

Management
Briefing Seminars
2007



Manufacturing

It's a Small World After All

U.S. Manufacturing: Challenges and Opportunities

John B. Byrd III
President

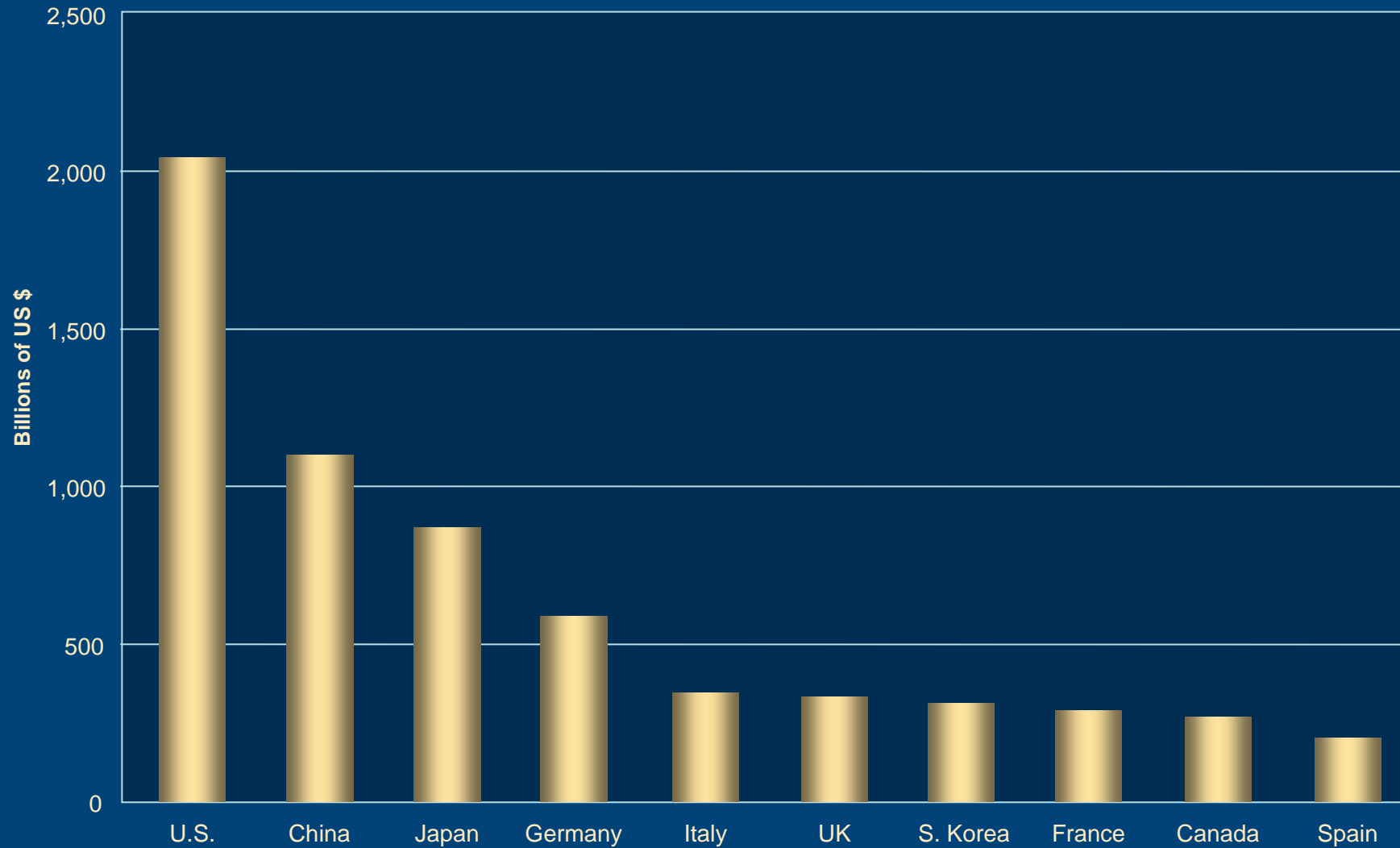
AMT - The Association For Manufacturing Technology

Center for Automotive Research

August 6, 2007

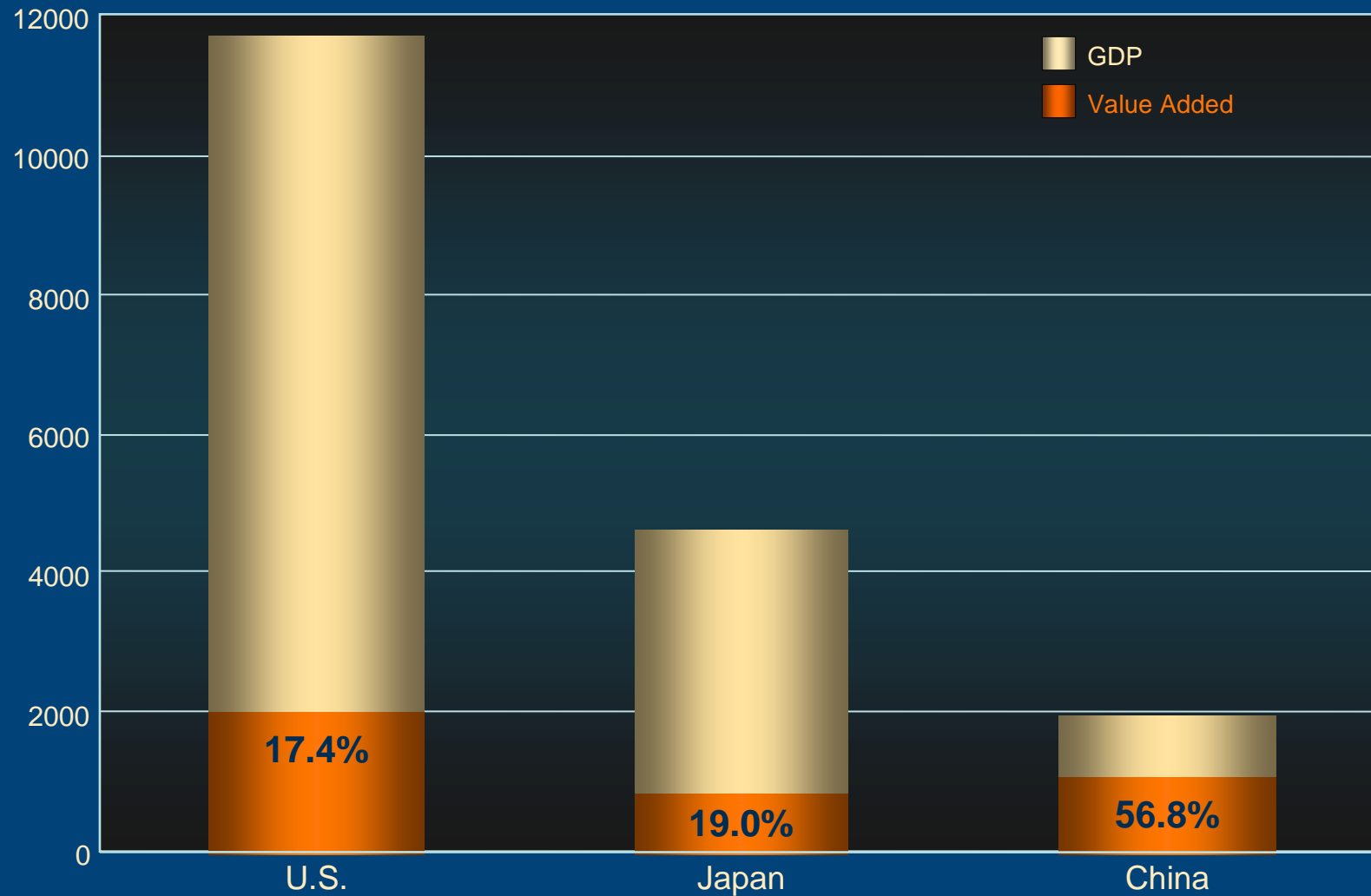
**U.S. manufacturing
is not dying**

Value Added by Industrial Sector/2004



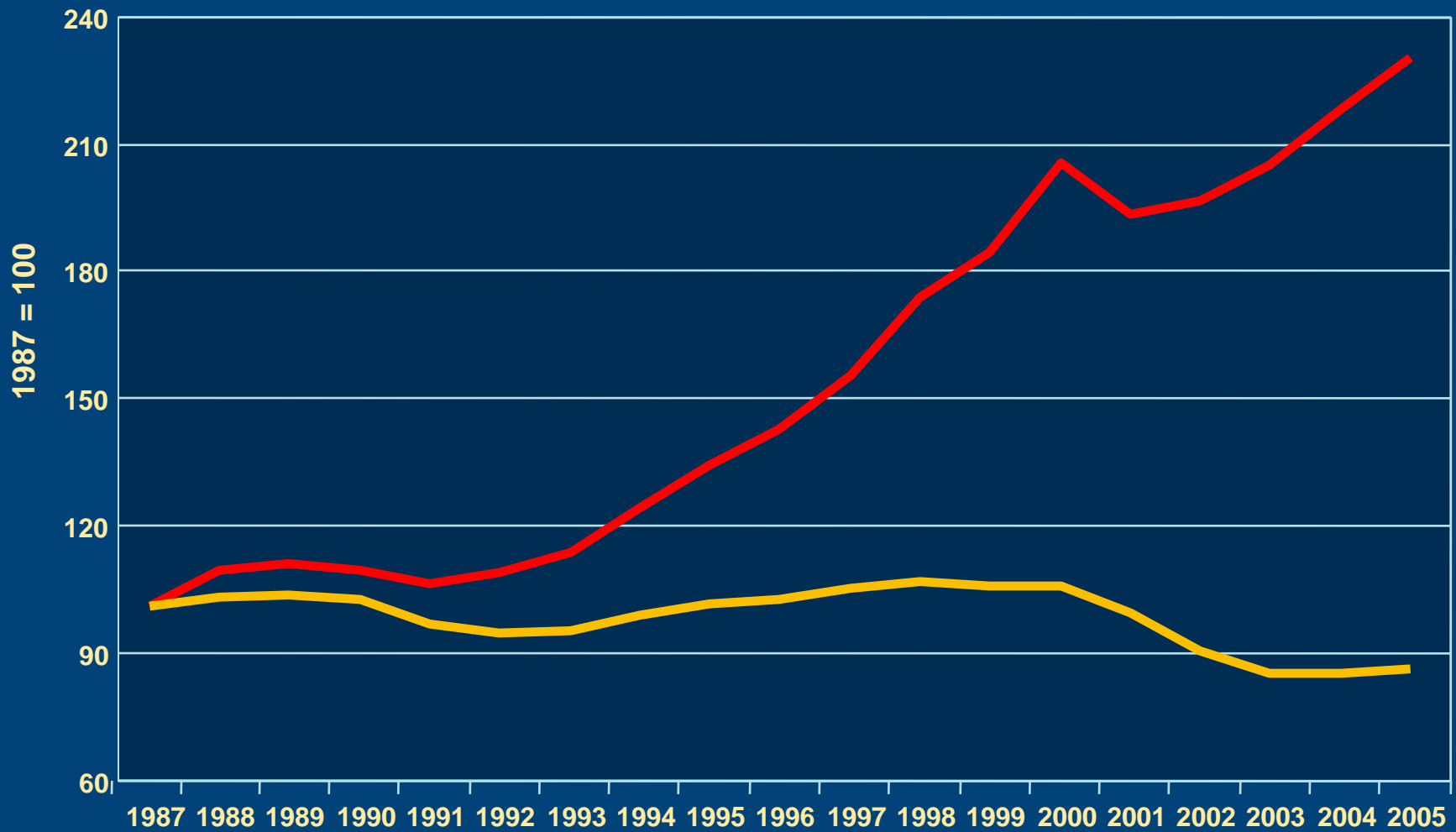
Source: OECD; National Statistics Bureau of China

GDP with Value Added by Industry



Source: OECD; National Statistics Bureau of China

U.S. Value-Added Manufacturing Output and Employment



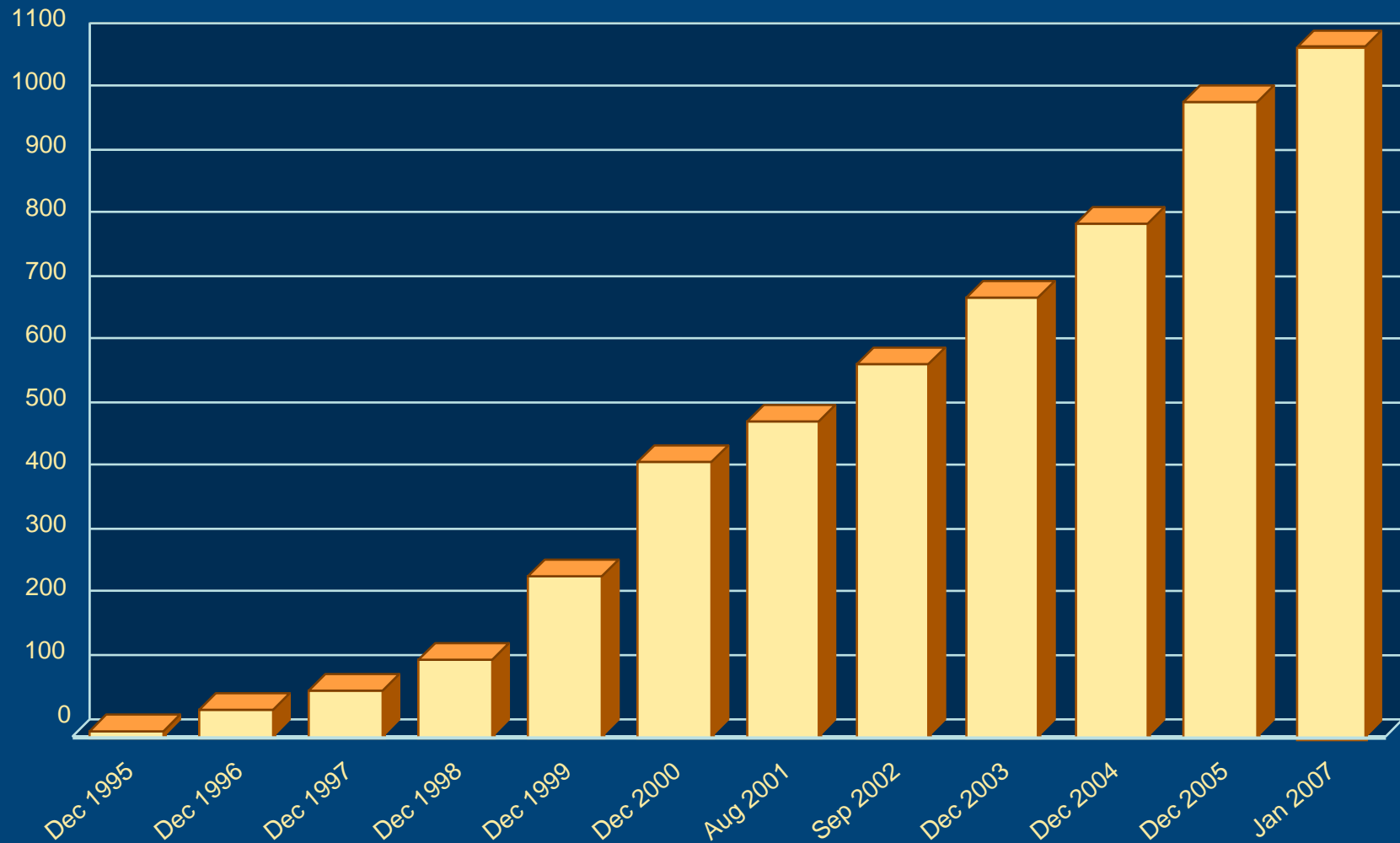
Source: Bureau of Labor Statistics and Bureau of Economic Analysis

— Real Output — Employment

**Manufacturing is
changing...**

Faster & Faster

Global Internet Users (millions)

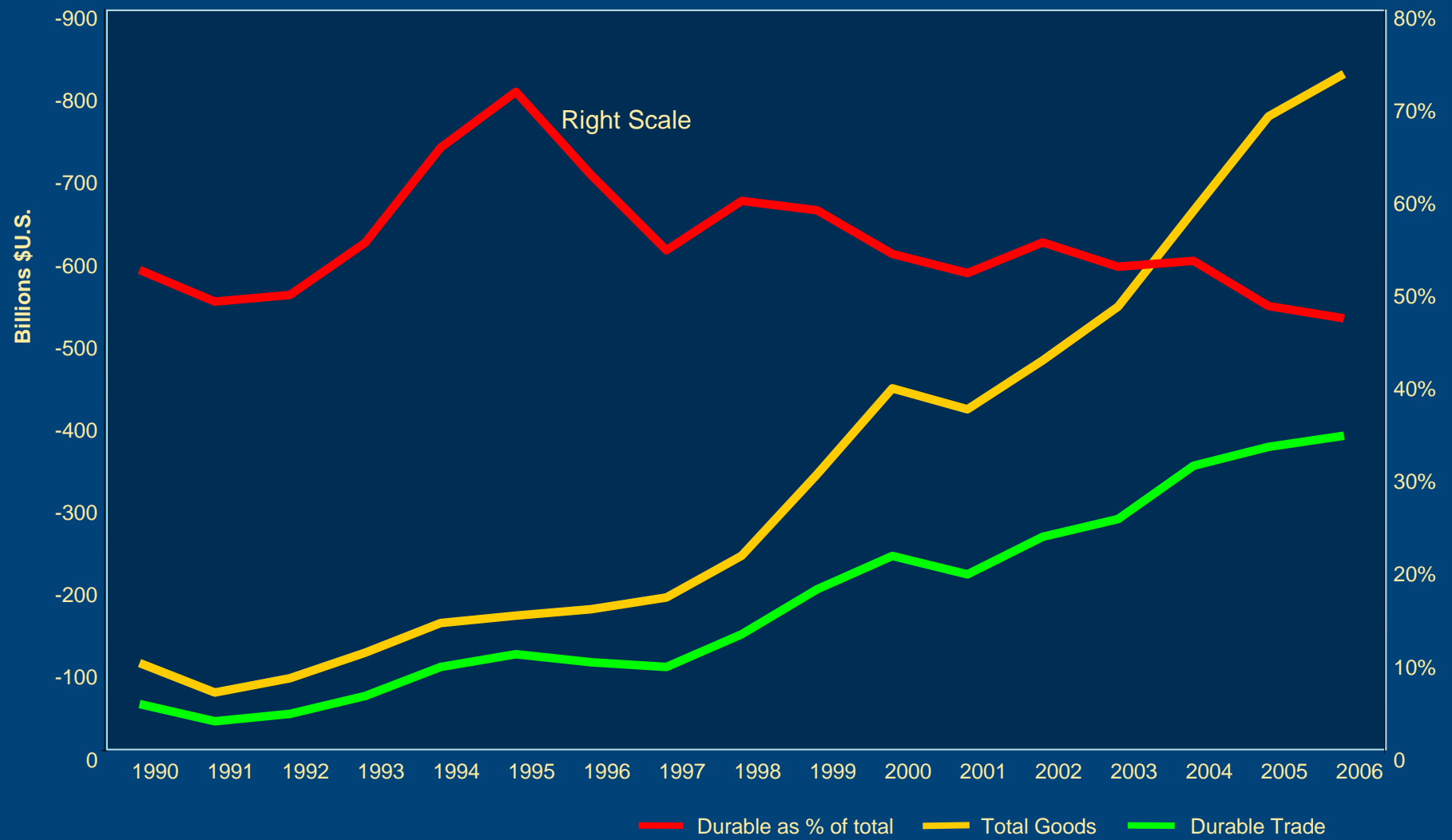


Source: InternetWorldStats.com

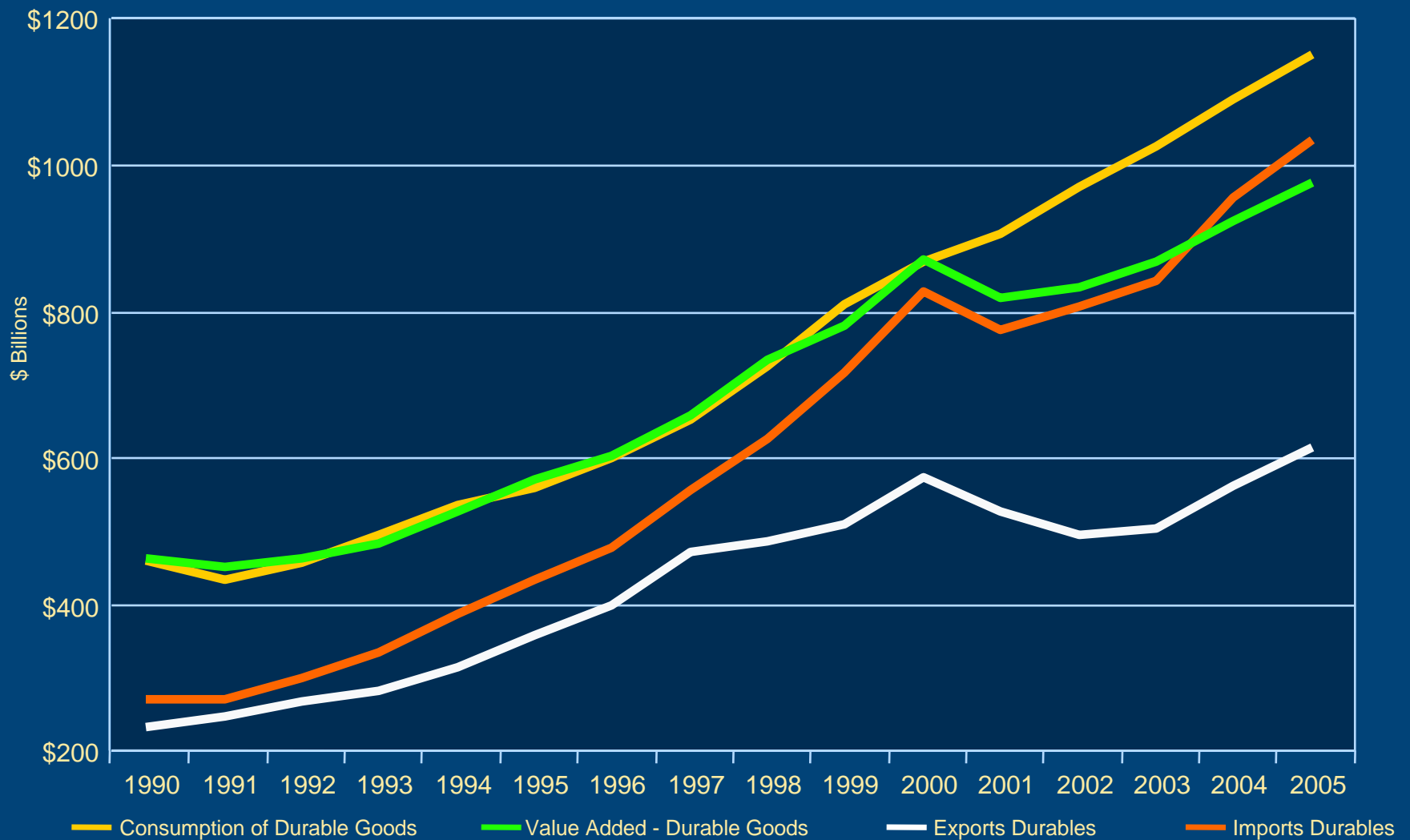
Global Internet Usage

	# Internet Users	Penetration	Percent of Global Use
Asia	389 million	10.5%	35.6%
Europe	313 million	38.6%	28.6%
North America	232 million	69.4%	21.2%
Latin America	89 million	16.0%	8.1%

U.S. Trade Deficit in Goods



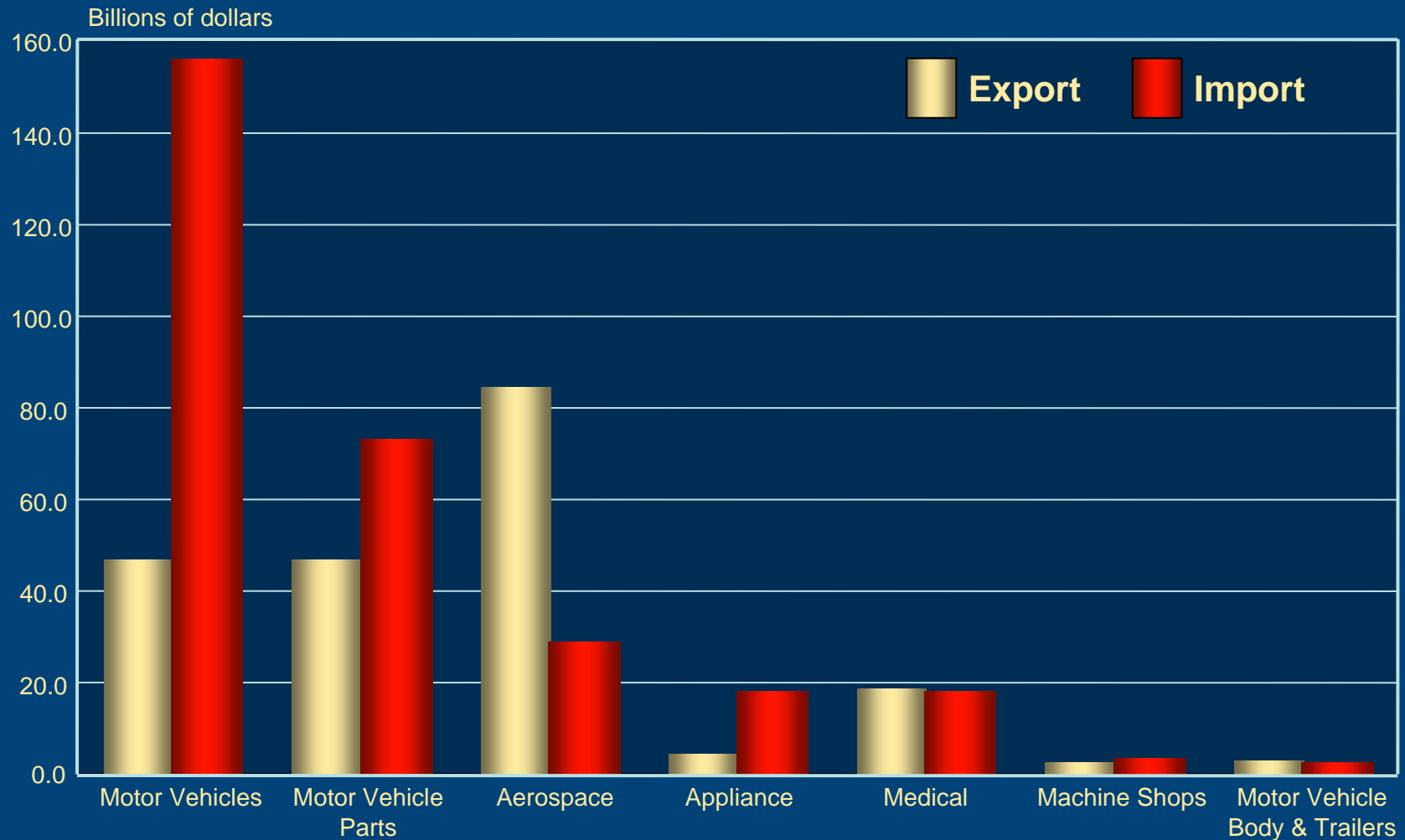
U.S. Durable Manufacturing Output & Consumption



Source: Bureau of Economic Analysis

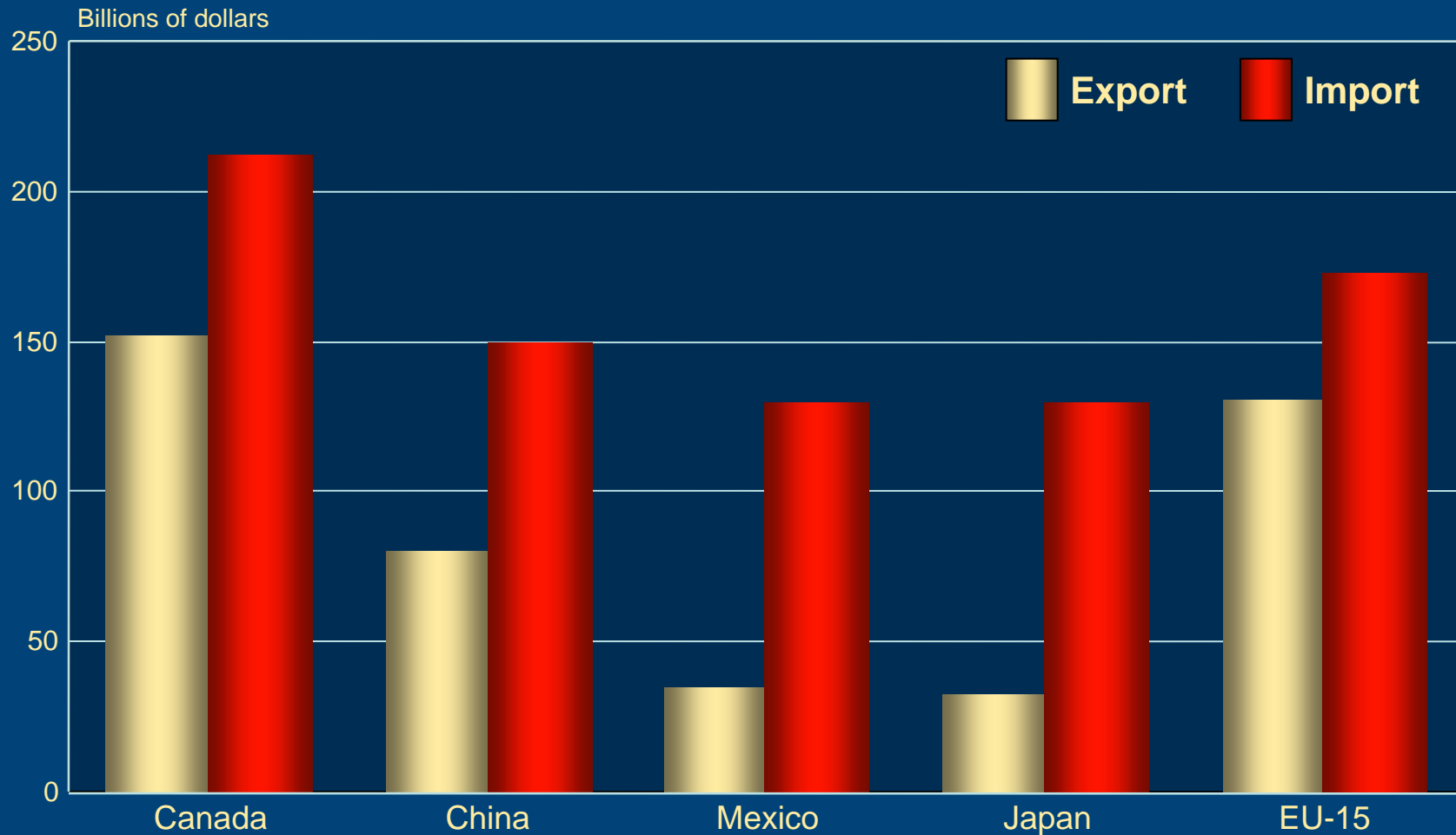
U.S. Durable Goods Trade - 2006

(Major Manufacturing Technology Customers)

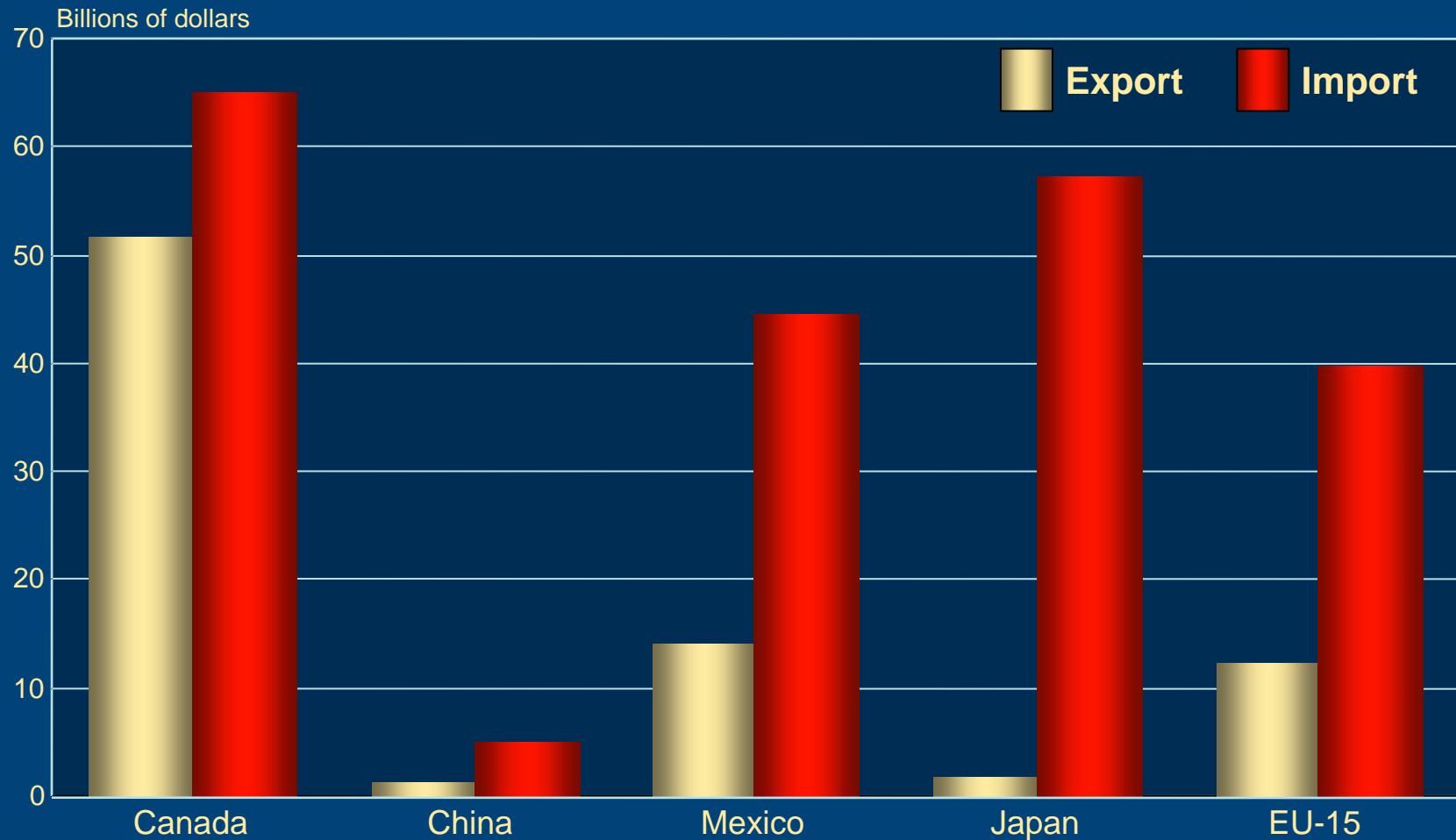


U.S. Durable Goods Trade - 2006

(Largest Trading Partners)

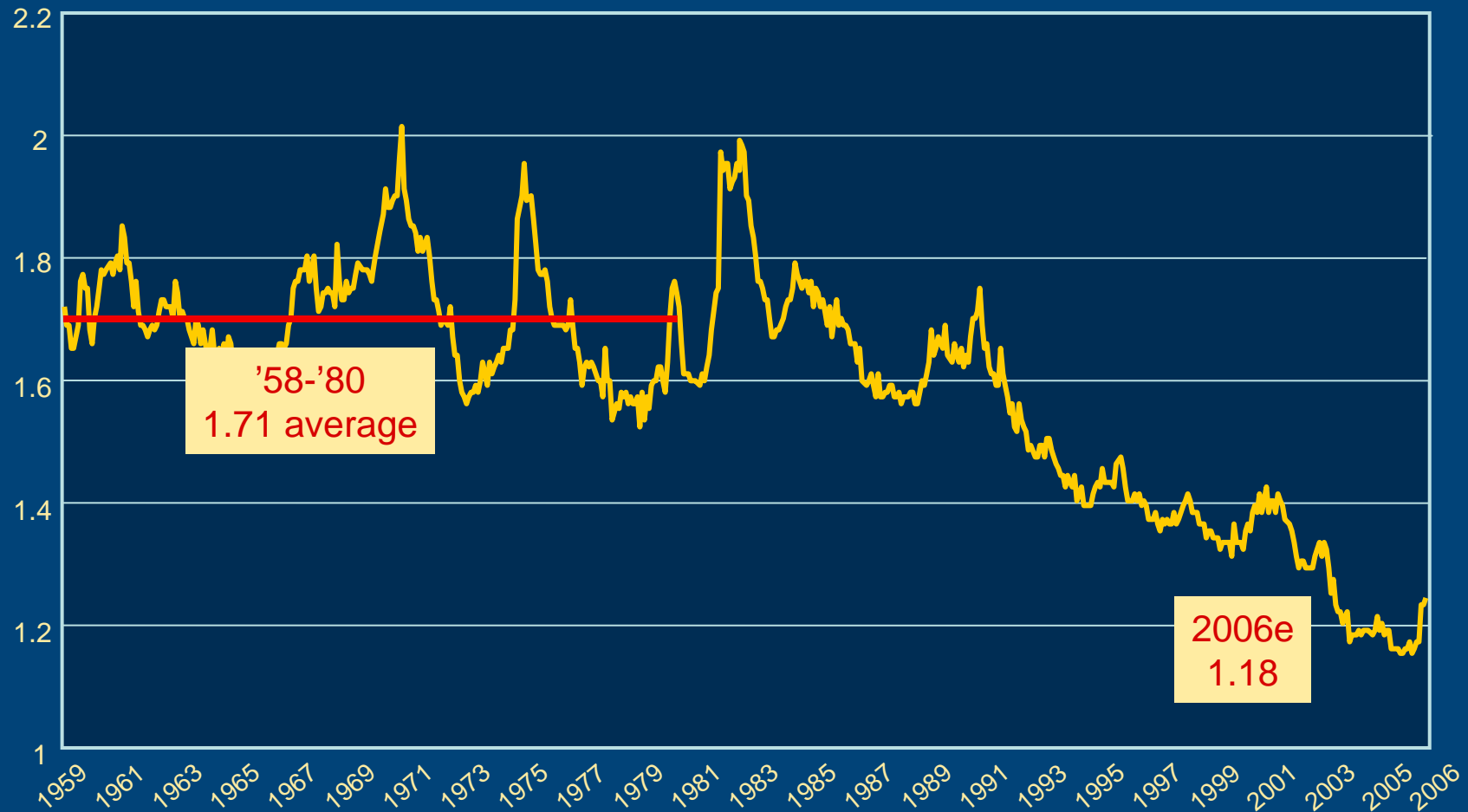


Trade in Automotive Sectors - 2006



The Manufacturing Supply Chain is Evolving

Inventory to Sales Ratio for Manufacturing



Source: Census Bureau

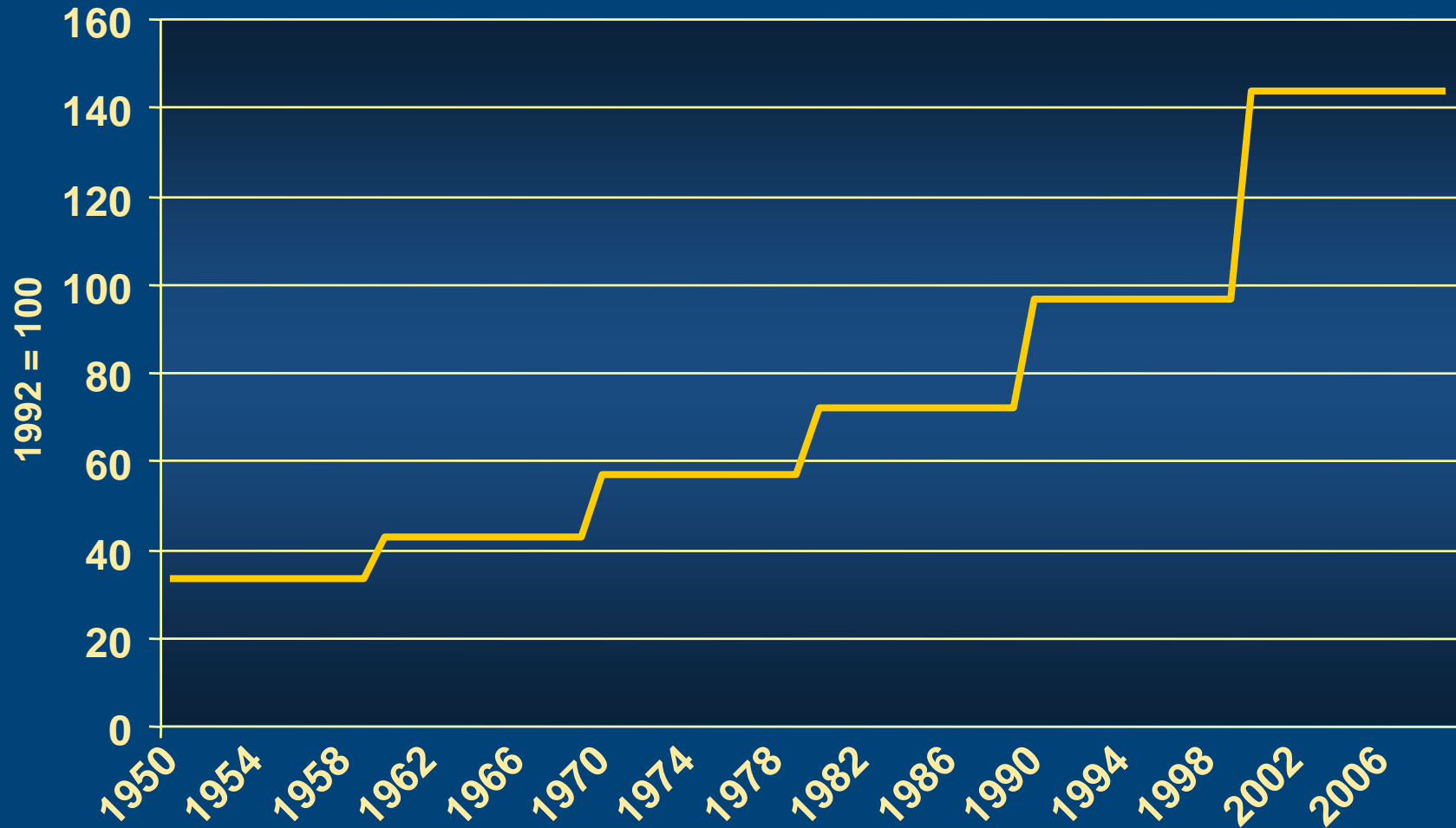
To compete in the supply chain of tomorrow...

- Lead time is critical
- Technology is essential
- Business environment must be flexible
- Productivity is a competitive advantage

U.S. Manufacturing has two strengths

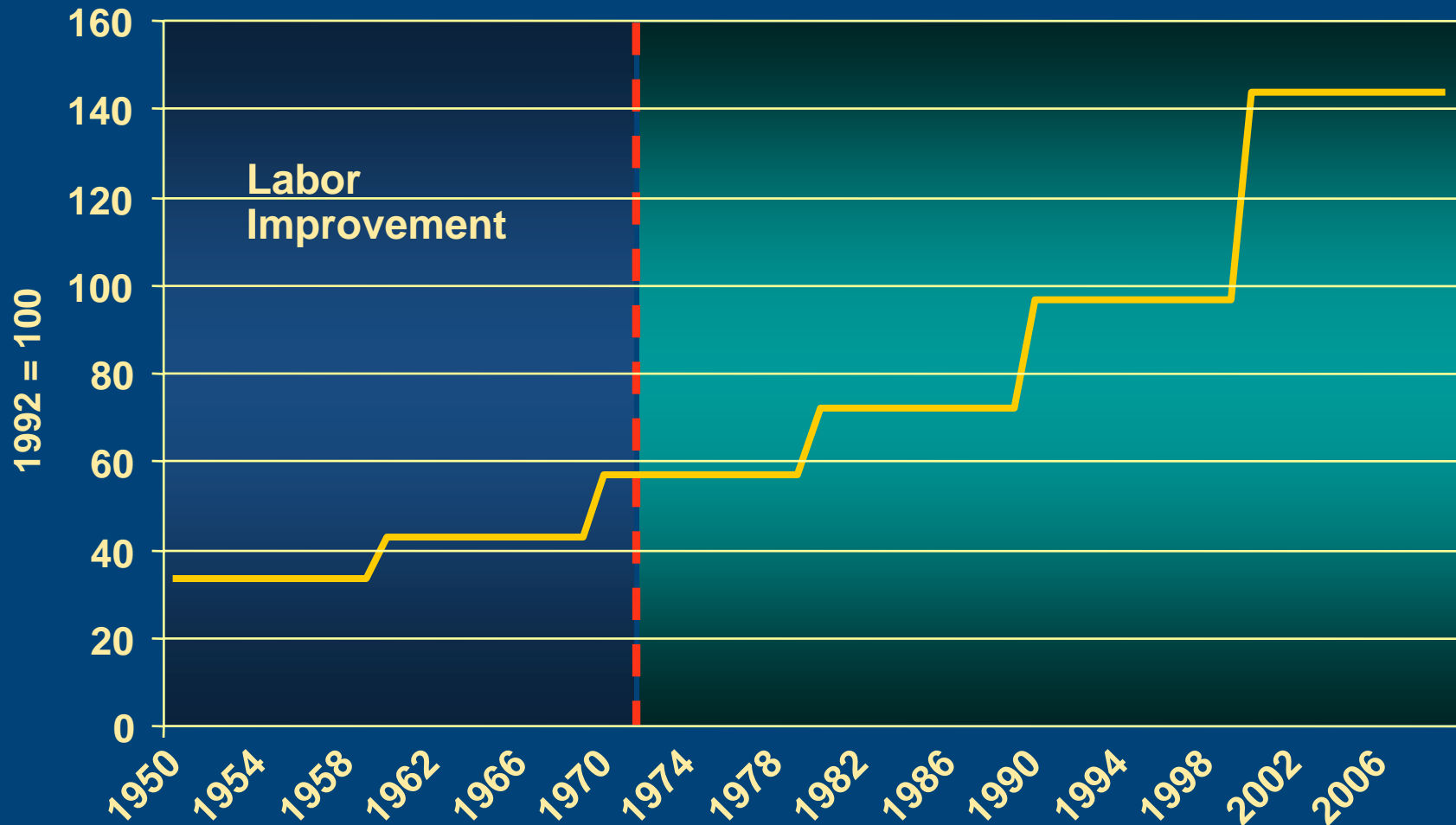
- Productivity
- Low Inflation

Productivity in Manufacturing (Output Per Hour)



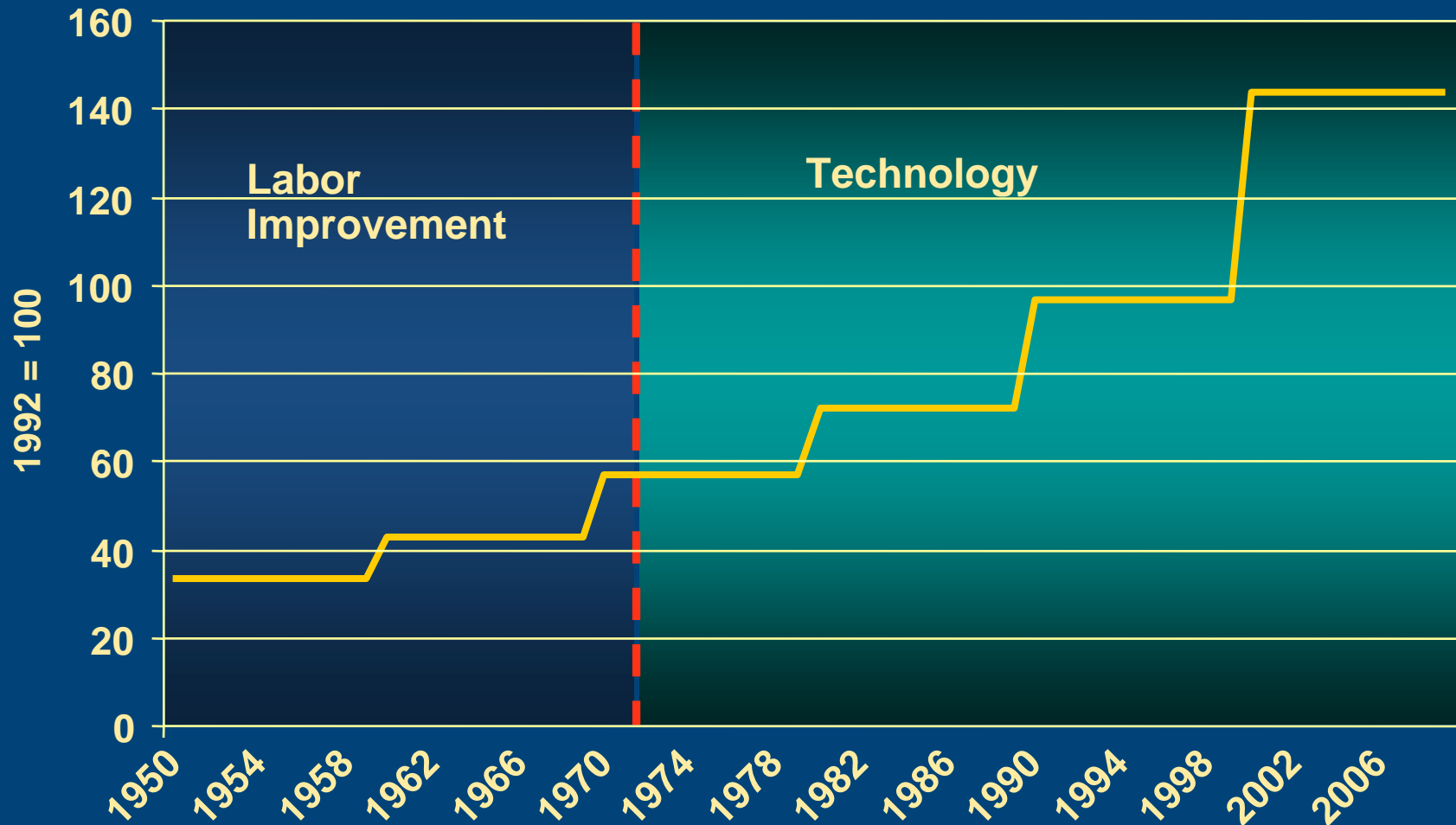
Source: Bureau of Labor Statistics

Productivity in Manufacturing (Output Per Hour)



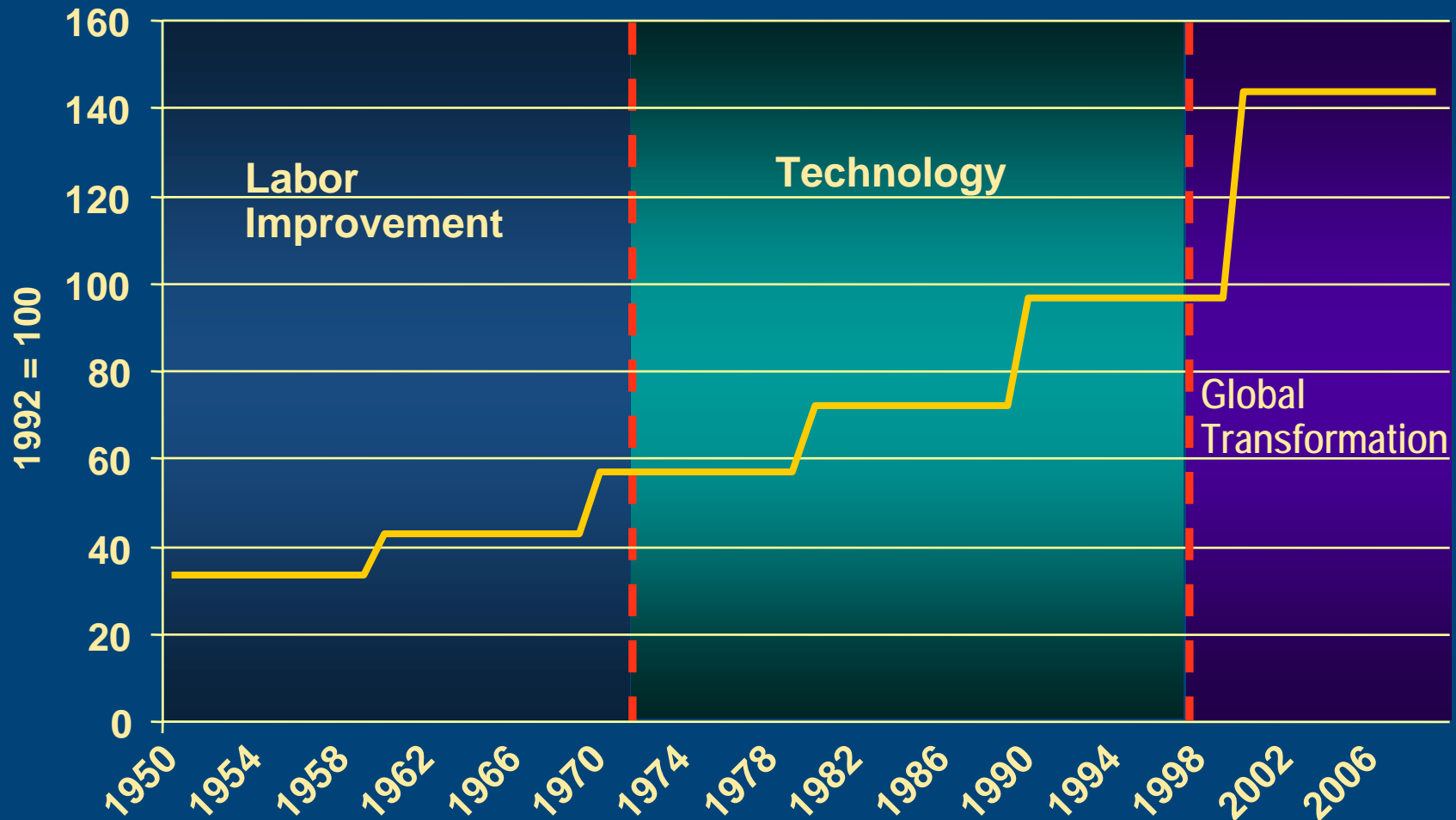
Source: Bureau of Labor Statistics

Productivity in Manufacturing (Output Per Hour)



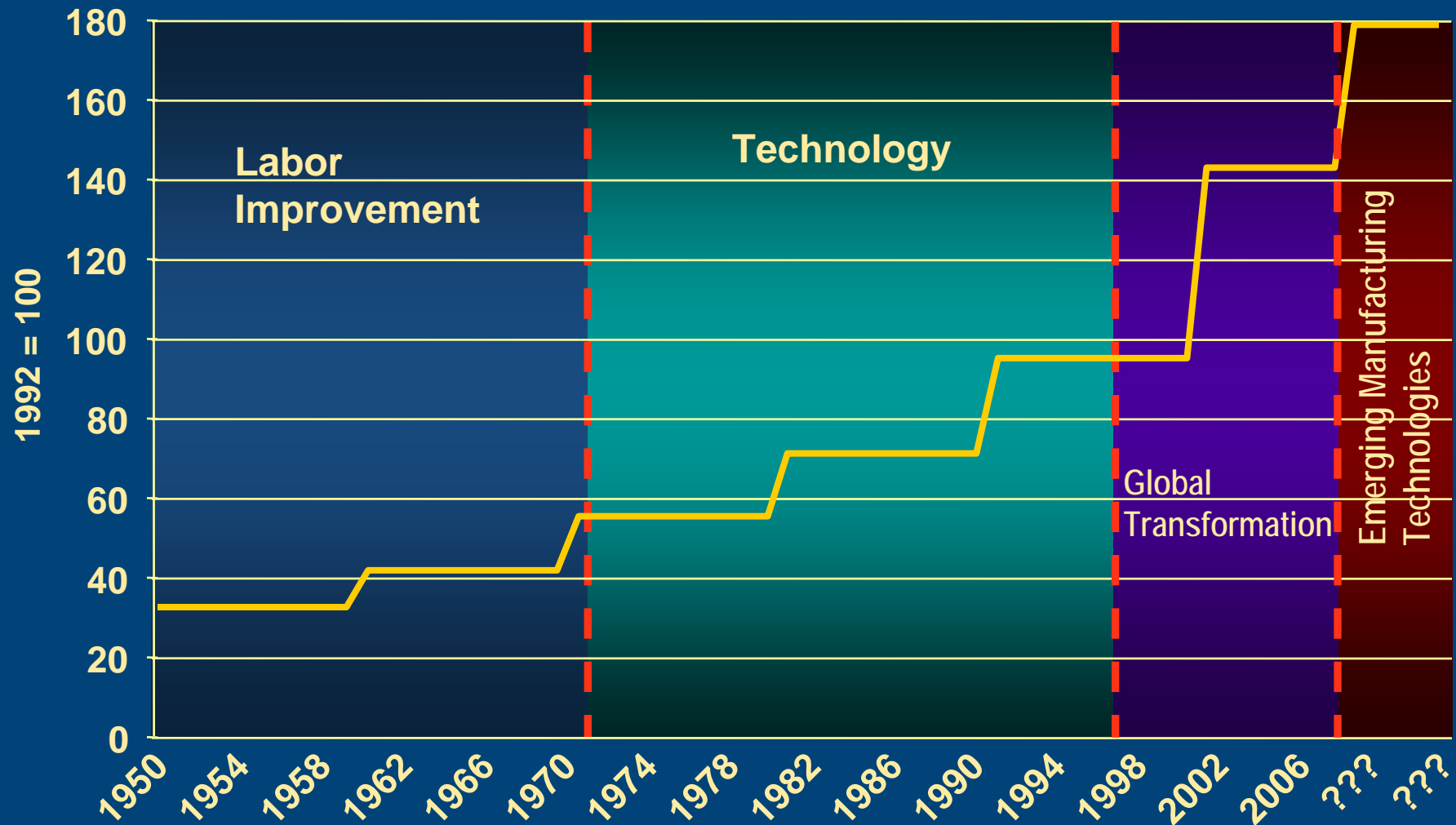
Source: Bureau of Labor Statistics

Productivity in Manufacturing (Output Per Hour)



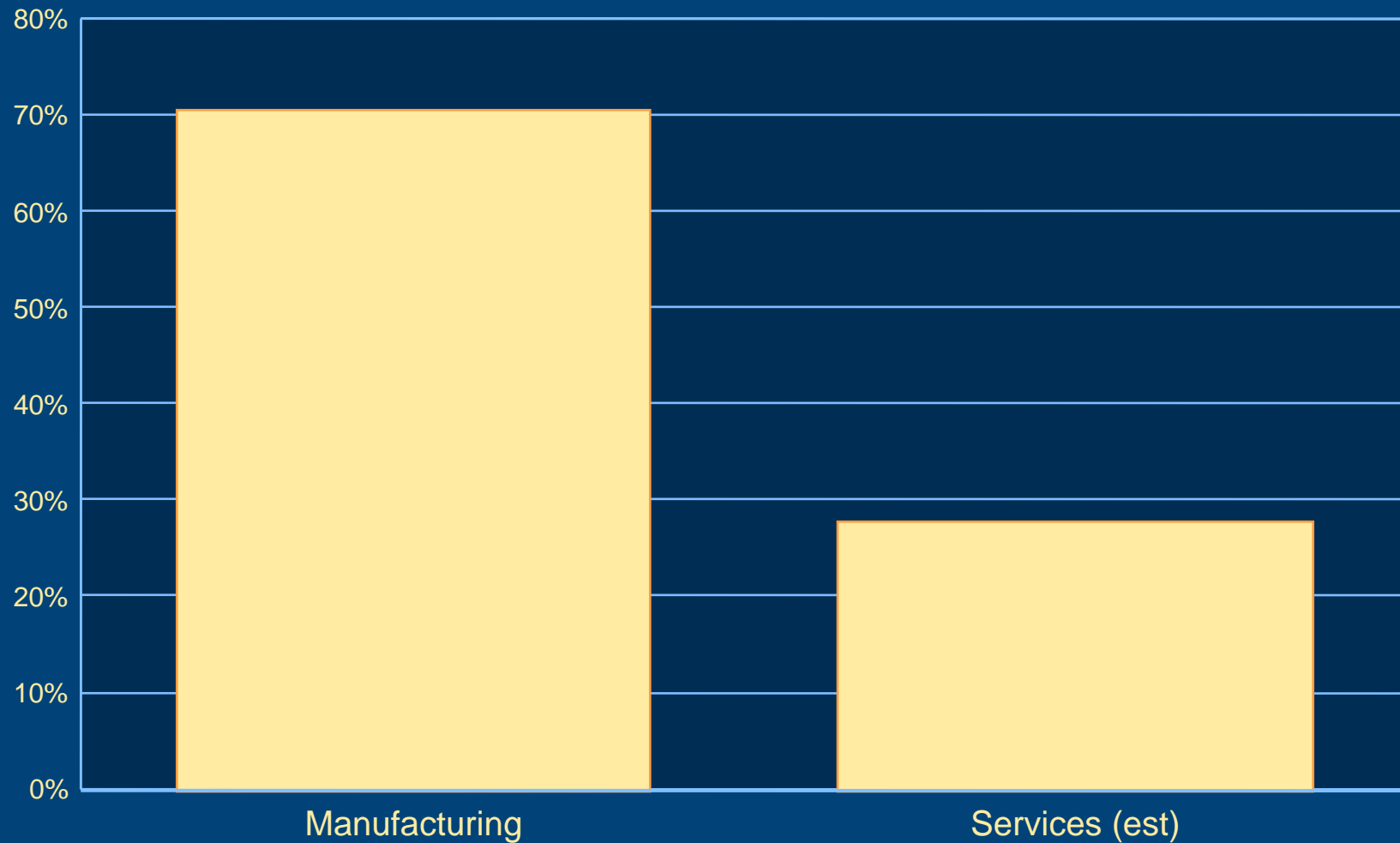
Source: Bureau of Labor Statistics

Productivity in Manufacturing (Output Per Hour)



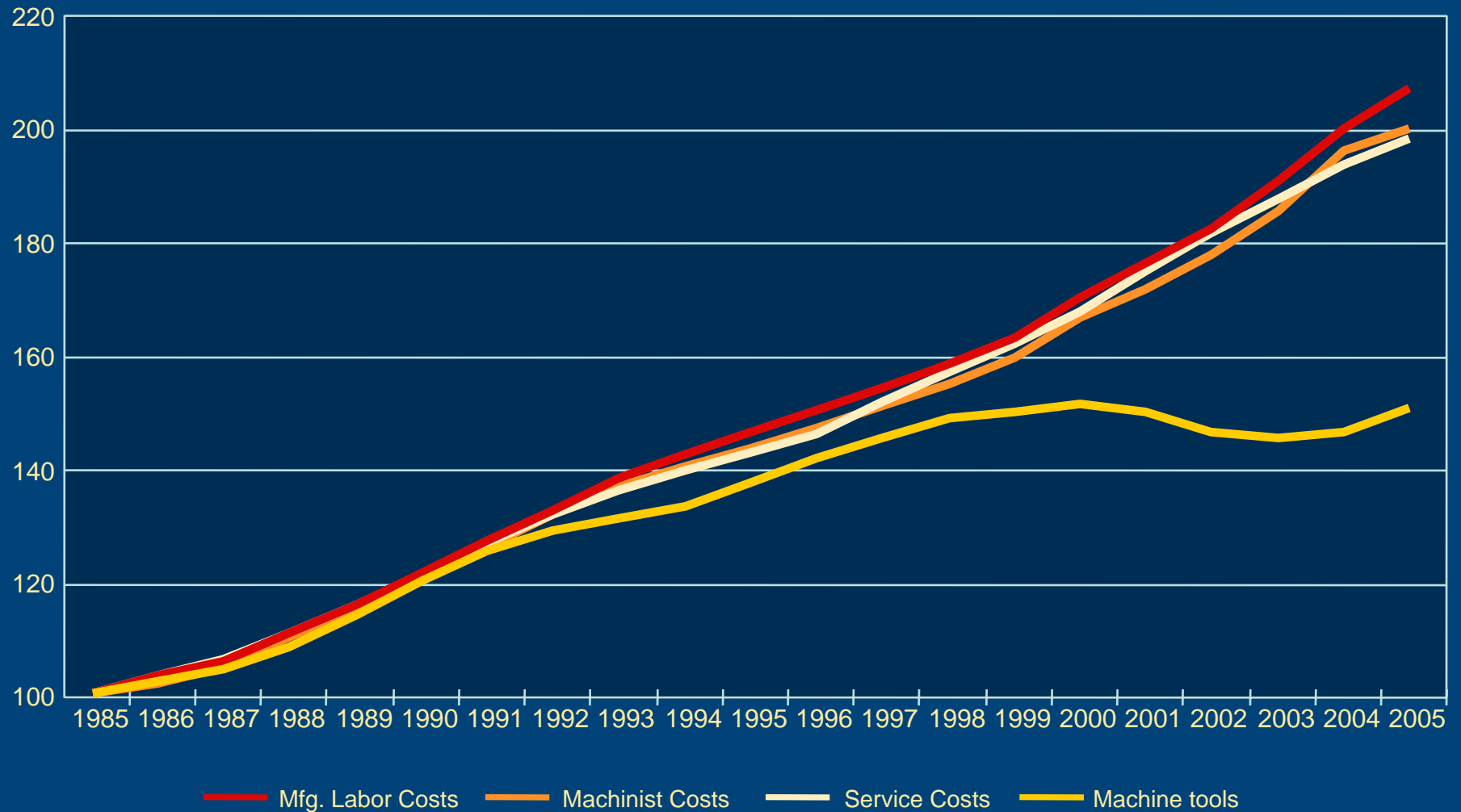
Source: Bureau of Labor Statistics

Productivity Growth 1992 - 2005



Source: Bureau of Labor Statistics

Labor Costs Outpace Equipment Prices



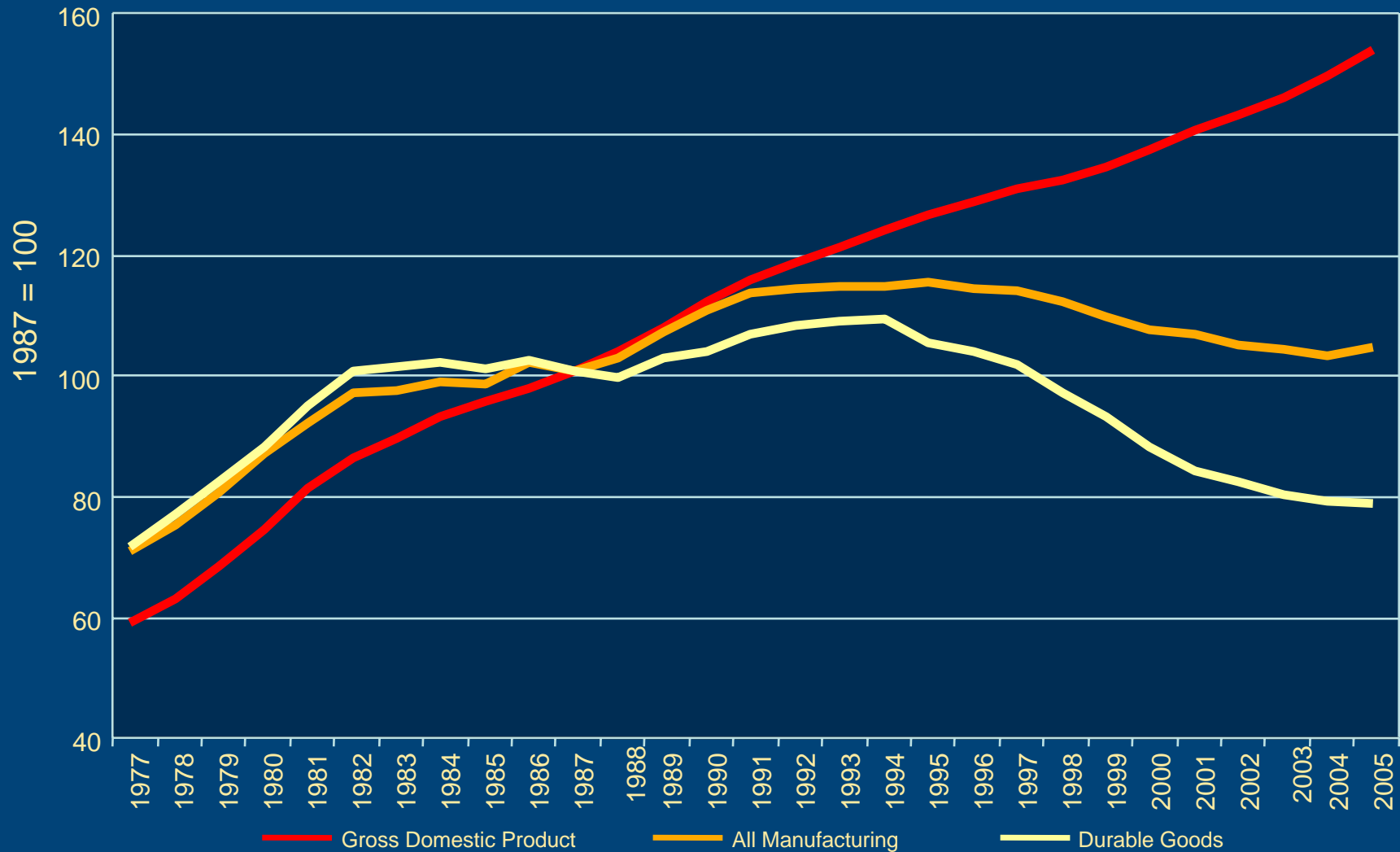
Source: Bureau of Labor Statistics

Total wages & benefits per person

Index - 1985 = 100

Price Increases

Total Economy vs. Manufacturing



Source: Bureau of Economic Analysis

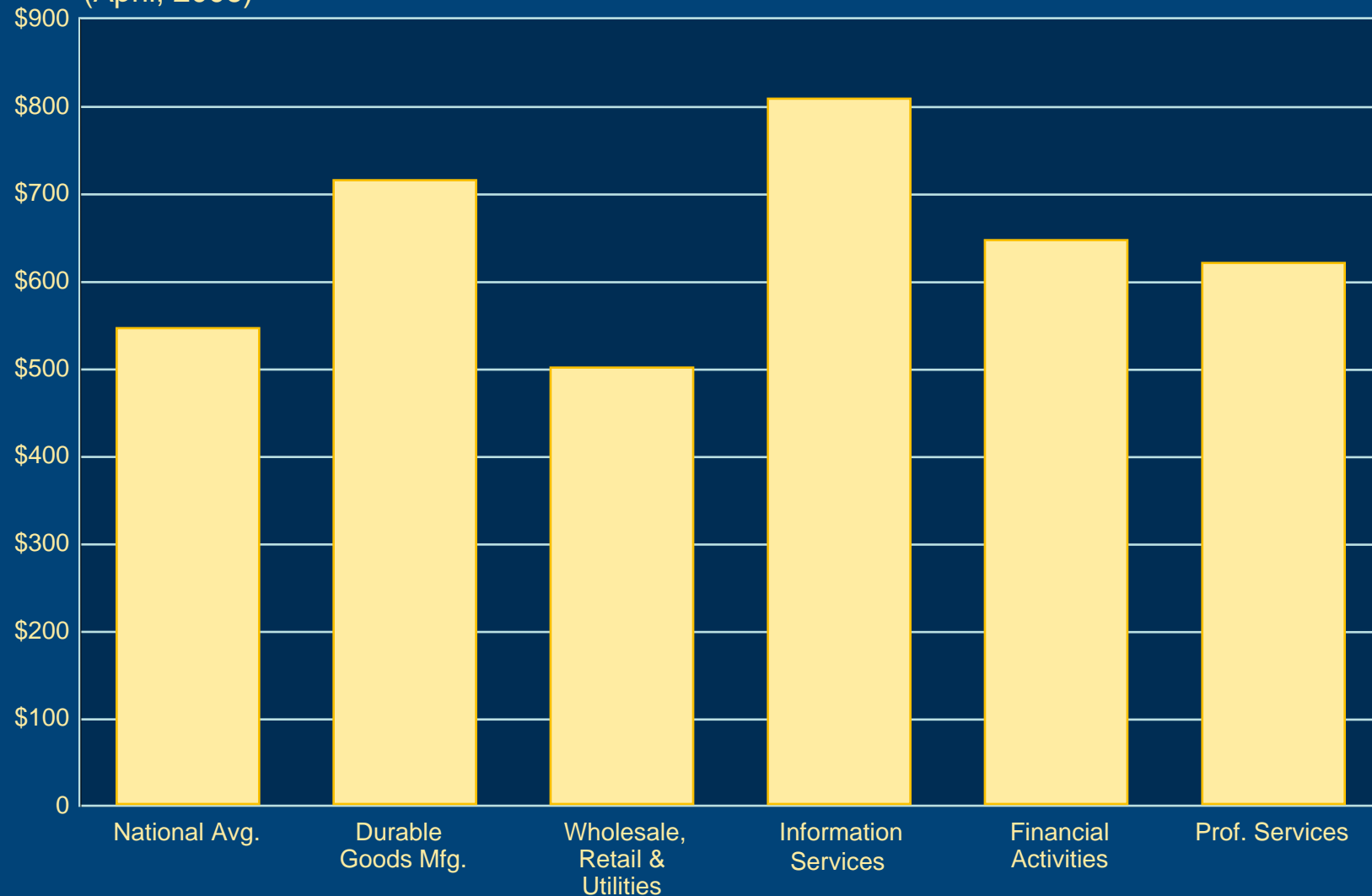
A transition is occurring in the U.S. Industrial Base

- Consolidation
- A migration of manufacturing to Tier 1 and Tier 2 suppliers
- Outsourcing of low skill jobs to overseas producers
- A geographic migration of manufacturing facilities within the U.S.
- A change in the makeup of the U.S. labor force

**Why are
manufacturing jobs
important?**

Weekly Wages – Non-Supervisory Employees

(April, 2006)

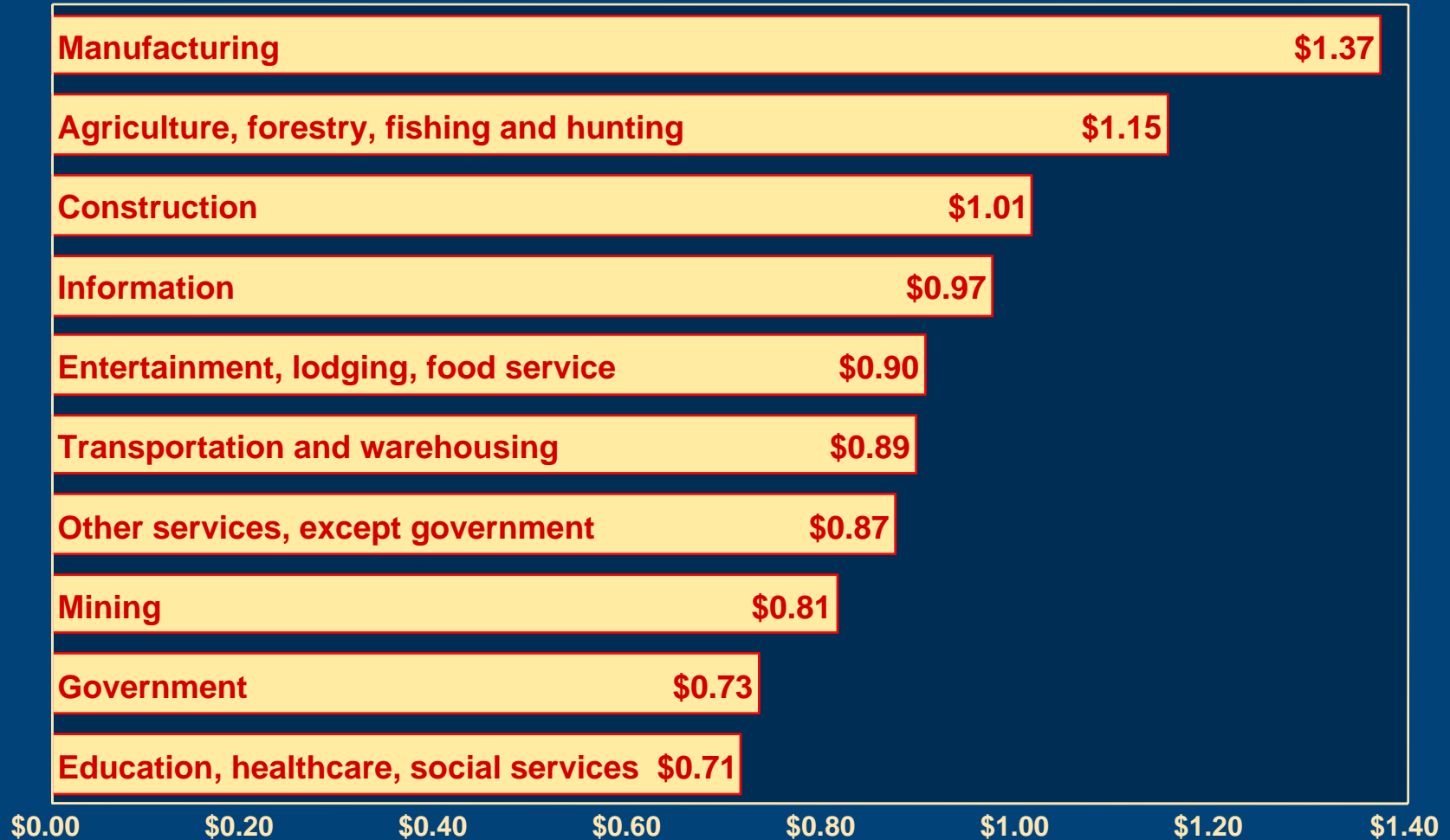


Source: Bureau of Labor Statistics

Health Insurance Coverage

- 56% of U.S. workers have health coverage through their jobs
 - 30% in recreation, hotel, and food sectors
 - 52% in retail and wholesale sector
 - 70% in manufacturing

Manufacturing jobs lead economic contributions



Source: U.S. Dept. of Commerce (2004)

Cost Pressures on U.S. Manufacturing Competitiveness

Cost Pressure	Foreign Nation's Advantage (%)	
	(2003)	(2006)
Corporate Tax Rates	-5.6	-7.6
Employee Benefits	-5.5	-6.8
Litigation Costs	-3.2	-3.7
Pollution Abatement	-3.5	-5.2
Natural Gas Prices	-0.5	-0.7
Total Cost Advantage	-18.3	-24.1
U.S. Net Cost Burden	22.4	31.7

Source: NAM & Manufacturers Alliance/MAPI



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