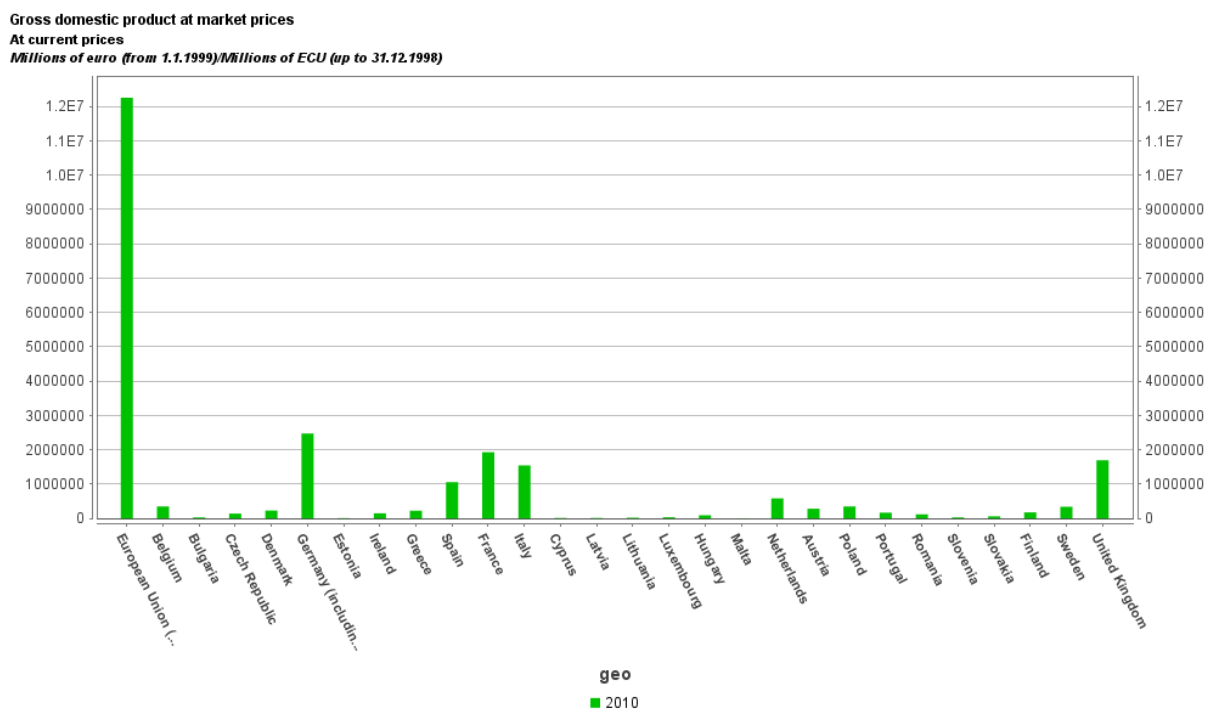


This home work assignment consists of two parts. First, we will present times series data from Eurostat for GDP per capita in nominal terms (current market prices) and real terms (in purchasing power standards). This will be done for both all 27 members of the European Union (EU) as well as for the biggest countries (by population if not said otherwise). In the second part, data will be presented of the real GDP growth rate for all 27 member countries of the EU. However, the time period for which the data will be presented will vary between graphs due to availability at Eurostat.

According to the definition by Eurostat; "GDP (gross domestic product) is an indicator for a nation's economic situation. It reflects the total value of all goods and services produced less the value of goods and services used for intermediate consumption in their production. Expressing GDP in PPS (purchasing power standards) eliminates differences in price levels between countries, and calculations on a per head basis allows for the comparison of economies significantly different in absolute size."

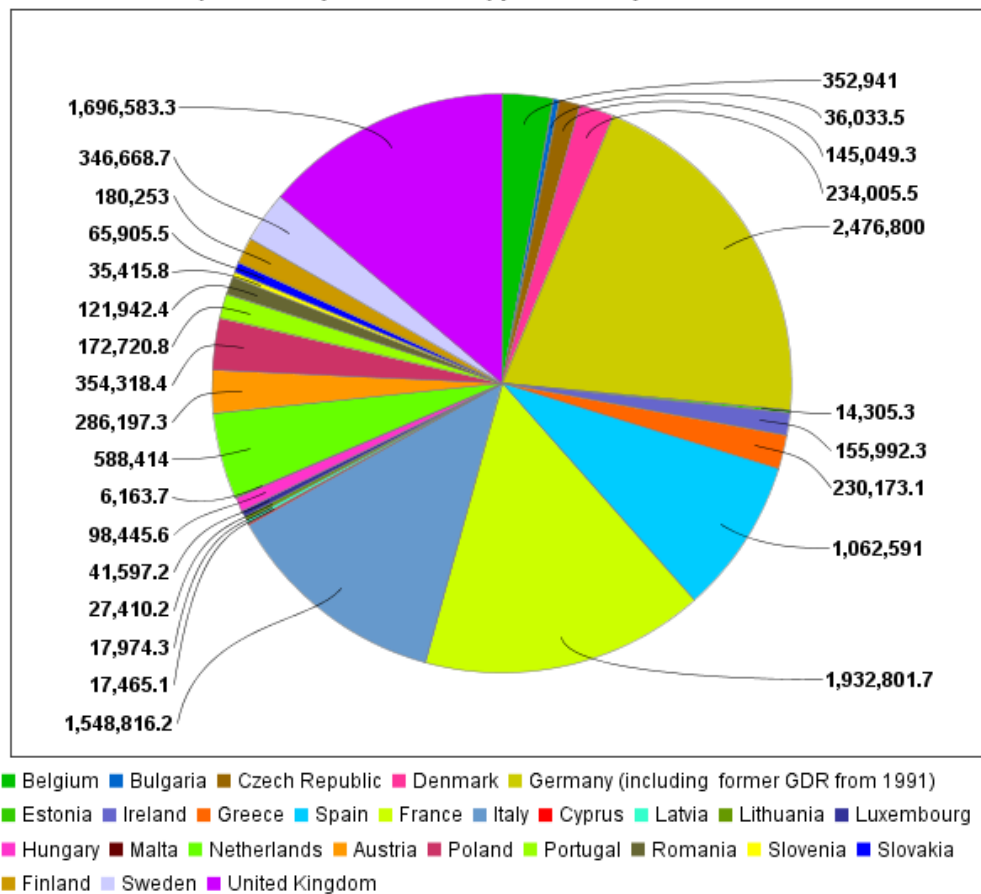
## 1. Nominal & Real GDP per Capita



In the graph above the nominal level of GDP per capita is presented for all 27 members of the EU for the year 2010, as well as for the entire EU in millions of Euros. Here you can see that the countries with the highest nominal GDP per capita are the ones with the biggest populations (Germany, France, UK, Italy, Spain in descending order). The Netherlands also have a quite big nominal GDP per capita although the country can't be compared in population size to the ones mentioned earlier.

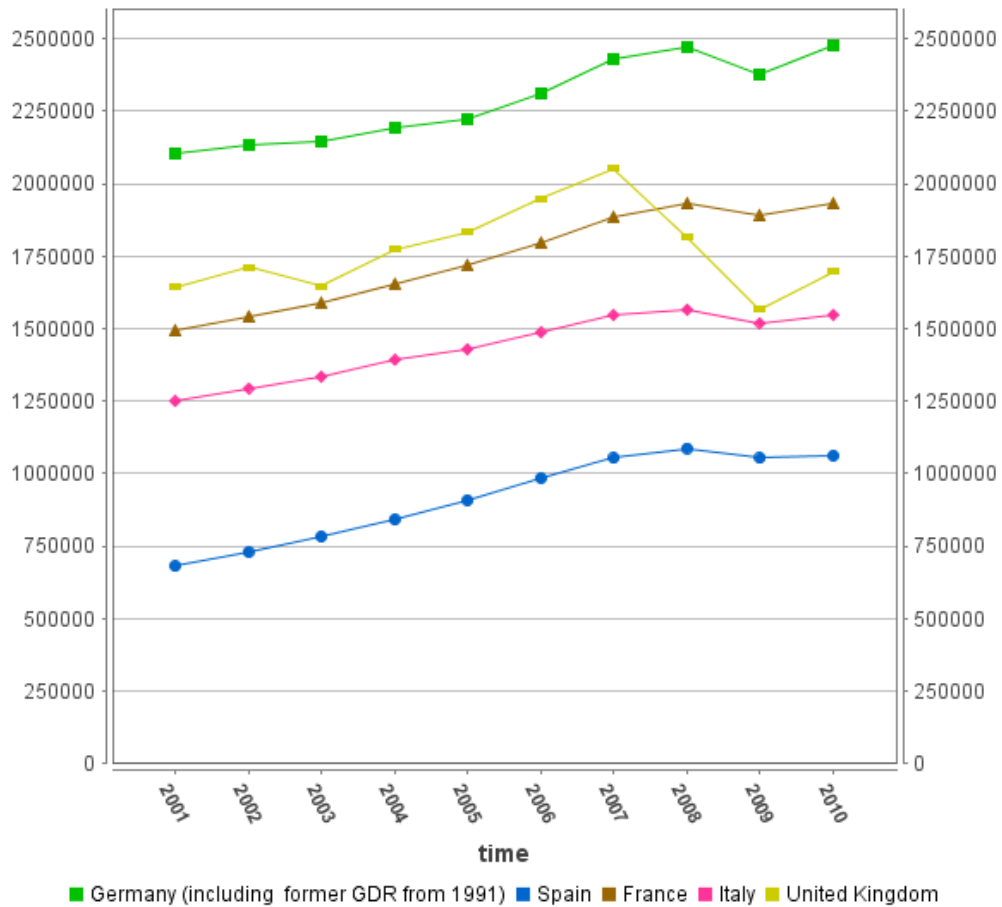
However, their big nominal GDP per capita can be due to the fact that they have legalized certain sectors (coffee shops which sell drugs and the prostitution industry) which generate production and income contributing to their GDP. You cannot find this legalized to the same extent in other EU countries.

**Gross domestic product at market prices**  
**At current prices**  
**2010 Millions of euro (from 1.1.1999)/Millions of ECU (up to 31.12.1998)**



Even though it is not appropriate to compare nominal GDP per capita between countries, the pie chart above shows easily the correct absolute values (in millions of Euros) of nominal GDP per capita, for all the 27 member counties of the EU.

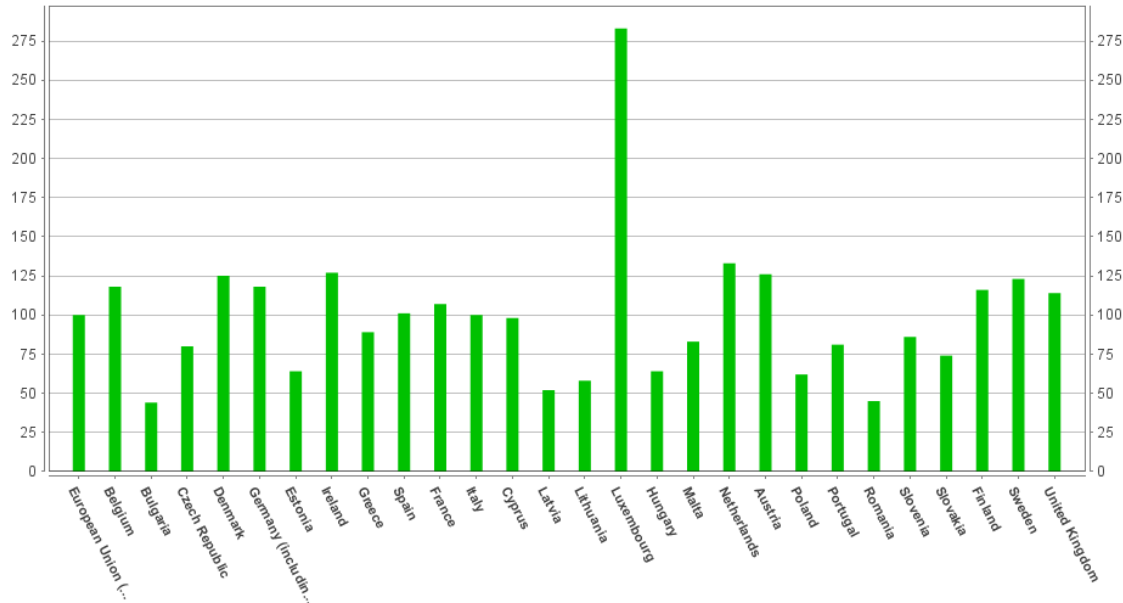
**Gross domestic product at market prices**  
**At current prices**  
**Millions of euro (from 1.1.1999)/Millions of ECU (up to 31.12.1998)**



the graph above, the nominal GDP per capita for the five biggest countries is plotted for the years 2001-2010. As said above, comparing nominal GDP per capita between countries doesn't say anything. However, here you can see the change for each of the countries over this time period. One clear change is due to the financial crisis of 2008. The nominal GDP per capita in the UK fell drastically during this period, but is now recovering. For the other countries the nominal GDP per capita more or less flattened out after 2008, with a smaller downturn than for the UK.

Next, we will instead take a look at real GDP per capita. This measure of GDP is used to compare GDP levels between countries over time, since it is adjusted for different price levels in countries. In the data from Eurostat used to present the real GDP per capita, the volume index of GDP per capita in Purchasing Power Standards (PPS) is expressed in relation to the European Union (EU-27) average set to equal 100.

GDP per capita in PPS  
GDP per capita in Purchasing Power Standards (PPS) (EU-27 = 100)

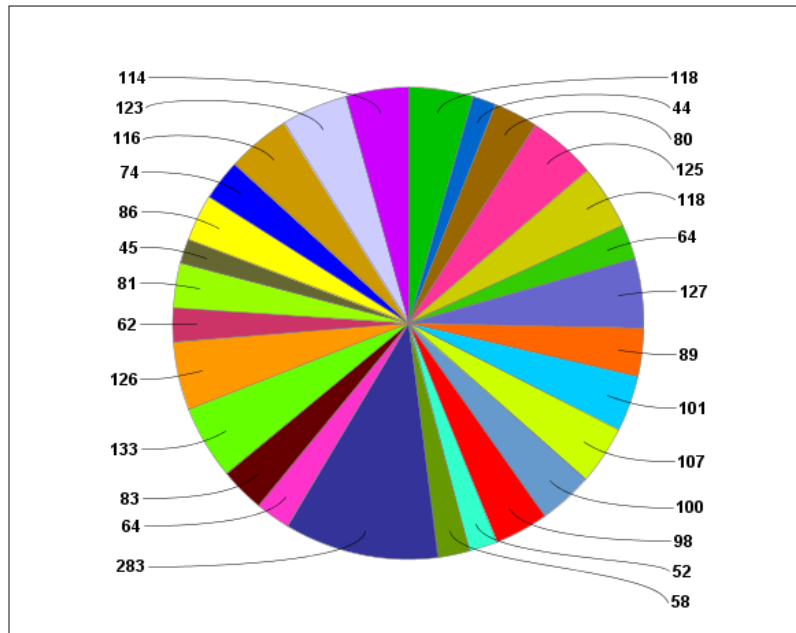


Exceptions:

geo

■ 2010

GDP per capita in PPS  
GDP per capita in Purchasing Power Standards (PPS) (EU-27 = 100)

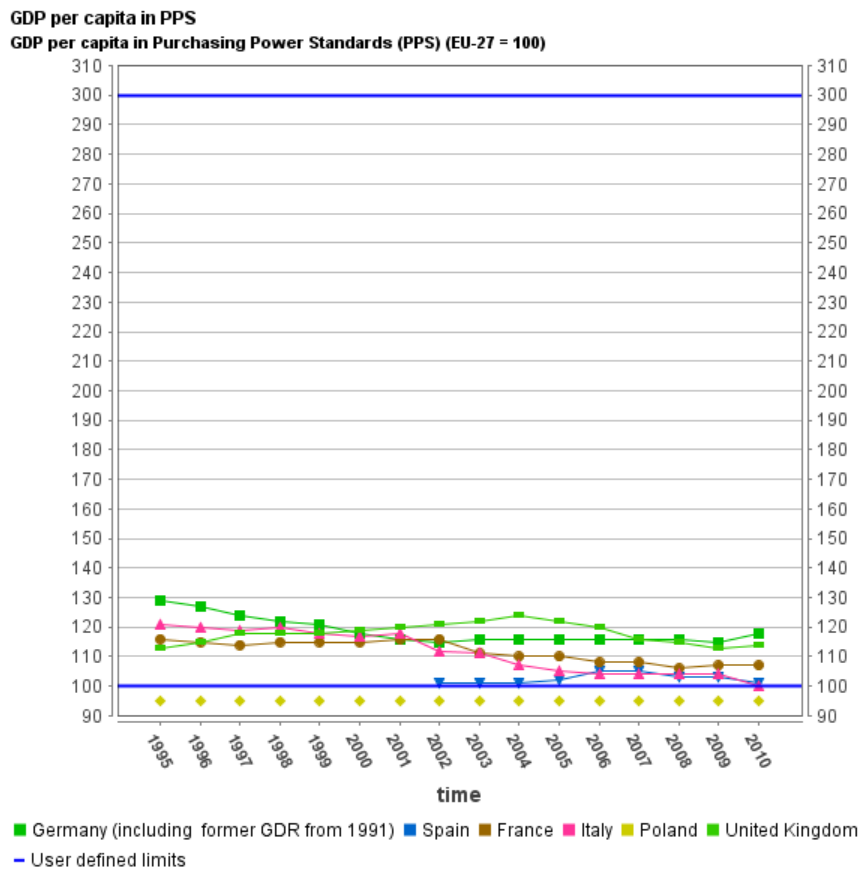
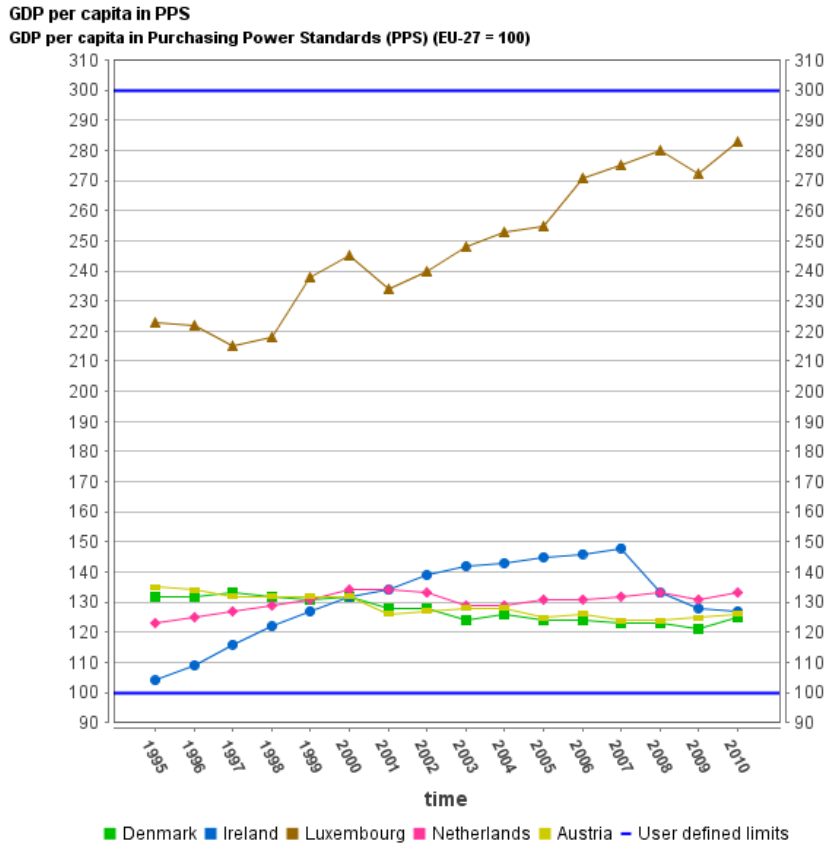


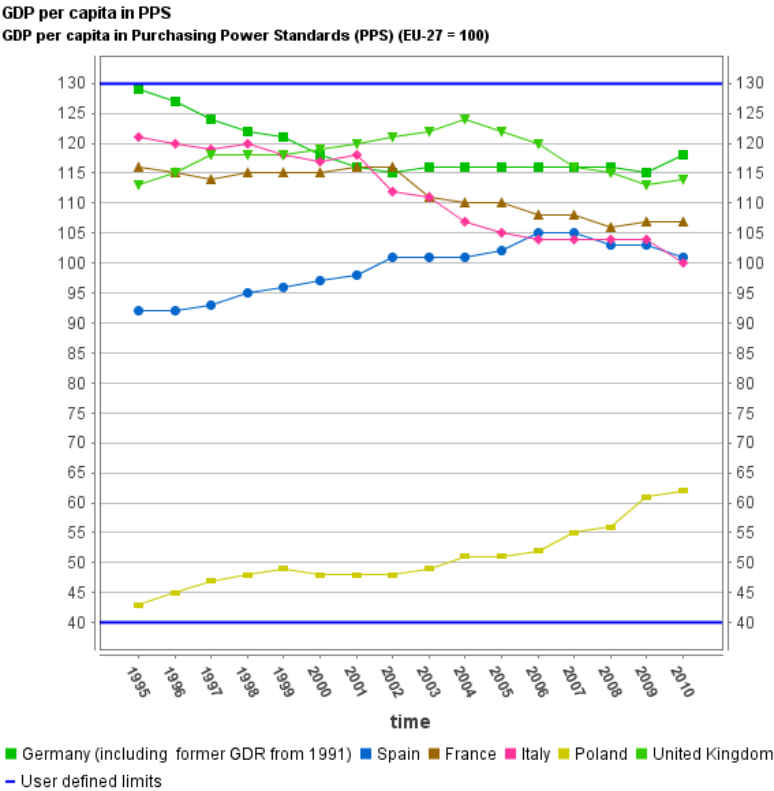
Exceptions:

- Belgium ■ Bulgaria ■ Czech Republic ■ Denmark ■ Germany (including former GDR from 1991)
- Estonia ■ Ireland ■ Greece ■ Spain ■ France ■ Italy ■ Cyprus ■ Latvia ■ Lithuania ■ Luxembourg
- Hungary ■ Malta ■ Netherlands ■ Austria ■ Poland ■ Portugal ■ Romania ■ Slovenia ■ Slovakia
- Finland ■ Sweden ■ United Kingdom

What is interesting is that the small country Luxembourg which in nominal terms earlier was barely on the graph now in real terms has the biggest GDP per capita measured in purchasing power standards. This is much due to the fact that many people living in neighboring France, Germany, Belgium and the Netherlands commute to work there and therefore contribute to the country's GDP. However, since they don't live in Luxembourg, they are not part of the population. Hence, when the GDP of Luxembourg is calculated in real terms, it is divided over a smaller amount of people (the inhabitants) than the actual amount of people who have worked for it. All in all, when looking at the data for 2010 above, about half of the countries have a real GDP per capita which is higher than the EU-27 average (the Netherlands, Austria, Ireland, Denmark, Germany, Belgium, Spain, France, Finland, Sweden, UK, Luxembourg).

Below, we have made two times series graphs, the first with the five countries with the biggest real GDP per capita (Denmark, Ireland, Luxembourg, the Netherlands, Austria) and one with the biggest EU countries by population (Germany, Spain, France, Italy, Poland, UK). This gives a good view for comparison when looking at the change over time, 1995-2010. When looking at Poland, which has a big population, you can see that the real GDP per capita doesn't have the same positive change over time as the other countries have seen. This can be due to the fact that it is the only Eastern European country, meaning that it has gone through different political climate and economic development than the rest. Even though Poland's economy is strengthening, it is still at a real GDP level under the average for the EU-27.

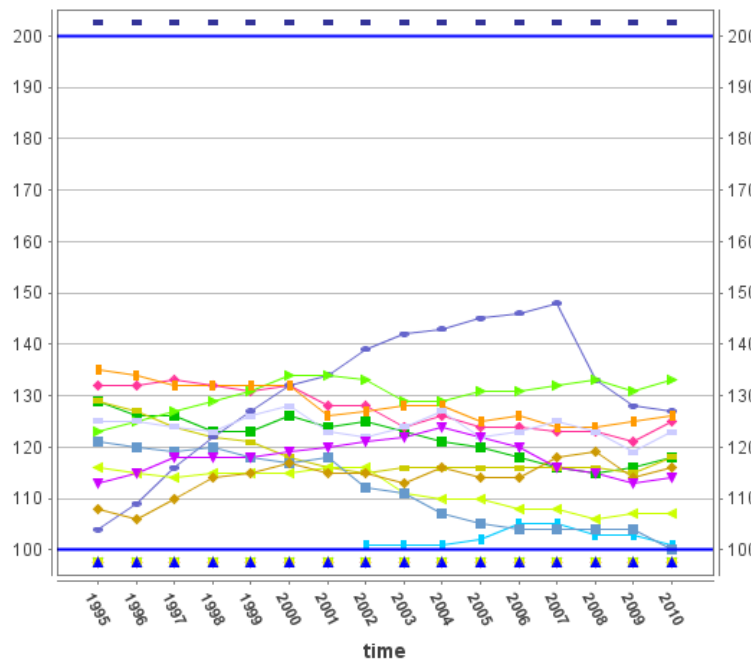




The graph above is an enlargement of the graph before it for the same countries. Here we can more clearly see the development of real GDP per capita for the biggest countries in the EU. Spain’s has steadily increased before the financial crisis 2008, while the real GDP per capita of Italy has deteriorated over the years.

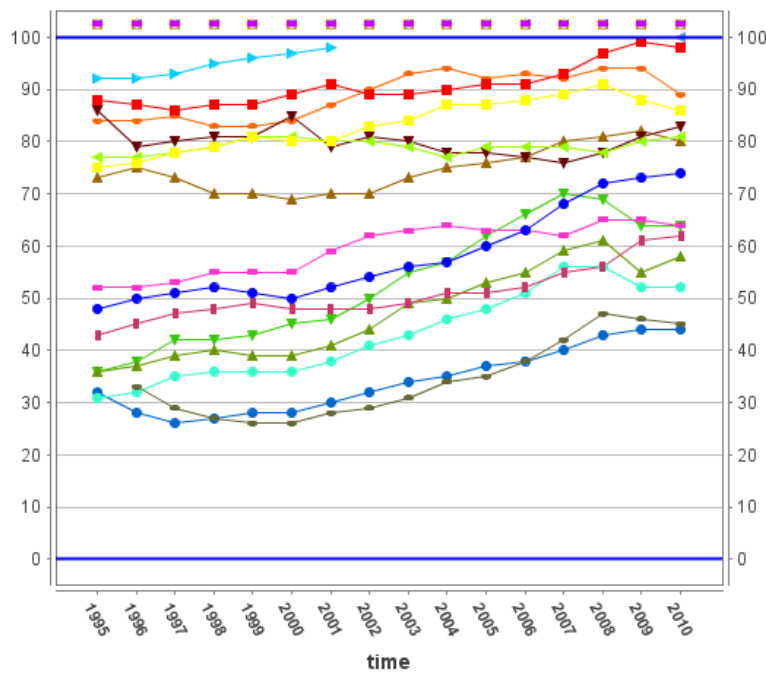
Below, there are two graphs showing the change in real GDP per capita for all EU-27 countries over the years 1995-2010. In the first graph, the countries which are under the EU-27 average (PPS: 0-100) is depicted. In the following graph, the countries with real GDP per capita over the EU-27 average (PPS: 100-200) are depicted. Since Luxemburg is an extreme outlier it is not shown in any of the two graphs.

**GDP per capita in PPS**  
**GDP per capita in Purchasing Power Standards (PPS) (EU-27 = 100)**



- Belgium ■ Bulgaria ■ Czech Republic ■ Denmark ■ Germany (including former GDR from 1991)
- Estonia ■ Ireland ■ Greece ■ Spain ■ France ■ Italy ■ Cyprus ■ Latvia ■ Lithuania ■ Luxembourg
- Hungary ■ Malta ■ Netherlands ■ Austria ■ Poland ■ Portugal ■ Romania ■ Slovenia ■ Slovakia
- Finland ■ Sweden ■ United Kingdom ■ Unavailable data is ignored ■ User defined limits

**GDP per capita in PPS**  
**GDP per capita in Purchasing Power Standards (PPS) (EU-27 = 100)**

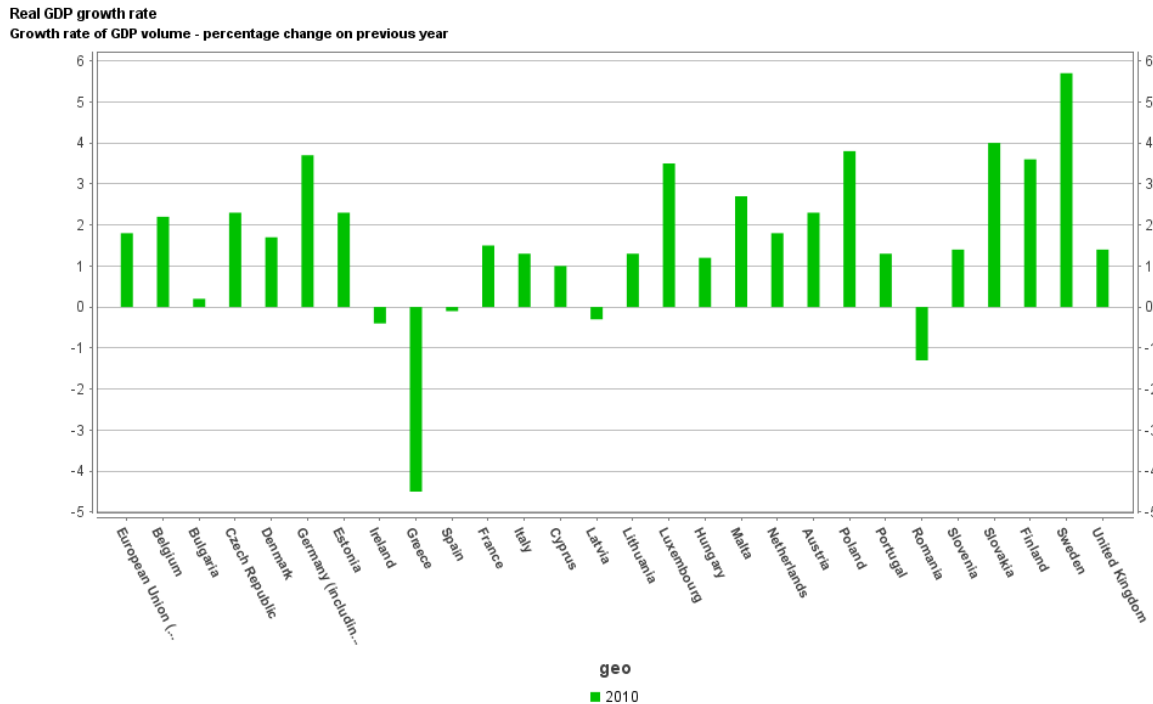


- Belgium ■ Bulgaria ■ Czech Republic ■ Denmark ■ Germany (including former GDR from 1991)
- Estonia ■ Ireland ■ Greece ■ Spain ■ France ■ Italy ■ Cyprus ■ Latvia ■ Lithuania ■ Luxembourg
- Hungary ■ Malta ■ Netherlands ■ Austria ■ Poland ■ Portugal ■ Romania ■ Slovenia ■ Slovakia
- Finland ■ Sweden ■ United Kingdom ■ Unavailable data is ignored ■ User defined limits



## 2. Real GDP growth rate

Below there are three graphs depicting the real GDP growth rate for the EU-27 countries. First, there is a graph showing the case for the countries in the year 2010. This graph shows that a couple of countries have had a negative real GDP growth rate, particularly Greece. This has much to do with the down turn of the economy due to the financial crisis in 2008 and the current debt crisis in Greece. Of all countries, Sweden has had the best real growth rate of GDP.



Below are two graphs depicting the change of real GDP growth rate over the years 1990-2010 (note that that there is not available data for so far back for all countries). First, there is a graph depicting the period where all member countries are included. This provides an OK overall picture of the situation and development for all countries, however to provide a clear picture we have chosen to do an own graph for the five biggest counties by population below that. The two outliers in the first graph below are Latvia and Belgium during the early 90's. Latvia took a heavy downturn while Belgium's economy boosted quite a lot during a shorter period. One common trend is the downfall in 2008 for all EU member countries due to the global financial crisis. The downfall during 2008 is also very clear in the second graph.

