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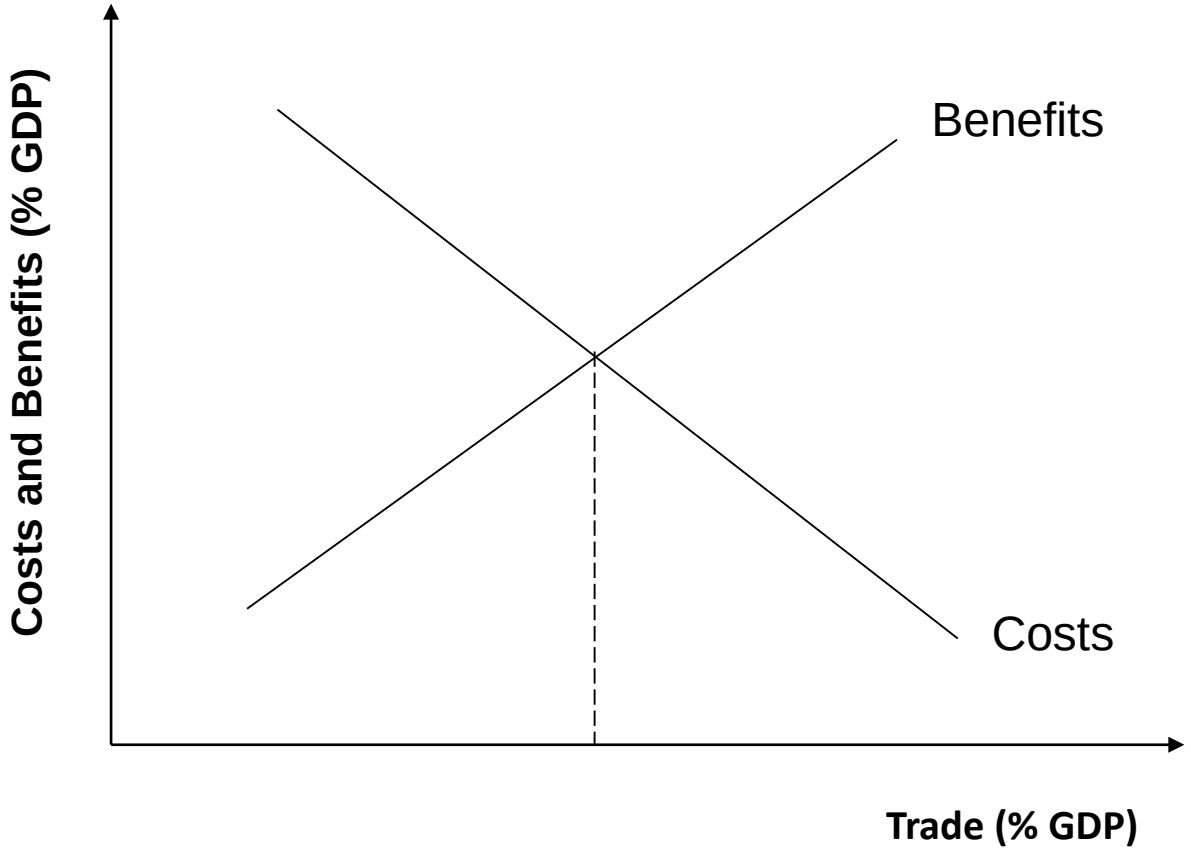
Economics of Monetary Union 12e

Chapter 4: Costs and Benefits Compared

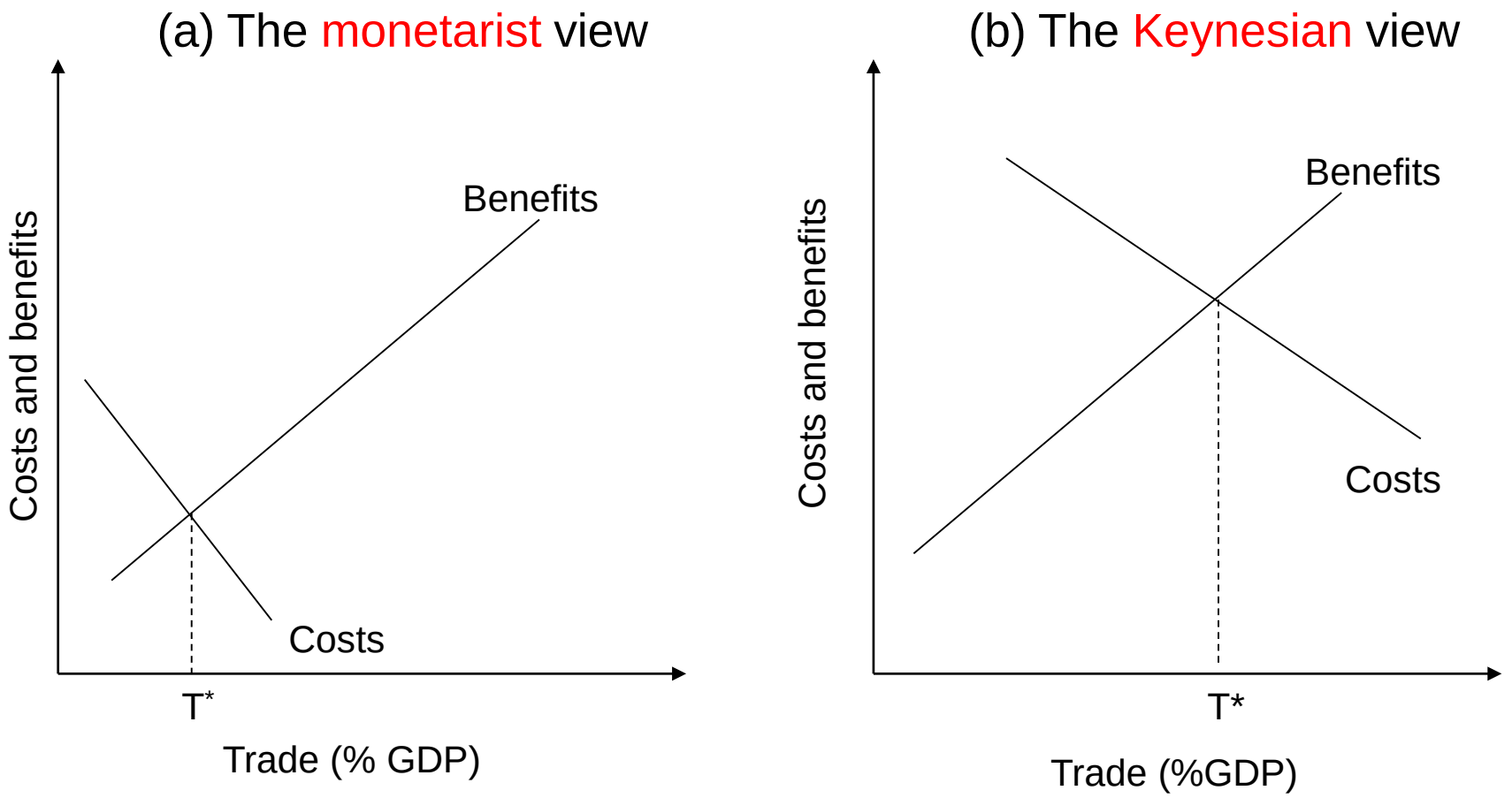
Costs and benefits of a monetary union

Figure 4.1 Costs and benefits of a monetary union



Two views about costs and benefits of MU

Figure 4.2 Costs and benefits of a monetary union: two views.



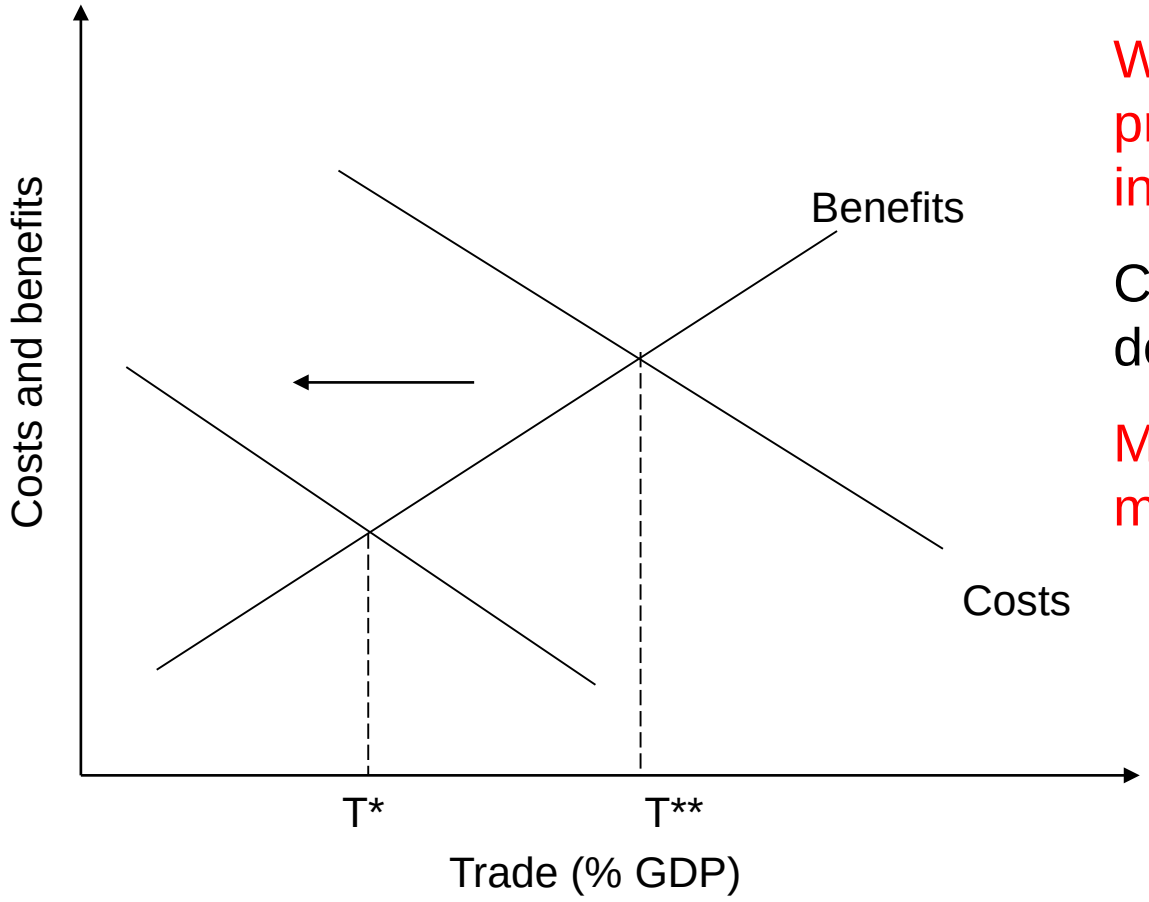
Two views about costs of MU

- The '*monetarist*' view :
  - Monetary policies are ineffective as instruments to correct for different developments between countries
  - The cost curve is close to the origin
  - Thus, many countries in the world would gain by relinquishing their national currencies, and by joining a monetary union

- The '*Keynesian*' view :
  - the world is full of rigidities
  - Monetary policy (including exchange rate policy) is a powerful instrument in eliminating disequilibria
  - the cost curve is far away from the origin
  - relatively few countries should find it in their interest to join a monetary union

- Since the early 1980s the 'monetarist' view has gained adherents, and has changed the view many economists have about the desirability of a monetary union
- The popularity of monetarism helps to explain why EMU became a reality in the 1990s
- Since sovereign debt crisis Keynesian view has made comeback
- This has coincided with loss of popularity of EMU in some countries (e.g. Italy)

Figure 4.3 Costs and benefits with decreasing rigidities



With decline in wage and price rigidities and an increase in labour mobility:

Cost curve shifts downwards

Monetary union becomes more attractive

Is EMU an optimal currency area?

- In order to answer to this question there are different parameters to evaluate:
  - Intra-EU trade
  - Degree of rigidities
  - Degree of asymmetry of shocks.

Table 4.1 Intra-union exports of EU countries (% of GDP) in 2012

Slovakia	71.7
Hungary	67.2
Czech Republic	65.8
Belgium/Luxembourg	62.5
Netherlands	61.4
Slovenia	52.7
Estonia	49.5
Lithuania	42.6
Ireland	34.0
Latvia	31.8
Austria	30.4
Poland	28.5
Germany	24.9
Denmark	22.0
Portugal	19.5
Sweden	19.1
Malta	17.3
Finland	16.0
Italy	13.7
Spain	13.5
France	12.4
United Kingdom	10.8
Greece	6.0
Cyprus	5.1

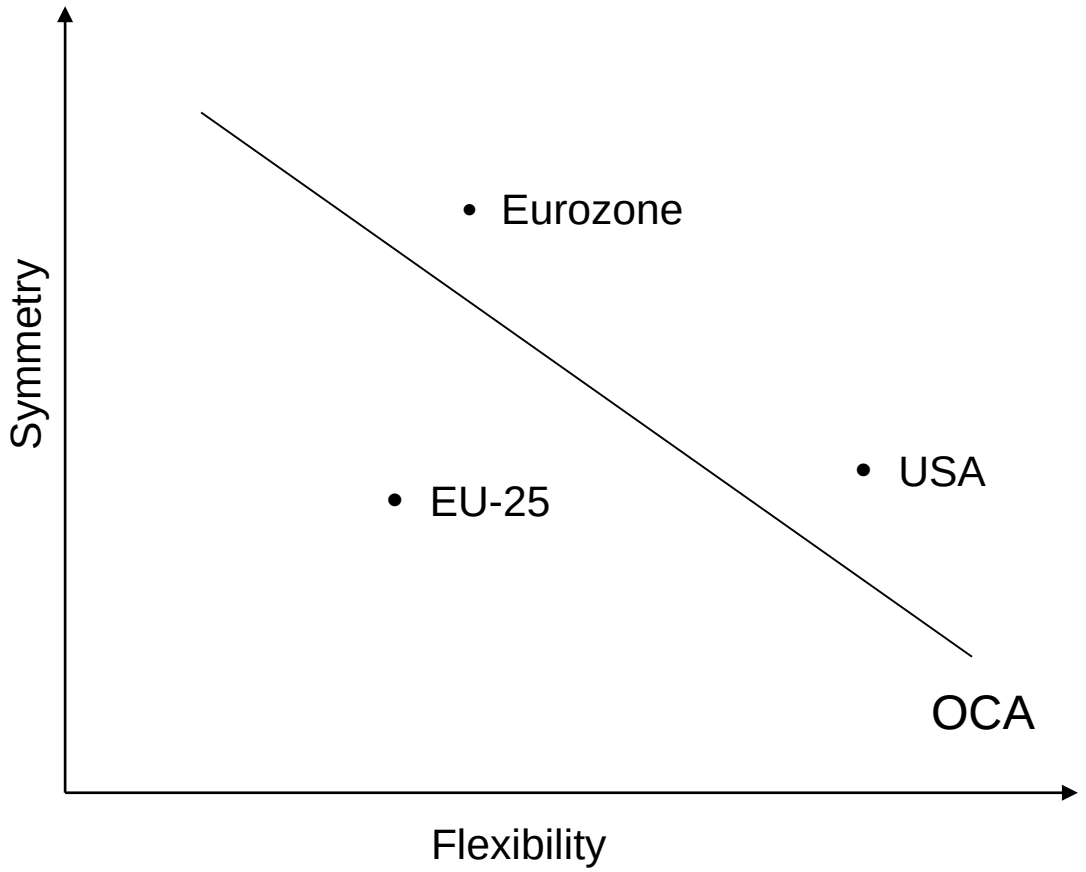
- Large differences in openness of EU countries with the rest of the Union
- Cost-benefit analysis is likely to show net benefits of being in EMU for Benelux, and small central European countries
- For countries with a small degree of openness (UK, Greece and Cyprus), it is less clear that they belong to an optimal currency area with the rest of the EU

Source: European Commission, European Economy, Statistical Appendix.

Asymmetric shocks and labour market flexibility

- The degree of labour market flexibility matters for determining whether a monetary union will be attractive
- Also asymmetry in demand and supply shocks matters.
- There is a link between labour market flexibility and asymmetric shocks in a monetary union

Figure 4.4 Symmetry and labour market flexibility in monetary unions



Downward sloping OCA-line shows minimum combinations of symmetry and flexibility that countries must have in order for a monetary union to provide more benefits than costs

Countries or regions located below the *OCA* line do not have enough flexibility given the level of symmetry they face

Countries to the right of the OCA line have a lot of flexibility given the level of symmetry they face

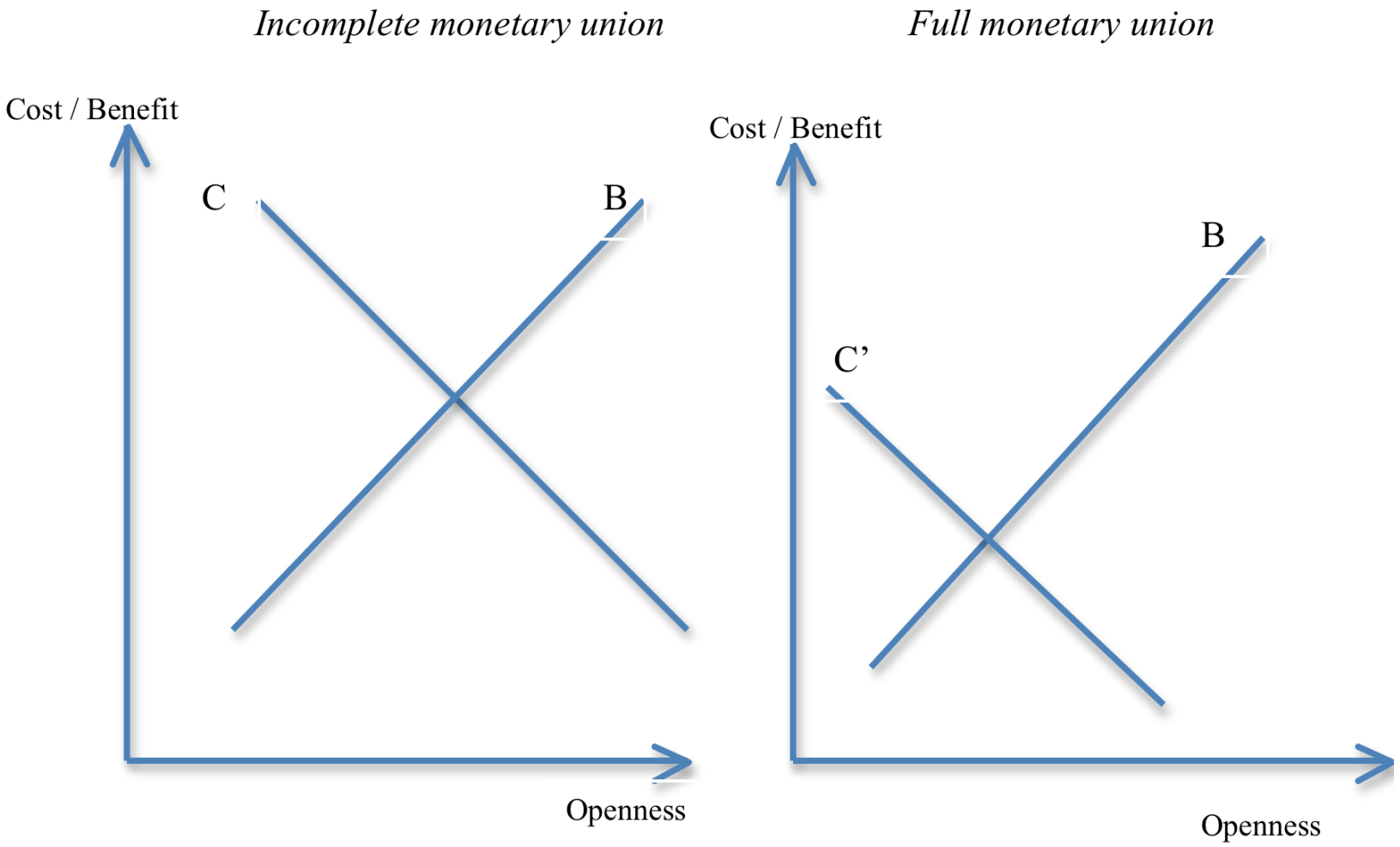
Evidence about how many countries in EU form OCA is not clear-cut

- The challenging task for the EU-25 is to move to the other side of the *OCA-line*, i.e. to make a monetary union less costly
- How can this be achieved? There are essentially two strategies
  - reduce the degree of real divergence (political union)
  - increase the degree of flexibility of labour markets

The degree of completeness of a monetary union

- In an incomplete monetary union, i.e. one in which there is no budgetary union, there will be great fragility of the government bond markets
- In addition, in such unions, asymmetric shocks are likely to be intensified by disruptions in the government bond markets that impose high interest rates in countries experiencing negative shocks
- In monetary unions that are embedded in a budgetary union these problems disappear and the cost of a monetary union is likely to be lower

Figure 4.5: Costs and benefits and degree of completeness of monetary union

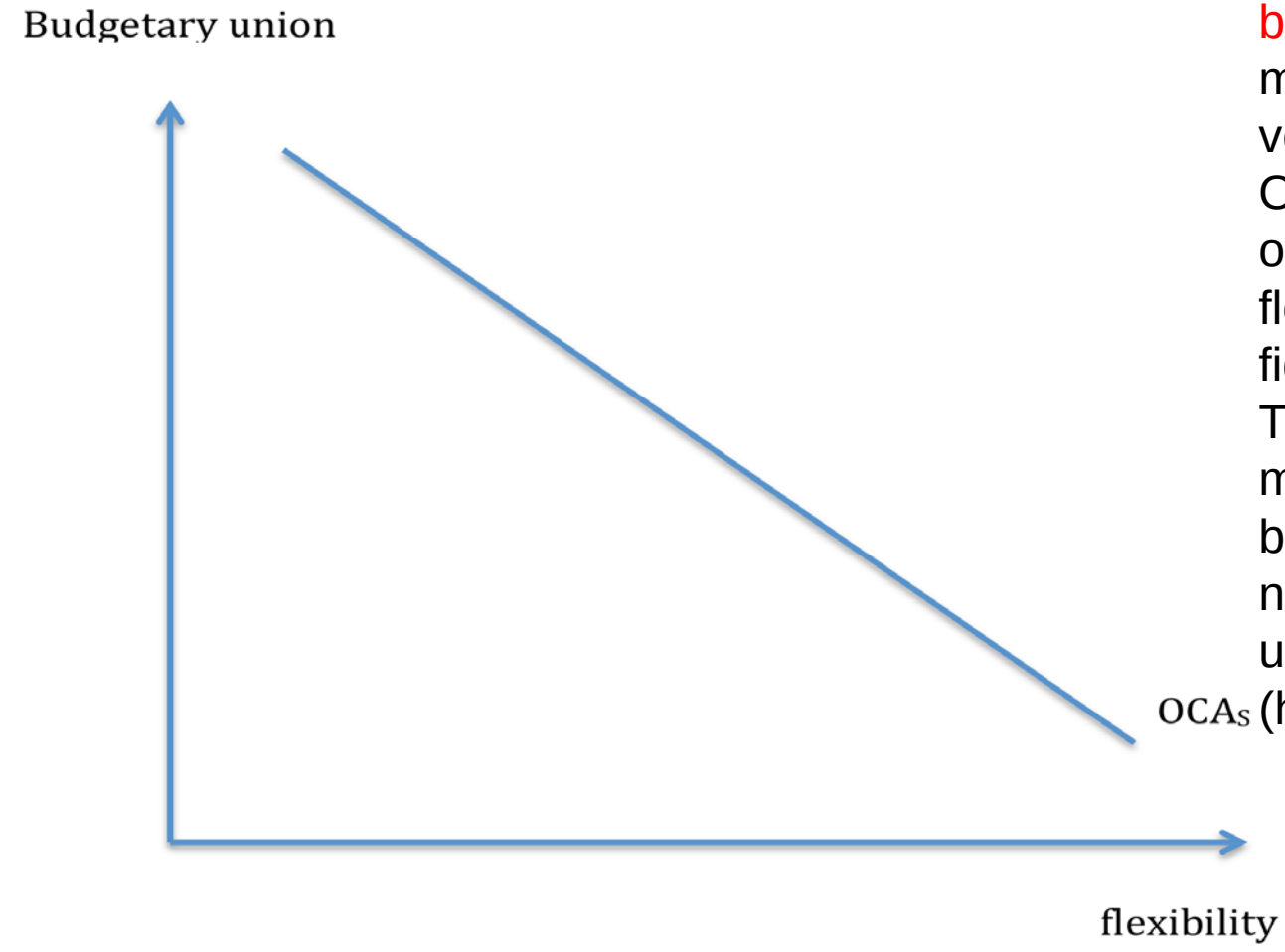


A prediction

- Previous analysis leads to prediction that we are more likely to observe monetary unions that are budgetary unions at the same time
- A budgetary union is essential component of a political union
- Thus a combination of monetary and political union is more likely to have fewer costs and therefore to function better than monetary unions that are not embedded in a political union
- The overwhelming evidence is that monetary unions are almost always embedded in a political union.
- The Eurozone is a big exception to this rule

Tradeoff budgetary union and flexibility

Figure 4: Tradeoff between budgetary union and flexibility



The higher the degree of budgetary union the more we move upwards along the vertical line.
On the horizontal axis we set out the same measure of flexibility we used in previous figures.
The OCA-line measures minimum combinations of budgetary union and flexibility needed to make a monetary union economically attractive (higher benefits than costs).

Implications

- Flexibility may sound great for many economists and central bankers
  - It is costly for most people that are forced to be flexible.
  - Flexibility means that these people may have to accept a wage cut or may be forced to emigrate
- We learn from previous Figure that a movement towards budgetary union alleviates the (painful) need to be flexible
- It may also make a monetary union more acceptable to large segments of the population

Additional insight

- Flexibility in labour markets is something national governments can create. There is no need to further integration to increase flexibility
- Budgetary union, however, is of a different nature. It requires political integration
- In other words while flexibility is in the realm of national governments, budgetary union is a European affair (Sapir(2015)

Empirical evidence about nature of shocks

- We compute trend and cyclical components of GDP of Eurozone countries:

- Using Hodrick-Prescott-filter (HP)

- and then compute correlations

- and relative variance of cyclical and trend component

Correlation coefficients cyclical components GDP

	Austria	Belgium	Finland	France	Germany	Greece	Ireland	Italy	Netherl	Port
Austria										
Belgium	0,97									
Finland	0,97	0,98								
France	0,93	0,95	0,97							
Germany	0,69	0,57	0,55	0,59						
Greece	0,73	0,82	0,84	0,74	0,09					
Ireland	0,85	0,89	0,92	0,95	0,41	0,81				
Italy	0,91	0,96	0,98	0,96	0,50	0,86	0,93			
Netherlands	0,93	0,94	0,93	0,91	0,60	0,75	0,86	0,90		
Portugal	0,98	0,89	0,89	0,87	0,37	0,82	0,87	0,90	0,94	
Spain	0,85	0,91	0,94	0,87	0,27	0,97	0,90	0,95	0,86	0,90

Mean trend growth and mean (absolute) business cycle change in GDP (in percent) during 1999-2014

	Mean cycle	Mean trend	ratio
Austria	1,79%	1,77%	1,01
Belgium	1,72%	1,67%	1,03
Germany	1,55%	1,23%	1,26
France	2,15%	1,49%	1,44
Netherlands	2,66%	1,66%	1,60
Finland	4,35%	2,02%	2,15
Spain	4,58%	2,07%	2,21
Ireland	8,01%	3,35%	2,39
Portugal	3,67%	0,81%	4,53
Italy	2,86%	0,41%	7,05
Greece	9,09%	0,90%	10,11

Interpretation

- Since start of Eurozone, cyclical (temporary) movements have been the dominant factor of growth variations in GDP
- Cyclical movements of GDP are highly correlated in the Eurozone
- Asymmetry between Eurozone countries
  - not so much to be found in a lack of correlation in growth rates
  - but in the intensity of the boom bust dynamics of growth rates

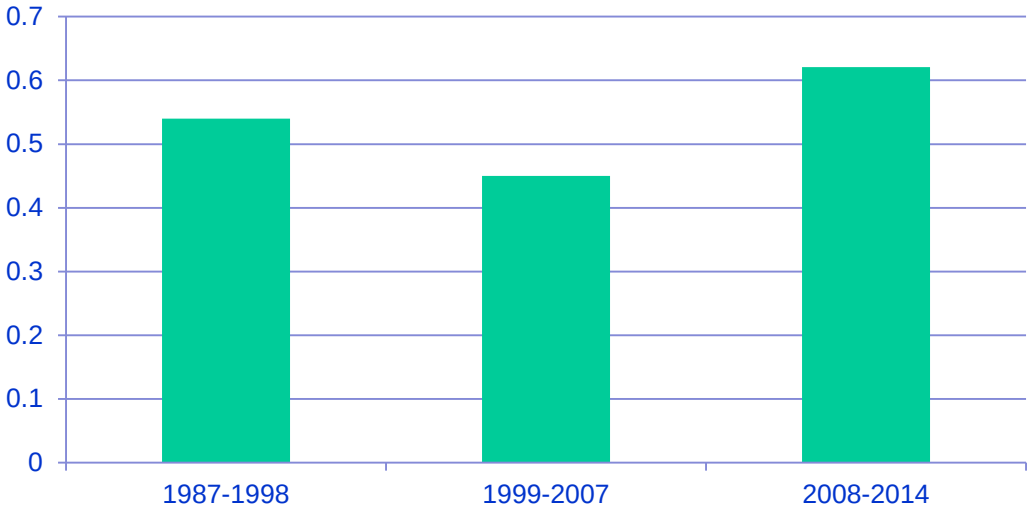
Endogeneity of monetary union

- A decision by an individual country to join EMU, even if it does not satisfy the *OCA* criteria, can have a self-fulfilling character
- Process of integration is sped up by the very decision to join the monetary union, so that this new country grouping moves faster into the *OCA* zone
- OCA becomes endogenous

Is there evidence for endogeneity?

- Three OCA-criteria are potentially affected by endogeneity
  - Trade integration
  - Symmetry
  - Flexibility
- Trade integration: econometric evidence suggests that euro may have increased intra-trade by 10 to 20%
- Symmetry: is symmetry increasing in eurozone? (see next slide)
- Flexibility has increased (but much of it before 1999; and very unequal between countries)
- Thus there is mitigated support for endogeneity

Figure 4.12: Mean Eurozone correlation of cyclical component of industrial production



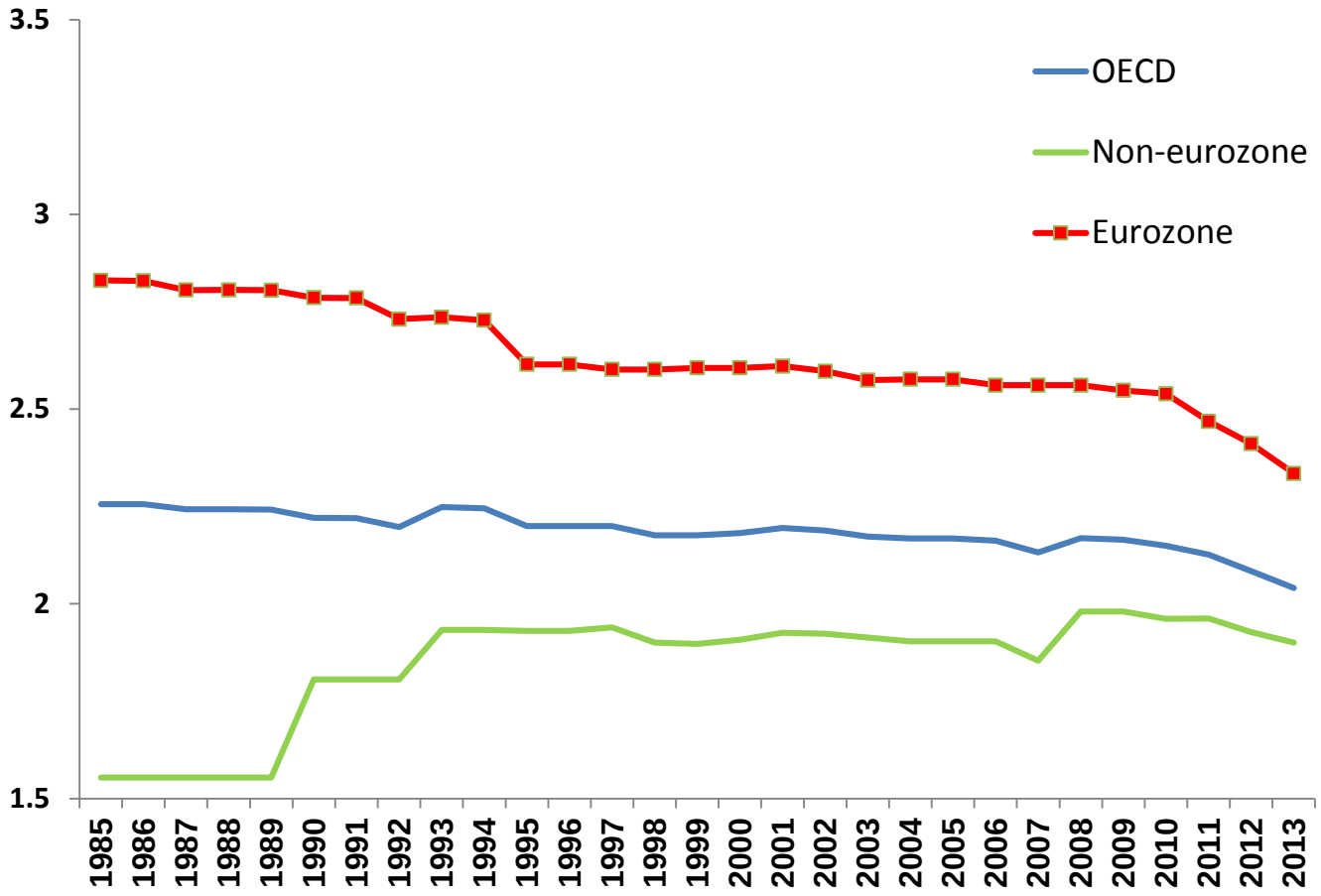
During the pre-crisis period (1999-2007) the mean correlation coefficient is marginally smaller than in the pre-Eurozone period (1987-1998).

During the post-crisis period (2008-11) the correlation increases significantly.

Mostly due to the strong decline in output that occurred in 2009 and that hit all countries together as a result of the “Great Recession”.

This is likely to be temporary

Increased flexibility?



Source: OECD

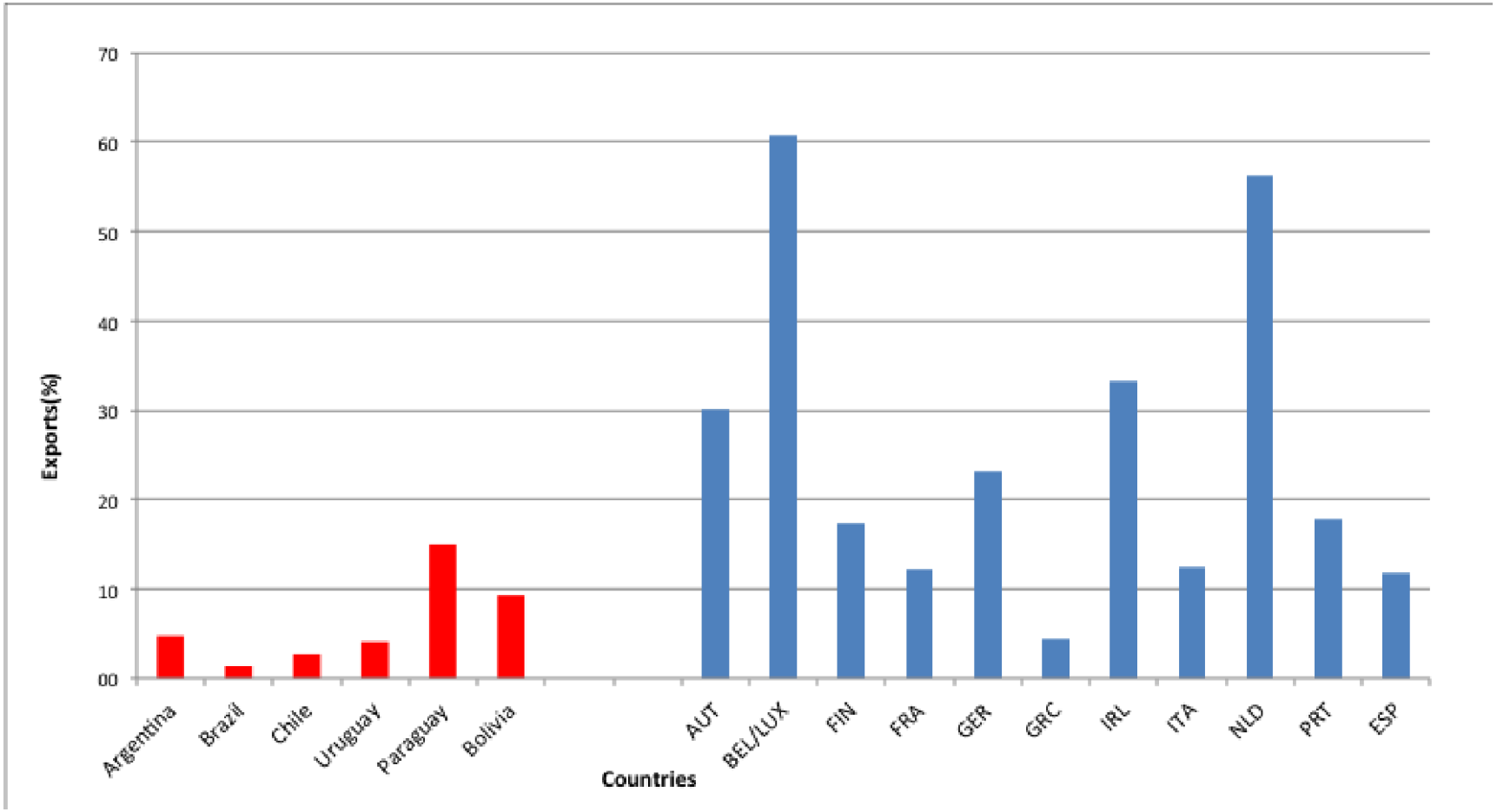
Conclusion on endogeneity of OCA-criteria

- On the whole, evidence of an endogenous component in OCA criteria mixed
  - integration criterion does not show much evidence of moving in right direction
  - the flexibility criterion seems to be moving in the OCA-direction
  - It is unclear whether the symmetry criterion has been subject to an endogenous dynamics up to now (2017)

Is Latin America an optimal currency area?

- Monetary instability has made the idea of forming a monetary union in Latin America popular
- Costs of monetary union in Latin America
  - Latin American countries have very low levels of trade with the rest of Latin America

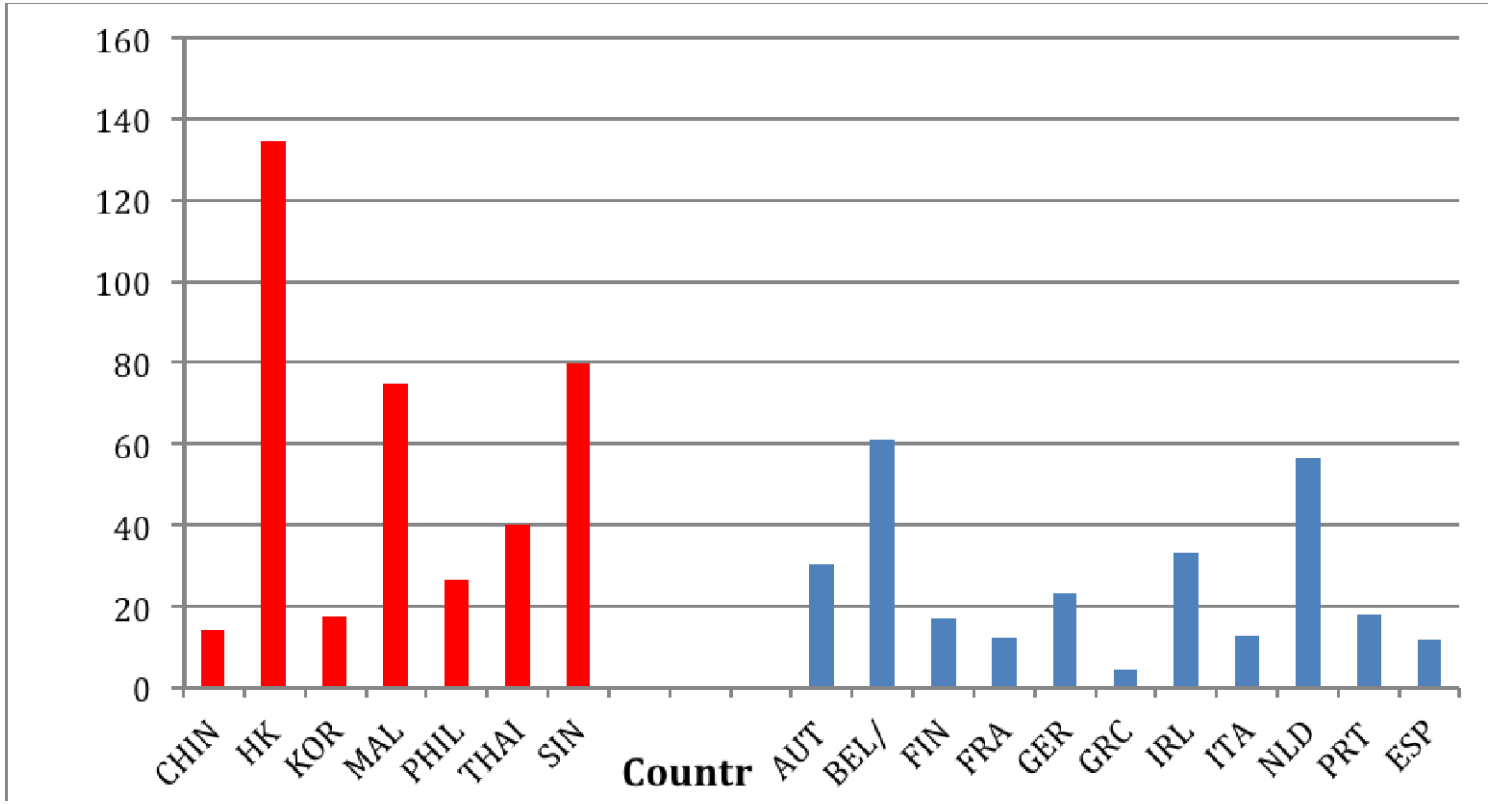
Figure 4.16 Intraregional exports of goods and services, EU and Latin America as a percentage of GDP (2007)



  - Degree of synchronization of output movements is low in Latin America, and asymmetric shocks are relatively large.
  - Very little empirical evidence has been undertaken to measure the degree of flexibility of labour markets
- Main driving force for popularity of MU is the hope to import price stability (dollarization)
- If monetary union comes about it will have to provide the right institutions guaranteeing price stability

Is East-Asia an optimal currency area?

Figure 4.17 Intra-regional exports of goods and services, EU and Latin America, as a percentage of GDP (2010).



Source: IMF, IFS and Xu Ning(2004)
Note: the exports of the East-Asian countries is to ASEAN plus China, Korea and Japan. The data for China relate to 2001.

Shocks are not more asymmetric in Asia than in Eurozone

Figure 4.19 Percentage of demand and supply changes explained by common shock in East Asia

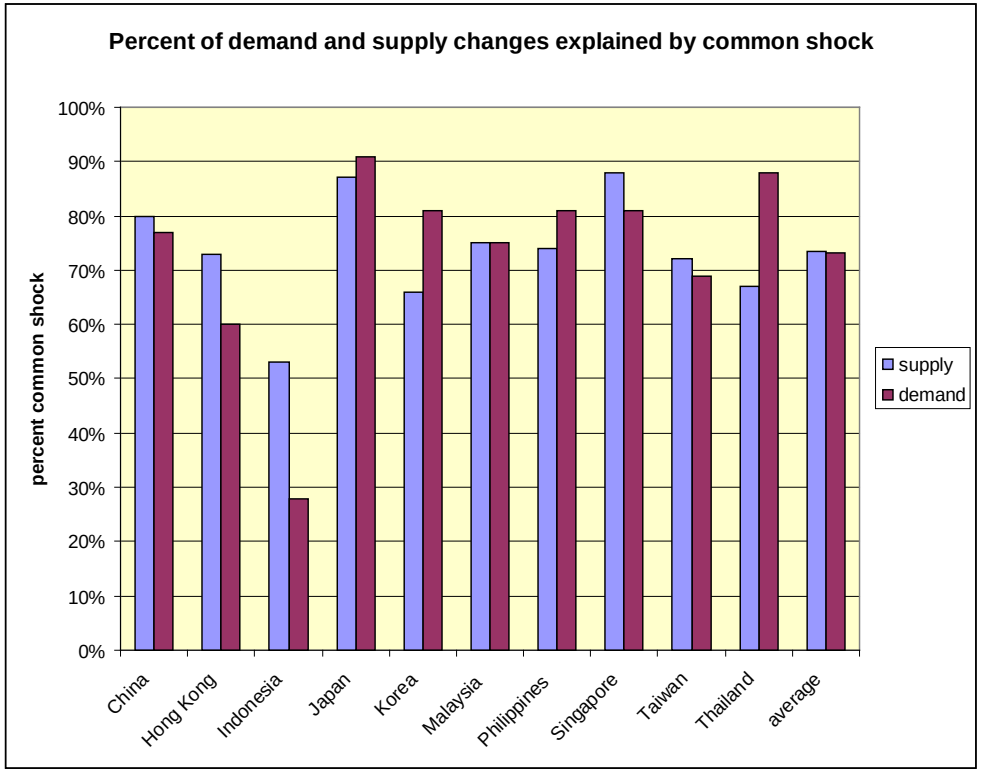
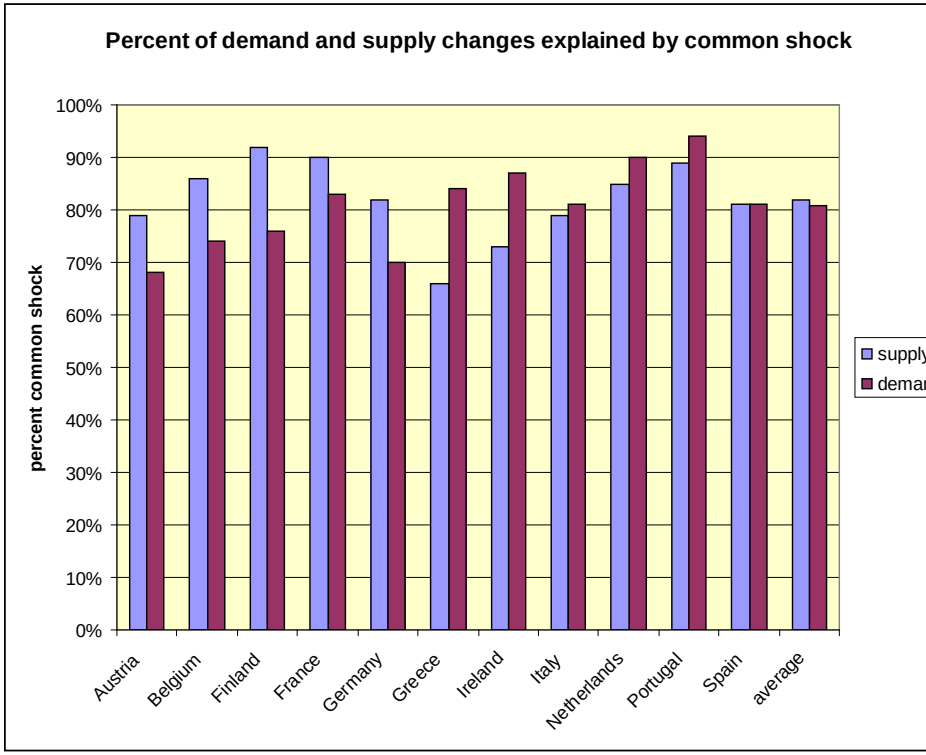


Figure 4.20 Percentage of demand and supply changes explained by common shock in the Eurozone.

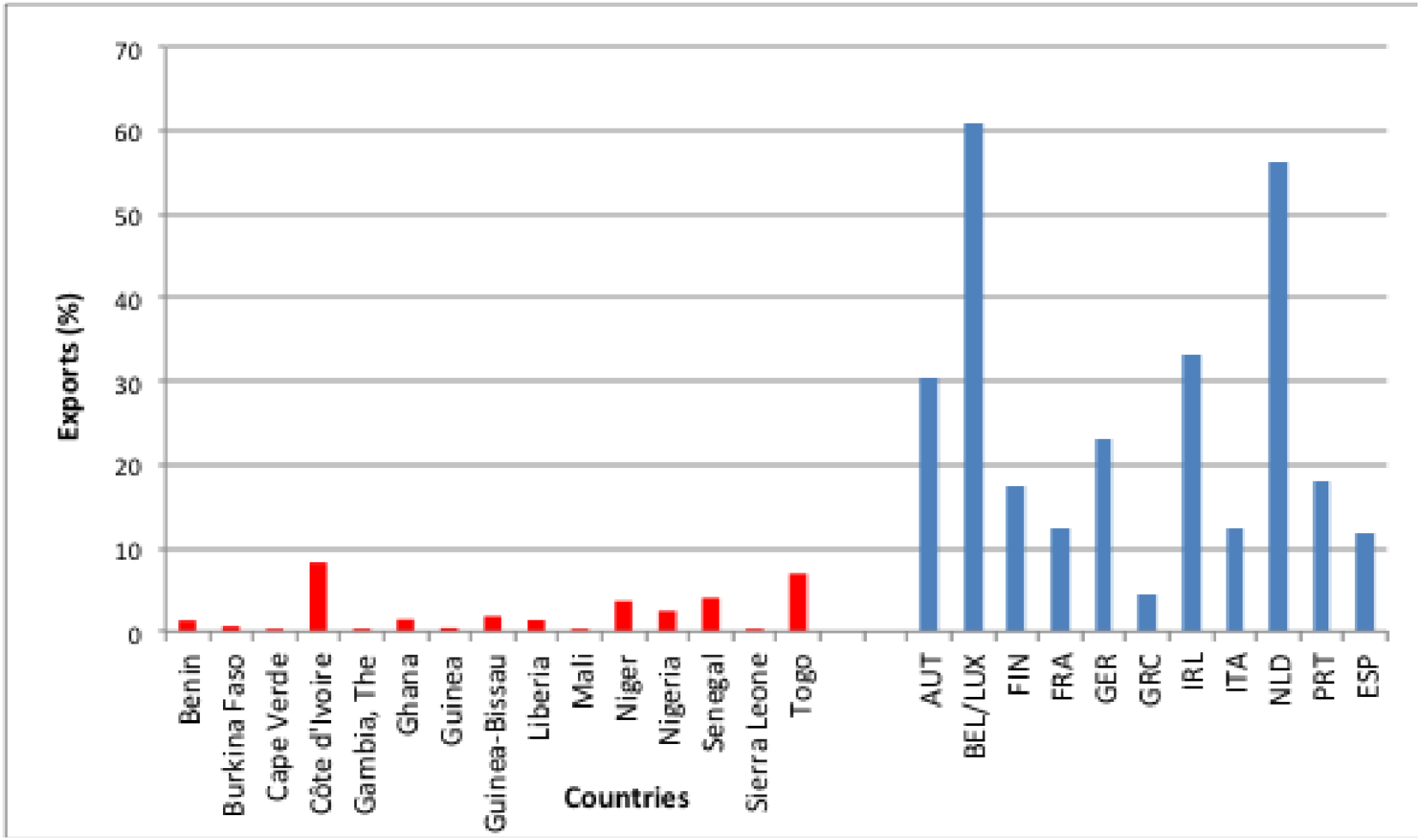


- Economic conditions for monetary union in East Asia seem to be satisfied
- Main stumbling block is political
- Desire for political unification is weak
- Contrast with Europe is great: process of political unification in Europe has been going on since 1960

Monetary Unions in Africa

- There is a history of monetary union in West- and Central Africa
- Legacy of colonization: CFA-zone
- New initiative to extend existing monetary unions: The Economic Community of West-African States (ECOWAS)
- This is a grouping of 15 states
- Do these form an OCA?

Figure 4.20 Intraregional exports of goods and services in West-Africa (2003) and the Eurozone (2010)



- When using the Eurozone as a benchmark, the evidence on whether West Africa forms an optimal currency area is mixed:
  - degree of integration among West African countries is low, yielding relatively few benefits of a monetary union
  - labour mobility is substantially stronger
  - the degree of asymmetry does not seem to be larger in West Africa than it is in the Eurozone
  - West African countries (the members of WAEMU) have already set into place a series of institutions, such as a common central bank facilitating further steps towards a monetary union

Conclusion

- It is unlikely that the EU as a whole constitutes an optimal monetary union.
- Even the countries that are net gainers from a monetary union take a risk by joining the union
  - Risk is that when large shocks occur (like the recent shocks resulting from the financial crisis), they will find it more difficult to adjust, having relinquished their national currencies
  - Even for those countries that have joined a monetary union, it is not entirely academic to know whether they form an optimal currency area
  - As a result of the sovereign debt crisis, in some of these countries doubts are voiced about whether it was a good idea to be in the Eurozone

Conclusion

- The nature of the asymmetric shocks matters.
  - If these are permanent, countries will have to focus mostly on making their labour and product markets more flexible.
  - If these shocks are temporary and result from unsynchronized business cycle movements, or from synchronized business cycles with very different amplitudes, then efforts at increasing the degree of budgetary union become more important.

Conclusion

- It is unlikely that Latin America and East Asia will come to monetary union soon, although reasons are different. Evidence about West-Africa as an OCA is mixed
- Analysis has been based on an *economic* cost-benefit analysis. Countries may also decide to adopt a common currency for *political* reasons
- The economic cost-benefit analysis remains useful, because it gives an idea of the price some countries will have to pay to achieve these political objectives