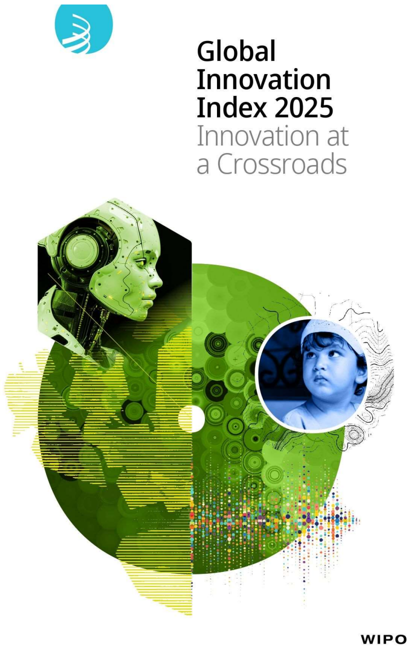
## Intellectual Property /Technology

# Global Innovation Index 2025: A World in Transition.




The World Intellectual Property Organization (WIPO) has released the 18th edition of its flagship Global Innovation Index (GII), offering a comprehensive analysis of innovation performance across the globe.

This year's report captures a world at a turning point. Innovation systems are adjusting to geopolitical shifts, rapid technological progress, and evolving modes of collaboration. While research and development (R&D) investment continues to grow, the pace of growth has slowed — reflecting the more restrained recovery seen in recent economic cycles.

**Key insights:**

**Innovation investment remains resilient — with one exception:** Most forms of innovation investment saw growth in 2024, yet overall growth remains at a historic low. Venture capital (VC) continues to lag, despite apparent gains driven primarily by US-based megadeals and the AI sector.

**Venture capital:** Narrow rebound conceals broader weakness: VC deal values rose by 7.7%, fuelled largely by generative AI. Excluding AI and US deals, global VC activity actually contracted. Notably, the number of VC deals declined for the third consecutive year — down 4.4% globally — highlighting ongoing investor caution.

**Technological progress surged, but adoption slowed:** 2024 witnessed significant advances in areas such as supercomputing and battery technology. However, adoption trends slowed, and innovation in fields like wind energy and genome sequencing showed less momentum than in past years.

**Innovation's socioeconomic impact remains broadly positive:** Innovation continues to enhance economic and social outcomes, with post-COVID recovery firmly underway. Environmental challenges persist, but the overall trajectory remains favourable.

**Stable rankings, rising players:** Switzerland, Sweden, the US, South Korea, and Singapore lead the GII rankings, with China securing a place in the top 10. Emerging economies continue their gradual ascent.

## Global Innovation Index 2025 rankings

| GII rank | Economy | Score | Income group rank | Region rank |
|---|---|---|---|---|
| 1 | Switzerland | 66.0 | 1 | 1 |
| 2 | Sweden | 62.6 | 2 | 2 |
| 3 | United States | 61.7 | 3 | 1 |
| 4 | Republic of Korea | 60.0 | 4 | 1 |
| 5 | Singapore | 59.9 | 5 | 2 |
| 6 | United Kingdom | 59.1 | 6 | 3 |
| 7 | Finland | 57.7 | 7 | 4 |
| 8 | Netherlands (Kingdom of the) | 57.0 | 8 | 5 |
| 9 | Denmark | 56.9 | 9 | 6 |
| 10 | China | 56.6 | 1 | 3 |
| 11 | Germany | 55.5 | 10 | 7 |
| 12 | Japan | 53.6 | 11 | 4 |
| 13 | France | 53.4 | 12 | 8 |
| 14 | Israel | 52.3 | 13 | 1 |
| 15 | Hong Kong, China | 51.5 | 14 | 5 |
| 16 | Estonia | 51.1 | 15 | 9 |
| 17 | Canada | 51.1 | 16 | 2 |
| 18 | Ireland | 50.4 | 17 | 10 |
| 19 | Austria | 50.1 | 18 | 11 |
| 20 | Norway | 49.2 | 19 | 12 |
| 21 | Belgium | 48.5 | 20 | 13 |
| 22 | Australia | 48.0 | 21 | 6 |
| 23 | Luxembourg | 47.3 | 22 | 14 |
| 24 | Iceland | 47.0 | 23 | 15 |
| 25 | Cyprus | 45.5 | 24 | 2 |
| 26 | New Zealand | 45.5 | 25 | 7 |
| 27 | Malta | 45.4 | 26 | 16 |
| 28 | Italy | 44.9 | 27 | 17 |
| 29 | Spain | 44.6 | 28 | 18 |
| 30 | United Arab Emirates | 44.2 | 29 | 3 |
| 31 | Portugal | 43.9 | 30 | 19 |
| 32 | Czech Republic | 42.0 | 31 | 20 |
| 33 | Lithuania | 40.8 | 32 | 21 |
| 34 | Malaysia | 40.6 | 2 | 8 |
| 35 | Slovenia | 40.1 | 33 | 22 |
| 36 | Hungary | 40.0 | 34 | 23 |
| 37 | Bulgaria | 39.1 | 35 | 24 |
| 38 | India | 38.2 | 1 | 1 |
| 39 | Poland | 37.7 | 36 | 25 |
| 40 | Croatia | 37.7 | 37 | 26 |
| 41 | Latvia | 37.5 | 38 | 27 |
| 42 | Greece | 37.4 | 39 | 28 |
| 43 | Türkiye | 37.2 | 3 | 4 |
| 44 | Viet Nam | 37.1 | 2 | 9 |
| 45 | Thailand | 36.7 | 4 | 10 |
| 46 | Saudi Arabia | 36.0 | 40 | 5 |
| 47 | Slovakia | 35.5 | 41 | 29 |
| 48 | Qatar | 34.6 | 42 | 6 |
| 49 | Romania | 34.3 | 43 | 30 |
| 50 | Philippines | 33.6 | 3 | 11 |
| 51 | Chile | 33.1 | 44 | 1 |
| 52 | Brazil | 32.9 | 5 | 2 |
| 53 | Mauritius | 32.5 | 6 | 1 |
| 54 | Serbia | 31.7 | 7 | 31 |
| 55 | Indonesia | 31.3 | 8 | 12 |
| 56 | Georgia | 31.2 | 9 | 7 |
| 57 | Morocco | 31.1 | 4 | 8 |
| 58 | Mexico | 30.5 | 10 | 3 |
| 59 | Armenia | 30.5 | 11 | 9 |
| 60 | Russian Federation | 30.3 | 45 | 32 |
| 61 | South Africa | 30.1 | 12 | 2 |
| 62 | Bahrain | 30.0 | 46 | 10 |
| 63 | North Macedonia | 29.8 | 13 | 33 |
| 64 | Montenegro | 29.8 | 14 | 34 |
| 65 | Jordan | 29.7 | 5 | 11 |
| 66 | Ukraine | 29.7 | 15 | 35 |
| 67 | Albania | 29.6 | 16 | 36 |
| 68 | Uruguay | 28.8 | 47 | 4 |
| 69 | Oman | 28.7 | 48 | 12 |
| 70 | Iran (Islamic Republic of) | 28.5 | 17 | 2 |
| 71 | Colombia | 28.5 | 18 | 5 |
| 72 | Costa Rica | 28.4 | 19 | 6 |
| 73 | Kuwait | 28.2 | 49 | 13 |
| 74 | Republic of Moldova | 27.4 | 20 | 37 |
| 75 | Seychelles | 27.2 | 50 | 3 |
| 76 | Tunisia | 27.0 | 6 | 14 |
| 77 | Argentina | 26.8 | 21 | 7 |
| 78 | Mongolia | 26.7 | 22 | 13 |
| 79 | Uzbekistan | 26.5 | 7 | 3 |
| 80 | Peru | 26.5 | 23 | 8 |
| 81 | Kazakhstan | 26.3 | 24 | 4 |
| 82 | Panama | 25.9 | 51 | 9 |
| 83 | Jamaica | 25.2 | 25 | 10 |
| 84 | Barbados | 25.1 | 52 | 11 |
| 85 | Belarus | 25.1 | 26 | 38 |
| 86 | Egypt | 24.7 | 8 | 15 |
| 87 | Botswana | 24.6 | 27 | 4 |
| 88 | Brunei Darussalam | 24.5 | 53 | 14 |
| 89 | Senegal | 23.8 | 9 | 5 |
| 90 | Lebanon | 23.6 | 10 | 16 |
| 91 | Namibia | 23.5 | 28 | 6 |
| 92 | Bosnia and Herzegovina | 23.4 | 29 | 39 |
| 93 | Sri Lanka | 22.9 | 11 | 5 |
| 94 | Azerbaijan | 22.9 | 30 | 17 |
| 95 | Cabo Verde | 22.6 | 12 | 7 |
| 96 | Kyrgyzstan | 22.6 | 13 | 6 |
| 97 | Dominican Republic | 22.6 | 31 | 12 |
| 98 | El Salvador | 22.2 | 32 | 13 |
| 99 | Pakistan | 22.1 | 14 | 7 |
| 100 | Cambodia | 22.0 | 15 | 15 |
| 101 | Ghana | 21.9 | 16 | 8 |
| 102 | Kenya | 21.4 | 17 | 9 |
| 103 | Paraguay | 21.4 | 33 | 14 |
| 104 | Rwanda | 21.1 | 1 | 10 |
| 105 | Nigeria | 21.1 | 18 | 11 |
| 106 | Bangladesh | 21.0 | 19 | 8 |
| 107 | Nepal | 20.2 | 20 | 9 |
| 108 | Tajikistan | 20.2 | 21 | 10 |
| 109 | Lao People's Democratic Republic | 20.1 | 22 | 16 |
| 110 | Côte d'Ivoire | 19.7 | 23 | 12 |
| 111 | Bolivia (Plurinational State of) | 19.6 | 24 | 15 |
| 112 | Zambia | 19.6 | 25 | 13 |
| 113 | Ecuador | 19.5 | 34 | 16 |
| 114 | Trinidad and Tobago | 19.3 | 54 | 17 |
| 115 | Algeria | 18.9 | 35 | 18 |
| 116 | Cameroon | 18.2 | 26 | 14 |
| 117 | Togo | 18.1 | 2 | 15 |
| 118 | Benin | 17.8 | 27 | 16 |
| 119 | Honduras | 17.7 | 28 | 18 |
| 120 | Madagascar | 17.6 | 3 | 17 |
| 121 | United Republic of Tanzania | 17.5 | 29 | 18 |
| 122 | Myanmar | 17.3 | 30 | 17 |
| 123 | Guatemala | 17.1 | 36 | 19 |
| 124 | Uganda | 17.1 | 4 | 19 |
| 125 | Malawi | 16.0 | 5 | 20 |
| 126 | Burkina Faso | 15.9 | 6 | 21 |
| 127 | Burundi | 15.8 | 7 | 22 |
| 128 | Mozambique | 15.4 | 8 | 23 |
| 129 | Zimbabwe | 15.4 | 31 | 24 |
| 130 | Nicaragua | 15.4 | 32 | 20 |
| 131 | Mauritania | 15.4 | 33 | 25 |
| 132 | Lesotho | 14.9 | 34 | 26 |
| 133 | Guinea | 14.9 | 35 | 27 |
| 134 | Ethiopia | 14.4 | 9 | 28 |
| 135 | Mali | 14.0 | 10 | 29 |
| 136 | Venezuela (Bolivarian Republic of) | 13.7 | | 21 |
| 137 | Congo | 13.6 | 36 | 30 |
| 138 | Angola | 13.0 | 37 | 31 |
| 139 | Niger | 11.9 | 11 | 32 |

Low-income
Lower middle-income
Upper middle-income
High-Income
Sub-Saharan Africa
Central and Southern Asia
South East Asia, East Asia, and Oceania
Nothern Africa and Western Asia
Latin America and the Caribbean
Northern America
Europe

Note: The World Bank classified Venezuela (Bolivarian Republic of) as an upper-middle income economy until 2021 and has been unclassified since then due to the unavailability of data.

Source: Global Innovation Index Database, WIPO, 2025.

**Innovation hubs span the globe:** The world's leading innovation clusters are now spread across six continents, with the Shenzhen–Hong Kong–Guangzhou corridor ranked first globally.

**Figure 1 Top 10 innovation clusters, and their footprint, 2025**

| Rank | Cluster name | Global share of publications | Global share of PCT filings | Global share of VC deals |
|---|---|---|---|---|
| 1 | Shenzhen–Hong Kong–Guangzhou | 2.4% | 9.0% | 2.9% |
| 2 | Tokyo–Yokohama | 1.4% | 10.3% | 2.2% |
| 3 | San Jose–San Francisco | 0.7% | 3.9% | 6.9% |
| 4 | Beijing | 4.0% | 3.8% | 2.9% |
| 5 | Seoul | 1.7% | 5.4% | 3.1% |
| 6 | Shanghai–Suzhou | 2.5% | 3.3% | 3.7% |
| 7 | New York City | 0.9% | 1.0% | 4.8% |
| 8 | London | 0.7% | 0.5% | 4.4% |
| 9 | Boston–Cambridge | 0.9% | 1.5% | 2.0% |
| 10 | Los Angeles | 0.5% | 0.9% | 2.5% |

**Global share range**

0.5% 10.3%

Source: WIPO Statistics Database, May 2025.

**Europe's strong showing:** Europe boasts 15 of the top 25 economies — six of which are in the top 10.

However, Greece remains notably low in the rankings, underlining the urgent need for systemic reforms across key sectors.

# Greece

GII 2025 rank **42**

| Output rank | Input rank | Income | Region | Population (mn) | GDP, PPP$ (bn) | GDP per capita, PPP$ |
|---|---|---|---|---|---|---|
| 42 | 42 | High | EUR | 10.0 | 436.8 | 42,066 |

| | | | Score/ Value | Rank | |
|---|---|---|---|---|---|
| **Institutions** | | | **52.0** | **60** | ◇ |
| **1.1** | **Institutional environment** | | **58.7** | **57** | |
| 1.1.1 | Operational stability for businesses* | | 70.7 | 44 | |
| 1.1.2 | Government effectiveness* | | 46.7 | 63 | ◇ |
| **1.2** | **Regulatory environment** | | **58.8** | **51** | |
| 1.2.1 | Regulatory quality* | | 60.1 | 46 | |
| 1.2.2 | Rule of law* | | 57.4 | 58 | ◇ |
| **1.3** | **Business environment** | | **38.5** | **80** | |
| 1.3.1 | Policy stability for doing business† | | 47.7 | 66 | |
| 1.3.2 | Entrepreneurship policies and culture† | | 29.3 | 63 | ○ |
| **Human capital and research** | | | **46.8** | **29** | ● |
| **2.1** | **Education** | | **60.9** | **38** | |
| 2.1.1 | Expenditure on education, % GDP | ⏲ | 3.8 | 87 | ○ |
| 2.1.2 | Government funding/pupil, secondary, % GDP/cap | ⏲ | 20.1 | 44 | |
| 2.1.3 | School life expectancy, years | ⏲ | 20.8 | 1 | ● ◆ |
| 2.1.4 | PISA scales in reading, maths and science | | 436.5 | 45 | |
| 2.1.5 | Pupil–teacher ratio, secondary | ⏲ | 8.5 | 15 | ● |
| **2.2** | **Tertiary education** | | **53.4** | **5** | ● ◆ |
| 2.2.1 | Tertiary enrolment, % gross | ⏲ | 166.7 | 1 | ● ◆ |
| 2.2.2 | Graduates in science and engineering, % | | 26.2 | 37 | |
| 2.2.3 | Tertiary inbound mobility, % | ⏲ | 3.1 | 68 | |
| **2.3** | **Research and development (R&D)** | | **26.0** | **40** | |
| 2.3.1 | Researchers, FTE/mn pop. | | 5,250.7 | 19 | ● |
| 2.3.2 | Gross expenditure on R&D, % GDP | | 1.5 | 29 | |
| 2.3.3 | Global corporate R&D investors, top 3, mn USD | | 0.0 | 44 | ○ ◇ |
| 2.3.4 | QS university ranking, top 3* | | 30.0 | 46 | |
| **Infrastructure** | | | **52.1** | **41** | |
| **3.1** | **Information and communication technology (ICT)** | | **84.6** | **45** | |
| 3.1.1 | ICT access* | | 96.0 | 36 | |
| 3.1.2 | ICT use* | | 80.3 | 58 | |
| 3.1.3 | Government online service* | | 77.7 | 45 | |
| **3.2** | **General infrastructure** | | **39.2** | **45** | |
| 3.2.1 | Electricity output, GWh/mn pop. | | 4,500.5 | 45 | |
| 3.2.2 | Logistics performance* | | 72.7 | 18 | ● |
| 3.2.3 | Gross capital formation, % GDP | | 20.3 | 102 | ○ |
| **3.3** | **Ecological sustainability** | | **32.6** | **37** | |
| 3.3.1 | GDP/unit of energy use | | 16.4 | 26 | ● |
| 3.3.2 | Low-carbon energy use, % | | 20.8 | 62 | |
| 3.3.3 | ISO 14001 environment/bn PPP$ GDP | | 4.3 | 21 | ● |
| **Market sophistication** | | | **39.0** | **57** | |
| **4.1** | **Credit** | | **30.8** | **64** | |
| 4.1.1 | Finance for startups and scaleups† | | 44.7 | 57 | |
| 4.1.2 | Domestic credit to private sector, % GDP | | 49.1 | 67 | |
| 4.1.3 | Loans from microfinance institutions, % GDP | | n/a | n/a | |
| **4.2** | **Investment** | | **7.9** | **55** | |
| 4.2.1 | Market capitalization, % GDP | | 26.9 | 53 | |
| 4.2.2 | Venture capital (VC) received, deal count/bn PPP$ GDP | | 0.1 | 46 | |
| 4.2.3 | Late-stage VC deal count, % global VC | | 0.0 | 56 | |
| 4.2.4 | VC investors, deal count/bn PPP$ GDP | | 0.2 | 42 | |
| 4.2.5 | VC investor co-participation/bn PPP$ GDP | | 0.1 | 41 | |
| **4.3** | **Trade, diversification and market scale** | | **78.1** | **38** | |
| 4.3.1 | Applied tariff rate, weighted avg., % | | 1.3 | 24 | |
| 4.3.2 | Domestic industry diversification | ⏲ | 87.0 | 49 | |
| 4.3.3 | Domestic market scale, bn PPP$ | | 436.8 | 53 | |

| | | | Score/ Value | Rank | |
|---|---|---|---|---|---|
| **Business sophistication** | | | **28.7** | **65** | ◇ |
| **5.1** | **Knowledge workers** | | **37.4** | **61** | |
| 5.1.1 | Knowledge-intensive employment, % | | 31.6 | 47 | ◇ |
| 5.1.2 | Females employed w/advanced degrees, % | | 20.2 | 37 | |
| 5.1.3 | Youth demographic dividend, % | | 23.4 | 130 | ○ |
| 5.1.4 | GERD performed by business, % GDP | | 0.7 | 35 | |
| 5.1.5 | GERD financed by business, % | | 37.9 | 51 | |
| **5.2** | **Innovation linkages** | | **23.8** | **74** | ◇ |
| 5.2.1 | Public research–industry co-publications, % | | 2.5 | 33 | |
| 5.2.2 | University–industry R&D collaboration† | | 21.8 | 107 | ○ ◇ |
| 5.2.3 | University industry and international engagement, top 5* | | 44.2 | 40 | |
| 5.2.4 | State of cluster development† | | 20.2 | 125 | ○ ◇ |
| 5.2.5 | Patent families/bn PPP$ GDP | | 0.4 | 37 | |
| **5.3** | **Knowledge absorption** | | **24.8** | **77** | |
| 5.3.1 | Intellectual property payments, % total trade | | 0.3 | 86 | |
| 5.3.2 | High-tech imports, % total trade | | 7.2 | 85 | |
| 5.3.3 | ICT services imports, % total trade | | 0.9 | 96 | ○ |
| 5.3.4 | FDI net inflows, % GDP | | 2.8 | 63 | |
| 5.3.5 | Research talent, % in businesses | | 31.1 | 45 | |
| **Knowledge and technology outputs** | | | **28.1** | **43** | |
| **6.1** | **Knowledge creation** | | **25.4** | **40** | |
| 6.1.1 | Patents by origin/bn PPP$ GDP | | 1.6 | 34 | |
| 6.1.2 | PCT patents by inventor origin/bn PPP$ GDP | | 0.3 | 38 | |
| 6.1.3 | Utility models by origin/bn PPP$ GDP | | 0.0 | 62 | ○ |
| 6.1.4 | Scientific and technical articles/bn PPP$ GDP | | 27.6 | 18 | ● |
| 6.1.5 | Citable documents H-index | | 33.7 | 30 | |
| **6.2** | **Knowledge impact** | | **33.4** | **45** | |
| 6.2.1 | Labor productivity growth, % | | 0.4 | 86 | |
| 6.2.2 | Unicorn valuation, % GDP | | 1.3 | 32 | |
| 6.2.3 | Software spending, % GDP | | 0.6 | 15 | ● |
| 6.2.4 | High-tech manufacturing, % | ⏲ | 16.5 | 71 | ○ ◇ |
| **6.3** | **Knowledge diffusion** | | **25.6** | **51** | |
| 6.3.1 | Intellectual property receipts, % total trade | | 0.1 | 78 | |
| 6.3.2 | Production and export complexity | | 53.8 | 51 | |
| 6.3.3 | High-tech exports, % total trade | | 2.7 | 54 | |
| 6.3.4 | ICT services exports, % total trade | | 1.3 | 80 | |
| 6.3.5 | ISO 9001 quality/bn PPP$ GDP | | 15.6 | 14 | ● ◆ |
| **Creative outputs** | | | **33.8** | **40** | |
| **7.1** | **Intangible assets** | | **40.6** | **31** | |
| 7.1.1 | Intangible asset intensity, top 15, % | | 55.0 | 44 | |
| 7.1.2 | Trademarks by origin/bn PPP$ GDP | | n/a | n/a | |
| 7.1.3 | Global brand value, top 5,000, % GDP | | 0.9 | 60 | |
| 7.1.4 | Industrial designs by origin/bn PPP$ GDP | | 2.9 | 29 | |
| **7.2** | **Creative goods and services** | | **18.3** | **57** | |
| 7.2.1 | Cultural and creative services exports, % total trade | | 0.5 | 53 | |
| 7.2.2 | National feature films/mn pop. 15–69 | | 5.2 | 33 | |
| 7.2.3 | Entertainment and media market/th pop. 15–69 | | 22.4 | 29 | |
| 7.2.4 | Creative goods exports, % total trade | | 1.1 | 42 | |
| **7.3** | **Online creativity** | | **35.9** | **41** | |
| 7.3.1 | Top-level domains (TLDs)/th pop. 15–69 | | 22.0 | 34 | |
| 7.3.2 | GitHub commits/mn pop. 15–69 | | 24.7 | 40 | |
| 7.3.3 | Mobile app creation/bn PPP$ GDP | | 61.0 | 82 | |

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; Square brackets [ ] indicate that the data minimum coverage (DMC) requirements were not met at the sub-pillar or pillar level; n/a represents missing values; a dash - indicates an indicator which is not relevant to this economy and thus not considered for DMC thresholds.

The Global Innovation Index (GII) can be found at https://www.wipo.int/web-publications/global-innovation-index-2025/en/index.html

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