THE INFORMATION TECHNOLOGY & INNOVATION FOUNDATION

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March 21, 2012

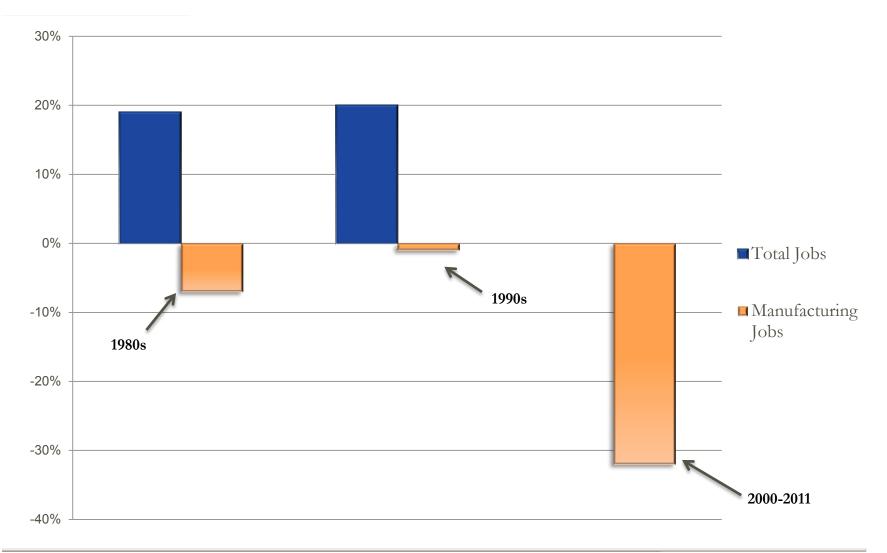
Worse Than The Great Depression: What Experts Are Missing About American Manufacturing Decline

Rob Atkinson, President, ITIF

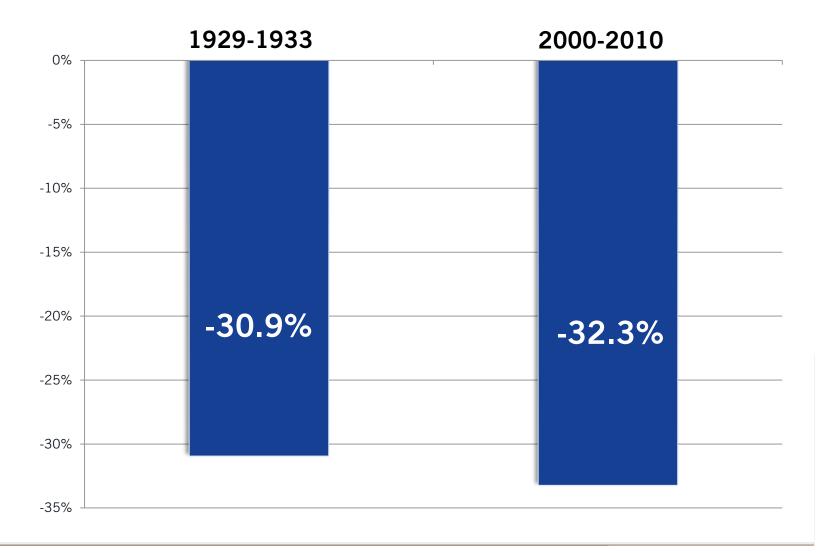


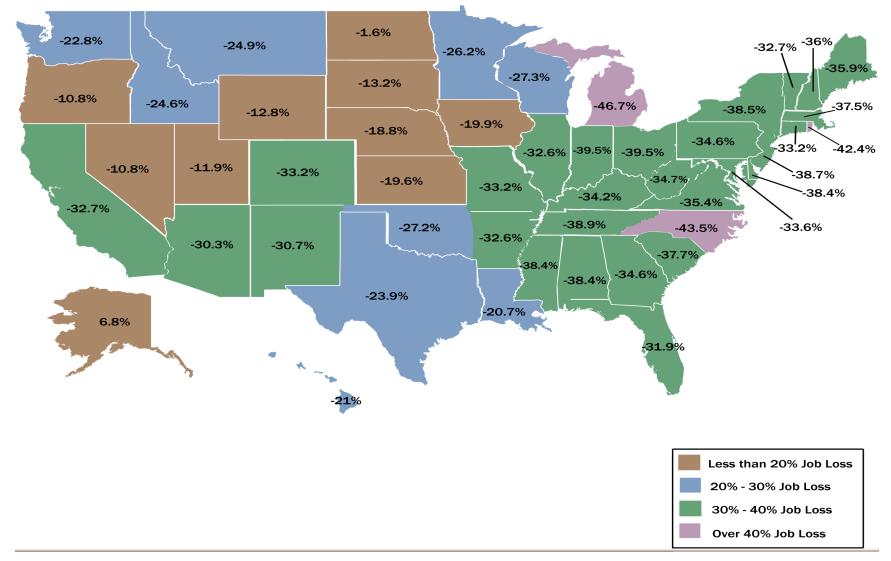
- The Information Technology and Innovation Foundation (ITIF) is a Washington, D.C.-based think tank at the cutting edge of designing innovation policies and exploring how innovation will create new opportunities to boost economic growth and improve quality of life. ITIF focuses on:
- Innovation "verticals": energy, life sciences, telecom, manufacturing, and Internet and IT transformation
- Innovation "horizontals": trade, tax, talent, and tech policy
- "Innovation economics" as an alternative to mainstream economics

Dramatic Manufacturing Job Losses in the 2000s

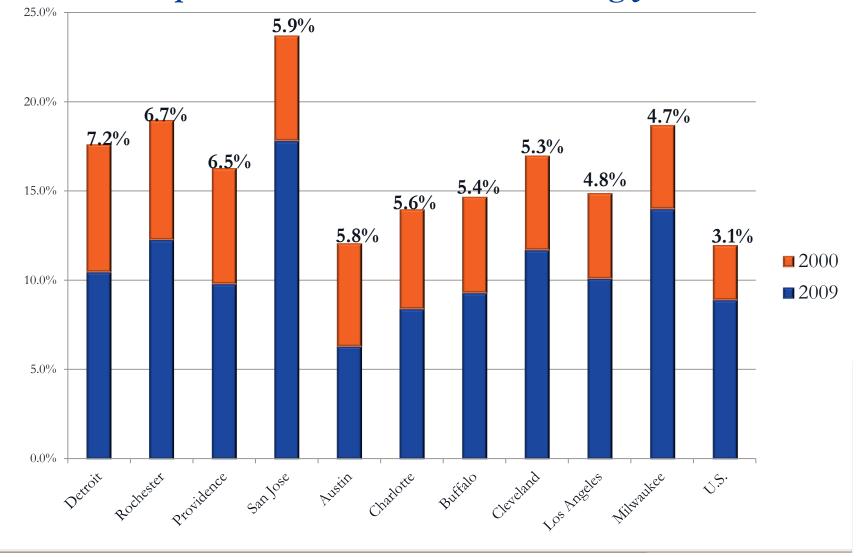


Greater Than in the Great Depression





All But One State Lost Manufacturing Jobs in the 2000s



Most Metropolitan Areas Saw Manufacturing Job Losses

The Conventional Wisdom: It's the Agriculture Story



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"Manufacturing employment has fallen because of productivity growth, not a decline in output." *Congressional Research Service*

"Manufacturing remains robust, but only because it has ... much more productive—by learning how to add more value with fewer workers." *Bill Galston, Brookings*

"Computers have made manufacturers more productive by automating many routine tasks. American manufacturers now employ fewer workers to produce more goods." James Sherk, The Heritage Foundation "The majority of manufacturing job losses are due to productivity increases." *Robert Reich, UC, Berkeley*

Agricultural jobs fell dramatically and "The same thing is now happening in manufacturing." Dan Miklovic, Research Director, Gartner

"Strong growth in productivity and a slower rate of growth in the demand for manufactured goods have necessarily entailed a decline in manufacturing's share of total employment." *Congressional Budget Office*

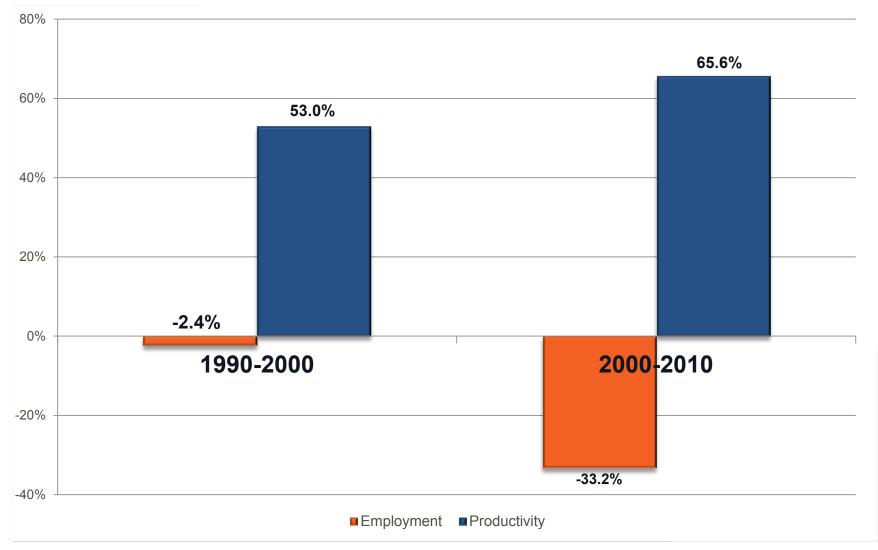
"The decline in US manufacturing employment is explained by rapid growth in manufacturing productivity." *Glen Hubbard, Columbia University*

- The Conventional Wisdom: It's the Agriculture Story
 - If it's the agriculture story then all that's needed are policies to help displaced workers and hard hit communities adjust to a fundamentally progressive force.
 - No need for a national manufacturing competitiveness strategy.

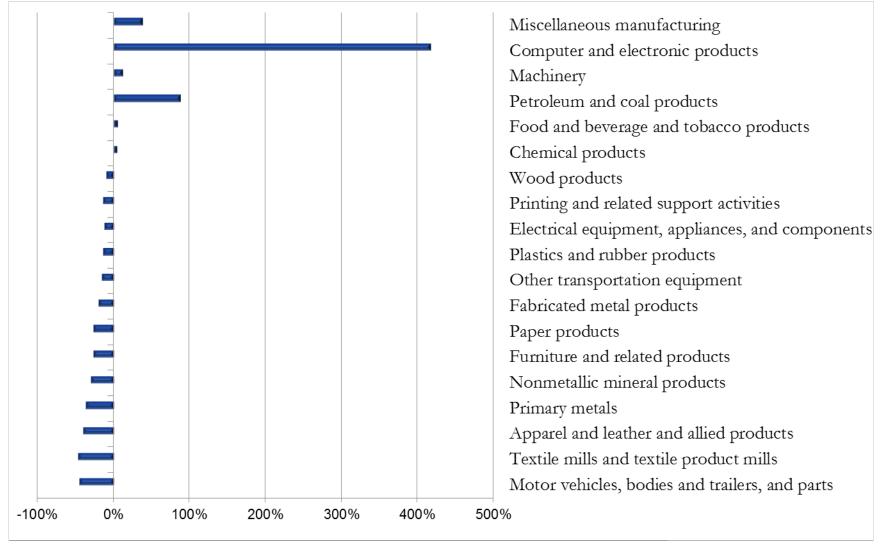
In Fact, It's the "Rust Nation" Story?



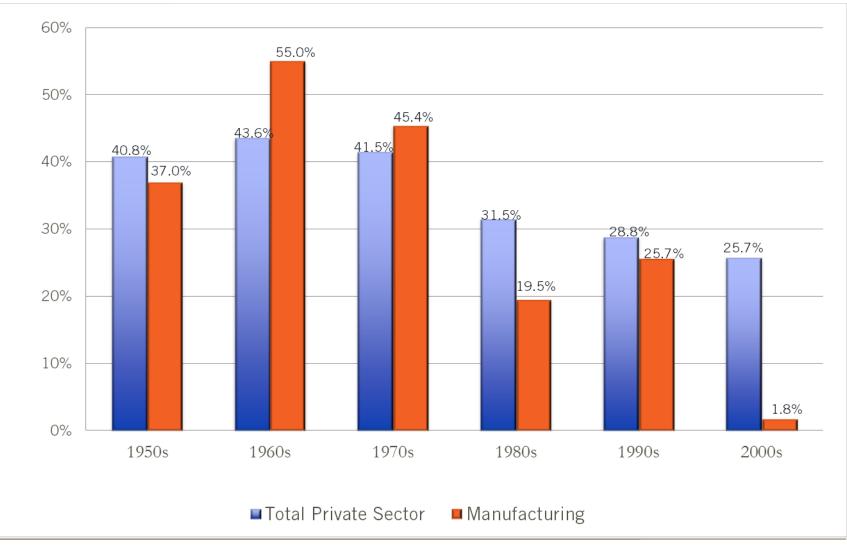
If Productivity is the Cause, Why Did the U.S. Lose Just 2.4% of Manufacturing Jobs in the 1990s?



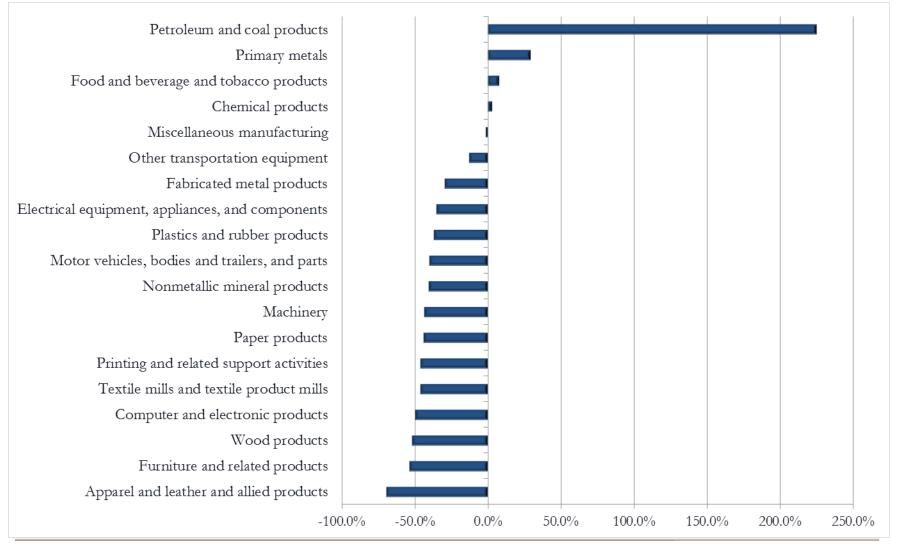
If Productivity is the Cause, Why Were 13 of 19 Manufacturing Industries Producing Less in 2010, Than in 2000?



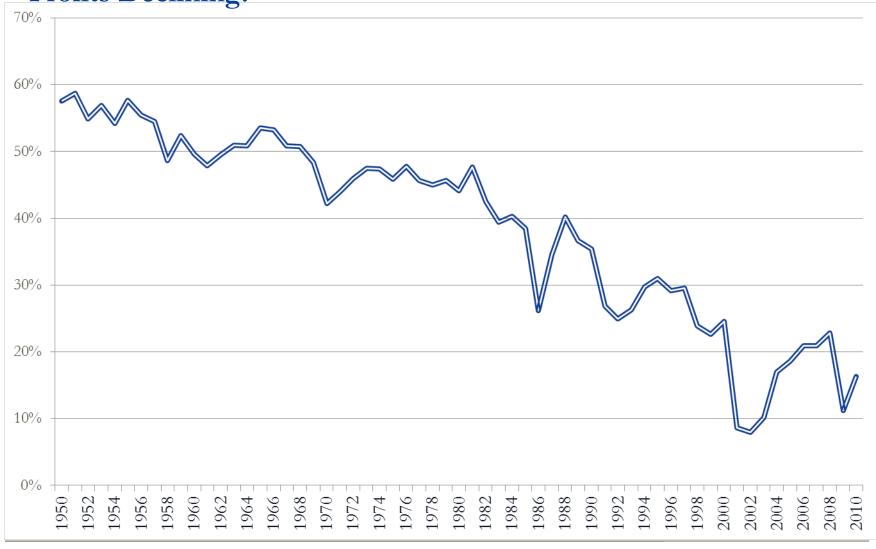
If Productivity Is the Cause Why Did Manufacturers' Capital Stock Barely Grow?



If Productivity Is the Cause Why Did Manufacturers' Fixed Investment Decline for 15 of 19 Industries from 2000 to 2010?



If Productivity Is the Cause, Why Is Manufacturing's Share of U.S. Profits Declining?



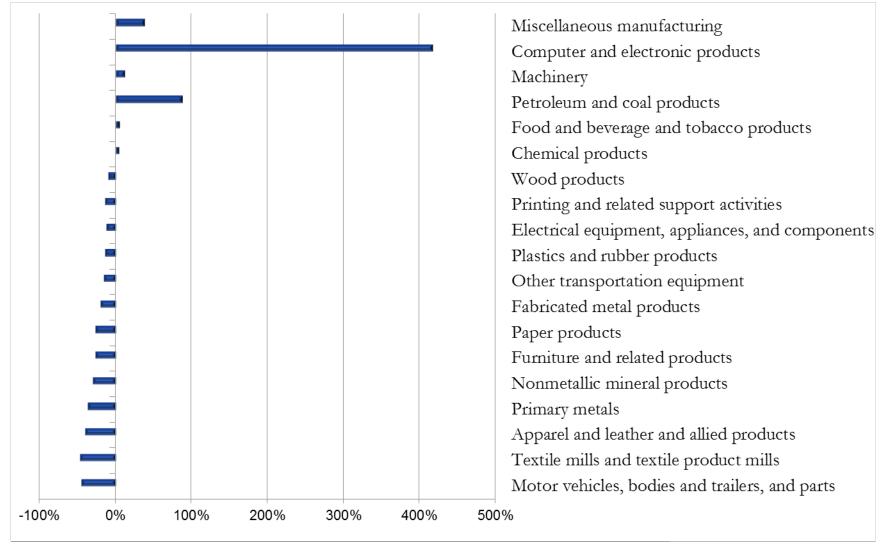
In Fact, Real Output and Productivity Growth Were Much Worse Than Official Data Suggest **Bad Measurement Problems Plague Federal Data**

• Problem #1: Understating the Value of Intermediate Goods Imports

Bad Measurement Problems Plague Federal Data

- Problem #1: Understating the Value of Intermediate Goods Imports
- Problem #2: Computers and Rapid Technological Change

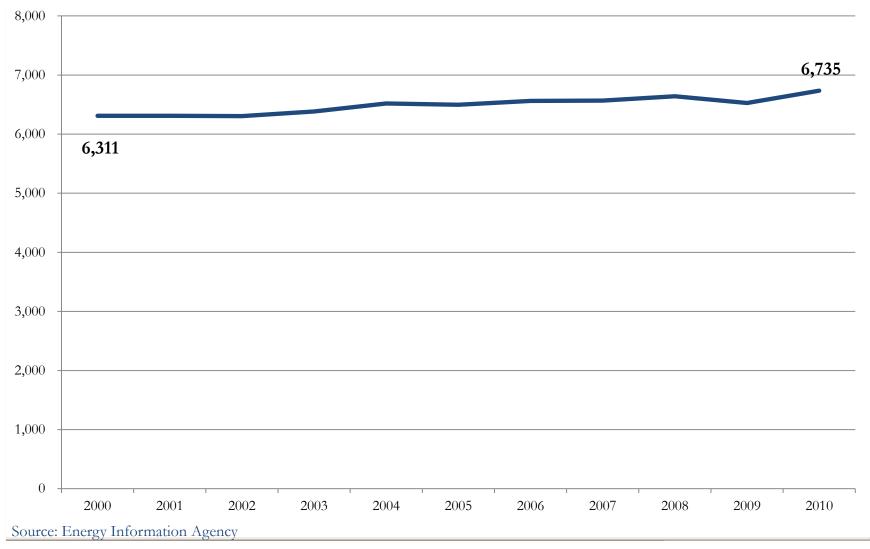
Did Computer & Electronic Products' Value Added Really Quintuple?



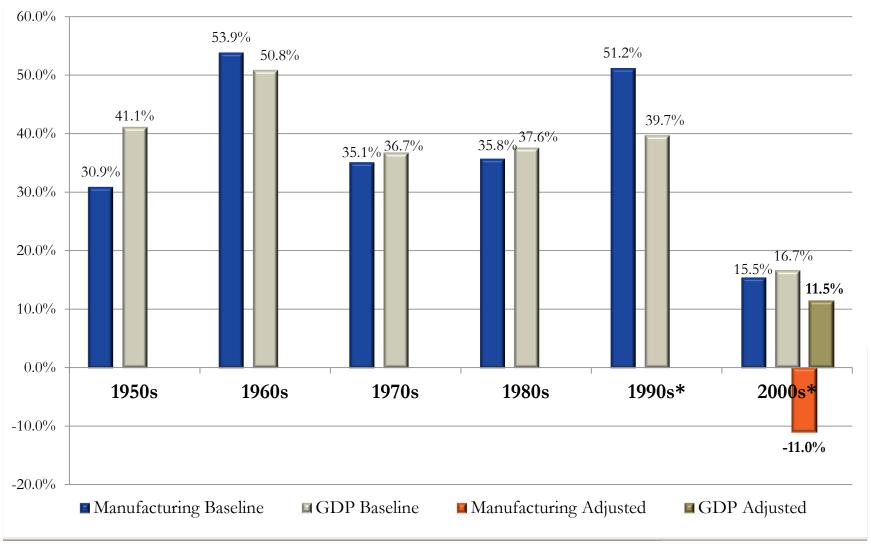
Bad Measurement Problems Plague Federal Data

- Problem #1: Understating the Value of Intermediate Goods Imports
- *Problem #2: Computers and Rapid Technological Change*
- Problem #3: Overstating Output in the Petroleum and Coal Products Industry

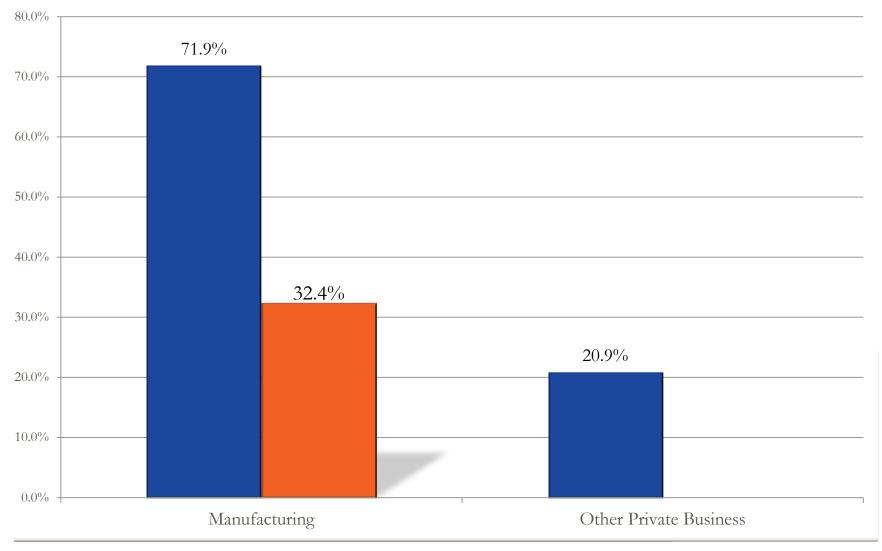
U.S. Refinery Production of Crude Oil and Petroleum Products Didn't Grow 70 Percent



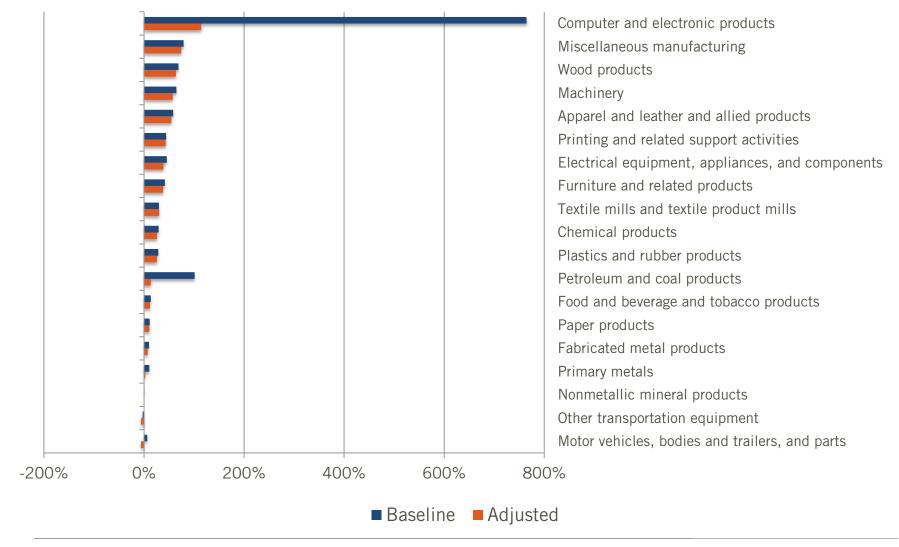
When Measured Properly Real Manufacturing Value-Added is Down



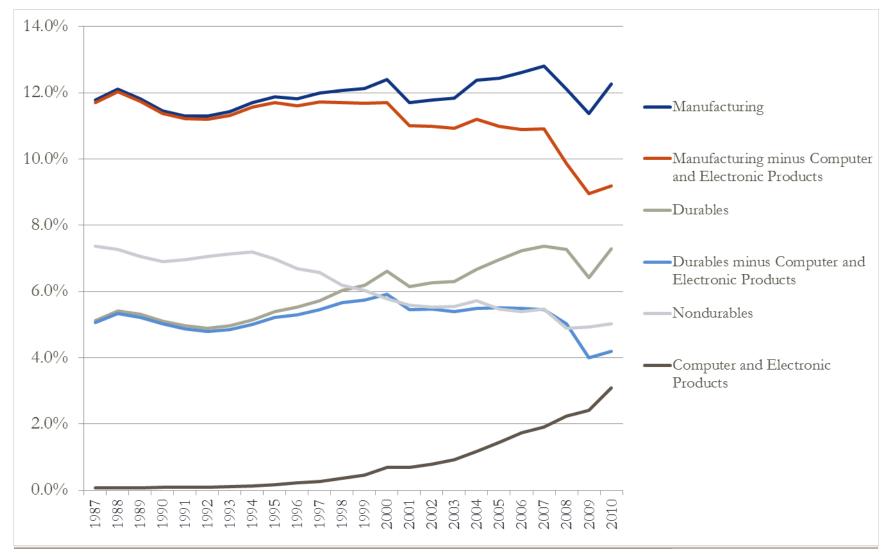
When Measured Properly, Productivity Growth is Much Lower



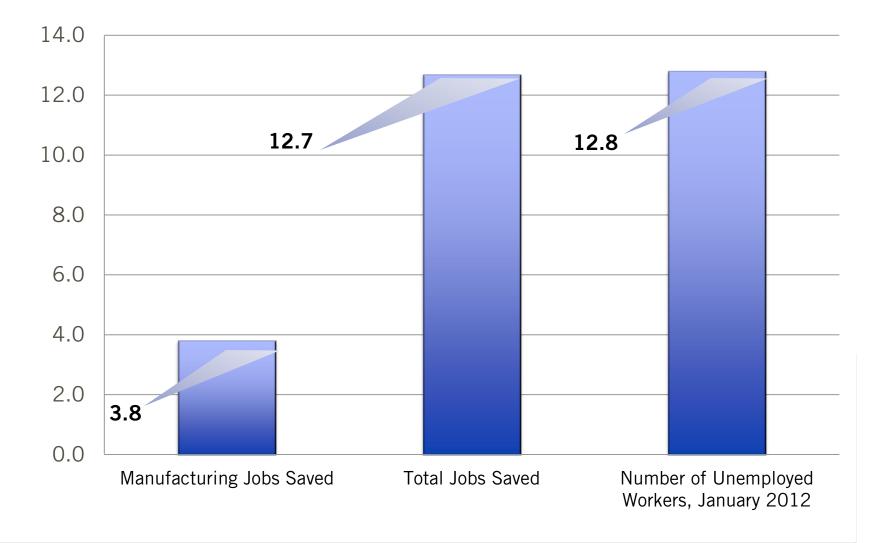
When Measured Properly, Productivity Growth is Much Lower



Real Manufacturing Value Added is Down as Share of GDP

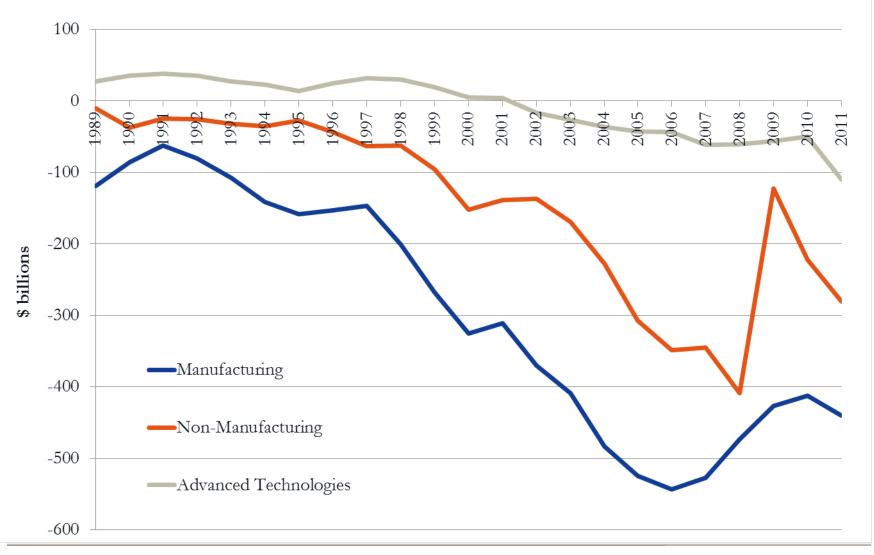


Millions of Jobs Saved if Manufacturing Equaled Other Private Business Growth

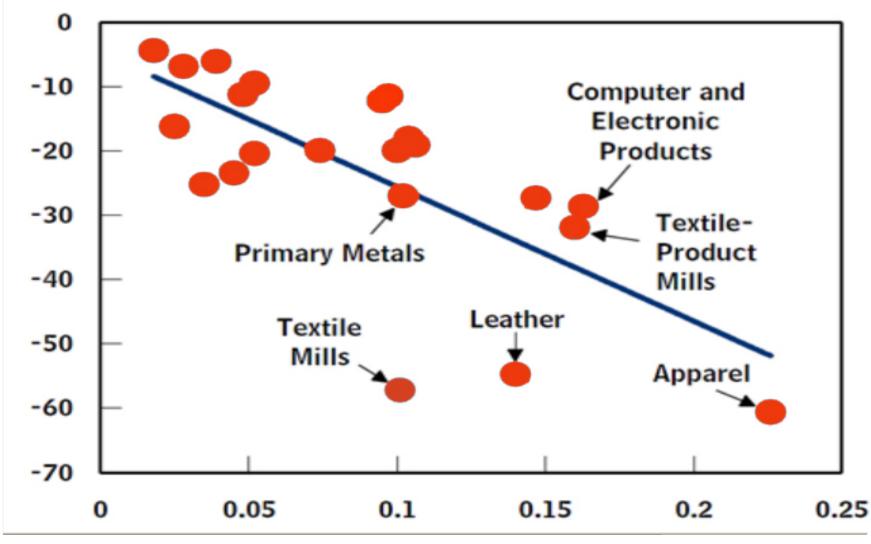


- Why Is Output Falling?
- It is not because Americans are buying fewer manufactured products
- It is because Americans are making fewer manufactured products

U.S. Losing Share in Advanced Technology Products



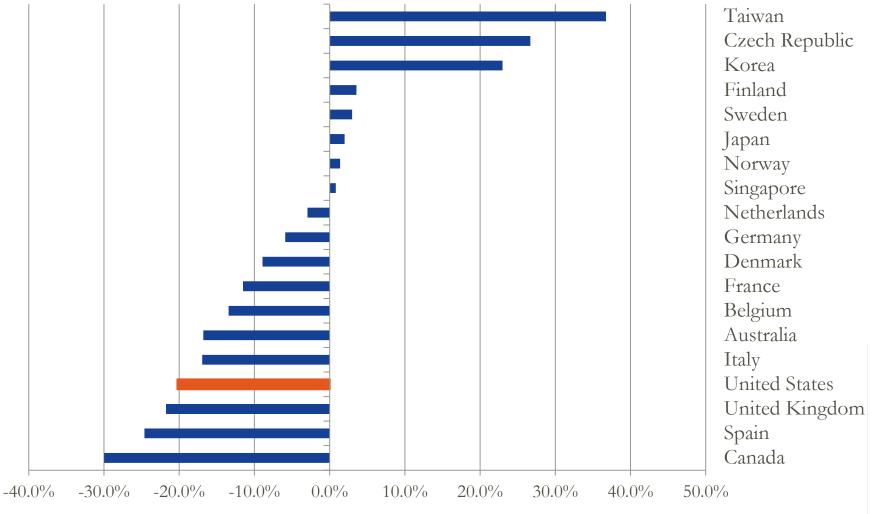
The Higher Import Penetration the Greater Decline in Jobs



But At Least We're Doing Better than Most Other Nations?



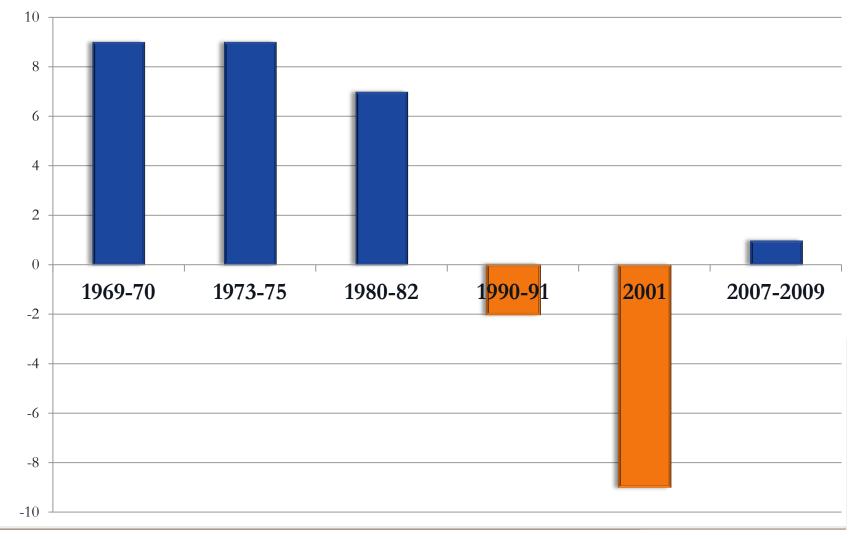
U.S. Lags in Growth of Manufacturing Value Added



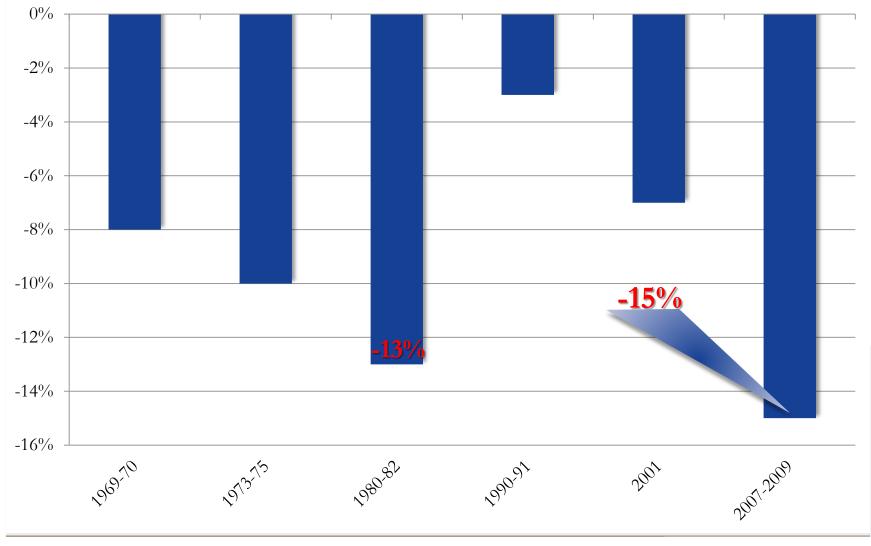
Percentage Change in Ratio of Manufacturing Real Value-added to GDP, 2000-2010

- But Isn't Renewal, Reshoring and Recovery Happening?
- Paul Krugman: manufacturing is "one of the bright spots of a generally disappointing recovery."
- Floyd Norris of *The New York Times:* "When the Labor Department employment numbers on Friday, it is expected that manufacturing companies will have added jobs in two consecutive years. Until last year, there has not been a single year when manufacturing employment rose since 1997."

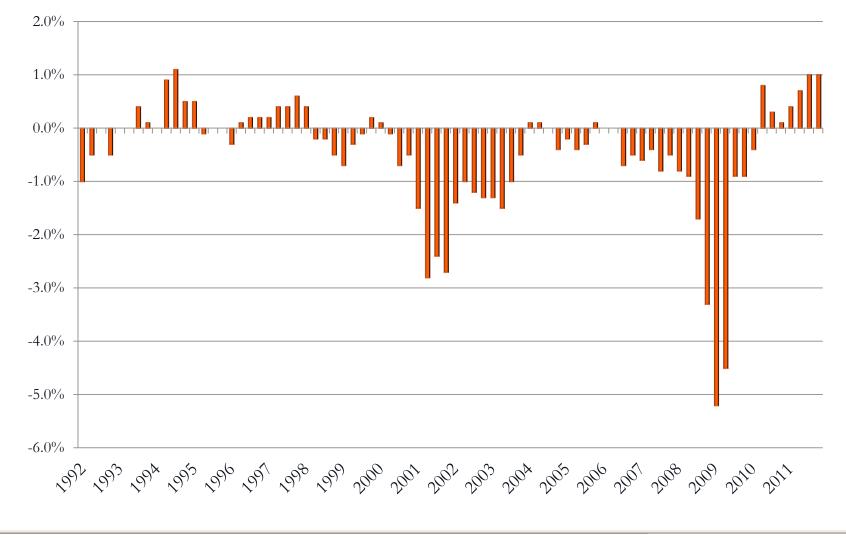
Share of Manufacturing Job Growth 30 Months After End of Recession is Positive but Still Low



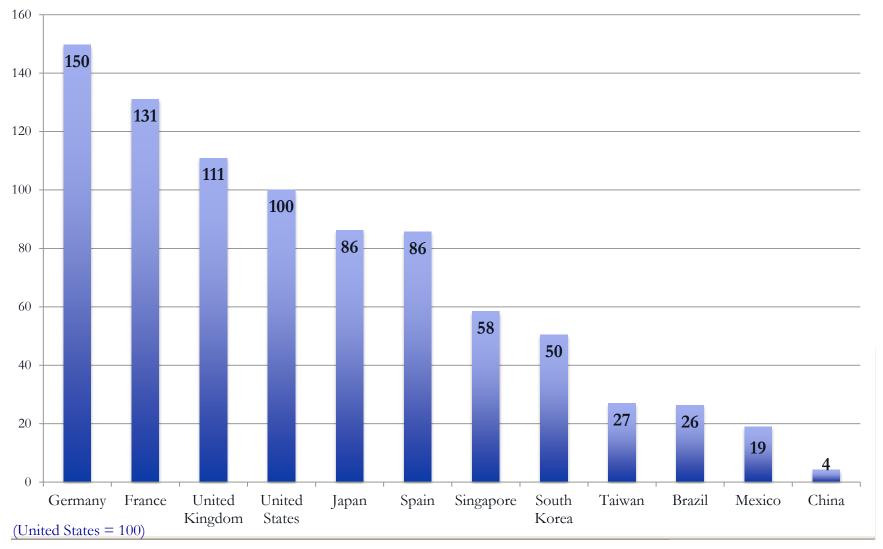
It's Positive Because the Loss Was so Great



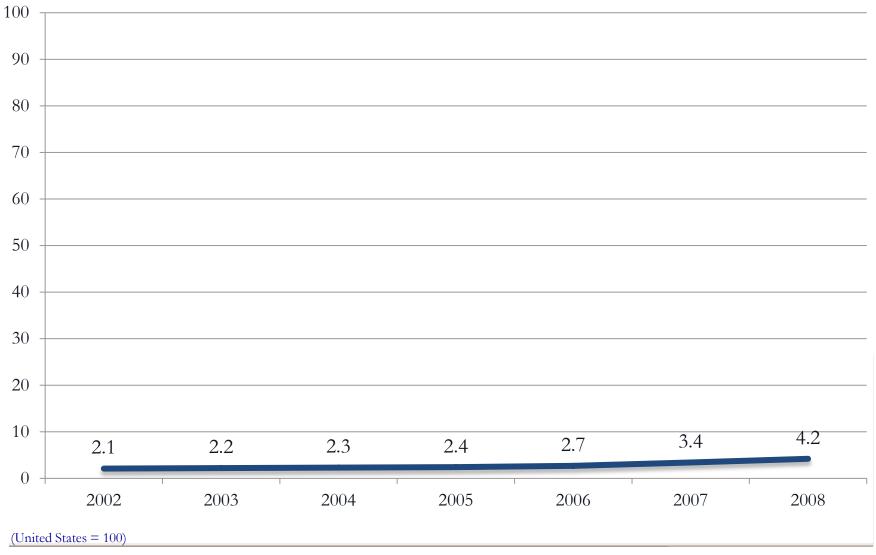
Net Job Loss/Creation, 1992-2011



Is International Wage Convergence Driving Reshoring?



• We Have a Long Way to Go vis-à-vis China



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- Manufacturing matters because if we lose traded sector output we don't automatically get it back.
- Hope is not a strategy
- Blame is not a strategy
- The U.S. can create millions of manufacturing jobs and eliminate the trade deficit in manufactured goods by 2020 but only with a real manufacturing strategy based on the "4T's" (trade, tax, talent, and tech).



Thank You Robert Atkinson ratkinson@itif.org Follow ITIF: facebook.com/innovationpolicy INNOVATION www.innovationpolicy.org POLICY BLOG www.youtube.com/user/techpolicy You Tube www.itif.org ITIF Twitter: @robatkinsonitif