Employment and Macro Policy in the Aftermath of the Crisis

Coen Teulings
University of Cambridge

Presentation for IZA conference
10/11 October 2013, Brussels

Introduction

- Employment at this stage of European history
- Based on my previous CPB experience
- Minimum wages? EPL? Wage subsidies?

?

Introduction

- Employment at this stage of European history
- Based on my previous CPB experience
- Minimum wages? EPL? Wage subsidies?

Introduction

- Employment at this stage of European history
- Based on my previous CPB experience
- Minimum wages? EPL? Wage subsidies?
- No! Housing and macro policy
- On-going research

Overview of the talk

1. Stylized facts
2. Theory framework
3. Outline of the model
4. Policy experiment
5. The 10 commandments

Overview of the talk

1. **Stylized facts**
2. Theory framework
3. Outline of the model
4. Policy experiment
5. The 10 commandments

The effect of Financial Crises

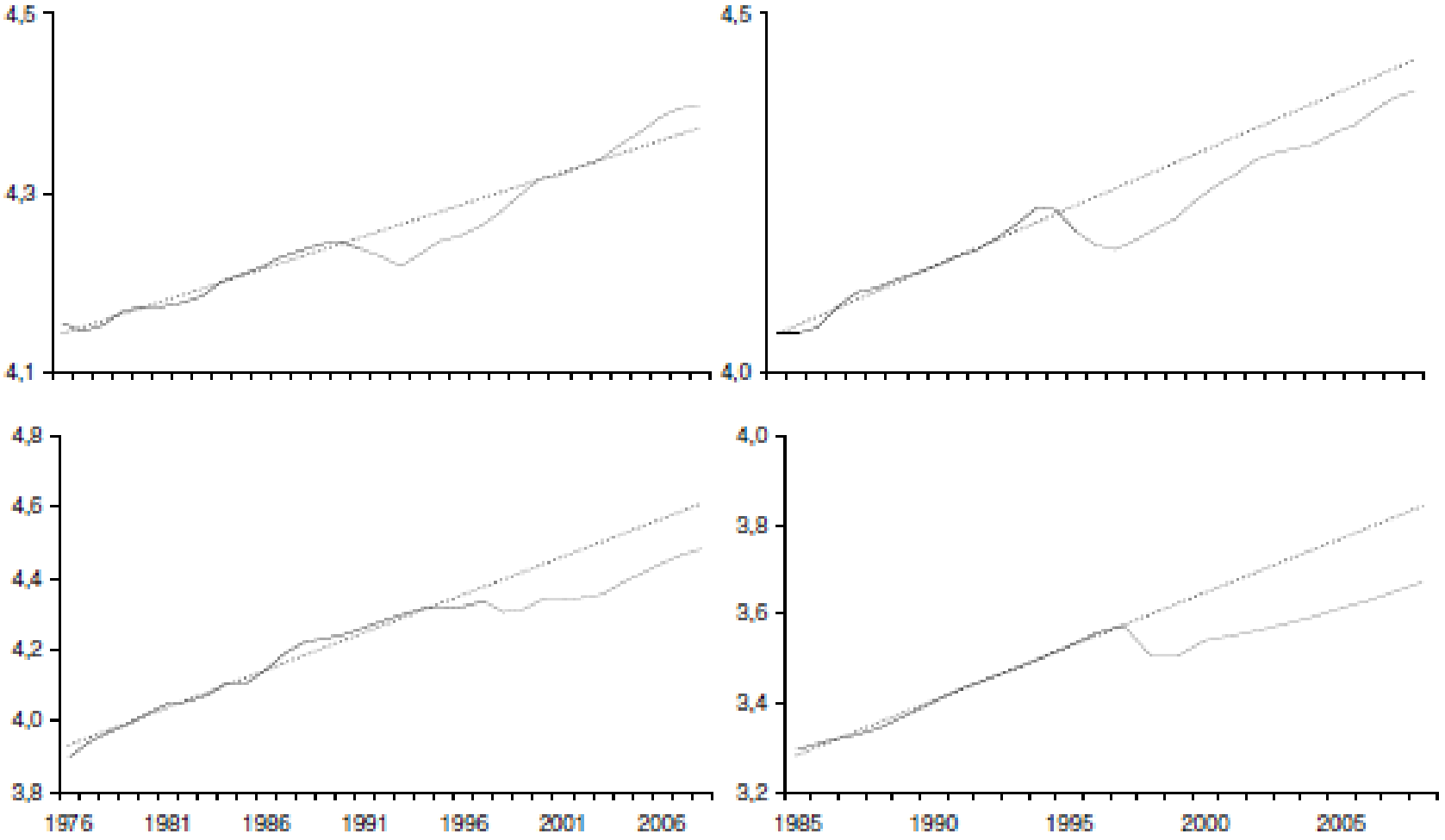
15 cases (Reinhart & Rogoff)

	Peak to Trough (%)	Duration (years)
Income per head	-9	1.9
Unemployment	7	4.8
House prices	-36	6.0
Stock prices	-56	3.4
Sovereign debt	86	3.0

GDP effect largely permanent

Sweden, Finland

Hong Kong, Indonesia



House price slumps

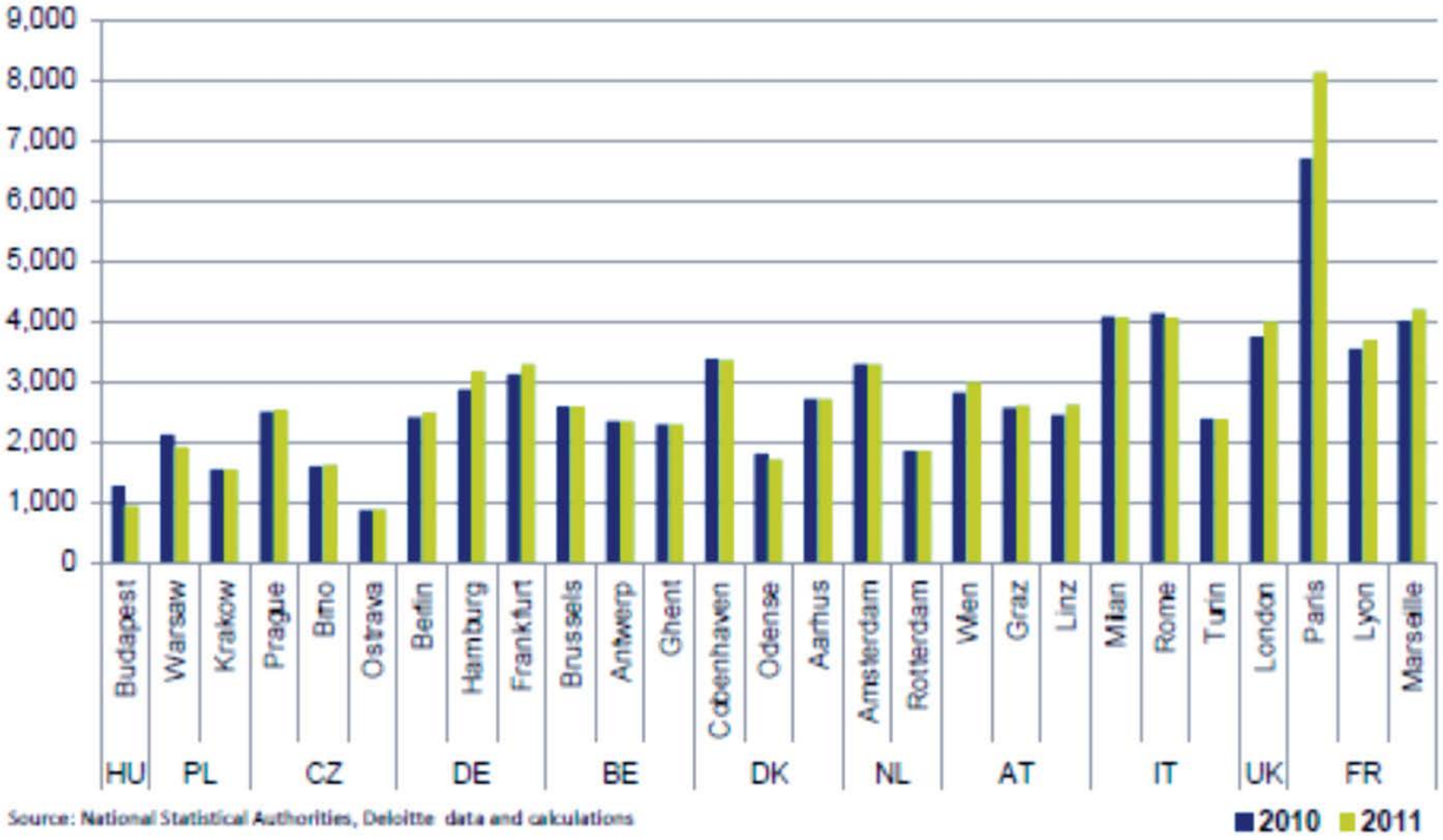
Benetrix, Eichengreen, O'Rourke

Country	Start date		End date		Slump
	Year	quarter	year	quarter	size
US	1979	2	1983	4	-9.4
US	1989	3	1996	4	-11.6
UK	1973	3	1978	1	-32.8
UK	1989	3	1996	2	-31.4
Belgium	1970	1	1971	3	-8.2
Belgium	1979	3	1985	2	-35.6
Denmark	1973	3	1974	3	-13.7
Denmark	1979	2	1982	4	-36.0
Denmark	1986	1	1993	2	-35.6
France	1970	1	1971	2	-6.2
France	1980	4	1984	4	-19.2
France	1991	1	1997	1	-16.6
Germany	1975	1	1976	3	-5.1
Germany	1981	2	1989	2	-14.2
Italy	1981	2	1986	3	-36.3
Italy	1992	4	1996	1	-12.5
Italy	1997	2	1999	4	-3.4
Netherlands	1978	2	1986	1	-50.3
Norway	1970	1	1973	1	-5.1
Norway	1980	2	1983	4	-9.1
Norway	1987	2	1993	1	-41.4
Sweden	1970	1	1971	3	-7.0
Sweden	1979	3	1986	2	-40.0
Sweden	1990	1	1995	4	-31.9
Switzerland	1973	1	1977	1	-27.4
Switzerland	1989	4	2000	4	-36.8
Canada	1976	1	1984	3	-21.8
Canada	1989	4	1991	3	-12.3
Japan	1973	4	1978	1	-28.7
Finland	1970	4	1972	2	-6.8
Finland	1974	1	1979	4	-26.5
Finland	1989	2	1995	4	-50.8
Finland	1999	4	2001	4	-5.3
Ireland	1970	4	1973	2	-9.6
Ireland	1979	2	1987	2	-32.0
Spain	1978	2	1982	2	-35.0
Spain	1991	4	1997	4	-24.1
Australia	1974	1	1978	4	-17.5
Australia	1986	2	1987	3	-8.4
Australia	1989	2	1996	4	-7.3
New Zealand	1974	3	1980	4	-38.2
New Zealand	1984	2	1986	4	-8.3
New Zealand	1990	1	1992	1	-7.9
New Zealand	1997	2	2000	4	-7.2

Anecdotical Evidence on Europe

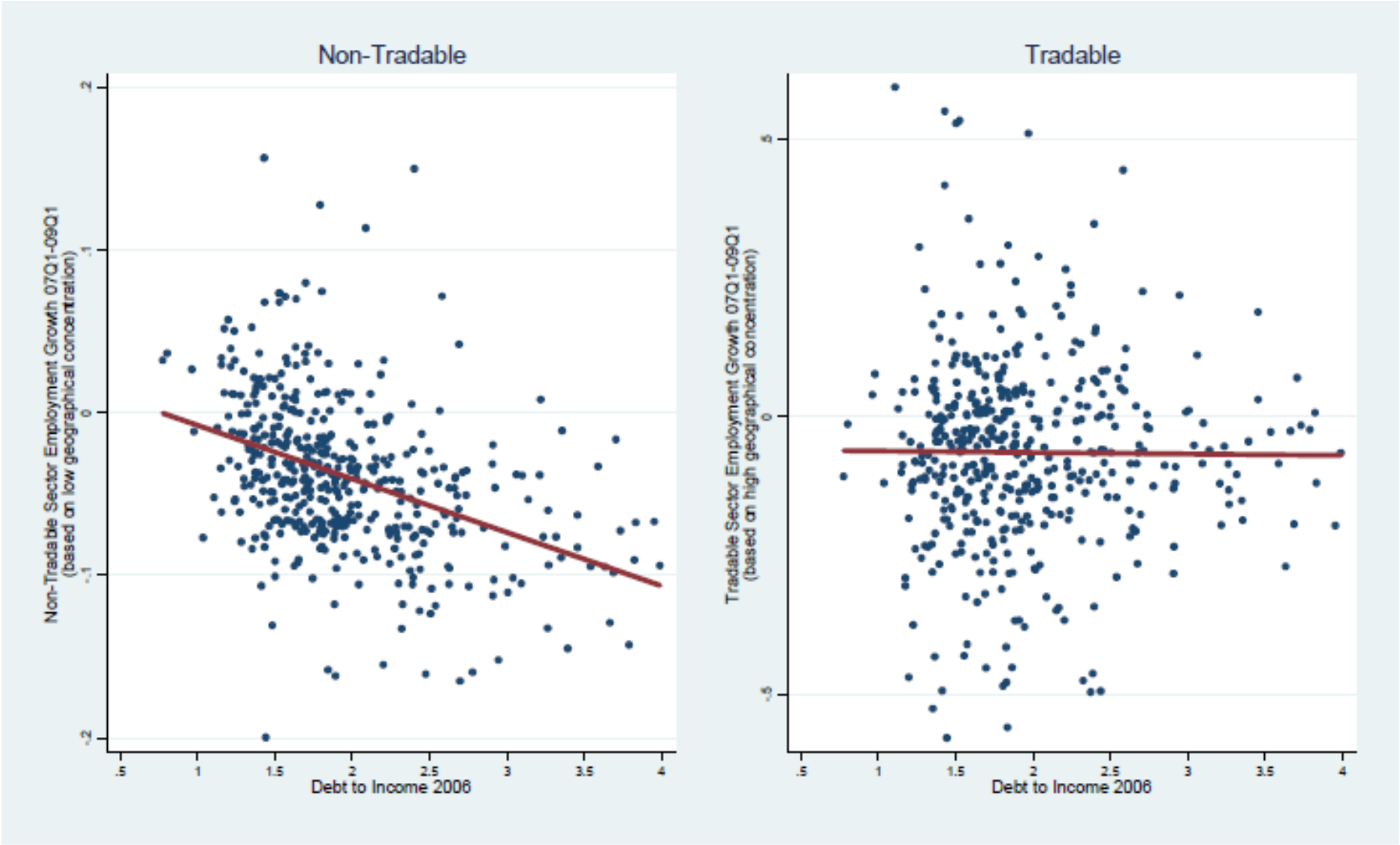
- House price decline $\leftrightarrow$ Unemployment
  - Small decline: Ger, Swe,NL (till 2010)
  - Strong decline: Esp, Ire, UK, Denmark, NL (since 2010)
  - Denmark and NL: high mortgage debt, unemployment
- Spain
  - 25% males work in construction
  - fall in human capital
- Current account since 2002
  - Surpluses: Ger, Swe, Denmark, NL, Austria, Finland
  - Deficits: UK, Gre, Esp, Por

House price overvalued?

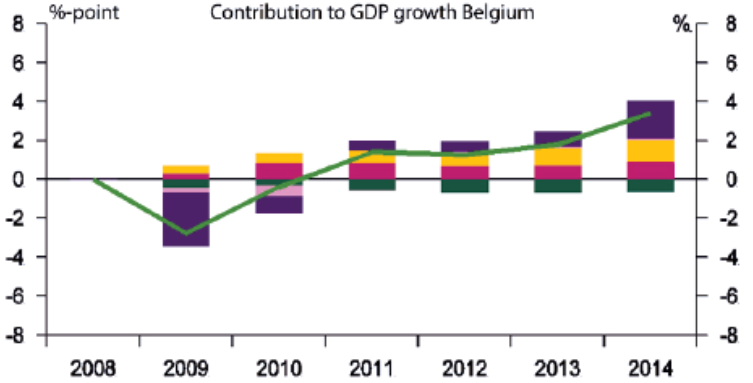


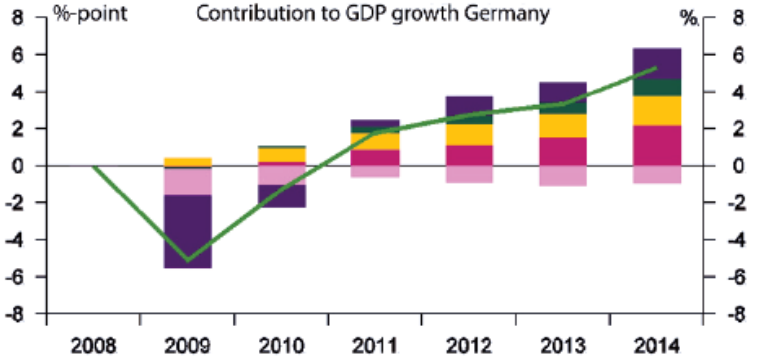
House prices, wealth, employment

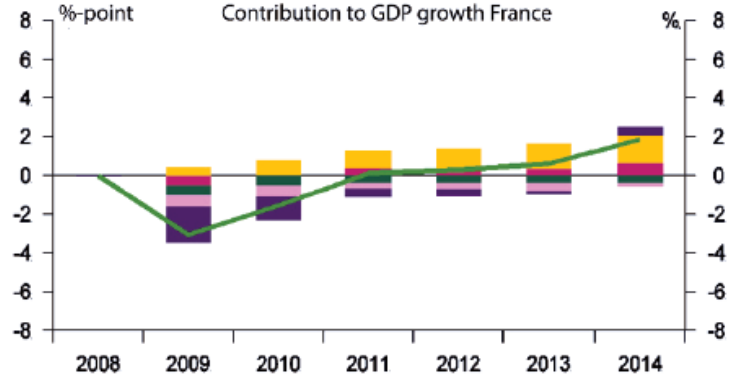
Mian & Sufi

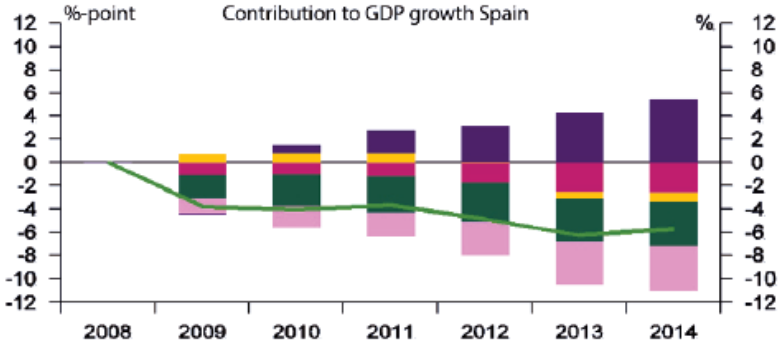


Decomposition of demand



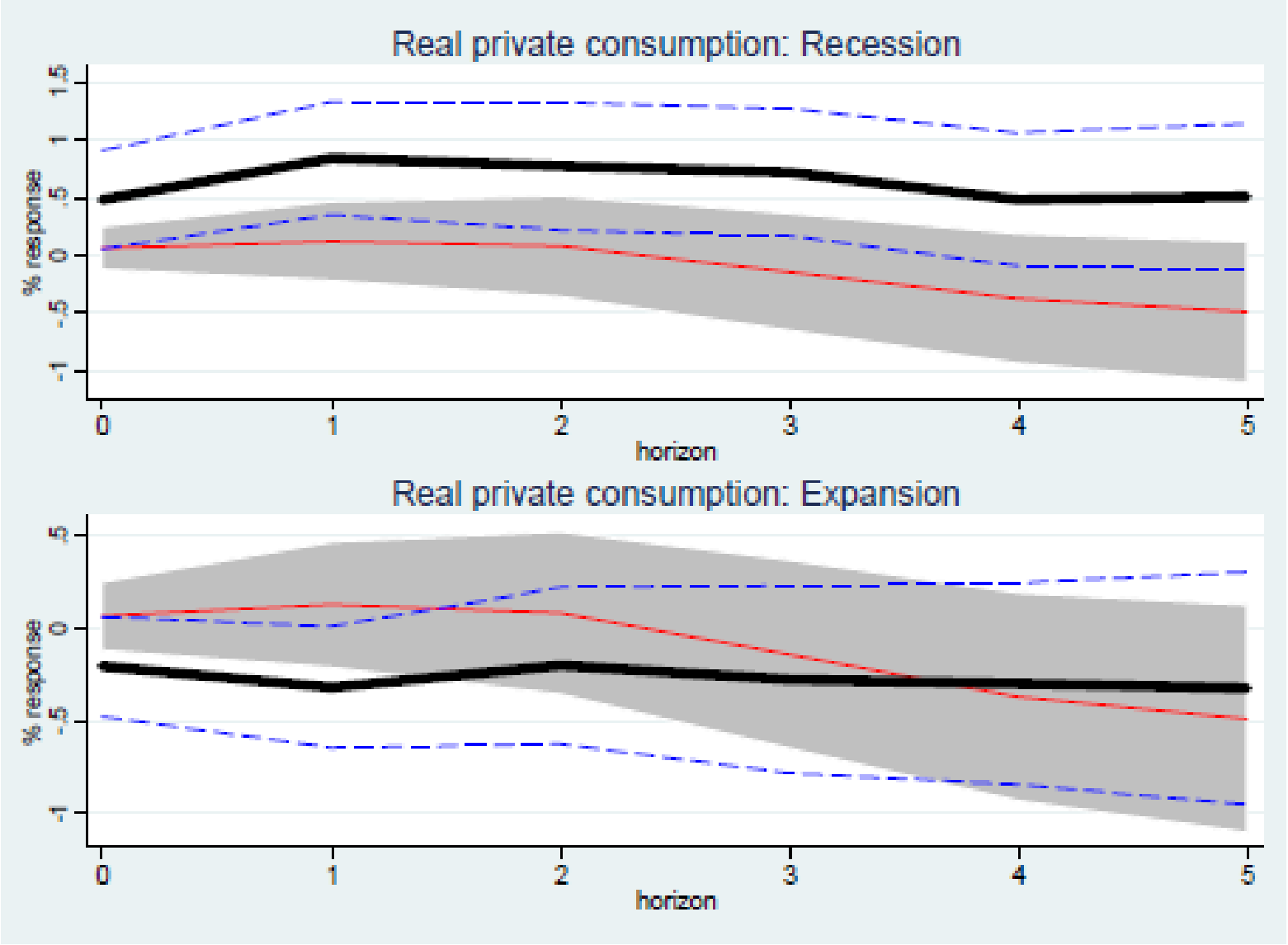






Fiscal multiplier

Auerbach & Gorodnichenko



Overview of the talk

1. Stylized facts
2. **Theory framework**
3. Outline of the model
4. Policy experiment
5. The 10 commandments

House price decline = Wealth transfer between generations

- High house prices
  - Good for current generation: wealthier
  - Bad for future generation: must buy expensive houses
- Hence: fall in house prices = wealth transfer
  - Large! 30% decline = 60% of GDP = 80% of souvereign debt
- Balance budget reduction in tax deductability = intergenerational wealth transfer
  - Value of housing captures NPV deductability

Massive saving response

- Take a real, not a financial view of saving
- What is saving in a small open economy?
- Export more!
- A massive shift of employment from domestic industries to tradables

Keynes of Friedman?

- Paradoxical situation
- Only current income matters?
  Then, house price decline would be irrelevant
- Argument relies on Permanent Income Hypothesis
- Not Keynes, but Friedman!
- Can we do macro without rigid prices?
  Would be much simpler!

Overview of the talk

1. Stylized facts
2. Theory framework
3. **Outline of the model**
4. Policy experiment
5. The 10 commandments

Structure of Economy

- Overlapping generations model
  - Blanchard-Yaari
  - Workers die at fixed rate, new cohorts enter
- Once and for all shock, perfect foresight after
- 3 industries
  - Tradables
  - Domestic
  - Construction
- Cobb Douglas utility
  - Both intertemporal and across commodities
  - Hence: constant consumption shares over lifetime
- All markets clear

Unemployment

- Workers enter unemployed
- Industry specific human capital
- Switching industries requires unemployment
    - 5 years period
- Hiring industries pay full wage
- Non hiring industries pay lower, clearing wage
    - Non hiring implies downsizing by dieing
- Industry wages too low? Firing/quitting

Government

- Pays interest on debt
- (Pays mortgage subsidy)
- Collects consumption tax
    - VAT
    - … but also: pension contributions are tax exempt
- Policy instrument: future taxes
    - We assume an exponential path back to LR equilibrium

Hence: model =

system of (almost) linear differential equations

What not?

- Apart from housing, no capital
- Constant interest rate
    - Hence: no sovereign debt crisis
- No financial intermediation
- No uncertainty / precautionary saving
- No bequest motive
- More general: no behavioral issues
- Perfectly elastic demand for tradables

Overview of the talk

1. Stylized facts
2. Theory framework
3. Outline of the model
4. **Policy experiment**
5. The 10 commandments

Policy experiment

- Start from a steady equilibrium
  - Applies to the Netherlands (?)
  - … but not to Spain (excess construction, bubble)
  - … and Denmark (overheating?)
  - … Germany (catching up due to labour market reform)
- Shock to productivity ↓and debt↑ (e.g. 10%)
  - Hence: excess housing (e.g. 5%)
- Policy response, fully credible
- Perfect foresight of adjustment path

What policy response?

- No response = No option: higher interest
- Raise taxes to cover only higher interest?
  - Optimal from tax smoothing perspective
  - Sovereign debt becomes random walk
  - Increases vulnerability for future shocks
- Hence: recovery of old public debt level
  - 60%?
  - Temporarily higher taxes, converging to steady state
- Question however: at what speed?

Phases in adjustment process

Typical adjusment process has 4 phases

1. Initial lay off in domestic and construction
    - Accelerator mechanism
2. Non-hiring/shrinking in both industries
3. Domestic starts rehiring
4. Construction starts rehiring

Effect on wealth and consumption

- Human capital current generation falls
    1. Lower wages in non-hiring industries
    2. Unemployment
- Financial capital falls due to house prices
- Hence: permanently lower consumption
    - Fits wealth effect of 3-5 cents the euro
- New generations consumption unaffected
    - Conditional on tax policy
- Lasts long (no standard business cycle)

Implications for debt and deficit

- Higher taxes reduce wealth current generation
- … and induce intertemporal substitution
- Hence: aggregate consumption postponed
- Leads to employment shift to tradables
    - … which reduces value of human capital
    - … and hence current consumption
    - ... and house prices, hence fin. cap. and consumption
- Short run effect on deficit is negative
    - Might even be negative? Open research question
    - Fits multiplier studies Auerbach & Gorodnichenko

Welfare evaluation

- Optimal policy = setting wealth distribution between generations
- Market is efficient
- Hence, postponing hurts future generations?
- Pace of restructuring is pure politics?
- Might be false: taxation leads to distortions

Varia

- Tax treatment mortgage interest:
  balance budget reform makes things worse!
- Same applies to NPV of market distortions
  - Italy
  - … and in the future Germany?
- Bubbles?
  - Lead to excess consumption
  - Adjustment unavoidable
  - Critical role trade balance
  - Also bubble adjustment can be exaggerated

Overview of the talk

1. Stylized facts
2. Theory framework
3. Outline of the model
4. Policy experiment
5. **The 10 commandments**

The 10 Commandments (I)

1. House price decline =
   intergenerational wealth transfer (large!)
2. Reduction sovereign debt =
   substitute, not complement
3. Requires long run stance fiscal policy
4. House price volatility matters, not their level
5. Shock therapy likely to be counterproductive

The 10 Commandments (II)

1. House price decline = intergen. wealth transfer
2. Reduction sovereign debt =substitute,≠complement
3. Requires long run stance fiscal policy
4. House price volatility matters, not their level
5. Quick adjustment contraproductive
6. Adverse short run response budget deficit
7. Hence: budget deficit=wrong control variable
8. Hence: EU regulatory framework inadequate
9. Reconsider concept output gap
10. Applies also to product market reforms