

New Jersey Competitiveness

State and Cluster Performance

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*Prepared for Governor Chris Christie
April 17, 2010*

State Comparisons

Overall Economic Performance Indicators

New Jersey

Economic Performance

Gross State Product per capita, 2008

- in New Jersey: \$54,699 (rank 8)
- in the US: \$46,588
- New Jersey % above US: 17.4%

Growth in Gross State Product per capita, annual rate, 1998-2008

- in New Jersey: 1.35% (rank 29)
- in the US: 1.50%

Average wage, 2007

- in New Jersey: \$50,295 (rank 5)
- in the US: \$41,680
- New Jersey % above US: 20.7%

Wage growth, annual rate, 1998 to 2007

- in New Jersey: 3.36% (rank 31)
- in the US: 3.49%

Employment, 2007

- in New Jersey: 3,661,679 (rank 9)
- % of US: 3.04%

Employment growth, annual rate, 1998 to 2007

- in New Jersey: 0.93% (rank 32)
- in the US: 1.22%

Share of Employment in Traded Clusters, 2007

- in New Jersey: 27.1% (rank 34)
- in the US: 27.4%

Change in Share of Employment in Traded Clusters, 1998 to 2007

- in New Jersey: -2.09% (rank 29)
- in the US: -2.14%

Innovation Output

Patents per 10,000 employees, 2008

- in New Jersey: 7.43 (rank 13)
- in the US: 6.43

Growth in total patents, annual rate, 1998 to 2008

- in New Jersey: -3.20% (rank 41)
- in the US: -0.35%

Traded establishment formation, annual rate, 1998 to 2007

- in New Jersey: 0.74% (rank 49)
- in the US: 2.11%

Total establishment formation, annual rate, 1998 to 2007

- in New Jersey: 0.59% (rank 36)
- in the US: 1.17%

Demographic Profile

Population, 2008

- in New Jersey: 8,682,741 (rank 11)
- % of US: 2.86%

Population growth, annual rate, 1998 to 2008

- in New Jersey: 0.47% (rank 37)
- in the US: 0.98%

Labor Force Participation, 2007

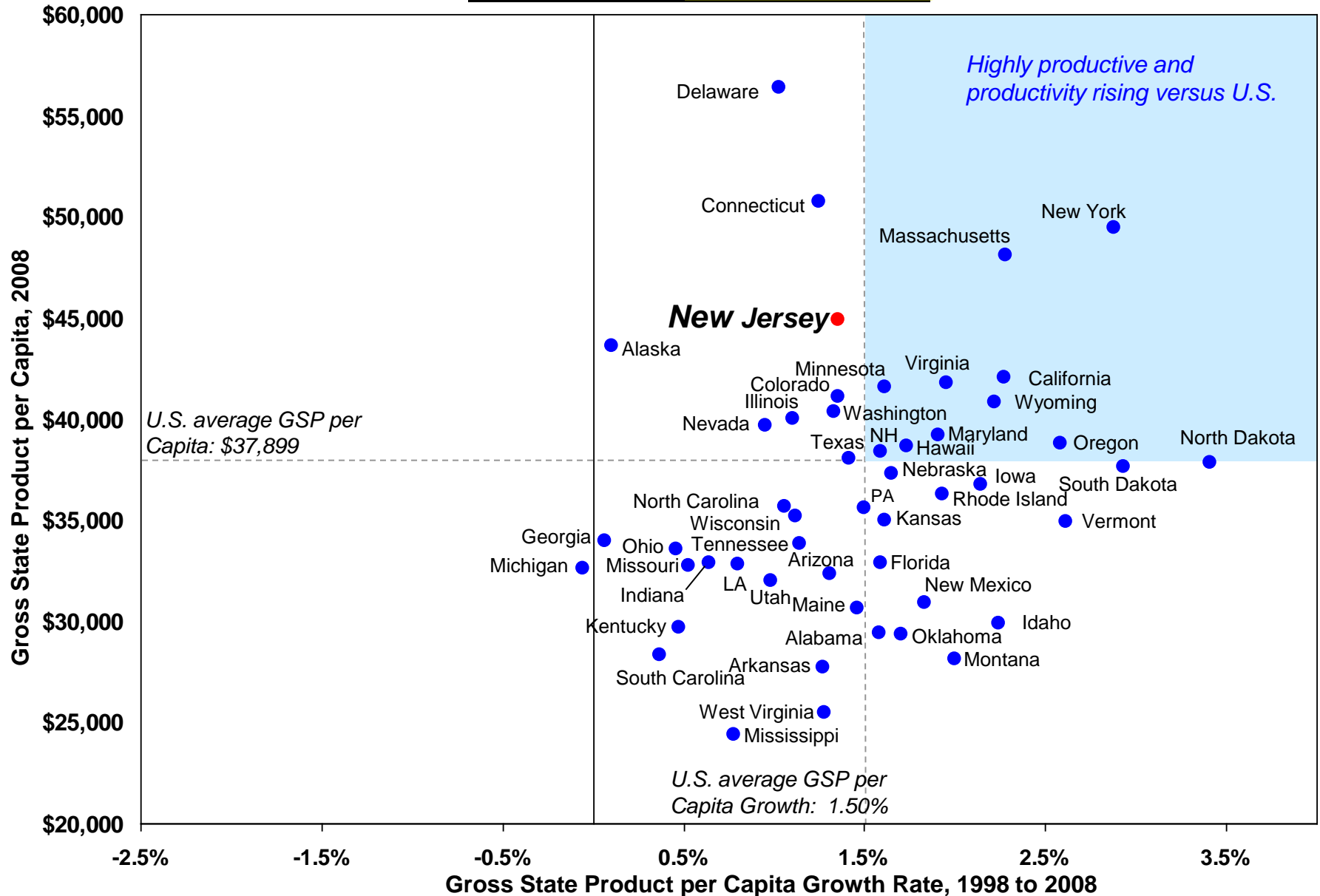
- in New Jersey: 66.3% (rank 29)
- In the US: 66.0%

Note: Ranks are among the 50 US states plus the District of Columbia. Growth rate is compound annual growth rate (CAGR.). Gross state product figures in 2000 chained US dollars. Private, non-agricultural employment.

Source: Prof. Michael E. Porter, Cluster Mapping Project, Institute for Strategy and Competitiveness, Harvard Business School; Richard Bryden, Project Director.

State Prosperity

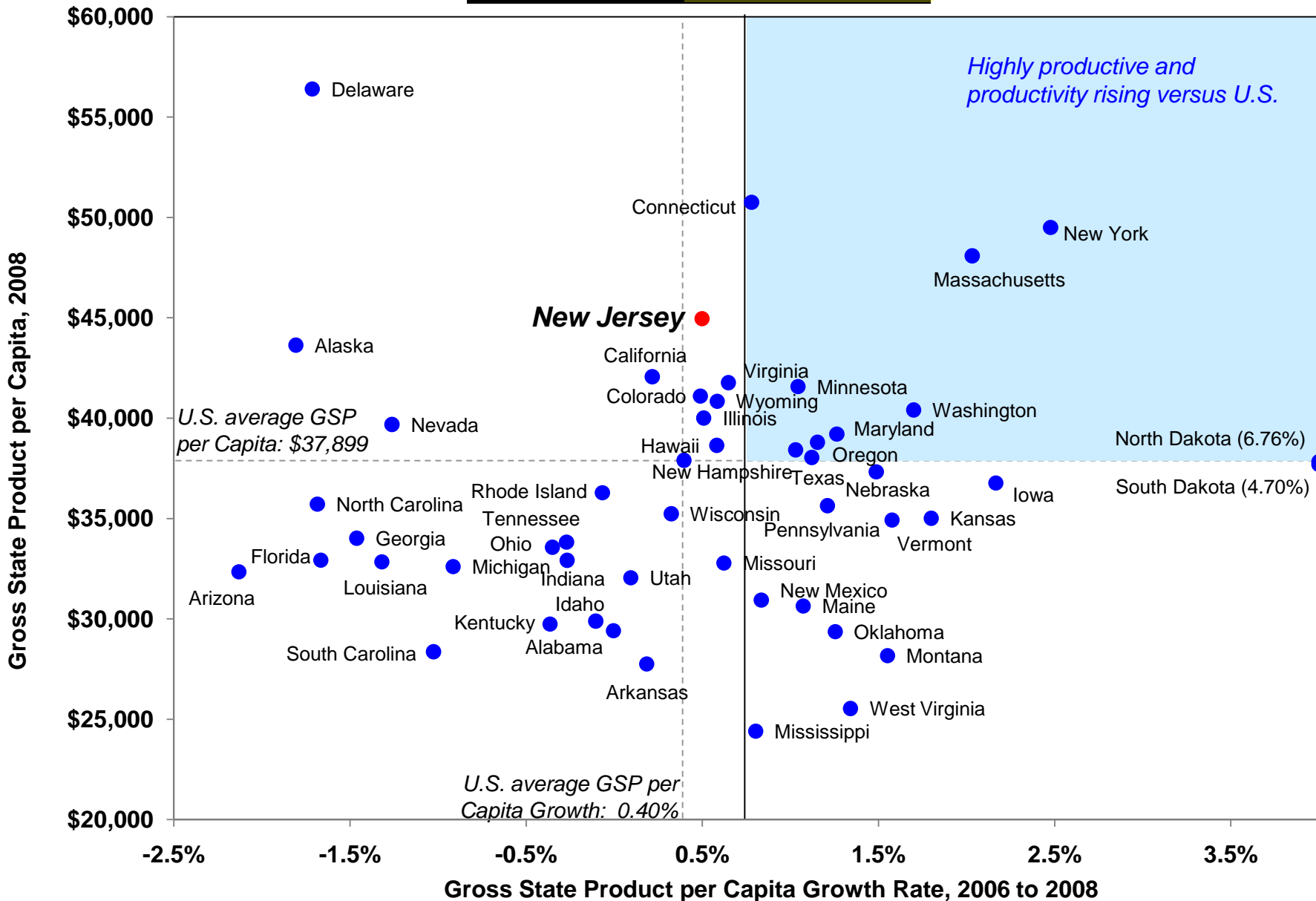
U.S. States, 1998 to 2008



Source: Bureau of Economic Analysis. Growth rate is compound annual growth rate (CAGR). Gross state product figures in 2000 chained US dollars.
 Notes: District of Columbia: \$126,407, 2.63%.

Recent State Prosperity

U.S. States, 2006 to 2008

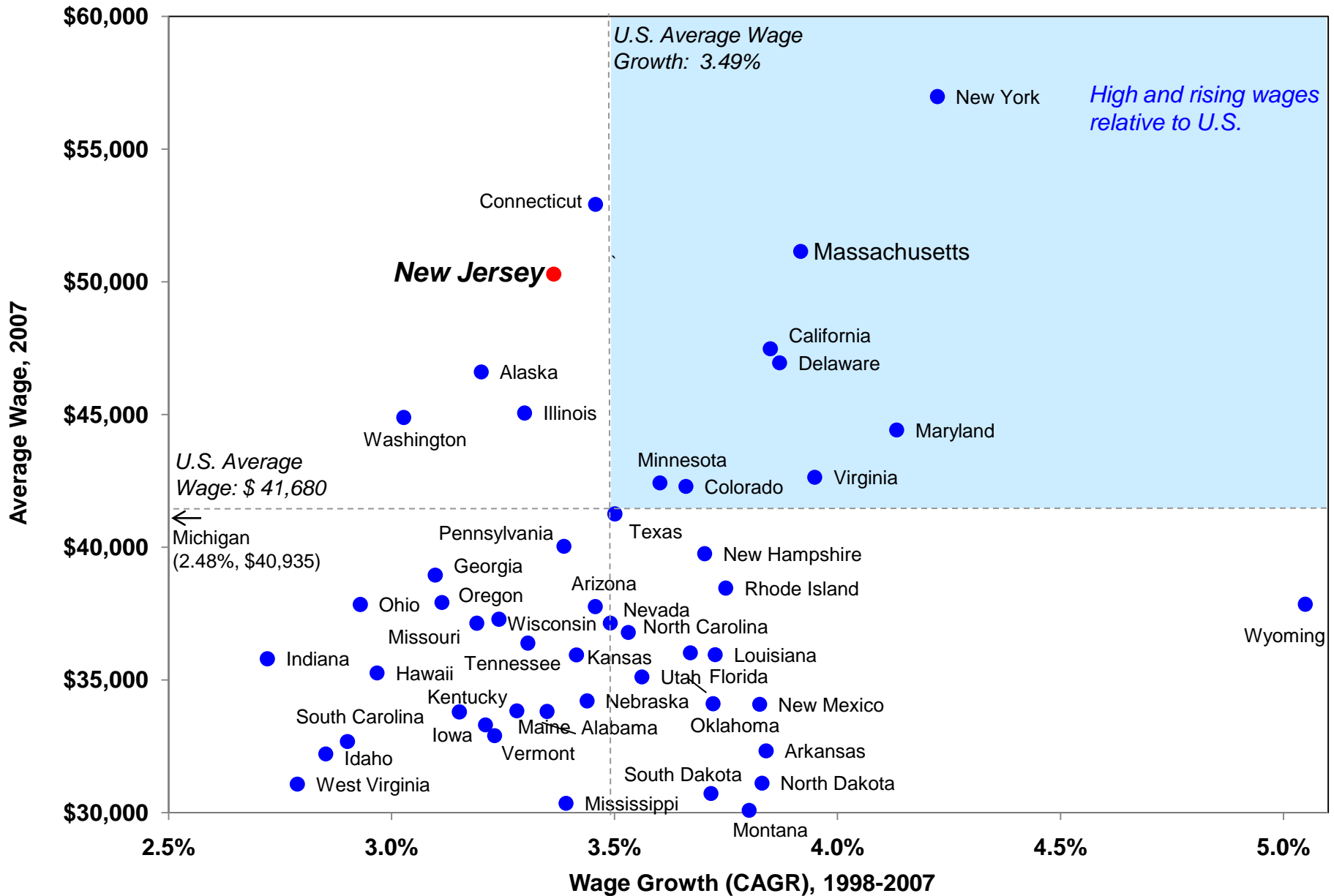


Source: Bureau of Economic Analysis. Growth rate is compound annual growth rate (CAGR.). Gross state product figures in 2000 chained US dollars.

Note: District of Columbia: \$126,407, 1.79%.

Average Private Sector Wage and Wage Growth

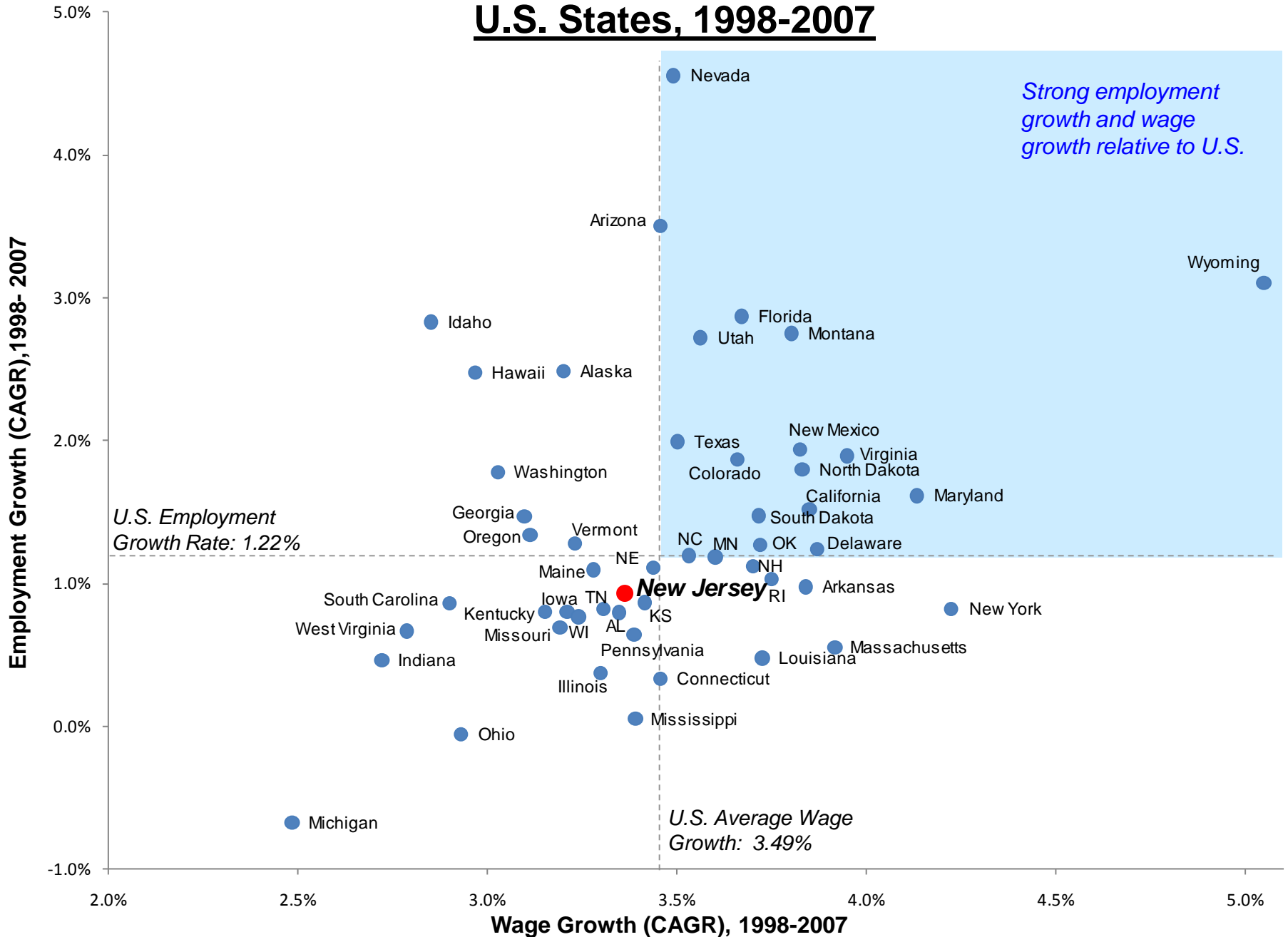
U.S. States, 1998-2007



Source: Prof. Michael E. Porter, Cluster Mapping Project, Institute for Strategy and Competitiveness, Harvard Business School; Richard Bryden, Project Director.

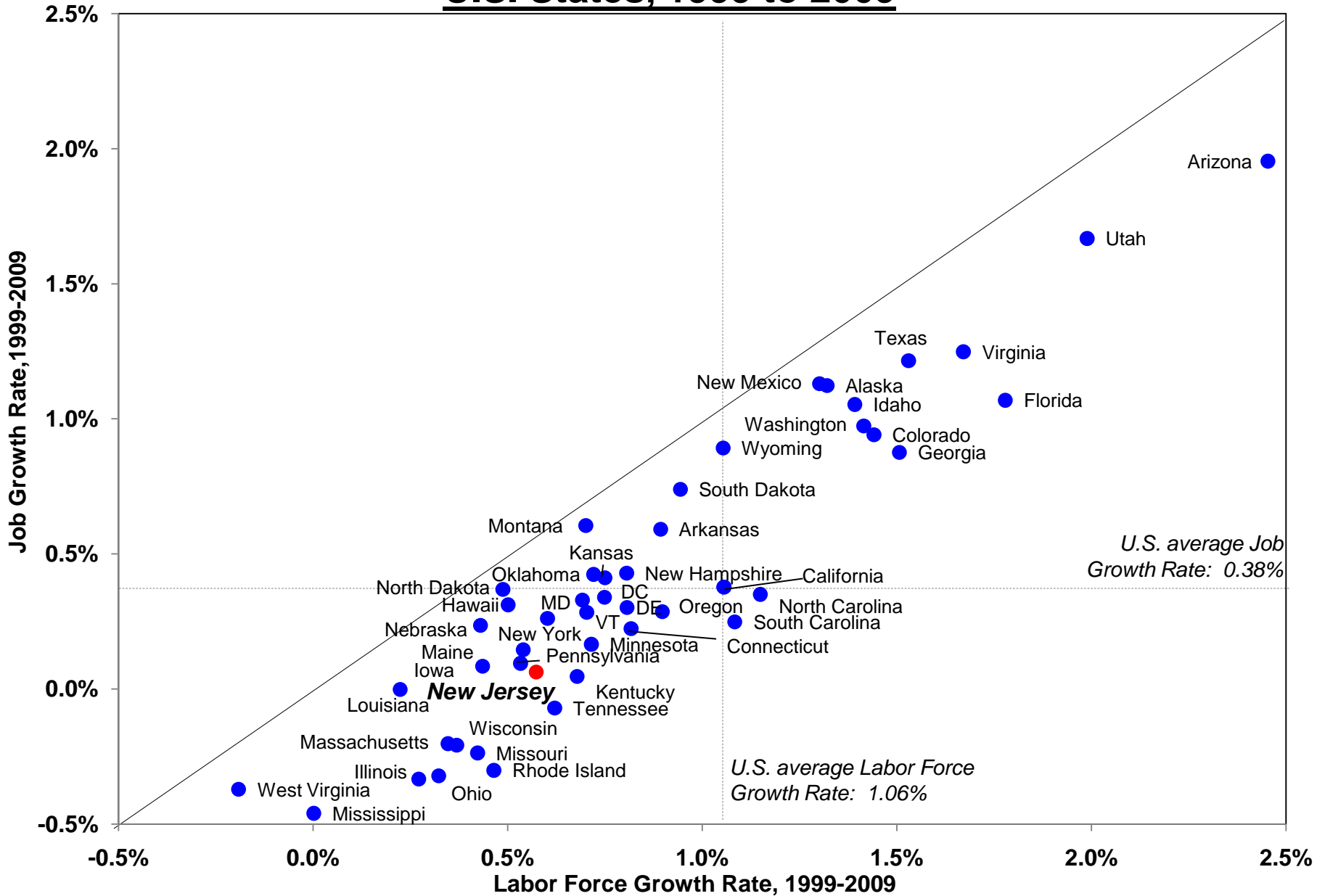
Employment Growth versus Wage Growth

U.S. States, 1998-2007



Labor Force Growth versus Job Growth

U.S. States, 1999 to 2009

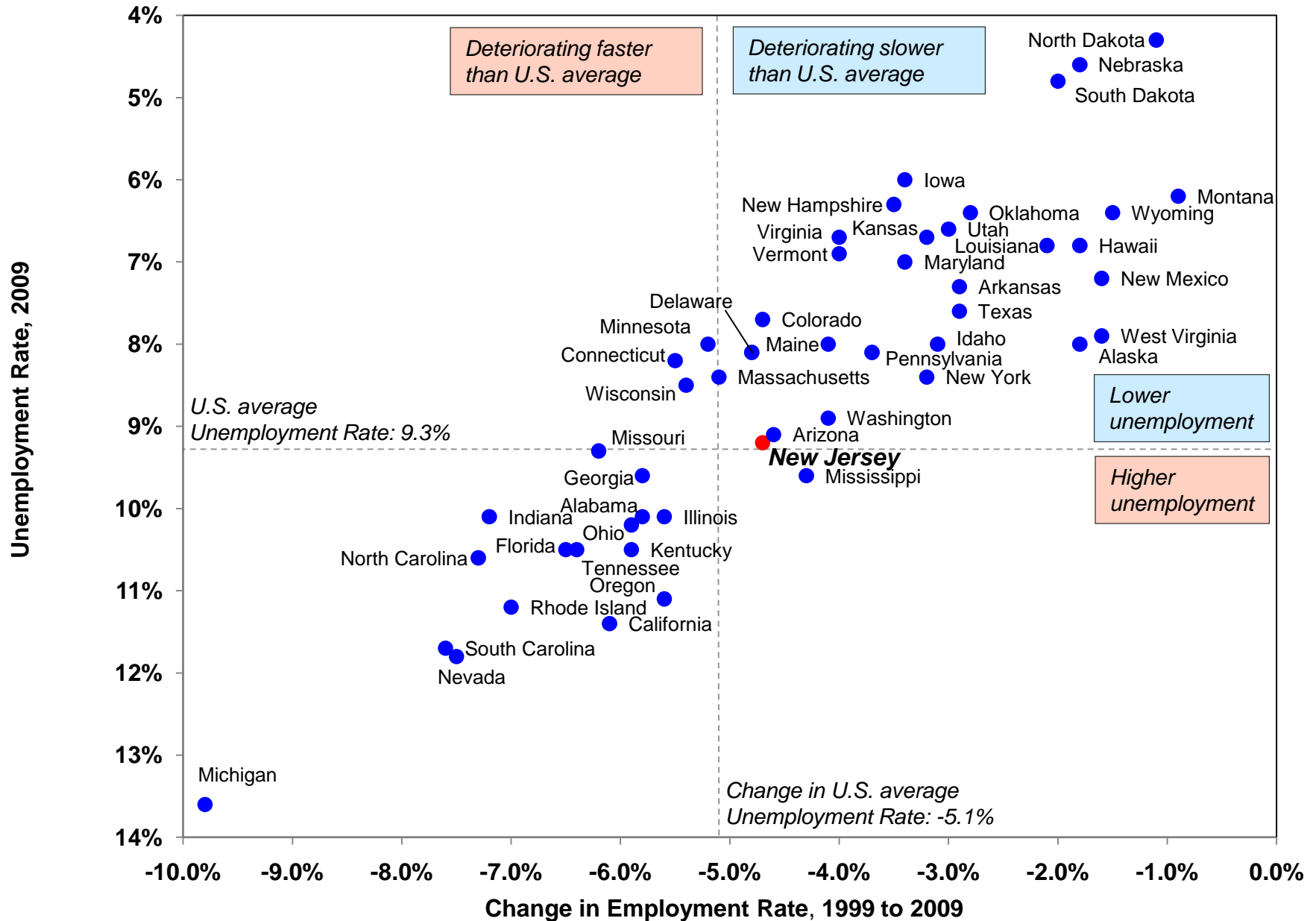


Note: Growth rates calculated as compound annual growth rate (CAGR).

Source: Census; Bureau of Labor Statistics. * Data available through November 2008

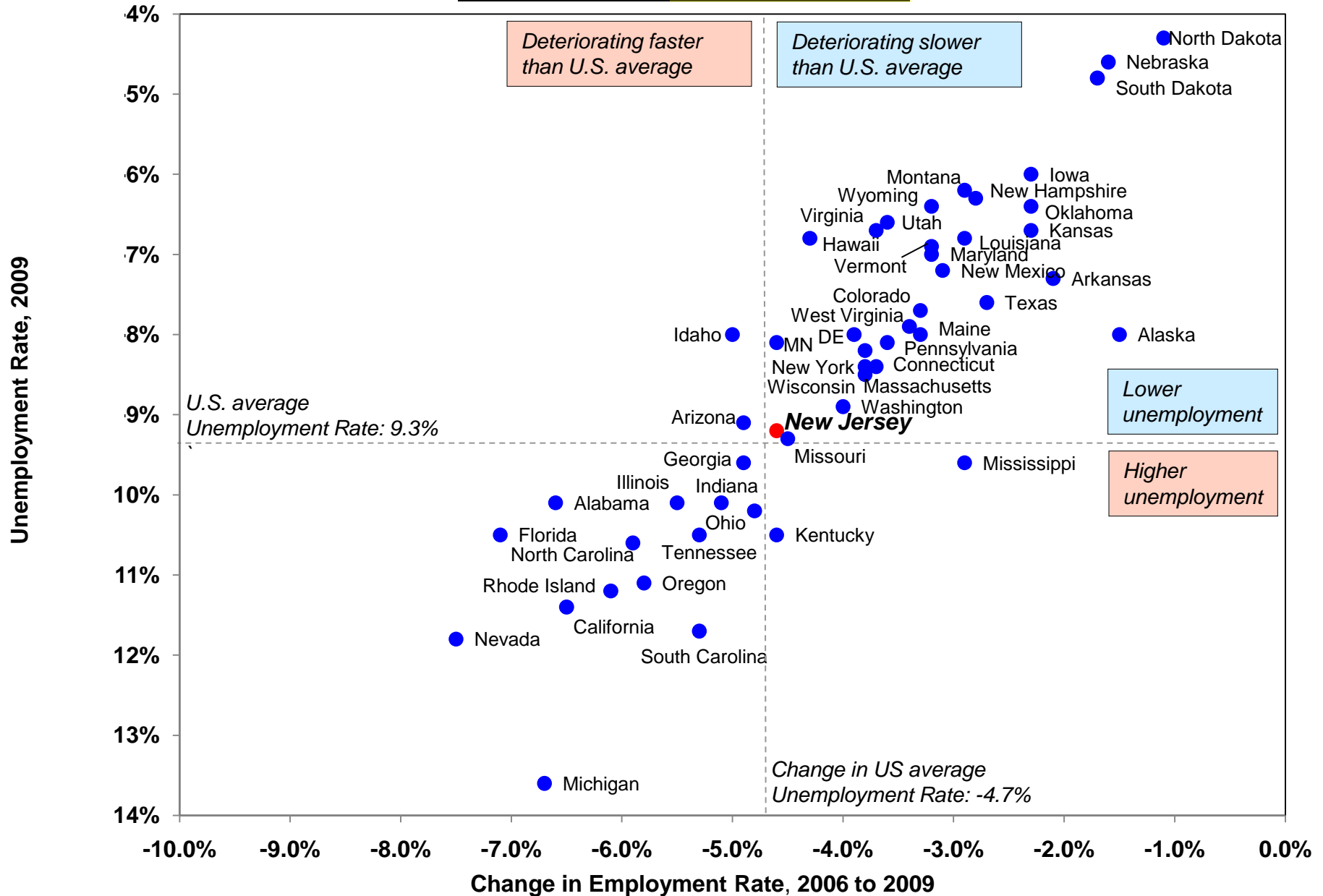
Unemployment Performance

U.S. States, 1999 to 2009



Recent Unemployment Performance

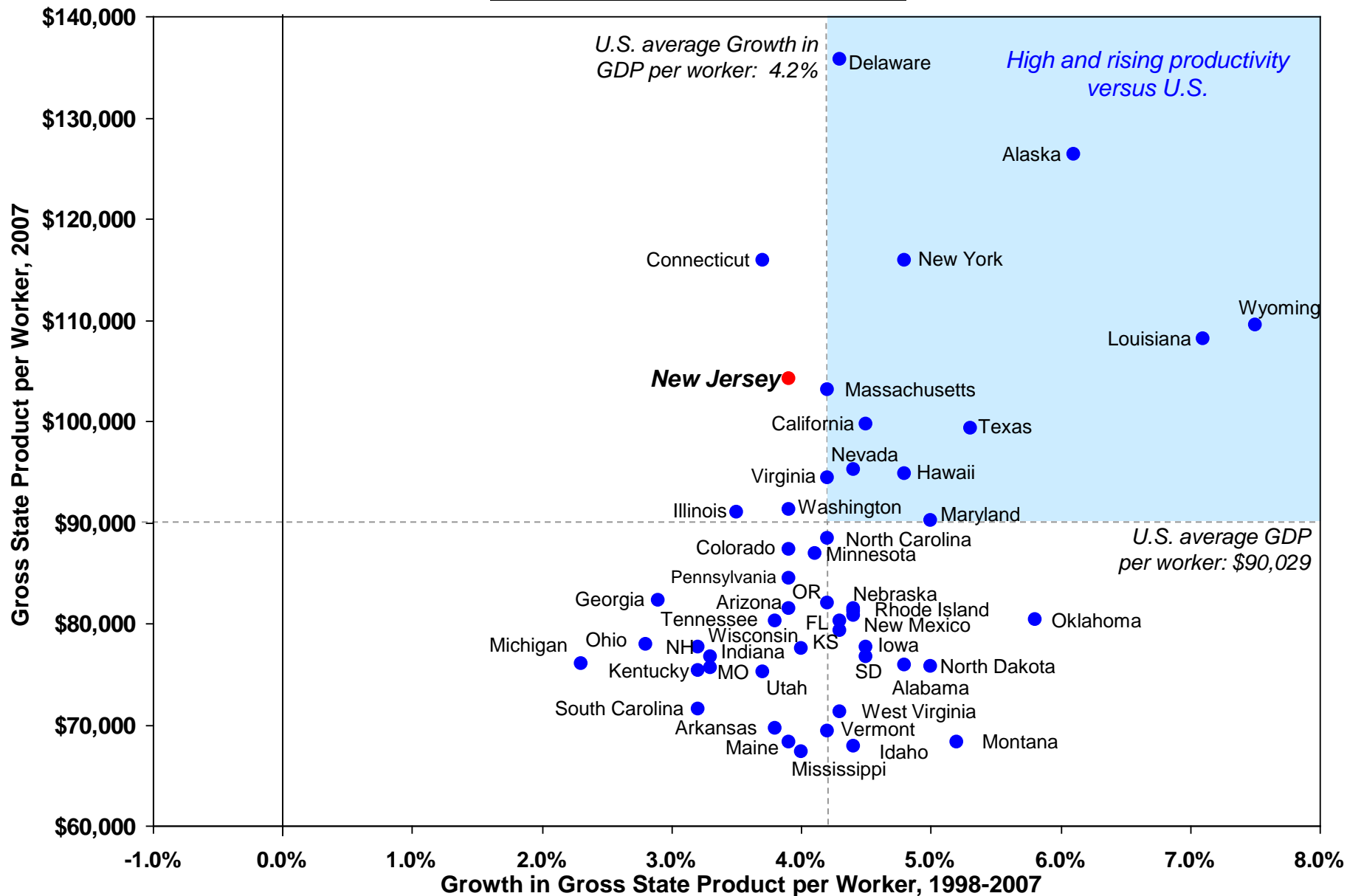
U.S. States, 2006 to 2009



Source: Bureau of Labor Statistics

Labor Productivity Performance

U.S. States, 1998-2007

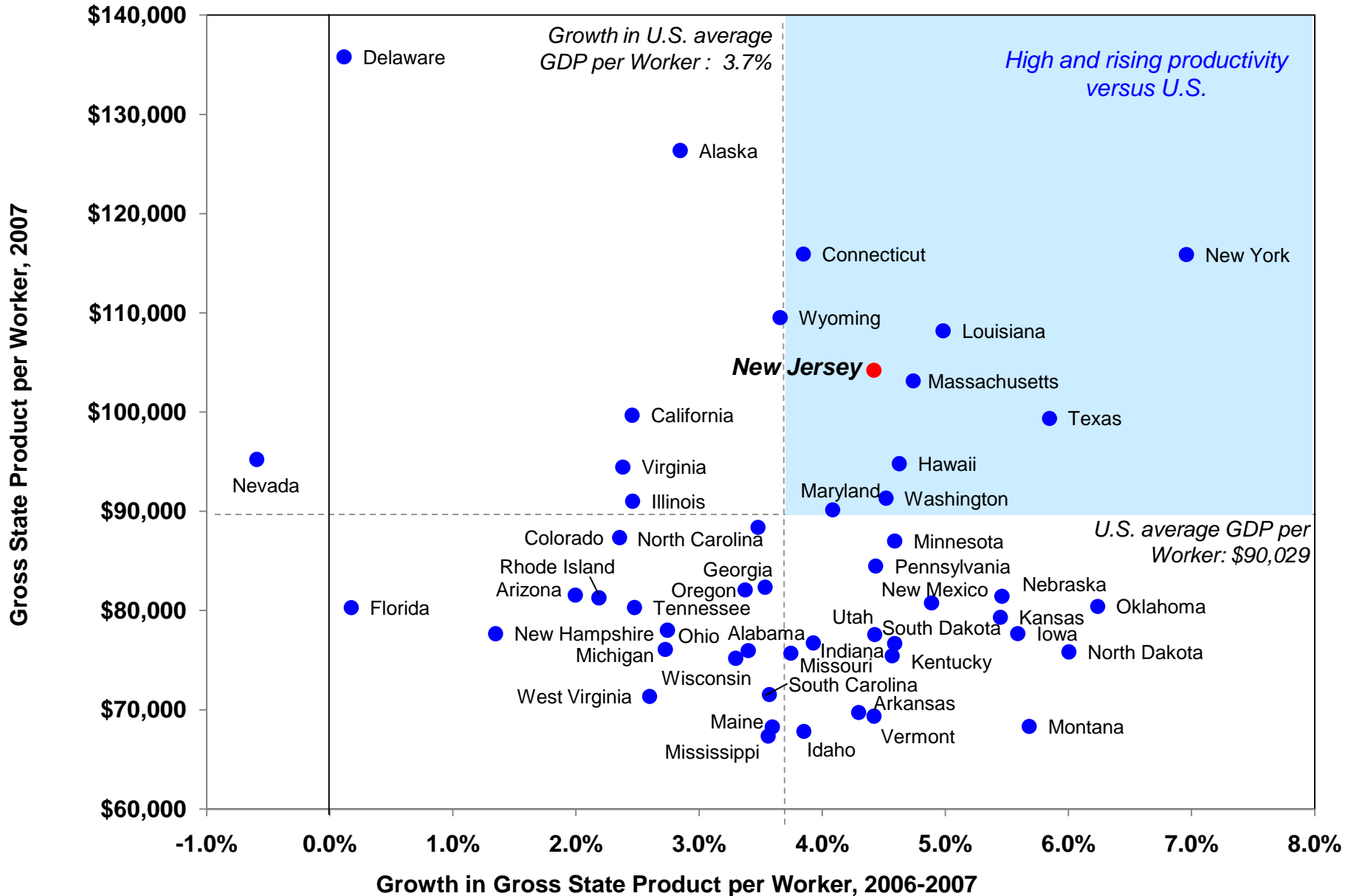


Source: Bureau of Economic Analysis. Growth rate is compound annual growth rate (CAGR.). Gross state product figures in 2000 chained US dollars.

Notes: District of Columbia: \$288,176, %5.6.

Recent Labor Productivity Performance

U.S. States, 2006-2007

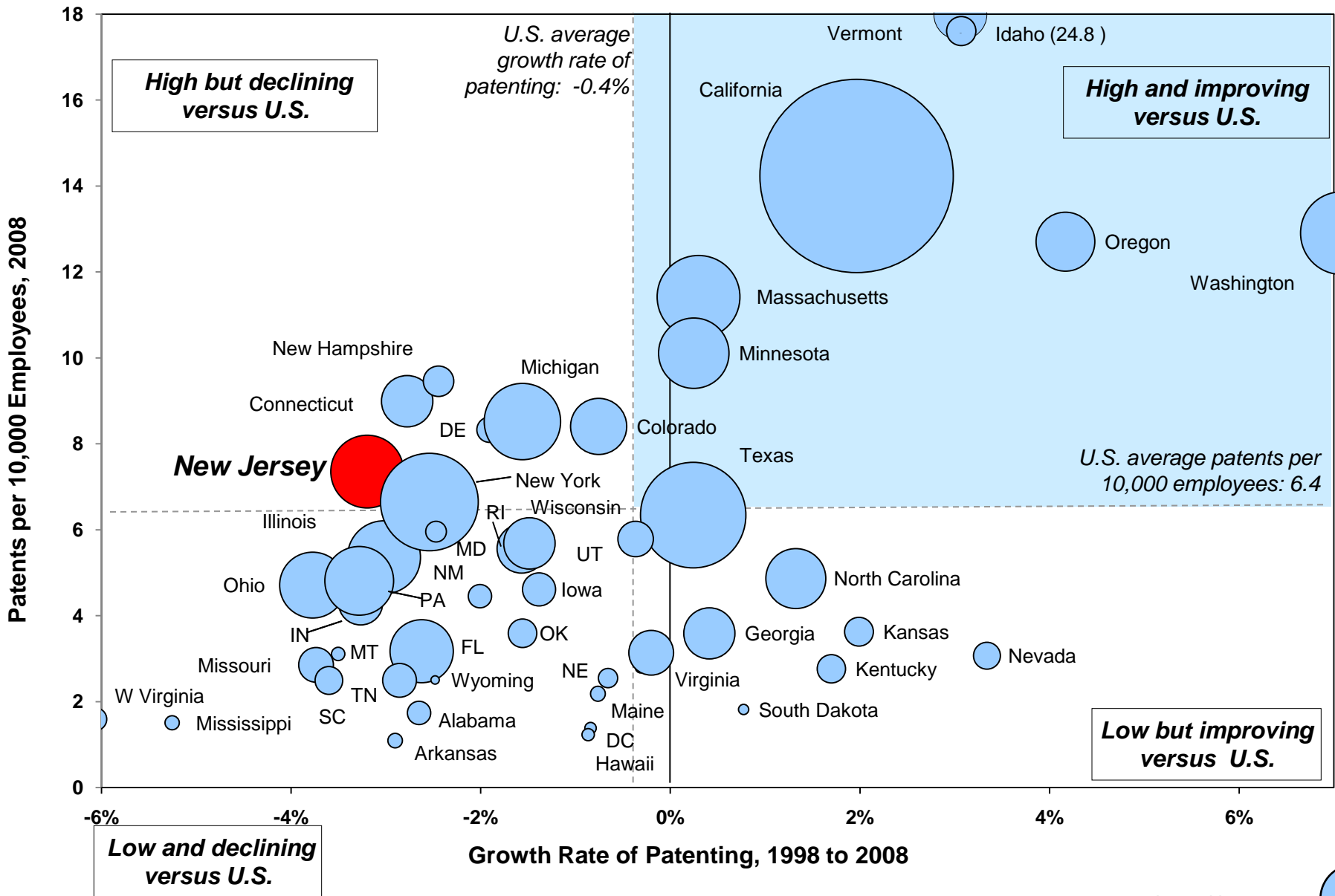


Source: Bureau of Economic Analysis. Growth rate is compound annual growth rate (CAGR.). Gross state product figures in 2000 chained US dollars.

Notes: District of Columbia: \$288,176, 4.5%.

Patenting Rate

U.S. States, 1998 to 2008



Source: USPTO, Bureau of Labor Statistics. Note: Growth rate calculated as compound annual growth rate (CAGR).

Top New Jersey Patenting Organizations

2003-2007

| Rank | Organization | 2003 | 2004 | 2005 | 2006 | 2007 | Five-year Total |
|------|--|------|------|------|------|------|-----------------|
| 1 | LUCENT TECHNOLOGIES INC. | 421 | 330 | 256 | 306 | 237 | 1,550 |
| 2 | AT&T CORP. | 179 | 172 | 151 | 229 | 218 | 949 |
| 3 | AGERE SYSTEMS INC. | 82 | 85 | 45 | 54 | 37 | 303 |
| 4 | BRISTOL-MYERS SQUIBB COMPANY | 51 | 29 | 41 | 69 | 72 | 262 |
| 5 | SCHERING CORP. | 40 | 31 | 47 | 53 | 53 | 224 |
| 6 | MERCK + CO., INC. | 71 | 31 | 28 | 25 | 43 | 198 |
| 7 | HONEYWELL INTERNATIONAL INC. | 41 | 44 | 28 | 22 | 29 | 164 |
| 8 | METROLOGIC INSTRUMENTS INC. | 30 | 22 | 39 | 38 | 31 | 160 |
| 9 | SARNOFF CORPORATION | 61 | 38 | 25 | 22 | 14 | 160 |
| 10 | EXXONMOBIL RESEARCH AND ENGINEERING COMPANY | 35 | 52 | 22 | 25 | 23 | 157 |
| 11 | ETHICON, INC. | 26 | 20 | 25 | 34 | 29 | 134 |
| 12 | SIEMENS CORPORATE RESEARCH, INC. | 26 | 22 | 16 | 36 | 33 | 133 |
| 13 | COLGATE-PALMOLIVE COMPANY | 49 | 21 | 14 | 24 | 23 | 131 |
| 14 | UNITED STATES OF AMERICA, ARMY | 25 | 21 | 27 | 42 | 16 | 131 |
| 15 | WYETH | 24 | 28 | 21 | 29 | 16 | 118 |
| 16 | PRINCETON UNIVERSITY | 25 | 20 | 27 | 19 | 22 | 113 |
| 17 | UNILEVER HOME & PERSONAL CARE USA, DIVISION OF CONOPCO | 36 | 18 | 32 | 19 | 8 | 113 |
| 18 | RUTGERS UNIVERSITY | 22 | 19 | 16 | 30 | 19 | 106 |
| 19 | BECTON, DICKINSON AND COMPANY | 32 | 19 | 20 | 17 | 15 | 103 |
| 20 | EXXONMOBIL CHEMICAL PATENTS INC. | 18 | 17 | 19 | 23 | 23 | 100 |
| 21 | TELCORDIA TECHNOLOGIES, INC. | 20 | 17 | 21 | 30 | 8 | 96 |
| 22 | AVAYA TECHNOLOGY CORP. | 25 | 20 | 15 | 17 | 19 | 96 |
| 23 | NATIONAL STARCH AND CHEMICAL INVESTMENT HOLDING CORP | 24 | 23 | 16 | 18 | 10 | 91 |
| 24 | MATSUSHITA ELECTRIC INDUSTRIAL CO., LTD. | 14 | 14 | 14 | 37 | 10 | 89 |
| 25 | ENGELHARD CORPORATION | 23 | 18 | 16 | 15 | 8 | 80 |
| 48 | UNIVERSITY OF MEDICINE AND DENTISTRY OF NEW JERSEY | 11 | 6 | 4 | 15 | 7 | 43 |
| 75 | NEW JERSEY INSTITUTE OF TECHNOLOGY | 4 | 6 | | 6 | 6 | 22 |
| 82 | UNITED STATES OF AMERICA, NAVY | 4 | 2 | 8 | 2 | 5 | 21 |
| 115 | TRUSTEES OF THE STEVENS INSTITUTE OF TECHNOLOGY | 1 | 4 | 4 | 2 | 3 | 14 |

Note: Government, educational and other non-profit research institutions are highlighted.

Source: USPTO; utility patents granted. Prof. Michael E. Porter, Cluster Mapping Project, Institute for Strategy and Competitiveness, Harvard Business School; Richard Bryden, Project Director.

Leading U.S. Patenting Universities and Research Institutes

2003-2007

| Rank | Organization | 2003 | 2004 | 2005 | 2006 | 2007 | Five-year Total |
|------|---|------|------|------|------|------|-----------------|
| 1 | UNIVERSITY OF CALIFORNIA, THE REGENTS OF | 434 | 420 | 377 | 406 | 327 | 1,964 |
| 2 | HARVARD AND AFFILIATED HOSPITALS AND INSTITUTES | 174 | 133 | 119 | 141 | 132 | 699 |
| 3 | MIT AND AFFILIATED INSTITUTES | 113 | 116 | 121 | 118 | 119 | 587 |
| 4 | CALIFORNIA INSTITUTE OF TECHNOLOGY | 132 | 128 | 97 | 113 | 114 | 584 |
| 5 | UNIVERSITY OF TEXAS | 91 | 98 | 87 | 101 | 86 | 463 |
| 6 | STANFORD UNIVERSITY | 85 | 69 | 87 | 95 | 77 | 413 |
| 7 | WISCONSIN ALUMNI RESEARCH FOUNDATION | 82 | 64 | 74 | 100 | 89 | 409 |
| 8 | JOHNS HOPKINS UNIVERSITY | 70 | 94 | 71 | 89 | 62 | 386 |
| 9 | UNIVERSITY OF MICHIGAN | 62 | 66 | 71 | 69 | 47 | 315 |
| 10 | BATTELLE MEMORIAL INSTITUTE | 70 | 71 | 60 | 66 | 41 | 308 |
| 11 | COLUMBIA UNIVERSITY | 60 | 52 | 56 | 53 | 54 | 275 |
| 12 | CORNELL RESEARCH FOUNDATION INC. | 58 | 37 | 40 | 58 | 54 | 247 |
| 13 | UNIVERSITY OF ILLINOIS | 39 | 58 | 34 | 51 | 45 | 227 |
| 14 | GEORGIA TECH RESEARCH CORP. | 43 | 37 | 42 | 54 | 50 | 226 |
| 15 | UNIVERSITY OF FLORIDA RESEARCH FOUNDATION | 15 | 19 | 40 | 60 | 56 | 190 |
| 16 | UNIVERSITY OF PENNSYLVANIA | 28 | 32 | 43 | 47 | 39 | 189 |
| 17 | UNIVERSITY OF MINNESOTA, THE REGENTS OF | 37 | 43 | 34 | 36 | 31 | 181 |
| 18 | NORTH CAROLINA STATE UNIVERSITY | 43 | 37 | 37 | 32 | 31 | 180 |
| 19 | UNIVERSITY OF WASHINGTON | 36 | 31 | 31 | 36 | 39 | 173 |
| 20 | PENN STATE RESEARCH FOUNDATION, INC. | 51 | 37 | 29 | 29 | 27 | 173 |
| 21 | DUKE UNIVERSITY | 40 | 26 | 25 | 51 | 29 | 171 |
| 22 | RESEARCH FOUNDATION OF STATE UNIVERSITY OF NEW YORK | 34 | 37 | 24 | 42 | 29 | 166 |
| 23 | MICHIGAN STATE UNIVERSITY | 49 | 28 | 24 | 30 | 34 | 165 |
| 24 | SOUTHWEST RESEARCH INSTITUTE | 29 | 39 | 18 | 39 | 38 | 163 |
| 25 | UNIVERSITY OF MARYLAND | 31 | 27 | 21 | 39 | 29 | 147 |
| 30 | PRINCETON UNIVERSITY | 31 | 21 | 31 | 23 | 29 | 135 |
| 39 | RUTGERS UNIVERSITY | 24 | 20 | 18 | 31 | 20 | 113 |
| 80 | UNIVERSITY OF MEDICINE AND DENTISTRY OF NEW JERSEY | 12 | 8 | 4 | 18 | 9 | 51 |

Note: New Jersey organizations are highlighted.

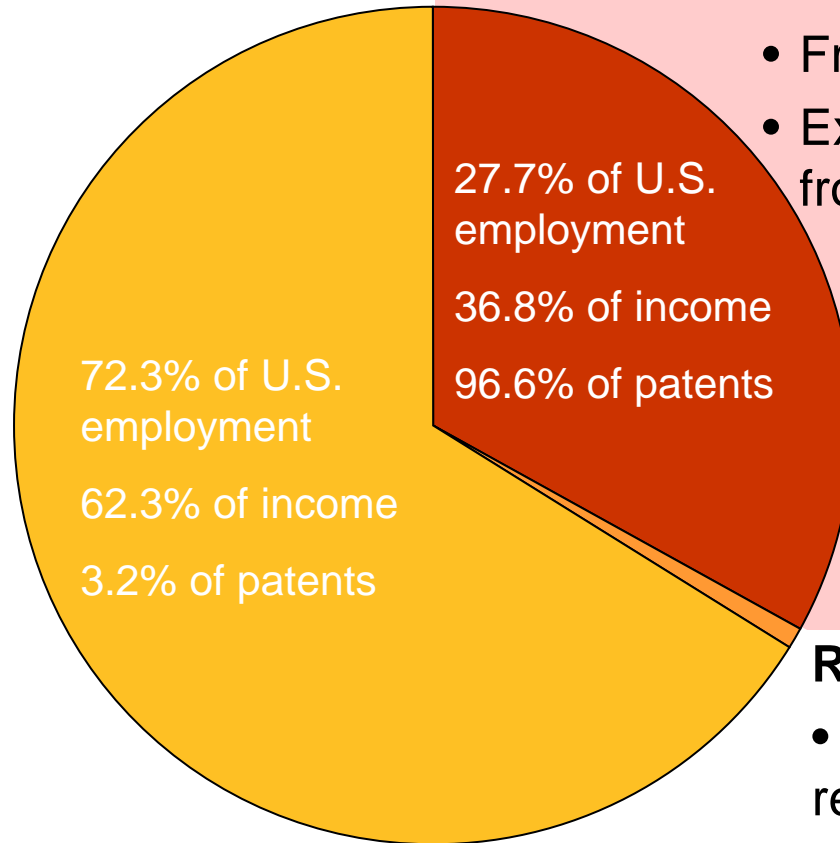
Source: USPTO; utility patents granted. Prof. Michael E. Porter, Cluster Mapping Project, Institute for Strategy and Competitiveness, Harvard Business School; Richard Bryden, Project Director.

New Jersey Cluster Performance

Composition of Regional Economies, United States

Local Clusters

- Serve almost exclusively the local market
- Not exposed to cross-regional competition for employment



Traded Clusters

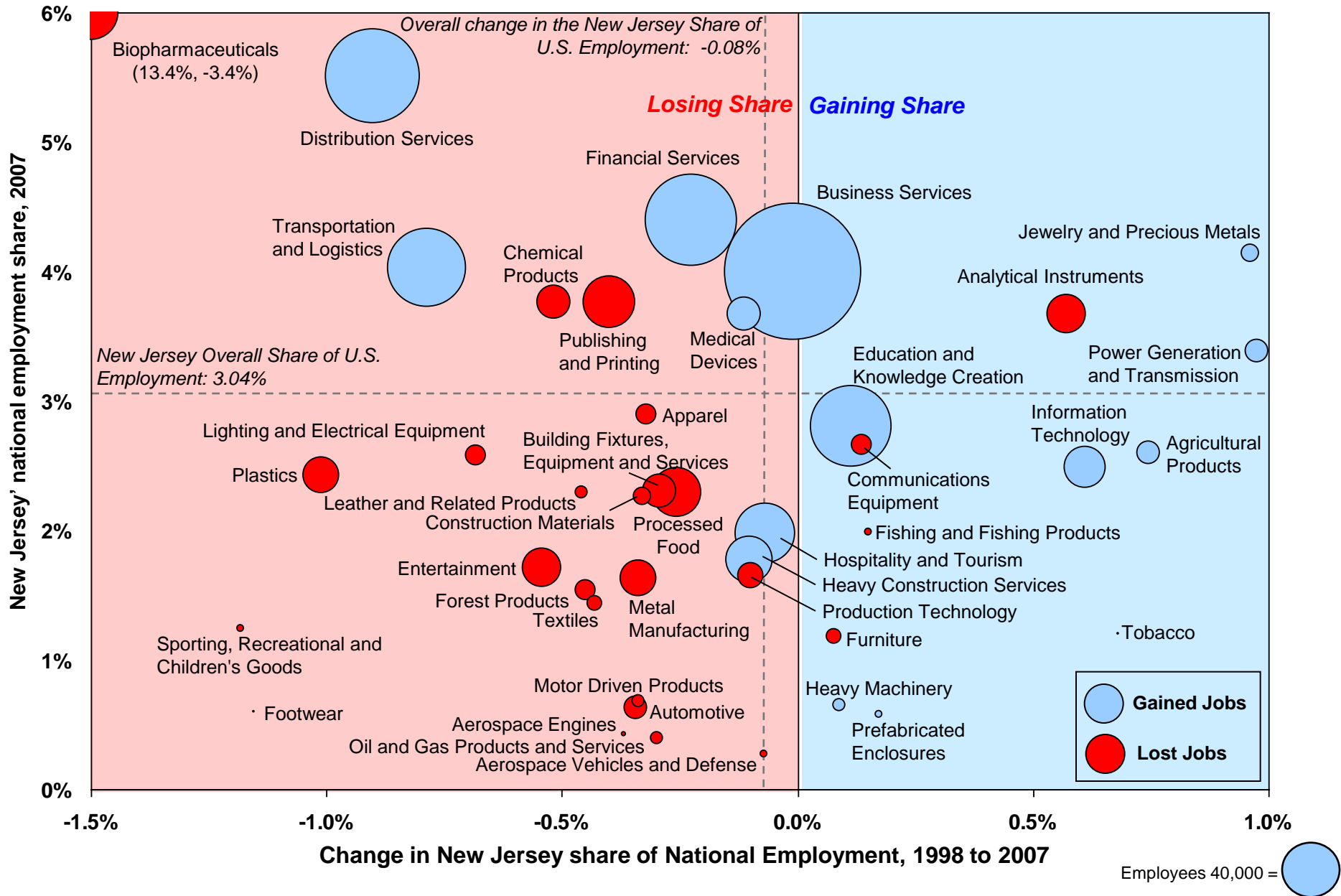
- Serve markets in other regions and countries
- Free to choose location
- Exposed to competition from other regions

Resource-based Clusters

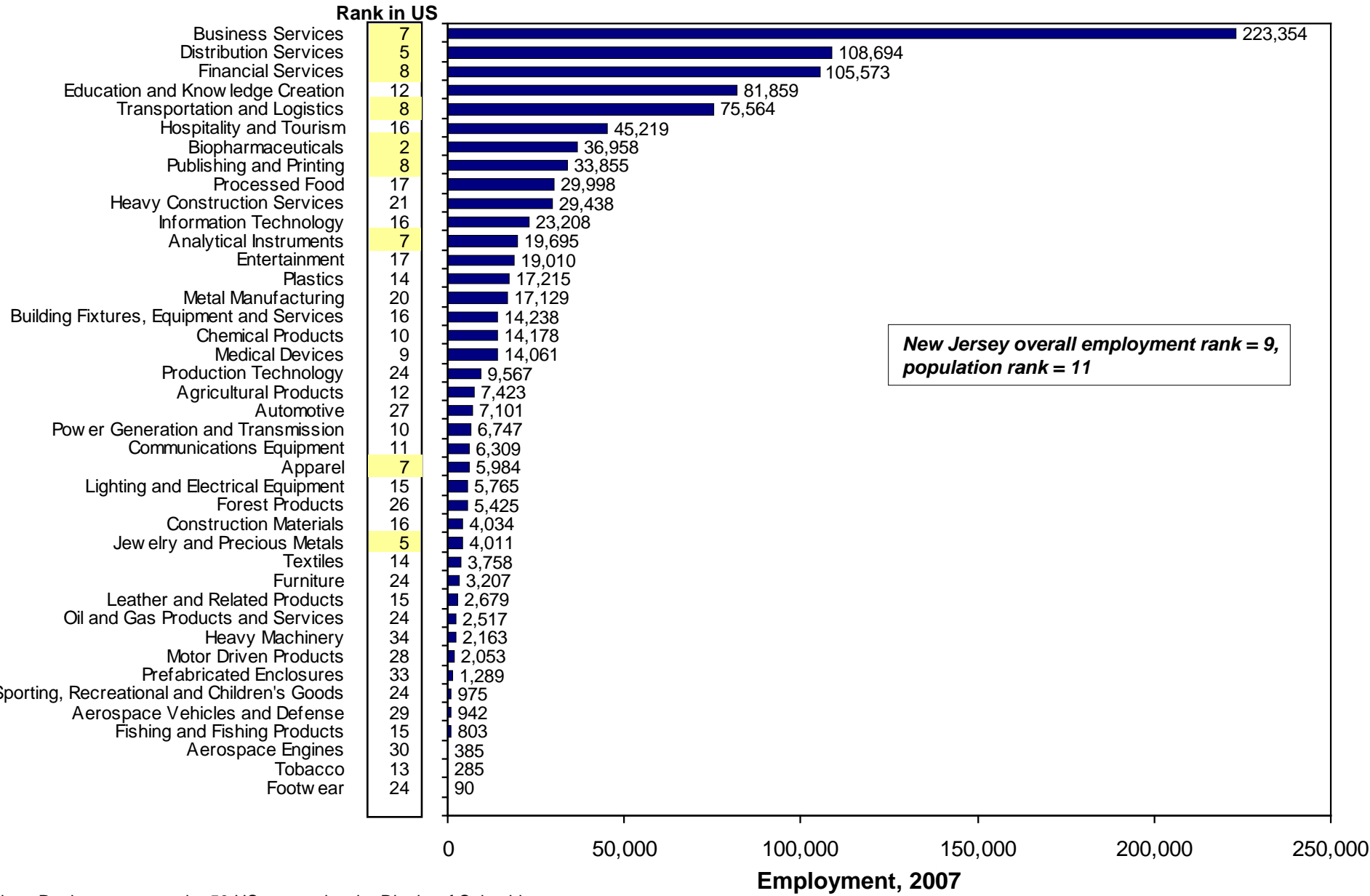
- Location determined by resource availability
- <1% of income, employment, and patents in the U.S.

Source: Michael E. Porter, Economic Performance of Regions, Regional Studies (2003); Updated via Cluster Mapping Project, Institute for Strategy and Competitiveness, Harvard Business School (2007)

Composition of the New Jersey Economy Specialization by Traded Cluster, 1998 to 2007



New Jersey Employment by Traded Cluster, 2007

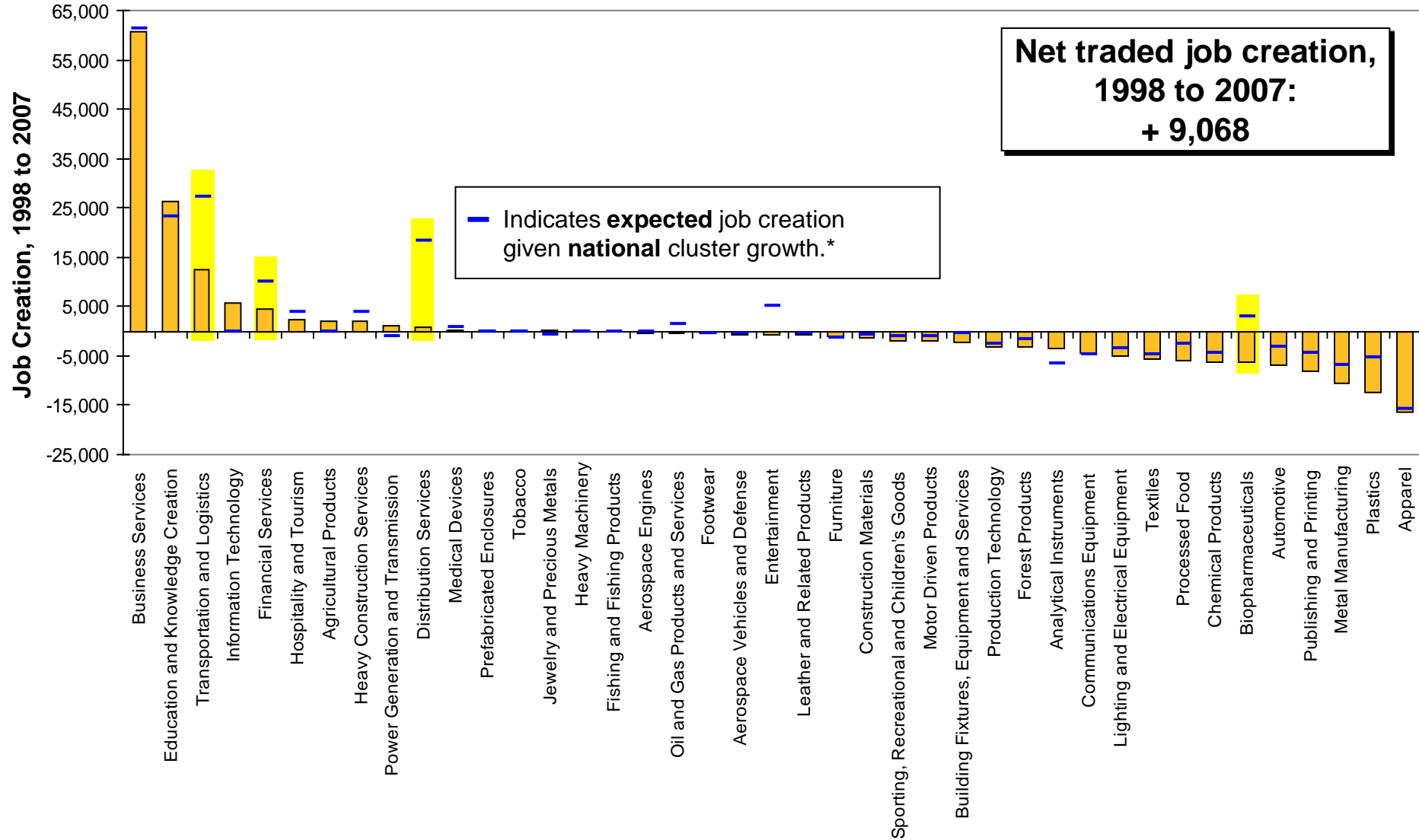


Note: Ranks are among the 50 US states plus the District of Columbia.

Source: Prof. Michael E. Porter, Cluster Mapping Project, Institute for Strategy and Competitiveness, Harvard Business School; Richard Bryden, Project Director.

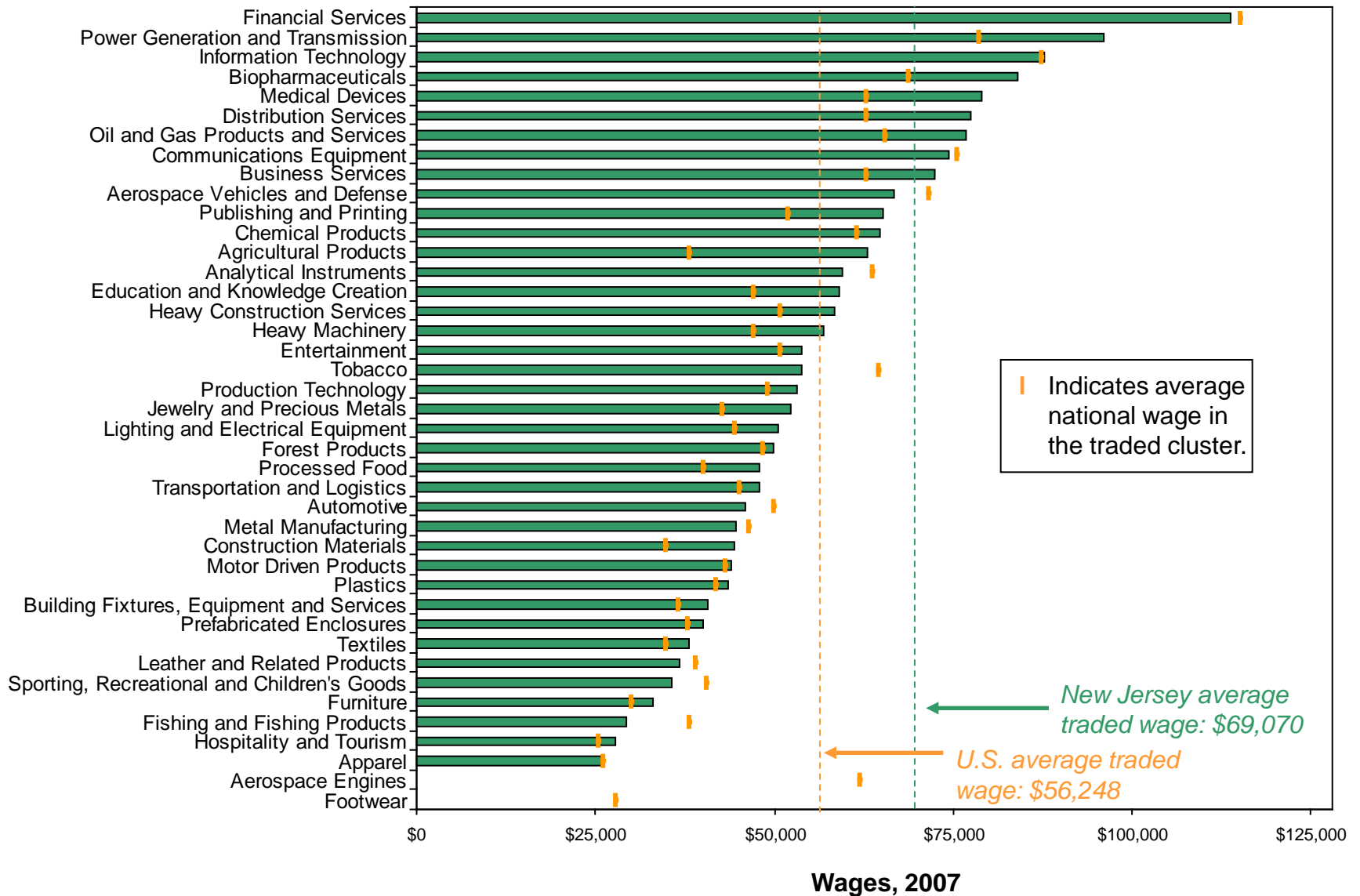
New Jersey Job Creation by Traded Cluster

1998 to 2007



* Percent change in national benchmark times starting regional employment. Overall traded job creation in New Jersey, if it matched national benchmarks, would be +84,701
 Source: Prof. Michael E. Porter, Cluster Mapping Project, Institute for Strategy and Competitiveness, Harvard Business School; Richard Bryden, Project Director.

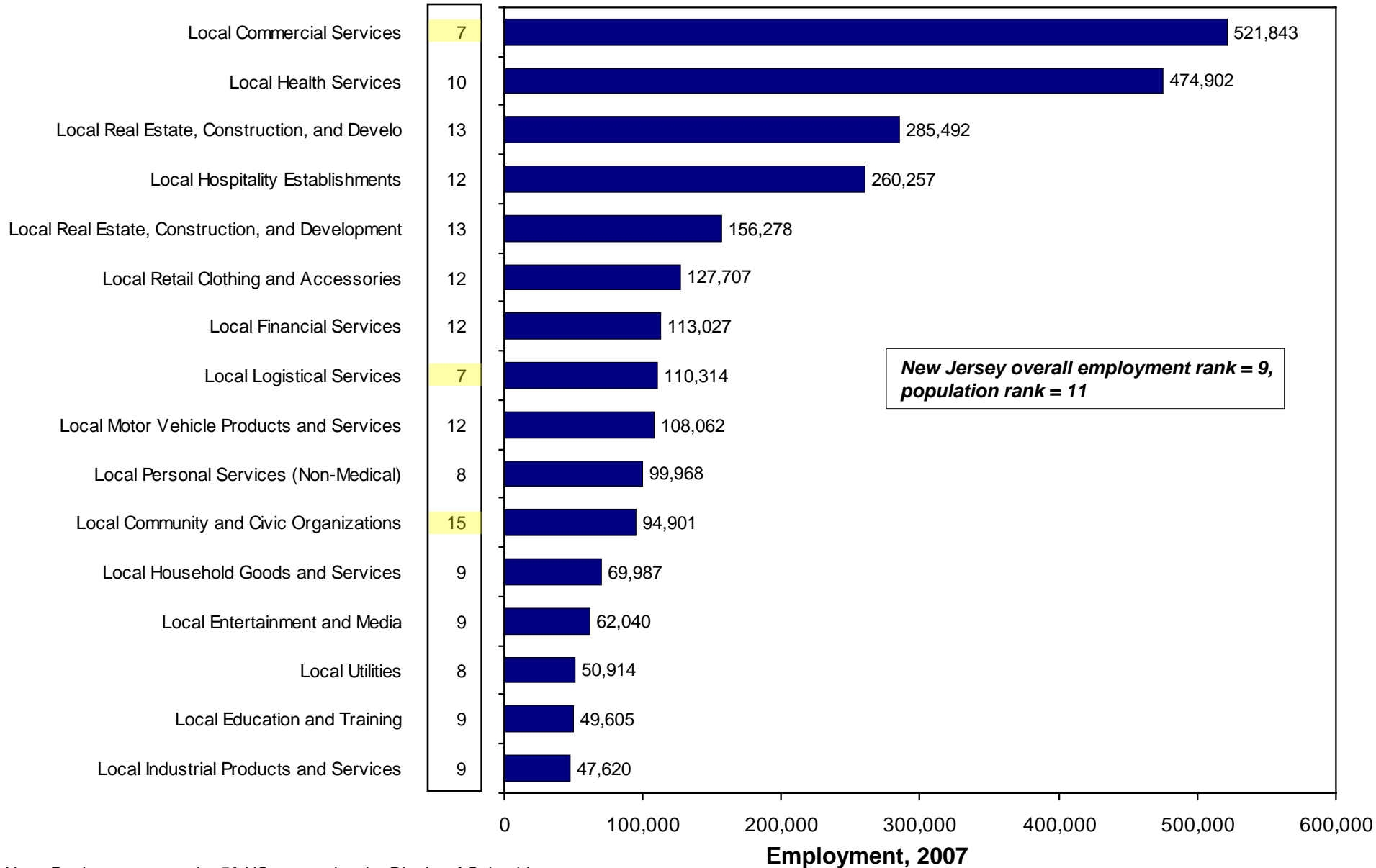
New Jersey Wages by Traded Cluster vs. National Benchmarks



Source: Prof. Michael E. Porter, Cluster Mapping Project, Institute for Strategy and Competitiveness, Harvard Business School; Richard Bryden, Project Director.

New Jersey Employment by Local Cluster, 2007

Rank in US

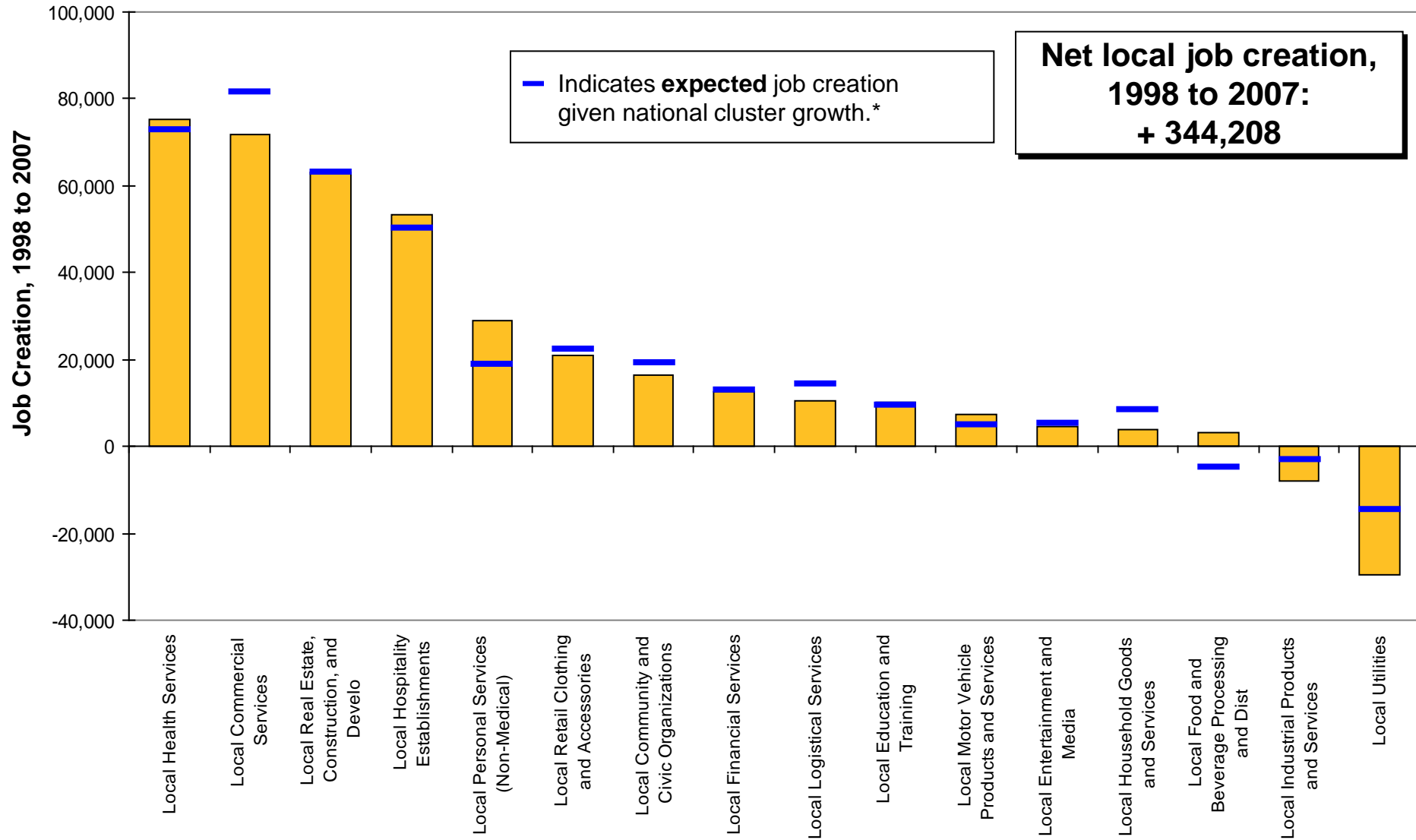


Note: Ranks are among the 50 US states plus the District of Columbia.

Source: Prof. Michael E. Porter, Cluster Mapping Project, Institute for Strategy and Competitiveness, Harvard Business School; Richard Bryden, Project Director.

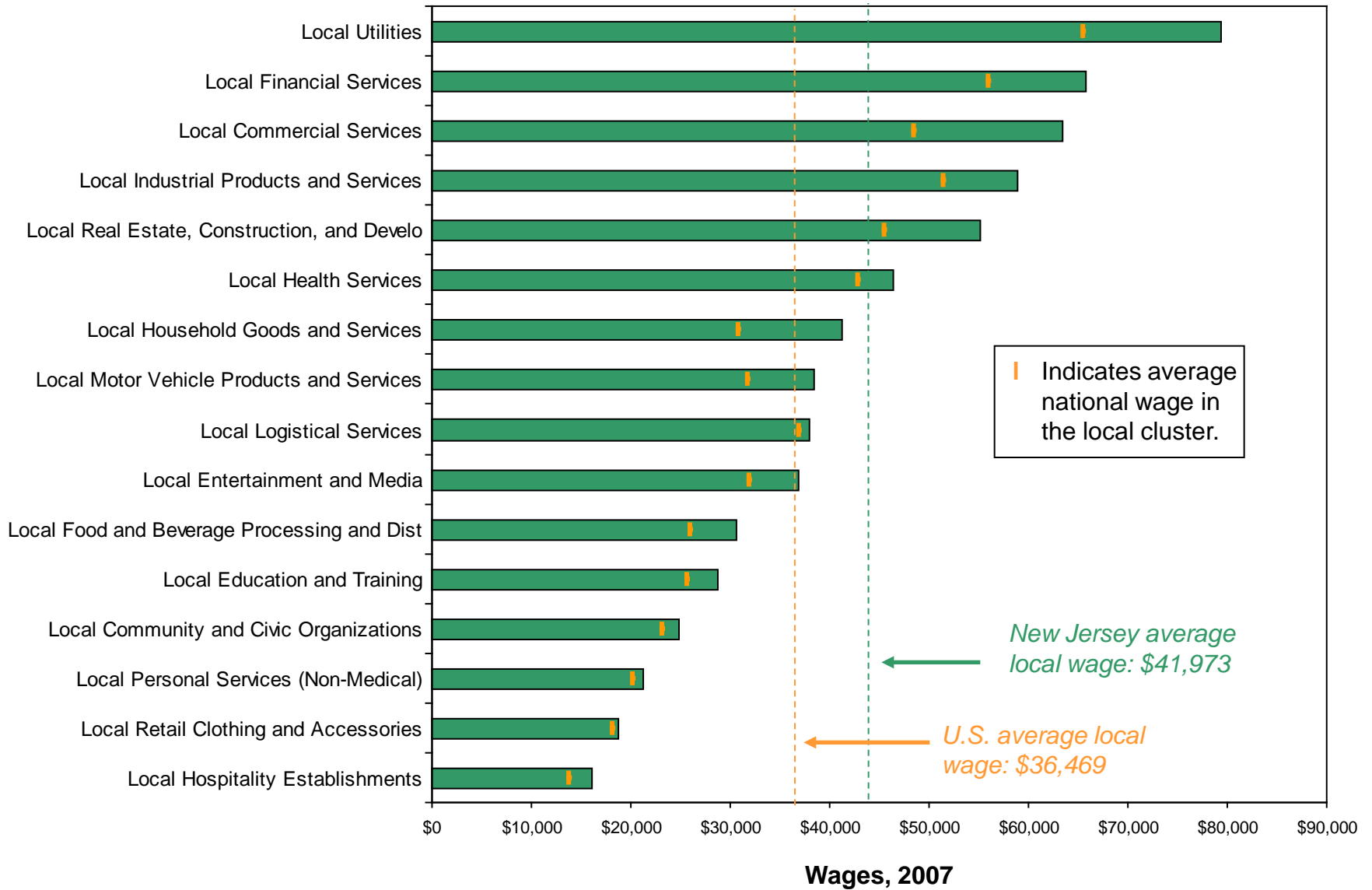
New Jersey Job Creation by Local Cluster

1998 to 2007



* Percent change in national benchmark times starting regional employment. Overall local job creation in New Jersey, if it matched national benchmarks, would be +360,867
 Source: Prof. Michael E. Porter, Cluster Mapping Project, Institute for Strategy and Competitiveness, Harvard Business School; Richard Bryden, Project Director.

New Jersey Wages by Local Cluster vs. National Benchmarks



Indicates average national wage in the local cluster.

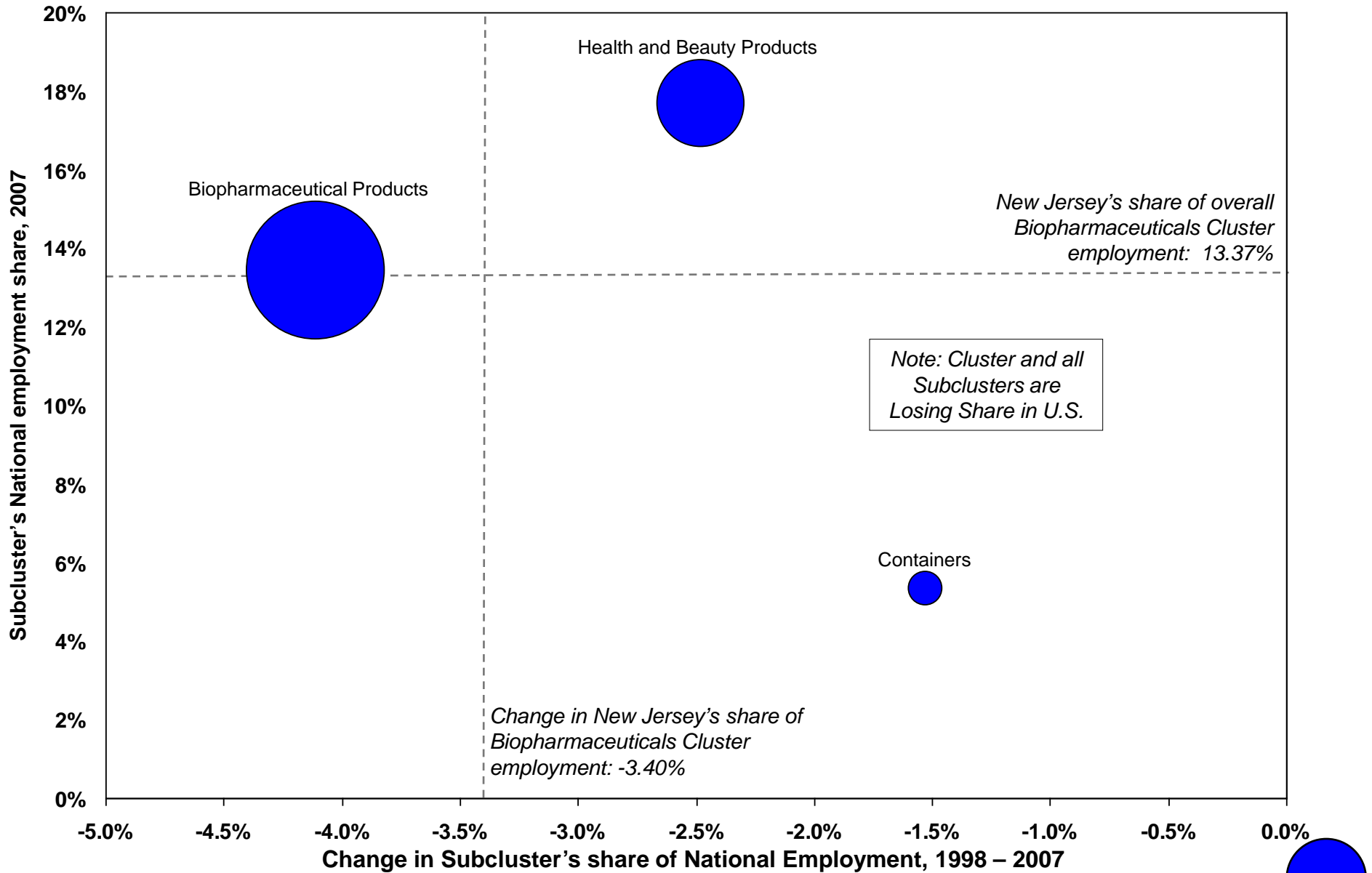
New Jersey average local wage: \$41,973

U.S. average local wage: \$36,469

Wages, 2007

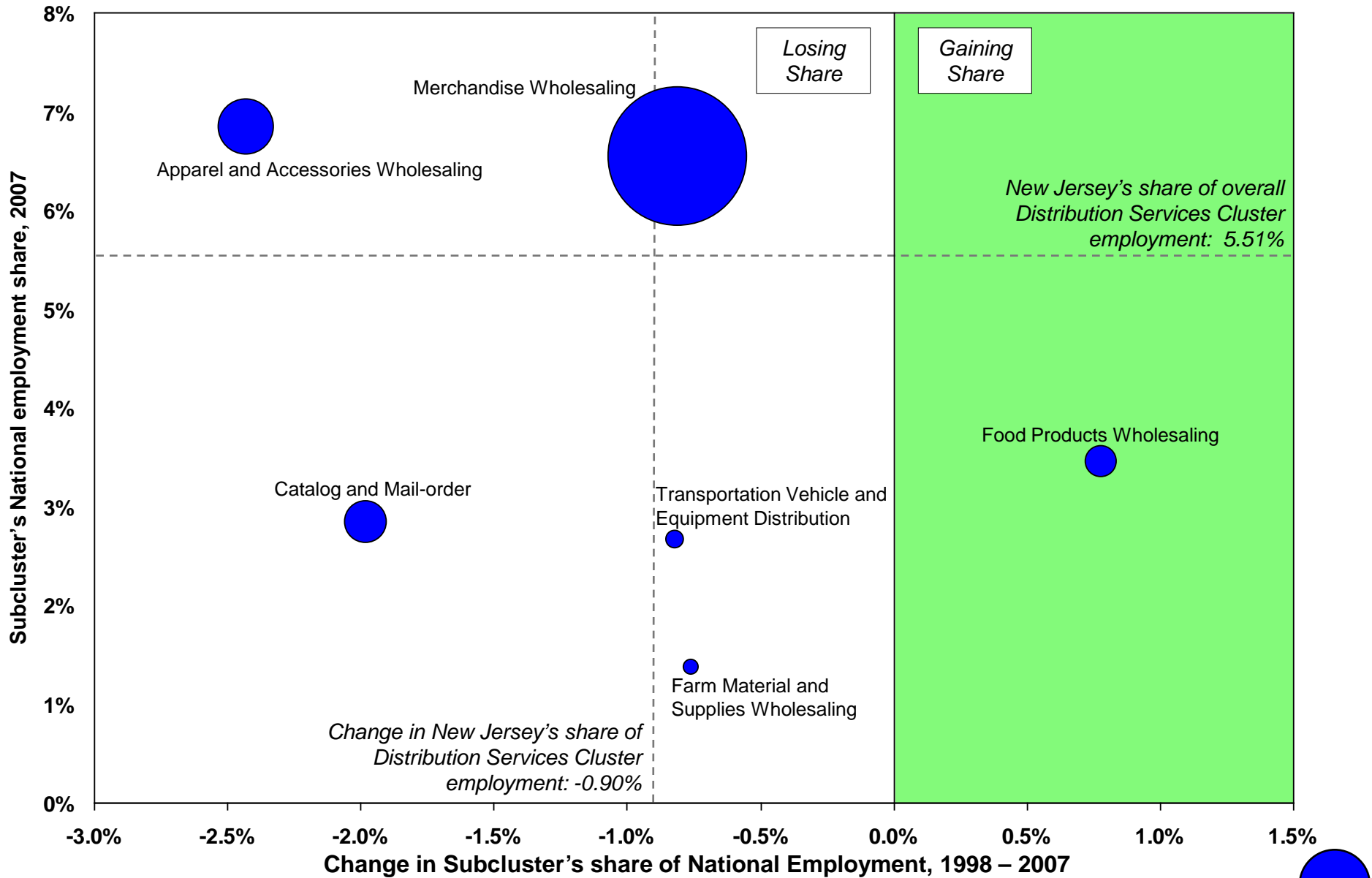
Source: Prof. Michael E. Porter, Cluster Mapping Project, Institute for Strategy and Competitiveness, Harvard Business School; Richard Bryden, Project Director.

New Jersey Biopharmaceuticals Cluster, 1998-2007 Employment by Subcluster



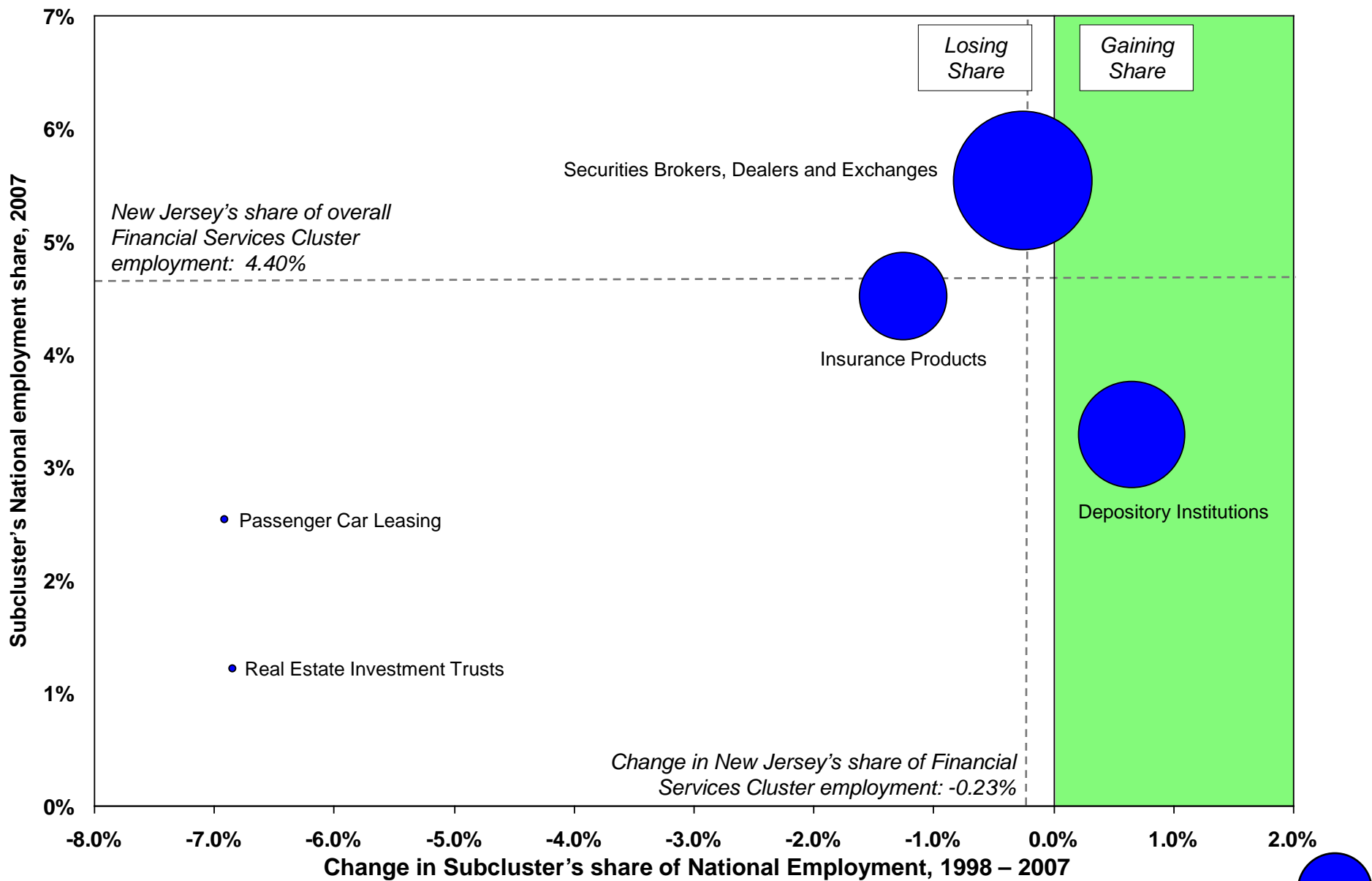
New Jersey Distribution Services Cluster, 1998-2007

Employment by Subcluster



New Jersey Financial Services Cluster, 1998-2007

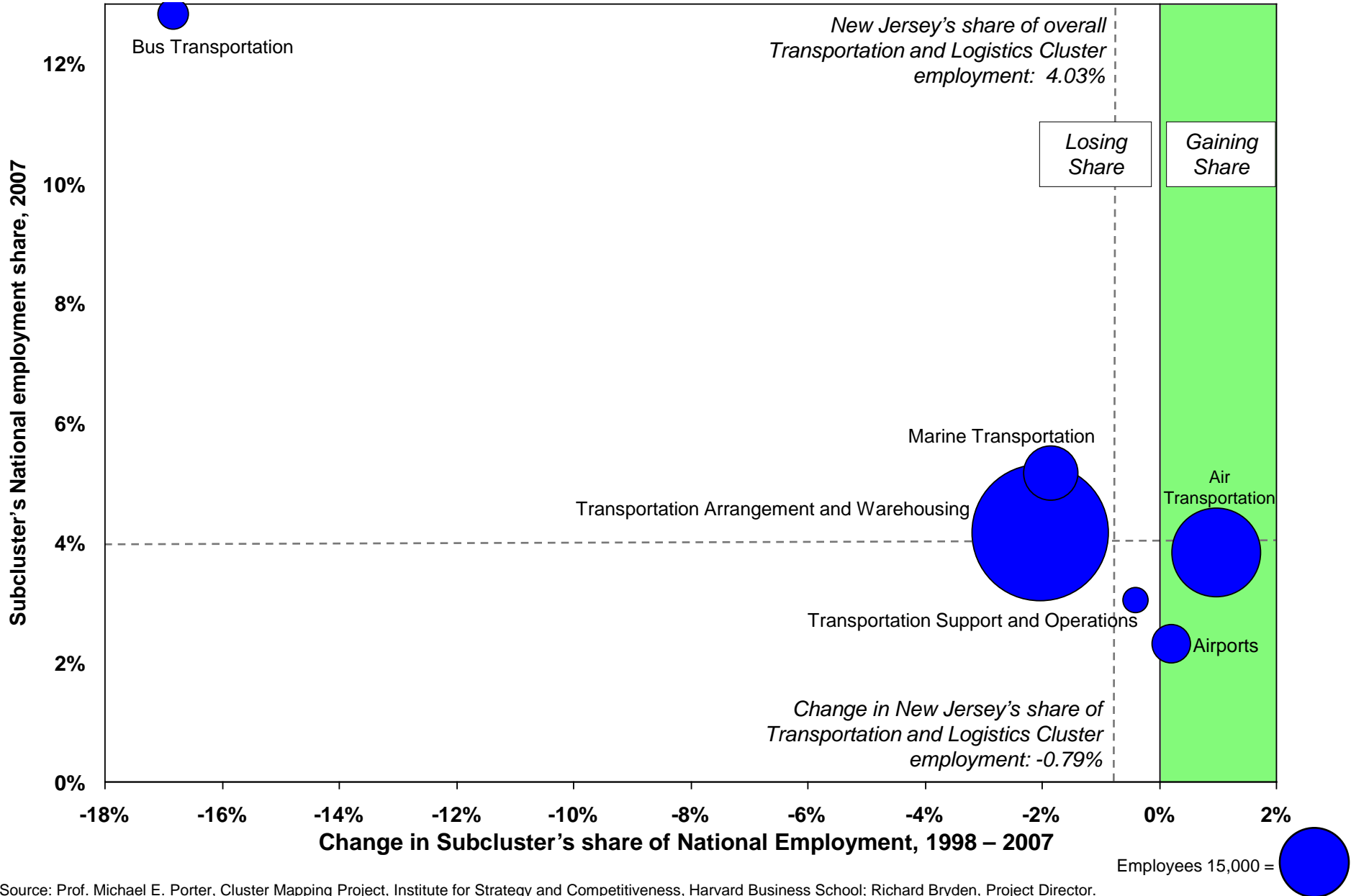
Employment by Subcluster



Employees 20,000 =

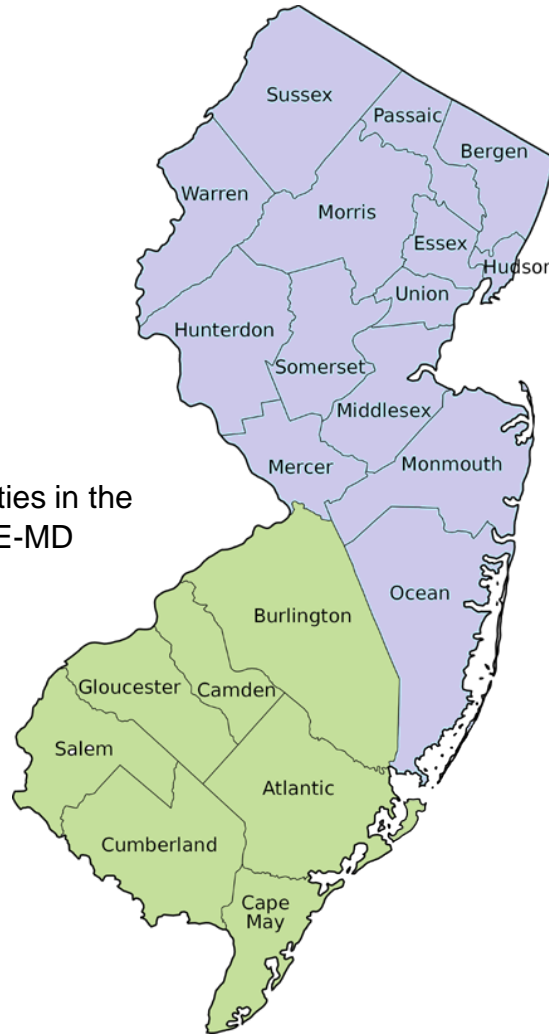
New Jersey Transportation and Logistics Cluster, 1998-2007

Employment by Subcluster



Comparative Performance of New Jersey Regions

New Jersey Counties and Regions



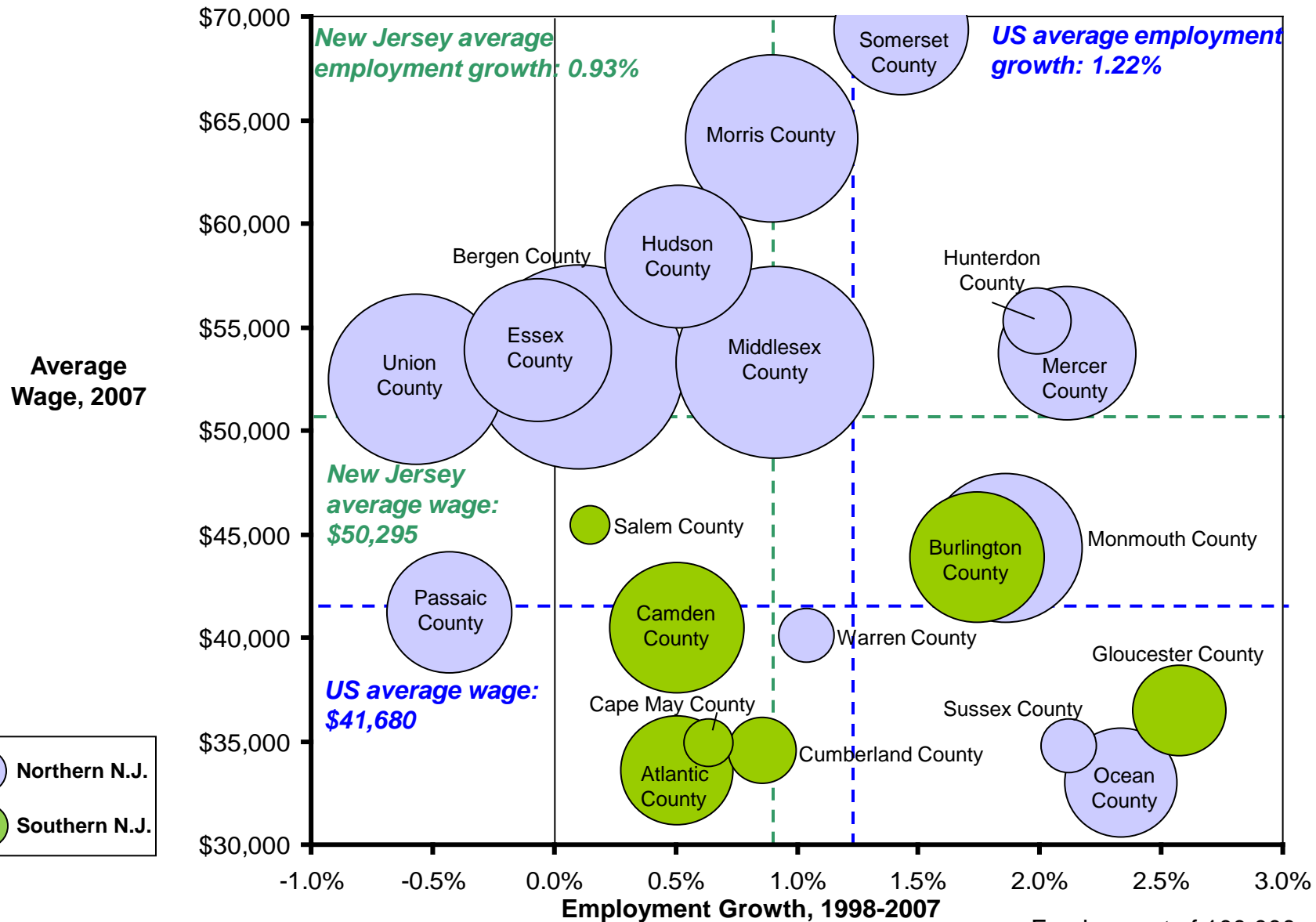
Southern New Jersey includes counties in the Philadelphia-Camden-Vineland, PA-NJ-DE-MD Economic Area

Northern New Jersey includes the counties in the New York-Newark-Bridgeport, NY-NJ-CT-PA Economic Area.

- New Jersey is part of two different regional economies.

Comparative Performance of N.J. Counties

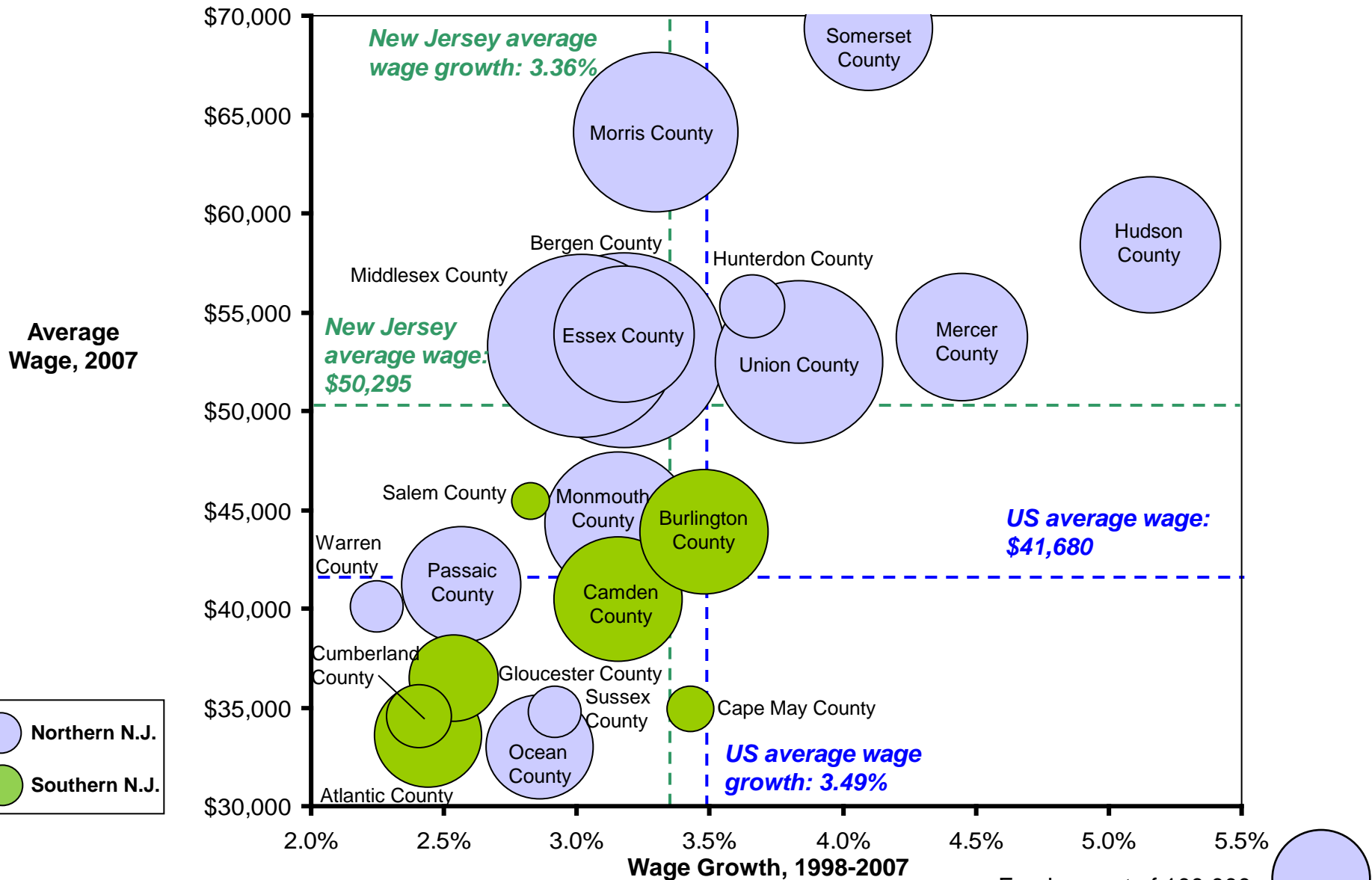
Average Wage vs. Employment Growth



Note: Covers private, non-agricultural employment. Note: Growth is calculated using compound annual growth rates (CAGR)
 Source: Cluster Mapping Project, Institute for Strategy and Competitiveness, Harvard Business School

Comparative Performance of N.J. Counties

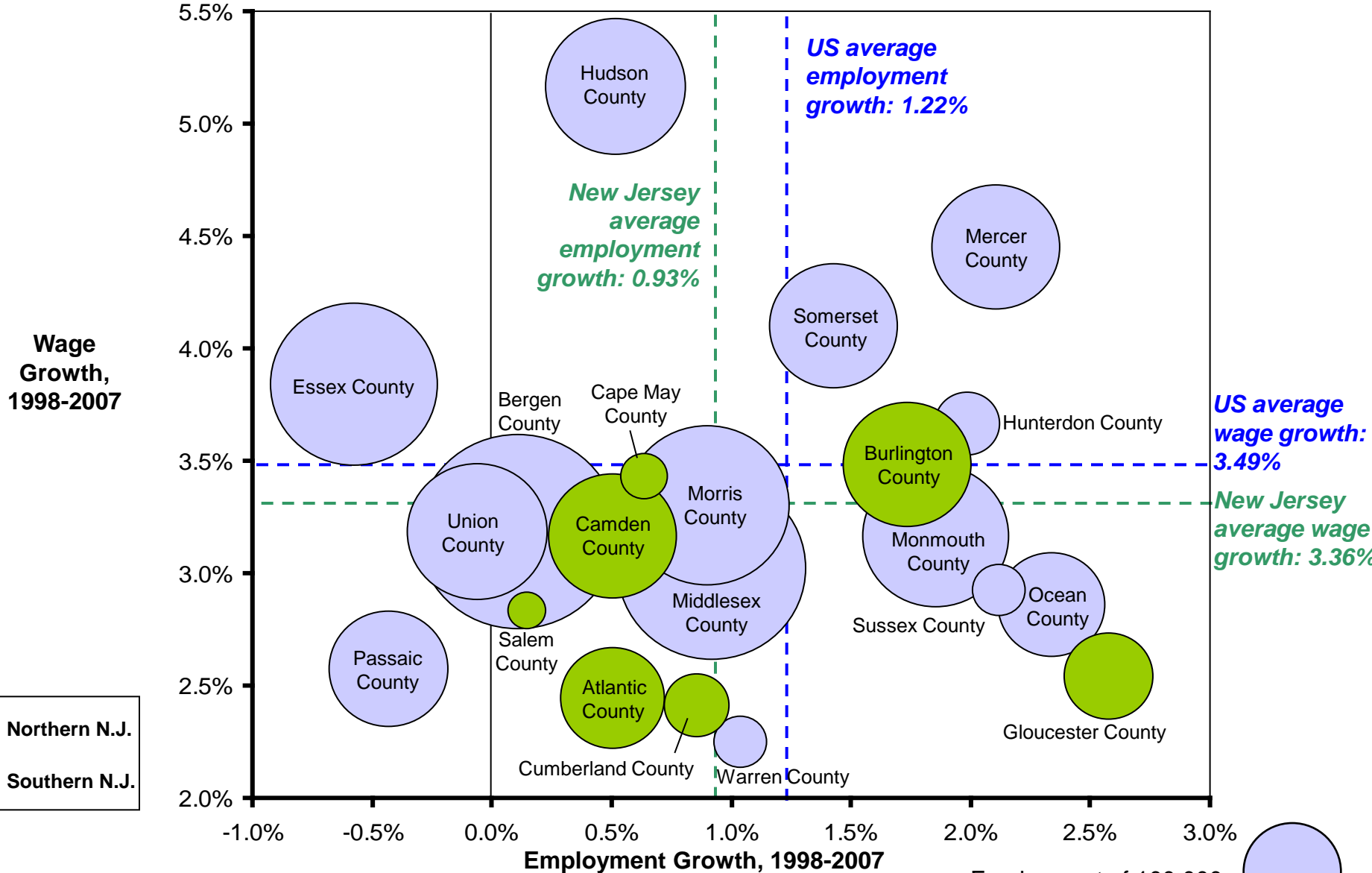
Wages vs. Wage Growth



Note: Covers private, non-agricultural employment. Note: Growth is calculated using compound annual growth rates (CAGR)
 Source: Cluster Mapping Project, Institute for Strategy and Competitiveness, Harvard Business School

Comparative Performance of N.J. Counties

Wage Growth vs. Employment Growth

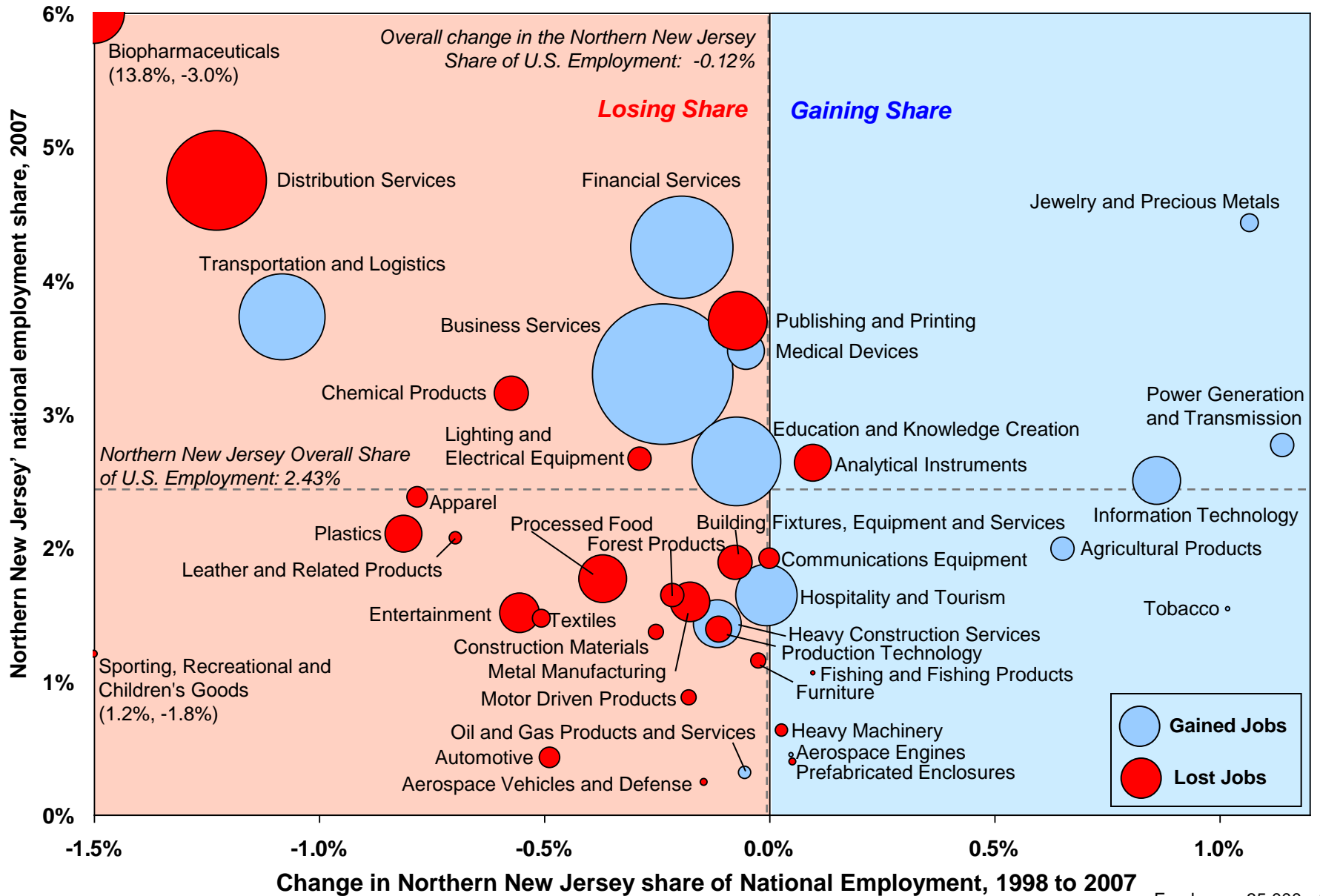


Employment of 100,000 =

Note: Covers private, non-agricultural employment. Note: Growth is calculated using compound annual growth rates (CAGR)
 Source: Cluster Mapping Project, Institute for Strategy and Competitiveness, Harvard Business School

Northern New Jersey Cluster Performance

Composition of the Northern New Jersey Economy Specialization by Traded Cluster, 1998 to 2007

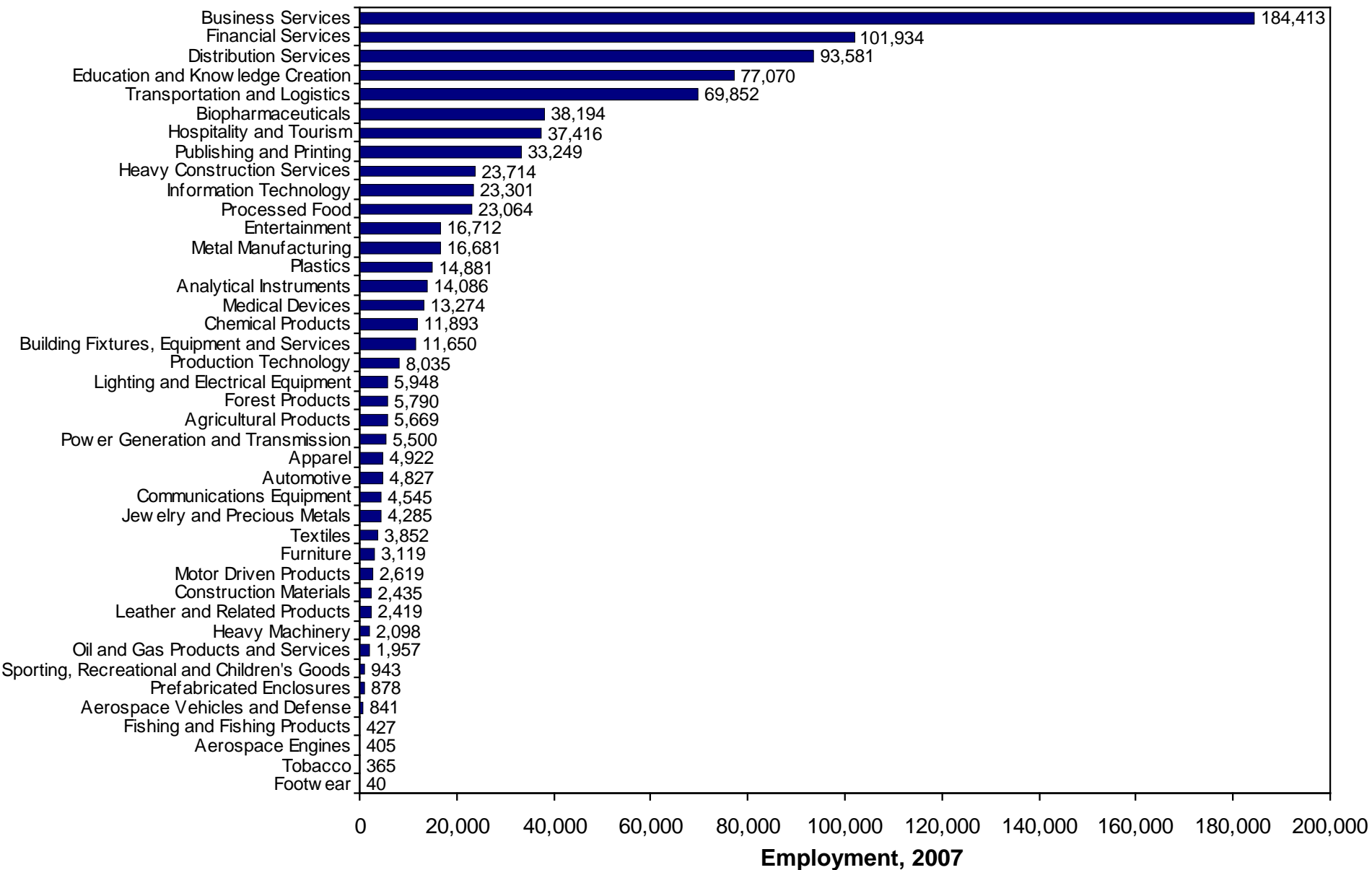


Source: Prof. Michael E. Porter, Cluster Mapping Project, Institute for Strategy and Competitiveness, Harvard Business School; Richard Bryden, Project Director.
 April 2010 - NJ Governor Christie

Employees 35,000 =

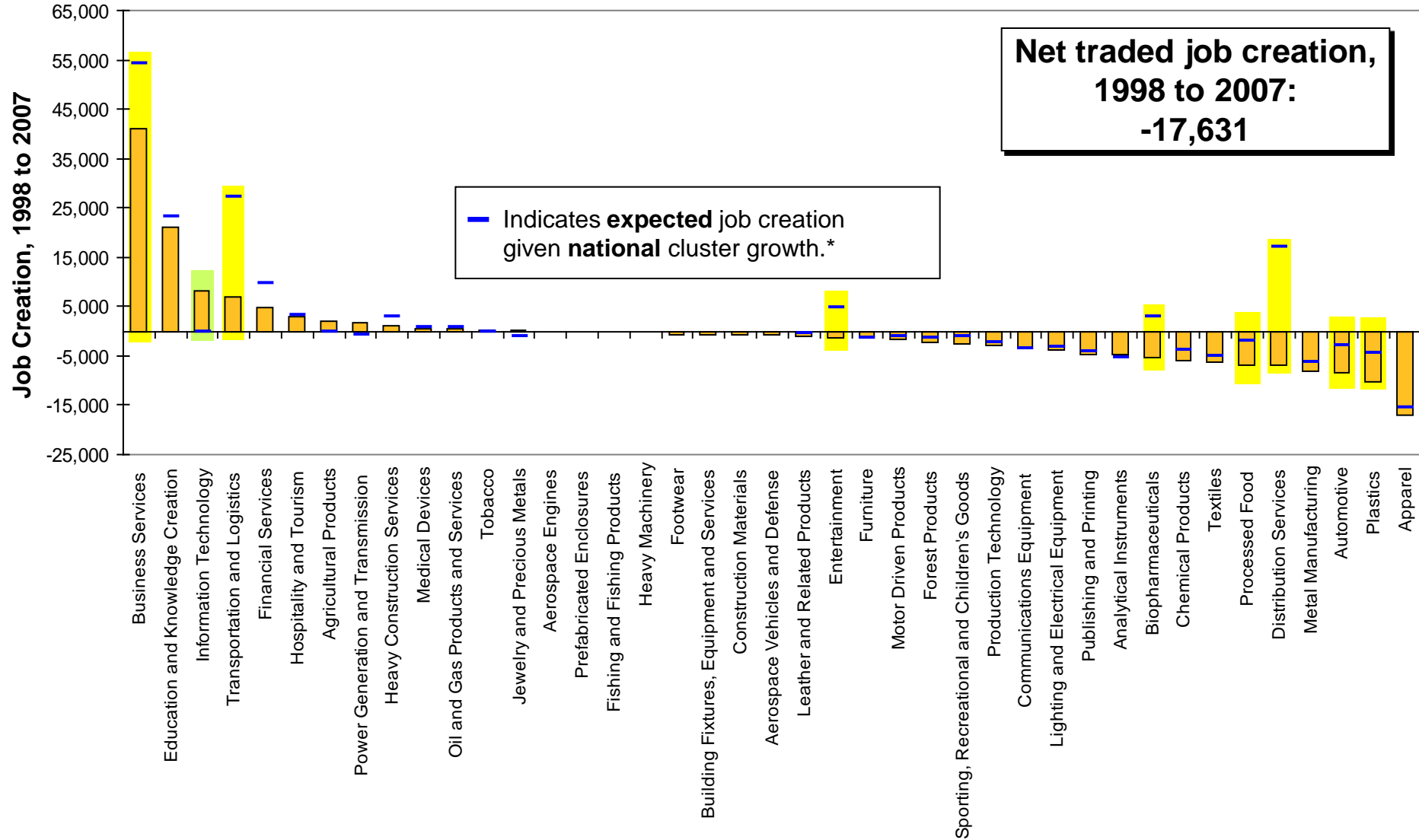
Composition of the Northern New Jersey Economy

Employment by Traded Cluster, 2007



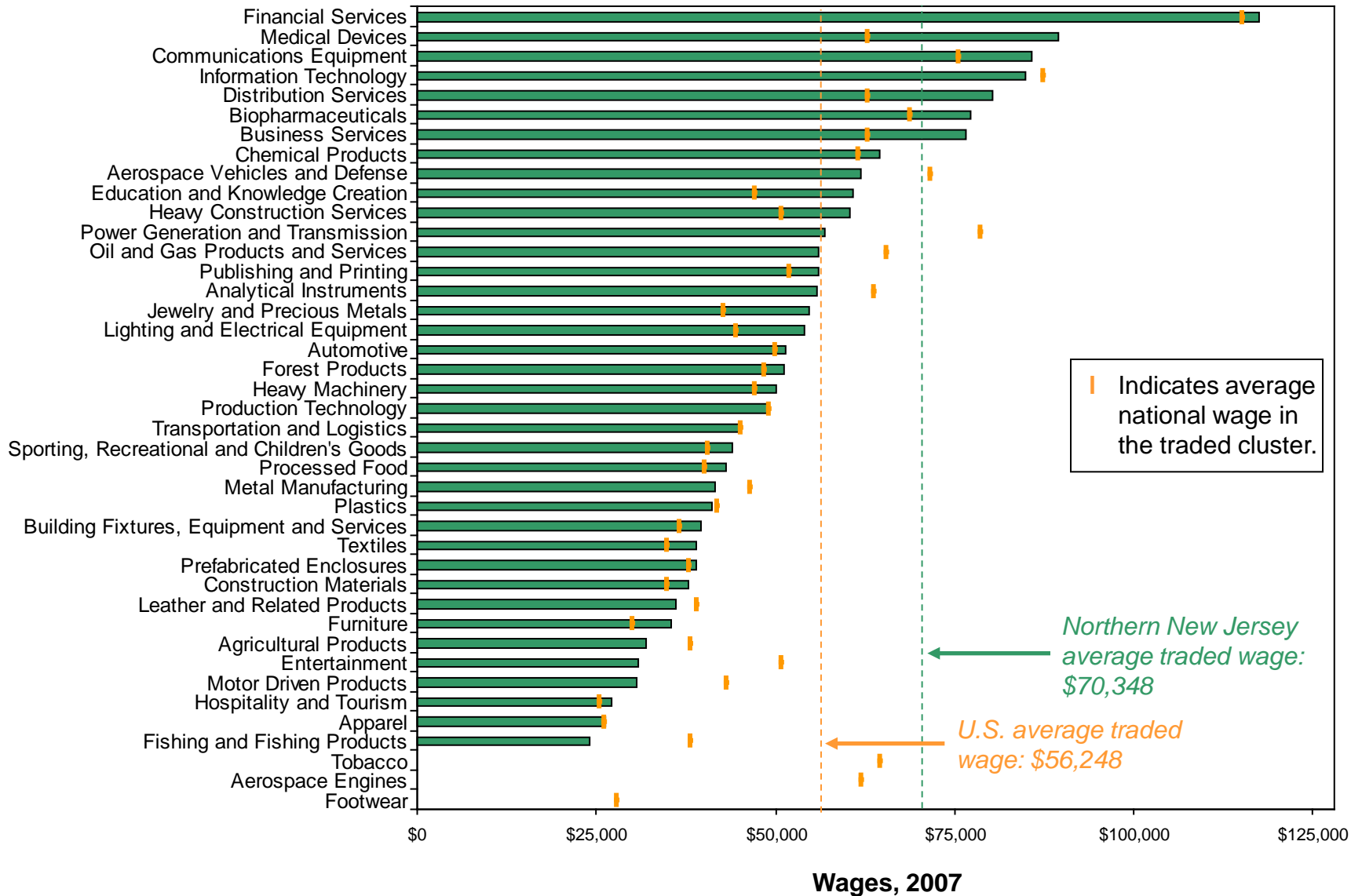
Northern New Jersey Job Creation by Traded Cluster

1998 to 2007



* Percent change in national benchmark times starting regional employment. Overall traded job creation in No. New Jersey, if it matched national benchmarks, would be +79,875
 Source: Prof. Michael E. Porter, Cluster Mapping Project, Institute for Strategy and Competitiveness, Harvard Business School; Richard Bryden, Project Director.

Northern New Jersey Wages by Traded Cluster vs. National Benchmarks



Indicates average national wage in the traded cluster.

Northern New Jersey average traded wage: \$70,348

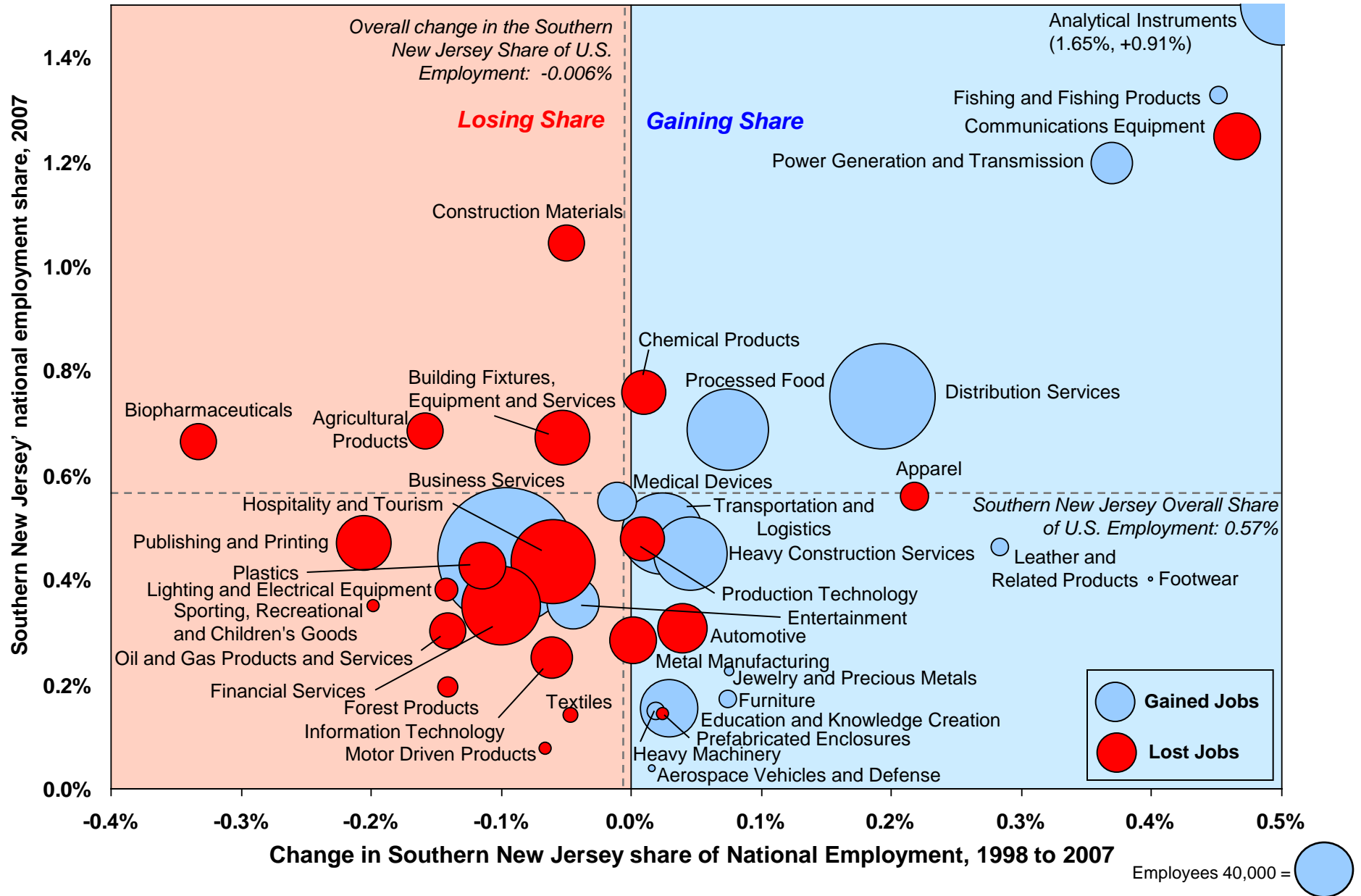
U.S. average traded wage: \$56,248

Wages, 2007

Source: Prof. Michael E. Porter, Cluster Mapping Project, Institute for Strategy and Competitiveness, Harvard Business School; Richard Bryden, Project Director.

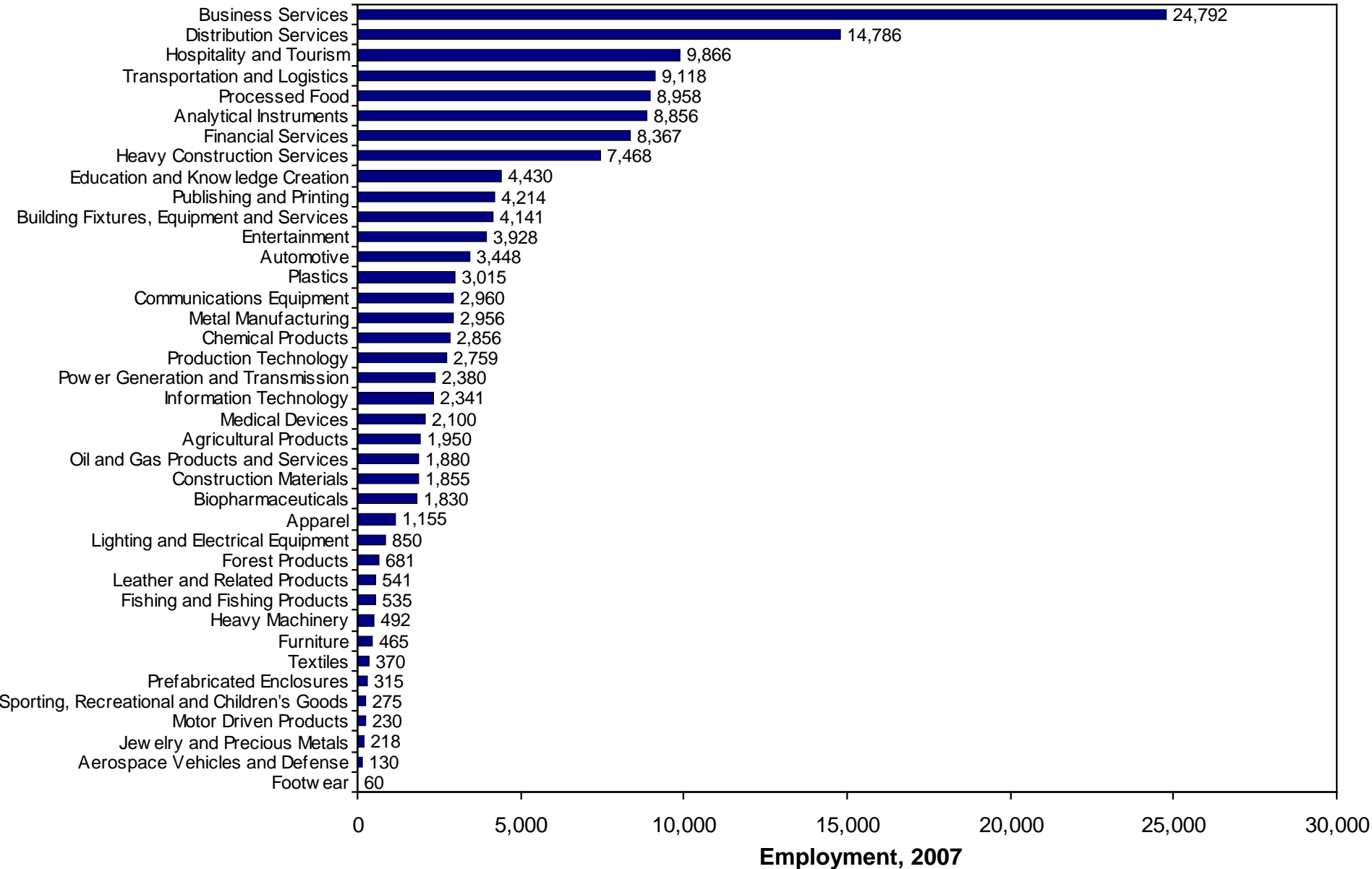
Southern New Jersey Cluster Performance

Composition of the Southern New Jersey Economy Specialization by Traded Cluster, 1998 to 2007



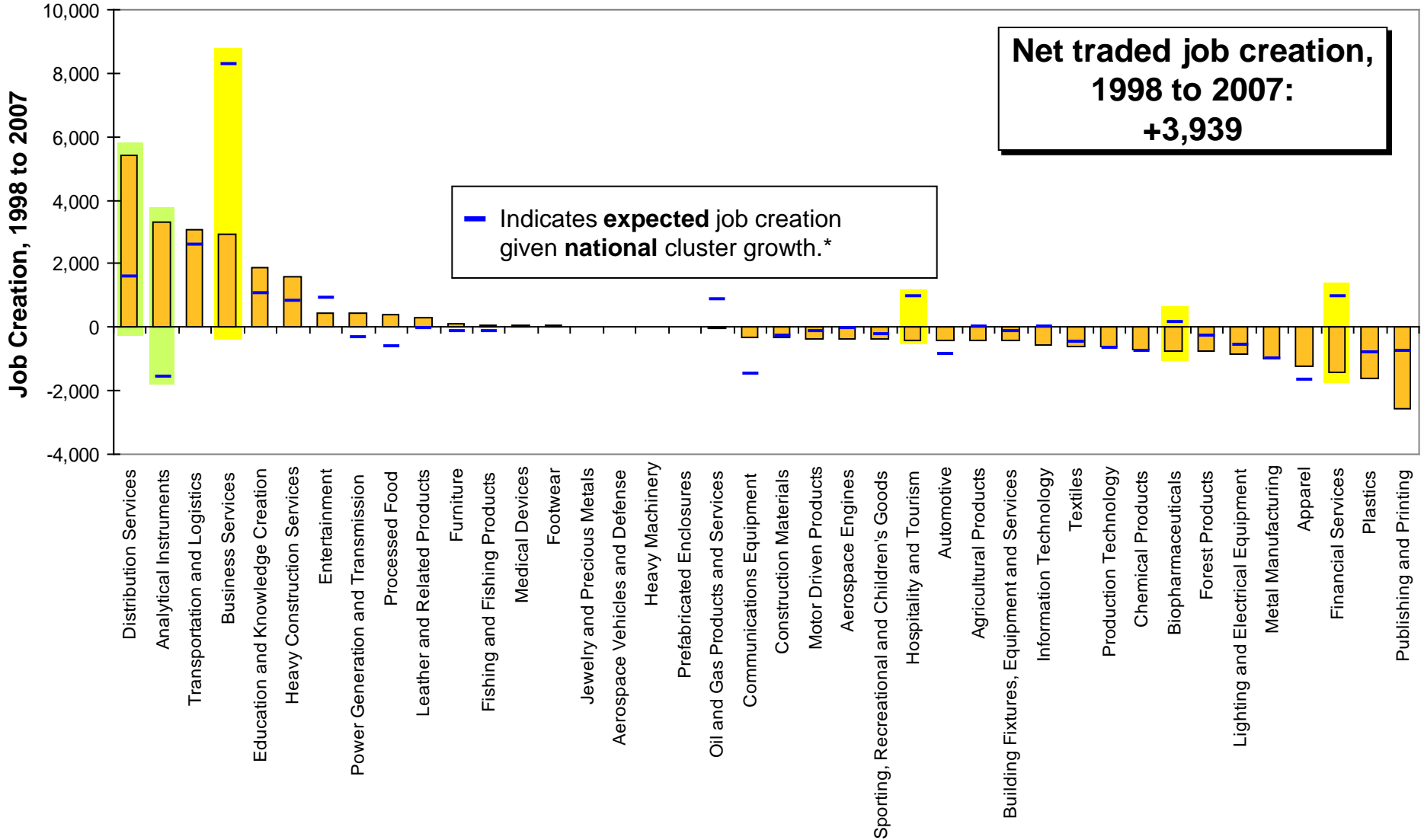
Composition of the Southern New Jersey Economy

Employment by Traded Cluster, 2007



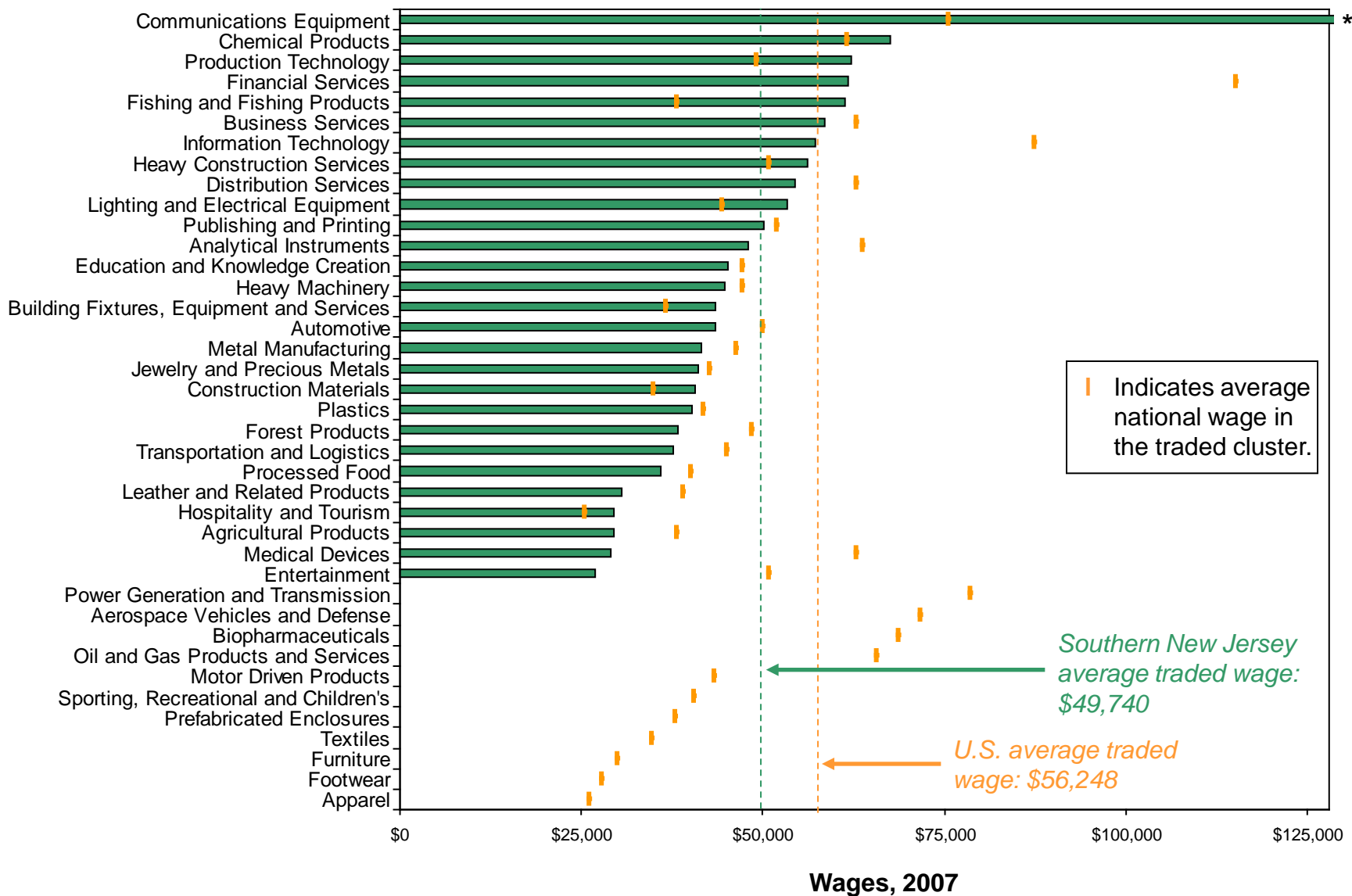
Southern New Jersey Job Creation by Traded Cluster

1998 to 2007



* Percent change in national benchmark times starting regional employment. Overall traded job creation in So. New Jersey, if it matched national benchmarks, would be +5,507. Source: Prof. Michael E. Porter, Cluster Mapping Project, Institute for Strategy and Competitiveness, Harvard Business School; Richard Bryden, Project Director.

Southern New Jersey Wages by Traded Cluster vs. National Benchmarks



* Wage values in some clusters are based on a small subset of data with reported values. County-industry data are suppressed in reported statistics to protect confidentiality. Source: Prof. Michael E. Porter, Cluster Mapping Project, Institute for Strategy and Competitiveness, Harvard Business School; Richard Bryden, Project Director.