

Wednesday, 08 November 2017

09:00 *Welcome Coffee*

09:30 Step 7: Statistical coherence (II)

(principal component analysis,
exploratory factor analysis, Cronbach
alpha)

11:00 *Coffee break*

11:30 Step 8: Quality control & Robustness

(Pearson correlation coefficient, non-
linear Pearson correlation ratio,
uncertainty and sensitivity analysis)

13:00 *Lunch break*

14:00 Steps 9 & 10

Visualization & Communication

(back to the data, radar plots,
scatterplots, heatmaps)

15:00 Interactive Q & A Session

15:30 *Coffee break*

16:00 Audit your index: JRC-COIN tool

(an Excel-based guide for assessing,
partially, the soundness of composite
indicators and scoreboards)

18:30 *End of training*

Joint Research Centre

The European Commission's
science and knowledge service

European Commission
Joint Research Centre (JRC)

Competence Centre on Composite Indicators and Scoreboards

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COIN 2017

15th JRC Annual Training on Composite Indicators & Scoreboards



Joint Research Centre,

06-08 November 2017

Ispira, Italy

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The **15th 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.

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 and policy analysts with an interest on multidimensional measures and multi-criteria analysis.

Lecturers & organising team

M. Saisana, W. Becker, G. Damioli, P. De Pedraza, M. Del Sorbo, B. D'Hombres, M. Dominguez-Torreiro, C. Ghisetti, V. Montalto, C. Moura, H. Norlen, F. Panella, S. Russo, D. Vertesy, M. Alvarez.

Venue

Joint Research Centre, Building 36, Amphitheater, via Enrico Fermi 2749, 21027, Ispra (VA), Italy.

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Monday, 06 November 2017

12:00 *Registration & Welcome Lunch*

13:00 **Opening & Introduction**

Sven Langedijk, Head of Unit

13:30 **Interactive Q&A session**

13:45 **Indices & Scoreboards: Ten steps guide**

(uses and misuses, framework, indicators, data treatment, weighting, aggregation, statistical coherence, communication, transparency)

14:30 **Steps 1 & 2: Framework & Indicators**

(definition, added-value, multidimensionality, selection criteria for indicators)

16:00 *Coffee break*

16:30 **Step 3: Outliers & Missing data**

(Outliers: winsorization, trimming, Box-Cox; Missing data: mean/median, hot-deck, EM, cross-sectional trend analysis.)

18:00 *End of first day*

Tuesday, 07 November 2017

09:00 *Welcome Coffee*

09:30 **Step 4: Normalisation**

(min-max, distance to best performer, z-scores, categorical, ranking)

10:15 **Step 5: Weighting methods (I)**

(statistical: principal component analysis, data envelopment analysis)

11:30 *Coffee break*

12:00 **Step 5: Weighting methods (II)**

(participatory: budget allocation, analytic hierarchy process)

13:15 *Lunch break*

14:30 **Step 6: Aggregation rules**

(generalized mean, median ranking, Borda, Condorcet, Copeland, Arrow-Raynaud, Kemeny)

16:00 *Coffee break*

16:30 **Step 7: Statistical coherence (I)**

(correlations, cross-correlations)

18:00 *End of second day*

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