Industry Forum
Business Excellence Through Inspired People

Higher UK Productivity with updated skills

The UK is not alone amongst advanced countries in facing a productivity challenge currently. The sixteen most developed countries in the world economy are reporting a sharp drop in total factor productivity (TFP) in the current decade compared with the rate of increase achieved in the noughties up to the crash in 2008. TFP relates to how capital and labour used and covers issues such as knowledge and skills. But beyond that common theme, despite a lot of analysis, researchers are struggling to explain why productivity problems are so widespread. This may mean that each advanced country has to work out its own solution to its productivity puzzle. The UK, for example, also achieves a lower overall level of productivity than many competitor nations.

Although the UK is behind Europe in the percentage of GDP that is spent on research and development, the quality of UK science and technology stands out. In FP7, the seven year EC R&D programme which finished in 2013, the UK tied with Germany, the largest EC economy, in securing the top share of funds -7bn euros - in the face of very strong competition to get projects funded. This is an important indicator of the UK's potential for high value growth as is the thriving digital start-up scene here, the largest in Europe. Currently the average value added per person in the UK digital sector is £92k per annum, well above the national average.

The UKCES 2015 skills survey finds that skills shortages vacancies are on the increase in the UK having jumped by over forty percent between 2013 and 2015 to 206,000. Machine operatives are particularly in short supply and the specific skills which are hard to find include workload management, teamwork, complex analytical skills, time management, customer service and management and leadership. This is a familiar portfolio in terms of the skills needed to drive operational excellence and boost added value. Employers who report skill shortage vacancies often see the consequence as delay in the introduction of new products and difficulties in embedding innovative work practices.

UKCES suggest that digitisation is rapidly changing the skills needs of employers across the economy. Job roles are becoming more complex and staff are expected to work more flexibly. Against this background employers' concern over the lack of high level analytical skills available to them is an important and worrying finding.

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The volume of training delivered in 2015, 118m staff days, was over 4 per cent higher than in 2013 and in excess of the 2011 volume suggesting that the downward trend in training volumes of recent years may have come to an end. The growth in the workforce plus the increased level of recruitment activity are thought to have been factors in this growth. UKCES report that employers who have adopted high performance working and ambitious product/market strategies are more likely to train their staff. These employers are actively exploring more innovative ways of delivering training using digital tools.

About two thirds of UK employers provide some training for their staff in any one year currently and around the same proportion of employees are trained annually. It is widely accepted that an important factor in the UK's economic performance is the long tail of badly managed mostly smaller firms compared with more productive competitors such ad the U.S. On top of that, it is estimated that around two million employees in UK firms are in jobs that do not make full use of their skills and qualifications.

In its UK Futures Programme, UKCES is working with business to pilot innovative solutions to major workforce development issues including raising productivity in small firms by increasing management and leadership. Issues being addressed include the skills base for innovating in manufacturing and better management and leadership in supply chains.

Within the EC workplace innovation has been taken up as a priority for increasing competitiveness with the specific goal of increasing its adoption in small and medium sized enterprises. A Europe-wide learning network (EUWIN) has been launched to improve the performance of organisations and the quality of jobs in a sustainable way. The network distributes evidence on the benefits of modernising the workplace and working condition and raises awareness via regional workshops and social media.

In January the Department of Culture, Media and Sport and the Department of Business published a study of the UK's future digital skills needs. In line with the recent UKCES research, this study found that shortages of digital skills already persist and this threatens the UK's growth potential. This applies right the way across the economy, not just to the digital sector. For example, the CBI 'Gateway to Growth 2014' study found that approximately two thirds of businesses reported that their employees had weaknesses in IT skills competencies, a 4% increase from the last survey which in 2009.

The concept of Industry 4.0 refers to the anticipated development in manufacturing operational excellence through the widespread Integration of digital techniques. The basic principle of Industry 4.0 is that by connecting machines, work pieces and systems, businesses are creating intelligent networks along the entire value chain that can control each other autonomously. Industry 4.0 is closely linked to the Internet of Things.

Although the concept started with a German study it has been taken up in Horizon 2020, the successor to FP7 in the CREMA project - Cloud Based Rapid Elastic Manufacturing - which started in January 2015 .
The European automotive supply chain is heavily involved in CREMA with UK representation coming from Tenneco UK and DotNet IT .

Work has started on updating the UK skills regime in the light of the burgeoning digital skills agenda. In February of this year the Skills Funding Agenits published its Review of Publicly Funded Digital Skills Qualifications. It finds that in many cases the occupational standards on which many existing qualifications are based are more than five years old. This study compliments the Shadbolt Review of Computer Science Degree Accreditation and Graduate Employability which is currently under way.

Most of the UK workforce in 2020 is already in employment and so updating vocational courses of new entrants including apprentices must work hand in hand with workforce skills development for existing job-holders.