What is an OCA?

• A geographical region which adopts a single currency to maximise economic efficiency and creates the greatest economic benefit.

 Based on Optimal Currency Theory, a systematic approach on determining whether countries should give up their national currency for a common currency.

Mundell (1961) - areas that suffer large asymmetrical shocks are not likely to be successful currency areas.

Benefits are:

Free trade and movement of capital, goods and people.

Consolidate purchasing power (especially for smaller Western European countries who were not large enough to be an economic force).

Businesses no longer have to pay hedging costs to insure themselves against the threat of currency fluctuations. Reduce transaction costs .

Exchange rate fluctuations between EU members are no longer an issue.

Mundell (1961) stresses the benefits deriving from:

1. The elimination of transaction costs- European Commission state that costs reductions amount to 0.25 to 0.5% of GDP

2. Better performance of money as a medium of exchange and as a unit of account- a single currency eliminates deadweight losses due to currency transactions and to the need to collect and process information related to exchange rates

3. The second kind of benefits correspond to efficiency gains from:

Elimination of the relative price distortions generated by the transaction costs

Elimination of exchange rate uncertainty. - greater price comparability

Increasing trade between the involved countries, because trade is no longer hampered by rapid changes of exchange rates.

Cross border investment. A single currency eliminates the direct exchange rate risk of cross-border investment within the currency union.

Mundell's OCA criteria include:

Labour/Factor Mobility - Robert Mundell (1961) **Production Diversification** - Peter Kenen (1969) **Openness** - Ronald McKinnon (1962) **Fiscal integration and transfers Homogeneity of Preferences Commonality of Destiny**

Labour Mobility

One of the three economic criteria of OCA is labour mobility (Mundell): in an OCA, labour/people move easily.

In principle, the free movement of goods, services, capital, and labour was signed in the Treaty of Rome (came into force in 1958). The European Single Act (1986) and Single Market (1993) enforced this agreement, so migration within the EU has been free.

A single currency is only feasible if there is high factor mobility (labor and capital). Labor mobility is the more important factor, as capital is conventionally assumed to be mobile. In the absence of wage and price flexibility during an asymmetric shock, high labor mobility can restore full employment through emigration.

Mundell (1961): The cost of sharing the same currency would be eliminated if the factors of production, capital and labour, were fully mobile across borders. Since it is convenitonally assumed that capital is mobile, the real hurdle comes from the lack of labour mobility.

Why should unemployment rise in some part of a currency area while, in other parts, firms cannot produce enough to satisfy demand?



Adversely affected country A undergoes unemployment while non-affected country B faces inflationary pressure. Both problems could be solved by a shift of the production factors from A, in which they are idle, to B, in which they are in short supply.

Hence, there is no need for prices to and wages to change in either country. Once the factors of production have moved, the currency area's nominal exchange rate E delivers a the real exchange rate $\lambda 1$ that is best for each country.

Wage flexibility is a key requirement needed to deal with asymmetric shocks

Labour mobility has major implications on unemployment when asymmetric shocks occur. In the USA, as employment falls, regional emigration rises, thus, participation rate remains relatively unchanged. Quick labour market adjustment.

Contrarily, in the EU, most of the drop in employment is met by a fall in participation rate. In the long-run, this results to higher unemployment rates

<u>Reality – limited mobility</u>

Migrants have to consider many economic issues, such as:

- Cost of moving, possibly including the selling and buying costs of dwellings;
- The prospect of becoming unemployed, both in the country of origin and in the country of immigration;
- · Career opportunities, which means not only current but also future earnings;
- Family career prospects, including the spouse and children and sometimes even more distant relatives;
- Social benefits, including unemployment, health and retirement;
- Taxation of earnings from both labour and savings.

Labour mobility, or migration, is the key to dealing with asymmetric shocks in a common-currency area. However, moving entails a large degree of risk and uncertainty due to:

- 1. the cost of settling in another country
- 2. the prospect of becoming unemployed
- 3. job opportunities
- 4. family career prospects
- 5. different welfare systems: pension rights, unemployment benefits, health and retirement benefits
- 6. cultural differences (language, religion, traditions, racism)

Different labour market institutions:

Some labour markets are dominated by highly centralised labour unions (e.g. Germany), and in some countries labour unions are decentralised (e.g. UK).

These differences may introduce significant costs for a monetary union – these differences may lead to divergent wage and price developments, even if countries face the same disturbances. Very much depends on how labour unions react to shocks.

Centralised vs non-Centralised wage bargaining:

Centralised: Labour unions take into account the inflationary effect of wage increases. They know that excessive wage claims will lead to higher inflation, so that real wages will not increase and therefore will make no excessive wage claims. When a supply shock occurs, they realize that that losses in real wages cannot be compensated by nominal wage increases.

Bruno and Sachs (1985) state: In a highly centralised wage bargaining structure, labour unions take the inflationary effect of wage increases into account and exert modest increases.

De-Centralised: Here, individual unions that bargain for higher nominal wages know that the effect of these nominal wage increases on aggregate price level is small, because these unions only represent a small fraction of the labour force.

Free-riding problem: each union has an interest in increasing the nominal wage for their members. In such a non-cooperative set-up no individual union has an incentive to take the first step in reducing its nominal wage claim. For it risks having the others not follow, so the real wage level of its members will decline.

Bruno and Sachs (1985) state: In a less centralised wage bargaining structure with several labour unions, each union has an incentive to increase the wages for its members (non- cooperative game leading to a sub-optimal equilibrium)

Product Diversification - Kenen (1969)

Severe shocks usually affect countries which specialize in a narrow range of goods. Hence, product diversification eliminates the possibility of shocks which would call for exchange rate adjustment.

Countries whose production and exports are widely diversified and of similar structure form an OCA

Kenen: Countries whose production and exports are widely diversified and of similar structure form an optimum currency area.

Shifts in spending patterns, which may be a consequence of changing tastes or new technology that brings new products

Countries that specialize in a narrow range of goods are likely to be affected by these asymmetric shocks.

Horváth (2007) calculates an index of dissimilarity of exports for individual countries as compared to Germany (aggregate Eurozone data does not exist) for the period 1999-2002:

Denmark, Latvia, Netherlands have the highest scores and are hence more exposed to asymmetric shocks

- Austria, Czech Republic, Italy, Slovenia, UK have very low scores
- Horváth (2007) concludes that economic diversification is sufficient in the new Eastern European member states.

Fiscal transfers

OCA CRITERIA – ABILITY TO DEAL WITH ASYMMETRIC SHOCKS

Fiscal Transfers / Public Insurance Systems

Krugman and Obstfeld – this is the EU's "ability to transfer economic resources from members with healthy economies to those suffering economic setbacks."

Insurance systems can help to alleviate the adverse effects of countries hit by negative shocks.

Public insurance system – allows for automatic transfers of income between countries of the monetary union .

Insurance system should not prevent the adjustment mechanism (of flexible wages and labour mobility) from working.

FISCAL INTEGRATION (Kennen (1969))

i In the case of the United State, each state makes a contribution of taxes to the federal government.

; The Federal government can then distribute compensating transfers to individual states if they were subject to an asymmetric shock.

; Individual states then don't risk defaulting on debt as their borrowing costs and constraints are frequently higher than the Federal Government.

Eurozone does not have such a body therefore such relief cannot be provided via a central fiscal body and thus debt crises can deepen.

· Asymmetric shocks in a country within a currency area will affect the whole area. Therefore it is important to have a fiscal transfers system to prevent these shocks from spreading.

• No fiscal union in place as of now (only monetary union exists)

• Plans for fiscal union, urged by recent Euro zone crisis • Problema9c due to poli9cal considera9ons, equity issues, pride, etc

Countries that agree to compensate each other for adverse shocks form an OCA Currency union member countries must share a wide consensus on the way to deal with shocks.

An asymmetric shock is when an economic supply or demand is different from one region to another, or when the shocks do not move tandem.

In 1961, Mundell stated that areas that suffer from large asymmetrical shocks are not likely to be successful currency areas. This is because asymmetric shocks make it difficult for the CB of a monetary union to conduct monetary policy that is beneficial to each member of the union.

Example of an asymmetric shock:

Lets assume that France and Germany form a monetary union- so they have a common currency, the euro, which is managed by a common CB, the ECB.

• Lets also assume that consumer tastes have changed so that they prefer German products to French products. • As consumers prefer German goods to French goods, the demand curve for German goods shi's rightwards and the demand curve for French goods shifts leftwards.

• This effect is likely to increase unemployment and reduce output (recession) in France and reduce unemployment in Germany and increase output (Boom).





ure 15.5 An asymmetric shock in a currency union



Euro area has failed because of what any standard macroeconomics textbook tells you: that once you give up your exchange rate you lose a stabilization tool and when a crisis that is asymmetric in nature comes along you suffer a prolonged crisis as the only way out is to let prices and wages fall (internal devaluation), a painful and inefficient process.

Countries that experience very different demand and supply shocks (because their industrial structures differ greatly) will find it more costly to form a monetary union. The shift to a single currency exacerbates unemployment by eliminating the possibility of national differences in interest rates and of changes in nominal exchange rates. Do asymmetric shocks occur frequently enough to be a serious concern? Empirical studies that measure the size and nature of asymmetric shocks face the problem that some of the shocks may not be exogenous. Blanchard and Quah (1989) developed a statistical methodology to deal with this problem - It consists of extracting from the price and output data, the underlying demand and supply shocks.

Bayoumi and Eichengreen (1993) find the size of the supply shocks experienced by the "periphery" countries are approximately 2x as large as the core countries.

Korhonen and Fidrmuc (2001) find high correlations of large countries (France, Germany, Italy) with the Euro area; but the correlation of the supply shocks of some existing Eurozone countries (Ireland, Greece, Slovakia) with the euro area is rather low.

Unfulfilled criteria "More significant...the political integration and the common fiscal policy" are vital to the final transition to OCA. (Petreski, 2007)

<u>Trade Openness</u> - McKinnon (1962)

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

The Treaty of Rome, with the formation of a Customs Union, ensured the free movement of goods and services, which led to a gradual elimination of trade barriers, such as tariffs and quotas, and allowed free trade between member states.

The introduction of the euro enhanced trade integration, because it has led to lower transactions costs, price

transparency, greater competition, and lower exchange rate uncertainty (i.e. exchange risk is eliminated). These have fuelled further openness to trade.

Most EU countries (especially the smaller states) are very open to trade, which suggests that EU member-countries mostly satisfy this criterion of OCA.

Rose estimated a 200% rise in trade following establishment of a common currency Intra-Euro trade has increased by less than predicted since inception

- Possible reasons:
 - Countries already integrated
 - Time needed for gradual adjustment
 - Financial crisis

Countries that are very open to trade and trade heavily with each other form an OCA.

Price of domestic and foreign goods equalize (world price), and any change in one country's nominal exchange rate changes that country's prices such that the world price level remains the same.

When prices are flexible, giving up the exchange rate for a common currency involves little loss of policy independence.

Homogeneous Preferences

Common Currency members must share a wide consensus on the way to deal with shocks.

Countries should have similar views about the use of monetary and fiscal policy

- Low inflation vs. High inflation
- Low Leverage/Debt vs. High Leverage/Debt
- Political institutions vary
- Respective roles of parliament and executive
- Number of political parties

Homogeneity of Preferences

- Eurozone members predominantly share different views with regards to monetary policy
- Bundesbank's attitude towards inflation inherently different than Italy's/Greece's central banks
- QE: Bundesbank vs. ECB
- · Eurozone members predominantly share different views with regards to fiscal policy
- Huge differences in debt levels
- German 10y bond yield (0.34%) vs. Greek 10y bond yield (9.26%)

<u>Commonality of Destiny/ Political Integration</u>

Political solidarity in resolving conflicts of national interests, hence accepting the costs in the name of a common destiny.

The political will to integrate is regarded by some as among the most important condition for sharing a single currency (Mintz (1970)).

Petreski (2007) -

"the political will" is very important. It determines the willingness and commitment of a state to joint economic policies, common fiscal policy and a strong institutional linkage. It is the connection between economic policy and legitimacy." (Also expressed in Haberler, 1970)

"political will for adopting a single currency is the crucial one in the whole story."

Tower and Willet (1976) – need a tradeoff between objectives (e.g. growth, inflation and unemployment)

More fundamentally, commitment on a political level to policies of OCA is crucial in order to ensure proper implementation.

Financial Market Integration

Money Market/Banking Sector

 From 1999-2010 money markets fully integrated, which means same interest rate for all lending (interbank lending)-The EURIBOR

- Sovereign debt crisis (2010-) ended this
 - Local banks are main holders of government debt of the country they operate in
- Due to large losses, borrowing rates for banks increased faster than lending rates
- Many banks lost access to interbank market and were forced to physin financing from ECB le.co

Bond Market

- Seemed very much integrated since launch of Ego
- French vs. German bonds prior 1998 Compared to 1999-2008
- Risk among countries sign fidently different in Osovereign debt crisis
- Government borned not close support thes anymore
- Corporate bonds have seen some integration as exchange risk has been eliminated

Marinheiro (2002) shows that risk-sharing among states in the US is considerably higher. American capital markets redistribute 48% of asymmetric shocks whereas European capital markets only around 15%.

Is Europe an optimum currency area?

Labour mobility - No Trade Openness - Yes Product Diversification - Yes Fiscal Transfers - No Homogeneity of Preferences - Partly Commonality of Destiny -?