Outline

• Some important long run trends
• The business cycle and current situation
• Manufacturing productivity growth
• Wages in manufacturing
MANUFACTURING: SHARE OF EMPLOYMENT

Note: Shading indicates periods of economic contraction.
MANUFACTURING:
LEVEL OF EMPLOYMENT

Note: Shading indicates periods of economic contraction.
MANUFACTURING: SHARE OF OUTPUT

Note: Shading indicates periods of economic contraction.
MANUFACTURING: LEVEL OF OUTPUT

Billions of 1996 dollars

Note: Shading indicates periods of economic contraction.
Note: Shading indicates periods of economic contraction; data exclude food and petroleum products.
History Shows

• Fifty years of manufacturing data show the predominance of the long-run trends
• That said much of the long run changes are seen around periods of recession
• The current period has developed slowly into one of the larger episodes
BUSINESS CYCLE PATTERN: NONFARM EMPLOYMENT

Percent change from previous peak

- **Average**
- **Average range**
- **2001-**

Change from Dec’03 to Jan’04: 112,000
Total Change from March 2001: -2,337,000
BUSINESS CYCLE PATTERN: MANUFACTURING EMPLOYMENT

Percent change from previous peak

- Average range
- Average
- 2001-

Change from Dec’03 to Jan’04: -11,000

Total Change from March 2001: -2,717,000

Months from previous peak
BUSINESS CYCLE PATTERN: MANUFACTURING EMPLOYMENT

- Percent change from previous peak
- Average range
- Average
- 2001- Manufacturing
- 2001- Nonfarm

Months from previous peak

Values: -20, -15, -10, -5, 0, 5, 10
MANUFACTURING GROWTH FROM PREVIOUS PEAK

Overall manufacturing growth: -15.4%
### US MANUFACTURING 2001-2003

#### Losers
- Communication equipment (-39%)
- Cut and sew apparel (-36.2%)
- Semiconductor and electronic (-35.7%)
- Apparel knitting mills (-35.5%)
- Accessories and other apparel (-34.3%)

#### Gainers
- Pharmaceuticals and medicines (6.1%)
- Sugar and confectionery products (3%)
- Other food products (2.9%)
- Tobacco and tobacco products (1.9%)
- Other transportation equipment (1.8%)
MANUFACTURING PRODUCTIVITY

Annual percent change

-2 0 2 4 6 8


Manufacturing
Nonfarm business sector

Note: Shading indicates periods of economic contraction.
BLS INDUSTRY PRODUCTIVITY PROGRAM

• The Bureau of Labor Statistics produces annual measures of productivity by detailed industry
  – Manufacturing Industries
    • Data provide nearly complete coverage
    • 4-digit NAICS industries (e.g., basic chemicals or industrial machinery)
  – Services Industries
    • Data provide coverage of about half of the service sector
    • 4-digit NAICS industries (e.g., full service restaurants or automotive repair and maintenance)
    • The industries for which data are available are the ones with the most reliable productivity measures
PRODUCTIVITY GROWTH 1990-1995

Growth rate (annual average)

Percent of employment

- Manufacturing
  
  Mean is 3.7%

- Iron and steel mills
- Ship and boat building
- Computer and peripheral eqpt.
- Semiconductor eqpt.

Growth rate (annual average)
PRODUCTIVITY GROWTH 1990-1995

Percent of employment

- Manufacturing
- Services

Mean is 2.4%
Mean is 3.7%

Growth rate (annual average)

- Specialty food stores
- Grocery stores
- Commercial equipment
PRODUCTIVITY GROWTH 1996-2001

Mean is 3.7%

Percent of employment

- Apparel knitting mills
- Computer and peripheral eqpt.
- Semiconductor eqpt.

Manufacturing

Growth rate (annual average)
PRODUCTIVITY GROWTH 1996-2001

Growth rate (annual average)

Percent of employment

- Manufacturing
- Services

Mean is 2.7%
Mean is 3.7%

Wholesale chemicals
Advertising agencies
Electronics and appliance stores
Wage Distributions: 1980

Weekly Wages (2002 Dollars)

Percent

Manufacturing
Wage Distributions: 1980

50% of the distribution
Wage Distributions: 1980

Weekly Wages (2002 Dollars)

Median = $580.30

Manufacturing
Wage Distributions: 1980

Weekly Wages (2002 Dollars)

- **Median for Services**: $483.60
- **Median for Manufacturing**: $580.30
Wage Distributions: 1990

Median = $598.60

Median = $548.70

Weekly Wages (2002 Dollars)
Wage Distributions: 2001

Weekly Wages (2002 Dollars)

- Median is $623.80
- Median is $655.00
Conclusions

• Long-run factors like productivity and trade are critical to understanding the state of manufacturing
• Restructuring of manufacturing appears to have driven much of the decline in the latest recession and has abated little
• Fortunately, the differences between manufacturers and service providers is getting smaller
The State of Manufacturing

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