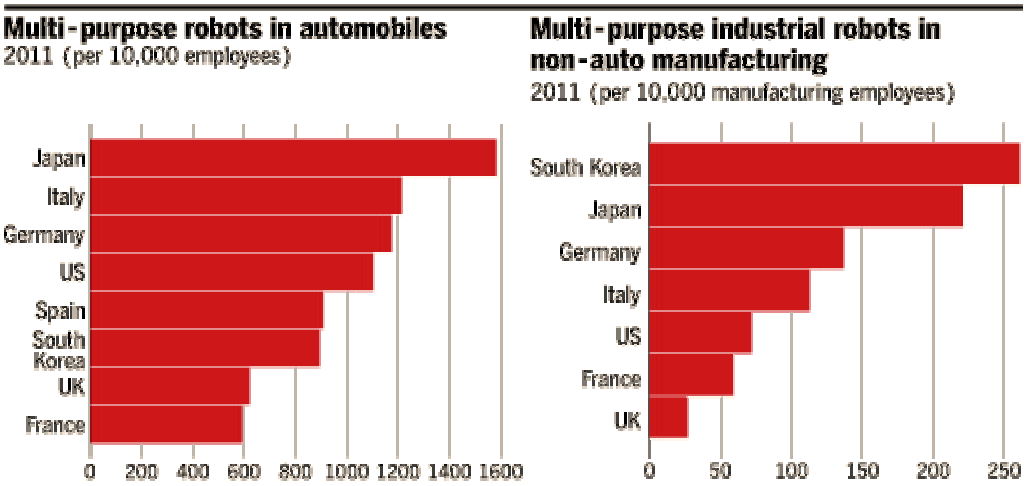
FINANCIAL TIMES
April 21, 2013 7:40 pm

UK trails in march of the robots

By Andrew Bowman

The spinning mule was a pivotal element in the industrial revolution, destroying the labour-intensive cottage spinning industry and turning Britain into a textiles superpower. But when it comes to replacing human hands with machines, today's British manufacturers have become the Luddites of Europe.

The UK car industry uses just 622 robots per 10,000 workers, compared with almost twice that in Germany and Italy, according to the International Federation of Robotics. Exclude automotive manufacturing, which commonly accounts for about half of new robotics installations, and the UK fares even worse, with just 27 units per 10,000 manufacturing employees compared with 137 in Germany, 113 in Italy and 59 in France.



- Industrial robots were first successfully applied by General Motors in the US in the 1960s, but fears over job losses impeded widespread adoption across industry. From the 1970s Japan established itself as world-leader in automation, and today has the highest operational stock of industrial robots in the world, with more than 300,000 in 2011, compared with 185,000 in the US. Many US and European manufacturers instead opted to offshore to maintain competitiveness, but with Asian wages rising and governments seeking to strengthen domestic manufacturing, the application of robotics is generating renewed interest. There are concerns though that British companies are lagging behind.

"The situation is desperate", says Christopher Buxton, chief executive of the British Automation and Robot Association.

David Willetts, science minister, has identified robotics as one of "eight great technologies" that will share £600m of new funding, but the problems holding back automation in the UK are deep rooted, says Mr Buxton.

Part of the problem is the number of small businesses in the UK manufacturing sector – over nine in ten manufacturing workplaces employ less than 50 people, according to research from Manchester University's Centre for Research on Socio-Cultural Change. Most robots sold in the UK cost between £30,000 and £50,000, putting them out of the reach of smaller companies.

"If you're that small you're worrying about where the next order is coming from and whether you can pay the rent on the warehouse", says Mr Buxton. "[SMEs] are understandably very risk averse, and don't always have time to research the technology".

New robotics installations in the UK doubled in 2012 to 2,477, according to BARA data, but four in five were in the car industry. Elsewhere, installations have plateaued in recent years.

In food, the UK's largest manufacturing sector by employment with a workforce of about 400,000 people, British companies appear slow on the uptake. According to IFR, there were 100 shipments of robots to UK food companies in 2011, compared to France's 270, Spain's 308, Germany's 442, and Italy's 658.

Bob Hinchcliffe, managing director at Yorkshire-based Quasar, which provides bespoke robotic automation systems to food manufacturers, says his customers are increasingly under pressure from more efficient continental competitors.

"In fresh and chilled food, a lot [of manufacturers] thought that strip of water between us and Europe was enough to prevent that type of product coming in, but with improvements in wrapping material you're getting a longer shelf life. An extra day is enough."

Many in the food industry blame supermarket buying practices for the UK's slow movement into automation.

"Food manufacturers have been dominated by a few large supermarkets, who put constant pressure on [supplier] margins", says David Jahn, director of Kent-based automated packing and palletising manufacturer, Brillopak. "The challenge for manufacturers is they want to invest in automation, but this means high capital costs which they recoup over 2-3 years ??? but the supermarkets insist on very short-term contracts."

Mike Wilson, a UK-based sales manager for the Swiss engineering conglomerate ABB says British food manufacturers have got by on cheap and flexible labour allowing them to achieve productivity growth without automation.

"It's a vicious circle, because we [the UK] don't have a large automation base, we don't have a large supply chain, and therefore we don't have the strength and expertise to develop the technology," he says. A chronic shortage of skilled engineers compounds the problem.

Government support has so far come in the form of a handful of small initiatives. In January David Willetts pledged £35m of investment in robotics "centres of excellence" to link universities and industry. IFR valued the global market for robotics at $25.5bn in 2011.

There are concerns though that this policy focuses on the UK carving out high tech manufacturing niches, rather than helping normal companies adopt existing technologies.

Emerging markets are also rushing to automate. In 2011 China was the world's third largest purchaser of robotics by unit number – with 22,577, up from under 6,000 in 2006 – with companies such as Foxconn planning major automation drives due to rising labour costs. Both India and Mexico bought more units than the UK, with 1,938 and 1,547 compared with the UK's 1,514.