Optimum Currency Area theory

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The euro area
Euro area
EU Member States with an opt-out
EU Member States that have not yet adopted the euro
Sweden
Finland
Helsinki
Stockholm
Tallinn
Estonia
Latvia
Riga
Lithuania
Vilnius
Denmark
Copenhagen
Dublin
Ireland
United Kingdom
London
Nether-lands
Amsterdam
Berlin
Warsaw
Poland
Brussels
Belgium
Germany
Luxembourg
Luxembourg
Prague
Czech Republic
Slovakia
Bratislava
Paris
Vienna
Budapest
Austria
Hungary
Romania
France
Slovenia
Ljubljana
Zagreb
Bucharest
Croatia
Bulgaria
Sofia
Italy
Rome
Portugal
Lisbon
Madrid
Spain
Greece
Athens
Valletta
Malta
Azores (PT)
Madeira (PT)
Canary Islands (ES)
Saint-Martin (FR)
Saint-Barthélemy (FR)
French Guiana (FR)
Guadeloupe (FR)
Martinique (FR)
Réunion (FR)
Mayotte (FR)
Cyprus
Nicosia

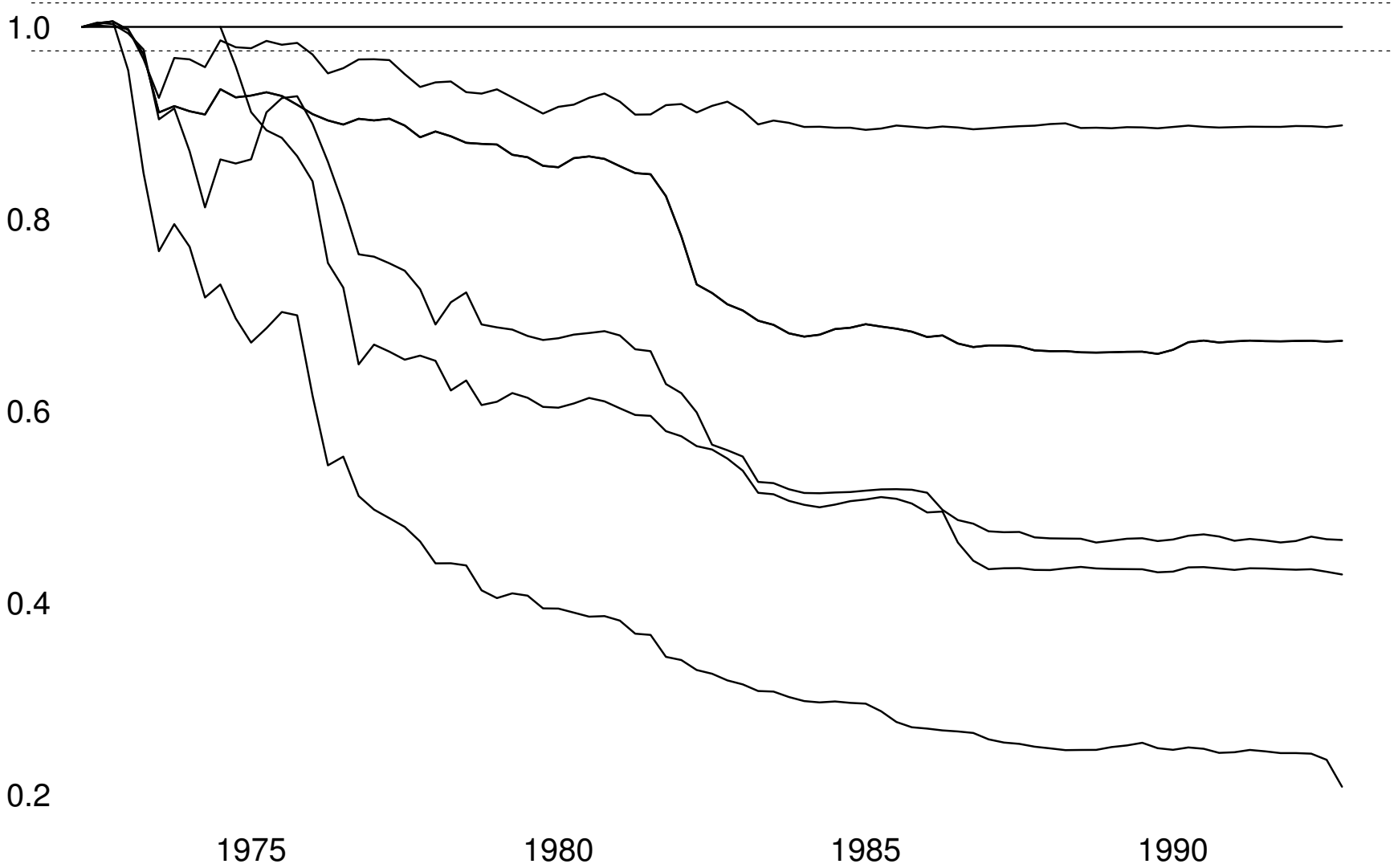
The Euro according to the EU

The euro is the most tangible proof of European integration - the common currency in 19 out of 28 EU countries and used by some 338.6 million people every day. The benefits of the common currency are immediately obvious to anyone travelling abroad or shopping online on websites based in another EU country.

- Launched in 1999
- Replaced 12 national currencies in 2002
- Currently used by 19 of 28 member states
  - 4 microstates adopted the Euro, and two states adopted currency unilaterally

Brief history of European monetary integration

19th century-1944: Gold-standard
1944 - 1971: Bretton-Woods system
1970: Werner report
1972: Snake in the tunnel
1979: European Monetary System
1992: Economic and Monetary Union
2002 - present: Euro


1.0
0.8
0.6
0.4
0.2
1975
1980
1985
1990

Mundell (1961), "A Theory of Optimum Currency Areas"

1. Can a system of flexible exchange rates work effectively and efficiently in the modern world economy?
   - Involves lot of conditions for stability
   - e.g. accounting for speculation; monetary discipline; debtors/creditors protection, etc.
2. How should the world be divided into currency areas?

Can divide world into regions

- Within there is factor mobility
- Between there is factor immobility

Region is an economic unit, but currency domain partly expression of national sovereignty.

Benefits of common currency area

1. Lowering of transaction costs
2. Price transparency
3. Uncertainty reduction
4. Improvements in trade
5. Quality of monetary policy

Lowering of transaction costs

1. Common currency means that there is no need to discuss currency of transaction
2. Elimination of exchange rate

2 implies that there is no loss in value.

- Changing from currency to currency can lead to 50% loss

Additionally, lowering of costs might increase competition

Price transparency: prices are directly comparable across regions

1. Increase in transparency might increase competition: good for consumers
2. Can create trade opportunities: reducing border effect
   - Border effect means that a national border is associated with a substantial reduction in trade

Wage setting will be affected by increased price transparency and competition

- Countries compete with each other through exports
- Can become more competitive by adjusting wages
- Long and painful process though

Uncertainty reduction due to exchange rate elimination

- Beneficial to foreign direct investment (FDI)
- Exchange rate fluctuations could lead to long-term losses decreasing FDI

Trade improvements

1. Reduction of border effect
2. Easier and more secure payment; might again increase competition
3. Reduction in non-tariff barriers; reducing monopoly power

Quality of monetary policy

Policy will converge to a higher quality level for lower-quality countries

- Common central bank will do better job compared to low-quality national central bank
- Conditional quality of common central bank

Does involve loss of autonomy in monetary policy

Costs associated with common currency area

1. Link between shocks and exchange rate
2. Dealing with asymmetric shocks
3. Dealing with symmetric shocks that have asymmetric effects

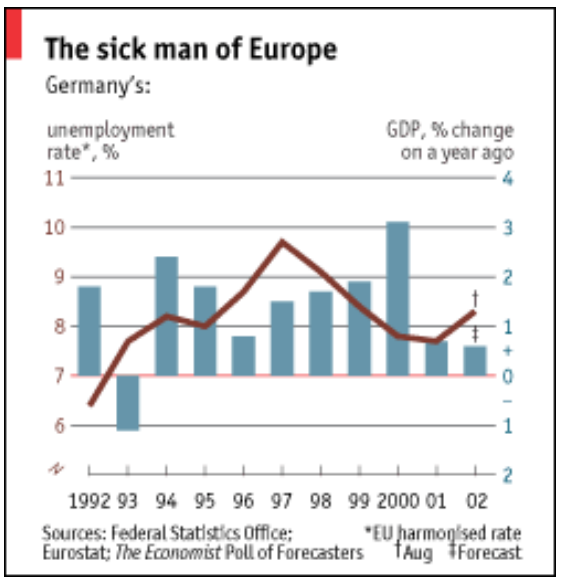
Costs stem mainly from cross-country differences (heterogeneity)

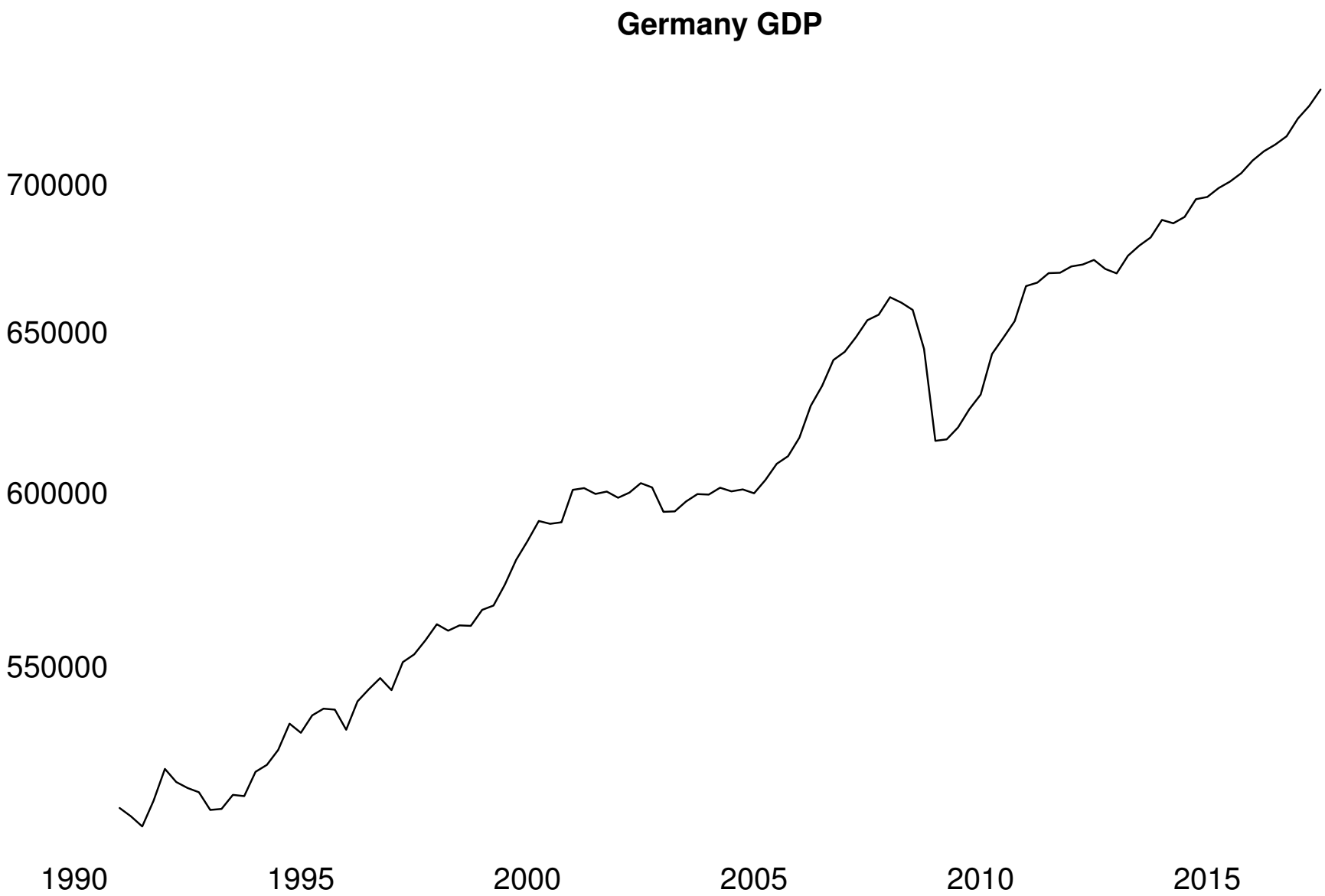
Shocks and exchange rate

Country cannot lower exchange rate following shock

- There are also no short-term alternatives

Results in economic slow-down; for prolonged time




Germany GDP
700000
650000
600000
550000
1990
1995
2000
2005
2010
2015

Asymmetric shocks

Countries with different characteristics face different shocks

- e.g. Germany is not as earthquake-prone as Italy

Common in OCA: exchange rate

- Faced with asymmetric shock, central bank has to make a decision
- Decision likely to have diverging effects: common exchange rate cannot insulate all countries

Symmetric shocks with asymmetric effects

Countries experience same shock but react differently

- Result of socio-economic structure: labour regulations, external debt, etc.

Consider fall out of Brexit

- Ireland and Denmark exposed due to trade relations
- Poland and Portugal more insulated

Optimum Currency Area theory somewhat misleading name

- Theory does not discuss optimum conditions
- No discussion on type of countries that should form currency area

McKinnon & Kenen expanded OCA theory including some criteria

- These criteria are endogenous

Criteria for an optimum currency area

1. Labour mobility
2. Production diversification
3. Openness
4. Fiscal transfers
5. Homogeneous preferences
6. Cross-national solidarity

Labour mobility

> *In an OCA the people should be able to move easily between regions*

Important mechanism for dealing with shocks

- When factors of production can move freely shocks can be mitigated more easily

Various barriers to migration exist of course

- Economic costs
- Skill of migrant worker
- Cultural factors such as language

Production diversification

Having a similar production structure and widely diversified production and exports is beneficial for a OCA

Main problem for currency areas: asymmetric shocks

- How often do these shocks occur?
- If shocks are rare: costs will be episodic; profits accrue every day

Specialised economies are more severely affected by shocks

- $Pr(\sigma_a)$ reduced if countries produce similar goods in diversified economy
- Not clear how diversified economies should be

Openness

> *When countries are open to trade and trade heavily with each other, they could form an OCA*

No distinction between domestic and foreign good in OCA

- Similar to free trade
- Competition will lead to price equalisation for most goods (when expressed in same currency)
- Exchange rate changes affects competitiveness
  - Through exports
  - Firm more export-oriented at certain price levels; more profitable

Fiscal transfers

When countries agree to compensate each other for adverse shocks, they form an OCA

Moral hazard issue

- Countries might be expecting transfers to happen; lead to slacking
- e.g. no diversified economy; heavy import dependence; rigid labour markets

Free-riding behaviour important discourse during eurocrisis

- North/south antagonism

Homogeneous preferences

> *Currency union member countries must reach consensus on the best way to deal with shocks*

Solidarity vs. nationalism

Common monetary policy might give rise to conflicts of national interests

- Costs need to be accepted for the greater good
- Acceptable when

$$Costs < \sum Benefits$$

Criteria implies move to political union at some time in the future

Six criteria

1. Labour mobility
2. Production diversification
3. Openness
4. Fiscal transfers
5. Homogeneous preferences
6. Cross-national solidarity

let's check the eurozone's performance

Labour mobility important mechanism to deal with asymmetric shocks: but there are obstacles

- Cost of moving
- Risk of becoming unemployed in the destination country
- Family prospects
- Fiscal factors: social benefits, taxation on earnings, etc.

Other factors influencing migration decision:

- Cultural differences
- Links with family and friends
- Commitment to origin country

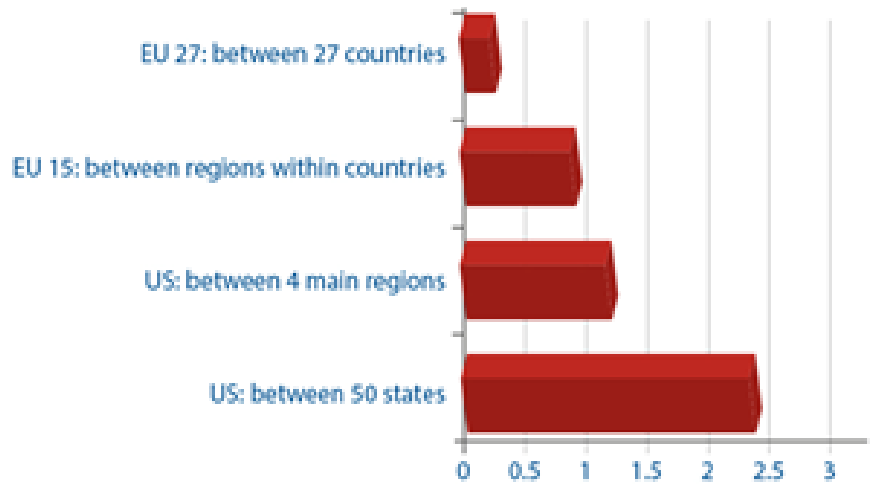
Combination of factors means that migration will be limited

Compare US with European labour mobility

- Similar geographic size
- Same level of economic development
- Comparable within-area differences: Greece is Europe's Mississippi

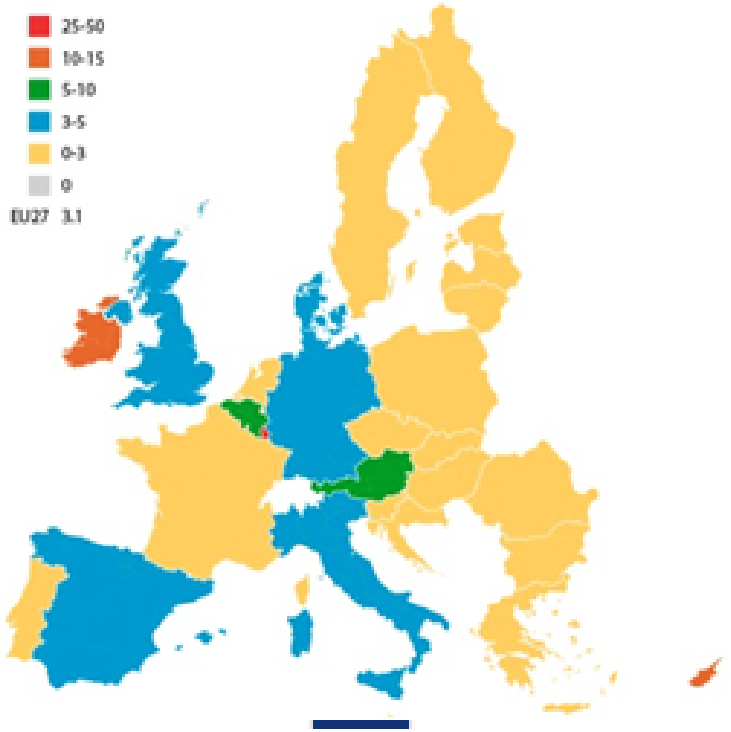
EU mobility is limited in comparison to US mobility

Annual cross-border mobility (in % of total population, 2010)



Source: OECD, Economic Review – European Union, 2012

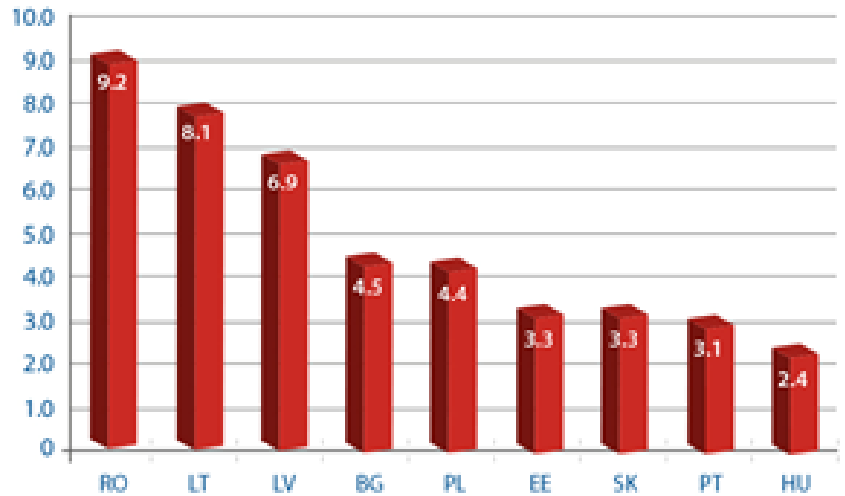
Share of EU mobile workers in % of total labour force



Source: Eurostat EU-LFS 2012

Large outflow in % of labour force in origin countries

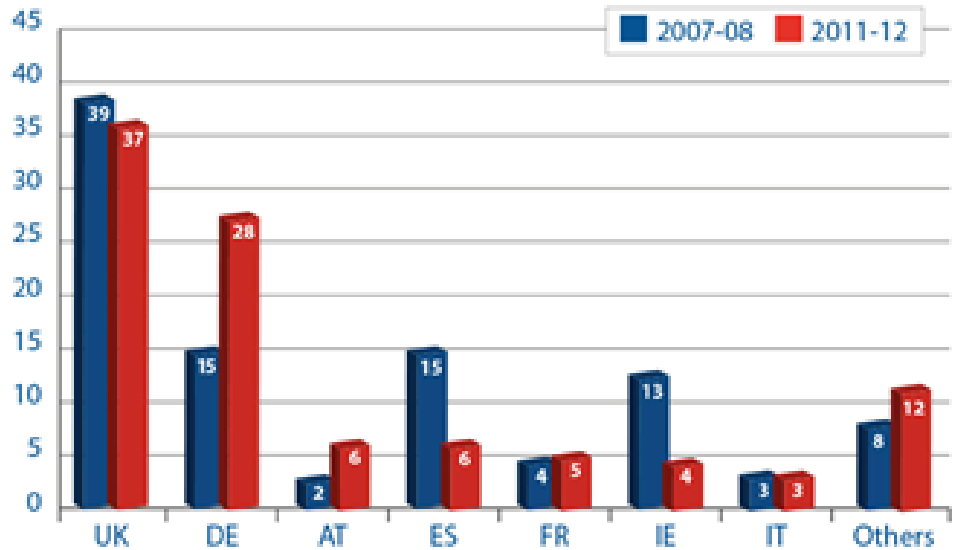
Recent (<10 years) mobile (economically active) EU citizens by nationality, in % of labour force of origin country, 2013



Source: Eurostat EU-LFS and European Commission calculations

Impact on destination countries

Recent (< 2 years) intra-EU movers (econ. active) by destination country, in % of total



Source: Eurostat, LFS and European Commission calculations.

High unemployment levels associated with adverse asymmetric shocks

- Specifically given low labour moblity levels in EU

Important that economies are

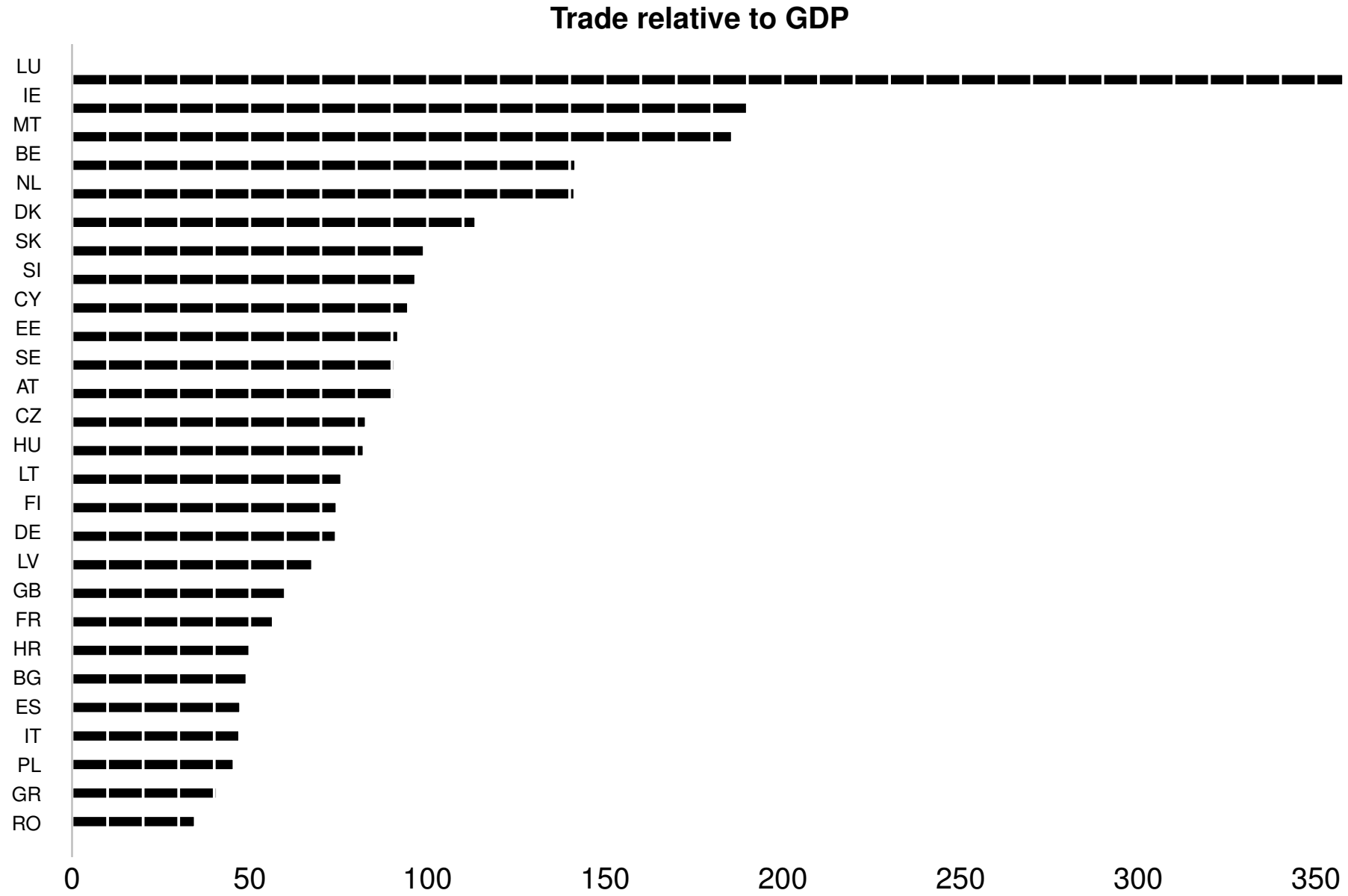
1. Diversified
2. Open to trade

Frequency of asymmetric shocks is lower among countries with

- Similar production patterns
- Diversified trade pattern

Dispersion of key macro indicators (unweighted standard deviation of growth rates in percentage points)			
Real GDP	**EA 12**	**EA 17[3]**	**US[1]**
1985-1998	2.0		2.6
1999-2012	1.8	2.3	2.1
HICP	**EA 12**	**EA 17[3]**	**US[2]**
1985-1998	3.7		
1999-2012	0.9	1.5	0.8
Unit labour costs	**EA 12**	**EA 17[3]**	**US[1]**
1985-1998	4.2		2.2
1999-2012	1.9	2.4	1.8

Sources: Eurostat, European Commission, ECB calculations.
Notes: 1) 50 US states. ULC data available up to 2011. 2) 14 US Metropolitan Statistical Areas. 3) Latvia became a member of the euro area on 1 January 2014.

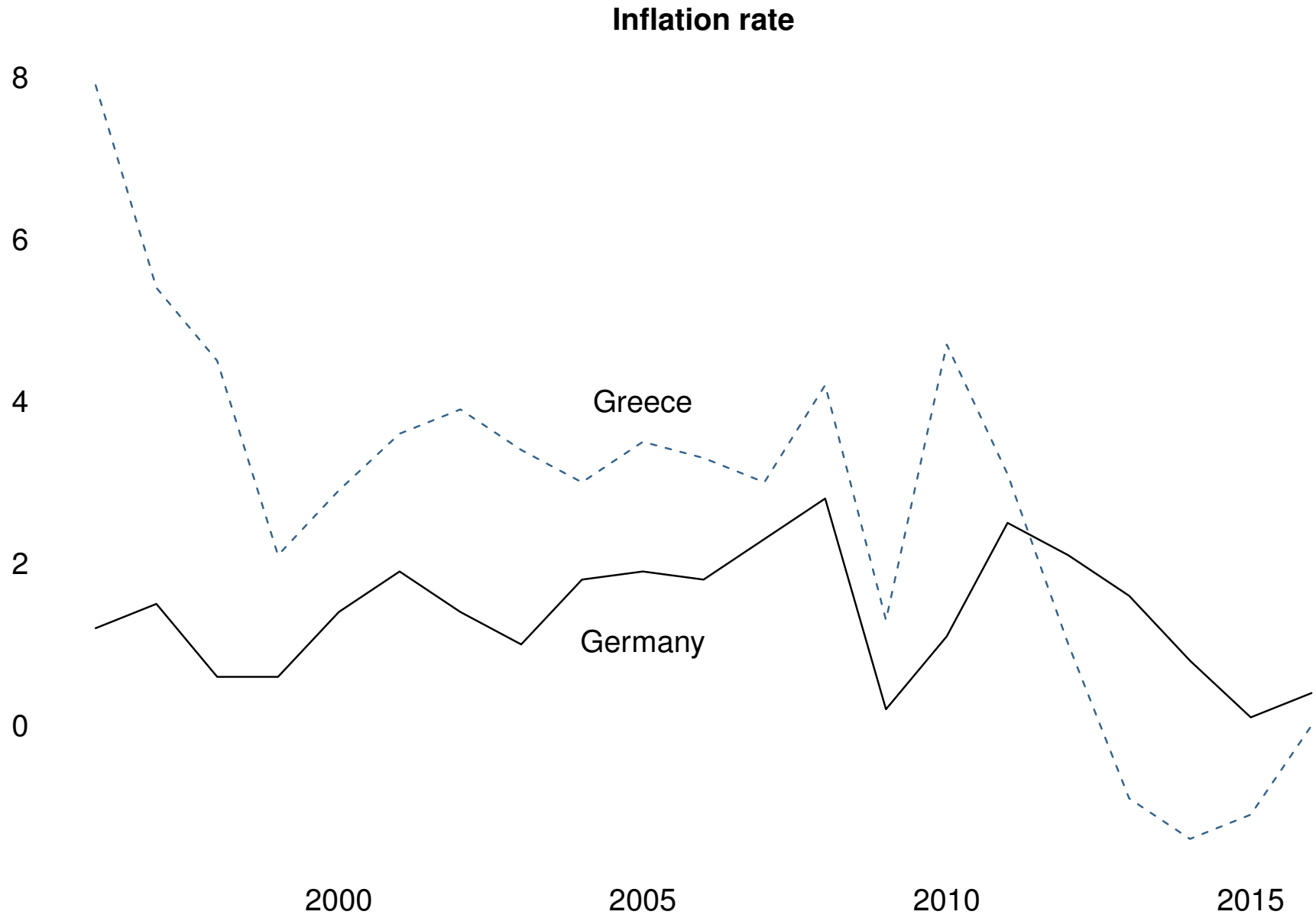

Trade relative to GDP
LU
IE
MT
BE
NL
DK
SK
SI
CY
EE
SE
AT
CZ
HU
LT
FI
DE
LV
GB
FR
HR
BG
ES
IT
PL
GR
RO
0
50
100
150
200
250
300
350

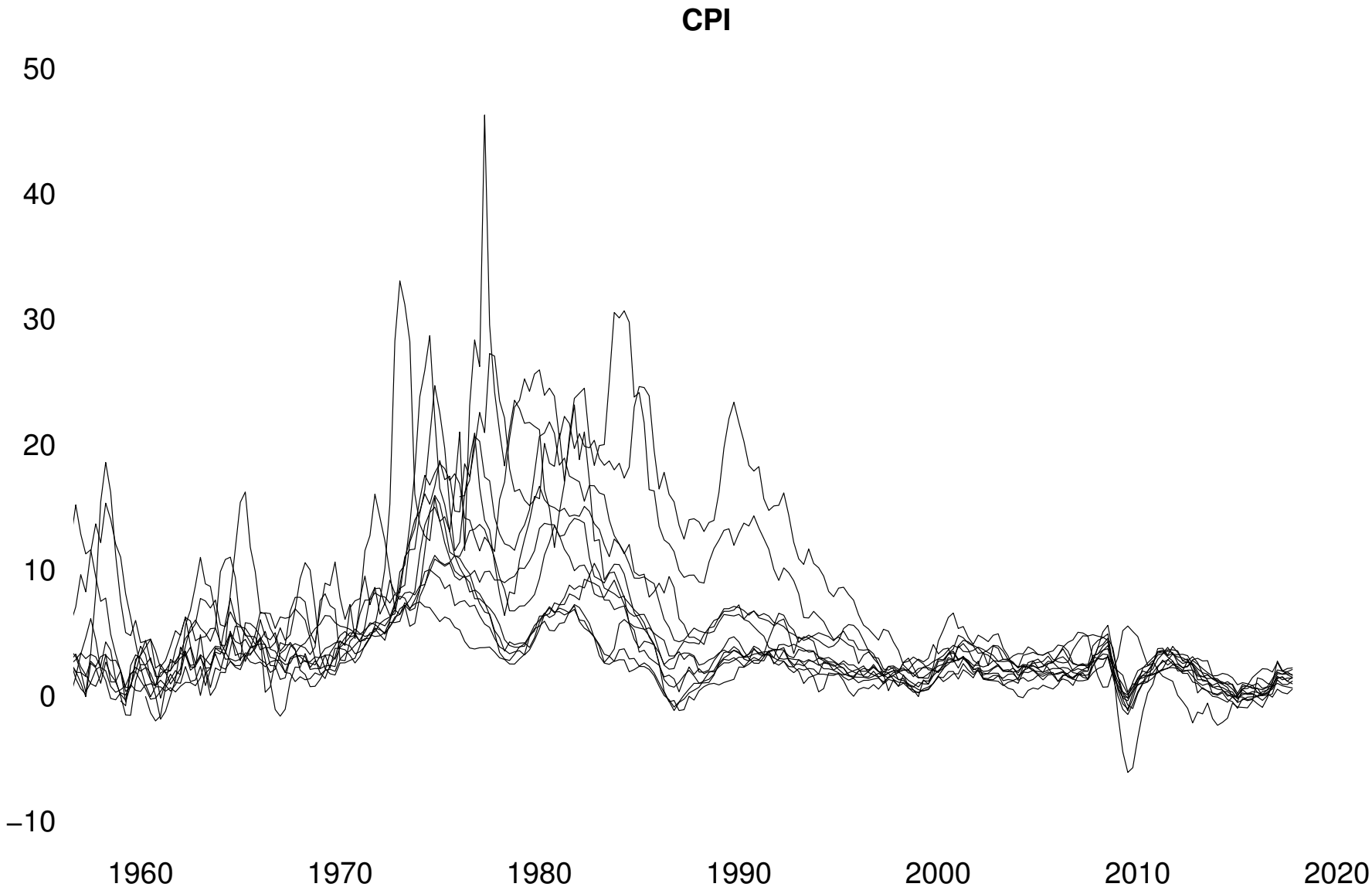
Homogeneous preferences on monetary and fiscal policy is an import economic criteria.

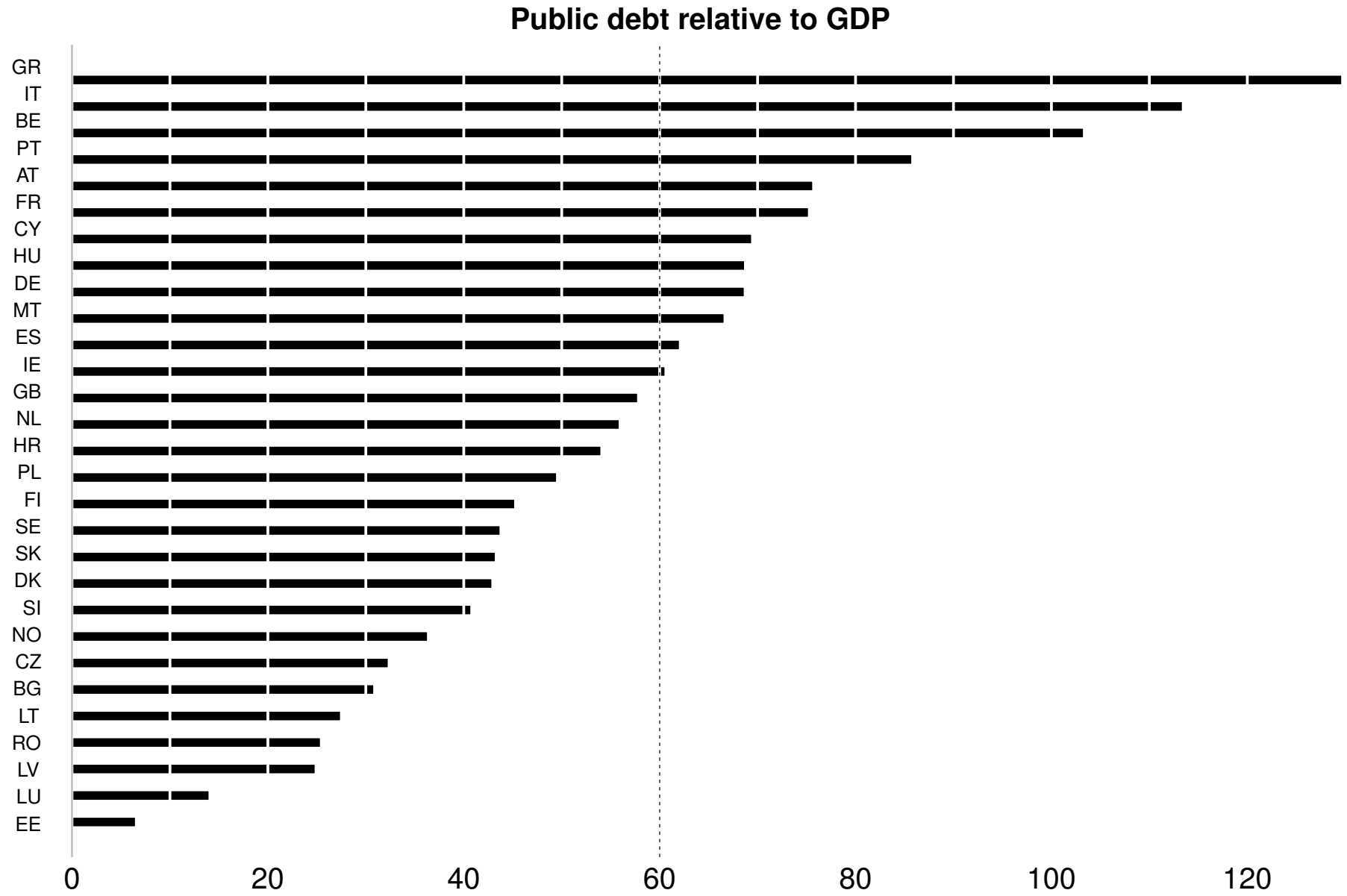
- Monetary policy important tool dealing with shocks
- Fiscal policy important with regard to public debt

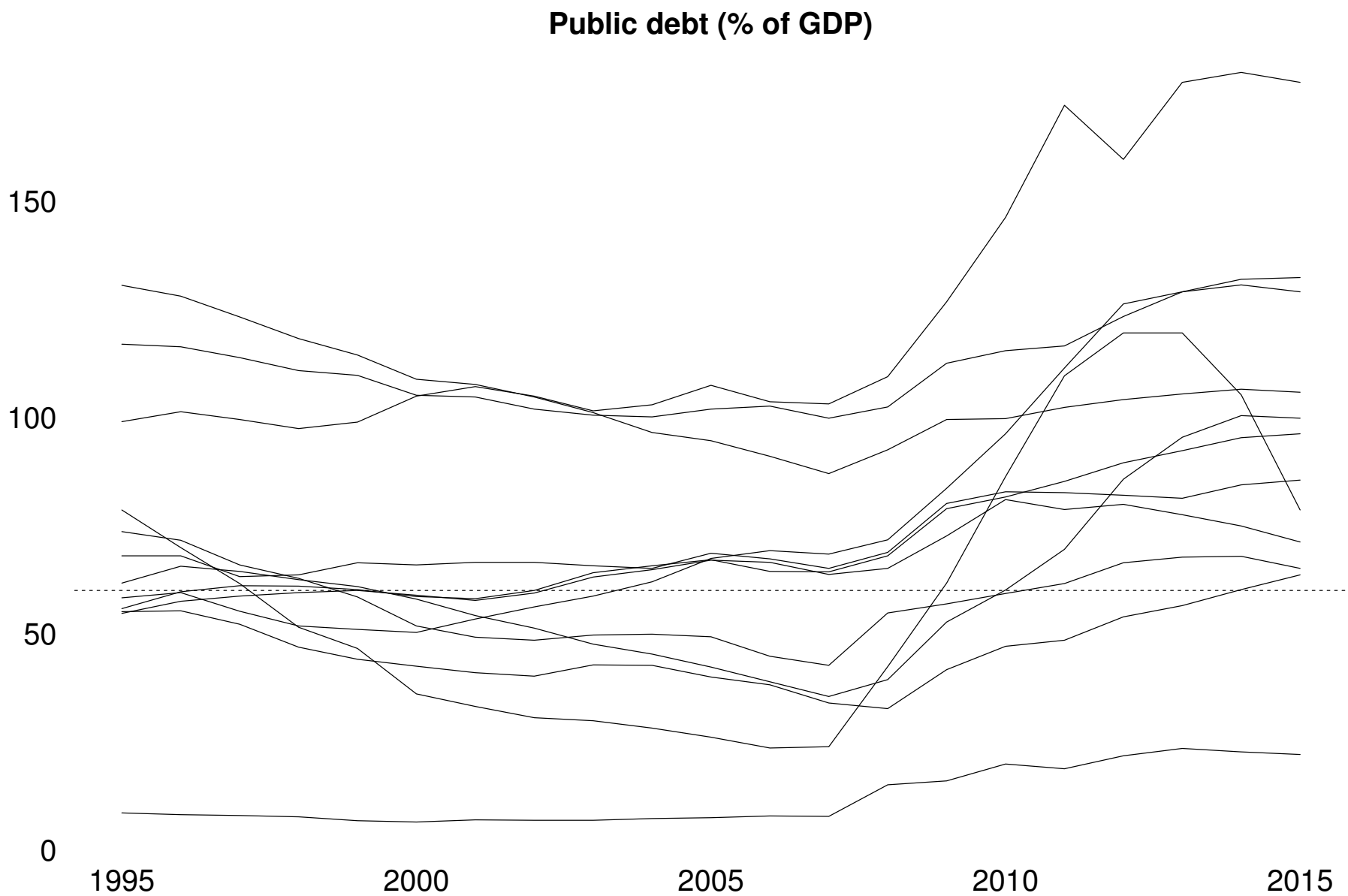
For homogeneity can look at long term trends:

1. Inflation rate: for monetary policy
2. Public debt levels: for fiscal policy


Inflation rate
8
6
4
2
0
Greece
Germany
2000
2005
2010
2015


CPI
50
40
30
20
10
0
−10
1960
1970
1980
1990
2000
2010
2020


Public debt relative to GDP
GR
IT
BE
PT
AT
FR
CY
HU
DE
MT
ES
IE
GB
NL
HR
PL
FI
SE
SK
DK
SI
NO
CZ
BG
LT
RO
LV
LU
EE
0
20
40
60
80
100
120


Public debt (% of GDP)
150
100
50
0
1995
2000
2005
2010
2015

What explains differences in macroeconomic policy across countries?

- Politician's incentives; shapes national institutions
- e.g. strong labour union movements; emphasis on public goods provision

Common institutions can help homogenise policy, e.g. European Central Bank

- ECB determines monetary policy for eurozone
- Main objective: price stability

All national budget are subject to **excessive debt procedure**

- Aimed at curtailing excessive public spending
- Operation under common institutions does not imply agreement on best course of action in dealing with shocks

Fiscal transfers: let's check EU budget

1. Structural fund and Cohesion policy (50%)
2. Common Agricultural Policy (43%)
3. Operating expenses (6%)

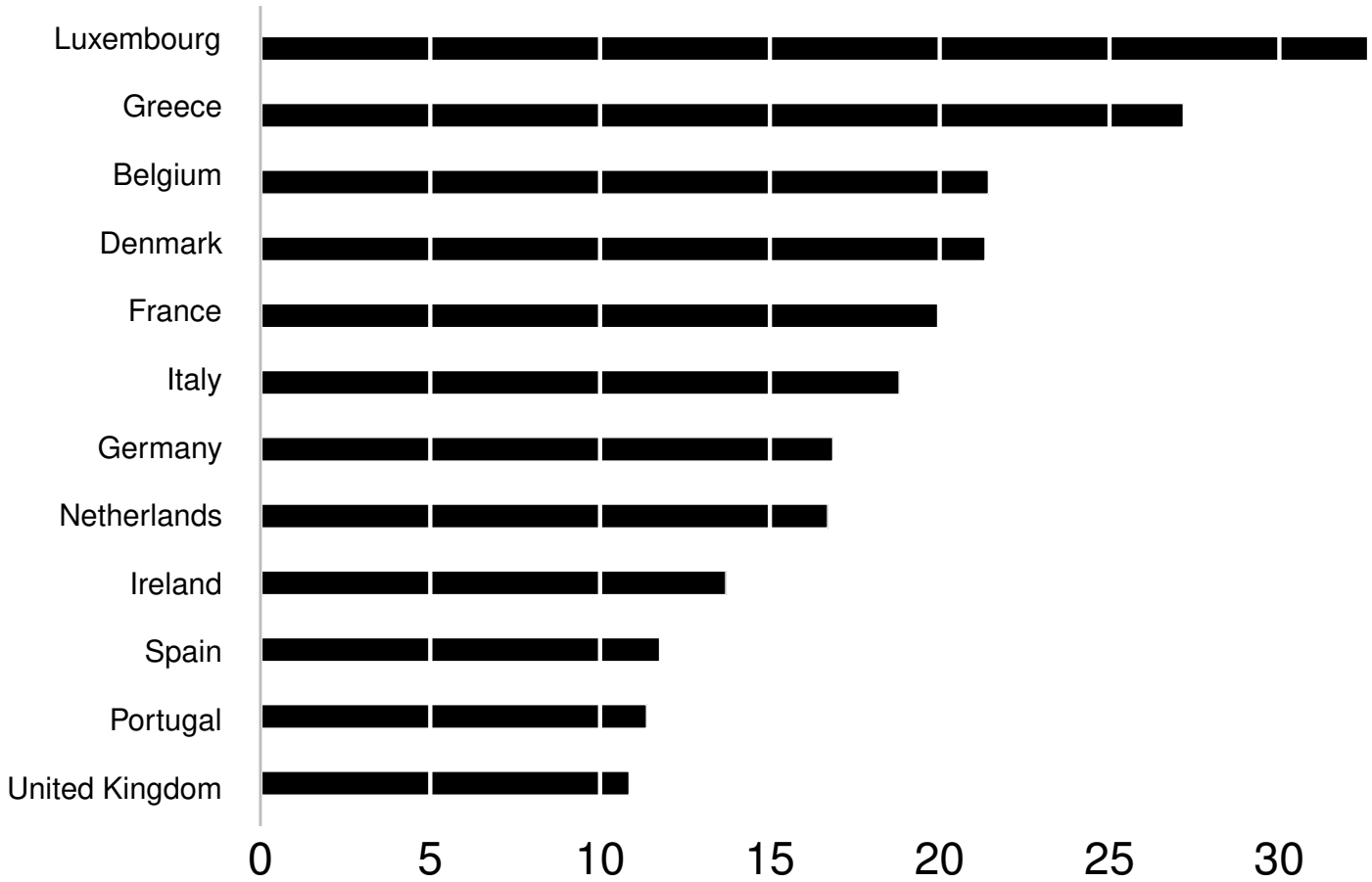
In general EU budget is small: ~1% of EU GDP

No cyclical transfer system in EU/eurozone

- Structural fund/Cohesion policy transfers money to assist in stimulating economy in long-run
- EU regions with a GDP below 75% of the EU average; regardless of shocks
- Transfers are for 7-year period and not cyclical

European Stability Mechanism (ESM)

- Established following the eurocrisis (2012)
- ESM member states can apply for ESM bailout when
  1. They are in serious financial difficulty
  2. Their banks need recapitalisation.



Percentage respondents that felt often more European than own nationality. Data: Eurobarometer (2006)

Euroskepticism

- EU constitution rejection by French and Dutch voters (2005)
- Nationalist movements following Great Recession (FRA, NLD, AUT, GER, GRC, ITA)
- Brexit (2016)
- Poland, Hungary

More enthusiasm for European project can be found in

- Scotland, Catalonia
- Ukraine, Georgia

Table: Scorecard for the OCA criteria

Criterion	Satisfied
Labour mobility	No
Trade openness	Yes
Product diversification	Yes
Fiscal transfers	No
Homogeneous preferences	Partially
Commonality of destiny	Hard to tell

1. Euro project remains controversial
   - Difficult to make hard case for either stance
   - OCA criteria guiding principle
   - Political considerations basis for decision monetary union

2. Continuation entails future costs
   - Costs mainly in labour market and fiscal transfers
   - Eurozone crisis showed larged adverese effects of asymmetric shocks