Economics of the European Union

EC 2057

Lecturer: Dr Jan Fidrmuc

Contact Information

- Office: SS 255
- Email: Jan.Fidrmuc@brunel.ac.uk
- Phone: 01895-266-528 (or ext. 66528)
- Office hours:
  Wed/Thu 10.30-11.30, or by appointment
- Course web page:
  http://www.fidrmuc.net/eu/

Course Information

- Assessment:
  - Coursework (essay): 25% due on 22-02-2006 ; topic and further details will be announced shortly;
  - Exam (1½ hrs): 75%
- Reading:
  - Paul De Grauwe, *Economics of Monetary Union*, Oxford University Press, 6th edition, 2005.
  - Lecture handouts

Outline of the course

Part I: The theory of optimum currency areas (OCA)

- The costs of a monetary union
- The benefits of a monetary union
- Costs and benefits compared

Outline of the course

Part II: How do existing monetary unions work: the Eurozone

- The European Central Bank: institutional features
- Monetary Policy in the Eurozone
- Fiscal Policy in a monetary union

The Theory of Optimum Currency Areas

The Costs of a Common Currency

- Definitions of monetary (currency) unions:
  - Common currency and common central bank setting a single interest rate (e.g. EMU or UK)
  - Weaker definition: rigidly fixed exchange rate that both countries are committed to uphold (e.g. Germany/Austria or Germany/Netherlands before the EMU)
  - Currency-board arrangement: the exchange rate is fixed by law or constitutional ammendment (Honk Kong, Estonia, Bulgaria)
  - Dollarization: one country abandons its own currency and uses that of another (Panama, Bosnia, Monte Negro)

Introduction

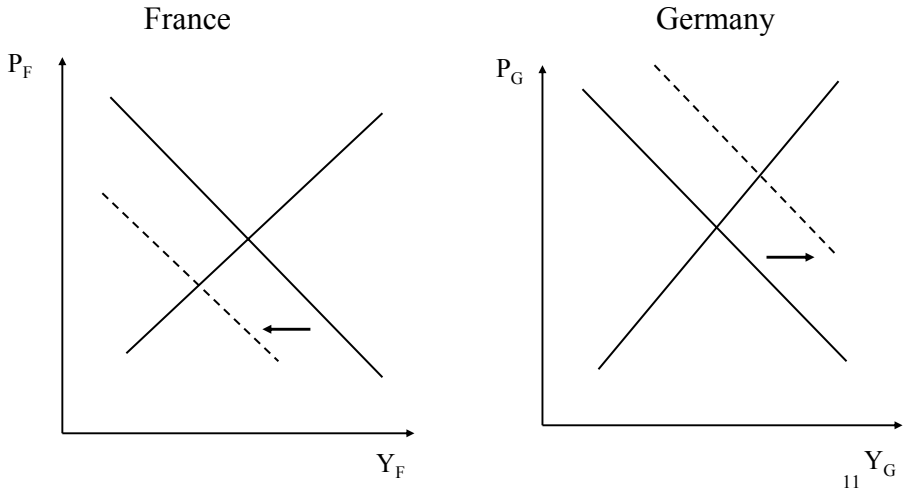
- Joining a monetary union is costly because a country looses an independent monetary policy instrument (exchange rate).
- This is costly when asymmetric (country or region specific) shocks occur.
- With single currency, the union CB can only respond to shocks shared by all regions, or to the average of region-specific shocks

- National CBs (if present) cannot pursue independent monetary policies when part of a monetary union
- This increses the importance of other policy tools (e.g. fiscal policy), and adjustment mechanisms (e.g. labor or capital mobility or fiscal transfers)
- We analyze the sources of such costs
- The analytical framework is based on the theory of optimum currency areas (Mundell, 1961)

Shifts in demand

- Assume two countries, France and Germany
- Asymmetric demand shock
  - Decline in aggregate demand in France
  - Increase in aggregate demand in Germany
- Result:
  - Lower output, higher unemployment and falling prices in France
  - Higher output, lower unemployment and rising prices in Germany

Figure 1.1 Aggregate demand and supply in France and Germany



11

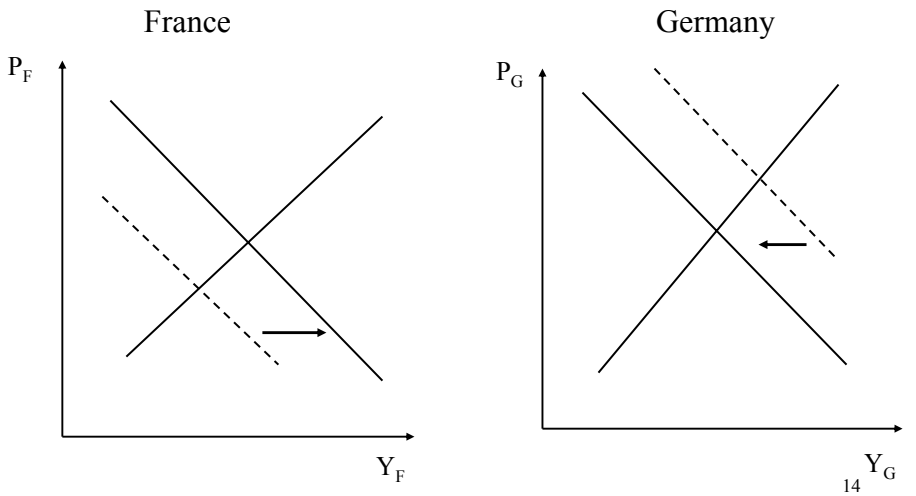
Regime 1: Monetary Independence

- If France and Germany maintain their own currencies and national central banks, they can use national interest rate and/or exchange rate to counter the shock
- With flexible exchange rate, France could lower its interest rate to stimulate aggregate demand; this would cause the currency to depreciate
- Under a fixed-exchange rate regime, France could formally devalue its currency

12

- Depreciation/devaluation makes French products cheaper in terms of German currency; German products become more expensive in French currency
- Relative prices of French/German products change
- French exports increase while German exports fall
- Demand shifts again in favor of French products
- France avoids unemployment; Germany avoids inflation

Figure 1.3 Effects of a devaluation of the FF (revaluation of the DM)

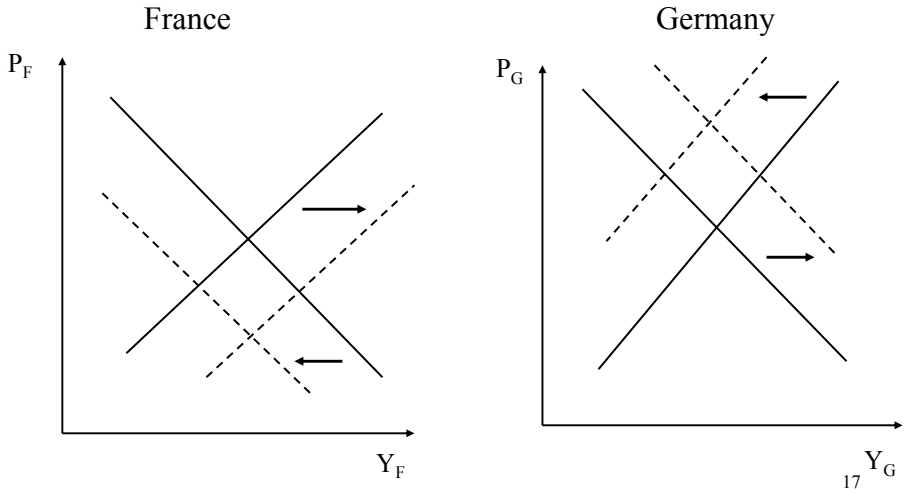


Regime 2: Monetary Union

- How can France and Germany deal with this shock if they form a monetary union?
- France cannot stimulate demand using monetary policy, nor can Germany restrict aggregate demand using monetary policy
- Are there alternative adjustment mechanisms in a monetary union?

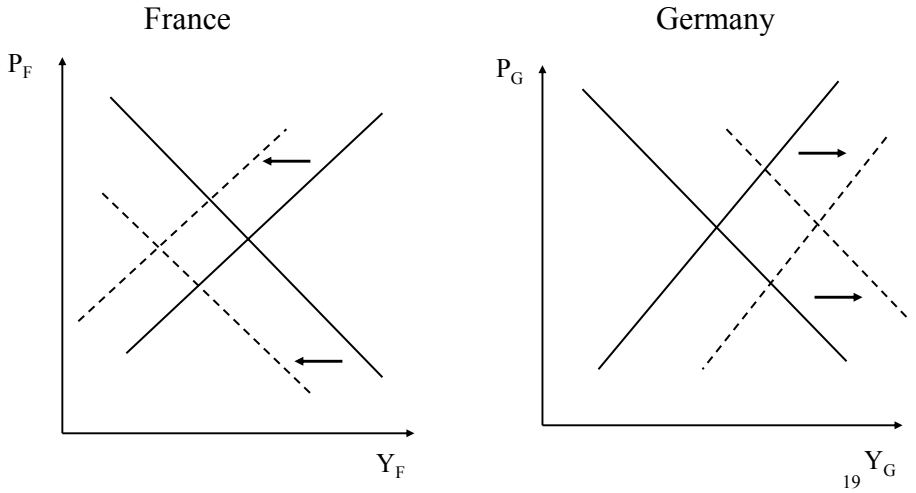
- Wage flexibility
  - Higher unemployment → lower wages in France
  - Aggregate supply in France shifts out
  - Low unemployment (excess demand) → higher wages in Germany
  - Aggregate supply in Germany shifts in
  - French products become cheaper; German products become more expensive
  - Relative prices of French/German products change
  - Deflation in France, inflation in Germany

Figure 1.2 Adjustment through flexible wages



- Labor mobility
  - Unemployed French workers move to Germany and seek work there
  - Output rises in Germany and falls in France
  - Little change in prices in Germany or in France
  - However, labor mobility is very limited in Europe, especially for low skilled workers
- Similar adjustment could be achieved with capital mobility

Adjustment through labor mobility

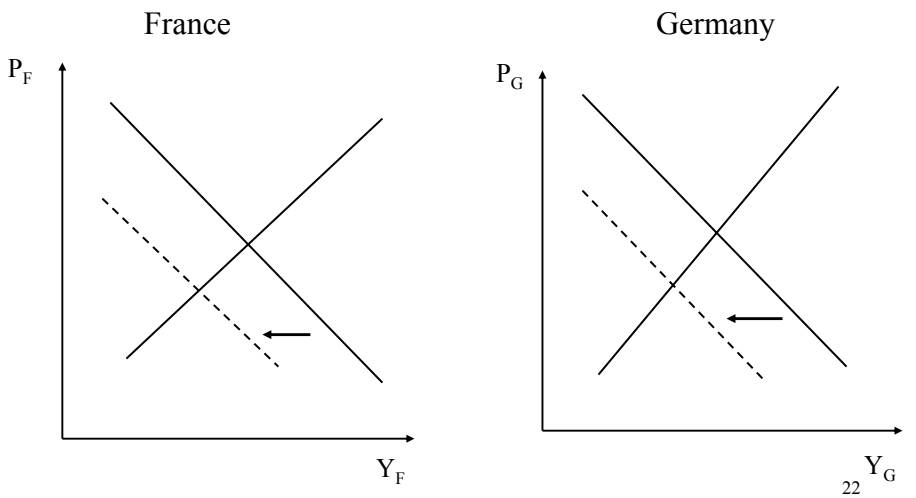


- If wage are rigid and/or labor immobile, adjustment is more difficult
- Wages may be downward rigid because unions are reluctant to accept wage cuts
- Then, wages remain unchanged in France but rise in Germany
- Adjustment occurs only through inflation in Germany
- Unemployment persists in France
- Both countries therefore find the monetary union costly

Symmetric and asymmetric shocks compared

- When shocks are asymmetric
  - monetary union creates costs compared to monetary independence
  - Common central bank cannot deal with these shocks
- When shocks are symmetric :
  - Monetary union becomes more attractive compared to monetary independence
  - Common central bank can deal with these shocks

Figure B2.1 Symmetric shocks



Insurance against asymmetric shocks

- Mutual insurance against asymmetric shocks can be implemented
- It is sustainable
  - if it does not hinder the adjustment mechanism through prices and wages → moral-hazard problem
  - If it is used to deal mainly with temporary shocks → incentive compatibility
- Two systems
  - Public insurance systems
  - Private insurance systems

Public insurance systems

- Centralised budget that allows for automatic transfers between countries of monetary union
- E.g. progressive tax in Germany used to finance unemployment benefits in France
- It is largely absent at the European level but common at national level and in federations (e.g. Germany)
- Creates the problem of moral hazard

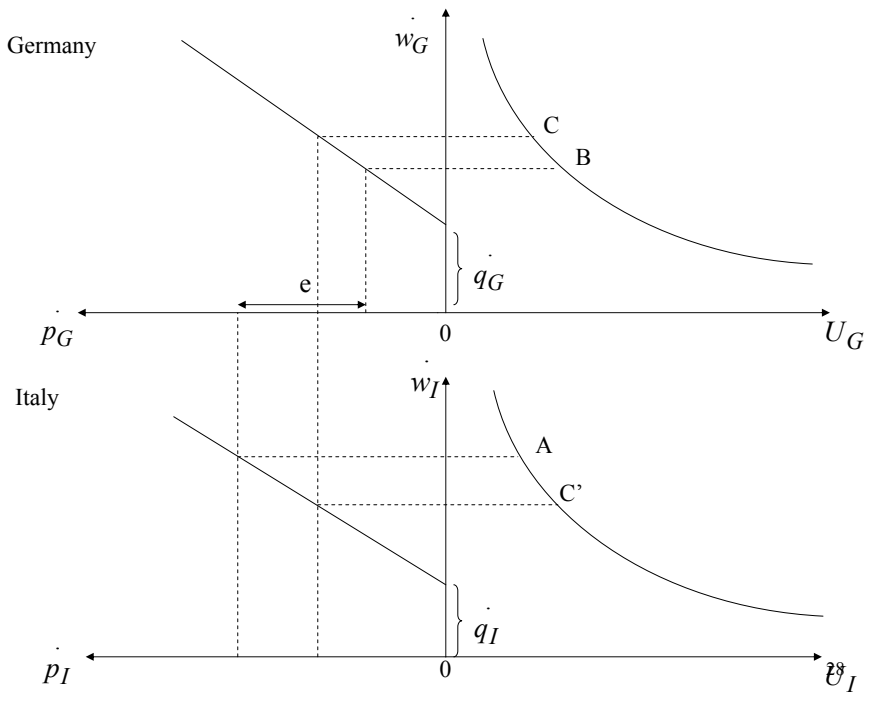
- National budgets allow for automatic transfers between generations (inter-temporal smoothing) within the same countries
  - France accumulates deficit; Germany surplus
  - Integrated capital markets redistribute purchasing power
  - This imples automatic transfers between generations within the same countries
  - Create problems of debt accumulation and sustainability

Private insurance

- Integrated capital markets allow for automatic insurance against shocks
- Example: stock market and diversification of risk
- Citizens can reduce their exposure to asymmetric shocks by holding financial assets (stocks and bonds) in both countries
- The less-well-off may be unable to participate

Other sources of costs

- Different preferences about inflation and unemployment create potential cost of monetary union
  - This analysis holds only when short-term Philips curve is stable
  - Countries may prefer different points alongside the Philips curve
  - In a monetary union, they may have to agree on a different inflation-unemployment choice



- Different labour market institutions
  - Centralized versus non-centralized wage bargaining (Germany vs UK)
  - Symmetric shocks (e.g. oil shocks) are transmitted differently when institutions differ across countries
  - Trade unions are more likely to *internalize* the impact of their wage demands when wage bargaining is centralized
  - Calmfors and Driffill (1988)

- Different legals systems
  - These lead to different transmission of symmetric shocks (e.g. interest rate change)
  - E.g. regulation of mortgage markets
- Different growth rates
  - Does a monetary union constrain the growth of less developed countries?
  - Rapidly growing countries are more likely to experience growing trade deficits
  - Related issue: Balasa-Samuelson effect
  - Both can result in deterioration of competitiveness

- Different fiscal systems
  - Countries with less effective tax collection tend to rely more on inflation tax (seigniorage)
  - These countries may have to raise explicit taxes in a monetary union

- Optimum-currency-area criteria:

  1. Shocks are largely symmetric

  or

  2a. Wages are flexible

  or

  2b. Labor (or capital) is sufficiently mobile and responsive to asymmetric shocks

  or

  3. There is an effective insurance mechanism to counter adverse effects of asymmetric shocks
- These criteria address the costs of monetary (currency) unions, not benefits