Larch

Head of the Secretariat of the European Fiscal Board
joint work with
Peter Claeys (College of Europe) and Wouter van der Wielen (EIB)

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Outline

- The conventional view of the cycle
- Major economic downturns
- Scarring effects
- Fiscal policy and scarring

The conventional view of the cycle

Dornbusch, Fischer, (Startz) Macroeconomics

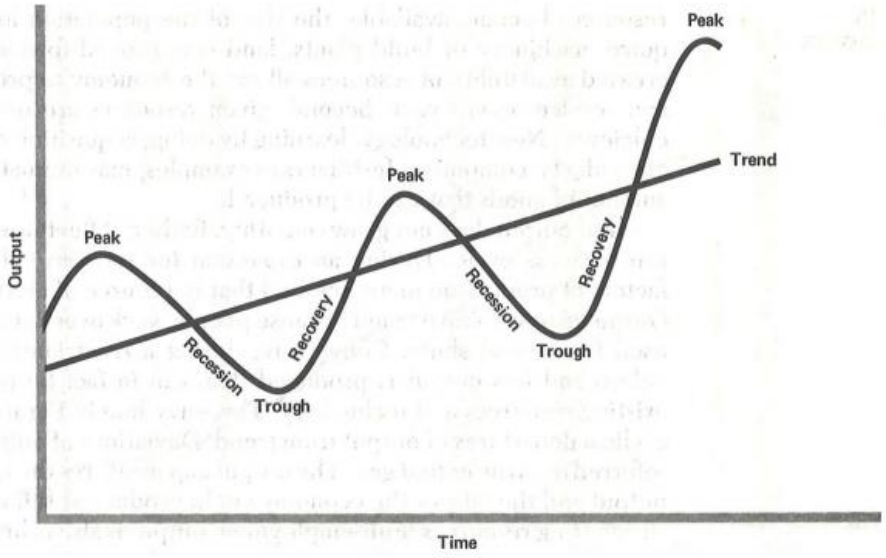


FIGURE 1-2 THE BUSINESS CYCLE. Output or GNP does not grow smoothly at its trend rate. Rather, it fluctuates irregularly around trend, showing business cycle patterns from trough, through recovery, to peak, and then from peak, through recession, back to the trough. Business cycle output movements are not regular in timing or in size.

3rd edition (1984)

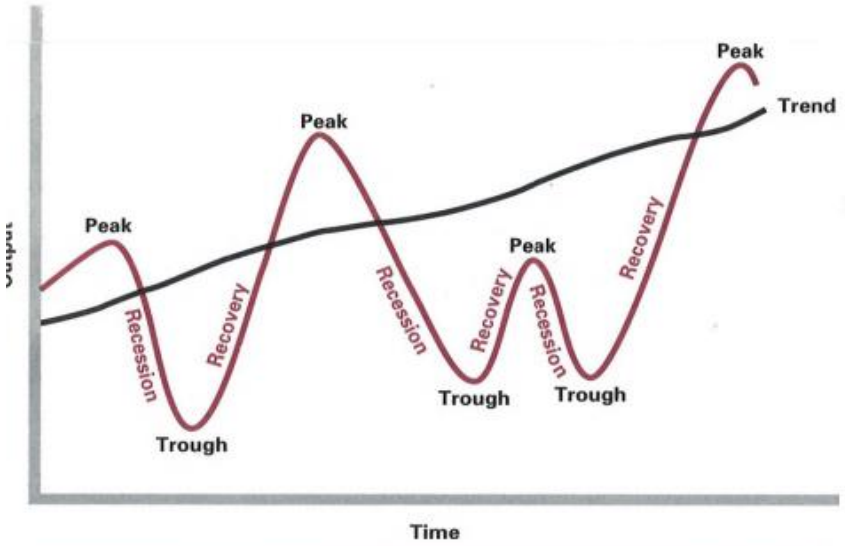


FIGURE 1-2
THE BUSINESS CYCLE. Output, or GDP, does not grow at its trend rate. Rather, it fluctuates irregularly around trend, showing business cycle patterns from trough through recovery to peak, and then from peak through recession and back to the trough. Business cycle output movements are not regular in timing or in size. Nor is the trend growth rate constant; it varies with changes in technical knowledge and the growth of supplies of factors of production.

6th edition (1994), 11th edition (2011), 13th edition (2018)

The conventional view of the cycle

Dornbusch, Fischer, (Startz) Macroeconomics

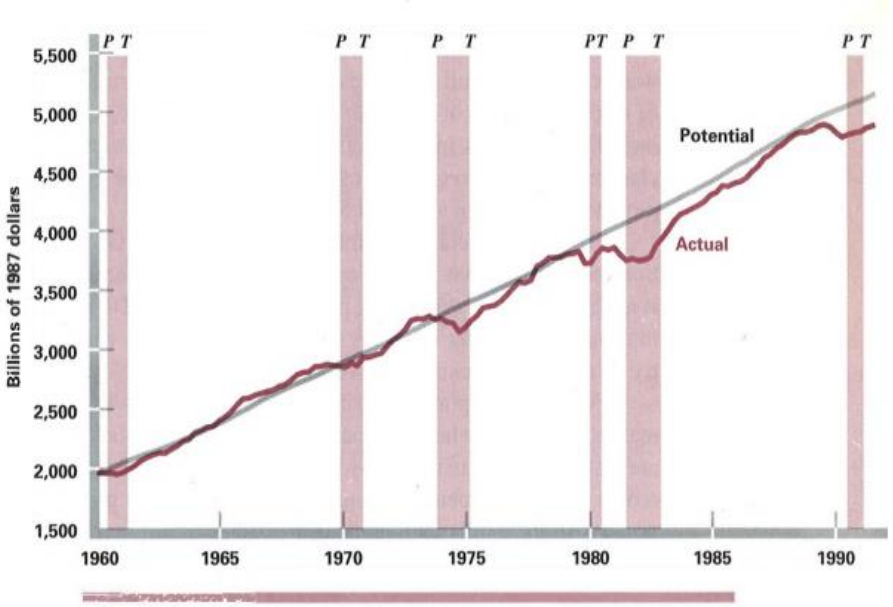


FIGURE 1-3
ACTUAL AND POTENTIAL OUTPUT, 1960–1992. Potential output is the full-employment level of output. It grows like trend output in Figure 1-2. Actual GDP fluctuates around potential, falling below during recession and rising up toward the potential level during recoveries. Shaded areas represent recessions. (SOURCE: DRI/McGraw-Hill.)

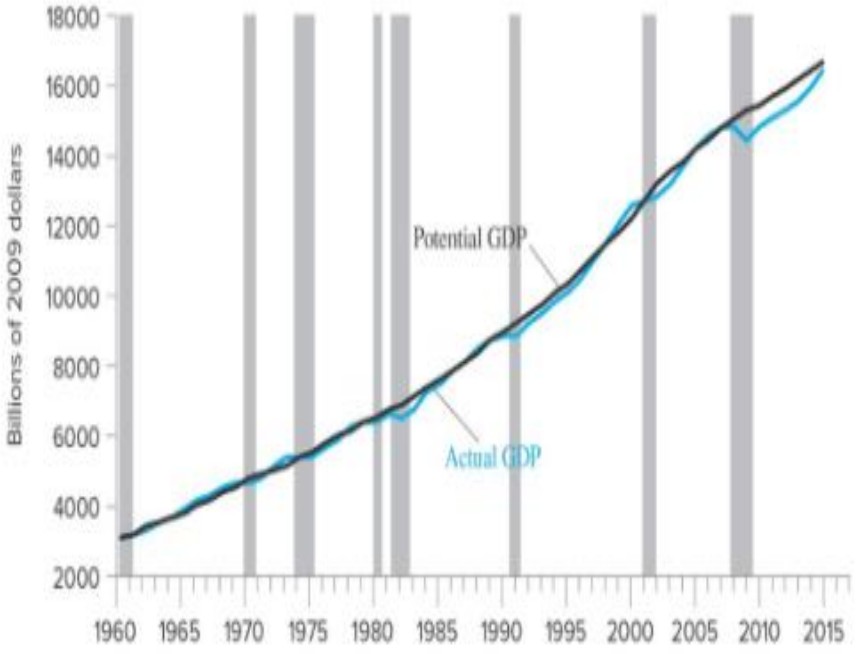


FIGURE 1-8 ACTUAL AND POTENTIAL OUTPUT, 1960–2015.
Source: Federal Reserve Economic Data [FRED].

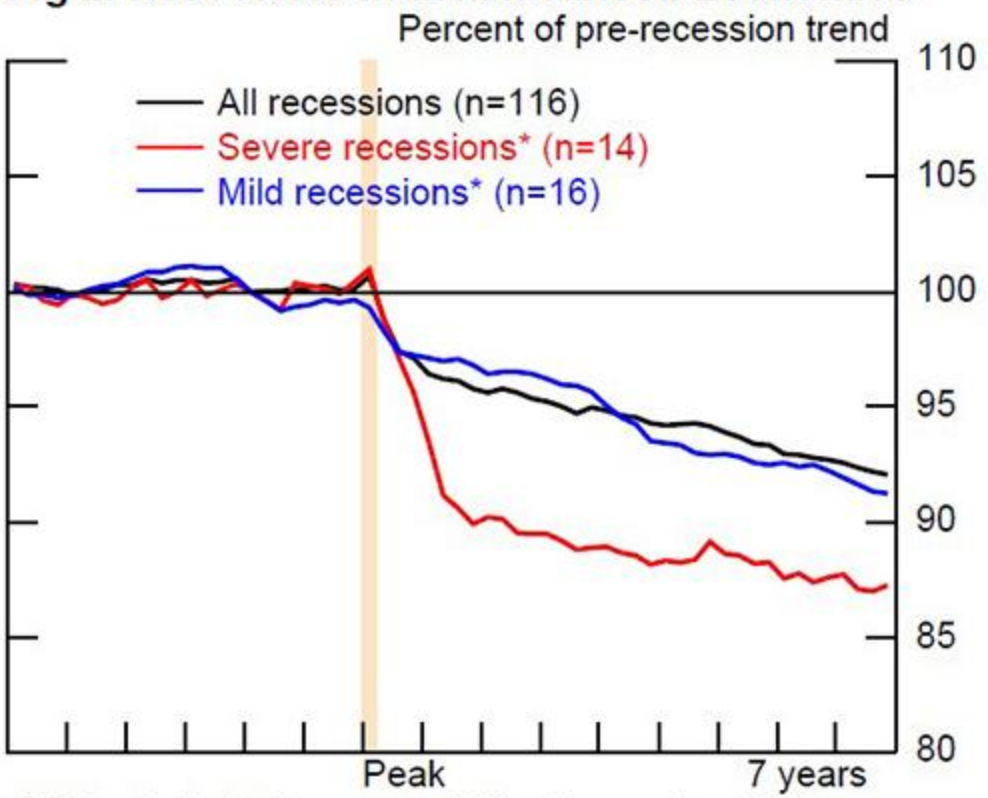
6th edition (1994)

13th edition (2018)

The (un)conventional view of the cycle

Figure 2

Fig 2. Recoveries in the Advanced Economies



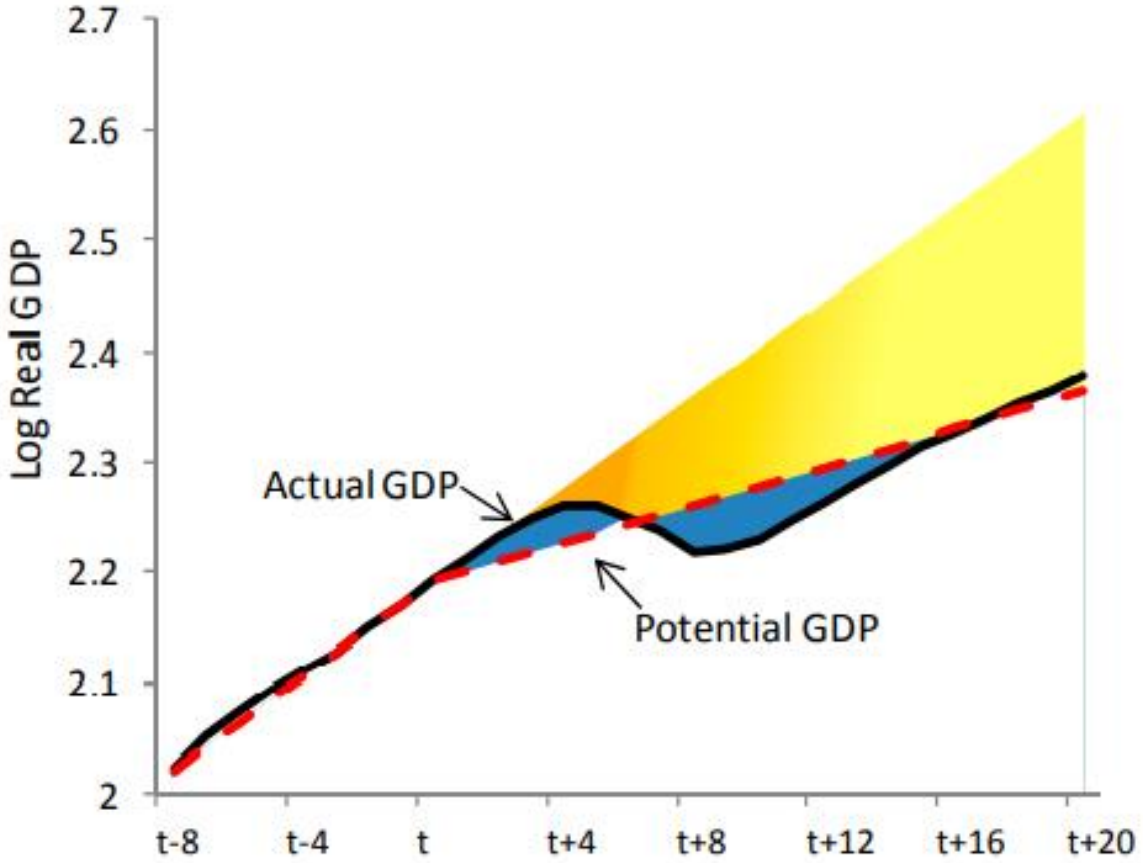
GDP trend calculated as exponential function growing at the four-year average two years prior to the peak

* Severe recessions are in the top 25th percent of recessions as measured by both depth and duration. Similarly, mild recessions are in the bottom 25th percentile of each category.

Martin, Munyan, Wilson (2015) based on 23 advanced OECD economies from 1970 (quarterly data)

The (un)conventional view of the cycle

Figure 10. Decreases in growth, recessions, and output gaps.

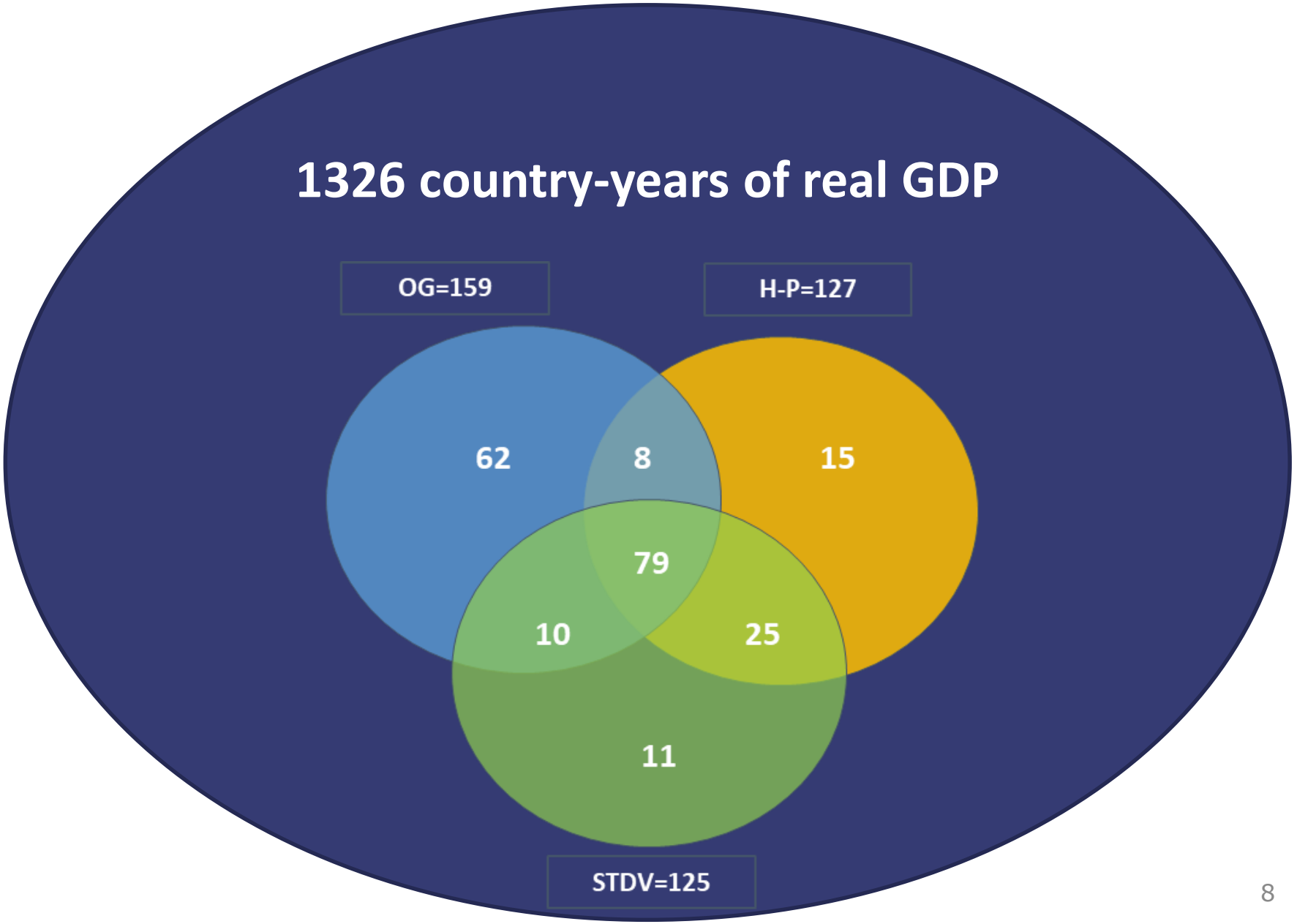


Blanchard, Cerutti, Summers (2015) 23 advanced OECD countries since 1960 (quarterly data)

Major economic downturns: our samples

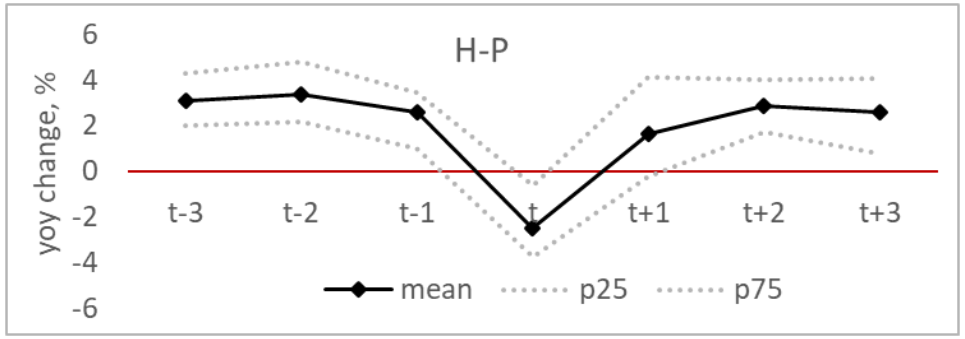
26 OECD countries of which 14 EU, since 1970 or earliest available year (annual data)

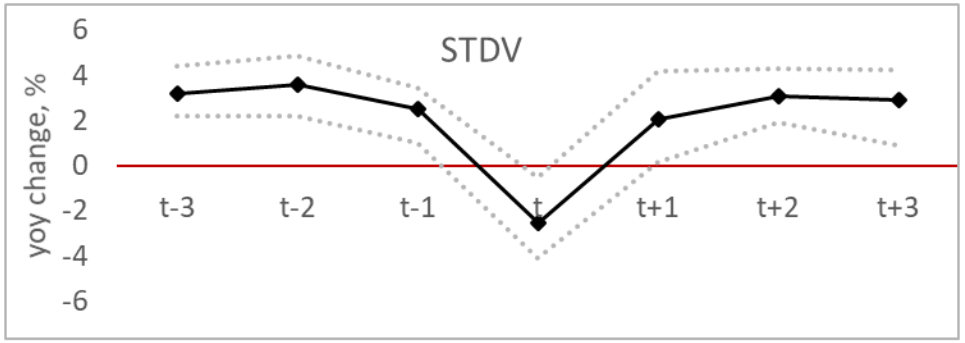
Major economic downturns: our sample

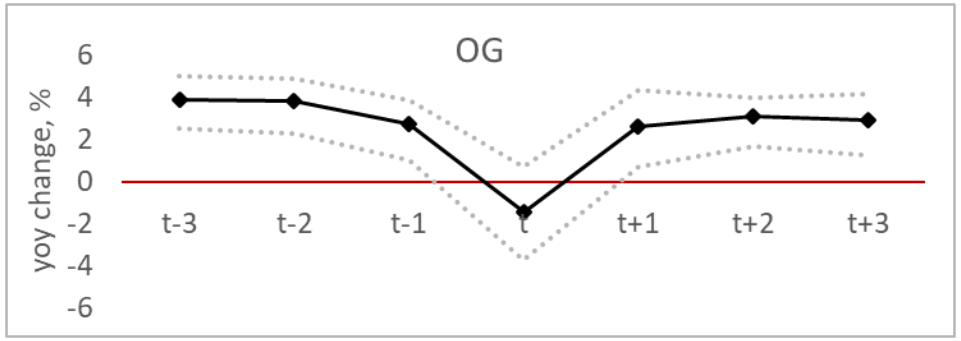


Major economic downturns: our sample

Real GDP

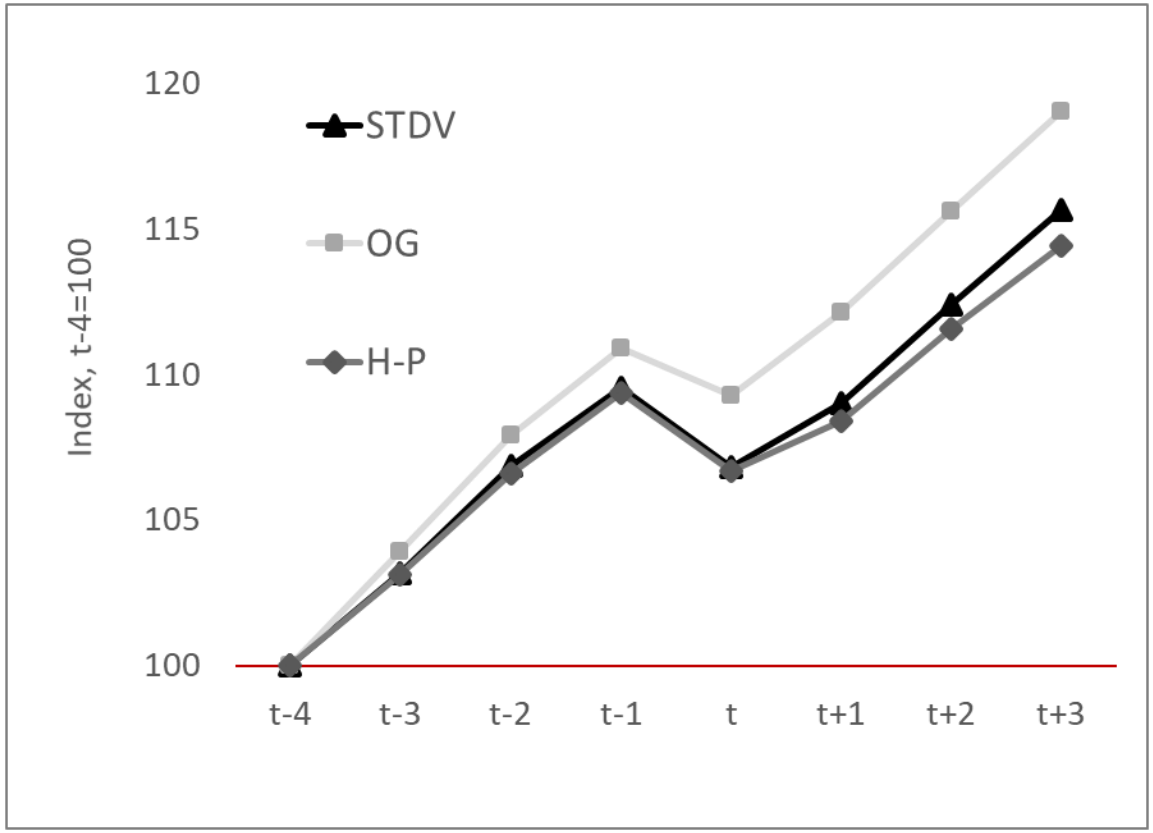






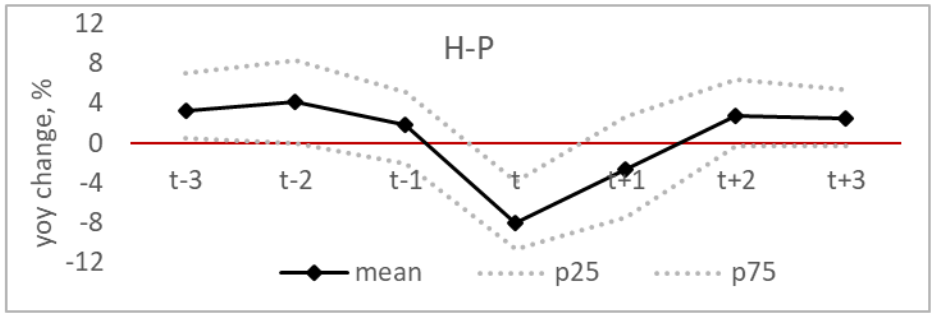
Major economic downturns: our sample

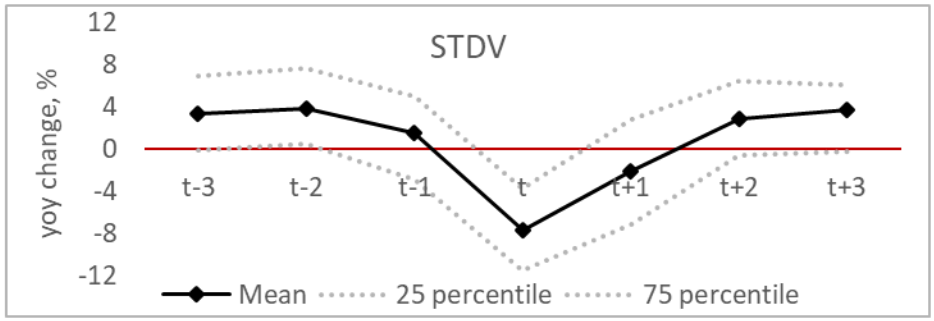
Real GDP

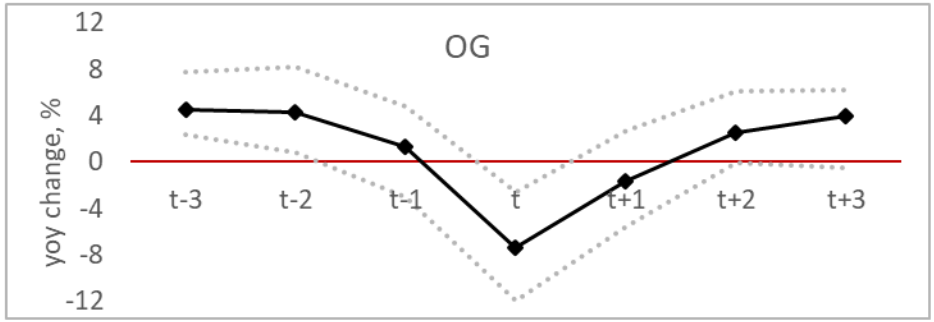


Major economic downturns: our sample

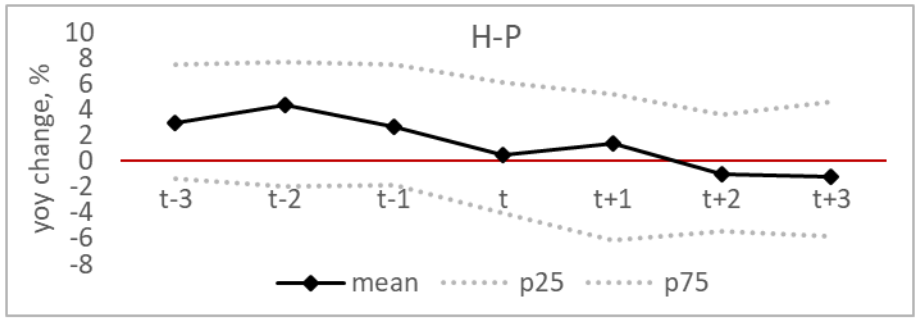
Private investment

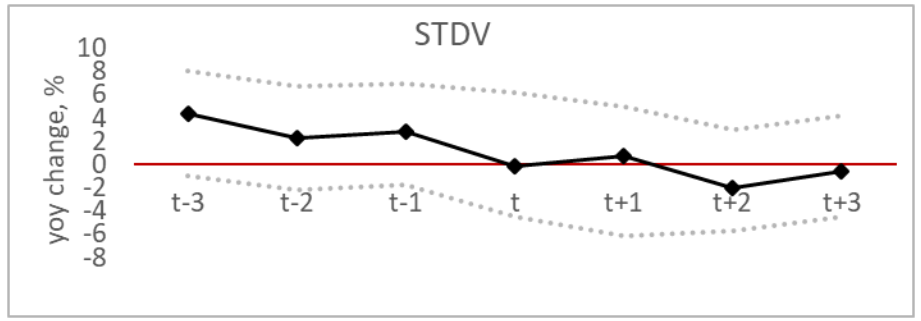


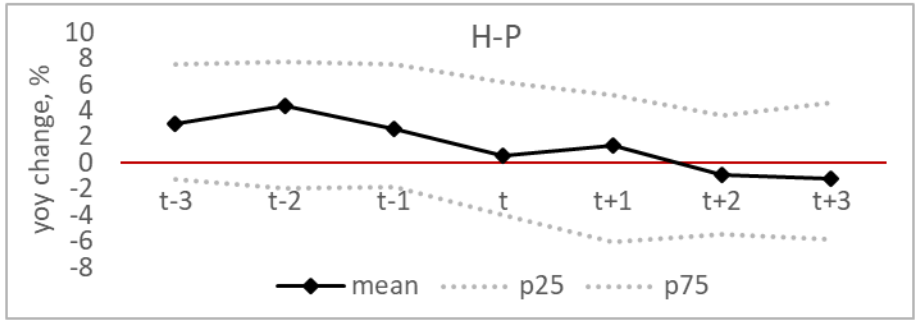




Public investment

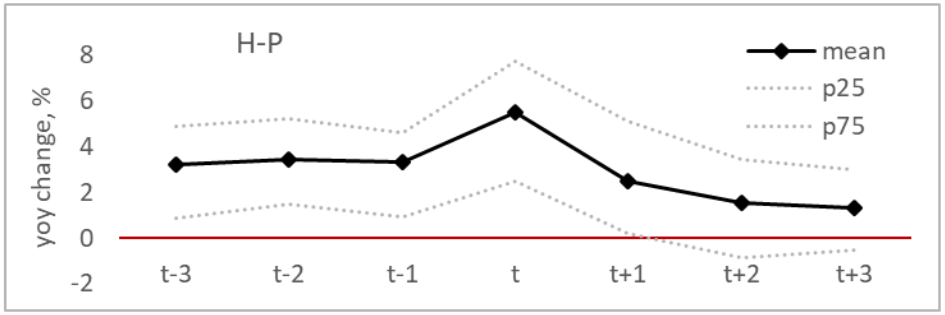


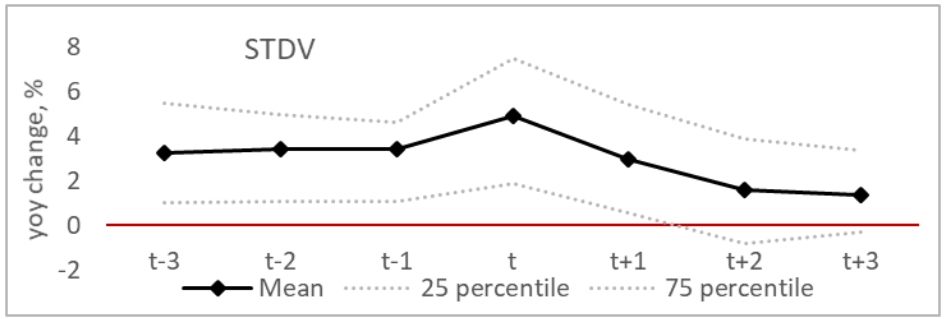


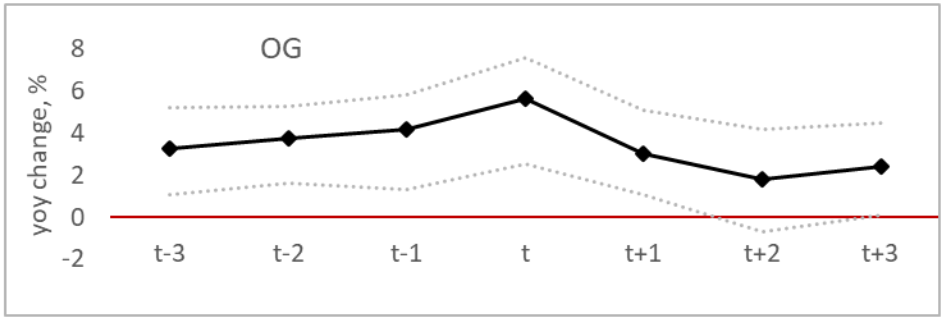


Major economic downturns: our sample

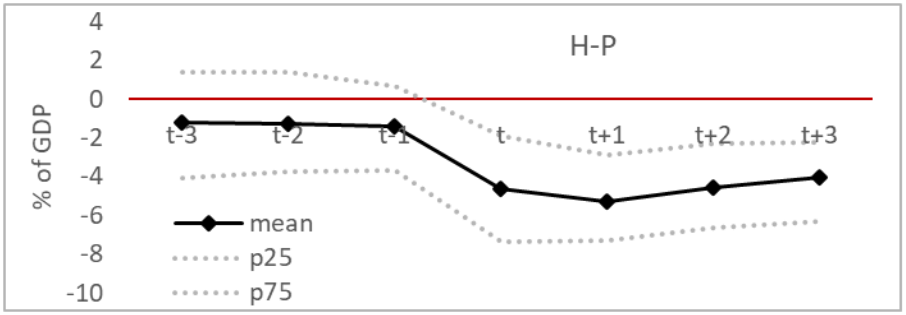
Public spending

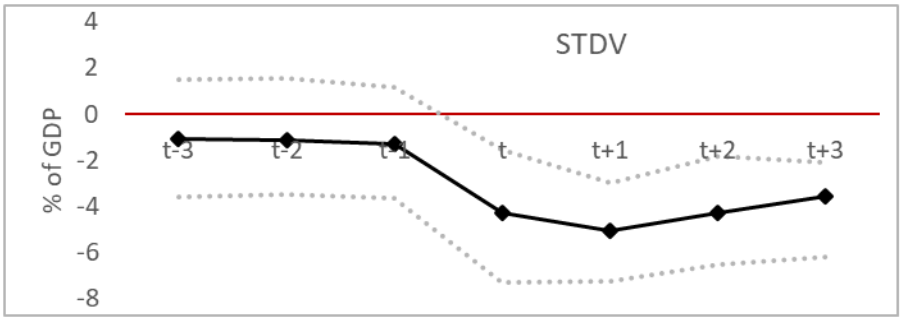


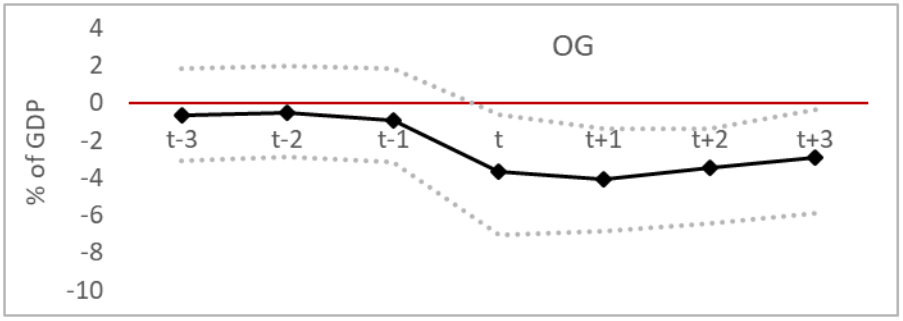




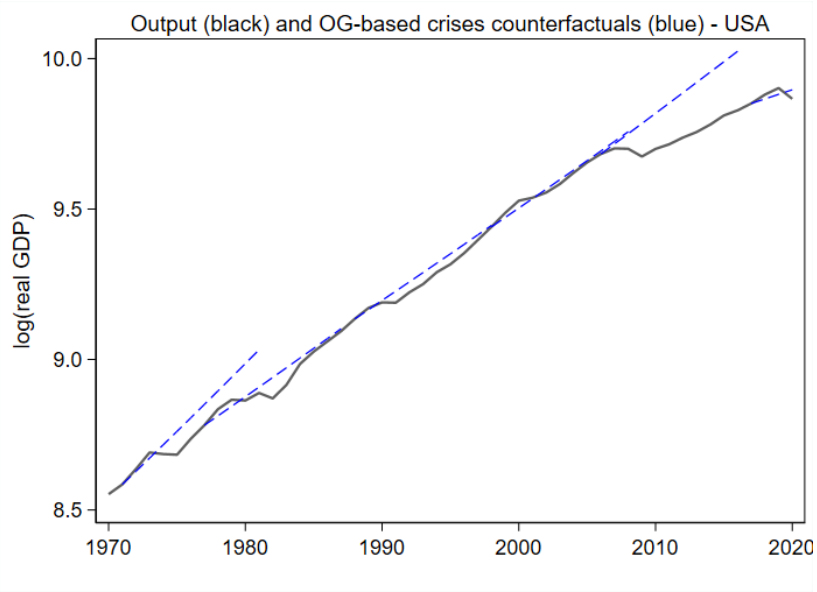
Budget balance

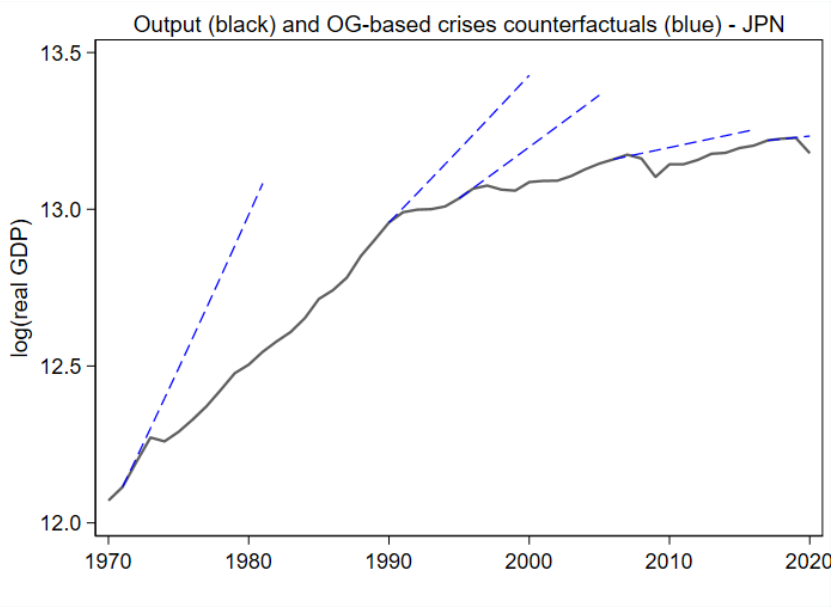


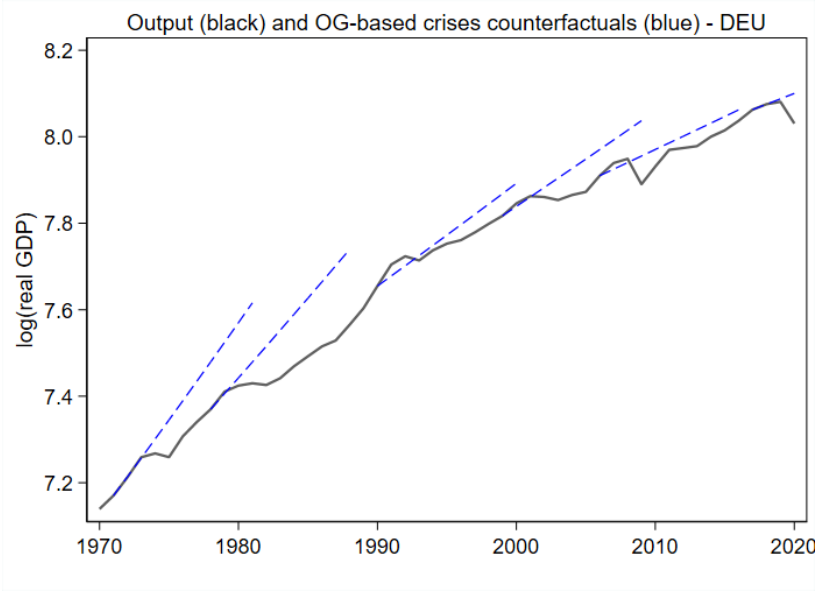


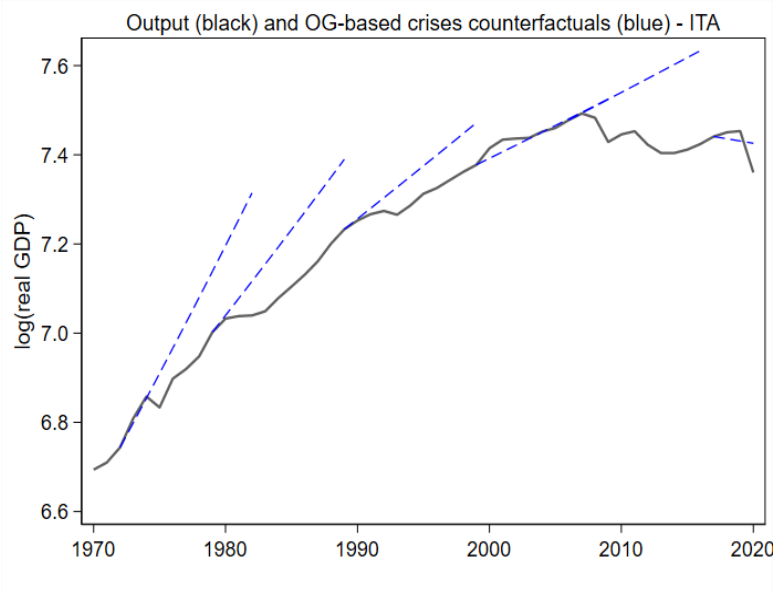


Scarring: pre-crisis trend vs actual output



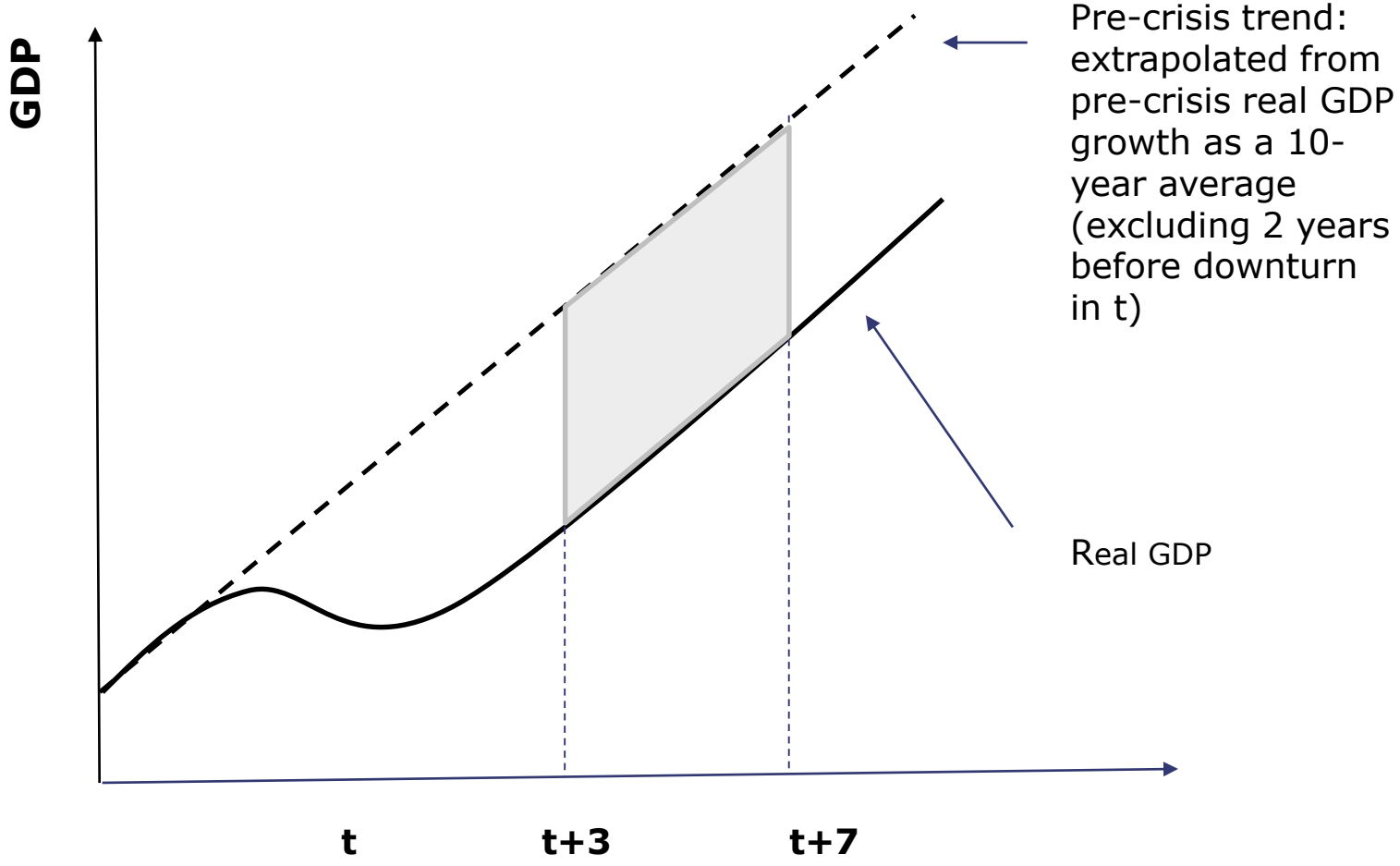




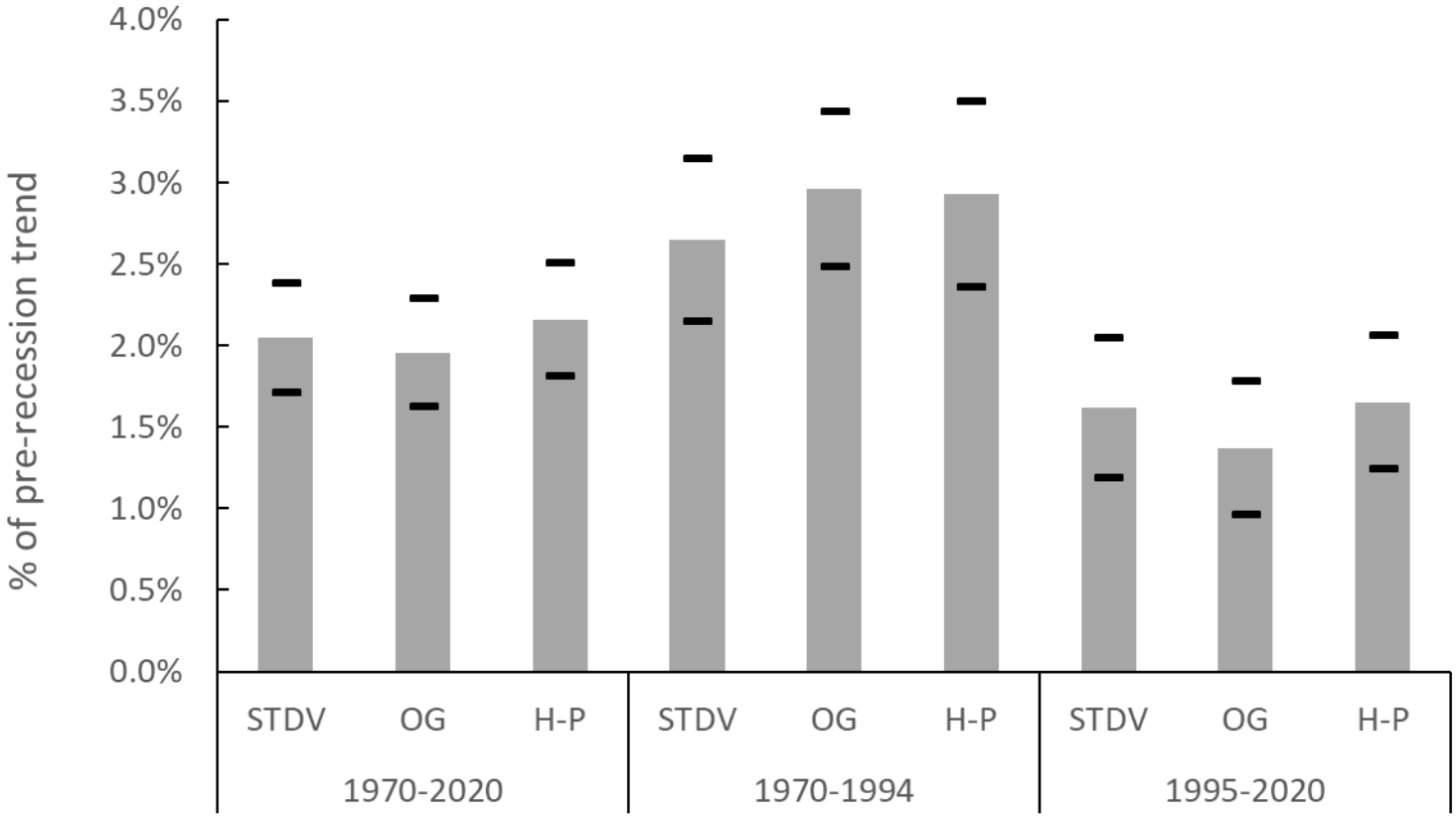


Scarring: pre-crisis trend vs actual output

$$Scarring_{i,t} = \sigma_{i,t} = \frac{1}{5}\sum_{\tau=3}^{7} \frac{\left(Pre - crisis\ trend\ GDP_{i,t+\tau} - Actual\ GDP_{i,t+\tau} \right)}{Pre - crisis\ trend\ GDP_{i,t+\tau}}$$

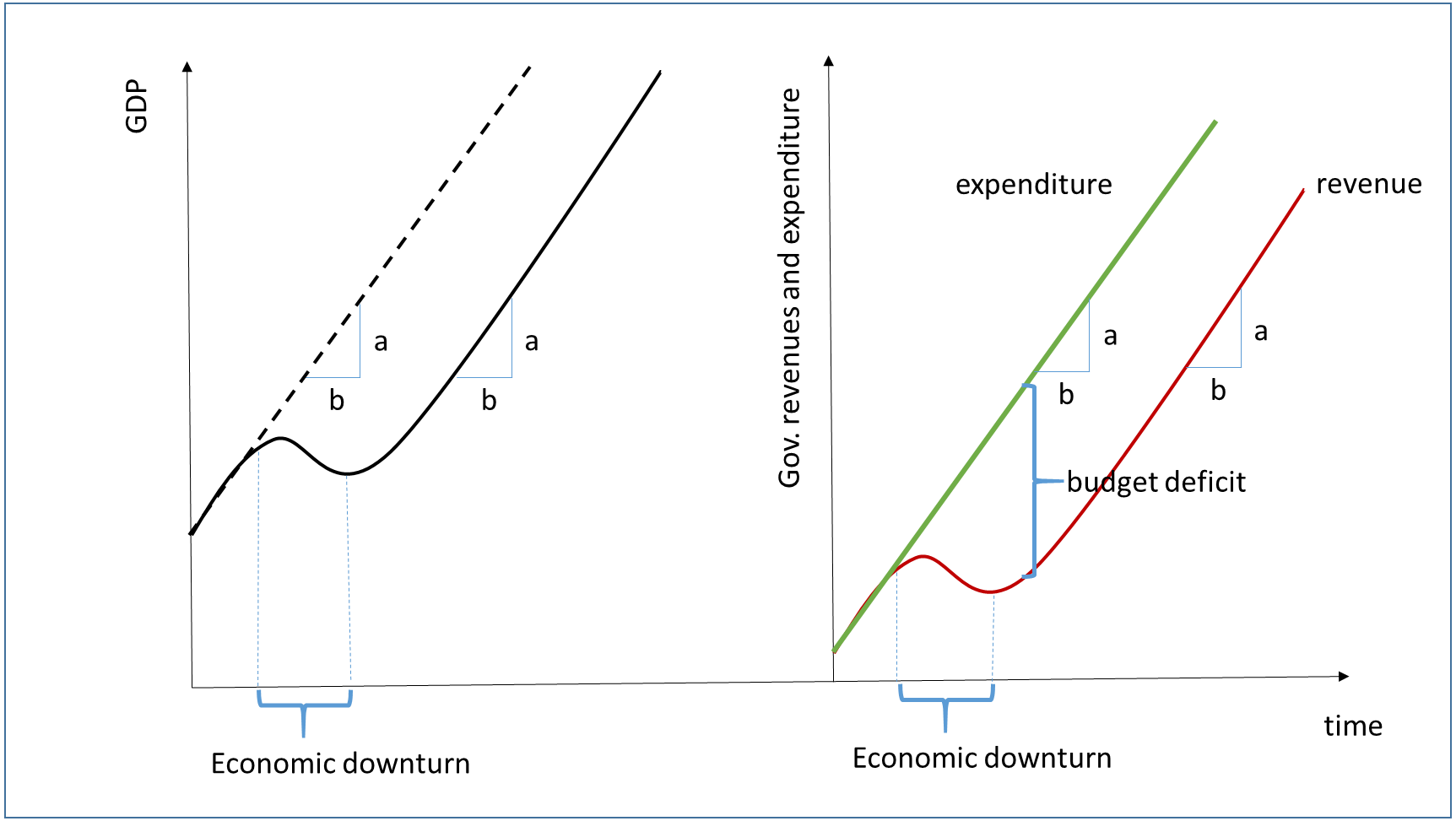


Scarring: pre-crisis trend vs actual output



90% confidence intervals based on standard errors of the mean

Scarring: implications for fiscal policy



Regression analysis: specification

$$\sigma_{i,t} = \sum_j \alpha_j \left(x_{j,i,t} - \bar{x}_{j,i,t-3|t-1}\right) +$$ **Fiscal variables**

$$\sum_j \beta_j \left(y_{j,i,t} - \bar{y}_{j,i,t-3|t-1}\right) +$$ **Control variables**

$$\sum_j \delta_j D_{j,i,t} + \theta + e_{i,t}$$ **Dummies**

Regression analysis: fiscal variables

G, yoy change, t - ∅ (G, yoy change, t-1:t-3)

I^G, yoy change, t - ∅ (I^G, yoy change, t-1:t-3)

b=BB/Y , t - ∅ (b, t-1:t-3)

Reference:

db= (dR/R-dY/Y)*R/Y – (dG/G-dY/Y)*G/Y

Regression analysis: main results

Controls

Systemic banking crises	+	
Successive downturns	+	(weak significance)
Private investment	-	
Structural reforms	+/-	(weak significance)

Fiscal variables

Budget deficit	-	
Government investment	-	
Current gov. exp.	-	(weak significance)

Auxiliary regressions

Does government debt affect fiscal response during downturns?

Yes, it does! Higher government debt-to-GDP ratio weighs on:

- government investment (growth)
- government budget deficit in % of GDP

Finding consistent with many studies looking at fiscal policy across full cycle

Implications for post-Covid?

Will this time be different?

- Some forecasts see return to linear extrap. of pre-crisis trend
- Growing number of observers point to bottlenecks in supply chain and labour shortages

Was policy response appropriate?

- Forceful fiscal policy response incl. job retention schemes and guarantees for firms
- In EU, PEPP added fiscal space in high debt countries
- RRF boosts government investment

Challenges?

- Effective implementation of RRF
- Switching towards consolidation

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Thank you for your time!