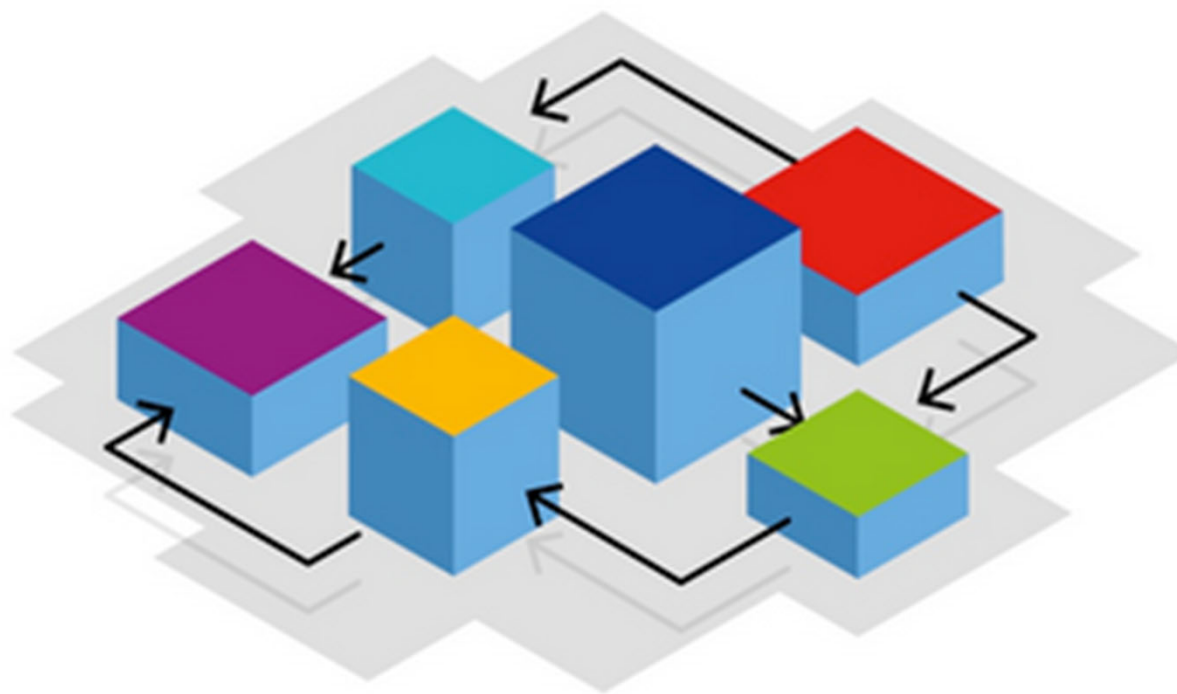




# Clusters and Clusters Analysis in the Laredo Region



**Dr. Federico Schaffler**

*Director Texas Center for Border Economic and Enterprise Development  
Texas A&M International University*

*Presentation for members of the Laredo  
Economic Development Committee*

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*Laredo, Texas, November 5, 2020*

# What are Clusters?



## What Are Clusters?

Today's economic map of the world is characterized by "clusters." A cluster is a geographic concentration of related companies, organizations, and institutions in a particular field that can be present in a region, state, or nation. Clusters arise because they raise a company's productivity, which is influenced by local assets and the presence of like firms, institutions, and infrastructure that surround it.



## U.S. Cluster Mapping Project

The U.S. Cluster Mapping Project is a national economic development initiative led by Harvard Business School Professor Michael Porter through the Institute for Strategy and Competitiveness, with support from partners around the country and a federal grant from the U.S. Department of Commerce, Economic Development Administration.

## Who is Michael Porter?

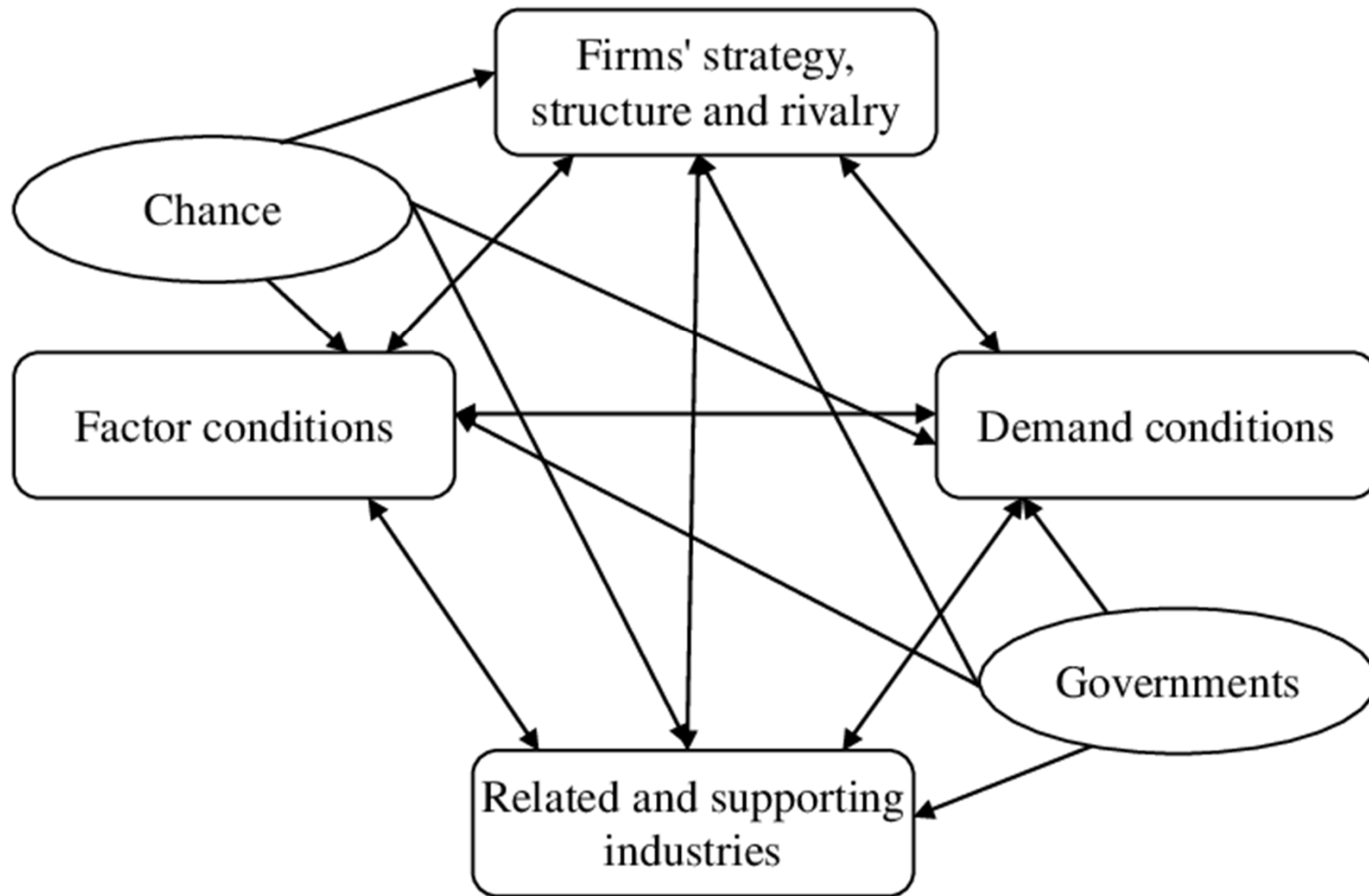
Michael Porter is an economist, researcher, author, advisor, speaker and teacher. Throughout his career at Harvard Business School, he has brought economic theory and strategy concepts to bear on many of the most challenging problems facing corporations, economies and societies, including market competition and company strategy, economic development, political competition, the environment, and health care. His approach is based on understanding the overall economics and structure of complex systems, in contrast to particular elements or parts. His extensive research is widely recognized in governments, corporations, NGOs, and academic circles around the globe. His research has received numerous awards, and he is the most cited scholar today in economics and business. While Michael Porter is at the core a scholar, his work has achieved remarkable acceptance by practitioners across multiple fields.



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Source. Harvard Business School, Institute for Strategy & Competitiveness.

# Michael Porter Clusters Model



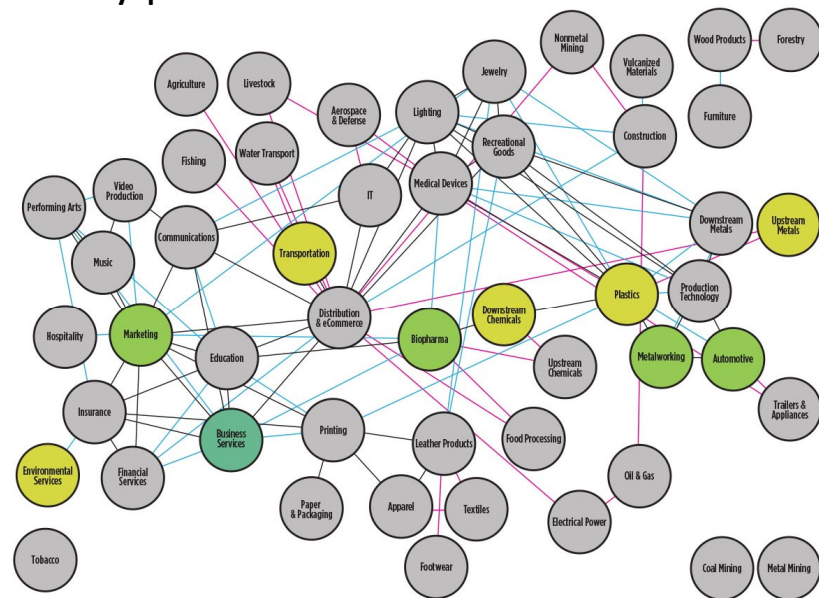
**Source:** Porter (1990)

# Types of Clusters

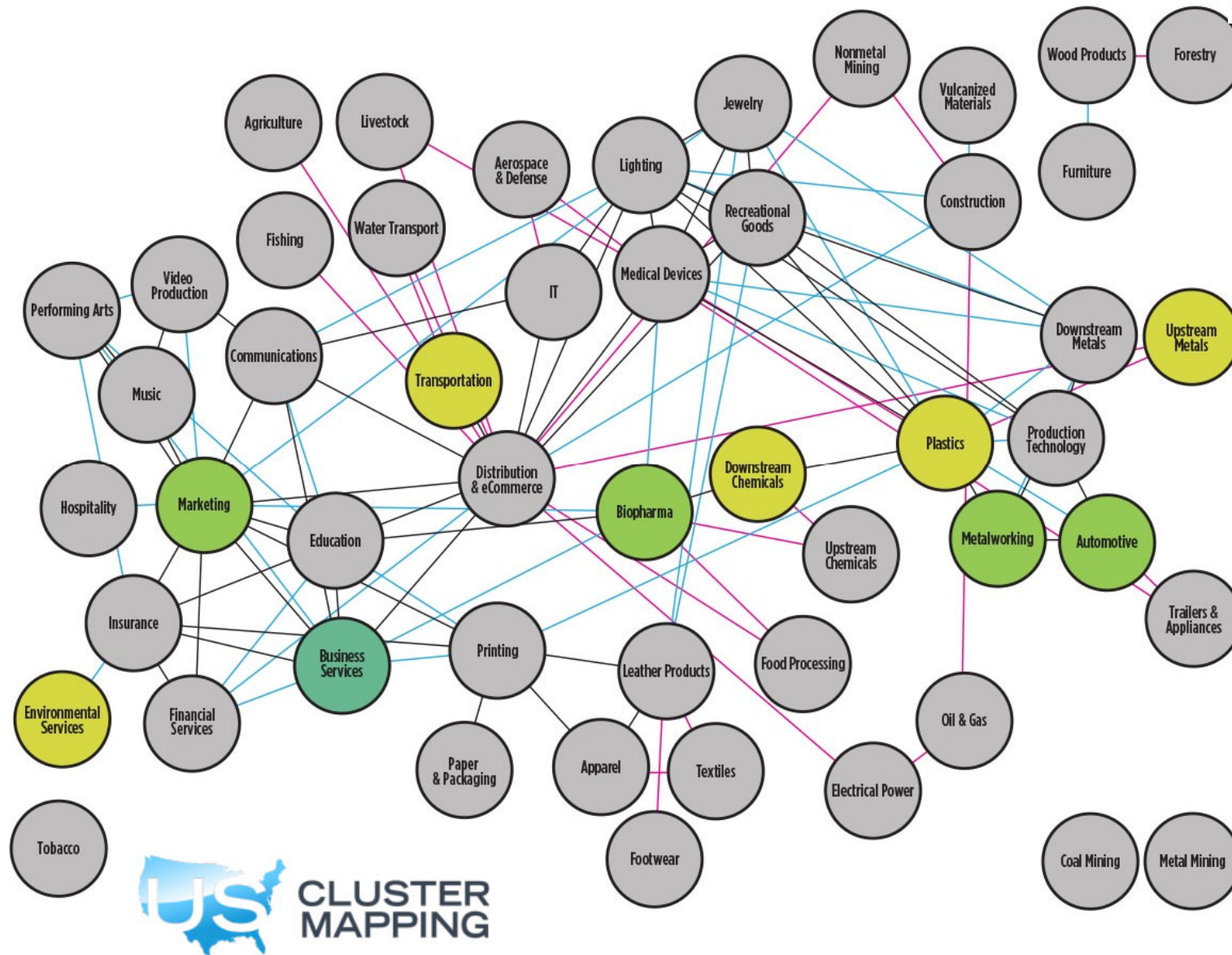
**Local clusters** consist of groups of industries that primarily serve the local market. Local clusters are not typically impacted by the competitive advantages of a region or a particular location. The majority of employment in a region comes from local clusters. They are not directly exposed to competition from outside of their direct geography. Some examples of local clusters include local health services like dentists and eye doctors.

- The majority of a region's jobs and job growth comes from its local clusters.
- However, traded clusters generate higher levels of innovation and offer higher wages.
- Local clusters typically support the traded clusters in a region.
- Both cluster types are important to the economic health and vitality of a region's economy.

**Traded clusters** provide products and services for cross regional markets and they bring in dollars from outside the region. The dollars generated from traded cluster companies are important to economic growth in the region because they represent new wealth being brought into the area rather than the simple recirculation of wealth already present in the market.




















# Interrelation of Clusters




















# Types of Clusters?

















## 51 Traded Clusters, 16 Local Clusters

### 51 Traded Clusters

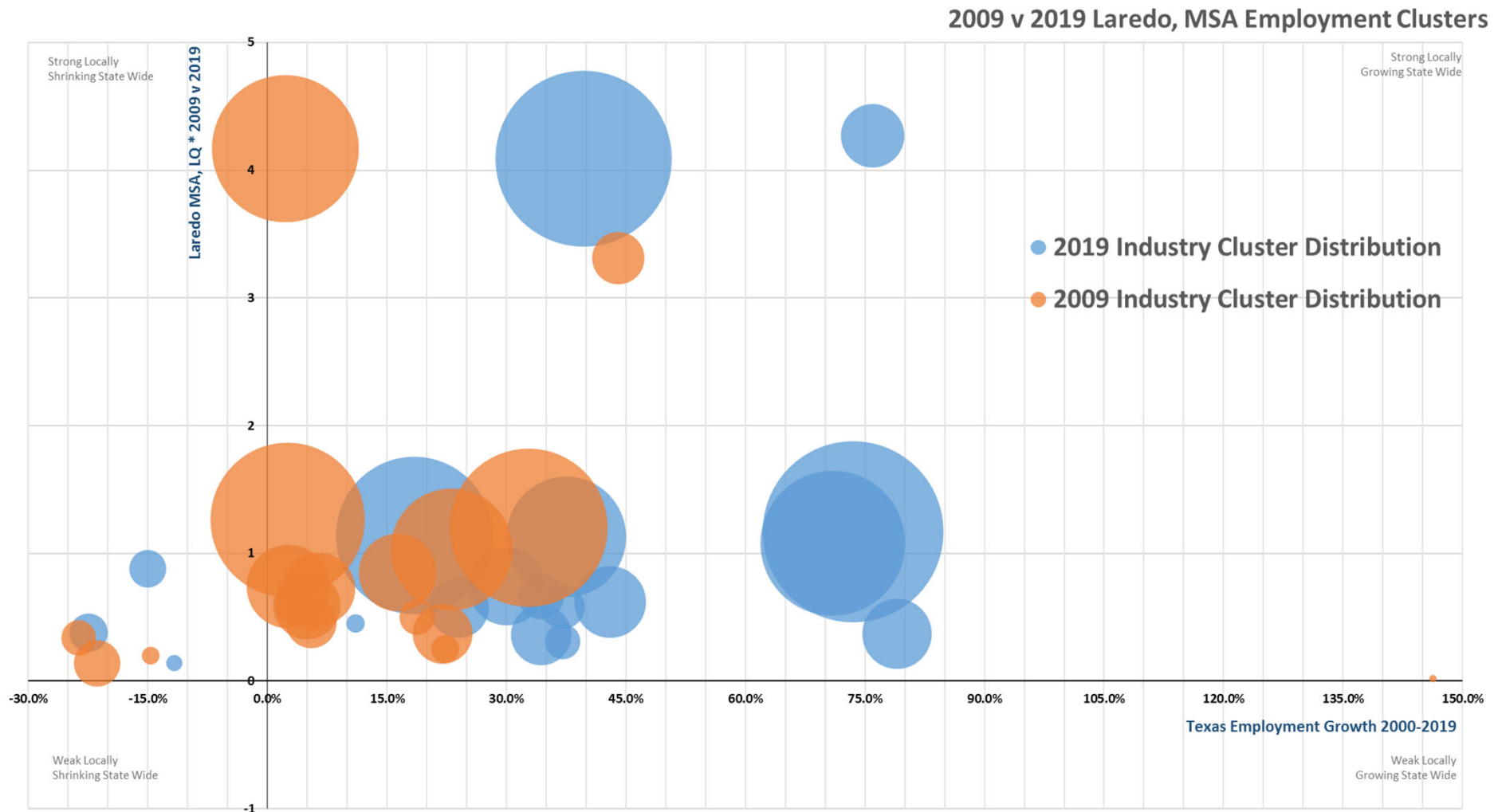
 Aerospace & Defense	 Food Processing
 Agriculture	 Footwear
 Apparel	 Forestry
 Automotive	 Furniture
 Biopharma	 Hospitality
 Business Services	 IT
 Coal Mining	 Insurance
 Communications	 Jewelry
 Construction	 Leather Products
 Distribution & eCommerce	 Lighting
 Downstream Chemicals	 Livestock
 Downstream Metals	 Marketing
 Education	 Medical Devices
 Electric Power	 Metal Mining
 Environmental Services	 Metalworking
 Financial Services	 Music
 Fishing	 Nonmetal Mining

 Oil & Gas
 Paper & Packaging
 Performing Arts
 Plastics
 Printing
 Production Technology
 Recreational Goods
 Textiles
 Tobacco
 Trailers & Appliances
 Transportation
 Upstream Chemicals
 Upstream Metals
 Video Production
 Vulcanized Materials
 Water Transport
 Wood Products

### 16 Local Clusters

 Commercial Services
 Community Organizations
 Education
 Entertainment
 Financial Services
 Food & Beverage
 Health Services
 Hospitality
 Household Goods
 Industrial Products
 Logistics
 Motor Vehicles
 Personal Services
 Real Estate
 Retail
 Utilities

# Laredo MSA Employment Clusters Growth (2000-2019)



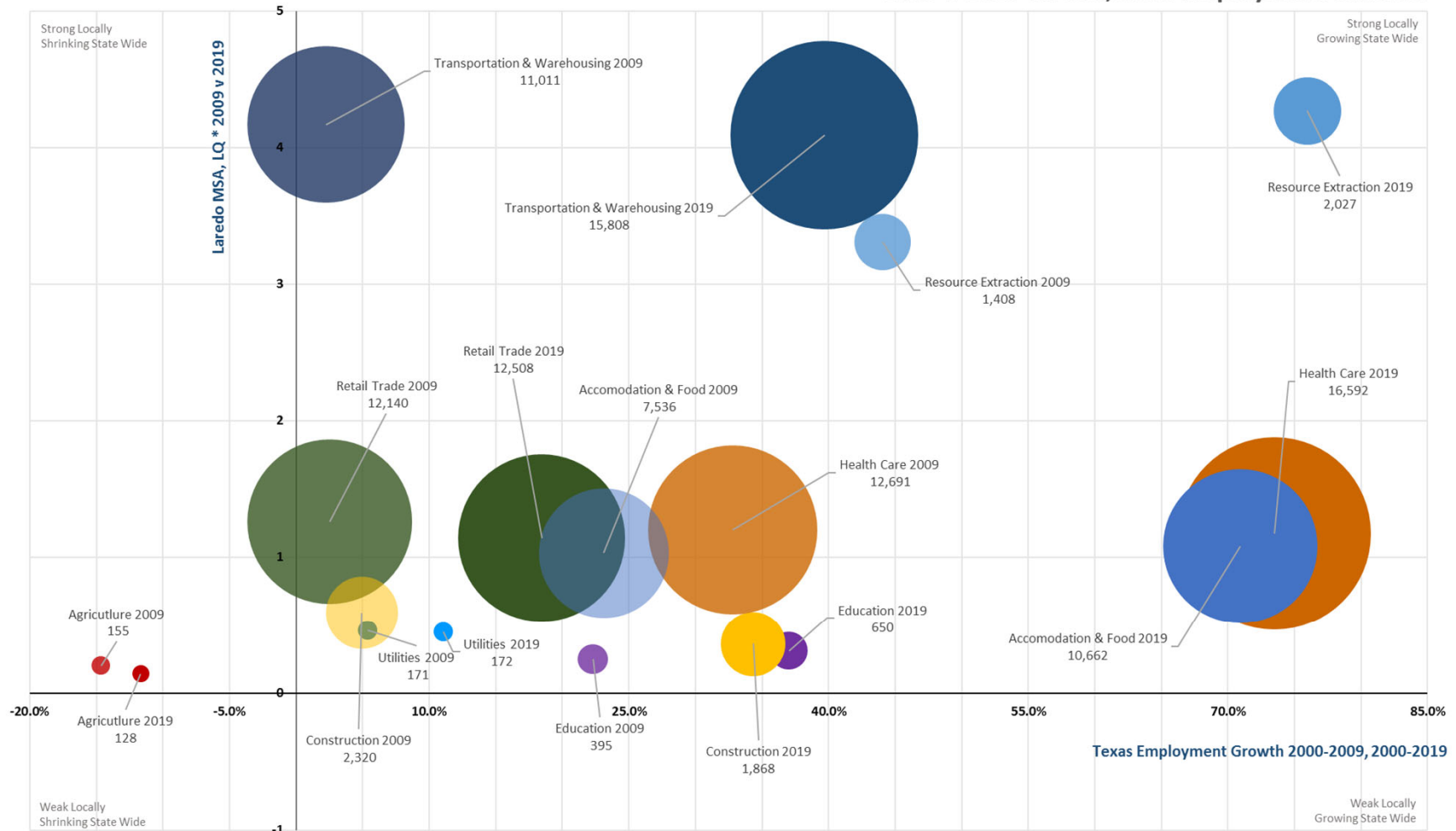
Source: U.S. Bureau of Labor Statistics  
 Compiled by: Texas Center for Border Economic and Enterprise Development

\* An LQ of 1 indicates the industry has the same share of its area employment as it does in the nation  
 Size of Bubble = Number of Jobs in Cluster

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# Laredo MSA Clusters: Employment Clusters (2009 v 2019 comparison)

2009 v 2019 Laredo, MSA Employment Clusters

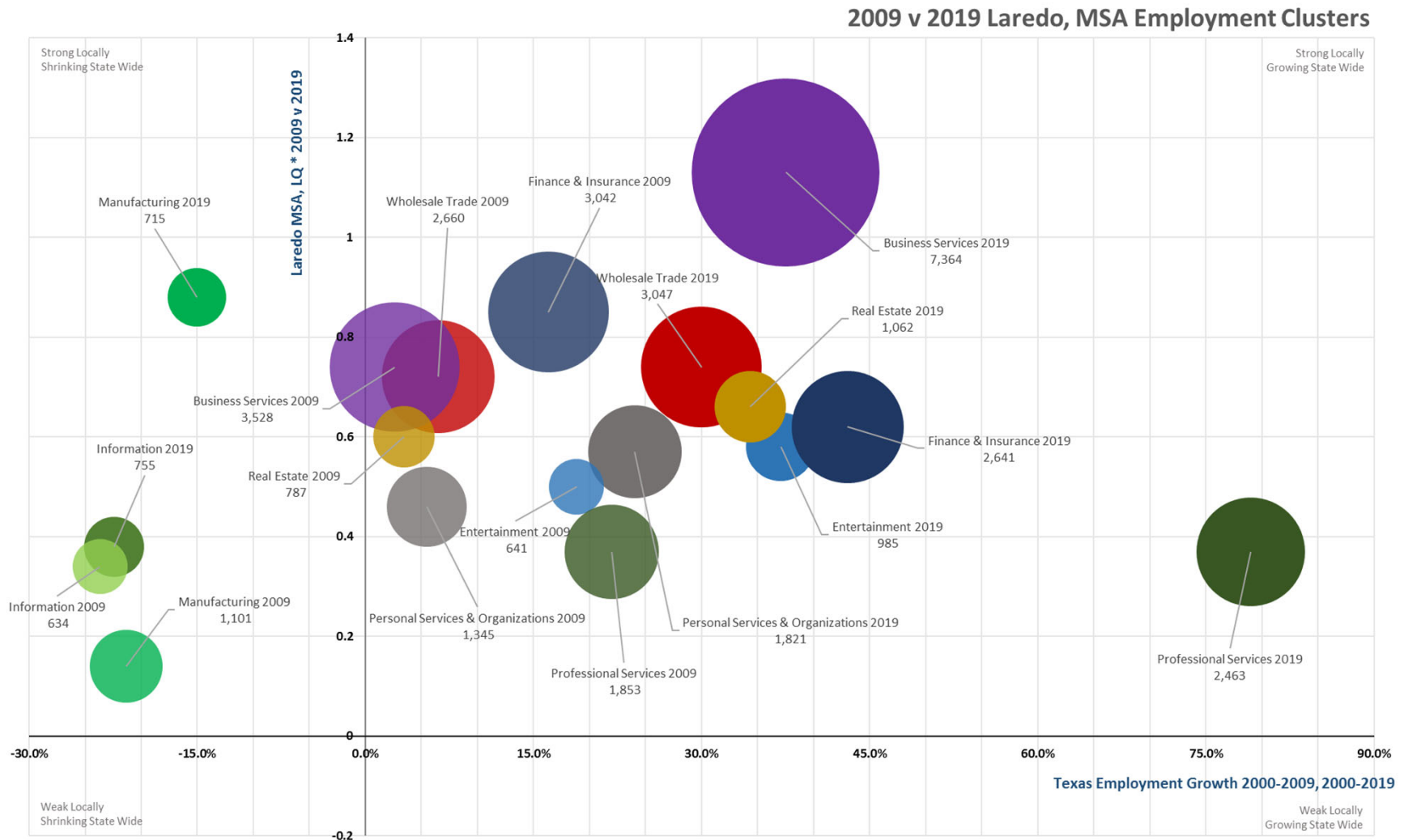


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# Laredo MSA Clusters: Employment Clusters (2000-2019 comparison)



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Source: U.S. Bureau of Labor Statistics  
Compiled by: Texas Center for Border Economic and Enterprise Development

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# Laredo Employment by Major Occupational Group (2019-2029 est.)



**Table 1.1 Employment by major occupational group, 2019 and projected 2029  
(Numbers in thousands)**

2019 National Employment Matrix title and code		Employment		Change, 2019–29		Median annual wage, 2019 <sup>(1)</sup>
		2019	2029	Number	Percent	
Total, all occupations	00-0000	162,795.6	168,834.7	6,039.2	3.7	\$39,810
Management occupations	11-0000	10,697.2	11,202.2	505.0	4.7	\$105,660
Business and financial operations occupations	13-0000	9,016.3	9,492.5	476.2	5.3	\$69,820
Computer and mathematical occupations	15-0000	4,845.1	5,432.4	587.4	12.1	\$88,340
Architecture and engineering occupations	17-0000	2,728.9	2,803.7	74.8	2.7	\$81,440
Life, physical, and social science occupations	19-0000	1,460.3	1,528.5	68.2	4.7	\$68,160
Community and social service occupations	21-0000	2,797.7	3,146.3	348.6	12.5	\$46,090
Legal occupations	23-0000	1,335.6	1,403.2	67.6	5.1	\$81,820
Educational instruction and library occupations	25-0000	9,744.7	10,185.6	441.0	4.5	\$50,790
Arts, design, entertainment, sports, and media occupations	27-0000	2,923.6	2,997.6	73.9	2.5	\$51,150
Healthcare practitioners and technical occupations	29-0000	9,133.7	9,967.3	833.6	9.1	\$68,190
Healthcare support occupations	31-0000	7,013.4	8,598.1	1,584.8	22.6	\$28,470
Protective service occupations	33-0000	3,615.9	3,711.1	95.2	2.6	\$41,580
Food preparation and serving related occupations	35-0000	13,761.3	14,769.7	1,008.4	7.3	\$24,220
Building and grounds cleaning and maintenance occupations	37-0000	5,664.0	5,943.4	279.5	4.9	\$28,330
Personal care and service occupations	39-0000	4,724.1	5,088.4	364.3	7.7	\$26,220
Sales and related occupations	41-0000	15,525.3	15,222.0	-303.4	-2.0	\$29,630
Office and administrative support occupations	43-0000	20,633.0	19,673.3	-959.7	-4.7	\$37,580
Farming, fishing, and forestry occupations	45-0000	1,116.6	1,115.1	-1.5	-0.1	\$27,180
Construction and extraction occupations	47-0000	7,349.1	7,645.4	296.3	4.0	\$47,430
Installation, maintenance, and repair occupations	49-0000	6,128.0	6,301.3	173.3	2.8	\$46,630
Production occupations	51-0000	9,447.0	9,023.8	-423.2	-4.5	\$36,000
Transportation and material moving occupations	53-0000	13,134.8	13,583.6	448.9	3.4	\$32,440

**Footnotes:**

(1) Data are from the Occupational Employment Statistics program, U.S. Bureau of Labor Statistics. Wage data cover non-farm wage and salary workers and do not cover the self-employed, owners and partners in unincorporated firms, or household workers.

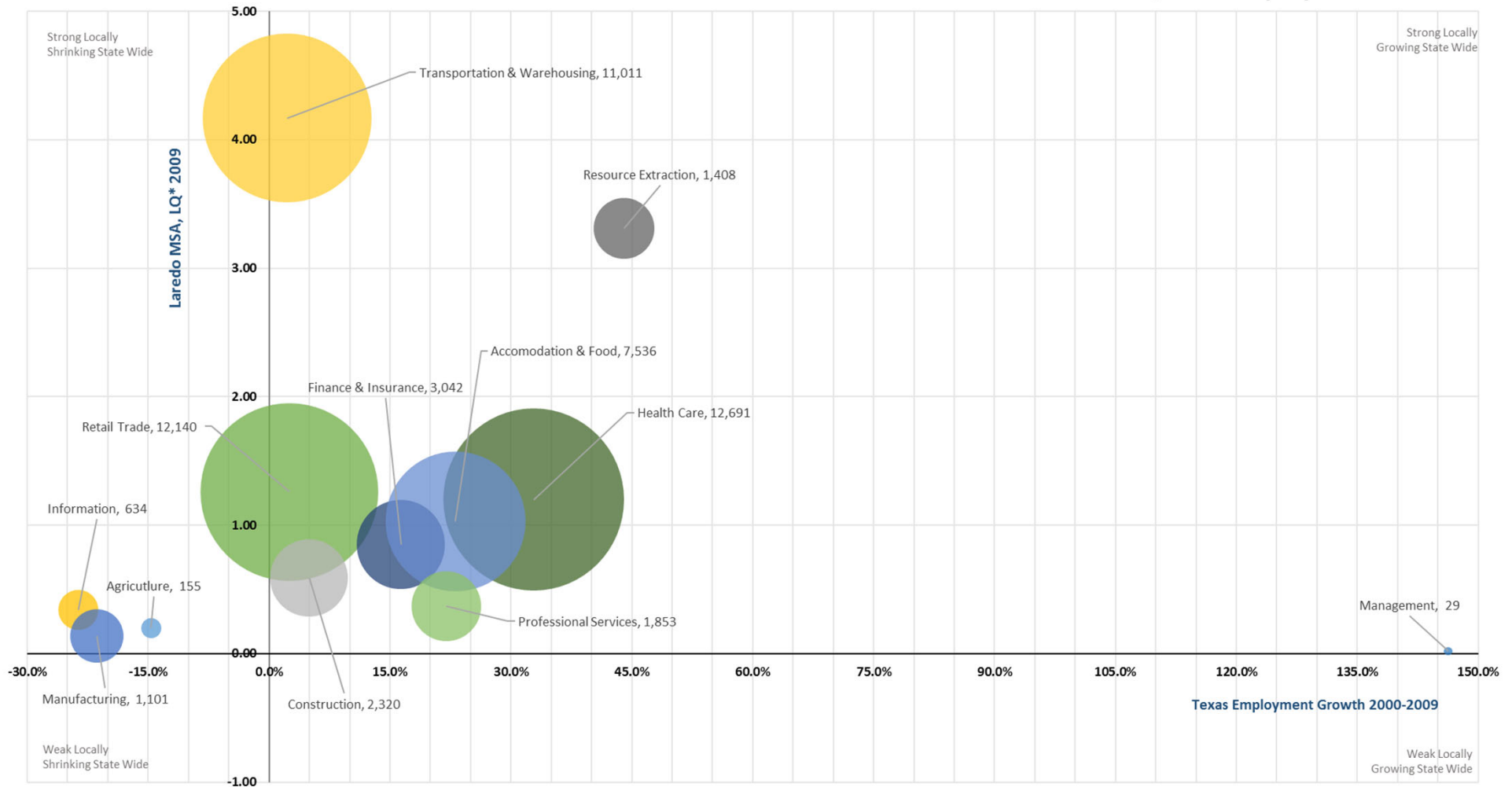
Note: Data is unavailable for values denoted with a "—".

Source: Employment Projections program, U.S. Bureau of Labor Statistics

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# Laredo MSA Clusters: Employment Clusters 2009

2009 Laredo, MSA Employment Clusters



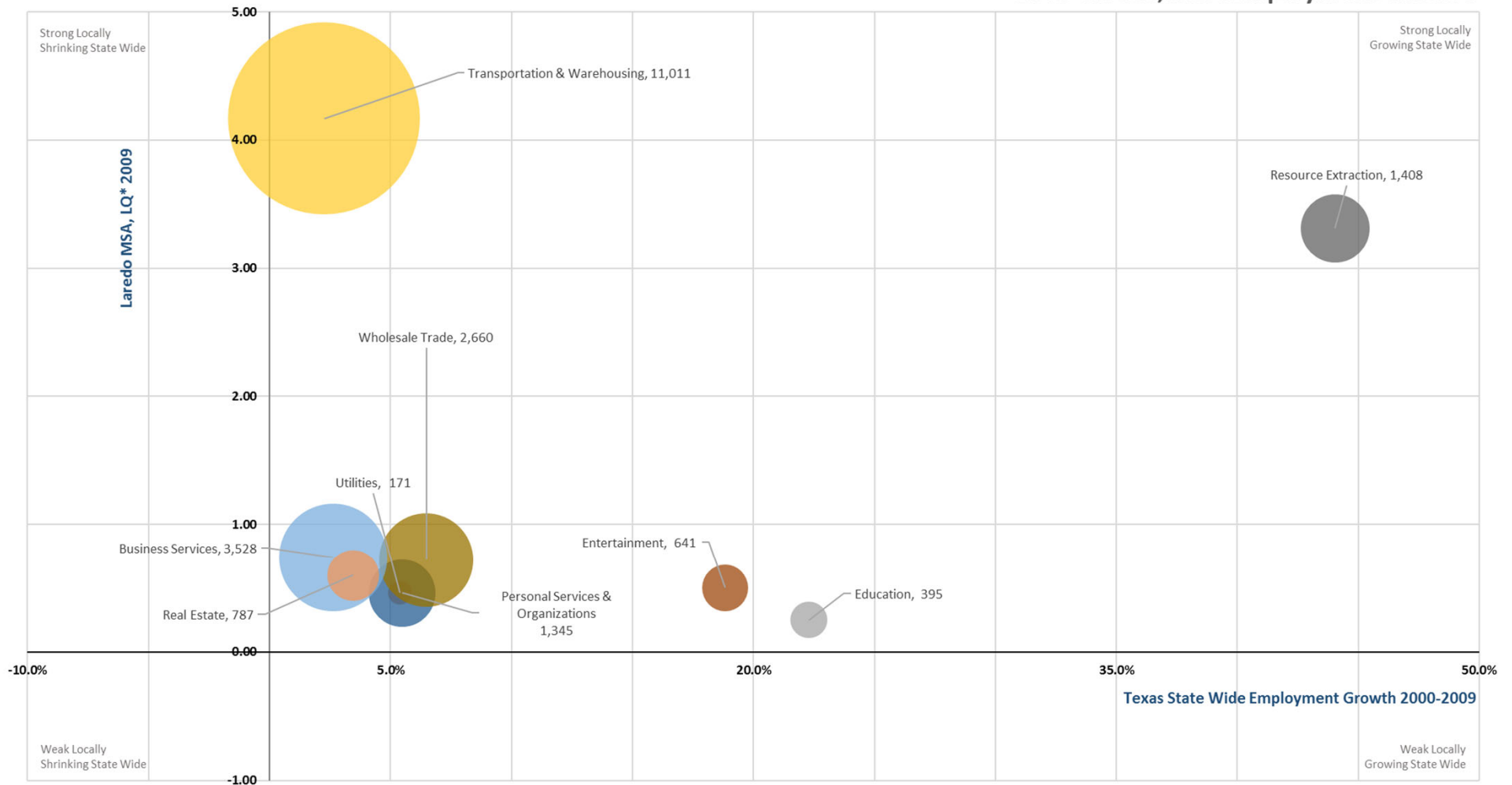
Source: U.S. Bureau of Labor Statistics  
Compiled by: Texas Center for Border Economic and Enterprise Development

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Size of Bubble = Number of Jobs in Cluster

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# Laredo MSA Clusters: Employment Clusters 2009

2009 Laredo, MSA Employment Clusters



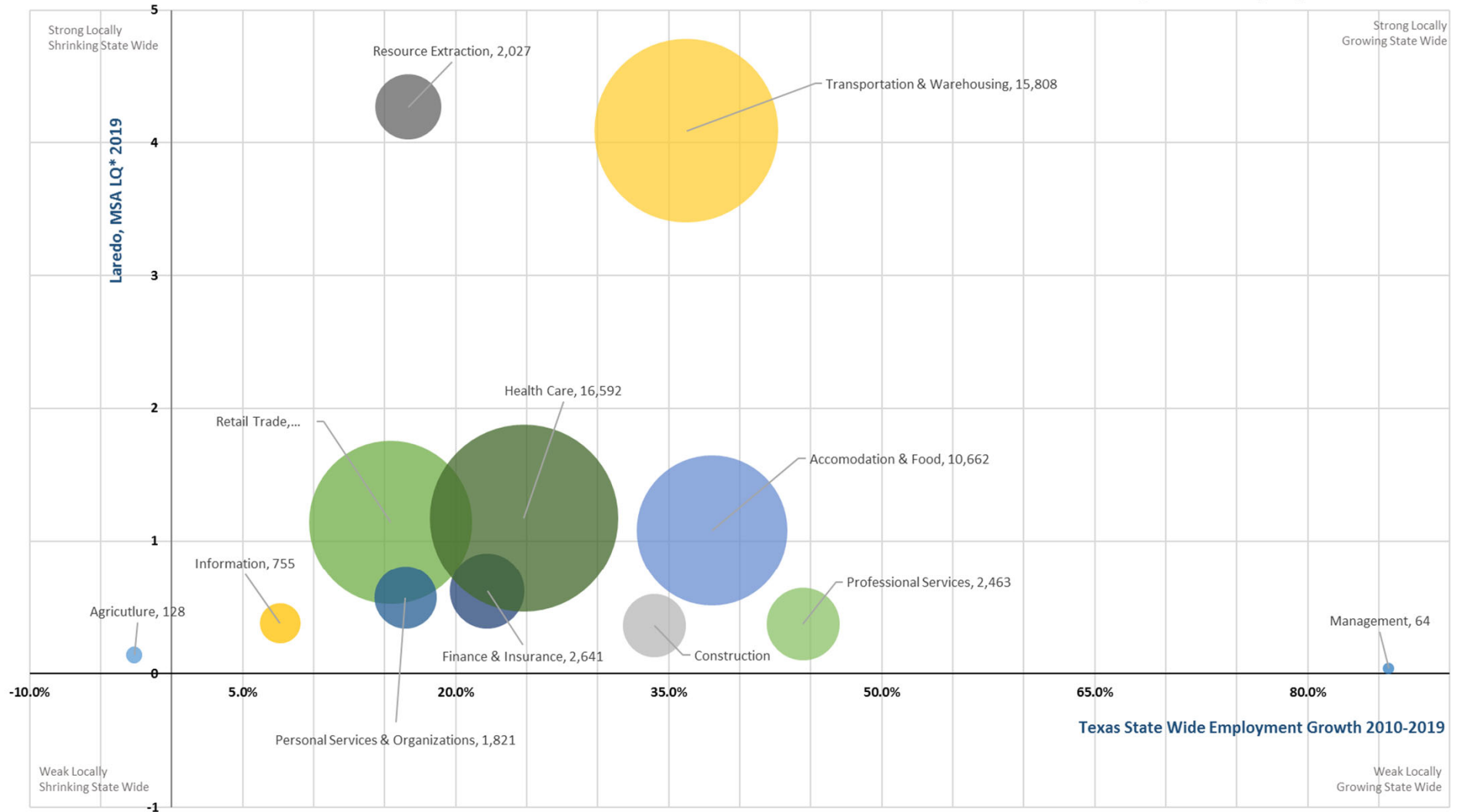
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# Laredo MSA Clusters: Employment Clusters 2019

## 2019 Laredo, MSA Employment Clusters



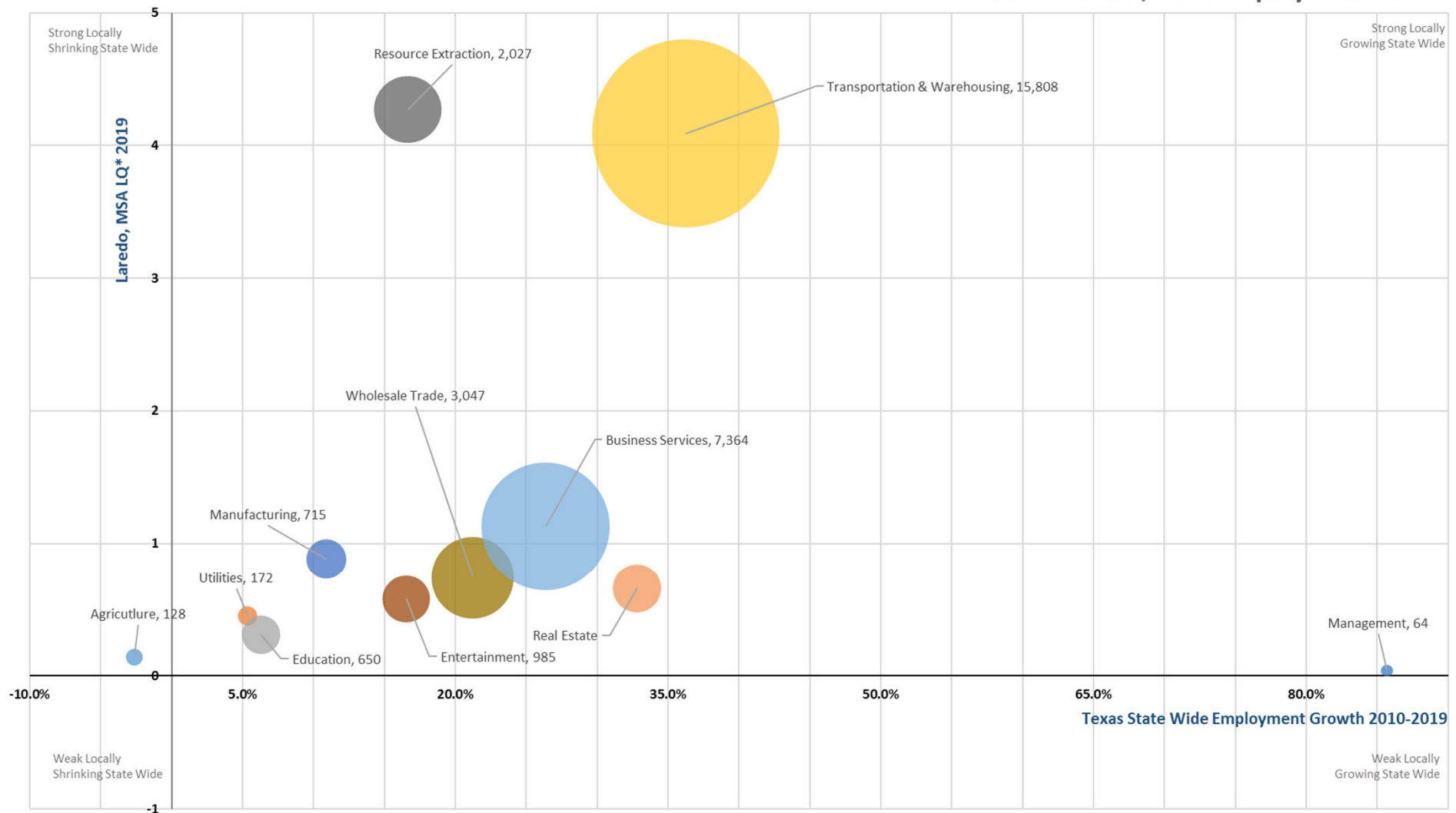
Source: U.S. Bureau of Labor Statistics  
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# Laredo MSA Clusters: Employment Clusters 2019

## 2019 Laredo, MSA Employment Clusters



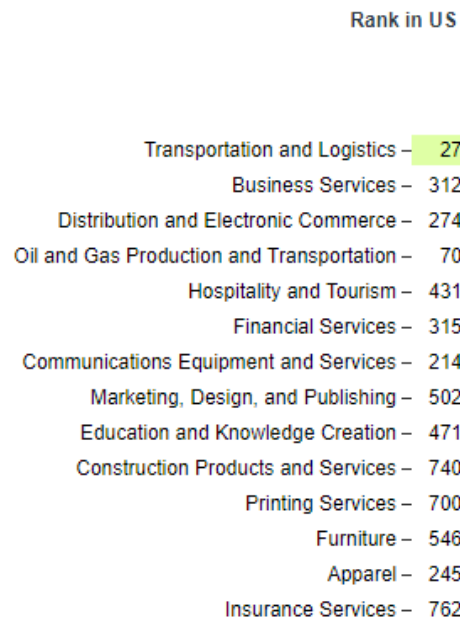
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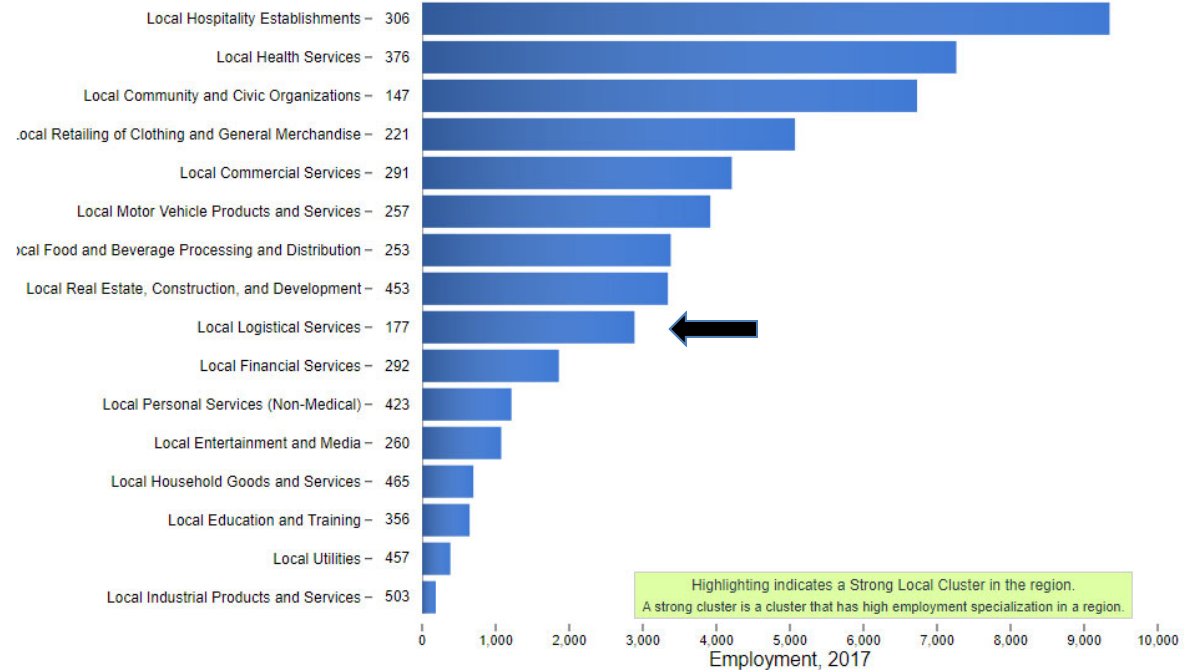
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# Traded/Local Clusters Employment (Webb Co. 2017)

## Webb County Employment by Traded Cluster, 2017 Private, Non-Agricultural Employment



## Webb County Employment by Local Cluster, 2017 Private, Non-Agricultural Employment



Highlighting indicates a Strong Local Cluster in the region.  
A strong cluster is a cluster that has high employment specialization in a region.



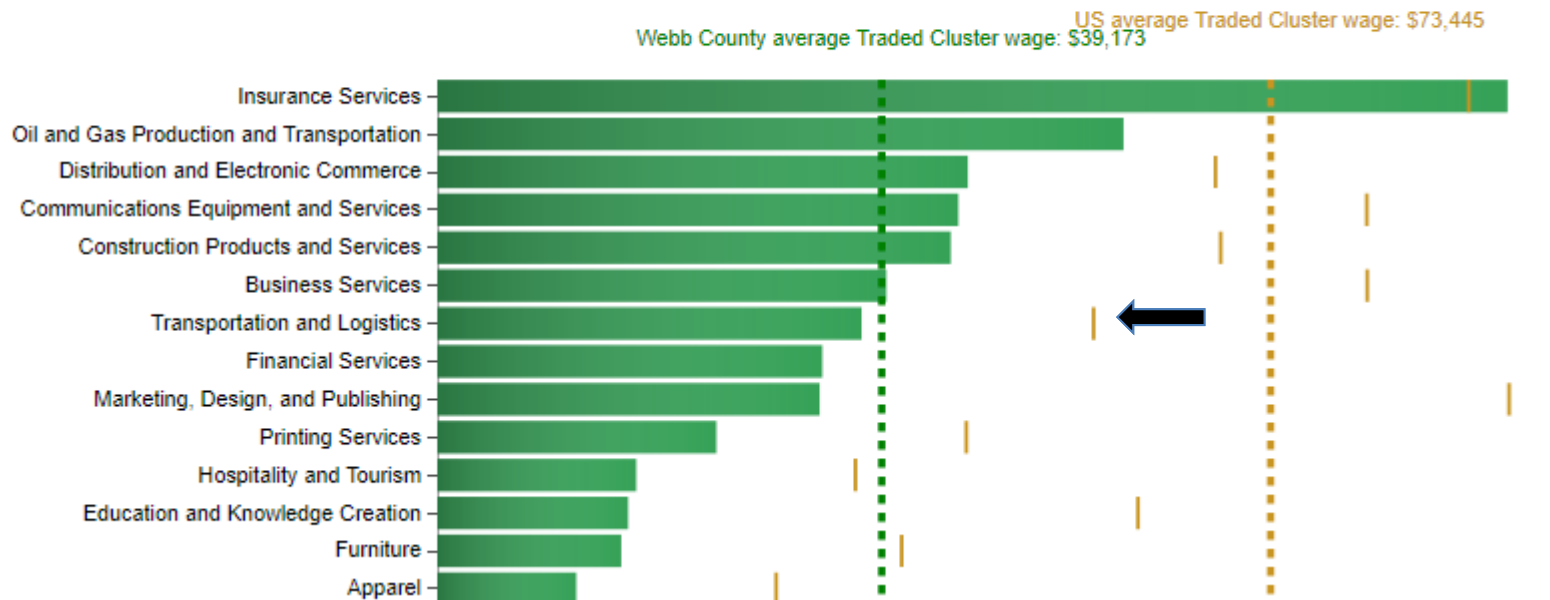
Source: U.S. Cluster Mapping Project

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# Webb County Wages by Traded Cluster 2017

## Webb County Wages by Traded Cluster, 2017 Average Private Wage

indicates US average wage for cluster



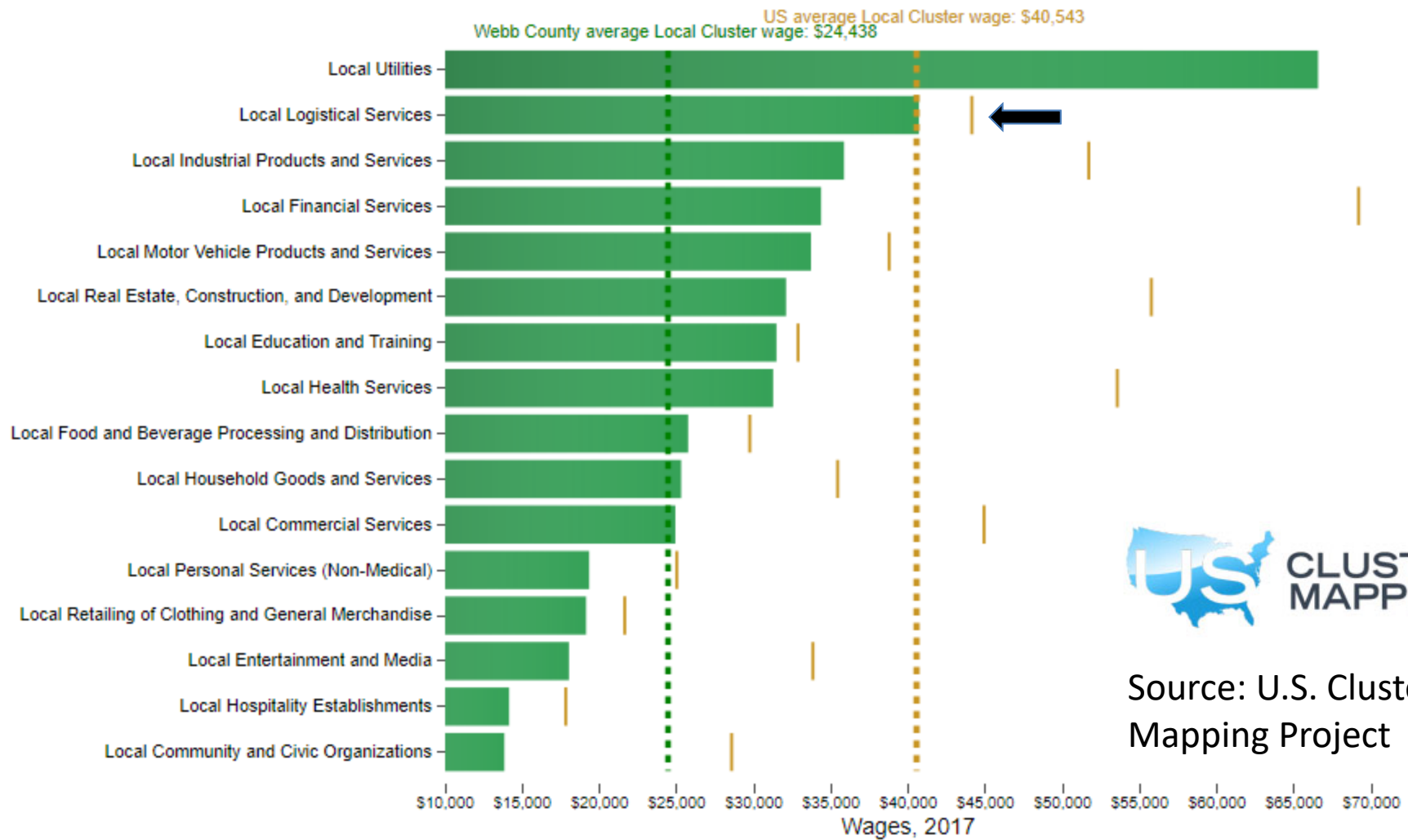
Source: U.S. Cluster  
Mapping Project

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# Webb County Private Wages by Local Cluster, 2017

## Webb County Wages by Local Cluster, 2017 Average Private Wage

indicates US average wage for cluster



Source: U.S. Cluster Mapping Project

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TEXAS A&M INTERNATIONAL UNIVERSITY  
**TEXAS CENTER**  
 Border Economic and Enterprise Development



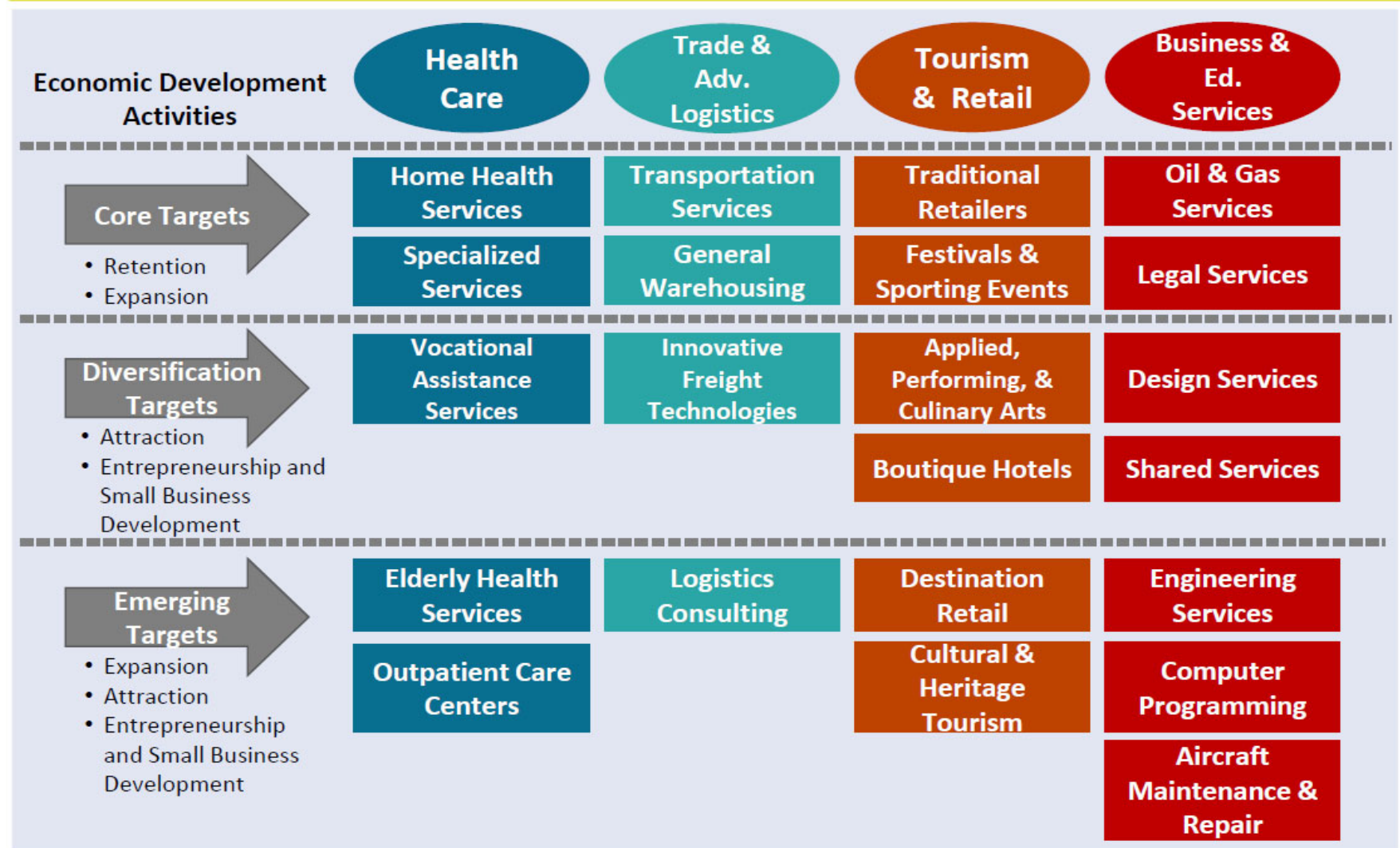
## V. 2017.9.1 Adopted September 18, 2017



CITY OF LAREDO, TX  
ECONOMIC DEVELOPMENT  
**STRATEGY**

V. 2017.9 Adopted September 18, 2017

# Target Industries and Niches (Laredo Comprehensive Plan)





***For more  
information:***



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