School of Economics

Department of International and European Economic studies

Master of Science, International Economics and Finance

M.Sc. Dissertation :

The Financial & Economic Crisis of 2008 and its impact in the Global Economy and World Trade

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A Thesis submitted in partial fulfillment of the requirement of the degree M.Sc. at the Athens University of Economics and Business

Abstract

The Financial and Economic Crisis of 2008-2009 is considered the most severe and persistent crisis since the Great Depression. What started as a crisis in the sub-prime mortgage US market, soon developed into an International banking crisis, followed by a global economic downturn. The result was the decline of global output and the 'collapse' of international trade. The world was presented with a number of problems to solve and measures need to be introduced rapidly to prevent further damage. In our study, we will make an attempt to make an extensive analysis of the latest crisis, its implications on the world trade and this has affected the global economy.Our primary focus will in Europe as it is the biggest economy and the bigger trade partner on the global stage.

In our introduction, we present different aspects of international trade activity and present facts about the international trade among participants. The structure of the thesis is as follows :

In the **first chapter**, we go through standard and new trade theories across. What makes the new trade theories different; what are the benefits of the new trade theories; How they have changed the way we analyze trade today and interest results from this new theoretical perspective. In the **second chapter**, we concentrate on the creation of the EMU and how it changed the economic position of the EU in the world. It is essential to understand how closer economic cooperation can affect all countries in the EU. Who benefited more from such a change and was it considered overall a beneficial change for the global economy or not. In the **third chapter**, we can answer questions from the previous chapter as well. An extensive analysis of the Crisis : the drying of trade finance, the collapse of trade and the impact on the global economy. In the **fourth chapter**, we analyze the situation after the crisis until today. First, we to present results on the impact of the crisis to the global economy; which countries were hit harder; the global economy was affected, how did the countries reacted (measures); did the WTO and EU rules prevent protectionist measures and how the world trade recovered rapidly. Second, we focus on the situation nowadays. What has changed and where does the global economy stand today. In the **fifth chapter**, we will present the position of the EU in the global economy and international trade. What are the trade agreements with trade partners and what is the EU strategy for the world trade in the coming years.In the **last part**, wepresent our concluding remarks and make a few recommendation on what could change for the better.

Acknowledgement

First and foremost I would like to thank my Thesis supervisor Mr. **Hatzipanayotou Panos**, professor of Economics at the Athens University of Economics and Business. I am indebted and grateful for his guidance throughout my work. While working on the recent financial & economic crisis on this study with Mr. Hatzipanayotou, it has been a privilege to benefit from his knowledge and the way of teaching in some of his courses I have attended.

I have been extremely fortunate to work with some of the greatest professors and learn from them at the Athens University of Economics and Business.

I would also like to extent my gratitude to my parents for their intellectual guidance and financial sacrifices without which I would not have achieved any results.

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Introduction

International Trade and the facts

'Recent decades have seen rapid growth of the world economy. This growth has been driven in part by the even faster rise in International Trade. The growth in trade is in turn the result of both technological developments and concerted efforts to reduce trade barriers. Some developing countries have opened their own economies to take full advantage of the opportunities for economic development through trade, but many have not. Remaining trade barriers in industrial countries are concentrated in the agricultural products and labor-intensive manufactures in which developing countries have a comparative advantage. Further trade liberalization in these areas particularly, by both industrial and developing countries, would help the poorest escape from extreme poverty while also benefiting the industrial countries themselves (IMF, 2001)'.

International trade is the exchange of goods, services and capital along international borders. It is a multi-trillion dollar activity, central to the GDP of many countries, and it is the only possible way for people in many countries to acquire resources they require. This type of trade allows for greater competition and more competitive prices in the market. The competition in turn results in more affordable products for the consumers globally. The exchange of goods also affects the economy of the world as dictated by supply and demand, making goods and services obtainable which may not otherwise be available to us. International trade allows to expand our markets for both goods and services as it presents the opportunity for specialization and as such increased efficiency in the use of resources, strengthening the potential of a country to maximize its capacity to produce and acquire goods. With absent trade, consumers and suppliers would be forced to either develop substitute goods or devote a large proportion of their income to acquire products where demand is inelastic and domestic supply is inadequate. On the contrary, opponents of global free trade often argue, however, that international trade still allows for inefficiencies that leave developing nations compromised. Can we confirm that this view is right or not? The answer to this question is not that simple and based on our work and data, we will attempt to drive conclusions and have a better 'picture' of the reality. What

we can say with certainty is that the global economy is in a state of continual change, and, as it develops, so too must all of its participants.

Global trade allows wealthy countries to use their resources, whether labor, technology or capital— more efficiently. Because countries are endowed with different assets and natural resources (land, labor, capital and technology), some countries may produce the same good more efficiently and therefore sell it cheaper than other countries. If a country cannot efficiently produce an item, it can obtain the item by trading with another country that can. This is known as **specialization** in international trade. In addition, international trade not only results in increased efficiency but also allows countries to participate in a global economy, encouraging the opportunity of **Foreign Direct Investments (FDI),** which is the amount of money that individuals invest into foreign companies and other assets. As a result, the economies can grow and become competitive economic participants. Foreign Direct Investments have become extremely popular for most countries nowadays as it can boost growth, by raising capital within the country and reducing unemployment by creating new job opportunities. Specifically, for the receiving nation, FDI is a means by which foreign currency and expertise can enter the country. These raise employment levels, as we mentioned, and leads to a growth in the gross domestic product. For the investor, FDI offers company expansion and growth, which means higher rate of return for investments. But how is it possible to measure all these results for the trade flows? The answer is via the **Balance of payments**. A country's balance of payments basically tracks the financial flows between trading partners. The balance of payments includes the payments made for imports and exports, as well as financial transfers. Exports create a positive entry, while imports are a negative. It is important to mention that a balance of payments must always balance out at zero – a trade deficit must be balanced with foreign investments, declines in reserves, or increased debt while a trade surplus will be balanced out with financial outflows or increased reserves. Within a nation's balance of payment is the current account. The current account is made up primary of a company's trade balance, as well as net interest and dividends, and net transfer payments. The benefits of international trade have been the major driving force of growth for the last half of the 20th century. Participants (whether a country e.g. China or a region/Union e.g. the European Union) with strong international trade have become prosperous and have the power to control the world economy. The global trade can become a major driving force in an effort to reduce poverty and create job opportunities.

Almost every kind of product can be found on the global markets : food, clothes, spare parts, oil, jewellery, wine, stocks, currencies and water. Services are also traded : tourism, banking, consulting and transportation. A product that is sold to

the global market is an **export**, and a product that is bought from the global market is an **import**. Imports and exports are accounted for in a country's **current account** in the balance of payments. Some of the major driving forces to have contributed in this massive expansion of International trade include Industrialization, advanced technology e.g , globalization, multinational corporations, and outsourcing. Facts (official data) show that this Increasing trend of international trade has helped economies grow faster and globally prestigious organizations such as the IMF or the European Commission support their opinion on the need of further Liberalization of World Trade in the coming years. To better understand the reasoning behind this view, we will present some data from the European Commission in 2017 regarding International trade and the world economy :

- *The EU firms export almost the same as China to the rest of the world and more than companies than in the USA or other country. Specifically, this accounts for 31 million jobs for the Europeans*
- *1 in 7 jobs in the EU depends on exports to other countries. This creates job opportunities for skilled and unskilled workers*
- *The compensation in these jobs is higher compared to the average of the economy in a country*
- *The EU exports provide a significant share of jobs in almost all countries within European Union*
- *More than 16 % of Europeans in export-related jobs live in a different country from the one that the final product or service is exported. This is an additional benefit for the EU single market*
- *EU exports ensure 19 million job opportunities outside of the EU. We realize that the situation is mutually beneficial for all the participants and not only for the EU*

Source : '*European Commission, 2008'*

Without international trade, nations would be limited to the goods and services produced within their own borders. International trade is, in principle, not different from domestic trade as the motivation and the behavior of participants involved do not change fundamentally regardless of whether trade is across a border or not. The main difference is that international trade can be more costly than domestic trade. The reason is, unlike the EU single market, in many cases international trade entails additional costs such as tariffs, time costs due to border delays and costs associated with country differences such as language, the legal system or culture. This is known in Economics as **Protectionism** (the opposite of free trade). Another difference between domestic and international trade is that factors of production such as capital and labor are typically more mobile within a country than across countries.

Thus international trade is mostly restricted to trade in goods and services, and only to a lesser extent to trade in capital, labor or other factors of production. Trade in goods and services can serve as a substitute for trade in factors of production. Instead of importing a factor of production, a country can import goods that make intensive use of that factor of production and thus embody it. An example is the import of labor-intensive goods by the United States from China. In contrast to the previous decades/past, where world trade was not that significant, advancement in technology and globalization have closed the gap between countries and involvement of more participants seems inevitable. We do realize that global trade is not only beneficial for the participants but also essential to create a world with more benefits for everyone. Examples of advantages in international trade are presented below :

i. **Optimal use of natural resources** : International trade helps each country to make optimal use of its natural resources. Each country can concentrate on production of those goods for which its resources are best suited.
ii. **Availability of all types of goods** : countries are able to obtain goods which cannot produce or they decide not to produce due to high costs, by importing from other countries at more competitive prices.
iii. **Specialization** : Foreign trade leads to specialization and encourages production of different goods in different countries. Due to the advantages of specialization, good and services can be produced at a lower production cost.
iv. **Advantages of large-scale production** : International trade enables countries to produce goods and services not only for home consumption but also for export activity to other countries. Thus, countries can dispose traded goods which they have in surplus in the international markets. The result is, production at large scale and the advantages of large scale production can be obtained by all the countries of the world.
v. **Stability in prices** : In general, International trade equalizes the prices of goods throughout the world (for the sake of simplicity, we ignore cost of transportation). It prevents us from wild fluctuation in prices.
vi. **Exchange of technical know-how and establishment of new industries** : Developing economies can establish and develop new industries with the machinery, equipment and technical know-how imported from the developed countries. This trend helps economies become more competitive and the economic activity as a whole.
vii. **Increase in efficiency** : Due to the increased competition, countries attempt to produce better quality goods and lower production cost. This increases efficiency, decreases the prices of the products and is beneficial for all consumers all over the world.

viii. **Development of the mean of transport and communication** : International trade requires the best means of transport and communication. Improved Infrastructure, better roads, advanced technologies, high quality services in ports and airports are considered as a 'must' nowadays and can help the country increase its reputation, gain trust and become more reliable trade partner for other countries.

We have seen so far that international free trade is typically believed to lead to aggregate welfare gains for trading partners. However, we mentioned that it is also often viewed as a source of growing social disparity - by causing unemployment and greater inequality within countries - which calls for an offsetting policy response. International trade and international capital flows link national economies. Although such links are considered to be beneficial for the most part, they produce an interdependence that occasionally has harmful effects. This interdependence tends to become more complex when the global economy is faced with an unexpected event, an anomaly.

The economic & financial crisis of 2008 is the most representative example to such concern. Since the beginning of the crisis and the collapse of International trade in 2008-2009, questions were raised regarding the necessity of world trade and its importance to help countries overcome difficulties. Does international trade harm or foster growth? Is free trade beneficial for all participants? Do the advantages always outweigh disadvantages of being involved in the world trade? Does unemployment rise in the local market by forcing small manufactures going out of business because they are unable to compete with the imported products, and if so what can be done to prevent such a trend? Do developed countries benefit more than developing ones even if they belong in a single free trade market (e.g. the EU)? Do developing countries benefit **at all** when they trade? Should we impose restrictions on foreign trade to prevent domestic industries and distress among people? All these concerns, combined with the latest economic crisis of 2008 created an environment of disbelief and many specialists and policy makers urged the countries to reconsider their position when it comes to world trade. Of course, this goes beyond the national level and it captures broader regions such as the single market of the European Union. For instance, supposing that the European Union decide to sign an agreement with a trading partner (e.g. USA, Canada, China) on free trade (e.g. TTIP) and after a cost/benefit analysis we conclude that it seems beneficial for both parties to reach such an agreement, then still some specialists claim that we cannot be confident that the deal is going to be beneficial for everyone. The concern they raise is : Have all countries in the European Union benefited from such an agreement? If yes, are these benefits only temporary and some of these countries risk of being faced, in the future, with unexpected problems such as the rise of unemployment in their countries (the local producers may find it difficult to compete with the more

competitive prices of the new products and can be forced out of the market)? Nowadays, International trade affects almost every country, directly or indirectly, and that requires extensive research and analysis to ensure that the new agreements we reach with other trade partners can help us build a world economy beneficial to everyone increase our quality of life. But the question remains, is it possible to create benefits for everyone? Such a question requires an in-depth technical answer, which the present thesis attempts. Contrary to most academic works that are based on a **model** to derive conclusions, this thesis is a **Data-based** essay and focuses on the available data we have from recent studies and International organizations (IMF, OECD, EUROSTAT, World, Bank, Bloomberg and others). We attempt to give a clear picture of the theory and how data can prove theory right or wrong taking into account the circumstances in different period (e.g. crisis of 2008 for this period). To help us get a better picture of this Thesis, the structure is as follows :

The**introduction** *presents different aspects of international trade activity and present facts about the international trade among participants.*

The **first chapter**, *goes through all trade theories across time (very briefly) and presents what is believed in theory today. What makes the new trade theory different; what are the benefits of the New trade theory; How it has changed the way we analyze trade today and interest results from this new theory.*

The **second chapter**, *focuses on the EMU creation and how it changed the economic position of the EU in the world. It is essential to understand how closer economic cooperation can affect all countries in the EU. Who benefited more from such a change and was it considered overall a beneficial change for the global economy.*

The**third chapter**, *answers questions from the previous chapter as well. An extensive analysis of the Crisis : the drying of trade finance, the collapse of trade and the impact on the global economy.*

The **fourth chapter**, *analyzes the situation after the crisis until today. First, we present results on the impact of the crisis to the global economy; which countries were hit harder; the global economy was affected, how did the countries reacted (measures); did the WTO and EU rules prevent protectionist measures and how the world trade recovered rapidly. Second, we focus on the situation nowadays. What has changed and where does the global economy stand today.*

The **fifth chapter**, *presents the position of the EU in the global economy and international trade. What are the trade agreements with trade partners and what is the EU strategy for the world trade in the coming years.*

The **last part,***summarizes what we have seen so far and presents our concluding remarks.*

An important conclusion form the financial crisis of 2008 is the fact that trade flows seem to be far more sensitive than the direction (volatility) of the general economic activity and thus it can affect the success of a country in a direct way. For instance, International Trade is the channel via which countries try to benefit by lowering costs of trading goods and decreasing unemployment. A recent study from the IMF (December 30, 2009) revealed the collapse of International Trade, during the first years of the crisis in 2008-2009, and the reduction in trade relative to the overall activity was far larger than in previous downturns. Specifically, in the USA the GDP declined 3.9% of its peak, the real U.S. imports fell by 18,6% and real exports fell by 15,2% over the same period. In addition, sectors used as intermediate inputs experienced significantly higher percentage reductions in both imports and exports and sectors with larger reductions in domestic output had larger drops in trade.

Before moving on, it is essential to understand how countries have benefited from the world trade, and especially free trade, during the past decades and conclude how things have changed during the past 15 years since globalization and technological trend have changed the world dramatically. Based on the IMF and World Bank studies, there are facts to be considered regarding International Trade and the World Economy.

International Trade and the World Economy

Integration into the world economy has proven a powerful means for countries to promote economic growth, development, and poverty reduction. Over the past 20 years, the growth of world trade stands at an average of 6 % per year, which is twice faster compared to the world output. International trade has been a major driving force for growth for much longer. Since 1947, with the creation of the General Agreement on Tariffs and Trade (GATT), the world trading system has continuously benefited from 8 rounds of multilateral trade liberalization, as well as from unilateral and regional liberalization. In fact, the last of these 8 rounds (completed in 1994) led to the establishment of the World Trade Organization (WTO) to help in the organization and administration of the growing body of multilateral trade agreements.

The further integration of developing countries in the global economy has improved living standards around the world. Most developing countries have benefited from such a trend and wages have increased dramatically. Developing countries (see group of countries in the end of the last chapter) are of great importance to the whole economy as they now account for one-third of world trade, in comparison with a few decades ago (early 1970s) where they accounted for about a quarter. Many of them have substantially increased their exports of manufactures and services relative to traditional commodity exports with manufactures having risen to 80 % of developing country exports. Furthermore, trade between such countries has seen rapid growth, with 40 % of their exports now going to other developing countries (For more information and examples on this, someone can see IMF 2001, 'Global trade liberalization and developing economies').

That said, this integration has been uneven in recent decades. On the one hand, progress has been very impressive for a number of developing countries in Asia and, to a lesser extent, in Latin America. The 'secret' behind the success of these countries lay on their determination to participate in global trade and thus attracting an important number of foreign direct investments. Two examples we can mention, China and India, since they embraced trade liberalization and other free open market-oriented reforms. The same can be said also about countries with a higher income in Asia e.g. like Korea and Singapore which were themselves poor back to the 1970s.

On the other hand, such progress has been less rapid for other countries, particularly in Africa and the Middle East. The poorest countries have seen their trade participation on a global level decline substantially, and without lowering their own restrictions barriers to trade, it would be difficult to avoid further marginalization. This situation is related to 75 developing and economies in transition, including all of

the least developed countries. In contrast to the successful cases, these countries depend disproportionately on production and exports of traditional commodities. The reasons behind their unsuccessful story are not straightforward and clear to understand but rather complex, including deep seated structural problems, weak policy frameworks and institutions, and protectionism both within the country and abroad.

The **European Parliament** expresses its own view on the importance of the single market and the trade liberalization in the European Union

'The free movement of goods, the first of the four fundamental freedoms of the internal market, is secured through the elimination of customs duties and quantitative restrictions, and the prohibition of measures having an equivalent effect. The principles of mutual recognition, elimination of physical and technical barriers, and promotion of standardization were added in order to continue the completion of the internal market. The adoption of the New Legislative Framework (NLF) in 2008 significantly strengthened product marketing rules, the free movement of goods, the EU's market surveillance system and the CE mark. The mutual recognition principle was also consolidated, and applies to a wide range of products not covered by EU harmonization (European Parliament, 2017).'

The Benefits of Trade Liberalization

The facts are clear on the benefits of trade liberalization. There is no country, during the past decades, to have achieved economic success and increase its living standards without trading with other countries globally (decreasing restrictions and strengthening free trade). Such policies are required to make an economy open to trade and investment with the rest of the world and achieve sustained economic growth. Trade opening and FDI have both been an important element in the economic success of East Asia, where the average import tariff has fallen from 30% to 10% over the previous 20 years.

According to the World Bank, countries with open economies on the global stage have developed competitive advantages in the manufacture of certain products. In such countries, the number of people in absolute poverty declined by 14 % (more than 120 million) in 1993-1998.

There is considerable evidence (IMF, 2001 'Trade liberalization and developing economies and also data from other institutions are presented later on) that more open market oriented countries tend consistently to grow faster than those who seem to be more inward-looking. Official Data speak for itself that the benefits of trade liberalization can exceed the costs by more than a factor of 10. Those ones which have opted to open their economies in recent years, including India, Vietnam, and Uganda, have experienced faster growth and more poverty reduction. On average, those developing countries that lowered tariffs sharply in the 1980s grew faster in the 1990s than those that did not follow such policies.

Contrary to the opponents' view on International free trade regarding developing countries, evidence indicate that free trade frequently benefits the poor especially. In developing economies, the raising growth that results from free trade , can increase the incomes of the poor in about the same proportion as those of the population as a whole. New job opportunities are created for unskilled workers as well, placing them into the middle class. In general, inequality among countries has been constantly decreasing since 1990, reflecting more rapid economic growth for developing countries as a result of trade liberalization. The potential gains from eliminating remaining trade barriers are of great importance. The benefits from such a change are estimated to range from US$250 billion to US$680 billion per year. About two-thirds of these gains would account for industrial countries. But the amount accruing to developing countries would still be more than twice the level of aid they currently receive. Furthermore, developing countries could benefit more from global trade liberalization as a percentage of their GDP in comparison with industrial countries, and the reason is that their economies are more highly protected and experience higher barriers. It is important to clarify that while there are benefits from improved access to other countries' markets, countries benefit more from liberalizing their own markets. As far as Industrial countries are concerned, their main benefits would come from the liberalization of their agricultural markets. On the other side, developing countries would gain about equally from liberalization of manufacturing and agriculture. However, low-income countries would gain most from agricultural liberalization in industrial countries because of the greater relative importance of agriculture in their economies ('trade, growth and poverty', World Bank 2001 & NBER Working Paper No. 8228, 2001).

The Need for Further Liberalization of International Trade

These facts highlight the need for further trade liberalization. Despite the fact that protection has declined considerably over the last 3 decades, it remains essential for both industrial and developing countries to continue towards the open-market trend. Emphasis should be given mainly in fields such as agriculture products or labor-intensive manufactures and services where developing countries have comparative advantage.

Industrial countries remain highly protectionist in agriculture through very high tariffs, including **tariff peaks** (>15 %), **tariff escalation** (tariffs that increase with the level of processing), and restrictive **tariff quotas** (limits on the number of imports at a lower tariff rate). The average tariff rate in agriculture exceeds by about 9 times those in manufacturing. Moreover, agricultural subsidies in industrial countries (which account for 2/3 of Africa's total GDP) undermine developing countries' agricultural sectors and exports by depressing world prices and pre-empting markets. For instance, while the European Commission is spending 2.7 billion euro per year in an attempt to make sugar profitable for European farmers, at the same time that leads to shutting out low-cost imports of tropical sugar.

In industrial countries, protection of manufacturing is generally low, but it remains high on many labor-intensive products produced by developing countries. As an example, we can mention the United States, where the *average* import tariff of only 5 percent, has tariff peaks on almost 300 individual products. These are largely on textiles and clothing, which account for 90 percent of the $1 billion annually in U.S. imports from the poorest countries—a figure that is held down by import quotas as well as tariffs. Other labor-intensive manufactures are also disproportionately subject to tariff peaks and tariff escalation, which inhibit the diversification of exports toward higher value-added products. Many developing countries themselves have high tariffs. On average, their tariffs on the industrial products they import are three to four times as high as those of industrial countries, and they exhibit the same characteristics of tariff peaks and escalation. Tariffs on agriculture are even higher (18 %) than those on industrial products (IMF, 2001).

Non-traditional measures to impede trade are harder to quantify and assess, but they are becoming more significant as traditional tariff protection and such barriers as import quotas decline. Anti-dumping measures are on the rise in both industrial and developing countries, but are faced disproportionately by developing countries. Regulations requiring imports to conform to technical and sanitary standards comprise another important hurdle. They impose costs on exporters that can exceed the benefits to consumers. European Union regulations on aflotoxins, for example, are costing Africa $1.3 billion in exports of cereals, dried fruits, and nuts per

European life saved (World Bank, 2001). Is this an appropriate balance of costs and benefits?

Preferential access schemes for poorer countries have not proven very effective at increasing market access for these countries. Such schemes often exclude, or provide less generous benefits for, the highly protected products of most interest to exporters in the poorest countries. They are often complex, nontransparent, and subject to various exemptions and conditions (including non-economic ones) that limit benefits or terminate them once significant market access is achieved.

Further trade liberalization (both industrial& developing countries) will be needed to realize trade's potential as a driving force for economic growth and development. Greater efforts by industrial countries, and the international community more broadly, are called for to remove the trade barriers facing developing countries, particularly the poorest countries. Rapid liberalization of textiles and clothing and of agriculture is particularly important while the elimination of tariff peaks and escalation in agriculture and manufacturing also seem to be a 'must'. In turn, developing countries should aim in reducing their own trade barriers in order to strengthen their economies and help trade partners on a global level.

Giving the poorest countries easier access to world markets (no quotas & duty restrictions) would greatly benefit these countries at little expense to the other countries. The recent market-opening initiatives of the EU and some other countries are a step forward towards that direction. To make it more efficient, such access should not only be temporary but permanent, extended to all goods, and accompanied by simple, transparent rules of origin. This would give the poorest countries the confidence to persist with difficult domestic reforms and ensure effective use of debt relief and aid flows.

The position of the European Commission on Global Trade

Ten Benefits of International Trade

1. More trade can be translated to more economic growth and help us overcome the crisis faster. The EU is the largest player when it comes to trade and alongside investments they consist of two driving forces for the economic boom during the previous decades. With the new trade agreements, the EU can gain around 150 billion in the coming years.
2. International trade also leads to more job opportunities. It is estimated that more than 36 million jobs in Europe are dependent on trade and cooperation with other partners. International trade can provide higher salaries and enhanced living standards.
3. Increased trade offers a greater variety of goods, at lower prices, to consumers. The gains for the average consumer are in the range of €600 per year.
4. Trade helps reduce poverty. A World Bank study, which used data from 80 countries over four decades, confirms that open trade boosts economic growth and that the incomes of the poor rise one-for-one with overall growth. All things being equal, countries with open economies tend to grow faster than those that trade less.
5. Trade allows countries to procure the best products and services for its citizens internationally. This means government and local authorities can spend less public money on the products and services they purchase.
6. Trade and investment flows spreads new ideas and innovation, new technologies and the best research, leading to improvements in the products and services that people use.
7. Trade brings people together. It develops and secures economic ties between nations and contributes to political stability. Trade in the 1950s was one of the initial drivers which helped create the peaceful Europe we 7 have today.
8. Trade and investment boosts competition as well as competitiveness. It allows EU businesses to access inputs at the lowest prices, allowing them to compete within Europe and abroad.
9. Trade agreements can make it easier to do business. For example encouraging the use of international standards for industrial products reduces the costs of doing business and promotes international trade.

10. Trade makes it easier to exchange innovative or high-technology products. For example international rules on intellectual property protect knowledge and allows the transfer of technology to other countries.

What about the developing economies? Are the above benefits for all countries? Let's see the corresponding benefits for these countries.

1) Trade can help boost development and reduce poverty by generating growth through increased commercial opportunities and investment, as well as broadening the productive base through private sector development. Between 2000 and 2008, GDP per capita increased from $325 to over $625 in Least-Developed Countries. Much of this can be attributed to an increase in trade and foreign investment.
2) Trade enhances competitiveness by helping developing countries reduce the cost of inputs, acquire finance through investments, increase the value added of their products and move up the global value chain. Emerging economies like China, Brazil, India and South Africa are steadily catching up with developed countries, thanks to increased trade. The GDP per capita increase of G20 developing countries stands at 115% for the decade 2000-2010.
3) Trade facilitates export diversification by allowing developing countries to access new markets and new materials which open up new production possibilities. India cut import duties from an average of 90% in 1991 to 30% in 1997. This gave Indian manufacturers access to a variety of intermediate and capital goods. Imports of intermediate goods increased by 227% over the period. Two thirds of the intermediate goods imported were products Indian producers could not buy before 1991. As a result, industrial output grew by 50% with new products accounting for 25% of the total.
4) Trade encourages innovation by facilitating exchange of know-how, technology and investment in research and development, including through foreign direct investment. Investment and trade have facilitated the deployment of information and communication technology, with mobile cellular coverage reaching 86% of the world's population in 2008, including 69% of the African population.
5) Trade openness expands business opportunities for local companies by opening up new markets, removing unnecessary barriers and making it easier for them to export. Business-enabling reforms were implemented in 36 SubSaharan African economies in 2010/2011. Of these, Mauritius ranks 23rd out of 183 countries in

the World Bank's Ease of Doing Business Report, ahead of several EU member states.

6) Trade expands choice and lowers prices for consumers by broadening supply sources of goods and services and strengthening competition. Business-enabling reforms were implemented in 36 Sub-Saharan African economies in 2010/2011. Of these, Mauritius ranks 23rd out of 183 countries in the World Bank's Ease of Doing Business Report, ahead of several EU member states.
7) Trade plays a role in the improvement of quality, labor and environmental standards through increased competition and the exchange of best practices between trade partners, building capacity in industry and product standards. Through its Aid for Trade, the EU has helped South Asian countries like Bangladesh and Sri Lanka benefit from the improvement of quality standards for textiles and other exports. Over the last decade Bangladesh has increased its exports by more than 80%.
8) Trade contributes to cutting government spending by expanding supply sources of goods and services and strengthening competition for government procurement. Government procurement is an important aspect of international trade, given the considerable size of the procurement market (often 10-15% of GDP) and the benefits for domestic and foreign stakeholders in terms of increased competition.
9) Trade strengthens ties between nations by bringing people together in peaceful and mutually beneficial exchanges and as such contributes to peace and stability. This intuitive notion is confirmed by evidence. A study undertaken by the Center for Economic Policy Research on empirical data showed that the probability of disputes escalating to conflict is lower for countries that trade more because of the opportunity cost associated with the loss of trade gains.
10) Trade creates employment opportunities by boosting economic sectors that create stable jobs and usually higher incomes, thus improving livelihoods. Manufacturing workers in open economies received pay rates 3 to 9 times greater than those in closed economies, depending on the region. In Chile, a worker in a sector open to trade and investment gains an average €1,100 more per year than a worker in a relatively closed sector

Chapter 1

The evolution of the world trade : The theories

From Ricardo and comparative advantage to modern trade theory

The early beginning of the a theory of free trade is found in the classical theory. Tracing back the evolution of what today is recognized as the standard theory of international trade, we should go back in time with the publications of Adam Smith's in 1986 Wealth of Nations and David Ricardo's Principles of Economics in 1951, respectively. Adam Smith describes trade as a result of countries having absolute advantage in production of particular goods. An economy has an absolute advantage in the production of a product when it is more efficient than any other economy to produce it. Taking as an example two countries that specialize in production of products that they have absolute advantage, that will lead to the result that both of them will have more products to consume. In 1817, Ricardo introduced the concept of comparative advantage. According to the principle, if each country specializes in the good for which it has a comparative advantage, then the global production of the goods increases and consumption as well. The theory of comparative advantage is an economic theory about the work of gains from trade for individuals, firms or nations that arises from differences in their factor of endowments or technological progress. In an economic model, agents have a comparative advantage over others in producing a particular good if they can produce it a a lower relative opportunity cost or autarky price. We should not compare the monetary costs of production but focuson the opportunity costs of producing goods across countries. This theory had a great influence across the world and became an essential part of neoclassical trade theory. But was Ricardo's theory necessary and sufficient to analyze world trade? Well, in fact the Ricardian model was based on two assumptions : a) Labor is the only primary output in production and b) the relative ratios for labor at which the production of one good can be traded off for another differ between countries.

The Ricardian model, however, does not take into account (directly) factor endowments, e.g. relative amounts of labor and capital in a country. This was meant to be resolved later on, in the Heckscher-Ohlin theory. In 1919 (Heckscher) and 1933

(Ohlin) introduced a model where a new and different concept of comparative advantage was introduced explaining the pattern of international trade. It builds on David Ricardo's theory of comparative advantageby predicting patterns of commerce and production based on the factor endowments of a trading region.Based on this model, countries are going to export goods that make intensive use of locally abundant factors and import those that the intensive use of factors is scarce. The theory was considered as the most reliable one to analyze trade at that time. However, in 1953 Wassily Leontief published a study in which he attempted to test the validity of the theory and his results were opposed to what Heckscher and Ohlin considered to be true. In his study, Leontief theorized that since the U.S has abundant capital relative to other countries, they would export capital intensive products and import labor intensive ones. The results showed that this was not the case and the phenomenon was named the Leontief Paradox. Despite the fact that many economists tried to give their own explanations to the results (e.g. a number of them supported that the U.S has an advantage in high skilled labor more so than capital and including human capital in a broader view of capital. Thus, the exports of the U.S are very human capital intensive and not particularly intensive in unskilled labor), it was obvious that new elements and concepts had to be introduced in the existing theory.

The Ricardian model of comparative advantage has trade ultimately motivated by differences in labour productivity using different "technologies". Heckscher and Ohlin did not require production technology to vary between countries, so (in the interests of simplicity) the "H–O model has identical production technology everywhere". Ricardo considered a single factor of production (labour) and would not have been able to produce comparative advantage without technological differences between countries (all nations would become autarkic at various stages of growth, with no reason to trade with each other). The H–O model removed technology variations but introduced variable capital endowments, recreating endogenously the inter-country variation of labour productivity that Ricardo had imposed exogenously. With international variations in the capital endowment like infrastructure and goods requiring different factor "proportions", Ricardo's comparative advantage emerges as a profit-maximizing solution of capitalist's choices from within the model's equations. The decision that capital owners are faced with is between investments in differing production technologies; the H–O model assumes capital is privately held.The model has been extended since the 1930s by many economists. These developments did not change the fundamental role of variable factor proportions in driving international trade, but added to the model various real-world considerations (such as tariffs) in the hopes of increasing the model's predictive power, or as a mathematical way of discussing macroeconomic policy options.Notable contributions came from Paul

Samuelson, Ronald Jones, and Jaroslav Vanek, so that variations of the model are sometimes called the Heckscher-Ohlin-Samuelson model or the Heckscher-Ohlin-Vanek model in the neo-classical economics.

However, still questions such as : why International production is organized between developed countries or why FDI take place between countries in the same sector could not be answered.A large part of international trade is ʻintra-industryʼ trade (the exchange of similar products belonging to the same industry) which cannot be fully explained by classical trade theory. The growing share of such trade in world markets needs explaining. The introduction of product differentiation and economies of scale assumptions into trade models provides a partial answer. The presence of economies of scale creates incentives for countries to specialize in the production of a small number of differentiated products and therefore naturally leads towards intra-industry trade (see Grubel and Lloyd, 1975; Helpman 1983; Krugman, 1979, 1980, 1995), but it is also at the root of imperfectly competitive markets. "New" trade theory starts from these new assumptions (imperfect competition, economies of scale and differentiated goods), and identifies new gains from international trade (see e.g., Brander, 1981; Venebles and Smith, 1986; Hwang and Schulman, 1992). The intuition is simple: by creating larger and more competitive markets within a single industry, trade reduces the distortions associated with imperfect competition in a closed economy. Based on these assumptions, Brander (1981) shows that there are reasons to expect two-way trade even in identical products, due to strategic interactions among firms operating in non competitive markets. What is not so widely recognized is that there are reasons to expect international trade in identical commodities (e.g. within a single industry) even if markets are perfectly competitive.

Indeed, that happened later on with new concepts from Paul Samuelson as previously mentioned and the introduction of the specific factors model. While the H-O model was considered a valid one in the long run, the specific factors model is a short run model where capital and land inputs are fixed but labor is variable. In other words, specific factors of production such as physical capital are not easily transferable between industries in the short run. The theory suggests that in case an increase in the price of a good is to be observed, the owners of the factor of production specific to that good are going to realize profit in real terms.

One important motivation for international trade is the efficiency improvements that can arise because of the presence of economies of scale in production. Although economists wrote about these effects long ago, models of trade developed after the 1980s introduced economies of scale in creative new ways and became known as

the “New Trade Theory.”**Economies of scale** means that production at a larger scale (more output) can be achieved at a lower cost (i.e., with economies or savings). When production within an industry has this characteristic, specialization and trade can result in improvements in world productive efficiency and welfare benefits that accrue to all trading countries.

Another feature of international trade that remains unexplained with classical models is the phenomenon of intra-industry trade. A quick look at the aggregate trade data reveals that many countries export and import similar products. For example, the United States imports and exports automobiles, imports and exports machine tools, imports and exports steel, and so on. To some extent, intra-industry trade arises because many different types of products are aggregated into one category. For example, many different types of steel are produced, from flat-rolled to specialty steels. It may be that production of some types of steel requires certain resources or technologies in which one country has a comparative advantage. Another country may have the comparative advantage in another type of steel. However, since all these types are generally aggregated into one export or import category, it could appear as if the countries are exporting and importing ‘‘identical’’ products when in actuality they are exporting one type of steel and importing another type.Nevertheless, it is possible to explain intra-industry trade in a model that includes economies of scale and differentiated products even when there are no differences in resources or technologies across countries. This model is called the monopolistic competition model. Its focus is on consumer demand for a variety of characteristics embodied in the goods sold in a product category. In this model, advantageous trade in differentiated products can occur even when countries are very similar in their productive capacities.

As with economies of scale, product differentiation distorts the basic properties of the H-O-S trade model. As demand is generated in either country for individual varieties produced by the same industry, the process makes space for intra-sectoral (industry) trade across nations. Such intra-industry trade in both directions is also possible when markets are segmented and firms adopt price discrimination/dumping, etc. to maximize revenue by taking advantage of the different demand elasticities that prevail for the same good in the two countries. With the increased availability of micro-data set on firms and plants from the late 1980s and 1990s on-wards, it became clear that there is in fact vast heterogeneity across producers within industries in terms of size, productivity, capital and skill-intensity and wages. In addition, empirical evidence began to explore the idea that this heterogeneity was systematically related to trade participation in ways that could be influential for aggregate outcomes. Perhaps the biggest ‘flaw’ of the existing models was that modeling approaches adopted by the new trade theory assumed away differences among firms for simplicity’s sake. Recent empirical evidence (micro-data of all

studies we will refer to), however, shows that differences among firms are crucial to understand World Trade. For Example, firm differences within sectors may be more pronounced that differences between sector averages and most firms even in the export sector do not export at all. In response, what we might call the 'new ' trade theory incorporates firm-level heterogeneity to account for the many of the new firm-level facts.

Despite the large influence of these modern new trade theories models, their biggest 'flaw' was the fact that they assumed away differences among firms for simplicity's sake. Recent empirical evidence (micro-data of all studies we will refer to), however, shows that differences among firms are crucial to understand World Trade. For Example, firm differences within sectors may be more pronounced that differences between sector averages and most firms even in the export sector do not export at all. In response, what we might call the 'new new' trade theory incorporates firm-level heterogeneity to account for the many of the new firm-level facts.

The main theoretical studies in this rapidly expanding literature are Bernard, Eaton, Jensen and Kortum (2003), **Melitz** (2003), Helpman, Melitz and Yeaple (2004), Bernard, Redding and Schott (2004), Bernard, Eaton, Jensen, and Schott (2003), Melitz and Ottaviano (2005), Falvey, Greenaway and Yu (2004), and Yeaple. Research in World Trade has changed dramatically over the past fifteen years as its focus has shifted from industries and countries to firms and products. This transformation was instigated by the emergence of a wide range of micro-datasets exhibiting sharp variation in firm outcomes and attributes, even within narrow industries. One of the most impressive features of the micro-data is that the participation of firms in World Trade is exceedingly rare. Researches have shown that exporters and importers represent just a tiny fraction of producers across many developed and developing countries. In general, empirical studies of production have reported a massive amount of heterogeneity in various performance measures mast notably **size** and **productivity**. Trade liberalization induces important reallocation between heterogeneous producers in a sector, leading the smallest or least productive producers to exit the market (they are forced to do so) and market shares to further reallocate between less productive producers (who do not export) toward larger more productive exporters. These reallocation generate a new channel for productivity and welfare gains from trade. We must pinpoint here that in a market that the less productive firms are forced to exit the market, the average productivity of the sector increases because fewer, more productive, firms remain in the sector and not because the productivity of each of the remaining firms increases (at least directly after the exit of some firms, in the long run the remaining firms may become more productive.). In discussing the origins and implications of International Trade, modeling firm heterogeneity leads to a number of new insights concerning the determinants and effects of World Trade. Empirical studies have provided a wealth

of Information about the important role that firm heterogeneity plays to determine trade between countries.

Interesting results from these new theories

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Export participation

Present evidence for U.S manufacturing shows that typically a minority of plants within an industry export. Data from the 2002 U.S Census of Manufactures show that the overall share of U.S. Manufacturing firms that export is relative small at 18 percent and there is a substantial considerable variation in export market participation rate across industries within manufacturing. Furthermore, these exporting firms also ship a relatively small share of their total shipments abroad, aggregating to an average share of shipments exported in 14 percent for the manufacturing sector as a whole. For more information on the exports by US firms, I would recommend Bernard et al., 2007b. While the results we mentioned use U.S. Data, similar findings have emerged for a wide range of other countries as summarized in World Trade Organizations (2008).

Exporter Characteristics

Micro-data research demonstrated that not only is exporting rare but exporters are systematically different from non-exporters. Empirical analysis show that among U.S. Manufacturing plants, exporters are larger, more skill intensive, more capital intensive and more productive. There are substantial mean difference between them. On average, exporting firms are larger in employment and sales and use a different input in mix. The following table gives a clear answer of these differences. All results are from bivariate OLS regression of firm characteristic in first column on a

dummy variable indicating firm's export status. Columns two and three include fixed effects and industry fixed effects plus log firm employment respectively as additional controls. All results are statistically significant at 1 percent level. Since export participation is correlated with industry characteristics, the inclusion of the industry effects reduces the magnitude of these coefficients but exporters remain different from non-exporters even within the same industry. Whiles the correlation between firm size and exporting accounts for some of the differences between exporters and non-exporters, they

remain even after controlling for log employment. Qualitative similar results have been found for many other *countries and time periods.*

'Exporter Premia in US Manufacturing'

Additional Covariates	**None**	**Industry fixed effects**	**Industry fixed effects, log employment**
Log employment	1.19	0.97	-
Log shipments	1.48	1.08	0.08
Log value added per worker	0.26	0.11	0.10
Log TFP	0.02	0.03	0.05
Log wage	0.17	0.06	0.06
Log Capital per worker	0.32	0.12	0.04
Log skill per worker	0.19	0.11	0.19
Source : Bernard et al. 2007b			

Sunk Costs and Selection into Exporting

The finding that exporters are more productive than non-exporters raises the question of the direction of causality. After finding that there is causality (the one induces the result of the other) and not just correlation between them, the following question arises : does high productivity induce firm to self-select into export markets or does exporting cause productivity growth through 'learning by exporting? An extensive body of evidence form many countries and industries confirm that high productivity precedes entry into export markets. These findings are suggestive of sunk costs of entry into export markets that only the most productive firms find it profitable to incur. Whether there is learning by exporting is less clear. While previous researches have shown that there is no difference in productivity (Mexico, Morocco, Colombia), recent studies have found evidence of productivity improvements following export market entry (de Loecker,2007). Another significant finding of recent evidence is the fact that export market entry may increase the return to other supplementary investments such as technology adoption (Atkinson & Burstein, 2010).

Trade Liberalization, Reallocation and Productivity Growth

Micro-data evidence reveal new channels through which trade liberalization can affect the aggregate economy. Beyond the effects of the expansion in the range of product varieties available to consumers, there is the potential for within-industry productivity growth coming from decreasing trade costs. As mentioned in the introduction, trade liberalization reform are accompanied by the contraction and exit of low productivity firms and the expansion and entry into exports markets of high productivity firms. This reallocation of resources within industries raises average industry productivity. In addition, the liberalization of trade may have a pro-competitive effect in reducing mark-ups of price over marginal cost, so that eventually it reduces average prices through both lower average costs and lower average mark-ups. These reduction in average prices in turn provide sources of welfare gain. In a series of researches(Tybout 2003, Pavcnik 2002) in many developing countries and especially Mexico, two-third of the 19 percent in aggregate productivity is due to the relatively greater survival and growth of high productivity plants. Within industry re-allocations of resources in theses studies, dominate cross-industry reallocation of resources. One concern is that trade liberalization often occurs as part of a wider package of reforms. That said, similar patterns of productivity gains from the expansion of high productivity exporting firms have been found in response to reductions in trade barriers in Canada and the United States (Trefler, 2004). Evidently, the Canada-U.S. Free Trade Agreement raised the labor

productivity of Canadian manufacturing plants by 7.4 percent and an annual compound growth rate of 0.93 percent was observed.

Multi-product Firms

One of the vital results of modern trade theory date is the extent to which World Trade is concentrated in the hands of a few firms.. As reported in the new evidence (Bernard et.al 2009), the top 1% percent of firms account for around 90 percent of the value of U.S. Trade. Unfortunately, these firms account for only 15 percent of employment in the United States. Similar levels of concentration are observed in other countries as summarized in World Trade Organization (2008). One reason why International trade is so concentrated is that larger exporters not only export more of a given product to a given destination than smaller exporters but also export more products to more destinations.

Firm Importing

The early empirical literature on firm heterogeneity in International trade concentrated almost exclusively on firm export behavior since only exporting was available of domestic production or manufacturing. More recent work (Bernard et al. 2007b) using firm-level trade data has begun to examine heterogeneity in firm import behavior. Most important is the fact that firm importing displays many of the same features as firm exporting. Nevertheless, importing is somewhat rarer than exporting and there is substantial variation across industries. There is a strong relationship between them. Specifically, around 41 percent of exporters also import while 79 percent of important also export. Importers exhibit a number of the same performance differences as exporters with the most significant examples being the bigger size , the higher productivity, higher wage rate and more skill and capital intensive than non-importers. While empirical studies of the impact of trade liberalization on productivity have typically focused on reductions in tariffs in output

markets, more recent evidence suggests that reduction in tariffs on imported intermediate inputs may be a promising source of productivity gains. The study by Amiti & Konings in 2007 on Indonesia revealed that following the trade liberalization in 1990s, reductions in input tariffs are associated with an increase in productivity of around 12 percent for firms that import their inputs. The number itself is twice as large as the effect for reduction in output tariffs. More generally, the presence of both importing and exporting within firms suggest the relevance of theories of the *fragmentation of production* . In such a context, firms can organize stages of production across national borders. As shown in Yi (2003) when stages of production are spread across national borders boundaries in this way, changes in trade costs can have a magnified impact on trade flows because they are incurred each time the good is traded back and forth between countries. Reports (Hummels er al. , 2001) that such vertical specialization accounts for around 20 percent of countries' exports and grew by around 30 percent between 1970 and 1990.

Product Quality

A growing literature in World Trade argues that the variation is due to the differences in product quality across patterns. This variation is strongly related to country characteristics/endowments, with more capital and skill intensive countries supplying varieties with higher prices within clos product categories. According to this view, such countries use their endowments to supply products of higher quality and this higher quality is reflected in a higher price. Examples from Chinese trade transaction data (Manova and Zhang, 2010) show that across firms selling a given product, those firms that charge higher export prices earn greater revenues in each destination, have bigger worldwide shares and export to more markets. Across destinations within a firm-product , firms set higher prices in richer, larger and less remote countries. In addition, firms that export pay a wider range of inputs prices and source inputs from more countries. Put together, we come up with the conclusions where more successful exporters use higher quality inputs to produce higher quality goods and firms vary the quality of their products across destinations. Khandelwal (2011) found that markets characterized by relatively small scope for quality differentiation are associated with larger employment and output declines resulting from low wage competition. In general, prices are found to be increasing in quality and decreasing in efficiency but selection into exporting is made up mainly by quality.

Intermediaries

While in a large number of models and papers of International Trade consumers purchase directly from foreign producers, the prevalence of firm importing has stimulated recent research on the role of intermediaries such as wholesalers and retailers in the whole process. We actually want to examine the differences between these categories of U.S. Trading firms. As evidence indicate (Bernard et al.,2010) wholesale firms comprise 35 percent of exporters and 42 percent of importers, they account for only 8 percent of export value and 15 percent of import value. Retailers are less prevalent accounting for 9 percent of exporters and 13 percent of importers and only 1 percent of trade (export and import) value. Firms with other operations (large firms) comprise around 5 percent of exporters and importers but the crucial thing here is that they account for more than 50 percent of export and import value respectively. Thus, the vast majority of trade is undertaken by a relative small number of larger traders that vertically integrate wholesale/retail activities within firm boundaries.

Foreign Direct Investment (FDI)

Multinational firms play an important role in the global economy with U.S.-based multinationals mediating more than 90 percent of U.S. Trade. Indeed, for countries whose firms have large networks of overseas subsidiaries , the sales of these subsidiaries can reduce International Trade flows. If the fixed costs of FDI are sufficiently high relative to the fixed costs of exporting, the most productive firms serve the foreign market through FDI. Firms with an intermediate range of productivity export while firms with a lower range of productivity only serve the domestic market. Following the firm selection theory, more productive U.S. Firms own affiliates in a larger number of countries and these affiliates generate greater revenue from sales in their host countries. In contrast, according to the country selection theory, as a country becomes more attractive to U.S. Multinationals, it attracts progressively smaller and less productive firms. In addition, while total affiliates sales and the number of foreign affiliates are less sensitive to distance than exports, they both decline with distance.

Intra-Firm Trade

Multinational firms not only dominate International Trade flows but also undertake a significant proportion of their trade within the boundaries of the firm. Such trade between related parties accounts for half of .U.S. Imports. While many of the models

of FDI assume that overseas production is organized within the boundaries of the firm, recent evidence has sought to explicitly model this choice of firm organization. When overseas production is organized within the boundaries of the firm, foreign affiliates may either specialize in different stages of production activities from the parent firm (vertical FDI) or may undertake the same production activities in a different location (horizontal FDI). To the extent that stages of production are traded across national borders, vertical FDI involves intra-firm trade. As well as dominating U.S. Imports, intra-firm trade is concentrated in capital intensive industries and between capital abundant countries.

Labor Markets

As mentioned before, in Melitz (2003) model firms are evenly affected by trade liberalization : low-productivity firms exit, intermediate-productivity domestic firms contract and high-productivity exporting firms expand. On the contrary, workers are symmetrically affected by trade liberalization since workers are identical and the labor market is frictionless so that all workers are employed for a common wage. But should that be the case? More recently, the literature on heterogenous firms and trade has highlighted reasons why the wages can vary with revenue across firms. One line of research assumes competitive labor markets so that all workers with the same characteristics are paid the same wage, but wages vary across firms as a result of differences in workforce composition. Another line of research introduces labor market frictions so that workers with the same characteristics can be paid different wages by different firms. These theoretically models highlight a new mechanism for trade to affect wage inequality based on wage variation across firms and the selection of firms into international markets. According to Helpman et al. (2011) wage inequality between firms within sector-occupations accounts for a substantial proportion of the level and growth of overall wage inequality and this between-firm wage inequality remains important after controlling for observable worker characteristics. A number of recent empirical studies have used matched employer-empolyee data to try to determine whether wage differences between exporters and importers arise due to differences in the composition of the workers across firm or wage ‘premia’ for workers with the same characteristics. These studies reveal contributions from both differences in workforce composition and wage ‘premia’ , varying across studies. Frias et al.,2003 (using Mexican data) find that bout two-thirds of the higher level of wages in larger more productive plants is explained by higher levels of wage ‘premia’ and that nearly all of the differential changes in

wages across plants as a result of the shock of the peso devaluation are explained by the same factor. Using German data, Schank et al (2007) find that wage differences between exporters and non-exporters become smaller but do not completely vanish once we control for observable and non-observable characteristics of workers. Furthermore Amiti & Davis (2011) examine the separate impacts of input and output tariffs on firm wages. A fall in output tariffs lowers wages at import-competing firms but boosts wages at exporting firms while a fall in input tariffs raises wages at import-using firms relative to those at firms that only source inputs locally. Another line of researches (Manova,2011) considering capital market imperfections find that more financially-advanced countries are more likely to enter any given destination market and to export more conditional on trading.

Conclusions

Until the 1980s, 'old' trade theory adopted modeling approaches that assumed away intra-industry trade. In response, 'new' trade theory incorporated imperfect competition and increasing returns to scale to account for intra-industry trade. However, the modeling approaches adopted by the 'new' theory assumed away differences among firms for simplicity's sake. Recent evidence however show that differences among firms are crucial to understand World Trade. Empirical findings from micro-data on plants and firms have presented challenges to traditional theories of International Trade and stimulated the development of recent models of heterogenous firms and trade. These recent theories explain empirical findings that only some firms export, exporters are larger and more productive than non-exporters and trade liberalization raises average productivity through reallocation of resources across firms within industries. These new theories pinpoint additional mechanisms through which the aggregate economy is affected by the opening of trade and have stimulated further empirical research exploring these mechanisms. Aggregate economic relationships are largely driven by the extensive margin of firms and products rather than the intensive of average exports per firm product. Reductions in trade costs induce endogenous changes in internal firm organization as firms adjust their range of products, their decisions about whether to organize foreign markets through trade or overseas production and their choices about whether to organize foreign production within or beyond the boundaries of the firm. To the extent that wages vary with firm revenue and only some firms export, firm heterogeneity provides a new mechanism for trade to affect wage inequality. While older empirical studies examined export behavior using plant or firm-level data, more recent availability of customs data on individual trade transactions has led to an explosion of research across a broad range of areas. Thesis include multi-product firms, intra-trade, intermediation and the dynamics of firm entry into export markets. There remain many fundamental issues ahead such as the micro-foundations of trade costs, further exploration of the boundaries of the firm and further consideration of the relationship between findings from dis-aggregated data and the economy's response to trade.

To summarize, we put together all the available information mentioned to better understand the differences between the existing trade models (old and new), how useful trade theory can be and what features have we covered comparing the old theory with the new one. The table below gives a complete picture of World Trade theory across time.

Facts	**'old' trade theory**	**'new' trade theory**	**'Integrated model'**	**heterogenous firms models**	**'integrated' heterogenous firms model**
	Ricardo (1817) *Heckscher (1919)* *Ohlin (1933)*	*Krugman (1980)*	*Helpman and Krugman (1985)*	*Melitz (2003)* *Bernard (2003)*	*Bernard* *Redding* *Scott (2003)*
Trade					
Interindustry trade	Yes	No	Yes	No	Yes
Intraindustry trade	No	Yes	Yes	Yes	Yes
Exporters and non exporters within industries	No	No	No	Yes	Yes
Trade and Productivity					
Exporters are more productive than non exporters within industries	No	No	No	Yes	Yes
Tradeliberalization raises industry productivity through reallocation	No	No	No	Yes	Yes
Trade and labor markets					
Net changes in employment across industries following trade liberalization	Yes	No	Yes	No	Yes
Job creation and destruction following					

trade liberalization	No	No	No	Yes	Yes
Trade liberalization affects relative factors rewards (income distribution)	Yes	No	Yes	No	Yes
Source :Journal of Economics Prospective '*Firms in International Trade*', p. 105-130					

Chapter 2

The EMU formation and its impact in the European countries and Global Economy

As we have already discussed, a key element in the EU's leading role when it comes to International trade has been undoubtedly its trade liberalization regime during the past years. The EU has undertaken fundamental initiatives to support free trade and the biggest step has been the formation of the single market in 1993.

'The Single Market refers to the EU as one territory without any internal borders or other regulatory obstacles to the free movement of goods and services. A functioning Single Market stimulates competition and trade, improves efficiency, raises quality, and helps cut prices. The European Single Market is one of the EU's greatest achievements. It has fueled economic growth and made the everyday life of European businesses and consumers easier (European Commission)'

The **European Single Market**, **Internal Market** or **Common Market** is a single market that seeks to guarantee the free movement of goods, capital, services, and labour – the "four freedoms" – within the European Union. The market encompasses the EU's 28 member states, and has been extended, with exceptions, to Iceland, Liechtenstein and Norway through the Agreement on the European Economic Area and to Switzerland through bilateral treaties (Wikipedia). Although this is considered as a milestone in our recent history, the EU took further action to ensure tighter collaboration within the countries and strengthen its position on the global stage and 'complete' the EU on an economic level as well. Therefore, in 2008 the EU took the initiative to move towards the third and final stage of the Economic and Monetary Union (EMU) and the introduction of the common currency (Euro) to its member countries. Today, out of the 28 EU country members, 19 have adopted the Euro as their national currency. This has been a significant moment for the economy of the whole union as it changed dramatically what we already knew about the Union before. For that reason, it is essential to understand how did the EU Economy developed after the creation of the EMU and what were the consequences on important macroeconomic factors such as growth and unemployment. We will

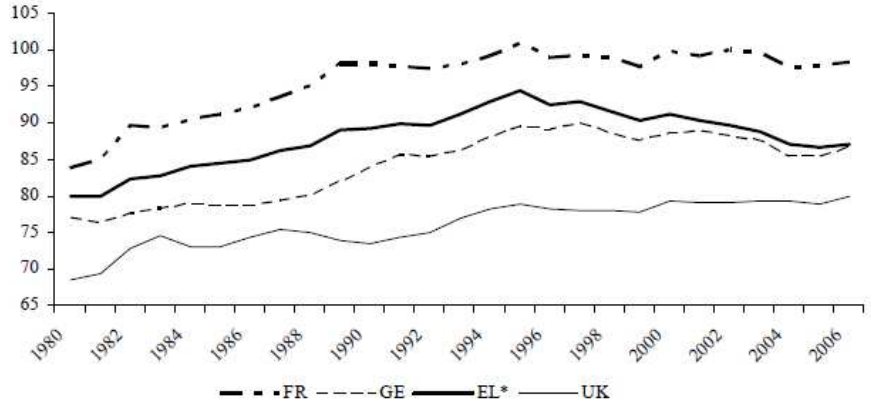
focus mainly on the changes that occurred after the EMU creation until the economic crisis of 2008 and we'll compare the results with the situation before. Identifying the advantages and disadvantages of the EMU, we can conduct a cost/benefit analysis and make conclusions on the importance of the EMU in the EU Economy.

Several opinions have been expressed on how the common currency could affect the circumstances in the economic activity. Some of them include : greater transparency and effectiveness of the common market, increasing the competitiveness; the financial market can improve the overall productivity of the economic activity; improved macroeconomic position for countries and thus for the EU making it a more attractive environment to do business with and others.

We will begin our analysis with the productivity growth rate during the past years. The graph below will help us get a first idea on the impact the common currency had on the productivity :

Figure II.3 Productivity levels relative to the US

US productivity = 100 in each year



* Euro Area

Source : 'European Commission, 2008'

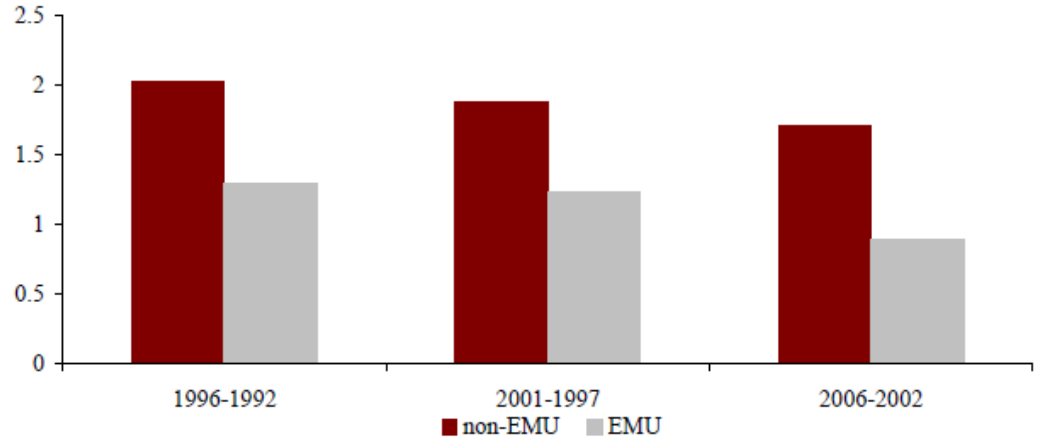
As shown in the graph above, we can see that there are big differences in productivity rate levels among countries. While the UK continues its increasing path during the years, we observe that the productivity levels in France are always bigger. In the Euro Area , the situation stand in-between and that gives the impression that the productivity levels can remain more stable since there are many countries in the Eurozone. But is that the case? Until 1996 (before the formation of the EMU) we can see the highest rise in productivity in the Euro Area and after that year on-wards, the productivity rates have been falling during the years while in other countries (UK, France) have increased their productivity levels. This does not mean that all the

countries in the Eurozone performed worse than France and the UK in terms of productivity, but for some of them the performance could have been such low that it drags the average productivity level of the Euro Area down. For more information on the Technical Analysis on the results of the graph, someone can consult Barell, Guillemineau and Holland, 2007.

The following graph can give us a deeper understanding of the situation :

Figure II.4 Growth of total factor productivity

Average per cent per annum



* The non-EMU aggregate covers the UK, Sweden and Denmark

Source : *'European Commission'*

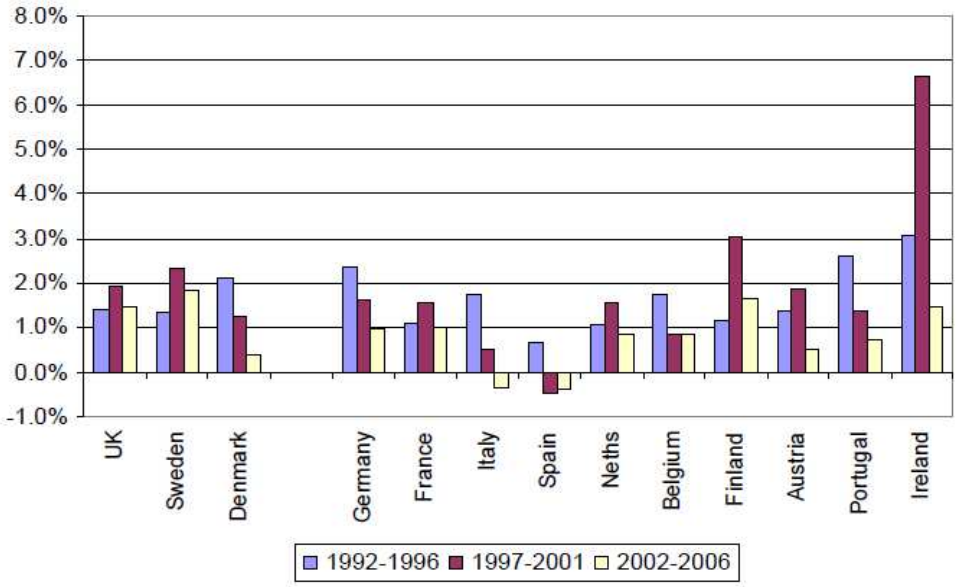
In economics, **total-factor productivity** (**TFP**), also called *multi-factor productivity*, is a variable which accounts for effects in total output growth relative to the growth in traditionally measured inputs of labor and capital. TFP is calculated by dividing output by the weighted average of labor and capital input, with the standard weighting of 0.7 for labor and 0.3 for capital.If all inputs are accounted for, then total factor productivity (TFP) can be taken as a measure of an economy's long-term technological change or technological dynamism (Wikipedia).

It is clear that in both cases, the Total Factor Productivity (TFP) has been declining during these years and at about the same rates. It is beneficial to mention that the non-EMU countries presented in the graph had better performance when it comes to TFP than other non-EMU countries. TFP slowed down once the common currency was introduced. The EU countries outside the Euro Area had faster TFP Productivity growth in comparison with those countries that adopted the Euro first. TFP growth was not much lower than countries such as Italy, Belgium and Spain between

1997-2001 in comparison with the UK. The same can be said about other countries such as Portugal, Holland and Austria in the 2002-2006 period. For France and Germany, the TFP was slightly below the one in the UK for both periods.

A general graph shows the whole situation for the countries :

Figure II.5 TFP growth (basic prices)

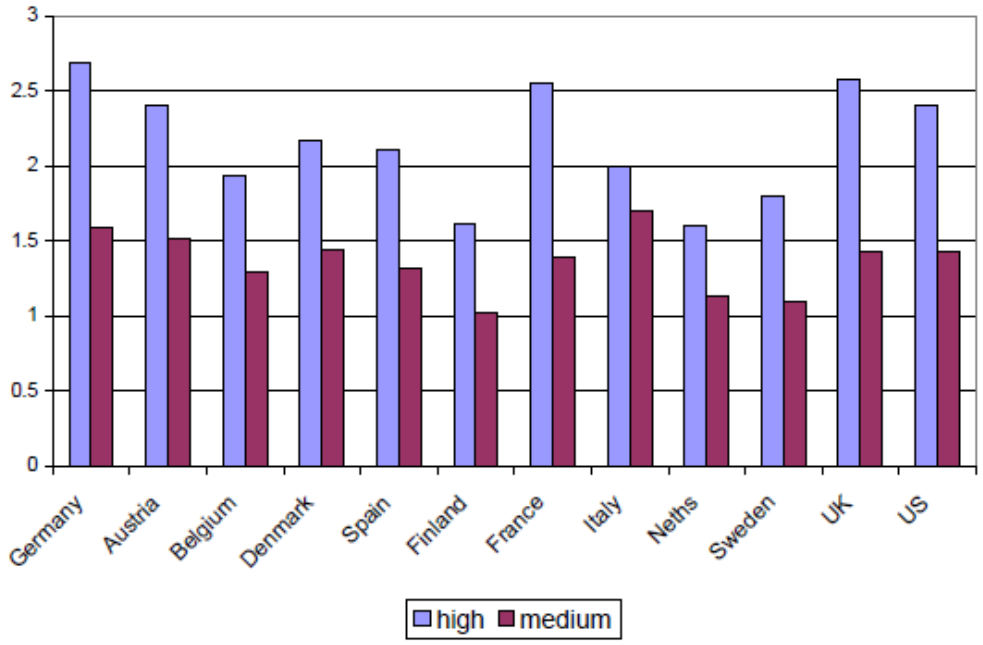


For half of the countries in the above graph, the TFP growth was higher in the 1997-2001 period, I which the EMU creation took place. The EMU surely affected such a trend for both members (Ireland, Austria, Netherlands, France) and non-members (UK, Sweden, Finland). The introduction of the Euro made these economies more stable in the financial markets, thus reducing interests rates for borrowing and also decreasing inflation. Thus the output growth was higher and the TFP growth as well. Other countries ,such as Germany, which are one of the Eurozone members already had a stable economy and the EMU did not increase at a large extent output while labor input increased significantly during that period. The same can be said for non-Eurozone member developed countries e.g. Denmark. In the case of Italy and Spain, the capital input had been enormous during these periods and that can explain the negative TFP growth during the two last consecutive

periods. The conclusion is that the common currency did not affect all economies at such a large extent and not in the same direction.

Now that we have seen how the productivity has been affected after the EMU creation in all the Europe area (EMU & non-EMU countries), we can explore the differences in the wages between workers in the different countries. We compare the wages of high skilled workers with those who have medium performance based on their skills and the low-skilled ones. The following graphs can help us in this attempt :

Figure II.6 Relative wages by skill category (1992 unskilled =1)



Source : *'European Commission, 2008'*

Table II.4 The growth rate of skills

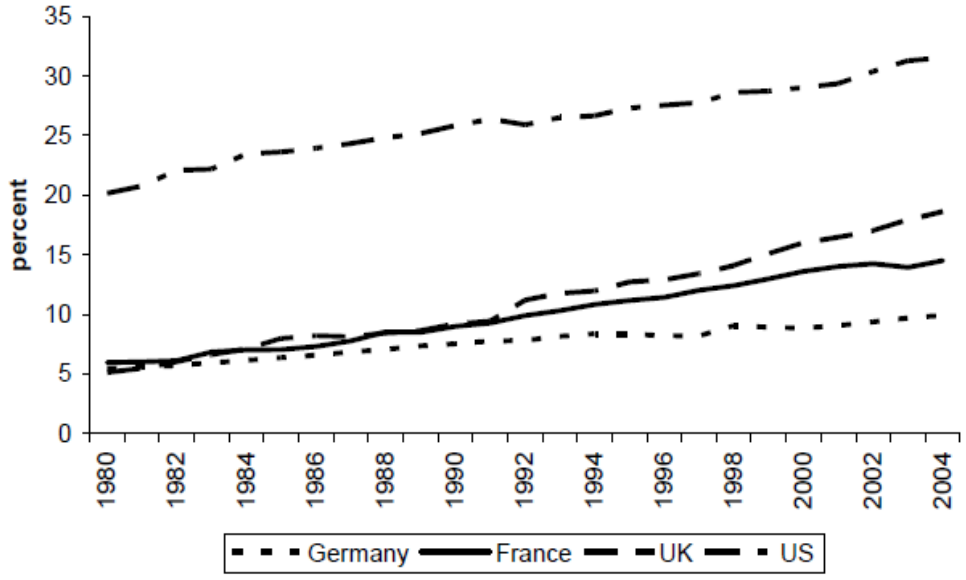
period	BG	DK	FN	FR	GE	IT	NL	OE	SD	SP	UK	US
85-89	0.4	0.5	0.4	0.7	0.4	0.2	0.4	0.5	0.3	0.8	0.7	0.3
90-94	0.8	0.6	0.7	0.8	0.3	0.2	0.3	0.5	0.3	0.8	1.0	0.3
95-99	0.5	0.4	0.2	0.6	0.0	0.2	0.3	0.5	0.2	0.7	0.8	0.3
00-04	0.4	0.3	0.2	0.4	0.2	0.1	0.2	0.3	0.6	0.7	0.6	0.4

Note: BG=Belgium, DK=Denmark, FN=Finland, FR=France, GE=Germany, IT=Italy, NL=Netherlands, OE=Austria, SD=Sweden, SP=Spain.
Source: Own calculations using EUKLEMS data

The two graphs are related as those who are highly skilled have a better chance of earning a higher wage. In 1992, Germany and France (from Europe and both EMU) the highest wages for high skilled workers compared to medium skilled ones. They are followed by the UK and the USA. Interesting results are presented in the Table II.4 as we can see that the growth rates of skills in Germany higher during the first

periods compared to the last ones. This can be explained by the fact that the more technological advances the more skills we acquire, but at the same time it becomes more and more difficult to improve our already high skills. The same applies for other countries and not only for Germany as shown in the Table. Nobody can deny that university uducation can raise skills and thus the competitiveness of the whole market increases. Countries do realize that fact and a number of them make significant investments supporting Universities and graduates. For instance, countries such as Belgium, Germany, Holland have a high public spending for University education and knowledge, offering programs with very low fees with the perspective that this will increase the skills and competitiveness of the market. Other countries such as the US and UK, have some of the most renowned universities worldwide and attract some of the brightest minds despite the high fees for different programs. Let's have a look at the proportion of the university graduates relative to the total workforce following graph :

Figure II.7 Percent of university graduates in total employment



Source : *'European Commission, 2008'*

European Economic and Monetary Union (EMU) from 1999 fueled large capital flows from member economies with trade surpluses to member economies with trade deficits. These flows, and the deficits they financed, were regarded as part of the catching-up process of less productive economies, supporting the formation and upgrading of productive capacity (Blanchard and Giavazzi, 2002). Many deficit countries, however, lagged behind in productivity growth and experienced booms in real estate and consumption, rather than in non-financial-business investment. The resulting high debt levels and high dependence on continued inflows left EMU-member deficit economies vulnerable to the 2008 global financial shock, which made capital flows dry up and debt refinancing costly (Obstfeld, 2012).Capital flows may have positive effects on growth and external sustainability, provided that they finance productive investment in tradable goods, such that repayment is assured by a future export surplus (Lucas, 1990; Blanchard and Giavazzi, 2002; Eichengreen, 2010). Under these conditions, more financial integration (including monetary union as its extreme) and more capital flows towards catching-up economies leads to faster catchup growth. Let's first have a look at the capital inflows by group of countries prior to the EMU and afterwards and then examine the FDI during those years :

Capital inflows by country groups

Variable	Current account deficit		Current account surplus	
	EMU	non-EMU	EMU	non-EMU
Bank inflows (% of GDP)				
1990–2011	4.44	2.63	1.65	1.72
1990–1998	1.15	0.33	0.30	1.02
1999–2001	2.61	4.54	2.60	4.03
2002-2007	12.91	7.70	4.86	4.33
2008–2011	-0.81	1.29	-0.88	-2.75
Non-bank inflows (% of GDP)				
1990–2011	3.30	1.16	2.73	1.13
1990–1998	1.38	1.85	1.55	0.71
1999–2001	5.41	2.88	6.59	1.65
2002-2007	6.00	3.17	2.15	1.70
2008–2011	1.98	-4.70	3.34	0.83

Notes: Countries are classified as EMU if they became EMU members in any given year during the study period 1990–2011.

Source : 'Capital Inflows and Financial Intermediation : University of Groningen, 2014'

In the above table we compare average bank and non-bank inflows for EMU/non-EMU and for current account surplus/deficit economies, for 1990 – 2011

and for sub-periods. Over 1990 – 2011, deficit EMU economies attracted bank inflows equal to 4.4% of GDP per year, substantially more than did surplus EMU economies (1.7%). During the 2002 – 2007 capital flow boom years, that difference widened to 12.9% compared to 4.9%. Also nonbank inflows in deficit EMU members were almost three times larger than in surplus EMU economies. Further, the dispersion in non-bank inflows is smaller in deficit (3.3%) than in surplus (2.7%) EMU economies. Before EMU in 1990 – 1998, capital inflows appeared to be largely independent of current account status. Outside the EMU, capital inflows 13 over 1990 – 2011 were smaller overall, differences between surplus and deficit economies were negligible, and cross-country dispersion was moderate.

We mentioned in the previous chapters that Foreign Direct Investments play a key role in the growth process for countries and consist of a significant percentage of their GDP. What was the situations with the European Union? Looking at the graphs below we can draw a few conclusions about FDI in European Countries and the US :

Table II.5 Stock of FDI as a per cent of GDP

period	BG	DK	FN	FR	GE	IR	IT	NL	OE	SD	SP	UK	US
1991	11.2	11.6	8.3	11.4	11.7	10.8	11.1	11.2	9.3	11.8	11.4	12.0	12.9
1996	11.6	11.8	8.9	12.0	11.7	10.8	11.0	11.6	9.7	12.4	11.5	12.1	13.3

[12] The same basic price adjustment and skills assumptions have been made about Greece, Portugal and Ireland, and hence the same caveats hold. Skills growth was probably higher in Ireland and lower in Greece and Portugal than in France and hence our number may be a lower bound.

2001	12.4	13.3	10.2	12.7	12.6	12.0	11.7	12.6	10.5	13.7	12.2	12.8	14.1
2006	13.0	13.5	10.8	13.2	12.8	11.8	12.2	12.6	10.9	14.2	12.5	13.3	14.4
2006-1991	1.8	1.9	2.5	1.8	1.1	1.0	1.1	1.4	1.6	2.4	1.1	1.3	1.5

Note: BG=Belgium, DK=Denmark, FN=Finland, FR=France, GE=Germany, IR=Ireland, IT=Italy, NL=Netherlands, OE=Austria, SD=Sweden, SP=Spain
Source: UNCTAD and NIESR calculations

In all cases, we observe a significant increase for the stock of FDI as a percentage of GDP (since GDP was higher during these years that means that the FDI stock increase has been even larger) the years before and after the creation of the single market (1993) and the EMU (1998). The largest increase for most countries took place between 1996-2001, the years before and after the EMU creation. Specifically, in Europe this was true for Euro-member (Belgium, Italy, Netherlands, Germany, France) and non Euro-member countries (Finland, Denmark, Sweden, UK). Thus, the EMU

seem to have played a significant role in the increase of the stock of FDI in these countries). The situation was similar for the US economy as well.

What else can we say about the EMU impact on growth, further trade liberalization and other macroeconomic factors such as exchange rate volatility?

With the creation of the EMU, the European Economy established a price stability in the Eurozone. That can have affect output and productivity growth as we have seen previously. When discussing about the EMU, the main focus is on three main advantages :

- Increased Competition and Transparency

Improvement in the efficiency of factors and output increase for given inputs. In addition, it can decrease the mark-up of prices over costs and raise the level of employment (in equilibrium)

- A reduction of exchange rate volatility and uncertainty within the area

The introduction of the common currency, can affect GDP growth by reducing the risk associated with output and exchange rate volatility, reducing also the cost of investment and boosting incoming FDI flows in the country/region

- Improved Price Stability

Similar explanation as above

1. EMU & growth

This is a key factor to determine whether the creation of the EMU has been a success story or not. Despite the slow growth rate that we showed in one of our graphs earlier, it remains questionable whether this is due to the common currency. According to the European Commission (2004), this slow growth rate can be attributed to weak domestic demand and external anomalies. They mentioned three examples of such shocks :

i. The oil price hike in 2000 which reduced the purchasing power parity of the consumers and thus it affected negatively demand.

ii. The pronounced correction of stock market prices in 2000

iii. The blow in the world trade growth in 2001

Although these shocks can explain a slowdown in growth for a few countries, it cannot be generalized for the Euro Area and this is because all these anomalies affected countries to different degrees and thus fail to give answers to the slowdown in GDP growth in Eurozone relatively to other major economies. In addition, a study from Barell & Pomerantz (2004), showed that higher oil prices do not have a significant effect on output growth for many OECD countries. They observed that changes in output are related with the oil intensity of production, which is different for every country and relatively low in Europe compared to non-European countries. However, these changes can be significant in the long run as they can change the terms of trade and increase the real interest rate. Furthermore, oil prices have continued towards that trend in the previous years while growth increased as well for the OECD countries, strengthening the view that high oil prices have little impact on output growth.

In 2007, Barell-Guillemineau-Holland (and other studies) examined the role of factor inputs in the growth process. The study was focused on the largest Economies in the EU and 'unexpectedly' indicated that Germany had experienced weak growth and this can be attributed to the labor input decrease rather than the introduction of the common currency. Other countries such as the UK have had higher growth due to the boom in business and finance sectors as these fields benefited from a faster diffusion of ICT advances compared to other countries. As far as France is concerned, the country experienced higher growth than Germany, one year after the Euro, thanks to non traded sectors and higher labor input. While these developments took place during the years after the common currency was introduced, there have been

no evidence that they are related to the EMU. According to the study, there might be other explanations about such changes. For instance, Barell (2006) claims that the slow growth rate in Italy can be attributed to Globalization and the trade agreements of the Union and not the common currency itself. A conclusion can be that, in the short run, new trade agreements lead to higher competition and it requires restricting reforms in a country and Italy verifies that view. Wyplosz (2006) expresses his own view regarding the impact of the Euro in the growth process. According to him, the common currency can be considered a success but secondary problems linked to it have arose. During the 1990s, inflation fell considerably in the UK, US, France, Germany, Italy and Spain. But there are difference between these countries. As far as the USA and the UK are concerned, output growth rise and unemployment decrease were observed both observed. In contrast, the European countries experienced growth fall while the unemployment remained high. This difference cannot be attributed to the common currency itself but instead problems may arise from the one-size-fits-all perception that applied for all countries in the Euro Area. As the study explains, the US labor productivity growth was closely linked with ICT investments while the UK's superior performance and lower unemployment came due to the fact that there was a decline in unitization in the private sector and deregulation of the service's sector. The conclusion of the study was the fact that the weak macroeconomic performance of the Eurozone countries compared to the UK and the US, has little to do with the EMU creation. During the same year, another study from Lane tried to explain the inflation differentials within the Eurozone. He discovered that these differentials have been much more persistent in the Euro Area relative to the USA. That said, he found that the EMU has led to greater economic integration on the global stage. In addition, he believes that the elimination of exchange rate uncertainty has boosted trade among countries and lead to closer convergence in the whole Euro Area. Based on his study, the EMU contributed in the creation of more liquid and deeper financial markets. As a result, it can lead to economic growth as it makes it easier to borrow and lend oversees and can help countries smooth consumption when the domestic market faces a shock as well as diversify financial risks (reduces the exposure of domestic wealth to domestic shocks). Despite these advantages, another study from Cappiello in 2006, argues that while the common currency has facilitated regional financial integration in Eurozone for both bond & equity markets, it has done little when it comes to other areas such as a common European Banking system ensuring stability in the banking sector.

Indeed, the scale of the euro denominated corporate bond market has grown rapidly and many equity investors now treat the Euro Area as a single entity. However, there are some effects of financial market integration that may enhance heterogeneity inside the Euro Area in the future. We need to be cautious as higher financial

integration may lead to more asymmetric macroeconomic fluctuations, with economic integration leading to greater risk-sharing opportunities through financial market integration (Kalemli-Ozcan et al. (2003)).

In fact, there is little evidence that income levels in the Euro Area have been converging. Data show that output levels are not converging in Europe, with the exception of the remarkable catch-up of Ireland's output. However, they are clearly not diverging either. They suggest that cyclical asymmetries among Euro Area countries are relatively small and similar to those among US regions. They find that the response of the Euro Area to a world shock lags the US and its cycle is more persistent, but less volatile. show that common shocks account for the bulk of output fluctuations in the Euro member states. Country specific shocks have small but persistent effects, and these, rather than heterogeneous responses to common shocks, are the main culprits for existing asymmetries among Euro Area countries (Giannone and Reichlin, 2006 & European Commission 2008).

2. EMU and Openness

During the past years, trade liberalization for goods, services and capital has boosted rapid growth of trade relative to output. The increase in this fast trade growth (mainly after the 1990s) was even higher than the post World War II period. There were important events that took place and affected the European and Global Economy. An important initiative by the EU has been the attempt of deepening the regional integration, via regional trade agreements, for instance, the North American Free Trade Agreement (NAFTA). In addition, the introduction of the common and the completion of the European Single Market as well as the formation of the World Trade Organization (WTO) have been vital steps towards further trade liberalization and tighter cooperation.With regards to the EMU, there is a large literature of empirical facts suggesting that currency unions have an essential positive impact on trade flows between participants.

'A study made in 2000, used a gravity equation approach to assess the separate effects of exchange rate volatility and currency unions on international trade. The panel data set includes bilateral observations for five years spanning 1970 through 1990 for 186 countries. In this data set, there are more than 100 pairings and 300 observations, where both countries use the same currency. The study examines the openness ratios (the sum of trade divided by real GDP) of these countries and observes a large positive effect of a currency union on international trade, and a small negative effect of exchange rate volatility. These effects are statistically

significant and imply that two countries that share the same currency trade 3 times as much as they would with different currencies (Rose, 2000).'

However, according to the European Commission, the results lack credibility as omitted variables that are pro-trade and correlated with the currency union dummy, model misspecification and reverse causality in that big bilateral trade flows cause a common currency rather than vice versa. Furthermore, most of these comparisons involved monetary union changing to non-union at the time of a break down in a strong relationship, and we cannot prove that impacts on trade have been caused by the latter and not the former. More recent attempts from different studies focus on the impacts of the EMU on trade but the results are less impressive. Bun and Klaasen (2002) and Micco et al. (2003), found that EMU increased trade volumes by 15 % to 38 % within the EU. Baldwin (2006) analyses the trade effects of currency unions for non-European cases. In his study, he suggests that the trade effects are still important but still less significant compared to the finding by Rose (2000). He believes that the euro has already boosted intra-Euro Area trade by around 5% to 10 % on average, although the estimation could change based on the circumstances and the data available. Baldwin noticed that given that trade among countries in Europe has continuously increased over the last 50 years, it will not be easy to experience further impressive surges in intra-European trade.

3. EMU and Exchange Rate Volatility

The elimination of exchange rate volatility and uncertainty has been a strong advantage of the Euro introduction. Did the EMU creation achieved that goal and boosted growth? In 2004, made an attempt to prove it. Evidence showed that there are no direct effects of exchange rate instability on growth in the Eurozone, but in the study observed a weak but positive effect on growth was observed. In general, while increased uncertainty reduces investment (Carruth, 2000), there are cases where firms could increase investment but reduce output to eliminate risks. Is that something unexpected? Most people would agree as higher uncertainty tend to discourage investors and eventually reduce GDP. One of the most important studies to examine the relation between volatility and investment has been Darby (1999) which uncovers the fact that exchange rate volatility may damage investment flows in the long-run. The findings showed that exchange rate stability increases investment in European territory, but the benefits are not even and equal. The most investment initiative take place mainly in France and Germany, while for other economies such as Italy and the United Kingdom do not experience real benefits in terms of investments. In 2005, Byrne and Davis showed that only nominal and real

exchange rate uncertainty have significant negative impacts on investment for all the countries examined, and exchange rate uncertainty impacts increase over time. In general, facts from these studies show that long term interest rate uncertainty matter in Europe, although such evidence is not robust. Last but not least, the results unveiled the fact that nominal effective exchange rate uncertainty for the G7 (the 7 biggest economies globally) countries, it is the transitory and not the permanent component of volatility which adversely affects investment.

While it was important to understand the effects of the exchange rate volatility in the economies of Europe, we can go a bit deeper by presenting official data from the European Commission on the role of the volatility :

The table below reports average conditional real exchange rate volatility (for 5 years) including Europe and the USA. We observe that in the Eurozone (in all countries), except France, the real exchange rate volatility has decreased since the EMU formation. Similar results were found on countries that did not adopt the common currency such as Sweden and Denmark. On the contrary, the exchange rate volatility increased in the UK.

'Impact of the EMU on the conditional exchange rate volatility'

Table V.3 Conditional volatility of the real effective exchange rate

GARCH estimates, annual average over the period

period	BG	DK	FN	FR	GE	IT	NL	OE	SD	SP	UK	US
84-89	0.0151	0.0221	0.0373	0.0285	0.0433	0.0521	0.0589	0.0242	0.0691	0.0578	0.0759	0.0343
90-94	0.0210	0.0380	0.2233	0.0290	0.0490	0.0983	0.1722	0.0432	0.1091	0.0658	0.0740	0.0358
95-99	0.0212	0.0360	0.1063	0.0209	0.0305	0.0522	0.0886	0.0188	0.0950	0.0635	0.0871	0.0351
00-06	0.0158	0.0234	0.0415	0.0206	0.0222	0.0296	0.0562	0.0076	0.0643	0.0331	0.0903	0.0343

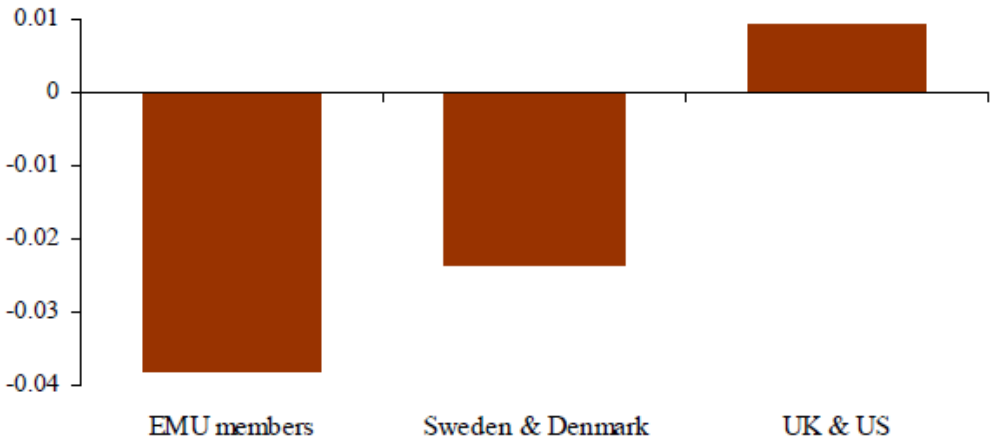
Note: BG=Belgium, DK=Denmark, FN=Finland, FR=France, GE=Germany, IT=Italy, NL=Netherlands, OE=Austria, SD=Sweden, SP=Spain.
Sources: NiGEM database, authors' calculations

The conditional exchange rate volatility is affected by inflation, interest rates (short term) and openness in the market. The regressors used are based on the work of Aghion in 2006 who suggested that trade openness and lack of price stability have a real effect on exchange rate volatility. For more information on the econometric analysis with dummies in this search, someone can read Aghion's work (2006). The

general conclusion of the literature we have seen so far is that the volatility of the real exchange rate is the one systematic factor that affects the level of investment in cross country panel data analysis.

Below we can see the summarized results by country group and compare the results.

Figure V.1 The impact of EMU on the conditional volatility of the real effective exchange rate by country groups

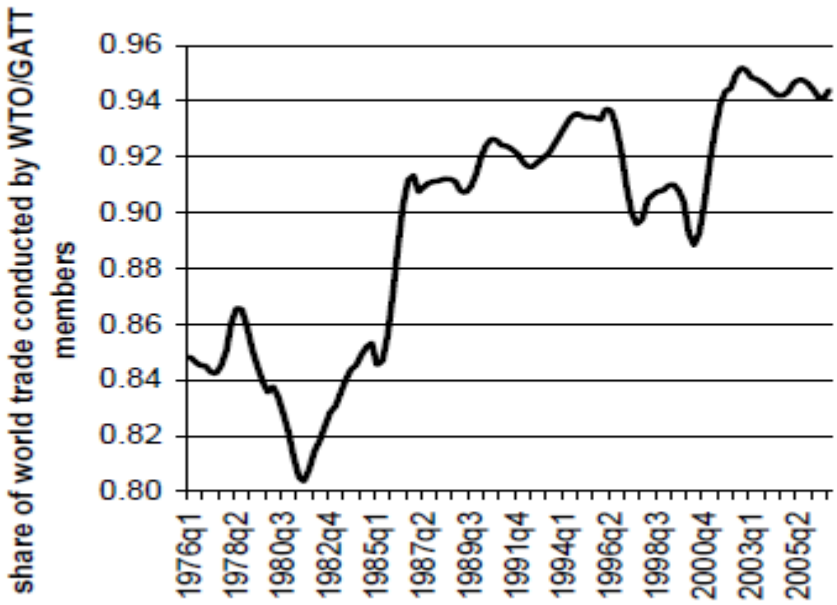


Source : '*European Commission, 2008'*

The EMU seems to have had significant effects on the exchange rate volatility for the countries that use the same currency. The results were similar but less impressive for Sweden and Denmark while the conditional exchange rate volatility for both the US and UK moved from the opposite direction.

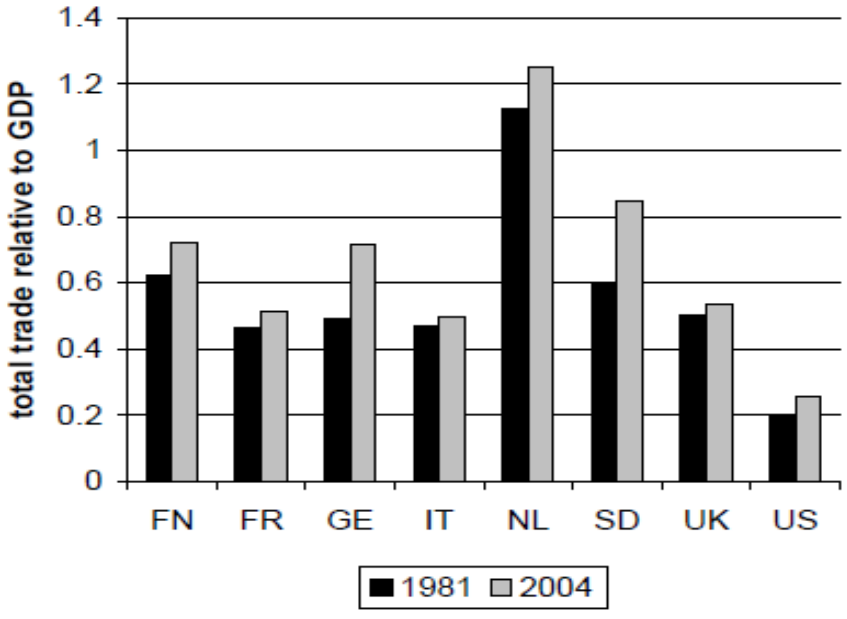
We have repeatedly mentioned that trade liberalization has been a driving force for a number of benefits that arose for the European countries after the EMU formation. **Globalization** and **open market oriented policies** will continue being an important factor for new developments in the global economy. Below, there are two graphs which will help us understand how these factors have affected economies :

Figure VI.1. Index of globalisation (*WTO*)



Source : *'European Commission'*

Figure VI.2. Openness indicator (*OPEN*)



Source : 'European Commission, 2008'

Our key indicator of globalisation and global trade liberalisation (*WTO*), reflects the share of world trade conducted by members of WTO from 1995, and prior to 1995 the share of world trade conducted by the contracting parties of GATT. Figure VI.1 illustrates that it has clearly been on an upward trend over the full sample period, but there are some drops in the series. For example, the rise of China in global trade preceded its entry into the WTO, which explains much of the deterioration 1997-2000. Figure VI.2 illustrates the measure of openness (*OPEN*) which is calculated as total exports and imports of goods and services as a share of GDP, calculated in nominal terms. This has increased by 5-15 per cent in most countries over the sample period, with more significant rises in Germany, Sweden and the US.

Source : 'European Commission, 2008'

Conclusions

Evidence indicate that EMU has increased trade between members but it is not to be take for granted that this had a major impact on growth for all countries. Based on our analysis, the EMU creation and the common currency had a direct positive impact on growth in the core Euro Area countries: France, Germany, Italy, Belgium and the Netherlands. The approximate raise of output was around 2% in these countries. This is a considerable change but still smaller than the impact of the Single Market Program in the late 1980s and early 1990s. In fact, other factors such as R&D and FDI stocks have been driving forces in growth development for both periods. In addition, we were also able to show that the EMU effects did not have much of an impact for countries such as the UK, the US, Denmark and Sweden who are not Euro Area members. We do not have a clear picture of the situation in other smaller economies e.g. Finland and Austria which may suggest that EMU has promoted agglomeration to the core of the Union. In the long run, the facts for positive impact of EMU on growth is opposed to the observed slow growth in the Euro Area.

Much of this slower growth is in underlying productivity per person hour, and it reflects the differences in the rate of accumulation of skills across the countries we study. Around a quarter of a percentage 53 point of the difference in growth rates between the UK and the members of the Euro Area comes from the more rapid accumulation of skills in the UK, both in the run up to EMU and in the subsequent period. Skills growth was particularly slow in Germany and in Italy especially in the EMU period and this alone would account for half a percentage point difference in the growth rates between these countries and the UK. Our panel analysis of the determinants of growth also point to the importance of the stock of R&D, and this has been growing more slowly in Italy than in any other Euro Area country except perhaps than the Netherlands. The lack of growth in skills and in knowledge together with the adverse effects of the recent liberalization of world trade that have particularly affected Italian output are the main factors behind that countries slow growth. In addition our work suggests that the positive benefits of EMU will come through more slowly in Italy than in any other country we study except France. Apart from estimating its direct effects on output, we investigated the impact of EMU on output through alternative channels, as suggested in the existing literature. Our results indicate that EMU may raise output by reducing output volatility, as EMU was found to have a significant impact on output volatility in most Euro Area economies including the small peripheral members. This suggests that the periphery still

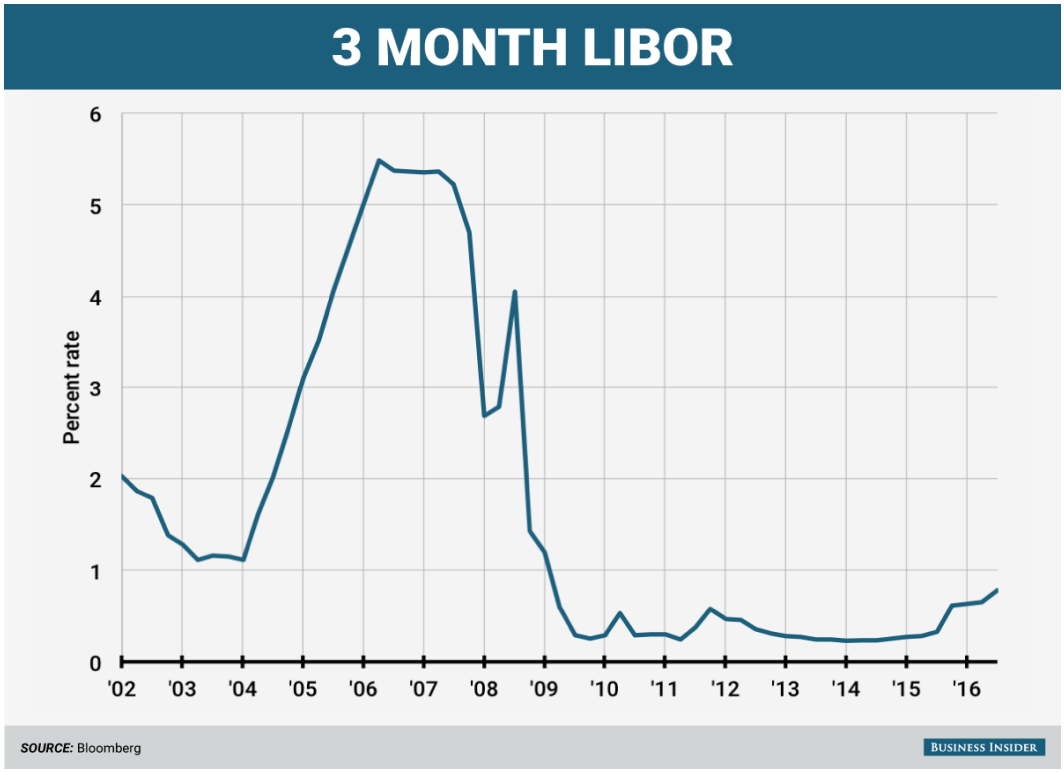
benefits from joining EMU through the reduction in output volatility. Our analysis of volatility indicates that EMU has reduced the volatility of the real effective exchange rate for all members and especially for Finland where direct effects may not be present. In the long run, reduced uncertainty as regards the real effective exchange rate is thought to raise investment and capital stock relative to what it would have been in the absence of a monetary union in all member countries. It is difficult to extract this long run effect directly from such a short data sample, and we would argue that the impacts of EMU would be increased by around one percent of GDP in the larger countries and perhaps more in the smaller ones such as Finland. This would leave our range of estimated effects between one and a half and three percent of GDP per person hour. As regards the impact of EMU on the amount of labor employed, Holland (2007) has not found that the transparency associated with the euro has had a significant impact on the mark-up and hence on the sustainable level of employment. At least as importantly, trade liberalization, both on a global and European scale have reduced mark-ups, and that liberalization has had a clear effect on the sustainable level of employment in the European countries. These results are repeated in this paper using a data set and asset of assumptions consistent with our core productivity analysis (European Commission, 2008).

Chapter 3

The European& Global Economy during the latest Crisis : The Financial and Economic Crisis and its impact on the world Trade.

How did it all start ?

The world economy experienced the biggest financial & Economic Crisis in years starting from the financial sector to international trade and the real economy. Someone can go back in 2008 to realize that there was a severe liquidity problem that year. An example is the LIBOR, which measures the interest rate at which banks lend to each other at different duration. Its sharp increase means that banks see lending to their fellow financial institutions as more risky and signals the possibility of financial instability in the banking sector. The graph below shows the volatility of LIBOR during the previous years :



The lack of confidence in the mortgage credit markets in the USA created the liquidity crisis at first. Specialists where skeptical on the way the other countries (especially the developing ones, as those were hit harder by the crisis) could isolate their economies and not allow the crisis to spread and affect them. They hoped that the crisis would be restricted to financial markets and not to other sectors and countries. Soon, they realized that their biggest fears became true and made the world suffer for the coming years. In 2008, strong fluctuations in the stock market started to appear as shown by the S&P500 Index below :

S&P 500 Index, fluctuations in the stock market

Source : 'http://www.macrotrends.net/2324/sp-500-historical-chart-data'

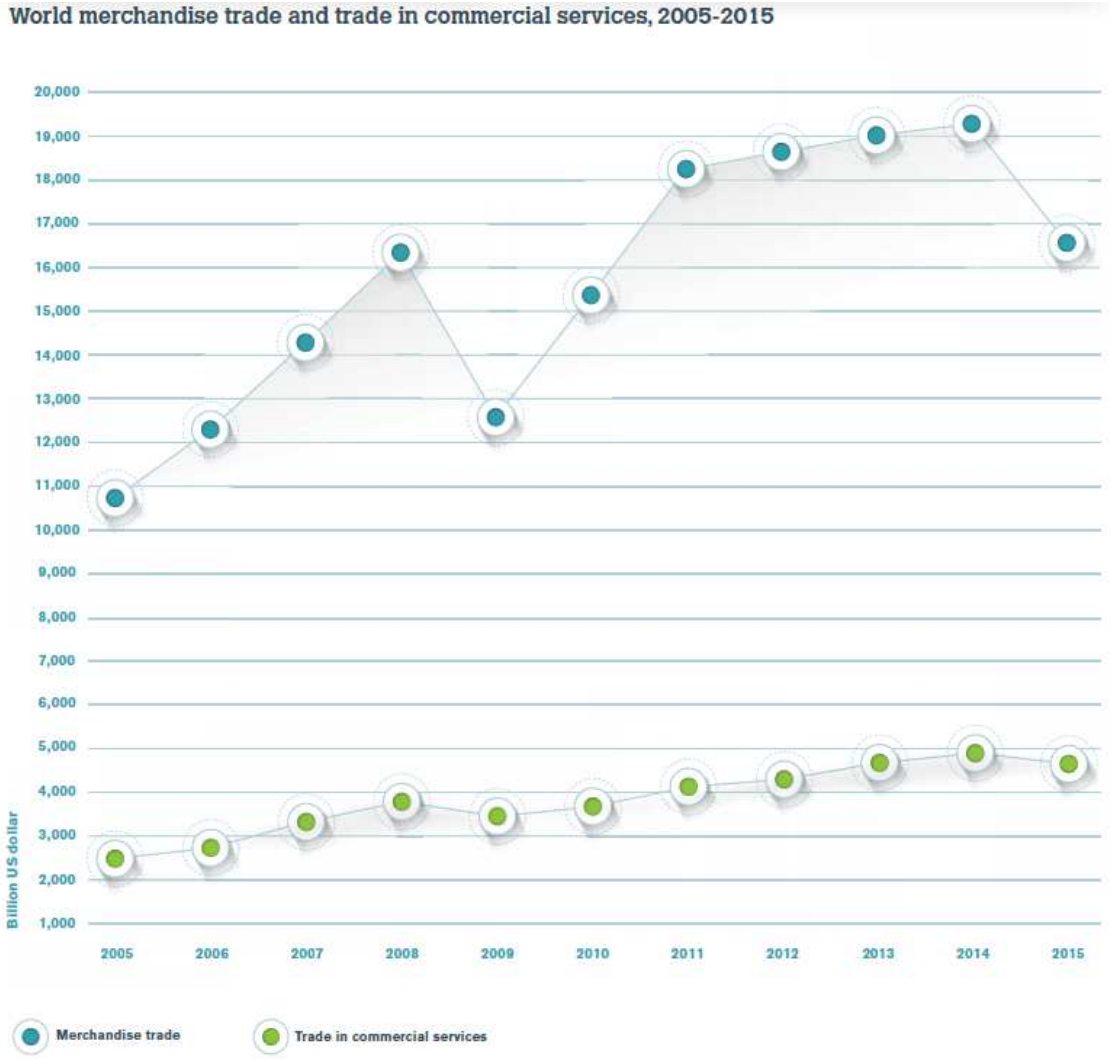
In addition, declining rates of economic growth, volatility of exchange rates, a huge decrease in demand and consequently a decrease in production in combination with the decline in FDI and technological advances flows confirmed the difficult situation that would follow. One of biggest problems was the increased unemployment in many countries. Did close economic cooperation and globalization play an important role in this process? The answer is absolutely YES, and that was proved by the fact that the crisis was spread rapidly across countries through a contraction in trade finance and a decline in demand which affected trade flows negatively. The results were more obvious in fields closely related with global production and supply chain. When it comes to trade, developing countries depend to a great extent on developed economies and the big decline in the demand of the developed ones affected demand

negatively in the former countries. In addition, technological advances and FDI are driving forces in a modern economy to keep boosting growth and development. The decline in the FDI flows from and towards the developing countries meant that there was little room for improvement in their economies taking into account the big crisis. As previously discussed before, the collapse of trade flows in many sectors across Europe, the underestimation of the trade finance problem, the big fall in demand for highly traded goods to the vertical integrated nature of the supply chains globally all had their say in the deterioration of the situation as we can see from the analysis below.

How Trade affected the Economic activity and vice versa.

We have reached now the 'heart' of our study. The Financial and Economic Crisis of 2008 affected significantly the European and Global Economy. Things changed rapidly and unexpectedly and the world was faced with numerous problems to solve in the economy. From the collapse of trade flows in many sectors across Europe, the underestimation of the trade finance problem, the big fall in demand for highly traded goods to the vertical integrated nature of the supply chains globally. The Global Economy was faced with the most extreme financial shock of the Great Depression in the 1930s. Despite the fact that countries did experience different crises since WWII, a global financial crisis with such a huge economic downturn was unexpected. The damage on world trade was the biggest in the past 40 years with a 'collapse' between 2008-2009.

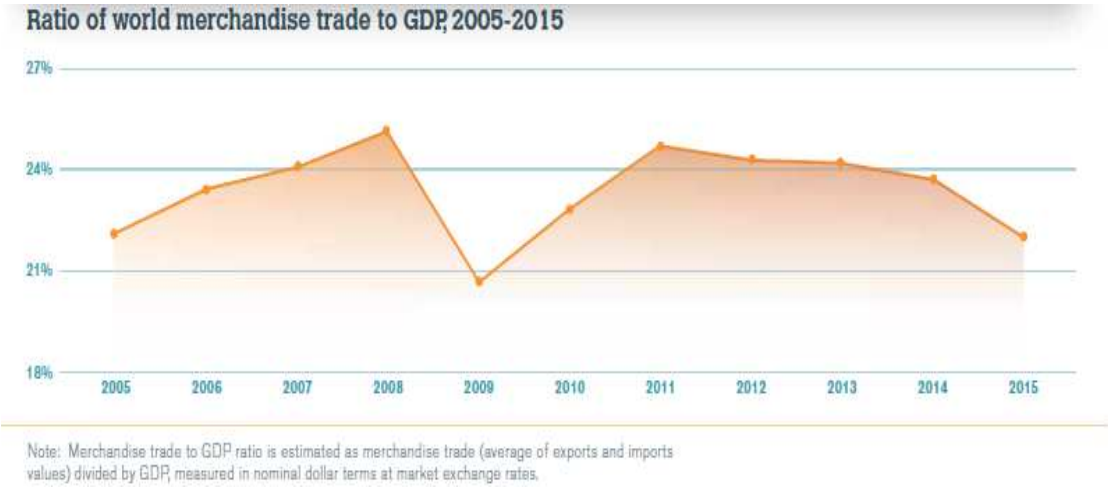
The world trade before and during the crisis



Source : *'WTO, 2016'*

We can see that the world merchandise trade (trade in goods, not services nor capital transfers and foreign investments) has been much larger than the world trade in commercial services. WE also observe that the former type of trade has been much more volatile during the past years while the latter has been more stable. An interesting conclusion from the graph is the sharp and big decline of merchandise trade during the crisis reaching low levels while the trade in commercial services experienced a much smaller decline in 2009.

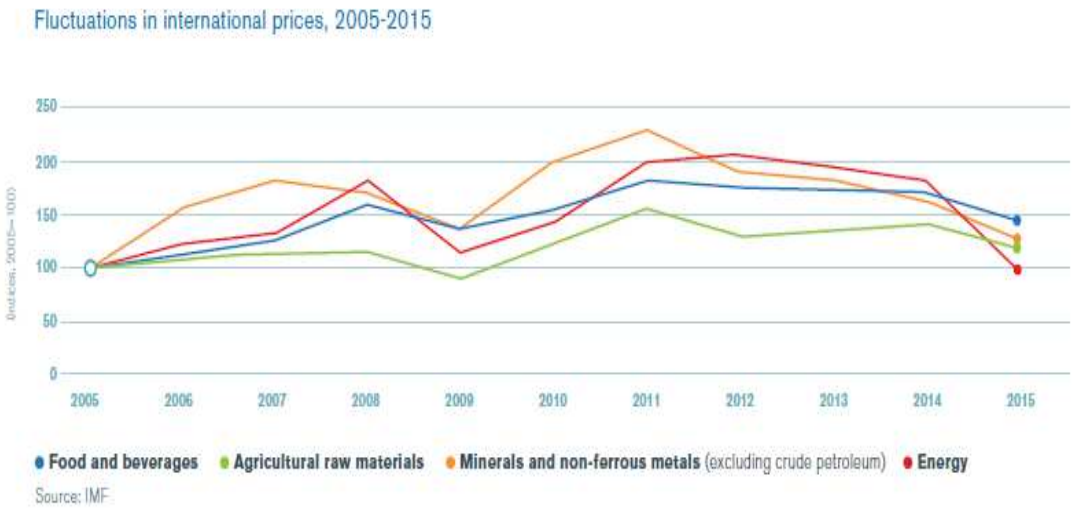
The ration of merchandise trade to GDP fell sharply in 2009 following the economic crisis but bounced back quickly in 2010-2011.



Source : *'WTO, 2016'*

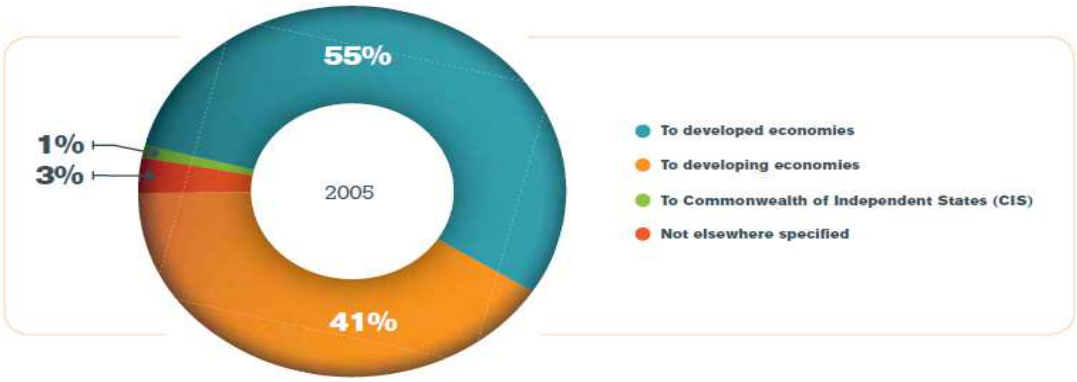
As we mentioned in previous chapters, the world trade 'collapsed' in 200-2009 while the decline of the global GDP was not that sharp and large.

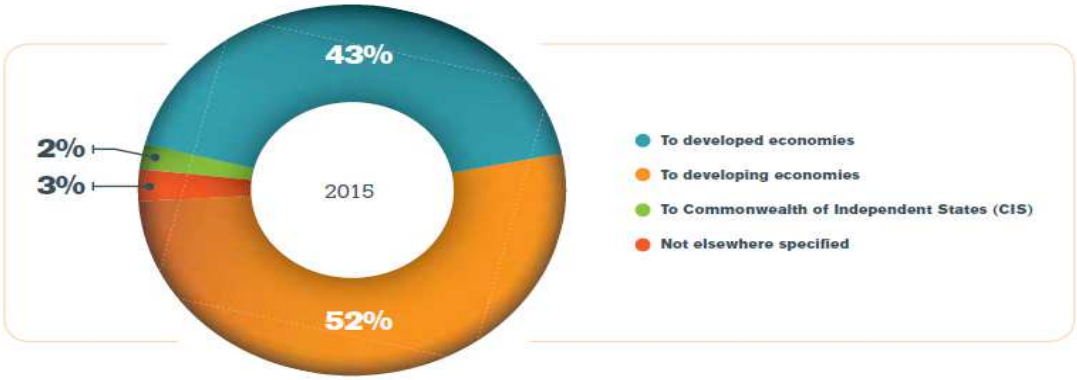
How about the fluctuations in international prices for the goods in different sectors :



From the graph, it is obvious that there was a drop in price for all different type of products during the crisis, 2008-2009. The prices started increasing again in 2010 with the Minerals and non-ferrous metals being in pole position. The biggest price fluctuations are observed in Energy, followed by Minerals and non-ferrous metals while the price for Food & Beverages has been the most stable of all categories.

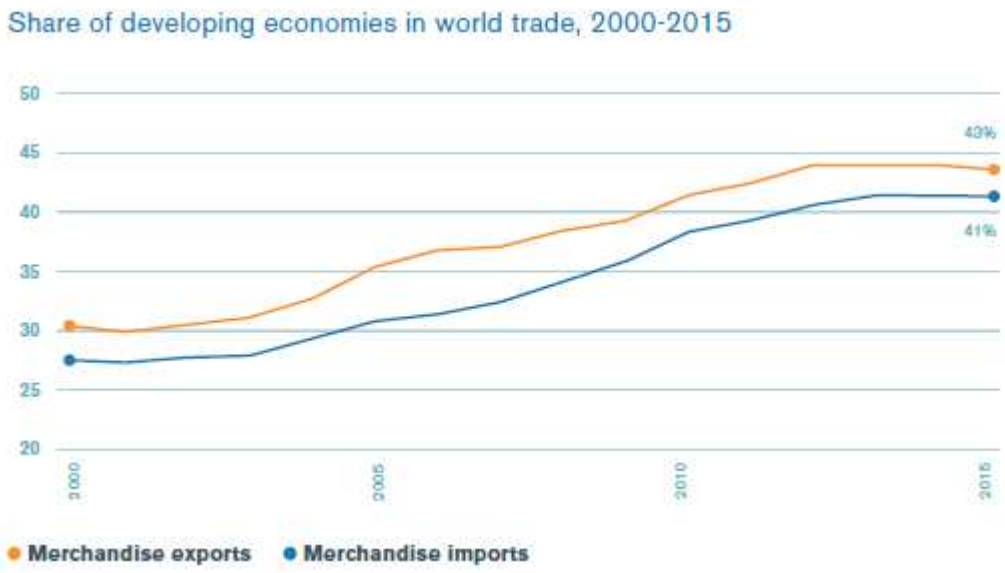
Merchandise exports of WTO members totalled $16.2 trillion in 2015. The share of developing economies in merchandise exports increased from 33% in 2005 to 42% in 2015. In addition, merchandise trade between developing economies has increased from 41% to 52% of their global trade since 2005.





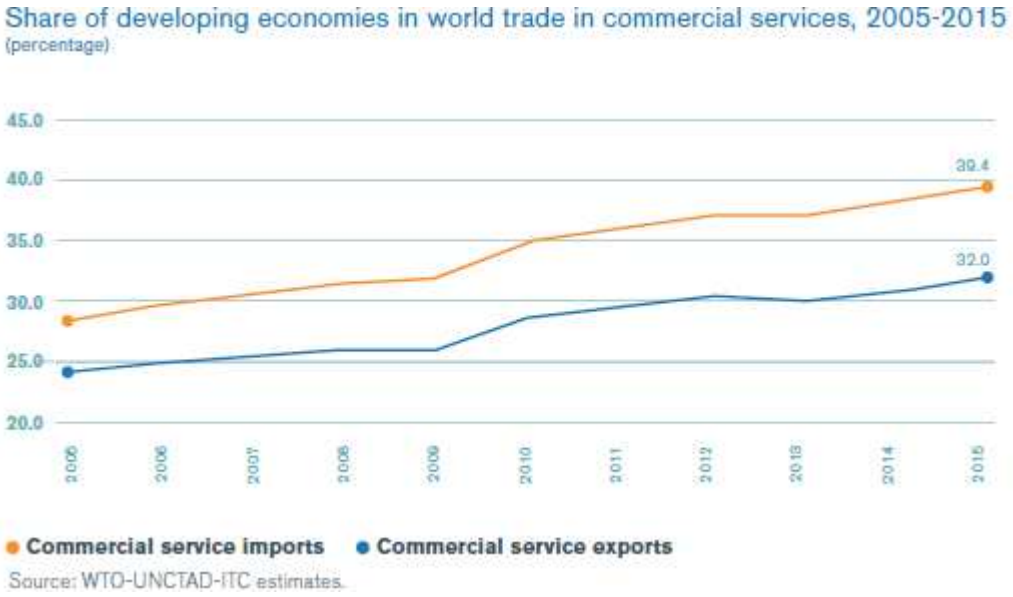
Source : *'WTO, 2016'*

While the share of the developing economies increased during these years from 41% to 52%, the share of developed economies fell from 55% to 43%. The share of commonwealth of independent states remains unchanged. The share of developing economies in exports and imports is illustrated in the graph below :



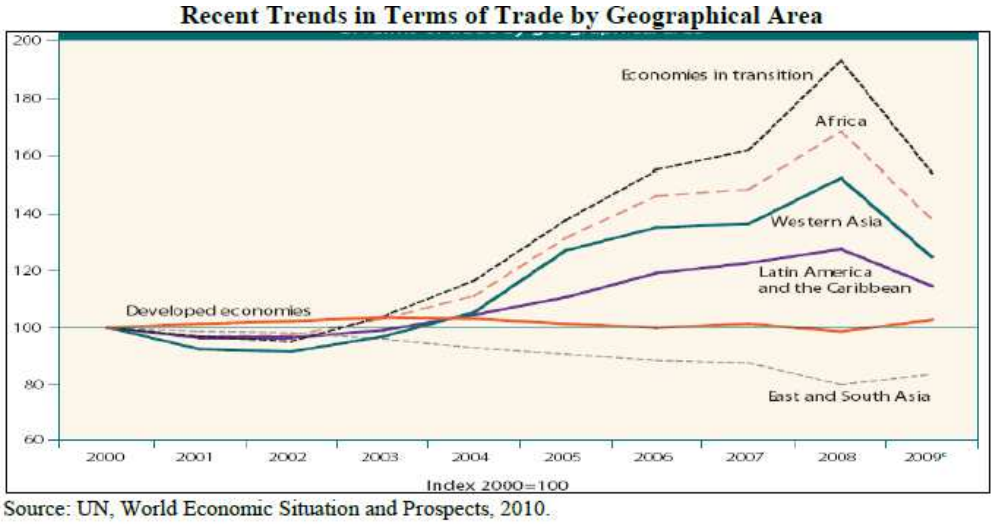
Source : *'WTO, 2016'*

So far we have discussed about merchandise world trade. We can continue our analysis with the world trade in commercial services. Exports of commercial services by WTO members totalled $4.68 trillion in 2015. Developing countries accounted for 36% of total trade in commercial trade during the same year.



From the previous two graphs, we can see that the share of developing economies in world trade in commercial services is higher in imports while for world merchandise trade the opposite is true.

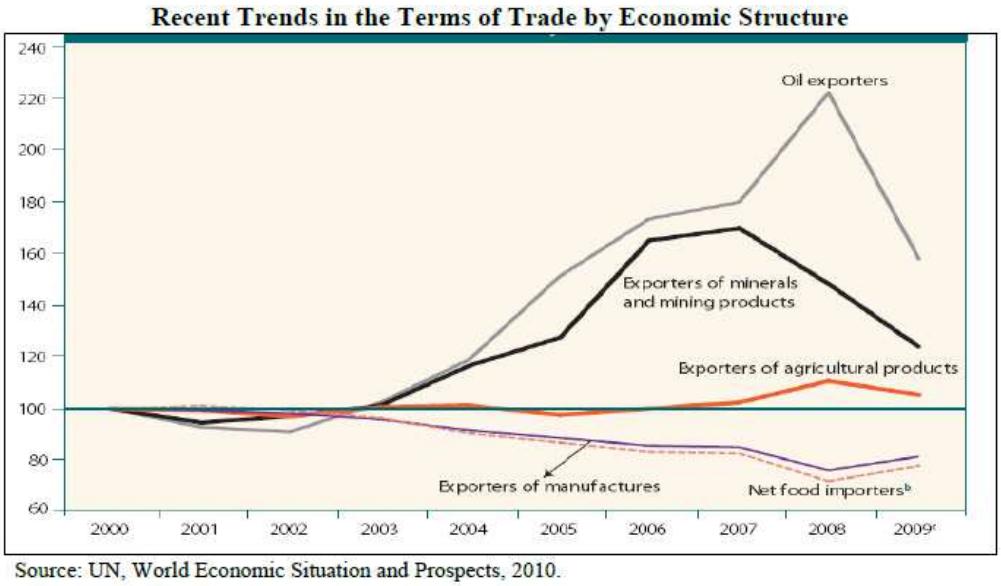
Now that we have discussed about the exports and imports for developed and developing economies, we can go one step further and talk about the terms of trade. Terms of trade are defined as the ratio between the index of export prices and the index of import prices. Let's have a look at the following graphs.



Source: UN, World Economic Situation and Prospects, 2010.

We observe that the years before the crisis, there has been a huge improvement for the economies in transition (while the other group of countries experienced a less impressive improvement). That said, the experienced a significant decline during the second half of 2008.

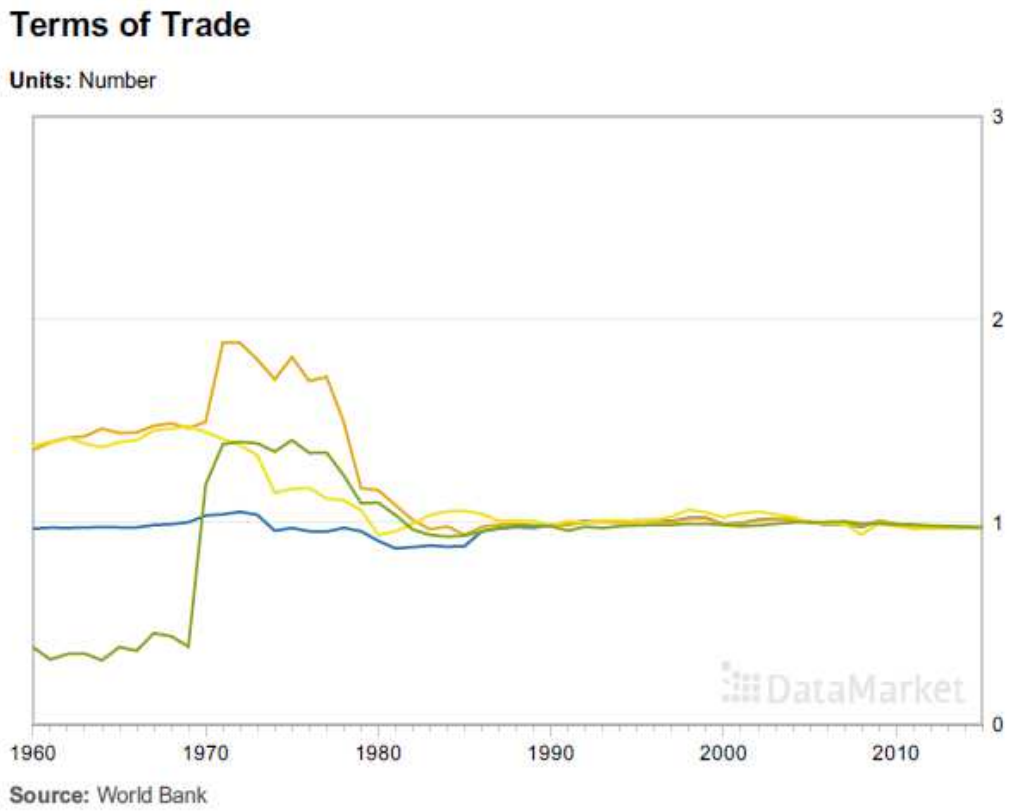
What about the the terms of trade in the different sectors of the developing economies?



Source: UN, World Economic Situation and Prospects, 2010.

We can see that Oil exporters suffered the biggest declines in the terms of trade as the price of energy decreased more than any other commodity. Russia (CIS) is an example of those countries that experienced such a damage. That means that they were hit hard as well in terms of economic welfare as real GDP does not take into account inflation. With regards to the Asian countries, they performed better in terms of GDP growth but suffered in a worse way in terms of economic welfare.

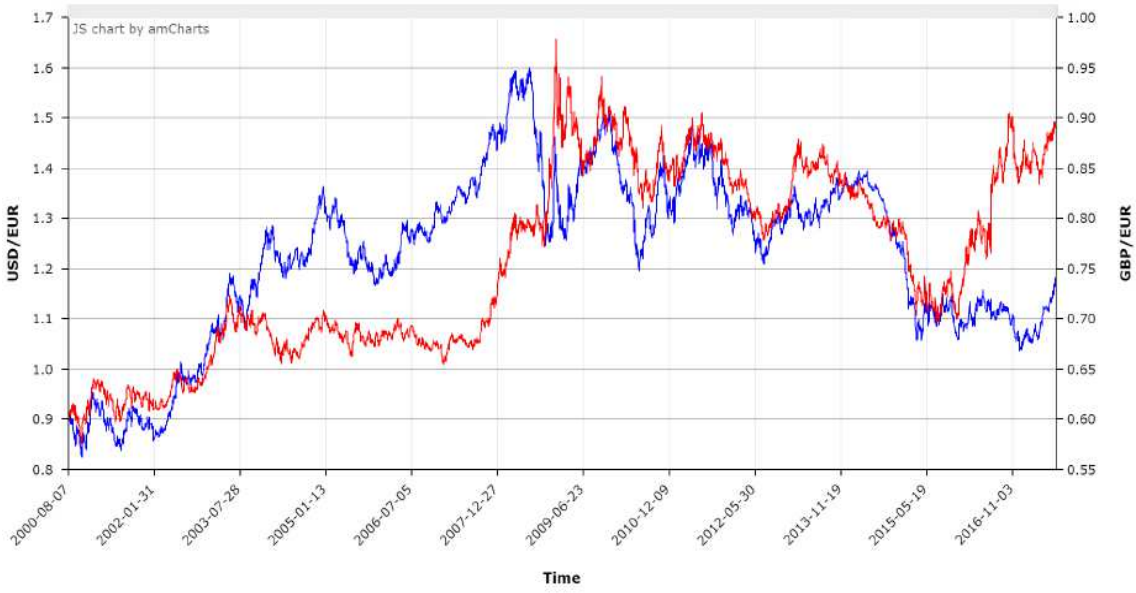
Is there any difference between the terms of trade between regions such as the European Union and the USA? What about the global terms of trade? Are they close or is there a big gap between them?



We observe that the terms of trade are very close for each region and the whole world as well. Prior to the crisis the terms of trade were better for the United States while right after the crisis the opposite was true with the terms of trade in both Europe and the Euro area seem to have been slightly bettercompared to the USA.

We do realize that the prices of imports and exports are key factors to determine the terms of trade for a country or region relative to other countries. Since, countries (USA, UK) or group of countries (Euro Area) use different currencies, it is essential to analyze how the exchange rate for some of the biggest economies has developed during the past years.

What are the exchange rates : An exchange rate is the rate at which one currency can be exchanged for another currency. For example, €1 could be exchanged for $1.13. This rate changes constantly on global foreign exchange markets where all kinds of currencies are traded. The euro is one of the most traded currencies, along with the US dollar, the Japanese yen and pound sterling.Exchange rates do have implications for price stability and growth. For example, exchange rates affect prices in international trade. When more US dollars can be obtained for €1, in other words when the euro appreciates, US products become less expensive for people in the euro area. As a result, import prices fall. This has a direct impact on inflation in the euro area, via the prices of imported goods for consumption, and also indirect via the prices of imported raw materials and intermediate goods used for production.

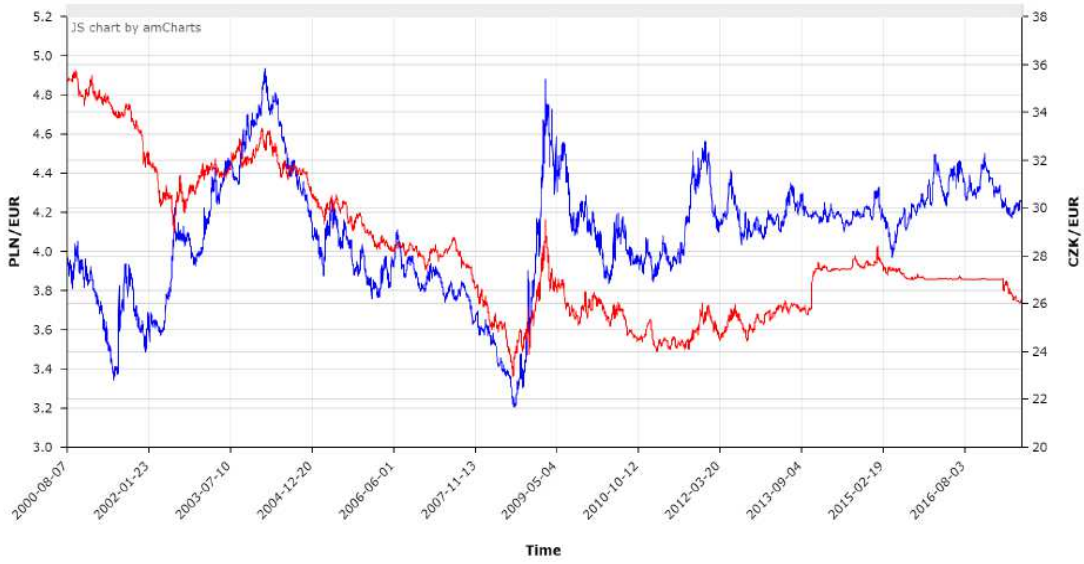


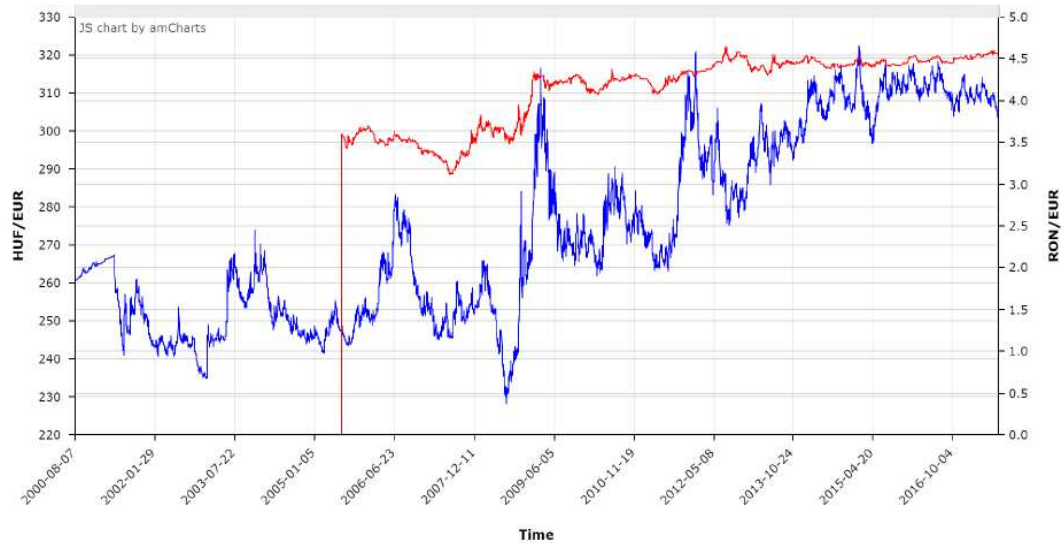
Bleu line : USD/EURRed line : GDP/EUR

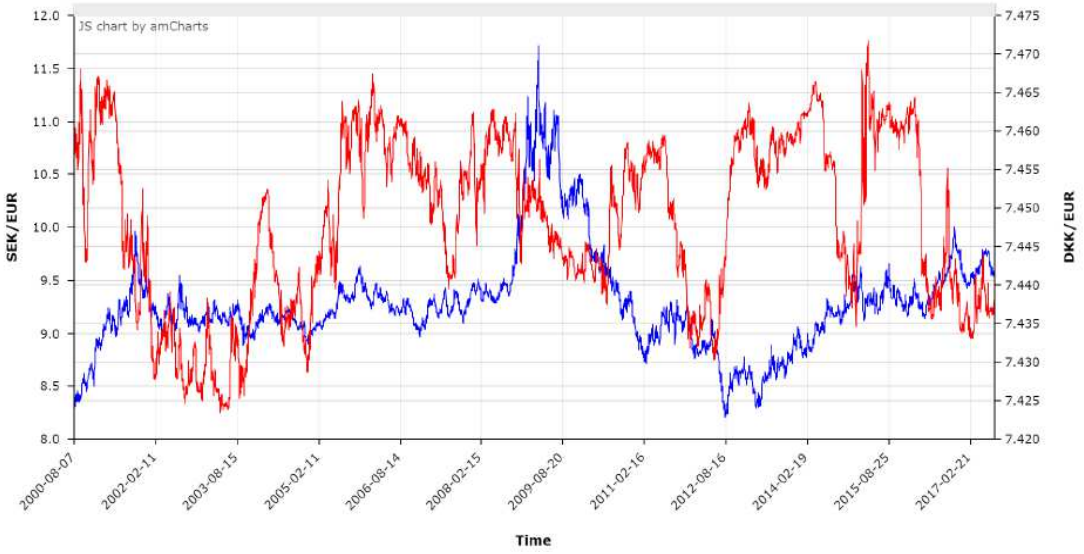
Source : *'https://forex-history.net/main/'*

In 2000, GBP/EUR exchange rate was at 0.6 while the USD/EUR exchange rate was at 0.9 , both of them below 1. That means that at that time both currencies were stronger than Euro with GBP leading the race. In 2002, the Euro started appreciating versus the USD, surpassing its value between 2002-2003. The Euro continued its increasing trend until the financial crisis of 2008. Since then, there have been fluctuations in the USD/EUR exchange rate with the Euro still stronger as a currency. With regards to the GBP/EUR exchange rate the Euro started appreciating versus the GBP as well reaching its highest value in 2009, which was very close to the value of the GBP. The GBP started appreciating again against the Euro reaching a GBP/EUR exchange rate of 0.7 in 2015 while the strengthened again one year later.

What was the exchange rate for the other countries in the EU that are not Euro area members? Did their currencies follow the fluctuations of the Euro versus the USD? We have already examined the GBP, and we saw that it followed a similar path with the EUR during the years before and after the crisis while this was not the case with the USD as it only happened to have similar development the years right after the crisis. Let's have a look at the other currencies in the EU, 7 of which are obliged to join the eurozone on meeting convergence criteria while Denmark had the right to opt-out (part of the European Exchange Rate Mechanism II, unlike the UK) so its exchange rate is tied to within 2.25% of the Euro.





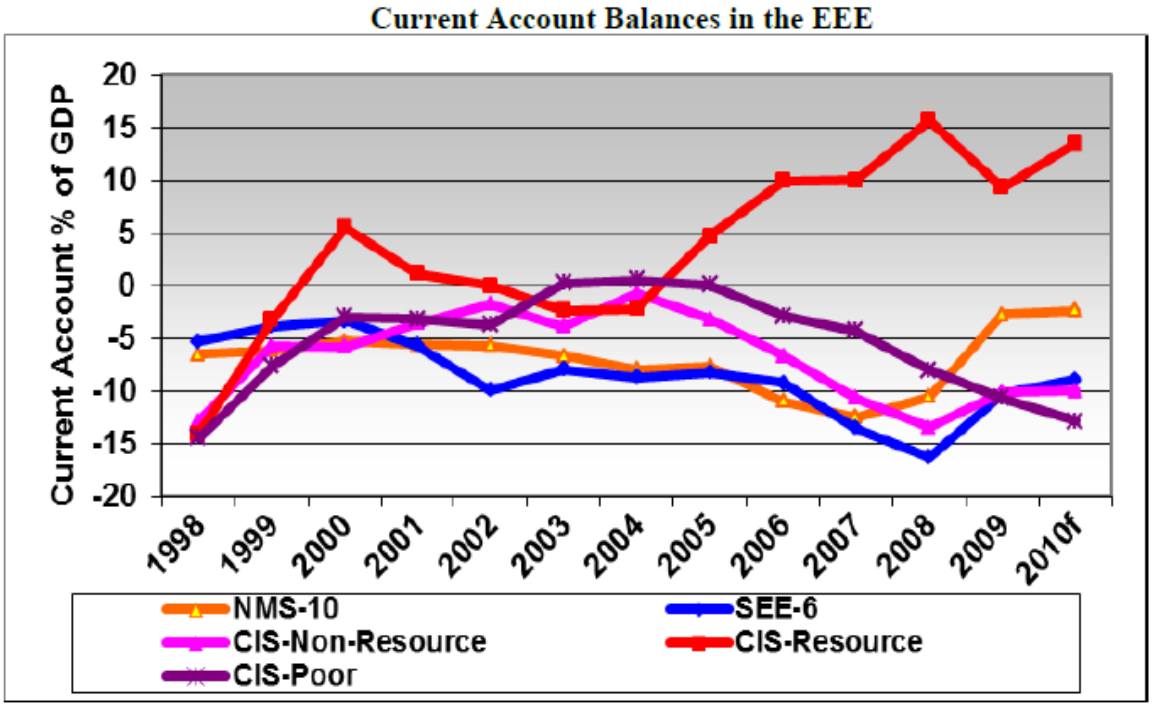


Source : *'https://forex-history.net/main/'*

In the first graph, we can see that the national currencies of Poland and Czech Republic have followed a similar path during the years before and after the crisis. The fluctuations for bot countries have been similar during the same periods after 2003 with the Polish Zlot having bigger fluctuations than the Czech Koruna. In the second graph, we observe that since mid-2004 the Hungarian currency (Hungarian Forint) has seen an increase at a more stable pace relative to the Romanian currency (Romanian Leu) which saw its exchange rate versus Euro drop considerably in 2008, a sudden increase in 2009 and again a decrease the following before starting increasing again in 2012. In the third graph, we cannot find a similar path between the Danish (Danish Krone) and Swedish (Swedish Krona) currency. They both appreciated against the Euro during 2008, with the Danish currency continuing its appreciation path while the Swedish currency started depreciating against the Euro. From all graphs combined, we can conclude that while the Euro and GBP had a similar path after the crisis, all the other currencies started appreciating against the Euro at a different pace after the crisis except the Swedish Krona which continued to depreciate against the Euro.

The different currencies and their exchange rate volatility which was different for countries and regions, made the impact of the crisis vary between countries and regions. Another important factor that contributed in a such a trend was the different trade imbalances for countries and regions. In fact, trade imbalances made a number of countries suffer more compared to others.

Before the crisis of 2008, the world already was faced with the problem of trade imbalance. For some countries, there was a a deficit in the current accounts (e.g. USA, more imports than exports) while for other countries there was a surplus (e.g. China). In Europe, many developing economies had large current account deficits while other had surplus. This difference was created due to the fact that some countries are rich in resources (so there is no need to import them) while for the rest the only way to acquire them is by importing. The graph below can help us have a clearer idea of the trade imbalances for the different group of countries :



Source : *'UN-DESA, 2010'*

NMS : Countries in Central & Eastern Europe, New member states integrated in the already group of 15 countries in the EU.

CIS : Russia, Armenia, Belarus, Kazakhstan, Kyrgyzstan, Moldova, Tajkistan, Turkmenistan, Ukraine, Uzbekistan.

SEE : South Eastern-Countries, Albania-Turkey-Bulgaria-Romania-Croatia-Greece-Moldova-Montenegro-Serbia-Bosnia.

Looking at the graph we can see that after 2008, during the crisis, there was a current deficit for each group of countries except the CIS countries rich in resources. A country (or group of countries) that is rich in resources will not be hit hard by a crisis in terms of balance of trade as it does not import many of these resources. Thing started to improve after 2009 with CIS-Poor having the worse performance and NMS-10 being in second place following CIS-Resource (rich in resources). Was this a fearsome situation? There were different opinions regarding that topic with some worrying that this was a dangerous situation and measures needed to be taken immediately while others supported that this was a signal that capital markets were working efficiently as the open market regime allow savings to go where the investment return is higher. The crisis in 2008 proved that the former opinion was correct and the imbalances of trade played a key role to the existence of the economic crisis. But how the world economy managed to decrease the trade imbalances after the crisis? The are 3 main reasons of that result :

i. *Trade flows declined to a large extent during the period 2008-2009. If both exports and imports experience a decrease (most probably) then the difference between them will also decrease.*

ii. *In the countries that experienced a surplus in their current accounts, data show that the income decline in these countries was smaller compared to the ones that had a current account deficit and since income plays a significant role in the volume of imports, it eventually turned out that imports declined more in the latter group of countries.*

iii. *The economies that were oil-rich were enjoying the large surplus before the crisis. In 2008-2009 the price of oil dropped substantially and they lost a big percentage of their revenues. In addition, the surplus decreased even more as part of it was used in off-setting policies by their governments.*

So far we have examined different aspects of world trade and how they are determined in different regions and countries globally. The next step of our analysis will include different macroeconomic factors in the EU; how did they change during the crisis; are hey different between EU and Euro Area; How about the non-eurozone countries in the EU? Thu, our focus will be in the European Economy and how crisis changed it.

Let's begin the analysis with the **GDP** :

Million euro (at prices of the previous year) **INDIC_NA:** Gross domestic product at market prices

GEO / TIME	European Union (28 countries)	European Union (27 countries)	Euro area (18 countries)
2004Q1	2,530,794.2	2,523,454.7	1,884,769.3
2005Q1	2,632,363.4	2,624,518.7	1,940,707.4
2006Q1	2,785,245.5	2,776,496.3	2,047,640.2
2007Q1	2,945,927.9	2,936,103.1	2,158,862.9
2008Q1	3,085,942.1	3,075,387.0	2,247,998.8
2009Q1	2,918,274.6	2,907,882.8	2,163,219.2
2010Q1	2,908,125.3	2,897,935.1	2,208,758.8
2011Q1	3,056,237.7	3,046,053.4	2,289,286.5
2012Q1	3,117,817.3	3,107,783.5	2,320,962.1
2013Q1	3,153,949.1	3,144,006.5	2,309,799.0

GEO / TIME	Bulgaria	Czech Republic	Denmark	Croatia	Hungary	Poland	Romania	Sweden
2004Q1	4,169.6	20,377.8	46,639.2	7,338.5	17,470.2	47,332.4	9,785.3	71,505.9
2005Q1	4,617.7	22,425.2	47,932.4	7,844.5	19,050.1	49,719.0	11,347.9	72,996.9
2006Q1	5,197.4	25,917.1	51,399.0	8,748.9	20,730.1	60,453.3	15,475.0	76,375.4
2007Q1	5,904.3	29,205.7	53,911.5	9,824.6	20,420.7	67,837.1	18,744.0	81,352.3
2008Q1	6,909.1	31,794.9	55,524.9	10,554.7	23,110.6	77,364.4	24,170.6	84,032.6
2009Q1	7,123.6	34,733.3	54,899.0	10,390.7	22,571.0	86,428.2	23,879.8	78,034.4
2010Q1	7,096.0	33,827.6	54,497.3	10,189.6	20,956.6	74,592.0	21,535.4	74,885.5
2011Q1	7,448.1	35,957.8	58,316.8	10,183.9	22,387.8	85,322.8	24,496.0	88,594.2
2012Q1	7,878.7	36,644.3	58,707.6	10,033.5	22,529.2	88,544.0	25,606.9(p)	96,357.2
2013Q1	8,191.7	35,349.9	59,741.3	9,941.8	22,264.7	89,681.4	25,576.4(p)	101,942.0

Source : '*Eurostat*'

From the two tables we can see that the the GDP of the EU (28) followed an increasing trend until the crisis in 2008. In 2009, there was a drop in the GDP for the European Union. Things did not improve the year after but at least the output remained somehow stable, with a small decrease compared to the previous year. The GDP continued rising again in the next years but a slow pace. The results were similar and very close for the EU (27 countries, excluding the UK) and not big changes are observed. Similar results can also be seen in the Euro area. The decrease of the GDP was slightly smaller during the crisis while it recovered faster the year after. Despite this recovery, the GDP in the Euro area continued to increase at a lower pace (very small difference) compared to the GDP of the EU (28). From the second table. It is clear that the results did not differ much for all non-Euro area countries except Poland. The GDP was rising for these countries while it started decreasing in 2008 while for Poland its GDP continued its increasing trend. Another important observation is the fact that for some countries, including Hungary/Poland/Romania/Bulgaria, the biggest increase in their GDP was seen in the 2007-2008 period while for other countries, Czech Republic/Denmark/Croatia/Sweden this was seen in the 2006-2007 period. In general, the results did not differ to a large extent for the different group of countries as far as the GDP is concerned.

The second factor of this analysis includes Domestic Demand :

Million euro (at prices of the previous year) **INDIC_NA:** Domestic demand

GEO / TIME	European Union (28 countries)	European Union (27 countries)	Euro area (18 countries)
2004Q1	2,495,922.5	2,487,902.6	1,842,888.4
2005Q1	2,601,004.5	2,592,488.6	1,904,457.1
2006Q1	2,763,041.3	2,753,515.3	2,021,303.2
2007Q1	2,936,750.9	2,926,088.6	2,136,430.9
2008Q1	3,061,671.6	3,050,076.5	2,212,488.7
2009Q1	2,935,461.3	2,924,219.1	2,178,122.4
2010Q1	2,875,207.5	2,864,676.4	2,176,349.3
2011Q1	3,010,938.8	3,000,325.7	2,255,338.7
2012Q1	3,062,143.0	3,051,774.8	2,268,151.9
2013Q1	3,083,952.7	3,073,843.4	2,248,108.8

GEO / TIME	Bulgaria	Czech Republic	Denmark	Croatia	Hungary	Poland	Romania	Sweden
2004Q1	4,855.2	20,065.3	44,311.0	8,412.2	17,898.3	49,189.8	10,682.5	65,202.9
2005Q1	5,425.9	21,248.3	46,206.8	8,965.6	19,313.3	49,792.5	12,618.6	67,288.9
2006Q1	6,451.5	23,913.6	49,698.7	10,224.2	21,122.9	60,697.3	17,386.1	69,651.4
2007Q1	7,487.4	28,084.5	53,166.9	11,468.6	20,421.0	69,451.4	22,211.4	75,386.5
2008Q1	8,586.4	30,235.2	54,697.2	12,510.5	22,775.0	79,518.2	28,974.3	77,769.1
2009Q1	8,409.6	33,805.9	52,944.6	11,692.5	21,791.4	87,789.8	25,577.4	73,202.0
2010Q1	7,842.2	31,515.1	52,669.5	11,077.8	19,694.8	74,590.1	23,134.2	70,346.4
2011Q1	7,769.1	33,518.8	54,567.0	11,394.6	20,807.9	85,499.2	25,750.4	83,758.7
2012Q1	8,558.1	33,654.2	56,209.4	11,221.5	20,778.1	88,465.5	26,846.2(p)	90,778.0
2013Q1	8,647.7	32,861.6	57,881.4	10,996.3	20,581.6	88,887.2	25,662.3(p)	95,772.8

Source : '*Eurostat*'

Not big changes relative to the GDP that we examined before. The results for the EU (28 or 27) are similar and for the Euro area as well with a small difference that the domestic demand decreased in the Euro area less compared to the GDP. From the second table we can see that the domestic demand for Poland continued to increase even during the crisis, the same result we had for the GDP and also for Czech Republic unlike the GDP for this country during the 2008-2009 period. Another important observation is the fact that the years after the crisis (e.g. 2013) all countries and group of countries (EU, Euros area) managed to have a higher domestic demand compared to the pre-crisis period except Croatia (12,5 - 10,9).

Next, we will examine the exports and imports during these years for the different regions and countries.

Million euro (at prices of the previous year) **INDIC_NA:** Exports of goods and services

GEO / TIME	European Union (28 countries)	European Union (27 countries)	Euro area (18 countries)
2004Q1	901,901.0	898,679.2	689,606.8
2005Q1	949,826.4	946,429.8	722,197.5
2006Q1	1,103,632.0	1,099,731.4	819,023.6
2007Q1	1,197,837.6	1,193,606.6	903,454.9
2008Q1	1,275,439.3	1,270,818.1	959,229.8
2009Q1	1,104,678.8	1,100,634.2	825,940.4
2010Q1	1,131,074.2	1,127,073.1	861,966.8
2011Q1	1,317,751.9	1,313,432.3	990,905.2
2012Q1	1,403,372.5	1,398,884.5	1,060,346.8
2013Q1	1,423,623.6	1,419,181.4	1,067,093.0

GEO / TIME	Bulgaria	Czech Republic	Denmark	Croatia	Hungary	Poland	Romania	Sweden
2004Q1	1,992.1	12,345.0	21,174.6	2,430.6	12,099.2	16,209.4	4,765.2	32,176.5
2005Q1	1,679.4	14,426.5	21,863.5	2,538.2	13,018.2	18,360.6	5,390.1	33,192.5
2006Q1	3,018.2	18,531.4	26,313.6	2,977.2	15,806.0	24,472.7	6,875.0	38,294.6
2007Q1	3,569.6	21,148.4	28,605.2	3,165.5	18,677.8	28,571.0	8,413.7	42,015.7
2008Q1	4,195.0	23,796.5	29,775.3	3,370.7	21,606.7	33,583.5	9,882.4	45,346.9
2009Q1	3,801.4	20,597.0	28,912.8	3,127.5	17,846.1	31,483.5	9,034.1	37,884.4
2010Q1	3,637.4	22,153.7	25,859.5	3,114.9	18,214.2	31,711.2	9,055.3	35,898.9
2011Q1	4,937.3	26,911.8	30,874.9	3,063.7	21,564.6	38,486.4	11,052.8	44,642.1
2012Q1	5,242.9	30,076.8	31,249.2	3,317.3	22,472.3	42,010.9	12,456.7(p)	47,761.0
2013Q1	6,126.4	28,696.1	32,079.1	3,233.7	22,870.2	43,608.4	13,534.2(p)	47,687.4

Source : '*Eurostat*'

We can see from the tables above that there are similarities with the results of the GDP and domestic demand but there is a big difference when it comes to exports. During the 2007-2008 crisis year we observed that both GDP and domestic demand fell almost for all countries (except Poland and Czech Republic) and they started to recover slowly the years after while this is not the case with exports. The exports continued to rise during that period and fell considerably in 2009 while they recovered rapidly within one year. In all cases, including the EU and members and non-Euro area member countries, that exports collapsed in 2009 and they recovered the year after reaching higher numbers in 2011 relative to the pre-crisis period.

Million euro (at prices of the previous year) **INDIC_NA:** Imports of goods and services

GEO / TIME	European Union (28 countries)	European Union (27 countries)	Euro area (18 countries)
2004Q1	867,029.3	863,127.2	647,725.9
2005Q1	918,467.5	914,399.7	685,947.2
2006Q1	1,081,427.8	1,076,750.5	792,686.6
2007Q1	1,188,660.6	1,183,592.1	881,022.9
2008Q1	1,251,168.8	1,245,507.6	923,719.7
2009Q1	1,121,865.5	1,116,970.5	840,843.6
2010Q1	1,098,156.5	1,093,814.5	829,557.4
2011Q1	1,272,453.0	1,267,704.5	956,957.4
2012Q1	1,347,698.2	1,342,875.8	1,007,536.6
2013Q1	1,353,627.2	1,349,018.2	1,005,402.8

GEO / TIME	Bulgaria	Czech Republic	Denmark	Croatia	Hungary	Poland	Romania	Sweden
2004Q1	2,677.6	12,032.5	18,846.4	3,504.3	12,527.3	18,066.8	5,662.4	25,873.5
2005Q1	2,487.5	13,249.5	20,137.9	3,659.3	13,281.4	18,434.0	6,660.8	27,484.4
2006Q1	4,272.4	16,527.9	24,613.2	4,452.4	16,198.8	24,716.7	8,786.1	31,570.5
2007Q1	5,152.6	20,027.3	27,860.7	4,809.6	18,678.1	30,185.4	11,881.0	36,049.9
2008Q1	5,872.2	22,236.8	28,947.5	5,326.5	21,271.2	35,737.3	14,686.1	39,083.4
2009Q1	5,087.4	19,669.5	26,958.6	4,429.3	17,066.4	32,845.1	10,731.7	33,052.0
2010Q1	4,383.6	19,841.2	24,031.7	4,003.1	16,952.5	31,709.3	10,654.1	31,359.7
2011Q1	5,258.3	24,472.8	27,125.1	4,274.4	19,984.8	38,662.8	12,307.2	39,806.7
2012Q1	5,922.2	27,086.7	28,750.8	4,505.3	20,721.2	41,932.4	13,696.1(p)	42,181.8
2013Q1	6,582.4	26,207.8	30,157.9	4,288.2	21,187.1	42,814.1	13,620.1(p)	41,518.3

Source : '*Eurostat*'

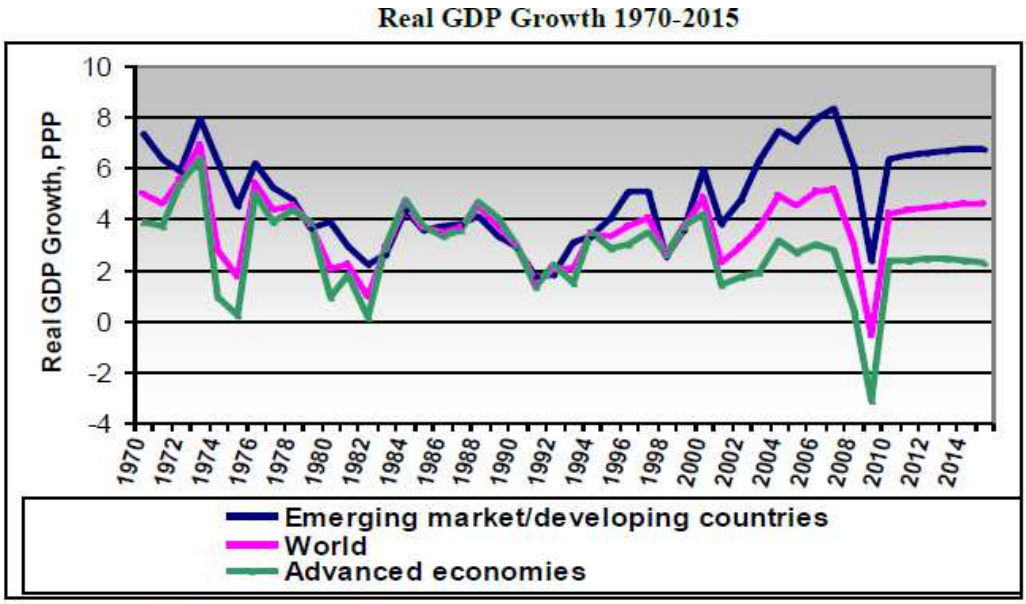
Similar results are observed for the imports as well. They collapsed in 2009 and they recovered the year after. Comparing exports and imports tables we can conclude the following :

- In the EU (28), the exports were higher than the imports in 2008 but they fell through to a largest extent than the imports and in 2011 increased by a higher percentage relative to the pre-crisis period(2008). Despite the higher percentage increase, the exports remained higher that imports in the EU (28). Similar results were observed for the EU (27) and the Euro area, with even higher percentage decrease in the exports in 2009.
- On average, the percentage decrease in exports for non-eurozone countries was less than the percentage decrease of the EU or Euro area. With regards to the imports decrease, the opposite is true. The average decrease in imports of the non-eurozone members was higher than the decrease in the EU and Euro area.

From the analysis we have conducted in this chapter so far, we can derive two basic conclusions :

1. During the financial and economic crisis, they economic activity were hit hard and both the GDP and world trade were negatively affected. The global GDP decreased considerably during the crisis but still less than the world trade which collapsed. However, the world trade recovered rapidly one year later while the world GDP started recovering at a much slower pace.
2. During the financial and economic crisis, they economic activity were hit hard and both the GDP and world trade were negatively affected. The impact of the crisis on these two factors appeared not at the same time though. In 2008 when the crisis began, the world GDP (and the GDP of different regions and countries) started to decrease while for the world trade this was not the case. Exports and imports decreased in 2009 even more than the GDP. One year later, the world trade started to recover rapidly unlike the world economic activity where it started recovering at a lower pace as we mentioned above.
3. The impact of the crisis on the world trade was not the same for all countries and regions. As far as they EU is concerned, they exports were higher than the imports in 2008 and they decreased at a higher percentage in 2009. In 2010, both imports and exports started to recover at a fast pace but imports at an even faster pace. Despite this rapid recovery, exports in the EU remained higher than imports in 2010. With regards to the non-eurozone members, on average, the percentage decrease in exports was below the percentage decrease of the EU or Euro area. However, the opposite is true for imports. The average decrease in imports of the non-eurozone members was higher than the decrease in the EU and Euro area.

Looking at the following graphs we can derive two more conclusions from our analysis.



Source: IMF includes forecast for 2010-2014.

We can see that from 1984 to 1998 the Real GDP growth was almost the same for both developed and developing countries. The situation started changing and big difference were observed in 2002 on-wards. It seems like the developing economies benefited to a greater degree when it comes to output growth with a considerable gap in comparison with the developed economies. In fact, the developed countries experienced a slower growth from 2000 relative to the past years. This was the position of the countries before the big downturn in 2009

Export Volume Shock

Percentage of gross domestic product		
		Demand shock: change in export volume
World	2008	0.5
	2009	-3.5
Developed economies	2008	0.2
	2009	-3.5
United States of America	2008	0.5
	2009	-1.3
Japan	2008	0.1
	2009	-4.4
EU-15	2008	-0.2
	2009	-4.4
Economies in transition	2008	2.3
	2009	-5.1
Developing countries	2008	2.1
	2009	-3.3
Africa	2008	2.1
	2009	-2.2
East and South Asia	2008	2.9
	2009	-4.2
Western Asia	2008	3.4
	2009	-3.3
Latin America and the Caribbean	2008	-0.4
	2009	-1.7
Least developed countries	2008	1.4
	2009	-1.6

Source : '*UN-DESA, WESP 2010*'

It is clear from the table that developing countries experienced the largest damage form the crisis with regards to the Export Volume stock. The global economy faced a real shock as in 2009 the change in export volume is quite big. The developing economies were hit harder than the developed ones as we can see in the table above and this was also the case with the less developed countries within the EU. So we can generalize this conclusion as the developing economies experienced tha bigger damage in terms of trade compared to more developed ones on a global level as well as in other regions such as the EU.

So the next two conclusions for our analysis in this chapter are :

4. In a period of economic growth, the countries that benefit most are the developing ones and that is true especially after the common currency introduction where economic and trade cooperation became tighter between European country members. As long as there is an economic boom and the

economy continues to grow, developing countries seem to enjoy benefits that otherwise it is not for granted that they could achieve. However,

5. For developing countries when they work closely with other countries having economic and trade (free trade mainly) agreements with other countries (the EU as a single market and common currency in the Euro Area) and at the same time their economies are faced with an unexpected crisis, then it is this group of countries that suffer the most damage during the crisis compared to their more developed partners.

Now that we have seen what happened during the crisis, in the next chapter we are going to present results about the global economy and trade after the crisis.

Chapter 4

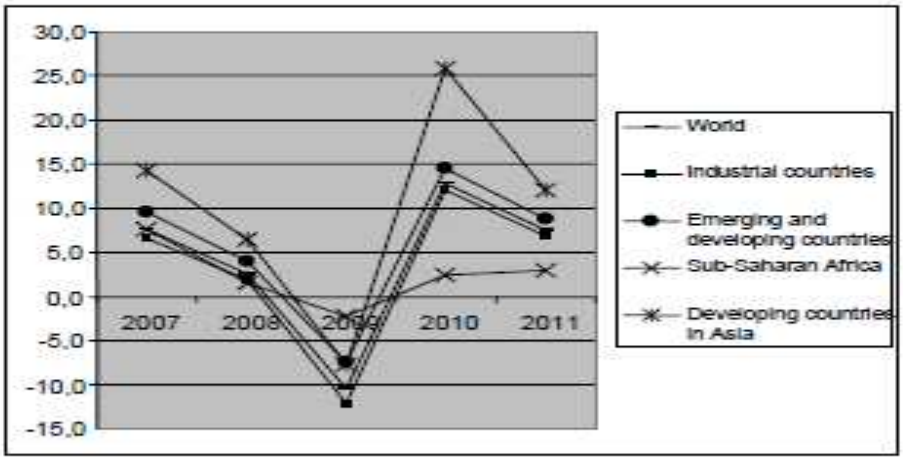
The World Trade and the Global Economy after the Crisis to Today

The Global Economy after the crisis

In 2008-2009 the world trade experienced its greatest collapse in decades. In response, a number of countries introduced protection measures to save their economies. An example is the depreciation, as we have already mentioned, in the region of 20% that was adopted by some countries to increase their competitiveness. Despite the fact that there were quite a few countries adopting such protectionist policies, the number of measures taken is considerably low in comparison with the situation during the Great Depression. The Global Economy was far from the 1930s-style protectionist outcome.

After the collapse, unexpectedly enough, world trade recovered rapidly. After the 10.9% decrease in the volume of trade that continued until 2009, one year later trade volume surpassed at some point even the pre-crisis results. According to the World Bank, the financial crisis slowed down international trade significantly as the increase in 2010 would have been 13.6% higher compared to the 0.8% that was actually realized. The results are more encouraging for developing countries relative to the industrial ones. Specifically, in 2010, for the latter group of countries the export volume almost reached its pre-crisis level (only 2% gap) while for the developing countries the export volume increased around 16% higher of its pre-crisis level. The graph below show the impressive recovery of trade with 1 year :

Figure 1: Variation in the export volume of selected countries 2007-2011 (Percentage variation compared with the precious years)

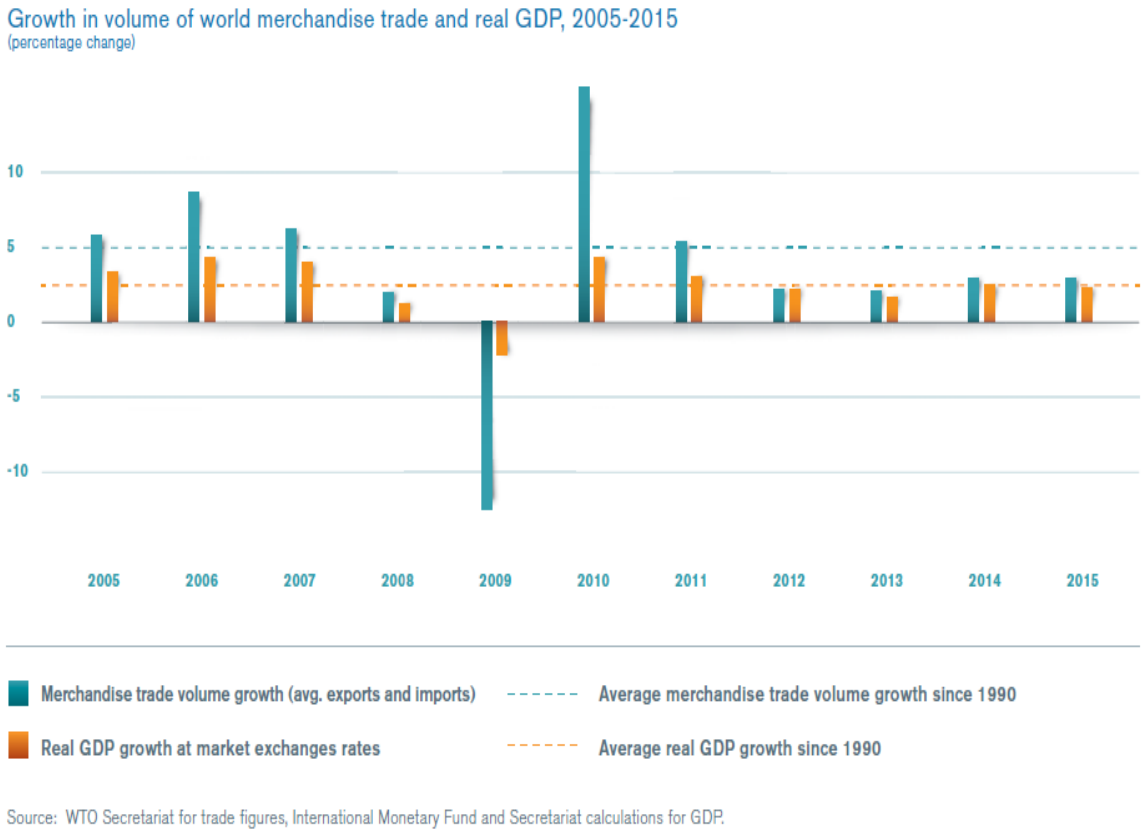


Source: IWF, World Economic Outlook Database as of 28.07.2011: Predictions, 2011 Estimates

The graph above verifies one of the conclusion we derived in the the previous chapter. The world trade recovered rapidly with the emerging and developing economies leading the race.

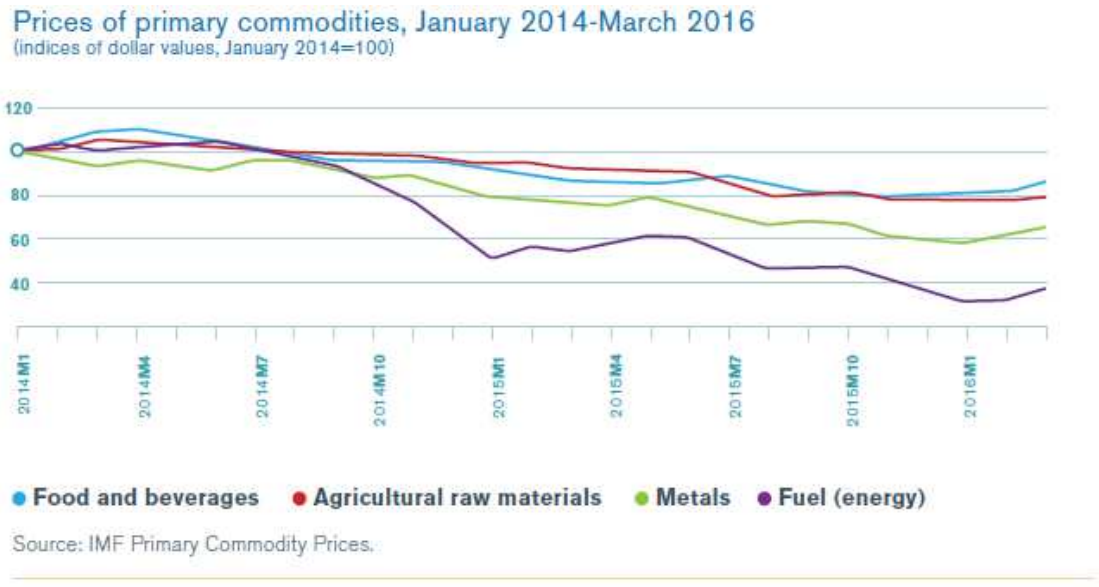
In the previous chapter we presented results for the GDP, domestic demand and world trade (exports & imports) for the years before and after the crisis. What about the other economic factors of the economic activity? How did the world economy looked like after the crisis?

Before analyzing the different economic factors of the economy, let's begin with a combined graph on the GDP and merchandise trade :



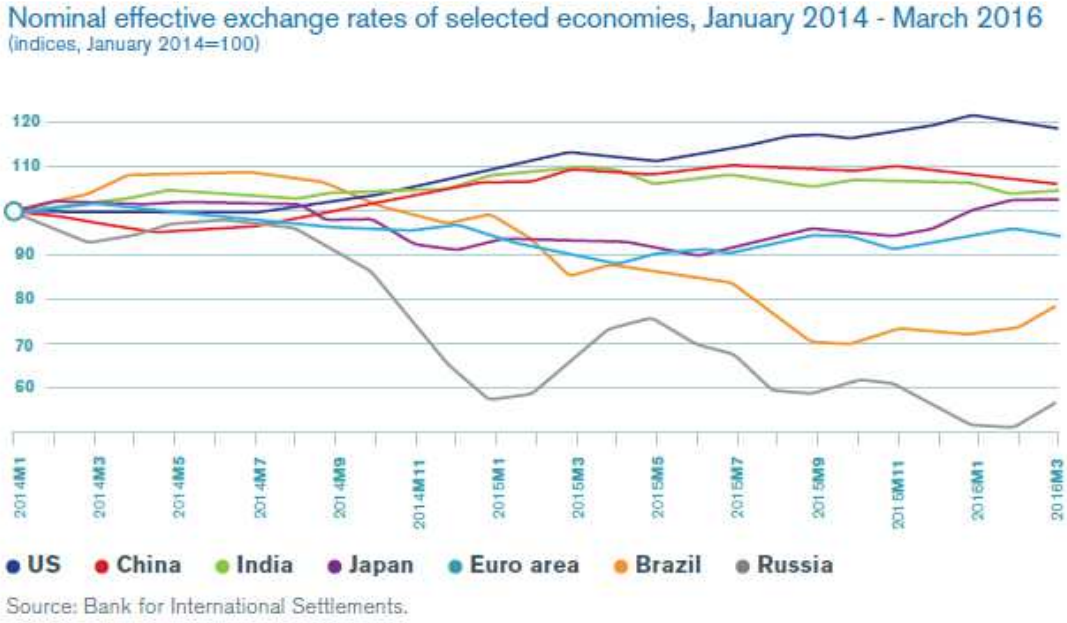
Source: WTO Secretariat for trade figures, International Monetary Fund and Secretariat calculations for GDP.

After 2009 we can see that merchandise trade recovered and increased much more than the real GDP growth. However, the difference between them started to reduce gradually year after year and in 2015 merchandise trade was slightly above the real GDP growth. Despite this small advantage, the latter seems to be equal with the average GDP growth since 1990 while the former is considerably below the average merchandise trade volume growth since 1990. According to the WTO, a decline in world commodity prices had a significant impact on the value of global merchandise trade in 2015. The prices of primary commodities during the last years :



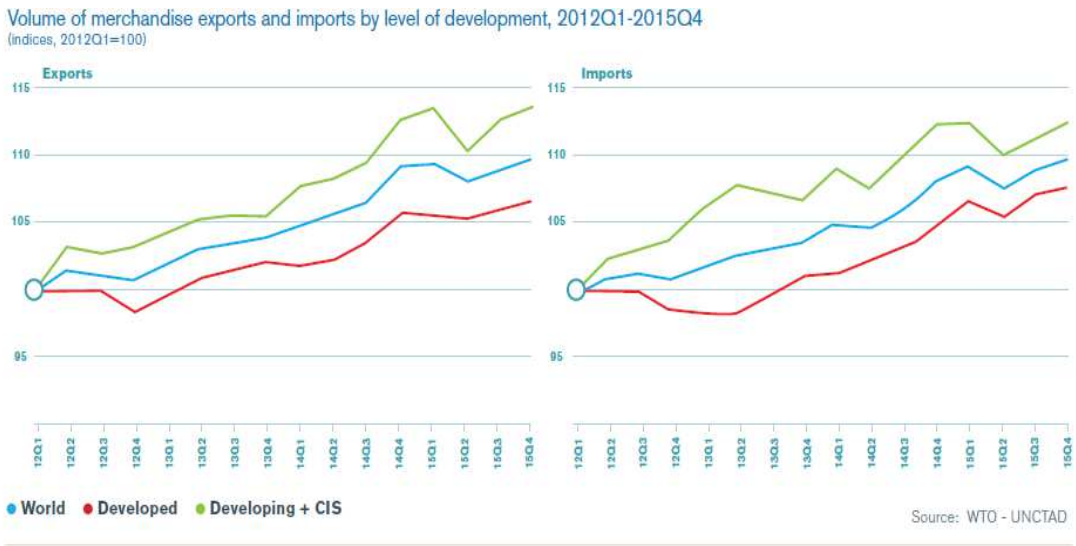
Source: IMF Primary Commodity Prices.

The prices started decreasing mid-2014 for all categories. The largest drop was seen in Fuel-energy (as a result of new sources of supply such as shale oil and an easing of world energy demand as economic growth slowed in Asia), followed by Metals while Food and Beverages experienced the smallest decrease. Prices play an important role for countries when it comes to trade and they are closely related with the exchange rates and. So, how were the exchange rates formed during the last years :



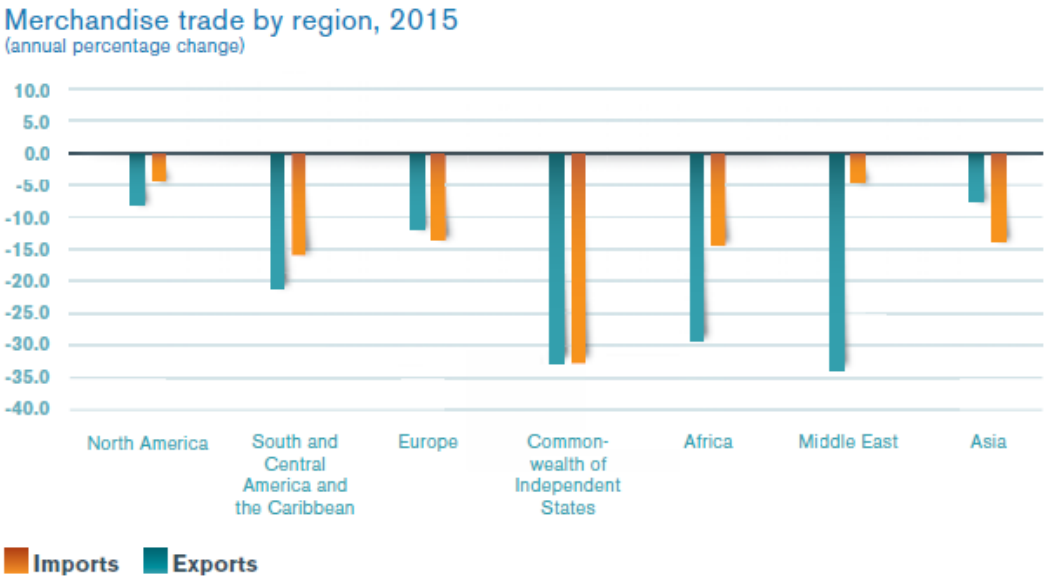
The appreciation of the US dollar contributed to falling commodity prices since most primary products are priced in dollars and a stronger USD allows the same quantity of goods to be purchased with fewer dollars. The USD appreciated 13% on average against the currencies of US trading partners in 2015 and was even more between June 2014-December 2015. The Chinese yuan appreciated along with the dollar, rising 10 percent on average in 2015 followed by the appreciation of the Indian currency. The appreciation of yuan may have contributed to the slowdown in China to the extent that it made Chinese exports more expensive in foreign markets. As see from the graph, Brazil and Russia saw the biggest drop in their currencies in 2014 due to the fact that falling prices for oil and other commodities reduced export earnings (both countries are major natural resources exporters). The exchange rate of the Euro dropped slightly between 2014-2016 while Japan saw its currency appreciating slightly in 2016.

Let's now have a look at the exports and imports of merchandise trade for developed and developing economies as well as on a global level.

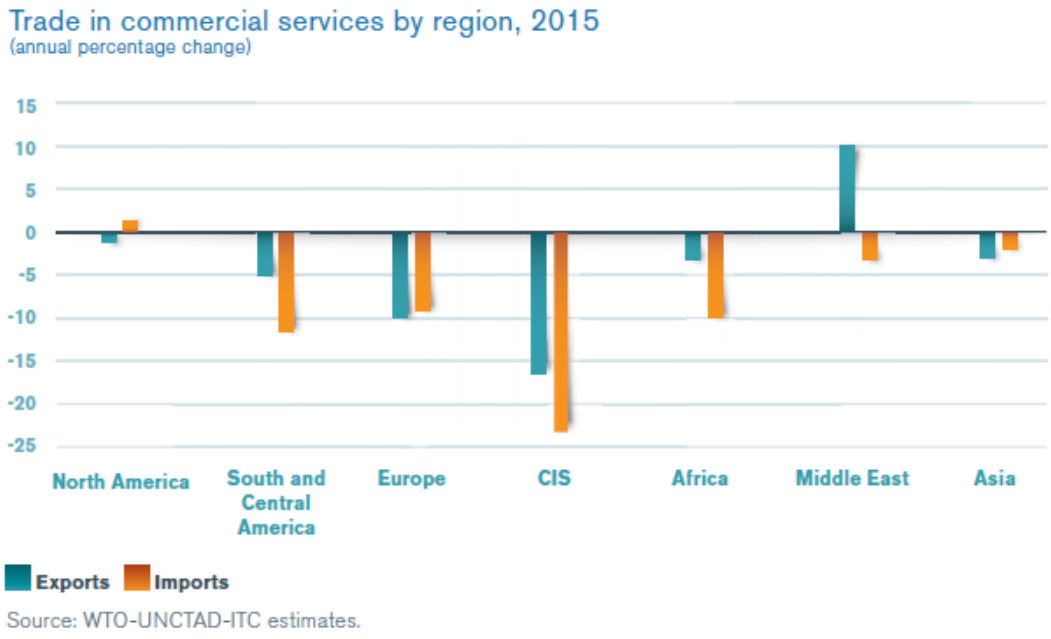


World trade was volatile over the course of 2015 falling sharply in the second quarter of the year and recovering fast in the last six months. The declines in exports and imports of developed economies in the second quarter were less than the world average while all the economies were affected to varying degrees by trade slowdown. We can also see from the graph that the exports for both developed and developing economies are higher than the imports. For developing countries, exports have been less volatile relative to imports, with three main increases since 2012 for each consecutive years for the imports while the increase in exports was much lower for these years. As far as developed countries are concerned. The volume of imports had been more volatile than the one for exports with bigger fluctuations but similar path during these years.

So far we have discussed about merchandise trade, so now we can take one step further and present data on merchandise trade by region. Then we can compare the results with the trade of commercial services for the different regions.



In dollar terms, Asia was the best performing region with the lowest annual percentage decrease in exports which accounted for 5.961 trillion in 2015 followed by Europe's 5.958 trillion and North America's 2.3 trillion. Despite the less exports. North America had the second best performance in terms of exports followed by Europe. The worst performing regions were CIS and Middle East as far are exports are concerned with the former having a similar decrease in imports while the decrease of imports for the latter was much less. Asia along with Europe are the only region that saw a bigger decrease in their exports relative to their imports. How can these results be compared to the ones for the trade in commercial services ?



During the same year, world trade in commercial services slowed down by 6% with some regions experiencing significant declines. Specifically, for the CIS exports decreased by 16% and imports by 23% reflecting a contraction in services for Russia and the depreciation of its national currency against the USD. Exchange rates fluctuation in Europe contributed to the region's decline in commercial services trade as well while the recession in Brazil had a significant impact in South and Central America particularly in terms of commercial service imports which fell by 12%. North America was the only region with positive import growth. In Asia, a decline in transport exports in a number of economies, due to weak merchandise trade and a contraction in other commercial services led to services exports falling by 3% and imports by 2%. As far as Africa is concerned, a decrease in travel receipts, which accounted for more than 40% of Africa's exports, led to 3% drop in Africa's commercial services. Last, the Middle East was the only region with an increase in the export commercial services thanks to the expanding tourism (rose by 5%) which is the region's largest exporting service which boosted growth in both UAE and Saudi Arabia.

Now that we have examined different factors of the economy and trade for different countries and regions after the crisis, we can present some Important evidence on World Trade.

- ✧ Trade in goods and services has fluctuated significantly over the past 20 years.
- ✧ During the financial crisis of 2008, the volume of world exports decreased by 12% in 2009 while the global GDP decreased by 2%.
- ✧ World merchandise exports : 1995 - $5,168 billion, 2005 - $10,509 billion, 2014 - $19,002 billion. World exports of commercial services : 1995 - $1,179 billion, 2005 - $2,516 billion, 2014 - $4,872 billion.
- ✧ In 2009, the biggest drop in trade over the last 20 years. World merchandise exports decreased by 22% and commercial services exports decreased by 9%.
- ✧ 2010 and 2004 : Highest recovery rates in trade for the past 20 years, 14% world merchandise exports (2010) and 22% world services exports (2004).
- ✧ Trade and GDP : A divergence in 2001, world merchandise exports dropped by -0.5% while world GDP increased by 2%; A decline in 2009, world merchandise exports dropped by 12% while world GDP decreased by 2%; A recovery in 2010, world merchandise exports increased by 14% while the world GDP increased by 4%; Parity in 2014 for both.
- ✧ Despite the financial crisis, the share of world trade is much higher today than it was 20 years ago.
- ✧ Exports of goods to developing regions have significantly increased while Europe remains the main destination.
- ✧ Intra-regional trade accounts for a significant proportion of exports for Europe, Asia and North America.

Now that we have presented data regarding our economy after the crisis, it would be essential to understand what actions did the countries adopted in order to prevent the crisis from expanding and protected themselves in the international markets. Based on this analysis we can then discuss the effectiveness of the WTO current rules and what can be done to improve the existing rules and have a reformed set of rules to help countries face a future crisis in a more efficient way.

We mentioned that protection measures were introduced by many countries to help them stop the situation from deteriorating. But what was the reality about these measures? Was the number of measures adopted high?

The General Agreement on Tariffs and Trade (GATT), the predecessor of WTO, aimed at preventing protective wars and a protectionist race between countries. The regulations of the WTO, the EU and the trade agreement in the G20 group can limit trade barriers and strengthen further liberalization. Despite some successful and efficient attempts, new types of protectionism have arose (murky protectionism, we will discuss it later on). Different studies have found contradictory results and present at some point different data on the protection measures that were introduced. The general result from the study is totally unexpected. Most trade barriers have been introduced by the G20 countries. Germany and the EU are representative examples of countries adopting **begger-thy-neighbour policies** (in economics, this term is used for those policies adopted to protect a country's economy but at the same time damaging the economy of other countries).

Nobody can question the effectiveness of the existing WTO regulations as they served as a 'wall' against a widespread protectionism. However, these are considered inadequate for such a rapidly changing world. New or reformed rules need to be introduced. For instance, 'ailing' firms should be bailed out and governments should create incentives for investors to buy in the local market and support the development of each country. In that sense, we would push the economy into regional and bilateral free trade agreements and have better control of the situation rather than the multilateral chaotic framework. In addition, with the current rules, the emerging economies seem to be very vulnerable so further trade liberalization should be discussed about them necessarily.

What restriction measures did countries introduce?

Since the global financial crisis that started in October 2008, countries started to impose various kinds of trade-restrictive measures (see Table I-1 below). The United States Government, for example, instituted the Recovery and Reinvestment Act of 2009 in February 2009, which included a "buy American" clause to encourage the purchase of domestic products. Following the entry into effect of this provision, "buy Indonesian" and "buy Victorian" campaigns started (the latter in the Australian state of Victoria). European countries such as Germany, France, and the United Kingdom have successively announced bail-out measures for their automotive industries, and Argentina, India and Indonesia have introduced new import licensing systems.

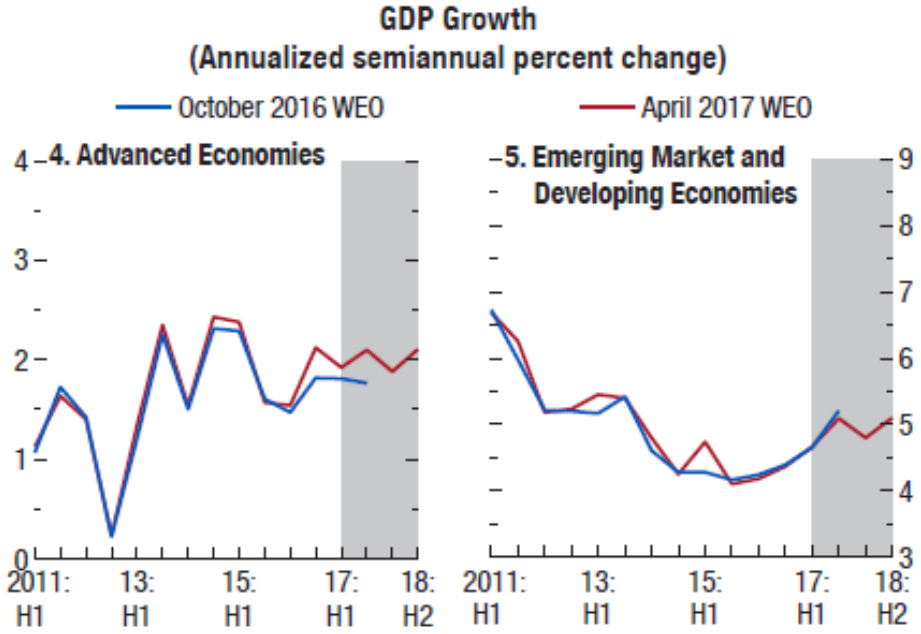
Ecuador, Russia and Ukraine have raised tariffs on a wide range of imported products, including automobiles, electrical goods, iron and steel, and machinery. In October 2008, in response to a potential surge of trade-restrictive measures worldwide, the WTO established a task force to monitor the introduction of new trade-related measures (JUTRO, 2012).

Furthermore, Following the financial crisis, a number of countries increased their tariffs. Ecuador, Russia and Ukraine increased tariffs on a large number of products, while Brazil, the EU, India, Turkey, and Vietnam, among others, increased tariffs on specific items. With regard to specific sectors, tariffs on iron and steel products were raised by a large number of countries. For instance, India increased its tariff on certain iron and steel products from zero to 5 per cent in November 2008. In January 2009, Turkey increased its tariff on hot flat-rolled steel from 5 per cent to 13 per cent, and on cold flat-rolled steel from 6 per cent to 14 per cent. In April 2009, Vietnam increased its tariffs on half-finished iron and steel goods, flat-rolled steel, steel bars, steel wire, and iron and steel pipes by several percentage points in each case. In June 2009, Brazil increased tariffs on seven iron and steel products, including hot- and cold-rolled steel sheets, from zero to a maximum of 14 per cent. Many countries increased tariffs on primary products, including agriculture food products, which had been previously reduced to combat high commodity prices during the period prior to the financial crisis. For instance, in October 2008, the EU reintroduced tariffs on cereal which had been eliminated in January of that year. Such tariff increases are not “illegal” under the WTO multilateral trading rules as long as the new tariff rate remains within the limit set by the bound rate.4 Under the General Agreement on Tariffs and Trade (GATT) of the WTO, member countries bind their tariffs, i.e. set upper limits to their tariff rates. The upper-limit tariff rate, or the “bound” rate, is not always the same as the rates that WTO members actually apply. In reality, in many countries there sometimes exists a wide gap between the bound tariff and the applied tariff.

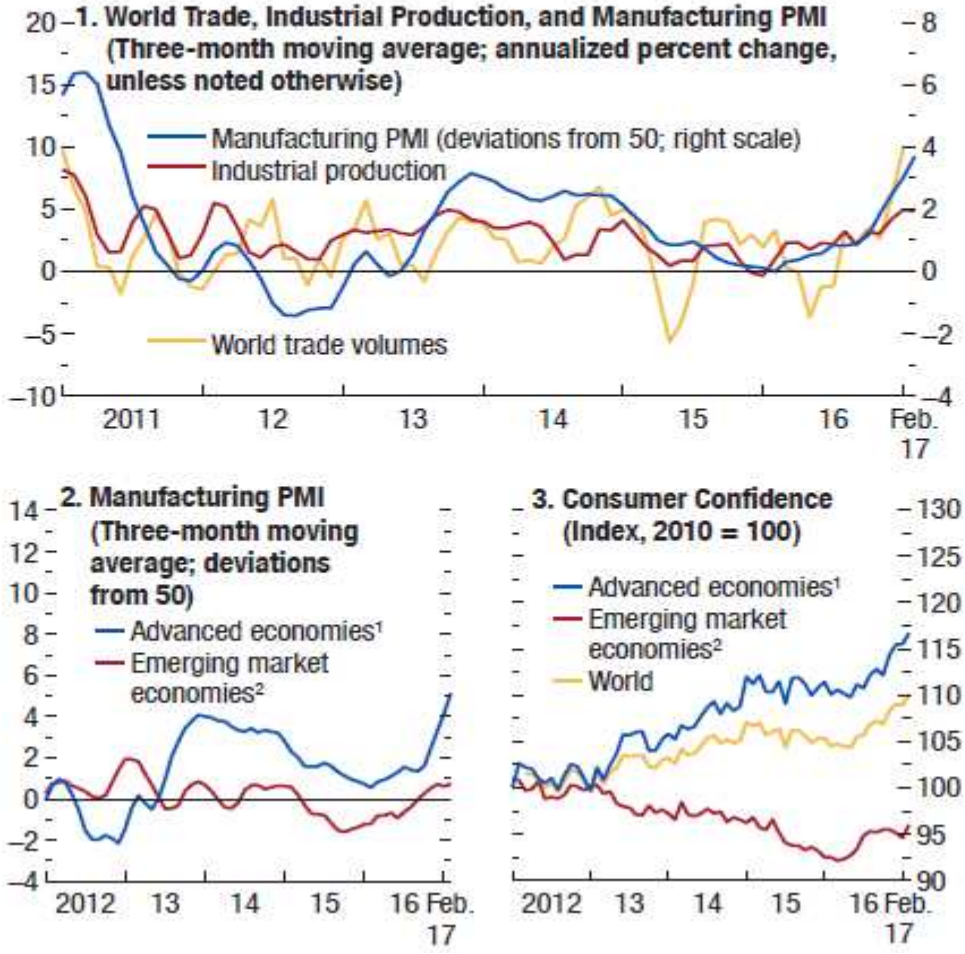
Further analysis on our global economy and world trade

Global Economic activity is heading towards a cyclical recovery with regards to investments, manufacturing and International Trade after such a long time. The growth of the world output will continue to rise next year (3.6% compared to 3.1% in 2016). Stronger activity, expectations of more robust global demand, reduced deflationary pressures, and optimistic financial markets are all upside developments. But structural impediments to a stronger recovery and a balance of risks that remains tilted to the downside, especially over the medium term, remain important challenges (IMF, 2017).

One of the key facts that we discovered in our analysis is the fact that Global GDP is less volatile relative to world trade. Let's see below were things stand today for these two factors compared to previous years :



Global economic activity gained momentum in the fourth quarter of 2016. Manufacturing PMIs and consumer confidence increased noticeably in advanced economies in the last few months of 2016 and early 2017. They also recovered to a more modest extent in emerging market economies.



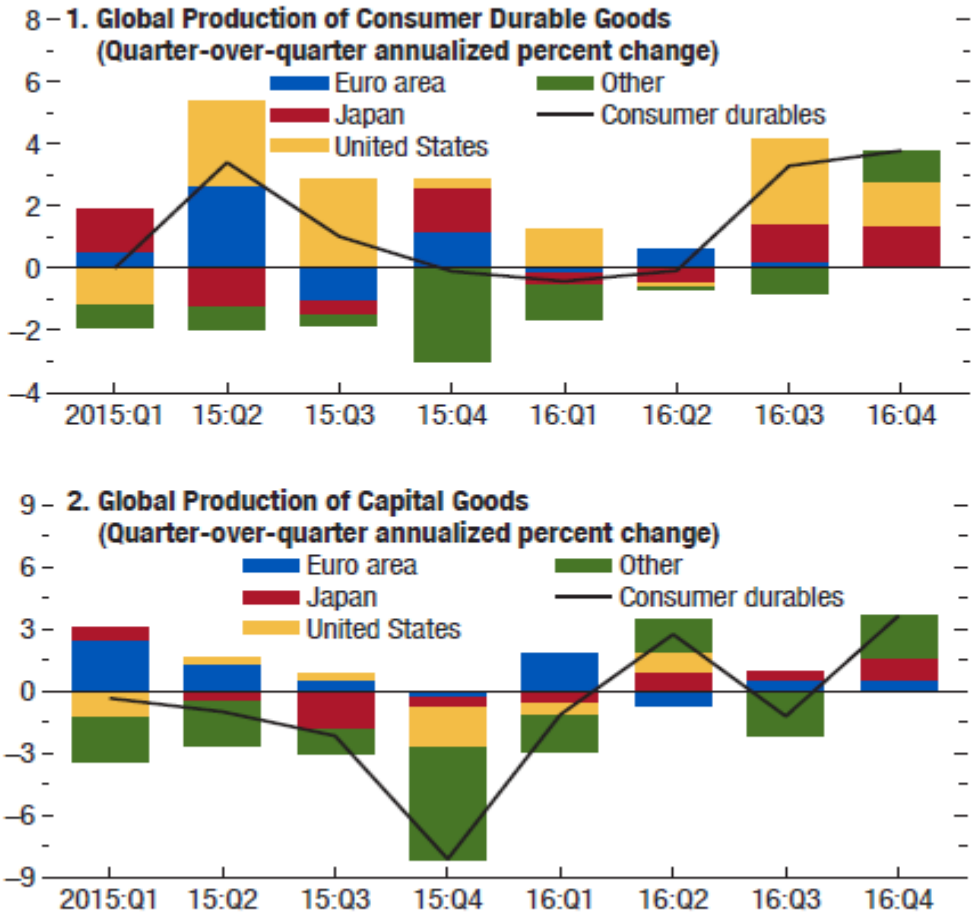
Source (for all above graphs) : *CPB Netherlands Bureau for Economic Analysis; Haver Analytics; Markit Economics; IMF staff estimates.*

We can see that the GDP growth is higher for developed countries and much more volatile during the previous years. In the next graphs we observe that the world trade volume is rising again, reaching highest point in six years. Manufacturing PMI is higher than Industrial Production but the latter has been more stable (less volatile). With regards to the two group of countries, the Manufacturing PMI was higher for developing economies in 2012 but since 2013 it is much higher for developed economies. Last, the consumer confidence is higher for the advanced economies while the emerging economies are far below the world average consumer confidence.

The Global production?

Figure 1.2. Recent Trends in Global Production

The production of both consumer durables and capital goods recovered in late 2016, after several quarters of lackluster growth or contraction.



Source: IMF staff estimates.
Note: Euro area data are through November 2016. Other = Brazil, India, Korea, Norway, Sweden, Switzerland, Taiwan Province of China, Turkey, United Kingdom.

Global Production of Durable Goods **:** The Euro Area production seem to be stable in the last quarter of 2016 with no percentage change. Th US market faces the largest change, followed by Japan and other countries.

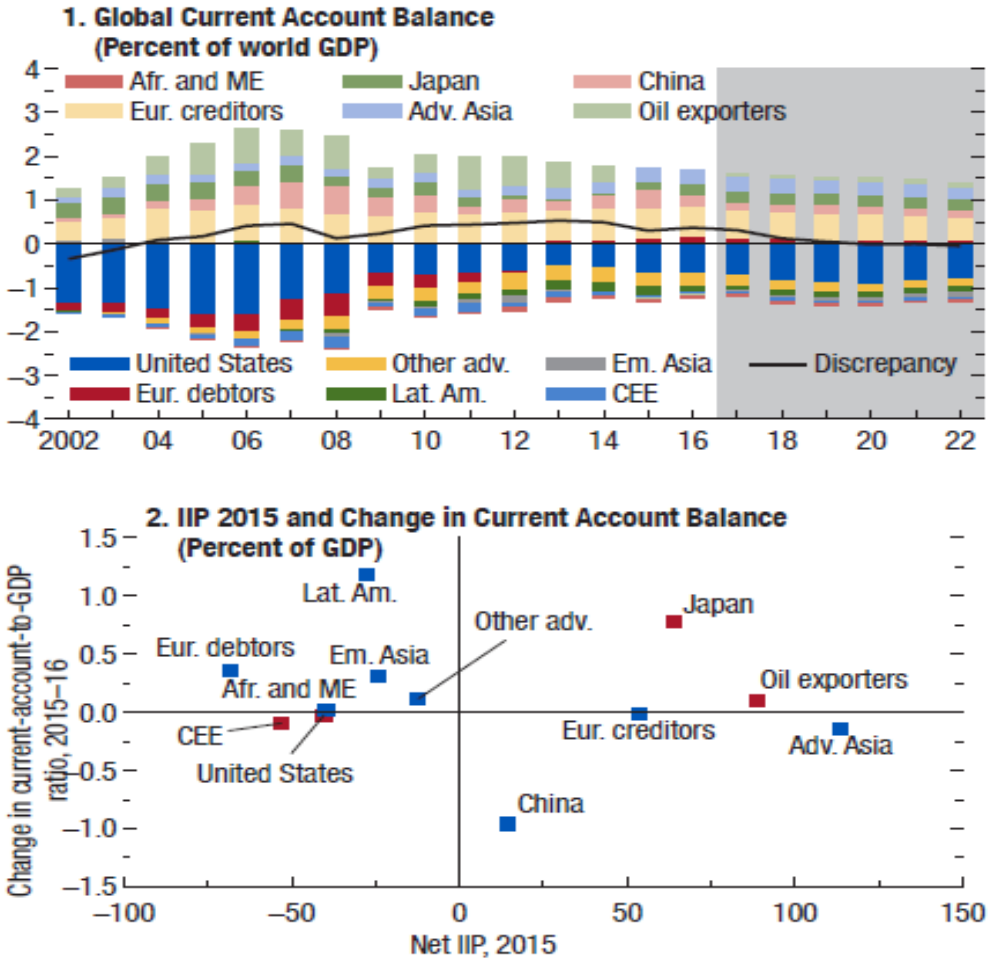
Global Production of Capital Goods : Contrary to our previous observation, the US market has the lowest change while the Euro Area comes second while Japan is in third place.

Combined : The Global production of Durable goods has been less volatile than the Global production of Capital Goods.

We mentioned previously that current account balances decreased during the crisis but are predicted to increase again from 2018 on-wards. Let's have a look below :

Figure 1.16. Global Current Account Balances

Global current account imbalances narrowed marginally in 2016. In general, current account balances tended to increase in debtor countries but decline in creditors—changes that would help stabilize the international investment positions. Imbalances are projected to remain stable in 2017 but widen again from 2018 onward.



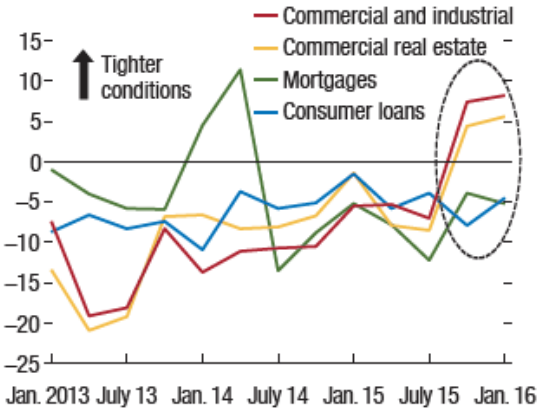
Source: IMF staff estimates.
Note: Adv. Asia = advanced Asia (Hong Kong SAR, Korea, Singapore, Taiwan Province of China); Afr. and ME = Africa and the Middle East (Democratic Republic of the Congo, Egypt, Ethiopia, Ghana, Jordan, Kenya, Lebanon, Morocco, South Africa, Sudan, Tanzania, Tunisia); CEE = central and eastern Europe (Belarus, Bulgaria, Croatia, Czech Republic, Hungary, Poland, Romania, Slovak Republic, Turkey, Ukraine); Em. Asia = emerging Asia (India, Indonesia, Pakistan, Philippines, Thailand, Vietnam); Eur. creditors = European creditors (Austria, Belgium, Denmark, Finland, Germany, Luxembourg, Netherlands, Norway, Sweden, Switzerland); Eur. debtors = European debtors (Cyprus, Greece, Ireland, Italy, Portugal, Spain, Slovenia); IIP = international investment position; Lat. Am. = Latin America (Argentina, Brazil, Chile, Colombia, Mexico, Peru, Uruguay); Other adv. = other advanced economies (Australia, Canada, France, Iceland, New Zealand, United Kingdom); Oil exporters = Algeria, Azerbaijan, Iran, Kazakhstan, Kuwait, Nigeria, Oman, Qatar, Russia, Saudi Arabia, United Arab Emirates, Venezuela.

The financial system is a key pillar for the global economy. The crisis began due to the financial system failures and it is where the economy has began its recovery. Has the financial system changed; what are the financial conditions globally; Let's have a look at the graph below and try to answer these questions.

Figure 1.1.1. Financial Conditions

Lending standards have been tightening across the board since mid-2015.

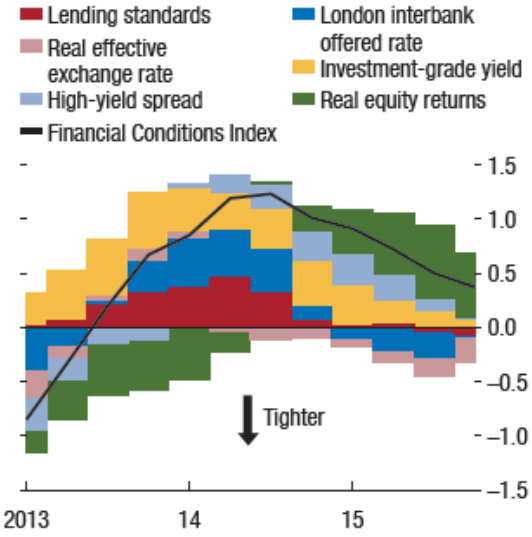
1. Senior Loan Officer Opinion Survey: Tightening Bank Lending Standards (Net percent of respondents)



Sources: Federal Reserve; and Haver Analytics.

The U.S. financial conditions index progressively tightened since mid-2014.

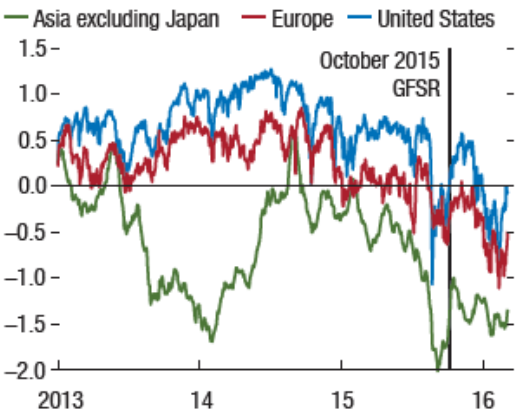
2. U.S. Financial Conditions Index and Component Contributions (Change in percentage points of year-over-year real GDP growth)



Sources: Bank of America Merrill Lynch; Bloomberg, L.P.; Haver Analytics; and IMF staff calculations.

Financial conditions in Europe and Asia have also tightened ...

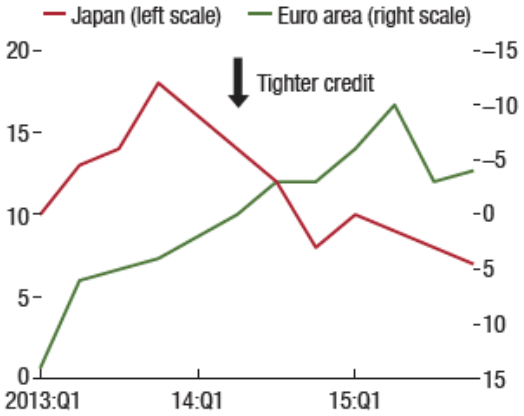
3. Financial Conditions Indices



Source: Bloomberg, L.P.
Note: GFSR = *Global Financial Stability Report*.

... even as Japanese banks tightened credit standards.

4. Central Bank Credit Standards Surveys (Net percent)



Sources: Bank of Japan; European Central Bank; and Haver Analytics.

It seems like a number of things have changed compared to the pre-crisis situation. The general conclusions from the above graphs are :

i. The lending standards have been tightening since 2015 for the different types of loans. The Banking standards for mortgages have been the most volatile while significant increase can be observed in the tightening standards for commercial-industrial-real estate ones.

ii. The financial conditions Index the measures risk, liquidity & leverage in money markets, debt markets and equity markets and is the way of assessing financial conditions.

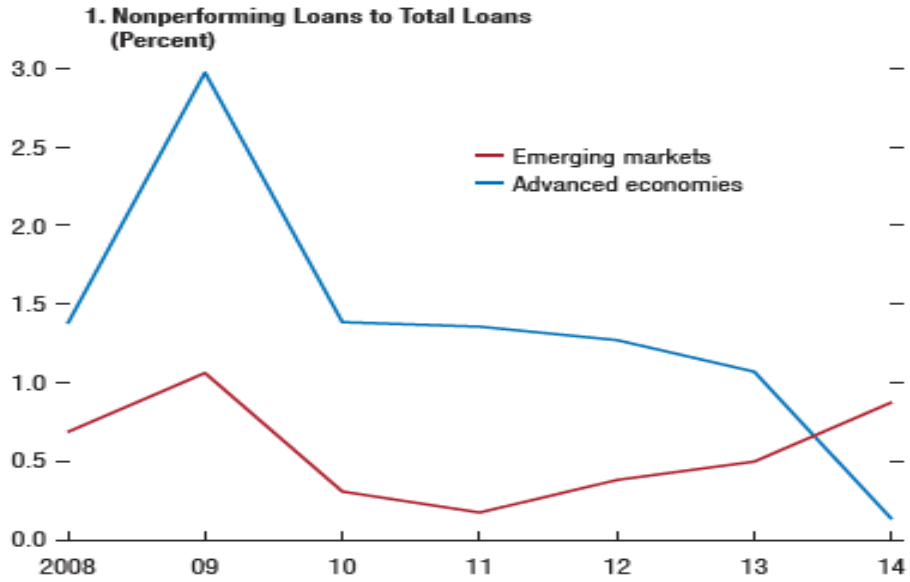
iii. The financial conditions have also tighten in Europe and are close to the ones that prevail in the USA. In Asia, the same conclusion stands but the financial conditions are still lower than Europe & USA.

iv. Since 2014 (almost mid-2014) tighter credit standards prevail in Japan relative to Europe. The opposite was true in the past.

Now that we have a better idea of how the financial system has shifted from the pre-crisis condition, the next question is : how healthy are banks today?

Figure 1.17. Banking System Health

Rising bad loans and slowing growth will likely raise required provisions going forward ...



Sources: Bankscope; and IMF staff calculations.

We can see something that most of us would have expected. The non-performing loans (to total assets) are decreasing in the advanced economies at a faster pace while in developing ones they are steadily increasing. That create further problems for this group of countries as the banks become less and less able to provide loans and an increase in the economic activity is less likely.

A few more information on the Global Economy

According to the CIA…

The international financial crisis of 2008-09 led to the first downturn in global output since 1946 and presented the world with a major new challenge: determining what mix of fiscal and monetary policies to follow to restore growth and jobs, while keeping inflation and debt under control. Financial stabilization and stimulus programs that started in 2009-11, combined with lower tax revenues in 2009-10, required most countries to run large budget deficits. Treasuries issued new public debt - totaling $9.1 trillion since 2008 - to pay for the additional expenditures. To keep interest rates low, most central banks monetized that debt, injecting large sums of money into their economies - between December 2008 and December 2013 the global money supply increased by more than 35%. Governments are now faced with the difficult task of spurring current growth and employment without saddling their economies with so much debt that they sacrifice long-term growth and financial stability. When economic activity picks up, central banks will confront the difficult task of containing inflation without raising interest rates so high they snuff out further growth.

Fiscal and monetary data for 2013 are currently available for 180 countries, which together account for 98.5% of world GDP. Of the 180 countries, 82 pursued unequivocally expansionary policies, boosting government spending while also expanding their money supply relatively rapidly - faster than the world average of 3.1%; 28 followed restrictive fiscal and monetary policies, reducing government spending and holding money growth to less than the 3.1% average; and the remaining 70 followed a mix of counterbalancing fiscal and monetary policies, either reducing government spending while accelerating money growth, or boosting spending while curtailing money growth.

In 2013, for many countries the drive for fiscal austerity that began in 2011 abated. While 5 out of 6 countries slowed spending in 2012, only 1 in 2 countries slowed spending in 2013. About 1 in 3 countries actually lowered the level of their expenditures. The global growth rate for government expenditures increased from 1.6% in 2012 to 5.1% in 2013, after falling from a 10.1% growth rate in 2011. On the other hand, nearly 2 out of 3 central banks tightened monetary policy in 2013, decelerating the rate of growth of their money supply, compared with only 1 out of 3 in 2012. Roughly 1 of 4 central banks actually withdrew money from circulation, an increase from 1 out of 7 in 2012. Growth of the global money supply, as measured by the narrowly defined M1, slowed from 8.7% in 2009 and 10.4% in 2010 to 5.2% in 2011, 4.6% in 2012, and 3.1% in 2013. Several notable shifts occurred in 2013. By cutting government expenditures and expanding money supplies, the US and Canada moved against the trend in the rest of the world. France reversed course completely. Rather than reducing expenditures and money as it had in 2012, it

expanded both. Germany reversed its fiscal policy, sharply expanding federal spending, while continuing to grow the money supply. South Korea shifted monetary policy into high gear, while maintaining a strongly expansionary fiscal policy. Japan, however, continued to pursue austere fiscal and monetary policies.

Countries with expansionary fiscal and monetary policies achieved significantly higher rates of growth, higher growth of tax revenues, and greater success reducing the public debt burden than those countries that chose contractionary policies. In 2013, the 82 countries that followed a pro-growth approach achieved a median GDP growth rate of 4.7%, compared to 1.7% for the 28 countries with restrictive fiscal and monetary policies, a difference of 3 percentage points. Among the 82, China grew 7.7%, Philippines 6.8%, Malaysia 4.7%, Pakistan and Saudi Arabia 3.6%, Argentina 3.5%, South Korea 2.8%, and Russia 1.3%, while among the 28, Brazil grew 2.3%, Japan 2.0%, South Africa 2.0%, Netherlands -0.8%, Croatia -1.0%, Iran -1.5%, Portugal -1.8%, Greece -3.8%, and Cyprus -8.7%.Faster GDP growth and lower unemployment rates translated into increased tax revenues and a less cumbersome debt burden. Revenues for the 82 expansionary countries grew at a median rate of 10.7%, whereas tax revenues fell at a median rate of 6.8% for the 28 countries that chose austere economic policies. Budget balances improved for about three-quarters of the 28, but, for most, debt grew faster than GDP, and the median level of their public debt as a share of GDP increased 9.1 percentage points, to 59.2%. On the other hand, budget balances deteriorated for most of the 82 pro-growth countries, but GDP growth outpaced increases in debt, and the median level of public debt as a share of GDP increased just 1.9%, to 39.8%.

The world recession has suppressed inflation rates - world inflation declined 1.0 percentage point in 2012 to about 4.1% and 0.2 percentage point to 3.9% in 2013. In 2013 the median inflation rate for the 82 pro-growth countries was 1.3 percentage points higher than that for the countries that followed more austere fiscal and monetary policies. Overall, the latter countries also improved their current account balances by shedding imports; as a result, current account balances deteriorated for most of the countries that pursued pro-growth policies. Slow growth of world income continued to hold import demand in check and crude oil prices fell. Consequently, the dollar value of world trade grew just 1.3% in 2013.

Austere economic policies have significantly affected economic performance. The global budget deficit narrowed to roughly $2.7 trillion in 2012 and $2.1 trillion in 2013, or 3.8% and 2.5% of World GDP, respectively. But growth of the world economy slipped from 5.1% in 2010 and 3.7% in 2011, to just 3.1% in 2012, and 2.9% in 2013.

Beyond the current global slowdown, the world faces several long standing economic challenges. The addition of 80 million people each year to an already overcrowded globe is exacerbating the problems of pollution, waste-disposal, epidemics, water-shortages, famine, over-fishing of oceans, deforestation, desertification, and depletion of non-renewable resources. The nation-state, as a bedrock economic-political institution, is steadily losing control over

international flows of people, goods, services, funds, and technology. The introduction of the euro as the common currency of much of Western Europe in January 1999, while paving the way for an integrated economic powerhouse, has created economic risks because the participating nations have varying income levels and growth rates, and hence, require a different mix of monetary and fiscal policies. Governments, especially in Western Europe, face the difficult political problem of channeling resources away from welfare programs in order to increase investment and strengthen incentives to seek employment. Because of their own internal problems and priorities, the industrialized countries are unable to devote sufficient resources to deal effectively with the poorer areas of the world, which, at least from an economic point of view, are becoming further marginalized. The terrorist attacks on the US on 11 September 2001 accentuated a growing risk to global prosperity - the diversion of resources away from capital investments to counter-terrorism programs.

Despite these vexing problems, the world economy also shows great promise. Technology has made possible further advances in a wide range of fields, from agriculture, to medicine, alternative energy, metallurgy, and transportation. Improved global communications have greatly reduced the costs of international trade, helping the world gain from the international division of labor, raise living standards, and reduce income disparities among nations. Much of the resilience of the world economy in the aftermath of the financial crisis resulted from government and central bank leaders around the globe working in concert to stem the financial onslaught, knowing well the lessons of past economic failures.

Source : *CIA, World Fact Book, 2017.*

Chapter 5

The EU position in International Trade and Agreements

Why to choose Europe as a reference point

The European Union is in pole position when it comes to world trade. The single market and the open trade regime has put Europe in a leading trade position, making it an attractive market to do business with. The EU has been acting on the international stage with a common strategy (and not 28 different ones) in an attempt to create benefits for everyone. Thanks to the advanced transport and communications, it is now easier to produce, buy and sell goods around the world which gives European companies of every size the potential to trade outside Europe. Today, the EU is the largest exporter of manufactured goods and services and in total it is the biggest exporter for around 80 countries. In addition, the whole Union account for 16% of world imports and exports.

Goods and Commercial Services in 2013 (in billion *€*)

Country / Region	Imports	Exports
EU	2188	2415
USA	2079	1688
China	1716	1817
Japan	750	648
South Korea	468	506
Source : Eurostat, WTO		

The EU is the largest economy in the world. Apart from its leading position in manufactured goods and services, the same can be said about the Foreign Direct Investments. The table below can give us a detailed picture of the reality :

Share of World FDI in 2012, in percentage

Country / Region	Outward stock	Inward stock
EU	45.5	34.2
USA	35.7	26.2

Latin America	4.1	11.9
China	3.5	5.6
Japan	7.2	4.1
Source : Eurostat, Unctad		

i. The EU is the largest economy in the world. Although growth is projected to be slow, the EU remains the largest economy in the world with a GDP per head of €25 000 for its 500 million consumers.
ii. The EU is the world's largest trading block. The EU is the world's largest trader of manufactured goods and services.
iii. The EU ranks first in both inbound and outbound international investments
iv. The EU is the top trading partner for 80 countries. By comparison the US is the top trading partner for a little over 20 countries.
v. The EU is the most open to developing countries. Fuels excluded, the EU imports more from developing countries than the USA, Canada, Japan and China put together.

The EU has set the example of its free trade regime and has been a key factor in its leading position when it comes to trade. Based on what we have seen so far, we can say that :

a) The average applied tariff for goods imported into the EU is very low. More than 70% of imports enter the EU at zero or reduced tariffs.
b) The EU's services markets are highly open and we have arguably the most open investment regime in the world.
c) The EU has not reacted to the crisis by closing markets. However some the EU's trading partners have not been so restrained as the EU has highlighted in the Trade and Investment Barriers Report and the report on protectionism.
d) In fact the EU has retained its capacity to conclude and implement trade agreements. The recent Free Trade Agreements with South Korea and with Singapore are examples of this and the EU has an ambitious agenda of trade agreements in the pipeline.

Source : *'Eurostat, 2017'*

The European Union as an attractive trade partner

Despite the collapse of global trade in 2008-2009 and the skepticism regarding the importance of tighter economic agreements between trade partners, the EU has taken measures to overcome difficulties :

- ✧ At a European level, the EU is working towards the creation of a common Banking Union. The idea is to assist financial those countries in need in order to ensure a reinforced system of economic governance.
- ✧ Ar a National level, countries have adopted a program (based on each member state's needs) of structural reforms in order to improve their fiscal position and boost their economies.

i. <u>The European Union is the central of the World Economy</u>

Despite the slow growth rate in the EU during the past years, it does remain the market globally by a long shot. The numbers speak for themselves :

GDP per capita of EUR 25,000 and 500 million consumers. The whole economy in the EU account for EUR 12.6 trillion, followed by the USA economy which represents a EUR 11.5 trillion market. China and Japan are far behind with EUR 4,6 trillion and EUR 4,2 trillion respectively. With regards to business and firms, there are 135 EU companies in the FORTUNE 500, 132 USA companies and 75 from China and Japan.

The EU economy seems to remain in a leading position in the coming years as well :

The EU represents more than 1/4 of R&D spending globally, and specifically one year after the financial crisis, it provided 29% of the world scientific publications while the the USA ones accounted for 22% followed by China with 17%. In addition 1/3 of the world's patent applications are filled in the EU. On a national level, 5 out of the top 10 countries on the World Economic Forum Global Competitiveness Index belong to the EU. On a company level, 28 of Forbes' top 100 firms are headquartered in the EU.

The ease of communication between countries and its advanced infrastructure level remain vital for its success. There are 65,000 km of motorways and some of the busiest airports globally as 30 airports serve more than 10 million passengers annually. Last, the EU has the biggest network for high-speed railway tracks, 6,200 km and the largest number of high speed trains which account for more than 60% on a global level.

ii. <u>The EU market is still the largest one</u>

Europe is the largest importer of manufactured goods and products. In addition, it has the biggest stocks for FDI and in return it hosts the largest number of FDI withing the EU territory. Even in the difficult years of the crisis, the imports continued to rise. For

instance, in 2012, the EU imports reached EUR 740 billion. Almost 60% of these imports come from developing countries. In addition, the EU is by far the the top trading partner, dealing with 80 countries while the gap with the USA (second place) is huge, trading with 20 countries.

Europe's market can be characterized as highly diverse with producers from all stages of the supply chain. The main imports of the are primary products such as agricultural goods, raw materials and energy but also capital equipment, chemicals and a number of consumer goods. The European market is also highly competitive and as a result close trade and investment links with the EU help companies become more competitive and efficient. As global leaders in technological infrastructure, it is essential for developing countries to cooperate with European firms to improve their infrastructure. Importing products from Europe would make it easier for them to boost their economy.

iii. The EU has the capacity and prestige to conclude essential trade agreements

Despite the the difficulties in the previous years, the EU was able to strengthen its liberalization regime and through the trade agreements with key participants in comparison with other countries/regions (e.g. USA).

Examples :

EU-South Korea (South Korea became its fourth largest partner of the out Europe) free trade agreement, negotiation started in 2007 the agreement was signed in 2011. Other recent agreements an Economic Partnership agreement with Caribbean countries and a free trade agreement with Morocco on agricultural and fisheries products. We will present in the next chapters in detail all the trade agreements reached by the EU with trade partners.

iv. Commitment to trade liberalization

Before the economic crisis in 2008, imports in goods accounted for 16.9% of the EU GDP. After the collapse of trade flows, the EU took initiatives and measures required to rebound the situation. In 2011, imports reached 18,1% of the EU GDP meaning that almost 1/5 of the overall economic activity is closely related with imports. The continuous commitment to free trade has had a significant effect in this effort.

That said, trading partners should not consider such a commitment as a reason not to engage in trade agreements with the EU. Europe will not close its market to new trading partner but the message is clear : Countries and regions that do not have

preferential access to the European Market, risk losing their competitive position if they do not take actions and conduct free trade agreements with the EU. More details on the position of the EU in the world economy today will be presented in the next chapters and all the trade agreements reached so far.

Trade Agreements with International Partners

Trade Agreements with :

- **USA** → *Following three years of intense talks,* **TTIP** *negotiations are now effectively on hold. The EU stays committed to ensuring a strong trade and investment relationship with the US but the new US administration is still in the process of defining its trade policy and contacts between the US and EU are in an early stage. We need some more time to see where we are.*

- **Canada** → *On 15 February 2017, the European Parliament gave its consent for CETA. The agreement will be applied provisionally after Canada will have notified adoption of all necessary legislative acts.*

- **Japan** → *The EU and Japanese teams are currently in Tokyo (since 13 June) and the negotiations are expected to last until 30 June. The aim is to conclude an agreement in principle as soon as possible.*

- **China** → *The next round of negotiations is likely to take place in July 2017 – with preparatory inter-sessional work in between.*

- **ASEAN** → In March 2017 Ministers tasked the Senior Economic Officials to work out the parameters of a future ASEANEU region-to-region agreement and to report back to the next Ministerial meeting in 2018 under the Singapore chairmanship.

- **Singapore** → The Commission is discussing with Singapore how to bring the investment protection provisions in the draft agreement in line with EU's new approach. The draft agreement will then need to be formally approved by the European Commission and then agreed upon by the Council of Ministers, and ratified by the European Parliament.

- **Malaysia** → *In 2016, a stocktaking exercise took place to assess the prospect to resume negotiations. In March 2017, ministers agreed in principle to re-launch the negotiations in due course. The EU is looking for a comprehensive and ambitious FTA, as was reached with Singapore and Vietnam.*

- **Vietnam** → *On 1 February 2016, the preliminary text of the Agreement was published on DG Trade's website together with a Commission Staff Working Document on Human Rights and Sustainable Development in the EU-Vietnam Relations with specific regard to the EU-Vietnam Free Trade Agreement. The legal review of the text is nearing its end. The text will then be translated into all official EU languages and into Vietnamese before being presented to the Council for signature and conclusion and the European Parliament for consent.. Subject to the decision making procedures of these two co-legislators, it is expected that the agreement can enter into force in 2018. Preparations to ensure swift practical implementation of this FTA are on-going*

- **Thailand** → *The EU remains committed to resuming negotiations with Thailand when the conditions are right to do so.*

- **Indonesia** → *The next round of negotiations is likely to take place in September 2017 – with preparatory inter-sessional work in between.*

- **Philippinnes** → *No date has been set yet for the next round of negotiations.*

- **Myanmar/Burma** → *No date has been set yet for the next round of negotiations.*

- **India** → *Discussions to assess the possibility to resume the FTA continue.*

- **Mercosur** → *A third negotiating round should take place in Brussels between 3 and 7 July 2017. In the meantime, the two sides continue working together in 'intersessional' manner.*

- **Mexico** → *The fourth round of negotiations is expected to take place in Mexico City between 26 and 30 June 2017.*

- **Turkey** → *The negotiations can start once the Council adopts the Negotiating directives.*

- **Bosnia & Herzegovina**→ *Negotiations for Bosnia and Herzegovina's accession to the WTO are on-going.*

- **Serbia** → *Negotiations for Serbia's accession to the WTO are ongoing.*

- **Morocco** → The latest round took place in April 2014. The negotiations were then put on hold to accommodate the plan of Morocco to carry out additional studies before continuing the negotiations.

- **Tunisia** → *A second full round will be held in the autumn of 2017 in Tunis.*

- **Armenia**→ *The agreement will now follow a usual approval procedure on both the EU and Armenian side.*

- **Azerbaijan**→ *The first round of negotiations was held in June 2017. The next round of negotiations should take place in September 2017.*

- **Belarus** → *Regulation (EU) 2017/354 of the European Parliament and of the Council amending Regulation (EU) 2015/936 on common rules for imports of textile products from certain third countries not covered by bilateral agreements, protocols or other arrangements, or by other specific Union import rules was adopted on 15 February 2017 and published on 3 March. Next and final step will be to amend via Delegated Act the Commission Implementing Regulation (EU) 2016/2148 laying down rules for the management and distribution of textile quotas established for the year 2017 under Regulation (EU) 2015/936.*

- **Kyrgyzstan** → *Council discussions ongoing on the negotiations directives.*

- **China** → *No date has been set yet for the 13th round of negotiations.*

- **Services (TISA)** → *The talks were put on hold late autumn 2016. Next steps to be determined.*

- **Green Goods** → *Further steps to be determined.*

- **Trade in Agriculture and Fisheries products with EEA/EFTA countries** → *Formalise agreement with Norway on liberalisation of agricultural products*

- **Association Agreements with Andorra-Monaco-San Marino** → T*he next round of negotiations should take place in July 2017.*

Let's talk a bit about TTIP….

The **Transatlantic Trade and Investment Partnership** (**TTIP**) is a proposed trade agreement between the European Union and the United States, with the aim of promoting trade and multilateral economic growth. The overall impact of the TTIP is expected to increase the EU economy by 120 billion (0.5% of GDP) and by 95 billion (or 0.4% of GDP) by 2027. This result will be a permanent increase in the amount of wealth that both economies can produce, so the benefits can be much larger than these amounts. According to the estimations (by the CEPR study) around 80% of the total gains could arise from cutting costs by duplicate bureaucracy, thus it is essential to reduce non-tariff barriers. With regards to the trade volume, the EU exports to the US would go up by 28% (159 billion, goods and services) while the EU imports from the US will increase by 159 billion). The trade flows with the rest of the world will also increase as it is expected that the EU exports would rise by 33 billion and the US exports by 80 billion. In total, the EU exports would rise by 6% and imports by 5% while for the US the exports will rise 8% and imports 5%.

But are the benefits even for all sectors? Do all industries gain from TTIP?

Based on the CEPR study, the EU exports will increase in almost all industries. The most significant increases will be in metal products (12%), processed food (+9%), chemicals (+9%), other manufactured goods (+6%), transport equipment (6%) and motor equipment (41%). This will be followed by an increase in imports as well, increasing competition in the market with benefits for both consumers and companies (more competition will ensure lower prices while companies can purchase some of their parts in lower prices). In some sectors, companies may find it difficult to survive but according to the estimations the situation will be manageable. Such sectors are 'electrical machinery' and 'transport equipment' in the EU and 'electrical machinery' and 'motor vehicles' in the US. With regards to the wages, the study shows that there will be a positive impact for both skilled and unskilled workers by around 0.5%. In addition, the TTIP is not expected to have significant impact on the movement of employees across different sectors as the average annual change in the EU for a number of sectors is really low (2001-2007 was 2.1% annually while since 2008 it slightly increased to 3.6%).

What about the rest of the world? How can TTIP affected the Global Economy?

The CEPR study suggests that GDP of the trading partners would increase by 100 billion. Specifically, the output of industrial countries are is expected to is going to rise by 36 billion while for the less developed countries the increase will be in the region of 2.4 billion. Is there an explanation for such a rise? A simple explanation :

'An increase in the output of both EU & US economies means that households will have a higher amount to spend and will lead in an increase in demand. Higher demand will not cover only the EU & US markets but also goods and services from other markets globally. This will have a significant impact on the exports (mainly) of other countries taking into account that the EU & US economies account for 46% of the global Economic activity that leads to increased demand.'

From what we have seen so far, it looks like TTIP is a deal with benefits for everyone. But is that really the case? If the studies were to be believed than why has it not been signed yet? Why do people argue about the agreement in total? Are there potential disadvantages that could outweigh the benefits? Is the world ready for such a big step?

All these questions can be highly debatable and create a real headache for policymakers not only for the EU & US but on a global level. Could there be any disadvantages that could be worrisome for the entire economy? Let's have a closer look at what could be some of the disadvantages :

1. The disappearance of some jobs

We mentioned before that the increase in the trade volume will increase the competitiveness of the whole market. On the one hand, this is a positive outcome for the market but this is not the case for everyone. Some companies may find it difficult to compete with the competitive prices set by companies abroad and thus may be forced to exit the market. The result will be an increase in unemployment. If the good scenario is to be believed, this will only be temporary as in the long run with an increased competitiveness, companies will be able to perform better, increasing their revenues and thus offering more job opportunities.

2. Lower European Standards

Perhaps the biggest concern is not the rise of unemployment but the lower European Standards on food safety, the environment, privacy and labor conditions. The opponents of TTIP argue that the economic benefits should not come first relative to our health, animals and the environment.

3. Concerns about TTIP's impact on low and middle income countries

TTIP could have an adverse impact on low and midle income countries. Although it is considered as a considerable drawback for the agreement, the benefits could still outweigh the disadvantages. Higher economic growth in both the US &EU means more opportunities for other countries as well including the poor ones. The focus should be on have a fairer distribution of the benefits to developed and developing countries.

4. Concerns that companies will act as they want

Some civil society organizations are concerned that the investment protection provided by TTIP will give companies too much power. They fear it will limit governments' democratic scope to make laws and regulations. This is known as the

regulatory chill effect. Foreign investors that feel they have been disadvantaged can, for example, challenge a government decision.

Based on what we have seen so far, we now have a better idea on the TTIP and why it is not straightforward to assume that the agreement is beneficial for the global economy. What is important before going through with the agreement is

- To take into account the European standards and ensure that economic benefits will not come around in the expense of human, animal and environment.
- To ensure that the benefits will be fairly and even distributed among developed and developing countries as it can create a further gap and a future world economic crisis cannot be excluded.

What about the future? What are the plans of the EU on global trade and how things are planned to changed in the next years..

The EU Trade Strategy for the Future

Towards a more responsible trade and investment policy

1. Trade and Investment as driving forces for growth and job creation

Ninety percent of the global economic growth, in the next fifteen years, is expected to be generated outside Europe. Trade has never been that important for our economy. Exports from the EU to the rest of the world have increasing significantly and a number of jobs have been created. Exports also support Europe's SMEs. To boost the EU's capacity for further gains the EU has created an agenda of bilateral agreements to ensure further cooperation and more benefits.

2. An effective policy that tackles new economic realities and create opportunities

Responding to the rise of global supply chain : The EU will prioritize trade in services, seeking ambitious outcomes in all trade negotiations. Trade agreements will not require governments to privatize any service.

Facilitating digital trade : The EU will seek to use FTAs and the TiSA to set rules for e-commerce and cross-border data flows and tackle new forms of digital protectionism, in full compliance with and without prejudice to the EU's data protection and data privacy rules. European companies still face significant barriers around the world, such as non-transparent rules, government interference, unjustified data localization and data storage requirements.

Supporting mobility and addressing migration : The temporary movement of professionals has become crucial for all fields to make business internationally. The EU will support the EU-financed exchange, training and other capacity-building programs and portals which facilitate the effective use of mobility provisions in FTAs.

Reinforcing international regulatory cooperation : Regulatory fragmentation costs are particularly significant for SMEs. While it may seem easier to address such topics in bilateral agreements, regional and global solutions have greater effects. The EU will address regulatory issues as a priority in negotiations and steer greater cooperation, while keeping high European standards. In addition, the EU will keep

trying to decrease non-tariffs barriers through the enforcement of agreements and regulatory reforms.

Stronger enforcement of the EU rights : Potential benefits to trade agreements should be available to all EU members. A more coordinated approach to economic diplomacy is needed ensuring that all EU assets are deployed in the most efficient way.

3. A more transparent trade and investment policy

Further cooperation within the EU : The EU will make its closer engagement with the European Parliament to ensure harmonization on the trade agreements, especially the TTIP. In addition, the EU institutions will attempt to urge countries be more involved in the debate of trade.

A more open policy making process with increased transparency : It has been decided that after signing deals, the agreement will be published immediately. Quick and easy access will ensure increased transparency.

4. A trade and Investment policy based on values

Winning customer's trust on the products from the international markets : The EU is working towards a direction that will allow close cooperation with consumer associations and relevant organizations to ensure that trade and investment policies follow consumers' preferences and will also improve the analysis of the impact of their policy on trade and investments.

Supporting a new way to invest : The EU will include modern provisions in bilateral agreements, putting stronger emphasis on the right of the state to regulate, something which was not sufficiently highlighted in the past. EU bilateral agreements will begin the transformation of the old investor–state dispute settlement into a public Investment Court System composed of a Tribunal of first instance and an Appeal Tribunal operating like traditional courts. There will be a clear code of conduct to avoid conflicts of interest, independent judges with high technical and legal qualifications comparable to those required for the members of permanent international courts, such as the International Court of Justice and the WTO Appellate Body.

Promoting fair and ethical trade schemes : There is a lack of information today about access to fair trade schemes for both producers and EU consumers. The EU will

launch an initiative working with International organizations e.g. the International Trade center, to gather market data regarding fair and ethical trade markets.

Protecting human rights and fighting corruption : A deeper analysis is required of global trade to human rights. For example, propose an ambitious modernisation of the our policy on export controls of dual use goods, including the prevention of the misuse of digital surveillance and intrusion systems36 that results in human rights violations. The EU has proposed to implement anti-corruption assessments in all trade agreement e.g. TTIP.

5. A long-term plan of negotiations to embrace globalization

Making Progress at the WTO : The EU plans to provide the WTO with a more central role in developing and strengthening the rules of global trade. Proposing that a subset of WTO members can advance on a given issue. Re-balancing the contribution and role of the developed and developing economies is a driving force to improve things as both groups of countries are essential for the global economic activity.

An open approach to bilateral and regional agreements : The EU should aim at ensuring bilateral and regional agreements in a way that place the WTO at the center of the global economy. In addition the EU should develop specific set of criteria and through mechanisms to allow countries join them in the future provided that the meet the criteria. The EU is eager to open FTAs agreements with the countries that would like to join them.

Moving Bilateral relationships forward : In order to boost the the economic activity, growth and create jobs, the EU has set priorities to continue negotiations (and open new ones) concentrating on the economic criteria. Eliminating barriers is essential and the EU needs to take a more flexible approach when it comes to FTA negotiations taking into account the economic reality for the trading partners. Signing and implementing CETA & TTIP will prove vital for the Global Economy. The sooner it happens the more benefits will come across for trading partners. Other agreements with trading partners from all over the world will also be a driving forcing in changing the world for the better.

What can we conclude from the EU trade strategy?

Trade is not an end in itself. It is a tool to benefit people. The aim of EU trade policy is to make the most of those benefits. That means making sure that trade and investment policy is effective. It must tackle real issues based on an up-to-date understanding of the fact that the world economy is tightly linked by global value chains; that services — including those that require providers to move across borders — are increasingly important; and that the digital revolution is transforming the international economy. Trade agreements must tackle the barriers companies face in the modern global economy. They must also be effectively implemented and enforced, including for small- and medium-sized companies. Trade and investment policy must equally take responsibility for supporting and promoting EU values and standards. The EU must engage with partners to promote human rights, labour rights and environmental, health and consumer protection, support development and play its part in stamping out corruption. Furthermore, key policies for the future of Europe's integration into the world economy, like investment and regulatory cooperation, must support, not undermine, the EU's broader objectives of protecting people and the planet. Any change to the level of protection can only be upward. Essential to meet all of these objectives is a trade policy that remains ambitious in its effort to shape globalization. Trade benefits people most when creating economic opportunity. That means action to support the multilateral system embodied in the WTO and a targeted strategy for bilateral and regional trade and investment agreements. The EU can only reach these goals if it speaks with one voice and ensures that all EU Member States, people and companies are treated equally. It has to be coherent across policy areas. These principles of unity and coherence must underlie the daily work of the Commission as, with the support of the Council and the Parliament, it seeks to implement this communication in the coming years.

Concluding Remarks and Suggestions

In 2008, the world was presented with the greatest crisis in our recent history. This was considered by many to be the most severe and persistent crisis since the Great Depression. What started as a crisis in the sub-prime mortgage US market, soon developed into an International banking crisis, followed by a global economic downturn. The result was the decline of Global GDP and the 'collapse' of International trade. The Global Economy had to face a different reality and a huge challenge to overcome. In our study, we made an attempt to analyze the latest Financial & Economic and its impact in the Global Economy, with a main focus in World Trade. We based our work primarily on the European Economy as this is the biggest Economy in the world and directly or indirectly can affect our Economy on a Global level. From closer economic cooperation to bilateral/multilateral trade agreements, all such factors have been key driving forces to our modern economy. In the introduction we presented various information regarding world trade and based on Internationally recognized Institutions e.g. IMF, European Commission hail the importance of trade and suggest that further trade liberalization could prove essential for a better economy. For them, countries who have adopted open market policies have managed to boost growth and reduce poverty while countries that stick to the traditional way of protectionism struggle to develop. Despite the skepticism created during the crisis regarding International Trade, these Institutions advise that further liberalization is the best way to move forward. Then in chapter one, we went through the trade theories throughout the years and compared their analysis of trade to modern trade theory. There have been improvements in the new trade theory as it takes into account cases and factors that previous attempts failed to include but with the complexity of intra-industry trade and the fast moving world, it might prove that even this theory is not enough to analyze trade in a precise way. The proof? The 'collapse' of International Trade in 2008-2009. In the second chapter, we stressed out the importance of the EMU creation for the European and the Global Economy. Closer economic cooperation and new trade agreements had a direct positive on growth in the core Euro Area countries but it is not clear for the other countries. Factors such as FDI flows and R&D played a significant role for the development of these countries. On average, the EU growth has been slow since the EMU formation due to the differences of growth between countries. However, the elimination of volatility and uncertainty has been a strong advantage since the introduction of EURO. In chapter 3, we went deep to analyze the latest crisis and observe its impact in the European and Global Economy. Based on our work, we derived two fundamental conclusions : i) In a period of economic growth, close economic cooperation and free trade (e.g. when you are in a Union with single

market and common currency), leads to fact that those countries which realize the more benefits are the developing ones, ii) In a period of economic downturn, based on the same assumption, those countries who are negatively affected to a larger extent are the developing countries. In other words, in a period of economic boom, developing countries benefit more than the developed ones while in a period of crisis/anomaly this group of countries are affected the most in a negative way. The last conclusion we managed to reach in this chapter : The current set of rules imposed by the WTO and the EU (also agreements with other trade partners e.g. USA, China) seem to set the optimal solution in a period of economic growth (or normal period) while in a period of economic crisis the inability to prevent distorting protectionism measures and lack of growth oriented action due to the existing rules do not allow for efficient solutions and usually create dis-functional problems. In the next chapter, we presented the results of the global economy after the crisis. While the world trade collapsed in 2008, it recovered rapidly in 2010 reaching pre-crisis levels contrary to the global output was recovering slowly. This is in line with the first conclusion we mentioned in the introduction that International Trade is much more volatile than the Global GDP. In addition we came across a controversial result. While the EU and G7 countries have had a free trade approach during the past years, in our study we found that it is the EU alongside with G7 countries out of Europe which adopt beggar-thy-neighbor policies and have imposed the most trade barriers. Furthermore, with the drying of trade finance it became obvious that the current system is unable to provide a certain environment and that led to the result that today the financial conditions have tighten and this is not only in Europe but on a global level. The amount of non-performing loans has been decreasing significant recently in developed countries while the opposite is true in the developing ones. In the last chapter, we highlighted to leading position of the EU in trade and its tendency to discuss and conduct bilateral trade agreements rather than only sticking to the multilateral ones. The world is changing and its participants must change too. The TTIP is an example that could affect the way we trade and our economy for many years to come and that is the reason why we need the best deal possible for both parties taking into account any advantages and drawbacks. The EU strategy for the future indicate that reforms need to be done in many aspects to have better deals for everyone. Could something change? That has to be seen. We can attempt to predict the future, based on our knowledge as scientists, but the truth is that we do not know the future…..

Suggestions

While discussing our results throughout our work, we highlighted the role of the current WTO and EU set of rules and how they failed to prevent countries from adopting distorting protectionism measures rather than those that can boost growth. So are the existing rules useless? Absolutely not, they contribute to a large degree to reduce protectionism measures but we can do a lot better by reforming these rules. The WTO's multilateral trade rules should be collectively be reinforced so as to more effectively prevent what we called 'murky protectionism'.

<<Experts have variously assessed the dimensions of the new trade barriers erected during the crisis: The especially detailed analyses by Global Trade Alert (GTA), an independent monitoring service for trade policy, detected substantially more protectionist measures than did other analyses. For example, reports by the WTO, the OECD (Organisation for Economic Cooperation and Development) and UNCTAD (UN Conference on Trade and Development) concluded that although some protectionist measures had been introduced, in the course of the crisis, protectionism was generally limited (OECD / WTO / UNCTAD 2010) – whereas GTA experts observed a surge in protectionist measures as a result of the global crisis (CEPR 2010). For instance, from November 2008 to November 2010, a total of 692 trade restrictions were introduced worldwide. Since 2009, between 100 and 134 trade barriers have been put up each quarter. By way of comparison, with a total of 50 protectionist measures in the fourth quarter of 2008, that year there were markedly fewer trade restrictions. Even the revival of world trade since midyear 2009 has not reduced the number of new trade barriers. Most frequently affected are steel and iron imports, and products of the chemical, and textile and garment industries. (German Development Institute, 2011).>>

So what can be done? Could we change something?

Before making any attempt to reform the existing rules of the WTO, we should be thinking first on Institutional reform of the World Trade Organization. We can highlight five reforms to improve the way WTO functions for equal treatment and rules for all countries.

a. Reinforcement of Internal Democracy

In theory, all countries are equal to at the WTO but in reality his does not seem to be the case as developing countries may find it difficult to defend their interests. The

reason is the cost : it is expensive to have a representative in Geneva as according to the estimations from the UK government it costs around USD 900,000 per year. Almost half of the least developed countries have no representative in Geneva. Example. Most of these countries have only 1 representative for all negotiations while the US have 250 and they can easily travel and attend meetings and events.

Recommendation : The WTO should aim that all of its members can participate in negotiations of all interests. To enhance the efficient use of limited access by many countries, all meetings should be properly arranged with agendas published in advance. In depth report and analysis of discussions at WTO meeting should be sent to all countries.

b. Capacity Building

A number of developing countries do not have the analytical and technical skills to deal with the complexity of the trade laws. A key problem is the lack of institutional capacity in trade policy and law at national level. There is need for institutional capacity building to develop knowledge and analytical skills across civil service departments and enable inter-departmental assessments of the potential impacts of world trade.

Recommendation : There should be commitments by countries to provide financial and technical support for trade policy capacity building especially for developing countries.

c. Dispute Settlement

Serious questions exist concerning the operation of the WTO’s Dispute Settlement procedures. For instance, it is well known that trade sanctions can hurt the retaliator as much as the ‘victim’ so they will only really be of any use, if at all, to the economically powerful. This gives the lie to the claim that such a system is fair to, and workable for, the world’s poorest nations because the use of sanctions against a more wealthy nation would be akin to shooting themselves in the foot.

Recommendation : The establishment of a superior referral body to resolve disputes between trade laws, multilateral agreements and international customary law such as Human Rights Conventions. The new Implementation Review Mechanism should become a permanent institution within the WTO that provides regular assessments of the implementation record of developing and least-developed countries.

d. **External Accountability**

It is essential to improve the external accountability and raise its profile as public concern will only grow without reforms. The skepticism that WTO′s policies are in favor of the most developed countries make things more complex.

Recommendation : The WTO should take action to encourage parliamentary scrutiny of trade policy at the national and regional level. The trade policy review mechanism should aim at an evaluation of how trade policy is organized and planned.

e. Impact Assessments

A recent UK government report on trade and and social, health and environmental objectives concluded that : ′*each Government should carry out more research on the interactions between trade and (social, health & environmental) policies including impact assessments of trade rounds*′.

Recommendation : Sustainability impact assessments are essential prior to negotiating bilateral, regional and multilateral trade agreements. Investing more on research and outsourcing projects to specialized UN agencies and civil society groups to conduct evaluation on the socio-economic, environmental, basic rights impacts of Free Trade Agreements.

f. Coherence between WTO and other multilateral Institutions on agreements

International trade rules are vital tools that can set a framework for a fairer system of international trade, help to correct market failures and imbalances, and allow countries to fully engage in trade as part of their national development strategies.

Recommendation : A new mechanism is needed to promote the development of an arbitration mechanism to define WTO rules conflicts with other institutions. The beginning can be a stronger cooperation of WTO with the UN organization.

Most of the above information can be found in the official website of the European Commission. The link for this specific study we used the data can be found in the following link : http://trade.ec.europa.eu/doclib/docs/2005/april/tradoc_122163.pdf

We all understand that a better function of the WTO and improved institutional reforms can help us set better rules for future trade agreements.

What could be some of the Reforms to have a new set of Rules?

1. The protectionist measures should be restricted to the same degree for all countries. We observed in our analysis that countries or regions which support a free trade regime have imposed the most protectionist measures e.g. Germany, EU. There should be a limit and possible sanctions can be imposed in case this limited is not honored. In a period of crisis, there could be some flexibility with regards to the limits but a pre assessment of the possible measures is crucial to evaluate the overall impact for all countries. For instance, in a period of economic downturn a depreciation policy from a developing country could be accepted in case the overall impact is positive for the EU otherwise both the country and the EU risk of facing a worse situation.

2. We discovered the fact that nowadays the financial conditions are tighter compared to the past. The drying of financial trade and the 'collapse' of trade during the crisis has awaken the market and it seems that the trust between debtors and lenders is not in the same balance as it used to be before the crisis. Is this necessarily a negative outcome? Well the truth is that the situation before the crisis was too vulnerable and the risk of non performing loans (not to be honored) was extremely high which finally let to the great crisis. In fact, there is one important thing we should pay attention to : The financial support, mainly in the form of loans in the financial system, should aim at reaching the 'right hands'. In other words, it does not make sense to restrict the access to the capital markets to all countries as the perspectives of growth would decline considerably, instead we should provide financial support and trust these economies that can use the money and create investments, increase productivity, create more job opportunities and boost the global economy. Those countries or investors who seem to be unable to use a loan in an efficient way for the good of our economy (whether it is a commercial loan, a mortgage, an industrial loan) **SHOULDNOT** be given that amount of money. Once structural reforms within the country (and a stable political system) can win the trust of the markets and the financial institutions then they would be more than welcome to access the capital markets and boost the global growth. It is a matter of providing financial support to the right people/countries and not providing money to all countries.

3. Further trade liberalization is essential to promote growth and create job opportunities according to International Renowned Organizations such as the IMF and the European Commission. Based on the facts, it is true that countries that have had an open market oriented strategy have managed to boost their economies while those who stick to the traditional protectionist measures risk a more severe economic downturn. This seems to be rational and we should do our best to adopt a free trade regime. But is that the case? Should we believe that this is the only way of moving forward for a better future? In 2010, right after the rapid recovery of the world trade, Ms. Myriam Vander Stichele (employed at the Center for Research on multinationals corporations - SOMO) discussed the findings in her study and warned that Europe could be in the illusion that further trade liberalization should always be our driving force to grow our economies. She argued that given the numerous unsuccessful case of free trade paradigm, the principle of competing to get most access for exports should be replaced with cooperation to manage trade. Can anyone question her conclusion? Between the two opinions (EU & IMF vs SOMO) the truth is somewhere in the middle. On the one hand, evidence and data show that trade liberalization has helped countries grow their economies and achieve results that otherwise would not be possible to reach and on the other hand the aim of trade agreements should not be just to increase the number of participants but equitable and sustainable production, trade and consumption.

With this Thesis, we made an attempt understand the impact of the financial and Economic crisis in the global economy from different aspects, with a main focus in International Trade. The impact of close cooperation, as the EMU formation verified, creates a trade-off for the different group of countries as the effects depend on the business cycle of the economy. While trade recovered rapidly compared to global GDP, we should take into considerations different factors and conduct useful assessments on the potential impact of any trade future agreements. Further trade liberalization seem to be inevitable for our economy today **BUT** we should aim at being able to assess in the right way whether all participants can benefit from an possible agreements not only in the short-run but also in the long-run. The fact that more bilateral agreements are ‘on the table’ give a positive indication that the EU is probably moving towards the right direction (although at a very slow pace). I hope that our work will leave people with some food for thought regarding International Trade and its importance on the Global Economy especially in a period of a shock/crisis.

A few information we should all know……..

World GDP (PPP) : USD 119.3 trillion (PPP)

World GDP (official exchange rate) : USD 75.27 trillion

GDP real growth rate : 3% (2016-2017)

GDP per capita : USD 16,300 (2016)

Gross national savings : 26.8% of GDP (2016)

GDP composition :

household consumption: 57.2%
government consumption: 16.4%
investment in fixed capital: 25.3%
investment in inventories: 0.8%
exports of goods and services: 28.1%
imports of goods and services: -27.7% (2016 est.)

GDP composition by sector :

agriculture: 6.3%
industry: 30.2%
services: 62.8% (2016 est.)

Industries : dominated by the onrush of technology, especially in computers, robotics, telecommunications, and medicines and medical equipment; most of these advances take place in OECD nations; only a small portion of non-OECD countries have succeeded in rapidly adjusting to these technological forces; the accelerated development of new technologies is complicating already grim environmental problems

Industrial Production growth rate : 2.3% (2016)

Labor force : 3.53 billion (2016)

Labor force by occupation :

agriculture: 31.7%
industry: 23.6%

services: 44.7% (2013)

Unemployment rate : 7.3%

Distribution of family income - Gini Index : 37.9 (2016)

Budget : Revenues USD 19.8 trillion, Expenditures USD 22.02 trillion (2016)

Taxes and other revenues : 26.3% of GDP

Budget surplus/deficit : -3% of GDP

Public debt : 59.6% of GDP

Inflation rate :

world average: 3.6% (2015 est.) 0.9% (2015 est.)
developed countries: 5.4% (2015 est.) 0.3% (2014 est.)
developing countries: 5.7% (2015 est.) 4.7% (2014 est.)

Exports : USD 15.78 trillion (2016)

Exports commodities :

The whole range of industrial and agricultural goods and services
top ten - share of world trade: electrical machinery, including computers 14.8%; mineral fuels, including oil, coal, gas, and refined products 14.4%; nuclear reactors, boilers, and parts 14.2%; cars, trucks, and buses 8.9%; scientific and precision instruments 3.5%; plastics 3.4%; iron and steel 2.7%; organic chemicals 2.6%; pharmaceutical products 2.6%; diamonds, pearls, and precious stones 1.9% (2007 est.)

Imports : USD 15.13 trillion (2016)

Imports commodities : see above - exports commodities

Debt external : USD 75.89 trillion (2016)

Stock of FDI at home : USD 28.06 trillion (2016)

Stock of FDI abroad : USD 29.56 trillion (2016)

Source : **World Factbook, CIA**

The following tables regarding the different group of countries can be found in the database of **IMF.**

Country Groups Information

World
Composed of 192 countries: Afghanistan, Albania, Algeria, Angola, Antigua and Barbuda, Argentina, Armenia, Australia, Austria, Azerbaijan, The Bahamas, Bahrain, Bangladesh, Barbados, Belarus, Belgium, Belize, Benin, Bhutan, Bolivia, Bosnia and Herzegovina, Botswana, Brazil, Brunei Darussalam, Bulgaria, Burkina Faso, Burundi, Cabo Verde, Cambodia, Cameroon, Canada, Central African Republic, Chad, Chile, China, Colombia, Comoros, Democratic Republic of the Congo, Republic of Congo, Costa Rica, Côte d'Ivoire, Croatia, Cyprus, Czech Republic, Denmark, Djibouti, Dominica, Dominican Republic, Ecuador, Egypt, El Salvador, Equatorial Guinea, Eritrea, Estonia, Ethiopia, Fiji, Finland, France, Gabon, The Gambia, Georgia, Germany, Ghana, Greece, Grenada, Guatemala, Guinea, Guinea-Bissau, Guyana, Haiti, Honduras, Hong Kong SAR, Hungary, Iceland, India, Indonesia, Iran, Iraq, Ireland, Israel, Italy, Jamaica, Japan, Jordan, Kazakhstan, Kenya, Kiribati, Korea, Kosovo, Kuwait, Kyrgyz Republic, Lao P.D.R., Latvia, Lebanon, Lesotho, Liberia, Libya, Lithuania, Luxembourg, Macao SAR, FYR Macedonia, Madagascar, Malawi, Malaysia, Maldives, Mali, Malta, Marshall Islands, Mauritania, Mauritius, Mexico, Micronesia, Moldova, Mongolia, Montenegro, Morocco, Mozambique, Myanmar, Namibia, Nauru, Nepal, Netherlands, New Zealand, Nicaragua, Niger, Nigeria, Norway, Oman, Pakistan, Palau, Panama, Papua New Guinea, Paraguay, Peru, Philippines, Poland, Portugal, Puerto Rico, Qatar, Romania, Russia, Rwanda, Samoa, San Marino, São Tomé and Príncipe, Saudi Arabia, Senegal, Serbia, Seychelles, Sierra Leone, Singapore, Slovak Republic, Slovenia, Solomon Islands, South Africa, South Sudan, Spain, Sri Lanka, St. Kitts and Nevis, St. Lucia, St. Vincent and the Grenadines, Sudan, Suriname, Swaziland, Sweden, Switzerland, Syria, Taiwan Province of China, Tajikistan, Tanzania, Thailand, Timor-Leste, Togo, Tonga, Trinidad and Tobago, Tunisia, Turkey, Turkmenistan, Tuvalu, Uganda, Ukraine, United Arab Emirates, United Kingdom, United States, Uruguay, Uzbekistan, Vanuatu, Venezuela, Vietnam, Yemen, Zambia, and Zimbabwe.

Advanced economies
Composed of 39 countries: Australia, Austria, Belgium, Canada, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hong Kong SAR, Iceland, Ireland, Israel, Italy, Japan, Korea, Latvia, Lithuania, Luxembourg, Macao SAR, Malta, Netherlands, New Zealand, Norway, Portugal, Puerto Rico, San Marino, Singapore, Slovak Republic, Slovenia, Spain, Sweden, Switzerland, Taiwan Province of China, United Kingdom, and United States.

Euro area
Composed of 19 countries: Austria, Belgium, Cyprus, Estonia, Finland, France, Germany, Greece, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Portugal, Slovak Republic, Slovenia, and Spain.

Major advanced economies (G7)
Composed of 7 countries: Canada, France, Germany, Italy, Japan, United Kingdom, and United States.

Other advanced economies (Advanced economies excluding G7 and euro area)
Composed of 16 countries: Australia, Czech Republic, Denmark, Hong Kong SAR, Iceland, Israel, Korea, Macao SAR, New Zealand, Norway, Puerto Rico, San Marino, Singapore, Sweden, Switzerland, and Taiwan Province of China.

European Union
Composed of 28 countries: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Poland, Portugal, Slovak Republic, Slovenia, Spain, Sweden, Romania, and United Kingdom.

Emerging market and developing economies
Composed of 153 countries: Afghanistan, Albania, Algeria, Angola, Antigua and Barbuda, Argentina, Armenia, Azerbaijan, The Bahamas, Bahrain, Bangladesh, Barbados, Belarus, Belize, Benin, Bhutan, Bolivia, Bosnia and Herzegovina, Botswana, Brazil, Brunei Darussalam, Bulgaria, Burkina Faso, Burundi, Cabo Verde,

Cambodia, Cameroon, Central African Republic, Chad, Chile, China, Colombia, Comoros, Democratic Republic of the Congo, Republic of Congo, Costa Rica, Côte d'Ivoire, Croatia, Djibouti, Dominica, Dominican Republic, Ecuador, Egypt, El Salvador, Equatorial Guinea, Eritrea, Ethiopia, Fiji, Gabon, The Gambia, Georgia, Ghana, Grenada, Guatemala, Guinea, Guinea-Bissau, Guyana, Haiti, Honduras, Hungary, India, Indonesia, Iran, Iraq, Jamaica, Jordan, Kazakhstan, Kenya, Kiribati, Kosovo, Kuwait, Kyrgyz Republic, Lao P.D.R., Lebanon, Lesotho, Liberia, Libya, FYR Macedonia, Madagascar, Malawi, Malaysia, Maldives, Mali, Marshall Islands, Mauritania, Mauritius, Mexico, Micronesia, Moldova, Mongolia, Montenegro, Morocco, Mozambique, Myanmar, Namibia, Nauru, Nepal, Nicaragua, Niger, Nigeria, Oman, Pakistan, Palau, Panama, Papua New Guinea, Paraguay, Peru, Philippines, Poland, Qatar, Romania, Russia, Rwanda, Samoa, São Tomé and Príncipe, Saudi Arabia, Senegal, Serbia, Seychelles, Sierra Leone, Solomon Islands, South Africa, South Sudan, Sri Lanka, St. Kitts and Nevis, St. Lucia, St. Vincent and the Grenadines, Sudan, Suriname, Swaziland, Syria, Tajikistan, Tanzania, Thailand, Timor-Leste, Togo, Tonga, Trinidad and Tobago, Tunisia, Turkey, Turkmenistan, Tuvalu, Uganda, Ukraine, United Arab Emirates, Uruguay, Uzbekistan, Vanuatu, Venezuela, Vietnam, Yemen, Zambia, and Zimbabwe.

Commonwealth of Independent States
Composed of 12 countries: Armenia, Azerbaijan, Belarus, Georgia, Kazakhstan, Kyrgyz Republic, Moldova, Russia, Tajikistan, Turkmenistan, Ukraine, and Uzbekistan. Georgia, which is not a member of the Commonwealth of Independent States, is included in this group for reasons of geography and similarities in economic structure.

Emerging and developing Asia
Composed of 30 countries: Bangladesh, Bhutan, Brunei Darussalam, Cambodia, China, Fiji, India, Indonesia, Kiribati, Lao P.D.R., Malaysia, Maldives, Marshall Islands, Micronesia, Mongolia, Myanmar, Nauru, Nepal, Palau, Papua New Guinea, Philippines, Samoa, Solomon Islands, Sri Lanka, Thailand, Timor-Leste, Tonga, Tuvalu, Vanuatu, and Vietnam.

ASEAN-5
Composed of 5 countries: Indonesia, Malaysia, Philippines, Thailand, and Vietnam.

Emerging and developing Europe
Composed of 12 countries: Albania, Bosnia and Herzegovina, Bulgaria, Croatia, Hungary, Kosovo, FYR Macedonia, Montenegro, Poland, Romania, Serbia, and Turkey.

Latin America and the Caribbean
Composed of 32 countries: Antigua and Barbuda, Argentina, The Bahamas, Barbados, Belize, Bolivia, Brazil, Chile, Colombia, Costa Rica, Dominica, Dominican Republic, Ecuador, El Salvador, Grenada, Guatemala, Guyana, Haiti, Honduras, Jamaica, Mexico, Nicaragua, Panama, Paraguay, Peru, St. Kitts and Nevis, St. Lucia, St. Vincent and the Grenadines, Suriname, Trinidad and Tobago, Uruguay, and Venezuela.

Middle East, North Africa, Afghanistan, and Pakistan
Composed of 22 countries: Afghanistan, Algeria, Bahrain, Djibouti, Egypt, Iran, Iraq, Jordan, Kuwait, Lebanon, Libya, Mauritania, Morocco, Oman, Pakistan, Qatar, Saudi Arabia, Sudan, Syria, Tunisia, United Arab Emirates, and Yemen.

Middle East and North Africa
Composed of 20 countries: Algeria, Bahrain, Djibouti, Egypt, Iran, Iraq, Jordan, Kuwait, Lebanon, Libya, Mauritania, Morocco, Oman, Qatar, Saudi Arabia, Sudan, Syria, Tunisia, United Arab Emirates, and Yemen.

Sub-Saharan Africa
Composed of 45 countries: Angola, Benin, Botswana, Burkina Faso, Burundi, Cabo Verde, Cameroon, Central African Republic, Chad, Comoros, Democratic Republic of the Congo, Republic of Congo, Côte d'Ivoire, Equatorial Guinea, Eritrea, Ethiopia, Gabon, The Gambia, Ghana, Guinea, Guinea-Bissau, Kenya, Lesotho, Liberia, Madagascar, Malawi, Mali, Mauritius, Mozambique, Namibia, Niger, Nigeria, Rwanda, São Tomé and Príncipe, Senegal, Seychelles, Sierra Leone, South Africa, South Sudan, Swaziland, Tanzania, Togo, Uganda,

Abbreviations

EMU : Economic and Monetary Union

IMF : International Monetary Fund

GDP : Gross Domestic Product

FDI : Foreign Direct Investments

EU : European Union

TTIP : Transatlantic Trade and investment Partnership

OECD : Organization for Economic Co-operation and Development

GATT : General Agreement on Tariffs and Trade

WTO : World Trade Organization

NLF : New Legislative Framework

NAFTA : North American Free Trade Agreements

CIS : Commonwealth of Independent States

CIA : Central Intelligence Agency

SME : Small and Medium Enterprise

FTA : Free Trade Agreement

UN : United Nations

TFP : Total Factor Productivity

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