Trade in Value Added: Update on Work with NSF



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- Motivation
- International Engagement
- Single-Country Trade in Value Added (TiVA) Statistics
- Looking Forward



- Countries produce statistics on gross exports and imports of goods and services via their national accounts
- However, these data do not reflect the origin of value embedded in these goods and services or how they are ultimately used
- TiVA statistics:
 - Show the origin of value added in the goods and services consumed in a country
 - Trace where the value added created by a country is absorbed worldwide
 - Provide additional insights into bilateral trade linkages

Motivation continued:





Global Value Chains



• OECD-WTO

- Ongoing support for world TiVA database
- Engagement with Expert Group on Extended Supply-Use Tables
- https://www.oecd.org/sti/ind/measuring-trade-in-value-added.htm
- https://www.oecd.org/sdd/na/oecd-expert-group-on-extended-supply-use-tables.htm
- Asia Pacific Economic Cooperation (APEC)
 - Development of APEC regional TiVA statistics
 - Regional capacity building efforts
 - https://www.apec.org/Publications/2021/02/APEC-TiVA-Initiative-Report-Two---Better-Understanding-Global-Value-Chains-in-the-APEC-Region
- North America
 - Collaboration to develop a North America regional TiVA database
 - Bilateral trade asymmetries
 - https://www.usitc.gov/publications/332/working_papers/02202018_an.htm



- BEA engaged in a new collaboration with the National Science Foundation (NSF)
- Goal: Better understanding of the role of science & technology (S&T) industries in domestic and global supply chains
- Approach: BEA is working with NSF's National Center for Science and Engineering Statistics (NCSES) to develop U.S. TiVA statistics in a singlecountry framework and to expand the coverage of S&T industries in BEA's industry statistics



- Key goal of BEA/NSF collaboration is to explore development of TiVA statistics in a single-country framework:
 - Relies primarily on the U.S. supply-use tables
 - No direct use of a multi-country supply-use framework
- Advantages:
 - Timely results
 - Detailed results
 - Greater consistency with official statistics
- Disadvantages:
 - Cannot fully decompose global supply chain without link to multi-country I-O framework





8



- Initial Results (2007-2020) to be released in Fall 2021
- Expanded SUT from current 71- to 81-industries, additions include:
 - Semiconductors
 - Communications equipment
 - Aerospace products and parts
 - Pharmaceuticals and medicine

- Navigation/measurement/electromedical equipment
- Software publishers
- Scientific R&D services
- Data will be provided for five countries/regions:
 - Canada
 - Mexico

- Europe
- Rest of World

China

Decomposition of Gross Exports, 2007-2020 (Billions of Current Dollars)



11/12/2021





Semiconductor and other electronic component manufacturing (NAICS 3344)

Oil and gas extraction (NAICS 211)

Aerospace product and parts manufacturing (NAICS 3364)

Communications equipment manufacturing (NAICS 3342)

Sources of Value in Petroleum and Coal Product Exports, 2007-2020



11/12/2021





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• Year 2

- Possible publication at 140-industry level
- Research possible estimation at 400-industry level
- Continue work on extended supply-use tables

• Year 3

- Re-evaluate regional breakouts
- Possible publication at 400-industry level
- Move toward incorporation of extended supply-use tables

• And beyond:

- Decomposition of value added into capital and labor services
- Decomposition of capital services by type of asset
- Real TiVA statistics
- Hybrid model



- Which industries should BEA consider prioritizing for future releases?
- Which regional breakouts would be most beneficial to include in this dataset?
- How should the data be organized and presented to maximize their accessibility and usefulness?
- What can BEA do to inform data users of the uses and benefits of these new data?