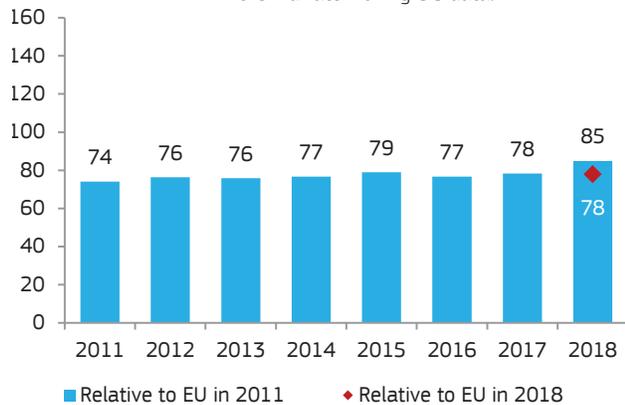




**Italy is a Moderate Innovator.** Over time, performance has increased relative to that of the EU in 2011. The strong increase in 2018 is largely explained by improved performance on the indicators using CIS data.



Italy	Relative to EU 2018 in 2018		Performance relative to EU 2011 in 2018	
	2018	2011	2011	2018
<b>SUMMARY INNOVATION INDEX</b>	<b>78.1</b>	<b>74.1</b>	<b>74.1</b>	<b>84.9</b>
<b>Human resources</b>	<b>52.4</b>	<b>53.2</b>	<b>53.2</b>	<b>64.1</b>
New doctorate graduates	65.8	107.7	107.7	95.5
Population with tertiary education	24.4	3.0	3.0	29.1
Lifelong learning	69.4	53.1	53.1	70.8
<b>Attractive research systems</b>	<b>90.1</b>	<b>73.3</b>	<b>73.3</b>	<b>101.5</b>
International scientific co-publications	76.0	71.1	71.1	110.6
Most cited publications	109.5	93.5	93.5	119.9
Foreign doctorate students	69.4	43.1	43.1	66.4
<b>Innovation-friendly environment</b>	<b>67.6</b>	<b>84.5</b>	<b>84.5</b>	<b>106.9</b>
Broadband penetration	50.0	55.6	55.6	100.0
Opportunity-driven entrepreneurship	86.1	104.3	104.3	111.5
<b>Finance and support</b>	<b>52.9</b>	<b>53.7</b>	<b>53.7</b>	<b>57.8</b>
R&D expenditure in the public sector	63.7	62.6	62.6	58.9
Venture capital expenditures	43.7	43.1	43.1	56.5
<b>Firm investments</b>	<b>71.2</b>	<b>66.8</b>	<b>66.8</b>	<b>84.8</b>
R&D expenditure in the business sector	60.3	69.1	69.1	69.1
Non-R&D innovation expenditures	83.8	89.0	89.0	97.9
Enterprises providing ICT training	68.4	40.0	40.0	86.7
<b>Innovators</b>	<b>130.5</b>	<b>102.1</b>	<b>102.1</b>	<b>118.5</b>
SMEs product/process innovations	124.1	86.6	86.6	120.4
SMEs marketing/organizational innovations	113.0	102.3	102.3	96.5
SMEs innovating in-house	154.3	117.6	117.6	138.9
<b>Linkages</b>	<b>47.8</b>	<b>46.7</b>	<b>46.7</b>	<b>49.6</b>
Innovative SMEs collaborating with others	42.7	48.0	48.0	45.6
Public-private co-publications	76.8	63.2	63.2	90.1
Private co-funding of public R&D exp.	36.6	38.7	38.7	35.1
<b>Intellectual assets</b>	<b>100.7</b>	<b>95.4</b>	<b>95.4</b>	<b>97.9</b>
PCT patent applications	60.1	52.1	52.1	54.7
Trademark applications	107.2	95.4	95.4	119.4
Design applications	135.5	140.1	140.1	124.9
<b>Employment impacts</b>	<b>73.3</b>	<b>71.4</b>	<b>71.4</b>	<b>76.5</b>
Employment in knowledge-intensive activities	94.1	102.6	102.6	102.6
Employment fast-growing enterprises	57.0	48.9	48.9	57.7
<b>Sales impacts</b>	<b>82.5</b>	<b>81.2</b>	<b>81.2</b>	<b>85.0</b>
Medium and high-tech product exports	89.1	90.3	90.3	96.2
Knowledge-intensive services exports	65.7	68.3	68.3	67.8
Sales of new-to-market/firm innovations	94.3	85.5	85.5	91.5

The colours show normalised performance in 2018 relative to that of the EU in 2018: dark green: above 120%; light green: between 90% and 120%; yellow: between 50% and 90%; orange: below 50%. Normalised performance uses the data after a possible imputation of missing data and transformation of the data.

*Innovators, Intellectual assets and Attractive research systems* are the strongest innovation dimensions. Italy scores high on SMEs innovating in-house, Design applications, and SMEs with product or process innovations. *Linkages, Human resources, and Finance and support* are the weakest innovation dimensions. Low-scoring indicators include Population with tertiary education, Private co-funding of public R&D expenditure, and Innovative SMEs collaborating with others.

**Structural differences** with the EU are shown in the table below. Italy scores low on various economic indicators. Average annual GDP growth, the turnover share of large enterprises, the value-added share of foreign-controlled enterprises, FDI net inflows, and top R&D spending enterprises per 10 million population are well below the EU average. The employment share in manufacturing and the turnover share of SMEs are above the EU average.

	IT	EU
<b>Performance and structure of the economy</b>		
GDP per capita (PPS)	28,300	29,500
Average annual GDP growth (%)	1.3	2.2
Employment share manufacturing (NACE C) (%)	18.3	15.5
of which High and medium high-tech (%)	33.2	37.5
Employment share services (NACE G-N) (%)	45.0	41.8
of which Knowledge-intensive services (%)	37.1	35.0
Turnover share SMEs (%)	43.9	37.9
Turnover share large enterprises (%)	31.6	44.4
Foreign-controlled enterprises – share of value added (%)	6.2	12.6
<b>Business and entrepreneurship</b>		
Enterprise births (10+ employees) (%)	1.2	1.5
Total Entrepreneurial Activity (TEA) (%)	4.3	6.7
FDI net inflows (% GDP)	0.8	4.3
Top R&D spending enterprises per 10 million population	6.7	19.6
Buyer sophistication (1 to 7 best)	3.7	3.7
<b>Governance and policy framework</b>		
Ease of starting a business (0 to 100 best)	71.8	76.8
Basic-school entrepren. education and training (1 to 5 best)	1.8	1.9
Govt. procurement of advanced tech products (1 to 7 best)	2.9	3.5
Rule of law (-2.5 to 2.5 best)	0.3	1.2
<b>Demography</b>		
Population size (millions)	60.6	511.3
Average annual population growth (%)	-0.1	0.2
Population density (inhabitants/km2)	204.8	117.5

#### EU targets for 2020

Indicator	2014	Latest	Target <sup>1</sup>
Gross domestic expenditure on R&D (% of GDP)	1.34	1.35	1.53
Tertiary educational attainment (% of population aged 30-34)	23.9	27.8	26.0

<sup>1</sup> Sources are provided in the introduction to the country profiles.

#### European Semester country report and country specific recommendations:

<https://rio.jrc.ec.europa.eu/en/library/research-and-innovation-analysis-european-semester-2019-country-reports>  
<https://rio.jrc.ec.europa.eu/en/library/country-specific-recommendations-2019-research-and-innovation-analysis>