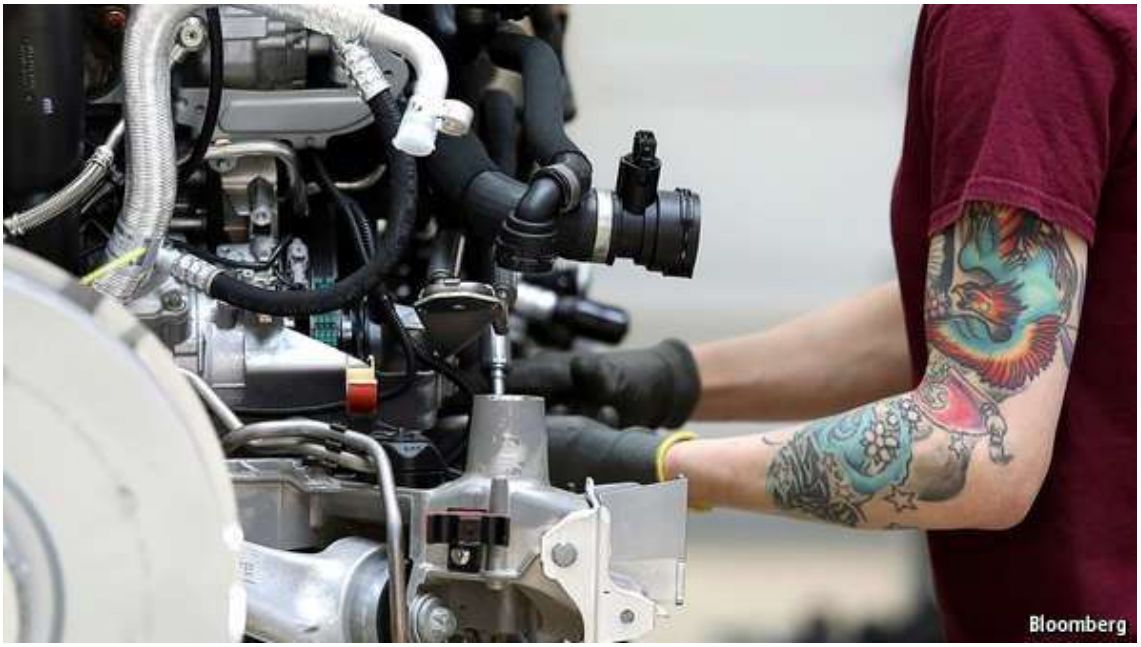
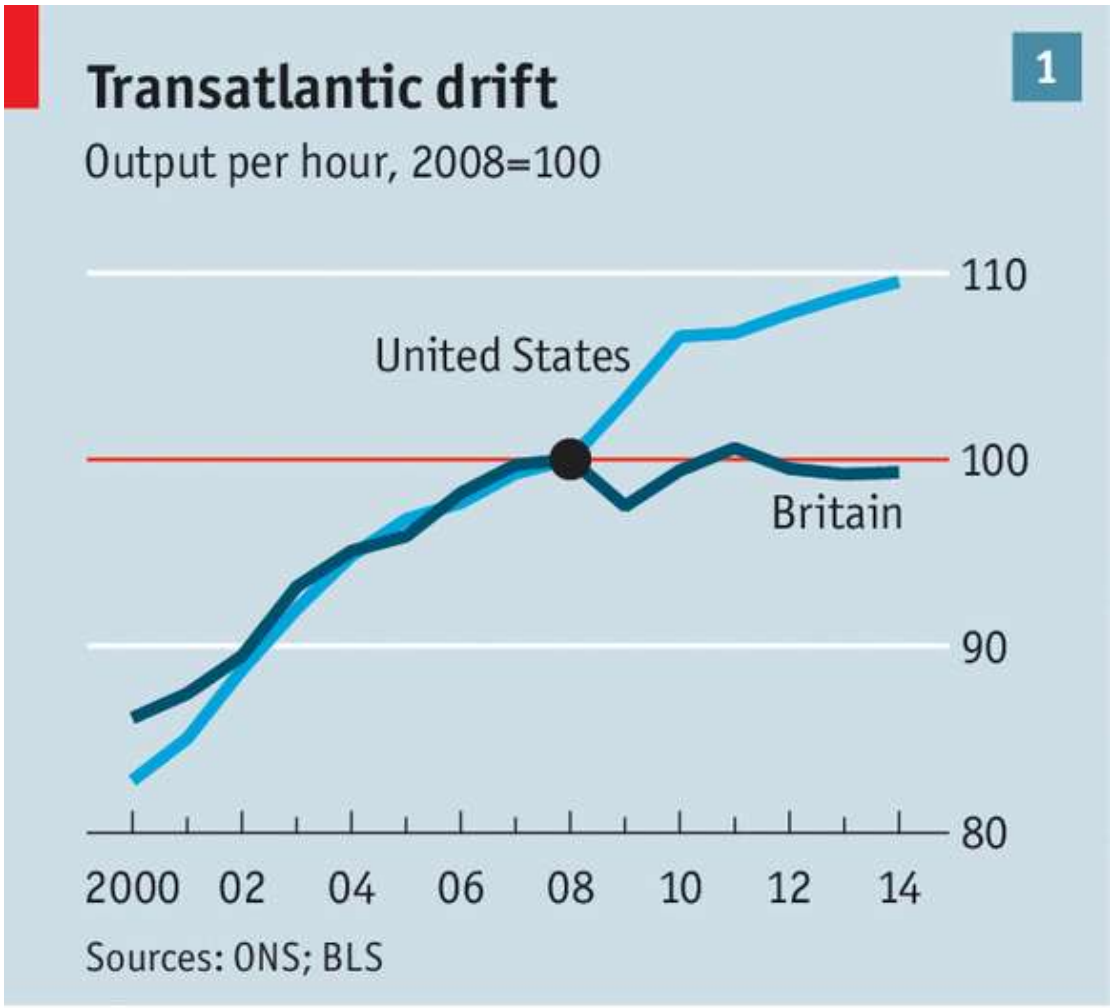
Under the bonnet

www.economist.com
May 30th, 2015



FROM the outside, Britain's economy looks as if it is ticking over nicely. Last year it grew by 2.8%, more than any other economy in the G7 group of rich countries. Employment has never been higher. And yet a nagging problem bothers its policymakers. Ask any economist what he sees as the biggest risk to the country's growth prospects and the reply is the same: "productivity". GDP per hour worked is lower now than in 2007, and flatlining (see chart 1). Mark Carney, the governor of the Bank of England, says that forecasting when productivity growth will return is the trickiest call he has to make. Having steadfastly ignored the issue during the election campaign, George Osborne, the chancellor of the exchequer, now promises a "productivity plan" in his first budget of the new parliament, due in July.



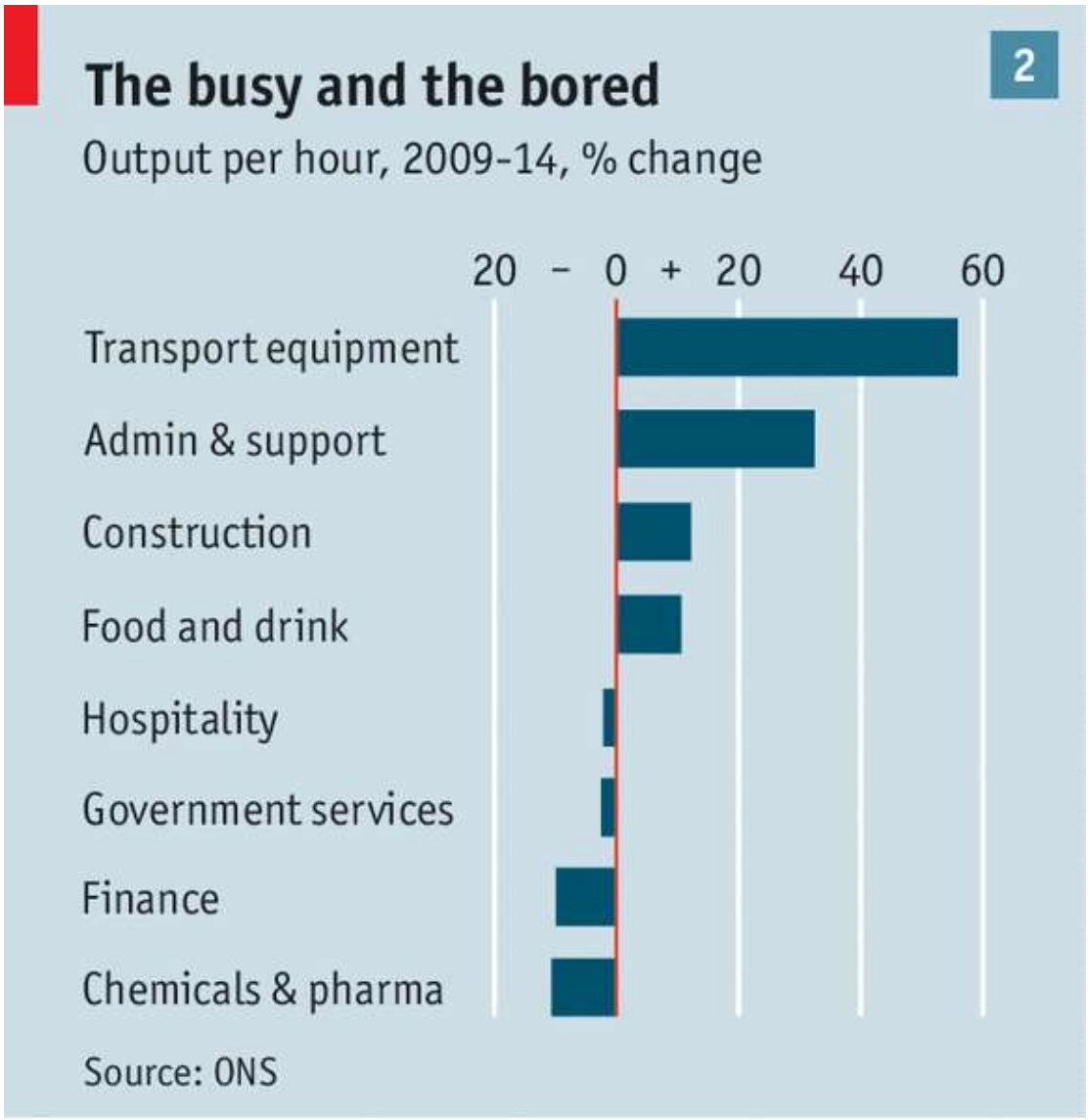
The wonks and policymakers are right to be worried. Productivity improvements are an important source of economic growth and rising living standards. And although economists across the rich world are wondering how to pep up their countries' productivity, Britain's stall is uniquely serious. American workers' output per hour is 9% higher than in 2007; even in France it has increased by more than 2%. Compared with G7 peers, Britain's post-crunch productivity performance has been remarkably poor.

But economic averages only reveal so much. While nationwide productivity has stagnated, the experience has varied dramatically by sector. *The Economist* looked at every industry making up at least 1% of the economy, and found that since 2009 some have been immune from the productivity illness—and others are particularly afflicted by it.

Planes, trains and automobiles

The slump has had two separate phases. When the economy stumbled into a year-long recession in 2008, many firms decided that, rather than fire workers, they would keep them on and weather the storm, to avoid costly rehiring later. Employing the same number of people while producing less meant that output per hour fell. As expected, when the economy began to recover so did output per hour, rising by 3% between 2009 and 2011.

Then something mysterious happened. Contrary to most forecasts, productivity froze. Growth continued, but instead of getting more from their existing workforce, employers went on a hiring spree. As a result Britain added 1.3m jobs between 2010 and 2014. The Bank of England used to assume that in the short-run productivity was closely linked to demand, which the bank steers using interest rates. Today, amid strong demand but stagnant productivity, the bank says it is powerless to do much about the issue.



Lift the bonnet of the economy and it emerges that the fastest-improving part is the transport-manufacturing industry. The 345,000 workers making cars, planes and trains produce 56% more in an hour than they did in 2009. Whereas from 2005 to 2009 the car industry made 9.3 vehicles per employee per year, from 2010 to 2014 it managed 11.5. Over that period Britain's car industry—which includes firms such as Nissan, Jaguar Land Rover and Mini—benefited from investment in new technology, improved supply-chain efficiency and better management, says Mike Hawes of the Society of Motor Manufacturers and Traders, an industry body.

Technological advances, aided by collaboration between firms, universities and government, are making manufacturing more efficient. Rolls-Royce, an aerospace company, has halved the time it takes to manufacture fan discs and turbine discs used in jet engines, using methods developed at the Advanced Manufacturing Research Centre (AMRC) at Sheffield University. The AMRC was established in 2001 and now forms part of a network of government-backed "catapult centres", whose aim is to forge links between academia and industry. Such links are crucial for success in manufacturing, says Hamid Mughal, Rolls-Royce's director of manufacturing, as they create a "sandbox" environment, allowing experimentation that would never be viable for a single firm.

Some companies are confident that the productivity gains will continue. The investment cycle in manufacturing—especially in aerospace—can be decades long, so the impact of catapult centres, which were launched only in 2011, is yet to be fully felt. Engineers brim with excitement about the potential for still more efficient production, even in low-volume, labour-intensive manufacturing. Meggitt, an aerospace manufacturer, is developing an "intelligent workbench", which uses lasers and screens to help guide engineers through the construction process. The firm collaborated with the AMRC (and got some taxpayer funding) to produce a prototype. Keith Jackson, the firm's head of technology, says that without the tie-up Meggitt could still do such projects—but more slowly, and possibly abroad.

Some low-tech industries seem to have overcome the productivity problem, too. The "administration and support" sector—which includes outsourcing firms like Capita, which lets other companies farm out anything from travel planning to entire HR departments—saw the next-biggest rise in productivity. Output per hour dipped by 6% between 2008 and 2009 but has since risen by 32%.

No time for a tea break

Even now, hourly output is only around £22 ($34), meaning that admin workers are still far less productive than those in sectors such as IT (who generate £42 per hour) or finance (who generate £62). This means that even their relatively low average wages of £12.50 an hour gobble up 58% of the value that they create, suggesting that there is little headroom for pay rises.

Yet the sector provides a counterexample to the argument that low productivity has been caused by employment growth. Firms have managed to increase both their productivity and their staffing levels: the sector has been a jobs powerhouse, with employment rising by more than 300,000 (close to 25%) since 2009. The hope for Mr Osborne is that the improved productivity will start to translate into higher wages.

The contrast with the worst-performing industries is stark. Productivity in finance and insurance is 10% lower than in 2009. That partly reflects artificially high productivity in the boom years, when the sale of overvalued financial instruments

and dangerously high leverage delivered bumper profits. It is also partly down to a heavier regulatory burden on banks, which has caused the ranks of legal and compliance officers to swell. The benefit of this—reduced risk of another crash—does not show up in productivity statistics.

A more surprising underperformer is the chemicals and pharmaceuticals sector. Some argue that manufacturing industries are inherently likelier than service industries to make productivity gains, since they are more intensive users of technology, which delivers productivity windfalls as it evolves. The chemicals and pharma sector is currently an exception. It is hugely productive, with output per hour of £72 per worker. But it has stalled badly, with hourly output dropping by 11% since 2009. Real wages are down by 4% and employment has fallen by more than 5%. That causes pain in local hubs: chemical firms employ 50,000 workers in the north-west of England, according to UK Trade and Investment, a government body.

One possible cause of the chemical crash is a failure to invest. Following the 2008 crisis Britain's bruised banks cut their corporate lending; firms' bond-market borrowing became dearer too. As investment become more expensive some firms hired cheap workers instead of buying pricey machines, according to John Van Reenen and João Paulo Pessoa of the London School of Economics. Neither investment nor lending has recovered (see chart 3). That means many Britons, toiling with out-of-date kit, have scant chance of becoming more productive.

Spectacular performance in high-tech manufacturing and stagnation in finance may look like a case for tilting the economy away from services. But despite recent trends, financiers remain one-fifth more productive than car and plane makers. If manufacturing grew at the expense of finance, overall productivity would fall.

A change of gear

The trick is to find what works, and mimic it. Stronger industrial clusters would help. Firms can cut costs by sharing infrastructure, as chemical firms in northern England have done, using a system of pipes to transport chemicals cheaply and

safely. Hubs also help to attract both talent and finance. Developing pharmaceuticals is a risky business in which the fate of a firm may hang on a single patent. In a city like Cambridge, where there are plenty of pharma startups, it is easy to attract talent: workers know that if their firm goes to the wall, another will be hiring soon.

Productivity gains are there in Britain if you look closely enough. But if the outwardly impressive economy is to continue motoring along, firms, people and capital must be freed to move more quickly from unproductive sectors into fizzier ones. Lighter planning rules would enable productive industries to grow: Oxford, for instance, has one of the world's leading medical schools, but its tight "green belt" of land that is off-limits to developers makes it hard to find space for life-sciences firms to flourish. A social-housing system less reliant on waiting lists would make workers more footloose. And more streamlined bankruptcy laws would allow money to flow out of failing businesses and into growing ones more quickly (the World Bank rates Britain's insolvency framework 11 out of 16; America and Germany both score 15). Until reforms such as these are passed, Britain will continue to grind forward with the hand-brake on.