

Analysis of the American Innovation and Competitiveness Act (S. 3084), as introduced in the Senate | June 27, 2016

On June 22, Senators Cory Gardner (R-CO), Gary Peters (D-MI), John Thune (R-SD), and Bill Nelson (D-FL) introduced the bipartisan <u>American Innovation and Competitiveness Act</u> (S. 3084), which is the Senate's version of <u>America COMPETES Act</u> reauthorization legislation. As COSSA has been <u>reporting</u>, the <u>America COMPETES Act</u> is legislation originally enacted in 2007 to bolster U.S. investment in basic scientific research at the National Science Foundation (NSF) and other federal science agencies. The <u>House's efforts</u> to reauthorize COMPETES took a negative turn in recent years, resulting in legislation that would decimate federal funding for social science research and dismantle the peer review process as we currently know it. In contrast, the bill introduced in the Senate last week looks to support—not undercut—NSF's grant-making infrastructure.

The Senate bill is scheduled to be <u>marked up</u> by the Senate Commerce, Science and Transportation Committee on June 29; however, it is not expected to become law or even be conferenced with the House bill before the 114th Congress comes to a close at the end of the year. Nonetheless, the introduction of a positive Senate bill provides an important marker for future consideration of NSF legislation.

Outlined below are some highlights of S. 3084.

Authorization of Appropriations

The Senate bill would authorize a 4 percent increase to the NSF budget for fiscal year (FY) 2018. The two-year authorization would include \$7.51 billion for NSF in FY 2017 (the amount included in the Senate CJS Appropriations Bill) and \$7.81 billion in FY 2018. In contrast, the House bill would authorize a flat \$7.6 billion for both FY 2016 (current year) and FY 2017 (next year) and, most troublingly, would set specific authorization levels for NSF's research directorates (translating to a 45 percent cut to social science research). The Senate bill sticks with current practice, which is to authorize top-line research funding for NSF and allow the agency to determine the appropriate funding levels for its various research lines. In addition, the proposed increase in the Senate bill, though modest, is a welcome development given the difficulty Republicans and Democrats have had in recent years in coming together to provide increases for any programs or agencies.

Reaffirmation of NSF's Merit Review Process

Unlike the House bill, which suggests that NSF's merit review process is flawed because of some of the projects it funds (often in the social and behavioral sciences), the Senate bill reaffirms NSF's merit review process, stating:

"As evidenced by the Foundation's contributions to scientific advancement, economic development, human health, and national security, its peer review and merit review processes have successfully identified and funded scientifically and societally relevant research and should be preserved."

The bill also notes the value of NSF's "portfolio" approach to grant-making, arguing against the practice of criticizing individual grants. The language included in the Senate bill is a stark contrast to the House bill, which seeks to set a definition for "national interest" as it relates to NSF-funded research, a definition that singles out social science research as "less worthy" of funding.

Later in the bill is language citing the value of social science research to cybersecurity. Sec. 104 of the bill would require that NSF cybersecurity research activities consider the "role of the human factor in cybersecurity and the interplay of computers and humans and the physical world."

Transparency and Accountability

A major theme within the House's COMPETES bill is a need for NSF to improve the transparency of its grant-making process (arguably to weed out "wasteful spending" in the social sciences). In contrast, the Senate bill notes progress the agency has made in improving transparency and accountability and, instead of imposing additional, arbitrary requirements, simply states that a project's abstract should describe how the project reflects the mission of NSF, should explain how the project conforms to the merit review requirements, be written in language a lay person can understand, and be publicly available at the time of award.

STEM Education

Title III of the Senate bill is dedicated to improving STEM education. The bill would create a STEM Education Advisory Panel (to include NSF, the Department of Education, NASA, and NOAA) to advise the Office of Science and Technology Policy-led Committee on STEM Education (Co-STEM). In addition, it would also authorize NSF to create Centers of Excellence aimed at improving the participation of women and underrepresented groups in STEM fields and would direct OSTP to form an interagency working group on inclusion in STEM fields. The working group would be tasked with "reviewing and assessing research, best practices, and policies across Federal science agencies related to the inclusion of underrepresented groups in the Federal STEM workforce, including available research and best practices on how to promote diversity and inclusion in STEM fields..."

Reducing Administrative Burden

The bill also includes a title (Title II) dedicated to reducing administrative burden associated with federal research funding. The bill would establish an interagency working group "to reduce administrative burdens on federally funded researchers while protecting the public interest in the transparency of and accountability for federally funded activities."

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