

# Robert Feenstra, “Statistics to Measuring Offshoring and its Impact”

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# New Data for the Measurement of Globalization

- Professor Feenstra's paper excellent review of the evolution of theory, research, and data to better understand globalization.
- He concludes with a plea for more and better data on value-added in trade and on imported input prices
- My remarks will discuss what is being done to address these needs (and other needs) for data to measure globalization

# Overview

- Existing international statistics have not kept up with globalization
  - Remain invaluable, but need extension to improve understanding and public policy
  - Critical need to “look-through” complex global production and financial transactions
- Based on:
  - SNA and BPM
  - Integration and reconciliation
  - New accounting concepts and measures including global supply and use tables and integrated real and financial accounts

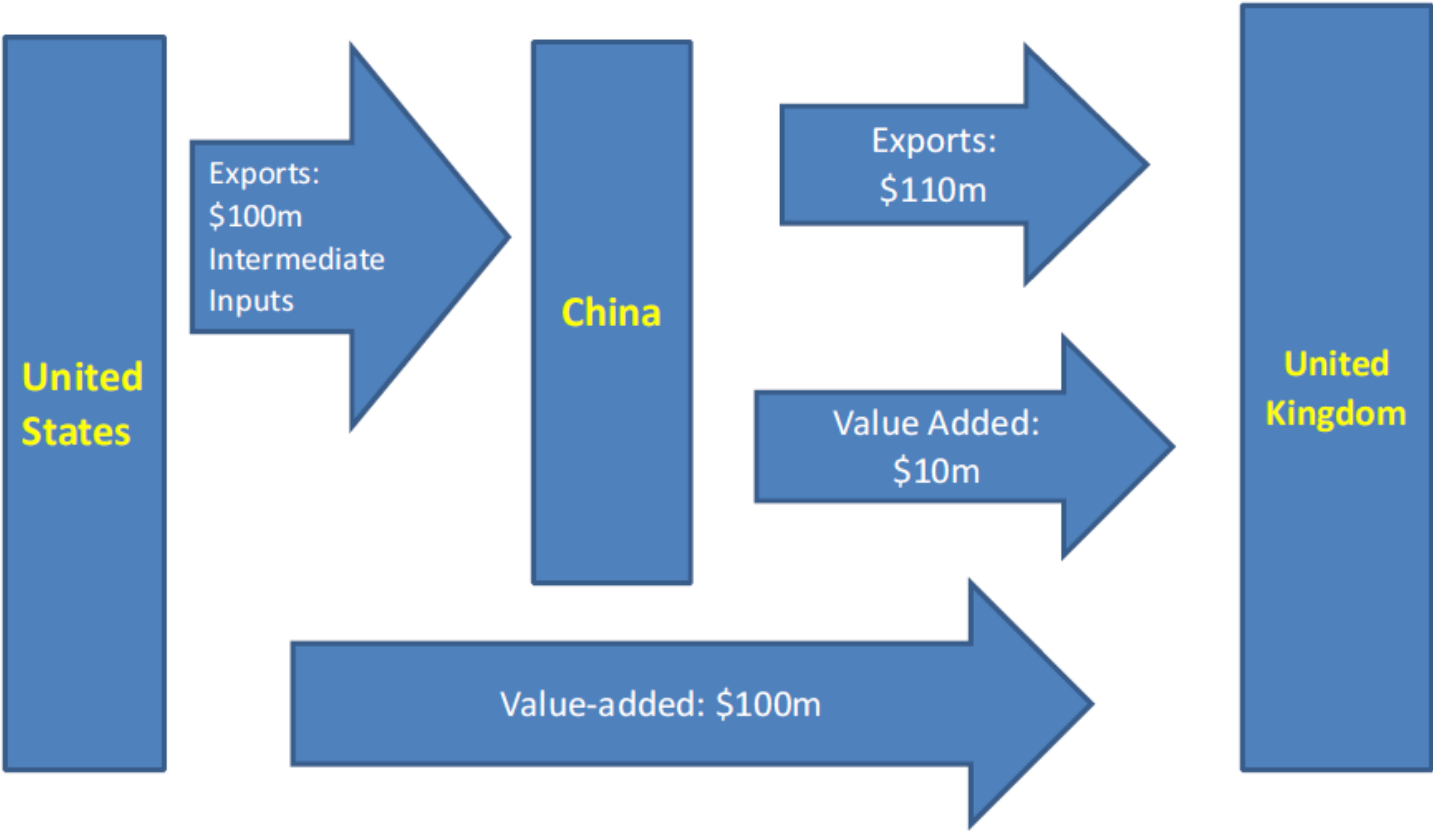
# Accelerating Globalization

- Firms maximize production efficiency and minimize global tax burdens by organizing across national boundaries
  - Advances in technology and communication and reductions in shipping costs have accelerated pace of global production.
  - Increased international trade, global growth, and productivity, but have caused significant problems for the measurement of economic activity.

# Value-Added Trade

- Increasing globalization has led to increasing volume of double counting in both the real and financial sector.
  - Traditional trade measures count gross flows as exports and imports each time they cross international borders
  - Gross flows often do not reflect the value-added of the exporting country in the production of the goods or services.

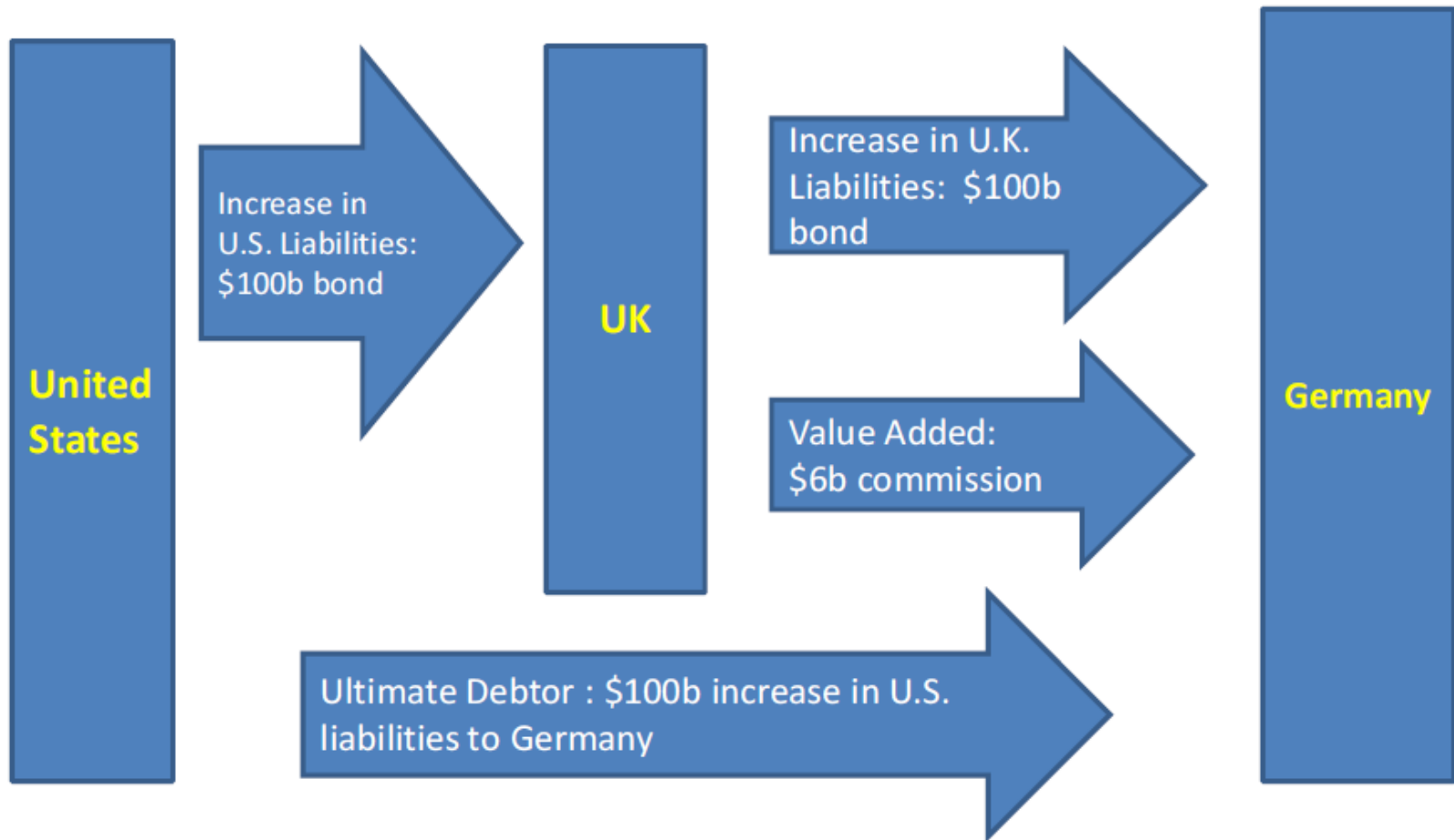
# FIGURE 1: Gross vs. Value-Added Trade Flows



# Integrated Financial Accounts

- Similarly, in the financial sector, increasing complexity and the global nature of financial transactions has resulted in a system where official statistics can provide a misleading picture of the ultimate cross-country financial risk.

# Figure 2 BOP Financial Flows vs. Ultimate Creditor/Debtor





# Encouraging Trade, Data, Growth, and Competitiveness Through More Relevant and Accurate Data

- Better target public policy and inform public perceptions
  - Drilling down beneath gross/counterparty trade and investment flows provides a more accurate, and relevant picture of the underlying pattern of economic activity across countries.
  - A fuller picture of the critical dependencies and benefits that arise from global production and trade provides an improved basis for public understanding of the dynamics of global trade and investment and for public policy.

# Case Studies of Globalization

## iPhone Study

Value of inputs from U.S. shipped to China (included in U.S. exports)	\$10.75
Value of inputs shipped to China from other countries	\$161.71
Manufacturing costs to China	\$6.50
Wholesale value of iPhone shipped to U.S. (included in U.S. imports)	\$179
Retail value of iPhone sold in U.S. stores (included in PCE)	\$499

# The Need for Consistent Aggregate Estimates: Incomplete Picture of Dependencies and of “Lost” Jobs, Incomes, and Taxes

- Exporting jobs to China? (OECD estimates)
  - China's bilateral trade with the United States 1/3 smaller on a value-added basis than on official gross flows
  - One third of the content of China's exports comes from foreign inputs.
    - Assembly and processing of electronic components and products contributed to rise in the foreign content of Chinese exports from 12 percent in 1995 to 33 percent in 2009

# Incomplete Picture of Dependencies and of “Lost” Jobs, Incomes, and Taxes

- Large range on foreign content of countries exports (OECD).
  - At the upper end -- with foreign content of roughly 40 percent or more -- are Luxembourg, Singapore, Slovakia, Ireland, and Taiwan.
  - At the lower end -- with foreign content of roughly 10 percent or less -- are such countries as the United States, Brazil, Russia, and Saudi Arabia.

# Importance of Global Trade to Domestic Non-Export Industries

- Services account for over half of total value-added exports for the United States, the United Kingdom, France, Germany and Italy (OECD).
  - Includes management, design, R&D, logistical, legal, financial, and other services that are inputs into exports.
- Also, significant domestic transportation, wholesaling, advertising, and financing services involved in selling imported final goods and services imports.
- Profits from domestic sales of imports and from overseas affiliates account for a disproportionate share of U.S. MNC profits.

## What Numbers Will and Will Not Change with Value-Added Estimates?

- Value-added measures will not change overall trade balances but will change bilateral balances.
  - Will lower bilateral trade deficits with countries near the end of the value-added processing chain and those assembling final goods and services
  - Also will lower with neighbouring countries that are the conduit for trade.
  - Will raise with countries further up the supply chain that provide inputs to countries involved in final assembly and processing
- Value-added estimates, by eliminating double-counting of trade, will also lower total exports and imports

# Trade, Investment and Development Policy

- Examples where value-added data would help
  - EU trade sanctions against footwear made in Asia when as much as 80% of the value-added from Asian-made footwear estimated to originate in EU.
  - More extreme U.S. concerns over trade with China and “offshoring”
    - U.S. value added in Chinese imports, other country value-added in Chinese imports; and
    - U.S. domestic services value-added in final sales of imports

# Tax Policy

- Large value-added benefits to parent-company countries and domestic non-traded goods sectors (services) ignored in static tax analysis.
  - Changes in tax law that ignored these benefits might not only reduce (rather than raise) net domestic tax receipts, but lower domestic production and employment.
- Integrated financial accounts and formulary accounting would also improve ability to “look through” transactions and identify true geography of economic benefits.
  - Over 40% of U.S. Foreign Direct Investment through tax havens



# Financial, Regulatory, and Macro Policy

- Lessons of Financial Crisis (EU underestimate of U.S. subprime exposure)
- Lessons of the Great Recession (Macro-prudential policy)
- Setting long-term targets for inflation, sustainable growth, and productivity: Addressing globalization measurement biases

# Other Policies and Uses that Would Benefit from Extended International Accounts

- Environmental and Energy Policies
- Critical Materials, Food Safety, and National Security
- Business and Financial decisions
- Analysis of the impact of offshoring on labor markets, welfare, incomes, and production

# Other Emerging Data Needs: Imported Input Prices

- As Feenstra notes, a significant body of research (Housemann et al) suggest that understatement of the prices of imported inputs has understated real inputs and overstated U.S. productivity and real GDP growth:
  - With estimates of an overstatement of U.S. real GDP and productivity of 0.2 percent and manufacturing as high as 0.5 percent.

**Table 1 Globalization factors and the most affected main national accounts items***Source: UNECE, Eurostat, and OECD, The Implications of Globalization on National Accounts, United Nations, 2011*

<b>Global phenomenon</b>	<b>National accounts items most affected</b>
<b>Arrangements within MNEs, including transfer pricing</b>	<b>Allocation of Gross value added (GVA)/GDP across countries; international trade in goods and services; investment income and financial flows</b>
<b>FDI relationships</b>	<b>Investment income and financial flows; i.i.p.</b>
<b>Special purpose entities (SPEs)</b>	<b>GDP in relation to GNI, International trade in services; investment income and financial flows; i.i.p.</b>
<b>Goods sent abroad for processing</b>	<b>GVA/GDP; international trade in goods and services</b>
<b>Merchanting</b>	<b>International trade in goods (and possibly services)</b>
<b>IPPs</b>	<b>GVA/GDP; capital formation; international trade in assets and related services</b>
<b>Quasi-transit trade</b>	<b>GVA/GDP; international trade in goods</b>
<b>International labour movement and remittances</b>	<b>GDP; GNI; gross national disposable income; international transfers</b>
<b>Ownership of property abroad</b>	<b>International trade in services; investment income and financial flows; i.i.p.</b>
<b>Internet trading</b>	<b>International trade in goods and services; household consumption</b>
<b>Limitations of national data collections</b>	<b>Imports, import prices, GDP/GVA, and Productivity</b>

# New Prices: Problem and Possible Solutions

- Significant apparent understatement of imported goods prices relative to domestic prices for similar goods
  - Problems with “linking” non-comparable products and missing price reductions when switching from domestic to foreign suppliers
- Possible solutions:
  - Input Cost Index:
    - Collected from manufacturers
    - Comparison of similar domestic and imported products
    - Significant budget and feasibility challenges

# New Prices: Possible Solutions

- Increased use of hedonics
  - Lack of data on characteristics requires use of external data (catalogs)
- Use of adjustment ratios
  - Compare prices of broadly comparable imported and domestic goods at switch points and develop linking adjustments to reflect lower prices (and possibly higher prices) of newly imported inputs
- Broader coverage:
  - Including series dropped due to budget cuts
    - Industry sources suggest that ocean freight rates have dropped 40% in the last two years, but BLS no longer collects such data
- Better weighting for deflating GDP and Gross Output
  - BEA weights applied to detailed BLS price indexes to develop better matched deflators