

Can Research and Innovation Save Finland?

With broad political support, Finland has decided to increase investments in research and innovation to 4% of GDP by 2030. This initiative aims to ensure economic growth after 17 years of stagnation. DFIR recently conducted a study tour in Finland and returned with inspiration for Danish research and innovation policy. Notably, the Finnish government and the private sector have committed to significantly increasing private R&D investments. VTT - Technical Research Centre of Finland is focusing on developing defense technology under a new paradigm. Furthermore, Finnish universities enjoy a high degree of autonomy and have a strong collective voice in the research and innovation policy debate, while local authorities actively finance and engage in research and innovation activities at Finnish Universities of Applied Sciences (UAS). DFIR visited one such institution, Metropolia, which is deeply embedded in its local community.

In December 2024, DFIR visited Finland, a country where research and innovation policy is a high political priority. This was evident in the meeting with DFIR's Finnish counterpart – *The Research and Innovation Council*. Here, the Prime Minister presides over the council, accompanied by four other ministers and representatives from Finland's research and innovation sector. This council has outlined a roadmap for Finnish research and innovation policy, aiming to increase total public and private investments to 4% of GDP by 2030. This agreement has been years in the making and was passed by the Finnish Parliament in the summer of 2024.

Finnish Companies' Research and Innovation Efforts

Once fully implemented, the agreement will increase public funding from 0.94% of GDP in 2022 to 1.33% in 2030. These public investments will be leveraged with private investments, which are expected to rise from 2.02% in 2022 to 2.67% in 2030.

This ambitious leverage strategy is supported by several measures. Trust-based initiatives include a commitment between the government and 56 R&D-intensive companies to increase private R&D investments. A survey conducted among a broad range of companies indicates that businesses are willing to increase investments if the Finnish state raises public funding.

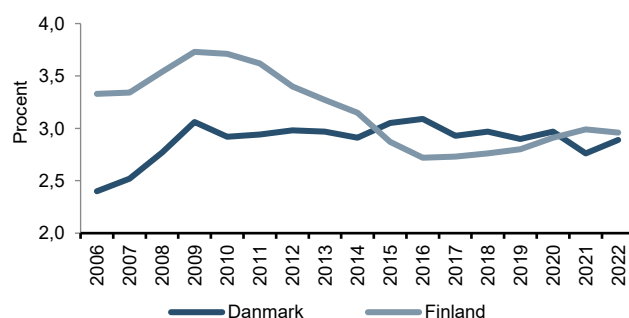
More structured instruments include the VETURI funding mechanism under Business Finland, a public fund similar to Denmark's Innovation Fund. VETURI targets large, technology-leading companies, where grants are conditional on companies increasing their own R&D

investments and actively building an R&D ecosystem of businesses and knowledge environments around a common mission. Business Finland also combines this with open funding calls to provide startups and spin-outs with research, innovation, and market maturation funds.

Finally, the increased public funding is being phased in over several years, and it is expected that politicians will halt the implementation if private investments do not increase accordingly.

DFIR assesses that these measures will strengthen private investments in the coming years. The key question will be whether private investments lead to increased growth and productivity. DFIR notes that tax incentives do not play a significant role in the Finnish reform.

Figure 2 R&I-Investments as a Percentage of GDP Separately for Denmark and Finland. 2006-2022. Percent.



Source: OECD statistics, Science and Technology Indicators

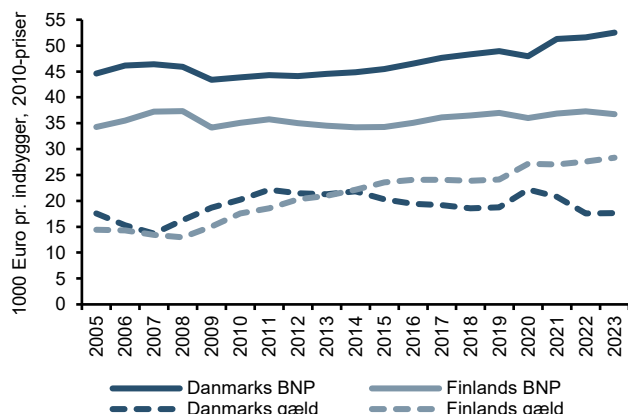
The Legacy of Nokia

The ambitious research and innovation policy is set against the backdrop of Finland's economic crisis. The country has not experienced GDP growth in 17 years. Finland faces significant demographic challenges with a projected increase in the elderly population, and its national debt is high compared to other Nordic countries.

In Finland, success is synonymous with Nokia. The country last experienced economic growth during Nokia's heyday in the late 2000s.

Nokia was exceptionally R&D-intensive. In 2008, it ranked among the top 10 most R&D-intensive companies globally and was number one in Europe. Therefore, as Finland seeks to ensure economic growth, Finnish politicians and citizens rally around a national compromise, where the entire public sector must cut costs—except in three areas: defense, research, and education. It is worth noting that the Finnish R&D sector faced massive budget cuts in the 2010s.

Figure 2 GDP and Public Gross Debt per Capita Separately for Denmark and Finland. 2005-2023. 1000 Euros, 2010 Prices.



Source: EuroStat, Danmarks Statistik and own calculations.

DFIR believes that Denmark should learn that investing in R&D alone is not enough. Nokia and Finland invested heavily throughout the 2000s. However, strategic and diversified investments are needed. DFIR encourages Denmark to strengthen its resilience by ensuring private R&D investments across a broad range of companies and sectors. There are significant risks associated with over-reliance on a single company or sector.

Further Inspiration

DFIR visited several institutions, including Aalto University, the University of Helsinki, VTT, and Finland's university interest organization, UniFi, as well as Metropolia and the Finnish universities of applied sciences interest organization, Arene. Below are key observations to inspire the Danish research and innovation policy debate.

Finnish universities have widespread autonomy and a strong collective voice in debates on research, innovation, and education policy. Aalto University was created through a merger of three universities in 2010 and established as a private foundation. Aalto has significant capital reserves, with investment returns covering 10% of the university's expenses. This governance model provides a high degree of autonomy from the political system, which seems to bear fruit, as reflected in various international rankings. Due to this autonomy, Aalto University is not required to implement specific government policies but is always willing to engage in negotiations with the Finnish Ministry of Education and Culture.

The council also met with VTT, a state research and innovation entity that most closely corresponds to a Danish GTS institute. VTT has successfully established a remarkable spin-out culture around its activities. Additionally, VTT has engaged in the development of new defense technology under the banner "New Defence." The development of new defense technology is driven by consortia and ecosystems of civilian dual-use companies and startups in collaboration with the established defense industry, research institutions, and defense stakeholders.

The aim is to accelerate the development of new defense technology by utilizing technology initially developed for civilian purposes and through a streamlined administration with fewer barriers for businesses.

The council also visited Metropolia Ammattikorkeakoulu, a university of applied sciences. Metropolia is owned by five municipalities in the Helsinki metropolitan area. It is physically located in a disadvantaged district of Helsinki and deeply integrated into this local community. For example, Metropolia provides healthcare services as an extension of its health education programs. The institution collaborates closely with local authorities, who also contribute to funding research and innovation activities.

A recurring observation and source of inspiration is the Finnish ability to think long-term and strategically through joint foresight processes. DFIR believes that this approach fosters greater predictability and consensus while clarifying key actors' strategic options. The council particularly noted the institutionalization of foresight work and that Finnish state auditors have concluded that this approach is widely implemented across central administration.

Over the past four years, DFIR has visited Switzerland, the Netherlands, Belgium, and Finland. The council observes that these countries, along with Denmark, prioritize similar technological strengths. This raises the question of whether collaboration and division of labor could be strengthened among these and similar nations.

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