

# Importance of Supply-Use and Input Output tables



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# Why SUTs

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- Accounting Tool
- Descriptive Statistics
- Useful for economic modeling
- Allows you to integrate a host of different economic statistics.

## Why Time Series SUTs?

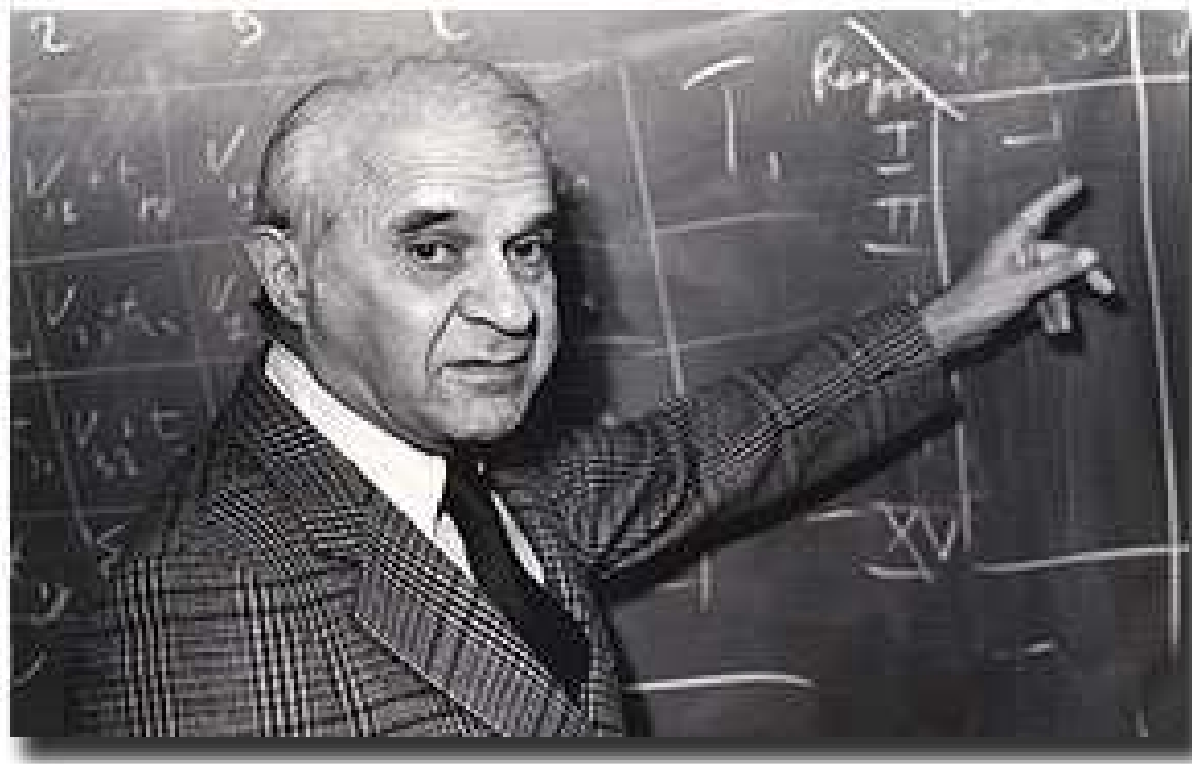
- To provide up-to-date information on the changing structure of the economy
  - Key for policy making purposes; e.g., impact analysis, understanding global value chains and globalization
- Framework for producing inflation-adjusted value added statistics, which leads to other extensions
  - E.g., real industry statistics, integrated productivity statistics
- BEA's time series consists of a series of Benchmark tables and Annual tables.

- Not as useful as time-series SUTs, but a lot easier to compile.
- Set better levels for Gross Domestic Product (Benchmarks)
  - Integrate all three methods of computing GDP (production approach, expenditure approach, and income approach)
- Open up research projects that investigate industry inter-relations in the economy
  - Examples: Requirements tables, satellite Accounts, TIVA, etc.

- Father of Input-output analysis

Wassily W. Leontief (1905-1999)

(1905-1999)

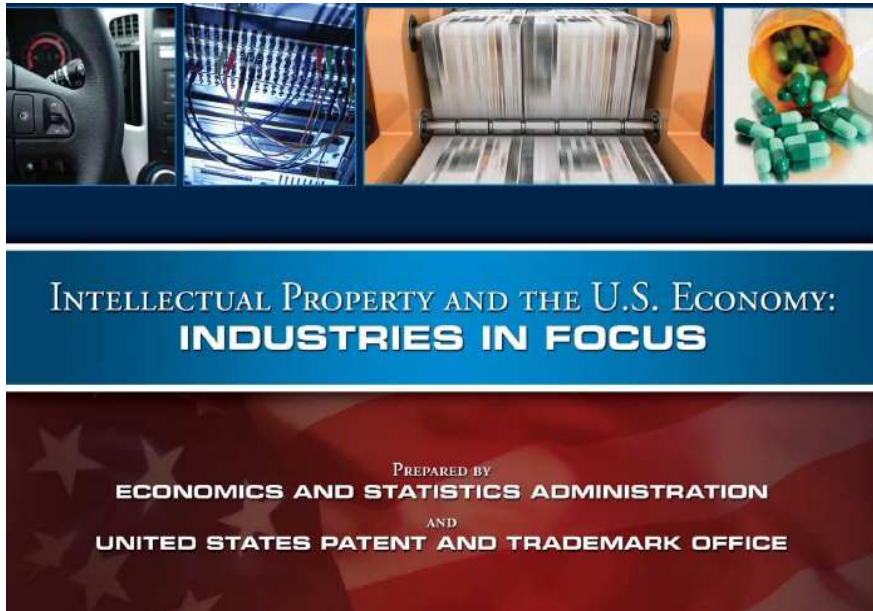


- The IO system was developed by Leontief in 1930s.
- Received Nobel prize in Economics in 1973.
- The development of System of National Accounts by Richard Stone in late 1940s.
- Stone also won a noble prize for his work.

- Stone developed European System of national accounts in 1952, and in charged of the first edition of SNA (1953) commissioned by the United Nations.
- Input-output tables was not included in 1953 SNA
- SNA 1968, IO table was included (make-use table)
- SNA 1993, IO was featured as the center of the system (supply-use tables, SUT)
- SNA 2008 and it's problems in SUT

## Effects of the 2008–10 automotive industry crisis on the United States

U.S. Department of Commerce  
Economics and Statistics Administration



### What is Made in America?

#### Executive Summary

Accurately determining how much of our economy's total production is American-made can be a daunting task. However, data from the Commerce Department's U.S. Census Bureau and the Bureau of Economic Analysis (BEA) can help shed light on the dollar value of what America produces, and what percentage of the dollar value of an industry's output that is considered domestic. Gross output, value added, domestically-sourced inputs, and domestic content are all concepts that can be used to measure U.S.

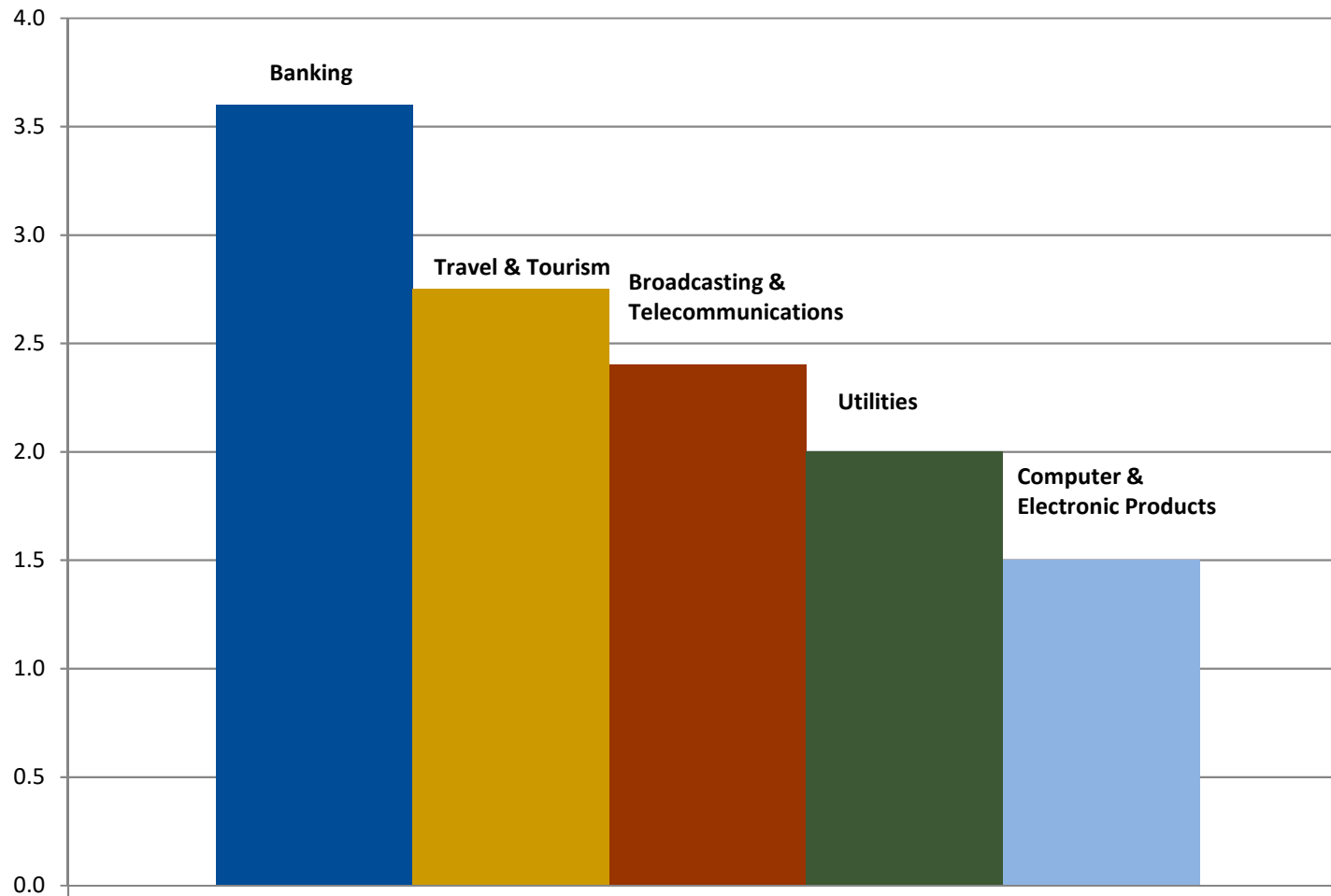


## Travel and Tourism (TTSA)



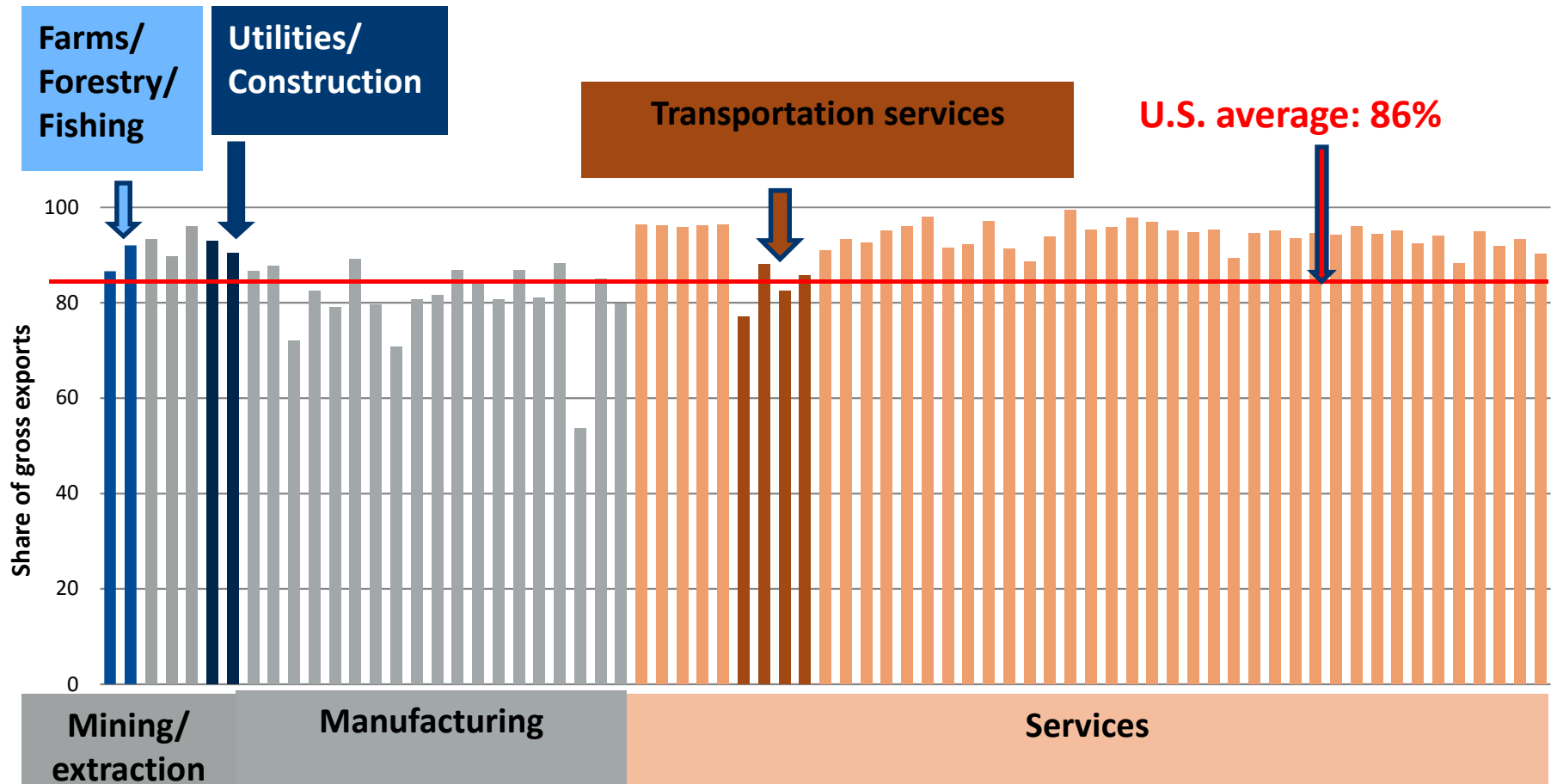
## Travel and Tourism (TTSA)

### Travel and tourism as a percent of GDP



# Global Value Chains

Trade in Value Added Domestic Value Added Share of U.S. Gross Exports by Sector, 2011



# Extended SUTs for global value chain analysis

## Dimensions of Firm Heterogeneity

OECD proposal

BEA proof of concept

Table 2: 'Ideal' breakdown of columns and rows in SU tables

Foreign Owned						Domestically owned MNE						Domestic Owned																	
With high Export orientation			With low Export orientation			With high Export orientation			With low Export orientation			With high Export orientation			With low Export orientation														
'Exporters'			'Non-Exporters'			'Exporters'			'Non-Exporters'			'Exporters'			'Non-Exporters'														
Low import orientation	High import orientation		Low import orientation	High import orientation		Low import orientation	High import orientation		Low import orientation	High import orientation		Low import orientation	High import orientation		Low import orientation	High import orientation													
S	M	L	S	M	L	S	M	L	S	M	L	S	M	L	S	M	L	S	M	L	S	M	L	S	M	L	S	M	L

- Time series SUTs provide the framework to produce inflation-adjusted statistics on gross output, intermediate inputs, and value added by industry
  - Production measure of GDP
  - Compliments featured GDP (E)
  - Lots of User interest in knowing relative performance of industries

- Long-standing call for statistics on the sources of growth
  - Solow (1957), Denison (1967), Griliches and Jorgenson (1967)
  - Postwar Recovery, Big Slump, IT Boom, the Great Recession
  - “... differences between the BEA and BLS estimates have led many researchers to construct their own measures ...”
    - Jorgenson and Landefeld (2006) in *A New Architecture for the U.S. National Accounts*
- The Advisory Committee on Measuring Innovation in the 21<sup>st</sup> Century: A Report to the Secretary of Commerce (January 2008)
  - “Develop annual, industry-level measures of total factor productivity ...”

- SUTs provide the framework for a number of widely used applications
  - Impact analysis, constant-price statistics, globalization analysis ,etc.
- Future directions
  - Globalization projects: North America Regional SUTs, APEC TiVA, OECD and firm heterogeneity