UK vs. the world: productivity and R&D

In this series, we take a close look at aspects that drive productivity and what other countries are doing to get it right – and how we can learn from them.

Driver #3: R&D

Who gets it right: U.S.

We haven't rated the U.S. first in R&D because their expenditure tops the UK. If judging by a percentage of GDP spent on R&D, Israel and South Korea would come out on top, spending 4.21% and 4.15% respectively, compared to the U.S. at 2.81%. (The UK: 1.7%)

What the U.S. appears to do better than anyone else is translate their expenditure into productivity gains. Think innovation and the U.S. is right up there: Sat Navs, Silicon Valley, companies like Apple and Google, and scientific breakthroughs like Harvard University's recent "bionic leaf" that recreates the efficiency of photosynthesis (which in turn will impact the solar industry.)

A few months ago, Lund University in Sweden compared R&D and productivity in the U.S. and EU, noting that the U.S.'s productivity gains came from high-tech industries. They surmised that the reason might be due to "the quality of human capital" and "the better North-American managerial practices."

The "quality of human capital" can probably be attributed to the Times Higher Learning Education's top 10 university rankings: six are in the U.S. Two of those universities focus on sciences, technology and engineering (California Institute of Technology [Cal Tech], ranked first and Massachusetts Institute of Technology [MIT], ranked 5th.)

But three of the world's 10 ten universities are in the U.K., so we're punching above our weight in higher education. And while managerial style is crucial to high productivity, that still doesn't explain why the U.S.'s productivity gains come from high-tech industries.

Since the '80s, the U.S. has offered tax incentives for companies to spend on R&D. The UK followed suit not too long ago, with tax incentives far more expansive than the U.S. system. The UK offers generous R&D tax incentives, especially to SMEs, and unlike the U.S. has no ceiling on the amounts that can be claimed, and is offered to all sectors, including restaurants and digital marketing agencies. Kick starting businesses and creating jobs appears to be part of the role of British R&D tax incentives.

The U.S., on the other hand, is only interested in innovation. They're stricter on who can claim tax relief. A company's experiment must rely on principles of the physical or biological sciences, engineering, or computer science. And that's just the beginning of the criteria.

By focussing on the STEM industries, the U.S. is better at targeting their money to find breakthroughs, which in turn translates to higher productivity. With British politicians looking to turn the UK into an export-driven economy, now is the time to rethink how we approach R&D to stimulate productivity.

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