Trade in Value Added Joint Project: the NCSES 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

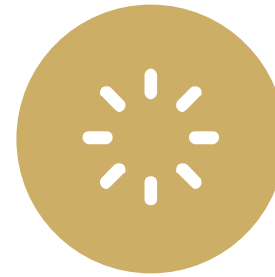- Areas for future work

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

STEM labor force

Public perceptions of science and technology

Research and development

S&T industries (production and trade)

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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