Robots have ‘contributed 10% to GDP growth’ since their arrival

THE ECONOMIC BENEFITS of industrial robots installed since the early 1990s have been similar to those of the railways in the 19th century, US highways in the 20th century, and information and communications technologies more recently, according to a new analysis by two economics professors.

George Graetz of Uppsala University in Sweden and Guy Michaels from the London School of Economics analysed statistics across 14 industries in 17 developed countries and found that robots have made a “substantial” contribution to productivity and growth. They also found that while fears that robots are destroying jobs on a large scale are unfounded, there is evidence that they may be reducing employment among low- and middle-skilled workers.

The researchers say that, until now, there has been no systematic analysis of the economic effects of robots. Their study “begins to remedy this problem”.

Graetz and Michaels found that industrial robots increase productivity and wages, without reducing the total numbers of hours worked. The rise in productivity means that fewer human hours are needed to produce a given output, but also cuts production costs and output prices. This, in turn, raises demand from consumers, and manufacturers have to hire more people to meet this demand.

The researchers calculate “conservatively” that the increased use of robots has contributed about 0.37% to annual GDP growth – more than a tenth of total GDP growth since industrial robots were introduced. It is on this basis that they make the comparison to the other major technological advances in the past. But robots, they point out, represent just 2% of capital spending, which is much less than the earlier technological drivers of growth.

On the controversial issue of whether robots are creating or destroying jobs, the researchers describe a “nuanced picture” in which robots appear to reduce the hours and wage-bill shares of low-skilled workers and, to a lesser extent, middle-skilled workers. But they did not find any significant effect on the employment of highly-skilled workers.

Global industrial robots market heads above $40bn

THE GLOBAL MARKET for industrial robots will climb from $26.8bn in 2012 to reach $41.2bn by 2020, according to a new report from Allied Market Research. This latest in a series of bullish predictions for the sector represents a CAGR of 5.4% from 2013 to 2020. Allied attributes the rapid growth to a combination of demand from the automation sector, and a reduction of duties on refurbished goods in the Asia-Pacific region.

At present, articulated robots are biggest-selling technology, with sales approaching $13bn in 2012 – almost half of the total robot market. However, the report predicts that cylindrical robots and other types of robots (including customised and refurbished robots) will grow at “significant” pace in the coming years as a result of increasing demand in the Asia-Pacific region, which represented about half of the global market in 2012. The CAGR for cylindrical types will be 6.5% from 2013–2020, while for other types it will be 7.5%.

The automotive sector continues to dominate the global robotics market with revenues worth $7.4bn in 2012. However, Allied expects this segment to be hit by a slowdown, and predicts that the food and beverages segment will witness highest growth rate of 6.9% over the forecast period. Other active areas include the electronics and healthcare sectors.

The report says that nanorobots are gaining momentum in the healthcare and other niche markets. For example, nanorobots can be used to mix compounds, resulting in shorter lead times.

The global HMI market will expand at a CAGR of 10.4% between 2013 and 2019, when it will be worth $5.57bn, according to a new report from Transparency Research. It says that interface software is the fastest-growing segment, although the industrial PC market is likely to expand “significantly” by 2019.

Rockwell Automation has appointed Dave Nicholl to be its new country sales director for the UK and Ireland. Nicholl was previously Rockwell’s sales director for Ireland alone. Before joining the company earlier this year, he held managerial positions at Schneider Electric in the UK, Romania and Sweden. Nicholl succeeds Bill Dennison who was appointed Rockwell’s UK and Ireland sales director at the end of 2014, but has since left the company.

ABB has acquired the remaining shares in the Swedish control-room design specialist CGM to take full ownership of the company, which employs 54 people.

Pepperl+Fuchs has acquired MACTek Corporation, a US-based supplier of Hart protocol devices. The move is part of a strategy to strengthen P+F’s position in the WirelessHart market. MACTek, founded in 1993, specialises in Hart modems, including wireless types.

The US materials-handling specialist Columbus McKinnon Corporation is buying the digital power and motion control manufacturer Magnatek for $188.9m. Columbus McKinnon says the deal will accelerate its plan to achieve $1bn in revenues. Magnatek supplies drives, radio controls and accessories for cranes and hoists as well as digital DC controls for lifts. Its UK base is in Bedford. Columbus McKinnon, which has a UK operation in Chester, says it is marrying Magneteck’s strengths in smart power technologies with its own mechanical lifting and positioning capabilities.

The industrial data communications specialist Westerno is running nine free, half-day roadshows across the UK from 13 October to 11 November. The events will include presentations of developments including 4G and cyber-security.

The Japanese motor manufacturer Nidec has acquired the US motor controls producer KB Electronics, for an undisclosed sum. KB offers controls for AC and DC motors up to 3.7kW, and produces more than 200 types of off-the-shelf controls. It employs 195 people and in the year to September 2014 had sales worth $23m.

Safety specialist Pilz Automation Technology has launched a PureGuardian (Prevention and Use of Work Equipment Regulations) assessment service which will inspect machinery and provide reports on equipment affected by the regulations. For any non-conformance it identifies, Pilz will conduct a risk evaluation as specified in the EN ISO 12100:2010 standard.

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