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“Towards STI indicators for inclusive development”

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Some reflections on what and how regarding STI indicators for inclusive development

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Point of departure

- The birth of science was related to measurements and, moreover, with the analysis of errors in measurements.
- Today, more and more intellectuals, scholars, specialists and just researchers are worried because they observe that measurements and, moreover, the lack of awareness of errors in measurements, seem to lead to trivialization, narrowing of scope, de-biodiversification of the intellectual endeavor of research.
- There are claims for alternatives; they are politically weak, but at least, alternative perspectives are put forwards .
- When it comes to science, technology and innovation for inclusive development, current STI indicators may be even more damaging than they are for STI tout court.
- What alternative indicators in this case may look like?

The issue of aims

What are our aims when designing STI indicators for inclusive development?

To fix ideas: we may understand “inclusive development” as a process of human and sustainable development where nobody is left behind and people are agents, no patients

Our aims are:

- (i) To highlight the kind of STI efforts **and** of STI outcomes related to inclusive development (unearth them from current invisibility)
- (ii) To foster efforts** and prize results of STI oriented towards inclusive development

These are related issues but they are not identical and deserve analytical differentiation

The issue of specificity

**What does it imply a process of inclusive development
in STI terms?**

Indicators should stem from aims and address the following issues:

- (i) The research agenda (what problems are addressed, what questions are put forward). Not letting anybody behind
- (ii) The building of the research agenda (who participate in the definition of what problems and what questions are taken on board). People are agents, no patients

Again, these issues are related but need to be differentiated analytically

What dimensions should be assessed?

- Fitness to inclusion
- Inclusiveness of the research/innovation methodology
- Recognition by “policy actors” of the importance of the knowledge to be acquired for inclusive development
- Localness of the research/innovation problem

What indicators may approximate such assessment?

- What should they measure? In which type of information should they be built?
- What values (qualitative or quantitative) should they take?
- What criteria should be used to assign values to them?

The issue of possible misalignments between research and inclusive development

It may be misalignments between STI activities aimed at inclusive development and the inclusiveness that can reasonably be expected from them, for quite different reasons

So, we need indicators to assess the fitness to inclusion of STI activities.

Related questions:

Is the knowledge to be acquired necessary to help solving a problem that difficult or hampers social inclusion? If yes, to what extent STI activities explore the universe of “un-done science”?

When the results may be expected to be applicable? On what grounds the time such activities would take is justified?

Indicators of fitness to inclusion

1. Expert opinions
2. Perspectives of stakeholders (those directly involved in the problems or acting on behalf of them): to what extent they recognize the problem as “their” problem?; to what extent they recognize that the knowledge to be acquired is missing to help solving the problem?
3. Directedness: when will results bear fruit? How is the time frame for research justified?

What should indicators measure/assess? Opinions of experts; opinions of stakeholders

What values should they take? High, medium, low, qualitatively stated

What criteria should be used to assign values to them? The judgement of the assessment group charged to take decision on research support

The issue of inclusiveness of the research/innovation methodology

It may be that the research aimed at inclusive development is not inclusive enough in terms of driving and making room for the participation of the people or actors involved in the problems to be addressed

So, we need indicators to assess the inclusiveness of the research/innovation methodology.

Related questions

Do the stakeholders have participation in the conceptualization of the problem? Have they a say in the importance for them of the foreseen results? Is the planned communication of results efficient in terms of being understandable for stakeholders or are they only peer-to-peer communication?

Indicators of inclusiveness of the research/innovation methodology

1. Level of the programmed dialogues (levels of stakeholders participation in the process of building the problem, expected involvement during the research process)
2. Strategies of communicating results

What should indicators measure/assess? The quality of the programmed “user-producer” interactions in the process of knowledge production; the adequacy of the communication of results strategy

What values should they take? High, medium, low, qualitatively stated

What criteria should be used to assign values to them? The judgement of the assessment group charged to take decision on research support

The issue of the policy recognition of the importance of the knowledge to be acquired for inclusive development

It may be that (i) even if the knowledge to be produced is related to problems that have been recognized by stakeholders and (ii) it fits well to these problems, the compromise of those with the power to address the solutions by using the new knowledge available through research is weak

So, we need indicators to assess the policy recognition of the importance of the knowledge to be acquired for inclusive development

Related questions:

Have the actors with policy possibilities (and legitimacy) to transform the new knowledge into applications a strong commitment to do it? Are all the relevant decision makers been taken into account?

Indicators for the policy recognition of the importance of the knowledge to be acquired for inclusive development

1. Level of acknowledgement on the importance of the problem by those with capacity to use the results to foster inclusive development (who are they?)
2. Soundness of the political compromise of the latter to implement the obtained results and to provide the needed requirements

What should indicators measure/assess? The willingness of institutions with power decision to implement the results obtained to foster inclusive development

What values should they take? High, medium, low, qualitatively stated

What criteria should be used to assign values to them? The judgement of the assessment group charged to take decision on research support

The issue of (perhaps excessive) localness of the research/innovation problem

It may be that the knowledge produced and the problems identified are like a “single issue” vindication: too narrow to be really centrally related to inclusive development. It may also be that the design of the research does not lead to possible scaling-up of solutions

So, we need indicators to assess the (perhaps excessive) localness of the research/innovation problem

Related questions:

What is the extent of “generalization” or “uniqueness” of the problems to be addressed? Are the requisites to scaling-up the solutions to which the research may lead easily fulfilled or solutions will remain “single”?

Indicators for localness of the research/innovation problem

1. Possibilities of scaling-up solutions for the same group of problems
2. Dimension of the problem (in terms of the size of the affected population and the barrier to inclusive innovation it entails)

What should indicators measure/assess? Opinion of experts

What values should they take? High, medium, low, qualitatively stated

What criteria should be used to assign values to them? The judgement of the assessment group charged to take decision on research support

In which situations can these indicators be applied?

- These are a set of “ex-ante” indicators, useful to the evaluation of research proposals
- They are process indicators and context indicators
- The impacts of the results may only be guessed from the combination of the indicators

Two more questions

What about the academic quality of the proposals?

What about researchers' evaluation strategy under the umbrella of inclusive development?

Give them enough time to work; do not count how many papers they publish; be extremely serious in analyzing the efforts to co-produce knowledge; be extremely strict in assessing the quality of the strategy of communication of results

It is true that these indicators lead to few numbers

But if we take into account what Lewis Mumford reminded us...

“In time-keeping, in trading, in fighting men counted numbers; and finally, as the habit grew, **only numbers counted.**” (*Technics and Civilization*: 22)

...relying on reasoned analysis of people narratives to form opinion on STI activities aiming at inclusive development may be a valuable countervailing trend.