



## EU-GCC Dialogue on Economic Diversification

A Project funded by the European Union

# GCC Countries - Global Innovation Index 2021 Rankings & Opportunities for EU-GCC Collaboration



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A project implemented by  
GFA Consulting Group GmbH  
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DMI Associates



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## The Global Innovation Index (GII): Role in Policymaking

- Innovation is widely recognized as a central driver of economic growth and development. The aim of the Global Innovation Index is to provide insightful data on innovation and, in turn, to assist economies in evaluating their innovation performance and making informed innovation policy considerations.
- The GII was created in 2007. The index has an important role in the design of economic policy strategies.
- Now in its 14th edition, the GII helps to create an environment in which innovation factors are under continual evaluation. It provides a key tool for decision-makers and a rich database of detailed metrics that are convenient for refining innovation policies.
- The 2021 edition of the GII proposes the use of a novel GII Global Innovation Tracker, fully in line with the GII's goal of advancing a data-based understanding of innovation.
- The GII 2021 report is published by WIPO in partnership with the Portulans Institute, with the support of corporate network partners, the Confederation of Indian Industry (CII), Brazilian National Confederation of Industry (CNI), Ecopetrol Group (Colombia) and the Turkish Exporters Assembly (TEM).



Source: Global Innovation Index [https://www.wipo.int/global\\_innovation\\_index/en/2021/](https://www.wipo.int/global_innovation_index/en/2021/)

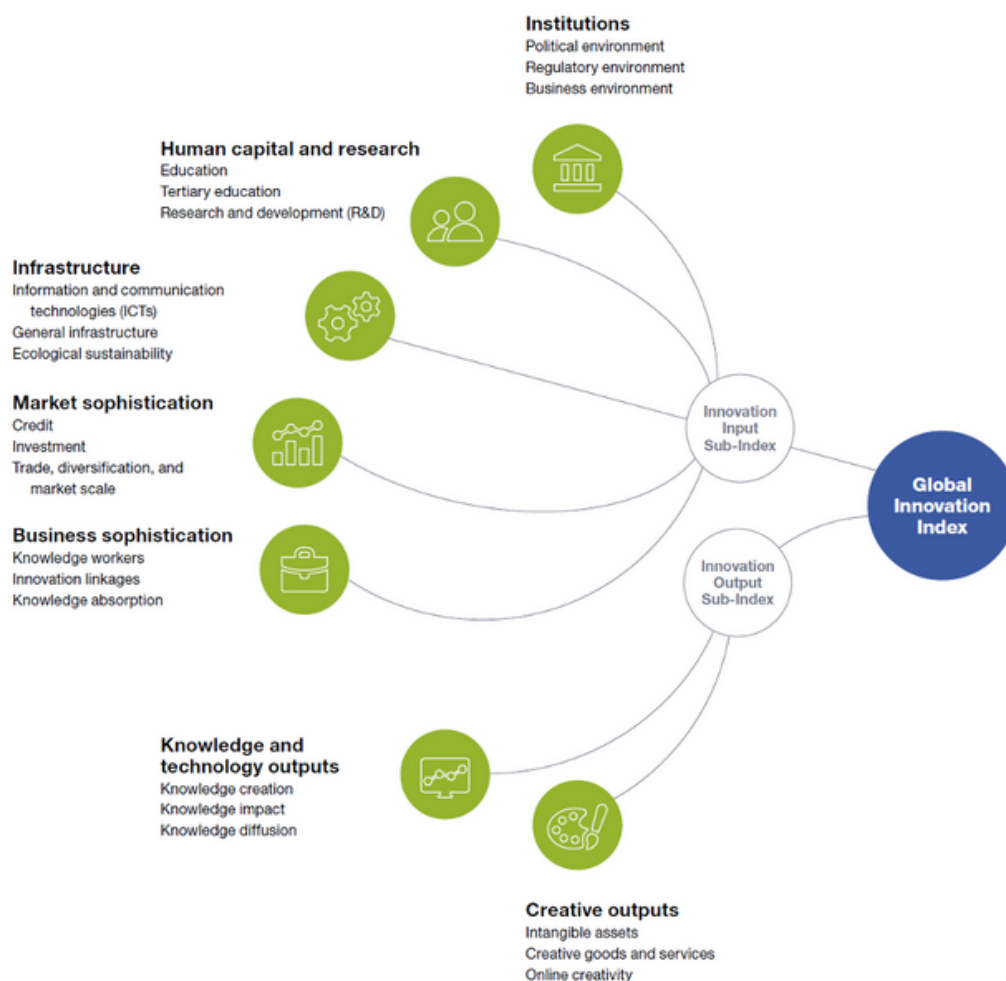
## Innovation Definition & Index Methodology

- The GII adopts a broad notion of innovation, originally elaborated in the Oslo Manual developed by the European Communities and the Organisation for Economic Co-operation and Development (OECD). In its fourth edition, the Oslo Manual 2018 introduces a more general definition of innovation: an innovation is a new or improved product or process (or combination thereof) that differs significantly from the unit's previous products or processes and that has been made available to potential users (product) or brought into use by the unit (process). It is important to highlight how these definitions capture the evolution of the way innovation has been perceived and understood over the last two decades.
- Today innovation capability is increasingly seen as the ability to exploit new technological combinations; it embraces the notion of incremental innovation and "innovation without research". Non-R&D innovative expenditure is an important component of reaping the rewards of technological innovation.
- The GII 2021 model includes 81 indicators and 132 economies, which represent 94.3% of the world's population and 99.0% of the world's GDP in purchasing power parity current international dollars.

# Framework of the Global Innovation Index 2021

The GII relies on two sub-indices—the Innovation Input Sub-Index and the Innovation Output Sub-Index—each built around pillars. Three indices are calculated:

1. Innovation Input Sub-Index: Five input pillars capture elements of the national economy that enable and facilitate innovative activities.
2. Innovation Output Sub-Index: Innovation outputs are the result of innovative activities within the economy. Although the Output Sub-Index includes only two pillars, it has the same weight in calculating the overall GII scores as the Input Sub-Index.
3. The overall GII score is the average of the Input and Output Sub-Indices, on which the GII economy rankings are then produced.



Source: Global Innovation Index [https://www.wipo.int/global\\_innovation\\_index/en/2021/](https://www.wipo.int/global_innovation_index/en/2021/)

## 2021 GII Pillars Ranking Comparison across GCC Countries

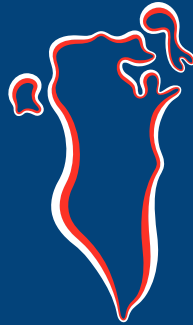
Highlighted in green are the highest rankings across GCC countries for each pillar. In red are the lowest rankings for each area, where EU can assist the GCC countries in improving their innovation capabilities..

GII Pillars	Bahrain	Kuwait	Oman	Qatar	Saudi Arabia	United Arab Emirates
Institutions	49	86	71	57	101	30
Human capital and research	83	69	45	75	32	22
Infrastructure	38	43	56	34	54	14
Market sophistication	78	94	84	83	39	26
Business sophistication	90	100	94	96	89	22
Knowledge and technology outputs	82	60	107	79	69	59
Creative outputs	106	89	71	63	78	40

## Global Innovation Index Rank Trends

Country	2018	2019	2020	2021
United Arab Emirates	38	36	34	<b>33</b>
Saudi Arabia	61	68	66	<b>66</b>
Qatar	51	65	70	<b>68</b>
Kuwait	60	60	78	<b>72</b>
Oman	69	80	84	<b>76</b>
Bahrain	72	78	79	<b>78</b>

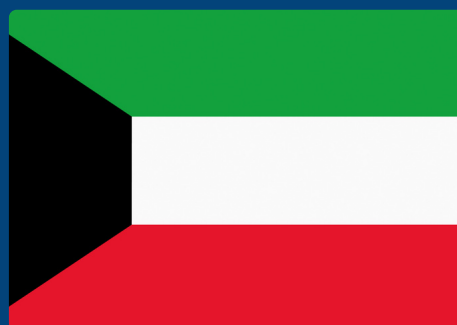
# Bahrain: Strengths & Areas of Improvement



Strengths		Areas of improvement	
Code Indicator Name	Rank	Code Indicator Name	Rank
2.1.3 School life expectancy, years	28	2.1.1 Expenditure on education, % GDP	108
2.1.5 Pupil-teacher ratio, secondary	32	2.3.2 Gross expenditure on R&D, % GDP	105
2.2.3 Tertiary inbound mobility, %	12	2.3.3 Global corporate R&D investors, top 3, mn US\$	41
3.1.1 ICT access	23	3.3.1 GDP/unit of energy use	116
3.2 General infrastructure	10	5.1.3 GERD performed by business, % GDP	82
3.2.1 Electricity output, GWh/mn pop.	3	5.3 Knowledge absorption	126
3.2.3 Gross capital formation, % GDP	15	5.3.5 Research talent, % in businesses	83
5.2 Innovation linkages	33	6.1 Knowledge creation	121
5.2.2 State of cluster development and depth	33	6.3.1 Intellectual property receipts, % total trade	114
5.2.4 Joint venture/strategic alliance deals/bn PPP\$ GDP	9	9 7.1.1 Trademarks by origin/bn PPP\$ GDP	125
6.2.3 Software spending, % GDP	30	7.1.3 Industrial designs by origin/bn PPP\$ GDP	110
6.3.4 ICT services exports, % total trade	33	7.2.1 Cultural and creative services exports, % total trade	113

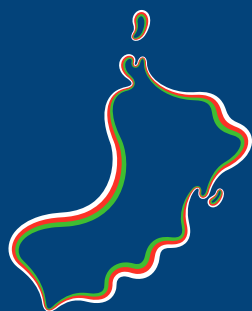


# Kuwait: Strengths & Areas of Improvement



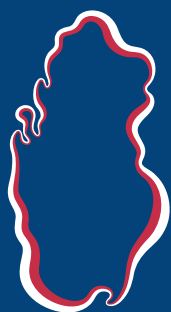
Strengths		Areas of improvement	
Code Indicator Name	Rank	Code Indicator Name	Rank
2.1.5 Pupil-teacher ratio, secondary	4	1.2.3 Cost of redundancy dismissal	116
3.1 Information and communication technologies (ICTs)	31	31 2.3.2 Gross expenditure on R&D, % GDP	111
3.1.1 ICT access	35	2.3.3 Global corporate R&D investors, top 3, mn US\$	41
3.1.3 Government's online service	31	4.2.4 Venture capital recipients, deals/bn PPP\$ GDP	84
3.1.4 E-participation	18	4.3.2 Domestic industry diversification	105
3.2 General infrastructure	27	5.1.4 GERD financed by business, %	94
3.2.1 Electricity output, GWh/mn pop.	4	5.3 Knowledge absorption	124
4.1.2 Domestic credit to private sector, % GDP	30	5.3.1 Intellectual property payments, % total trade	125
5.2.2 State of cluster development and depth	37	5.3.4 FDI net inflows, % GDP	122
6.2.2 New businesses/th pop. 15-64	27	6.1.1 Patents by origin/bn PPP\$ GDP	116
6.2.3 Software spending, % GDP	26	7.2.4 Printing and other media, % manufacturing	97
6.3 Knowledge diffusion	31		
6.3.4 ICT services exports, % total trade	6		

# Oman: Strengths & Areas of Improvement



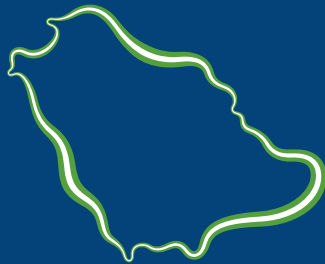
Strengths		Areas of improvement	
Code Indicator Name	Rank	Code Indicator Name	Rank
1.3.1 Ease of starting a business	30	2.3.3 Global corporate R&D investors, top 3, mn US\$	41
2.1.2 Government funding/pupil, secondary, % GDP/cap	13	4.1.1 Ease of getting credit	118
2.2 Tertiary education	10	5.2.3 GERD financed by abroad, % GDP	88
2.2.2 Graduates in science and engineering, %	1	5.3 Knowledge absorption	121
3.1.1 ICT access	30	5.3.2 High-tech imports, % total trade	106
3.1.3 Government's online service	24	5.3.3 ICT services imports, % total trade	117
3.2.1 Electricity output, GWh/mn pop.	24	5.3.5 Research talent, % in businesses	85
4.3.1 Applied tariff rate, weighted avg., %	23	6.2 Knowledge impact	107
5.2.2 State of cluster development and depth	21	6.2.3 Software spending, % GDP	102
5.3.4 FDI net inflows, % GDP	18	6.3.4 ICT services exports, % total trade	113
7.1.1 Trademarks by origin/bn PPP\$ GDP	22	7.1.3 Industrial designs by origin/bn PPP\$ GDP	114
7.3.4 Mobile app creation/bn PPP\$ GDP	23	7.2.4 Printing and other media, % manufacturing	89

## Qatar: Strengths & Areas of Improvement



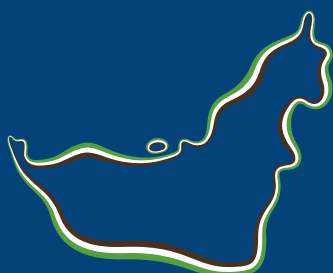
Strengths		Areas of improvement	
Code Indicator Name	Rank	Code Indicator Name	Rank
2.2.3 Tertiary inbound mobility, %	1	2.1.1 Expenditure on education, % GDP	105
3.2 General infrastructure	2	2.3.3 Global corporate R&D investors, top 3, mn US\$	41
3.2.1 Electricity output, GWh/mn pop.	6	4.1.1 Ease of getting credit	101
3.2.2 Logistics performance	29	4.2 Investment	128
4.1.2 Domestic credit to private sector, % GDP	24	4.2.1 Ease of protecting minority investors	124
4.2.2 Market capitalization, % GDP	17	4.2.4 Venture capital recipients, deals/bn PPP\$ GDP	89
5.2.1 University-industry R&D collaboration	14	5.1 Knowledge workers	118
5.3.3 ICT services imports, % total trade	9	5.2.3 GERD financed by abroad, % GDP	93
6.2.2 New businesses/th pop. 15–64	26	5.3.1 Intellectual property payments, % total trade	102
7.1.2 Global brand value, top 5,000, % GDP	20	5.3.4 FDI net inflows, % GDP	123
7.2.2 National feature films/mn pop. 15–69	4	6.2.1 Labor productivity growth, %	109
		7.1.1 Trademarks by origin/bn PPP\$ GDP	121

# Saudi Arabia: Strengths & Areas of Improvement



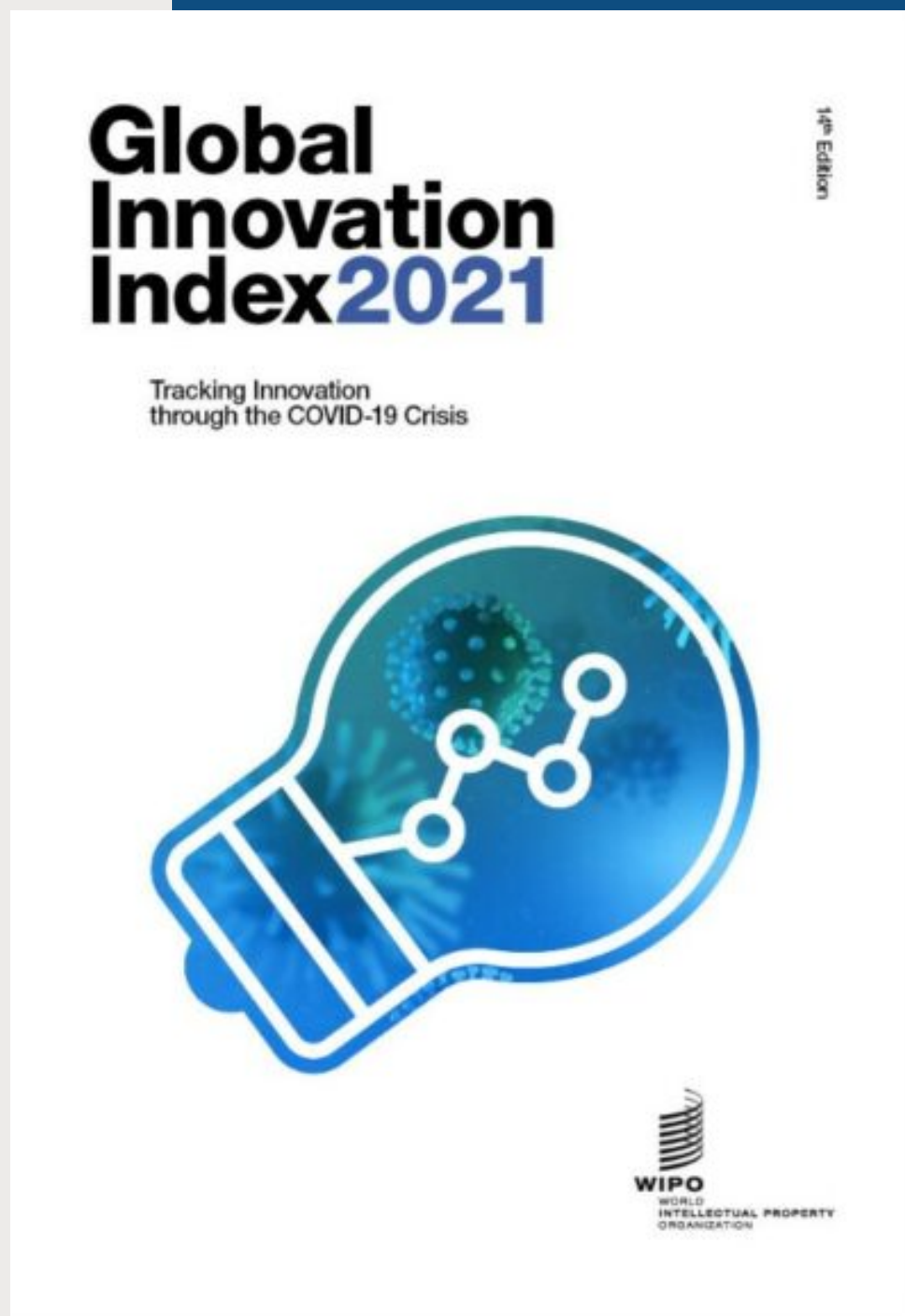
Strengths		Areas of improvement	
Code Indicator Name	Rank	Code Indicator Name	Rank
2.2.1 Tertiary enrolment, % gross	29	1.1.1 Political and operational stability	119
2.3 Research and development (R&D)	26	1.3 Business environment	129
2.3.3 Global corporate R&D investors, top 3, mn US\$	22	22 1.3.2 Ease of resolving insolvency	129
2.3.4 QS university ranking, top 3	24	2.1.4 PISA scales in reading, maths and science	71
3.1.1 ICT access	28	4.2.4 Venture capital recipients, deals/bn PPP\$ GDP	80
3.2.1 Electricity output, GWh/mn pop.	12	5.3.1 Intellectual property payments, % total trade	122
4.2.1 Ease of protecting minority investors	3	5.3.4 FDI net inflows, % GDP	119
4.2.2 Market capitalization, % GDP	6	6.2.1 Labor productivity growth, %	101
4.3 Trade, diversification, and market scale	29	6.3.3 High-tech exports, % total trade	118
4.3.3 Domestic market scale, bn PPP\$	17	7.1.3 Industrial designs by origin/bn PPP\$ GDP	101
5.2.2 State of cluster development and depth	8	7.2.1 Cultural and creative services exports, % total trade	100
7.1.2 Global brand value, top 5,000, % GDP	19		

# United Arab Emirates: Strengths & Areas of Improvement



Strengths		Areas of improvement	
Code Indicator Name	Rank	Code Indicator Name	Rank
1.2.3 Cost of redundancy dismissal	1	2.1.1 Expenditure on education, % GDP	94
2.2 Tertiary education	3	2.1.4 PISA scales in reading, maths and science	47
2.2.3 Tertiary inbound mobility, %	1	5.1.5 Females employed w/advanced degrees, %	77
3.1 Information and communication technologies (ICTs)	12	5.3.3 ICT services imports, % total trade	75
3.1.1 ICT access	13	6.1 Knowledge creation	105
3.1.2 ICT use	12	6.1.1 Patents by origin/bn PPP\$ GDP	105
3.2 General infrastructure	7	6.1.3 Utility models by origin/bn PPP\$ GDP	75
3.2.1 Electricity output, GWh/mn pop.	8	6.1.4 Scientific and technical articles/bn PPP\$ GDP	97
3.2.2 Logistics performance	11	6.2.1 Labor productivity growth, %	80
5.1.4 GERD financed by business, %	5	7.1.1 Trademarks by origin/bn PPP\$ GDP	115
5.2.2 State of cluster development and depth	9	7.1.3 Industrial designs by origin/bn PPP\$ GDP	111
5.3.5 Research talent, % in businesses	2		
7.2 Creative goods and services	2		
7.2.5 Creative goods exports, % total trade	6		

## Report & data available at:



[https://www.wipo.int/global\\_innovation\\_index/en/2021/](https://www.wipo.int/global_innovation_index/en/2021/)

# About the EU-GCC Dialogue on Economic Diversification Project

The EU-GCC Dialogue on Economic Diversification is a project funded by the European Commission Service for Foreign Policy Instruments under the Partnership Instrument.

The project contributes to stronger EU-GCC relations by supporting the GCC countries in the ongoing process of economic diversification away from hydrocarbon-dependent sectors, including by funding regular EU-GCC Business Fora.

The purpose of this project is to promote climate-friendly trade, investment, and economic affairs-related policy analysis, dialogue, and cooperation between stakeholders from the EU and GCC at both regional and country levels in the context of the GCC economic diversification process.

**For more information on the EU-GCC Dialogue Project, and to download research reports and other publications, please visit:**

[https://eeas.europa.eu/headquarters/headquarters-homepage/87855/eu-gcc-dialogue-economic-diversification-project\\_en](https://eeas.europa.eu/headquarters/headquarters-homepage/87855/eu-gcc-dialogue-economic-diversification-project_en)

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## Authors



**Douglas Aitkenhead**

Team Leader

E-mail: [daitkenhead@eugcc.eu](mailto:daitkenhead@eugcc.eu)



**Daniela Stratulativ**

Trade and Foreign

Direct Investment Expert

E-mail: [dstratulativ@eugcc.eu](mailto:dstratulativ@eugcc.eu)

Designed by Rania Nseir  
Event Management & Communications Expert  
EU-GCC Dialogue on Economic Diversification Project

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