Chapter 15: Optimum currency areas

“The European countries could agree on a common piece of paper, . . . they could then set up a European monetary authority or central bank. . . . This is a possible solution, perhaps it is even an ideal solution. But it is politically very complicated, almost utopian.”

Robert Mundell (1973)
The question, the problem and the short answer

Should currency area borders coincide with national borders?
- money makes transactions immensely easier: the more people accept a currency, the more useful it is;
- as a currency area grows larger, it becomes more diverse, which means more costly.

The solution has to involve trading off these costs and benefits:
Benefits of a currency area

- Elimination of transaction costs and comparability of prices: if you started with one EU currency and exchanged it successively in all the currencies of the EU (before the Euro) and than exchanged it back into the initial currency, you would get less than 50% of the initial amount!

- Elimination of exchange rate risk (for transactions and FDI) = less uncertainty.

- Price transparency and intensified competition (also affects wage setting)

- Intensified trade

- More independent central bank and better quality of monetary policy.
Costs of a currency area

- Diversity in a currency area is costly because a common currency makes it impossible to react to each and every local particularity.

- The theory of optimum currency areas (OCA) aims at identifying these costs more precisely.

- We proceed in three steps:
  1. define and examine the effects of asymmetric shocks;
  2. study the problems of asymmetric shocks in a currency area;
  3. examine how the effects of asymmetric shocks can be mitigated when national exchange rates are no longer available.
Shocks and the exchange rate

Consider an adverse demand shock:
- the real exchange rate depreciates;
- with exchange rate and price rigidities, fall in output is much bigger.
Shocks and the exchange rate

Consider currency area with 2 countries (A, B) and A is hit by a shock:
- the real exchange rate depreciates to $\lambda_2$ (‘correct’ on average) = common exchange rate cannot insulate both countries;
- in the long-run, prices will adjust ($P_A \downarrow$ & $P_B \uparrow$).

[Diagram showing the relationship between output gap and exchange rate for both countries A and B.]
The optimum currency area criteria

- The optimum currency area (OCA) theory derive practical criteria to understand which countries should share the same currency.

- Three classic (economic) criteria:
  - Mundell: labour mobility
  - Kenen: diversification
  - McKinnon: openness

- Three political criteria:
  - fiscal transfers;
  - homogeneous preferences;
  - solidarity vs. nationalism.
**Criterion 1 (Mundell): labour mobility**

*Optimum currency areas are those within which people move easily:*

unemployment in A and inflationary pressures in B could be solved by moving production factors from A to B.
Criterion 1 (Mundell): labour mobility

Caveats:
- labour mobility is easier within national borders (culture, language, legislation, welfare, etc.) than across countries;
- in presence of country specialization, skills also matter;
- capital mobility: difference between financial and physical capital.
Criterion 2 (Kenen): production diversification

*Countries whose production and exports are widely diversified and of similar structure form an optimum currency area:* indeed, in that case, there are few asymmetric shocks and each of them is likely to be of small concern.

Caveat:
- a very broad statement
Criterion 3 (McKinnon): openness

*Countries that are very open to trade and trade heavily with each other form an optimum currency area:*

- traded good prices are set worldwide;
- if all goods are traded, domestic good prices must be flexible and the exchange rate does not matter for competitiveness.

Caveat:

- exchange rate can affect profits for exporters (but nowadays most goods have little national specificity).
Criterion 4: fiscal transfers

*Countries that agree to compensate each other for adverse shocks form an optimum currency area:*
- transfers can act as an insurance that mitigates the costs of an asymmetric shocks;
- transfers exist within national borders;

Caveat:
- the debt crisis has brought forward the issue of transfers (i.e., moral hazard).
Criterion 5: homogeneous preferences

*Currency union member countries must share a wide consensus on the way to deal with shocks.*

Germany and Italy: a difficult relationship: real exchange rate (Index 1999 = 100 left) and current account (right, as % of GDP)

**Figure 15.8** External competitiveness of Germany and Italy, 1999–2014

*Note: The real exchange compares unit labour costs (EW/\(W^n\)), where \(W\) is the country's unit labour cost and \(W^n\) is the average of unit labour costs in 35 industrial countries.*

*Source: AMECO, European Commission*
Criterion 6: solidarity vs. nationalism

*When the common monetary policy gives rise to conflicts of national interests, the countries that form a currency area need to accept the costs in the name of a common destiny:*

it is unavoidable that there will be times when there will be disagreements and that these disagreements may follow national lines: people must accept that they will be living together and extend their sense of solidarity to the whole union.
Are the six criteria endogenous?

- The six criteria presented above refer to country characteristics, but these characteristics may change over time.

- A puzzling question is whether they can change because of membership of a currency area.

- Put differently, can an area that is not an optimum currency area become one as a consequence of being one?

- This possibility is called the endogeneity of the OCA criteria.
Is Europe an optimum currency area?

Labour mobility: Europeans move little!

Figure 15.9 Labour mobility in Europe and the USA, 2008

Note: Mobility is measured as the proportion of the population that has moved from another country in Europe, from another state in the USA. The EU15 refers to the 15 members of the Eurozone in 2008.

Source: European Commission, Geographic Mobility in the European Union, Directorate for Employment, Social Affairs and Equal Opportunities, April 2008

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Is Europe an optimum currency area?

Diversification and trade dissimilarity = trade dissimilarity index:

**Figure 15.11** Trade dissimilarity index

Note: The index measures the difference between individual countries’ trade structures and those of its partners.

Source: Horváth (2007)
Is Europe an optimum currency area?

Openness = openness to trade:

**Figure 15.12** Openness to trade, 2011

*Note:* The index is the ratio of the sum of exports and imports to GDP.

*Source:* AMECO, European Commission
Is Europe an optimum currency area?

Fiscal transfers:
- up until the debt crisis, there was no transfer system in the EU;
- EU budget is small (slightly above 1% of GDP) and almost entirely spent on operating expenses, CAP, and Structural Funds;
- crisis led to the creation of the European Financial Stability Fund (EFSF), which recognizes that monetary union needs transfers.

Homogeneous preferences:
- based on past inflation rates, it does not seem that country share similar views on monetary policy;
- similar story when looking at public debts.
Is Europe an optimum currency area?

Solidarity vs. nationalism = feeling European? (2006)

**Figure 15.13 Feeling European?**

- Slovenia
- UK
- Portugal
- Latvia
- Czech Republic
- Spain
- Estonia
- Austria
- Ireland
- Slovakia
- Hungary
- Lithuania
- Sweden
- EU
- Bulgaria
- Poland
- Netherlands
- Germany
- Italy
- France
- Denmark
- Belgium
- Cyprus
- Finland
- Greece
- Malta
- Luxembourg

*Note: Percentage of people who respond 'often' when asked: 'Do you ever think of yourself as not only (nationality), but also European? Does this happen often, sometimes or never?*

*Source: Eurobarometer (http://ec.europa.eu/public_opinion/cf/index.cfm)*
Is Europe an optimum currency area?

So, is Europe an optimum currency area? Mixed performance:

The single currency project has been and remains controversial. The partial fulfillment of the OCA criteria implies that, given that the decision to go ahead has been taken, there will be costs.

Table 15.1  OCA scorecard

<table>
<thead>
<tr>
<th>Criterion</th>
<th>Satisfied?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Labour mobility</td>
<td>No</td>
</tr>
<tr>
<td>Trade openness</td>
<td>Yes</td>
</tr>
<tr>
<td>Product diversification</td>
<td>Yes</td>
</tr>
<tr>
<td>Fiscal transfers</td>
<td>No</td>
</tr>
<tr>
<td>Homogeneity of preferences</td>
<td>Partly</td>
</tr>
<tr>
<td>Commonality of destiny</td>
<td>?</td>
</tr>
</tbody>
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Is Europe becoming an optimum currency area?

The fact that the single currency exists can change the situation:
- effects on trade: Baldwin et al. (2008) conclude that, so far, the euro has probably increased trade by some 5%;
- effects on labour markets: few expect labour mobility to increase dramatically in the near future but the single market may encourage reforms to make European labour markets more flexible;
- fiscal transfers: much the same applies to fiscal transfers.

BUT monetary union is not only about economics!

Political considerations have been paramount in launching the euro: political leaders agreed on the monetary union without thinking in terms of the OCA theory. Their intention was to move one step further in the direction of an ‘ever-closer union’.
The logic of the optimum currency area criteria

Very open (McKinnon) → Low likelihood of asymmetric shocks

- YES → OCA
- NO → Need adjustment → Flexible wages and prices
  - YES → OCA
  - NO → Need adjustment → Labour mobility (Mundell)
    - YES → OCA
    - NO → Need political support → Transfers, Homogeneity of preferences, Solidarity