JRC Week on Composite Indicators and Scoreboards

04-08 November 2019
JRC, Ispra - Italy
The Joint Research Centre (JRC) is the European Commission’s in-house science service. The Joint Research Centre’s mission is to provide European Union (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.

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, COIN helps to ensure that composite indicators and indicator frameworks are developed sensibly and used responsibly. ‘Sensible development’ of an indicator framework 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 and indicator frameworks were developed. The Competence centre examines available methodology within its remit, and provides European Commission services with quality-controlled multidimensional indicator frameworks that support the conception, implementation and evaluation of EU policies. COIN also includes the provision of support and assistance to international organisations and world-class universities as well as technical training. Best practices on developing and communicating multidimensional indicator frameworks are shared across services via communities of practice.

The JRC Week on Composite Indicators and Scoreboards is an annual five-day event during which local and international policy and decision makers, academics, think tanks, and practitioners in a wide range of fields learn from best practices and showcase their capacity to inform policies through the use of indicator systems that summarise multidimensional concepts.

Find out more at: https://composite-indicators.jrc.ec.europa.eu
JRC Week on Composite Indicators and Scoreboards
3 days

17th JRC Annual Training on Composite Indicators and Scoreboards

04 MON

05 TUE

06 WED

2 days

Composite Indicators and Scoreboards Community of Practice

07 THU

08 FRI
17th JRC Annual Training on Composite Indicators and Scoreboards

04-06 November 2019
The 17th JRC Annual Training on Composite Indicators and Scoreboards will offer lessons learnt from the JRC assessments on more than 100 well-known composite indicators and scoreboards. The training consists of presentations, Q&A sessions and a hands-on session using the COIN tool (Excel-based) for developing and statistically assessing a composite indicator or scoreboard. Participants will also have the opportunity to discuss their composite indicators/scoreboards and receive advice from the JRC.

The questions below and more will be explored during the training:

- What are the state-of-art methods to develop and audit indices and scoreboards?
- How much faith can we have in multidimensional frameworks and how can common pitfalls be avoided?
- How can indices and scoreboards better inform policy and be communicated to the wider public?
- What already successful tools can be further adopted?

Objectives

- To present the concept of composite indicators, strengths and weaknesses and domains of frequent use;
- To provide guidelines on the development of the theoretical framework and selection of indicators;
- To offer practical examples on the preparation of the data set, discuss the importance of the analysis of statistical coherence of the framework, the implications of the choice of the weighting and the aggregation method and the robustness and sensitivity analysis;
- To learn by best practices on how to ensure transparency and statistical soundness when developing composite indicators;
- To offer an Excel-based practical guide for the construction of composite indicators.

Target Group

Researchers, data and policy analysts with an interest on multidimensional indicator frameworks.
MONDAY | 04 November 2019

12:00  Registration & Welcome Lunch

13:00  Opening & Introduction
       Michaela SAISANA, European Commission, Joint Research Centre

13:40  Introduction to Statistical Terms
       William BECKER, European Commission, Joint Research Centre

14:00  Steps 1 & 2: Framework & Indicators
       Definition, added-value, multidimensionality, selection criteria for indicators
       Daniel VERTESY, European Commission, Joint Research Centre

15:30  Coffee Break

16:00  Step 3: Outliers & Missing data
       Outliers, winsorization, trimming, transformations (Box-Cox family)
       Giacomo DAMIOLI, European Commission, Joint Research Centre

       Missing data: mean/median, hot-deck, EM
       Marcos DOMÍNGUEZ-TORREIRO, European Commission, Joint Research Centre

17:00  Audit your index: The COIN tool
       An Excel-based tool for constructing composite indicators
       William BECKER, European Commission, Joint Research Centre

18:00  Welcome Cocktail

19:30  End of the first day
TUESDAY | 05 November 2019

09:00 Welcome Coffee

09:30 Mind stretching
Taking stock of day one

09:45 Step 4: Normalisation
Min-max, distance to best performer, z-scores, categorical, ranking
Maria DEL SORBO, European Commission, Joint Research Centre

10:20 Step 5: Data-Driven Weighting Methods (Part A)
Equal weights, Principal Component Analysis, Benefit of the Doubt (DEA approach)
Eleni PAPADIMITRIOU, European Commission, Joint Research Centre

11:00 Coffee Break

11:30 Step 5: Data-Driven Weighting Methods (Part A)
Benefit of the Doubt (DEA approach)
Giulio CAPERNA, European Commission, Joint Research Centre

12:00 Step 5: Participatory Weighting Methods
Budget allocation, Analytic Hierarchy Process
Beatrice D’ HOMBRES, European Commission, Joint Research Centre

12:45 Networking Lunch

14:00 Step 6: Aggregation rules
Generalized mean, median ranking, Borda, Outranking Matrix
Giulio CAPERNA, European Commission, Joint Research Centre
Marcos DOMÍNGUEZ-TORREIRO, European Commission, Joint Research Centre
15:30  Coffee Break

16:00  Audit your index: The COIN Tool
       An Excel-based tool for constructing composite indicators
       William BECKER, European Commission, Joint Research Centre

18:00  End of second day
WEDNESDAY | 06 November 2019

09:00 Welcome Coffee

09:30 Mind stretching
Taking stock of day one

09:45 Step 7: Statistical coherence
Correlations, cross-correlations
Pablo DE PEDRAZA, European Commission, Joint Research Centre

Principal component analysis, reliability analysis
Giulio CAPERNA, European Commission, Joint Research Centre

11:00 Coffee Break

11:30 Step 8: Quality control & Robustness
Pearson correlation coefficient, non linear Pearson correlation ratio, uncertainty and sensitivity analysis
William BECKER, European Commission, Joint Research Centre

13:00 Networking Lunch

14:00 Steps 9 & 10: Visualisation & Communication
Data visualisation
Carlos MOURA, European Commission, Joint Research Centre

Communication
Valentina ALBERTI, European Commission, Joint Research Centre

15:00 Coffee break

15:30 Audit your index: The COIN Tool
An Excel-based tool for constructing composite indicators
William BECKER, European Commission, Joint Research Centre

18:00 End of training
Composite Indicators and Scoreboards
Community of Practice

07-08 November 2019
Purpose and Scope

The purpose of the Community of Practice on Composite Indicators and Scoreboards (COINCoP) is to bring together policy analysts and researchers from the European Commission, international organisations, think tanks and the academia, to foster a practical exchange of experiences across a wide range of key policy areas that are monitored through composite indicators and scoreboards.

- **How should indices and scoreboards be used for policy and what should be avoided?**

- **How can indices and scoreboards be communicated to the wider public?**

The Community of Practice will facilitate collaboration between scientists and policy makers on the sensible development and responsible use of indices and scoreboards, encapsulating the ‘big picture’ on matters that are crucial for the European Union and helping to shape policy and monitor progress. It offers an ideal opportunity to share political and technical challenges in building multidimensional frameworks and stay up to date with the latest developments on composite indicators as well as on data visualisation tools.

This year’s Community of Practice meeting will feature presentations by over 20 speakers from international institutions such as the MIT, Yale-NUS College, World Economic Forum, OECD, Sustainable Development Solutions Network, Germanwatch, Equal Measures 2030, SRI International, among others. The discussion topics will focus on sustainable cities, energy transition, climate change, child wellbeing, African governance, gender equality and artificial intelligence.
THURSDAY | 07 November 2019

09:00  Registration & Welcome Coffee

09:30  Opening
       Michaela SAISANA, European Commission, Joint Research Centre

09:40  Session 1: Climate change and energy transition
       Moderated by: Ana Rita NEVES, European Commission, Joint Research Centre

       Climate Change Performance Index
       Jan BURCK, Germanwatch

       Energy Transition Index
       Harsh Vijay SINGH, World Economic Forum

       Indicator frameworks for the Energy Union
       Bogdan ATANASIU, European Commission, Directorate-General for Energy

11:00  Coffee Break

11:30  Session 2: Future and sustainable cities
       Moderated by: Eleni PAPADIMITRIOU, European Commission, Joint Research Centre

       The Future of Cities
       Carlo LAVALLE, European Commission, Joint Research Centre

       Cities in Motion Index
       Carlos CARRASCO, IESE Business School

       SDG Index and Dashboards for European Cities
       Guillaume LAFORTUNE, Sustainable Development Solutions Network;
       John DAGEVOS, Telos, Tilburg University

       Monitoring SDGs at local/regional level
       Marine SIVA, European Committee of the Regions
13:00 Networking Lunch

14:00 Session 3: Creative and inclusive cities
Moderated by: Francesco PANELLA, European Commission, Joint Research Centre

Senseable Cities
Fabio DUARTE, MIT Senseable City Lab

Cultural and Creative Cities Monitor
Valentina MONTALTO, European Commission, Joint Research Centre

Urban Environment & Social Inclusion Index
Angel HSU, Yale-NUS College

From data to local policy making
Giorgia BOLDRINI, City of Bologna, Italy

15:30 Coffee Break

16:00 Session 4: Africa: governance, integration and childhood
Moderator: Maria DEL SORBO, European Commission Joint Research Centre

Africa Regional Integration Index
Shamnaaz SUFRAUJ, United Nations Economic Commission for Africa
Simon MEVEL, United Nations Economic Commission for Africa

Ibrahim Index of African Governance
Yannick VUYLSTEKE, Mo Ibrahim Foundation

Child Friendliness Index
Negussie DEJENE, The African Child Policy Forum

End of Childhood Index
Doris MPOUMOU, Save the Children

17:30 End of the first day
FRIDAY | 08 November 2019

09:00  Registration & Welcome Coffee

09:30  Session 5: Artificial intelligence and economic complexity
Moderated by: Daniel VERTESY, European Commission, Joint Research Centre

  Artificial Intelligence Index
  Ray PERRAULT, SRI International

  Al Watch: the European Observatory for Artificial Intelligence
  Alessandro ANNONI, European Commission, Joint Research Centre

  Economic Complexity Index
  Alex SIMOES, Datawheel

11:00  Coffee Break

11:30  Session 6: Gender equality
Moderator: Lewis DIJKSTRA, European Commission, Directorate-General for Regional and Urban Policy

  Regional Gender Equality Monitor
  Eleni PAPADIMITRIOU, European Commission, Joint Research Centre

  Social Institutions & Gender Index
  Pierre DE BOISSÉSON, Organisation for Economic Co-operation and Development (OECD)

  SDG Gender Index
  Albert MOTIVANS, Equal Measures 2030

12:50  Closing
Michaela SAISANA, European Commission, Joint Research Centre

13:00  Networking Lunch
14:00  JRC optional tour
Tour #1: JRC Visitor’s Centre
Get to know the variety of research to support EU policies taking place at the JRC and engage in the many interactive exhibitions available.

Tour #2: JRC Makerspace
Discover the first Makerspace in an EU institution, a collaborative space designed to promote active participation, knowledge sharing, and scientific research through open-ended exploration and experimentation.

Tour #3: European Laboratory for Structural Assessment (ELSA)
Find out more about European research in structural and earthquake engineering and visit the ELSA Reaction Wall, one of the largest facilities in the world to test the vulnerability of buildings to earthquakes and other hazards.

15:30  End of the Community of Practice Meeting
Speakers
For more information on the speakers, lecturers and organising team please visit: bit.ly/jrcweekagenda
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 us by:

E-mail: jrc-coin@ec.europa.eu
Tel: +39 0332 78 6448
Web: https://ec.europa.eu/jrc/en/coin
https://composite-indicators.jrc.ec.europa.eu/

Links available from 4 to 8 November 2019:
Pose questions: www.slido.com | #jrcweek
Download presentations: bit.ly/jrcweekslides | 2019JRCweek!
The European Commission’s science and knowledge service
Joint Research Centre

JRC Mission
As the science and knowledge service of the European Commission, the Joint Research Centre’s mission is to support EU policies with independent evidence throughout the whole policy cycle.