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Position Paper

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What foundations does Europe need to ensure its global competitiveness?

Time-Distance Study 2009

EUROCHAMBRES – The Association of European Chambers of Commerce and Industry represents over 19 million enterprises in Europe through 46 members and a European network of 1700 regional and local Chambers

Introduction

The economic climate of the last eight months has been overshadowed by the global financial and economic crisis.

A range of emergency measures have been taken at European as well as at Member State levels in response to the crisis. In parallel to these necessarily short-term actions, it remains important to assess where Europe's economy stands in comparison with the other major global players from a longer term perspective, since the measures that are taken now will lay the foundations for many years to come.

Due to the global nature of the crisis, Europe is not the only one affected, and the different players are affected to differing degrees. The 2009 time-distance study has for this reason been extended to include, besides the USA, China and Japan, the full range of BRIC countries, i.e. Brazil, Russia, India and China.[*]

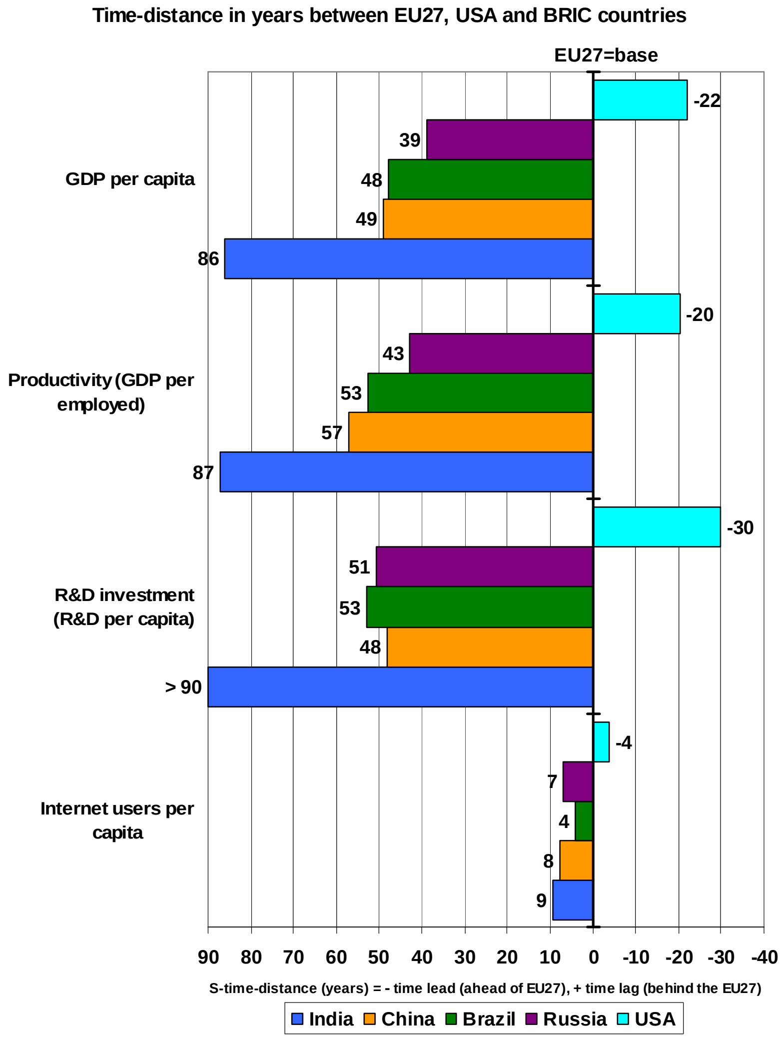
The progress of the EU27 compared to these countries is assessed using key competitiveness indicators (GDP per capita, productivity, R&D investment and internet users per capita). In a second exercise, the differentials in growth potential between the BRIC countries and the EU27 in terms of GDP per capita are analysed, showing how close they are to parity with the EU27. The third part shows how long it would take the EU27 to reach parity with the USA on key indicators, taking different growth scenarios into account. The last part of the study assesses the performance of the major economies vs the Lisbon 3% annual GDP growth target and monitors the implementation of the GDP growth, employment and R&D spending targets in the EU27 and the Euro area.

Most of the base figures relate to 2008, some to 2007 and 2006. Forecasts for 2009 are used to a very limited extent, given their high uncertainty with a view to the current economic climate. The main exception to this is GDP growth, for which the European Commission's 4 May 2009 economic forecast data has been used.

[*] Data sources : Eurostat, OECD, Groningen Growth and Development Centre, the Conference Board, Angus Maddison historical series, International Telecommunication Union, International Comparison project (published by the World Bank), IMF.

Findings

Using the time-distance methodology, the graph below compares Europe with the USA and the BRIC countries for a number of key economic indicators.



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For the comparison, the EU27 is taken as a base and 2008 as reference year. The first striking fact is that the EU27 is lagging behind the USA and ahead of all BRIC countries to varying degrees on every indicator. Progress of the BRIC countries for the different indicators is uneven. While for the first three indicators notable differences can be observed, for the fourth indicator, "Internet users per capita" time lags are much smaller between the EU27, the USA and the BRIC countries.

[2] GDP per capita and productivity refer to 2008, R&D investment to 2006, internet users per capita to 2007.

GDP per capita:
EU27-USA: in comparison to last year's results, there is no progress, as the EU continues to be 22 years late compared to the USA.
BRIC-EU27: Russia is the closest to closing the time lag with the EU, even though the time-distance is 39 years. Brazil and China are about 10 years behind Russia while India's time lag compared to the EU27 is well over three quarters of a century. Consequently, India would need over a century to catch up with the USA. Compared to last year's results, China's situation remains unchanged.

Productivity (GDP per employed):
EU27-USA: the lag is widening as the EU is falling further behind. While last year's time lag was 18 years, it has increased to 20 years with the 2008 figures.
BRIC-EU27: Russia leads again in terms of catching up compared to the other BRIC countries, yet it will need more than double the time to reach the current level of the EU27, than the EU27 needs to catch up with the USA. Brazil and China follow with an additional 10 year time lag, while India is again very far behind with a similar level as for GDP per capita.

R&D investment (R&D per capita):
EU27-USA: The current EU27 R&D investment level was reached by the USA in 1978, and the EU is not catching up with the USA in comparison with last year's results.
BRIC-EU27: India will need almost a century to reach the current EU27 level, whereas the other BRIC countries will reach it in about fifty years. China is progressing compared to last year's study, as the time gap has decreased below 50 years.

Internet users per capita:
For this indicator, time gaps between the different countries are smallest. The EU27 shows the same time lag as the previous year compared to the USA. Among the BRIC countries, Brazil is closest to the EU with a time lag of 4 years, followed by Russia with 7 years, China and India.

The following graph illustrates the catching up process of the BRIC countries compared to the EU27.

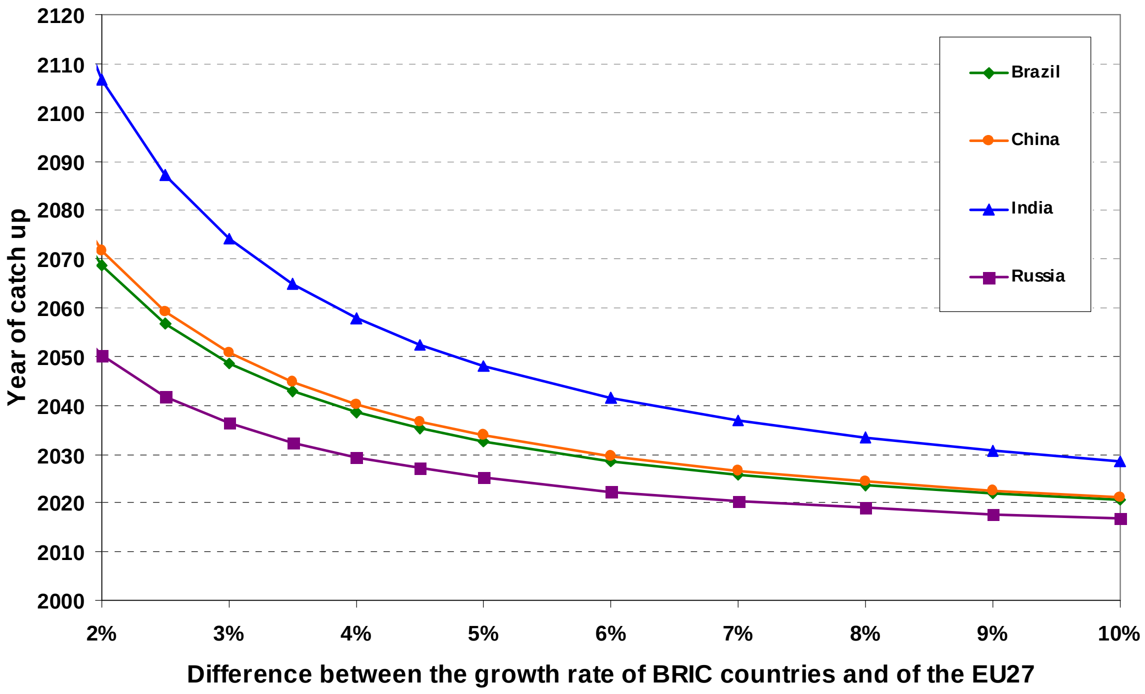
Russia is the closest to catching up with the EU27 GDP per capita value under the different growth scenarios, yet with view to the current economic situation, the figures have to be interpreted with caution. Indeed for 2009, Russia is not forecasted to witness GDP growth (-5.6%[‡]).

Brazil is second closest to catching up with the EU27 GDP per capita value, closely followed by China. Brazil and China are affected by the economic crisis to different extents. Brazil's GDP growth is foreseen to be negative in 2009 with - 0.3%[‡] (5.8% in 2008), while economists foresee China to continue growing in 2009 with 6.3%[‡]. That growth rate is considerably lower than the rates that China witnessed in the recent years, yet is among the highest worldwide for this year according to the OECD.

[‡] Growth forecasts are taken from the OECD Economic Outlook – interim report – released on 31/03/2009

India will take most time to catch up with the EU27, yet the pace is likely to accelerate after this year, as India is also forecasted to witness growth this year (4.3%[‡]), while the EU and the USA are going to witness setbacks in 2009, as their respective GDP growth rates are forecasted to be negative (EU27: -4%, USA: -4%[‡]).

Year in which BRIC countries would catch up with the EU27 GDP per capita under various assumptions

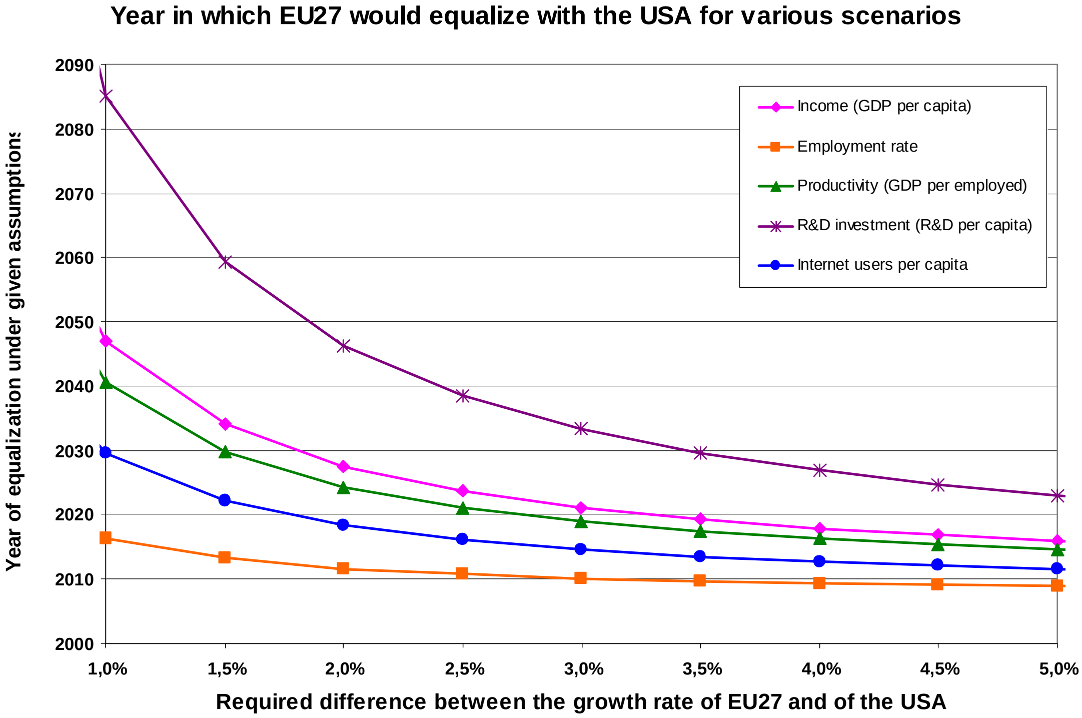


Data for all BRIC countries are taken from the Groningen Growth and Development Centre (GGDC) and Angus Maddison series. The results of the International Comparison Programme (ICP) of the World Bank are comparable for Brazil and Russia while there are considerable divergences between GGDC and ICP for China and India. According to the ICP, China and India would need longer to catch up with the EU27. With a 4 % growth differential for example, it would take China about 38 years longer to catch up, while it would take India about 56 years more to reach the EU27 GDP per capita value.

Seen from a different perspective, the graph shows that Russia is likely to reach the 2008 EU27 GDP per capita level by 2030 with an annual growth rate of 4%, while China would need a growth rate of 6% to equalize with the EU in 2030. Considering that China's growth forecasts for this year are robust, despite the economic crisis, it is likely that China will reach the current EU27 GDP per capita level much earlier.

The development of Brazil in time-distance terms is slightly ahead of that of China, yet with view to the setback the Brazilian economy is foreseen to witness this year, the scenario might change.

A simulation of the catching up process using 2009 GDP growth forecasts for all concerned countries shows that the overall picture is not very different from the one depicted above relying on 2008 figures. Nevertheless considering that the current economic climate is very uncertain and forecasts have changed several times since the beginning of the year, making an accurate prognosis with the forecast figures is impossible, and therefore preference is given to figures from the previous year.



The graph illustrates how long it would take the EU27 to catch up with the USA for the different indicators and supposing that the EU27 outperforms the USA.

In comparison with last year's analysis, there is no noticeable difference in terms of years. In absolute terms, the EU is progressing, and the time gaps are narrowing, yet the catch up process overall does not improve. Again, the EU27 employment rate is closest to equalizing with the USA, while the biggest time gap is observed for R&D investment.

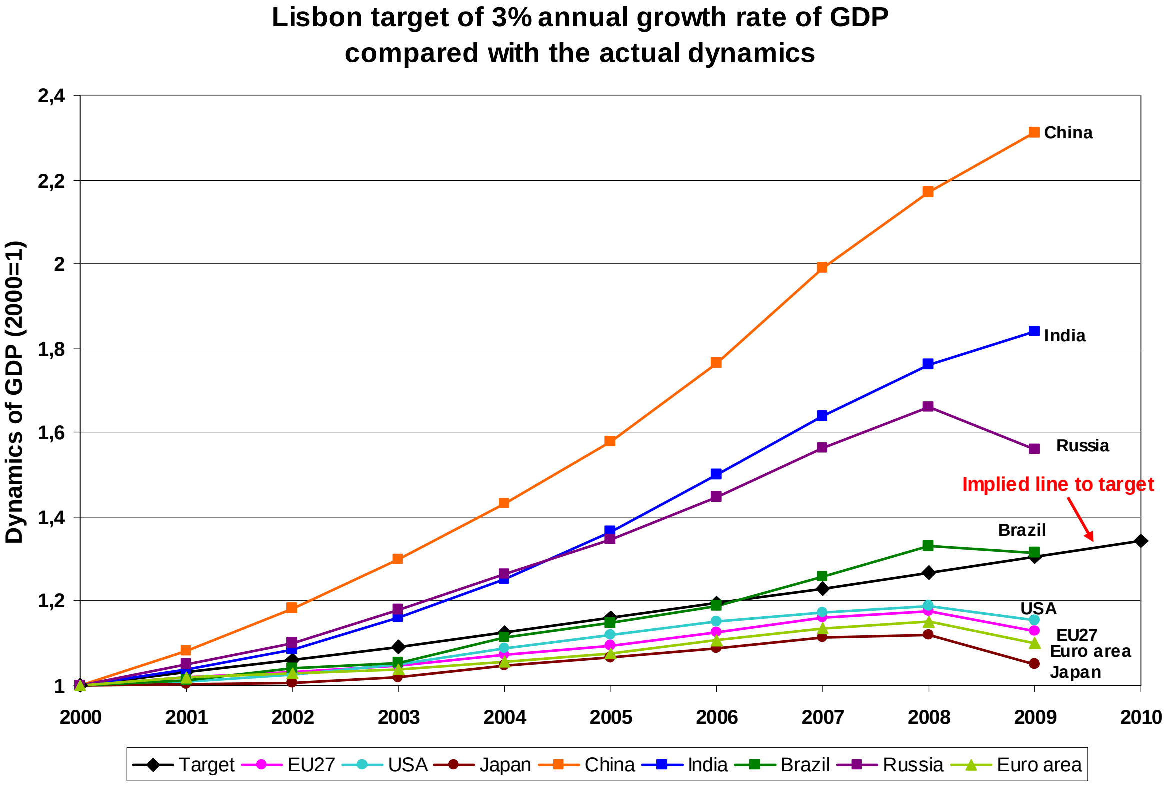
Income (GDP per capita):
Compared to the previous edition of the TDS, and based on 2008 figures, the EU27 has gained one year in the catching up process with a 1% growth rate difference, and would reach parity with the USA in 2047 (previously 2048).

Employment:
With a 1% differential in employment growth, the EU27 would reach parity with the USA in 2016 (previously 2017). These prospects have to be viewed carefully as the EU27 is likely to witness negative employment growth this year, as do the USA, and the results will have to be

readjusted at a later stage. Depending on which of the two economies manages first to turn the negative situation into a positive one, the time gap will either increase or decrease.

Productivity:
On productivity (GDP per employed) the EU27 is losing ground and the time gap is increasing by more or less one year, regardless of the differences in growth, in comparison with last year's results.

R&D investment:
R&D investment is clearly the weakest indicator showing the biggest gap with the USA. From one year to the next, the years of equalization with the USA for the different growth scenarios do not change, indicating slow progress on the EU's side.

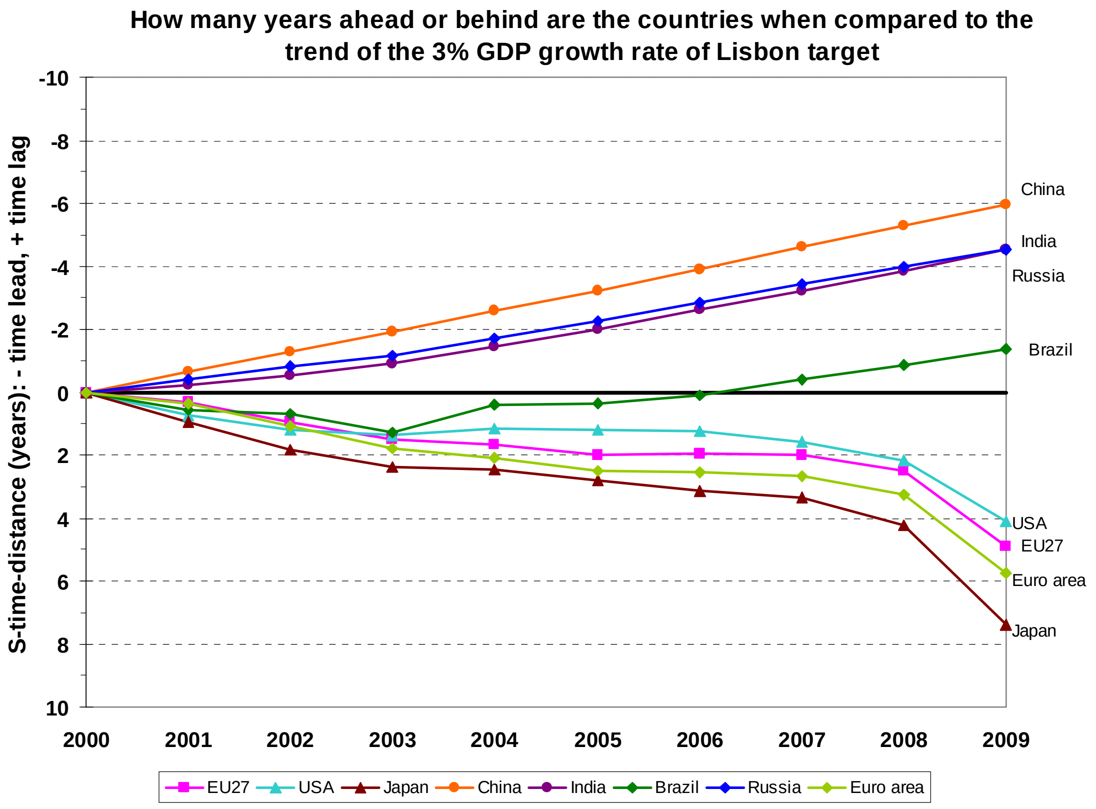


The above graph shows the performance of the BRIC countries, the EU27, the Euro area, the USA and Japan in relation to the 3% annual GDP growth rate target set in the Lisbon strategy.

There is a clear difference between the BRIC countries and the other economic players. While there was continued economic growth until 2008, the trend is reversing for the EU27, the Euro area, the USA, Japan and Russia.

Even if Russia is likely to witness a setback in its 2009 GDP growth, it is still well above the Lisbon target. Brazil, despite a reduced GDP growth forecast for 2009, remains also ahead of the Lisbon target.

Thanks to the economic growth that the EU27 witnessed in 2006 and 2007 the gap with respect to the Lisbon target did not widen and brought the EU27 value closer to that of the USA, yet the lower performance in 2008 and the negative GDP growth forecasts for 2009 contribute to a pessimistic scenario.



When looking at the different economies from a different angle, the picture is worse, as one can see that the BRIC countries continue to be ahead of target and continue to widen their advance while the so-called "advanced" economies do not manage to match the target and are falling behind every year.

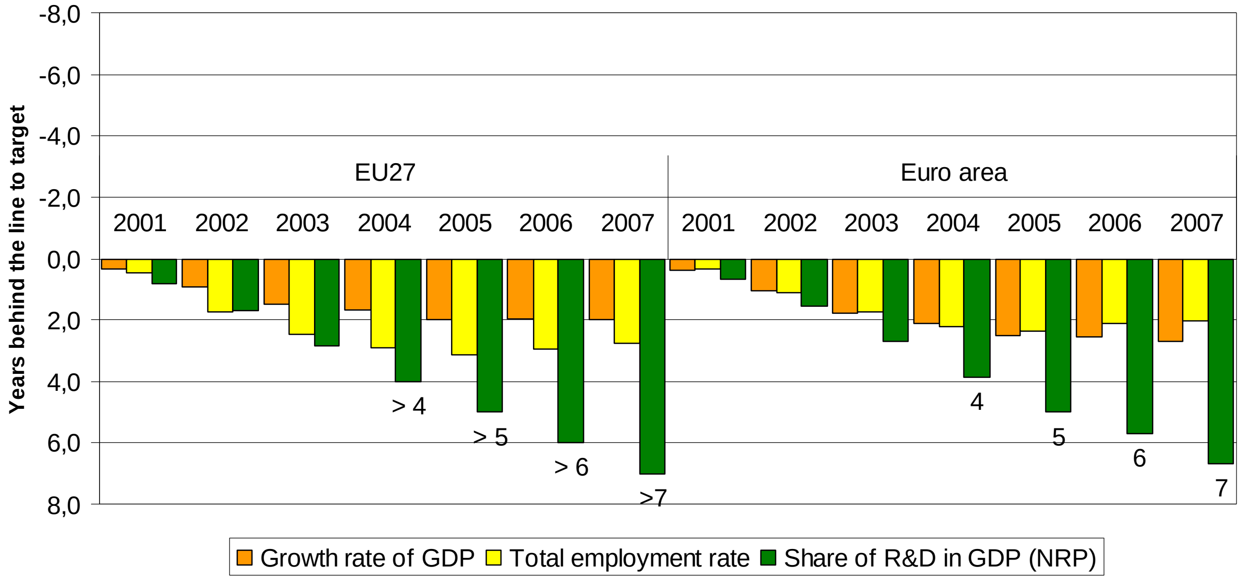
The growth perspectives for 2009 are taken from the World Economic Outlook published by the IMF in April 2009. The recent review of growth forecasts for the major economies of the OECD (OECD Economic outlook – interim report 31/03/2009) depict a similarly bleak scenario for the USA, EU27, Euro area and Japan, while the trend line for the BRIC countries does not change.

The following graph assesses the progress the EU is making towards the Lisbon targets of GDP growth, total employment and share of R&D in GDP.

At first glance, while both the EU and the Euro area are clearly behind target for the three indicators, one can note differences in the time lag for the two areas.

Thanks to the economic growth the EU has witnessed in the 2005-2007 period, the time gap did not increase, yet growth was not strong enough to allow for a catching up of the delay.
The situation in the Euro area is slightly different for the 2005-2007 period, as the gap widened slightly throughout that period (by 0.1 year every year).

Monitoring implementation of the EU Lisbon 1 targets with S-time distance - S-time-distance (years): (-) actual value ahead or (+) behind the line to target



The gap of the Euro area is larger than that of the EU as a whole throughout the whole period (2001-2007).

A low GDP growth rate in 2008 and negative growth forecasts for 2009 have considerable effects on the results of the S-time-distance analysis, as the European economy is falling much more behind target.

For the total employment rate, 2005 was a turning point for the observed country groups and period. While from 2001 to 2005 the time gap gradually widened, from 2005 onwards the situation improved, leading to a decrease in the gap between the actual situation and the line to target. It is to be noted that the Euro zone is less behind schedule in terms of overall employment than the EU as a whole.
Total employment increased by 0.9% in the EU27 and by 0.7% in the Euro area in 2008, and prospects for 2009 for both country groups are negative (-1.6% for both). Consequently, the

time gap is going to widen, taking both the EU27 and the Euro area further away from reaching the Lisbon target.

The share of R&D in GDP has been measured against the revised target of 2.6%, based on the Member States national reform programmes. Even though the target has been revised, the results are alarming. Both the EU27 and the Euro area are falling back year after year and the gap continues widening. From 2004 onwards, the values for the EU27 are actually worse than the starting values.

Recommendations

Europe has to get back onto a path to growth while also dealing with the immediate implications of the current crisis. This must be based on a European strategy for the economic, social and environmentally sustainable development of Europe for the years to come. This strategy must not only define how Europe is to reshape internally, but also determine its global role, considering that many of the challenges that Europe faces are indeed of a global nature and thus require a coordinated global response.

This strategy should build on the acquis of the current growth and jobs strategy, thus continuing structural reforms in areas key to business, achieving sustainable economic growth and more and better employment and maximising Europe's innovation and human resource potential. Training and education and research and development are key elements in this process, which must put in place framework conditions for competitive businesses that also correspond with social and environmental concerns.

The global competitive advantages of Europe in technological development and know-how should be maximised. Europe must pursue a business-friendly agenda, promoting open trade in goods and services, championing high economic and social standards.

The challenges Europe faces can only be met through the effective implementation of the new strategy. Reinforced ownership of the strategy by Member States and all relevant stakeholders is crucial to this. Enlarged partnerships and early involvement of relevant stakeholders from different governance levels will contribute to better coordination and increased efficiency.

So how can Europe build on the emergency measures that have been introduced at European as well as at national levels in response to the economic crisis?

1) The business environment

The current crisis necessitates measures to enhance access to finance for businesses, to reduce administrative burdens and to promote entrepreneurship.

Access to finance, a perennial concern for businesses, is a particularly key issue now. While emergency measures focus to a great extent on stabilisation of the financial system, also introducing various actions more directly aimed to support businesses, the long term focus should be on ensuring that it is possible to create and develop business projects easily and rapidly. This requires a diverse range of financing solutions that embrace and encourage responsible risk taking. More specifically, businesses need quicker and simpler access to credit on realistic terms and improvements in payment terms and times from public and private sector clients.

The reduction of administrative burdens has long been on the business community's agenda, and reform in this area should be pushed forward to further improve the environment for businesses to work in, with the medium term focus on meeting the target of 25% red tape reduction target at EU and national level by 2012.

Promoting entrepreneurship is important in times of economic crisis, as entrepreneurs are the true wealth creators and are thus essential to re-launching the economy and generating sustainable growth. This extends goes beyond the facilitation of business friendly measures like reduced start-up times or reduced fees for patent applications, as it must also address the way entrepreneurship is perceived in society. For a long term strategy to be successful in this field, it is essential to shift mindsets from risk-averse to risk-friendly thinking.

2) People

Europe needs a highly skilled workforce to compete on the global market. One of the key priorities in the current crisis is thus to safeguard employment and to prepare the workforce for the upswing after the crisis. To this effect, measures are being introduced to facilitate the reinforcement of employment activation schemes, focusing on the most vulnerable and addressing skills mismatches. Tax incentives are also being discussed, ranging from reduced VAT rates on labour-intensive services to reduced employers' social charges.

Considering the demographic challenges that Europe faces, these emergency measures should also be applied in the longer term, beyond the crisis. They should furthermore go hand in hand with the adaptation of education systems to the needs of European enterprises, eliminating skills mismatches and creating a closer cooperation between academia and businesses. In view of the challenges Europe currently faces in demographic and economic terms, it needs a well educated workforce that is in a position to contribute to economic development.

3) Infrastructure and energy

A sustainable energy supply for Europe and the greening of the economy are two key elements in the environmental pillar of the Lisbon Strategy. The emergency measures proposed in response to the crisis, namely improving the energy efficiency of buildings and modernising different infrastructures related to energy, ICT and transport, constitute an important step in the right direction. Implementation is proving more elusive and it is important that the measures are translated into action rapidly, laying the foundations for a more energy efficient Europe. At the same time, research efforts for the development and widespread use of renewable energies should be considerably increased.

4) R&D and Innovation

Investment in research and development and the conversion of this into innovative initiatives are key elements in Europe's competitiveness. During past crises, these elements were often the first to be victims of budget cuts. It is imperative that this trend is avoided during the current crisis.

R&D and innovation are cornerstones of Europe's competitiveness as a knowledge-based economy. Both public and private sector investment in research needs to increase significantly. Moreover, public administrations, academic institutions and the business community need to work more closely and effectively in ensuring that Europe's creative and intellectual capacity is accessible and transferable to a business context.

Methodology

All findings presented in this publication are based on the use of a methodology called the "time distance measure". This methodology was developed by Professor Pavle Sicherl, Professor of Economics at the Ljubljana University and Founder of SICENTER (Socio-economic Indicators Center), Ljubljana. All research for this publication was undertaken by him, on behalf of EUROCHAMBRES.

The special concept of time distance, S-time-distance, is a generic concept like static difference at a given point in time and the growth rate over time. It compares two time series in horizontal dimension for a given indicator level and calculates the difference in time when the two compared units attain the same level of the indicator. In our case it expresses the development gap between the EU and the US by looking how many years earlier a given level of an indicator for the EU was attained in the indicator time series for the USA. In simple terms, two long-term time series e.g. for GDP per capita for the EU27 and US are compared in such a way that for any level of the EU one searches in the time series for the US in which year the same level was achieved in the US and subtracts the two times involved.

It is a very useful complementary tool for analysis and presentation of key indicators. It allows making statements about a novel perspective in addition to other measures of the gap(s). A similar perspective in terms of time is used to describe outcomes of alternative policy scenarios for the future. The years when under various assumption the EU would catch up with the US or China with the EU27 are the results of multiplying the respective 2008 values of an indicator by the assumed growth rates for these countries and look for the year when the assumed values would become equal.

This generic approach can be usefully applied as an important analytical and presentation tool to a wide variety of substantive fields at macro and micro levels (see www.gaptimer.eu). The simultaneous two-dimensional comparisons of time series data, vertically (standard measures of static difference) as well as horizontally (Sicherl time distance), can be also a very practical application tool for monitoring Lisbon and Growth and Jobs Strategy targets in the EU, both at the European and national levels. The time distance information complements the conventional percentage difference in providing a realistic perception of the progress in implementation or the lack of it. Since S-time-distance is expressed in time units, it is intuitively understood by policymakers, professionals, managers, media and the general public. This makes it an excellent transparent presentation and communication tool.

SICENTER with the help of EUROCHAMBRES and other donors prepared a web tool to calculate the lead or lag from the line to target with S-time-distance at the world, national, regional, sub-national and business levels. Here it was used for the analysis of the implementation of Lisbon and NRP targets. The tool is available at http://www.gaptimer.eu/s-t-d_monitoring_tool.html .

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