



International Markets Summary

International Markets and European Institutions (Politecnico di Milano)

INTERNATIONAL MARKETS AND EUROPEAN INSTITUTIONS

05/10/2016

RECENT TRENDS IN GLOBAL MARKETS AND THE ROLE OF INTERNATIONAL INSTITUTIONS

When talking about markets, we are also talking about institutions that make them work: there are rules that define the transactions that take place in the market (property change, goods exchange..).

Market is the place where transactions take place and the rules that define and regulate these transactions can be explicit or implicit. The knowledge of these rules is fundamental for the players that operate in the market, since in the opposite case no economic transactions would take place.

Rules can be identified with the set of laws that regulate transactions in a given area (like a country) and they mainly define what goods can be sold or bought in a market.

Laws are not only allowing and forbidding, they also regulate constructions, constitutions and property exchange at firm level.

And what happens when transactions take place between two countries with different laws? Every time an international transaction takes place it is necessary to define the rules that govern such transaction, in terms of payments terms, legality of transaction and so on.

This is the reason why international institutions are needed, since otherwise would be very difficult to have international transactions.

International transactions are characterized by high complexity, due to the large number of players and the differences between their institutions, and complexity increases and varies on the basis of the type of goods that are traded: trading a commodity is totally different from trading a good composed by many different parts. The main difficulty related to the trade of goods is to understand if those goods are actually good and safe in every country they are sold.

THE NETWORK OF INTERNATIONAL TRADE GOODS TRADE

World trade occurs largely between US, EU and China: the size of the dots reports the volume of export. The thick lines that connect them represent the volume of bilateral transactions that take place between these countries.

The map shows that countries are privileging transactions with closer partners, for a number of reasons (logistics for example).

While trade between some countries increase recently, for others the volume of trade reduced (ex: Brazil): while trade has generally increased for the larger economies, it has shrunk for a large number of smaller countries.

Why are countries trading? And why some trade more than others?

Countries trade in order to obtain something that they cannot obtain by themselves (Sweden cannot get oranges that easily). The reason of importing is to obtain something that cannot be produced internally, while exporting is needed to balance the import flow (and not for making foreign people enjoy national goods).

The point of having good international institutions, is to facilitate these transactions and trade between countries.

Trade is also influenced by the international currency, which is the US dollars. Price is not relevant if trade is used to measure the production capacity of a country, but if trade evaluates the value of the goods exported, prices become very relevant since the value of exchanged goods influences both outbound and inbound flows. Another factor that impacts on international transactions is the effect of sanctions, which can shrink the volume of trade flows for a country (Russia).

By comparing world trade and GDP growth, it is possible to observe that after the crisis they both present a flat trend, due to the fact that international transactions are becoming more and more complex. The 2014 report from WTO identified four reasons for this trend:

1. The rise of developing worlds, so the increase of players in the market, which increases the number of rules and currencies that are involved at international level;
2. The expansion of the global value chain;
3. Commodities are still relevant but they have very volatile and higher prices;
4. The increasingly global nature of macroeconomic shocks, which means that economic shocks are easily transmissible between countries.

SERVICES TRADE

Complexity is even higher for service sellers, since it requires international movement of both people and firms. This is the main reason why international trade of services increased but still remains a limited part of international trade.

1. RISE OF DEVELOPING WORLD

Incomes in developing countries have been converging with those of rich countries. Since 2000, GDP per capita of developing countries has grown by 4.7 per cent, with developing country G-20 members performing particularly strongly. Meanwhile developed countries only grew by 0.9 per cent. As a result, developing countries now account for more than half of world output (in purchasing power parity terms). Higher GDP per capita helps to achieve other societal objectives, such as reducing poverty and protecting the environment. Given that more trade is associated with faster growth, trade can make it easier to achieve these goals.

Expanding trade underpinned these gains in income. The share of developing countries in global trade rose from 33 per cent to 48 per cent since 2000.

Over the last couple of decades, developing countries as a whole have reduced MFN tariffs, enabling this trade expansion. Average reductions of MFN tariffs have been greater in G-20 developing countries.

2. GLOBAL VALUE CHAIN

Developing countries are increasingly involved in international production networks, including through services exports. More than half of their total exports in value-added terms are now related to global value chains (GVCs). South-South global value chain linkages are becoming more important with the share of GVC-based trade between developing countries quadrupling over the last 25 years.

GVCs offer an opportunity to integrate in the world economy at lower costs. GVC participation can lead to productivity enhancements through technology and knowledge transfers. Countries with high greater GVC participation have experienced higher growth rates.

But gains from GVC participation are not automatic. Many developing countries join GVCs by performing low-skill tasks where value capture is low and achieving upgrading to higher value tasks can be challenging.

Countries with a favorable business environment and low tariffs participate to a greater extent in GVCs. In addition, GVCs are associated with “deep integration” agreements: more than 40 per cent of free trade agreements in force today include provisions related to competition policy, investment, standards and intellectual property rights.

Obstacles for developing countries seeking to participate in GVCs include infrastructure and customs barriers.

3. VOLATILE PRICES OF COMMODITIES

Commodity dependence is more evident for energy exporting countries in the middle east.

The commodity dependence index is computed as the share of the value exports in primary products consisting of agricultural goods and natural resources over the total value of export. It varies from 0 to 100: high dependence implies more exposure to shocks in the prices of natural resources and agricultural commodities.

4. GLOBALIZATION OF MACROECONOMICS SHOCKS

Global trade value fell by over 30 per cent within only a few months in face of the global economic crisis. This 2008-09 trade collapse and quick subsequent recovery revealed the dependency of developing economies on cyclical developments originating in large developed economies.

The synchronization of downswings and upswings across the world illustrated the strong interconnectedness of economies through trade and financial links, in particular the role of supply chains in the propagation of shocks, and the importance of trade finance, which had dried up.

Despite suffering the greatest economic downturn since the 1930s, the world did not see a repeat of the wholesale protectionism which marked that previous era. Explanations for this include the existence of a set of multilateral trade rules, the effectiveness of monitoring efforts by the WTO, countries' anticipation of the self-harming impacts of protectionism in light of their participation in global value chains, and the internationally coordinated macroeconomic response in light of the crisis.

Nowadays, trade is no more related only to finished goods services but also to components and semi-finished products that can be made in different countries and traded with other countries under the same ownership (ex: Apple components). This situation makes impossible to identify the ownership of the technology, since goods pass across different countries.

The rise of global value chains is one of the trends that are emerging recently and that are stressing the need of institutions that coordinate the markets.

07/06/2016

EXTERNALITIES AND PUBLIC GOODS

WHAT ARE INSTITUTIONS?

Institutions are the rules of the game in a society or, more formally, are the humanly devised constraints that shape human interaction.

Institutions:

- are humanly devised;
- set constraints;
- shape incentives.

As already mentioned, institutions cover an important role in defining how markets perform. Institutions are **endogenous**, meaning that they are the result of historical changes and social evolution, and because of this they are difficult to change.

Institutions are even subject to human behavior: they are not created for the good of society, but are imposed by groups for their economic interest, so they are not neutral. The different set of rules that an institution can produce have different economic effects, meaning that the group which establishes a certain set of rules will choose the most favorable set for its economics activity.

But decisions taken by institutions are not the only ones influencing the economic outcome, since it is also the result of million of individual decisions at the many different levels that characterize trade and economy. What institutions can do to deal with individual decisions is providing incentives, in order to drive individual decisions (ex: engineers waged better than historians because society needs many engineers, so more people will prefer to study engineering rather than history).

PUBLIC INTERVENTION IN ECONOMICS

The economic system previously described is a "bottom up" system, since the outcome is determined by many different individual decisions. But institutions have to intervene on this outcome, since the only individual decisions do not produce an optimal outcome: markets usually fail.

Public intervention in the economy is necessary:

- to enforce the rules and the institutions that allow markets to work
- when markets do not provide an efficient allocation of resources, because they don't exist or do not work adequately.

The two main market failures, and that require public intervention, are:

- Public goods;
- Externalities.

Other cases that require public intervention are:

- Imperfect information;
- Imperfect competition.

When such market failures are not occurring in a local or national market but a global market (interested subjects involved are present in more than a country), the intervention of a national government might not be appropriate and an international or supranational institution is needed.

EXTERNALITIES

Externalities are not considered in microeconomic context, because in this case only the direct benefits are taken into account: demand curve is derived by the individual choices of the players in the market, who base their choice on the benefit they expect related to the price they have to pay for it.

Externalities are those **effects** that the consumption of a good has on other players (ex: smoking after a coffee).

So, externalities affect the economic equilibrium both on demand and supply side. For example supply is determined by the marginal cost of production, that can be higher than the cost of only production because of externalities, like the case in which industrial production generates pollution and then the company needs to implement measures to avoid pollution (negative externality for the company).

Externalities are quite common in economics: **an externality occurs when the action of an economic agent generates costs (negative externality) or benefits (positive externality) to other economic agents. There may be pecuniary (through prices) or non-pecuniary externalities.**

Pecuniary externalities are those externalities generated by price definition, but they are already included in the market price, and so the equilibrium, definition. **Non-pecuniary** externalities give rise to inefficient outcomes because they are external with respect to the subject generating them and therefore they are not taken into account in market prices.

From the point of view of the individual economic agent (consumer or firm), externalities are not taken into account when making choices in the optimization process, and therefore they are not taken into account in the individual cost- benefit analysis.

The result of externalities is market's inefficiency: a production level different from the optimal. In an optimal situation both demand and supply side are fully satisfied: in case of externalities there may be resources wasted or not used enough.

DEALING WITH EXTERNALITIES: TAXES AND SUBSIDIES

The only way for institutions to regulate externalities is to change incentives. In some cases the inefficient outcome generated by externalities can be corrected with appropriate instruments:

- Introducing taxes to reduce production or subsidies to increase production (Pigouvian approach);
- Through direct regulation, imposing limits or targets to production.

Taxes increase the production cost perceived by the firm, influencing the quantity produced. At international level the result will be that in some countries production cost is lower because of lower tax rate, so:

- If firms can transfer the production, they will produce where taxes are lower;
- If firms cannot move, they will complain about unfair production conditions.

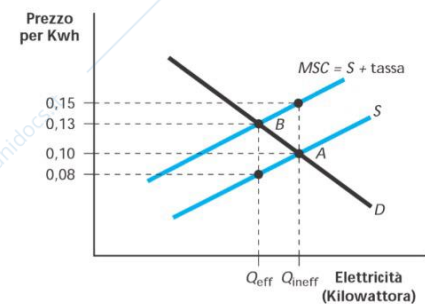
This is the example of a local externality influencing also other players outside the local context.

GLOBAL EXTERNALITIES

Examples of global externalities are:

- Global warming;
- Financial shocks transmitted from one market to another;
- Exchange rate fluctuations, since a country cannot impose abroad the value of its currency, because a single variation influences all the exchange rates between other currencies;
- Effects of national economic policies transmitted to foreign countries ("macroeconomic externalities").

The main problem about global externalities is coordination, because common financial rules are needed. But common rules cannot be imposed at global level, since there is no global government.



PUBLIC GOODS

The first category of public goods is pure public goods, which are not tradable: it is the most critical market failure, since market does not even exist. Pure public goods are both non-excludable and rivalrous.

Goods are either rivalrous or non-rivalrous and are either excludable or non-excludable.

Rivalrous goods are those which can be consumed by only one person at the same time -- for example, a candy bar or a suit; non-rivalrous goods may be consumed by many at the same time at no additional cost -- for example, national defense or a piece of scientific knowledge.

An alternative definition is that a **non-rivalrous** good may be provided to more consumers at a very low (or almost zero) marginal cost for each additional consumer. The alternative is correct, since even national defense takes additional resources for each person covered (it would be cheaper not to extend the area protected) and disseminating scientific knowledge does take added expense in printing journals and books. However, the marginal cost is very low compared to the cost of establishing an army in the first place or of making the scientific discovery. The alternative does leave us with the question: how low is "low enough" to qualify a good as "public"?

Excludable goods are those for which one can at low cost prevent those who have not paid for the good from consuming it. You can require people to pay for a stamp before you deliver mail or pay for a ticket before they board a train; you cannot cheaply or easily prevent people from entering a park or from listening to a radio station.

Note that excludable goods are sometimes provided publicly (mail service) and non-excludable goods (radio and television) sometimes privately.

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Central entities do not regulate the production of some kind of goods: it is interest of private companies whether to produce or not, it is not on behalf of institutions to decide if a good should be produced or not. The individual decision to produce or not depends on the convenience of the production (price people want to pay > cost of production).

For public goods the problem is **free riding**, meaning that it is not possible to collect fees for their use.

The private sector does not offer pure public goods because of free riding: users or consumers of the public good benefit from it, as they cannot be excluded, even if they don't pay for it, therefore production or provision costs cannot be repaid. For this reason, a pure public good is not provided by the market.

The best way to represent the free riding problem is the prisoners' dilemma.

Example: the distance between two houses is 2km, from an administrative perspective it makes no sense to build two roads to reach them, but it is more convenient to build a common road to reach them. The result is a good that is used by two players that have to agree on the road utilization and so on the sharing of the costs. But the problem is coordination: house 1 may try to free ride on the effort of the other house and vice versa.

The cost of paving a road leading to two houses is 4000 € and the benefit for each household is valued 3000 € (savings on car repairing, less time spent...)

- Collectively benefits outweigh costs and it would be efficient to pave the road;
- Individually, each household would choose not to pave the road.

	House 2 makes the work	House 2 does not make the work
House 1 makes the work	(1;1)	(-1;3)
House 1 does not make the work	(3;-1)	(-1;-1)

(-1;-1) is the Nash Equilibrium of the problem, meaning that no player will move from that situation and will wait for another player to do something.

The solution for this problem is coordination provision from a central authority. With coordination the outcome of the game becomes (1;1), which is of course better than the Nash equilibrium.

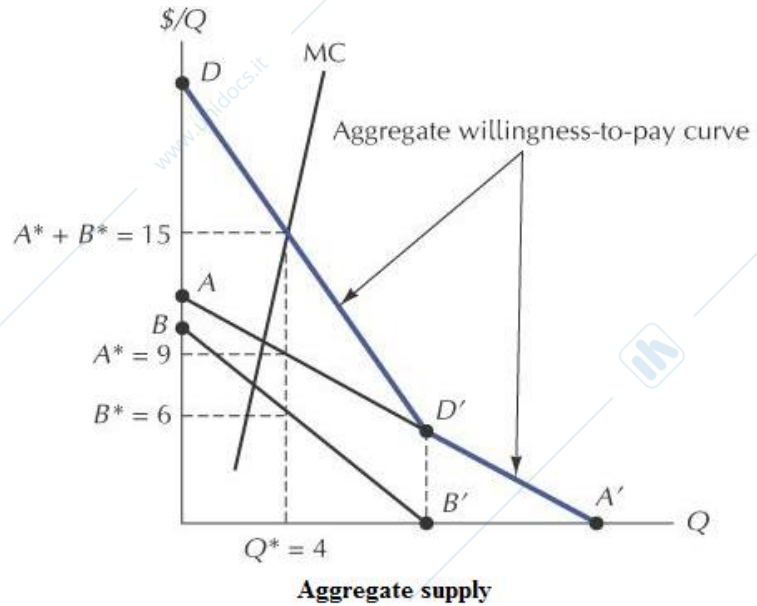
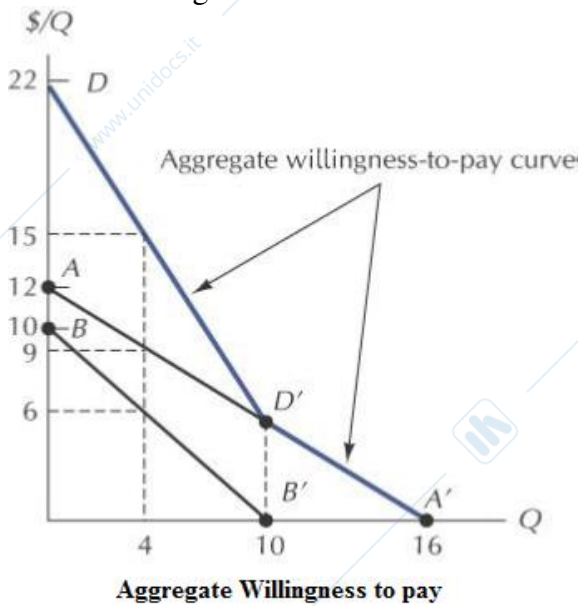
OPTIMAL SUPPLY OF A PURE PUBLIC GOOD

But sharing the cost is not that easy, because if the two players are characterized by very different wages or utility, the weight of the cost is different for them, so the willingness to pay of the two players will be different.

Willingness to pay in case of public goods is very different from the demand of private goods: in case of public goods, willingness to pay is not related to the consumption of one unity of good (if three players want a road, it does not mean that the government has to build three roads) because pure public goods are non rivalrous by definition. Then, it is not possible to define a market price for public goods, since in this case the overall demand is derived by summing the individual demands **vertically** and not horizontally.

Demand curve for a public good is different than the demand curve of a private good: for a private good, market demand is given by the sum of individual demand at a given price and it can be computed as the horizontal sum of individual demands.

With a public good, every individual if interested can consume the same amount. The demand curve is now the curve describing the willingness to pay for that quantity of public good and the total willingness to pay is obtained through the vertical sum of individual demand curves.

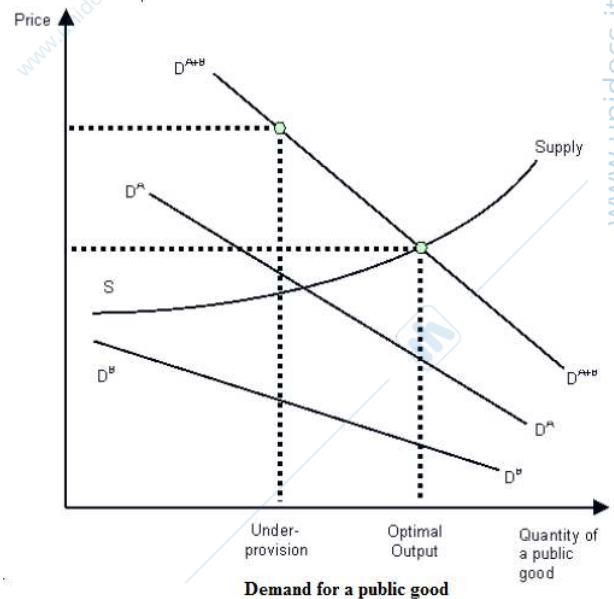


The efficient amount supplied of a pure public good is where its marginal cost is equal to willingness to pay the last unit supplied. This is efficient provided that the total willingness to pay is equal to the total cost to supply the good (including fixed and marginal costs); if the willingness to pay does not cover the costs, the public good should not be provided.

Total willingness to pay is the area below the aggregate willingness to pay curve up to Q^* .

If the government knew the individual willingness to pay, it could ask for different individual prices to provide the public good but this information is normally not available and people are not interested in declaring it because of the free riding problem, therefore public goods provision is usually financed through taxes:

- Uniform taxation (per capita division of the cost of the public good) can generate a sub-optimal provision of the public good
- Low income consumers are likely to have a lower willingness to pay; in their case the individual cost of the public good (if uniform) could be higher than their willingness to pay, and they would be against the production of the good



- If the collective willingness to pay is higher than the cost of the good, and the good is not provided because of the opposition of a group, this would be inefficient
- Higher income consumers can accept to pay higher taxes to avoid a reduction of the supply of the public goods
- Therefore, taxes that are proportional to income can be based on efficiency considerations.

GLOBAL PUBLIC GOODS

International institutions have the task to solve the problem of public goods at a global level: how to finance the supply of global public goods? Global taxes do not exist!

Coordination becomes more difficult.

International trade is a public good: many players can access to it but they can even be excluded. A global public good is a public good available on a (more-or-less) worldwide basis. Examples of global public goods:

- Free international trade
- International financial market
- Global financial stability
- Natural environment
- Cultural heritage
- Public health and control of infective diseases
- Peace and security

Some can be mixed goods (club goods)

SUMMING UP: OTHER TYPES OF PUBLIC GOODS

Types of goods		
	EXCLUDABLE	NON-EXCLUDABLE
RIVALROUS	PRIVATE GOODS (Candy bar)	COMMON GOODS (Fishing grounds)
NON-RIVALROUS	PUBLIC ENTERPRISE GOODS (TVA, mail, trains)	PURE PUBLIC GOODS (National defense, court system)

Goods with only one of the two characteristics (non-rivalrous or non-excludable) are sometimes called mixed goods. Club goods are non-rivalrous but excludable.

Other intermediate categories are possible:

PUBLIC ENTERPRISE GOODS are those which are excludable and so could be privately provided, but which have low marginal costs of production and so are likely to be natural monopolies. Private provision runs the risk of monopoly and hence of under provision; public provision is accordingly desirable.

Note that private provision is not impossible in these cases, so it is always debatable whether government should be in the business -- and the public choice school would argue that politicians and bureaucrats will always have an incentive to ensure their own employment by over-providing these goods.

COMMON GOODS are those which are rivalrous in consumption but non-excludable. (Ex: Fishing grounds -- fish caught by one boat reduce the catch available for others, but it is difficult to exclude fishing boats from going where they please).

Often the problem with common goods is overuse ("tragedy of the commons) -- overfishing, overuse of rivers or the air to discharge waste. A step towards a solution is often to define property rights which had been left undefined because of a belief (perhaps justified at an earlier time) that such goods were non-rivalrous -- that the fishing grounds were inexhaustible or the river unpollutable.'

Congestion effects generated in these cases can be seen as a negative externality due to individual consumption. Another way to deal with it is with congestions charges.

14/10/2016

BALANCE OF PAYMENTS AND INTERNATIONAL TRANSMISSION OF POLICIES AND SHOCKS

Needed: international public goods

Despite being a market failure, public goods are extremely important, especially international ones such as:

- Stable international financial markets;
- System for international transactions;
- Global coordination.

International financial markets are fundamental for firms, since they allow them borrowing money outside their home country. But since national financial markets present some risks, international ones are even riskier:

- Exchange rate fluctuations;
- Difficulty of gaining complete and reliable informations.

So, in order to have an efficient international financial market and to have international transactions happen, information among the players should be perfect.

Global coordination is needed to control through rules such transactions and possible variations in the market: if countries are connected, international externalities will occur, since an economic policy adopted by a country will impact on other countries, and these externalities will transmit to all those countries that are linked (ex: 2008 financial crisis).

So, the view has to be switched to an international perspective, meaning that the macroeconomic equilibrium should be found at international levels. At national level:

$$\mathbf{GDP=C+I+G}$$

This would be the result in a close economy, if export and import are taken into account:

$$\mathbf{GDP=C+I+G+(EXP-IMP)}$$

Export is the way in which a country pays back the import of goods from other countries: it is the way in which a country gets foreign currency, in order to pay import from countries that use that currency.

And what happens if import flow exceeds export flow? It is not a bad thing necessarily, it may mean that in the country demand is rapidly growing, and that the country is not able to satisfy it with domestic production. But if import exceeds export, it means that a country has to borrow currency from foreign countries, so it has to contract international debts.

$$\mathbf{GDP < C+I+G \Rightarrow \text{international debt}}$$

$$\mathbf{T_0: NX < 0}$$

And to access debt, a country has to prove that it will be able to pay back the sum borrowed: the only way a country has to pay back debts is to demonstrate that it is able to reverse the inequality:

$$\mathbf{GDP > C+I+G}$$

$$\mathbf{T_1: NX > 0}$$

The problem arises if in long period a country is not able to get a positive trade balance ($NX < 0$): if a major debtor defaults, also the lenders get in trouble and many other subjects too, so global coordination is needed to control this situation.

This kind of externality may be a **financial crisis**.

But where does domestic balance come from?

- Fall of production;
- Increase in demand.

If imbalance is generated by a fall in production it means that a country is not able to satisfy demand, and so that debt will pile up, since it will need to increase import. This situation will make very hard to make production recovering in the long run.

Anyway, an increase of G in the short run is beneficial but in the long run it creates a negative imbalance because G has to be paid back, with credits for example: EXTERNALITY.

In the opposite case, if production increases, a country will be able to increase export and will get an international credit (positive balance only if this comes from extra production). But if a country has a positive balance and will increase its standard of living, another country in the world will suffer from a negative imbalance: EXTERNALITY.

International externalities caused by positive or negative balances may not be caused only by domestic policies: if people do not consume in order to save because they do not feel safe about future times, GDP balance will be negative (ex: Japan is a very prosperous country, but Japanese people do not consume very much, the result is a stagnant economy)!

$NX > 0$: financially sustainable

$NX < 0$: financially unsustainable

Trade flow unbalance can be adjusted by means of exchange rate: if in a country $NX > 0$, export will increase, then many countries will require its currency, its price will increase and export will reduce. Exchange rate modifications can avoid such fluctuations. This mechanism had been supposed of being one of the major causes of 1930's crisis.

BRETTON WOODS CONFERENCE (1944)

It was decided:

- Exchange rates should be fixed, in order to avoid that international markets rely on exchange rate mechanisms and reduce then price volatility. But reduction of price volatility of course makes a country being stuck in its imbalance situation (the Bretton Woods system would be given up only in 1971);
- International Monetary Fund, the basic idea of IMF at the beginning was to provide an adjusting function to the system (if a country has a negative imbalance and cannot access credit, IMF would provide loans in change of goods);

Other institutions like IMF are:

- World bank
- General agreement on tariffs and trade (GATT)

INTERNATIONAL MONETARY FUND

The main functions of IMF are:

- **Surveillance** on economic and financial situations of countries, in order to avoid crisis;
- **Lending**, meaning that a country can deposit some goods to IMF and it has the right to borrow 6 times the amount that was deposited. This is a system of mutual insurance, in order to avoid countries defaulting because of their debt. But IMF's decision to lend money may rely also on domestic policy of countries, for example IMF can lend money under the condition that a country changes its economic policy to correct its unbalance situation. In this last case, a country has to sign a letter of intent with IMF, which states that domestic policies are in some way influenced by IMF;
- Another function is **capacity development**, meaning that IMF helps nations achieving macroeconomic stability.

Nowadays, 189 countries are members of the IMF.

The IMF's role was fundamentally altered by the floating exchange rates post-1971. It shifted to examining the economic policies of countries with IMF loan agreements to determine if a shortage of capital was due to economic fluctuations or economic policies. Exchange rates could be used again to correct trade imbalances, but in this way the impact on debt could be dramatic (if currency depreciates, debt gets higher).

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ECONOMIC GROWTH, DEVELOPMENT AND MARKET IMPERFECTION: THE ROLE OF THE IMF

Externalities are generated by external unbalances, which are caused by unbalances between domestic demand and domestic supply. The main kinds of international imbalances occur between debt and credit. With the first fixed exchange rate policy of the IMF it was almost impossible to correct such imbalances, but, as stated before, if they are let free to fluctuate, exchange rates will tend to adjust the imbalance. However, this is not a costless operation, since exchange rate fluctuations affect trade flows between countries and the prices of the goods sold on the international markets. So, when dealing with international economic transactions, we are facing a **spillover effect**, meaning that each action carried out by a country on the international market affects every other country in that market and so we are dealing with externalities.

SURVEILLANCE FUNCTION

The IMF was created to take care of these issues, especially in the case in which there are great credits between countries, in order to provide stability. This is comprised in the surveillance function mentioned before.

More in detail, the surveillance function consists of a constant review of the national, regional and global economic policies in order to foster economic growth and stability.

First of all, IMF collects macroeconomic data about all the members, according to specific international conventions which define how these data should be collected and what informations they have to include, since sometimes they are not easy to collect. Some of these informations are:

- Consumption vs investments;
- Government expenditure.

So, there are shared criteria between IMF members about how collecting such informations and what is relevant about these data is that there should be internal consistency, meaning that they have to be collected with the same criteria (for example, if data are all wrong, they are wrong in the same way).

The risk of crisis was supposed to be lower with variable exchange rates, and after the Nixon Shock (1970) it was observed that financial crisis were more frequent than before, why?

Because exchange rates are not totally free to fluctuate: there are some currencies whose value is fixed if compared to other currencies (for example Denmark, despite not adopting the euro, adopted fixed exchange rates between DKK and €). Why some countries adopted such policies? The reason is that, as said before, exchange rate fluctuations affect trade flows: for Danish firms, which are operating in a country that is very integrated with European environment, a continuous fluctuation of the exchange rate would be too costly since the prices would vary too much. So, this kind of policy is adopted in order to reduce uncertainty, since if a country lets its currency fluctuate in order to correct unbalances, the direction of change may bring additional problems: the correction, in theory, occurs only if the fluctuation of the exchange rate of the currency is perfect, and then there would be no trade unbalances in the mid term. The result would be that import reduces, currency depreciates and export increases (it's like reducing the price of the exported goods).

Remind that the mechanism is that if the trade balance is negative, the exchange rate depreciates because it means that there are more people looking for foreign currency rather than local people looking for national currency to buy. But if domestic currency depreciates, import costs increase.

The main reason of the adoption of fixed exchange rates is to avoid the import of inflation.

Because of this, perfect fluctuation of exchange rates does not exist. The correct definition is **dirty fluctuation**, due to the fact that governments intervene in the exchange rate definition. The consequence is that there are no more trade balances. This is a clear example of externality at international level.

The second reason of the increased frequency of crisis is that the sources of instability have multiplied: if there are only few large blocks of countries interacting it is easy to produce externalities and transmit them but their transmission and so their effects are still limited, but if the number of players and trade channels increase, the sources of instability grow too (ex: Thailand in 1970).

So, the main task of IMF is to reduce such effects in order to avoid a massive transmission of externalities.

LENDING FUNCTION AND DEFAULTS

What happens if something goes wrong and a shock occurs? First of all a country should be prevented from defaulting, because if a country defaults it means that it is not able, or willing, to pay back its debts. This situation usually occurs because production is not enough to balance the situation.

If C does not improve, one solution for the country is to cut G or I, which is a dramatic solution for developing countries (means no schools, roads and production capacity increase).

The cost of defaulting is that a country has to balance its situation without external helps (country loses credibility and no one will lend other money to it).

The entity of default depends on the international economic relevance of the country, because if a country is very important it will benefit from greater trust, for two main reasons:

- The larger is the size of the country's economy, the larger is the capability of pay-back;
- If a market is large, losing that market would impact also on other countries, because they would lose a market in which they own some interests.

So, if a country is very important, many players will be interested in avoiding its default.

The main solution to default is debt restructuring, meaning that the country negotiates the value of the debt in order to make possible its payment.

IMF intervenes in this case, in order to help countries to negotiate with creditors to face the emergency immediately. IMF intervenes in order to avoid default, also by lending money to the country. This money can come from reserves of the country held by IMF.

A core responsibility of the IMF is to provide loans to member countries experiencing actual or potential balance of payments problems. This financial assistance helps countries in their efforts to rebuild their international reserves, stabilize their currencies, continue paying for imports, and restore conditions for strong economic growth, while undertaking policies to correct underlying problems. Unlike development banks, the IMF does not lend for specific projects. Access to IMF financing is subject to the IMF quota submitted by the country.

The loans provided by the IMF are both **concessional** and **non concessional**: concessional loans have conditions quite favorable, meaning that the interest rate is lower than the one of the market and the time of pay back is longer.

IMF provides non concessional lending instead in the case in which the country is not able to find any other way to access credit, for example in emergency situations (for example in the case of default). All non-concessional facilities are subject to the IMF's market-related interest rate

In both cases, lending is subject to the condition that the country follows the guidelines of the IMF in order to correct its economic situation.

Countries agree to do so because of externalities: they do it because all the other countries do so, and also because a world in which every country is free to do whatever it wants under an economic perspective is not stable.

IMF conditionality is a set of policies or conditions that the IMF requires in exchange for financial resources. The IMF does require collateral (collateral is a borrower's pledge of specific property to a lender, to secure repayment of a loan. The collateral serves as protection for a lender against a borrower's default—that is, it can be used to offset the loan to any borrower failing to pay the principal and interest) from countries for loans but also requires the government seeking assistance to correct its macroeconomic imbalances in the form of policy reform. If the conditions are not met, the funds are withheld.

The conditions imposed by the IMF anyway, vary on the basis of the country it is dealing with, since the necessities of developing countries are different from those of the other countries.

Theoretically, IMF intervention should realign mismatch between different countries, especially in the GDP balance (as said before, not all the countries can improve or cut investment in the same measure) and its interventions is tailored on the basis of the economic situation of the country.

Example: during the recent crisis, IMF asked to Greece to cut of 30% the wages of public employees in the short term (reduce G), but if wages are cut, people will stop spending money (C decreases).

These loan conditions ensure that the borrowing country will be able to repay the IMF and that the country will not attempt to solve their balance-of-payment problems in a way that would negatively impact the international economy. The incentive problem of moral hazard—when economic agents maximize their own utility to the detriment of others because they do not bear the full consequences of their actions—is mitigated through conditions rather than providing collateral; countries in need of IMF loans do not generally possess internationally valuable collateral anyway.

Conditionality also reassures the IMF that the funds lent to them will be used for the purposes defined by the Articles of Agreement and provides safeguards that country will be able to rectify its macroeconomic and structural imbalances. In the judgment of the IMF, the adoption by the member of certain corrective measures or policies will allow it to repay the IMF, thereby ensuring that the resources will be available to support other members.

Moral hazard is a problem connected to the fact that if people had full coverage, they would risk everything every time. This is the same for IMF: if a country had free access to IMF funds, it would have no interest in regulating its policies and correct its trade balance.

This is why IMF imposes some conditions: in order to make the country minimizing the risk. So, borrowing from IMF is not free.

CAPACITY DEVELOPMENT AND THE ISSUE OF QUOTAS

The third function of the IMF deals with the impossibility of some countries to perform efficiently under an economic perspective (for example tax collection, because of lack of information about citizens' income). In this case, IMF encourages the country in making investments in order to increase GDP and gives consultancy to the country.

But the governance of the IMF may not be appropriate for such task: IMF must have reserves made by money provided by its members, which are used to pay staff and provide loans to countries. The quota provided by a country influences its decision making power in the IMF.

Each member country of the IMF is assigned a quota, based broadly on its relative position in the world economy. A member country's quota determines its maximum financial commitment to the IMF, its voting power, and has a bearing on its access to IMF financing.

The logic is: the larger share, the larger power in decision making.

This structure brought many critics to the IMF, because the decisions were actually taken by the richer countries that held more quotas than developing countries, and so had greater influence.

But nowadays developing countries account for the 50% of world GDP, so the revision of quotas would move the weight on the side of developing countries. The revision of quotas happens usually every five years, but still nowadays advanced countries account for the 57% (much more than they account in world trade) of the quotas of the IMF. Because higher quotas mean higher sums of money to be put into the IMF, many developing countries are not even interested in putting money in the IMF (China for example holds only the 6% of quotas of IMF).

The final issue related to this aspect, is that if European countries moved together in decision making, they would account for the largest share of quotas inside the IMF, but their interests are still very different, so the US keep on having the largest number of quotas, so owning a veto power on IMF's decisions.

Because of this, the IMF was accused to be too much American oriented.

An important mechanism adopted for correcting the issues related to quota sharing is the independent evaluation office, which is independent from the IMF. This office evaluates and assesses all the decisions of IMF and states whether the decision is correct or not.

21/10/2016

The final outcome of IMF intervention should be that the country helped is better off and the rest of the world is not or only little damaged. The objective of the IMF is to minimize the impact of such externality on the rest of the world.

After IMF intervention, we should ask ourselves:

- Was it necessary for the IMF to intervene?
- Was it the best possible solution for the country?
- Did the country have other alternatives?
- Was the intervention effective?
- Were the policy recommendations of the IMF good for the country?
- Was the country better off after the intervention? And if not why?

We should simply describe what happened.

THE WORLD BANK

Another important international institution that works alongside IMF is the World Bank. It is an institution that was created together with the IMF and with the same general idea: the need of stability and its preservation in the world market. More in detail, the World Bank takes care of the financial relationships between countries.

The World Bank's stated official goal is the reduction of poverty. However, according to its Articles of Agreement, all its decisions must be guided by a commitment to the promotion of foreign investment and international trade and to the facilitation of Capital investment.

At the time of their creation, in some countries no markets existed since the 70% of production capacity in Europe had been destroyed by the war. Even the labor force had heavily reduced.

One of the points was that in order to have a working economy reconstruction should occur: the first role of the World Bank was to provide money (loans) to countries in order to start reconstruction. Why was it in everyone's interest to have this kind of organization? The idea behind World Bank is the same behind traditional banks: it is an intermediary, and provides loans to those people who need more money than they earn. The money saved inside the banks is the money that circulates in the financial markets and it is the money given to firms to make investments. Investments are a relevant factor of economic growth: not only investments in machinery, but also in R&D and, in a broader sense, in everything that will be useful and used in the future. Investments are crucial to have a stable production capacity and even higher in the future.

This was the same idea in the post war period: countries needed money in order to restore their production capacity. But after the reconstruction, not all the countries could be left on their own since some countries had, and still have, limited production capacity, not large enough to sustain the level of income necessary to sustain their population. So nowadays, the World Bank does not provide loans to advanced countries, but to developing countries, those which need money to support investment.

For making this system working, many factors are needed, for example an interest rate that pays back people who save in the bank and also remunerates the risk that the parties bear. Interest rates represent the source of earning of banks.

Why does a firm that receives a loan decide to take a loan which encompasses costs (interest)? Because firms expect to earn from the investment enough money to pay back the loan and the interest, and also to keep some of the earnings. In case this does not happen, it means that the project is not good and not enough profitable.

Sometimes financial markets are not connected with economic reality: how can a financial market promise a return of 10% if the economy is growing at 2%? The missing 8% does not exist, this is the case of a bubble,

because in case of investments in assets or technologies that ensure a return of 10%, in the long run, if the economy is growing at a lower rate, on average the returns cannot be much higher but at most equal to 2%. **Money for paying back the loans can come only from the return on investments.**

This is important to understand the growth path of countries and their motivations to save money and investing them. In an economy with no returns on investment there would be no reason to give money to the banks to be saved, this would lead to a circle of no growth, since if there are no growth perspectives, nobody will save money in banks. In the case of risky transactions, in the other case, interest rates would grow.

At international level, what can be observed in general is that a firm in an advanced country can issue a bond on the market with a determined interest rate, while a similar project in a developing country will probably be issued with an higher interest rate.

The World Bank provides loans at a market interest rate, in order to let firms of developing countries access financial markets.

Like other banks, the World Bank relies on the savings of its customers, the more customers it has, the more resources it can rely on (for example a local bank can count on a limited amount of savings, and so can only provide limited loans, this is the same for developing countries), so the World Bank can rely on a huge amount of resources, like the IMF, since this amount is the outcome to the pooling of the resources of different countries.

The World Bank does exactly what a bank does: it collects savings from customers and gives them to investment projects.

The World Bank issues bonds on the international financial market, but it can't issue bonds with very low interest rate since the perceived risk would be 0 because the World Bank is backed by many countries, so when it issues a new loan, the interest rates are at the level of the rates of those bonds with the lower ones that are around.

So, the WB collects money at a very low interest rate and finances investment projects in developing countries.

Like the IMF, the World Bank was target of some critics:

- Giving money only to some investment projects and not to others;
- Financing only great projects, which usually led to waste of money because of corruption because these project were strictly controlled by governments;
- The staff evaluated the project quite superficially.

These complaints led to the birth of some organisms similar to the WB but that operate locally (Asian development bank and African Development Bank), with the idea of being more sensible to the local issues. These organizations collect money in the same way of the world bank and have some Pros, for example the staff is more careful about development projects, but on the other hand they can rely on a smaller pool of resources and can be subject to more pressure by the local governments: the number of counterbalances for a very influential government is limited (in WB, US influence can be mitigated by European countries, but in Asia is not the same).

After this wave of criticism that invested both IMF and WB, they both changed their way of intervention: now WB finances also very local projects.

The reasons of the existence of such institutions can be traced back to the presence of market failures (if international financial markets do not exist or do not work well, international investments cannot exist) and externalities (connection between international financial markets and avoiding of national defaults): for example, the under-development (because of lack of resources or unexploited ones in those countries) in some part of the world generates a number of negative externalities all over the world (immigration for example).

26/10/2016

INTEGRATING COUNTRIES' ECONOMY: TRADE POLICIES

As already mentioned, WB will finance an investment project only if the project actually exist and if a certain return is expected:

$$I < E(r)$$

For developing countries this condition may not be fulfilled and in these situations WB intervenes. If this condition is not verified, it is possible to "adjust" it. For example by:

- Providing loans with low interest rate (what WB does);
- Reducing uncertainty related to returns.

So the idea is mainly to reduce both sides of the inequality, by making investment projects more sustainable. Mind that the returns and uncertainty are not only due to the quality of a project, but they also depend on the context in which they are generated, which are the markets, that depend on the institutions that allow them to work, in terms of permissions, taxation, power supply etc.

So, we can say that the quality and the structure of institutions in a certain country, heavily affects the judgement on the convenience of an investment project: for example, developing countries do not have developed institutions like advanced ones, so the context uncertainty about the return on investment is higher, while New Zealand (according to doingbusiness.com) has the highest degree of easiness in doing business. Remember that the lack of information is an externality.

However, the way of collection of such data is highly questionable, since the weight given to some factors in the classification is not the same across different sectors, meaning that some factors given a certain weight might be crucial for some sectors and meaningless for others.

This mechanism is useful for countries to highlight and intervene on the aspects that discourage foreign investors.

BARRIERS AND PROTECTIONISM

Doingbusiness provides data about the easiness of doing business in that market, so it compares the business conditions of different countries: this is relevant on the side of transparency. But in an integrated world economy, what are the conditions for moving business across different countries? What are the barriers that obstacle the entrance in a certain market? Are transactions between countries easy?

In general, **countries define what is possible to be sold in their territory** and try to protect the national market, this is called PROTECTIONISM.

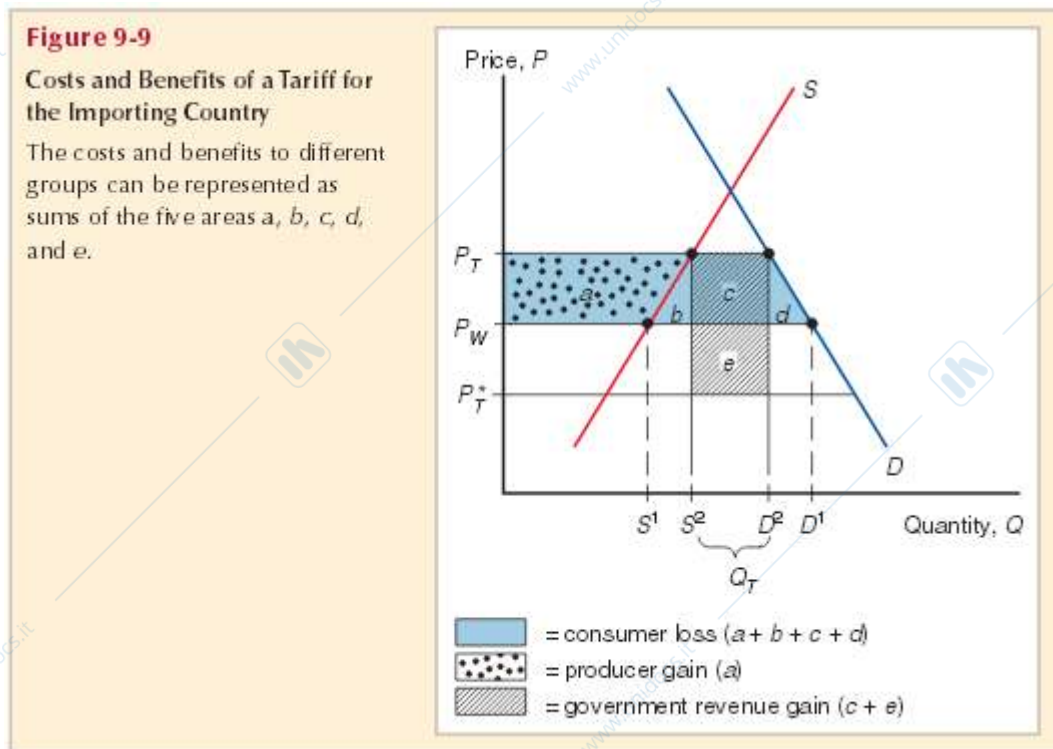
PROTECTIONISM

Protectionism does not allow markets to work properly and does not allow a proper allocation of resources. By eliminating borders, from an economic point of view, a country would be encouraged in producing only what it is able and efficient to produce with its own resources and then trade with other countries what it is not able to produce. But protectionism does not allow countries to fully exploit the gains from trade.

Where does barriers come from? Some barriers are artificially created by governments while others are "natural", like geographical distance (it is easier to trade with closer countries).

Artificial barriers, so protectionism, are the most critical ones in an international context since they are thought in order to make import more difficult.

COSTS OF PROTECTIONISM



P_e is the equilibrium price of the economy. If China imports at a price of P_w :

- Consumers' surplus increases, because they get a bigger quantity at a lower price;
- Producers' surplus decreases, since some of them are driven out of the market and because costs are too high for facing Chinese competition.

But if a country imports, it balances its trade flow with export: loss in domestic production means that the resources that are saved from a sector can be used in another sector (this is not costless anyway).

The area (triangle) between D and S curves and P_c represents the gains from trade.

In this situation, assuming that China exports Apparel and Home Machines:

- China is more efficient than Home, then import causes a price reduction;
- A Workers in Home want to ban Chinese import;
- M producers want to access Chinese market.

A mid-way solution is to tax foreign goods: by imposing a tariff that rises the price from P_w to P_t the government is able to protect some part of the domestic production and then to make some producers staying in the market. Every consumer that buys A coming from China has to pay more, this surplus is part of the income of the State.

The two triangles at the sides (b and d) represent the net loss in efficiency, caused by the distortion of the economic incentive to both production and consumption.

The previous reasoning relies on the simplifying assumption that tariffs are simply put on the top of the original price, which is contestable by foreign producers, who would make their prices even lower in order to avoid an exaggerated increase due to tariffs: this is called **dumping**, meaning that a country or a firm exports at prices lower than those of domestic producers of the importing country or even lower than production costs.

What if exporters are cheating on their price? Remember what was said at the beginning of the course: supply does not include additional costs connected to externalities, so the costs reported above are artificially lower. Another issue related to low costs may deal with unfair production processes (forbidden fertilizers, children exploitation etc): the solutions may be surveillance of international institutions or taxes on imported goods to protect environment. But taxes on products to protect environment impact on final consumers: only the ones more concerned about environment will spend more to buy environment-friendly products. The solutions for governments are regulation of labeling, so more information (Dolphins-friendly tuna which costs more vs classically-fished tuna which costs less with different labels), or ban of some products and imposing greater costs on consumers (but consumers are not happy to be imposed a choice, so a price, from government).

Moreover, imposing tariffs can lead to a trade war between countries, since tariffs on imported goods in a country would lead the exporting country to impose tariffs as well (retaliation).

GATT does not forbid tariffs but limits the freedom of countries of changing tariffs entity.

Retaliation is the main risk connected to protectionism, because a country, as already mentioned, should have its trade balance fluctuating around 0 (import as much as it can export) meaning that every country is open in two directions (import and export). So, protection of local economy from import not only impacts on consumers, but also on export flows, because of course importing countries will react to protectionism by imposing tariffs on goods exported from that country.

Imagine that there are only two countries in the world, the United States and Japan, and that these countries have only two policy choices, free trade or protection. Suppose that these are unusually clear-headed governments that can assign definite numerical values to their satisfaction with any particular policy outcome. The particular values of the payoffs given in the table represent two assumptions. First, we assume that each country's government would choose protection if it could take the other country's policy as given. That is, whichever policy Japan chooses, the U.S. government is better off with protection. The second assumption built into Table is that even though each government acting individually would be better off with protection, they would both be better off if both chose free trade. That is, the U.S. government has more to gain from an opening of Japanese markets than it has to lose from opening its own markets, and the same is true for Japan. We can justify this assumption simply by appealing to the gains from trade. This situation is known as the Prisoner's dilemma. Each government, making the best decision for itself, will choose to protect.

TABLE 10-3 The Problem of Trade Warfare

		Japan	
		Free trade	Protection
U.S.	Free trade	10, 10	-10, 20
	Protection	20, -10	-5, -5

Summarizing, the economic impact on the **COLLECTIVITY**, in the mid-long run, of protection in an industry involves:

- Price increases (sellers would be happy, buyers unhappy), since the goal of protectionism is to reduce import;
- Consumers' surplus declines;
- Producers' surplus increases;
- Government's tax revenue increase, only in case of tariffs;
- Risk of retaliation.

In General, the outcome is a negative effect on welfare.

02/11/2016

TRADE NEGOTIATION: GATT AND WORLD TRADE ORGANIZATION

As stated before, there are a number of reasons to protect national economy or some of its sectors. More in general, trade is limited not because of economic issues, but mainly for political ones (ex: sanctions to Russia and Iran). Anyway, the most efficient solution would be free trade.

Political reasons of protectionism are both external (sanctions, import duties etc) and internal. Internal reasons deal with short term issues, for example workers complaints: in the short run we have seen that free trade would lead to shut down of factories and unemployment, so politicians have to intervene in order to heal such complaints.

According to what was said so far, consumers should reasonably lobby for free trade, but the effort and the cost of lobbying are huge if compared to the individual gains of free trade, so it is not worth the effort. More recently, this task is being carried out by consumers' associations.

So, for the individuals, the impact of protectionism is not the same as for the collectivity. The outcome is that:

- Producers that compete on domestic market push for protectionist policies;
- Consumers do not lobby for free trade;
- Producers that compete internationally lobby for free trade and because of retaliation find difficult to access foreign markets.

So the idea is that negotiation is needed: GATT (General Agreement on Tariffs and Trade, 1947) established general rules on international trade, that were included also in WTO.

The basic principles of the agreement of WTO, that stem also from those of GATT, are:

- **Transparency**

- For firms the lack of certainty is dramatic, transparency is fundamental to avoid changes on decisions (tariffs and policies) over night;
- Notification requirement: trade rules have to be clear and public;
- Trade Policy Review Mechanism: the regular surveillance of national trade policies provides further transparency at the domestic and international level.

- **Non-discrimination**

- Most Favorite Nation clause: Under the WTO agreements, countries cannot normally discriminate between their trading partners. Grant someone a special favor (such as a lower customs duty rate for one of their products) and you have to do the same for all other WTO members. MFN was introduced by WTO, meaning that every member of WTO should apply the same tariff on the same good coming from different countries (A country imposes the same tariffs on different types of car coming from different countries), so there are no preferential trade agreements. The idea is to have full free trade between parties, meaning that a country cannot sign preferential trade agreements or selectively protect some industries;
- National treatment, meaning that the rules applied to domestic goods should be applied to imported goods as well;
- Binding tariff declaration, meaning that a country has to declare the maximum tariff that it will impose. It is a limit that cannot be passed in the definition of tariffs. This limit can be overcome only in two exceptions:
 - Emergency in a given sector (import increases suddenly, very high competition in a sector) which is temporary by definition, so the higher rate of the tariffs should be limited;
 - A country carries out unfair competition (dumping for example).

- **Trade liberalization**

- Lowering trade barriers through regular negotiations among members;
- Gradual and progressive process, especially for developing countries to allow their economies to adapt;
- At the end of 1990, tariff rates on industrial goods had fallen to 4%;
- Tariffs only allowed as more transparent, Quota prohibition.

- **Fair trade**

- Export subsidies, dumping, indirect measures that restrict trade above WTO commitments are prohibited;
- Production subsidies allowed only under special circumstances (R&D, safety, regional programs) or to limit production (in agriculture).

- **Stability and predictability**

- When countries agree to open their markets they bind their commitments (binding tariffs);
- Developing countries bound rates higher than actual rates (not for developed countries);
- Increased binding after Uruguay Round (Agriculture: all bound, industrial goods: 73% developing countries, 99% developed);
- A country can change its binding but only after negotiating (compensation for loss of trade).

GATT, before, and then WTO were the solutions to the prisoners' dilemma: individually governments go for protection but the most efficient outcome is free trade, so coordination is required and coordination is provided by these international organizations. These rules do not oblige tariffs elimination but pushes countries towards reduction and stabilization of tariffs.

04/11/2016

GATT

The GATT was an agreement, not an organization—the countries participating in the agreement were officially designated as “contracting parties,” not members. More specifically, GATT was the **system of rules** on multilateral trade created by 23 countries in 1948, after Bretton Woods conference

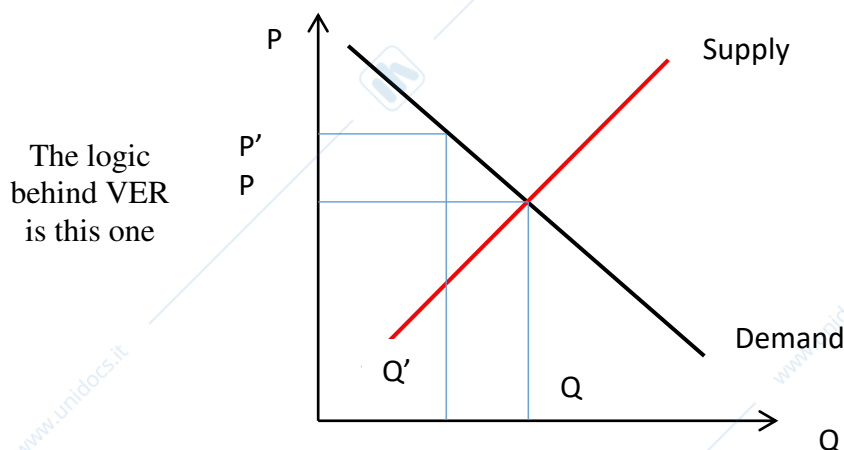
GATT agreement at the beginning did not involve every kind of goods, for example agricultural goods, raw materials and services trade were not considered in the agreement.

The second issue related to GATT was that the agreement did not establish an organizational structure, so it was quite easy to cheat because enforcement was not that possible. For example, during the '70s and '80s many countries broke the rules established by GATT: these cheats were in some way agreed by country and nobody came up to sanction these behaviors. In fact, GATT set that interventions had to be taken only in case of complaint of a damaged country.

For example, GATT prohibited limitations on the quantity imported in a country, but exporting countries voluntarily limited the imported quantity themselves in order to raise prices (Voluntary Export Restriction, VER, 1970). This was done because it was not possible for exporting countries to compete on prices, since if they had imported at very low prices, importing countries would have put high tariffs on imported goods to protect local producers. So, exporting countries found more convenient to compete on quantities:

- Case of Toyota, that agreed with US on the number of cars to be exported from Japan to US;
- Multi fiber agreement (MFA), with which developing countries, that exported textile and clothes to advanced countries, agreed on self limiting the quantities to be exported in order to raise prices and avoid tariffs. This was damaging of course the exporting countries, but not as much as the case of high import tariffs.

These are examples of voluntary and unpunished breaking of GATT, since GATT had no enforcement power and countries did not complain about VER.

**THE WORLD TRADE ORGANIZATION**

The lever used to make forward progress is called trade round, in which a large number of countries get together to negotiate a set of tariffs reduction and other measures to liberalize trade. In the **Uruguay Round** it was decided to redesign the organization and the set of rules of GATT.

The outcome of the Uruguay Round can be summarized in:

- Trade liberalization, with huge cut of tariffs around the world and liberalization of trade of agricultural products and textile goods (back loading of MFA);
- Administrative reforms, from GATT to WTO.

WTO, differently from GATT is a full-fledged organization and was established by the Marrakesh Agreement (signing of the document of Uruguay round) in 1995, embodying the previously existing General Agreement on Tariffs and Trade. WTO agreement defines rules for the international exchange of goods, services and Intellectual property rights. It spells out the principles of liberalization and the permitted exceptions and it includes individual countries' commitments to lower custom tariffs and other trade barriers, and to open and keep open services markets. It sets procedures for setting disputes and it prescribes special treatment for developing countries.

Five **functions** of WTO:

1. Administration of the agreements
2. Surveillance of the agreements
3. Forum of negotiations
4. Dispute Settlement
5. Technical Assistance

In WTO breaking rules is not possible anymore, since it established a Dispute Settlement Mechanism in charge of punishing whoever breaks the rules. Differently from GATT, in WTO every country can report irregularities, so the mechanism of surveillance is even more strict.

The WTO contains a much more formal and effective procedure: panels of experts are selected to hear cases, usually reaching a final conclusion in less than a year. Moreover, they were needed to avoid misunderstanding of the rules: for example if a country is in an emergency situation (high unemployment for instance), so in need of adopting emergency measures, the panel is necessary to assess the entity of the emergency and so whether emergency temporary measures should be adopted.

The great new fact introduced with WTO is the certainty of punishment for cheating countries through measures that penalize the economy of the country: the country that is hurt can ask the WTO to punish the hurting country in the same measure it was damaged.

Suppose that the WTO concludes that a nation has, in fact, been violating the rules— and the country nonetheless refuses to change its policy. Then what? The WTO itself has no enforcement powers. What it can do is grant the country that filed the complaint the right to retaliate.

However, the regulation was still lacking coverage for environmental damage and other issues related to protectionism, because it was not possible for WTO to reach an agreement on these aspects. WTO decided not to cover such issues because otherwise it would have been too complex to regulate and coordinate such a wide problem.

Example: US banned the import of tuna fish from Mexico because fishing techniques of Mexican fishermen were illegal in US (killing of dolphins). When Mexico complained to the WTO, it established that US rules could not be applied to Mexican fishermen and so forced US to remove the new rules. But if Mexico would have retaliated against US by itself it would have been found guilty of breaking WTO rules and so punished! Because of this decision, WTO was accused not to care about environmental issues: **WTO is an organization that regulates only trade and agreements and rules are about trade and effects on trade meaning that if WTO does not state that violation of human rights or that damaging the environment are illegal, WTO cannot punish a country because does such things**, otherwise it would have not punished US in favor of Mexico.

If US had not agreed on repealing that law, Mexico would have been allowed to retaliate against US. Even if Mexico is not a large country it is a crucial market for US, so the threat of suffering from an economic damage caused by limitation imposed by Mexico was enough to convince US to repeal the law.

The best solution was to make consumers choosing: nowadays, in the US grocery stores it is possible to find classic tuna fish boxes and boxes with a dolphin-shaped logo on it, in order to differentiate the products and then let the consumer choose on the basis of his concern about the environment.

The Uruguay Round produced also a treaty that made agricultural and services trade and intellectual property being included in WTO regulations.

GATS: GENERAL AGREEMENT ON TRADE OF SERVICES

The GATT applied only to trade in goods; world trade in services—that is, intangible things like insurance, consulting, and banking—was not subject to any agreed-upon set of rules, since services were not considered tradable internationally. As a result, many countries applied regulations that openly or de facto discriminated against foreign suppliers. The GATT's neglect of trade in services became an increasingly glaring omission, because modern economies have increasingly focused on the production of services rather than physical goods (for example medical assistance, by simply sending via email exam results).

But what rules can be imposed on the trade of services if service producer and service consumer are located in two different countries? Since services to be traded do not require to physically cross borders, because their production and consumption are quite simultaneous, how could their trade be controlled?

What happened is that when Uruguay Round was underway (1986-1993), countries decided to come to an agreement on services trade: GATS. The idea was to apply the same criteria that were applied in the case of goods trade. This was necessary because trading services was becoming even more difficult than goods services because:

- There were different legislations across countries;
- Many services were actually provided publicly;
- Services are usually provided through a network structure that requires the exploitation of economies of scale in order to cover a large geographic area, so in order to provide a certain type of services it is not required to have many different firms, making very easy the arising of a monopoly situation;
- Quality of services is difficult to be evaluated since consumption and production are quite simultaneous.

This is why services trade is heavily regulated all over the world, making firms facing barriers different than those faced in case of export of goods: barriers in this case are the national regulation, so barriers are beyond the boarder.

How could it be possible to apply the rules for the trade of goods to such more different and complex situation?

Protection in this case is not in favor of domestic firms but in favor of consumers; the idea is that in case of trade of services the enforcement is on national regulations: **rules that apply for domestic firms, apply also to foreign firms.** So, it is not possible to establish further rules ad hoc for foreign service providers.

According to GATS, there are 4 ways for trading services internationally:

1. Producer-consumer in different countries;
2. Producer firms moves to the foreign country in which wants to sell the service (=FDI);
3. Consumer moving (very touchy case, because it is not possible to prevent people from moving);
4. Person who supplies the service moves to another country.

So, rules and regulations are needed for every exchange of goods across borders and these were the four ways established to go beyond the common concept of trade.

Mind that WTO considers the movement of people with the last 2 modes, but it is not concerned with immigration.

TRIPS: TREATY ON INTELLECTUAL PROPERTY RIGHTS

In addition to a broad shift from producing goods to producing services, advanced countries have also experienced a shift from depending on physical capital to depending on "intellectual property," which is protected by patents and copyrights.

The issue is related to the property of the good: trade of tangible goods is based on the change of property rights: it is easily possible to define the property of a watch (I wear it, I pay for it and so on..) but how is it possible to define the property of the software in the computer?

TRIPS is the Treaty on Intellectual Property Rights, that became crucial in a world characterized by both tangible and intangible goods: who owns intangible goods? For example in some countries in Asia intellectual property was not recognized (you should not pay for using a software or reading a book) and ideas are considered public goods, while in western countries you get profit from your ideas and innovations so they have to be protected with property rights. Because of these differences the regulations were very different across countries, in fact some countries had a patent system while other did not.

Of course, the different economic incentives make different the outcome of innovation (Schumpeterian approach is at the basis of the western conception).

So, in order to have trade of intangible goods, a common ground between such different cultures was needed and a treaty in intellectual property rights was one of the outcomes of Uruguay Round: the different regulations were of course a trade barrier in intangible goods trade. The Treaty established that **if the property of an intangible good is protected in the country in which it is produced, then it must be protected also in country in which it is sold (enforcement of property rights) and not doing so it is a violation of rules:** for example, if a medicine is produced in a country in which property rights are protected and it is sold in Brazil, Brazilian firms cannot copy nor produce nor sell the same medicine.

However, this issue brought some critics to WTO since it was accused to regulate at international level an aspect which was mainly nationally regulated even if it is related to trade. WTO is also able to negotiate agreements in special controversial cases of violations (HIV medications sold in Africa).

GOVERNANCE OF WTO

Once all these aspects were brought in the regulation of WTO, countries realized it was quite hard to go further since harsh controversies usually rise (agreements are negotiated between 160 countries): WTO is a multilateral organization but recently many countries started negotiating bilateral agreements between them. These trade agreements have to comply with WTO regulations and they are very advantageous for signing countries, since they are easier to be negotiated.

Decision making in WTO is carried out by the whole of country representatives (one for each country) and it is quite difficult sometimes, especially in case of new membership because of veto power of members: Georgia has been putting veto on Russia entrance in WTO for 19 years.

The decision making process inside WTO is articulated in this way:

1. WTO is run by its member governments (1 country, 1 vote)
2. All major decisions are made by the membership as a whole
 - Ministers who meet once every two years (ministerial conference)
 - Ambassadors or delegates who meet regularly in Geneva
3. Decisions are normally taken by consensus.

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DEPTH OF TRADE AGREEMENTS

The birth of preferential trade agreements can be traced back to the growing problems inside the WTO, since the higher and higher number of members made the negotiation process quite difficult. Because of this, countries started negotiating trade agreements in a bilateral way between them.

The advantages of PTAs are:

- Smaller groups of countries are negotiating, making easier and faster the negotiation process;
- The countries that negotiate are somehow similar or with similar interests, so the outcome is efficient for everyone.

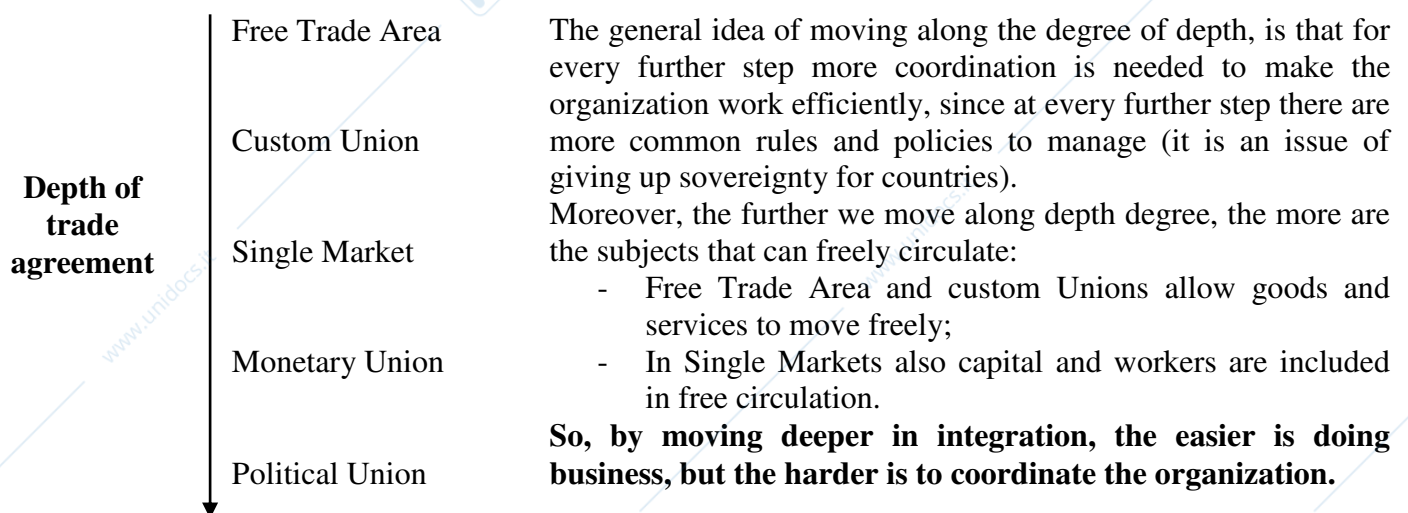
But PTAs have also some disadvantages:

- There are distortions from selective trade liberalization, since tariffs are different for partners and for the rest of the world;
- Countries that are not involved in the agreement are facing higher cost for trading on the international market.

In recent periods, countries preferred to sign PTAs rather than multilateral trade agreements (the ones of WTO), because of the lower difficulty of negotiation they provide even if they are suboptimal under the point of view of general welfare.

One of the characteristics of PTAs, compared to multilateral trade agreements, deals with the fact that multilateral (WTO) trade agreements have to include a common denominator: everyone must agree on what the agreement states. But in case of PTAs, the countries that sign the agreement are self-selected, so they have the same interests, making the negotiation very easy. Moreover, because of the limited number of countries that sign them, PTAs can include many more issues than a multilateral trade agreement.

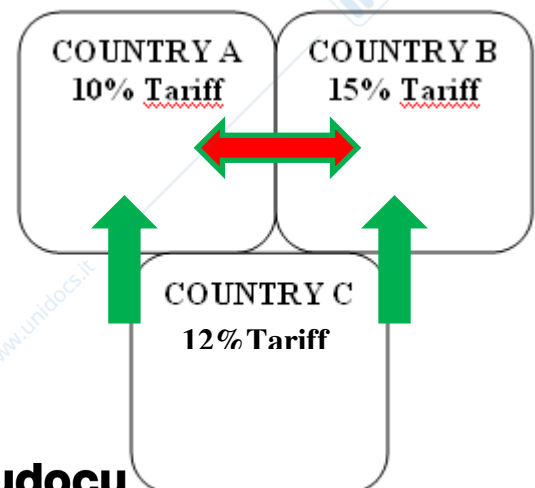
The conclusion about PTAs is that, because of their flexibility and easiness of negotiation, they can ensure a higher degree and depth of integration of the agreement itself despite the distortions that they cause.



FREE TRADE AREAS

The Free Trade Area is the easiest level of integration that can be reached in a trade agreement: a group of countries simply remove barriers between them. However, we are still considering the case in which a preferential trade agreement cannot include every possible issue: we are assuming that countries are WTO members which, according to article 24, can sign PTAs but these agreements must liberalize all kinds of trade between the signing countries.

When talking about PTAs, we need to consider at least 3 countries. Supposing that two of the three mentioned country want to create a free trade area: they abolish all the tariffs between them in all sectors (if they are member of WTO this is mandatory), while they keep



their independence in the regulation of trade with the rest of the world (tariff for imports from C stay the same).

However, this is quite complicated nowadays: suppose that a good is produced only in C, meaning that in order to sell it to B, C has to pay a tariff of 15% while it would pay only the 10% more for trading it with A, what if C ships the good to A and then A ships it to B?

It is not enough to state that goods can circulate freely between two countries, but it is necessary to define **which type of goods can freely circulate**. To achieve this it is necessary to define where the goods are made: in fact, only the goods made in A or B will freely circulate between them. But what is a good produced in country A? In a world characterized by global supply chains a good produced in a country may be assembled with components coming from all over the world, so it is extremely hard to determine where a good is actually made. The solution to this issue relies on the definition of **rules of origins**, that define rules to identify the origin of a good (for example the country in which a certain percentage of the final value is produced).

Note that despite being the simplest level of trade agreement, Free Trade Areas definition is already quite complex.

Many trade agreements start from this point, for example the NAFTA (North America free trade agreement), which states that every good produced in USA, Canada or Mexico can be freely traded between these countries, and each of these countries preserve their autonomy in their trade relationships with the rest of the world.

CUSTOM UNIONS

Custom Union is a further step to the creation of a unified market, and the issues that characterize Free Trade Areas definition are somehow overcome. In fact, in a custom Union not only trade is liberalized, but a common tariff is set for every country of the union: every country becomes part of a wider trade border and has to negotiate a new tariff rate with the other members (a common policy is defined). The new tariff has to be set lower than the weighted average of the previously existing tariffs (meaning that a product that crosses a boarder should not face a higher tariff than before), otherwise the creation of Custom Unions would create a more protectionist scenario.

This solution can solve some administrative problems, but there is a great problem of concession of sovereignty, since countries give up their power of individually setting a tariff: negotiation is needed to find a new trade policy, but if these countries present very different economic structures this task becomes very hard, since countries will tend to protect industries that characterize their economy and to liberalize the industries that are not present in their economy (any protection level on industries that do not exist in a country is only putting more taxes on consumers)

Mercosur: custom union between countries of South America, it was quite easy to create because South American countries had a consistent part of their import coming from US so it was quite for them to define a common tariff.

The origin of European Union too can be traced back to Custom Unions.

SINGLE MARKETS

In a single market the attempt is to create a market that is common to different countries in order to allow, differently from the previous kind of agreements, not only the free circulation of goods and services, but also of **capital and workers**.

A market is defined by common rules, it does not appear magically, and they are needed to allow free movement.

MONETARY UNIONS

Monetary Unions are characterized by the same kind of currency. The main benefit related to monetary union is the abolition of exchange rates, but a huge amount of policies is required to coordinate the Union. Monetary Union is different from simply adopting the currency of another country: in the case of Monetary Unions there is a central bank and a single exchange rate.

POLITICAL UNIONS

The last step of integration is political union, in which by definition the same rules, on every aspect, are shared in the same way by all the members.

Nowadays, signing a free trade agreement is much more complex than these cases, since many more aspects are comprised. This is the example of the free trade agreement between South Korea and EU that came in place in 2012/2013: even if there is no free movement of people and firms between them, this agreement includes many more issues than the simple removing of tariffs, for example cars imported from Korea have to be compliant to polluting standard of European cars.

However, there is another issue that affects market integration and goes beyond tariffs negotiation or abolishment: different countries have different rules. For example, if a country's law imposes a certain kind of labeling of goods, it means that to import there that kind of goods labels compliant to that regulation are required, meaning that for goods coming from a country that does not regulate such issue this represents an additional cost for exporters, who have to label twice their goods: this cost acts like a tariff.

The conclusion is that the previous basic models are quite hard to be implemented nowadays, since further regulations and aspects have to be included in the agreement, according to the different cases. The main problems are:

- Nowadays almost every country in the world has a preferential trade agreement in place (about 320 agreements all over the world) and this is a commercial nightmare and a terribly inefficient situation. In fact, to export in the world, small firms need a lot of information about all the rules that apply to different trade areas and this may make for them easier to trade with some areas with respect to others;
- Large economies inside WTO have higher negotiation power, because, even if inside WTO decision making is characterized by unanimity, countries with bigger markets and economies attract more interests from the rest of the world.

EUROPEAN UNION: AN UNIQUE EXPERIMENT OF INTEGRATION

European Union descends from a progressive experiment of economic integration. The initial idea of creating an integrated market in Europe after WW2 was mainly a political issue, in order to avoid further wars by creating economic ties (you do not make war with your commercial partners or suppliers), and an economic one too, strictly connected to the reconstruction of productive capacity, which had been almost cancelled by the war. The other aim of this Community was to counterbalance the economic power of the US, which were the only major economy at the time.

Moreover, this was thought to make reconstruction benefiting from economies of scale: if the reconstruction of an industry occurs on an international scale, it allows to access a higher production capacity and the exploitation of economies of scale, since goods of that industry are produced for a larger market.

The first step was the creation of the **Economic Community of Coal and Steel**, which were the two main industries of the economy (coal was fundamental for energy production and steel was fundamental for the reconstruction). The agreement was very efficient, in fact the reconstruction of both industry went on faster than any expectation.

Because of this, the six members decided to extend the agreement to other sectors: in 1957 Italy, Germany, France, Netherlands, Luxembourg and Belgium signed the **Treaty of Rome**, which gave birth to the **European Economic Community**. This agreement stated that the six countries should have a common trade policy, in terms of tariffs and trade relationships with the rest of the world.

Another outcome of the agreement was a common agricultural policy for the members, because agriculture was still a very large, but declining, sector. At that time, after the war, countries were putting subsidies on agriculture for two reasons: to foster its growth, in order to achieve self sufficiency in food supply, and to make people keep on working in the agricultural sector, due to the fact that people were starting to move very fast from the fields to the cities in order to find jobs causing very harsh social tensions. Almost all countries considered intervention in agriculture fundamental and strategic, so it was convenient to have a common policy in terms of subsidization of agriculture.

Why UK did not join the Community from the beginning? At that time UK had very different and strong relationships with the rest of the world (especially with its former colonies and with the Commonwealth) and had no interest in joining such agreement in terms of trade policies. Moreover, because UK had no land invasion during the war, it suffered from lower damages than other European countries, so its necessities regarding reconstruction were quite different and it had not the same interests in a common trade policy. Finally, subsidization of agriculture is efficient only if the sector is large enough, since it encompasses higher prices of agricultural goods and higher costs for the government: UK's agricultural sector was not so large and so it considered not convenient to have a common agricultural policy.

The experiment was very successful and in the meanwhile UK started losing economic ties with the former colonies and losing economic power with respect to other European countries. When UK realized that the costs of staying out the EEC were higher than joining to it, it asked to enter. After an initial opposition from France, it was admitted together with Ireland and Denmark in 1973.

The increasing number of members together with frictions like these ones, led to the uncertainty that characterizes the actual situation.

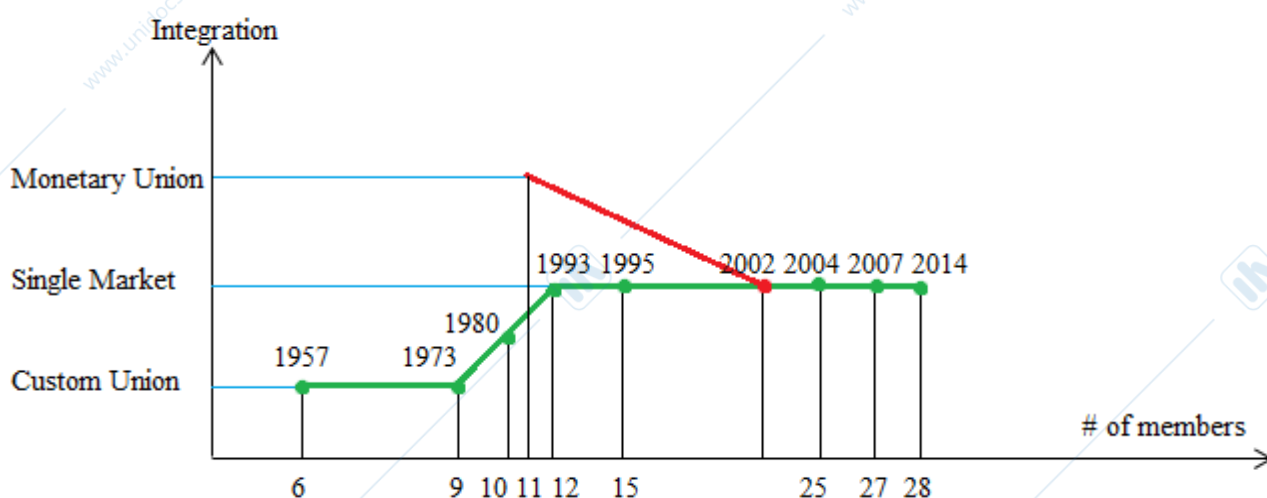
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THE SINGLE MARKET PLAN

As mentioned before, the greater the number of members, the more the heterogeneity of the countries belonging to the EEC impacted on the number of policies that were set, in fact, the greater the heterogeneity, the higher has to be the number of policies in order to coordinate all the members.

Southern Enlargement (1980 for Greece and 1986 for Spain and Portugal), with which countries like Greece, Spain and Portugal were admitted in the Community. They were initially left out because they were governed by dictatorships that brought them to a level of economic welfare lower than the other European countries. This was a problem at the time: how can a country jump into a market that is characterized by countries with higher average levels of income, technology and welfare? The risk is that competition becomes too tough for the new countries. But as long as the considered market is a demanding and growing one this problem is not that relevant.

The main problem deals again with the heterogeneity of the economic structures: Spain, Greece and Portugal were relying much more on the agricultural sector compared to other European countries, and adopting the common agricultural policies of the Community would have meant further expenditures on agricultural. The main issue was to foster their industrial growth in order to diminish their relying on agricultural sector.



When the southern enlargement occurred, the Community realized that integration, as the heterogeneity among members increased, was not just an issue of removing tariffs, but of creating a common policy in order to avoid the arising of harsh inequalities in income and level of development between the members that would have made impossible to coordinate the Community.

The result was that when these three countries joined, a further step towards integration was taken, since some new policies were created ad hoc for the poorest regions of the Community, in order to stimulate a

convergence of the levels of income of the member countries: it was no more possible to add new members and progress with integration without adapting the existing policies to the new members.

As a result, at the end of the '80s European countries faced no barriers and tariffs in trading between them, but the situation was still quite fragmented, since regulations inside countries were very different: as mentioned before, this aspect is a barrier to trade. For example, Swedish laws required cars to have wipers on the front lights because of climatic conditions, while other countries did not face such issue. Of course, for a German car maker, the cost of producing only few units of cars with wipers on front lights in addition to "normal cars" was not worth the gains and the efforts stemming from trade with Sweden (this cost acts like a tariff: it switches upward the supply curve, thus inducing an increase of price and so a reduction of the overall consumers' welfare level). The crucial aspect is that there is not a revenue for governments: consumer's surplus shrinks anyway, but it is not compensated by a tax revenue. So, the effect of this kind of regulation is the creation of hidden barriers that are different across every country.

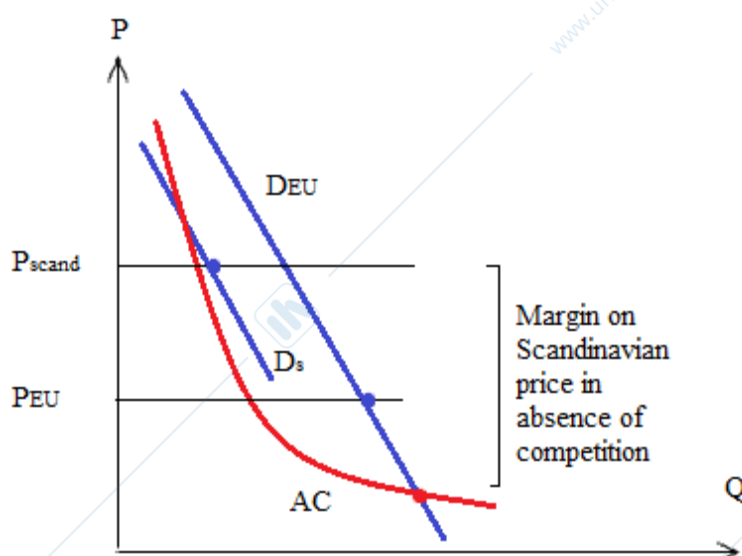
What happens if economies of scale are in place? What explained above is not true in the case of economies of scale, so in the case in which the average cost declines with increasing volumes (it is the case of a single market): the previous reasoning can apply to food market in which economies of scale are not that relevant. In the case in which economies of scale are in place, and are relevant, it is not possible to derive the supply curve directly from the average cost curve because it is possible only in the hypothesis of competitive market.

Economies of scale arise from the fact that in an integrated market the demand curve is the combination of the individual demands of all the members of the market: demand curve shifts right, so the equilibrium price will result lower.

In this case the equilibrium price will be lower than the equilibrium price of a country that is isolated from the integrated economy, this means that producers serving very small markets cannot bear the competition in a single market because if they cannot produce the volumes necessary to exploit economies of scale, so they are forced to sell at higher prices because their equilibrium price is higher than those of the producers that are benefitting from economies of scale.

This is the case of Scandinavian car makers: they disappeared from the market, because they were facing no competition in their markets until they were opened to European market.

But this situation is not enough to justify price reduction, because in this case a producer could simply fix its price just below those of other producers and gain a larger margin: from the point of view of the consumers nothing changes. What really makes prices reducing is competition between firms, because this means that in the market there will be other producers that will be trying to lower the prices.



Sectors in which economies of scale were not relevant were the representation of market equilibrium in case of no duplication of adaptation effort: regulations are still different among countries but producers do not have to adapt to every single national market, but they have to adapt only once.

The idea to achieve this result was to eliminate this hidden barriers that mined the achievement of free trade in order to create the conditions of truly integrated demand, in order to make producers benefiting from

economies of scale and because of this by making consumers access a higher quantity at a lower price. Because of all these types of barriers European countries still were not able to enjoy the single market condition.

In order to make the **Single Market Plan** efficiently working, the following policies were adopted. This was not so easy, since it required countries to give up their own regulations and sometimes even part of their tradition. In order to make this happen, a convergence on common regulations was required (Ex: wood oven cooked pizza was thought to be unhealthy, but this was a tradition in Italy).

1. MUTUAL RECOGNITION OF STANDARDS

The first principle of mutual recognition is that if a good can freely circulate inside an European country according to its laws, then it can freely circulate in all the Union: the safety standards of a European countries are considered valid at communitarian level, provided that they are compliant with a minimum level of standard (set at communitarian level) that is required to all the countries.

For example, Wolksfagen can sell cars in Sweden as they are sold and produced in Germany without extra costs, then it is on the behalf of the Swedish consumers the additional cost of voluntarily add the wipers on the front light. This really changed the way of thinking about the European single markets for the firms.

After taking consciousness that Europe was actually becoming a single market, European firms re-structured themselves in order to operate in a very large markets (in terms of plants location, logistics etc.): the Plan was scheduled to be active from 1993 on but **M&As** operations in Europe had been becoming incredibly frequent since the beginning of the '90s in order to make firms efficiently competing no more on 12 small markets but on only one integrated market.

This represented also an important change for the other producers all over the world: US producers could sell their products in Europe without adapting them to many different standards, meaning that all of the European countries were more attractive in terms of FDI, even the smaller and poorer countries like Ireland, Greece, Portugal and Spain.

The minimum set of standards was set in order to avoid the "raise at the bottom" in terms of standard, to prevent European countries from lowering their standards in order to result more attractive than others.

2. COMPETITION RULES

In order to make consumers benefiting from the establishment of a single market in terms of prices and safety standards, rules on competition were needed (as said before, establishment of a single market allows firms to achieve lower costs of production, but is this going to make consumers benefiting from lower prices?).

3. FREE MOVEMENT OF PEOPLE AND CAPITAL

Free movement of people and capital established that every european citizen can decide to settle and apply for a job in every European country. Of course this required some sort of harmonization (if an italian engineer applies in France, it is required that his level of education is as good enough as those of french engineers).

The whole of this policies were the basis of the **Treaty of Maastricht (1993)**, which gave birth to the European Union. But at the same time, the Soviet Union was falling apart, so there were many more countries pushing on the borders on the Union asking for membership (they started applying in the early '90s but were admitted only in 2004/2007) and in the meantime Finland, Austria and Sweden joined (1995). But in 1993 there was an important currency shock that created many tensions: firms have to compare their prices in order to compete and, if currencies are different, the means to do this is the exchange rate, which can be manipulated in order to make the national economy more competitive. This mechanism made very difficult the efficient working of the single market, and it was in this period that Europe started discussing about monetary integration (that happened in 2002).

WHO MAKES THE RULES: THE EUROPEAN INSTITUTIONS AND POLICY MAKING

The ones who make these policies are the member countries and the different of European institutions, meaning that the more are the members, the more becomes difficult to coordinate the policy making process. The different European institutions are:

- European Parliament;
- European council;
- Council of European Union;
- European Commission;
- Court of justice;
- European Central Bank.

Policy decisions are taken by the European Council and by the Council of European Union. When the Union was smaller, decisions were taken at unanimity, because it was easier to reach consensus among members. Still today some decision are taken in this way, but the largest share of decisions is taken by qualified majority (2/3 of voters).

At the time of its establishment the main issue was related to the right of vote of the member Countries since it was recognized that bigger countries, that have to take care of a higher number of people, should have a higher number of votes. But in this way Spain, Italy, Germany and France (the bigger countries) could held the majority of votes, so the outcome was a middle way between proportional voting and equally shared voting power: voting is approved only if beside the qualified majority of votes there is also the majority of population of the European Union, in order to avoid the coalition of big countries against the smaller ones.

European Council is simply the meeting of the 28 heads of the State of the members, it is the main institution in the political decision making process and meets about 4 times per year (every 3 months). Entering or exiting from EU means gaining or losing representativeness in this Council which establishes the common policies of the Union: if UK gets out, it may not lose the access to free trade with European Countries but it will certainly lose the right to join to this body.

The **Council of the European Union** is the meeting of the ministers of different areas of each member Country instead and meets much more frequently to discuss on issues regarding a certain area (for example Ministers of Finance meet and vote on the concession of loans to countries).

The **European Commission** instead is not formed by representatives of the member States, but is formed by 28 commissioners that check if the members are fulfilling the communitarian regulations: the idea is that Commission does not represent national interests. It is the organism that allows decisions and policies to be put in place, it is the organism that holds the executive power. For example, while the decision of admittance of a new Country is taken by the council, the check of the whole of the procedures is on behalf of the Commission.

The **European Parliament** checks the acts of the Commission and of the Council. Moreover, it checks if the laws are respected. It can also propose new laws, but it does not have the final word on the law making. Moreover, the Parliament has to approve the composition of the Commission.

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The **Court of Justice** checks if there are some firms, individuals or governments that are not respecting the European decisions and laws.

The **Central Bank** has the task to implement and regulate the monetary policy of the Union.

When a new law or rule is proposed, usually this is proposed at the level of the Parliament or of the Commission, then it goes to the European Council that approves it. After the approval, the norm is sent back to the Commission that implements it.

What can be decided is stated by the treaties that define the areas of competence of the EU: there are areas in which laws can be proposed, while others on which it is not possible. Initially the political competence of the EU was quite limited and sensibly enlarged when the Custom Union was established.

POLICIES AREA

In the European Union, the administration of some policies is on behalf of the whole Union, which is embodied by the Commission. These policies are common to all the members and are fundamental for the

existence of the European Single Market, along with other agreements, while other policies leave some degree of freedom of regulation to member Countries:

- **External trade policies** are wholly managed by the Union and the member countries have to follow them. But of course laws pass through the Parliament, that represents the interests of the member Countries, so conflicts may arise because trade policies have to be negotiated (2005: When MFA expired, some of the European countries started looking for exporters of textile apparel while countries that had a strong apparel industry asked to the WTO for emergency measures to protect their industry from competition. These two requests were in conflict and the outcome was a temporary tariff on import of textile apparel.)
- **Agricultural Policies** were created at the very beginning of the Union;
- **Standards and regulations on goods and services**, despite being not totally a communitarian issue, since the single standards can vary across countries, a common minimum standard is set in order to set when can be sold and bought on the European Market. This is fundamental for the efficient working of the Single Market;
- **Industrial and competition policy**, that comprises the agreement on standards. This policy too is not exclusively managed by the Union, in fact every country can set its own competitive and industrial policies;
- **Fishery policy**;
- **Cohesion Policy**.

However, alongside these policies, there are other kind of policies whose regulation is strictly national, meaning that the Union has no right to intervene on them: this is the case of fiscal policy. The fact that there are rules on debt and deficit comes from the monetary Union: setting a ceiling on the amount of debt that a country can contract has nothing to do with fiscal policy, since fiscal policy sets rules on expenditure and collection of money.

How strictly to apply the rules is a decision that is taken at European level, so the exceptional breaking of rules can be treated differently according to different cases (for example, when the financial crisis broke out, many countries exceeded the 3% threshold that EU puts on deficit to sustain demand and consumers, but no one was punished).

THE EUROPEAN BUDGET

There are some communitarian policies that are not related to the transfer of money, for example when talking about economic policies we can tell between:

- Policies that rule the working of markets (they do not require money);
- Policies that aim to redistribution of richness and that involve money of course.

Starting from the national economic identity, $Y=G+C+I+(E-I)$, there are two kinds of money expenditure for the State (G) that can be identified:

- To provide public goods (services, health care, schools etc..);
- Transfers (money used to provide pensions and subsidies for unemployment or export), that do not account in the national identity, since in this case money is not used to produce but it is simply a transfer of money from a group of citizens to others.

The share used for provision of public goods accounts on average for the 15/20% of the national budget while the share for transfers accounts for the 20%. This share comes from the difference between the amount spent for public goods and tax income, which is about 40%.

This means that the 40% of the national is used for pure public expenditure and European economy works in a similar way too: European Union requires a budget for implementing policies, some of which require a larger share while others require a smaller share. Differently from national cases, EU does not need to spend money in transfers.

European budget accounts for maximum the **1.23% of members' national GDP** and it has to be approved with the unanimity of votes of member Countries. This is of course a small amount of money and this is the reason why EU has always had limited power of intervention in crisis.

The European budget is established at the Council level through a financial framework for 5 five years that establishes where and how (it sets guidelines) the budget will be spent in that time interval.

European budget comes from:

- **Custom duties on imports** since most of the tariffs are collected by the European Union, while member Country in which the goods arrive keeps only a part (usually 20%) of the tariff in order to recover the costs of managing the ports. Tariffs used to be the main source of income for the EU;
- Resources based on **VAT**, which is paid every time a transaction takes place (in European Markets this is the 0.3% of national VAT: the 0.3% of the 22% of Italian IVA goes to EU);
- Resources based on **GNI** (similar but not the same GDP, since GNI comprises also the value generated by goods sold abroad), which is the main source for reaching the quota of European budget (it is some kind of tax, equal to 1.23% of national GDP). In the past, when tariffs used to be higher, GNIs were of course lower so the overall income of EU was lower than nowadays, when tariffs have declined.

European yearly budget collected through these means accounts for 155.61 billion euros (for 2017).

THE EXPENDITURE OF THE BUDGET

The commitments of budget expenditure are:

- **Competitiveness** for growth and jobs (R&D, education etc..), that account for the 13% of the budget;
- **Economic cohesion**, which is a transfer policy and accounts for 34% of the budget. It is fundamental for making laggard countries or poorer areas of some countries keeping up with more advanced countries in terms of GDP pro capita and other economic issues;
- **Common agricultural policy**, that accounts for the 30% of the budget since it is another transfer policy.

Wait! It is 2016 and EU is spending as twice as the expenditure for R&D on agricultural policy, why? This policy is an inheritance of the early Union and even if 50 years have passed since its introduction and even if farmers nowadays account only for 3.5% of European labor force, it is quite hard to remove this kind of law, because if farmers would be subsidized no more, they would probably revolt. Moreover, these subsidies are fundamental for farmers to preserve the environmental quality of their working processes. So, there is also a social issue to be considered while discussing the introduction and removal of some laws.

- **Security and citizenship** (1.6% of budget);
- **Administration** (5% of budget).

Funny fact: the cost of the whole EU is less than the cost of the only Rome's Municipality. Many things can be criticized about EU, but it is not a matter of money.

From these figures it is possible to observe that transfer policies absorb the largest share of the budget (60%).

What about other policies that do not require money? Competition policies only require a Commissioner to implement them (the Commissioner is paid with the budget for administration) so they do not consume a share of the budget: Competition policies represent instead a source of income for the EU, since they establish fines for firms that violate the rules (Apple, Google, Michelin for example) that are proportional to the economic damage caused by the violation. Another policy of this type is the External Trade Policy, that establish the tariff level.

There are few other additional funds at communitarian level for example:

- Fund for emergency aid for developing countries that are facing natural disasters;
- Solidarity funds for member Countries that are facing difficulties (earthquake in Italy).

Conclusion: every Country can compute which is the amount of money with which it contributes to the EU and can even compute how much it would gain if it collected directly the tariffs, but it can also compute the amount that it receives back, in the form of subsidies in R&D and agriculture, funding of projects etc.. So, basing on this combination of factors, there are Countries that are net payers and others that are net gainers, for example those that have a large agricultural sector BUT it is not this aspect that establishes whether belonging to EU is profitable or not, since the policies that are fundamental under this aspect are those that do not involve the transfer of money: national firms access EU market, countries can import more easily and can access easily to the single market.

But the final conclusion that can be drawn from this analysis is that the gains for national firms offset more than the 100% of the costs of contribution: UK as a country did not benefit nor from agricultural policies nor from economic cohesion policies because it had no agricultural sector and because many of its regions were fairly rich; but UK firms gained from the opening to European Market more than the 100% of the costs of contributing to EU. This was the argument on which leave supporters relied during the referendum campaign.

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EUROPEAN COMPETITION POLICIES

The conclusion from the theory is that opening up to free trade increases welfare because it is possible to exploit economies of scale, making consumers benefitting from lower prices and efficient firms, under the hypothesis that firms are not identical, from larger market share. This the theory that lies behind the trade policies of the EU. But of course smaller and less efficient firms will oppose to this situation because their margins would squeeze, and this was the reason that brought EU to reinforce competition policies because otherwise the risk is that less efficient firms keep on selling the same amount while the more efficient ones exploit economies of scale and monopolize the market.

If firms were similar they may collude in order to counter the changes brought by integration (agree on not changing prices or agree on selling in the same market as before), this is why collusion is strictly prohibited by the EU (fine for collusion is set from the Commission at the 10% of turnover).

From the outline of the budget it is evident that only a little part of the budget is reserved for industrial and competition policies. The share for industrial policies is limited since the only sector subsidized by EU is agriculture, because it is thought that subsidizing some industrial sectors would favor only some countries (for example, if it were decided to subsidize computer industry, this would benefit only those countries with a strong computer sector): money is substantially provided to countries for general research.

Industrial policies aim at supporting the competitiveness of some sectors. According to quite all economic models, in non-perfect competition condition every company will gain a margin on what it sells through a mark-up, which is set by demand (willingness to pay of consumers) and by competition (if your competitor has lower production costs than you and you are not able to communicate to customers that your quality is higher than that of your competitors you cannot ask for higher prices).

Competition policies regulate:

- **Limitation of collusion attempts**, through complaints of consumers or analysis of prices trend in the market;
- **Limitation of M&As** in case in which this would reduce competition in the market, unless they are done for efficiency reasons;
- **Limitation of market dominant position's abuse**;
- **Control of the state aid**, because each country's government would be tempted to step in by supporting less efficient firms. In this case, state AIDS would cancel all the benefits.

These rules apply also to every firm that is operating in the European market.

02/12/2016

EUROPEAN COHESION POLICIES

In a single market a consumer can buy a good wherever he wants since, as already seen, integration of markets gives birth to a greater one. But even in this case markets are not fully integrated because, despite all the treaties that can be signed, some markets remain very local and therefore distant from the integrated market: distance for such markets matters. So, integration is not only a matter of formal manners, but also of location.

There are activities for which location is very important (ex: buying a cup of coffee) and others for which location is not so important (ex: buying a plane ticket, because you buy it online).

This is why some of the policies of EU target geography and location issues, since market integration affects location and therefore the market equilibrium: there are winners and losers since there are opposite effects like in the case of integration. In fact if somebody had to choose between locating his business in Germany or in Hungary, he had also to choose between better infrastructures but higher competition and higher congestion costs or worse infrastructures but lower competition and costs.

Nowadays there is the risk that economic activities become too much concentrated, since distribution of economic activities is not homogeneous. Aggregation takes place because an activity cannot survive isolated from the others, since in order to work efficiently it needs services, infrastructures and consumers.

Location issues are heavily affected by transportation costs and distance issues: if an activity is located in Ireland, or more generally in a peripheral region, it bears of course less taxes and competition but it faces higher difficulties in reaching the main European market.

This is an example of the many forces that favor agglomeration or dispersion: Ireland counterbalanced its scarce attractiveness in terms of location with lower tax rates and more favorable conditions for setting up an activity.

HOTELLING MODEL

Agglomeration forces tend to be circular and to reinforce themselves

This model is well explained by the ice creams sellers on a beach example. Imagine a 1km long beach with uniform distribution of people along it, if an ice cream seller comes there he would locate itself in order to be the closest he can to every consumer on average, in order to make every consumer minimize his average effort to get the ice cream. If another seller comes, he would locate right next to the first in order to get the same market share of the other (half of the beach). What if the number of sellers increase? They cannot locate anymore in the center because this would make competition too harsh. It is in this situation that dispersion forces intervene in order to push firms far away from each other (customers will not visit every seller of the beach to check their prices, so every seller will serve a limited group of people).

If concentration of customers is no more homogeneous, firms will locate in the bigger market available. Suppose a country in which population is more concentrated in the west side than in the west side: firms will locate in the western side in order to reach more people at lower costs: **transportation costs are the most relevant aspect in location problems** because, assuming that people will not move to get what a firm sells, reaching a customer is a cost.

This includes also another aspect: an eastern inhabitant will tend to move to the western part in order to find a job because of this choice of firms to mainly locate there.

This means that, if only agglomeration forces were in place, people would totally migrate to west side in order to find a job, leaving desert the east side, and this would be even more convenient for firms since because of labor abundance wage rates would drop.

The equilibrium would result in 100% of people and firms located in the west side.

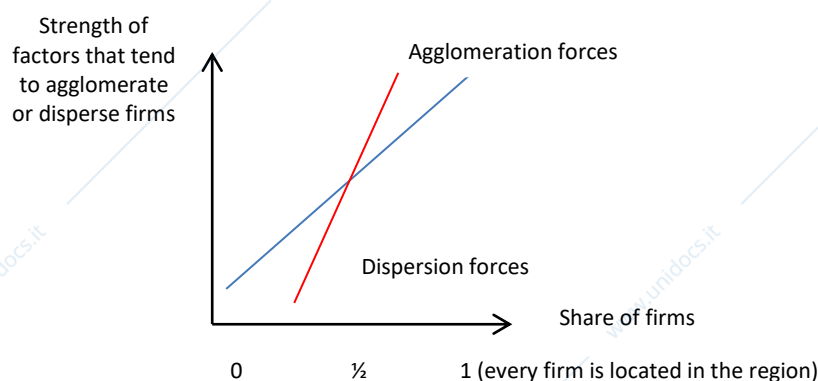
But this effect is partially offset by dispersion forces that break the circular reinforcement of agglomeration force: if firms concentrated too much in an area costs would become huge both for them and for people (renting, land etc..) and this will make some of them staying in the east side.

This combination of forces leads to an equilibrium that is highly unstable: in Italy distribution of economic activities is very heterogeneous and it is mainly concentrated in the north but not all Italians moved north from southern regions.

How does economic integration affect this situation?

EFFECTS OF ECONOMIC INTEGRATION

It is possible to represent the relationship between these forces and the share of firms in a chart. The blue line represents the relationship between the share of firms in a location and aggregation forces. The positive relationship is determined by circularity: if a group of people move to the west, firms will move to the west too and this will attract more firms to the west.



Agglomeration Forces are:

Proximity to the market a firm serves is crucial.

1. Market size (demand and number of customers), that will tend to pull firms together because they will move where there are more consumers;
2. Economies of scale at industry level, since if an industry needs specific suppliers, resources or skills, the firms belonging to that industry will choose to locate where they are closer to what they need (an hi-tech firm will locate close to an university that provides it engineers and software and so will do its competitors). This is the case of Silicon Valley in California (people moved there because of nice weather conditions).

Dispersion Forces are those that prevented US from “collapsing” inside California:

1. Competition will counterbalance economies of scale, since competition will push down prices and makes difficult to sell at different prices than competitors because proximity makes easier to compare prices;
2. Congestion, that makes costs rise (rents, land etc..)

So, also the line for dispersion forces as a positive slope and it can be steeper than the agglomeration curve: in some model these lines are not monotonous so there may be more than one equilibria. We are assuming that everything is fixed so we end up with straight line

How does economic integration affect this scenario?

First of all, competition is a dispersion force because it pulls firms away since they will try to escape their competitors.

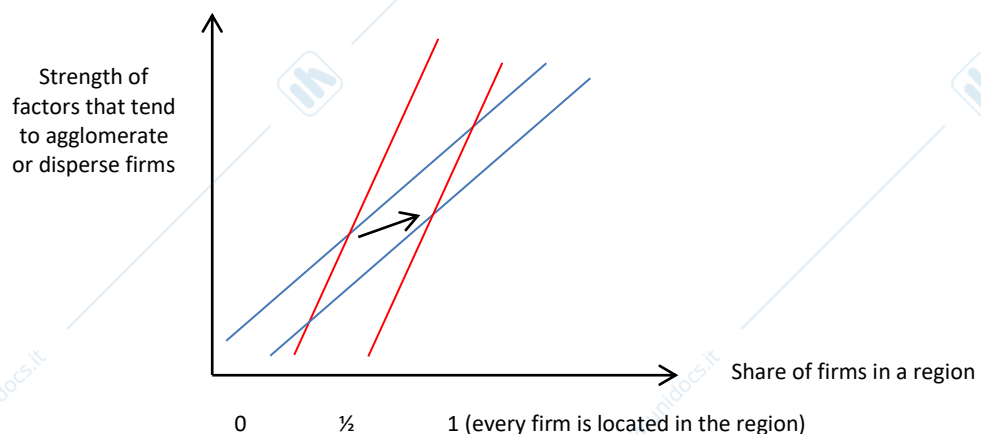
If the market size has no relevance, two competitors entering together in the market will locate in the furthest point from the other they can: according to the beach example of the Hotelling model, if the two ice cream sellers come together to the beach they will locate not in the middle back to back, but they will place in the middle of their share of the beach in order to minimize transportation cost and to have a higher degree of freedom in setting prices.

In this case the best and most efficient solution is given by dispersion because it minimizes the transportation cost, regardless if they are paid by customers or firms (if customers have to walk a short way to get an ice cream they may be willing to pay even an higher price).

Of course the willingness of customers to move to get the good depends on the type of good they want to buy: for ice cream sellers distance is a protection for competition, but for car sellers, for which consumers pay very high prices, dispersion is not convenient the same. The conclusion is that the market context plays a role in this mechanism.

In order to analyze the effect of integration, according to our assumptions integration pulls dispersions, especially in terms of protection from competition, forces much more down than agglomeration forces because market integration means that you want your domestic firms to compete with foreign firms: when economic integration is in place, separation is not efficient because firms can locate wherever they want in the market and there are no more shelter from competition.

Graphically:



Dispersion forces reduce because in integrated markets the issue of being close to the market is no more relevant because the more relevant issue is to be IN the market (exploitation of the bigger market size).

The hypothesis made results in the fact that European integration will lead to more aggregation (the equilibrium point moves right).

EUROPEAN INTEGRATION POLICY: THE COHESION PLAN

Policies aim at breaking the circularity of agglomeration forces and many policies undertaken in peripheral countries aimed at this.

When Greece, Spain and Portugal joined the EU, their governments and EU itself feared that their activities would have left to move to the center of Europe, where most of the economic activities were located. So, a number of policies were required in order to make sure that every country could be able to keep and incentivize its activities.

This was the basis of the **cohesion plan**.

The idea was to give funds to regions rather than to countries, since the distribution of richness and income is different within countries and across their regions: the problem is not at national level, but at regional level, since no one will locate an activity in the more peripheral and poorer regions of Europe (southern Italy, southern Spain or northern Sweden).

The basic criteria to assign these funds is that average income per capita of the region should be lower than the 75% of average EU income per capita and these regions are usually at the periphery of the EU. The idea of this policy is to make these regions more attractive:

- By improving infrastructures to favor transportation;
- By improving the training of workers in order to provide specific skills that firms may look for.

This policy helped Ireland and some parts of Spain to realign with the rest of Europe, while the results were disappointing in southern Italy and Greece, so the overall judgement on this policy was controversial. In order to avoid the waste of the structural funds it was stated that regions have always to co-finance the projects.

14/12/2016

PREPARATION POLICIES TO THE MONETARY UNION

Since the monetary union has been a further step in integration more common policies were required in order to align the different Countries, according to their needs and requirements.

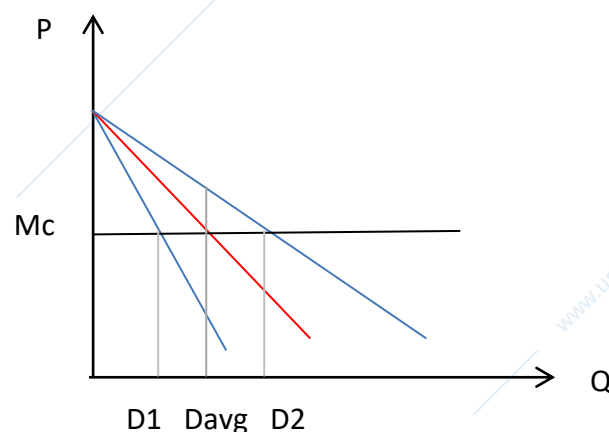
But what are the costs of having a common policy? The necessity of common policies can be traced back to the issue of public goods (remember the example of the two houses with a common road that connects them to the main road).

In general, benefits of public goods outweigh the individual cost but this is not always the case: some individuals may not be totally in favor of the common policy because the cost they would bear equals or even exceeds the benefits provided by the public good.

So, when common policies/goods should be adopted?

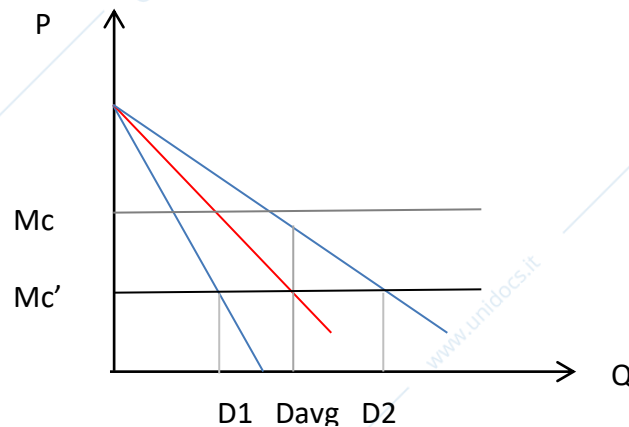
Let's analyze the case in which a country adopts a national transportation system, for example trains. The main advantage is related to exploitation of economies of scale while the main disadvantage is related to the fact that people have different needs across the country so different willingness to pay.

If the service was provided individually the result would be optimal for the consumers, but the cost would be maximized (we are assuming constant cost).



If the two demands represent the demand of two groups that live in different regions in a Country, it is evident that the optimal quantity to be provided will be different for both groups. If the service is provided by considering the average of the two demands, the State will provide an amount of service that will make both groups unhappy: group 2 will get more than it needs and vice versa for group 1. **The result is a cost** represented in the chart by the triangles highlighted.

This would be the situation in which the costs for providing a service regionally or nationally does not change, so it would not be convenient to provide the service nationally but it would be convenient only if the cost for providing it decreases if provided nationally (because of economies of scale). This is known as **cost saving effect**: the loss explained above is partially offset by a decrease in costs and an increase in consumer's surplus.



It is possible to conclude that a common policy is convenient if the cost saving effect outweighs the cost of choosing the provision level on average demand, so if preferences are not very different and if economies of scale are strong enough to ensure a good decrease of marginal costs: the cost for people having a suboptimal quantity of service provided is outweighed by lower taxes due to the fact that the State is spending less for providing that service nationally.

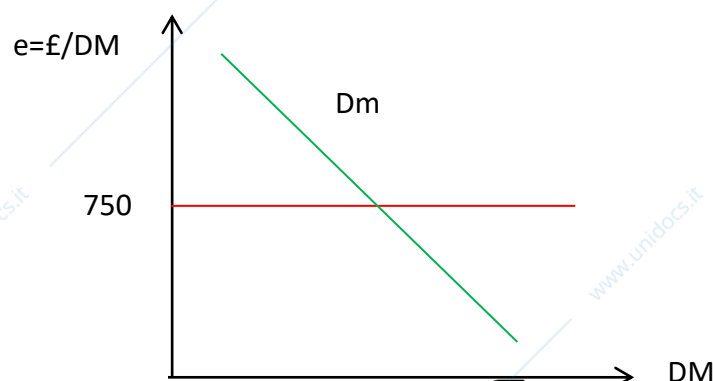
This is the conceptualized situation and explains because some countries stayed out from the Eurozone because they thought that the costs for adopting a common currency would have been too high since the differences between the countries were too deep.

How does it apply to the case of a common currency: it would be not convenient for cities to have their own currency, because this would make transactions between them very difficult since currency would have to be converted daily and, vice versa, it would not be convenient for the world to have a common currency because it is too heterogeneous.

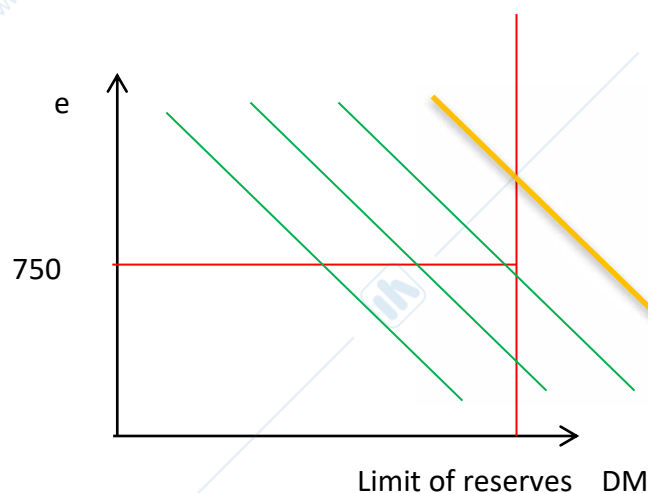
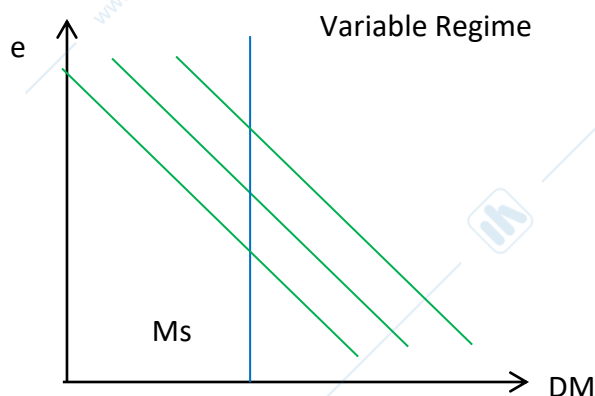
The issue of the common currency arose with the institution of the single market in 1993:

- **Transaction costs**, since one transaction every two was characterized by the need of exchanging currency for the firms, but of course going to the bank for exchanging currency is not free;
- **Risk and uncertainty**, since between the sale and economic transaction, in the case of firms located in different countries, any fluctuation of the exchange rate (in case of fluctuating exchange rates regime) may cause a significant loss for the seller or an excessively high price for the buyer (one of the players bears the exchange rate risk).

A possible solution to the second problem may be setting fixed exchange rates, as it was done in Europe in the mid '80s (central bank sold currency at a fixed price).



If exchange rates are fixed the central bank loses its control on monetary policy: it means that the central bank can control the situation of fixed exchange rate as long as the demand for currency does not exceed the limit of maximum reserve of foreign currency.



The left chart represents the setting of exchange rate on the basis of the shifts of money demand. The right chart represents what would happen in case of fixed exchange rate regime if there were important trade deficit between the two countries. In general, the main cause of this situation is related to the fact that the two economies are working at different paces and this is usually due to diverging inflation rates, meaning that in a country prices are growing faster than in the other: the chart represents the situation in which Italian consumers are willing to buy German goods/services/financial assets in a measure much greater than they want to buy Italian ones because they cost much less.

Imagine a situation in which the prices of FIAT and Opel cars are the same, if inflation is diverging and rises more in Italy, people will buy more Opel cars than FIAT ones.

The shift of demand curve may be also due to the price of financial assets: if inflation rate is expected to remain higher in Italy than in Germany, then the nominal returns on German government's bonds will be expected higher than those of the Italian one, so more people will ask for Deutsch Marks making the demand curve shifting to the right (many Liras buy fewer goods than the same amount of DM).

Fixed exchange rate regime can potentially last forever if this effect is not in place, but this is not always the case. In fact, if the demand for foreign currency is about to exceed the reserves a Country can:

1. Depreciate currency;
2. Lower prices.

Depreciating currency or lowering prices is the same thing! Apparently, depreciation is better since lowering prices means lowering salaries, but they are substantially the same since both lower the purchasing power of population.

The other way to decrease prices may be increase productivity, but the only problem is that this does not happen overnight but it requires a very long time.

During the eight years in which this regime was adopted many adjustments were done in order to correct this effect, but at a certain point the situation precipitated in 1992.

In 1991, in order to prepare the creation of the single market, free circulation of financial capital was allowed in Europe. Theoretically it is possible to have a fixed exchange rate regime, some independence on monetary policy and a relative stable system if financial capital is not free to circulate, because what really accelerates the shift in demand is the decision on financial assets because financial flows become much faster than transactions related to goods and services. At that time, high inflation was not only making Italy less competitive than the rest of the world, but it was also making Italian financial assets less attractive since they were issued in lira, and if inflation of lira was high the real returns on Italian financial assets were of course lower.

What really accelerated the strong shift to the right of demand for foreign currency in Spain and Italy was the freedom of circulation of capital.

In the summer of 1992 Bank of Italy announced that was running out of reserves, because demand for foreign currency was reaching the maximum reserve limit. Since Germany was no more intentioned to intervene in order to adjust the situation by injecting more Marks in the system, because it had to face a big

economic shock in order to absorb eastern Germany, which was much poorer and less developed so many subsidies were issued and many units of currency were printed in order to allow Eastern Germany to convert to the national currency.

The central bank of Italy went for a huge depreciation (30% in few months) that made Italian exporters better off and foreign importers worse off.

It was after this crisis that the decision to have a common currency was taken because the cost of having different currencies was becoming too high. The adoption of a common currency eliminated the problems of transaction costs, risk and uncertainty but were the European countries similar enough to bear this change?

16/12/2016

BENEFITS AND COSTS OF MONETARY UNION

Regarding the previous situation, the so called **Impossible Trinity Principle** states that a Country cannot simultaneously have:

- Fixed exchange rates;
- Independent monetary policy;
- Free capital movement.

The idea is that a country must choose between these options since it cannot have all the three of them. Anyway, a country can have both fixed exchange rate and independent monetary policy for limited periods of time only if the country controls capital movements in order to avoid excessive pressure on the demand for foreign currency.

The benefit of a common currency is that this impossible trinity principle is no longer in place, since there is no more an exchange rate and moreover:

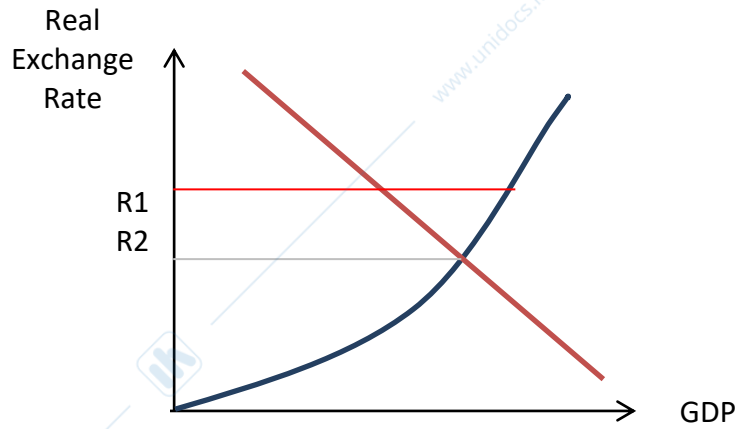
- **Less uncertainty** on the exchange rate;
- **Lower transaction costs**;
- **Regain of control** on monetary policy because the exchange rate is no more at national level, so a country does not need anymore to control exchange rates through monetary policy and basically it can do whatever it wants with its monetary policies, domestically speaking. Of course monetary policies should be coordinated within the currency area;
- **Price convergence** (more microeconomic aspect) since one of the ideas of the single market was to have firms competing with each other in order to lower pressure on prices for the benefit of consumers. In a common currency area is easier to compare prices so to state which good is cheaper, with different currencies this is not so immediate because of the exchange rate. In fact, when Euro was introduced it was expected to increase price competition in the market.

These are the main benefits that stem from monetary union. But in case of monetary union it is impossible that only benefits are present, since this would require that the interested economies were completely identical, which is of course impossible.

What are the costs? If the economies that join to the common currency area are different, a common monetary policy will not make everyone happy the same (remember the chart on common policies).

Common currency areas are characterized by one central authority and one common policy and it is from them that the main costs come. The fact that a monetary policy is the same across all the economies may not be the best option as it was seen before and these costs become evident in case of asymmetric shocks: the difference becomes relevant when an economic shock affects different countries in different ways. In general economic policies are important to react to shocks in order to re-establish the original economic situation, but what happens in the case of monetary union?

From a national perspective when looking at foreign markets we focus on how many units of domestic currency are required to buy foreign goods.



If the numerator of the real exchange rate increases the national economy becomes less competitive because domestic prices become relatively higher than foreign ones. This is the reason why aggregate demand is downward sloping.

On the other side, if wages increase in a country, sellers will sell at higher prices (this is why high income countries have average higher prices, since producers have to cover higher costs) and this is why aggregate supply is upward sloping.

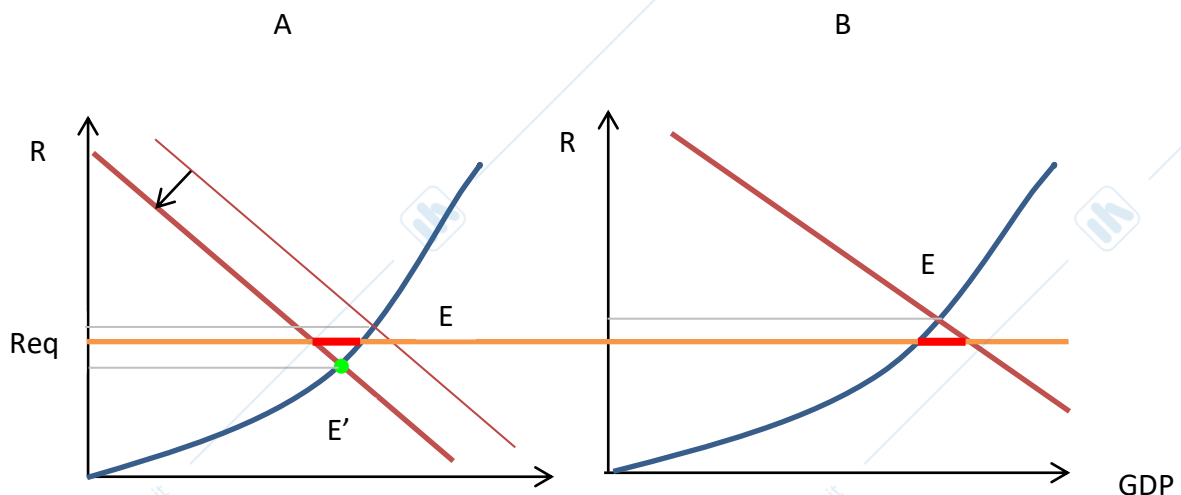
On the production side, the more resources are used in production the higher is the pressure on prices and this is the definition of macroeconomic equilibrium in the short run.

In order to have full employment a given combination of prices and nominal exchange rate is required: what happens if they vary? A higher price level will make demand and supply of domestic goods different, this is the so called **output gap**. The ways for going back to equilibrium is to lower prices or to depreciate currency: depreciating currency means pushing down real exchange rate. What is needed is or a **real depreciation** by lowering prices (so salaries), or a **nominal depreciation** by lowering exchange rate e .

What happens in case of a shock? Let's assume demand shifts down, this will push down pressure on prices and the final equilibrium will still be different from full employment but the size of the decline of the GDP will not be strong the same because part of the shock is absorbed by prices and exchange rate.

This is why having the possibility of depreciating the exchange rate or changing price level is useful. But depreciation makes an economy poorer even though the effect on GDP is milder in the short run, so the best solution is to combine both of them.

What happens in case of a shock that is asymmetric between two countries with the same currency? There is no exchange rate between them.



If the shock is symmetric, both countries will need a depreciation (it is not said that this will be equal) and they both will get back to equilibrium with a shift in prices or exchange rates.

The problem occurs if the shock is asymmetric: if only country A is affected by the shock there will be a downward pressure in the country while in the other nothing happens. The rest of the world will react only

in part (R reacts only a bit) because what it sees is that the demand of the common currency area shifts downward but not in the measure it does in country A.

In the new equilibrium, the exchange rate will set at a level so that the whole area is in equilibrium but in this way an economy will face more unemployment than it would.

The conclusion is that a common change in the exchange rate is putting the whole area in equilibrium but is putting the single countries in a slight disequilibrium and the situation cannot be corrected by means of monetary policy because, whatever decision is taken, an economy will bear a stronger depreciation than the other. The result is:

- Lack of AD in A (unemployment rises);
- Excess of demand in B, which puts pressure on prices (inflation)

Here the main costs are the risk of **inflationary pressure** from one economy or the **risk of unemployment** and they depend on the differences between the two economies. If the economies share the same idea of economic priority the economic policy will have the same guideline on unemployment or on inflation, otherwise everything becomes more difficult. So, also the differences on policies matter and the greater the difference, the greater the costs.

However, whichever policy is adopted will help one economy at the expenses of the other.

THE CRITERIA FOR AN OPTIMAL CURRENCY AREA: O.C.A. IN STATIONARY SITUATION

These theoretical criteria were theorized by Mundell and state what can minimize the impact of inflation or unemployment:

1. **Production factors mobility** (assuming aggregate demand fixed). In the US many countries have very different economic structures (Michigan GDP relies on car production while California's does not) and so a shock in a demand of a certain good may impact on the economy of a single state. According to Mundell this is not a great problem for US because if labor mobility is very high workers can easily relocate themselves (if demand for cars drop and many workers are fired they can easily move to California and look for another job). The adjustment takes place because the AS curve shifts and in this way it preserves the full employment equilibrium (it is not a matter of prices or employment). But this is only a theoretical situation since people cannot move that freely because of different languages, taxes, pension benefits and other problems related to displacement such as the availability of job for people who move there in order to absorb the shock;
2. **Production diversification**. In order to impact on aggregate demand the shock should affect a very important sector for the country and in the case in which a shock hits a sector which is very specific of economy A rather than to economy B an asymmetry will arise since the effects will be different between the two countries. So the more the economy is diversified, the lower is the impact of shocks, but the main issue is to define when a country is enough diversified. One of the reasons why UK did not join to Eurozone is this, because financial sector held a very large share of the economy and so UK would have been more exposed to financial shocks;
3. **Openness to integration** which deals with how much domestic prices are linked to those of the rest of the currency area since the higher the degree of openness, the more changes in international prices of tradable are likely to be transmitted to the domestic cost of living.

There also other three political criteria used to evaluate not the impact of the shock but the political response to the shock:

1. Since monetary policy in a monetary union cannot work well for everyone, another way to deal with asymmetric shock is **fiscal adjustment**: if aggregate demand shifts down this can be counterbalanced by an expansionary fiscal policy. The only problem is that a country affected by a negative shock usually does not have the resources to sustain such policy, so some sort of fiscal federalism is needed which allows internal fiscal transfers;
2. **Homogeneous priorities** of economic priorities;
3. **Solidarity mechanism**.

11/01/2016

According to theory, an optimal currency area is an ensemble of countries that are similar enough to allow the countries not to incur in asymmetric shocks or to be able to cope with them at least.

EU matches the requirements only partially, this means that it is not fully an OCA. But by working together with the members it was possible to reach a satisfying convergence.

Convergence is needed not only before joining, but it must hold even afterwards.

THE MAASTRICHT CRITERIA

These criteria were laid down during the signing of the Treaty of Maastricht in 1993 and at their basis was the statement that countries had to be similar enough, so that the common monetary policy could efficiently work for them all.

MONEY SUPPLY AND MONETARY POLICIES

A monetary policy is needed to control **Money Supply**.

Money supply represents money for transactions: the higher GDP, the more frequent will be transactions. If money supply grows faster than GDP inflation will be generated, since there are not enough transactions to match Ms.

Moreover, monetary policies also affect the exchange rate, interest rates and so financial markets.

The problem of a common monetary policy, in the case of EU, is that it affects all the member countries in the same way: if countries are moving in different directions or are pursuing diverging objectives the adoption of a common monetary policy is almost impossible.

1. A first solution was to give priorities to the actions of the ECB: the main objective of the Central Bank is to control prices stability, so to control **inflation**.

Inflation redistributes the purchasing power in an inefficient and uneven way and redistributes the power from creditors to debtors: if inflation rises, a creditor may lose certainty on how much he will be able to collect back.

Giving priority to inflation gave rise to the debate whether GDP should be the priority of the ECB: inflation had generated instability in Germany and this is one of the reasons the nazi movement found consensus, so it put particular stress on making inflation the priority of the ECB.

However, controlling inflation does not mean to have 0 inflation: a growing inflation signals strong demand and growing consumptions, which will stimulate firms to expand their production, thus making the economy growing. If inflation is 0 the economy stagnates, so the priority is given to price stability because it is believed that it drives GDP growth.

2. The ECB does not regulate the exchange rate, which is left free to fluctuate. But every country wanted to keep some independence in managing banks and financial markets.
3. ECB states also that monetary policies should favor GDP growth as long as it doesn't push prices up. This is the second objective of ECB.

THE MAASTRICHT CRITERIA

1. **Inflation Target**

In order to join the Eurozone, a Country should present a low inflation level. The target set was: *"average inflation level of the three countries with the lowest inflation rates + 1.5%"*, in order to reduce the impacts of the common monetary policy. If inflation is high, it will be high in order to repay the expected inflation, so if a country has inflation under control, so does over interest rates.

2. **Interest Rate**

Convergence on interest rates was required for two reasons:

- If i is low, inflation is under control;
- Different interest rates across countries would create disequilibria, since agents will tend to borrow where i is low while banks will lend where i is high.

These dynamics would generate huge financial flows across countries, so the target was set at: *"average interest rate level of the three countries with the lowest interest rate + 2%"*.

However, even if money supply should not target the exchange rate, it is of course affected by monetary policies.

3. **Exchange Rate**

Stable exchange rates are required in order to join the Eurozone, in order to avoid realignments.

No country was forced to align to these criteria: if the country did not want to join the Eurozone it did not have to meet the criteria. In fact, some countries like Poland voluntarily stayed out from the Eurozone.

These criteria were set for economic reasons, but as it is evident they had also political effects: why some countries decided to stay out from the Eurozone?

Beside these criteria other two were laid down regarding **fiscal policy**, which have been highly questioned. Fiscal policies are strictly national since they regulate governments' spending and taxation: when a government is elected it is given the mandate to collect taxes and to spend them, so Countries were very committed in keeping fiscal autonomy.

However, it was stated that debt and deficit accumulation in a Country were dangerous for the financial equilibrium of the Union, so, even if fiscal policies are not centralized in the Union, some criteria on the debt burden were introduced.

$$\text{Deficit} = \text{Tax Revenue} - \text{Government Expenditure}$$

Government expenditure comprises:

- Public goods and services;
- Transfers;
- Payment of interest rates.

The two additional criteria related to **fiscal policy** are:

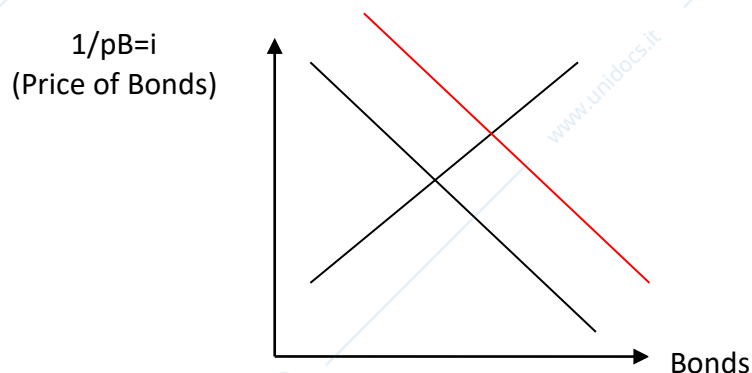
1. **Deficit/GDP < 3%**
2. **Public Debt/GDP < 60%**

Even if there is no centralization of fiscal policies in the EU, fiscal targets were set in order to avoid severe impact on inflation, interest rates and exchange rate.

There are no rules on tax collecting and expenditures but they are required to be consistent: if a government taxes heavily then it can spend more money. This was required because a large deficit creates strong externalities, since it is financed through debt, by issuing Bonds.

A limit on the amount of public debt was required in order to avoid that every country absorbs an excess amount of available savings in Europe because of its debt.

The main goal of these constraints is that each country absorbs a pool of savings proportional to the size of its economy.



Demand for bonds (upward sloping) comes from lenders (savers) and of course increases with the interest rates, while bond supply comes from borrowers. In principle, lenders are those who save through banks and financial systems, so, given that there is an amount of savings in Europe, if a government has suddenly to borrow a lot because of its debt what happens is an upward shift of the bonds supply curve.

Interest rates depend also on the perceived risk, so on the probability of payback, this is a simplifying assumption in order to plot together borrowers and lenders and interest rates: if every country presents the same risk, then every country would issue debt with the same interest rates since every lender will be willing in the same way to lend money to them.

Perceived risk increases if the Country has, for instance, required IMF intervention. However, the size of the economy of the Country mitigates the perceived risk: even if US had a large debt, the probability of not being able to pay back would be very low because of the size of its economy.

Another element may be the possibility to depreciate the currency in which the debt is issued.

But nowadays in Europe countries have more or less the same currency, with similar interest rates, so why should some Country issue a debt with higher interest rate? Again, because of probability of payback: the higher is GDP/Debt, the higher the perceived risk.

The 60% threshold on Public Debt/GDP ratio is purely a political criteria just to put a limit, it has no economic meaning since it is unlikely that a country paybacks its debt from a day to another if debt is very high (140% of GDP for example, it is impossible to tax citizens with 140% tax rate).

Interpretation of these criteria was very flexible: if you have a very high debt you cannot cancel it in the very short run: when the Maastricht criteria were negotiated (they were the result of negotiations between countries), some countries presented a ratio higher than 60% (like Belgium with 130%, Italy and Spain) but, since for them being left out from the Eurozone would have been dramatic (Belgium is a very small economy very linked with European markets), it was agreed that a country could join the Eurozone anyway, provided that its public debt was shown to present a decreasing trend towards the 60% threshold.

As said before, no country is forced to meet these criteria if it wants to stay out the Eurozone. Belonging to the Eurozone is a matter of the characteristics of its economy for the country: for a small economy very linked to the EU, with very frequent transactions with European countries, it is vital in terms of transaction costs and uncertainty.

However, countries that joined from the beginning to the Eurozone enjoyed these **benefits**, beside reduction of uncertainty, instability of financial markets and reduction of transaction costs:

- Lower inflation, due to the inflation targets imposed;
- Low interest rates (interest rates on mortgages have reduced during the years)

Because they were substantially more controlled thanks to the criteria.

THE IMPACT OF THE FINANCIAL CRISIS

Everything went well until 2008: when the financial crisis broke out, many weaknesses of the Eurozone came out. In order to include many different countries with different economies a certain degree of convergence is necessary in order to have more benefits than costs: in case the convergence is imperfect, in case of asymmetric shocks some additional tools are necessary.

Greece case: Greece was not allowed to join Eurozone at the beginning since it was not meeting the criteria, especially on deficit and inflation. It was allowed a year and a half later since it made significant efforts to join (being left out would have been dramatic because of its size), but undercover the debt level was still high, because its real economy was not converging in the same way. Greece was let in anyway since it was thought that joining the Euro would have accelerated the convergence process like in other countries, while debt in Greece kept on growing because, with the accession to the Eurozone, Greeks had their possibility to borrow increased.

This was a case in which integration brought to the explosion of debt rather than its control.

Ireland case: Ireland had been very keen on joining the euro. However, its economy was relying very much on financial sector and when the financial crisis broke out Ireland was hit harder than other countries (remember that one of OCA criteria is diversification of economy). Moreover, joining EU brought further specialization in Irish economy, since the bigger sectors of economy benefited more than the other from the integration with European single market.

So, this was a case in which integration brought further specialization rather than diversification.

So, the financial crisis uncovered the differences between the countries member of the Eurozone, for which convergence hadn't been perfect.

Recalling that the only way to cope with asymmetric shocks is fiscal policies in order to sustain domestic aggregate demand, but when the financial crisis broke out not all the countries were able to sustain fiscal policies in the same way because of the different entity of debt: because of its high level of debt, Greece was not as able as Germany to sustain an expansionary **fiscal policy** because was not able to finance it.

Another weakness was that **monetary policy** did not cover banking and financial sectors: monetary policy affects financial markets, but controllers of different countries were not coordinated at Communitarian level, leading to financial frictions.

And finally, European Union had no money to sustain its members with fiscal **transfers** because of the limited entity of its budget: a special fund was created for this scope.

This was the result of little coordination and imperfect convergence. And because of an inefficient management of the crisis a wave of skepticism on European Union rose in many countries.