The Competitiveness of the European Union: Pre-crisis Trends and the Impact of the Financial Crisis

Elena Makrevska Disoska, Tome Nenovski

Abstract

Over the past two decades, the European Union (EU) has been holding its position in the world market competing with the USA and Japan, as well as with new rivals such as China and India. However, even before the crisis, the growth in productivity had been slowing down and the internal and external balance was endangered by the different economic structures of the member states. The EU faced the serious challenges of losing world market positions due to a loss of competitiveness. This chapter aims to point out the risks of reducing EU competitiveness by analyzing the indicators of price and cost competitiveness, as well as the structural and technological aspects of competitiveness. Focus is placed on the influence of the world crisis on the competitiveness and export performances of the EU in order to show to what extent the global downturn may have aggravated previously existing needs for the readjustment of the functioning of the Union. Not only has the crisis demonstrated that the problems in the Union had been not created recently, but also that there were urgent demands for new and improved policies in order to regain the strength of competitiveness and performance. The reformulated strategy needs to be based on openness and innovation, with investment in research and development. Long-term expectations are to be made to comprehensive structural changes in order to overcome structural differences between individual Member States and to increase overall competitiveness. Additionally, trade barriers between individual Member States must be removed if higher individual and aggregate rates of economic growth are to be achieved. It is clear that the effects of a deeper integration of the EU have not yet been achieved, and any expected benefits may not be realized, if the internal and external balance of the Union is not maintained.

Keywords: competitiveness, trade, exchange rate, technology, productivity.

DOI: 10.5281/zenodo.4553238

Introduction

Over the past two decades, the European Union (EU) has managed to hold its position in the world market, competing with the USA and Japan, as well as with new rivals such as China and India. But even before the crisis, the growth in productivity started slowing down and the EU was faced with the serious challenges of losing world market positions due to a loss of competitiveness.

There are many definitions of the term "competitiveness". Generally-speaking, an economy is competitive if it does things that are likely to encourage economic growth. The simple measure of economic growth is the value of gross domestic product (GDP). But, if a country is increasing its GDP that would not mean that the country's competitiveness has improved. For instance, if growth is based on natural resources and their favorable price developments, GDP will grow (GDP = quantity multiplied by prices), but the economy will not have significant improvements in competitiveness. In case, the reason for the dynamics and the quality of economic growth is determined from the level of labor productivity, then we can make a difference. In the macro economy it is widely accepted that the difference in labor productivity is the reason for the great differences in the level of economic growth in different countries in the world economy (Mankiw, 2010).

Krugman (1996) has claimed that the real essence of competitiveness is reflected in productivity. Still, many economists believe that not only the quantity of economic production is important, but also the standard of living of the people (Aiginger, 2004). Among other things, that would mean greater opportunities for education, a healthy lifestyle, or a rich cultural life. That can be measured by the second indicator of economic growth, and GDP per capita. The higher the GDP per capital means higher living standards of the population. Still, GDP per capita does not take into account the country's ability to distribute the gained wealth in a fair manner (it is calculated on an average level). Another weakness is that we can draw the wrong conclusions. For example if we have the same value of GDP, but decreasing growth rates of population, we will get a higher GDP per capita.

Some authors (Haiman & Altena, 2007) concentrate on links between competitiveness and trade (traditional theories). Popular discussion often views 'competitiveness' as a way of narrowing the current account deficit of the balance of payments. That can be measured by the growth of the export of the market share (participation of the total value of the export in the total

world export). The essence of this theory is compounded by an openness to trade tending to be associated with an openness to ideas. Especially for small economies, openness to trade should boost economic growth by increasing domestic competitive pressures (from imports) and allowing domestic producers access to wider markets and, in turn, economies of scale (from exports). Still these theories do not take into account the quality of the product or the service or the branding of products. In the long run, non-pricing factors (structural and technological aspects) such as: research and development, regulatory regimes and other aspects have a significant influence on the competitiveness of the products and of the economy.

Finally, if we summarized all the above mentioned views, the competitiveness of one country can be defined as the ability of that country to compete on the world market, with the ultimate goal of increasing the wealth of the country and the living standards of its people (Ottaviano at al., 2009).

The definition, according to traditional theories will be applied in the context of this chapter. In the first section, the trends in world trade and EU trade are analyzed, from the creation of the European Economic Community until 2010. In the second section, discussions about the indicators of competitiveness will take place. The approach towards EU competitiveness will be analyzed according to the traditional approaches that relate to successful export performance – either in terms of export growth or export market share and by the standard indicators of cost and price competitiveness. To determine price competitiveness, the real effective exchange rate is used. Cost competitiveness is analyzed by the ULC (unit labor costs) in the manufacturing sector and consumer price deflator in order to see the trend in the movement of the real effective exchange rate. Also, additional data from the Global Competitiveness Report (World Economic Forum, 2013) and the Europe 2020 Strategy will be integrated in the chapter so as to provide a multi-dimensional concept of competitiveness. In order to overcome the flaws in traditional theories in the third section, technological aspects and other aspects of the non-price competitiveness of the EU will be elaborated.

This chapter aims to point out the risks of lowering EU competitiveness. Focus is placed on the influence of the world crisis on the competitiveness and export performance of the EU in order to demonstrate to what extent the global downturn might have aggravated previously existing needs for any readjustment to the functioning of the Union. Not only does the crisis show that problems in the EU were not created recently, but we also ask

for the urgent need for a new and improved policy in order to regain the strength of competitiveness and performance.

The methodology used in this research is based on quantitative analysis. It will be presented in the form of time series analysis for the case of the EU, concerning the period 1958-2012, and for the indicators of competitiveness between 2000 and 2012 in order to point out the dependence among observations at different points in time. Core suppliers of the necessary data are: Euro stat, the International Monetary Fund and the UN Comtrade databases.

The expected outcome of this research is to summarize the main reasons that contribute to a fall in the world trade positions of the EU which will lead to conclusions about the future prospects of the EU and the need for a higher productive strategy.

Trends in World Trade and the Trade of the EU

Global external imbalances widened persistently over the last few years. International trade flows contracted sharply in the fourth quarter of 2008 and the first quarter of 2009 mainly due to a decline in economic activity and aggregate demand, which resulted in the beginning of the world economic crisis. The percentage decline of world trade in 2009 by comparison with 2008 was 22.73% (figure 1).

With regard to the regions, an exceptional decrease was noticed in the Commonwealth of Independent States (C.I.S) of 35.28% in 2009, while Asia had the lowest slowdown in the volume of trade of 18.6% on an annual basis. Still, the decline in trade has led to a high degree of synchronization across countries, as a result of the developed and closely connected financial market and transmission power of information technologies.

The downfall of the total trade of the EU was 23.62% in 2009 compared with 2008. The declining foreign demand in the wake of the 2008/09 global economic downturn hit the EU export sector particularly hard. This led to increasing concerns about prospects for EU exports and competitiveness, particularly at a time when exporters had already been struggling to adjust to the fiercer competition and other structural changes resulting from globalization. While partly reflecting the relatively high openness of the European economy, this has also prompted increasing concerns about the competitiveness of the Union.

Trends in exports and imports may serve to calculate the value of the current account of the European Union. The trade balance of the Union in the period under review had a mainly negative value. In other words, the value of imports was higher than the value of exports and had been worsening over the previous decade. Since 2002 the trade deficit had been widening, and it reached the highest negative value in 2008 (525.1 billion Euros). The recovery came in 2009, when the trade balance showed positive tendencies. According to the data from Euro stat, the EU only exerted a positive trade balance in the period 1993-1998 (figure 2).

So far, European policymakers seem to have been watching the growing imbalances without much concern, in the hope that the EU will be largely unaffected (Ahearne, Jürgen, 2005). Additionally, the trade account balance, as well as the current account balance has never constituted a condition for the acceptance of a single currency. Even in the Maastricht criteria for entry into the Euro zone, there are no restrictions on trade or current account deficits. Under Article 143 of the Treaty on the Functioning of the European Union, only countries - countries that have not yet adopted the euro may receive financial assistance to deal with problems in the balance of payments *(Treaty of the functioning of the European Union*).

The reason why the EU does not allow funding for the deficit in the trade account is because it is considered that no economy can be exposed to speculative attacks on the common currency. Therefore, deficits between countries that are already members of the Euro zone should be financed through short-term financial markets, without the need for intervention by the monetary authorities.

The problem is systematic. The trade deficit of the EU is a result of the countries that traditionally achieve a trade surplus (Luxembourg, Finland, the Netherlands and Germany) and countries with traditionally high deficits (Greece, Portugal and Spain). However, the deficit in the trade account of Greece, Portugal and Spain was balanced until the mid- 1990s. Obviously, the process of convergence of these countries in the monetary union impacted negatively on the country, resulting in a deepening deficit due to the process of adaptation to the EU. Just for example, the Spanish balance of trade increased in 2006 to approximately four times more compared with 1999 (Trading Economics database).

Interestingly, the crisis created cyclical movements in the trade balance of the EU countries. The countries that traditionally have a trade surplus, experienced a lowering of the trade balance, and vice versa for the

countries with a trade deficit. By approaching price and cost competitiveness this research will try to provide an answer to these problems.

Approaches to Price and Cost Competiveness in the EU

The competitiveness of the EU as the main global trade leader is achieved by the advantages of the existence of a common market. The EU is the world`s largest exporter with good positioning in the global value chain. Still, the common market of the EU is fragmented by the domestic producers that do not use the advantages of the economies of scale as a result of not having synchronized policies. With the beginning of the economic crisis, many of the structural weaknesses of the Union were revealed. As private demand remained resilient, and public expenditure increased the internal imbalance of the Union. Sluggish international demand and a poor economic outlook limited the potential for export.

The trends of export for the EU are moving almost in the same direction as the total trade of the EU. Export growth reached its peak in 2007 with 17% annual growth, and then experienced a decline in 2009 of 23%, compared with 2008. After a short recovery exports showed a 5% decrease in 2012 compared with the previous year.

According to the share of the export of the EU in terms of world exports, the relative indicator is slowing down (figure 3). With the exception of the period 1958-1960, the Union had the highest share in the value of world exports in the whole period under observation. In 1996, the EU had a 20.8% market share of world trade in goods (excluding intra-EU). This market share has been lowered by competitive pressures from the emerging economies, falling to 16% in 2010. The second largest world exporter was the USA, whose share has been declining gradually since 2000. The most remarkable development is that of China as the fastest growing economy from 2005 onwards to become the third largest exporter in the world, followed by Japan as the fourth largest world exporter. Thus, if we make a comparison, we can see that the rise in the export share of China for 10 p.p. from 1996 to 2010, has been fairly affected by the EU (fall of 4.8 p.p.), USA (fall of 4.6 p.p.) and Japan (fall of 3.7 p.p.) over the same period.

The EU's export performance varies significantly between markets. The EU shows a decrease in market shares on some of the most dynamic importing markets during the last decade. The largest gain is in the United States market, where the EU accounted for over one fifth of the import market in 2007. This

performance coincided with shrinking shares of Japanese and to a lesser extent, of Canadian and ASEAN exports in the same market. Conversely, the EU lost market shares on the BRICs markets. The small market share loss of EU products on the rapidly expanding Chinese market could, however, have a large impact in the long run.

This appears to be mainly associated with unfavorable trends in the price competitiveness of the EU. Measured in terms of relative export prices, the European Central Bank estimates that euro area price competitiveness deteriorated by around 10% between 1999 and 2008 (ECB, 2010).

The decrease in price competitiveness has been confirmed by movements of the nominal effective exchange rate, given in figure 4. An increase of this indicator suggests an appreciation, which indicated a lowering of price competitiveness. The appreciation of the exchange rate was from 2002 to 2009, after it experienced a depreciation until 2012. The figure shows that the Euro zone has lower price competitiveness compared with the EU as an economy of 27 member countries (not taking into consideration Croatia, because of the lack of data since its entry into the EU in 2013).

Still, price competitiveness differs from country to country. High price competitiveness is achieved for Germany, France, Austria and Finland. Losses in price competitiveness are recorded in most of the countries - where at the same time, Estonia. Malta, Cyprus, Greece experienced a decline in exports.

The losses in market shares have coincided with a degradation of cost competitiveness, measured by unit labor costs (ULC). The rise in the real effective exchange rate indicates a lowering of cost competitiveness. We consider that the increased ULC both in the EU and the euro area, is most likely a consequence of the strong growth of real wages since 2002 in most of the countries of the European Union (figure 6).

Despite intensive wage growth which was a long term trend, during the whole period from 2002-2011, the peripheral member states registered a high unemployment rate, which indicates low wage sensitivity to movements of unemployment (figure 6). Additionally the cyclical effect of the crisis caused losses in labor productivity, meaning a faster decline of output relative to employment during the slump. Between the first quarters of 2008 and 2009, production decreased by 19% while hours worked fell by 8% (European Commission, 2013).

Therefore, as a result of the insufficient achievements in labor productivity, despite the introduction of new technologies and good business practices, economic growth in the Union was slowing down. In other words the

EU is not an optimal currency area, except the lack of wage flexibility, the EU does not have convergence in business cycles, and has low mobility of labor force and capital. In this regard, it can be concluded that in the event of an economic shock, when there is no flexible foreign exchange regime and an autonomous monetary policy in the member states, labor mobility or wage flexibility cannot recover the differences among the economies in the Monetary Union (Trpeski, Kondratenko, Jankoski, 2013).

Therefore there is limited potential growth of national spillovers. This argument is supported by the Regional Competitiveness Index (RCI) calculated by the European Commission, which measures the different dimensions of competitiveness at a regional level in the EU countries. RCI reveals substantial differences in competitiveness within some countries. In France, Spain, the United Kingdom, the Slovak Republic, Romania, Sweden and Greece the level of variability across regions is particularly high. As a result, a large gap in regional competitiveness is harmful for national competitiveness and consequently for the Union as a whole (The World Economic Forum, 2014).

Non-price Competitiveness

Whilst for most EU countries price competitiveness has been a critical factor in the shaping of relative export performance with respect to major direct competitors – most notably developed economies – other non price-related factors play a part. Generally, non-price competitiveness comprises the structural and technological aspects of competitiveness. In this context, factors such as research and innovation, infrastructures, as well as the regulatory and tax frameworks of a country, are critical because they affect the prospects of achieving higher productivity growth and thus competitiveness in the medium and longer term (ECB, 2010).

The European Competitiveness Report (2013) shows that the EU has comparative advantages in most manufacturing sectors (15 out of 23) accounting for about three quarters of EU manufacturing output. They include vital high-tech and medium-high-tech sectors such as pharmaceuticals, chemicals, vehicles, machinery, and other transport equipment (which includes aerospace). In the high tech sectors, the EU has a comparative advantage in pharmaceuticals but lags behind in the rest of this broad category (computers, electronics, and optical equipment). Even in the medium high-tech sectors, the EU comparative advantage is lower than for the US and Japan. More importantly, China and the other emerging industrial economies are quickly

gaining ground in the knowledge intensive sectors and rather than merely assembling high-technology products they are now producing them. Even though the data in table 1 confirms that China is a leader in high tech industries, this is, as yet unreliable data. It is a result of the offshore activities of the USA and EU for low cost production.

The type of specialization of the countries can explain the cyclical movements in the trade balance. Since, there is a difference between the elasticity of different categories of goods and services, trade in services, with the exception of transport, declined with less dynamics than trade in goods. Industries that are generally sensitive to the business cycle, such as industries that produce durable goods (raw materials and heavy equipment) suffered the most. Contrary to these trends, the trade of traditional "un cyclical" sectors, such as food, beverages and pharmaceutical products, was far more resilient.

Consequently, countries that entered the global economic crisis with large trade deficits had a significant improvement in the condition of the trade account in the period 2008 to 2010. Countries that had substantial trade surpluses had noted a lowering of the positive balance in trade. This suggests that the decline in trade surplus of the countries that traditionally generate a positive trade balance (Germany, France, Austria, Belgium and Netherland) is due to the elasticity of the world demand for capital intensive products and investment goods, in which these countries are highly specialized. Conversely, countries with trade deficits (Greece, Spain, Cyprus, Slovenia and Finland) that have high specializations in consumer goods, had slightly reduced exports due to a global "un elasticity" demand (Mauro, Foster, Lima, 2010).

These developments are cyclical; in other words, they are occurring due to the impact of the economic cycle in which the world economy finds itself. Thus, after the crisis, current trends in the trade balance will be present again. Consequently, the existence of the different economic structures of member countries is a systemic problem for the European Union. Although it can be equated with the global imbalance, there is a significant difference. Globally, adjustments are achieved through exchange rate movements, while within the monetary union (such as the EU) that must be achieved through fiscal adjustment and the coordination of policies within the member countries (Mrak, 2010).

We believe that the decreased labor productivity of the Union is important and influenced negatively not only for prices, but also for non-price competitiveness. Labor productivity, and especially multi-factor productivity, is often seen as being an indicator of technical progress. Increased labor

productivity means more output is produced with less labor, which can be due to technological or organizational improvements and other non-observable factors.

Reasons behind the Loss of EU Competitiveness

In order to explain why European growth came down from the extraordinary levels it reached during the Golden Age (1950-1973), and most importantly the technological lagging of the EU behind the USA we will compare the indicators of labor productivity and labor input between the EU and the USA.

According to the numbers in table 2, the problem is ascribed entirely to a relative fall in labor input (from index of 115,2 in 1950 to 76,2 in 1995 and 82,2 in 2004 compared with the USA). The reason for this is:

a) the ratio of population in employment to the population of working age, which is higher in the USA at 74% (OECD database) compared with the EU at 68% (Euro stat database). The data shows that the employment rate (age group 20-64) is still below the objectives set in "Europe 2020" of 75% of the population.

b) The structure of the working population has aged considerably in recent decades. Between 1960 and 2000, the average dependency ratio (defined as the number of persons aged 60 or more years per 100 persons aged 15-59 years) for the EU-15 this rose from 26 to 35. At the same time, the dependency ratio for the United States remained almost constant at around 25. During the period 1995-2015, the population above the standard retirement age, 65 years, will increase by 17 million (30%). Within this group the very old, those over 80, will increase by 5.5 million or 39% (Blanchard, 2004).

c) The fall of the utilization rate of labor in Europe compared with the USA which is a result of the sustainable preference for leisure due to higher social protection for the workers and also by the labor rigidness of the European market.

Taking into consideration that the average hours worked are much shorter in the EU and that the employment rate is much lower compared with the USA, we can get an artificially boosted indicator of productivity. As the data show productivity in the EU did not decrease, just the opposite. The GDP index per working hour increase from 75.4 in 1975 to 98.3 in 1995. Then decreased to 90.3 in 2004, but still remained below the USA (index=100) (table

2). This indicator should be revised in order to compare the real productivity gap between the EU and the USA. According to Cette (2004), the European productivity level should be revised downwards, which suggest that the productivity gap between EU and USA remains substantial.

The main turning point for widening the productivity gap is considered to have been in 1995. Taking into account indicators of annual productivity growth, in the USA, average annual labor productivity growth accelerated from 1.2 percent during the period 1973–95 to 2.3 percent during 1995–2006. Comparing the same two time periods, annual labor productivity growth in the European Union declined from 2.4 to 1.5 percent (Ark, O'Mahony, Timmer, 2008). In the mid-1990s, there was a burst of higher productivity in industries producing information and communications technology equipment (ICT), and a capital-deepening effect from investing in information and communications technology assets across the economy. In turn, these changes were driven by the rapid pace of innovation in information and communications technologies, fuelled by the precipitous and continuing fall in semiconductor prices. Europe has been lagging behind the USA not only in ICT investment but also in total productivity growth in ICT producing as well as ICT - using industries.

Practically, the period of the two oil crises 1973-74 and 1978-79 marked the end of the fast growing industries such as the chemical and automotive industries, the production of plastics and artificial fibers, which had been the main driving force of economic growth in the postwar period. For thirty years, between 1950 and 1973 Europe enjoyed a "Golden age" of growth, stability and social cohesion.

All industries were replaced by new industrial sectors with high added value, such as electronics, chemicals and pharmaceuticals, computer technology and telecommunications. Although newly industrialized economies-Japan and the "tiger economies" of Southeast Asia, at that time were trying to increase the competitiveness of these industries, especially in electronics, still in the areas of information technology products and bio pharmaceutical products the USA maintained a big competitive advantage (Dyker, 1999).

Also, the EU is lagging in its investment in research and development (R&D). According to the objectives set out by the European Commission (2010a), "Europe 2020", each EU member state should consider the costs for R&D as amounting to 3 % of their national GDP (the same as in the Lisbon strategy). In the period 1995 - 2010, the cost of R&D calculated as a

percentage of GDP in the EU and the euro area is relatively fixed, and moving with an average value of 1.8 % of GDP, which is below the set limit.

The EU and euro area have only a higher spending rate on R&D than China. Within the EU, only Sweden and Finland have 3.7 % exceeding the target. Other countries that have a higher than average rate in the Union are: Germany (2.69 %) and Denmark (2.85 %). In 2008, Japan had the highest percentage of allocation of 3.45 %, followed by South Korea with 3.36 % and 2.76 % in the USA. South Korea has witnessed a rise in costs during the reporting period.

It seems that the Lisbon strategy for making the EU the world's most competitive economy has been a failure. Still, an extension of the failed approach lies in its works. After the Lisbon strategy, the Europe 2020 strategy has emerged with some principle tasks, whilst central ideas of the Lisbon Strategy have been kept. The Lisbon answer has been the "open method of coordination". It was to aim at the middle ground, where key policy domains remain in the realms of national competence but are recognized as being of common interest. The EU continues with the Lisbon-type reforms and has developed new instruments of economic governance, especially with the beginning of the economic crisis.

Some authors, such as Wyplosz (2010) state that the Lisbon strategy should die a peaceful death, and that a brand new model is needed. We believe that the model is adequate, even though there is no explicit growth in the productivity targets formulated in the Europe 2020 strategy, but trends in labor productivity are monitored as one of its main indicators. The countries of the EU need to find their own ways of adjusting to the opportunities and dislocations of new information and communications technologies. We believe that the large extent of reforms should remain within the authority of the member states, which could bring a higher incentive for its implementation, thereby contributing to accomplishing a common interest. When one country becomes more productive, it benefits (through demand) the whole of the EU and raises the productivity of the rest of the countries. There also needs to be ensured a greater labor mobility and flexibility of the common market that can help the Union to improve its competitiveness and also to be able to face adverse shocks in the future much more easily.

Conclusion

Data for the foreign trade of the EU shows that the integration process and the introduction of the euro contributed to the Union becoming the biggest "trade player" in the world. However, there has been a gradual fall in the trading position of the EU. That is not only a result of the economic crisis, but due to the major structural weaknesses (shortcomings) of the EU. In other words, the situation in the foreign account is created due to the gap in productivity, which led to a real depreciation of the exchange rate in favor of countries that have traditionally been exercising surplus. At the same time, most of the other Member States of the EU realized a permanent foreign trade deficit that, among other things, was a result of the large discrepancy between labor productivity and wages, whose ultimate effect was perceived in the shrinking or stagnant rates of economic growth of these countries.

It turned out that the economy of the EU has a series of structural inconsistencies and numerous drawbacks in its economic system. The lack of compliance of internal policies was one of the most important reasons for the occurrence of asymmetric shocks in the Union, reducing the competitiveness of the EU economy and the strengthening of the negative effects from the existing economic crisis.

Among the Member States of the EU a gap in prices for homogenous products was created. Even though, the purpose of the single market was to allow free movement of goods, service, capital and labor, the goal was not met due to different price levels. The difference in prices and production costs has caused a negative impact on trade flows in the Union. The EU shows a decrease in market shares on some of the most dynamic importing markets during the last decade, especially the ASEAN market. The orientation of trade towards the emerging countries can be a suggestion for the rest of the member states for a faster, out of the crisis and balanced trade account in the future.

But on the other hand it is necessary to boost trade relations between the EU countries in order to gain and improve trade conditions in the Common Market. Long-term expectations and the needs of the Common Market to make comprehensive structural changes in order to overcome structural differences between individual member states and to increase overall competitiveness are needed. Also, it is necessary to remove trade barriers between individual member states and to achieve higher individual and aggregate rates of economic growth. It is clear, therefore, that the effects of a

deeper integration of the EU have not yet been achieved, and any expected benefits may not be truly realized, if the internal and external balance of the Union is not achieved.

In our opinion, the EU needs changes in the long term strategy which should be oriented towards targeting specific systematic problems of individual member states of the EU. Reforms need to be made in order to enhance competitiveness, which is seen as being a priority. When one country becomes more productive, it benefits (through demand) the whole of the EU and raises the productivity of the rest of the EU countries. Even though the relationship between labor productivity and market share gain is not straightforward, we tried to point out that decreased labor productivity growth in the case of the EU has an influence on the declining share of the world market. Firms and industries from the EU are facing tough competition from low-cost producers (especially from the Asian countries) and therefore they are forced to rationalize their production in order to survive. In that direction, measures need to be oriented towards a decrease in employees` protection and a higher initiative for regional mobility of the labor force.

Additionally, if the competitiveness of the Union is not improved, the balance in the trade account will be provided by increased unemployment, particularly in certain sectors which are uncompetitive. That would mean the risk of structural unemployment, in other words a more emphatic social crisis that could turn into a political crisis.

References

Ahearne, A., Jürgen, von H. (2005). Global current account imbalances: How to manage the risk for Europe. *Bruegel Policy Brief,* 2, 34-38.

Aiginger, K. (2004). Copying the US or developing a new European model – policy strategies of successful European countries in the nineties (Working paper). Geneva: United Nation Economic Commission for Europe. Retrieved April 12, 2014, from http://www.unece.org/fileadmin/DAM/ead/sem/sem2004/papers/Aiginger.pdf

Artis, M., & Nixson, F. (2007). *The Economic of the EU - Policy and Analysi*s (4th ed). Oxford: UK: Oxford University Press.

Ark, van B., O'Mahony, M., & Timmer, P. M. (2008). The productivity gap between Europe and the United States: Trends and causes. *Journal of Economic Perspectives*, 22 (1), 25–44.

Barro, R.J., & Xavier, S.M. (2004). *Economic Growth* (second ed.). London: McGraw-Hill.

Bernhard, M. (2004). Trends in export market shares between 1991 and 2001 (Working Paper 07-05). Brussels: Federal Planning Bureau. Retrieved March 13, 2005, from http://www.plan.be/admin/uploaded/200605091448058.WP0507en.pdf.

Blanchard, O. (2004). The economic future of Europe. *Journal of Economic Perspective*, 18: 3-26.

Dyker, D. A. (1999). *The European Economy (*second edition). New York: Longman.

Directorate General for Economic and Financial Affairs. (2013). Securing European competitiveness in a global perspective (ECFIN publication, issue 25). Brussels, Belgium. Retrieved fromhttp://ec.europa.eu/economy_finance/publications/economic_briefs/2013/eb25_en.htm

Eurostat. (2011). External and intra-EU trade: A statistical yearbook, data 1958 – 2010 [statistics].

World Trade Organization. (2014). Short term statistics. Retrieved from http://www.wto.org/english/res_e/statis_e/quarterly_world_exp_e.htm

European Commission. (2013). European competitiveness report 2013: Toward knowledge driven reindustrialization (Commission Staff Working Document SWD(2013)347 final). Brussels: European Commssion. Retrieved April 15, 2014, from http://ec.europa.eu/enterprise/policies/industrial-competitiveness/competitiveness-analysis/european-competitiveness-report/files/eu-2013-eur-comp-rep_en.pdf

European Commission. (2010). EU-Communication from the Commission Europe 2020, A strategy for smart, sustainable and inclusive growth. Brussels, European Commission. Retrieved February 20, 2014, from http://ec.europa.eu/eu2020/pdf/COMPLET%20EN%20BARROSO%20%20%20007%20-%20Europe%202020%20-%20EN%20version.pdf

European Commission. (2010a). Europe 2020 – A strategy for smart, sustainable and inclusive growth (Commission staff working Document COM(2010)2020. Brussels: European Commission.

European Commission official web site. http://ec.europa.eu/economy_finance/db_indicators/competitiveness/data_section_en.htm/

Haijman, W., & Altena, P. (2007). In search of clusters. Wageningen University, Department of Social Sciences. Retrieved from http://ageconsearch.umn.edu/bitstream/43571/2/a1.pdf

Krugman, P. R. (1996). Making sense of the competitiveness debate: International competitiveness. *Oxford Review of Economic Policy*, 12(3), 17-25.

Mankiew, G. (2010). *Macroeconomics* (7th edition). USA: Worth Publishers.

Mauro, F., Forster, K., & Lima, A. (2010, October). The global downturn and its impact on Euro area exports and competitiveness. Working paper 119. Frankfurt: European Central Bank. Retrieved January 20, 2014, from http://www.ecb.europa.eu/pub/pdf/scpops/ecbocp119.pdf.

Mrak, M. (2010). Eurozone crisis: what went wrong and where do we stand now? Working material. University of Ljubljana.

Ottaviano, G., Taglioni, D., & Mauro, D. (2009). The euro and the competitiveness of European firms. *Economic Policy,* 24 (57), 5-53.

Trading economics official web site. http://www.tradingeconomics.com/spain/balance-of-trade/

European Union. (2008). Treaty of the functioning of the European Union. Retrieved from http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:C:2008:115:0047:0199:en:PDF

UN comtrade database. http://comtrade.un.org/

World Economic Forum. (2014). *The Global Competitiveness Report 2013-2014.* Geneva: World Economic Forum. Retrieved from http://www3.weforum.org/docs/WEF_GlobalCompetitivenessReport_2013-14.pdf

Wyplosz, C. (2010, January 12). The failure of the Lisbon Strategy. *VOX online.* Retrieved from http://www.voxeu.org/index.php?q=node/4478

Table 1
Comparative advantage by technology intensities in manufacturing, 2011

	High tech	Medium high tech	Medium low tech	Low tech
EU	0,85	1,14	0,89	1,01
Japan	0,73	1,59	0,86	0,16
USA	0,88	1,22	0,96	0,68
Brazil	0,32	0,76	0,87	2,5
China	1,56	0,72	0,85	1,29
India	0,4	0,49	1,93	1,33
Russia	0,08	0,45	2,74	0,49

Source: UN Comtrade UN comtrade database (http://comtrade.un.org/).

Table 2
Levels of EU-15 relative to the USA, in PPP, (USA=100)
Source: Ark, van B., O'Mahony, M., & Timmer, P. M. (2008).

	1950	1973	1995	2004
GDP per capita	45,5	76,8	74,9	74,1
GDP per working hour (labor productivity)	39,5	75,4	98,3	90,3
Working hours per head of population (labor input)	115,2	101,9	76,2	82,1

Figure 1
Annual growing rates of the world trade by region and selected economies (%)
Source: World Trade Organization. (2014). Short term statistics.

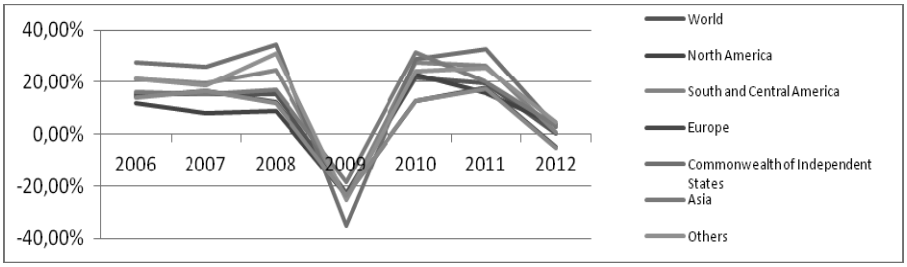
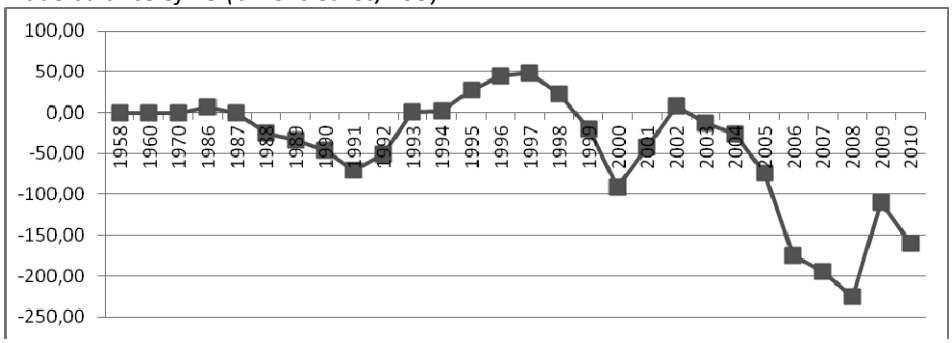
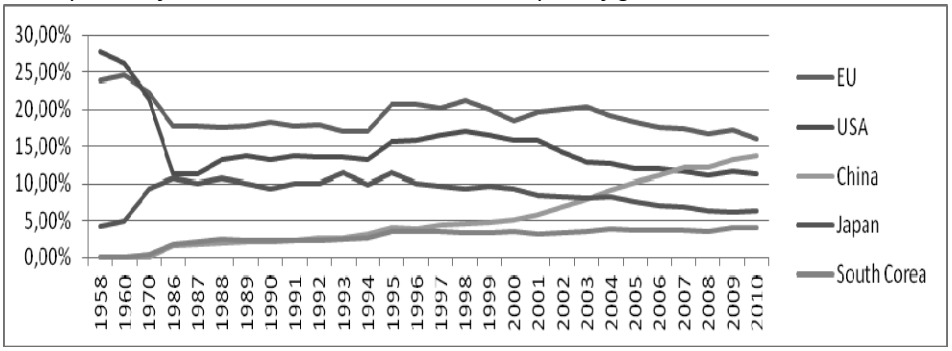


Figure 2
Trade balance of EU (billions euros/ECU)



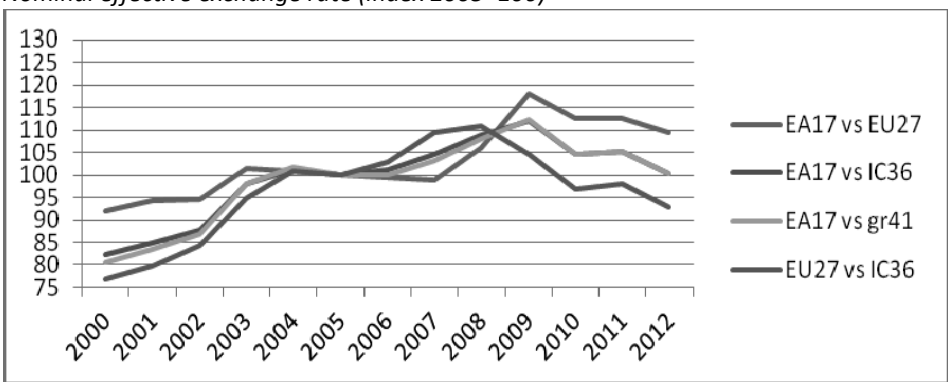
Source: Eurostat. (2011). External and intra-EU trade: A statistical yearbook, data 1958 – 2010 [statistics].

Figure 3
Participation of the countries in the total world export of goods



Source: Eurostat. (2011). External and intra-EU trade: A statistical yearbook, data 1958 – 2010 [statistics].
*the data cannot be consistent on the yearly intervals because of the lack of data

Figure 4
Nominal effective exchange rate (index 2005=100)



Source: European Commission official web site.

* IC 36 = group of 36 industrial countries
gr 41 = a larger group of 41 countries (the 36 industrial countries, Russia, China, Brazil, Hong Kong and Korea).

Figure 5
Real effective exchange rate (ULC) (index 2005=100)
Source: European Commission official web site.

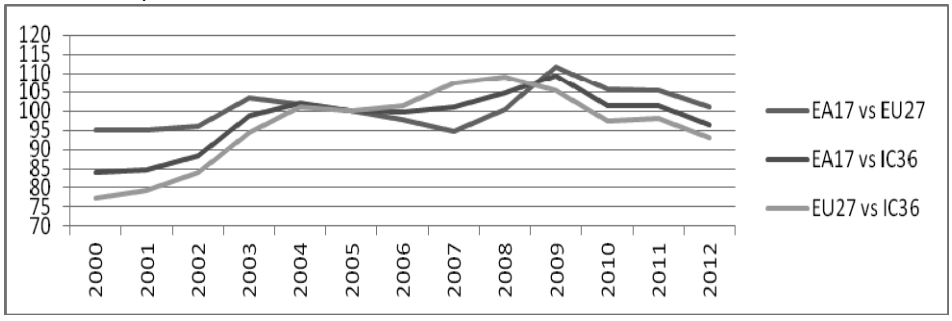
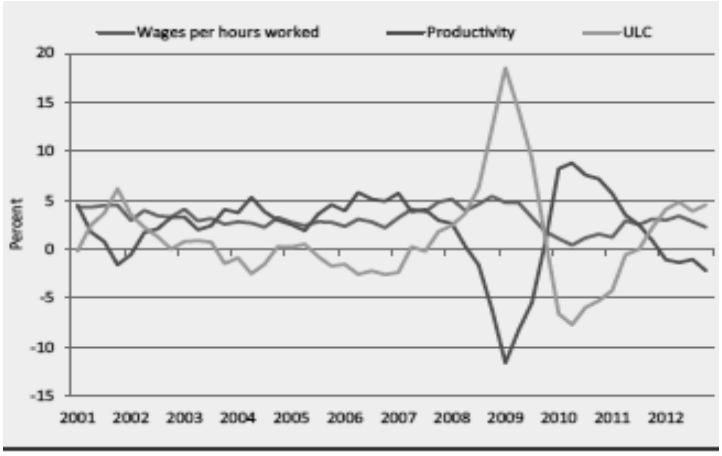


Figure 6
Fluctuations in EU ULC are mainly caused by variations in labor productivity growth



Source: European Commission. (2013). European competitiveness report 2013: Toward knowledge driven reindustrialization.