PART 1:
THE THEORY OF OPTIMUM CURRENCY AREAS

Theory of OCA and the EMU

• Part 1: Theoretical background
  – Introduction
  – Costs and Benefits
  – The “Old” OCA theory
  – The “New” OCA theory

• Part 2: The European Monetary Union
  – Is the EMU an OCA?
  – Future of the Enlargement
  – 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

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


Asymmetric shock in a CU

Benefits of forming a CU

• Price transparency
• Increased efficiency – no need to plan for exchange rate fluctuations – especially for importers who would have to bear 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 increased 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’)

Mundell Criterion

• Labor- and capital mobility can counterbalance 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

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”

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PART 2:
OPTIMAL CURRENCY AREAS
AND THE EMU

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1. Is the Euro-area an OCA?

Asymmetric shocks in the EMU?
- Diversity (people, economy)
- Inner trading circles
- Historic examples (D, FIN)
- Idiosyncratic 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
1.1. Old OCA theory
Factors to counter-balance asymmetric shocks

FACTOR 2: Product diversification

- Ricardo, Krugman: Trade Specialization
- EU challenges competition
- Consumerism
- Empirical Data: Trade dissimilarity index

→ Diversification criterion fulfilled

PRODUCT DIVERSIFICATION

![Trade Dissimilarity Index (1995)]

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

<table>
<thead>
<tr>
<th>Country</th>
<th>Average of ratios of exports and imports to GDP, %</th>
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<tbody>
<tr>
<td>Austria</td>
<td>55.5</td>
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<tr>
<td>Belgium</td>
<td>91.7</td>
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<tr>
<td>Denmark</td>
<td>45.1</td>
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<td>Finland</td>
<td>79.9</td>
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<td>France</td>
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<td>Switzerland</td>
<td>93.8</td>
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</tbody>
</table>

Average of ratios of exports and imports to GDP, %


#### 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: \( \checkmark \)
- 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](image)
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!