

Theory of Optimum Currency Areas and the European Monetary Union

PS Internationale Wirtschaftsbeziehungen
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Verena Kuhn, Agnes Seeber

Theory of OCA and the EMU

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 - EMU and other Currency Areas

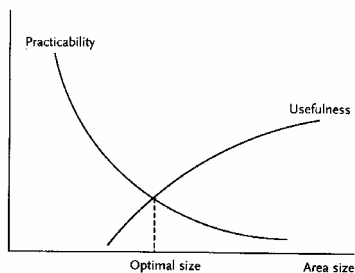
PART 1: THE THEORY OF OPTIMUM CURRENCY AREAS

Why OCA theory

- Central question: How many currencies does the world need?
 - Usefulness of a currency grows with the size of the area
 - Costs due to diversity may also grow (asymmetric shocks, one common policy)

Marginal Costs and Benefits

Marginal costs and benefits



Costs of forming a CU

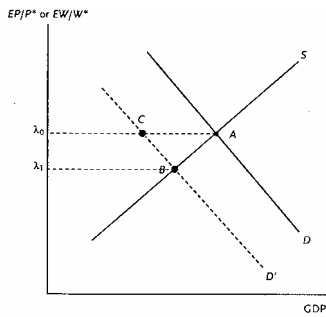
- Loss of exchange rate as an adjustment tool
- Loss of monetary autonomy
- Constraints on fiscal policies
- Bridging differences between member states

Asymmetric shocks

- An adverse shock only affects one country
- Adjustments through exchange rates not possible
- Adjustments will have to come from prices and wages in both countries

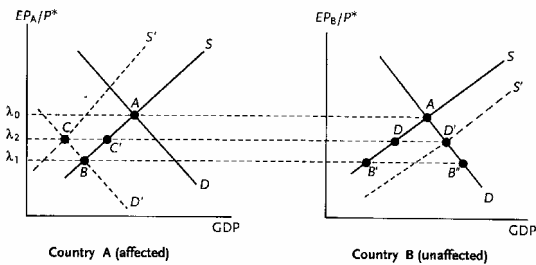
->Impact on the entire currency union

Asymmetric shock



Source: Baldwin and Wyplosz (2004)

Asymmetric shock in a CU



Source: Baldwin and Wyplosz (2004)

Benefits of forming a CU

- Price transparency
- Increased efficiency – no need to plan for exchange rate fluctuations – especially for importers who would have to bare hedging costs
- Reduced transaction costs
- No need to have foreign currency reserves for central banks – no separate currency to protect

Benefits of forming a CU

- Exchange rate stability – international firms' pricing, investment, export markets
- Reduced interest rates
- Increased policy credibility because devaluation is not possible
- less uncertainty from moral hazard, adverse selection due to overly high or low interest rates

Benefits of forming a CU

- increased growth especially endogenous growth
- firms: all the benefits reduce costs for firms & thus increase their competitiveness
- consumers: receive a welfare increase from increase consumer surplus from the lower prices & reduced uncertainty

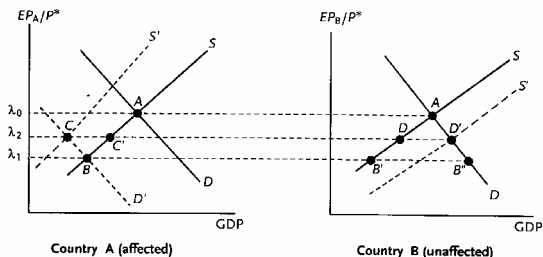
The "Old" OCA Theory

- Formulated by three American economists Robert Mundell, Peter Kenen and Ronald McKinnon
- Stress the economic point of view:
 - Labor mobility
 - Product diversification
 - Openness to trade

Mundell Criterion

- Labor- and capital mobility can counter-balance asymmetric shocks
- Problem:
 - Language, cultural differences, costs of moving
 - Physical capital isn't mobile
 - Difference of goods produced

Mundell Criterion



Shift of production factors from country A to country B -> seen in the shift of both countries supply schedules to S' (new equilibrium C' and D')

Source: Baldwin and Wyplosz (2004)

Mundell Criterion

- Labor- and capital mobility can counter-balance asymmetric shocks
- Problem:
 - Language, cultural differences, costs of moving, time
 - Physical capital isn't mobile
 - Difference of goods produced

Kenen Criterion

- Low probability and frequency that asymmetric shocks appear
- Diversified production and similar goods
 - >due to common trade structure demand in the two countries will become quite similar

McKinnon Criterion

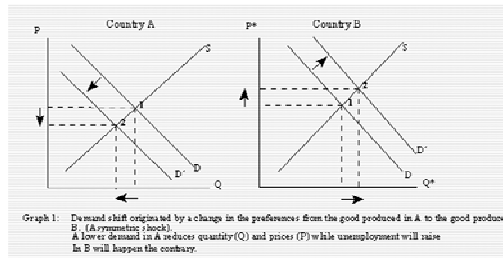
- When countries are open to trade and trade heavily with each other, giving up the exchange rate entails no serious loss of policy independence

The "New" OCA Theory

- Focuses primarily on political issues of forming a currency union
 - Fiscal Transfers
 - Homogenous Preferences
 - Solidarity

Transfer Criterion

- Asymmetric shock also has an influence on the non-affected country



Source: European Parliament

Homogeneity of Preferences Criterion

- Common view on how the ECB reacts to (symmetric) shocks
- Problem:
 - Every country wants to put its interests before those of the member states, jeopardizing the CU

Solidarity Criterion

- Solidarity among the member states has to outweigh national interests
- Problem:
 - Solidarity is only easy in “golden years”

PART 2: OPTIMAL CURRENCY AREAS AND THE EMU

1. Is the Euro-area an OCA?

Asymmetric shocks in the EMU?

- Diversity (people, economy)
- Inner trading circles
- Historic examples (D, FIN)
- Idiosyncronic business-cycles
- But: relativity (US), endogeneity

→ Still: Shock asymmetry as a danger for EMU

1.1. Old OCA theory

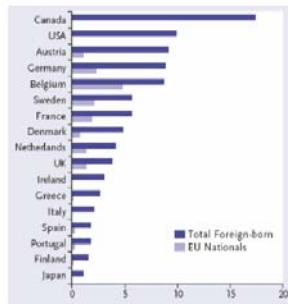
Factors to counter-balance asymmetric shocks

FACTOR 1: Labor mobility

- Barriers (linguistic, institutional,...)
- Restricted labor mobility: inter-country, but also intra-country
- Reasons for mobility-aversion
- Immigration as a solution?
- Poor wage flexibility

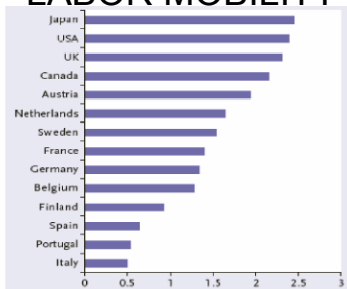
→ not enough labor mobility for an OCA

LABOR MOBILITY



Foreign-born population (1998) (% of total population)
Source: Baldwin and Wyplosz (2004)

LABOR MOBILITY




International Migration across regions (1995) (% of total population)
Source: Baldwin and Wyplosz (2004)

1.1. Old OCA theory

Factors to counter-balance asymmetric shocks

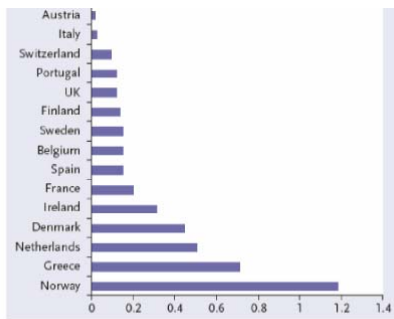
FACTOR 2: Product diversification

- Ricardo, Krugman: 

- EU challenges competition
- Consumerism
- Empirical Data: Trade dissimilarity index

→ Diversification criterion fulfilled

PRODUCT DIVERSIFICATION



Trade Dissimilarity Index (1995)

Source: Baldwin and Wyplosz (2004)

1.1. Old OCA theory

Factors to counter-balance asymmetric shocks

FACTOR 3: Trade Openness

Def.: ...share of economic activity devoted to international trade

- EMU: many small countries
- Single Market legislation
- Empiric data: Export/Import ratios

→ EMU fulfills openness-criterion

TRADE OPENNESS

Austria	53.5	Spain	33.6
Belgium	91.7	Sweden	48.8
Denmark	43.1	UK	30.7
Finland	39.9		
France	31.5		
Germany	38.4	EU	12.3
Greece	29.9	USA	13.5
Ireland	85.4	Japan	10.8
Italy	29.9	Australia	23.0
Netherlands	65.3	Canada	44.1
Portugal	38.3	Switzerland	51.3

Average of ratios of exports and imports to GDP, %
Source: Baldwin and Wyplosz (2004)

1.1. Old OCA theory

Factors to counter-balance asymmetric shocks

Mundell's Criterion: Labor mobility X

Kenen's Criterion: Diversification ✓

McKinnon's Criterion: Openness ✓

1.2. New OCA theory

Factors to counter-balance asymmetric shocks

FACTOR 1: FISCAL POLICY

Intergovernmentalism



Aversion against centralization



Small EU-Budget: max. 1.27% of GDP

→ not enough fiscal means to counter-balance

1.2. New OCA theory

Factors to counter-balance asymmetric shocks

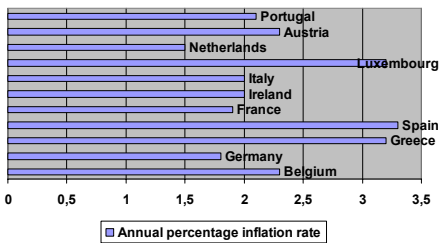
FACTOR 2: HOMOGENOUS PREFERENCES

Policy similarity?

- Inflation
- Public debt
- Political ideology
- But: common institutions, SGP

→ Preferences will get more homogenous

HOMOGENOUS PREFERENCES



Inflation rates in EU member states

1.2. New OCA theory

Factors to counter-balance asymmetric shocks

FACTOR 3: SOLIDARITY

Trust in national government

Trust in EU

Giving-up of sovereignty

→ No clear answer yet

1.2. New OCA theory

Factors to counter-balance asymmetric shocks

Fiscal Transfers	X
Homogeneity of Preferences	√
Solidarity	?

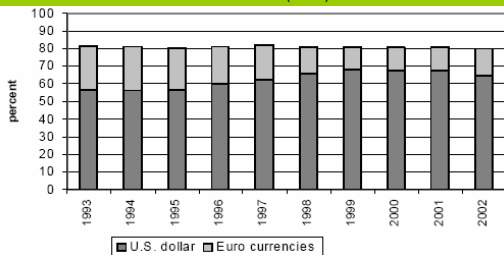
2. The Future of the EMU: Enlargement?

EU 10 mostly small countries – eager to join in
Will be able to fulfill Maastricht criteria
Risk: Currency crisis (ERM II)
Highly correlated business-cycle: H, SL

Adv: labor mobility ↑
Pb: surveillance of fiscal policies
supervision/regulation of EU institutions

3. EMU & other currency unions

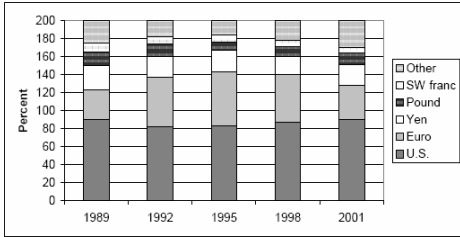
Official foreign exchange reserves, by currency of holdings
Source: Starr (2004)



→ \$ more important as a reserve
Pb: EU can't hold € reserves

3. EMU & other currency unions

Currency distribution of foreign exchange transactions
Source: Starr (2004)



→ € 2nd most important currency for exchange transactions

CONCLUSION

- EMU doesn't fulfill all OCA criteria, but many
- Endogeneity will improve EMU
- € is already important currency
- With EMU enlargement € will gain even more importance

Thank you for your attention!
