Automation – where the growth is happening

Steve Brambley, deputy director of Gambica*, takes a look at where and how automation is shaping the economic and industrial landscape around the globe.

The automation market is growing around the world at a faster rate than industrial production in general. It is also prevalent in economies where growth is strongest, and is behind some of the fastest-developing and most forward-looking industries. It is not too much of a stretch to say that automation is a success story and that it is the story behind the success of the businesses that have implemented it.

But automation is not only where the growth is, it is the mechanism by which UK manufacturing can compete with the rest of the world. Why? Because the rest of world is also using more and more automation, and becoming less reliant on low-cost labour to compete in a global market.

According to a recent report by the market analyst IHS, the automation market expanded by 3.7% in 2012 and will rise by more than 6% in 2013. Leading indicators such as machinery orders and manufacturing activity point to a global manufacturing recovery that is spearheaded by China, Europe and the US. This buoyancy is driving investment in the automation market to increase productivity, quality, repeatability and efficiency to drive further growth.

Credit Suisse has reported recently that over the past 10 years, while global production has risen by about 35%, the process automation market soared by 60% and the factory automation market by almost 100%. Before the 2009 economic downturn, both markets were seeing similar levels of growth, and while factory automation took a 20% hit in the recession, it recovered this all in the following year and continues to rise year-on-year.

Process automation, with longer project timescales, dropped less dramatically – by 5% – in 2009 and continued to decline for a further year. However, like factory automation, it has shown strong growth ever since.

If we take a regional view, almost half of global investment in automation is now in the Asia-Pacific economic zone, according to IHS. One fifth of this investment is taking place in the power industry, a growth sector in any expanding economy. Even if previous double-digit growth may no longer be the case, the Chinese and Asian economies will continue to expand at above-average rates, according to another report – this time from the ARC Advisory Group. So while it may not be flourishing as vibrantly as before, it is still steadily growing and predicted to continue, with a lot more potential for the uptake of automation.

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Yet another market analyst, Global Automation Research, reports that the process instrumentation and automation market in China has more than doubled in the past 10 years – a compound annual growth rate of more than 9%. The global market share of China has increased from 6% to 10%, in contrast to the US and Japan which have each lost 3%.

One widely used indicator of the uptake of automation is robot density – that is to say how many robots are installed per manufacturing worker. According to International Federation of Robotics, Japan and Korea lead the way with a density of around 300 robots per 10,000 employees. The US has 130, and China just seven. While this backs up the popular suggestion that China is a labour-intensive, low-automation manufacturer, the trend is quickly moving away from this stereotype. China currently leads the world in automotive robot shipments, with 20% of annual global sales, compared with the US on 13%. In this respect, China is notably different from the other BRIC countries (Brazil, Russia and India) which together account for just 2% of the market.

As China moves ever-faster to automate the manufacturing of products with increasing functionality and quality, the UK has the opportunity to compete on a level playing field. As automated and intelligent processes become the norm, low-cost labour will be much less of a factor in global manufacturing strategies. Other factors such as transport and energy costs, labour skills and competences, political and economic stability, tax incentives and infrastructure, will all feature highly. Gambica is seeking to bring government and industry together to put the UK in a position of strength in these areas. ■

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