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Globalization and Labor Markets in U.S. Component Manufacturing

Sloan Industry Studies Annual Meeting
December 16, 2005

What is component manufacturing?

- Our basic definition:
 - A manufacturing industry whose output is bought mostly by other manufacturers (and not the wholesale or retail sectors)
 - Not materials or capital goods
- Approximately 20% of domestic manufacturing jobs are in the component sector*
- U.S. component manufacturing is dominated by mechanical components (relatively low value-to-weight ratio)

*Source: Authors' analysis of BLS Quarterly Census of Employment and Wages, with all data converted to an approximate NAICS basis by Economy.com

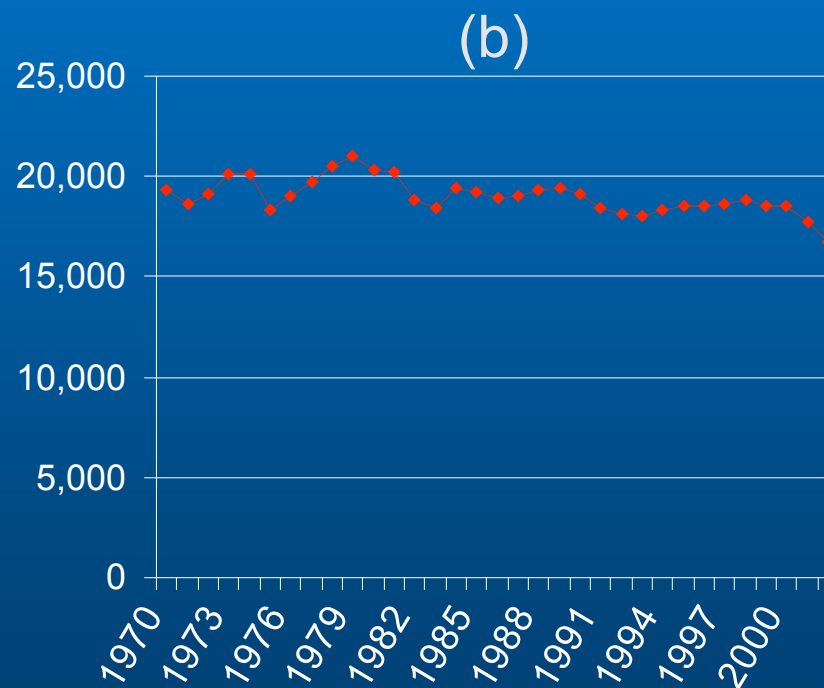
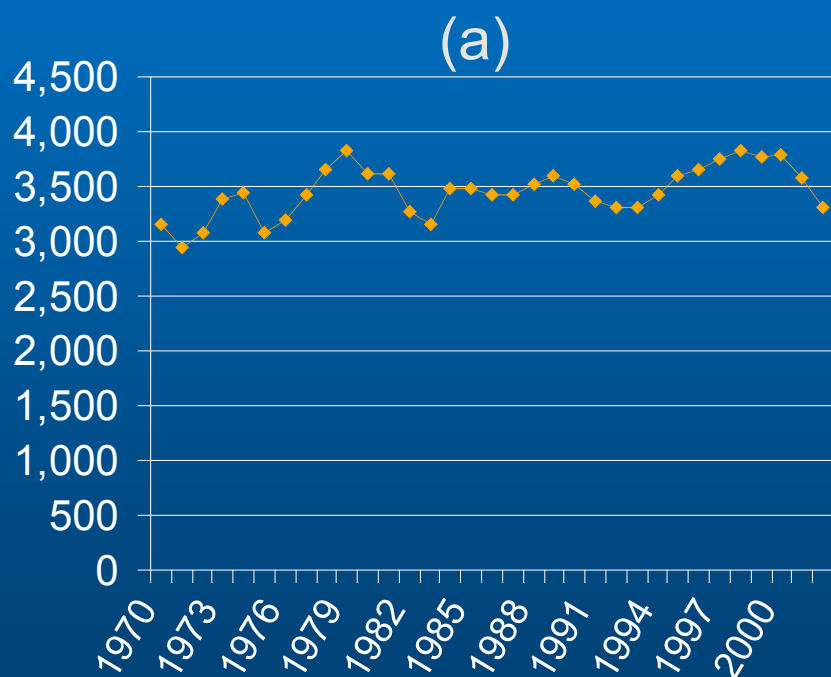
Forces affecting component sector labor markets

- Vertical disintegration of production within the U.S.
- Low-wage foreign competition

Employment

U.S. component sector employment grew from the 1970s through the late 1990s, while aggregate U.S. manufacturing employment fell

Employment in (a) the component sector, and (b) all manufacturing, 1970-2002 (thousands)



Source: Authors' analysis of BLS Quarterly Census of Employment and Wages, with all data converted to an approximate NAICS basis by Economy.com

During macroeconomic expansions, employment has grown faster in the component sector than in manufacturing as a whole, but since 1979, job losses in recessions have been more severe in the component sector

Percentage change in employment

→ The component sector has been more exposed to foreign competition since 1979

	All Manufacturing	Component Manufacturing	
1973-75	-9.1%	-9.1%	
1979-83	-12.4%	-17.4%	Recessions (peak to trough)
1989-93	-6.8%	-7.9%	
1998-2002	-11.1%	-13.2%	
1972-79	9.9%	24.0%	
1979-89	-7.9%	-6.1%	Expansions (peak to peak)
1989-2000	-4.7%	5.6%	

Source: Authors' analysis of BLS Quarterly Census of Employment and Wages, with all data converted to an approximate NAICS basis by Economy.com

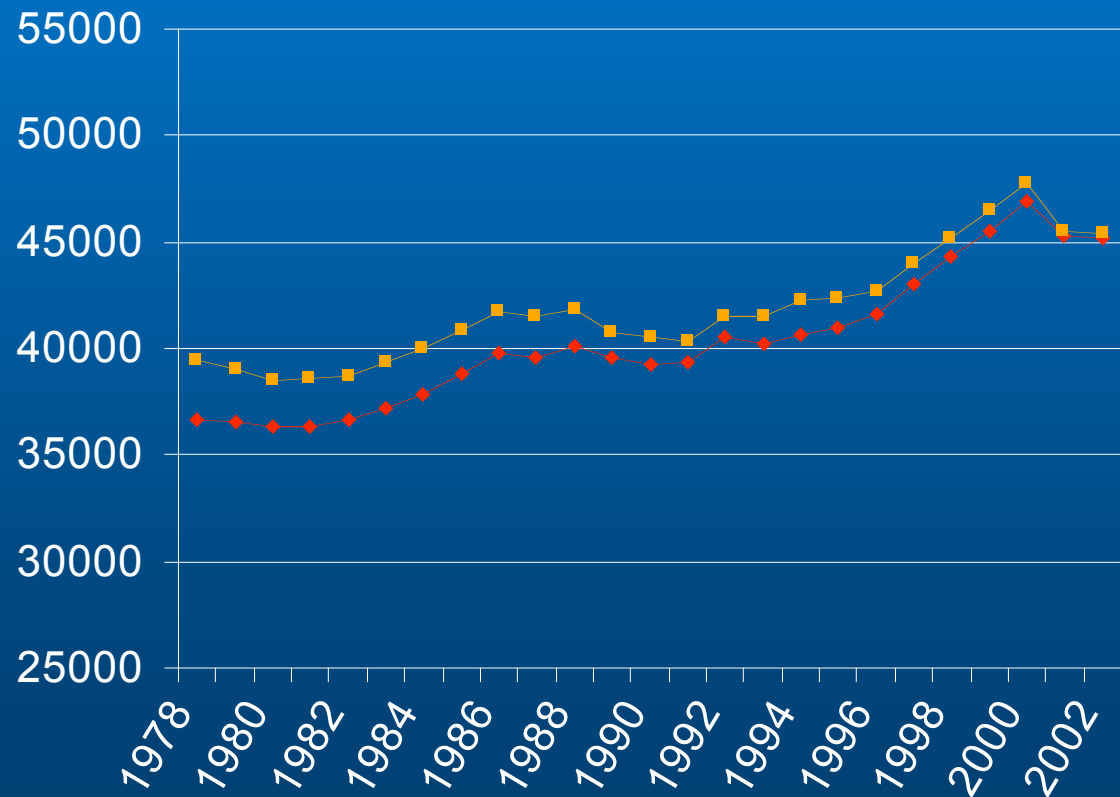
Wages

The component sector real average wage has exceeded that of manufacturing as a whole, but has grown more slowly

Average annual wage,
1978-2002 (2002 Dollars)

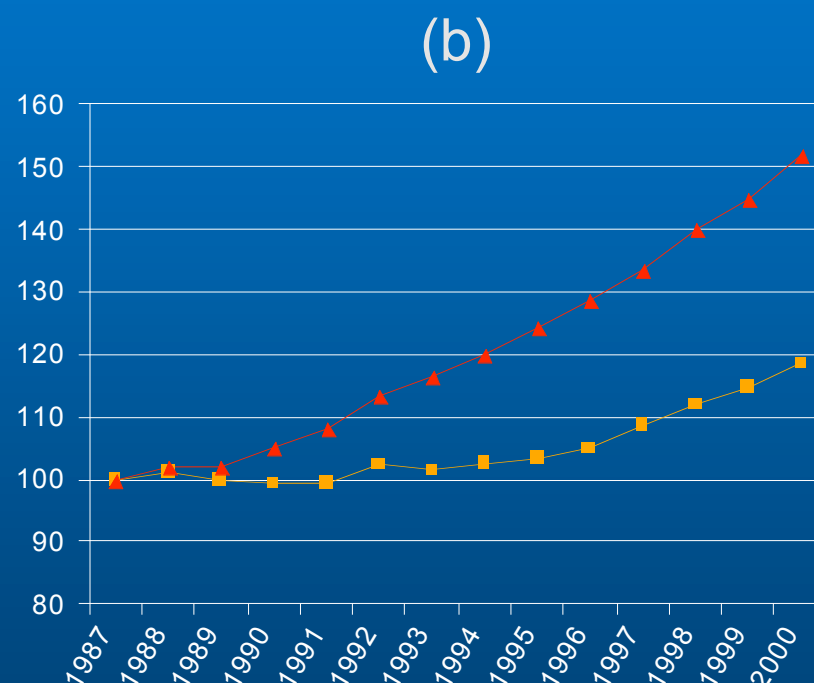
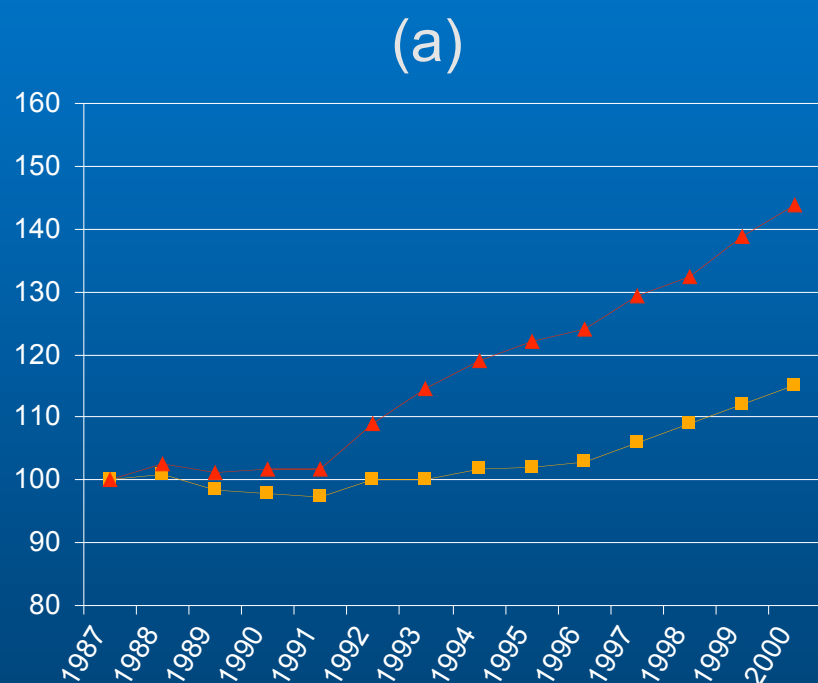
Source: Authors' analysis of BLS Quarterly Census of Employment and Wages, with all data converted to an approximate NAICS basis by Economy.com

- ◆ All manufacturing
- Component manufacturing



Wage growth has lagged productivity growth in components, but less so than in manufacturing as a whole

Wage and productivity indices for (a) component manufacturing, and (b) all manufacturing, 1987-2000 (1987=100)



■ Average annual wage ▲ Productivity (output per hour)

Source: Authors' analysis of BLS Quarterly Census of Employment and Wages, with all data converted to an approximate NAICS basis by Economy.com; authors' analysis of BLS productivity data

Productivity

Component sector productivity growth has lagged behind that of other manufacturing since at least the late 1980s

- 1987-2000 productivity growth:
 - 43.7% in components
 - 52.8% in all manufacturing
 - 70.5% in durable manufacturing
- 33 SIC component industries had slower productivity growth than manufacturing as a whole
- 12 had faster or equal productivity growth

Source: Authors' analysis of published and unpublished BLS data

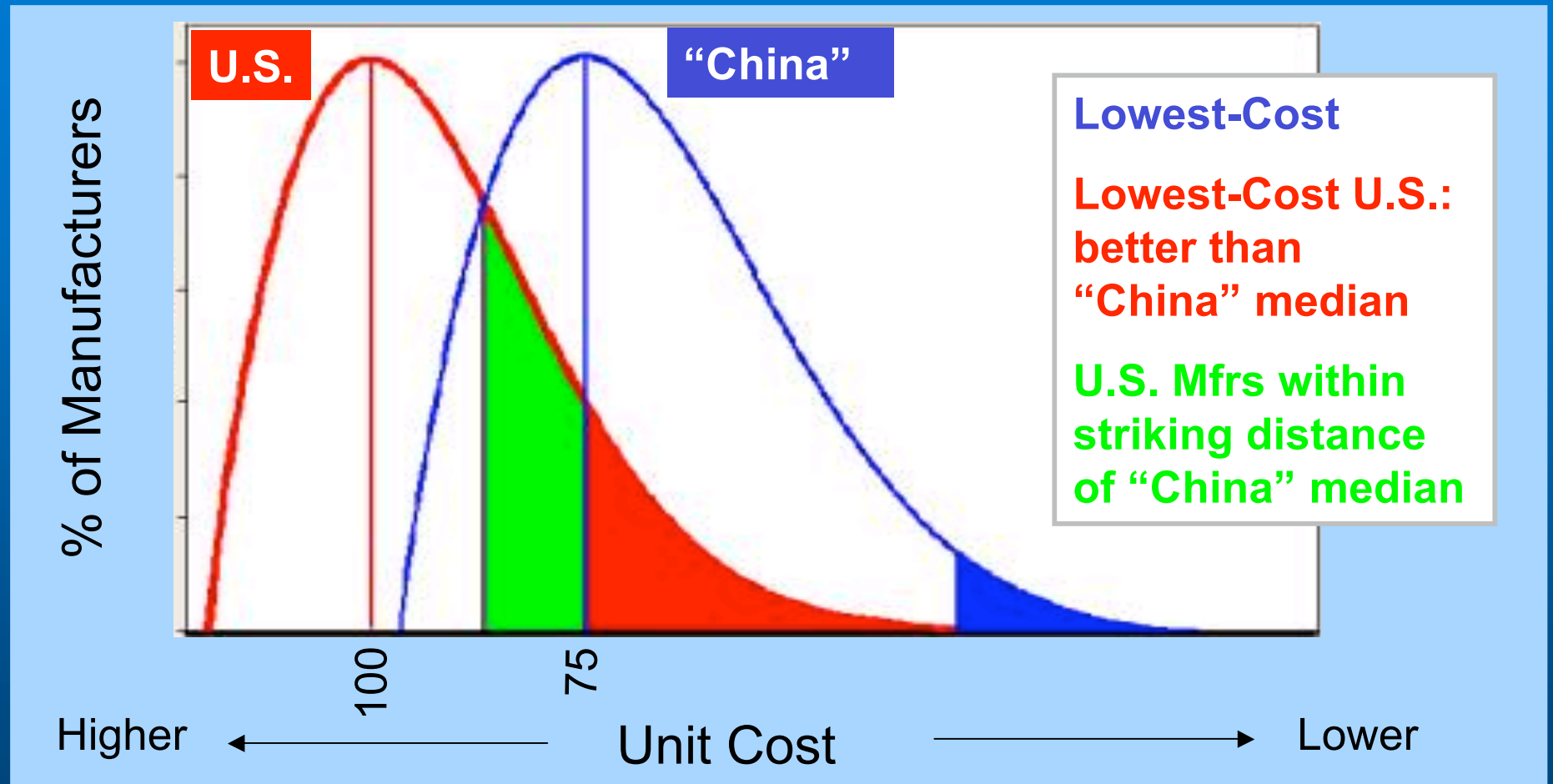
U.S. and low-wage country costs compared

Lowest-wage Asian countries have a 5-28% landed cost advantage over the average U.S. component manufacturer

- Lowest-wage country labor costs are about 10% of U.S.
- Their productivity is 20-50% of U.S.
- Their material costs are 5-10% below U.S.

Source: Estimates based on Michigan Manufacturing Technology Center analyses

Some U.S. component manufacturers are already cost-competitive with the lowest-cost Asian producers



→ Others could get there with 7-10% annual productivity growth over 3-5 years

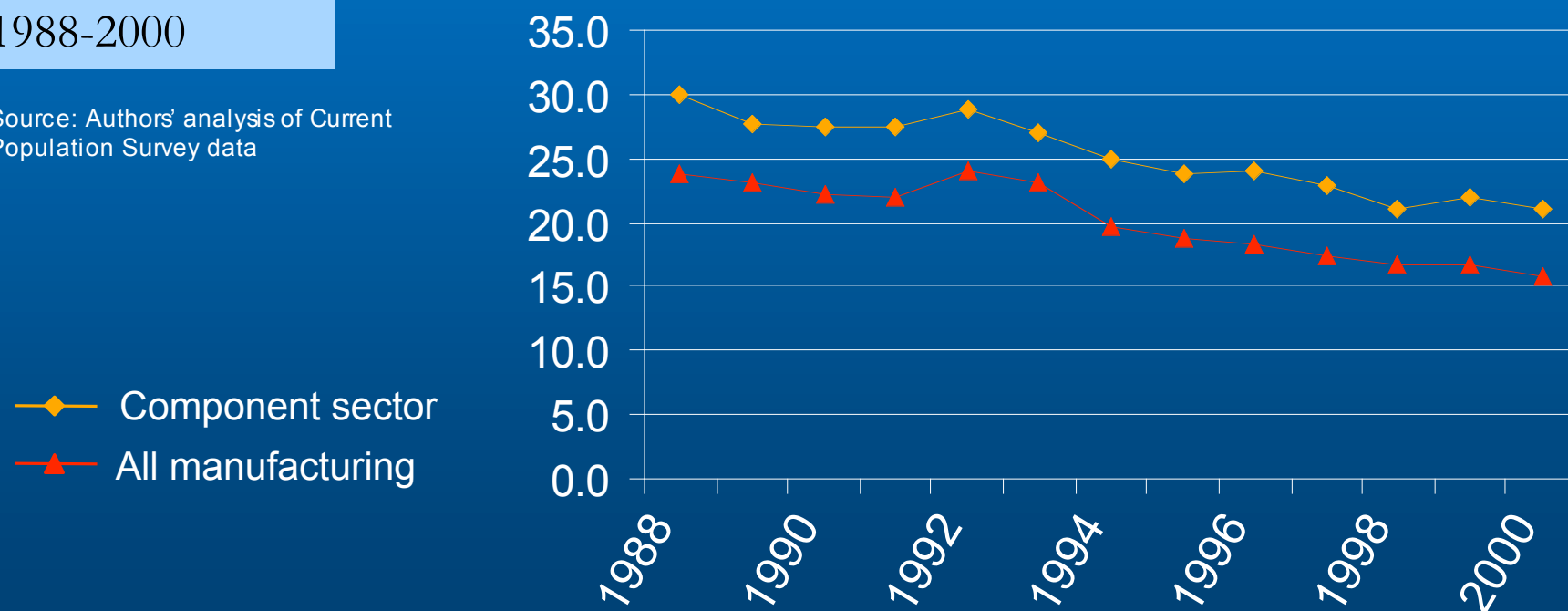
Sources: Authors' estimates based on Michigan Manufacturing Technology Center analyses

Union-nonunion comparisons

Union density fell in components since the late 1980s, but decline was smaller in relative terms than in manufacturing as a whole

Union Density, 1988-2000

Source: Authors' analysis of Current Population Survey data

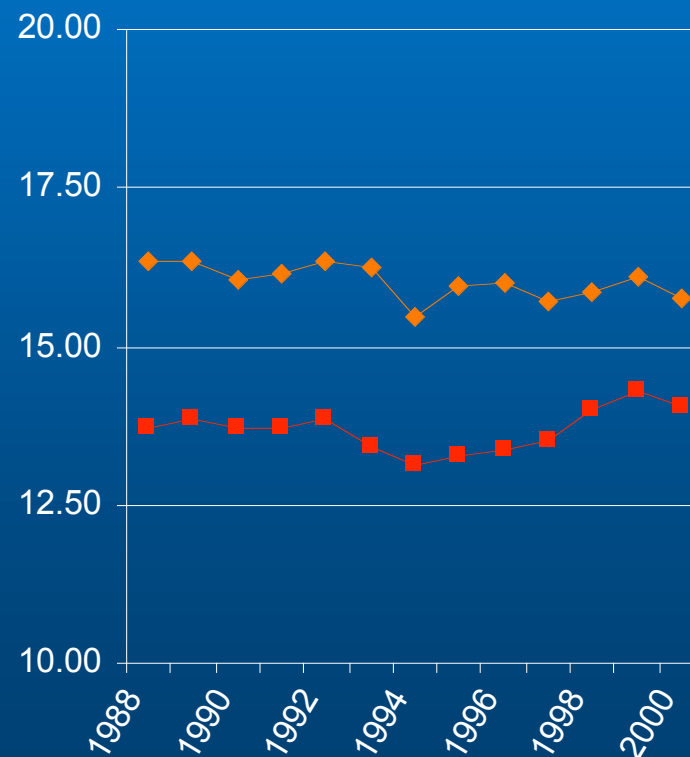


Since the late 1980s, real union wages have fallen while real nonunion wages have increased

Component sector union and nonunion median hourly wages, 1988-2000 (in 2002 dollars)

Source: Authors' analysis of Current Population Survey data

—◆— Union
—■— Nonunion



Estimates for more recent years

- Union-nonunion wage gap essentially eliminated
- Health care cost gap has grown
- Combined labor cost gap has narrowed
- Productivity gap essentially eliminated

Union-Nonunion Hourly % Differential

	Wage	Health care cost	Combined cost	Productivity
1997-98	15%	5%	20%	13%
2002-2003	3%*	6%	9%	8%*

*Not statistically significant at the .10 level

Source: Authors' analysis of Michigan Manufacturing Technology Center Performance Benchmarking Survey data

Recent productivity trends have been unfavorable to the unionized component sector

- Among union shops value-added per FTE increased by 3.3% from 1997-98 to 2002-2003
- Over the same period, value-added per FTE among nonunion shops rose by 12.7%

Unless union shops can increase their productivity growth rate, they will be increasingly disadvantaged in unit labor costs

Source: Authors' analysis of Michigan Manufacturing Technology Center Performance Benchmarking Survey data