Global Innovation Index 2021

MALTA

27th Malta ranks 27th among the 132 economies featured in the GII 2021.

The Global Innovation Index (GII) ranks world economies according to their innovation capabilities. Consisting of roughly 80 indicators, grouped into innovation inputs and outputs, the GII aims to capture the multi-dimensional facets of innovation.

The following table shows the rankings of Malta over the past three years, noting that data availability and changes to the GII model framework influence year-on-year comparisons of the GII rankings. The statistical confidence interval for the ranking of Malta in the GII 2021 is between ranks 25 and 28.

Rankings for Malta (2019–2021)

	GII	Innovation inputs	Innovation outputs
2021	27	29	22
2020	27	31	21
2019	27	32	20

- Malta performs better in innovation outputs than innovation inputs in 2021.
- This year Malta ranks 29th in innovation inputs, higher than both 2020 and 2019.
- As for innovation outputs, Malta ranks 22nd. This position is lower than both 2020 and 2019.

26th Malta ranks 26th among the 51 high-income group economies.

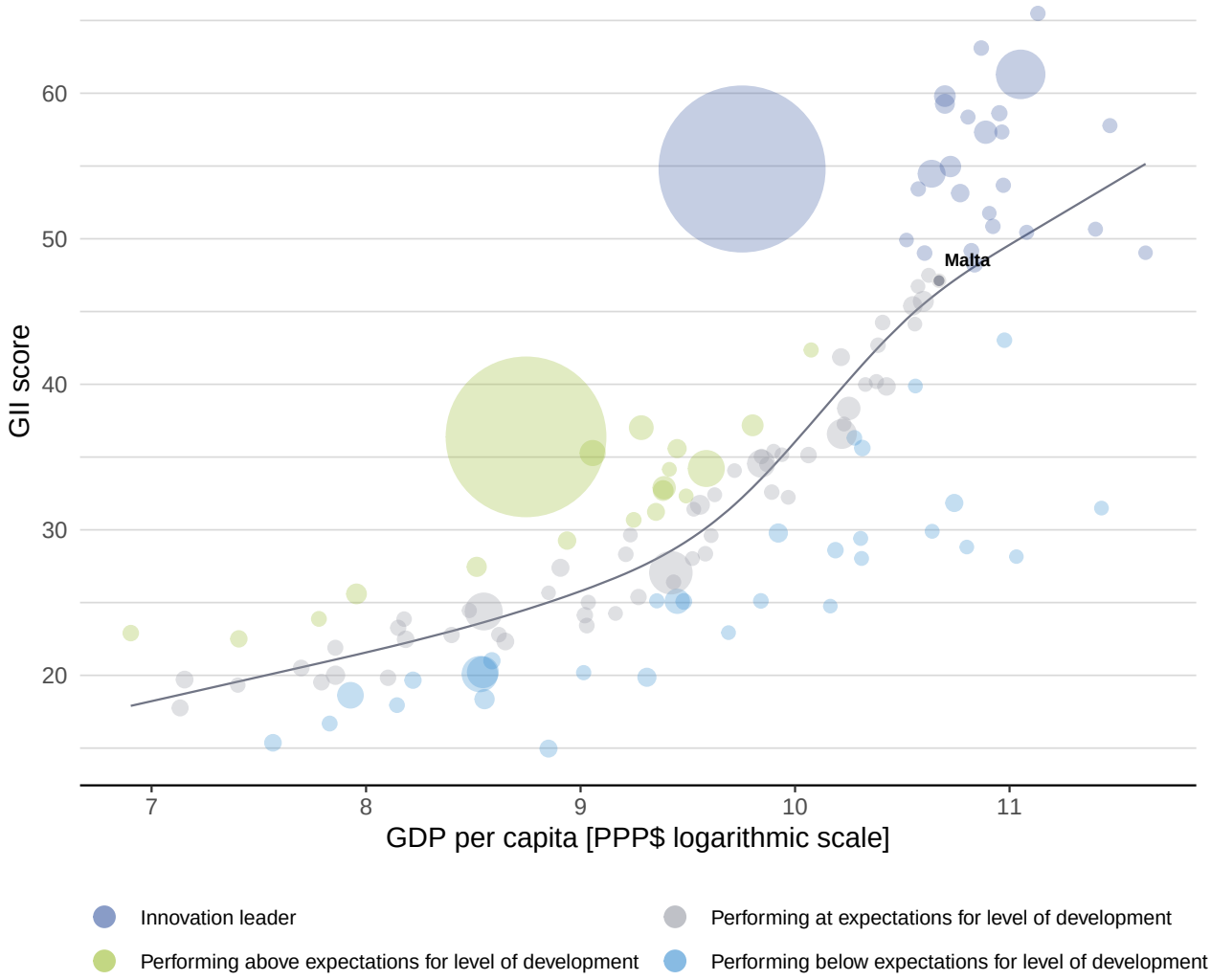
17th Malta ranks 17th among the 39 economies in Europe.

EXPECTED VS. OBSERVED INNOVATION PERFORMANCE

The bubble chart below shows the relationship between income levels (GDP per capita) and innovation performance (GII score). The trend line gives an indication of the expected innovation performance according to income level. Economies appearing above the trend line are performing better than expected and those below are performing below expectations.

Relative to GDP, Malta's performance is at expectations for its level of development.

The positive relationship between innovation and development

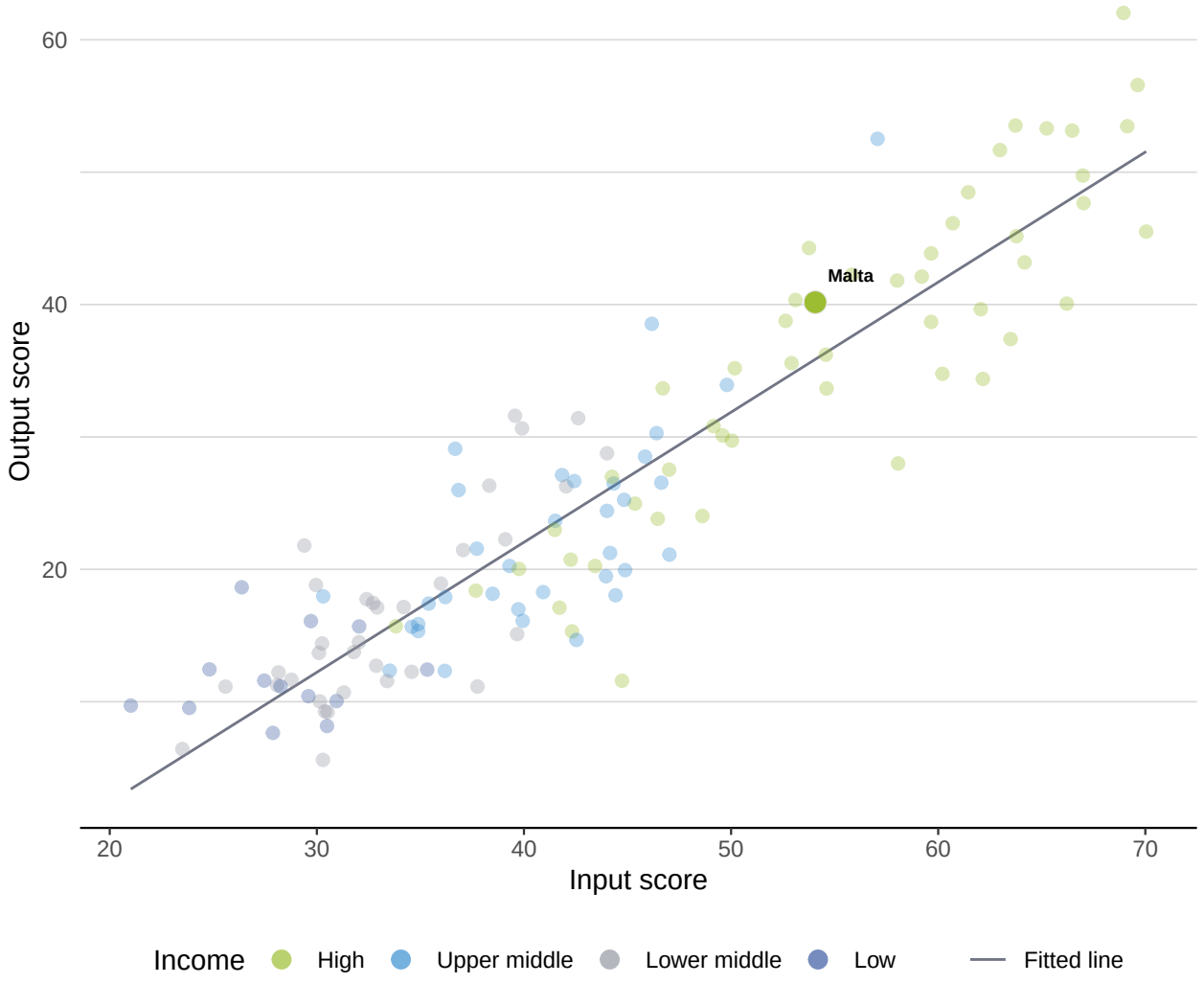


EFFECTIVELY TRANSLATING INNOVATION INVESTMENTS INTO INNOVATION OUTPUTS

The chart below shows the relationship between innovation inputs and innovation outputs. Economies above the line are effectively translating costly innovation investments into more and higher-quality outputs.

Malta produces more innovation outputs relative to its level of innovation investments.

Innovation input to output performance



BENCHMARKING AGAINST OTHER HIGH-INCOME GROUP ECONOMIES AND EUROPE

The seven GII pillar scores for Malta

High-income group economies

Malta performs above the high-income group average in three pillars, namely: Infrastructure; Business sophistication; and, Creative outputs.

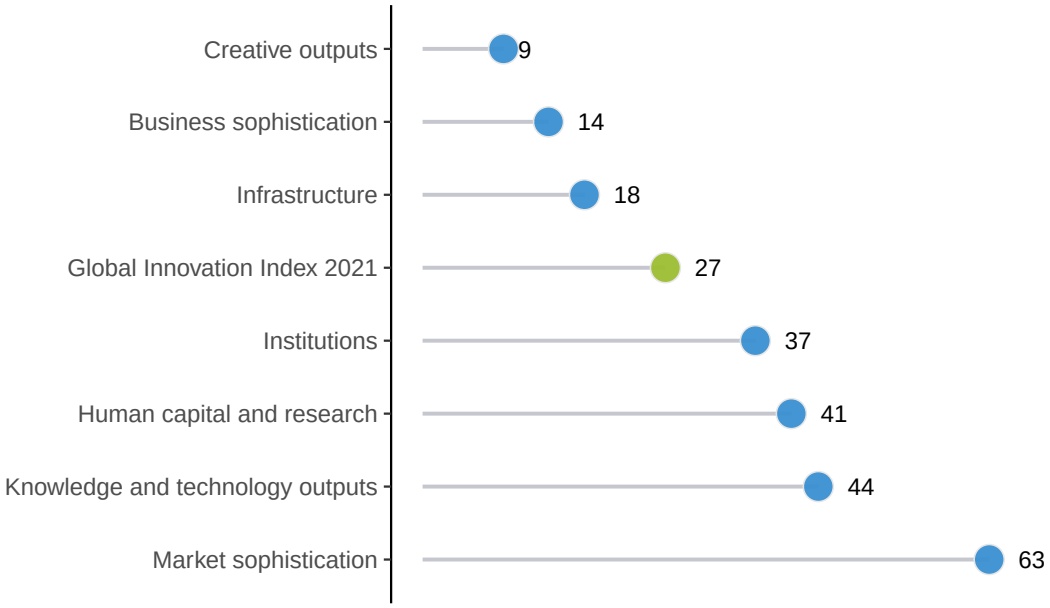
Europe

Malta performs above the regional average in three pillars, namely: Infrastructure; Business sophistication; and, Creative outputs.

OVERVIEW OF RANKINGS IN THE SEVEN GII 2021 AREAS

Malta performs best in Creative outputs and its weakest performance is in Market sophistication.

The seven GII pillar ranks for Malta



Note: The highest possible ranking in each pillar is one.

INNOVATION STRENGTHS AND WEAKNESSES

The table below gives an overview of the strengths and weaknesses of Malta in the GII 2021.

Strengths and weaknesses for Malta

Strengths			Weaknesses		
Code	**Indicator name**	**Rank**	**Code**	**Indicator name**	**Rank**
1.2.3	Cost of redudancy dismissal	1	1.3	Business environment	93
2.1.5	Pupil-teacher ratio, secondary	2	1.3.2	Ease of resolving insolvency	105
3.1.1	ICT access	5	2.2.2	Graduates in science and engineering, %	69
3.3	Ecological sustainability	3	2.3.4	QS university ranking, top 3	74
3.3.1	GDP/unit of energy use	3	4.1	Credit	98
5.2.4	Joint venture/strategic alliance deals/bn PPP$ GDP	1	4.1.1	Ease of getting credit	118
5.3	Knowledge absorption	4	4.3.3	Domestic market scale, bn PPP$	127
5.3.1	Intellectual property payments, % total trade	4	5.3.2	High-tech imports, % total trade	107
5.3.4	FDI net inflows, % GDP	1	6.1.5	Citable documents H-index	91
7.1.1	Trademarks by origin/bn PPP$ GDP	5	6.2.1	Labor productivity growth, %	115
7.2	Creative goods and services	5	6.3.4	ICT services exports, % total trade	96
7.2.1	Cultural and creative services exports, % total trade	1	7.2.5	Creative goods exports, % total trade	79
7.2.4	Printing and other media, % manufacturing	1			
7.3.1	Generic top-level domains (TLDs)/th pop. 15–69	3			

Malta

GII 2021 rank **27**

Output rank	Input rank	Income	Region	Population (mn)	GDP, PPP$ (bn)	GDP per capita, PPP$	GII 2020 rank
22	29	High	EUR	0.4	21.6	43,087	27

		Score/ Value	Rank	
Institutions		**73.9**	**37**	
1.1	**Political environment**	**73.3**	**36**	
1.1.1	Political and operational stability*	80.4	29	
1.1.2	Government effectiveness*	69.7	37	
1.2	**Regulatory environment**	**85.1**	**19**	
1.2.1	Regulatory quality*	68.5	38	
1.2.2	Rule of law*	71.8	32	
1.2.3	Cost of redundancy dismissal	8.0	1	● ◆
1.3	**Business environment**	**63.3**	**93**	○ ◇
1.3.1	Ease of starting a business*	88.2	69	
1.3.2	Ease of resolving insolvency*	38.3	105	○ ◇
Human capital and research		**39.3**	**41**	
2.1	**Education**	**62.2**	**21**	
2.1.1	Expenditure on education, % GDP	4.8	46	
2.1.2	Government funding/pupil, secondary, % GDP/cap	29.2	9	◆
2.1.3	School life expectancy, years	16.8	19	
2.1.4	PISA scales in reading, maths and science	458.8	42	
2.1.5	Pupil-teacher ratio, secondary ◴	7.1	2	● ◆
2.2	**Tertiary education**	**36.5**	**53**	
2.2.1	Tertiary enrolment, % gross	64.9	41	
2.2.2	Graduates in science and engineering, %	20.6	69	○
2.2.3	Tertiary inbound mobility, %	10.0	22	
2.3	**Research and development (R&D)**	**19.2**	**45**	
2.3.1	Researchers, FTE/mn pop.	2,116.4	39	
2.3.2	Gross expenditure on R&D, % GDP	0.6	59	
2.3.3	Global corporate R&D investors, top 3, mn US$	40.1	39	
2.3.4	QS university ranking, top 3*	0.0	74	○ ◇
Infrastructure		**56.4**	**18**	
3.1	**Information and communication technologies (ICTs)**	**85.0**	**20**	
3.1.1	ICT access*	92.2	5	● ◆
3.1.2	ICT use*	83.2	13	
3.1.3	Government's online service*	81.2	40	
3.1.4	E-participation*	83.3	38	
3.2	**General infrastructure**	**26.9**	**71**	◇
3.2.1	Electricity output, GWh/mn pop.	4,152.0	54	
3.2.2	Logistics performance*	35.6	68	◇
3.2.3	Gross capital formation, % GDP	23.4	56	
3.3	**Ecological sustainability**	**57.4**	**3**	● ◆
3.3.1	GDP/unit of energy use	28.7	3	● ◆
3.3.2	Environmental performance*	70.7	23	
3.3.3	ISO 14001 environmental certificates/bn PPP$ GDP	2.2	36	
Market sophistication		**47.0**	**63**	
4.1	**Credit**	**32.8**	**98**	○ ◇
4.1.1	Ease of getting credit*	35.0	118	○ ◇
4.1.2	Domestic credit to private sector, % GDP	75.9	41	
4.1.3	Microfinance gross loans, % GDP	n/a	n/a	
4.2	**Investment**	**41.4**	**33**	
4.2.1	Ease of protecting minority investors*	66.0	50	
4.2.2	Market capitalization, % GDP	36.4	42	
4.2.3	Venture capital investors, deals/bn PPP$ GDP	0.2	13	
4.2.4	Venture capital recipients, deals/bn PPP$ GDP ◴	0.1	16	
4.3	**Trade, diversification, and market scale**	**66.9**	**72**	
4.3.1	Applied tariff rate, weighted avg., %	1.8	25	
4.3.2	Domestic industry diversification	93.4	40	
4.3.3	Domestic market scale, bn PPP$	21.6	127	○ ◇

		Score/ Value	Rank	
Business sophistication		**53.7**	**14**	
5.1	**Knowledge workers**	**52.9**	**23**	
5.1.1	Knowledge-intensive employment, %	44.6	19	
5.1.2	Firms offering formal training, %	49.9	18	
5.1.3	GERD performed by business, % GDP	0.4	45	
5.1.4	GERD financed by business, %	59.6	14	
5.1.5	Females employed w/advanced degrees, %	16.0	43	
5.2	**Innovation linkages**	**48.6**	**14**	
5.2.1	University-industry R&D collaboration†	43.8	60	
5.2.2	State of cluster development and depth†	53.5	40	
5.2.3	GERD financed by abroad, % GDP	0.1	50	
5.2.4	Joint venture/strategic alliance deals/bn PPP$ GDP	0.5	1	● ◆
5.2.5	Patent families/bn PPP$ GDP	2.0	18	
5.3	**Knowledge absorption**	**59.5**	**4**	● ◆
5.3.1	Intellectual property payments, % total trade	4.0	4	● ◆
5.3.2	High-tech imports, % total trade	5.4	107	○
5.3.3	ICT services imports, % total trade	1.8	40	
5.3.4	FDI net inflows, % GDP	28.5	1	● ◆
5.3.5	Research talent, % in businesses	52.0	19	
Knowledge and technology outputs		**28.3**	**44**	
6.1	**Knowledge creation**	**21.5**	**50**	
6.1.1	Patents by origin/bn PPP$ GDP	2.6	30	
6.1.2	PCT patents by origin/bn PPP$ GDP	1.9	20	
6.1.3	Utility models by origin/bn PPP$ GDP	n/a	n/a	
6.1.4	Scientific and technical articles/bn PPP$ GDP	20.4	44	
6.1.5	Citable documents H-index	6.8	91	○ ◇
6.2	**Knowledge impact**	**37.6**	**33**	
6.2.1	Labor productivity growth, %	–3.7	115	○ ◇
6.2.2	New businesses/th pop. 15–64	17.5	6	◆
6.2.3	Software spending, % GDP	0.3	34	
6.2.4	ISO 9001 quality certificates/bn PPP$ GDP	9.5	28	
6.2.5	High-tech manufacturing, %	38.4	30	
6.3	**Knowledge diffusion**	**25.9**	**44**	
6.3.1	Intellectual property receipts, % total trade	2.8	9	◆
6.3.2	Production and export complexity	n/a	n/a	
6.3.3	High-tech exports, % total trade	3.9	41	
6.3.4	ICT services exports, % total trade	0.6	96	○
Creative outputs		**52.0**	**9**	◆
7.1	**Intangible assets**	**54.5**	**12**	◆
7.1.1	Trademarks by origin/bn PPP$ GDP	104.7	5	● ◆
7.1.2	Global brand value, top 5,000, % GDP	86.2	24	
7.1.3	Industrial designs by origin/bn PPP$ GDP	4.4	26	
7.1.4	ICTs and organizational model creation†	64.4	31	
7.2	**Creative goods and services**	**45.4**	**5**	● ◆
7.2.1	Cultural and creative services exports, % total trade	12.6	1	● ◆
7.2.2	National feature films/mn pop. 15–69	15.7	7	◆
7.2.3	Entertainment and media market/th pop. 15–69	14.9	30	◇
7.2.4	Printing and other media, % manufacturing	6.7	1	● ◆
7.2.5	Creative goods exports, % total trade	0.2	79	○
7.3	**Online creativity**	**53.8**	**16**	
7.3.1	Generic top-level domains (TLDs)/th pop. 15–69	95.8	3	● ◆
7.3.2	Country-code TLDs/th pop. 15–69	18.5	31	
7.3.3	Wikipedia edits/mn pop. 15–69	76.5	17	
7.3.4	Mobile app creation/bn PPP$ GDP	20.6	26	

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 IV 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.

DATA AVAILABILITY

The following tables list data that are either missing or outdated for Malta.

Missing data for Malta

Code	Indicator name	Economy year	Model year	Source
4.1.3	Microfinance gross loans, % GDP	n/a	2018	Microfinance Information Exchange
6.1.3	Utility models by origin/bn PPP$ GDP	n/a	2019	World Intellectual Property Organization
6.3.2	Production and export complexity	n/a	2018	Growth Lab, Harvard University

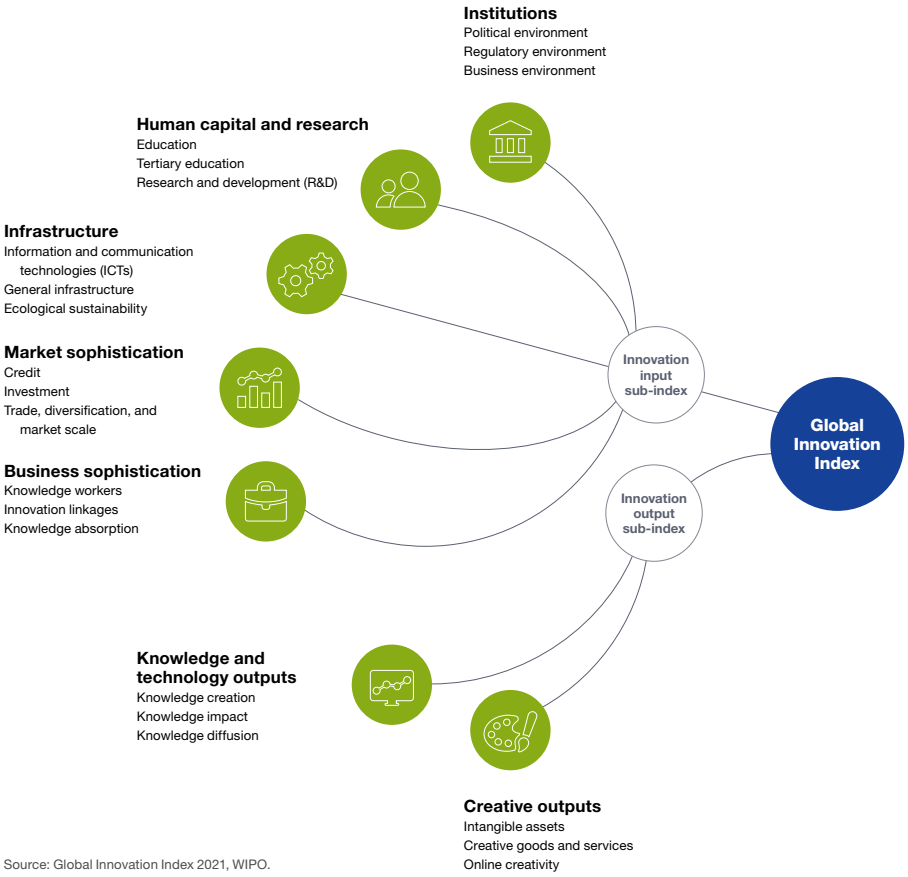
Outdated data for Malta

Code	Indicator name	Economy year	Model year	Source
2.1.5	Pupil-teacher ratio, secondary	2017	2019	UNESCO Institute for Statistics
4.2.4	Venture capital recipients, deals/bn PPP$ GDP	2019	2020	Refinitiv Eikon

ABOUT THE GLOBAL INNOVATION INDEX

The Global Innovation Index (GII) is published by the World Intellectual Property Organization (WIPO), a specialized agency of the United Nations.

Recognizing that innovation is a key driver of economic development, the GII aims to provide an innovation ranking and rich analysis referencing around 130 economies. Over the last decade, the GII has established itself as both a leading reference on innovation and a "tool for action" for economies that incorporate the GII into their innovation agendas.



Source: Global Innovation Index 2021, WIPO.

The Index is a ranking of the innovation capabilities and results of world economies. It measures innovation based on criteria that include institutions, human capital and research, infrastructure, credit, investment, linkages; the creation, absorption and diffusion of knowledge; and creative outputs.

The GII has two sub-indices: the Innovation Input Sub-Index and the Innovation Output Sub-Index, and seven pillars, each consisting of three sub-pillars.