



# European Innovation Scoreboard **2024** Country Profile **Italy**

## European Innovation Scoreboard 2024 – Country profile Italy

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ITALY

**Moderate Innovator**Summary innovation index (relative to EU in 2017): **98.6**Rank: **20**Change vs 2023: **▲ 0.8** Change vs 2017: **▲ 15**

Italy is a Moderate Innovator with performance at 89.6% of the EU average in 2024. Performance is above the average of the Moderate Innovators (84.8%). Performance is increasing more than the EU (+10%).

Indicator	Performance relative to the EU in 2024	Performance change 2017-2024	Performance change 2023-2024
<b>SUMMARY INNOVATION INDEX</b>	<b>89.6</b>	<b>15.0</b>	<b>0.8</b>
<b>Human resources</b>	<b>73.8</b>	<b>13.8</b>	<b>13.0</b>
New doctorate graduates	100.0	11.6	11.6
Population with tertiary education	32.0	13.7	8.4
Population involved in lifelong learning	89.9	17.4	20.4
<b>Attractive research systems</b>	<b>93.2</b>	<b>13.5</b>	<b>3.9</b>
International scientific co-publications	88.9	39.5	0.6
Scientific publications among the top 10% most cited	123.7	12.9	0.6
Foreign doctorate students as a % of all doctorate students	49.4	-8.9	14.0
<b>Digitalisation</b>	<b>75.7</b>	<b>24.7</b>	<b>3.4</b>
Broadband penetration	73.9	50.5	8.2
Individuals with above basic overall digital skills	78.1	-1.3	-1.3
<b>Finance and support</b>	<b>64.9</b>	<b>12.9</b>	<b>1.6</b>
R&D expenditure in the public sector	67.2	1.6	-1.7
Venture capital expenditures	68.9	3.9	4.4
Direct and indirect government support of business R&D	57.1	39.1	2.7
<b>Firm investments</b>	<b>69.8</b>	<b>7.2</b>	<b>-19.3</b>
R&D expenditure in the business sector	51.3	-3.8	-6.1
Non-R&D innovation expenditures	86.8	3.6	-26.1
Innovation expenditures per person employed	73.9	23.8	-26.8
<b>Use of information technologies</b>	<b>80.8</b>	<b>26.8</b>	<b>15.1</b>
Enterprises providing ICT training	82.2	44.6	24.2
Employed ICT specialists	79.4	9.7	6.5
<b>Innovators</b>	<b>151.3</b>	<b>47.8</b>	<b>37.7</b>
SMEs introducing product innovations	152.1	28.2	33.4
SMEs introducing business process innovations	150.3	66.1	41.6
<b>Linkages</b>	<b>96.5</b>	<b>63.4</b>	<b>9.1</b>
Innovative SMEs collaborating with others	123.9	113.9	23.9
Public-private co-publications	154.2	68.8	0.7
Job-to-job mobility of HRST	50.0	17.7	0.0
<b>Intellectual assets</b>	<b>106.8</b>	<b>-1.4</b>	<b>-1.4</b>
PCT patent applications	82.5	1.8	4.0
Trademark applications	104.3	12.5	-7.1
Design applications	148.5	-16.2	-3.9
<b>Employment impacts</b>	<b>104.2</b>	<b>11.5</b>	<b>-9.9</b>
Employment in knowledge-intensive activities	97.8	4.8	4.8
Employment in innovative enterprises	110.0	17.8	-23.4
<b>Sales impacts</b>	<b>76.1</b>	<b>6.8</b>	<b>-10.8</b>
Exports of medium and high technology products	78.6	-2.2	4.4
Knowledge-intensive services exports	56.2	2.1	-16.2
Sales of new-to-market and new-to-firm innovations	103.5	27.7	-27.4
<b>Environmental sustainability</b>	<b>109.5</b>	<b>3.0</b>	<b>-1.9</b>
Resource productivity	180.3	34.0	-2.9
Air emissions by fine particulates	98.4	1.7	0.6
Environment-related technologies	59.9	-20.7	-5.1

**Relative strengths**

- Resource productivity
- Public-private co-publications
- SMEs introducing product innovations

**Relative weaknesses**

- Population with tertiary education
- Foreign doctorate students as a % of all doctorate students
- Job-to-job mobility of HRST

**Strong increases since 2017**

- Innovative SMEs collaborating with others
- Public-private co-publications
- SMEs introducing business process innovations

**Strong decreases since 2017**

- Environment-related technologies
- Design applications
- Foreign doctorate students as a % of all doctorate students

**Strong increases since 2023**

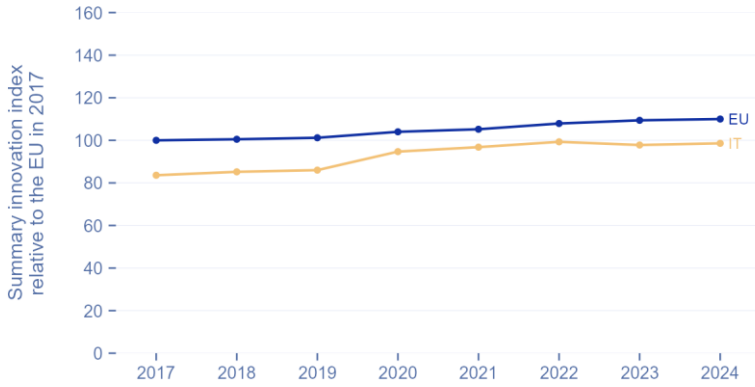
- SMEs introducing business process innovations
- SMEs introducing product innovations
- Enterprises providing ICT training

**Strong decreases since 2023**

- Sales of new-to-market and new-to-firm innovations
- Innovation expenditures per person employed
- Non-R&D innovation expenditures

**Footnote:** The first data column shows scores relative to the EU in 2024, with colour codes indicating performance levels. The subsequent columns show performance changes over time, with scores relative to the EU in 2017, coloured in purple for positive change and red for negative change. As reference years differ between the first column (2024) and the last two columns (2017), scores cannot be directly compared or subtracted across these columns.

Emerging Innovators Moderate Innovators Strong Innovators Innovation Leaders



### Summary innovation index

The line chart shows the evolution of the innovation performance of Italy over time, relative to the performance of the EU in 2017.

**Footnote:** All performance scores (SII and dimensions below) are relative to that of the EU in 2017.

### Framework conditions

Italy ranks below the EU average in terms of framework conditions, but the country is improving in all three groups of indicators. Recent progress, since 2017, is especially evident in areas such as broadband penetration (+50.5%-points), which is supporting the country’s digitalisation, scientific openness, expressed in terms of International scientific co-publications (+39.5%-points), and population involved in lifelong learning (+17.4%-points), contributing to a better performance in terms of human resources. Italy is just below the 2024 EU average in terms of attractiveness of its research system (at 93.2%). While the number of new doctorate graduates has grown (+11.6%-points), the share of foreign doctorate students has worsened since 2017 (-8.9%-points), also because of the pandemic, but has recently started to grow again. Similarly, the country still lags the EU average in terms of individuals with above basic overall digital skills (at 78.1% of the EU average in 2024).

#### Human resources



#### Attractive research systems



#### Digitalisation



### Investments

Italy underperforms in all areas linked to investments, especially in firm investments (69.8% of the EU average in 2024), and finance and support (64.9%). Since 2017, the country has made some progress in all areas apart from the business sector. The country’s economic structure is largely based on micro enterprises, whose investments contracted in recent years (Istat, 2022). Direct and indirect government support of business R&D has grown remarkably since 2017 (+39.1%-points) but remains at 57.1% of the EU average in 2024. However, this support has not significantly leveraged private investments in R&D. Innovation expenditures and non-R&D innovation expenditure are improving, even if they score below the EU average. On a positive note, and in line with the progress made in terms of human resources, the country made considerable progress in terms of enterprises providing ICT training (+44.6%-points since 2017).

#### Finance and support



#### Firm investments



#### Use of information technologies



### Innovation activities

Italy performs well in innovation activities, as also confirmed by its innovation profiles. Confirming the strength of the small and medium sized enterprises (SMEs) sector, all SMEs indicators are much higher than the EU average (Italy stands at 151.3% of the EU average in 2024 for the Innovators dimension). Despite the country’s weakness in terms of patent performance (at 82.5% of the 2024 EU average), which is correlated to company size (EPO, 2023), public-private co-publications are remarkably high (154.2% of EU average in 2024), confirming the openness of its public research system in engaging with the private sector. However, job-to-job mobility of HRST remains too low (half the EU average in 2024), even in the academic system, which was affected by recent government interventions that limited the mobility of academics among institutions. In the area of non-patent-related intellectual assets, the country has lost some of its edge in terms of trademark (-7.1%-points since 2023) and design applications (-3.9%-points) but is still above the EU average.

**Innovators**



**Linkages**



**Intellectual assets**



### Impacts

Since 2017, Italy has experienced a general improvement in impacts, even if most indicators worsened in the last year, apparently affected by recent international events. Employment impacts are above the EU average (104.2% of the 2024 EU level), while sales impacts are still far from it (76.1%). Despite the growth of the service sector, the country lags especially in knowledge-intensive services exports, standing at 56.2% of the EU average in 2024. The country ranks well in terms of environmental sustainability, at 109.5% of the EU average in 2024, as also reflected by its climate change indicators, but still underperforms other countries in terms of environment-related technologies (at 59.9% of the 2024 EU level), losing competitiveness in this area (-20.7%-points since 2017).

**Employment impacts**



**Sales impacts**



**Environmental sustainability**



## Structural differences

### Performance and structure of the economy

The Italian economy was severely hit by the pandemic but has proven relatively resilient in recent years, maintaining an average annual growth rate of GDP well above the EU average. The main contribution to growth has been domestic expenditure and this is expected to remain the case in the coming year. Italian GDP per capita is still below the EU average, ranking twelfth highest in the EU (above Cyprus and below France). The forward-looking scenario remains characterised by the persistence of a high uncertainty of the international framework, due to geo-political tensions (Istat, 2024). Economic growth in 2024-2025 is expected to be driven by looser monetary policy by the European Central Bank and the full implementation of the Recovery and Resilience Facility (RRF), which is expected to boost GDP by 2%. However, growth is hampered by the high costs of electricity and the phasing out of government incentives to the building sector addressing homes' energy efficiency. Labour demand is expected to cool down as real wages increase (Confindustria, 2024).

Italy has long been a country an export-led country, with a strong manufacturing sector. Therefore, the share of manufacturing is above the EU average, but the high and medium high-tech manufacturing sector employment share is below the EU average. The Italian economy also holds a higher share of employment in services, but the share in knowledge-intensive services is below the EU rate.

Italy is one of the European countries with the smallest average enterprise size. SMEs account for 99.8% of enterprises (above the EU average) and the relative importance of SMEs is reflected in the turnover share of SMEs, which is above the EU average. The contribution of large companies to the country's turnover is low as is the share of value added generated by foreign-controlled enterprises. While the Italian economy is highly open, the positive export performance in the manufacturing sector is generated by the country's industrial districts, largely composed of SMEs.

### Business and entrepreneurship

The entrepreneurial dynamics of the Italian economy are close to those of the EU, with a rate of enterprise births above average but with total entrepreneurial activity below average. While investment projects in Italy have more than doubled compared to the pre-COVID situation, the country lags the EU average in terms of FDI net inflows. The country shows low attractiveness for foreign investors for several reasons, including, according to UNCTAD, high taxation, slow administrative procedures, pronounced regional disparities (e.g. in terms of infrastructures). Partially because of its economic structure mostly based on micro enterprises, Italy is also showing low levels of dynamism in terms of rate of top R&D spending enterprises, which is well below the EU average.

### Innovation profiles

Italy has a remarkably high share of in-house product innovators with market novelties (16.6%). The country also ranks on par with the EU average in terms of business process innovators. Innovators in Italy tend to develop innovation themselves, as also confirmed by the relative higher share of active non-innovators, which represent companies with ongoing innovation development or that abandoned the development of innovations. The country's innovation performance is hampered by the weight of non-innovators that have no disposition to innovate. This is due to the structural characteristics of the Italian economy, where the relative weight of traditional industries is high.

### Governance and policy framework

The Italian governance system underperforms other countries in terms of perceived corruption. Higher-than-average perception of corruption has several negative implications in other areas, such as FDIs and business investments in general. The low performance in terms of corruption perception is also accompanied by a very low perception of the rule of law (Rule of Law Dashboard), which can be explained by the serious challenges the country faces in relation to the length of proceedings in its justice system.

The country has always enjoyed a strong entrepreneurial culture, also explained by its peculiar business structure, mostly based on micro enterprises, and the country's provision of basic-school entrepreneurial training is above the EU average. Public procurement is carried out at all levels of government but is still below the EU average in advanced technology products and innovative products or services.

## **Climate change**

The Italian performance on the three structural indicators measuring the transition of the economy and society towards a more environmentally sustainable trajectory is generally good. The GHG emissions intensity is similar to the EU average, despite the country's strong manufacturing base, and Italy performs well in terms of eco-innovations and most of all in the circular material use rate. These results partially explain also the positive results obtained in resource productivity.

## **Demography**

Italy counts some 59 million inhabitants and is the third largest country in the EU in terms of size. The country suffers from aging population, partly because of its extremely high life expectancy, and its population is slowly shrinking. The country has several metropolitan cities but as almost 40% of the Italian territory is mountainous and its large hilly territory, the population is concentrated in the plain, as is demonstrated by its high population density. There are significant regional differences in demographic trends with some regions, especially in Southern Italy, now falling into the so-called talent development trap, according to the latest European Commission Cohesion Report. The islands and the south suffer from high negative migration rates, while the north, more densely populated and industrialised, benefits from net migration.



## Structural indicators

The table below presents some structural differences between Italy and the EU.

	IT	EU
<b>Performance and structure of the economy</b>		
GDP per capita	97	100
Average annual GDP growth (2021-2023 average)	2.4	1.9
Employment share Manufacturing	18.5	15.8
Employment share High and Medium high-tech	33.8	37.9
Employment share Services	41.5	39.8
Employment share Knowledge-intensive services	28.4	28.6
Turnover share SMEs	16.3	12.6
Turnover share large enterprises	36.6	49.6
Foreign-controlled enterprises – share of value added	8.2	13.3
<b>Business and entrepreneurship</b>		
Enterprise births	1	0.8
Total Entrepreneurial Activity	6.6	6.8
FDI net inflows	1.1	1.9
Top R&D spending enterprises	3.4	8.4
Buyer sophistication	3.7	3.6
<b>Innovation profiles</b>		
In-house product innovators with market novelties	16.6	11.7
In-house product innovators without market novelties	12.3	13.7
In-house business process innovators	17.6	17.6
Innovators that do not develop innovations themselves	3	6.1
Innovation active non-innovators	6.1	4.2
Non-innovators with potential to innovate	5.9	17.8
Non-innovators without disposition to innovate	38.4	30.6
<b>Governance and policy frameworks</b>		
Corruption Perceptions Index	56	64
Basic-school entrepreneurial education and training	3.1	2.6
Government procurement of advanced technology products	2.9	3.4
Rule of law	0.2	1
Innovation procurement as a share of total public procurement	7	9.2
<b>Climate change</b>		
Circular material use rate	19.4	11.5
Greenhouse gas emissions intensity of energy consumption	81.9	82.8
Eco-Innovation Index	129.4	121.5
<b>Demography</b>		

	IT	EU
Population size (in millions)	59.1	447
Average annual population growth (2021-2023 average)	-0.2	0.3
Population density	199.5	109

## References

The country's relative strengths and weaknesses for each indicator, compared to other EU Member States and neighbouring countries, can be found in [Annex B](#).

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This report provides the Country profile from the 2024 European Innovation Scoreboard for Italy

*Studies and reports*

