SERBIA

GII 2019 rank

57

Output rank	Input rank	Income	Region	Population (mn)	GDP, PPP$	GDP per capita, PPP$	GII 2018 rank
57	62	Upper middle	EUR	8.8	112.5	17,555.2	55

		Score/Value	Rank	
	INSTITUTIONS	**68.7**	**47**	◆
1.1	**Political environment**	**58.7**	**55**	
1.1.1	Political and operational stability*	73.7	50	
1.1.2	Government effectiveness*	51.2	59	
1.2	**Regulatory environment**	**70.9**	**49**	
1.2.1	Regulatory quality*	42.2	70	
1.2.2	Rule of law*	41.3	72	
1.2.3	Cost of redundancy dismissal, salary weeks	8.0	1	●
1.3	**Business environment**	**76.7**	**40**	
1.3.1	Ease of starting a business*	92.6	37	
1.3.2	Ease of resolving insolvency*	60.8	45	
	HUMAN CAPITAL & RESEARCH	**32.4**	**59**	
2.1	**Education**	**43.3**	**77**	
2.1.1	Expenditure on education, % GDP	3.9	83	
2.1.2	Government funding/pupil, secondary, % GDP/cap	11.9	89	○
2.1.3	School life expectancy, years	14.8	57	
2.1.4	PISA scales in reading, maths, & science ⊙	446.6	43	
2.1.5	Pupil-teacher ratio, secondary	8.1	9	● ◆
2.2	**Tertiary education**	**41.7**	**30**	
2.2.1	Tertiary enrolment, % gross	66.5	35	
2.2.2	Graduates in science & engineering, %	26.6	22	
2.2.3	Tertiary inbound mobility, %	4.4	46	
2.3	**Research & development (R&D)**	**12.0**	**50**	
2.3.1	Researchers, FTE/mn pop	2,079.1	39	◆
2.3.2	Gross expenditure on R&D, % GDP	0.9	38	
2.3.3	Global R&D companies, avg. exp. top 3, mn US$	0.0	43	○ ◇
2.3.4	QS university ranking, average score top 3*	2.9	76	
	INFRASTRUCTURE	**49.9**	**54**	
3.1	**Information & communication technologies(ICTs)**	**73.2**	**50**	
3.1.1	ICT access*	76.6	37	◆
3.1.2	ICT use*	61.0	56	
3.1.3	Government's online service*	73.6	57	
3.1.4	E-participation*	81.5	48	
3.2	**General infrastructure**	**30.8**	**84**	
3.2.1	Electricity output, kWh/mn pop	5,469.4	39	◆
3.2.2	Logistics performance*	36.4	64	
3.2.3	Gross capital formation, % GDP	21.3	84	
3.3	**Ecological sustainability**	**45.6**	**43**	
3.3.1	GDP/unit of energy use	6.0	100	○ ◇
3.3.2	Environmental performance*	57.5	73	
3.3.3	ISO 14001 environmental certificates/bn PPP$ GDP	11.1	5	● ◆
	MARKET SOPHISTICATION	**39.6**	**103**	○ ◇
4.1	**Credit**	**28.0**	**98**	○
4.1.1	Ease of getting credit*	65.0	54	
4.1.2	Domestic credit to private sector, % GDP	43.0	77	
4.1.3	Microfinance gross loans, % GDP	0.0	65	○
4.2	**Investment**	**38.8**	**82**	
4.2.1	Ease of protecting minority investors*	56.7	79	
4.2.2	Market capitalization, % GDP ⊙	11.5	69	○
4.2.3	Venture capital deals/bn PPP$ GDP	n/a	n/a	
4.3	**Trade, competition, & market scale**	**52.0**	**101**	○ ◇
4.3.1	Applied tariff rate, weighted avg., %	n/a	n/a	
4.3.2	Intensity of local competition†	64.1	84	
4.3.3	Domestic market scale, bn PPP$	112.5	73	

		Score/Value	Rank	
	BUSINESS SOPHISTICATION	**31.9**	**63**	
5.1	**Knowledge workers**	**36.4**	**67**	
5.1.1	Knowledge-intensive employment, %	28.5	48	
5.1.2	Firms offering formal training, % firms	37.8	36	
5.1.3	GERD performed by business, % GDP	0.3	45	
5.1.4	GERD financed by business, %	10.0	75	○
5.1.5	Females employed w/advanced degrees, %	14.2	45	
5.2	**Innovation linkages**	**26.5**	**61**	
5.2.1	University/industry research collaboration†	38.5	76	
5.2.2	State of cluster development†	42.9	81	
5.2.3	GERD financed by abroad, %	19.9	18	●
5.2.4	JV-strategic alliance deals/bn PPP$ GDP	0.0	63	
5.2.5	Patent families 2+ offices/bn PPP$ GDP	0.1	57	
5.3	**Knowledge absorption**	**32.9**	**66**	
5.3.1	Intellectual property payments, % total trade	1.0	38	
5.3.2	High-tech imports, % total trade	5.4	99	○
5.3.3	ICT services imports, % total trade	2.1	26	● ◆
5.3.4	FDI net inflows, % GDP	6.5	20	● ◆
5.3.5	Research talent, % in business enterprise	10.6	64	○
	KNOWLEDGE & TECHNOLOGY OUTPUTS	**26.7**	**48**	
6.1	**Knowledge creation**	**21.0**	**40**	
6.1.1	Patents by origin/bn PPP$ GDP	1.7	49	
6.1.2	PCT patents by origin/bn PPP$ GDP	0.2	54	
6.1.3	Utility models by origin/bn PPP$ GDP	0.7	32	
6.1.4	Scientific & technical articles/bn PPP$ GDP	33.1	4	● ◆
6.1.5	Citable documents H-index	10.8	60	
6.2	**Knowledge impact**	**37.8**	**59**	
6.2.1	Growth rate of PPP$ GDP/worker, %	0.0	87	○
6.2.2	New businesses/th pop. 15-64	1.8	53	
6.2.3	Computer software spending, % GDP	0.0	108	○ ◇
6.2.4	ISO 9001 quality certificates/bn PPP$ GDP	27.0	6	● ◆
6.2.5	High- & medium-high-tech manufactures, %	0.2	47	
6.3	**Knowledge diffusion**	**21.1**	**48**	
6.3.1	Intellectual property receipts, % total trade	0.2	36	◆
6.3.2	High-tech net exports, % total trade	1.6	59	
6.3.3	ICT services exports, % total trade	4.3	13	● ◆
6.3.4	FDI net outflows, % GDP	0.6	62	
	CREATIVE OUTPUTS	**27.2**	**65**	
7.1	**Intangible assets**	**36.0**	**93**	
7.1.1	Trademarks by origin/bn PPP$ GDP	29.1	76	
7.1.2	Industrial designs by origin/bn PPP$ GDP	2.0	51	
7.1.3	ICTs & business model creation†	57.7	77	
7.1.4	ICTs & organizational model creation†	51.7	74	
7.2	**Creative goods & services**	**22.7**	**47**	
7.2.1	Cultural & creative services exports, % total trade	1.4	17	● ◆
7.2.2	National feature films/mn pop. 15-69	5.7	39	
7.2.3	Entertainment & Media market/th pop. 15-69	n/a	n/a	
7.2.4	Printing & other media, % manufacturing	1.6	28	
7.2.5	Creative goods exports, % total trade	0.7	51	
7.3	**Online creativity**	**14.2**	**42**	
7.3.1	Generic top-level domains (TLDs)/th pop. 15-69	1.4	90	
7.3.2	Country-code TLDs/th pop. 15-69	4.5	54	
7.3.3	Wikipedia edits/mn pop. 15-69	40.2	35	◆
7.3.4	Mobile app creation/bn PPP$ GDP	23.6	21	◆

NOTES: ● indicates a strength; ○ a weakness; ◆ an income group strength; ◇ an income group weakness; * an index; † a survey question. ⊙ indicates that the economy's data are older than the base year; see Appendix II for details, including the year of the data, at http://globalinnovationindex.org. Square brackets [ ] indicate that the data minimum coverage (DMC) requirements were not met at the sub-pillar or pillar level.