

The OSLO and Frascati manuals

Valentina Chiariello

University of Naples “Parthenope” - DiSAE

Economics of innovation

Frascati Manual - Guidelines for collecting and reporting data on research and experimental development

The internationally recognised methodology for collecting and using R&D statistics, the **OECD's Frascati Manual** is an essential tool for statisticians and science and innovation policy makers worldwide.

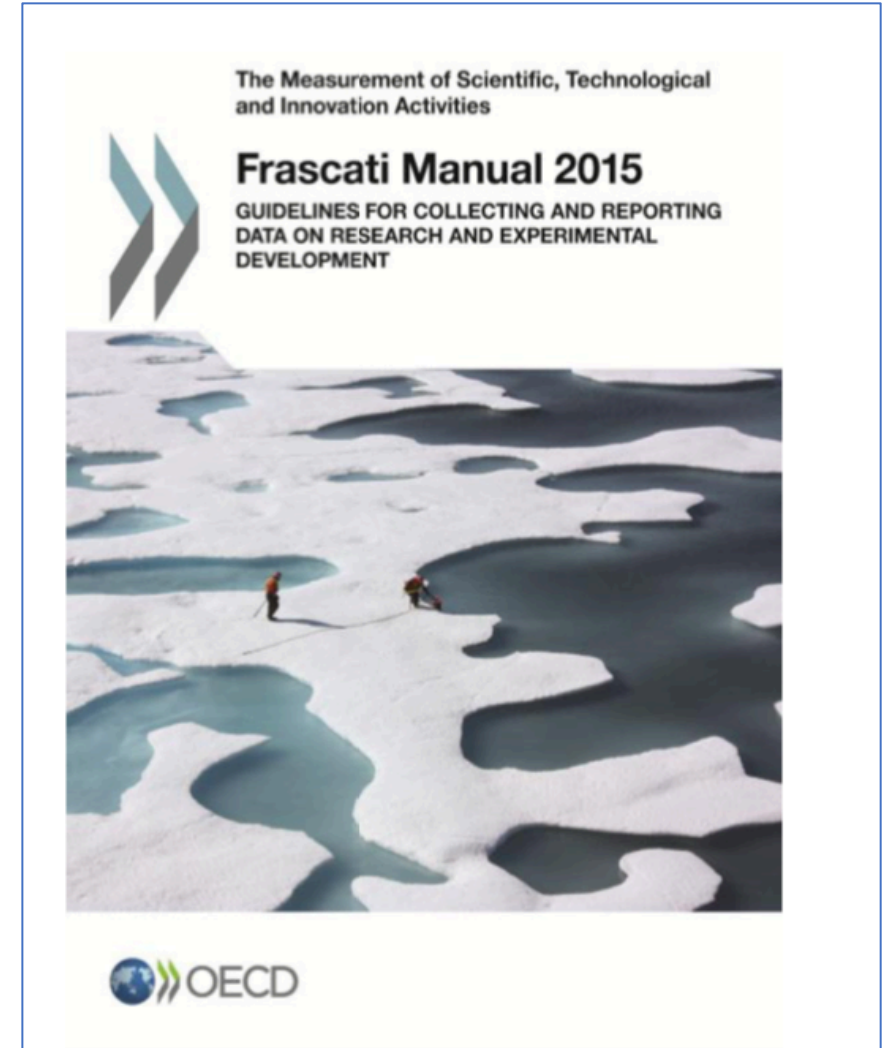
It includes definitions of:

- basic concepts,
- data collection guidelines,
- and classifications for compiling R&D statistics.

Why an OECD manual on R&D statistics?

Policy analysts and decision makers require data documenting the level and nature of human and financial resources that different countries, regions and institutions devote to such endeavour, as a first step towards learning how best to direct them towards desired objectives.

- ❖ Supporting these evidence needs through internationally comparable statistics, using a shared approach and a common language, is the main objective of the OECD's Frascati manual.
- ❖ The manual is a technical document, it is a cornerstone of OECD efforts to increase our understanding of the role played by science, technology and innovation and to analyse national systems of research and innovation.
- ❖ by providing internationally-accepted definitions of R&D and classifications, the manual contributes to intergovernmental discussions on good practices for science and technology policies.



How is R&D defined?

Research and experimental development (R&D) comprise creative and systematic work undertaken in order to:

- increase the stock of knowledge (including knowledge of humankind, culture and society)
- and devise new applications of available knowledge.

The manual provides a set of five core criteria to help survey practitioners and respondents identify whether their activities are consistent with this general definition.

What is the *Oslo Manual*?

The *Oslo Manual* provides guidelines for collecting and interpreting data on innovation.

- seeks to facilitate international comparability, and provides a platform for research and experimentation on innovation measurement.
- Its guidelines:
 - support national statistical offices and other producers of innovation data in designing, collecting, and publishing measures of innovation to meet a range of research and policy needs.
 - are also designed to be of direct value to users of information on innovation.
 - should be viewed as a combination of formal statistical standards, advice on best practices, as well as proposals for extending the measurement of innovation into new domains through the use of existing and new tools.
- A large number of countries and international organisations recognise the importance of innovation measurement and have developed capabilities to collect such data.
- The manual supports this coordinated effort in pursuit of robust, internationally comparable data, indicators and analysis.

Why a manual for measuring innovation?

Innovation is central to improvements in living standards and can affect:

- individuals,
- institutions,
- entire economic sectors,
- and countries in multiple ways.

Measurement of innovation and the use of innovation data in research can help policy makers to:

- better understand economic and social changes,
- assess the contribution (positive or negative) of innovation to social and economic goals,
- and monitor and evaluate the effectiveness and efficiency of their policies.

Why a manual for measuring innovation?

The purpose of the manual is to:

- guide innovation data collection;
- reporting efforts through a common vocabulary, agreed principles and practical conventions.

These can enhance the comparability of statistical outputs and support the progressive development of a global statistical information infrastructure on innovation that is relevant and useful for researchers and decision makers alike.

Why a manual for measuring innovation?

The *Oslo Manual*, jointly published by the OECD and Eurostat, is a key component of the series of measurement manuals produced by OECD under the title “*The Measurement of Scientific, Technological and Innovation Activities*”.

As part of this family of manuals, it addresses the need to reflect how innovation systems operate beyond a description of the efforts made to invest in new knowledge (captured in the OECD *Frascati Manual* on resources dedicated to R&D), or the numbers and characteristics of patented inventions (as covered in the OECD *Patent Statistics Manual*).

The *Oslo Manual's* key role

The *Oslo Manual* plays a key role in:

- demonstrating
- and communicating the multidimensional and often hidden nature of innovation.

However, there are several outstanding research and policy questions that call for extended and more robust data.

How are the guidelines intended to be used?

- The manual is a statistical resource that contains guidelines for applying concepts, definitions, classifications, taxonomies and statistical methods for collecting innovation statistics about the Business sector.
- The manual makes recommendations and identifies possible approaches for experimentation.
- Within the OECD context, the recommendations are not mandatory, but member countries are nonetheless expected to adopt the recommendations to the best of their ability.
- This is required in order to produce internationally comparable data that can constitute a global public information good on innovation.

How are the guidelines intended to be used?

- The manual allows for a significant degree of discretion on how different countries or groups of countries carry out their data collection activities.
- As measurement results are sensitive to the choice of survey methods, it is difficult to obtain international comparability without uniformity in data collection and reporting practices.
- Although uniformity is not feasible in an OECD or global setting, greater convergence in methods should be possible and aimed for.
- To this end, the OECD works with other international organisations and networks that support statistical capability development and the sharing of experiences on collecting innovation data.

How are the guidelines intended to be used?

Although not designed with this purpose in mind, the manual can provide a reference for:

- policy or regulatory uses, for instance linking policies to specific innovation activities and outcomes described in the manual.
- In addition, the adoption of its concepts and definitions by innovation managers and practitioners will facilitate data collection.