

The Application Context of Research Assessment Methodologies

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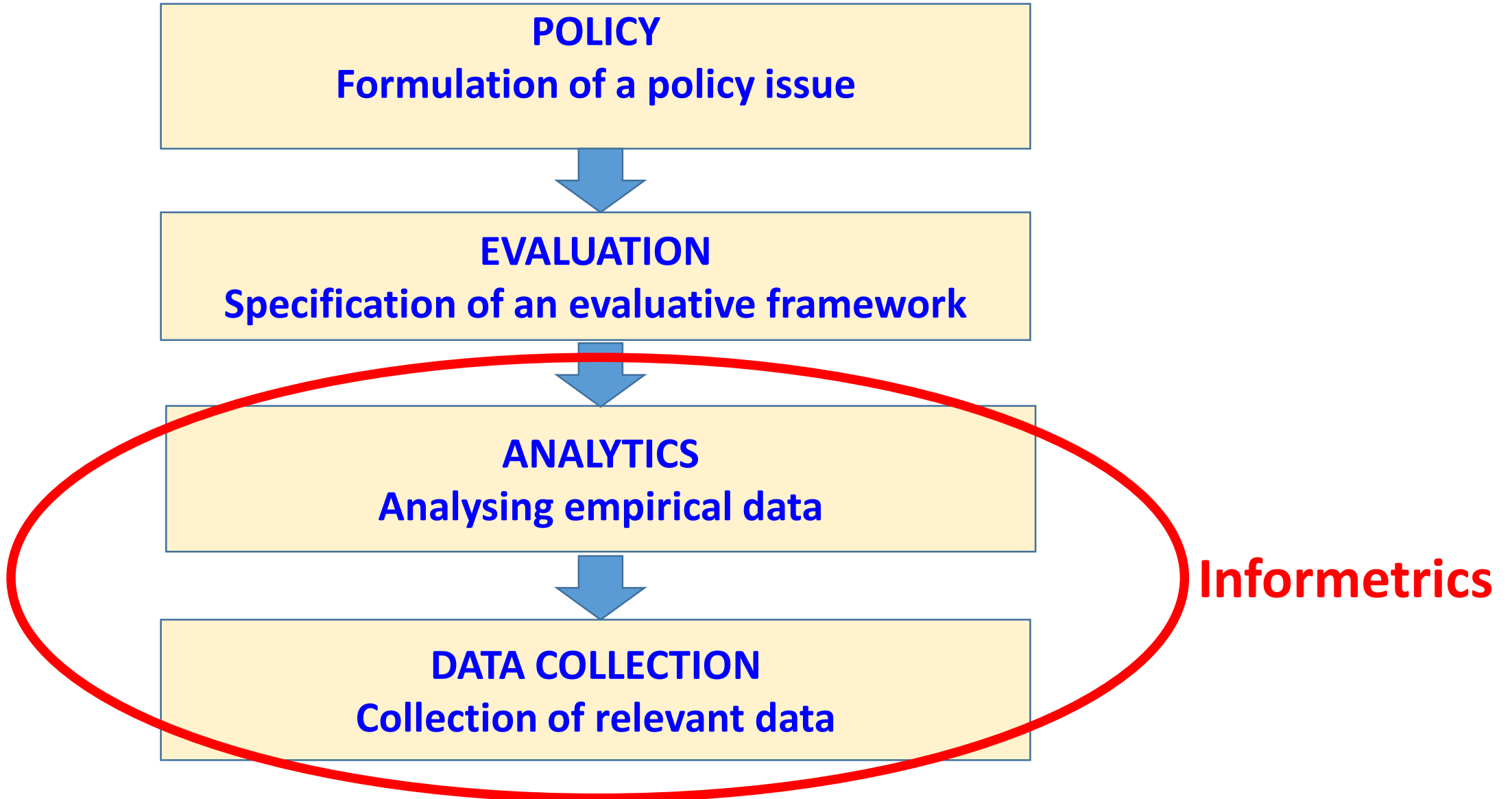
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Part 1:
Basic notions in applied evaluative informetrics

Four types of intellectual activity in research assessment



Examples of statements at the various levels

Informetrics (analytics, data collection)

- OA leads to higher citation impact

Evaluative framework, policy assumptions

- An open, multi-form scholarly communication system requires both OA and subscription-based (and hybrid) journals

Towards a methodologically “value free” informetrics

- A basic notion holds that from what **is** cannot be inferred what **ought to be**.
- **Evaluation** criteria and **policy** objectives are **not informetrically demonstrable** values.
- Informetricians should maintain in their informetric work a **neutral** position towards such values, and assign a hypothetical status to them
- In assessment processes more attention should be given to developing **evaluative frameworks**

Assessment of individuals, academic institutions and scientific-scholarly journals

- Calculating indicators of an **individual** and claiming they measure by themselves an individual's performance, suggests a *false precision*.
- University **rankings** are influenced by political premisses and objectives.
- “**Altmetrics** should not be used to help evaluate academics for anything important, unless perhaps as complementary measures” [Thelwall, 2014].
- The informetric evidence whether or not **journal impact factors** are good indicators of the quality of the peer review system and international orientation is equivocal

What does “false precision” mean?

- Performance of an **individual** and the citation impact of the **papers** he or she (co-) authored relate to two **distinct levels of aggregation**.
- Research is **team work**; multiple co-authorship is a rule rather than an exception, especially (but not exclusively) in the **natural and life** sciences.
- The crucial issue is how one should relate the citation impact of a **team's** papers to the performance of an **individual** working in that team.
- This issue **cannot merely** be solved in an **informetric** way (e.g., fractional counting; considering author sequence; formal statement on author contributions).

New indicators of the manuscript peer review process

Combine **classical** humanities and **computational** linguistics methods to analyse **referee reports**

Research issues:

- Degree of **consensus** among peer reviewers
- **Differences** between humanities and science
- Indicators of the **formative/summative** nature of evaluations
- Indicators of reviewer's **thoroughness** and **impartiality**?

Several publishers open their submission archives for research under strict conditions

Part 2:

A multi-level model for the use of metrics in academic
evaluation and policy

Multi-level assessment model

Data

Elaboration

Policy issue

National

Institution

Indicators
of groups &
individuals

Statistically
aggregate per
institution

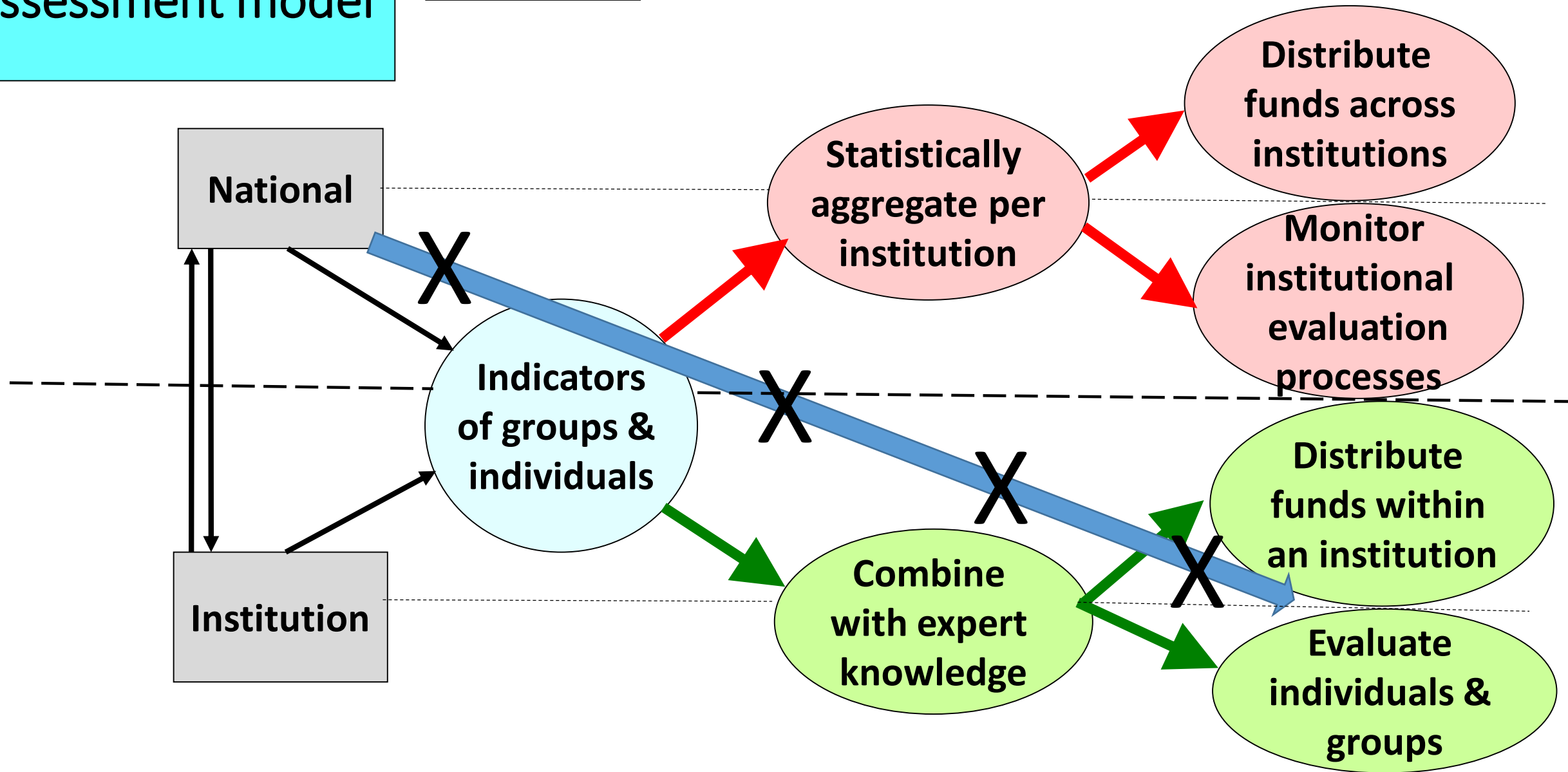
Distribute
funds across
institutions

Monitor
institutional
evaluation
processes

Distribute
funds within
an institution

Combine
with expert
knowledge

Evaluate
individuals &
groups



Institutional level:

Evaluates individuals and groups; distributes funds among groups

- Making proper evaluations and informed decisions about individual units within a university requires **background knowledge**:
- About units of assessment, their fields, institutional context, and about **strengths and pitfalls** of indicators.
- This knowledge may **not** be **well reflected** in informetric **indicators....**
-and therefore may be **unknown** to external entities operating at a **large distance** from an institution.

Supra-institutional level:

Assesses internal **processes**; distributes funds among institutions

- An **independent** entity **marginally tests procedures** along which institutions reach qualitative judgments and internally distribute funds among departments or groups
- In such tests, indicators may constitute a source of information, but it is **not** the position of an **individual** unit within an institution that is at stake, but the **defensibility** and the **effectiveness** of the overall process of quality control of the **institution as a whole**.

Multi-level assessment: Conclusions

- The **supra-institutional** entity acknowledges that it is the primary responsibility of the **institutions themselves** to conduct quality control.
- It stimulates institutions to **profile** themselves on the basis on how they define and implement a **notion** as complex as academic **research quality**.
- As a **necessary condition**, institutions should make next steps in the organization of their **internal quality control** and funding procedures.
- Informetricians should **communicate better** with potential users about the **informetric component** of assessment processes and its **evaluative and political** assumptions

Part 3:

A new journal for a wide scholarly and policy audience:

Scholarly Assessment Reports

Scholarly Assessment Reports: Scope and mission

- The journal publishes for a **broad scholarly audience** and for the **policy** domain articles and reports on the quantitative or qualitative assessment of scientific-scholarly activity, performance and communication.
- The mission of this journal is to enhance among a wide scholarly and policy audience the knowledge on the **potential and limits** of scholarly assessment methodologies.
- Its aim is to establish optimal conditions for an **informed, responsible, effective and fair** use of such methodologies and their metrics in actual scholarly assessment practices.

Scholarly Assessment Reports: Publication details

- *Publisher*: The journal is published by Levy Library Press (LLPP), owned by the Levy Library of the Mount Sinai School of Medicine, New York, USA.
- *Licenses*: All content is released under open licenses from Creative Commons.
- *Publication Frequency*: The journal is published online as a continuous volume and issue throughout the year.
- *Access modality and business model*: The journal is fully Open Access, and charges article processing costs (APC) upon publication of a manuscript. The APC depends upon article type, and amounts on average to 500 US\$.
- Technical handling and editing is carried out by Ubiquity Press.
- The publisher is willing to allocate a budget to financially support the launch of the journal, and to subsidize APC costs of at least 20 papers published during the first year.
- Submission site open: 1 October 2019. First papers published: As from January 2020.

List of papers in first issue (preliminary)

Nr	Name	Institution	Preliminary / suggested subject or title
1	Gali Halevi	Mt Sinai Sch Medicine, USA	Tracking diversity through publications – case of Mount Sinai Health system
2	David Pendlebury	Clarivate Analytics, USA	Contextual research evaluation of individuals through mapping
3	Michael Khor	Nanyang Technological Univ, Singapore	A critical assessment of technological advancement: what can bibliometrics analysis reveal?
4	Henk Moed	Sapienza Univ Rome, Italy	An integrated model for the use of bibliometric indicators in academic policy
5	Mike Thelwall	Univ. Wolverhampton, UK	The pros and cons of the use of altmetrics in research assessment
6	Lutz Bornmann	Max Planck Ges., Germany	Bibliometrics-based heuristics in decision making processes
7	Marc Luwel	NFAO, Belgium/Netherlands	Academic research assessment and funding in Flanders: A useful model for other countries?
8	Wolfgang Glanzel	KULeuven, Belgium	Statistical quality of indicators: What does it mean, and how can it be assessed?
9	Aparna Basu	Formerly Emeritus Scientist, NISTADS, India	The emerging role of India and China in global science : opportunities and lessons to be learned
10	Rodrigo Costas	CWTS, Univ Leiden	Does Mendeley offer useful research assessment tools?

Scholarly Assessment Reports: article types

Document Type	Details
Short communications	2,000-4,000 words.
<i>Method Reports</i>	Reports on new methodological developments informing a wide audience on the assessment- and policy-relevant aspects of these developments.
<i>Application Reports</i>	Critical reports on actual assessment practices are written by policy officials, evaluators or evaluated researchers.
<i>Country, Field, Institution Reports</i>	Reports on the outcomes of assessment studies on particular countries, research fields, institutions or other entities, of interest to a wide audience.
Full research papers	3,000-6,000 words. The basic element is the theoretical development of a research hypothesis, and its empirical evidence or theoretical validation.
Multi-disciplinary research-in-progress articles	Up to 5,000 words, presenting original research of a multi-disciplinary nature, showing novel approaches combining findings or methods from different disciplines.
Commissioned reports or reviews	Up to 8,000 words, provides state-of-the-art reviews for a wide audience presenting critical discussion of methodological developments or assessment practices.

I am grateful to the Sapienza University of Rome and especially to Magnifico Rettore prof. Eugenio Gaudio for conferring to me a doctorate honoris causa today