

The state of private RDI in Finland

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Investments into RDI activities are key drivers for long-term and sustainable growth in Finland

Companies' research, development and innovation (RDI) activities have a central role in not only for maintaining and improving the competitiveness of the Finnish economy, but also for providing solutions for societal challenges. A review of the current state of private RDI activities assessed the strengths, weaknesses and characteristics of the Finnish landscape.

More systematic monitoring of private RDI activities is needed

Investments into RDI activities are key drivers for long-term and sustainable growth in Finland. The increase in productivity requires extensive research, development and innovation activities, of which the private RDI activities taking place in the enterprise sector are of utmost importance. Recently, their importance in finding solutions to societal challenges (e.g. climate change) has also become increasingly recognized.

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Although there is an abundance of data and information on RDI activities available through various data sources, there has not been a coherent framework and set of indicators for monitoring the status of private RDI activities and relevant policy context in Finland.

Framework for measuring private RDI

Business Finland commissioned 4FRONT to carry out a review study to assess the state of private RDI in Finland, especially in relation to other leading countries in RDI activities (Sweden, Denmark, Netherlands, Belgium, Austria and Israel). As part of the review, a (pilot) framework for monitoring the development of private RDI activities and the operational environment was developed (see Figure 1), with the idea that Business Finland can use the framework in the future for facilitating the discussion on RDI policies in Finland. In addition to the general framework and statistical indicators, the framework identified some indicators (e.g. characteristics of private RDI activities) to be compiled with a stakeholder survey. As part of the study, a pilot survey for selected digitalisation experts was conducted (38 responses received).

Based on a review of existing international and national monitoring frameworks and indicators, a framework designed to measure the state and performance, as well as the wider operating environment and conditions of Finnish private RDI, was compiled. The framework covers five main themes, each consisting of sub-themes with a differing amount of indicators. The pilot study focused on themes from two to four, whereas for themes one and five, draft indicators were identified but no data analysis was conducted.

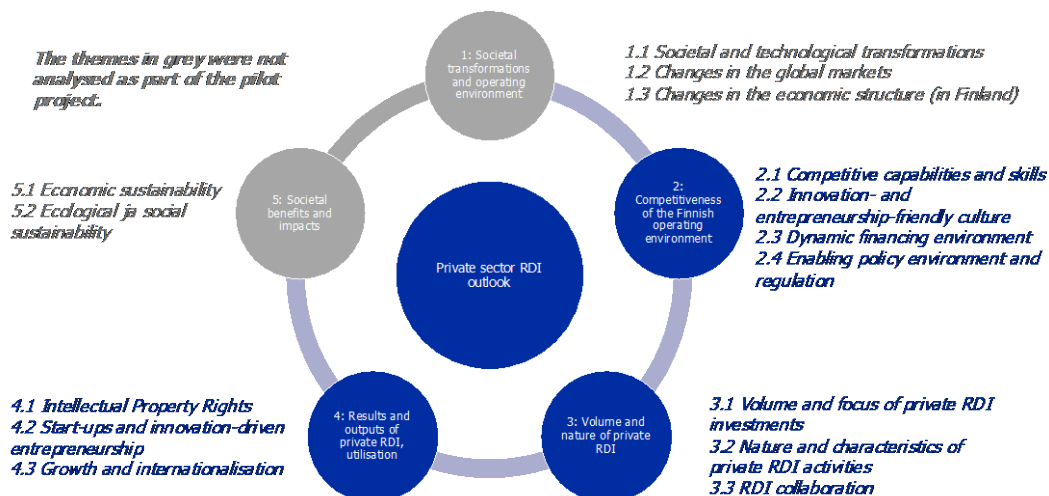


Figure 1. Framework for monitoring private RDI activities.

The framework utilises a multitude of different data sources. In the data collection phase, emphasis was placed on the ease of updating data in the future, thus providing a longer timespan for the usage of the framework. As international comparisons were favoured, focus was naturally on datasets including several countries. The vast majority of indicators and statistics included at least some of the reference countries for comparison, if not all. Additionally, some aggregate groupings were used, such as EU27 and/or OECD countries, to provide larger comparative context. Utilised data sources used were, but not limited to, OECD databases on RDI (e.g. Main Science and Technology Indicators, MSTI), Eurostat databases (e.g. Community Innovation Survey), Global Entrepreneurship Monitor, World Bank datasets, Invest Europe data, as well as WIPO information.

Finnish private RDI – strengths, weaknesses, opportunities and threats

On a general level, Finland is somewhat lagging behind the reference countries (Sweden, Denmark, the Netherlands, Belgium, Austria, Israel)) in most of the indicators selected for the framework.

In particular, compared to the reference countries, Finland seems to lag behind in terms of the financial environment – this is evident in the indicators related to the number of listed technology companies, the volume of the national private equity market, as well as the usage and volume of RDI tax incentives. Additionally, the volume of private RDI activities is lower in Finland than in comparison countries.

Finland's strengths relate to the competences and cultural aspects. Finnish RDI actors, as well as the society as a whole, have high capabilities in digital skills and the trust in political and societal institutions rank very high. Also, the indicators relating to different forms of RDI cooperation – whether public/private or between business enterprises – provide a positive outlook for Finland, however this could still be further developed.

The strengths and weaknesses of Finland in comparison to the selected comparison countries is presented in the following table (including indicators included in the pilot study).

Finland is lagging behind the reference countries in most of the indicators

Table 1. Overview of Finland's strengths and weaknesses in private sector RDI, based on selected indicators. (-2) Clearly below comparison countries' average; (-1) Somewhat below comparison countries' average; (0) On average with comparison countries; (1) Somewhat above comparison countries' average; (2) Clearly above comparison countries' average.

Indicator	Rating	Strengths	Weaknesses
2.1 Competitive capabilities and skills	0,2	Digital skills; R&D personnel (total)	R&D personnel in private sector; Int. scientific publications
2.2 Innovation- and entrepreneurship-friendly culture	-0,33	No particular strengths compared to comparison countries identified.	No particular weaknesses compared to comparison countries identified.
2.3 Dynamic financing environment	-0,8	VC investments into Finnish startups	R&D tax reliefs; IPOs; national private equity market volume
2.4 Enabling policy environment and regulation	1	Trust in institutions	No particular weaknesses identified
3.1 Volume and focus of private sector RDI investments	-1	-	Lagging behind in private sector RDI volume
3.2 Nature and characteristics of private RDI activities + 3.3 RDI collaboration	0,75	Collaboration between companies and between companies and research org.	International collaboration (with reservations)
4.1 IP rights	-0,25	Utilisation of IP rights in companies	Patent applications; copyright revenue
4.2 Start-ups and innovation-driven entrepreneurship	0	No. of startups	Share of innovative companies
4.3. Growth and internationalisation	-0,25	Employment in innovative companies; export of knowledge-intensive services	Export of high-technology products

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