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Measuring and Monitoring Sustainable Development

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Thought piece on measuring, monitoring and innovation

Measuring and monitoring activities take a leading role at the time of justifying a goal, a project, a program and even the existence of an organization. The success or failure of the Sustainable Development Goals (SDGs) will be determined by this. However, it is necessary to change the paradigm about measuring and monitoring towards a more critical way, enhancing discussion and exploring opportunities for innovation in the field.

Measuring and monitoring tools have expanded everywhere, from scientific to political, to organizational spheres. Do they actually matter? To what extent? And how must they be continuing to play a role within the decision-making specter? An important aspect that is often problematic about this tools, is that even when they help to obtain "hard" data (numbers) "facts", they mostly rely in subjective construction, interpretations and applications. This subjectivity brings several issues to the reliability of the data it produces. Even in the universal nature of the SDGs, subjectivity poses as a major threat. However, as technology keeps thriving and knowledge spreading, measuring and monitoring have a large range of opportunities to better contribute to decision-making processes.

A big leap for innovation in this field, but more importantly, for spread of innovation, is needed. Measurement in a way, shapes how we live, how we work, how we succeed. It leads the way policy makers define courses of action within a government. Key Performance Indicators are present in most of the companies throughout the world. Indicators about global health, global environmental impact and even global happiness determine the success or failure of our current societies. If measuring is ubiquitous and so determinant, but yet so subjective and imperfect, what can be done for innovating in this realm?

Using technology for minimizing subjectivity and learning from mistakes

Network innovations, particularly in softwares, have considerably increased for the past years. They analyze how different actors can better interact among them to throw better results. This kind of softwares are often developed for complex systems, as they take into consideration different scenarios, actors, data, etc. The uses of this analytic tools are unlimited, and measuring and monitoring tools can be potentially benefited from this. Taking automata networks as an example, have the potential to enable complex systems to be described quantitatively, as put by Weisbuch (1991). Automata data has evolved in computing systems that allow multi-level data put into concurrence.

Without aiming on elaborating on this idea, two key factors about network

innovations relate to measuring: complexity and predictability. Concepts and indicators arise from a complexity of systems, that these concepts and indicators are not always capable of reflecting. Numerous indicators are brought to the table without actually reflecting what they intend to measure. As a result, a misleading conclusion is made, and impacts misinterpreted. As the nature of the mentioned softwares is complexity, it could potentially help measuring tools to better incorporate the complexity factor into indicators, for example. Softwares could take different factors as inputs before analyzing the best way for being measured, or perhaps determine the best indicator that measures a performance.

Secondly, several softwares, some related to machine learning, are made to learn from patterns that usually work. They identify which patterns derive in a given scenario and what which other patterns lead to a different one, to put it in a simplistic way. By classifying, analyzing and sequencing, the softwares "learn" what a combination of factors can derive in. If a given indicator has been used over time, why not "testing" its effectiveness through the predictability of a complex system tool? They could measure the effectiveness of a given indicator throughout a period of time. This could help to build more effective indicators that actually work on showing more trustworthy results. It is worth to mention, that however this tools have been used in social sciences, their further applications are yet to be tested.

Increasing acknowledgement of systemic interrelatedness, as Ahlqvist and Rhisiart (2017) point out, and the complexity of social issues; make this technological innovation in the social field relevant, and further efforts to deepen in it would open new ways of collaboration among technocrats, social scientists, entrepreneurs, policy-makers, etc. If we want to improve the accuracy of measuring tools, why not take this into consideration?

Is technology enough?

Let alone the technical viability, even when the use of technology could be an appealing idea, there is no incentive for using it if current measurement techniques enables everyone to shape indicators at will. What then? Discussions as those arose by Paul Carney[1] on how to close the gap among academics and policy makers, must be further enhanced.

The different motives for which measurement and monitoring are used, as well as its functionality and relevance, are discussions that must be disseminated throughout and between different disciplines and individuals. The result of these discussions might boost the search for innovating in measuring. As this is an intersectoral and interdisciplinary practice, an amount of organizations and individuals could be greatly benefited.

This would ultimately lead to a change of paradigm that would consider measuring as part of a process that needs to be improved, instead of just a means to validate or invalidate a statement, fact, project, etc.

While measurement will continue to be important to show how certain progress

[1] Paul Cairney on The Science of Evidence-based Policymaking

has been made (or not), a change of mindset is needed as for the objective of measuring, which is ultimately, improving. There are many opportunities for achieving this, as measuring is a practice spread throughout every field in every level, but can be boosted through technology. However, a change of paradigm is needed for enhancing innovation and ultimately make measuring tools more pertinent and accurate in every field.

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