Taxation, Investment and R&D for Productivity

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IFS: How Can Policy Boost Productivity Growth?

Outline

I. Investment, R&D, productivity: where does the UK stand?
II. Tax and investment
III. Innovation with, or without taxation?
IV. Where to go from here?

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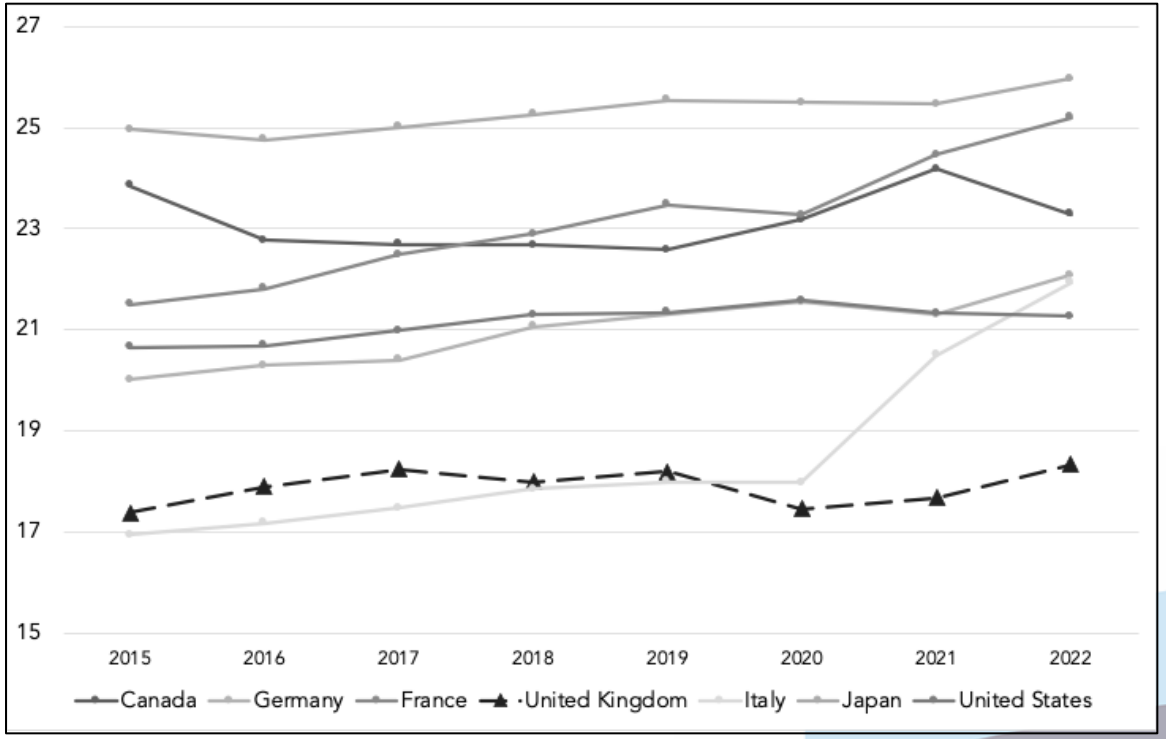
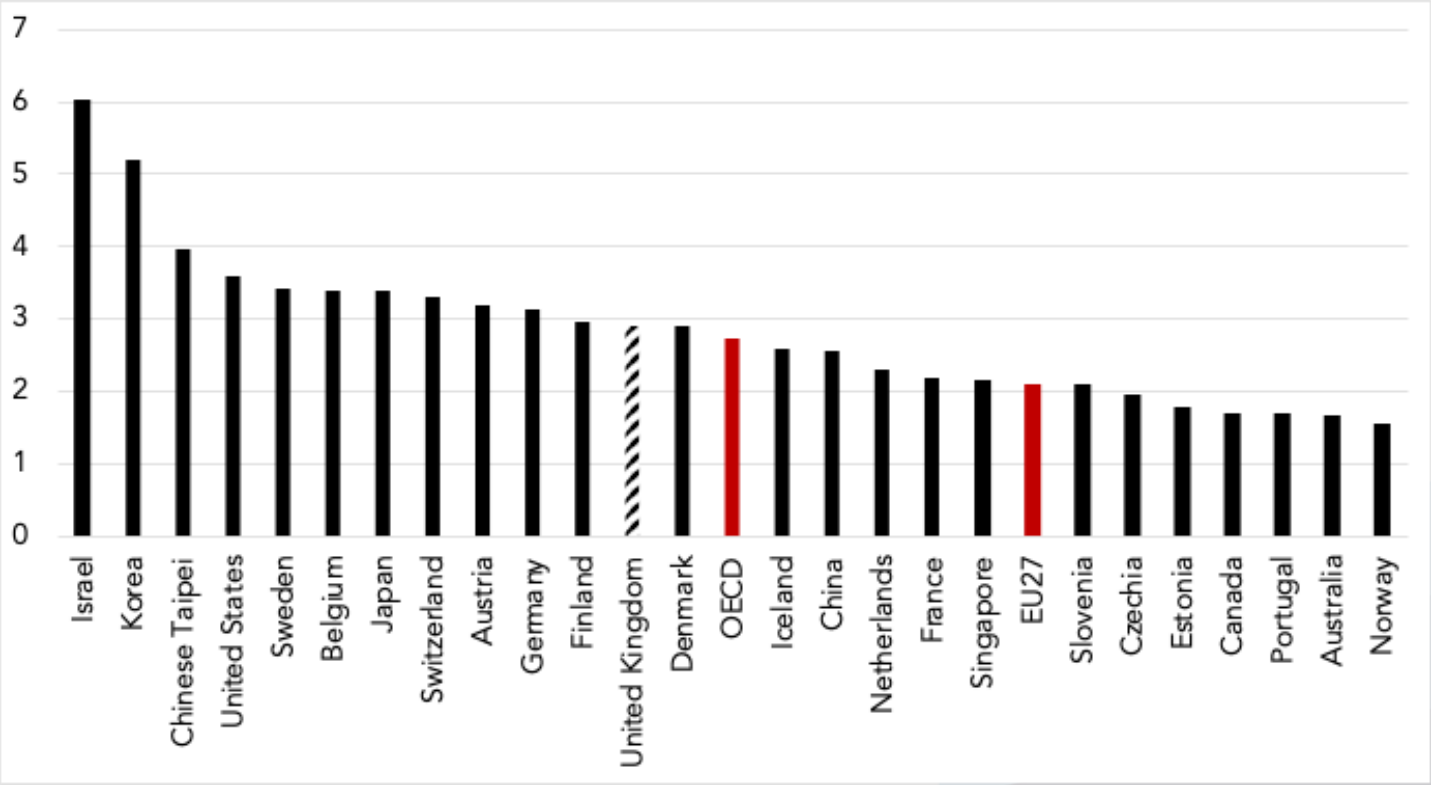
Investment performance (GFCF/GDP) ranked lowest in G7



Source: OECD Compendium of Productivity Indicators, 2024

R&D performance (R&D/GDP) ranked higher



Source: OECD STI Indicators, 2024 (reference year 2022)

Some facts to note…

1. Investment in physical capital is **lumpy**.

2. Investment in **R&D is 50% salaries**, 40% materials, 10% physical capital.

3. Success in innovation is highly **uncertain**.

4. Each R&D project is **unique**. Averages are not very informative about best policy.

5. Impact of **policy or demand** conditions, **price vs quantity** effects are hard to disentangle.

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What policies are we talking about?

1. The corporate income tax **rate** (overall, or arising from certain activity).
2. CT **base:** Depreciation, **full expensing** or **super-deduction** of the cost of certain investment for CT.
3. Taxes on **labour** and unincorporated income (including NICs!).
4. Reduced taxation for the **costs of R&D personnel**.
5. Tax breaks for **income of investors** in new or innovative companies.

Taxes raise the cost of capital for investment and lower cash flows

1. Theoretical literature dates back to 1960s, but now we finally have **better data** to analyse the effects of tax on investment.
2. Recent empirical literature finds: **tax incentives help smaller businesses** accumulate more capital (both investment and R&D; Zwick and Mahon, 2017; Maffini et al., 2019; Güçeri and Liu, 2019; Dechezlepretre et al, 2023; Pless, 2025)
3. I**mpact on large firms is mixed**: MNEs relocate investment (Devereux and Griffith, 1997; Knoll et al., 2021); in the US, TCJA stimulated investment, but eroded revenue (Chodorow-Reich et al., 2024); and…note the Irish investment boom.
4. And **no matter what tax policy is, certainty is key!** (Güçeri and Albinowski, 2021)

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Tax system offers a range of incentives for innovation

Input	Output	Investor	International
R&D tax reliefs; Full expensing of R&D capital	IP Boxes	Income tax breaks; EIS/SEIS VCT	Profit-shifting via patent transfers or CSAs

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These measures are costly, and in the UK, we currently cannot evaluate them together.

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R&D tax relief

SME relief:
£4.5 billion

RDEC:
£3 billion

Patent Box

Patent Box:
£1.5 billion

(and 285 companies → 97% of relief)

Investor Reliefs

EIS: £520 mil.

SEIS: £95 mil.

VCT: £330 mil.

Costings are for the 2022-23 tax year. Source is HMRC foregone revenue statistics for each scheme. Some values are rounded.

IV. Where to go from here?

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THANK YOU!

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