



Trade in Value Added Joint Project: the NCSSES Perspective

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National Center for Science and Engineering Statistics

Social, Behavioral and Economic Sciences

National Science Foundation

Outline

- How this project relates to our work
- Project goals and benefits
- Areas for future work

About NCSES

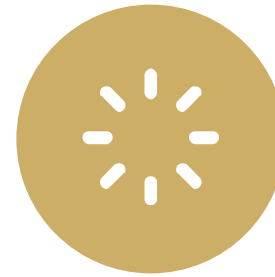
- Mission: policy-neutral and relevant statistical data and analyses on the U.S. science and engineering (S&E) enterprise



The condition and progress
of U.S. STEM education



The S&E workforce



R&D trends



U.S. competitiveness in S&E,
technology, and R&D

- Fields more than a dozen nationally representative surveys
- Publishes over 30 reports a year, including two congressionally mandated reports

NCSES Data Users, Stakeholders, and Collaborators

- National Science Board (NSB)
- Office of Science and Technology Policy (OSTP)
- National Academies of Sciences, Engineering, and Medicine (NASEM)
- Federal statistical agencies (e.g., Census, BLS, BEA)
- Academic institutions and public policy research institutes
- Organization for Economic Co-operation and Development (OECD)

Science and Engineering Indicators

- National Science Board's flagship report on the state of the U.S. science and engineering enterprise



STEM education



Research and development



STEM labor force



S&T industries
(production and trade)



Public perceptions of
science and technology



Innovation

- Globalization of S&E activities is an area of policy interest for U.S. competitiveness and global leadership in S&E and core technologies

BEA-NCSES/NSF Collaboration: R&D in BEA's Economic Accounts

- R&D-Satellite Account (2004–13)
- 2013 NIPA Comprehensive Revision – R&D in the core accounts
- NSF-BEA MOU for early data releases (since 2013)
- 2018 NIPA Comprehensive Revision
 - Reclassified R&D for software originals from own-account software to R&D
 - Recognized capital services in own-account investment in software and R&D
- Regional R&D production and investment (2021 forward)

BEA-NCSES/NSF Collaboration: Globalization

- Microdata linking
 - BERD and MNE/FDI and services trade surveys (2004–10)
 - Intangibles in BEA/Census GVC Project (proposed)
- Survey data development
 - BEA-Census MNE ID sharing for new BERD tabulations (pending)
- Macro statistics: ongoing NCSES funded work (2020 forward)
 - Trade in value added (TiVA)
 - R&D in Input-Output/Supply Use Tables (SUTs/Extended SUTs)

BEA-NCSES/NSF Collaboration on TiVA and SUTs

Project goals: Better understanding of the participation and role of S&T industries in domestic and global value chains

- Develop TiVA statistics in a single country framework
- Expand coverage of S&T industries and R&D commodity in BEA's Input-Output/Supply Use Tables (SUTs)
- R&D in extended SUTs (work with BEA's National and International Divisions)

Benefits to NCSES, BEA, and the Overall Federal Statistical System

- Insights on the U.S. participation in global value chains (GVCs)
 - Value contributed by U.S. industries to GVCs and U.S. reliance on foreign production
 - Timely work as discussions of efficiency, stability, risk and resilience in GVCs revived by the COVID-19 pandemic
- Expanded and more timely coverage of S&T industries and intangibles in both NCSES reports and BEA's industry statistics
- Support existing international efforts (e.g., OECD/WTO) to improve the measurement of TiVA

Areas for Future Work

- Further expansion and improvement of industry detail in TiVA and SUTs, including R&D and other S&T industries
- Decomposition of value added by component, including capital services by asset type (e.g., IPPs)
- Methodology and data improvements for SUTs and TiVA (e.g., services for the Import matrix)
- Intangibles in the Extended SUTs



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