

Competence centre on composite indicators and scoreboards

COIN
 COIN Tool
 sound and reliable evidence guidelines
 composite indicators
 policy-making
 COIN Explorer
 scoreboards benchmarking monitoring
 complex phenomena
 online forum community of practice
 competence centre
 quality control training

If you would like to learn more about the activities of the European Commission's Competence centre on composite indicators and scoreboards (COIN), please contact:

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Joint Research Centre The European Commission's in-house science service

JRC mission

As the Commission's in-house science service, the Joint Research Centre's mission is to provide EU policies with independent, evidence-based scientific and technical support throughout the whole policy cycle.

Working in close cooperation with policy Directorates-General, the JRC addresses key societal challenges while stimulating innovation through developing new methods, tools and standards, and sharing its know-how with the Member States, the scientific community and international partners.

Serving society
Stimulating innovation
Supporting legislation

 **JRC Science Hub**
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The Competence centre on composite indicators and scoreboards (COIN) brings together scientific and analytical expertise that can be applied across policy areas. By doing so, it will help to ensure that all composite indicators are developed sensibly and used responsibly. 'Sensible development' of a composite indicator implies a quality control process based on both conceptual and statistical considerations. 'Responsible use' calls for care in drawing conclusions and recommendations without taking into account the conceptual context in which composite indicators were developed.

The Competence centre examines available methodology within its remit, and provides Commission services with quality-controlled tools that support the conception, implementation and evaluation of EU policy. COIN includes the provision of support and assistance to policy DGs, as well as technical training. Best practices are to be shared across services via communities of practice. Furthermore, COIN will strengthen and extend its strong networks with academia, external research organisations, and practitioners in other policy-making institutions to remain mainstream in its expertise and to provide the Commission with state-of-the-art scientific methodology.

The European Commission is committed to policy-making based on sound and reliable evidence.



Composite indicators

Composite indicators are aggregations of observable variables, which aim to quantify concepts that are not directly observable, such as competitiveness, freedom of press or climate hazards. The resulting figures facilitate country, region, or city comparisons and benchmarking. They help monitoring progress over time and evaluate ex-ante policy options based on multi-criteria analysis. Scoreboards of indicators have, to some extent, similar objectives to composite indicators, yet they do not consist of a mathematical aggregation of data.

Composite indicators are powerful practical tools that can help policy makers summarise complex and interdependent phenomena. They provide the big picture, are easy to interpret, easy to communicate, and attractive for the public. They are also drivers of behaviour and of change by forcing institutions and governments to question their standards. On the other hand, caution is needed to avoid situations where composite indicators may send misleading or partial policy messages because they are poorly constructed or misinterpreted.

The use of composite indicators and scoreboards for designing and monitoring policies has gained much interest in recent decades. The first composite indicator from the Commission dates back to 1987, while today the Commission services have developed more than 100 composite indicators and even more scoreboards, including the Europe 2020 Index, the Regional Human Development Index and the Regional Poverty Index of the Directorate-General for Regional and Urban Policy, and the European Innovation Union Scoreboard and the Small Business Act Principles of the Directorate-General for Internal Market, Industry, Entrepreneurship and SMEs among many others.

Towards a centre of reference

The JRC has worked on composite indicators since 2002. It now has international recognition as a centre of methodological expertise.

First Commission requests

- First JRC state-of-the-art report on composite indicators
- First Commission request to develop the Internal Market Index 1992-2001

Collaboration with the OECD

- Second JRC Annual Seminar on composite indicators jointly organised with the OECD

JRC-OECD Handbook

- JRC-OECD Handbook on constructing composite indicators is endorsed by the OECD high level statistical committee



First training and dissemination

- First JRC Annual Seminar on Composite Indicators
- Launch of composite indicators server – a Google top-hit for over 10 years

First request for JRC audit

- Environmental Sustainability Index by Yale University and Columbia University
- First academic paper on uncertainty and sensitivity analysis for composite indicators
Journal of the Royal Statistical Society

Competence centre launch

Current

- 100 requests for JRC audits received
- 50 trainings to Commission staff and partners
- Half of the 130 composite indicators developed or used by the Commission received JRC guidance
- Launch of the European Commission's Competence centre on composite Indicators and Scoreboards (COIN)

Examples of JRC support to EU institutions

- Innovation Output Indicator** – DG RTD
- Research Excellence in Science & Technology** – DG RTD
- Consumer Conditions Scoreboard** – DG JUST
- Consumer Markets Scoreboard** – DG JUST
- Europe 2020 Index** – DG REGIO
- Regional Human Development Index** – DG REGIO
- EU Multidimensional Poverty Index** – DG REGIO
- Index for Risk Management** – DG ECHO
- Banks' contributions to EU Single Resolution Fund** – DG FISMA
- Systemic Risk Country Heat Maps** – European Central Bank
- Small Business Act Principles** – DG GROW
- Youth Civic Competence** – DG EAC

Examples of JRC audits to partners

- Global Innovation Index** – Cornell University, INSEAD Business School, World Intellectual Property Organization (WIPO)
- Human Development Index** – UN Development Programme
- Child Poverty Indices** – UNICEF
- Global Talent Competitiveness Index** – INSEAD Business School
- ICT Development Index** – International Telecommunication Union
- Corruption Perceptions Index** – Transparency International
- Rule of Law Index** – World Justice Project
- Multidimensional Poverty Assessment Tool** – UN International Fund for Agricultural Development (IFAD)
- Alcohol Control Policies Index** – New York Medical School
- European Lifelong Learning Index** – Bertelsmann Foundation
- Environmental Performance Index** – Yale University, Columbia University
- Index of African Governance** – Harvard School of Economics

Quality assurance framework

The Joint Research Centre proposes a quality assurance framework for composite indicators with the goal of discovering useful information, suggesting conclusions, and supporting decision-making.

- 1 How to develop a conceptual framework that is easy to remember and apply
- 2 How to select suitable indicators that meet key criteria
- 3 How to conduct analysis to inspect, clean, transform and model data
- 4 How to map data on a common scale
- 5 How to weigh data to make more balanced decisions
- 6 How to aggregate data to reliably synthesise the maximum amount of information
- 7 How to use quality control tests to ensure that information is not lost in aggregation
- 8 How to assess the impact of the assumptions
- 9 How to make the most of an index by looking back at the data
- 10 How to visualise, interpret and communicate composite indicators

New tools and manuals in 2016

COIN Explorer

platform to visualise and combine dimensions from over 100 indices and scoreboards with Commission relevance

JRC-OECD guidelines

on constructing and interpreting composite indicators (follow up to the JRC-OECD Handbook)

International conference

on new methods for constructing, visualising and interpreting indices and scoreboards

COIN tool

Excel-based tool to assess some of the statistical and robustness properties of composite indicators

New training syllabus

modules for users and developers of composite indicators and scoreboards

Online forum

on indices and scoreboards actively moderated by COIN