

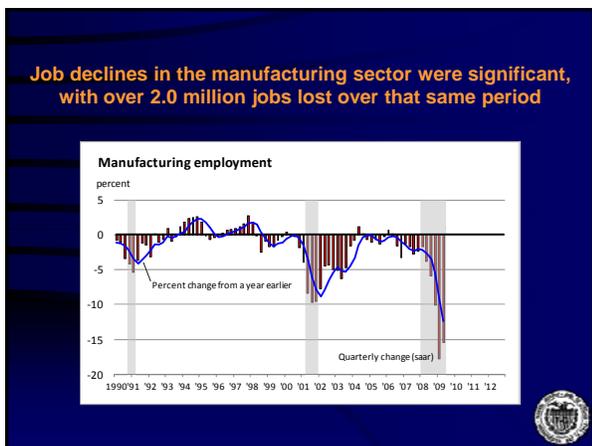
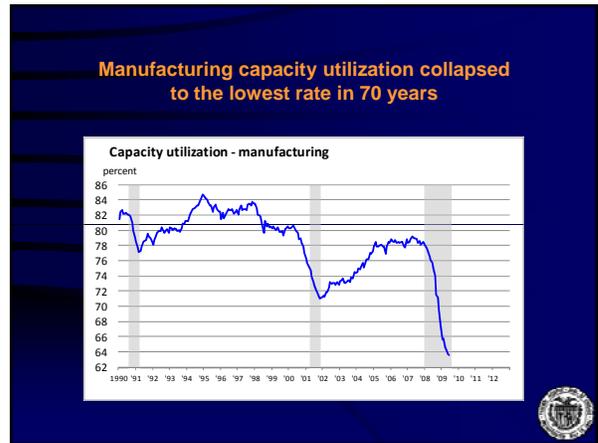
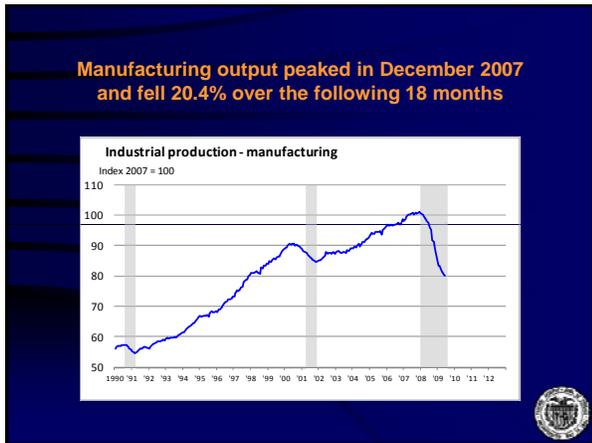
Is the U.S. Losing Its Manufacturing Base?

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Philadelphia, PA
May 18, 2012

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and Economic Advisor
Federal Reserve Bank of Chicago

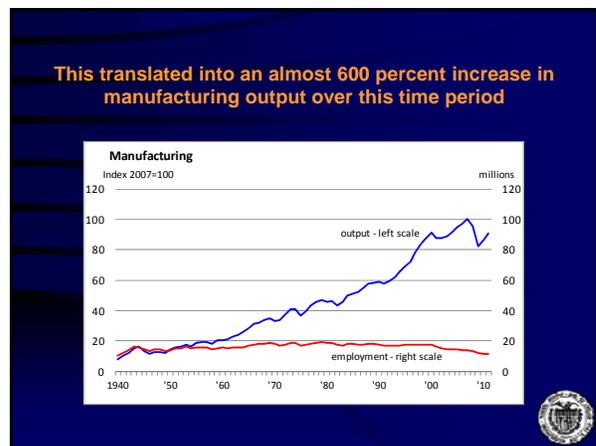
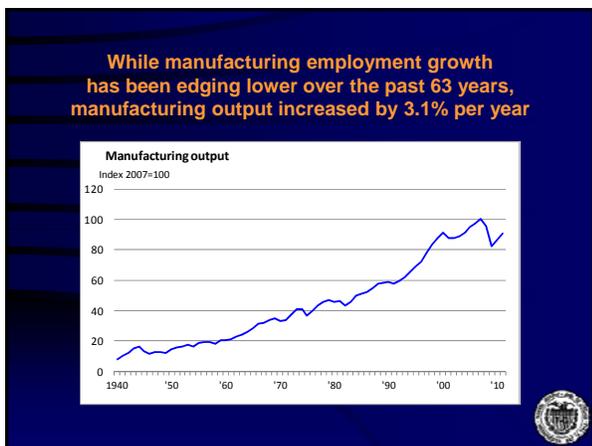
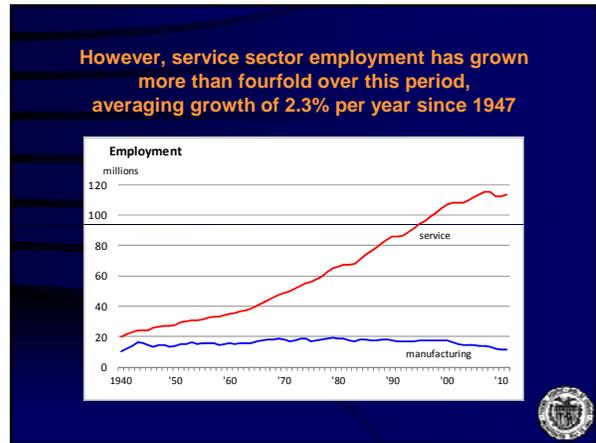
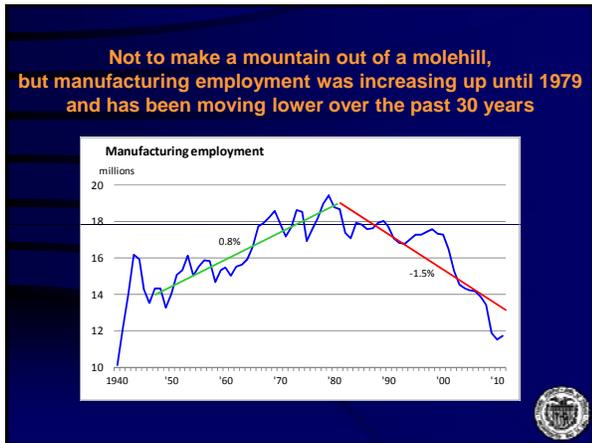
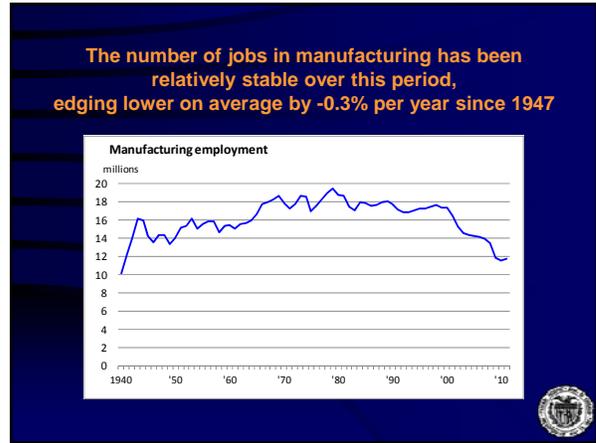
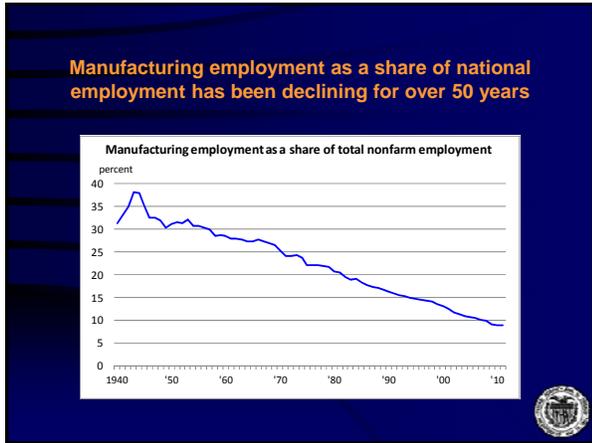


The Setup

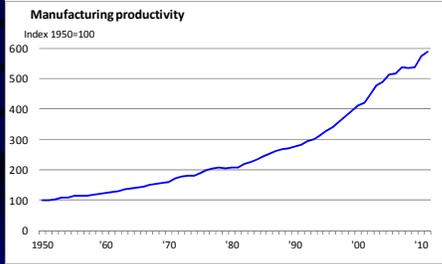


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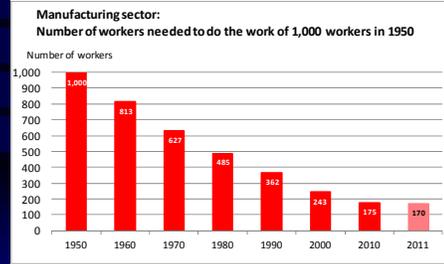




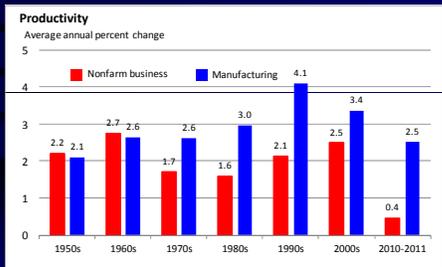
The increase in output can be attributed to strong productivity growth experienced by the manufacturing sector



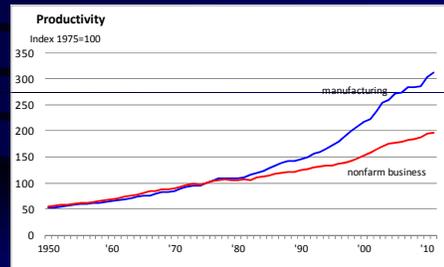
What took 1,000 workers to produce in 1950 takes 170 workers today



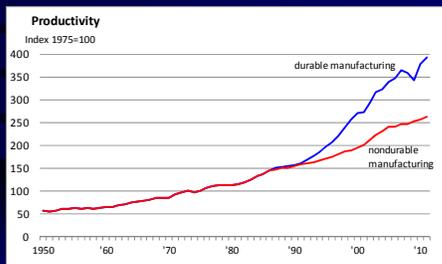
Manufacturing productivity growing faster over the past 40 years



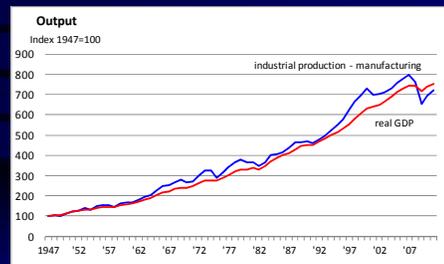
The divergence in productivity appears to have occurred around the mid-1970s

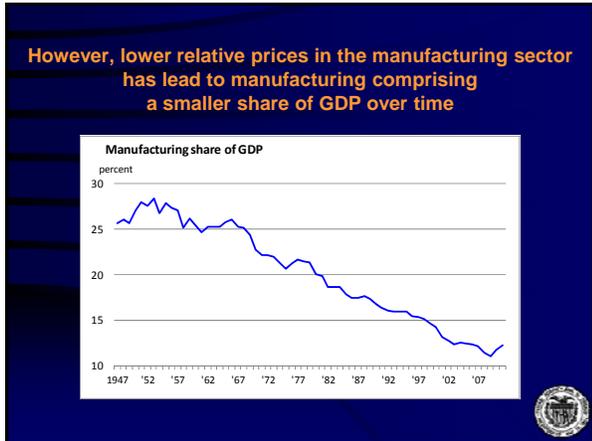


This divergence is especially apparent in durable manufacturing

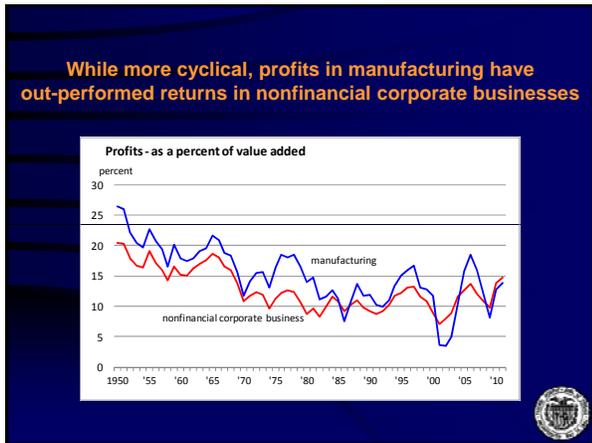


Strong productivity growth had allowed the manufacturing sector to grow faster than the overall economy

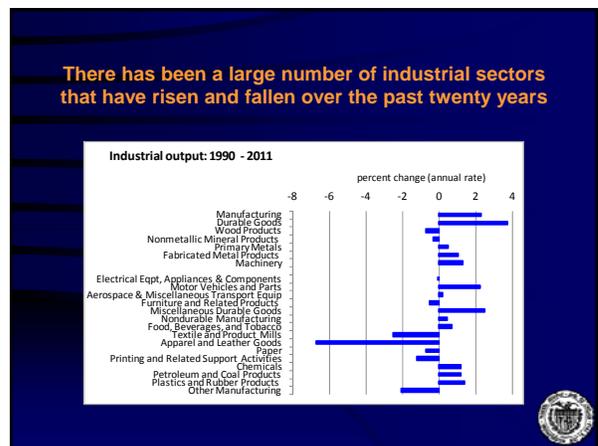
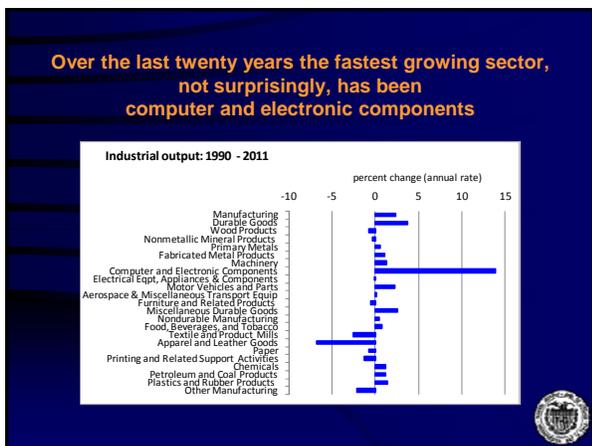




How profitable is manufacturing?



The Manufacturing Sector Continues to Re-invent Itself



The collapse in manufacturing experienced in 2008-2009 is closely linked with the economic recession



Declines in manufacturing output were broad-based during the Great Recession – especially in vehicle and primary metals manufacturing

Industrial output: December 2007 - June 2009

Sector	Percent Change
Manufacturing	-15
Durable Goods	-25
Wood Products	-10
Nonmetallic Mineral Products	-10
Fabricated Metal Products	-20
Primary Metals	-45
Machinery	-15
Computer and Electronic Components	-10
Electrical Eqpt, Appliances & Components	-15
Motor Vehicles and Parts	-55
Aerospace & Miscellaneous Transport Equip	-15
Furniture and Related Products	-10
Miscellaneous Durable Goods	-40
Nondurable Manufacturing	-10
Food, Beverages, and Tobacco	-10
Textile and Product Mills	-10
Apparel and Leather Goods	-10
Printing and Related Support Activities	-10
Paper	-10
Chemicals	-10
Petroleum and Coal Products	-10
Plastics and Rubber Products	-10
Other Manufacturing	-10



The recovery has also been broad-based with motor vehicles and primary metals manufacturing leading the way

Industrial output: June 2009 - April 2012

Sector	Percent Change
Manufacturing	40
Durable Goods	30
Wood Products	10
Nonmetallic Mineral Products	10
Fabricated Metal Products	50
Primary Metals	60
Machinery	10
Computer and Electronic Components	10
Electrical Eqpt, Appliances & Components	10
Motor Vehicles and Parts	120
Aerospace & Miscellaneous Transport Equip	10
Furniture and Related Products	10
Miscellaneous Durable Goods	10
Nondurable Manufacturing	10
Food, Beverages, and Tobacco	10
Textile and Product Mills	10
Apparel and Leather Goods	10
Printing and Related Support Activities	10
Paper	10
Chemicals	10
Petroleum and Coal Products	10
Plastics and Rubber Products	10
Other Manufacturing	10



Manufacturing workers have suffered steep employment declines over the current cycle

Manufacturing employment

trough = 100



But the overall economy's employment growth also struggled

Total nonfarm employees

trough = 100



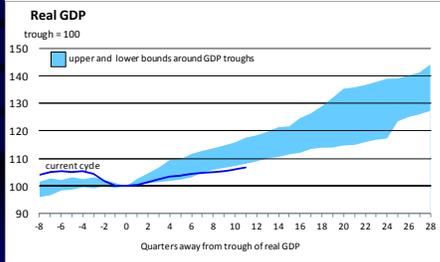
When changes in nonfarm employment are considered, the most recent manufacturing employment downturn is not unprecedented

Manufacturing employment share

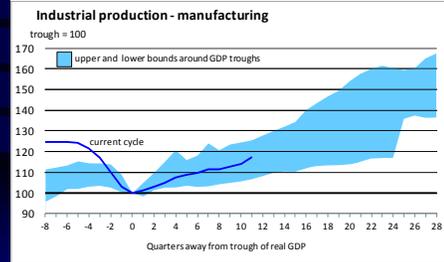
percent



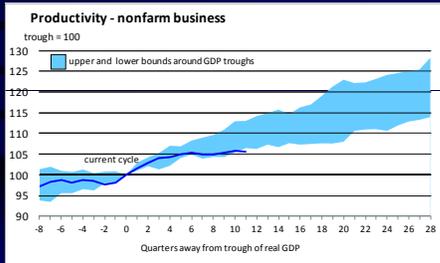
The financial crisis and its aftermath has hampered the current economic expansion



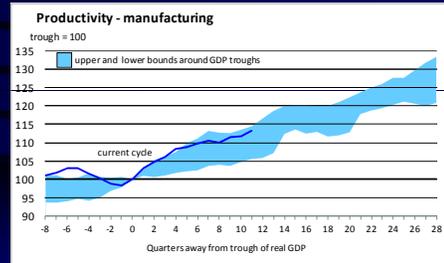
The recovery in manufacturing output is in-line with past industrial recoveries



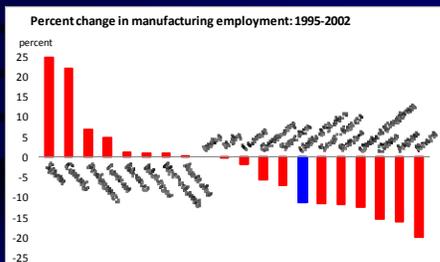
Productivity in the overall economy has grown at a rate near the low-end of previous expansions



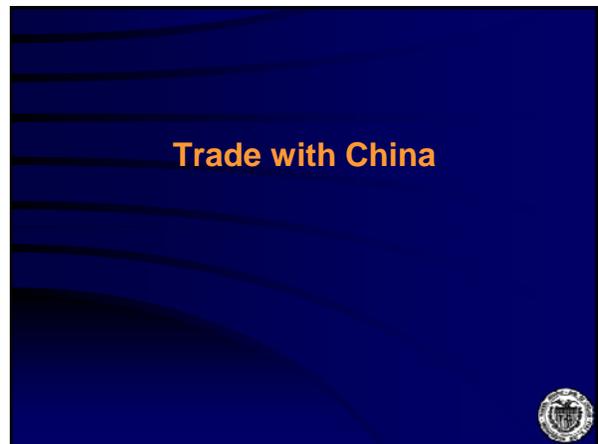
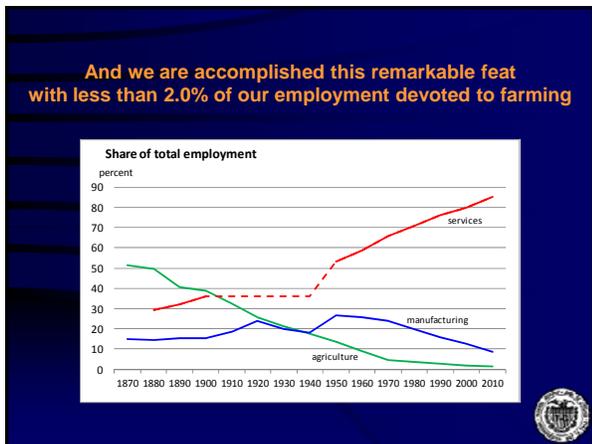
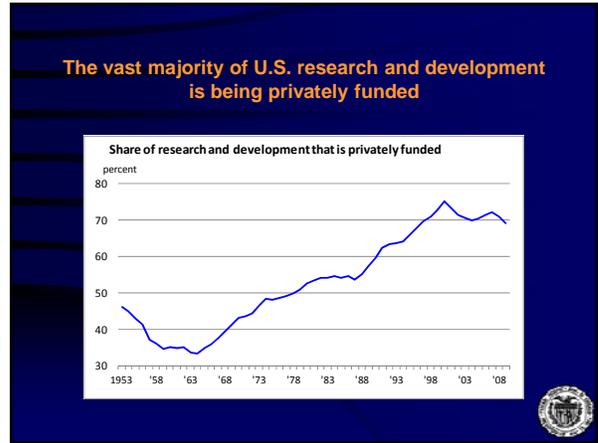
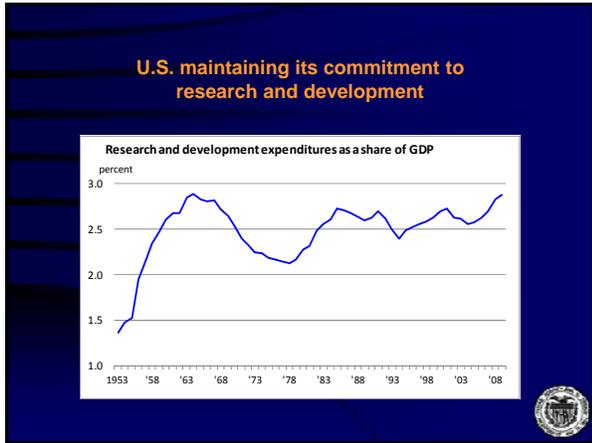
However, productivity within the manufacturing sector has grown at a much faster pace



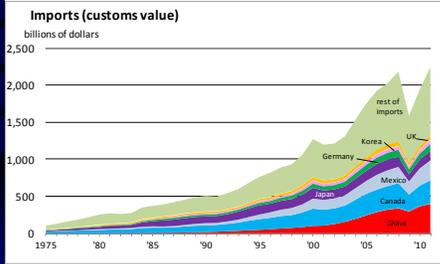
Manufacturing employment losses have occurred across numerous countries – among 20 big economies, 22 million jobs were lost



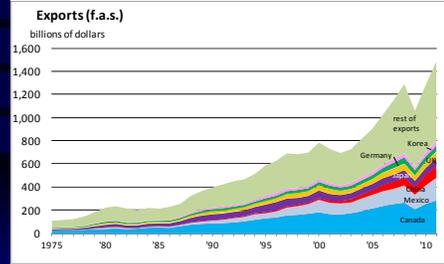
Is the U.S. positioned to continue its strong productivity gains?



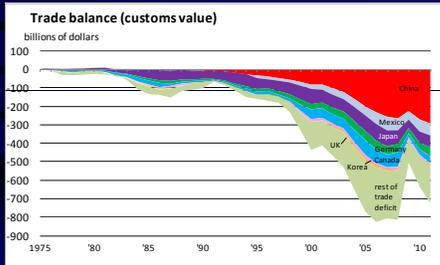
China has risen to number one in terms of U.S. imports, representing 18.1% of all imports in 2011



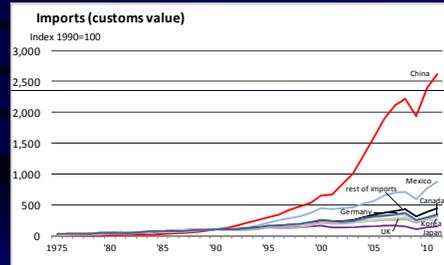
While China has risen to be our third largest export country, it represents only 7.0% of U.S. exports



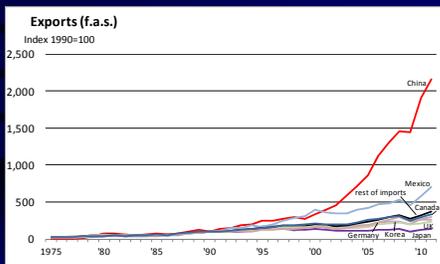
This difference has led to China having the largest trade deficit with the U.S.



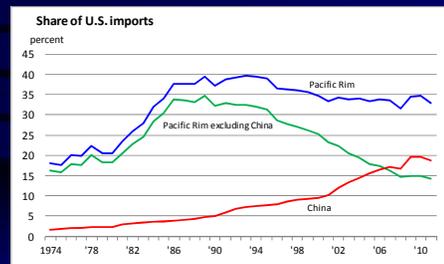
China has certainly increased the amount of goods flowing into the U.S.



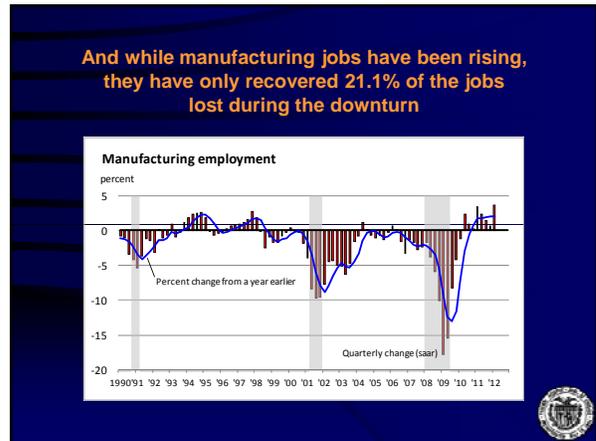
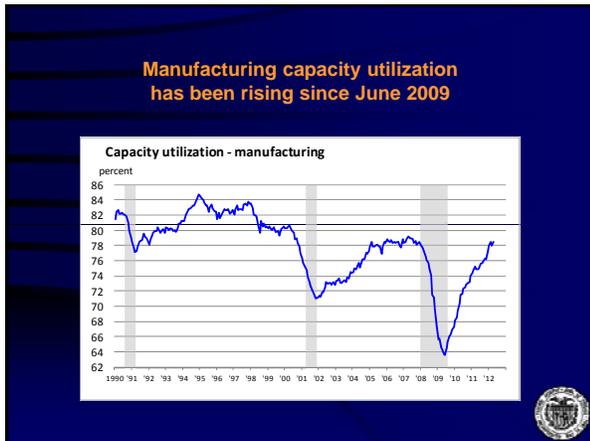
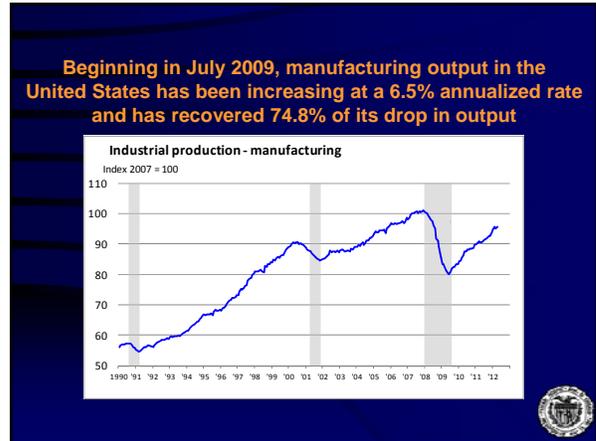
They have also represented the largest gain for exports from the U.S.



While China has increased its share of imports to the U.S., the Pacific Rim as a whole has had a declining share since the mid-90s



The Current Expansion



Summary

- Manufacturing output is in the process of recovering its losses
- The success of manufacturing has been driven by productivity
- Manufacturing employment has shown little change over the past 70 years – with a steady decline over the past 30 years
- The most recent decline in manufacturing was cyclical, not structural
- Profits in manufacturing have outperformed profits for the rest of the nation
- The trends that have dominated manufacturing for the past 70 years are suggestive of the future for U.S. manufacturing: ever increasing output with employment representing a smaller share of total employment

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