

MIAMI-DADE INDUSTRY CLUSTERS 2010



Miami-Dade County
Department of Regulatory and Economic Resources
Planning Division
Research Section
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MIAMI-DADE COUNTY'S INDUSTRY CLUSTER ANALYSIS

Miami-Dade County is an international community known as the “Gateway to the Americas,” with 2.5 million residents. It is home to a diverse and dynamic workforce of almost 1.3 million, producing a gross regional product estimated to be \$115 billion – larger than Bangladesh, the Dominican Republic and Sri Lanka combined.

As regional competition in the global market for talent and capital grows more intensely, it becomes more and more urgent to devise effective economic policies to enhance the County's competitiveness and attract businesses to locate here. In order to deliver the critically-needed infrastructure under limited budgets and provide a climate of technological innovation to existing and future businesses to thrive, we need to understand the nature of the industries and their needs. This analysis aims at providing better insight to the industry mix of the County so that we can better tailor our policy and economic development strategies in a collaborative effort with the business community.

METHODOLOGY

This analysis evaluates Miami-Dade County's industries utilizing the cluster concept – that is a geographically proximate group of interconnected companies and associated institutions in a particular field, including product producers, service providers, suppliers, universities, and trade associations.

Clusters consist of dense networks of interrelated firms that arise in a region because of powerful externalities and spillovers across firms and various types of institutions. Clusters are important because they play a fundamental role in knowledge creation, innovation, the accumulation of skills, and the development of pools of employees with specialized expertise.

While cluster analyses have been done in many regions of the Nation, definition of clusters and the composition of a specific cluster often varies among different studies. This study used the same cluster and sub-cluster definitions of the Cluster Mapping Project that was developed by Professor Michael E. Porter of the Institute for Strategy and Competiveness at the Harvard Business School. This framework allows us to combine classic economic base theory and the cluster concept to clearly differentiate patterns of spatial competition that have effective policy implications on enhancing competitiveness of the County.

According economic base theory, all industries in the economy have three different patterns of spatial competition based on the degree of industry dispersion across geographic areas and the markets they serve. They are broadly identified as “*Local*”, “*Natural Endowment Dependent*” and “*Traded*”. “*Local*” industries present in most if not all geographic areas, are evenly distributed, and provide goods and services primarily to the local market and therefore compete in only a limited way with other regions. “*Natural Endowment Dependent*” industries are located primarily where the needed natural resources are found and their products and services are mainly exported. “*Traded*” industries concentrate in a subset of geographic areas and sell to other regions and nations. They locate in a particular region based not on resources but on broader competitive considerations, and employment concentration usually varies significantly by region.

DATA SOURCE

The raw data for the analysis are County Business Pattern (CBP) data on private sector employment and wages by six-digit North American Industry Classification System (NAICS) Code in 2000, 2003, 2005, 2008, and 2010. We use Professor Porter's definition to classify them into clusters and sub-clusters. This dataset excludes agriculture and government jobs.

INDICATORS

Size of the cluster – we look at the size of the cluster in terms of employment. We also show the breakdown of the cluster and the size of its sub-clusters. For now, we focused on the ten (10) largest traded industry clusters, the four (4) largest local industry clusters, and one (1) natural endowment dependent industry cluster.

Average wages – wages provide an indication of the productivity of the employees in that cluster or sub-cluster. Due to disclosure issues of the CBP dataset, we do not have complete information to calculate the average wages for each cluster; therefore, we look at the average wages compiled by the Cluster Mapping Project for the Miami-Fort Lauderdale-Pompano Beach Metropolitan Statistical Area as a proxy for the County's average wage for the cluster.

Time series data on employment (2000 -2010) are used to account for business cycle and growth trends of a cluster. We include five years of data points and see how each cluster has performed over the decade, both in terms of numbers of jobs and in jobs as a share of total county private sector employment. We are able to identify emerging, mature, or declining clusters by examining these trends.

Location quotient – Location quotient (LQ) is a measure of the employment concentration of the cluster in Miami-Dade County compared to the nation as a whole. A location quotient of 1 indicates that our regional cluster employment concentration is equal to the national average; a higher than 1 location quotient is indicative of regional specialization of the cluster; a less than 1 location quotient means the cluster is less concentrated in the region than the nation.

THE BUBBLE CHART

The Bubble Chart plots the largest 10 Traded Industry clusters and the 4 largest Local Industry clusters in Miami-Dade County, by their relative regional employment concentration (Location Quotient, or LQ) in 2010 and their growth rates between 2000 and 2010. The bubble chart sheds some light on the strengths and weaknesses of the economy.

How to read a bubble chart?

The bubble chart is divided into four quadrants, based on two factors: the County's existing LQ of each cluster's employment, and whether the sector is growing or losing employment. The size of the bubble represents the size of employment in that cluster in 2010.

This chart gives a snapshot of the County's competitive position by clusters. All clusters are positioned according to their current concentration and growth over the past decade. It clearly differentiates clusters among "Strengths", "Opportunities", "Threats", and "Weaknesses".

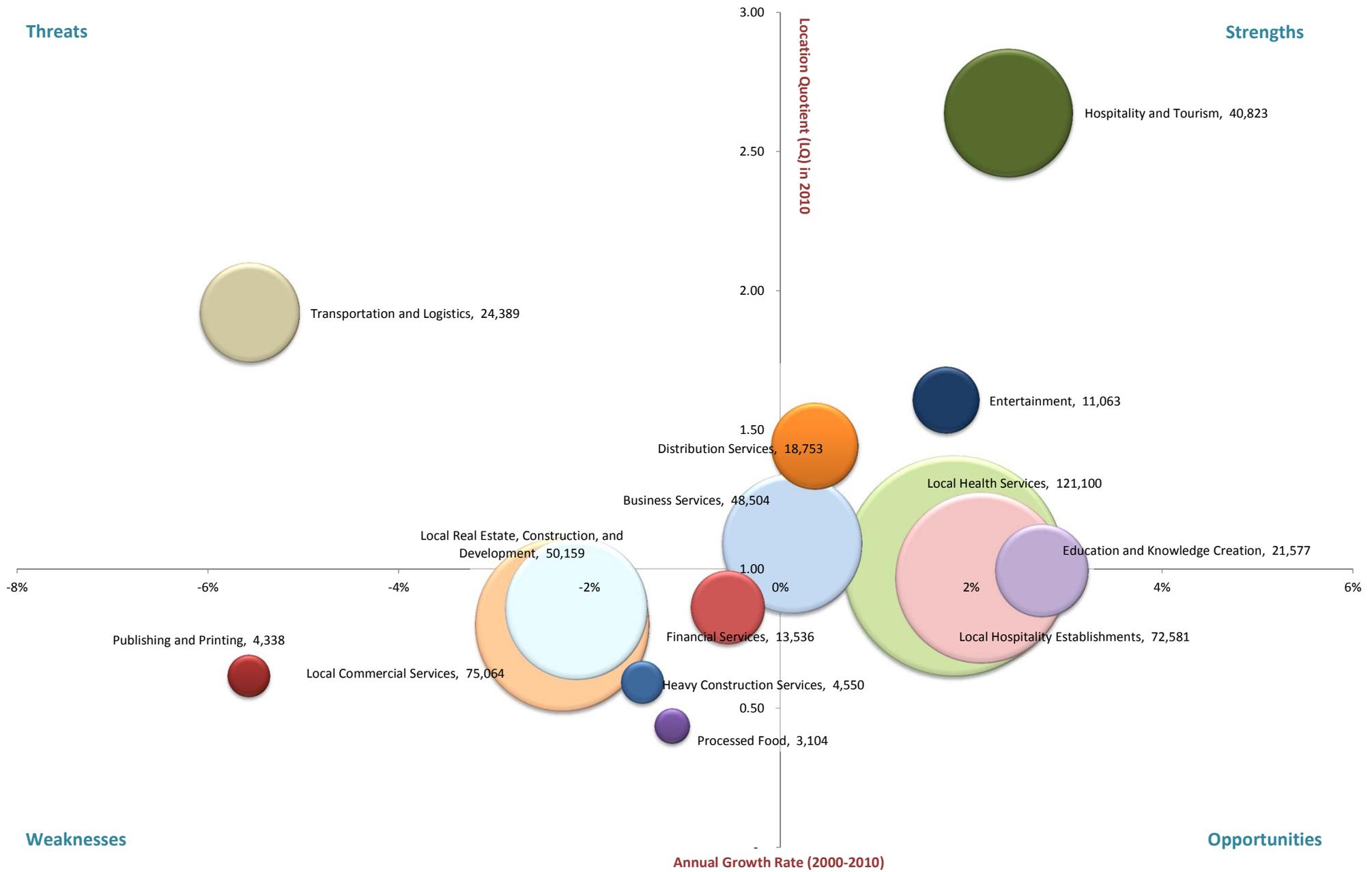
Generally speaking, the upper right-hand quadrant contains the County's strongest, most dynamic clusters, where the County has both a larger than proportional share of national cluster employment and the size was increasing. They are identified as strengths of the economy. Miami-Dade County has competitive advantage in Business Services, Entertainment, Distribution Services, Hospitality and Tourism, Water Transport (not included in the chart due to scale factors) clusters.

The lower right-hand quadrant contains clusters where the County is gaining employment but which do not yet have a strong concentration compared to the nation as a whole. These clusters present growth opportunities for the future. Education and Knowledge Creation, local health services, and local hospitality Establishments clusters are in this quadrant.

The upper-left hand quadrant indicates clusters that were strong and concentrated in the County but losing employment opportunity. These clusters were traditionally important pillars of the County economy that are threatened. Therefore they may be in need of revitalization or retention support. For example, the Transportation and Logistics cluster, although still with a high location quotient, has contracted in size.

Finally, the lower-left hand quadrant indicates clusters with apparently limited competitiveness in the County. In addition, they have exhibited declines in employment. Financial Services, Heavy Construction Services, Local Commercial Services, Local Real Estate, Construction and Development, Processed Food, and Publishing and Printing are in this category.

Overview of the Ten Largest Traded Industry Clusters and Four Largest Local Industry Clusters in Miami-Dade County



Private Industry Clusters Overview

AT-A-GLANCE

2010

of Employees

801,633

Average Annual Wage

\$41,696

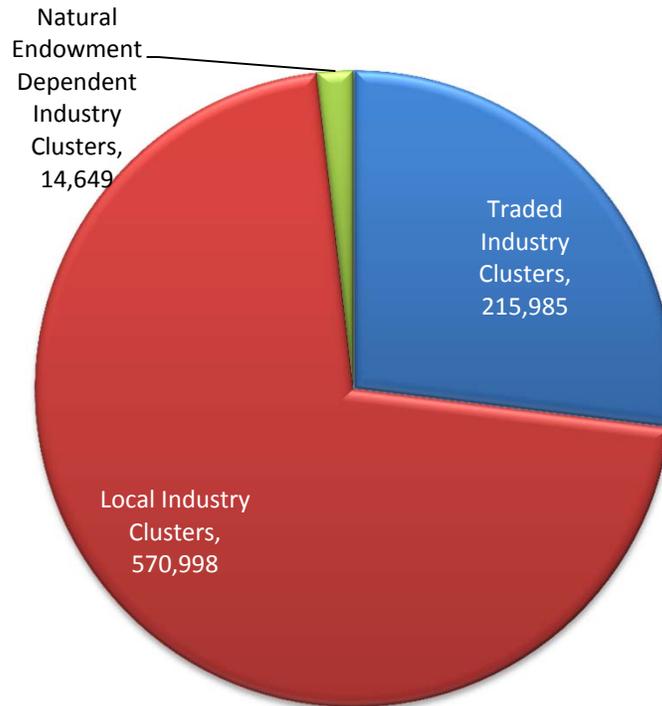
Traded Industry Cluster Employment

215,986

Local Industry Cluster Employment

570,998

Employment Breakdown



Local Industry Clusters account for more than two-third of total private sector employment.

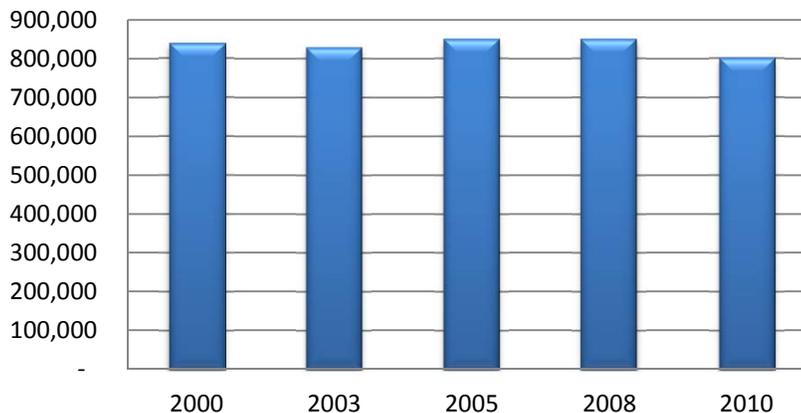
Wages



Average annual wages in Traded Industry Clusters are slightly higher than Natural Endowment Dependent Industry Clusters, and much higher than Local Industry Clusters.

Employment Trend

Employment

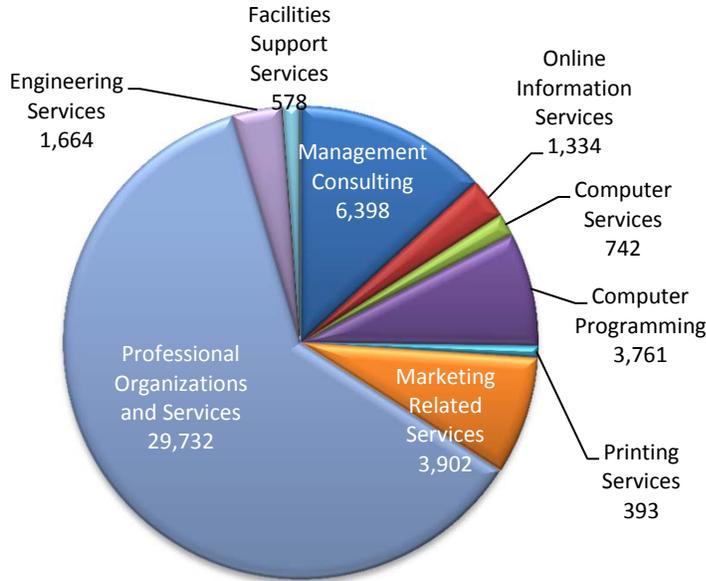


Total private sector employment had been increasing through 2008 then decreased to the lowest level in the past decade as a result of the Recession.

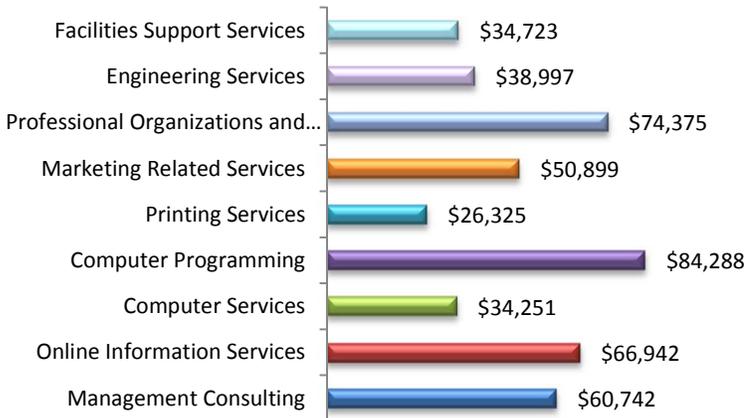
Business Services

Business Services is the largest Traded Industry Cluster in Miami-Dade County, with 48,504 employees in 2010.

Of the 48,504 employees in the Business Services cluster, 61.3 percent are in Professional Organizations and Services sector.

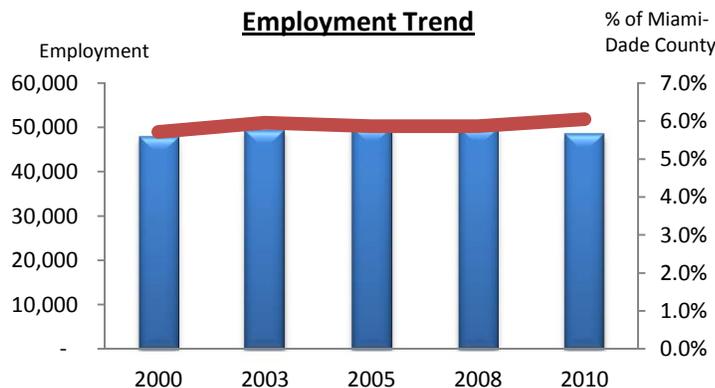


Wages by Sub-Cluster



Average wages in the cluster are almost 40 percent above the County figure with the Computer Programming the highest at \$84,288.

Employment in this cluster grew from by 2,200 over the past decade, while its share of total County employment also increased.



AT-A-GLANCE

2010

of Employees

48,504

Average Annual Wage

\$57,571

Location Quotient

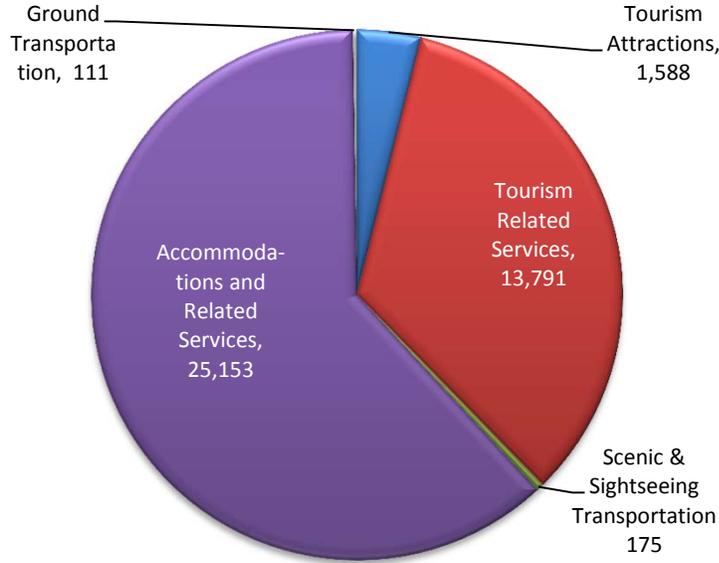
1.1

Employment in Business Services Cluster is somewhat more concentrated than the nation as a whole.

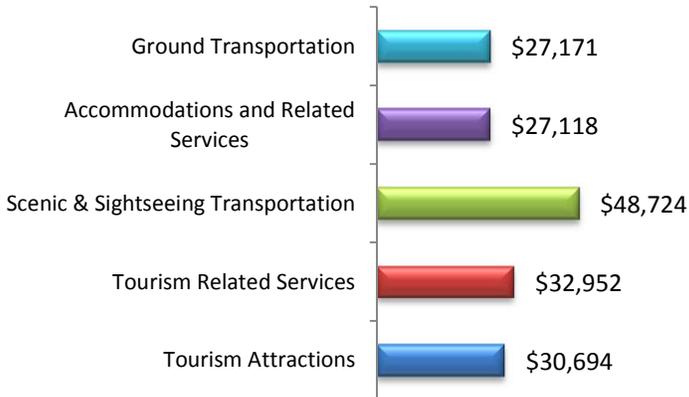
Hospitality and Tourism

Hospitality and Tourism is the 2nd largest Traded Industry Cluster in Miami-Dade County, with 40,823 employees in 2010.

Almost 95 percent of the 40,823 employees in this cluster are in the Accommodations and Tourism Related Services, with the former accounting for about 62 percent.

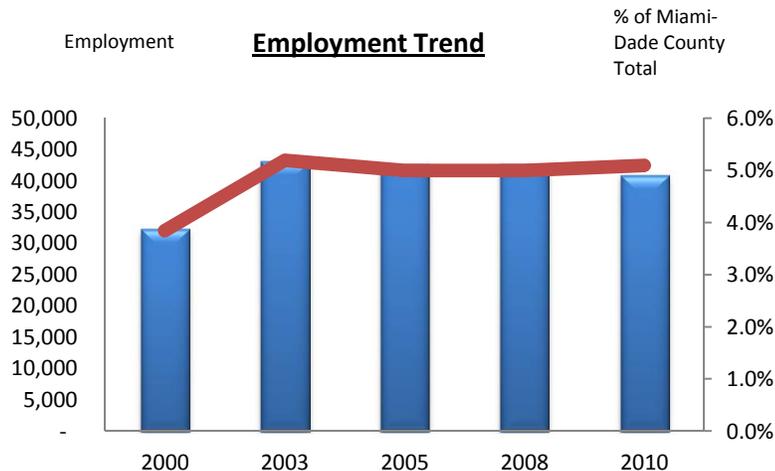


Wages by Sub-Cluster



Wages in this cluster are low, about 32 percent less than County average, in part due to the part-time nature of many jobs.

After 2003, employment in this cluster and as a percentage of the County total has been fairly steady.



AT-A-GLANCE

2010

of Employees

40,823

Average Annual Wage

\$28,240

Location Quotient

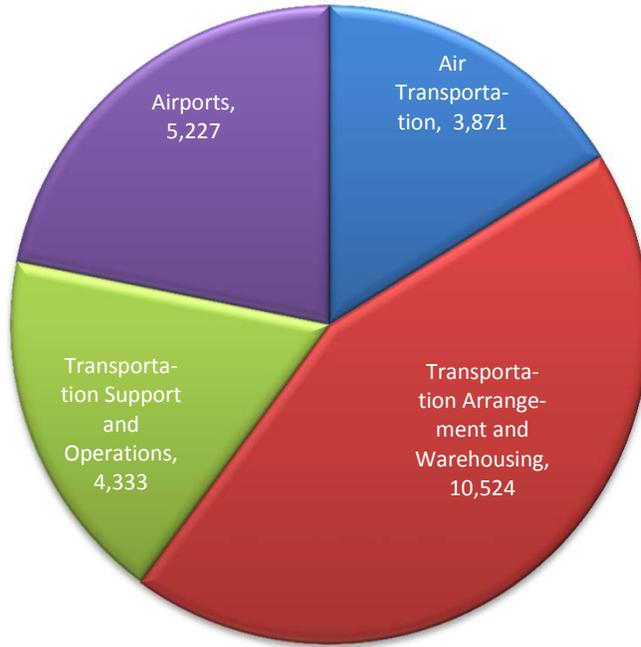
2.6

Miami-Dade County enjoys a high regional concentration and competitive advantage in Hospitality and Tourism Cluster.

Transportation and Logistics

Transportation and Logistics is the 3rd largest Traded Industry Cluster in Miami-Dade County, with 23,955 employees in 2010.

Total employment in this cluster was concentrated in Transportation Arrangement and Warehousing sector and Airports and Air Transportation sectors.



AT-A-GLANCE

2010

of Employees

23,955

Average Annual Wage

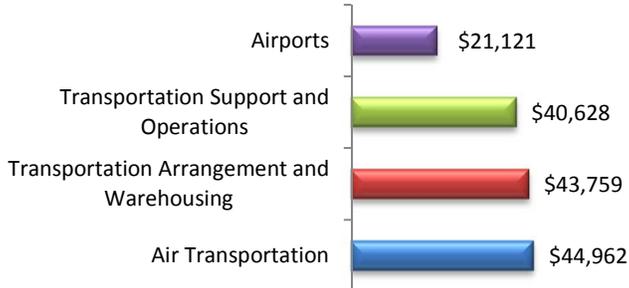
\$41,708

Location Quotient

1.9

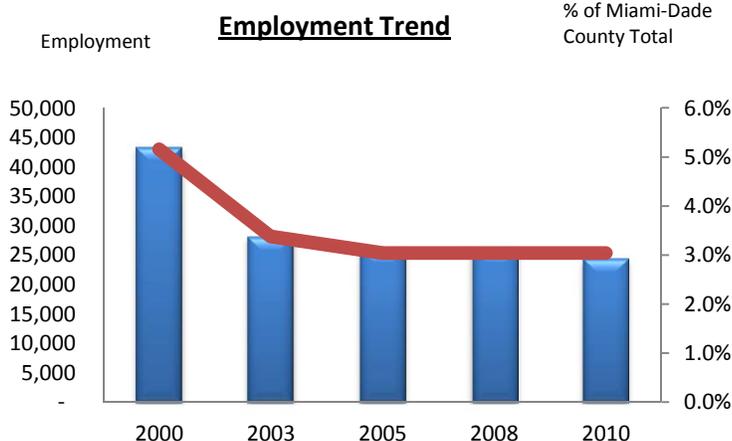
Miami-Dade County enjoys a regional concentration in Transportation and Logistics Cluster.

Wages by Sub-Cluster



Wages in this cluster are almost identical to the County average with 80 percent of employees near that level.

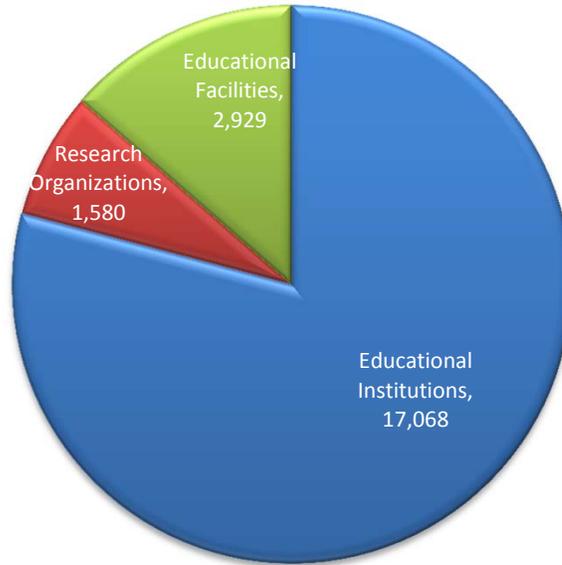
After 2003, employment in this cluster and as a percentage of the County total remained flat.



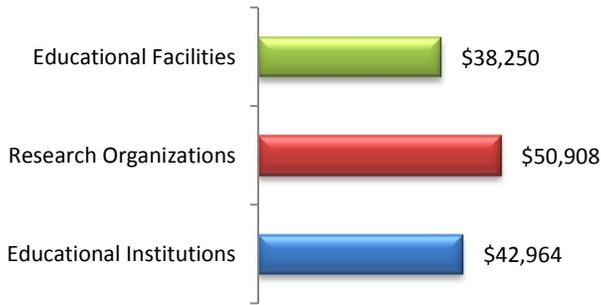
Education and Knowledge Creation

Education and Knowledge Creation is the 4th largest Traded Industry Cluster in Miami-Dade County, with 21,577 employees in 2010.

Over 79 percent of the 21,577 employees in the cluster are in the Educational Institutions sector.

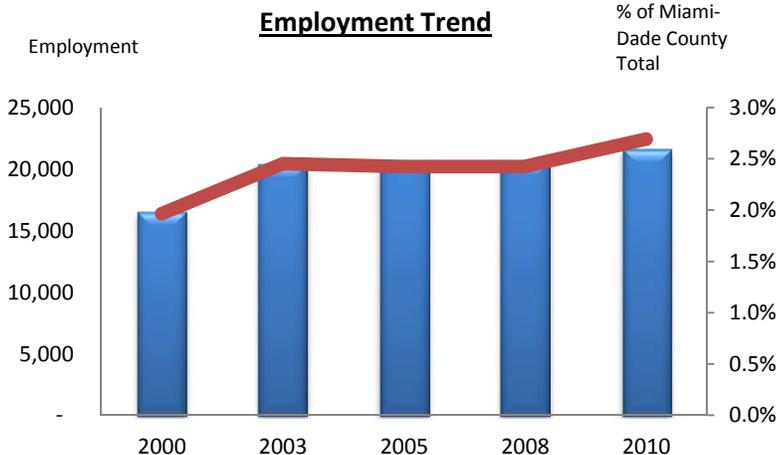


Wages by Sub-Cluster



Wages in these sub-clusters in Miami-Dade County are lower than their national counterparts.

There has been a slow but steady increase in employment and in the share of the County total over the past decade.



AT-A-GLANCE

2010

of Employees

21,577

Average Annual Wage

\$46,885

Location Quotient

1.0

Concentration of the Education and Knowledge Creation cluster in Miami-Dade County is similar to the rest of the nation.

Distribution Services

Distribution Services is the 5th largest Traded Industry Cluster in Miami-Dade County, with 18,753 employees in 2010.

Employment in this cluster is heavily concentrated in the Food and Merchandise Wholesaling sectors.

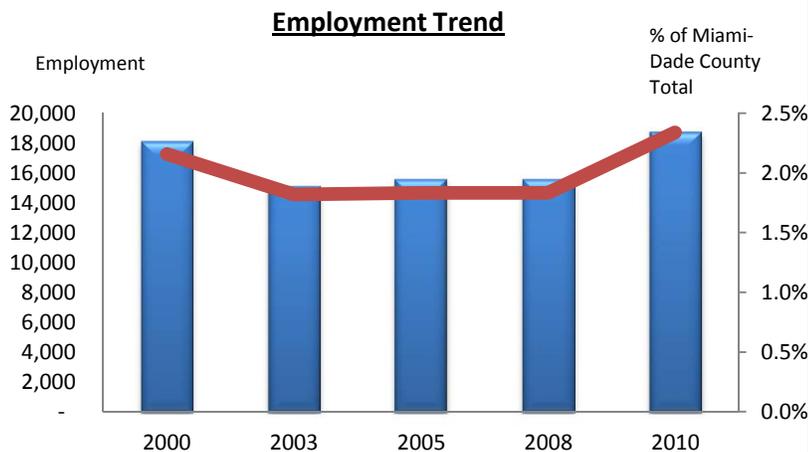


Wages by Sub-Cluster



Wages in these sub-clusters in Miami-Dade County are generally lower than their counterparts at the MSA's level.

There was a large increase in total employment and as a share of the overall amount for the County.



AT-A-GLANCE

2010

of Employees

18,753

Average Annual Wage

\$53,288

Location Quotient

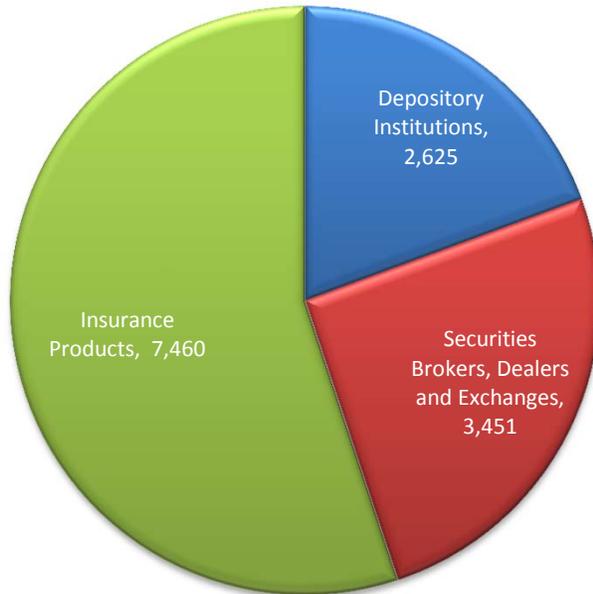
1.4

Miami-Dade County enjoys a regional concentration in Distribution Services Cluster.

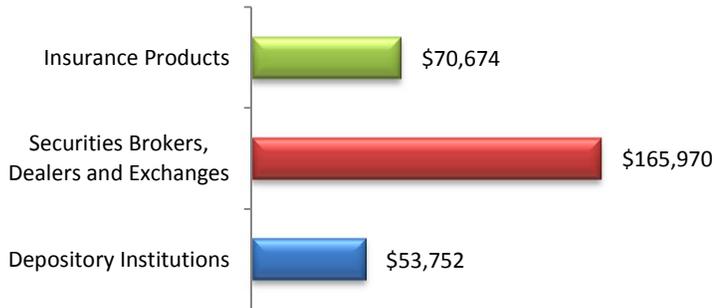
Financial Services

Financial Services is the 6th largest Traded Industry Cluster in Miami-Dade County, with 13,536 employees in 2010.

Over half of the employment in this sector is in the Insurance Products sector.

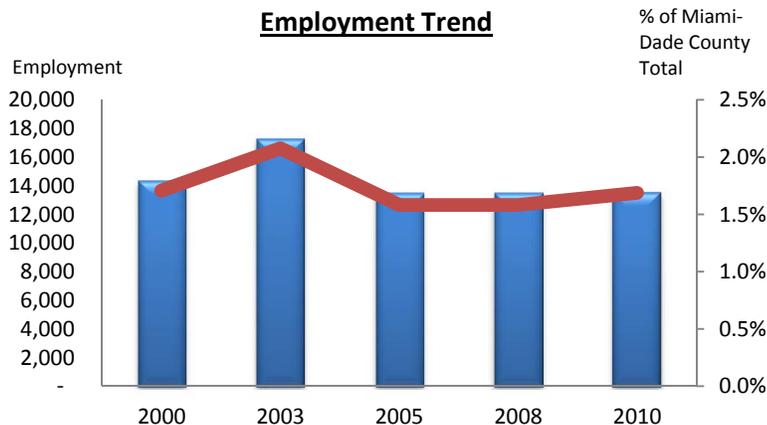


Wages by Sub-Cluster



Average annual wages in Financial Services are the highest among all clusters.

Employment in this sector, both in absolute amount and as a percent of the County total, has remained steady.



AT-A-GLANCE

2010

of Employees

13,536

Average Annual Wage

\$99,310

Location Quotient

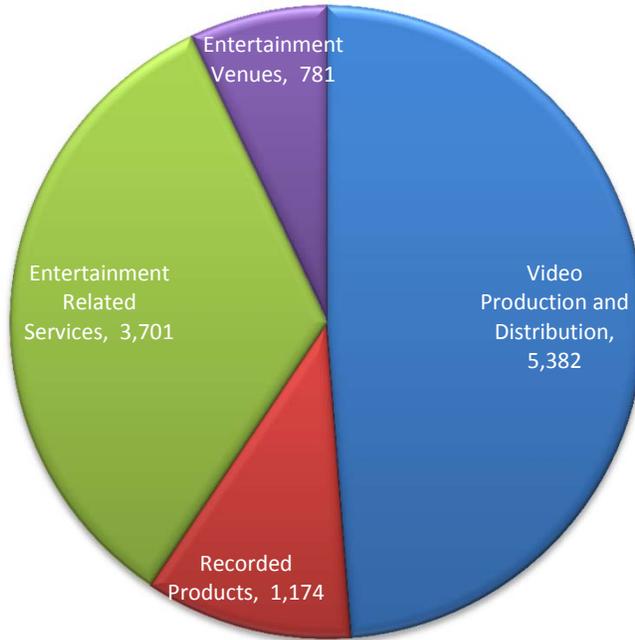
0.9

Employment in Financial Services Cluster is somewhat less concentrated than the nation as a whole.

Entertainment

Entertainment is the 7th largest Traded Industry Cluster in Miami-Dade County, with 11,063 employees in 2010.

Almost half of the employment in this cluster is in the Video Production and Distribution sector.



AT-A-GLANCE

2010

of Employees

11,063

Average Annual Wage

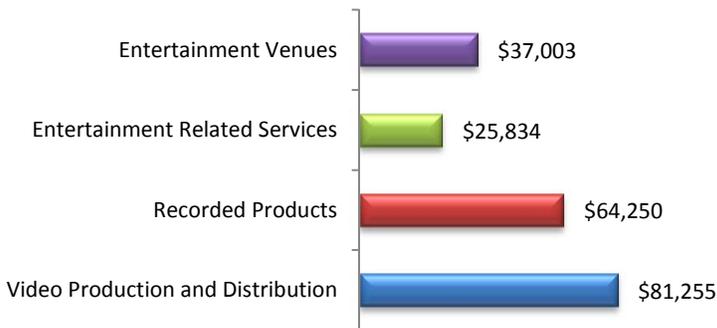
\$57,921

Location Quotient

1.6

Miami-Dade County enjoys a regional concentration in Entertainment Cluster.

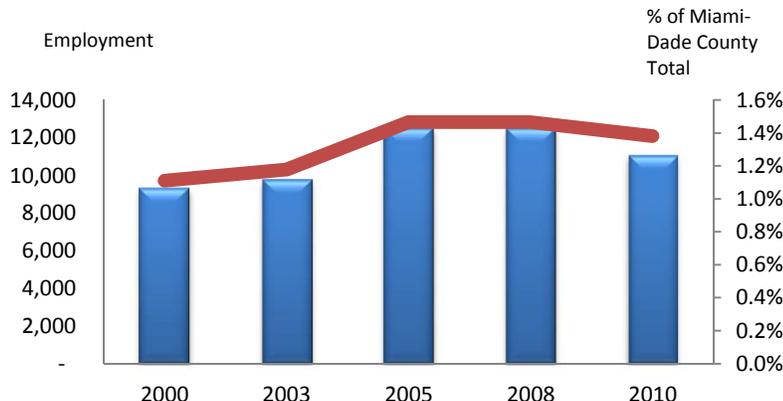
Wages by Sub-Cluster



Average annual wages are significantly higher than the County average, particularly in the Video Production and Distribution sector.

Employment in the Entertainment cluster grew, both in absolute terms and as a percent of total County employment, and has more recently tapered off.

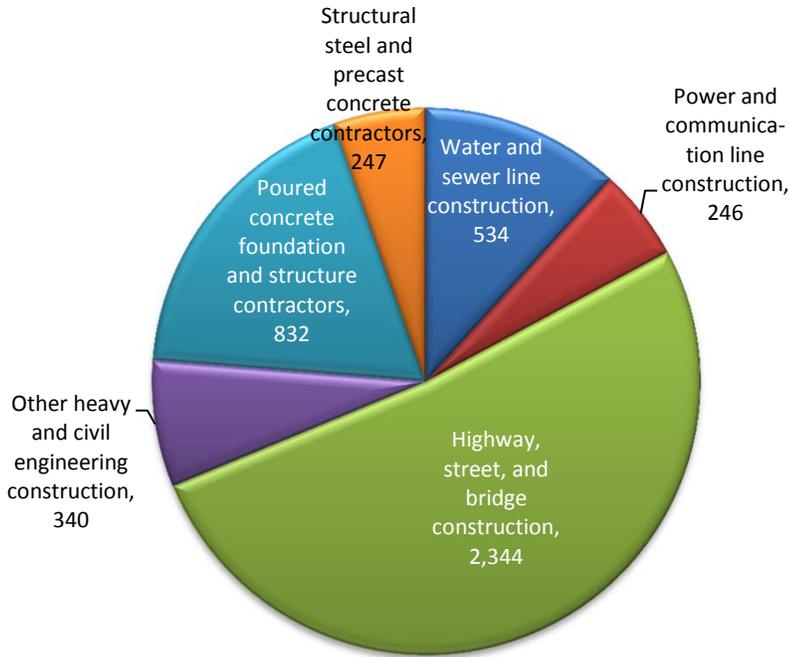
Employment Trend



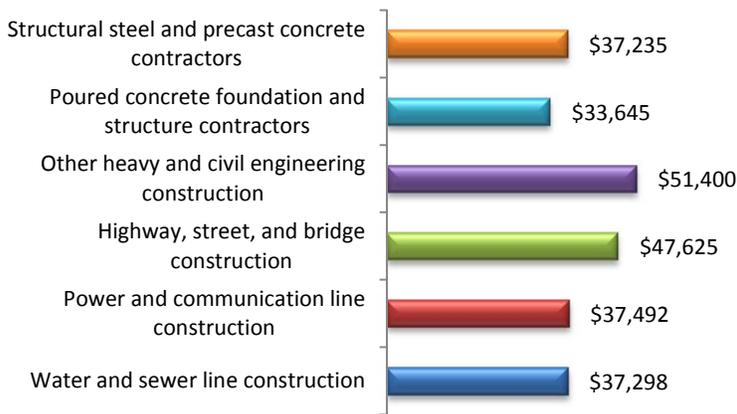
Heavy Construction Services

Heavy Construction Services is the 8th largest Traded Industry Cluster in Miami-Dade County, with 4,550 employees in 2010.

Half of the employees in the Heavy Construction Services Cluster are in the Highway, street, and bridge construction sector.



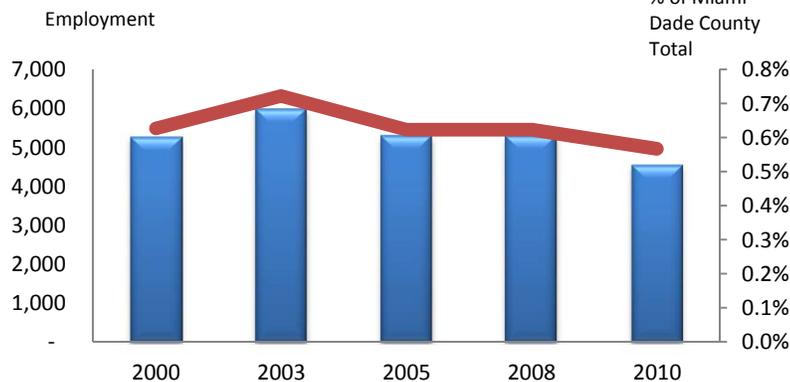
Wages by Sub-Cluster



Average annual wages in this cluster are slightly above the County average.

Employment Trend

Employment and as percent of the County total has been decreasing since 2003.



AT-A-GLANCE

2010

of Employees

4,550

Average Annual Wage

\$44,380

Location Quotient

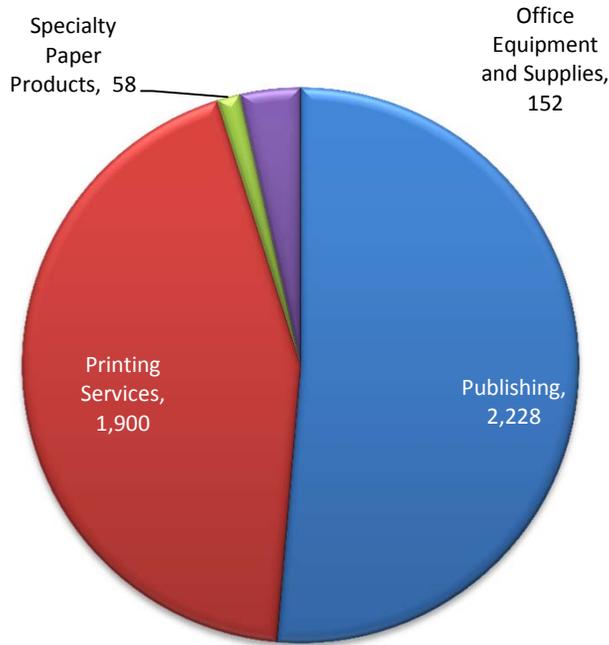
0.6

Heavy Construction Services Cluster is less concentrated in Miami-Dade County than in the nation.

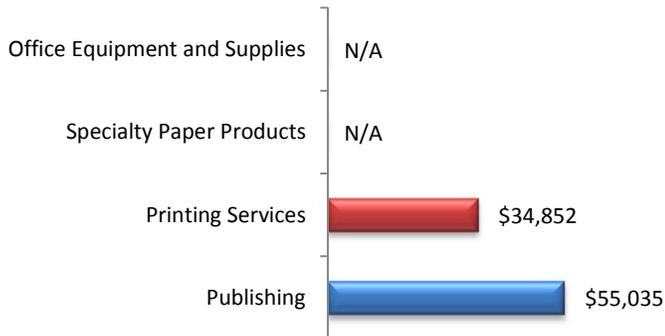
Publishing and Printing

Publishing and Printing is the 9th largest Traded Industry Cluster in Miami-Dade County, with 4,338 employees in 2010.

Almost 95 percent of employment in this cluster is concentrated in the Printing Services and Publishing sectors.

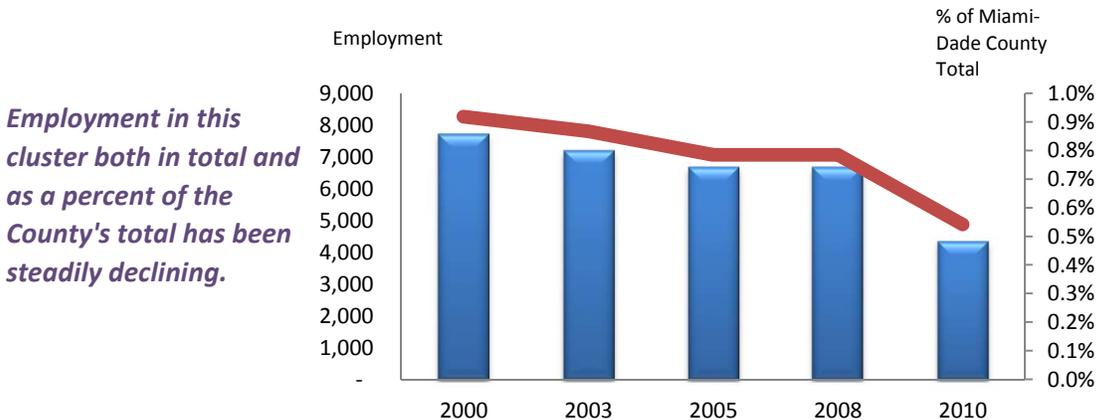


Wages by Sub-Cluster



Average annual wages in this cluster are somewhat higher than the County average.

Employment Trend



Employment in this cluster both in total and as a percent of the County's total has been steadily declining.

AT-A-GLANCE

2010

of Employees

4,338

Average Annual Wage

\$47,812

Location Quotient

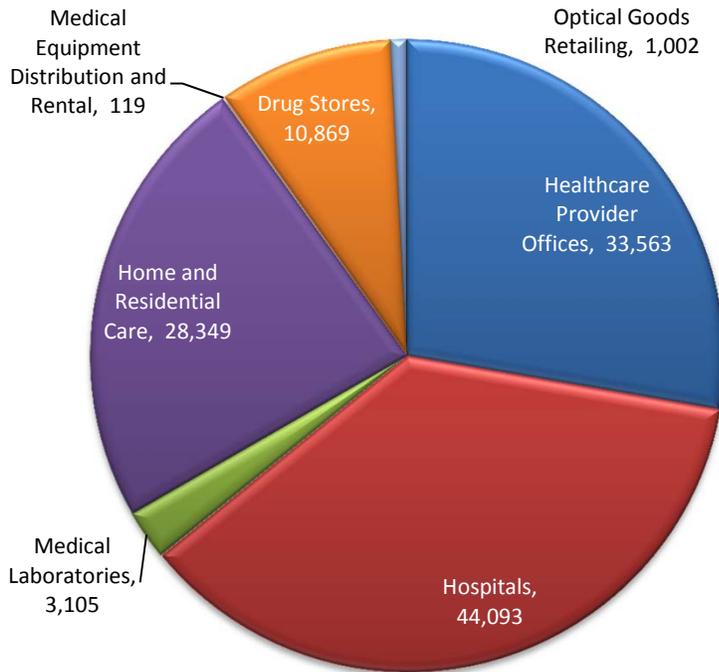
0.6

Publishing and Printing Services Cluster is less concentrated in Miami-Dade County than in the nation.

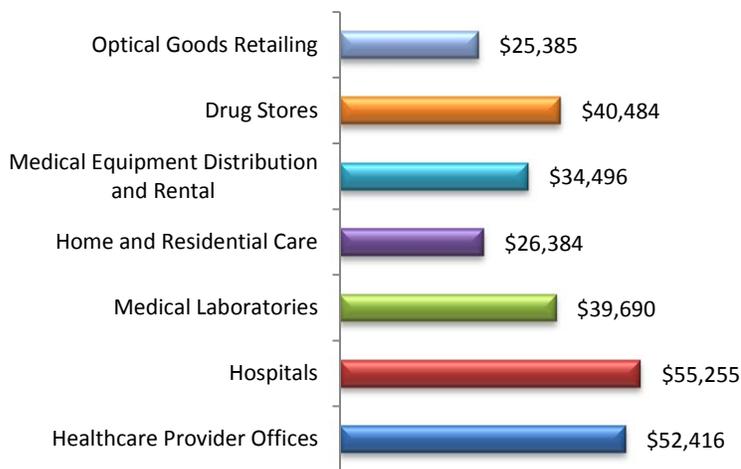
Local Health Services

Local Health Services is the largest Local Industry Cluster in Miami-Dade County, with 121,100 employees in 2010.

Hospitals and Healthcare Provider Offices sectors account for about two-third of the Local Health Services cluster.



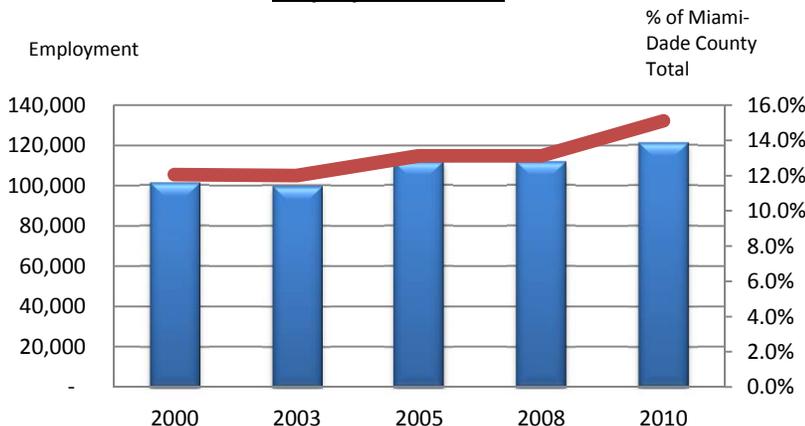
Wages by Sub-Cluster



Average annual wages in Hospitals and Healthcare Provider Offices sectors are higher than the County average.

Employment Trend

Employment in this cluster and as a percent of the County total has been increasing since 2003.



AT-A-GLANCE

2010

of Employees

121,100

Average Annual Wage

\$46,744

Location Quotient

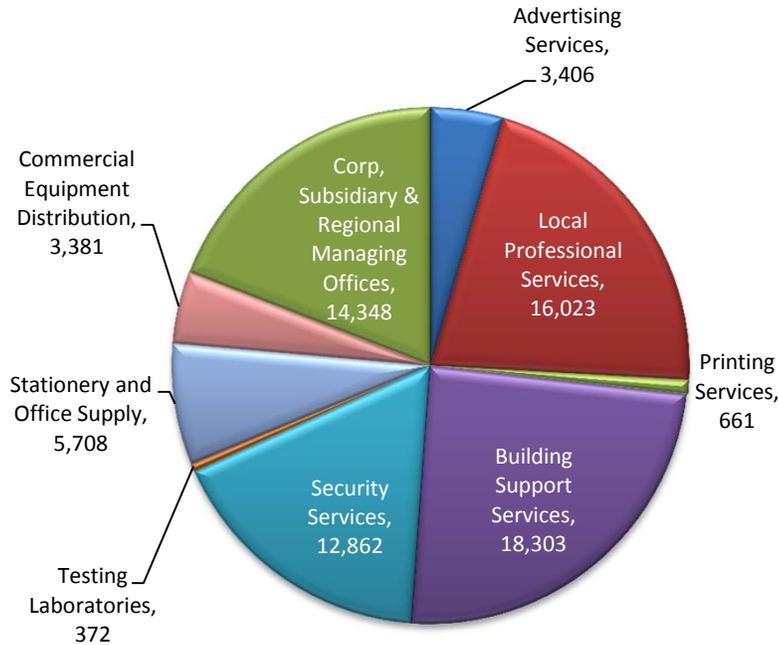
1.0

Concentration of the Local Health Services Cluster in Miami-Dade County is similar to the rest of the nation.

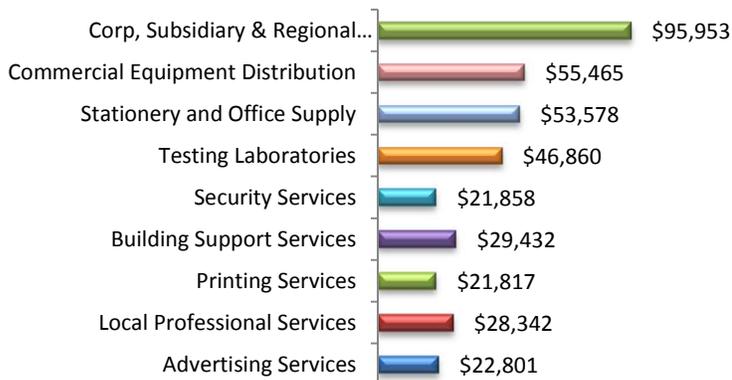
Local Commercial Services

Local Commercial Services is the 2nd largest Local Industry Cluster in Miami-Dade County, with 75,064 employees in 2010.

Building Support Services, Local Professional Services, Corporate, Subsidiary & Regional Managing Offices, and Security Services are the four largest sub-clusters within Local Commercial Services Cluster.



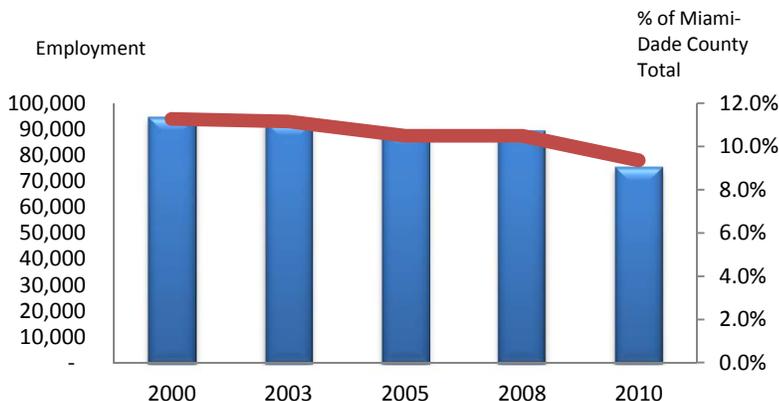
Wages by Sub-Cluster



Average annual wage in the Corporate, Subsidiary and Regional Managing Offices sub-cluster is significantly higher than the County average.

Employment Trend

Employment in this cluster both in total and as a percent of the County's total have been steadily decreasing.



AT-A-GLANCE

2010

of Employees

75,064

Average Annual Wage

\$52,890

Location Quotient

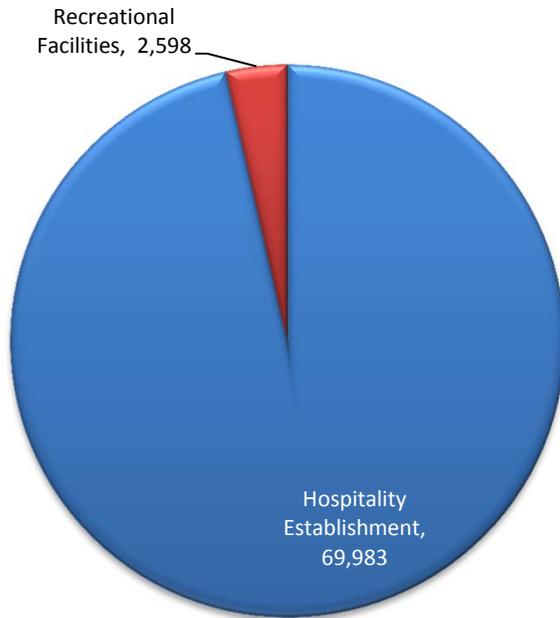
0.8

Local Commercial Services Cluster is slightly less concentrated in Miami-Dade County than in the nation.

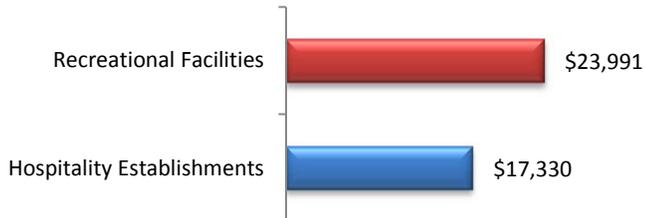
Local Hospitality Establishments

Local Hospitality Establishments is the 3rd largest Local Industry Cluster in Miami-Dade County, with 72,581 employees in 2010.

Restaurants and Drinking Places are the largest sectors within Local Hospitality Establishments cluster in Miami-Dade County.



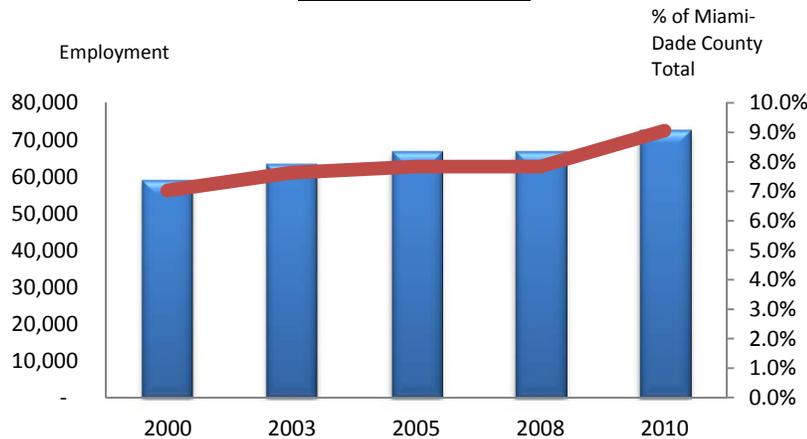
Wages by Sub-Cluster



Average annual wages in this cluster are much lower than the County Average.

Local Hospitality Establishment Cluster has experienced a steady increase in total employment as well as in the share of overall employment in the County in the past decade.

Employment Trend



AT-A-GLANCE

2010

of Employees

72,581

Average Annual Wage

\$16,838

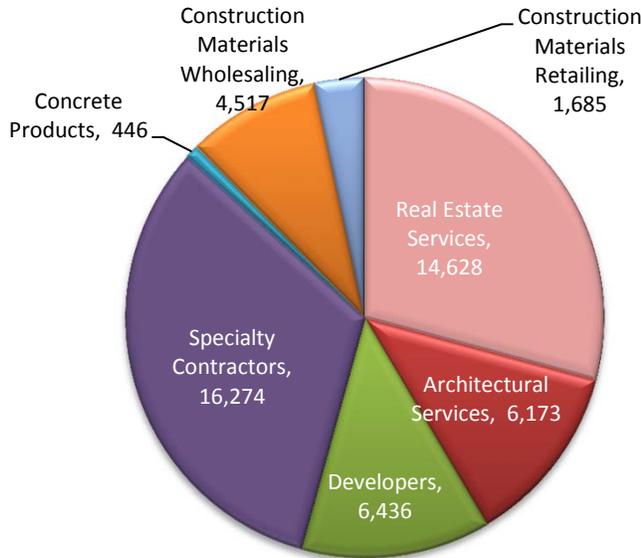
Location Quotient

1.0

Concentration of the Local Hospitality Establishments Cluster in Miami-Dade County is similar to the rest of the nation.

Local Real Estate, Construction, and Development

Local Real Estate, Construction, and Development is the 4th largest Local Industry Cluster in Miami-Dade County, with 50,159 employees in 2010.



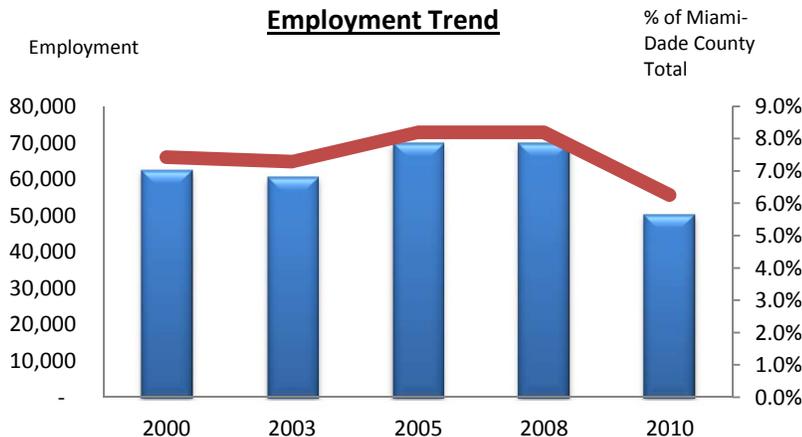
Specialty Contractors and Real Estate Services account for two-third of total employment of this cluster.

Wages by Sub-Cluster



Average Annual Wages for most of this cluster's workers are lower than the County average.

Employment Trend



Employment in this cluster and as a percent of the County total had been increasing from 2003 through 2008 then sharply decreased.

AT-A-GLANCE

2010

of Employees

50,159

Average Annual Wage

\$41,878

Location Quotient

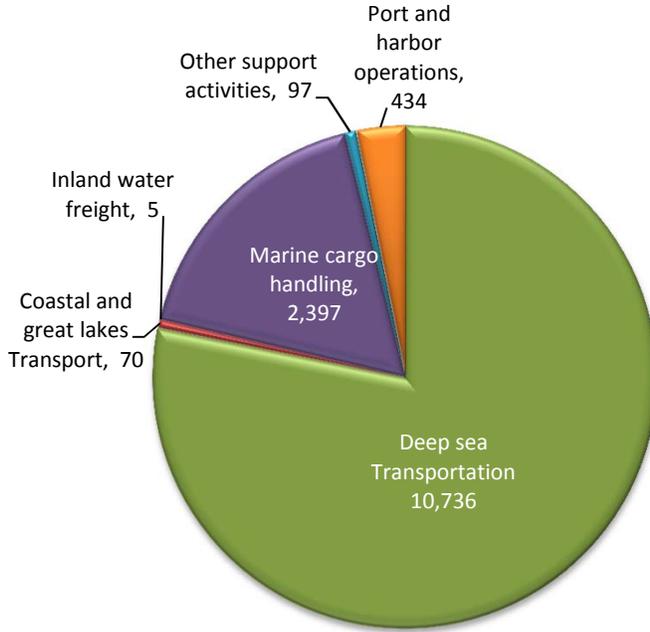
0.9

Local Real Estate, Construction, and Development Cluster is slightly less concentrated in Miami-Dade County than in the nation.

Water Transport

Water Transport is the largest Natural Endowment Dependent Industry Cluster in Miami-Dade County, with 13,739 employees in 2010.

Most of this cluster's employment is in the Deep Sea Transportation sector.



AT-A-GLANCE

2010

of Employees

13,739

Average Annual Wage

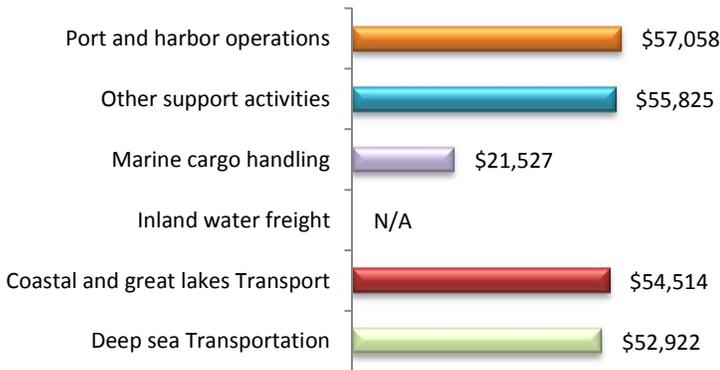
\$47,012

Location Quotient

16.3

Miami-Dade County enjoys an extremely high regional concentration in Water Transport Cluster.

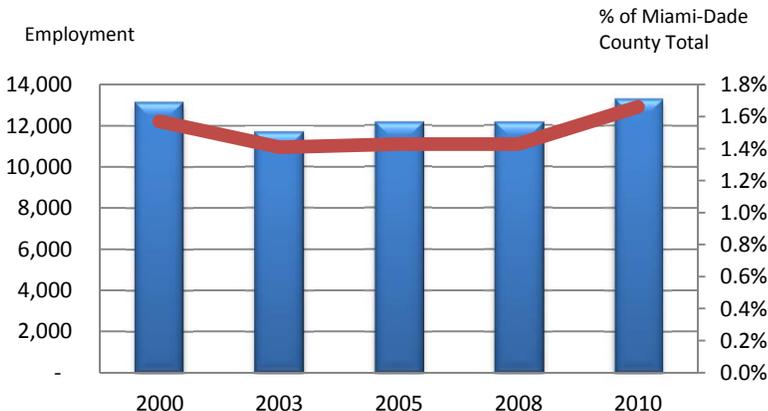
Wages by Sub-Cluster



Most workers in this cluster earn annual wages that are higher than the County's average.

Employment Trend

After a decrease from 2000, this cluster has steadily regained its employment level since 2003, both in absolute term and as a percent of the County total.



MIAMI-DADE COUNTY DEPARTMENT OF REGULATORY AND ECONOMIC RESOURCES

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<http://www.miamidade.gov/business/library/reports/cluster-analysis-2010.pdf>