

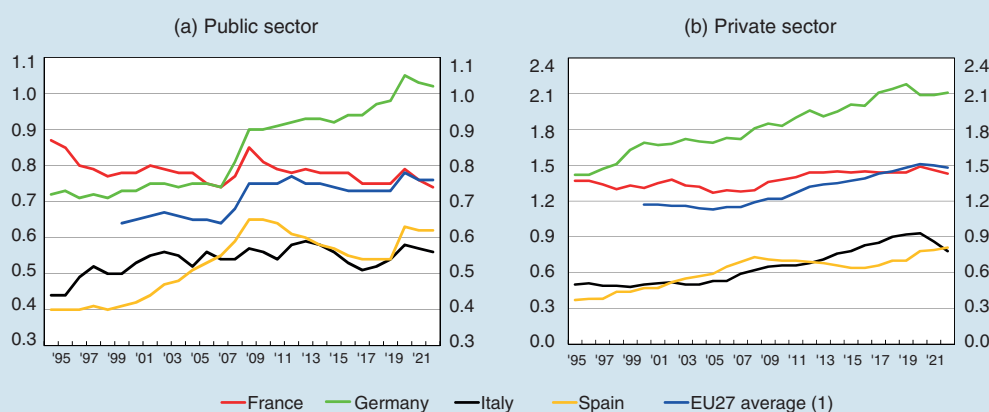
BUSINESS INCENTIVES FOR RESEARCH AND INNOVATION

Research and development (R&D) by private firms or public institutions, investment in innovative goods and services, and an ecosystem that provides fertile ground for cutting-edge start-ups are key drivers of technological progress and thus of long-term economic growth.¹

Looking at R&D, total public and private expenditure amounted to 1.33 per cent of GDP in Italy in 2022 (the last year for which data are available), respectively 1.80 and 0.85 percentage points lower than in Germany and France; as a share of GDP, both public and private expenditure were below the EU average and that of the main Member States (see the figure).

Figure

R&D expenditure as a share of GDP
(annual data; per cent)



Source: Eurostat.

(1) The data for the EU27 average are available from 2000.

R&D investments generate positive externalities that justify the public programmes that are so widespread in the main western countries.

Subsidies in the form of grants and the purchase of R&D services by the public sector are a way to directly support firms in their basic research and in the development of strategic technologies. Their effectiveness in stimulating innovation depends greatly on the ability to identify the most promising technologies and projects to fund.

Tax incentives are indirect support tools that can intervene upstream of the value creation process, by cutting the cost of investing, or downstream, by reducing taxes on returns; they can foster broadly-based innovation, leaving it up to firms to choose which projects to undertake. Their design is complex because of the need to prevent abuses, which consist in the misreporting of liability items as R&D expenditure, by

¹ See F. Bertolotti, L. Citino, A. Linarello, F. Lotti, E. Padovani, E. Pisano, M. Romanelli, A. Sanelli, F. Scoccianti, E. Sette and E. Zangari, 'Innovation and public support policies: a comparative analysis', Banca d'Italia, Questioni di Economia e Finanza (Occasional Papers), forthcoming (only in Italian).

setting requirements that push up administrative and compliance costs. Tax relief for returns on R&D investment, typical of patent box regimes,² improves the ability to translate R&D into innovative products, processes and services, but tends to exclude firms that have a low capacity to bear the initial investment costs, for example due to financial constraints.

Public intervention can also support the acquisition of innovative goods and services, especially in times of fast technological advances, when it is more difficult to assess their performance; delaying their adoption would weaken the innovative capacity of the entire production system.

Over the last decade, amid prolonged productivity stagnation and weak capital accumulation, Italy has adopted tax relief measures for investment in new technologies and R&D, as well as in innovative start-ups and small and medium-sized enterprises. As a result, measures supporting innovation account for nearly all tax incentives for business investments.³ However, these interventions were carried out in a context of great regulatory instability and difficulties in interpretation, which have generated uncertainty among firms and may have reduced their effectiveness.

With regard to tax relief for R&D, the following main changes were introduced: in 2020, there was a shift from a scheme based on incremental expenditure to one tied to the overall volume of expenditure; in 2021, the patent box regime was replaced by an additional tax deduction of 110 per cent for some R&D expenditure incurred in connection with specific intangible assets. Under the current scheme, there is no relief on profits but only measures to reduce investment costs, unlike in France, Spain and the United Kingdom, where both types of incentives are in place.

Overall, tax incentives on firms' R&D expenditure are still lower in Italy than in the other main European countries. In 2021 (the last year for which data are available), grants amounted to 0.50 per cent of GDP, on a par with Spain (0.53 per cent) and the United Kingdom (0.56 per cent), but less than in France (0.72 per cent) and Germany (0.94 per cent). Tax incentives stood at 0.07 per cent of GDP in Italy, compared with 0.33 per cent in the United Kingdom, 0.28 per cent in France, and 0.15 per cent in Spain.⁴ The gap is ascribable both to the lower volume of subsidized investments and to the less generous incentives: the tax credit in Italy

² Patent box regimes allow for a full or partial exemption for income and capital gains realized from the exploitation of certain intangible assets developed by the firm.

³ The incentives for investment in innovation include, in addition to R&D subsidies, those from the Transition 4.0 plan, to promote the digital transition of production processes, and the more recent ones from the Transition 5.0 plan, which aim to support innovation in connection with environmental sustainability. Tax breaks on investment in traditional machinery, introduced in 2016, have only been maintained in some regions, as they were not extended beyond 2022.

⁴ OECD, R&D Tax Incentives database, April 2024; the item considered is 'Indirect government support through R&D tax incentives (GTARD), percentage of GDP'. For Germany, where these incentives were introduced in 2020, comparable data are not available yet. The figure for Italy reflects both the R&D tax credit implemented since 2020 and previous R&D incentives; it does not include the 110 per cent extra deduction introduced in 2021 which, based on the tax return data published by the Italian Department of Finance, amounts to around €520 million (equal to potential tax savings for firms of around €150 million for the purposes of the corporate income tax – IRES – and the regional tax on productive activities – IRAP).

is equal to 10 per cent of the costs, which is lower than that of the main European economies and the OECD average (20 per cent). According to our estimates, bringing the Italian tax credit rate in line with the OECD average would require less than €1 billion per year in public funds, but could stimulate firms to increase their R&D expenditure by more than €2 billion, i.e. by nearly 15 per cent.