

Research and Development in the EU

Guideline on the use of Eurostat

Country groups to analyse - Reminder

1. Northern European Innovation Leaders – Sweden, Finland, Denmark

2. Baltics – Estonia, Latvia, Lithuania

3. Central European countries – Hungary, Poland, Czech Republic

4. EU big economies – France, Germany, Austria

5. Mediterranean countries – Italy, Portugal, Spain

6. Benelux countries – Belgium, Netherlands, Luxembourg

Possible data sources

01

The MAIN source of data: EUROSTAT

02

But there are interesting facts in the yet unused parts of Horizon Dashboard

03

And there is always the possibility to check the countries' websites of their statistical offices or their official communications

04

This guideline covers EUROSTAT

How to use Eurostat

The main info on R&D can be found:

<https://ec.europa.eu/eurostat/web/science-technology-innovation/overview>

From here you can have access to: complete databases, selected tables, info on data, publications, methodology & legislation

You can get redirected to: countries' progress comparison, discovering business sectors, exploring statistical articles, statistics for regions & cities

The main info on Europe 2020 can be found:

<https://ec.europa.eu/eurostat/web/europe-2020-indicators>

From here you can have access to: complete databases, selected tables, info on data, publications, reports, methodology & legislation

You can get redirected to: countries' progress comparison, discovering business sectors, exploring statistical articles, statistics for regions & cities

Main tables are here:

<https://ec.europa.eu/eurostat/web/science-technology-innovation/data/main-tables> and <https://ec.europa.eu/eurostat/web/europe-2020-indicators/europe-2020-strategy/main-tables>

Visualisations are here:

<https://ec.europa.eu/eurostat/web/science-technology-innovation/visualisations>

Eurostat – Main info on R&D

Available here:
<https://ec.europa.eu/eurostat/web/science-technology-innovation/overview>

& this is what you see →

(although these slides show R&D info only, the logic is similar for Europe 2020 indicators)

Eurostat's own Guideline available here:

https://ec.europa.eu/eurostat/online-help/first-visit/first-visit_en.html#/discoverGroup

A short summary of the available information that you can reach from this site

Science, technology and innovation – Overview

INTRODUCTION

Which information can I find here?

Eurostat's statistics in the fields of science, technology and innovation cover a range of issues divided into four main domains:

- **Research and development (R&D)** includes statistics on expenditure, personnel and government budget allocations for R&D. Data are available by performing and funding sectors, types of costs or economic activities.
- **Community Innovation Survey** provides statistics about enterprises that have product and business process innovations, their strategies, knowledge management and innovation activities, as well as about factors that facilitate or hinder innovation (innovation environment).
- **High-tech** includes statistics on high-tech industries and products, high-tech trade as well as knowledge-intensive services.
- **Human resources in science and technology (HRST)** includes statistics on the current stock of HRST and on the current and future supply of highly skilled persons.

These statistics measure the EU's performances on the global market and provide a comparative assessment of the relative strengths and weaknesses of national systems across the Member States.

[> read more](#)



You are redirected to a site where the main tables, main data on R&D is available

You are redirected to Visualisations

HIGHLIGHTS



Compare your country's progress

Do you know how R&D intensity has developed over the last years? What is the share of persons employed in this sector? Find out using our interactive line chart.



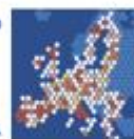
Discover business sectors in a click

Interested in a certain industry? Here you can see dozens of indicators from various business statistics on a single webpage, just choose your sector!



Explore our statistical articles

You are not a 'data-type' person, but want to know more about these statistics? Then our articles in 'Statistics Explained' are for you!



You are redirected to a site on regional comparisons

Dig into statistics for your region & city

The visualisation tool 'Regions and cities illustrated' lets you easily explore science and technology statistics for your region or city using maps, graphs and bar charts.

You are redirected to a site where all R&D data is available

DIRECT ACCESS TO...



Complete database



Selected tables



Information on data



Publications



Methodology



Legislation

You are redirected to a site where Eurostat publications concerning R&D are available

EXPLORE FURTHER



Sustainable development goals (SDG)

Have a look at our website section and learn more about SDG 9 'Industry, innovation and infrastructure'.



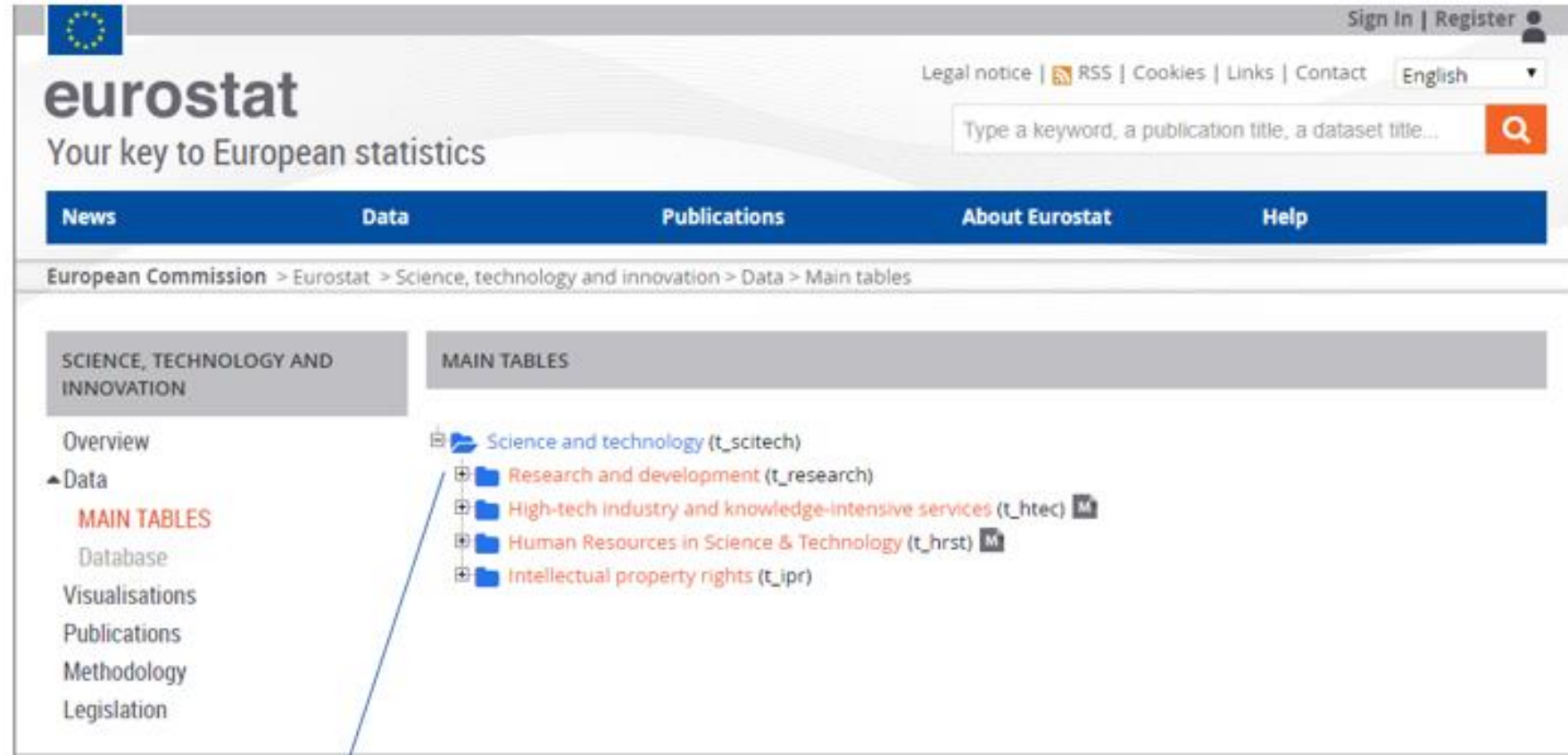
Europe 2020

Interested in the other Europe2020 indicators? Then check out our section on this topic.

Eurostat – Main tables

Available here:

<https://ec.europa.eu/eurostat/web/science-technology-innovation/data/main-tables>



The screenshot shows the Eurostat website interface. At the top, there is a header with the Eurostat logo, the tagline "Your key to European statistics", and navigation links for "News", "Data", "Publications", "About Eurostat", and "Help". A search bar is also present. Below the header, a breadcrumb trail reads: "European Commission > Eurostat > Science, technology and innovation > Data > Main tables". The main content area is divided into two columns. The left column, under the heading "SCIENCE, TECHNOLOGY AND INNOVATION", contains links for "Overview", "Data", "MAIN TABLES" (highlighted in red), "Database", "Visualisations", "Publications", "Methodology", and "Legislation". The right column, under the heading "MAIN TABLES", lists four categories, each with a blue folder icon and a plus sign: "Science and technology (t_scitech)", "Research and development (t_research)", "High-tech industry and knowledge-intensive services (t_htec) M", and "Human Resources in Science & Technology (t_hrst) M". Below these, "Intellectual property rights (t_ipr)" is listed. A blue arrow points from the plus sign next to "Research and development (t_research)" down to the explanatory text at the bottom.

If you click on the + signs here, you will be able to see the content of these big topics & the available data

Eurostat - Main tables

Available here:

<https://ec.europa.eu/eurostat/web/science-technology-innovation/data/main-tables>

If You click on
these signs, then
you can already
reach the desired
database

You can have data on these fields.

Sign In | Register

Legal notice | RSS | Cookies | Links | Contact | English

Type a keyword, a publication title, a dataset title...

News Data Publications About Eurostat Help

European Commission > Eurostat > Science, technology and innovation > Data > Main tables

SCIENCE, TECHNOLOGY AND INNOVATION

Overview

▲ Data

MAIN TABLES

Database

Visualisations

Publications

Methodology

Legislation

Science and technology (t_scitech)

Research and development (t_research)

Statistics on research and development (t_rd)

Research and development expenditure, by sectors of performance (tsc00001)

Intramural R&D expenditure (GERD) by source of funds (tsc00031)

Total researchers by sectors of performance - head count (tsc00003)

Total researchers by sectors of performance - full time equivalent (tsc00004)

Research and development personnel, by sectors of performance (tsc00002)

Share of women researchers, all sectors (tsc00006)

Share of women researchers, by sectors of performance (tsc00005)

Intramural R&D expenditure (GERD) by NUTS 2 regions (tgs00042)

Researchers, all sectors by NUTS 2 regions (tgs00043)

Government budget appropriations or outlays on R&D (t_gba)

Share of government budget appropriations or outlays on research and development (tsc00007)

Share of GBAORD allocated to defence and total civil socio-economic objectives (tsc00008)

High-tech industry and knowledge-intensive services (t_htec)

High-tech exports (tin00140)

Employment in high- and medium-high technology manufacturing sectors and knowledge-intensive service sectors (tsc00011)

Employment in high-tech sectors by NUTS 2 regions (tgs00039)

Human Resources in Science & Technology (t_hrst)

Human resources in science and technology (HRST) (tsc00025)

Doctorate students in science and technology fields (tsc00028)

Human resources in science and technology (HRST) by NUTS 2 regions (tgs00038)

Intellectual property rights (t_ipr)

Patent (t_pat)

Patent applications to the European patent office (EPO) by priority year (tsc00009)

High-tech patent applications to the European patent office (EPO) by priority year (tsc00010)

Patent applications to the European patent office (EPO) by priority year by NUTS 2 regions (tgs00040)

High-tech patent applications to the European patent office (EPO) by priority year by NUTS 2 regions (tgs00041)

Eurostat – Main tables

Available here:
<https://ec.europa.eu/eurostat/web/science-technology-innovation/data/main-tables>

This is what You see first when You click on reaching data →

Research and development expenditure, by sectors of performance
% of GDP

online data code: TSC00001 last update: 20/01/2021 23:00 view: FULL

Research and experimental development (R&D) comprise creative work undertaken on a systematic basis in order to increase the stock of knowledge,

Source of data: Eurostat (RD_E_GERDTOT)

Information
Actions
Visualisations

Annotations:

- If you click on „More” you can have an explanation on the indicator (Same with „About this dataset”)
- You can download Data in different formats
- You can select the years for which you want to see data here.
- You can select the countries for which you want to see data here.
- In case of certain indicators there is e.g. a Sectoral breakdown available. You can switch to other sectors here.
- You can create Line or Bar graphs or Maps. To switch there, just select the right tool here.

Selection **Format** **Download**

Column **Row** **Page**

Time [12/12] 12 values displayed
Drag and drop here for breakdown

Geopolitical entity (reporting) [46/46] 46 values displayed
Drag and drop here for breakdown

Sector of performance [5/5]
All sectors

Time frequency: Annual Unit of measure: Percentage of gross domestic pr...

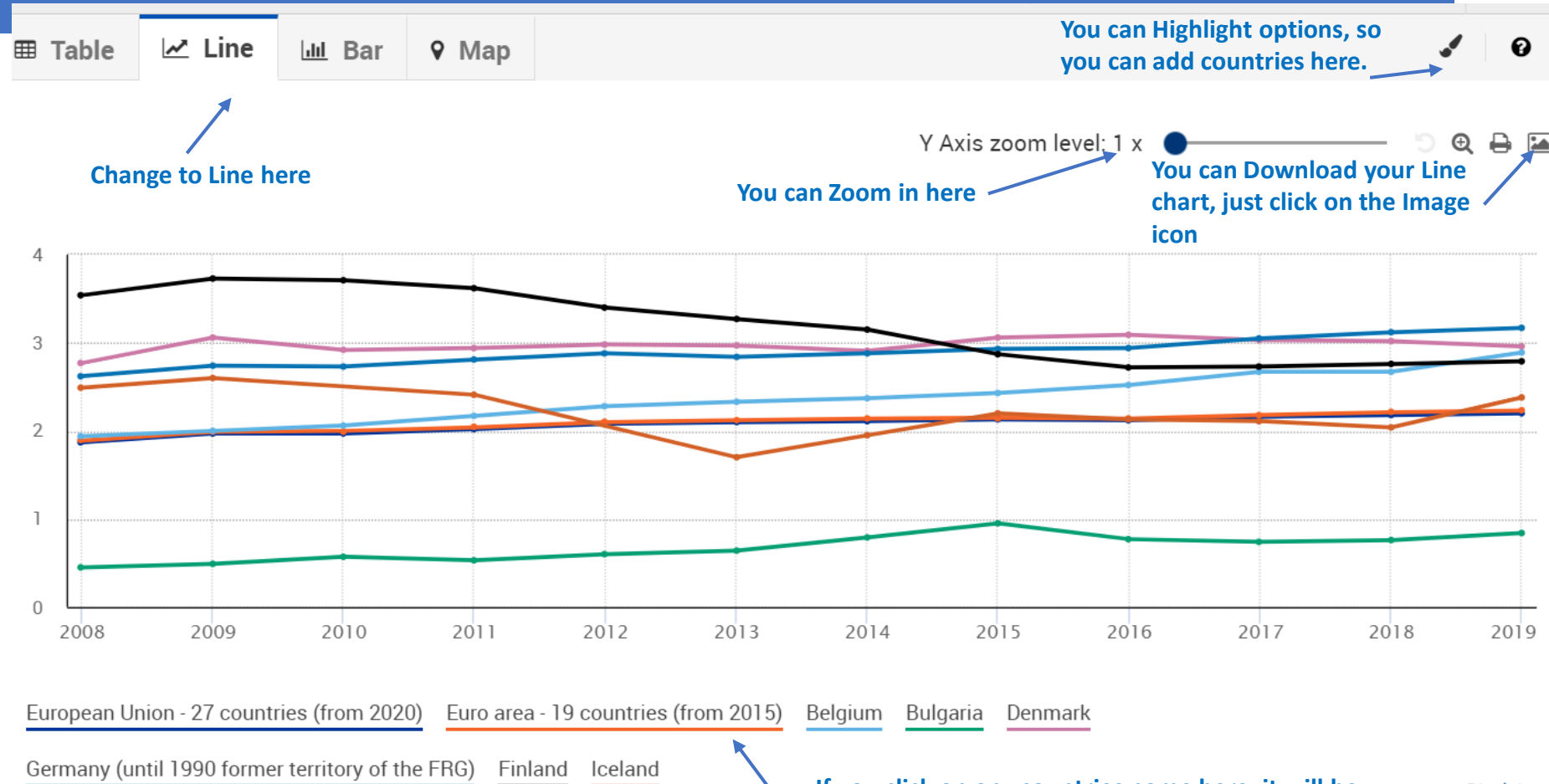
Research and development expenditure, by sectors of performance (online data code: TSC00001)
Source of data: Eurostat

Settings: Default presentation

Table **Line** **Bar** **Map**

↓↑	TIME	2008 ↓	2009 ↓	2010 ↓	2011 ↓	2012 ↓	2013 ↓	2014 ↓	2015 ↓	2016 ↓	2017 ↓	2018 ↓	2019 ↓
GEO	↓												
European Union - 27 countries (from 2020)		1.87	1.97	1.97	2.02	2.08	2.1	2.11	2.13	2.12	2.16	2.18	2.2 (p)
European Union - 28 countries (2013-2020)		1.83	1.93	1.92	1.96	2	2.02	2.03	2.04	2.04	2.08	2.11	2.14 (p)
Euro area - 19 countries (from 2015)		1.89	1.99	2	2.04	2.1	2.12	2.14	2.15	2.14	2.18	2.21	2.23 (p)
Belgium		1.94	2	2.06	2.17	2.28	2.33	2.37	2.43	2.52	2.67	2.67 (e)	2.89 (p)
Bulgaria		0.45	0.49	0.57	0.53	0.6	0.64	0.79	0.95	0.77	0.74	0.76	0.84 (p)
Czechia		1.23	1.29	1.33	1.54	1.77	1.88	1.96	1.92	1.67	1.77	1.9	1.94 (p)
Denmark		2.77	3.06	2.92	2.94	2.98	2.97	2.91	3.06	3.09	3.03 (p)	3.02 (p)	2.96 (p)
Germany (until 1990 former territory of the FRG)		2.62	2.74	2.73	2.81	2.88	2.84	2.88	2.93	2.94	3.05	3.12	3.17 (e)

Eurostat – Main tables



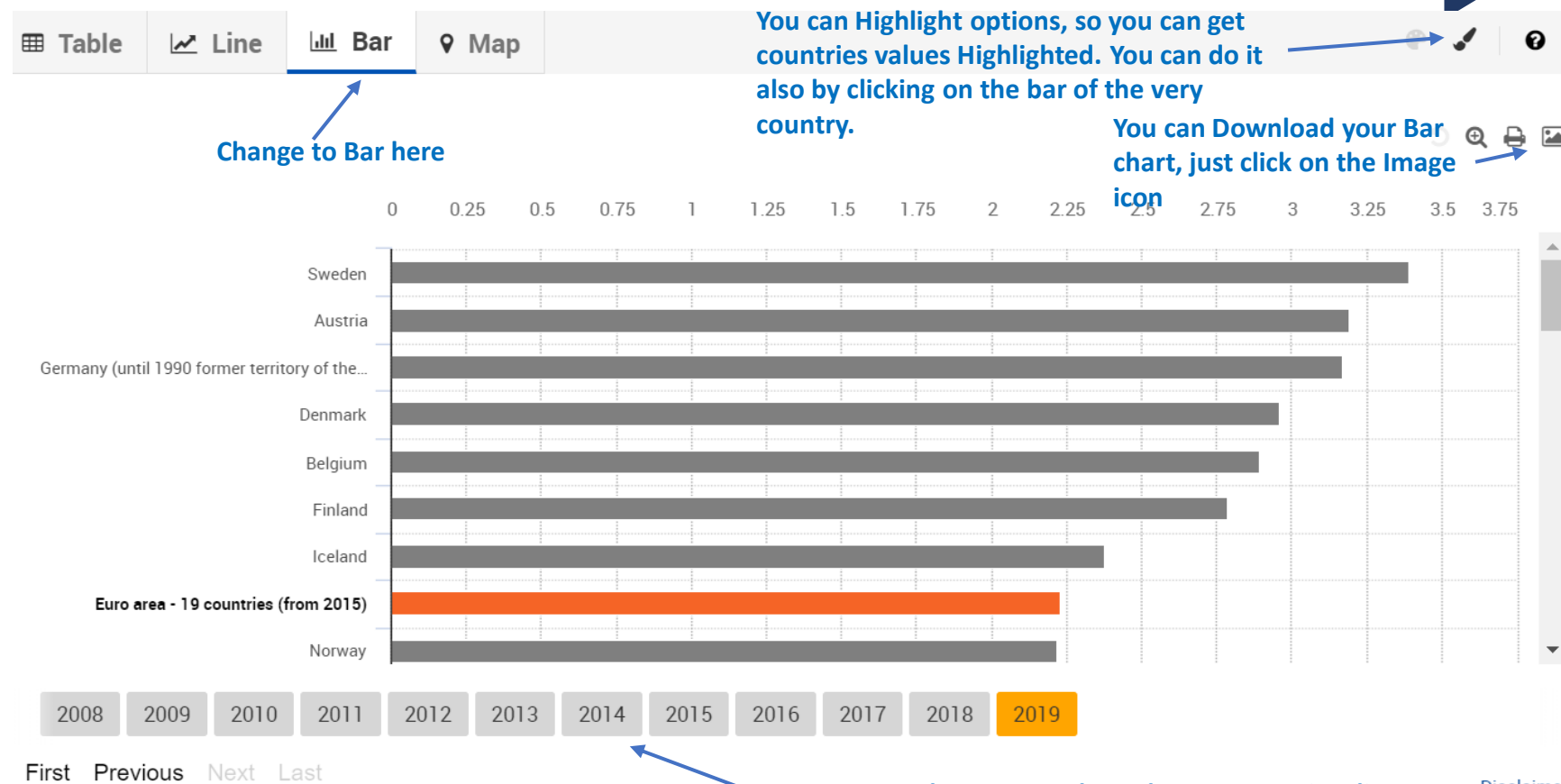
Disclaimer

Available here:
<https://ec.europa.eu/eurostat/web/science-technology-innovation/data/main-tables>

Creating Line charts

If you click on any countries name here, it will be Highlighted, it will pop out from the other countries

Eurostat – Main tables



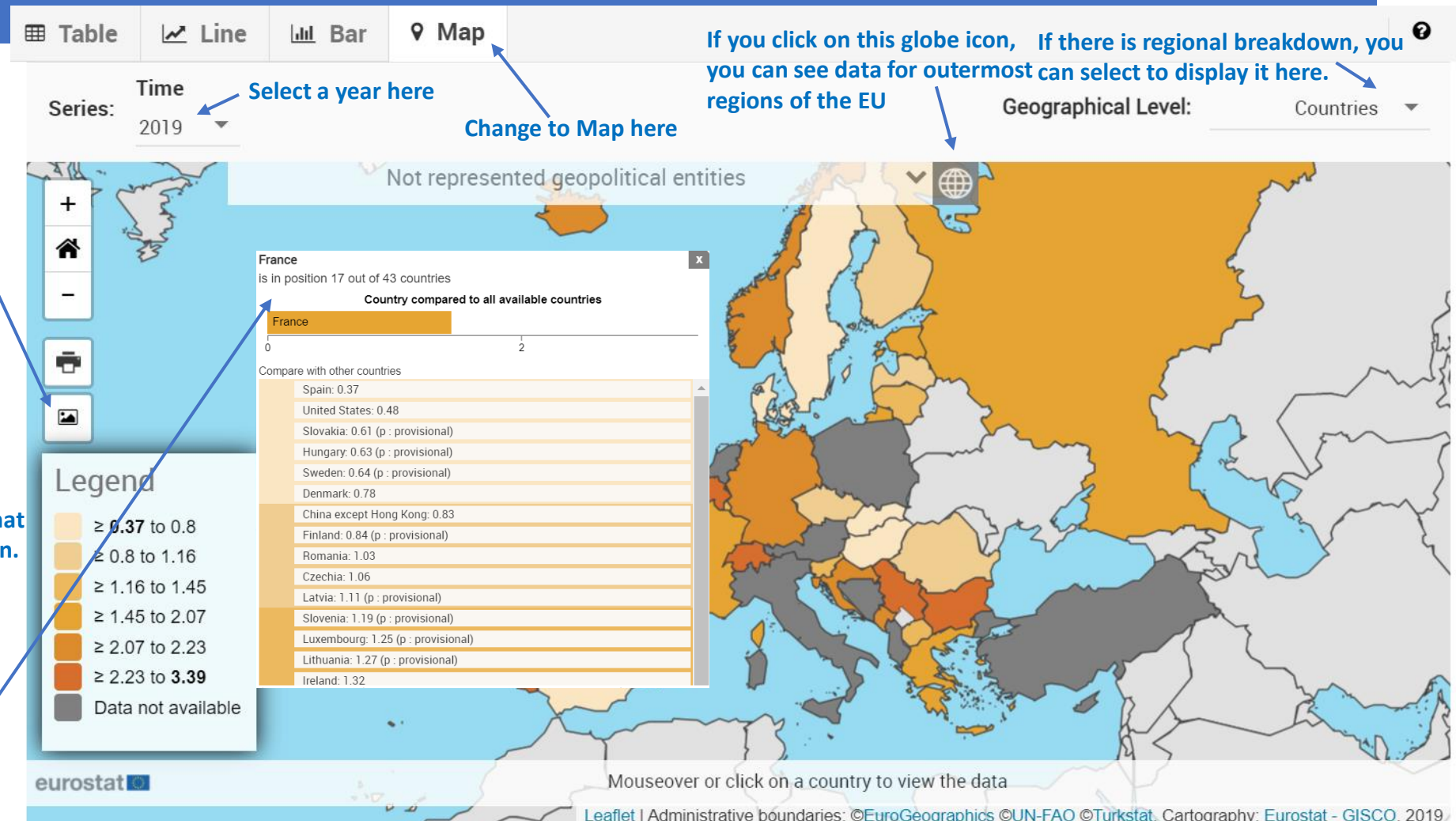
You can change years here, but you can visualize on year at a time only.

Disclaimer

Available here:
<https://ec.europa.eu/eurostat/web/science-technology-innovation/data/main-tables>

Creating Bar charts

Eurostat – Main tables



You can Download your Map chart, just click on the Image icon

Available here:
<https://ec.europa.eu/eurostat/web/science-technology-innovation/data/main-tables>

Creating a Map

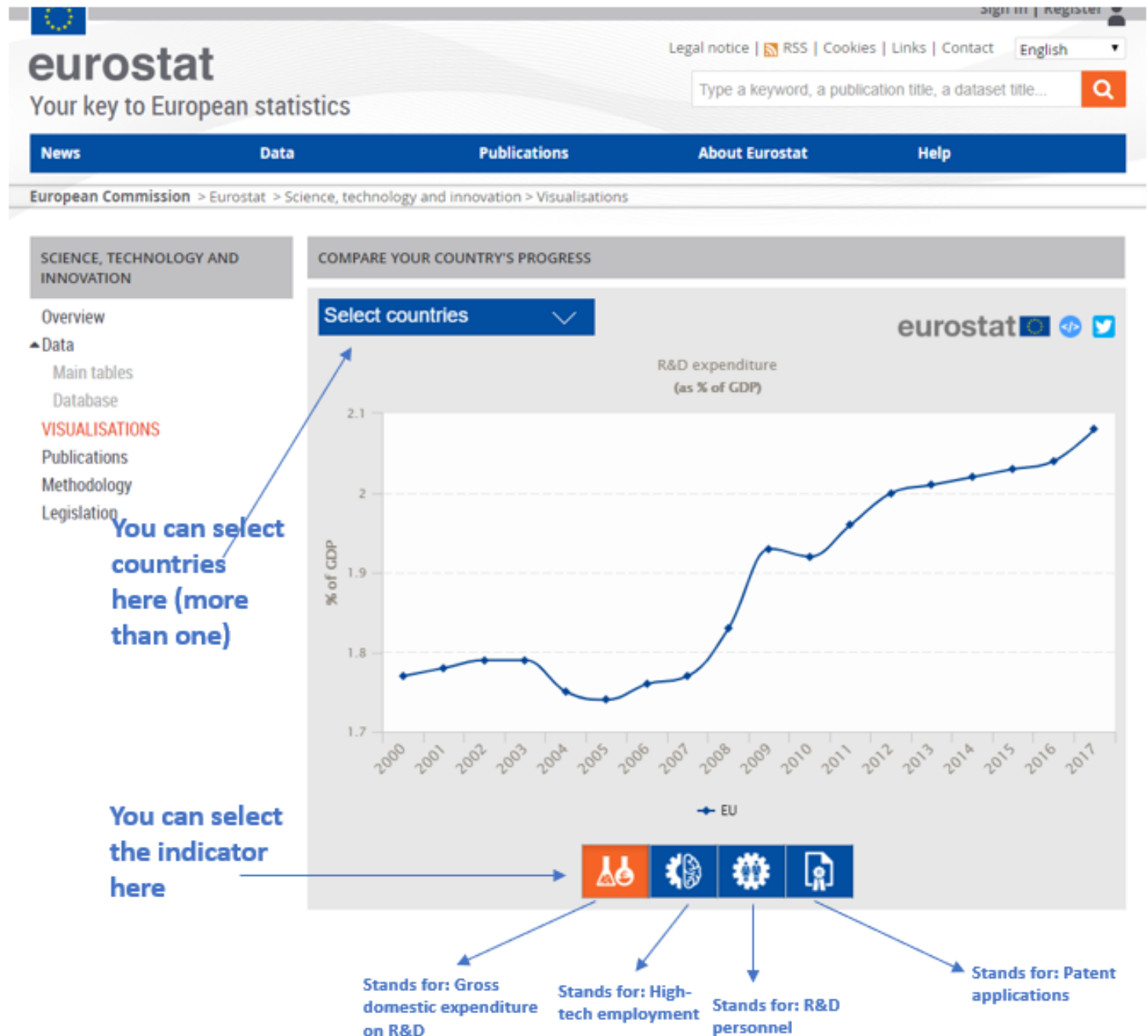
The Legend shows what different colours mean.

If you click on a country you can see detailed information e.g. its position and comparison with other countries

Eurostat – Visualization

Available here:

<https://ec.europa.eu/eurostat/web/science-technology-innovation/visualisations>



What can You use in Your presentation?

Any indicator that You find important/interesting

Indicators where there are big differences between the analyzed countries

Indicators where the country group highly differs from the rest of the EU

Examples for indicators used:

- R&D expenditure, even in sectoral breakdown
- R&D personnel, even in sectoral breakdown
- Women researchers' share, even in sectoral breakdown
- Regional breakdowns
- GERD by source of found
- Etc.

Anything else that you find relevant & interesting even if that is not from Eurostat

The contents or components of this lesson may be used only with prior written permission.

Thank you for your attention

pelle@eco.u-szeged.hu
tabajdi.gabriella@eco.u-szeged.hu

This teaching material has been made at the University of Szeged and supported by the European Union. Project identity number: EFOP-3.4.3-16-2016-00014

SZÉCHENYI 2020



HUNGARIAN
GOVERNMENT

European Union
European Social
Fund



INVESTING IN YOUR FUTURE