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After the crisis, the e-skills gap is looming in Europe

Empirica and IDC EMEA Government Insights anticipate that the EU labour market may face an excess demand of 384,000 ICT practitioners¹ by 2015. The number of ICT professionals in Europe was 4.7 million in 2007 and is forecast to be between 4.95 and 5.26 million in 2015 depending on five foresight scenarios. Accordingly the e-skills gap, or unfilled vacancies, will amount to between 1.7% and 13% of the existing occupations by 2015. Empirica and IDC EMEA Government Insights have developed five foresight scenarios for Europe including a "back to normal" scenario, which describes how the labour market for ICT practitioners will evolve if we get back onto the previous, pre-crisis trajectories in terms of growth rates, the number of computer science students and graduates and the role of ICT-based innovation as a driving factor of European economic development. Contrasting with this scenario, they analysed four alternative paths varying the main factors that influence the demand and supply for e-skills: GDP growth, the pace of the economic recovery, the ICT innovation rate, ICT policies and the attractiveness of ICT jobs and careers in general. The variations in these factors were inputs to a predictive model they have developed and which is based in particular on historically observable elasticities and dependencies. The report was commissioned by the European Commission, DG Enterprise and Industry.

"Predicting the future is always and naturally speculative to some extent but especially difficult in times like these, when there is so little agreement about when the economic rebound will finally stabilise. Especially the economic development until 2015 is the unknown factor that will have a major effect on how demand for IT professionals will develop" says Werner B. Korte of empirica. "This is why we have chosen to cover a rather broad scope of likely futures, if at the expense of a more scattered set of prognoses. Nevertheless, what our five scenarios have in common is that there will be an excess demand for ICT practitioners again by 2013 and by 2015 it will reach a non-negligible quantity – and even in a very severe fashion in case we see an economic recovery gaining momentum already from 2011 on."

The main findings of the report provide confirmation of the relevance of the key components of the EU long term e-skills agenda presented by the European Commission in September 2007 in its Communication on “*e-Skills for the 21st Century: Fostering Competitiveness, Growth and Jobs*” and referring to the need of a longer-term cooperation, multi-stakeholder partnerships, increased human capital investment (private and public), appropriate financial and fiscal incentives, development of a European e-Competences Framework and tools at EU level for mobility and transparency, improving the attractiveness of ICT-related professions and education (e.g. promoting science, maths and ICT education)

¹ ICT practitioners are defined according to standard classifications used by Eurostat and National Statistical Offices.

and promoting lifelong learning (regular e-skills updating) as well as innovative e-learning and training approaches.

One major recommendation the report has to offer to policy makers and stakeholders is to act more swiftly and decisively. Says Tobias Hüsing of empirica: *"Although we see in this crisis that firms are eager to retain their ICT skilled staff as long as possible, we should note that there is significantly more potential short term volatility on the demand side than on the supply side of the labour market. There is natural inertia on the supply side stemming from the educational system and the time it takes for instance to earn a degree in computer science – while lay-offs are linked in a much shorter term to economic developments. So any effort that policy spends to enhance the attractiveness of ICT careers has to bear in mind the enormous lead time and policy must prepare for the post-crisis sooner rather than later."*

The global foresight scenarios that the study presents are:

Back to normal - a return to "before the crisis" moderate growth development model, with ICT-based innovation developing unevenly across Europe. This results in a limited e-skills gap (estimated at 384,000 excess demand in 2015, about 8% of the ICT workforce);

Investing in the future - a scenario of moderate growth similar to the previous one until 2011, when, thanks to decisions to step up investments in ICT innovation and the future Internet, there is an acceleration of economic and ICT growth, expected to increase after 2015. This leads to higher demand for R&D and ICT skills in the period 2012-2015, with an estimated e-skills gap of 580,000 jobs in 2015, about 11% of the ICT workforce.

Turbo knowledge economy - the knowledge economy takes off in Europe, thanks to a virtuous circle of productivity and economic growth driven by widespread diffusion of ICT-based innovation. ICT careers become more attractive and demand of e-skills grows, leading to an e-skills gap of approximately 669,000 jobs in 2015, about 13% of the ICT workforce, even if the attractiveness of ICT jobs increases, leading to a slight increase of e-skills supply.

Tradition wins - after the crisis, an export-driven recovery advantages traditional industries, rather than high-tech and innovative industries, resulting in a combination of moderate economic growth with low ICT growth. The relocation of the ICT industry outside of Europe accelerates and the demand of e-skills from 2010 to 2015 grows very slowly while the attractiveness of ICT careers declines. A small level of excess demand of e-skills remains, but at the same time there are mismatches between demand and supply across the EU, particularly in the countries where the advanced high intensity IT users remain an important presence.

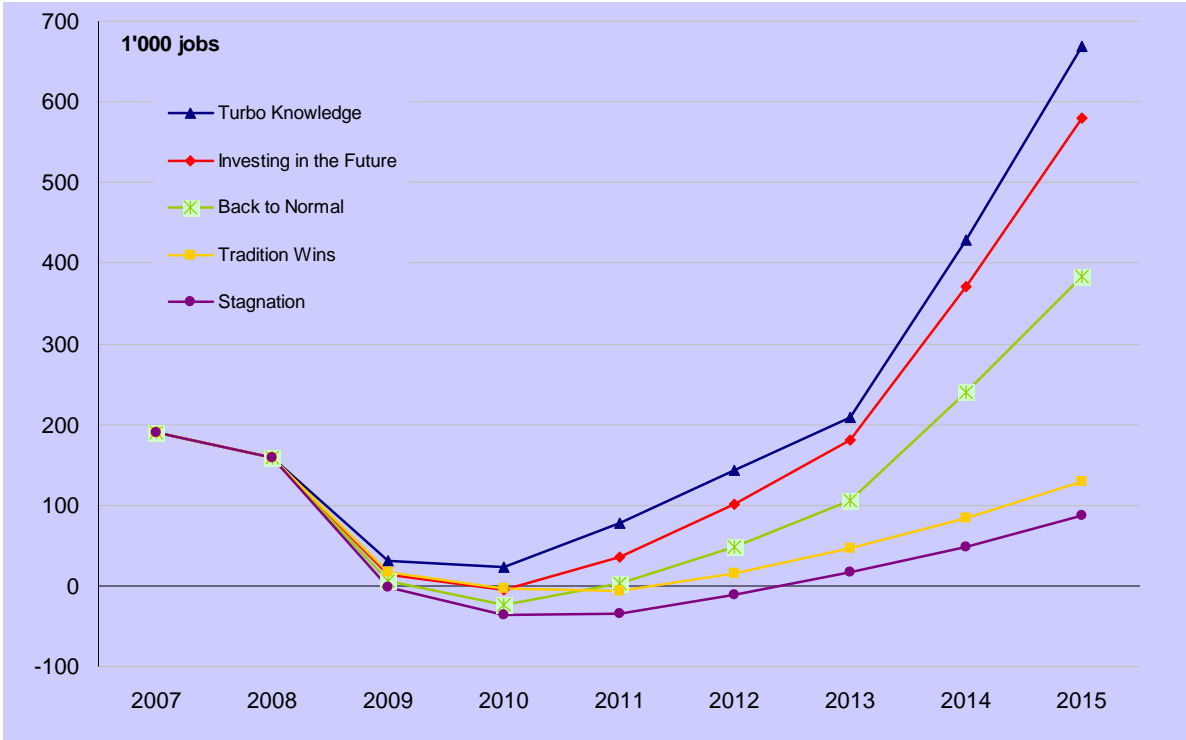
Stagnation - a very slow recovery, accompanied by domestic protectionism in the most important countries, discourages innovation investments. The European socioeconomic system struggles to keep up with the emerging economies and tends to close itself ("fortress Europe"), with low ICT investments counterbalanced by IT off-shoring growth. Both demand and supply of e-skills are flat, without growth, and the result is a very small e-skills gap accompanied by mismatches in the e-skills labour market across Europe.

The full study report is available at: <http://www.eskills-monitor.eu> (website)
<http://www.eskills-monitor.eu/foresight-2/>

The report was commissioned by



Chart: e-skills Demand and Supply Gaps (excess demand) in the EU27 until 2015



Source: empirica and IDC, e-Skills Monitor 2009

Disclaimer:

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Background

The European Commission adopted in September 2007 a Communication on “e-Skills for the 21st Century” presenting a long term e-skills agenda and including five major action lines at the European level. The Competitiveness Council of Ministers welcomed this Communication and adopted Conclusions on a long term e-skills strategy at its meeting on 22-23 November 2007. Stakeholders have established the e-Skills Industry Leadership Board to contribute to implementing the strategy.

More information

E-Skills for the 21st Century, European Commission, DG Enterprise and Industry

<http://ec.europa.eu/enterprise/sectors/ict/e-skills>

European e-Skills 2009 Conference: Fostering ICT professionalism

<http://www.eskills-pro.eu>

European e-Competences Framework

<http://www.ecompetences.eu>

E-Skills Industry Leadership Board

<http://www.e-skills-ilb.org>

European e-Skills and Careers portal

<http://eskills.eun.org>