



Did you know that ...

Europe's economy has recovered from every GDP decline the last 150 years. If the future is guided by the past, we will see a full recovery even from the current fall in the GDP

The economic crisis that started 2008 caused a substantial drop in the GDP, and in EU as a whole the recovery has been slow so far. It is likely that this slow recovery is reflected also in the EU's prognoses for the future GDP development, since they are much more conservative now compared to before the financial crisis. Before 2008, the EU prognosticated a GDP growth of approximately 2.2 %/year up to 2030. Today, the prognoses predict a GDP growth of only 1.4 %/year. However, a historical review reveals that the European economy has recovered from all economic crises and drops in GDP the last 150 years, e.g. crises connected to the two world wars and the depression in the 1930s. So, a recovery even from the current financial crisis should not be ruled out. At the very least, the EU's energy analysts should see a recovery as one of many possible future scenarios. This scenario, however, is not to be found in analyses today.

The GDP has grown by approximately 45 % in EU 28 through the period 1990-2013. The growth has steadily stayed at 2-3 %/year during the major part of this period, with two distinct exceptions. In the early 90s the GDP fell in the new EU Member States (negative GDP), as a result of the collapse of the Soviet Union and the economic downturn in the Eastern Europe. The other exception is the financial crisis recent years with a profound drop in the GDP during 2008-2009, showing a negative GDP in EU 28 in 2009 (-4.5 %). After that, the economy has recovered to some extent, but it is still weak. Since 2008 the **average** GDP growth has been close to 0 %/year.

The financial crisis has pushed down the prognoses

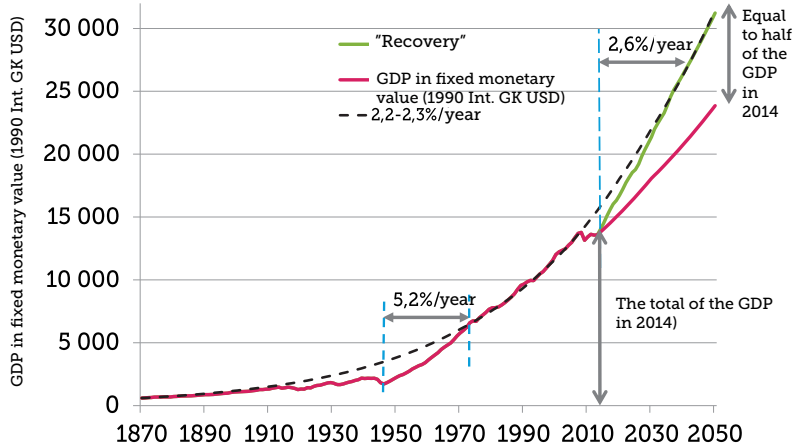
The financial crisis has also had an impact on the prognoses for the future GDP development. The prognoses from before 2008 outlined an average GDP growth of about 2.2 %/year up to 2030 (and around 2 %/year up to 2050). The prognoses performed in the EU Energy Roadmap 2050 work, presented in 2011, have a significantly slower average GDP growth for the period 2005-2030 of 1.6-1.7 %/year, while the current EU prognoses (2013) show an average GDP growth of only 1.4 %/year for the whole period up to 2050.

The resulting difference in GDP for 2050 between the current prognosis and the prognosis from 2007, i.e. before the financial crisis, is considerable. The prognosis from 2007 ends up at EUR 7 000 billion above the most recent prognosis, which is equal to as much as half the current GDP. The difference between these prognoses is obviously very large.

However, financial crises and large GDP drops is not a new phenomenon. In the 20th century there were several drops in GDP equal to the fall during the worst year of the financial crisis, 2009. These were caused by the two world wars, and by the depression in the 30s. Also in the period 1970-2000, EU had a negative GDP growth (or zero growth) at three different occasions.

The EU economy has always recovered

After all of these drops in GDP, i.e. the large drops during the world wars, the depression in the 30s and the three negative GDP periods during 1970 -2000, Europe's economy has recovered relatively fast. The GDP development in Europe has therefore stayed at an average growth of 2.2-2.3 %/year, all the way since 1870 (See figure). The longest period of recovery, and at the same time the most massive recovery, happened after World War II when the GDP growth was on average 5.2 %/year during the 25 years between 1945 and 1970.



GDP development in (Western) Europe, during 1870-2050 expressed as GDP in international dollars at 1990 values (1900 Int. GK USD). The red line represents the real development in 1870-2013 (Source: Maddison Historical GDP data), as well as the most current prognosis for 2015-2015 from the EU's energy scenarios (Source: PRIMES Reference scenario 2013). The green line shows an assumed GDP recovery of half of the rate seen after World War II. As a comparison, the dotted line illustrates an average GDP growth of 2.2-2.3%/year for the whole period of 1870-2050.

If the future is guided by the past, it is reasonable to believe that Europe's economy will again take speed, even after this latest financial crisis, and in the coming 20 years recover fully from the GDP fall we have seen since 2008. For such a development to become a reality we need an average GDP growth of 2.6 %/year up to 2030 , i.e. ("only") half the average yearly GDP growth we had in Europe after World War II.

If such a recovery is really possible today though, cannot be told for certain by studying history. But at least, the

history justifies the formulation of (alternative) scenarios based on the assumption that Europe's economy recovers fully as well as a study of the consequences this would have for the energy system.

However, among all the energy scenarios now analysed by the EU commission, there is no such scenario. In the scenario called "high GDP", the average GDP growth is only 1.9 %/year.