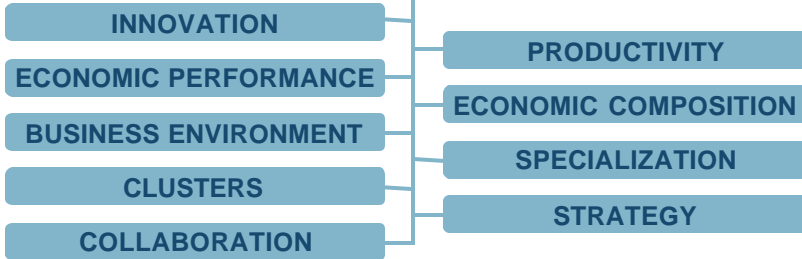


# South Carolina Competitiveness Initiative Phase I Final Presentation



**Phase 1 Presentation  
Columbia, South Carolina  
December 8th, 2003**

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Professor Porter donated his time as senior advisor to this project.  
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# Agenda

- **Overview of the South Carolina Competitiveness Initiative**
- Conceptual Framework and Methodology
- Assessment of the South Carolina Economy
  - Economic Performance and Innovation Output
  - Economic Composition
    - Clusters
    - Impact on Economic Performance
  - Business Environment
- Assessments of Selected Clusters
  - Automotive
  - Chemicals
  - Textiles
  - Tourism
- Implications and Recommendations

# Introduction

## *Special thanks to . . .*

- Palmetto Business Forum
- Palmetto Foundation for the Economic Development of South Carolina
- Palmetto Institute
- South Carolina Chamber of Commerce
- South Carolina Department of Commerce
- South Carolina Department of Parks, Recreation and Tourism; and...
- Several hundred people who participated in our surveys and interviews

## Surveys

### **Web-based survey: 443 executives**

- 42 from the automotive cluster
- 43 from the chemical products cluster
- 52 from the textiles cluster
- 80 from the hospitality and tourism cluster
- 226 executives from other clusters

## Interviews

### **112 regional and cluster experts**

- 59 Cluster interviews
  - 7 automotive
  - 9 chemical products
  - 9 textile
  - 34 hospitality and tourism
- 62 Non-cluster interviews
  - 19 Private sector
  - 8 Academic
  - 4 Government
  - 8 Rural
  - 23 Economic development orgs

Source: Monitor in-depth interviews and survey of key industry, academic and government leaders; June-September, 2002

## Motivation, Objectives, Current Status, and Next Steps

### Key Issues:

- Average wages in South Carolina were **80.5% of the U.S. average** in 2001;
- South Carolina's wage growth was 3.6% from 1990-2001, which **lags the U.S. average** of 3.9%;
- Unemployment in the state **rose to 7.1%** in October 2003, above the U.S. average of 6.0%;
- The rise of many low cost competitors (e.g., China) ensures that these **trends will persist** unless South Carolina moves away from its traditional low cost positioning

### Project Objectives:

- Bring together the relevant stakeholders in the region;
- Assess the competitive position of the state;
- Identify key challenges, opportunities, and new strategic directions;
- Install a process to act on the findings from the study and measure progress

### Current Status and Next Steps:

- Presentation of Phase I: data, analysis, vision, and high-level action agenda;
- Launching of Phase II: strategy development and implementation

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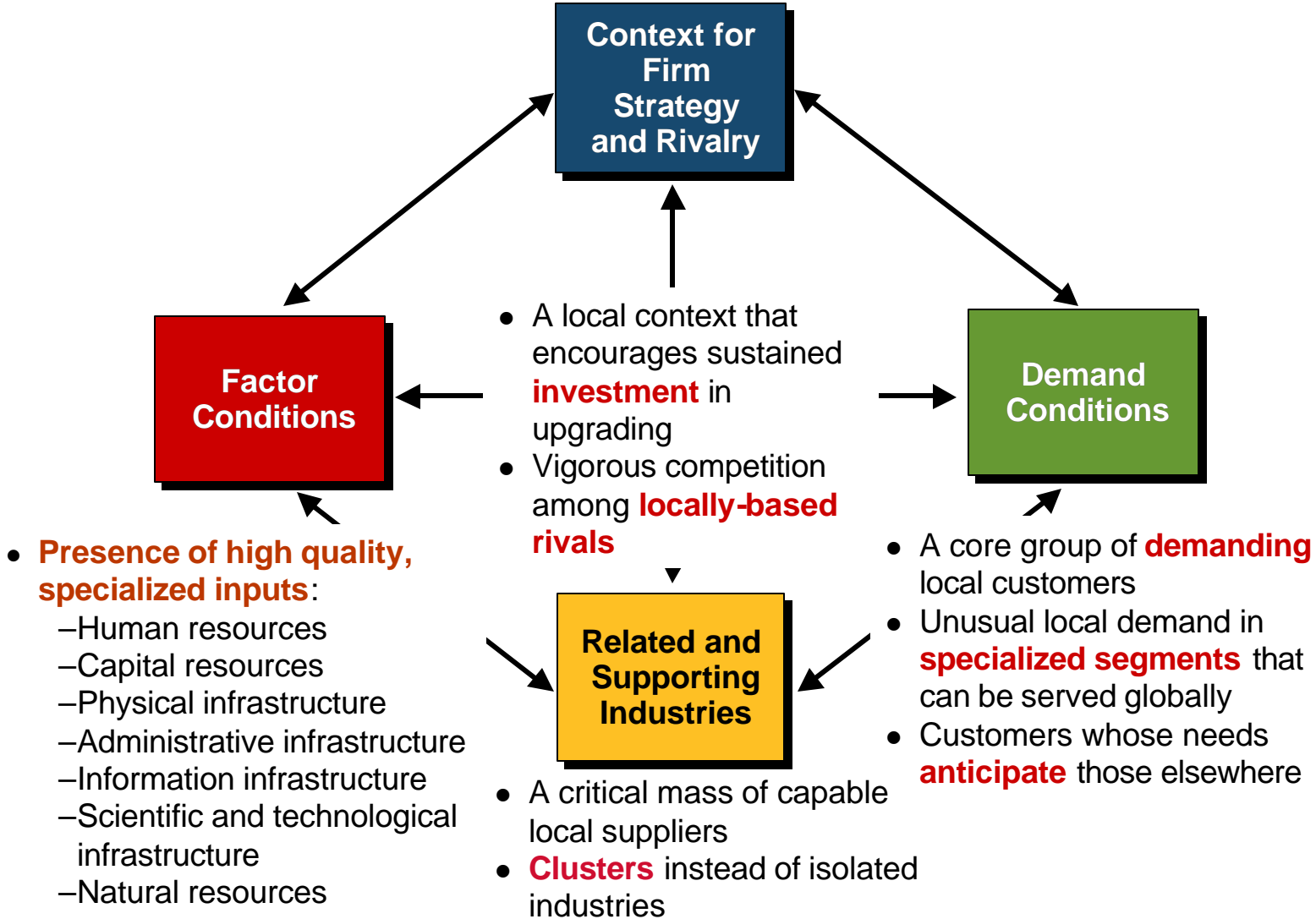
## What is Competitiveness?

- Competitiveness is **not low wages or low taxes**
- Competitiveness is **productivity**:
  - Productivity depends on both on the **value** of products and services (e.g., uniqueness, quality) as well as the **efficiency** with which they are produced
  - Productivity is not measured as units produced per worker, but as **value produced per worker**
  - It is not **what** industries a region competes in that matters, but **how** firms compete in those industries
  - Productivity sets a nation's or region's **standard of living**
  - It is highly productive workers that will **attract companies** to a region, and lead to job creation in that region

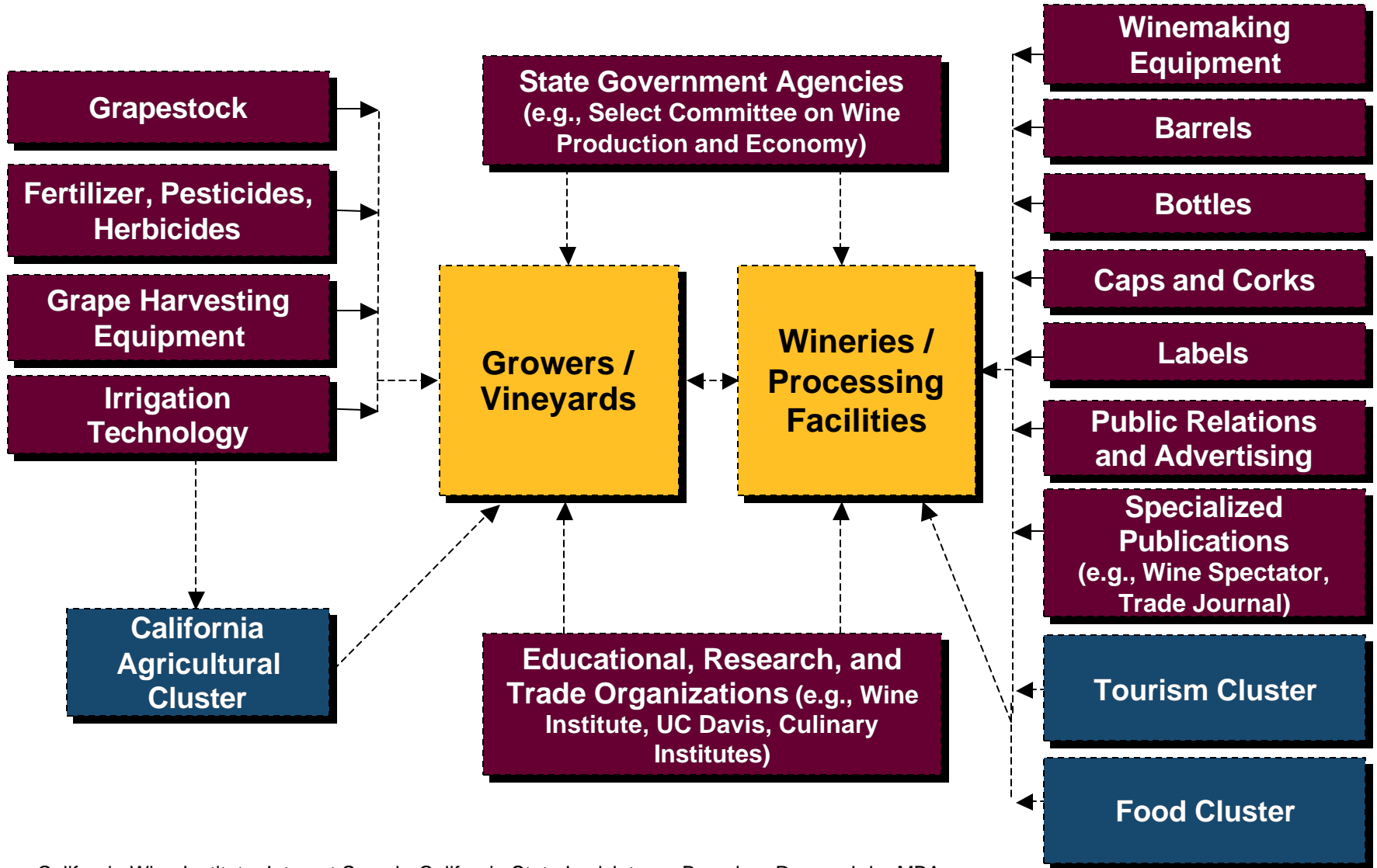


- Nations or regions compete in offering the **most productive environment** for business

# Competitiveness and the Business Environment



# The California Wine Cluster



Source: California Wine Institute, Internet Search, California State Legislature. Based on Research by MBA 1997 Students R. Alexander, R. Arney, N. Black, E. Frost, and A. Shivananda

## Levels of Clusters

- There is often an **array of clusters** in a given field in different locations, each with different levels of specialization and sophistication
- Global **innovation centers**, such as Silicon Valley in semiconductors, are few in number. If there are multiple innovation centers, they normally **specialize** in different market segments
- Other clusters focus on **manufacturing**, outsourced **service functions**, or play the role of **regional** assembly or service centers
- Firms based in the most advanced clusters often **seed or enhance clusters** in other locations in order to reduce the risk of a single site, access lower cost inputs, or better serve particular regional markets
- The challenge for an economy is to move from **isolated firms** to an array of **clusters**, and then to **upgrade the breadth and sophistication** of clusters to more advanced activities

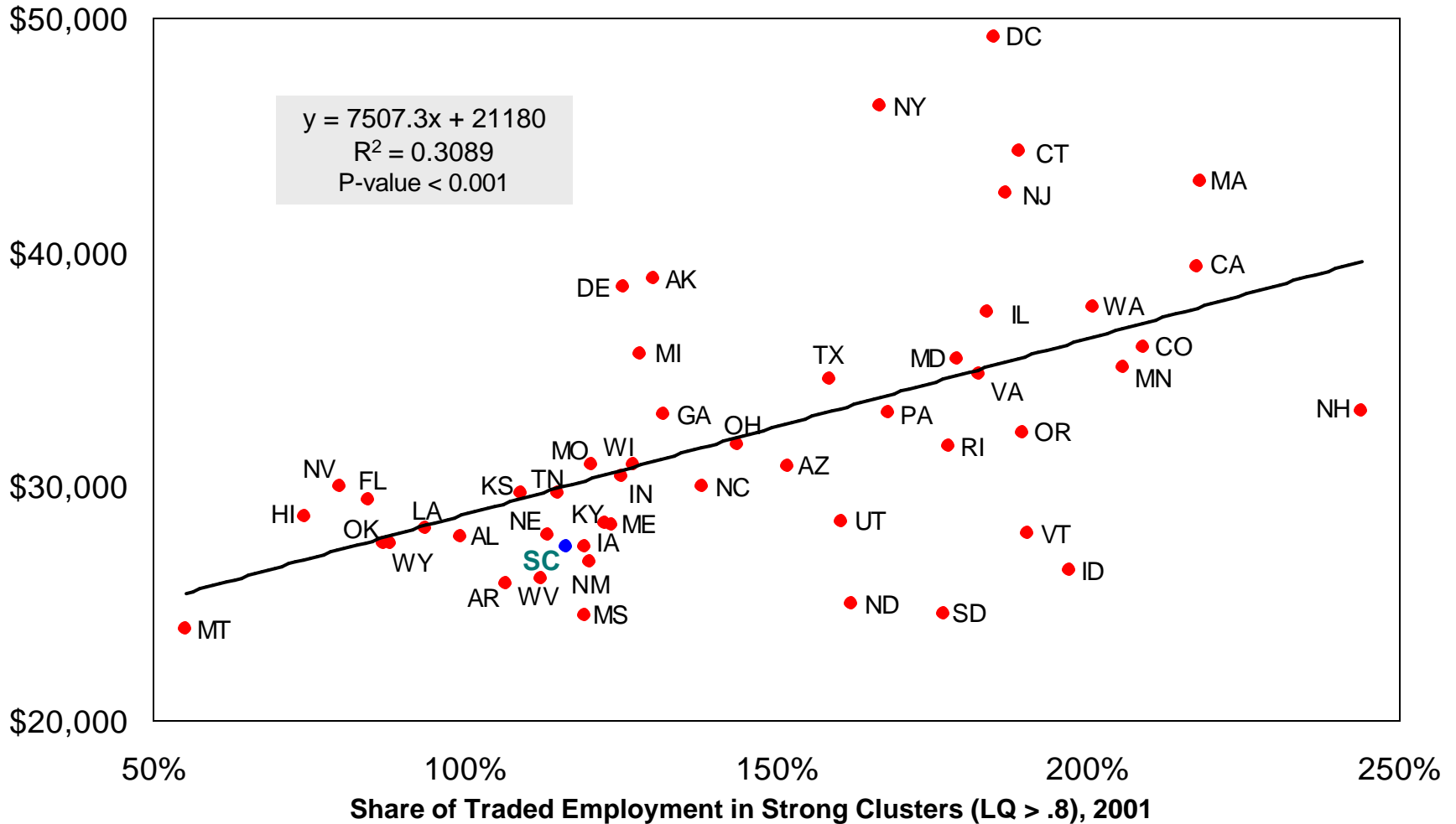


- Cluster-based development provides opportunities to **all regions**, not only the most advanced regions

# Determinants of Regional Prosperity

## Cluster Strength and Wage Levels

Average Regional  
Wage, 2001



Note: Uses broad, overlapping cluster definitions

Source: County Business Patterns; Michael E. Porter, The Economic Performance of Regions", *Regional Studies*, Vol. 37, 2003

# Institutions for Collaboration

## Selected Massachusetts Organizations in Life Sciences

### Life Sciences Industry Associations

- Massachusetts Biotechnology Council
- Massachusetts Medical Device Industry Council
- Massachusetts Hospital Association

### General Industry Associations

- Associated Industries of Massachusetts
- Greater Boston Chamber of Commerce
- High Tech Council of Massachusetts

### Economic Development Initiatives

- Massachusetts Technology Collaborative
- Mass Biomedical Initiatives
- Mass Development
- Massachusetts Alliance for Economic Development

### University Initiatives

- Harvard Biomedical Community
- MIT Enterprise Forum
- Biotech Club at Harvard Medical School
- Technology Transfer offices

### Informal Networks

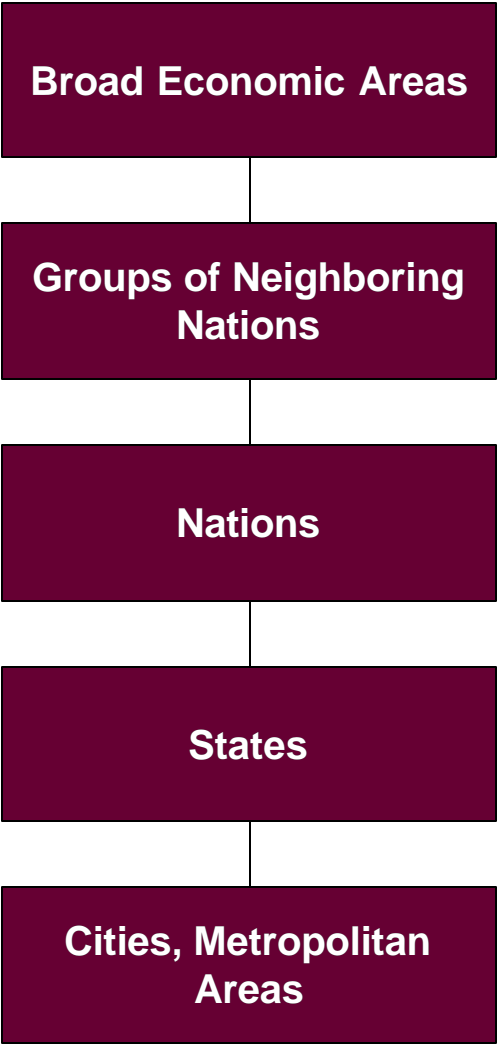
- Company alumni
- VC community
- University alumni

### Joint Research Initiatives

- New England Healthcare Institute
- Whitehead Institute For Biomedical Research
- Center for Integration of Medicine and Innovative Technology (CIMIT)

# Influences on Competitiveness

## Multiple Geographic Levels



# Composition of Regional Economies

## United States

Advanced Copy  
December 8, 2003

	Traded Clusters	Local Clusters	Natural Resource-Driven Industries
Share of Employment	31.6%	67.6%	0.8%
Employment Growth, 1990 to 2001	1.7%	2.8%	-1.0%
Average Wage	\$46,596	\$28,288	\$33,245
Relative Wage	133.8	84.2	99.0
Wage Growth	5.0%	3.6%	1.9%
Relative Productivity	144.1	79.3	140.1
Patents per 10,000 Employees	21.3	1.3	7.0
Number of SIC Industries	590	241	48

Note: 2001 data, except relative productivity which is 1997 data.

Source: Cluster Mapping Project, Institute for Strategy and Competitiveness, Harvard Business School

# Shifting Responsibilities for Economic Development

## Old Model

- **Government** drives economic development through policy decisions and incentives



## New Model

- Economic development is a **collaborative process** involving government at multiple levels, companies, teaching and research institutions, and institutions for collaboration

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# South Carolina's Economic Performance

## Economic Performance

### Employment

- South Carolina's employment grew 1.3% annually from 1990 to 2002, below the U.S. average of 1.5%

### Unemployment

- South Carolina's unemp. rate of 7.1% in October 2003 was higher than the national average of 6.0%

### Average Wages

- The state's average wages of \$28,634 in 2001 were 80.5% of the national average of \$35,550

### Wage Growth

- Growth of average wages in South Carolina was 3.6% from 1990 to 2001, below the US rate of 3.9%

### Manufacturing Export Dollars

- Manufacturing exports per worker were 16% lower than the US average in 2001, but grew 7.7% faster from 1997 to 2001

### Gross State Product per Worker

- GSP per worker of \$63,181 in 2001, was 82.2% of the U.S. average of \$76,898; annual growth of 3.6% from 1990 to 2001 was the same as the US

## Innovation Output

### Patents per Employee

- South Carolina's 3.6 patents per 10,000 employees in 2001 was well below the national average of 7.7

### Patent Growth

- Annual patent growth in South Carolina from 1990-2001 was 4.3%, below the 6.5% rate for the U.S.

### Establishment Formation

- The growth rate for establishments was 2.1% from 1991 to 2000, higher than the US average of 1.5%

### Venture Capital Investments

- VC funding in South Carolina was \$3 per worker in 2002, below the national average of \$155 per worker

### Small Business Innovation Research Award Dollars

- South Carolina's \$2.56 SBIR awards per worker in 2001 was below the US average of \$8.50, however growth of 36.6% was far higher

### Fast Growth Firms

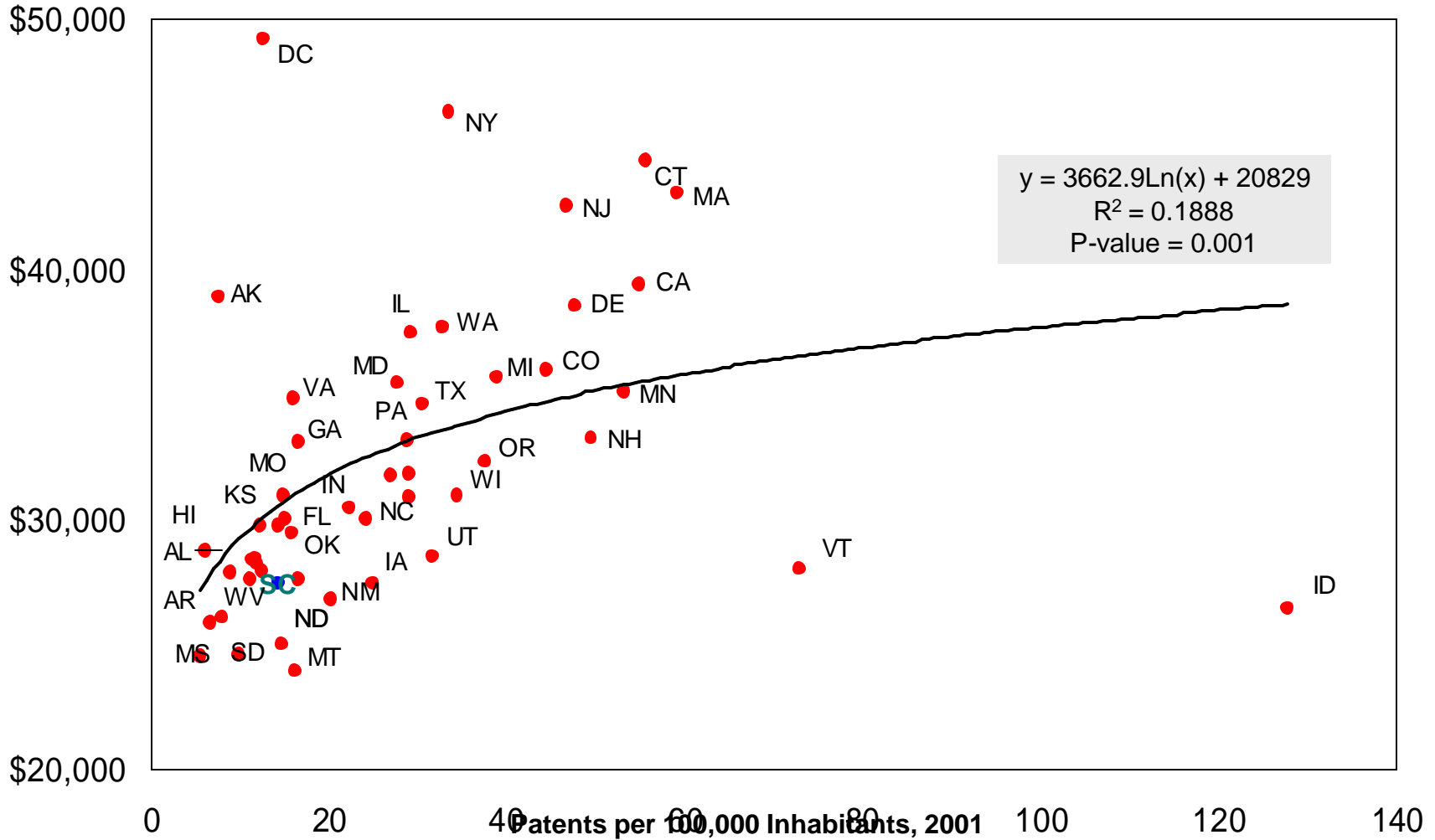
- The state had 0.8% of the Inc 500 fast growing companies in 2002, vs. 1.4% of employment. These ratios were approximately the same in 1994

Note: Wage data is provided by NAICS codes, as compared to SIC codes, after 2001; black font indicates areas of relative success, red indicates significant lag.  
Source: Bureau of Labor Statistics; Bureau of Econ Analysis; Intern'l Trade Admin; U.S. Patent and Trademark Office; PricewaterhouseCooper Money Tree; American Chamber of Commerce Researchers Assoc; MA Division of Employment & Training; Development Report Card for the States; Cluster Mapping Project, Institute for Strategy and Competitiveness, Harvard Business School

# Innovation Performance of Regions

## Patenting Intensity and Wage Level

Average Wage, 2001



Source: U.S. Patent and Trademark Office; CHI Research; County Business Patterns;  
Michael E. Porter, The Economic Performance of Regions”, *Regional Studies*, Vol. 37, 2003

## Patenting Organizations in South Carolina

Rank	Organization	Type of Institution	Total Patents 1997 through 2001
1	MILLIKEN & COMPANY	Corporation	88
2	NCR CORPORATION	Corporation	75
3	CRYOVAC, INC.	Corporation	74
4	WESTVACO CORPORATION	Corporation	61
5	POWER TOOL HOLDERS, INC.	Corporation	53
6	MILLIKEN RESEARCH CORPORATION	Corporation	52
7	GENERAL ELECTRIC COMPANY	Corporation	50
8	WESTINGHOUSE AIR BRAKE COMPANY	Corporation	48
9	W. R. GRACE & CO.-CONN.	Corporation	45
10	HILL-ROM COMPANY, INC.	Corporation	37
11	SONOCO DEVELOPMENT, INC.	Corporation	36
12	THE ESAB GROUP, INC.	Corporation	34
13	KEMET ELECTRONICS CORPORATION	Corporation	30
14	MICHELIN RECHERCHE ET TECHNIQUE	Corporation	28
15	BAYER CORPORATION	Corporation	26
16	RELIANCE ELECTRIC INDUSTRIAL COMPANY	Corporation	23
16	RYOBI NORTH AMERICA, CORP.	Corporation	23
18	ASTEN GROUP, INC.	Corporation	21
19	CLEMSON UNIVERSITY	University	20
19	WESTINGHOUSE SAVANNAH RIVER COMPANY, INC.	Corporation	20
21	BASF CORP.	Corporation	19
22	RELIANCE ELECTRIC TECHNOLOGIES, LLC	Corporation	18
23	MEDICAL UNIVERSITY OF SOUTH CAROLINA	University	17
23	ROBERT BOSCH GMBH	Corporation	17
25	BIC CORPORATION	Corporation	16
25	UNITED STATES OF AMERICA, DEPARTMENT OF ENERGY	Government	16

*South Carolina patents per 10,000 employees were 3.4 in 2001; the US average for 2001 was 7.7*

## Patenting Organizations in Massachusetts

Rank	Organization	Type of Institution	Total Patents 1997 through 2001
1	MASSACHUSETTS INSTITUTE OF TECHNOLOGY	University	525
2	GENERAL HOSPITAL CORPORATION	Institute	282
3	DIGITAL EQUIPMENT CORPORATION	Corporation	273
4	EMC CORPORATION	Corporation	270
5	POLAROID CORPORATION	Corporation	211
6	ANALOG DEVICES, INC.	Corporation	168
7	MILLENNIUM PHARMACEUTICALS, INC.	Corporation	163
8	HARVARD COLLEGE, PRESIDENT AND FELLOWS	University	150
9	SUN MICROSYSTEMS, INC.	Corporation	146
10	BOSTON SCIENTIFIC CORPORATION	Corporation	137
11	COMPAQ COMPUTER CORPORATION, INC.	Corporation	134
12	GENETICS INSTITUTE, INC.	Corporation	125
13	ACUSHNET COMPANY	Corporation	121
14	GILLETTE COMPANY	Corporation	111
15	BRIGHAM AND WOMEN'S HOSPITAL	Institute	110
16	GENERAL ELECTRIC COMPANY	Corporation	109
17	RAYTHEON COMPANY	Corporation	99
18	HEWLETT-PACKARD COMPANY	Corporation	92
18	JOHNSON & JOHNSON PROFESSIONAL INC.	Corporation	92
20	CHILDREN'S MEDICAL CENTER CORPORATION	Institute	91
20	QUANTUM CORP. (CA)	Corporation	91
22	SEPRACOR INC.	Corporation	90
23	COGNEX CORPORATION	Corporation	89
24	DANA-FARBER CANCER INSTITUTE, INC.	Institute	86
25	BOSTON UNIVERSITY	University	81

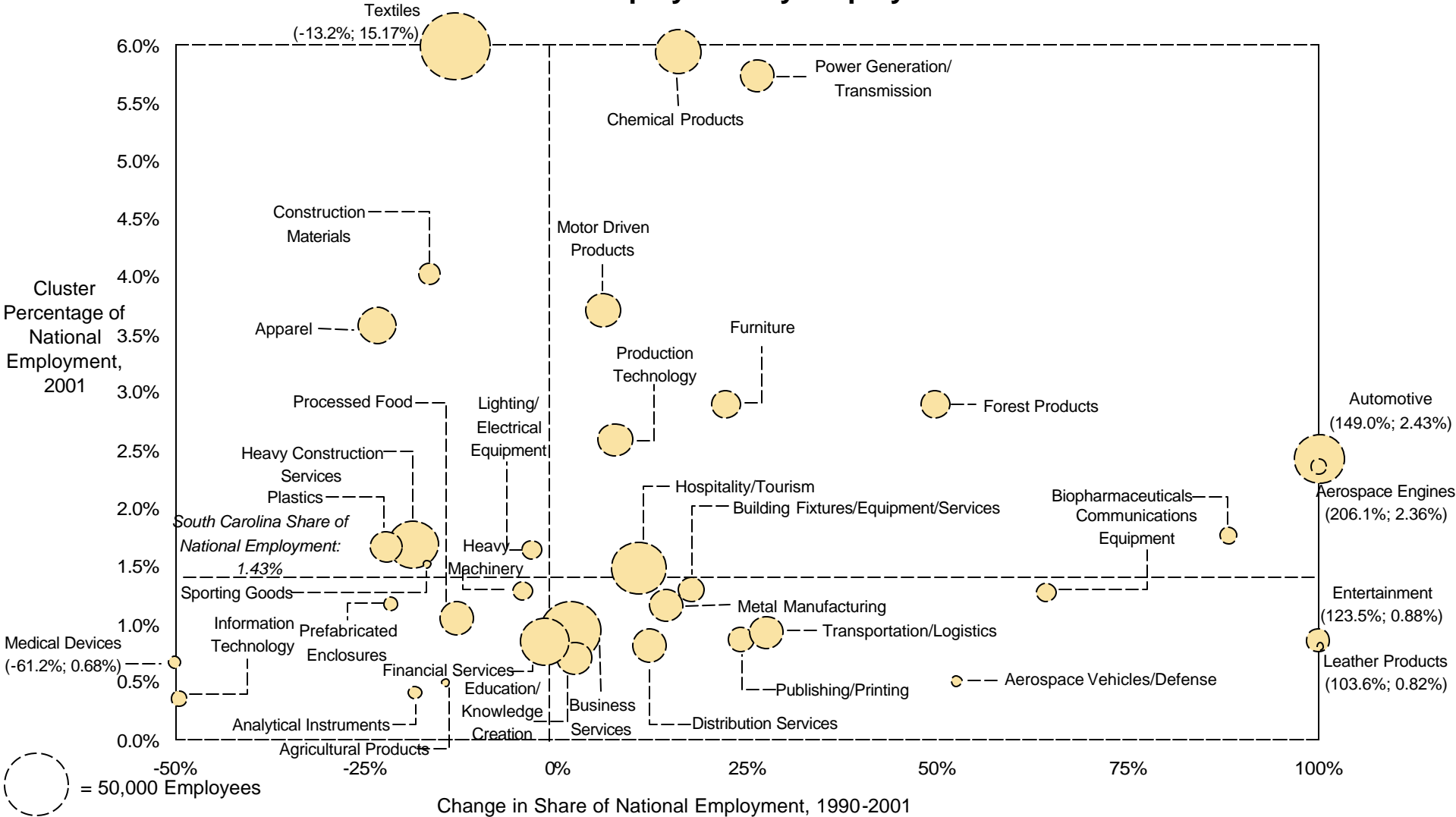
*Massachusetts patents per 10,000 employees were 12.1 in 2001; the US average for 2001 was 7.7*

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# Specialization of the South Carolina Economy by Traded Cluster

## South Carolina Share of National Employment by Employment Share Growth 1990-2001

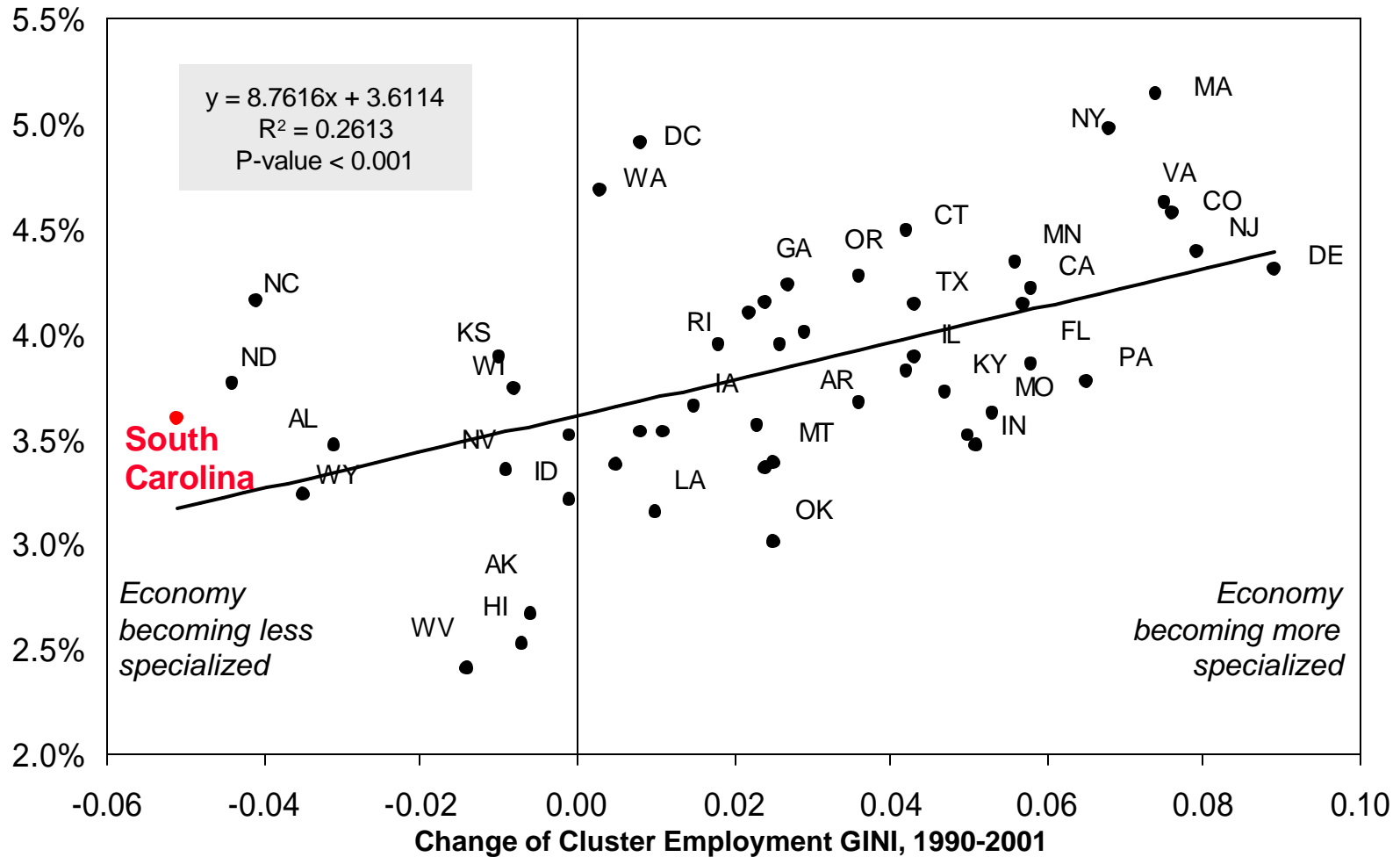


Note: Traded clusters with less than 1,000 employees in South Carolina are not displayed. These clusters are Oil & Gas Products & Services; Tobacco; Fishing & Fishing Products; & Footwear. Clusters located out of scale have been placed on the border with coordinates labeled (% change in national cluster employment share; % of national cluster employment).  
Source: Cluster Mapping Project, Institute for Strategy and Competitiveness, Harvard Business School

# Determinants of Regional Prosperity

## Change in Cluster Specialization and Wage Growth

Annual Regional Wage  
Growth Rate, 1990-2001

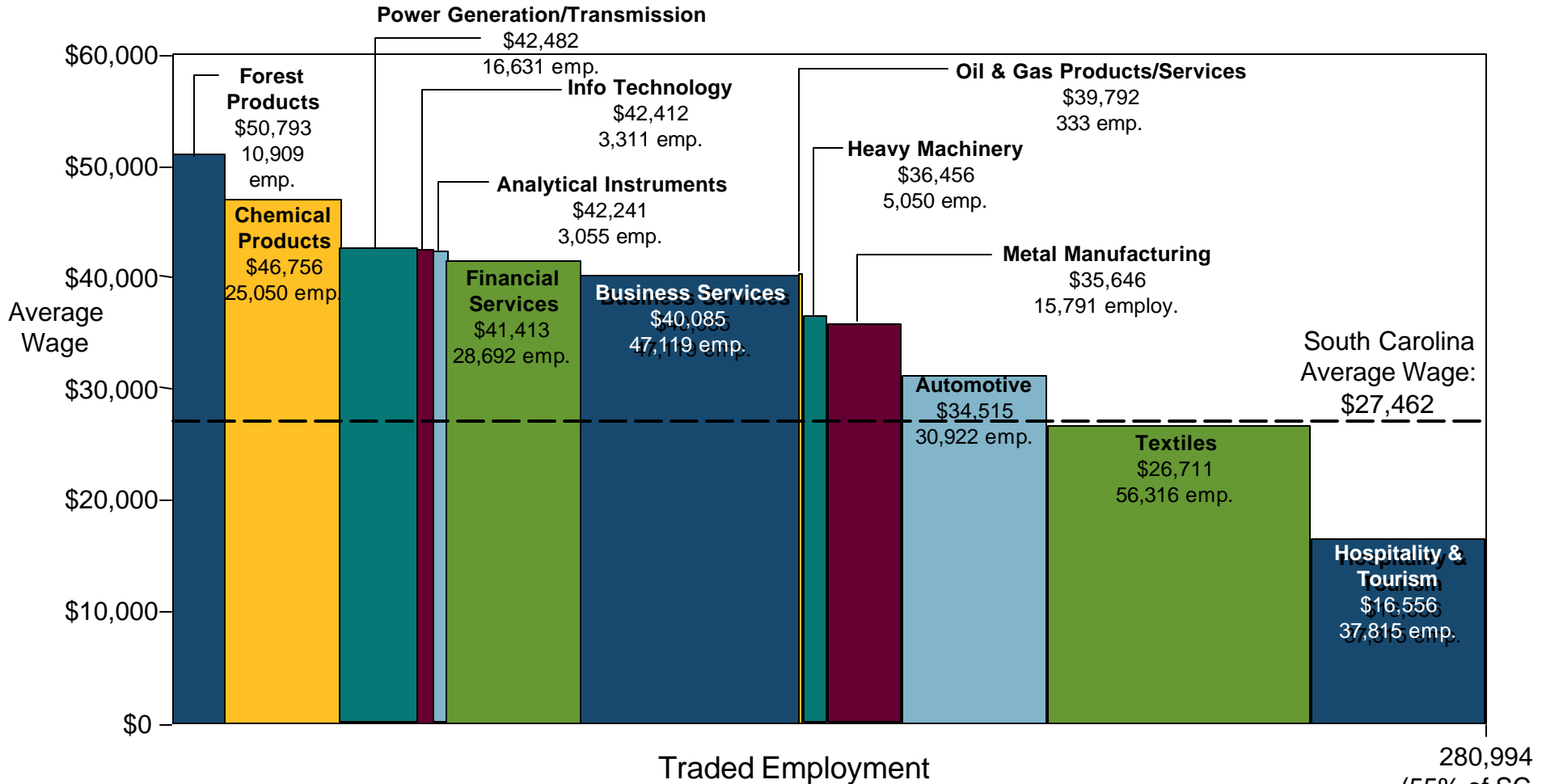


Source: County Business Patterns; Michael E. Porter, The Economic Performance of Regions", *Regional Studies*, Vol. 37, 2003

# Employment and Wage Composition in South Carolina

## 10 Highest Wage Clusters and Autos, Textiles, and Tourism

Employment and Average Wages in South Carolina's Top Wage Clusters (and Automotive, Textiles and Tourism), 2001



Note: In previous 2000 data, Aerospace Engines was one of the high wage clusters; however the wage data for this cluster was suppressed in 2001. Narrow cluster definition.

Source: Cluster Mapping Project, Institute for Strategy and Competitiveness, Harvard Business School

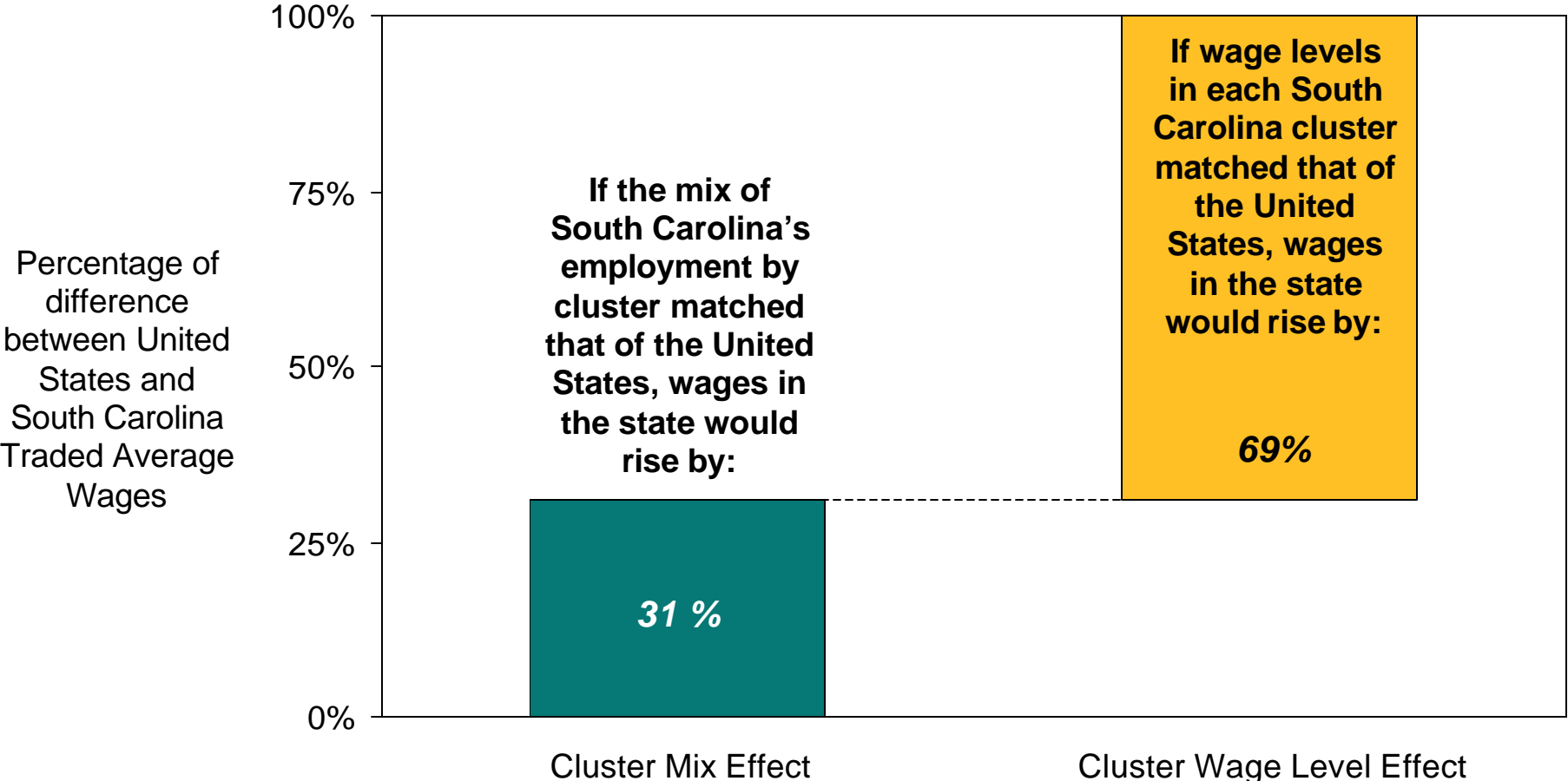
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# Impact of Cluster Mix on Average Wages

## South Carolina's Traded Clusters

Impact of Cluster Mix and Wage Level on the Gap between United States and South Carolina Average Wages, 2001



If the mix of South Carolina's employment by cluster matched that of the United States, wages in the state would rise by:

If wage levels in each South Carolina cluster matched that of the United States, wages in the state would rise by:

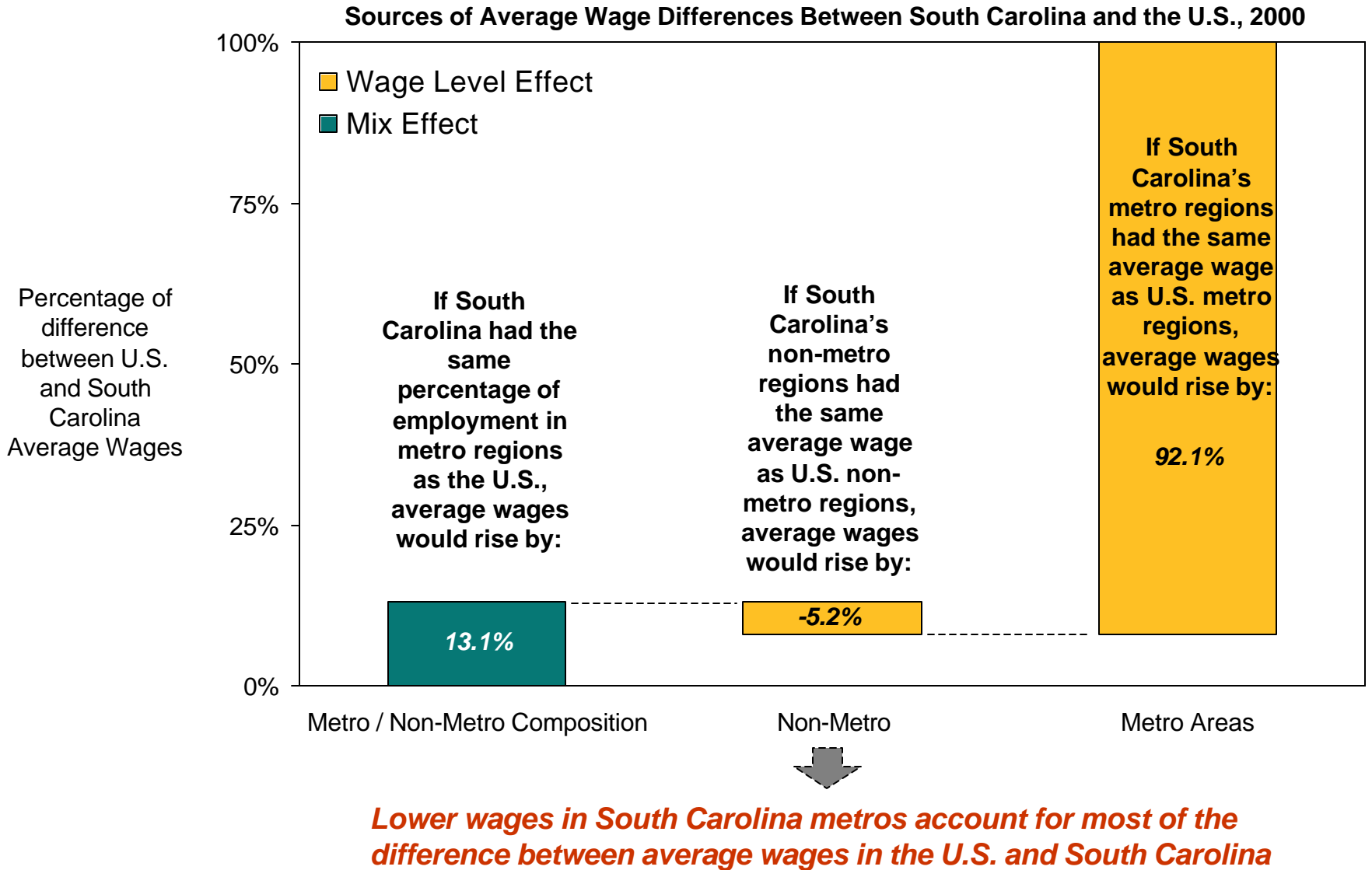
69%

31%

**Relatively high employment in clusters with low average wages accounts for only one third of the difference**

Note: Assumes average wages of reported employment are representative of average wages for all employment in a cluster  
Source: Cluster Mapping Project, Institute for Strategy and Competitiveness, Harvard Business School, Monitor Analysis

# Impact of Rural - Urban Composition on Average Wages South Carolina



Source: US Department of Agriculture, Monitor Analysis

# Economic Performance by Selected Demographic Groups

## Population and Per Capita Income in South Carolina and the U.S.

	White	African-American	Other
<b>South Carolina</b>	Percentage of Population: 66.2%  Per Capita income: \$22,223	Percentage of Population: <b>29.5%</b>  Per Capita income: \$11,776	Percentage of Population: <b>4.4%</b>  Per Capita income: \$14,222
<b>United States</b>	Percentage of Population: 69.1%  Per Capita income: \$24,819	Percentage of Population: <b>12.2%</b>  Per Capita income: \$14,437	Percentage of Population: <b>18.7%</b>  Per Capita income: \$14,295



**10.2% of the gap between U.S. and South Carolina per capita income is explained by the state's larger percentage of minorities, 89.8% by lower per capita income across all groups**

Note: Other\* includes Hispanics, American Indians/Native Americans, Pacific Islanders, Native Hawaiians and others. Data is 1999, most recent available.  
Source: US Census Bureau , Monitor Analysis

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## – Business Environment

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# South Carolina Business Environment

## Findings from the Survey and Interviews

### Advantages:

- Low cost of doing business: wages, taxes, rents, utilities
- Flexible, hard working labor force
- High quality of life along some dimensions
- Good transportation infrastructure: seaport and interstates
- Responsive, high quality technical colleges
- Proximity to assets in Georgia and North Carolina (e.g., capital, air and seaports, research)

### Disadvantages:

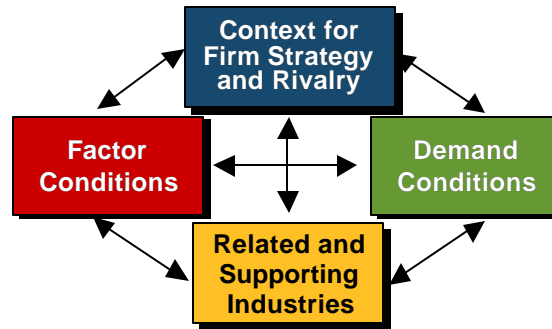
- Relatively few advanced degree holders: scientists and engineers
- Limited supply of skilled workers: technicians, advanced metal workers
- Relatively weak K-12 and advanced educational systems
- Lack of first-tier research universities
- Limited air access: few direct flights

### Advantages:

----

### Disadvantages:

- Limited local competition
- Difficult environment for start-ups
- Few local headquarters or core operations



### Advantages:

- Presence across a wide range of manufacturing oriented clusters

### Disadvantages:

- Few high quality, specialized suppliers
- Limited interaction with local suppliers on product and process development

### Advantages:

- Sophisticated (albeit few) manufacturers across many clusters
- Frequent feedback between end-user manufacturers and suppliers

### Disadvantages

- Consumers are not as sophisticated and trend-setting as in other states

Source: Monitor  
Competitiveness Survey,  
Interviews, Monitor Analysis

# South Carolina Business Environment

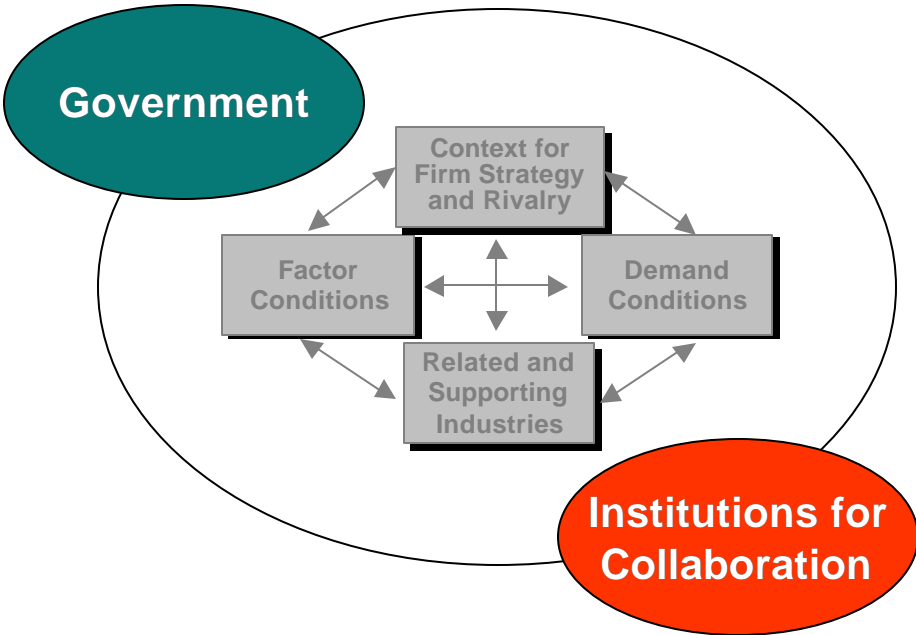
## Findings from the Survey and Interviews

### Advantages:

- Historically responsive to needs of relocating companies: e.g., rapid set-up times, worker training packages, etc.

### Disadvantages:

- Incentives and attention skewed to attracting large outside firms to the state



### Advantages:

- Many effective organizations for marketing South Carolina, and selling companies on the state

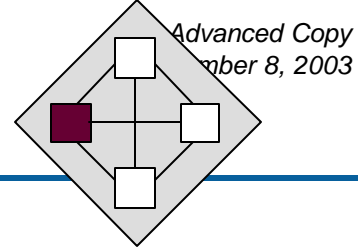
### Disadvantages:

- Limited coordination between universities and companies
- Few cluster-specific institutions for collaboration
- Few organizations working to upgrade the quality of all elements in the business environment

Source: Monitor Competitiveness Survey, Interviews, Monitor Analysis

# Availability of Specialized Inputs in South Carolina

## Survey and Interview Results



### Representative Interview Quotes

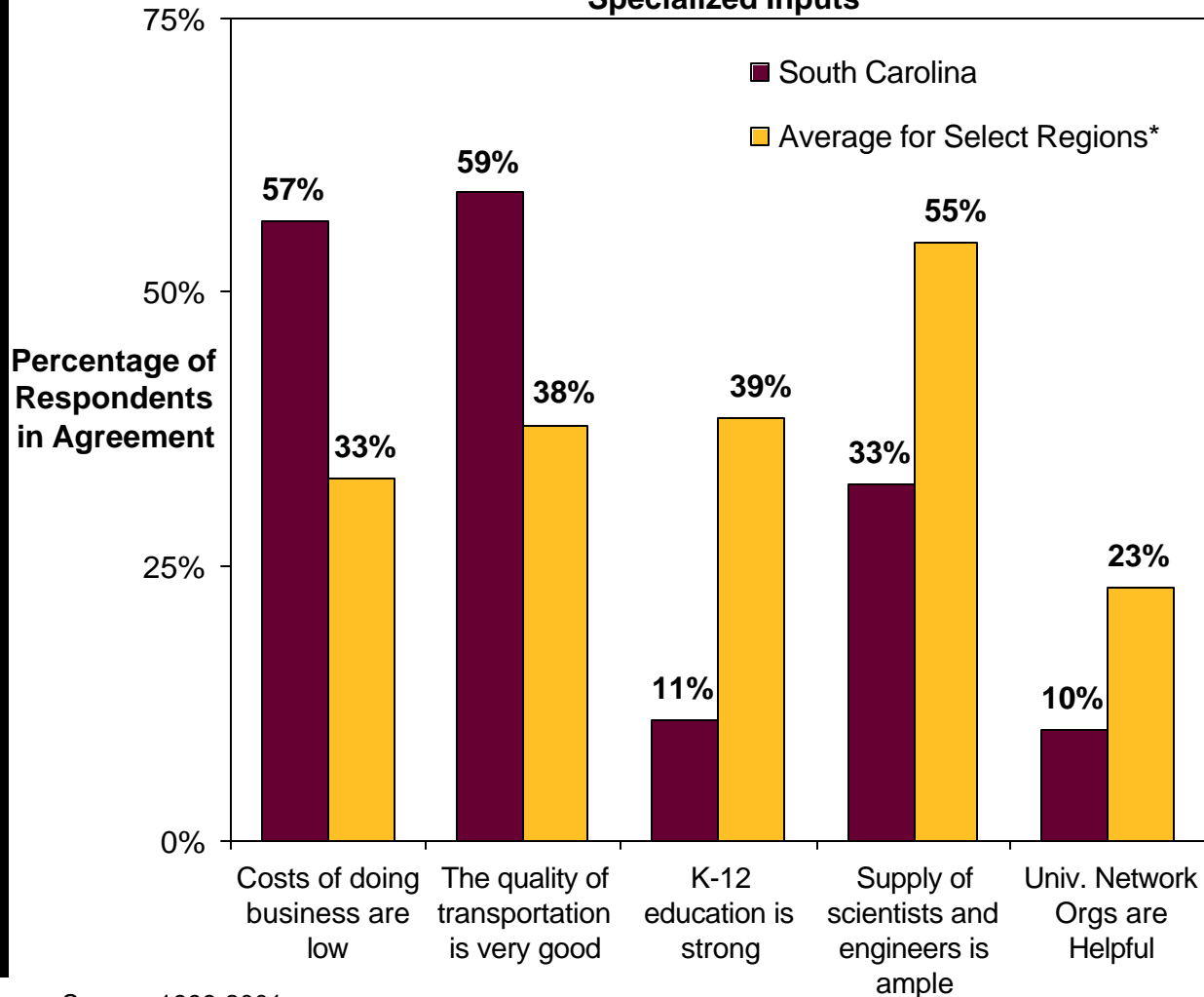
#### Strengths

- “The attractive wage scale and right-to-work policies made the difference.”
- “The highway system is an advantage.”
- “The port is critical. I’d have to charter 1,000 planes a year.”

#### Challenges

- “There was a lack of skills at the level required, especially technical and mechanical.”
- “The main barrier is the ability to attract and employee base. You need operators of broader processes, with a large span of control, and empowerment in decisions.”
- “It is extremely difficult to establish a relationship with universities. We tried for month to give money for projects and scholarships.”

South Carolina vs. Regional Average:  
Specialized Inputs



Note: \* From average responses to Monitor Competitiveness Survey, 1999-2001

# Select Research Strengths

## Navy SPAWAR Systems Center, Charleston

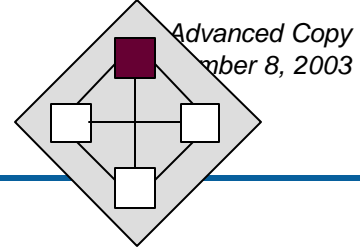
- Mission: The development, acquisition, and support of effective, capable and integrated C<sup>4</sup>ISR (**command, control, communications, computers, intelligence, surveillance, and reconnaissance**), information technology and space systems, in use today or planned for the future
- **Over 1,500 employees** in the Charleston Area
  - 60% with bachelor degrees, over 10% with advanced degrees
  - Estimated \$50,000-60,000 average salary
- **\$2 billion in revenues** from contracts with the US Dept of Defense
  - **Growth of \$400 million per year** due to its high effectiveness and technical capability
  - Up to **\$215 million production facility** to begin construction in following months

### However

- **Lack of graduate university in Charleston** with IT engineering expertise is a limitation

# Context for Firm Strategy and Rivalry in South Carolina

## Survey and Interview Results



### Representative Interview Quotes

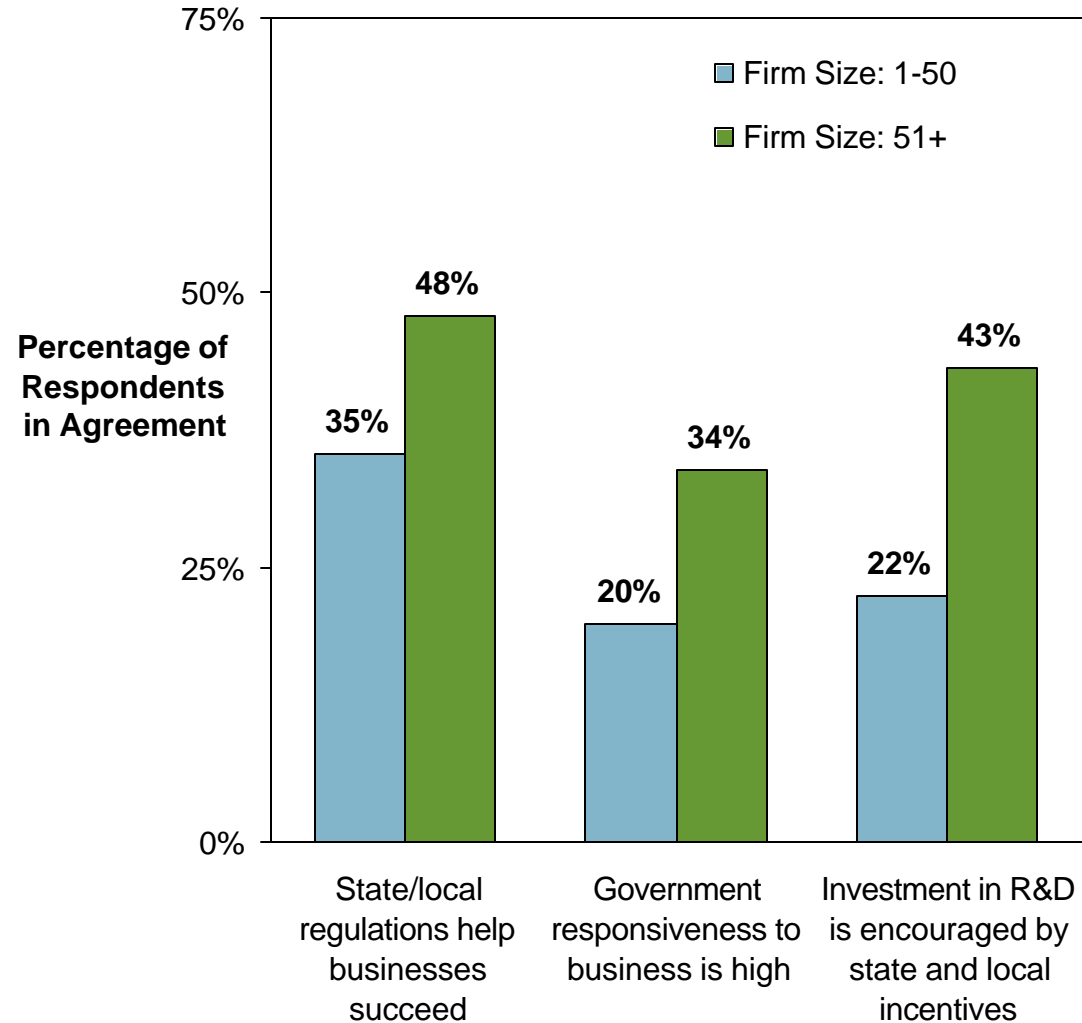
#### Incentives for large companies

- “The state has an excellent program for recruiting through tax incentives.”
- “The governor was involved in the recruitment...the state provided a nice tax package.”
- “The Alliance was aggressive, helping with sites, incentives, and information.”

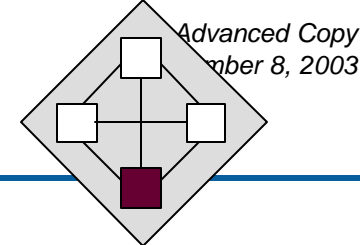
#### Difficult environment for small business and start-ups

- “I am convinced we can become the innovation engine within manufacturing, but this would require changing the tax structure/incentives program.”
- “We need to rework our incentive packages to include entrepreneurs and small businesses.”
- “Commerce and the economic development groups are not geared towards innovation or organically grown companies.”

### Large Firms vs. Small Firms in South Carolina: Government Rules and Incentives for Business



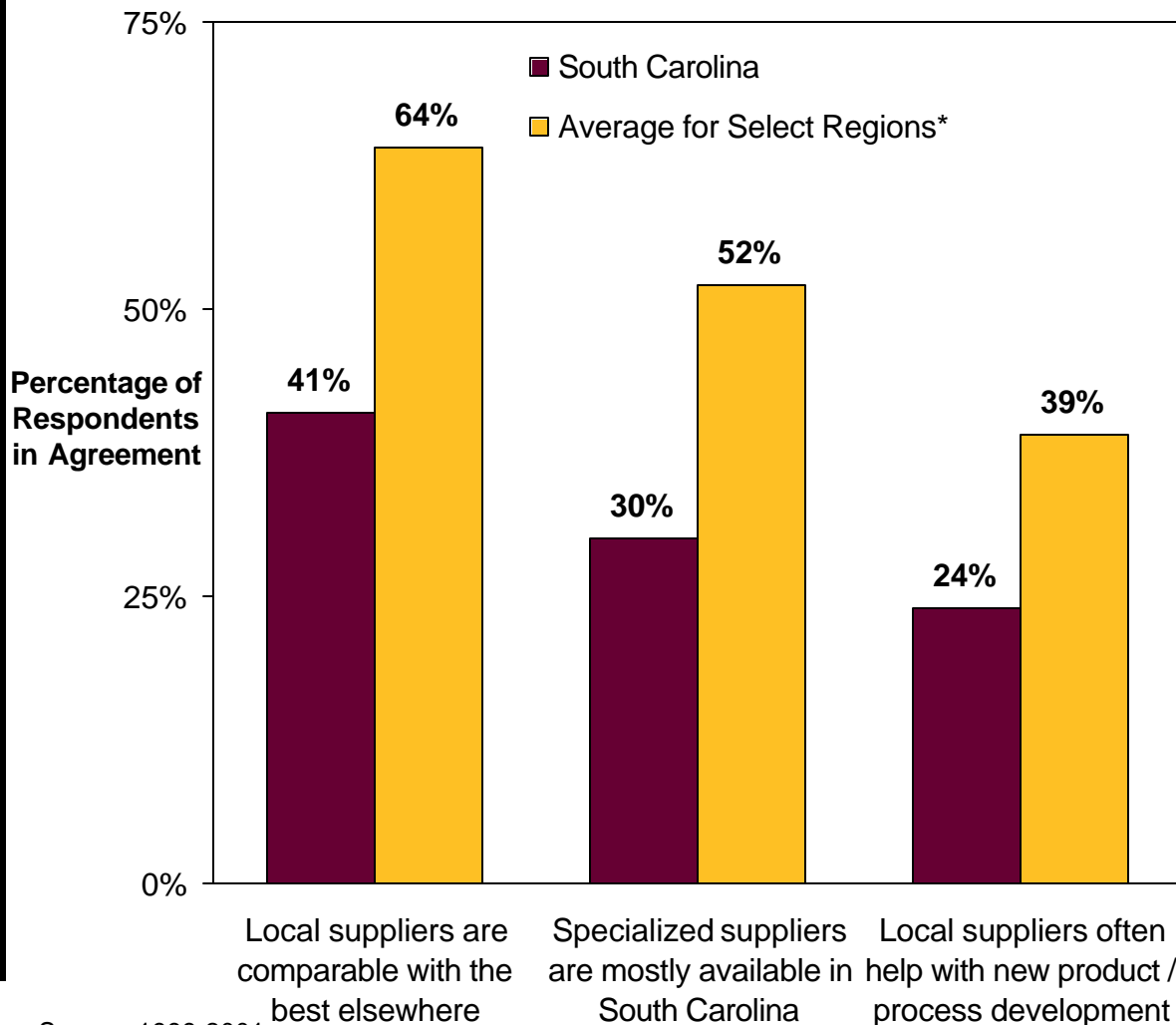
# Related and Supporting Industries in South Carolina Survey and Interview Results



## Representative Interview Quotes

- “There is no cluster here.”
- “There are no competitors in this area. Customers are handled by corporate. Suppliers are in the eastern U.S. or global...maybe we buy pellets in South Carolina. Services are OK.”
- “There is a lack of machine shop capabilities. It’s a huge entrepreneurial opportunity.”
- “The supplier base was not a critical factor in our decision to re-locate operations.”
- “All non-specialized, basic services come from the state. Parts and equipment are handled by corporate global purchasing.”
- “Our suppliers are still here. Probably they have just downsized too.”

South Carolina vs. Regional Average: Related and Supporting Industries



Note: \* From average responses to Monitor Competitiveness Survey, 1999-2001

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# Phase I Cluster Selection

## Principles, Objectives, Criteria, Next Steps

- All clusters are good
  - There are no inherently “high-tech” or “low-tech” clusters;
  - It does not matter what you do, but how you do it
- Phase I analysis focused on Selected clusters to:
  - Gain detailed view of the South Carolina economy;
  - Gain nuanced understanding of key themes of the overall economy;
  - Identify generalizable lessons for developing the economy
- Clusters were selected based on:
  - Competitiveness within U.S. economy;
  - Number of workers in South Carolina;
  - Geographic presence across the state
- Phase II should put in place a process to develop specific strategies for a wide range of clusters

# Agenda

- Overview of the South Carolina Competitiveness Initiative
- Conceptual Framework and Methodology
- Assessment of the South Carolina Economy
  - Economic Performance and Innovation Output
  - Economic Composition
    - Clusters
    - Impact on Economic Performance
  - Business Environment
- Assessments of Selected Clusters
  - **Automotive**
  - Chemicals
  - Textiles
  - Tourism
- Implications and Recommendations

## Overview of the South Carolina Automotive Cluster

- **Performance:**
  - 13th largest U.S. cluster with rapid employment growth;
  - Lower average wages and little innovation output
- **Position:**
  - Broad, but not especially deep, presence across sub-clusters;
  - Many similarly positioned low cost competitors in the South
- **Strengths:**
  - Low costs, flexible labor, strong tech colleges, good transportation infrastructure;
  - Select and improving research strengths (Clemson, USC, SRS);
  - Sophisticated demand from nearby NASCAR headquarters
- **Challenges:**
  - Limited supply of skilled workers;
  - Few local competitors;
  - Few high quality specialized suppliers;
  - No dedicated cluster council, and limited collaboration among cluster firms

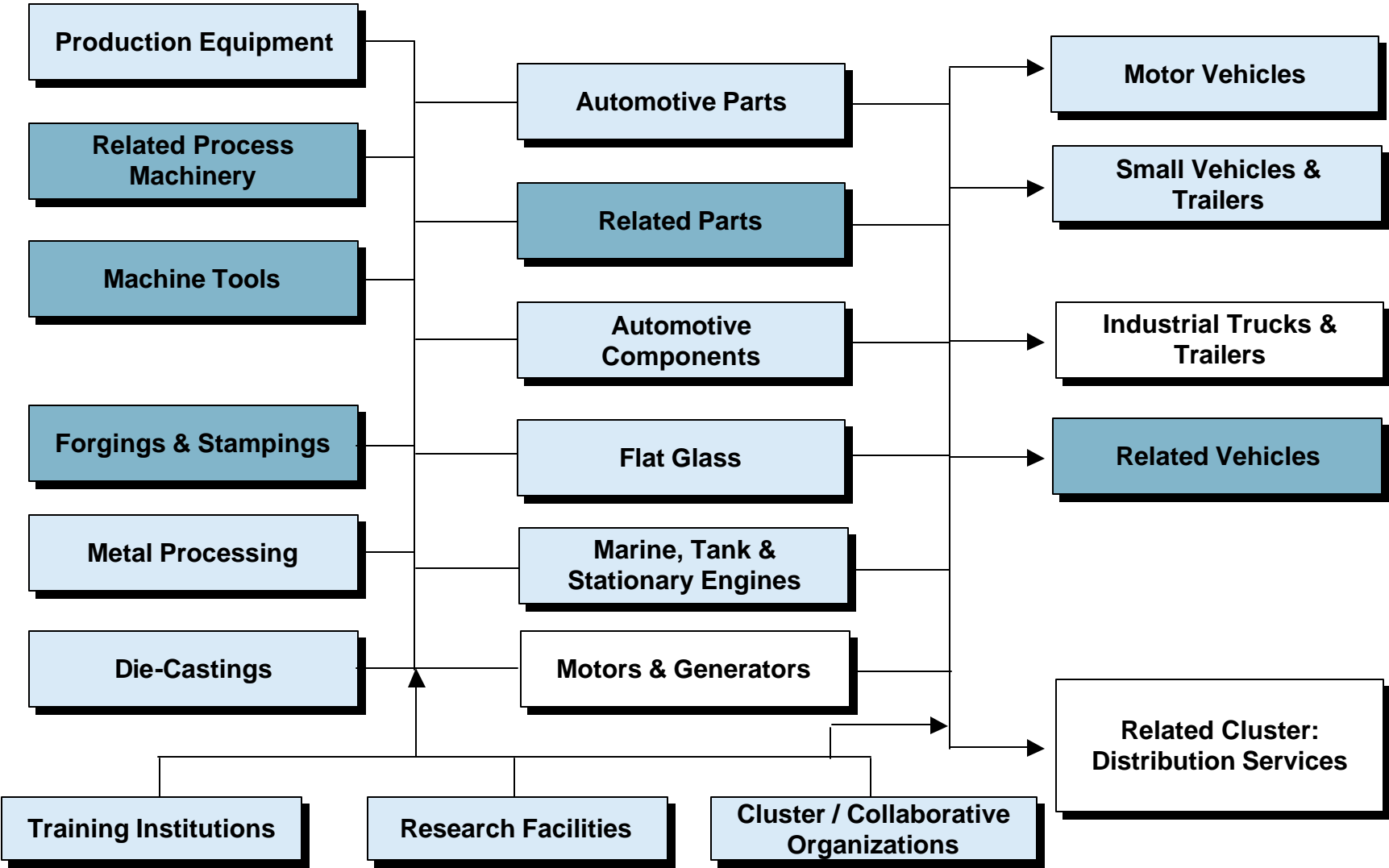
# Summary of Economic Performance in the Automotive Cluster South Carolina Relative to the 15 Largest US Clusters

State	2001 Employment	1990-2001 Employment Growth	2001 Average Wage	1990-2001 Average Wage Growth	2001 Patents per Thousand Workers	1990-2001 Patents per Worker Growth
Michigan	268,348	-1.27%	\$55,041	2.85%	3.48	8.78%
Ohio	173,105	5.12%	\$46,208	2.28%	1.55	2.45%
Indiana	122,903	-0.58%	\$48,313	3.54%	1.45	0.33%
California	71,262	2.76%	\$35,757	3.11%	8.45	3.06%
Tennessee	64,654	-0.47%	\$32,523	2.84%	0.84	-1.67%
Illinois	52,602	1.35%	\$43,052	2.73%	5.90	4.49%
Wisconsin	49,167	3.91%	\$39,813	1.30%	3.33	3.56%
Kentucky	46,635	-0.53%	\$34,598	0.44%	0.61	0.46%
Missouri	42,889	-1.97%	\$31,144	-2.49%	1.22	-1.05%
North Carolina	36,663	-2.29%	\$33,738	3.82%	2.82	5.23%
New York	34,933	-1.86%	\$44,712	3.42%	7.98	4.39%
Pennsylvania	34,590	1.78%	\$38,112	2.01%	5.05	2.85%
<b>South Carolina</b>	<b>30,922</b>	<b>12.69%</b>	<b>\$34,515</b>	<b>3.33%</b>	<b>1.60</b>	<b>-4.49%</b>
Georgia	27,662	0.55%	\$33,061	1.49%	2.90	6.06%
Texas	24,995	-1.03%	\$31,816	3.38%	8.74	2.04%
Alabama (ranked 19 <sup>th</sup> )	16,041	9.39%	\$38,763	1.61%	1.67	-1.66%
<b>South Carolina Out-Performs Percent of Top 15 Employing States</b>	14%	100%	36%	71%	36%	0%

Source: Cluster Mapping Project, Institute for Strategy and Competitiveness, Harvard Business School  
Note: Narrow cluster definition

# South Carolina Automotive Cluster Map

## Employment Position of South Carolina's Sub-clusters

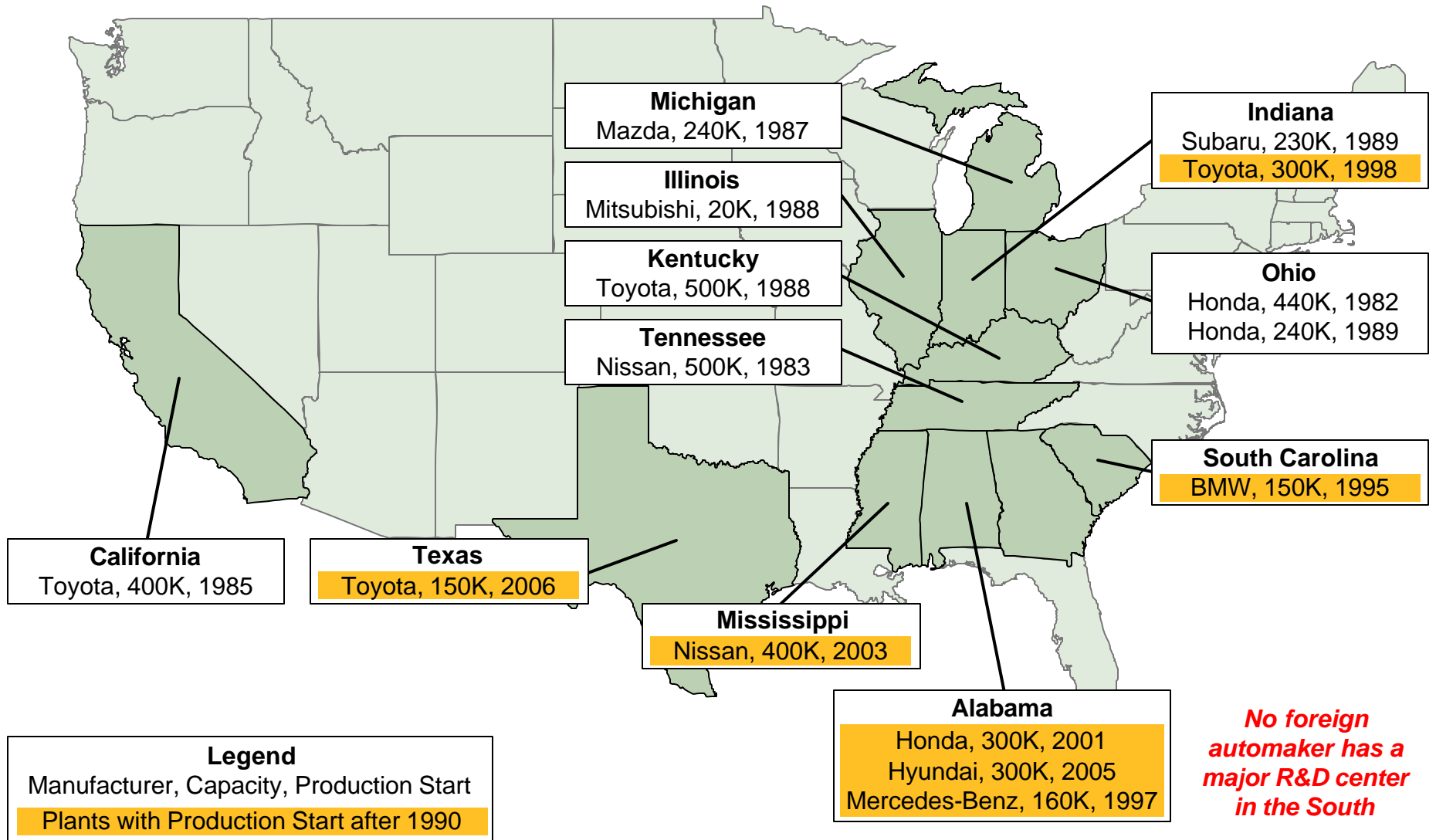


Among National Leaders (Rank 1–5)
  Competitive (Rank 6–10)
  Position Established (Rank 11–20)
  Less Developed (Rank 21+)

Source: Cluster Mapping Project, Institute for Strategy and Competitiveness, Harvard Business School  
 Note: Broad cluster definition, data is 2001, the most recent available.

# Site Selection of Automotive Manufacturing

## Foreign Manufacturers' U.S. Vehicle Assembly Plants



*No foreign automaker has a major R&D center in the South*

Source: Japan Automobile Manufacturers Association (JAMA), Manufacturer's Websites and Annual Reports; Monitor Research

# South Carolina Automotive Business Environment

## Findings from the Survey and Interviews

### Advantages:

- **Low cost of doing business: wages, taxes, rents, utilities**
- **Right-to-work labor environment**
- High quality of life along some dimensions
- **Good transportation infrastructure: seaport, highways, railways**
- Responsive, high quality tech colleges
- **Clemson Center of Auto Research**

- **Unique fuel-cell technology opportunities:**
  - Savannah River Site
  - Research strength at the University of South Carolina
- **Proximity to NASCAR R&D center**

### Disadvantages:

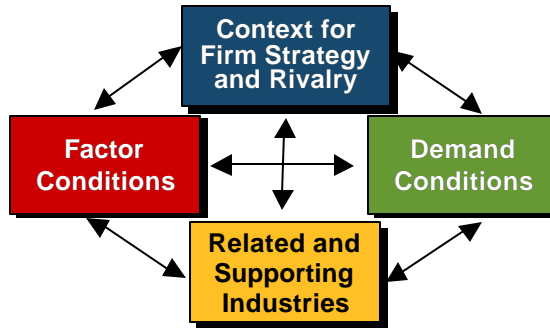
- Lack of central US location
- Relatively few advanced degree holders
- **Limited supply of skilled workers**
- Relatively weak K-12 and advanced educational systems

### Advantages:

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### Disadvantages:

- **Only one major light vehicle assembly plant in region**
- Few incentives for investment in R&D



### Advantages:

- Strong presence of suppliers in related clusters: textiles, plastics, chemicals

### Disadvantages:

- **Few high quality, specialized suppliers**
- **Limited interaction with local suppliers on product and process development**

### Advantages:

- **NASCAR demand in North Carolina**
- Sophisticated (albeit few) end-user manufacturers
- Frequent feedback between end-user manufacturers and suppliers

### Disadvantages

- Lack of consumer buyers with sophisticated needs and trend-setting requirements

Source: Monitor Competitiveness Survey, Monitor Interviews, Monitor Analysis

Note: Red bold letters illustrate key themes; black dotted boxes indicate potentially leverageable assets

# New Directions for the Automotive Cluster

## Research and Custom Manufacturing for Global Distribution

### Main Challenges

**Lack of breadth and depth**

“Building a [broad and deep] supplier network requires a number of OEMs in order to get critical mass.”

**Need to build-out cluster**

**Many similar competitors**

“Incentives and flexible labor were a big reason we located in South Carolina. That’s why we put so many operations in the South.”

**Need to differentiate**

### Opportunities to Differentiate

**Little R&D in the South**

“Auto frame research is done in Ohio, design in L.A., R&D for engines, components and transmissions is done in Japan.”  
“New graduates from Clemson auto engineering school will enable us to start parts development here.”

**Leverage the Center for Auto Research**

**Success in sophisticated manufacturing**

“This is an award winning facility. No one touches the product from end-to-end, and it’s also zero emissions.”  
“They can run batches of 400-600 exactly equal. We offer so many options, no two cars we produce in a day are the same.”

**Specialize in high-end manufacturing**

**Lack of central location**

“The infrastructure to support export and distribution was extremely important.”  
“We import much of our raw materials, so access to a port was key.”

**Focus on import / export oriented firms**

# Findings and Implications for the Automotive Cluster

## Implications, Strengths, Challenges and Action in South Carolina

Vision Element	Strengths	Challenges	Action Agenda (Potential)
<ul style="list-style-type: none"> <li>• <b>A center of R&amp;D in the Southeast</b></li> </ul>	<ul style="list-style-type: none"> <li>• Clemson Graduate School of Automotive Engineering</li> <li>• Savannah River Site and USC fuel-cell technology</li> <li>• Strong R&amp;D at Georgia Tech</li> <li>• Sophisticated R&amp;D and demand from NASCAR in North Carolina</li> </ul>	<ul style="list-style-type: none"> <li>• Few scientists and engineers</li> <li>• Underdevelopment of specialized R&amp;D facilities</li> <li>• Lack of industry-specific institutions for collaboration</li> </ul>	<ul style="list-style-type: none"> <li>• Continue to support Auto Research Park               <ul style="list-style-type: none"> <li>– Incentives for R&amp;D</li> <li>– Recruit more firms</li> <li>– Develop links to other research centers</li> </ul> </li> <li>• Develop cluster specific inst for collaboration</li> <li>• Support engineering training</li> </ul>
<ul style="list-style-type: none"> <li>• <b>A leader in high-end manufacturing</b></li> </ul>	<ul style="list-style-type: none"> <li>• Proven track record of successful firms</li> <li>• Strong tech colleges</li> <li>• Pool of experienced manufacturing workers</li> </ul>	<ul style="list-style-type: none"> <li>• Limited skilled workforce, particularly outside the Upstate</li> </ul>	<ul style="list-style-type: none"> <li>• Incentives for facilities modernization</li> <li>• Further upgrade technical colleges and K-12</li> </ul>
<ul style="list-style-type: none"> <li>• <b>A premier location for import / export operations</b></li> </ul>	<ul style="list-style-type: none"> <li>• Responsive government</li> <li>• Good highway system</li> <li>• Port of Charleston</li> <li>• Port of Savannah</li> </ul>	<ul style="list-style-type: none"> <li>• Only one major light-vehicle assembly plant</li> <li>• Less central locale than AL, TN, MS, etc.</li> </ul>	<ul style="list-style-type: none"> <li>• Recruit one more light assembly plant</li> <li>• Develop a base of suppliers for southeast</li> </ul>

# Agenda

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  - Automotive
  - **Chemicals**
  - Textiles
  - Tourism
- Implications and Recommendations

## Overview of the South Carolina Chemical Products Cluster

- **Performance:**
  - 4th largest U.S. cluster, and gaining share (due to slower shrinkage);
  - Competitive average wages, but little innovation output
- **Position:**
  - Little breadth or depth in cluster;
  - High ranking due almost entirely to Savannah River Site (12,000 employees)
- **Strengths:**
  - Low costs, flexible labor, strong tech colleges, good transportation infrastructure;
  - Expertise in hydrogen technology at Savannah River Site;
  - Proximity to relevant chemical institutions: CDC, SPAWAR, FDA
- **Challenges:**
  - Limited supply of experienced managers;
  - Relatively weak K-12 and advanced educational programs for chemistry;
  - Difficulty recruiting national talent;
  - Limited local competition and supplier network;
  - No dedicated cluster council, and limited interaction among cluster firms

# Summary of Economic Performance in the Chemical Products Cluster South Carolina Relative to the 15 Largest US Clusters

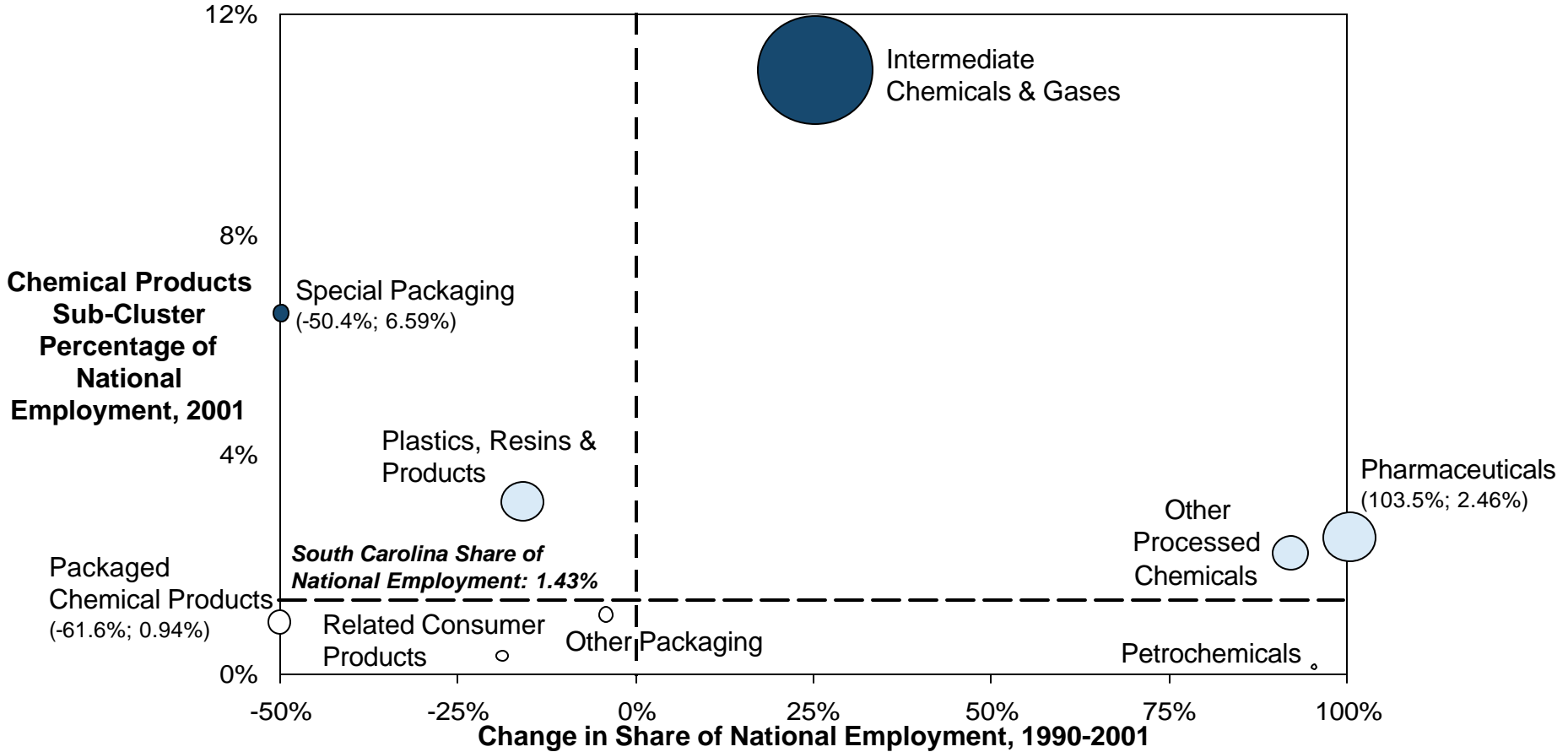
State	Employment	Employment Growth	Average Wage	Average Wage Growth	Patents per Worker	Patents per Worker Growth
Texas	44,729	-1.52%	\$59,116	3.38%	6.16	4.29%
Ohio	32,874	-2.27%	\$47,873	3.08%	7.08	5.51%
Tennessee	29,479	-0.99%	\$52,256	8.30%	1.80	3.39%
<b>South Carolina</b>	<b>25,050</b>	<b>-0.61%</b>	<b>\$46,756</b>	<b>3.60%</b>	<b>1.22</b>	<b>6.23%</b>
Illinois	23,287	-1.29%	\$52,019	4.54%	7.12	1.27%
California	20,963	-2.97%	\$43,723	3.04%	28.77	10.66%
Pennsylvania	20,121	-1.58%	\$44,061	3.66%	14.18	2.82%
Louisiana	19,709	-1.42%	\$65,564	3.92%	2.75	-1.30%
New Jersey	17,871	-4.05%	\$53,773	3.33%	18.04	2.68%
Michigan	16,883	-1.95%	\$51,567	3.49%	8.33	1.52%
New York	15,755	-3.11%	\$40,745	2.43%	19.33	4.26%
Georgia	15,652	-0.20%	\$42,378	3.00%	3.69	5.09%
North Carolina	13,583	0.73%	\$42,900	3.42%	6.98	7.70%
Missouri	13,506	-1.49%	\$44,382	2.71%	4.20	2.95%
Wisconsin	10,588	-0.22%	\$50,357	3.82%	6.46	8.04%
<b>South Carolina Out-Performs Percent of Top 15 Employing States</b>	79%	79%	43%	64%	0%	79%

Source: Cluster Mapping Project, Institute for Strategy and Competitiveness, Harvard Business School  
Note: Narrow Cluster Definition

# Chemical Products Sub-Clusters

## Employment Level, Share and Share Growth

South Carolina Chemical Products Sub-Cluster Employment Level, Share and Share Growth



○ = 5,000 Employees

- Among National Leaders (Rank 1-5)
- Position Established (Rank 11-20)
- Competitive (Rank 6-10)
- Less Developed (Rank 21+)

Note: Broad cluster definition; "Ammunition," "Diagnostics & Biological Products", "Hydrocarbons," "Leather Tanning & Finishing," "Processing Instruments," "Refractories" and "Treated Garments" have under 100 employees, & are not shown  
Source: Cluster Mapping Project, Institute for Strategy and Competitiveness, Harvard Business School

# Intermediate Chemicals & Gases Sub-Cluster

## Westinghouse Savannah River Site

- The Savannah River Site (SRS) accounts for **almost half the cluster's employment**, with over 12,000 employees:
  - Average salary at SRS is **\$60,000** per year
  - 45% of the workforce has a college degree, with 400-500 holding a PhD
  - Current annual economic impact estimated at \$2.5 billion
  - Projected **impact of being designated a National Lab is \$5 billion**
- As the only site in the country able to process and store plutonium, SRS has developed significant **hydrogen and nuclear materials related capabilities**
- SRS has the potential to act as an anchor in the cluster:
  - Hydrogen handling and storage technologies --- enabling South Carolina to obtain a share (\$10 billion est.) of the estimated \$1 Trillion U.S. **fuel-cell energy business** in 2020
  - Nuclear forensics and **counter-terrorism** research in support of **Homeland Security**
  - Next generation of nuclear reactors, along with other partners
  - **Medical radioisotope research**
- Opportunity to **partner with the auto cluster and USC's** fuel cell researchers to develop fuel cell powered automobiles

# Business Environment of the Chemical Products Cluster

## Findings from the Survey and Interviews

### Advantages:

- **Low cost of doing business: wages, taxes, rents, utilities**
- High quality of life along some dimensions
- **Good transportation infrastructure: seaport and interstates**
- **Responsive, high quality technical colleges**
- **Abundant, trainable basic workforce**
- **Strong specialized R&D capabilities in hydrogen technology at the Savannah River Site**
- **Proximity to CDC and SPAWAR for collaboration on WMD cluster**

### Disadvantages:

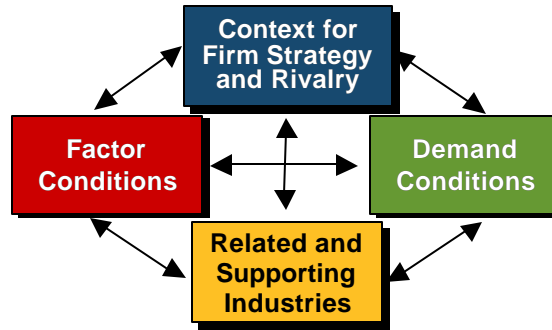
- **Relatively few experienced managers**
- **Relatively weak K-12 and advanced educational systems**
- **Few specialized research facilities**
- **Outsiders' image of South Carolina makes recruitment difficult**

### Advantages:

- State and local tax incentives relatively supportive of investments in R&D

### Disadvantages:

- **Relatively few local competitors and limited local rivalry**



### Advantages:

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### Disadvantages:

- **Few high quality, specialized suppliers in the region**
- **Very infrequent collaboration with local suppliers on product and process development**

### Advantages:

- Local customers with specialized needs: e.g. autos, textiles, production tech, pharmaceuticals, forest products, etc.
- Relatively frequent feedback between end-user manufacturers and chemical suppliers

- **Proximity to FDA**

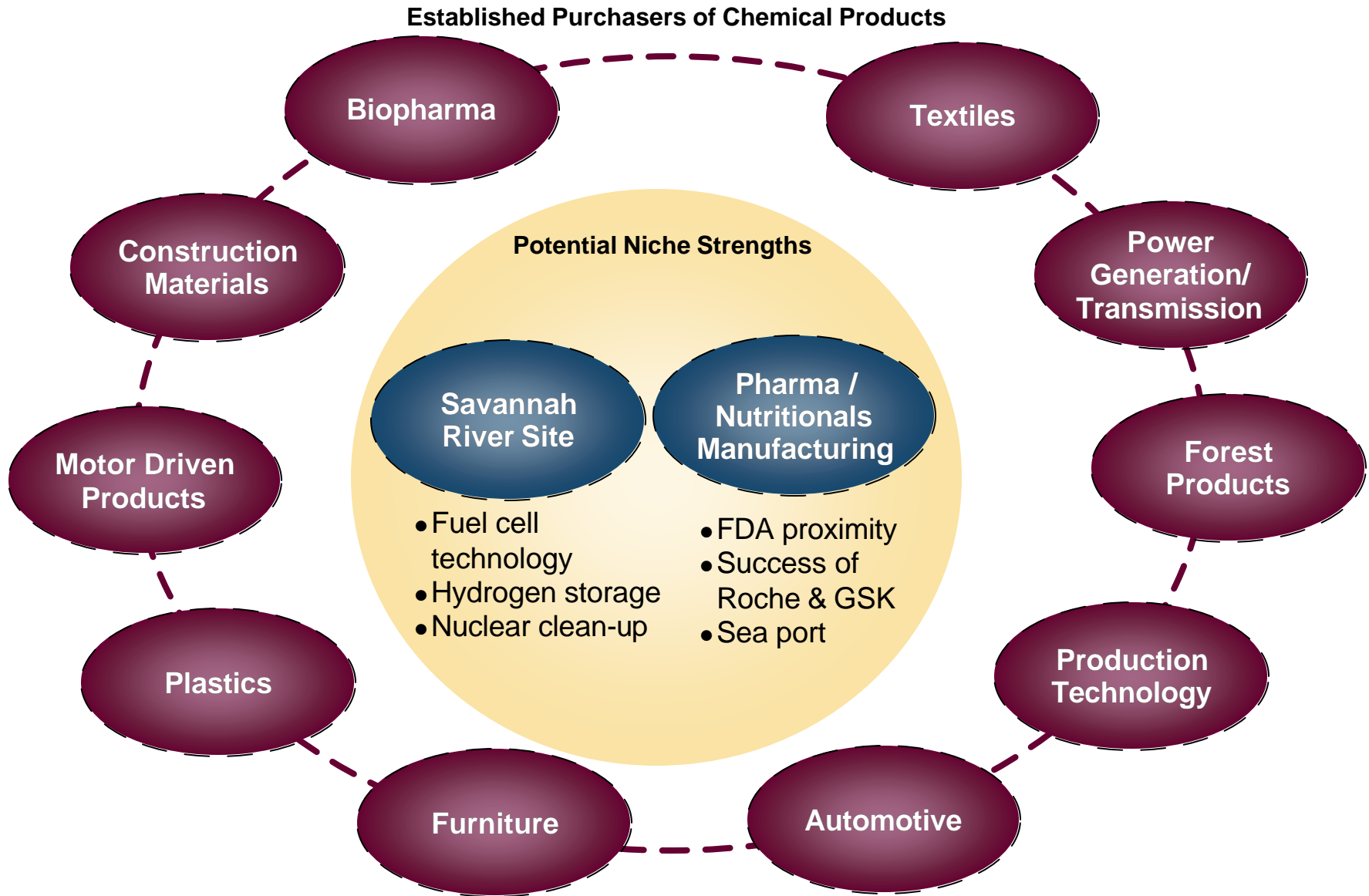
### Disadvantages

- Shrinkage of textile demand, a historically major buyer of chemical products in South Carolina

Source: Monitor Competitiveness Survey, Monitor Interviews, Monitor Analysis  
Note: Red bold letters illustrate key themes; black dotted boxes indicate potentially leverageable assets

# New Directions for the Chemical Products Cluster

## Niche Strengths and Proximity to Customers



# Findings and Implications for the South Carolina Chemicals Cluster

## Strengths, Challenges, and Action Items

### Strengths

- Costs and infrastructure
  - Low costs of doing business
  - Good interstate and seaports
- Workers and training
  - Abundant, trainable, flexible workforce
  - Outstanding technical institutes
- Research
  - Strong research capabilities in select fields
  - Good incentives to invest in R&D
- Customers
  - Numerous, local buyers of basic and specialized chemicals

### Challenges

- Weakness in talent and recruiting
  - Lack of experienced managers
  - Need to shift external perceptions of South Carolina to support recruitment of researchers and managers
- Limited critical mass in the cluster
  - Few local competitors
  - Few local suppliers and limited interaction with chemical firms
  - Few large customers or industry concentrations

### Action Items (Preliminary)

- Technical Colleges
  - Liaise with local firms and national associations to identify priority upgrades in the local technical college system
- Universities
  - Create a networking organization in each research university to help align research with interests and capabilities of local firms
- Form a chemical cluster organization to:
  - Support networking across the cluster and with local chemical users
  - Liaise with universities
- Marketing and Image, e.g.:
  - Launch an ambassadorial initiative to support recruiting efforts
  - Work with tourism cluster to target mutually beneficial tourist segments
- Recruiting and Expansion
  - Redouble traditional recruiting efforts to attract chemical firms and suppliers
  - Revamp incentives to reward plant upgrades and product development

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  - Automotive
  - Chemicals
  - **Textiles**
  - Tourism
- Implications and Recommendations

## Overview of the South Carolina Textiles Cluster

- **Performance:**
  - 4th largest US cluster, but rapidly losing employment share;
  - Competitive average wages, but little innovation output
- **Position:**
  - Good breadth and depth across cluster;
  - Traditional focus on commodity textiles for apparel cluster
- **Strengths:**
  - Low costs, strong tech colleges, good transportation infrastructure;
  - Ample supply of skilled labor and experienced managers;
  - Proximity to strong research (NC State, Georgia Tech, Clemson)
- **Challenges:**
  - Relatively few advanced degree holders (scientists and engineers);
  - Limited collaboration among local firms on new product development;
  - Difficult environment for start-ups;
  - No dedicated cluster council focused upgrading the local business environment

# Summary of Economic Performance in the Textile Cluster South Carolina Relative to the 15 Largest US Clusters

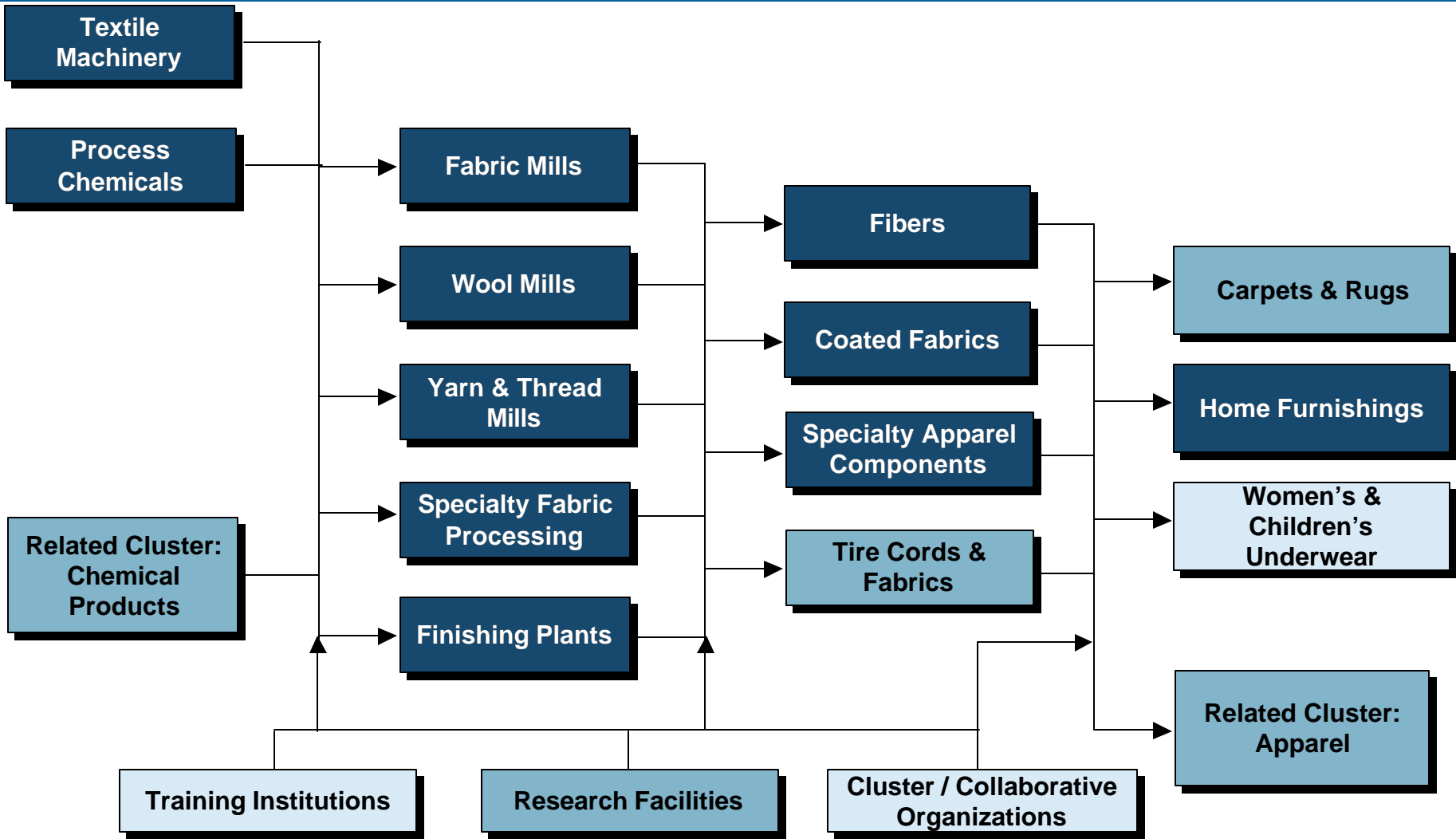
Advanced Copy  
December 8, 2003

State	2001 Employment	1990-2001 Employment Growth	2001 Average Wage	1990-2001 Average Wage Growth	2001 Patents per Thousand Workers	1990-2001 Patents per Worker Growth
Georgia	76,710	-2.15%	\$26,400	3.06%	0.26	9.56%
North Carolina	73,367	-5.48%	\$25,816	3.02%	0.40	10.45%
<b>South Carolina</b>	<b>56,316</b>	<b>-4.97%</b>	<b>\$26,711</b>	<b>2.63%</b>	<b>0.29</b>	<b>7.50%</b>
Virginia	26,245	-4.64%	\$25,137	2.98%	0.37	3.83%
Alabama	25,010	-2.92%	\$26,520	3.59%	0.12	2.47%
California	16,578	1.64%	\$24,708	1.54%	4.01	2.80%
Pennsylvania	12,366	-4.67%	\$29,537	4.58%	1.88	4.65%
Tennessee	11,357	-6.09%	\$30,671	4.43%	1.09	13.78%
Massachusetts	9,331	-3.48%	\$34,868	3.42%	1.99	7.06%
New York	8,491	-2.42%	\$36,568	4.72%	4.77	5.36%
Texas	5,890	-2.88%	\$23,141	2.19%	4.30	4.64%
Florida	5,172	-0.52%	\$21,665	3.85%	2.87	3.48%
New Jersey	4,617	-6.43%	\$31,627	1.74%	4.60	6.23%
Connecticut	3,831	-3.37%	\$31,758	6.89%	2.94	3.65%
Rhode Island	3,507	-6.03%	\$26,820	2.89%	0.76	10.54%
<b>South Carolina Out-Performs Percent of Top 15 Employing States</b>	86%	29%	50%	21%	14%	71%

Source: Cluster Mapping Project, Institute for Strategy and Competitiveness, Harvard Business School  
Note: Narrow cluster definition

# South Carolina Textile Cluster Map

## Employment Position of South Carolina's Sub-clusters

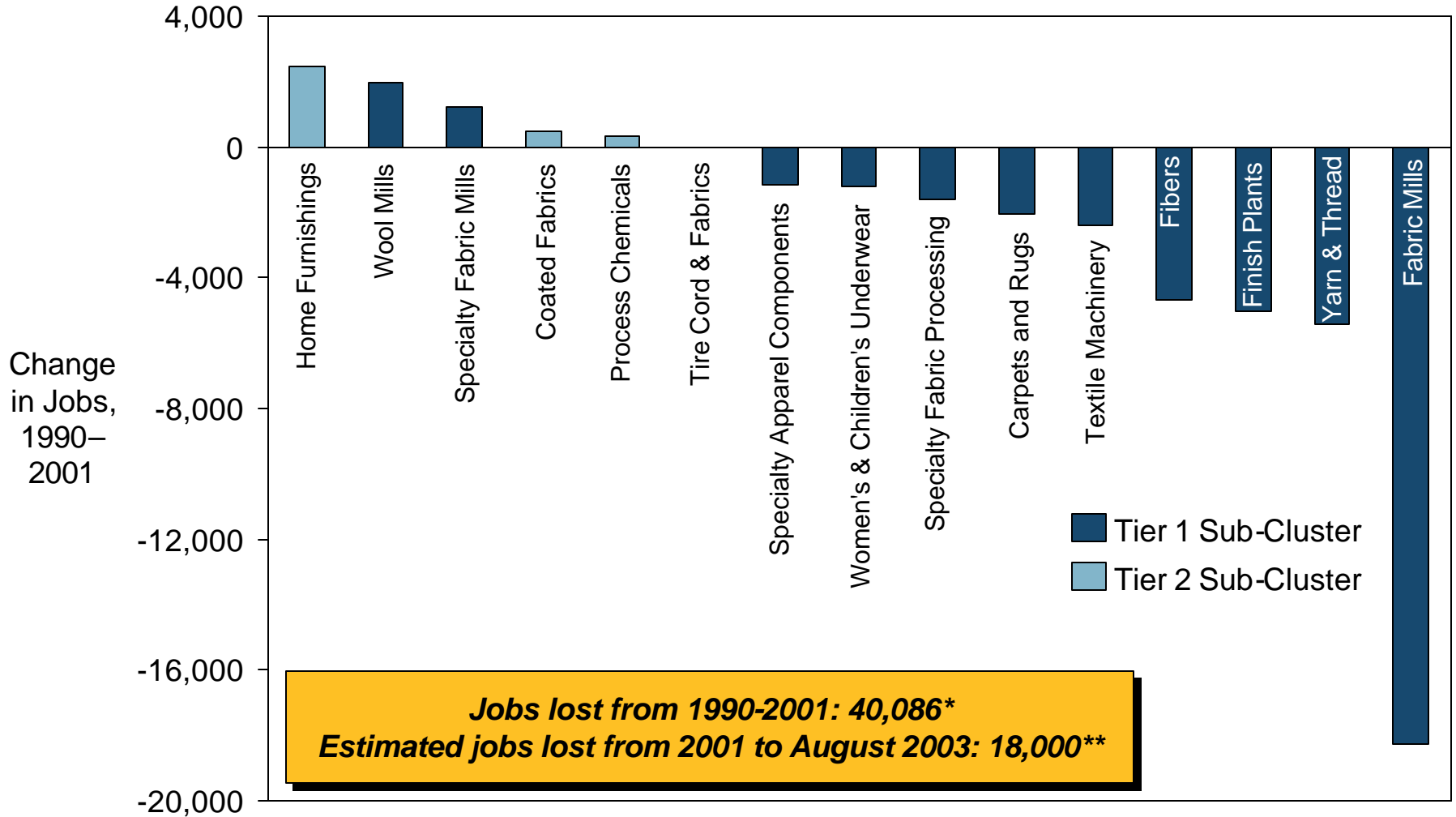


Among National Leaders (Rank 1–5)
  Competitive (Rank 6–10)
  Position Established (Rank 11–20)
  Less Developed (Rank 21+)

Source: Cluster Mapping Project, Institute for Strategy and Competitiveness, Harvard Business School  
 Note: Broad cluster definition; data is 2001, the most recent available.

# South Carolina's Textile Sub-clusters

## Employment Gain and Loss by Sub-cluster



\* Source: Cluster Mapping Project, Institute for Strategy and Competitiveness, Harvard Business School  
 \*\* Source: Data taken from preliminary data from Bureau of Labor Statistics for "textile mills" and "textile product mills."  
 Note: Broad cluster definition; data is 1990-2001, the most recent available.

# South Carolina Textile Business Environment

## Findings from the Survey and Interviews

### Advantages:

- **Low cost of doing business: wages, taxes, rents, utilities**
- Ample supply of skilled workers
- High quality of life along some dimensions
- Good transportation infrastructure: seaport and interstates
- Responsive, high quality technical colleges

- **Significant textile management expertise**
- **Strong specialized research centers in neighboring states (GA, NC)**

### Disadvantages:

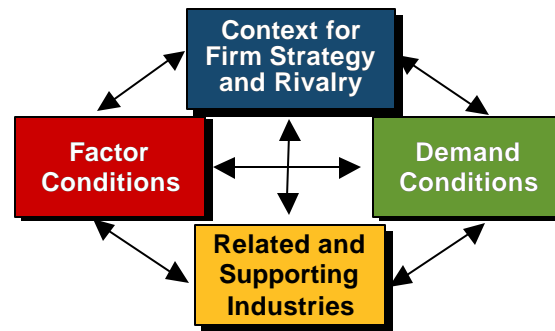
- **Relatively few advanced degree holders: scientists and engineers**
- Relatively weak K-12 and advanced educational systems
- Limited air access: few direct flights

### Advantages:

- Appropriate regulations for the cluster

### Disadvantages:

- **Perception of few local competitors**
- **Limited research collaboration among firms**
- **Difficult environment for start-ups**



### Advantages:

- Presence of high-quality specialized suppliers
- Frequent interaction with suppliers
- Strong presence of related cluster (e.g. chemicals) in the region

### Disadvantages:

- Lack of local machinery manufacturers

### Advantages:

- Sophisticated buyers with special needs
- Frequent interaction with customers

- **Presence of non-apparel customers in the region (e.g. autos, heavy construction services)**

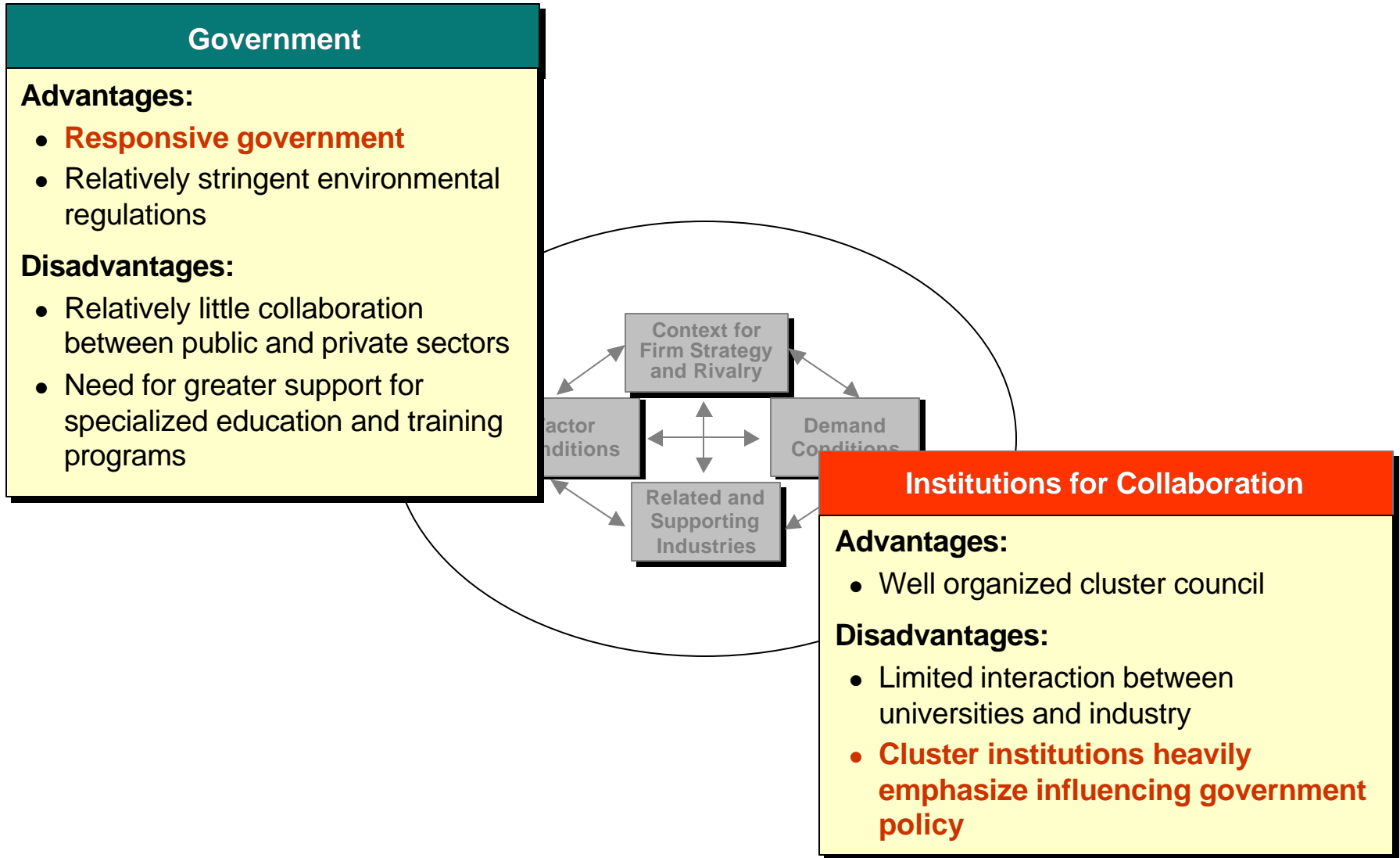
### Disadvantages:

- Local and national customers of key segments (apparel, furniture) moving offshore

Source: Monitor Competitiveness Survey, Interviews, Monitor Analysis  
Note: Red highlights illustrate key themes; black lined boxes indicate leverageable assets

# South Carolina Textile Business Environment

## Emerging Findings from the Surveys and Interviews (Cont.)



Source: Monitor Competitiveness Survey, Monitor Interviews, Monitor Analysis  
Note: Red bold letters illustrate key themes; black dotted boxes indicate potentially leverageable assets

# New Directions for the Textile Cluster

## Close Customers, Supply Chain Speed, and Product Development

### Making a Strategic Transition

*“Commodity apparel is all gone - and that was 65% of what we did here.”*

#### Stable US customers

- **Inputs for industries with stable U.S. manufacturing operations**

“There are lots of textiles going into autos and industrial products.”

- **Military-related textile products**

“[Dept. of Defense may] not acquire supplies consisting...of any of the following, that have not been grown or produced in the U.S....cotton and other natural fiber products, wool, woven silk, synthetic fabric, including all fibers and yarns that are for use in such fabrics.”

- Berry Amendment

- **Differentiated high-tech fibers aimed at specialty niches**

“America’s strength is in intellectual property. We can no longer manufacture [all] textiles, but we can manufacture ideas.”

“It is estimated that about 20 percent of all applications for textiles have been developed.”

“The future is in new innovative products, yet we are investing the same in research.”

“Companies don’t get together to talk about research and products. They are in survival mode, hanging to what they believe may provide them a window of opportunity.”

- **Made-to-order products requiring fast turnaround**

“What will stay will be textiles for firms that want a quick response and that must be nearby.”

“At a Bed Bath and Beyond, a manager can order one purple towel with a particular pattern and he wants it in 2-3 days. It hard to supply such specific requests from abroad.”

#### New Products

#### Supply Chain Dynamics

# Findings and Implications for the South Carolina Textile Cluster

## Implications, Strengths, Challenges and Action Items

Implications for Textile Firms	Strengths	Challenges	Action Item (Preliminary)
<ul style="list-style-type: none"> <li>• <b>Develop close links to the right customers, eg:</b> <ul style="list-style-type: none"> <li>– Automotive</li> <li>– Construction materials</li> <li>– The U.S. Military</li> <li>– High-end retailers</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Large and growing auto cluster</li> <li>• Relatively large construction materials cluster</li> <li>• Large military presence</li> <li>• Good linkages with local customers</li> </ul>	<ul style="list-style-type: none"> <li>• Decline of apparel and furniture clusters</li> </ul>	<ul style="list-style-type: none"> <li>• Recruit sophisticated textile consumers, e.g.: <ul style="list-style-type: none"> <li>– Autos</li> <li>– Construction Materials</li> </ul> </li> <li>• Foster networking opportunities with new customers <ul style="list-style-type: none"> <li>– Trade-shows</li> <li>– Inst for collaboration</li> </ul> </li> </ul>
<ul style="list-style-type: none"> <li>• <b>Rapidly Develop New and Innovative Products</b> <ul style="list-style-type: none"> <li>– New designs and styles</li> <li>– High-tech products</li> <li>– New fabrics and materials</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Strong research capabilities nearby (GA &amp; NC)</li> <li>• Presence of quality specialized suppliers</li> <li>• Presence of local competitors</li> <li>• Abundance of good managers</li> </ul>	<ul style="list-style-type: none"> <li>• Relatively weak in-state research</li> <li>• Few scientists and engineers</li> <li>• Limited R&amp;D collab. among local firms</li> <li>• Need for better university-industry linking institutions</li> <li>• Difficult start-up environment</li> </ul>	<ul style="list-style-type: none"> <li>• Support textile start-ups</li> <li>• Foster better university-industry linkages</li> <li>• Increase investments in appropriate niche areas in local universities</li> <li>• Recruit advanced textile companies to the state</li> </ul>
<ul style="list-style-type: none"> <li>• <b>Lean, flexible manufacturing operations</b></li> </ul>	<ul style="list-style-type: none"> <li>• Responsive government</li> </ul>	<ul style="list-style-type: none"> <li>• Limited incentives for upgrading existing facilities</li> </ul>	<ul style="list-style-type: none"> <li>• Invest in manufacturing related R&amp;D (e.g. materials, machinery, and processes) <ul style="list-style-type: none"> <li>– R&amp;D centers at univ.</li> <li>– Incentives for upgrades</li> </ul> </li> </ul>

# Agenda

- Overview of the South Carolina Competitiveness Initiative
- Conceptual Framework and Methodology
- Assessment of the South Carolina Economy
  - Economic Performance and Innovation Output
  - Economic Composition
    - Clusters
    - Impact on Economic Performance
  - Business Environment
- Assessments of Selected Clusters
  - Automotive
  - Chemicals
  - Textiles
  - **Tourism**
- Implications and Recommendations

## Overview of the South Carolina Hospitality and Tourism Cluster

- **Performance:**
  - Modestly sized cluster with slightly higher employment growth than US average;
  - Slightly lower average wages and wage growth
- **Position:**
  - Fragmented position, from very low-cost to high-end;
  - Focus on relaxation--such as golf and beach--much like nearby competitors
- **Strengths:**
  - Attractive natural assets (e.g., climate, golf, coastline);
  - Historical and military sites
- **Challenges:**
  - Relatively weak K-12 system;
  - Limited supply of specially trained local workers;
  - Limited collaboration among firms on product development;
  - Numerous cluster councils, but fragmented efforts with little consensus on strategy

# Hospitality and Tourism Cluster

## Summary of Economic Performance

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December 8, 2003

State	2001 Location Index*	2001 Employment	1990-2001 Employment Growth	2001 Average Wage	1990-2001 Average Wage Growth	1990-2001 Establishments Growth
Nevada	10.96	222,975	4.33%	\$26,029	3.47%	1.81%
Hawaii	4.59	44,966	-1.15%	\$27,139	4.26%	2.08%
Vermont	2.11	12,205	3.24%	\$14,174	3.19%	1.62%
Wyoming	2.09	8,254	2.64%	\$15,725	4.60%	3.54%
Florida	1.93	275,252	2.78%	\$20,301	4.27%	2.87%
Mississippi	1.69	34,649	13.61%	\$19,648	7.08%	4.23%
Montana	1.68	11,251	3.65%	\$13,052	3.26%	4.63%
District of Columbia	1.57	14,712	-1.35%	\$29,914	4.74%	0.24%
Arizona	1.46	63,026	2.75%	\$18,331	5.12%	4.07%
Alaska	1.46	6,933	2.04%	\$25,496	3.45%	5.61%
Louisiana	1.35	48,064	5.10%	\$18,569	3.75%	4.34%
South Dakota	1.35	9,306	4.28%	\$12,244	2.93%	2.71%
New Mexico	1.30	15,936	2.46%	\$15,080	4.84%	3.39%
West Virginia	1.19	14,624	2.15%	\$15,742	3.21%	2.17%
Colorado	1.18	51,886	2.98%	\$19,965	5.41%	3.62%
<b>South Carolina (Ranked 19<sup>th</sup>)</b>	<b>1.07</b>	<b>37,815</b>	<b>3.22%</b>	<b>\$16,556</b>	<b>4.11%</b>	<b>3.32%</b>
<b>South Carolina Out-Performs Percent of Top 15 Employing States</b>	0%	60%	60%	40%	47%	47%

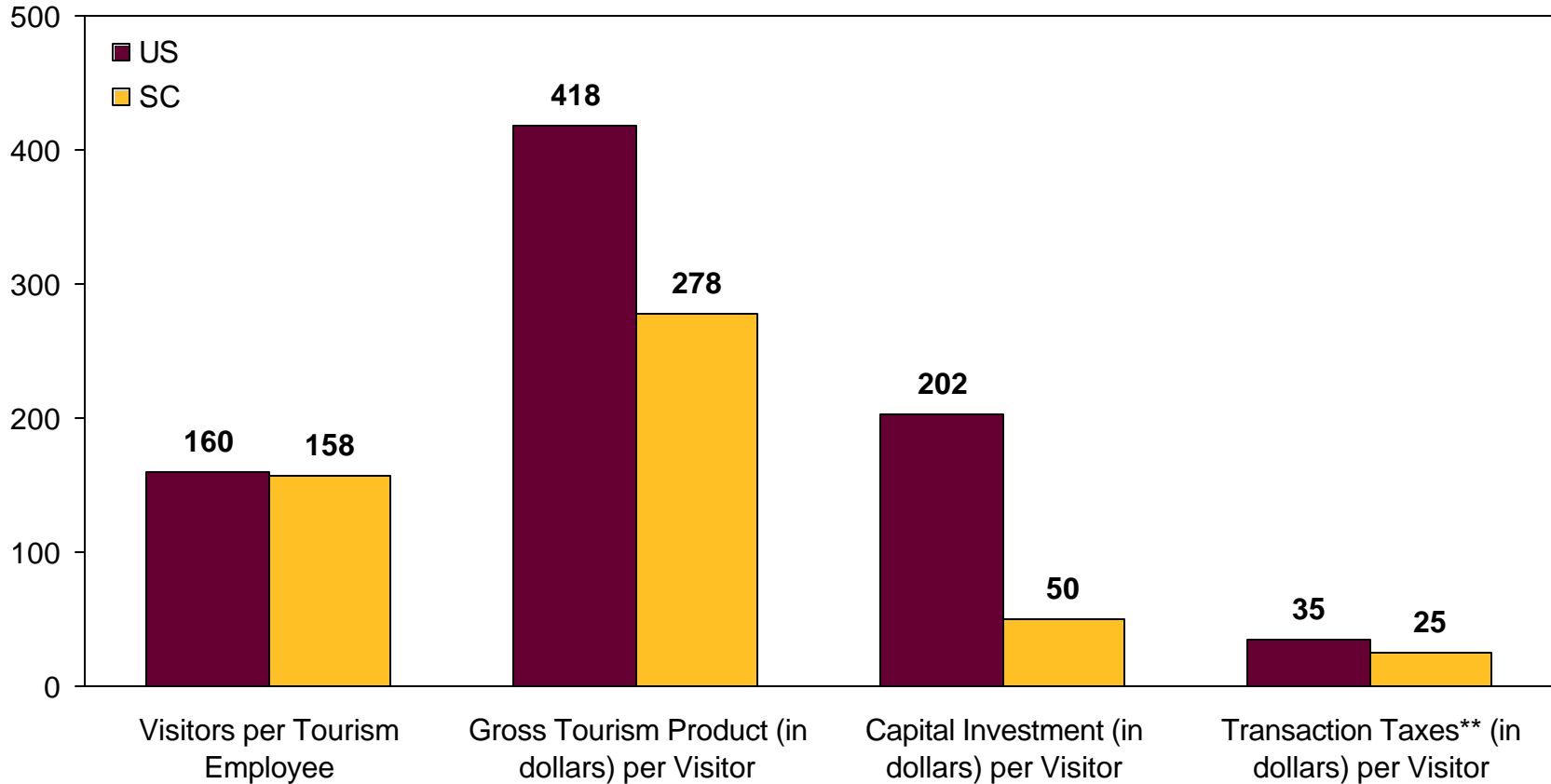
Note: \* "Location Index", also known as "Location Quotient", equals 1 when a state's share of cluster employment equals the state's share of total employment. A Location Index greater than 1 indicates that state has a disproportionate share of Hospitality & Tourism employment, relative to the state's total employment. Narrow cluster definition.

Source: Cluster Mapping Project, Institute for Strategy and Competitiveness, Harvard Business School

# Tourism Industry Benchmark Metrics per Visitor

## South Carolina Compared to the United States

Key Per Visitor\* Metrics of South Carolina and United States Tourism Industry, 2001



\* Visitor Trips exclude 'pass through' visitors to make SC comparable to the U.S.

\*\* Transaction Taxes using projected for SC 2001, actual U.S. 2002

Source: SC PRT; TIA; WTTC United States Report, 2003; Monitor Analysis

# South Carolina Tourism Business Environment

## Emerging Findings from the Surveys and Interviews

### Advantages:

- Relatively high number of airports
- Active technical college system
- **Attractive natural assets, including climate, golf courses, and coastline**
- **Unique military and American history assets**

### Disadvantages:

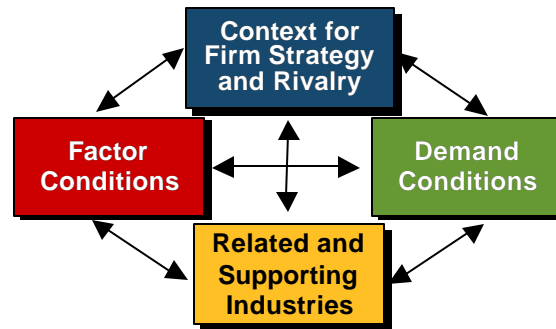
- Lack of hub airport means few direct flights to key markets and expensive fares
- **Relatively weak K-12 and specialized advanced educational programs for locals**
- **Limited supply of local skilled workers**
- Lack of interstate access to Myrtle Beach
- Underdeveloped port passenger terminal in Charleston
- Few specialized tourism research centers

### Advantages:

- Intense local competition

### Disadvantages:

- **Few local headquarters of core operations**
- **Limited collaboration between firms on development of integrated product offerings**
- **Highly fragmented industry lacking major anchor organizations**



### Advantages:

- Frequent feedback from customers on product improvements

### Disadvantages:

- Relatively small presence of international visitors
- Lack of high-end tourism consumers beyond Hilton Head and Charleston

### Advantages:

- A number of specialized transportation-related sub-clusters

### Disadvantages:

- Relatively low quality of suppliers
- **Limited interaction on new product development**
- Few support industries that capture a significant portion of the value chain (i.e., tour operators, reservation systems, large travel agencies)

Source: Monitor Competitiveness Survey, Interviews, Monitor Analysis  
Note: Red bold letters illustrate key themes; black dotted boxes indicate potentially leverageable assets

# South Carolina Tourism Business Environment

## Emerging Findings from the Surveys and Interviews (Cont.)

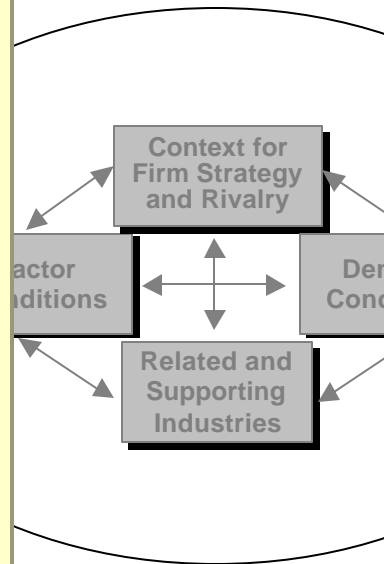
### Government

#### Advantages:

- Relatively good recent collaboration between public and private sectors
- Recent improvements in marketing and promotional efforts by the state

#### Disadvantages:

- Need for greater support for specialized education and training programs
- Lack of adequate market research
- Limited funds available for tourism promotion and perceived overall lack of support from the legislature
- Limited role in providing policy framework and catalyzing collaborative efforts



### Institutions for Collaboration

#### Advantages:

- Emergence of several regional organizations for and initiatives aiming to build networks
- Effective organizations for marketing key tourism destination areas

#### Disadvantages:

- **Few statewide organizations working to upgrade the quality of all elements of the business environment**
- **Limited coordination between universities, government and companies**
- **Numerous regional cluster institutions yet limited focus on building partnerships**

Source: South Carolina Competitiveness Survey, Monitor Interviews, Monitor Analysis

Note: Red highlights indicate factors different from the state overall, or of particular significance to the cluster

# Findings and Implications for the Hospitality and Tourism Cluster

## Aligning Visitors, Product Offering to an Updated Strategy

### Visitors

#### Identify attractive, high-potential segments

- High per capita tourism expenditures
- High conversion rate
- Cost-effective marketing and distribution channels
- Critical mass of visitors
- Adequate transportation infrastructure in place

### Updated Strategy

#### Create a differentiated position that provides the right destination for the right tourist segments by:

- Improving visitor mix
- Packaging, cross-selling, and cross-promoting
- Broadening and upgrading of product offering
- Increasing conversion of pass-through / business visitors
- Increasing shoulder season occupancy
- Leveraging tourism to attract talent and businesses to SC

### Product Offering

#### Identify attractive, high-potential assets

- Coastline and beach resorts
- Historic cities, towns, plantations, and military sites
- Golf courses
- State parks and forests
- Cultural attractions
- Family attractions
- Retail offering

# Findings and Implications for the Hospitality and Tourism Cluster

## Strengths, Challenges, and Action Items

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December 8, 2003

### Strengths

- Natural endowments
  - Attractive coastline
  - Climate and quality of life
  - Multiple historic/heritage assets
- Economic development organizations
  - Effective state and regional marketing organizations
  - Relatively effective public/private sector collaboration
- Workforce and education
  - Strong technical colleges
  - Select high school providing specialized H&T programs

### Challenges

- Tourism-oriented transportation infrastructure for tourism
  - Few direct flights and expensive air fares
  - Lack of interstate access to Myrtle Beach
  - Underdeveloped passenger terminal in Port of Charleston
- Visitor mix
  - Disproportionate concentration on drive leisure tourists from established domestic markets
  - Limited segmentation efforts; lack of market research
- Cluster composition
  - Few large firms that can act as anchor organizations
  - Limited collaboration in integrated product offering
  - Relative low presence of upstream and support firms

### Action Items (Preliminary)

- Create a differentiated position coupling an attractive coastline and rich historical assets
  - Appeal to international and domestic fly-in visitors looking for unique US destinations
- Upgrade tourism-related educational system
  - Promote industry/university/technical colleges collaboration to make SC a premiere H&T educational and research location
  - Leverage technical colleges to develop training programs for local and rural workers
  - Expand H&T vocational high-school training
- Develop state transportation infrastructure plan
  - Attract low-cost carrier to state
  - Upgrade passenger terminal in Charleston
  - Speed-up construction of I-73
- Entice cluster-specific organizations to
  - Promote business development through collaborative efforts and data-driven plans
- Recruiting and expansion
  - Targeted recruiting of tour operators, reservation systems, travel agencies
  - Creation of statewide cluster organizations
  - Focus on tourism services related research and technology companies

## Key Themes and Lessons from the Cluster Analyses

### Themes

- Good job growth, and capital investment
- Low value creation and innovation
- Many similarly positioned competitors
- Good breadth, but little depth in clusters
- Limited collaboration among cluster firms
- Legacy of low cost strategy
  - Abundant, trainable workers
  - Good transportation infrastructure
  - Responsive government
  - Few highly skilled, specialized talent
  - Little R&D
  - Few institutions linking clusters and upgrading the business environment

### Lessons

- Establish a differentiated position, e.g.:
  - Automotive: a center of research and engineering in the South
  - Textiles: custom products, fast turn-around, inputs to nearby customers
- Build upon unique assets, e.g.:
  - Tourism: create a destination with relaxation AND historical attractions
  - Chemicals: leverage the Savannah River Site
- Invest in assets as appropriate, e.g.:
  - Automotive: Clemson Center of Automotive Research
- Organize the cluster, e.g.:
  - Chemicals: communicate common needs to government and universities
  - Textiles: focus more efforts on upgrading the business environment
  - Tourism: gain consensus across regions on an integrated strategy

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  - Textiles
  - Tourism
- **Implications and Recommendations**

## South Carolina's Traditional Strategy

- Compete based on being an efficient, **low cost location**:
    - **Low business costs**, including taxes;
    - Abundant, **flexible workforce**;
    - Good **transportation infrastructure**;
    - Competitive **incentive package**
  - Recruit large-scale **manufacturing** companies from outside the state
  - Create an array of **aggressive local economic development organizations** focused on business attraction
  - **Government in the leadership** role in economic development
    - Spending driven
- 
- Create **jobs** and attract capital **investment**

# South Carolina's Traditional Strategy Limits

- **Wages**
  - Average wages were 80.5% of the U.S. average in 2001
  - Wage growth of 3.6% from 1990-2001 lagged the US growth rate of 3.9%
- **Productivity**
  - Value creation per worker per year in South Carolina lags other U.S. states
- **Competition**
  - Globalization has led to the emergence of many lower cost competitors
  - Unemployment is 7.1%, higher than the US rate of 6.0%.

# South Carolina's Traditional Strategy

## Key Strengths

### Economic Composition

- Diversified mix of clusters
- Good positions across a range of manufacturing industries

### Education and Workforce

- Flexible, hard working labor force
- Strong technical colleges

### Infrastructure

- High quality highway system
- Proximity to large efficient seaports (i.e. Charleston and Savannah)

### Input Costs

- Relatively low cost utilities, and land

### Role of Government

- Streamlined regulation
- Efficient worker training system

### Economic Development Organizations

- Dense network of recruiting organizations
- Good incentives and recruiting effort

### Research and Technology

- SPAWAR, Savannah River Site
- University leadership committed to economic development
- Select disciplines at research universities

# New Directions for South Carolina

## Traditional Strategy

- **Create Jobs:** traditional objectives were to create jobs and attract capital investments
- **Low Cost:** South Carolina has competed as a low cost location using:
  - Tax breaks and incentives;
  - Abundant labor; and
  - Good physical infrastructure
- **Recruit Companies:** efforts targeted outside operations based on the number of jobs and size of investments they would bring
- **Government Leadership:** government has led with effort and skill from the executive branch, and tax incentives and regulatory policy from the legislative branch

## New Directions

- **Raise Prosperity:** new objectives should be to raise the prosperity of South Carolinians
- **High Value:** South Carolina can compete by enabling firms to create high value, which will:
  - Raise prosperity; *and*
  - Lead to job creation, and capital investments
- **Build Clusters:**
  - Recruit companies based on fit with existing clusters and assets; *and*
  - Upgrade elements of business environment to retain and grow companies; *and*
  - Invest in new assets to seed clusters
- **Collaboration across Groups:** development should be a collaborative process involving government at multiple levels, as well as firms, teaching and research institutions, and institutions for collaboration

## Key Challenges Remaining

### Distribution of Econ Performance

- Deep poverty in numerous rural counties
- Much lower levels of prosperity among African-Americans

### Economic Composition

- Difficult environment for start-ups and small firms

### Clusters

- Little depth of clusters
- Limited interaction among cluster members

### Education and Workforce

- Improving, but still under-performing K-12 system
- Relatively few highly skilled and specialized technicians
- Relatively few specialized engineers in select clusters

### Physical Infrastructure

- Relatively expensive and time-consuming air access

### Econ Development Organizations

- Overlapping sales and marketing organizations
- Lack of cluster-specific institutions for collaboration
- Lack of university/college-industry institutions for collaboration

### Culture and Attitudes

- Emphasis on distributing resources rather than growing the pie
- Low self-expectations

### Research and Technology

- Lack of first-tier research universities

## Recent Progress

### Economic Composition

- Start-ups: several successes such as AT Desk, Forest Technology Group, Southern Sun
- Textiles: foreign direct investment to get closer to U.S. based buyers
- Automotive: Auto research park is attracting highly sophisticated, specialized suppliers (e.g. BMW, IBM)

### Education and Workforce

- Private sector leadership on improving K-12 and college education
- Significant improvement in SAT scores over the last year

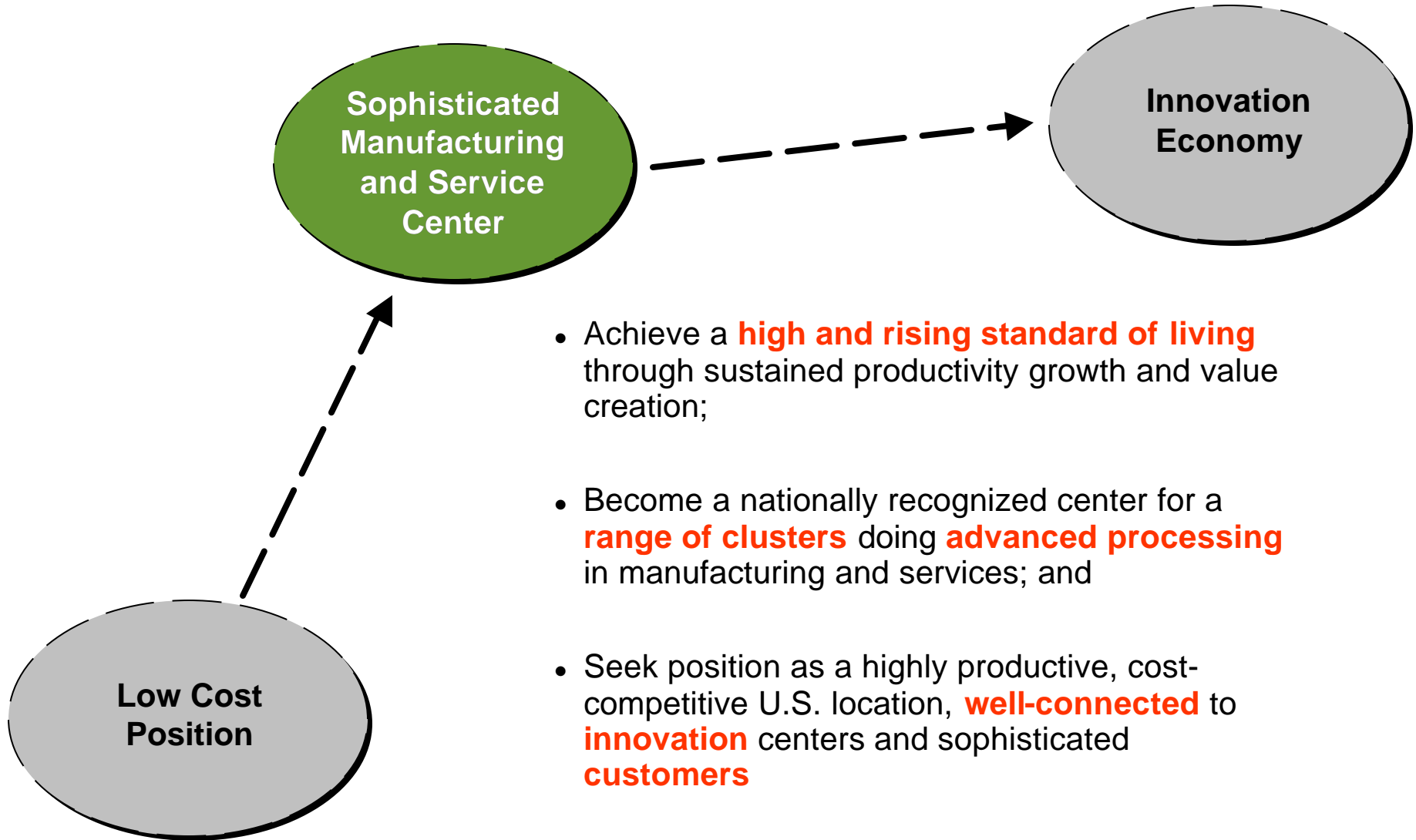
### Economic Development Organizations

- Recent formation of institutions for collaboration helping entrepreneurs network with each other, capital providers, and research centers

### Research and Technology

- New commitment to cross-university collaboration and the support of economic development
- Endowed Chairs Program
- Clemson Automotive Research Center

## A Shared Economic Vision for South Carolina



## **Eight Campaigns to Reach the Economic Vision**

*To achieve this vision South Carolina should pursue several campaigns, including:*

**Campaign 1: Activate and Upgrade Clusters**

**Campaign 2: Continue to Enhance Education and Workforce Training**

**Campaign 3: Invest in Research and the University System**

**Campaign 4: Increase Support for Start-ups and Local Firms**

**Campaign 5: Create an Explicit Economic Development Plan for Distressed Areas**

**Campaign 6: Create New Institutions to Support Economic Development**

**Campaign 7: Launch Internal and External Marketing Campaigns**

**Campaign 8: Measure Progress**

# The Capacity to Act

## What We Heard in the Interviews

### Shared Vision

#### Need to develop consensus:

- “The problem is that the objectives [of the traditional strategy] were so self-limiting.”
- “We shouldn’t recruit companies with patents. We should keep doing what we’ve been doing.”
- “The state is simply not committed to economic development through education. There is a gap in a scale that is difficult for us to understand.”

### Committed Leadership

#### Concerns about leadership:

- “South Carolina is in desperate need of visionary leadership. Lack of leadership is profound and permeates the communities. Pessimism follows. It is the chicken or egg dilemma.”
- “Our problem is that now the bulk of assets are run by people from outside the state, that are not vested in it.”

### Organizing Architecture

#### Need for new types of economic development organizations:

- “The more developed networks in the state are the networks for politics and lobbying.”
- “Organizations reflect the current strategy. Instead of growing companies, they bring them from outside. Instead of creating a business environment that attracts firms, they go after them.”

### Sense of Urgency

#### Concerns about the ability to change:

- “People have a fear of failure, rather than a fear of change. It is a mix of will and psychology. We are not sure we can pull this off.”
- “The main problem of South Carolinians is their lack of confidence in that they can be world class. Once you have knocked that out, there is no problem at all.”

# An Integrated Process with Multiple Working Committees Accountable for Specific Results

