Institute for Economic and Enterprise Research

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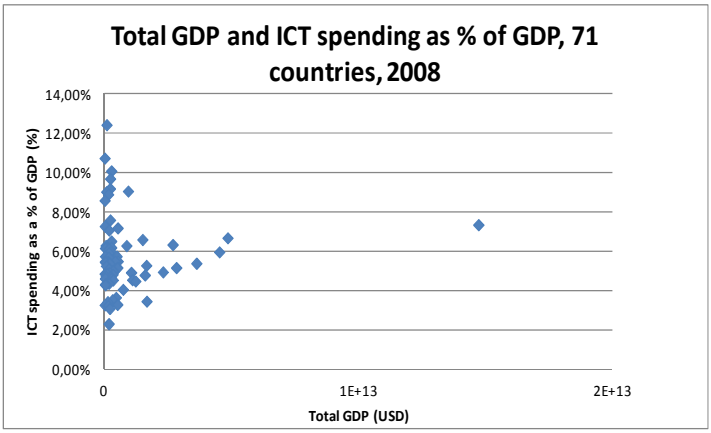
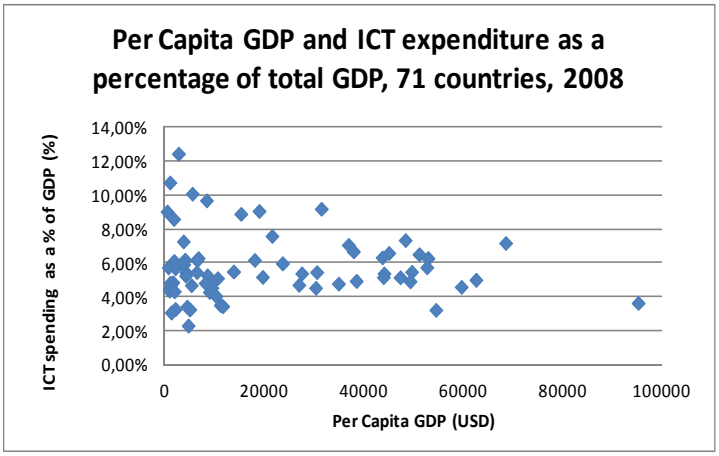
In a recent study by the IEER entitled "Trends and careers in the software industry" the current situation of the software industry is examined. The analysis deals with the question of what trends can be observed in recent and current developments of the sector as well as what changes delegate the likely future orientation of the software industry. In order to achieve our goal it is not only important to deal with regional and global trends, but also to discuss the features and history of some typical companies of the software industry.

The study by the Institute for Economic and Enterprise Research (IEER) entitled "Trends and careers in the software industry" discusses information technology, one of the most significant economic and social segments of our time, including an analysis of current developments and companies within the software industry. Changes in the industry are important for the so-called information society era, as it has a big impact on many areas of the society. For summarizing the characteristics and the most important trends within the software industry, a multi-faceted approach is needed. It needs to set out the worldwide industry trends that have affected and could affect the future dynamics of software development. On the other hand, there is a need to examine these effects on a regional basis. Finally, there is a need to analyze which processes observed in a given region of the software industry provided a good starting point for certain types of software companies.



In the examination of global trends, phenomena are recognizable which are not only present in the industry, but which could also seriously affect its future. The changes taking place currently in the sector is being driven by consumerism. Among these phenomena can be classified cloud services, SaaS (software-as-a-service) technology, the popularity of mobile devices, the transformation of data analysis capabilities (Big Data), and the generalized use of social networking. Added to this is the extraordinary success of certain start-up companies as well as the beginnings of the development of the so-called Future Internet, which can be described as an evolving system and which includes, inter alia, the internet with significantly more endpoints than at present, content accessible anytime and anywhere, quality and secure services, and a link between the virtual and real world. It is worth mentioning here also the mergers and acquisitions within the sector as well as the globalization of the industry. The events listed can affect the functioning of the software industry to such an extent that aside from changes of its features, also its limits may change compared to the present state.

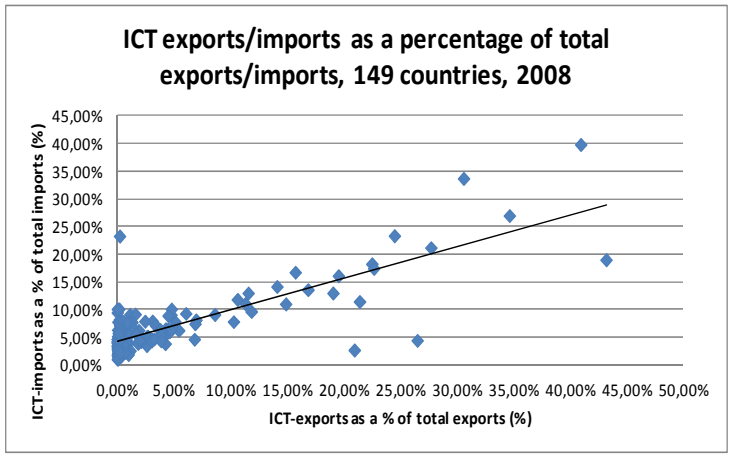


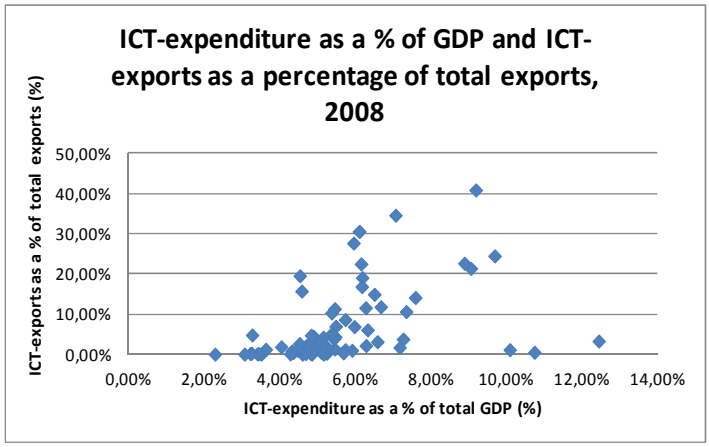
When analyzing current trends in the software industry not only prevailing global views should be taken into consideration, however, but those at the regional levels also. It is worthwhile to analyze that global trends are materialized in what kind of concrete forms within the regions. There are three major regions that are not composed on only a

geographical base, but by considering the state of development of the software industry: North America (primarily the U.S.), Europe (western, northern and the central parts) and developing countries. Developing countries are separated into different groups comprising of the emerging markets (BRIC countries, the "Visegrad Four" and Israel), and in those countries that have yet to show an instance of major industrial software development, and thus are considered to be lagging behind in this aspect.

The dominant companies of the software industry come from the North American region (e.g., Microsoft, IBM); however the leadership position of these companies isn't assured because in the future the biggest challenge will be the inertia from the corporate past. Europe can be said to be no longer regarded as one of the world's most vibrant economic areas for setting the pace of the future, but the software market continues to grow and change, and this highlights the area's ability to innovate. Many European software companies achieve significant success on a global level. Companies operating in developing regions generally have achieved weaker positions in the global market than their North American and European competitors, but the development of the software industry is not uniform. While in some underdeveloped countries the development of the software industry has yet to start, other emerging countries have been able to become important players in the global software industry both as an investment destination and as mother countries for new companies.

A presentation and comparison of some software companies typical of each region complements the global and regional overview of the industry trends examined. From the North American region Microsoft and Google, among companies from the European Region SAP and Dassault Systems, among developing countries the Hungarian developer Prezi, and among emerging countries the Costa Rican software company TecApro, have all been presented and compared. In addition to the regional trends described above what was observed during the presentation of each company was that while major, traditional software companies tend to handle industry innovations in a conservative manner, smaller emerging companies exhibited an extraordinary openness towards such innovations.



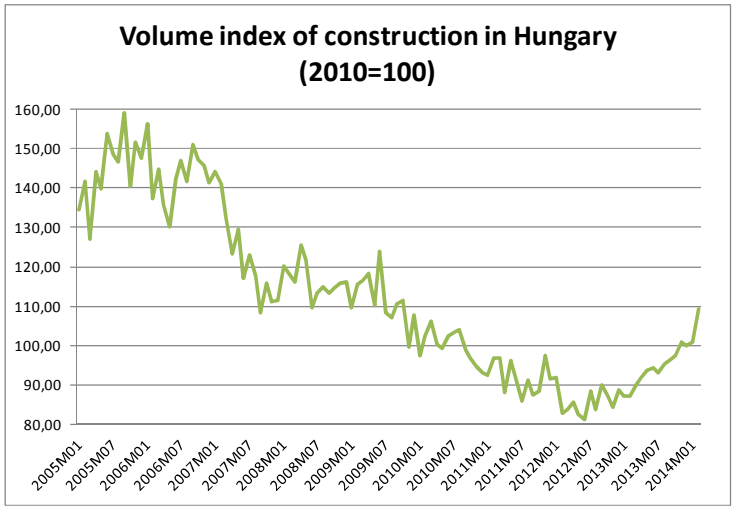


Macroeconomic trends:
A regional comparison of the situation of the Hungarian construction industry

Hungarian construction output in February of this year exceeded production for the same period of the previous year by 28.3%. For the construction of both buildings and civil engineering, production increased 21.3% for the former and 39.2% for the latter, respectively. However, in conjunction with this increase in the sector there also has been a continuous increase in the number of construction companies going out of business. It is worth comparing the performance of the sector with the results of the other members of the so-called "Visegrad countries" because this helps to assess construction performance in Hungary in the light of trends of the entire Central European region.

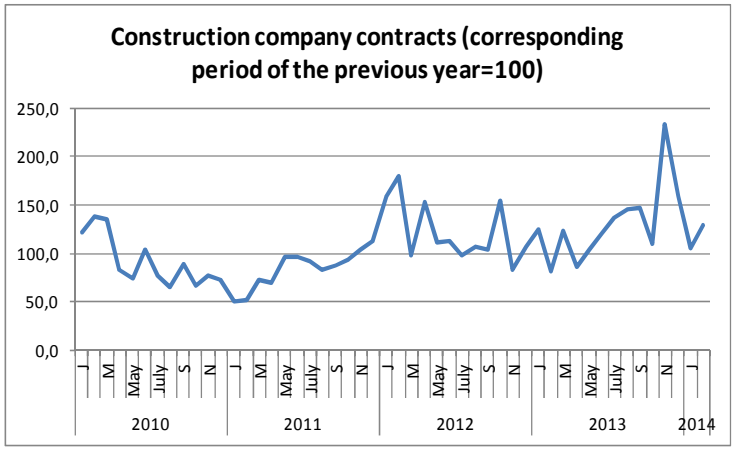
The Hungarian construction industry

In Hungary, starting in 2006 the increase in production of construction showed a sharp negative trend, which was caused by a decline in the production of road and motorway construction companies. Because of the world financial crisis the Hungarian construction industry, which was already in difficulty, fell into a deep recession, with a fall in production lasting a long time. The turning point was the second half of 2012 when the sector showed a positive growth trend, but government investment played a large role in this; private sector construction investment was still heavily held back.



In February 2014 production increased for both main construction groups: compared to the same period of last year, the construction of buildings increased by 21.3% whilst for civil engineering it increased by 39.2%. The expansion of the construction of buildings was mainly due to industrial investments; in the case of civil engineering, improvements in growth were due to the renovation of the railways and utility construction works. The volume of new contracts signed in February 2014 was 29.8% higher than in the same period of last year. Much of the improvement comes from the volume of new contracts for civil engineering, since it increased 77.9% compared to the same period of the previous year, while the volume of contracts for the construction of buildings decreased by 23.2%.

This positive trend is expected to have a positive impact. According to a survey conducted in April 2014 by GKI, across all sectors within the business community with the exception of retail expectations have improved, especially among construction companies.



In addition, however, a negative outlook is indicated by the fact that according to the data from the Opten business information service, the number of Hungarian construction companies in the past year declined, and the first quarter of this year brought no change. While since March 2013 a total of 6,063 construction companies went out of business, which is a quarterly

average of 1,515 firms, for the first three months of this year 1,526 companies went into liquidation, which is 33 percentage points higher than in the same period of the last year.

Regional comparison

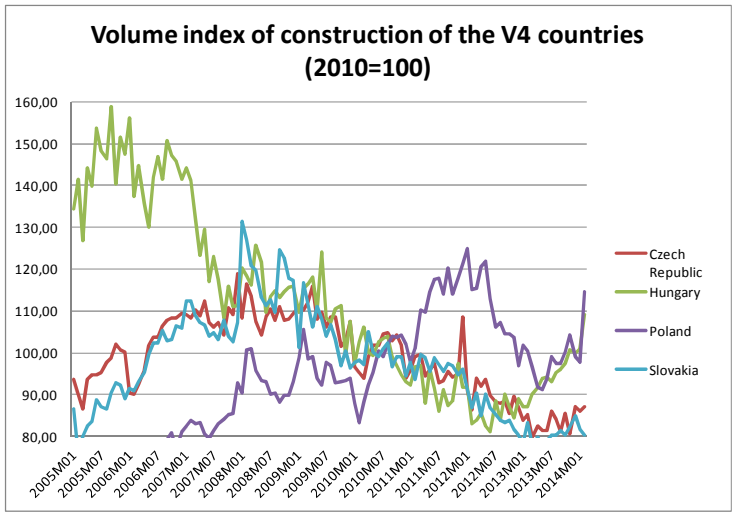
The situation of the Hungarian construction industry in the European Union should be compared with the so-called "Visegrad countries" (also known as V4 and includes Hungary, Poland, the Czech Republic and Slovakia), since this region consists of the four countries of the Central European region, and which after the termination of the socialist block were all at about the same level of economic development.

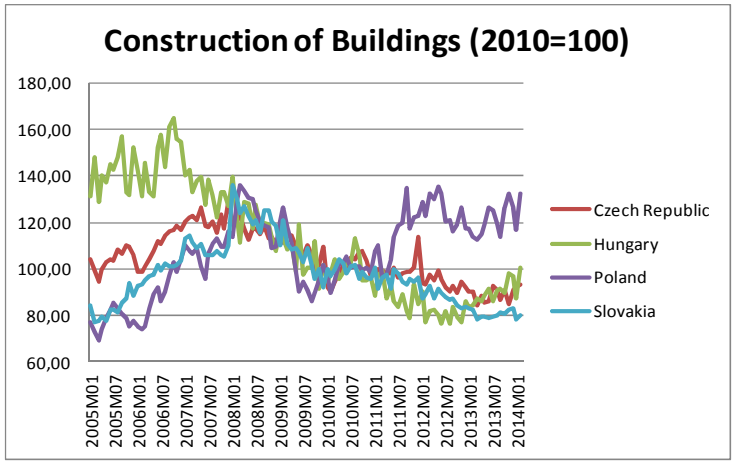
Examining the construction volume index of the V4 (with 2010 as a base year) we found that for the four-year period before the economic crisis the construction growth rate in Hungary far exceeded the performance of the other three countries. As a result of the decline observed in the second half of 2006, the volume index from 2008 to the second half of 2012 moved in tandem with the construction performance of Slovakia and the Czech Republic. Interestingly, results revealed that in Poland, which before the crisis showed the weakest growth performance and after the 2009 crisis a deep but short-term decline – while the other three countries showed a decline – from the first quarter of 2010 a steep, positive construction volume was produced.

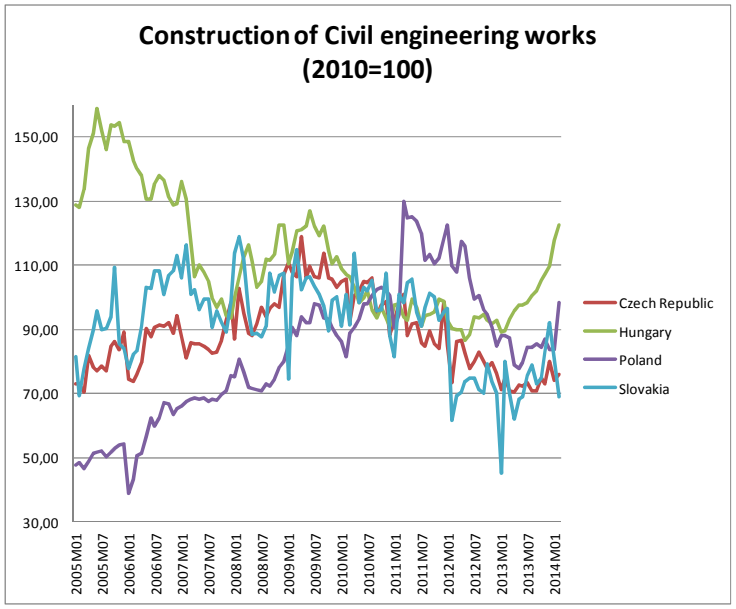
For Poland this striking performance during the economic crisis was due to the 2012 European Football Championship, since it was one of the countries which hosted this event. But this event not only caused a recovery, but also a decline because the large-scale construction investments were underpriced, raw material prices became more expensive, and payment morale deteriorated leading to a wave of bankruptcies in the country, resulting in the volume index for 2013 to fall to the same level as in Hungary.

Overall, we can say that in terms of construction output Poland and Hungary now show a positive growth trend within the "Visegrad countries", but in Hungary the main driver of the increase is a boost in government investment. The Czech Republic and Slovakia have not yet been able to reverse the negative growth trend developed since the crisis.

Source: Central Statistical Office, Eurostat, hvg.hu



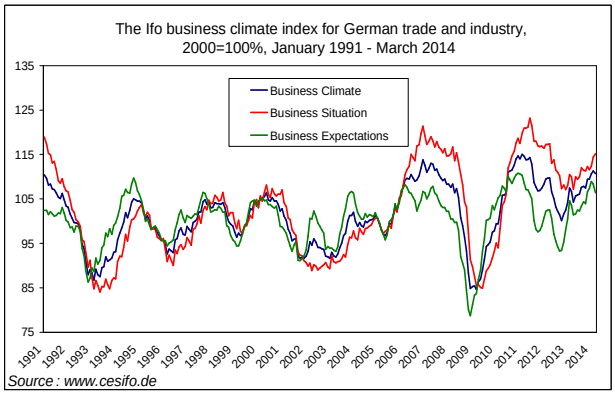


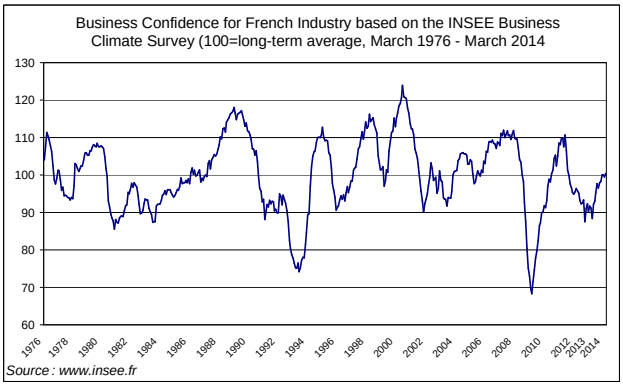


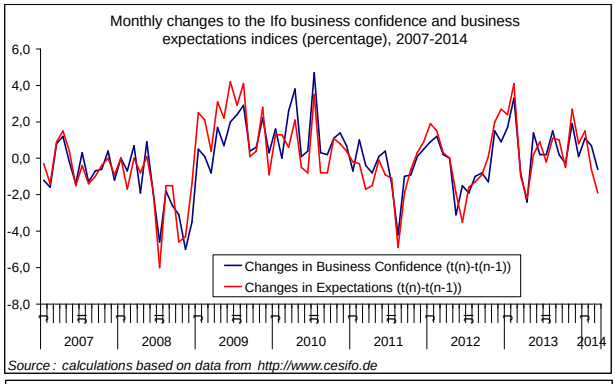
International trends

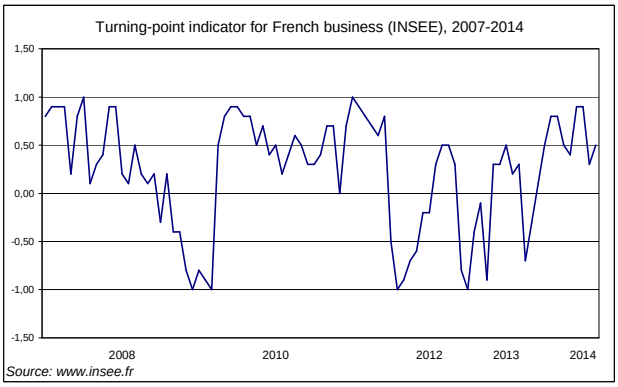
The Ifo Business Climate Index for industry and trade in Germany fell in March to 110.7 points from 111.3 points after four successive increases. Companies expressed far less confidence in future business developments, but were more satisfied with their current business situation. The gap between the current business situation and the expected developments, as calculated by the IEER Index of Asynchrony, increased in March, so the business confidence index showed higher uncertainty than in the previous month. According to Ifo analysts, the crisis of the emerging economies and the events in Crimea are impacting the confidence of German firms. (Source: Ifo, http://www.cesifo-group.de)

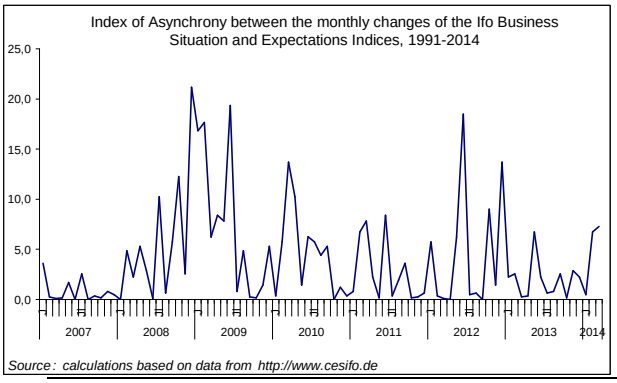
Based on the survey of the French statistical office (INSEE), according to the business managers surveyed in March 2014, the French business climate in industry remains stable compared to the previous month. The composite indicator has not changed and stands at its long-term average. The turning-point indicator has slightly increased compared to February and is now in the zone indicating a favorable outlook. The balance of opinion on personal production expectation remains good-biased: it is nearly stable and stands above its long-term average. The balance on general production expectations, which represents business managers' opinion on French industry as a whole, has weakened and has reached a level which remains close to its long-term average. (Source: INSEE, http://www.insee.fr)











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