

Manufacturing in Small Cities: Policies and Practice

*Reinventing Older Communities:
Building Resilient Cities*

Philadelphia Federal Reserve Bank

Barry Bluestone

Director, Dukakis Center for Urban and Regional Policy
Northeastern University

May 9-11, 2012



Northeastern University
School of Public Policy & Urban Affairs

Manufacturing in the U.S.: The “Conventional Wisdom”

Deindustrializing



An Industrial Dinosaur ...



“Dead as a Door Nail”



Business Week – June 30, 1980

“The U.S. economy must undergo a fundamental change if it is to retain a measure of economic viability let alone leadership in the remaining 20 years of this century. **The goal must be nothing less than the reindustrialization of America.** A conscious effort to rebuild America’s productive capacity is the only real alternative to the precipitous loss of competitiveness of the last 15 years, of which this year’s wave of plant closings across the continent is only the most vivid manifestation.”

-
- As quoted in Barry Bluestone & Bennett Harrison, *The Deindustrialization of America* (New York: Basic Books, 1982)

Lessons from Massachusetts Manufacturing: Historical Overview

From World War II to the 21st
Century

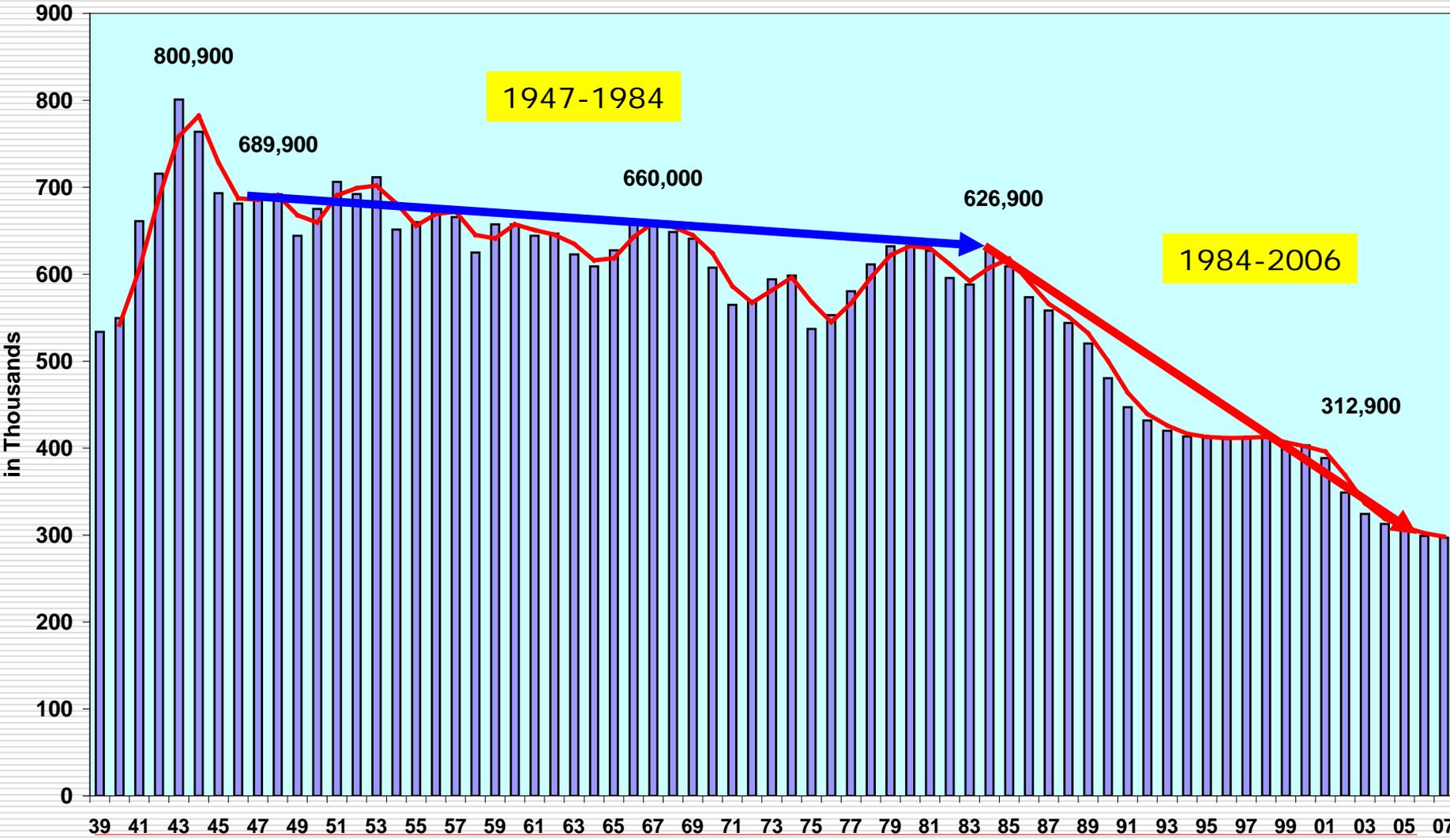


Long-Term Manufacturing Employment Trends

- Mobilization for World War II saw Massachusetts' manufacturing workforce swell from 534,000 in 1939 to **801,000** by 1943 – **45%** of total state employment
 - By 1967, employment was down to **660,000** – 18% below its WWII peak
 - By 2006, manufacturing employment stood at just **299,000**
 - Between 1984 and 2006, Massachusetts **lost** an average of **15,000** manufacturing jobs *each year ... and the annual rate of decline was nearly twice as high* during 2000-2006 as it was between 1984 and 2000
-

Figure 1.1

Massachusetts Manufacturing Employment (1939-2007) (with 2-Year Moving Average)



Is Massachusetts Manufacturing Destined to Disappear?

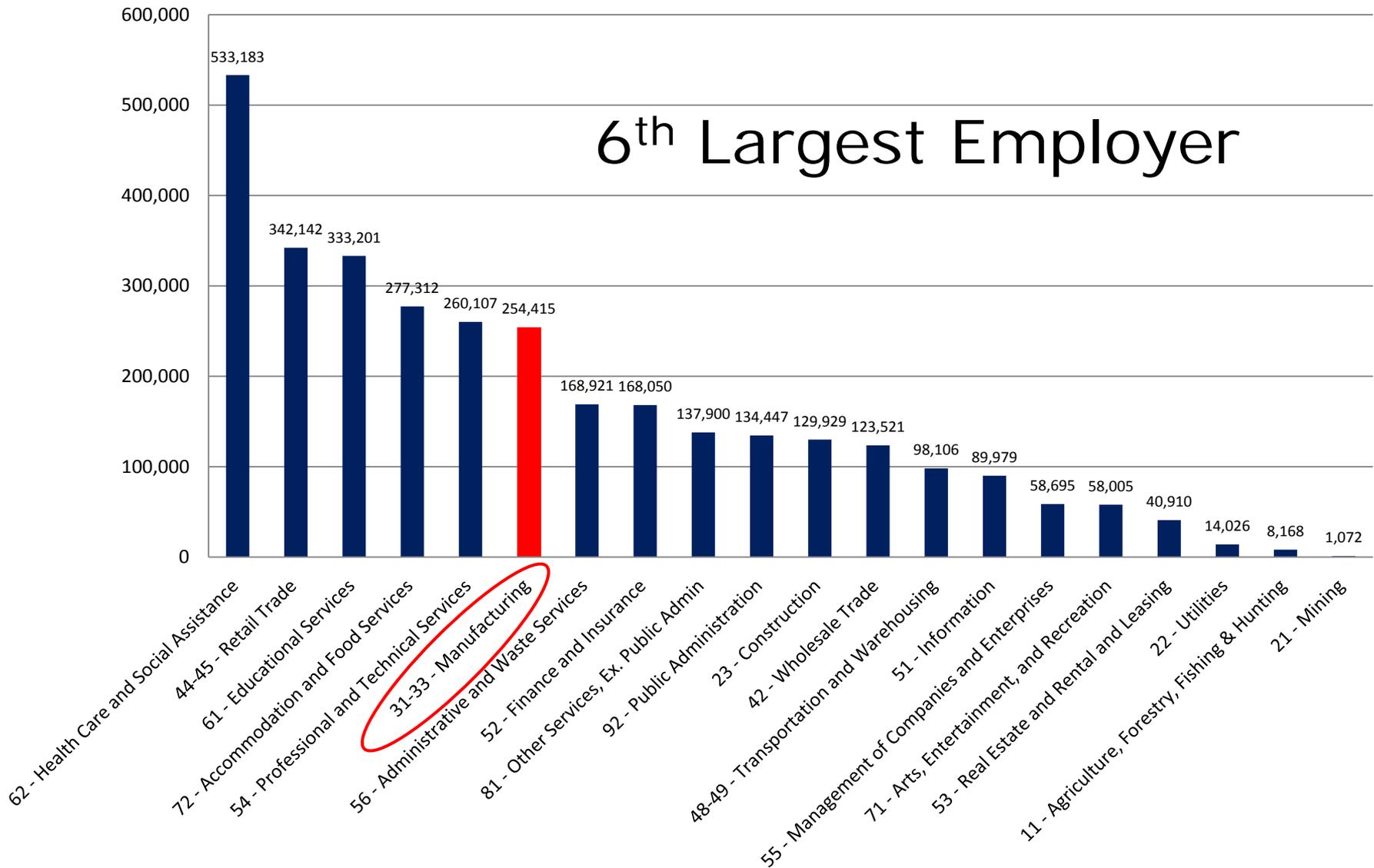
- If the 2000-2006 employment trend were to continue, Massachusetts would see its last manufacturing job disappear before 2025
 - **BUT**, new research demonstrates this conclusion is much too pessimistic
-

Massachusetts Manufacturing Today

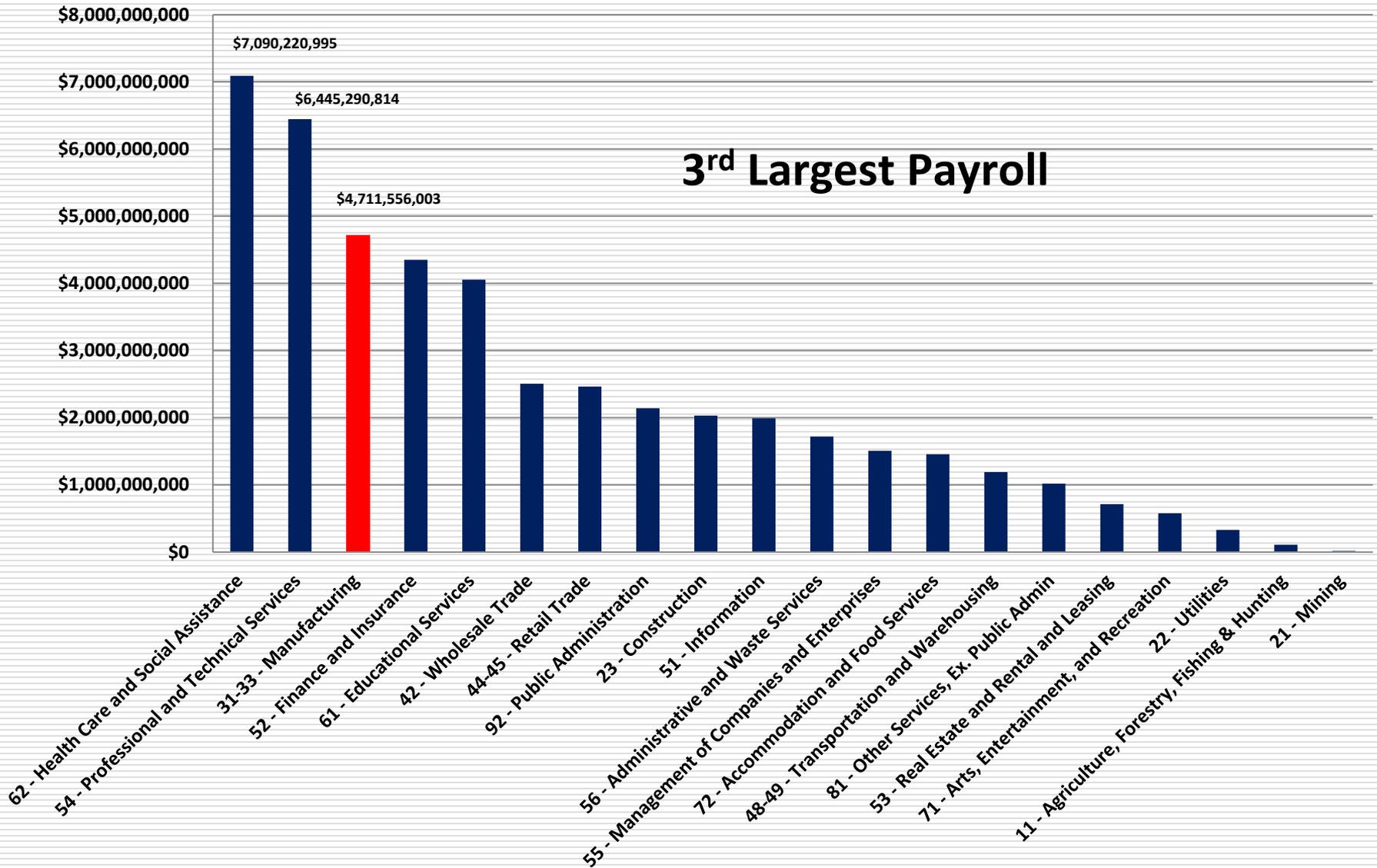


Employment by Industry Massachusetts 2011

6th Largest Employer

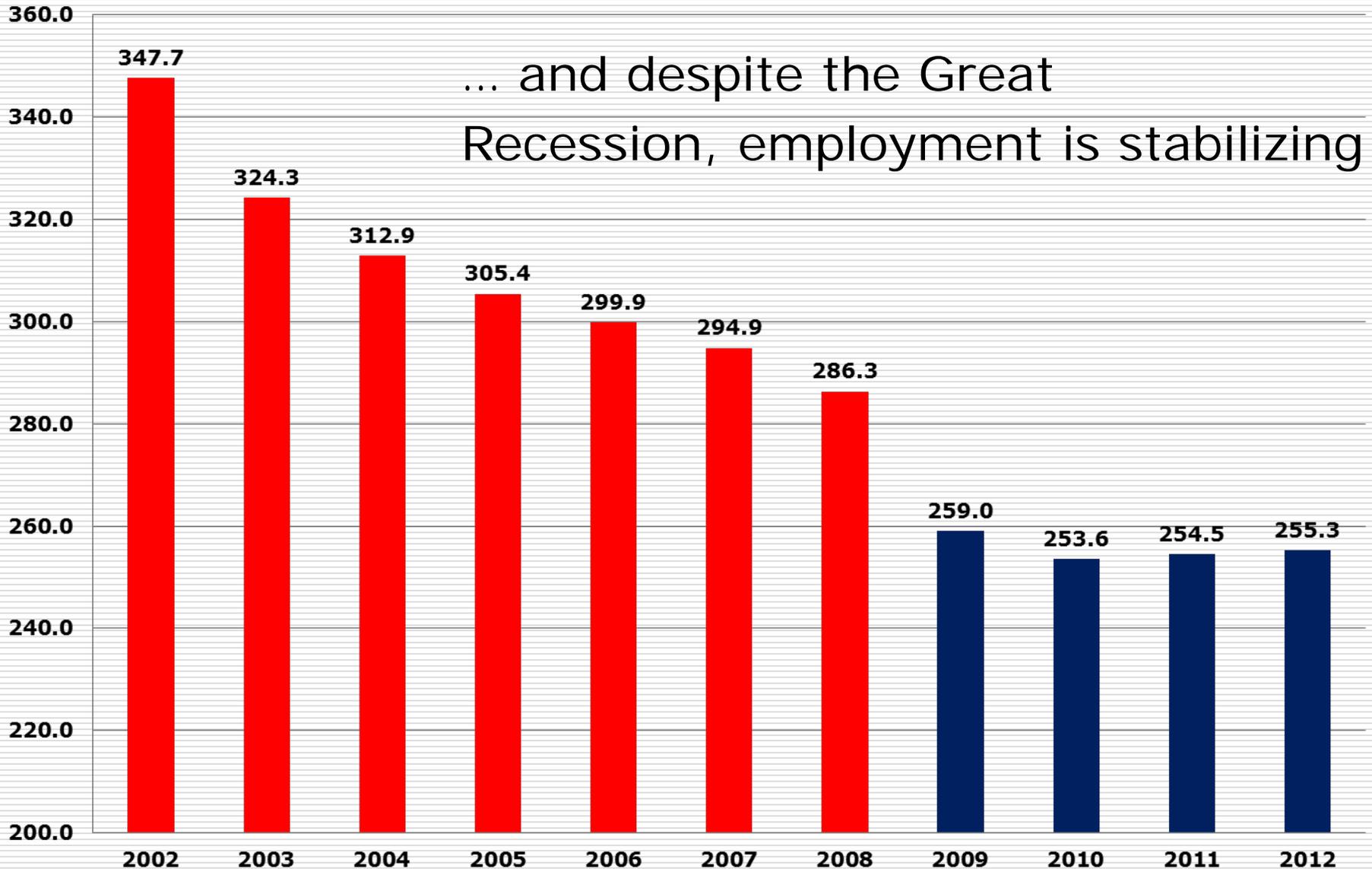


Industry Total Payroll Massachusetts 2011



Manufacturing Employment 2002 - 2012 (March) Massachusetts (in 000's)

... and despite the Great
Recession, employment is stabilizing



Massachusetts is home to a broad range of products from **High Technology to Low Tech**

- Aerospace components
 - Printed circuit boards
 - Bio-surgery products
 - Ceramic components
 - Machine tools
 - Electrical & electronic switches
 - High voltage cable assemblies
 - Bearings
 - Construction castings
 - Fabricated metal parts
 - HVAC duct work
 - Cannoli shells
 - Beer
 - Frozen seafood
-

Shares of Massachusetts Manufacturing by Technological Intensity

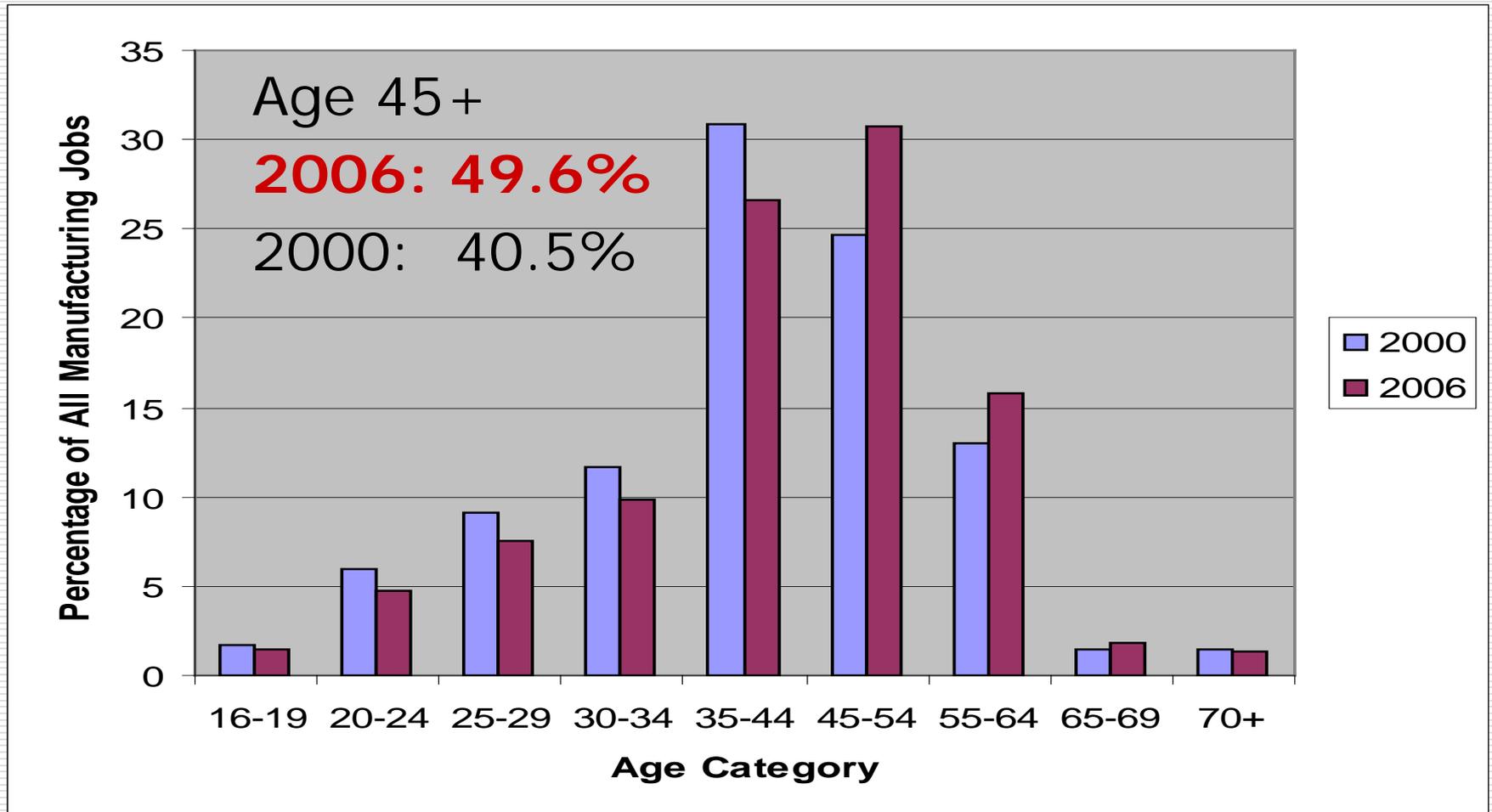
	1980	1990	2000	2006	
Low-Tech	39.8%	29.7%	28.4%	29.4%	30.6%
Medium-Low Tech	21.5%	21.1%	20.1%	22.9%	20.4%
Medium-High Tech	18.9%	24.1%	24.8%	21.9%	18.3%
High Tech	19.8%	25.0%	26.7%	25.7%	30.6%

The Big Surprise:

Massachusetts Manufacturing is a growing sector in the State

- ❑ Falling employment levels in manufacturing hide the fact that manufacturing output in the state has been rising steadily
 - ❑ **Between 1997 and 2009, the real gross state product originating in manufacturing increased from \$20 to \$33 billion (in \$2005)**
 - ❑ Manufacturing actually produced a larger share of total gross state product in 2007 ... **rising from 9.0% in 1997 to 11.0%**
 - ❑ Due to extraordinary productivity growth in this sector compared to others
-

A Rapidly Aging Workforce

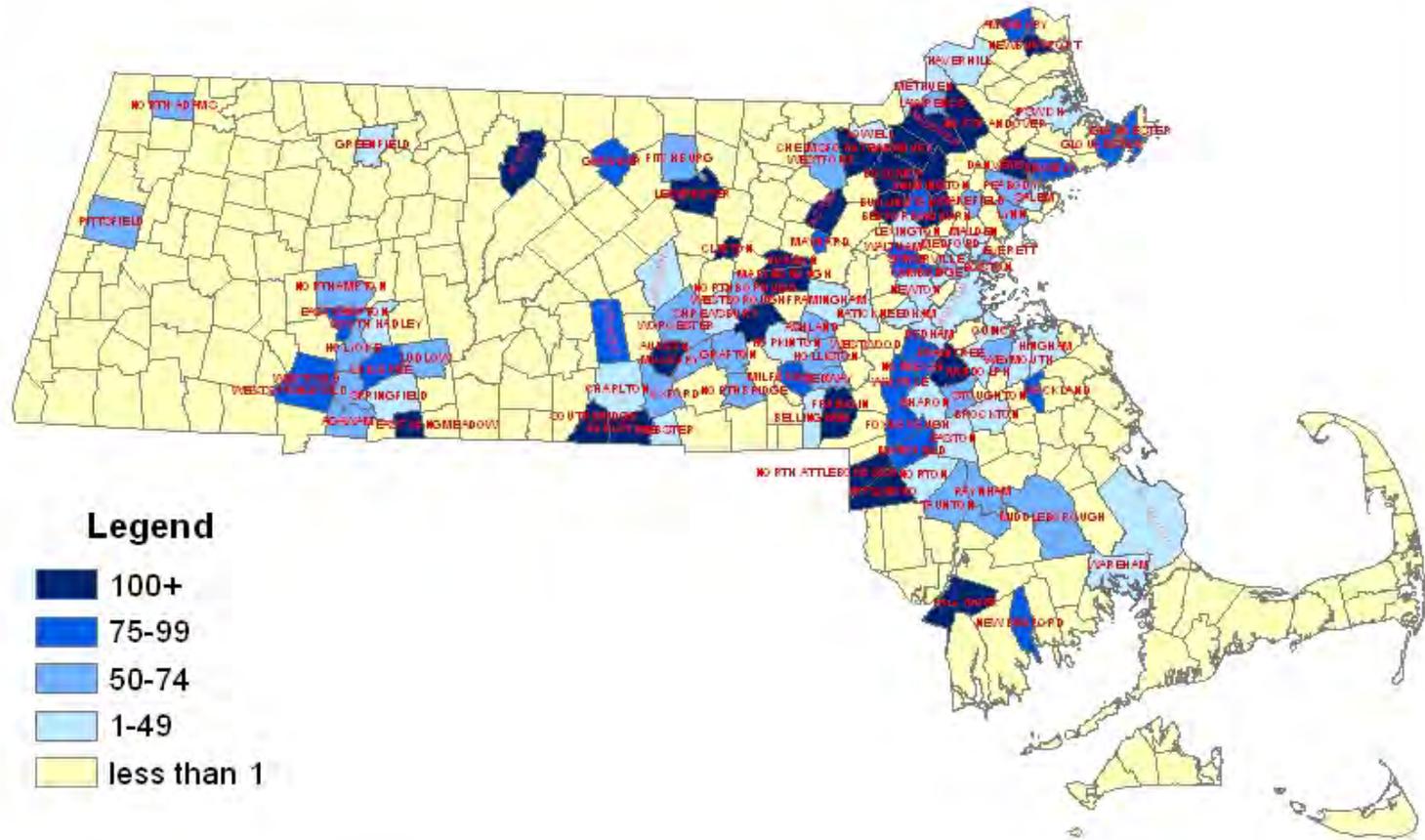


... Leading to Job Openings

- Given the likely retirement of more than 50,000 manufacturing workers over the next decade and given normal turnover of younger and prime age workers in this sector, it is likely that **100,000** or more jobs will need to be filled in this sector. A large number of these will be for production workers.
-

New Employment Opportunity based in Older Smaller Industrial Cities

Manufacturing Employment per 1,000 Residents

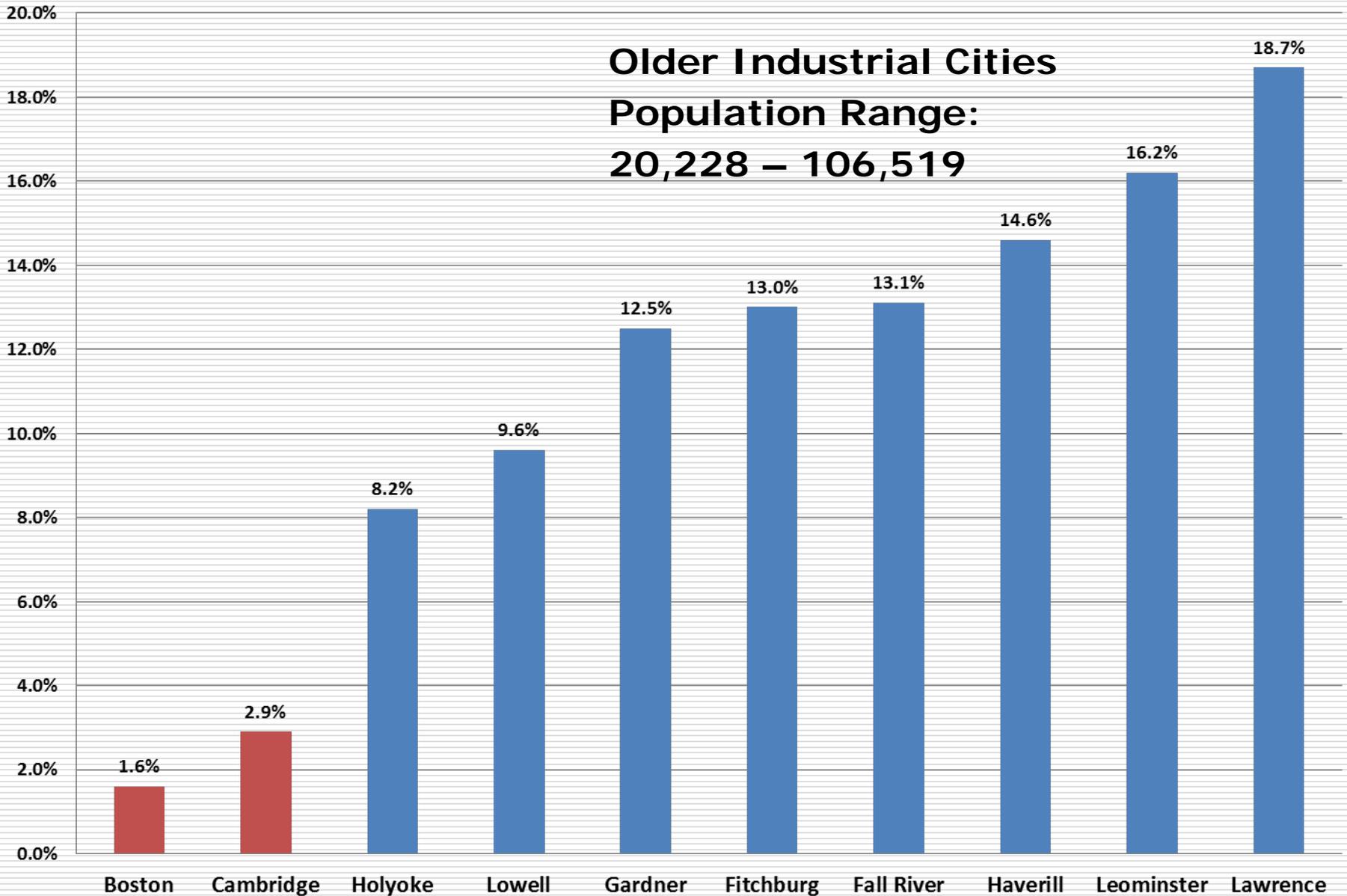


Legend

- 100+
- 75-99
- 50-74
- 1-49
- less than 1

Source: 2002 Economic Census

Manufacturing Share of Total Employment by City (2010)



Why have Manufacturers Stayed in Massachusetts?

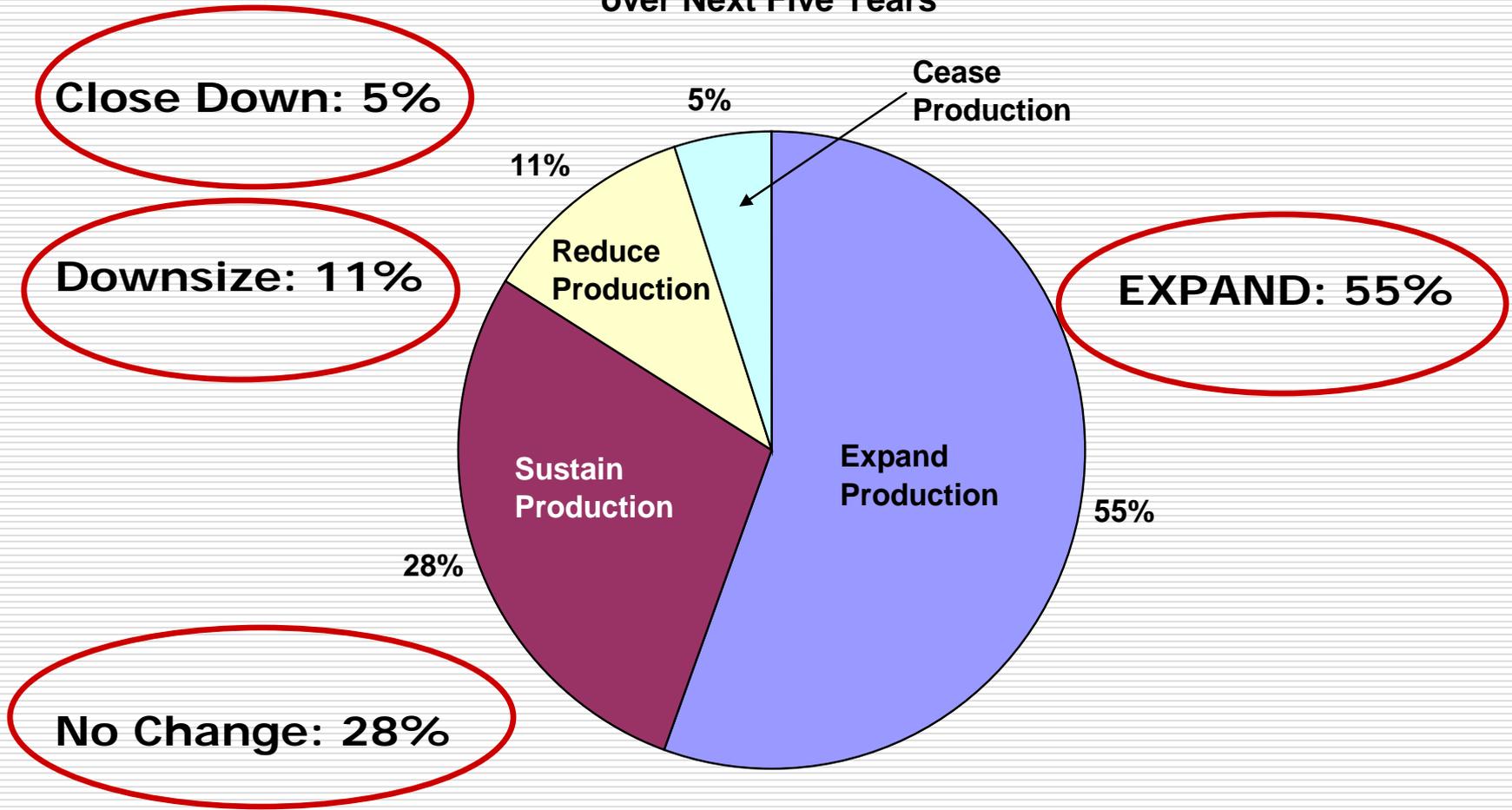
Potential Economic Resilience in Older Industrial Cities

Reasons for Staying in Massachusetts

<i>Reason</i>	<i>Number of Firms</i>	<i>Percent of Firms</i>
Strong work ethic in workforce	347	49.2
Inertia (too hard to relocate)	345	48.9
Proximity to customers	260	36.8
Availability of appropriate skilled labor	258	36.5
Availability of reasonably priced labor	258	36.5
Quality of life (e.g. public schools, recreation, and cultural institutions)	249	35.3
Monetary or in-kind incentives from state, local governments or quasi-publics	221	31.3
Availability of reasonably priced land for expansion	219	31.0
Accessibility to transportation for shipping and commuting (e.g. highways, airports, rail, seaport)	216	30.6
Proximity to key suppliers	148	21.0
Proximity to professional or research support services	74	10.5
Proximity to universities and colleges	71	10.1
Critical mass of similar firms in region	66	9.3
Proximity to European markets	37	5.2

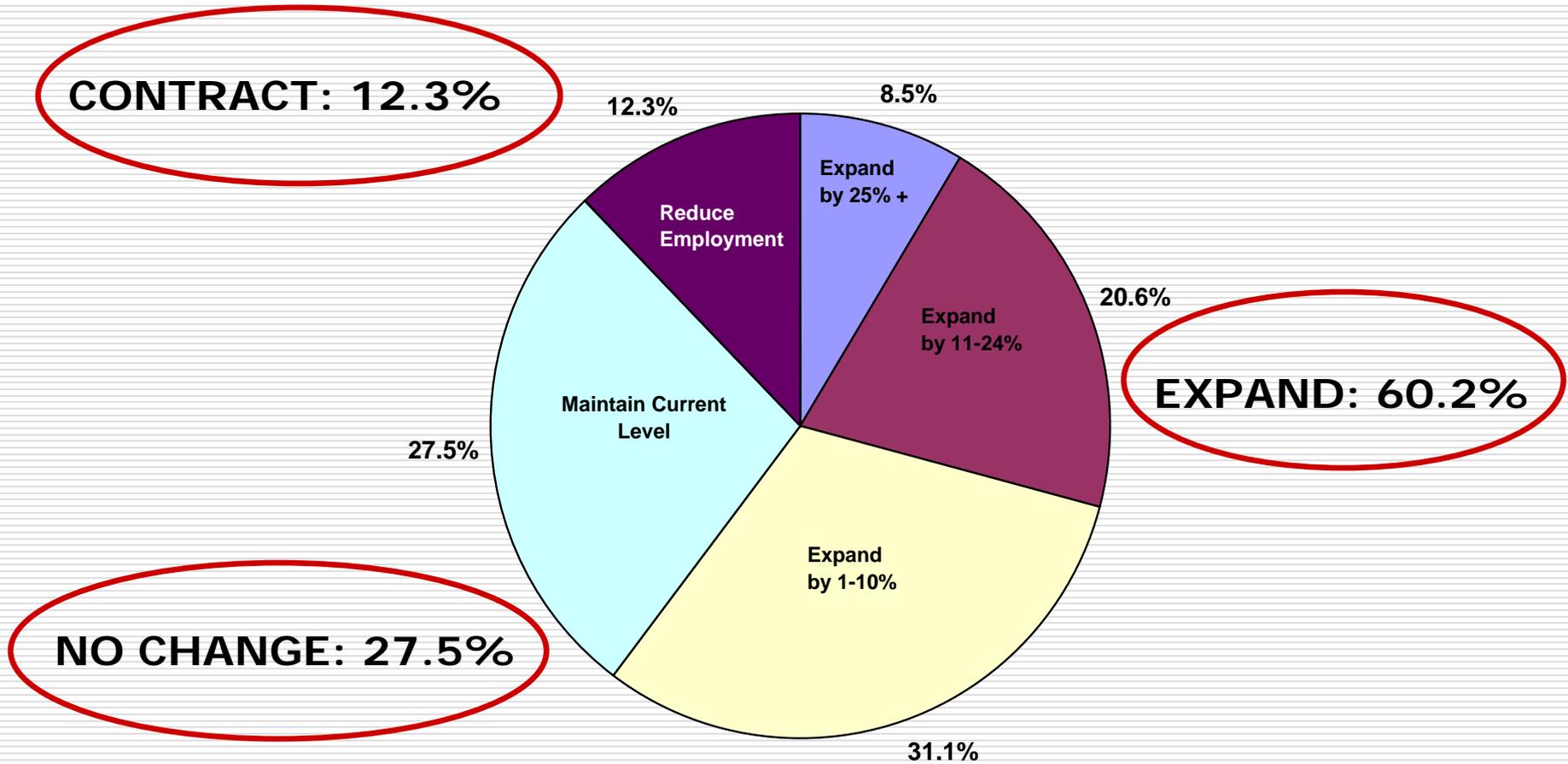
2007 MFG Survey

Expected Production Levels in Massachusetts
over Next Five Years



2007 MFG Survey

□ 5 Year Employment Projections



The Recruitment Challenge

- ❑ The manufacturing workforce is aging rapidly
 - ❑ Replacing retirees will be a major challenge for many manufacturers
 - ❑ This is especially true of **skilled craftsmen** ... even more difficult to recruit than scientific R&D workers
 - ❑ Recruiting **entry level workers** almost as hard as recruiting middle managers, especially for smaller firms
-

Difficulty in Recruiting Labor by Size of Firm

(% "Difficult" or "Extremely Difficult")

Type of Employee	Small Firms 0-19 Employees	Medium Sized Firms 20-100 Employees	Large Firms 100+ Employees
Executive Management	38%	39%	39%
Middle Management	30%	25%	21%
Scientific R&D	52%	50%	54%
Skilled Craftsmen	71%	65%	53%
Entry Level	28%	17%	13%

How to Retain and Attract Manufacturing in the 21st Century

Where will Manufacturers expand their
current operations?

Where will new Manufacturing
establishments be located?

Manufacturing Births & Deaths

- ❑ Even in recession periods, new manufacturing establishments are born
 - ❑ The question is where will these be located
 - ❑ Can Older Industrial Cities win their share?
-

Births & Deaths of Massachusetts Manufacturers

Year	Initial Year Establishments	Births	Deaths	Birth : Death Ratio
1995	9,544	584	691	0.85
1996	9,437	722	686	1.05
1997	9,473	419	876	0.48
1998	9,016	481	701	0.69
1999	8,796	523	646	0.81
2000	8,673	546	612	0.89
2001	8,607	454	804	0.56
2002	8,257	486	622	0.78
2003	8,121	N/A	N/A	N/A
Total		4,215	5,638	

Net Change -1,423

The Role of Municipal Government in Assuring a Manufacturing Base

Economic Development Self-Assessment Tool
(**EDSAT**)

A tool to help Mayors become the **“CEO for Economic Development”** in their city or town

Survey Results – NAIOP/CoreNET Survey

Mean Scores for All Factors (1 = Very Important; 4= Unimportant)

Factor	Mean
Onsite parking for employees	1.51
Rental rates	1.55
Availability of appropriate labor	1.57
Access to airports / major highways*	1.63*
Timeliness of approvals / appeals	1.70
Quality / capacity of infrastructure	1.75
Competitive labor costs	1.78
Traffic congestion	1.79
Property taxes	1.83
State tax / financial incentives**	1.83**
Crime rate in the area	1.84
Fast track / concurrent permitting	1.84
Access to major highways**	1.85**
Local tax / financial incentives	1.87
Land costs	1.87
Predictability / clarity of permitting	1.88
Undesirable abutting land use	1.89
Physical attractiveness of area	1.95
State tax rates**	1.96
Municipal rep. as good place to work	1.97

Factor	Mean
Municipal rep. as good place to live	2.03
Municipal rep. for economic dev.	2.03
Zoning by right	2.09
Proximity to restaurants / shops	2.10
Public transportation	2.15
Cost of housing for employees	2.15
Complementary business svcs**	2.16
Critical mass of similar firms	2.20
Access to airports**	2.21
Quality of local schools	2.21
Awareness of brownfields	2.24
Permitting ombudsman	2.32
Awareness of strong neighborhood orgs	2.37
Customized workforce training	2.49
Availability of sports/cultural/recreational opps	2.62
Proximity to research/universities	2.66
Informative municipal website	2.75
Strong trade unions	2.82
Access to railroads**	2.84
Municipal minimum wage law	3.00

□* Question asked in NAIOP survey only. **Question asked in CoreNet survey only.

The Self-Assessment Tool (EDSAT)

The self-assessment tool includes sections on:

1. Access to Customers/Markets
 2. Concentration of Businesses and Services (Agglomeration)
 3. Cost of Land (Implicit/Explicit)
 4. Labor
 5. Municipal Process
 6. Quality of Life (Community)
 7. Quality of Life (Site Amenities)
 8. Business Incentives
 9. Tax Rates
 10. Access to Information
-

Customized EDSAT Reports

A typical report contains:

- (a) A summary of city responses to the self-assessment questionnaire
 - (b) Color coded benchmarks against all municipalities that have participated in the self assessment
 - (c) Dukakis Center analysis of responses and a prioritized list of deal breakers to help you think about these issues in a concrete, actionable way
 - (d) A ranking system noting which location factors are *most important, somewhat important, and less important* to attracting investment
-

Sample Result 1

 C. Parking			
		Report of	as compared to all jurisdictions
Question			Comparison Group
12: What percentage of available sites for retail trade have on-site parking?	50-74%		75%+
13: What percentage of available sites for manufacturing have on-site parking?	75%+		75%+
14: What percentage of available sites for general office space have on-site parking?	75%+		75%+
15: Does your jurisdiction offer parking facilities near development sites?	yes		yes
16: Have you employed tax abatements or other financial incentives to local employers to provide off-site parking?	no		no
17: Have you used state or federal infrastructure grants to improve parking in your jurisdiction?	no		no

Importance To Market			Your Performance Relative To Peers								
	Very Important		Important		Less Important		Strong		Average		Weak

Sample Result 2

 A. Highway Access			
		Report of	as compared to all jurisdictions
Question			Comparison Group
1: What percentage of available sites for retail trade, including your central business district, are within 2 miles of an entrance or exit to a limited-access major highway?	75%+		75%+
2: What percentage of available sites for manufacturing are within 2 miles of an entrance or exit to a limited-access major highway?	75%+		75%+
3: What percentage of available sites for general office space are within 2 miles of an entrance or exit to a limited-access major highway?	75%+		75%+
4: Does your jurisdiction impose weight restrictions on streets or access roads?	yes		between yes and no

Importance To Market  Very Important  Important  Less Important	Your Performance Relative To Peers  Strong  Average  Weak
--	--

Sample Result 3

 C. Timeliness of Approvals			
Report of _____ as compared to all jurisdictions			
Question	_____	_____	Comparison Group
13: What is the average time from application to completion of the review process for the following?: Site plan review	5-8 weeks		5-8 weeks
14: What is the average time from application to completion of the review process for the following?: Zoning variance	5-8 weeks		5-8 weeks
15: What is the average time from application to completion of the review process for the following?: Special permit	9-12 weeks		9-12 weeks
16: What is the average time from application to completion of the review process for the following?: Building permit	0-4 weeks		0-4 weeks
17: What is the average time from application to completion of the review process for the following?: Appeals process	48+ weeks		5-8 weeks
18: What is the average time from application to completion or occupation in existing structures: Site plan review	37-48 weeks		5-8 weeks
19: What is the average time from application to completion or occupation in existing structures: Zoning variance	17-20 weeks		5-8 weeks

Importance To Market  Very Important  Important  Less Important	Your Performance Relative To Peers  Strong  Average  Weak
--	---

Sample Result 4

C. Unions				
		Report of	as compared to all jurisdictions	
Question				Comparison Group
11: Have any employers in your jurisdiction had a major strike or work stoppage within the last three years?		no		no
12: Has there been a major union organizing drive among public or private workers in the last 3 years?		yes		no
13: Do labor unions have a significant presence in the labor market of your jurisdiction?		Somewhat		Somewhat

<p>Importance To Market</p> <p>  Very Important  Important  Less Important </p>	<p>Your Performance Relative To Peers</p> <p>  Strong  Average  Weak </p>
--	---

How Municipal Leaders are using EDSAT Results

- ❑ Provides the Municipal Leadership Team with a **solid understanding of their city or town's strengths, weaknesses, opportunities and threats** -- Everybody on board
 - ❑ Provides the Mayor or Town Manager with **specific data on the efficiency of municipal department processes** (e.g. zoning appeals) leading to reform of specific departments
 - ❑ Provides guidance on **marketing municipal strengths** that to firms
 - ❑ Provides overall guidance on **municipal weaknesses that need to be ameliorated**
-

So with a manufacturing renaissance
and a municipal commitment to
economic development, older cities
can become resilient

