Creating an Encyclopedia of Innovation Indices

Currently in the United States, no overarching measure of innovation exists, although multiple organizations and government agencies produce indices of their own according to their own criteria. These data are often limited in their scope (e.g., by focusing strictly on the technology sector) are not readily available, or present a particular perspective based upon editorial priorities. Each of these measures is valuable, however, for different audiences and different purposes. Therefore, creating an encyclopedia of indices will present a broadly defined perspective of innovation that characterizes the state of innovation in the United States and that gives local agencies and policy makers the opportunity to define innovation in a way that best suits their local contexts.

1. BACKGROUND

Currently in the United States, various measures exist that characterize innovation in myriad ways. For example, the NSF Business R&D Innovation Survey (BRDIS) addresses about 1.5 million firms and asks companies if they have introduced new or significantly improved products or processes. Other U.S. government reports preceded BRDIS and sought to outline philosophies of measurement, including the 2005 report from the Council on Competitiveness for Measuring Regional Innovation[1] and the 2008 report from the Advisory Committee on Measuring Innovation in the 21st Century Economy "Innovation Measurement: Tracking the State of Innovation in the American Economy"[2]. The former "outlines a process for collecting data on key measures of innovation that can then be used to drive regional economic development policies and programs," and the latter recommends "ways to improve the measurement of innovation in the economy."

Partly following the theory outlined in these documents and others, many groups, both public and private, have produced measures of innovation. For example, the state of North Carolina produces a comprehensive report on innovation for that state by collecting data every three years and creating a comparative report card that ranks North Carolina against other states on more than 30 indicators ranging from the percentage of those who hold a doctorate to venture capital expenditures in the state.[3] Likewise, the "Illinois Innovation Index" measures technology-based activity in that state on a quarterly basis and other regions conduct similar research for their areas.[4]

Additionally, a host of private organizations rank innovation based upon their particular definitions or perspectives. For example, MIT's Tech Review ranks the 50 most innovative companies[5], The Scientist ranks the year's top innovations[6], and multiple publications such as Fast Company[7], Forbes[8], Bloomberg[9], and Thomson Reuters[10] produce various rankings of innovation all reflecting their individual editorial priorities.

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[1] http://www.compete.org/storage/images/uploads/File/PDF%20Files/Regional_Innovation_Guidebook.pdf

[2] http://www.esa.doc.gov/sites/default/files/innovation_measurement_01-08.pdf

[3] https://www.nccommerce.com/sti/resources/innovation-reports

[4] http://www.illinoisinnovation.com/innovation-index/

[5] http://www.technologyreview.com/lists/companies/2015/

[6] http://www.the-scientist.com/?articles.view/articleNo/41486/title/Top-10-Innovations-2014/

[7] http://www.fastcompany.com/section/most-innovative-companies-2015

[8] http://www.forbes.com/innovative-companies/list/

[9] http://www.bloomberg.com/graphics/2015-innovative-countries/

[10] http://top100innovators.com/

Outside of the United States, there are efforts to measure and compare innovation across countries, such as the Oslo Manual[11] or the Global Innovation Index[12], which might offer methods useful for a specific location to measure its own level of innovation.

In short, within the United States and across the world, dozens of indices exist yet no encyclopedia catalogs them all nor comments on their (1) applicability or usefulness in particular circumstances, such as at certain levels or within specific geographies; (2) philosophical perspective; and (3) prevalence across other reports. Policy makers are left to sift through the measures that they can find, hoping that they will uncover one that will be most germane to the types of topics they hope to measure.

2. SOLUTION

Through NACIE's members and its contacts, the Council will produce an encyclopedia of innovation indices available for policy makers. The document will be available online, be searchable, and will contain commentary about the possible best uses of each particular index with a brief discussion of that index's perspective on innovation. The online encyclopedia will be updated annually through an ongoing review process housed within the Department of Commerce.

a. Process

To create the encyclopedia, we'll follow a predictable path:

1. Create a catalog of indices.
2. Characterize the indices according to common nomenclature that allows cross comparison.
3. Explain the best uses of each index based upon the characterization.
4. Make the encyclopedia available to the public through a Department of Commerce website or other appropriate domain.

With the assistance of multiple NACIE members helping to locate the indices and in partnership with universities, nonprofits and local agencies, creating the first version of the encyclopedia could be accomplished within one year.

3. WHY SHOULD NACIE UNDERTAKE THIS?

One of NACIE's goals is to enable innovation by pursuing policies that make innovation easier to achieve. The best way to pursue policy is first to understand what already exists and the purpose of this encyclopedia is to provide policy makers with a reliable source of information for decision-making as they undertake economic development activities. Currently, no standard exists and this encyclopedia, while not setting a single measurement standard, collects in one place different perspectives on innovation which enables policymakers and other actors from different locations or interests to pursue policy based upon indices or measures most suitable to their goals.

Just as innovation and entrepreneurship can take various shapes and NACIE seeks to take an inclusive view of all types of innovation, this encyclopedia represents a similar impulse to respect the multitude of possibilities available for measuring innovation yet collects them into a reliable, uniformly presented and curated resource.

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[11] http://www.oecd.org/sti/inno/oslomanualguidelinesforcollectingandinterpretinginnovationdata3rdedition.htm

[12] https://www.globalinnovationindex.org/content.aspx?page=GII-Home