



The **Czech Republic** is a **Moderate Innovator**. Over time, performance has declined by 3.5% relative to that of the EU in 2010.

## Innovation system

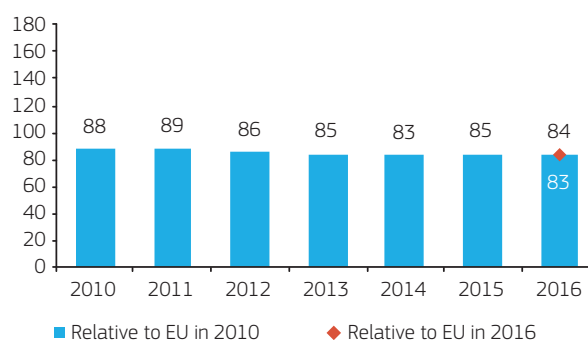
Relative strengths of the innovation system are in Firm investments, Employment impacts, and Sales impacts. Relative weaknesses are in Intellectual assets, Linkages, and Innovators.

## Structural differences

Notable differences are a smaller share of employment in Agriculture & Mining, a larger share of employment in Manufacturing, a larger share of employment in Utilities and Construction, a lower number of Top R&D spending enterprises and a lower average R&D spending of these enterprises, a smaller share of enterprise births, a higher growth rate of GDP, a lower growth rate of population, and lower population density.

	CZ	EU
<b>Structure of the economy</b>		
Composition of employment, average 2011-15		
- Agriculture & Mining (NACE A-B) (%)	3.8	5.1
- Manufacturing (NACE C) (%)	26.6	15.6
of which High and Medium high-tech (%)	40.2	36.4
- Utilities and Construction (NACE D-F) (%)	10.6	8.6
- Services (NACE G-N) (%)	52.6	63.6
of which Knowledge-intensive services (%)	54.4	58.0
- Public administration, etc. (NACE O-U) (%)	6.4	7.1
<b>Business indicators</b>		
Composition of turnover, average 2011-2014		
- Micro enterprises (0-9 employees) (%)	18.3	17.3
- SMEs (10-249 employees) (%)	39.3	38.0
- Large enterprises (250+ employees) (%)	42.3	44.1
Share of foreign controlled enterprises, 2014 (%)	1.37	1.18
Top R&D spending enterprises		
- average number per 10 mln population, 2011-15	3.3	29.9
- average R&D spending, mln Euros, 2011-15	24.8	165.8
Enterprise births (10+ empl.) (%), avg 2012-14	1.1	1.5
Buyer sophistication 1-7 (best), 2013-14	3.4	3.6
Ease of starting a business, Doing Business 2017	76.7	76.5
<b>Socio-demographic indicators</b>		
GDP per capita, PPS, avg 2011-13	20,500	25,400
Change in GDP between 2010 and 2015, (%)	8.1	5.4
Population size, avg 2011-15 (millions)	10.5	505.5
Change in population between 2010 and 2015 (%)	0.7	1.1
Population aged 15-64, avg 2011-2015 (%)	68.4	66.1
Population density, average 2011-15	136.3	116.4
Degree of urbanisation, average 2011-15 (%)	63.9	74.4

Values in green show performance above 120% of EU, values in red show performance below 80% of EU.



Czech Republic	Performance relative to EU 2010 in		Change 2010-2016
	2010	2016	
<b>SUMMARY INNOVATION INDEX</b>	<b>87.9</b>	<b>84.4</b>	<b>-3.5</b>
<b>Human resources</b>	<b>70.7</b>	<b>97.4</b>	<b>26.6</b>
New doctorate graduates	92.3	113.6	21.3
Population with tertiary education	29.6	95.4	65.8
Lifelong learning	92.6	80.0	-12.6
<b>Attractive research systems</b>	<b>60.8</b>	<b>82.6</b>	<b>21.9</b>
International scientific co-publications	111.9	209.9	89.0
Most cited publications	55.6	62.6	6.9
Foreign doctorate students	42.8	62.3	19.5
<b>Innovation-friendly environment</b>	<b>76.7</b>	<b>94.2</b>	<b>17.5</b>
Broadband penetration	88.9	111.1	22.2
Opportunity-driven entrepreneurship	68.2	82.3	14.1
<b>Finance and support</b>	<b>114.7</b>	<b>77.5</b>	<b>-37.1</b>
R&D expenditure in the public sector	71.6	138.4	56.9
Venture capital expenditures	159.1	13.3	-155.7
<b>Firm investments</b>	<b>108.7</b>	<b>114.6</b>	<b>5.9</b>
R&D expenditure in the business sector	60.5	88.8	28.3
Non-R&D innovation expenditures	155.4	139.5	-15.9
Enterprises providing ICT training	121.4	121.4	0.0
<b>Innovators</b>	<b>105.6</b>	<b>73.7</b>	<b>-31.8</b>
SMEs product/process innovations	98.8	81.5	-17.3
SMEs marketing/organizational innovations	120.6	50.6	-70.0
SMEs innovating in-house	97.0	89.7	-7.3
<b>Linkages</b>	<b>66.9</b>	<b>63.0</b>	<b>-3.9</b>
Innovative SMEs collaborating with others	101.1	88.6	-12.5
Public-private co-publications	80.5	46.5	-34.0
Private co-funding of public R&D exp.	27.2	56.2	29.0
<b>Intellectual assets</b>	<b>54.4</b>	<b>60.8</b>	<b>6.4</b>
PCT patent applications	51.0	53.9	2.9
Trademark applications	65.0	78.1	13.2
Design applications	50.9	56.9	6.0
<b>Employment impacts</b>	<b>115.8</b>	<b>95.4</b>	<b>-20.3</b>
Employment in knowledge-intensive activities	84.6	91.0	6.4
Employment fast-growing enterprises	146.5	98.6	-39.9
<b>Sales impacts</b>	<b>102.4</b>	<b>95.0</b>	<b>-7.5</b>
Medium and high tech product exports	119.9	124.5	4.6
Knowledge-intensive services exports	40.9	49.2	8.2
Sales of new-to-market/firm innovations	112.4	112.9	-0.5

Dark green: normalised performance above 120% of EU; light green: normalised performance between 90% and 120% of EU; yellow: normalised performance between 50% and 90% of EU; orange: normalised performance below 50% of EU. Normalised performance uses the data after a possible imputation of missing data and transformation of the data.

Change highlighted in green is positive; change highlighted in light red is negative.