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New Broward County Targeted Industries Study Cluster Selection Methodology



10 New Target Industry Clusters



Broward County
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Industries Study

Advanced Materials & Hi-Tech

- ❖ Radio and Television Broadcasting
- ❖ Motion Picture & Video Industries
- ❖ Advertising, Public Relations, & Related Services
- ❖ Internet Service Providers & Web Search Portals
- ❖ Cable & Other Subscription Programming

Manufacturing

- ❖ Plastics
- ❖ Cement and Concrete
- ❖ Chemicals wholesaling
- ❖ Rubber

Alternative Energy & Renewable Resources

- ❖ Electric Power Generation
- ❖ Architectural, Engineering, & Related Services
- ❖ Environmental services
- ❖ Water Utility Systems

Aviation / Aerospace

- ❖ Aerospace Product and Parts
- ❖ Avionics
- ❖ Air Transportation Support
- ❖ Flight education

Global Business Services

- ❖ Commercial Banking
- ❖ Computer Systems Design
- ❖ Insurance Carriers
- ❖ Commercial credit

Headquarters & Management Operations

- ❖ Corporate headquarters
- ❖ Business, Professional, Labor, Political Organizations
- ❖ HR & Management, Consulting Services
- ❖ Commercial Equipment Leasing

Human Resources Development & Higher Education

- ❖ Colleges, Universities, and Professional Schools
- ❖ Other Schools and Instruction
- ❖ Business Schools & Computer & Management Training

Global Media & Production

- ❖ Radio and Television Broadcasting
- ❖ Motion Picture & Video Industries
- ❖ Advertising, Public Relations, & Related Services
- ❖ Internet Service Providers & Web Search Portals
- ❖ Cable & Other Subscription Programming

International Trade & Logistics

- ❖ Professional & Commercial Equipment Wholesalers
- ❖ Machinery, Equipment, & Supplies Wholesalers
- ❖ Freight Transportation Arrangement
- ❖ Miscellaneous Durable Goods Wholesalers
- ❖ Electrical & Electronic Goods Wholesalers
- ❖ Grocery & Related Product Wholesalers
- ❖ Metal & Mineral Wholesalers
- ❖ Logistics Consulting Services

Life Sciences

- ❖ Biotechnology research
- ❖ Pharmaceuticals
- ❖ Medical devices
- ❖ Medical Equipment & Supplies

Marine

- ❖ Ship & Boat Building
- ❖ Electronics Repair and Maintenance

Target employment (2016):

73,203 total new jobs
55,044 new high skill/high wage jobs

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Cluster Theory

In his groundbreaking text, *The Competitive Advantage of Nations* (1990), Dr. Michael Porter of Harvard University advanced the economic geography theory that industries and businesses demonstrate interdependence on a number of organizational networks, from geographic similarities, through sectored affinity, horizontal sharing or resources, or to vertical supply chain linkages. Today, cluster theory is at the heart of economic development, and although not yet officially designated, clusters have become so widely accepted that the US Economic Development Administration requires their inclusion in the Comprehensive Economic Development Strategies (CEDs).

By identifying the underlying linkages between industries, a more complete understanding of the fundamental synergies can be achieved. The 295 national industries are mapped to 27 cluster categories that have been drawn from a "best practices" review of multiple cluster analyses from other US communities and states, cluster mapping white papers for the US Dept. of Commerce, and primary-related industry taxonomies from numerous on-line commercial enterprises. These cluster names provides more "user-friendly" terminology and location quotient graphics can be applied to complex industry scenarios.

The 27 clusters and the number of their corresponding number of industries included in each category are as follows:

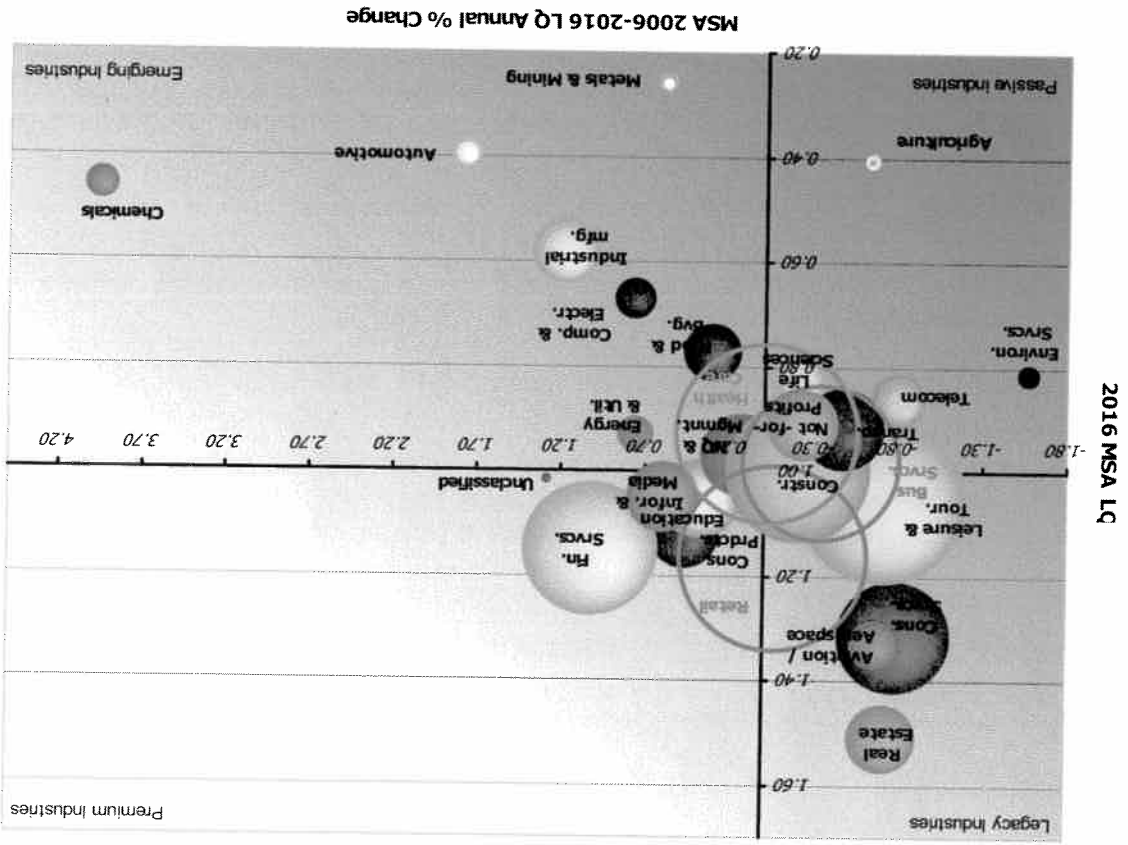
Cluster Name	# of industry components contained within each
Aviation/Aerospace	4
Agriculture	9
Automotive	5
Business Services	9
Chemicals	8
Computers & electronic equip.	6
Construction srvc. & mat'ls.	20
Consumer Products	16
Consumer Services	11
Education	7
Energy & Utilities	7
Environmental Services	3
Financial Services	12
Food & beverages	11
Health Care	17
HQ & Management Operations	3
Industrial mfg.	34
Information & Media	8
Leisure & Tourism	16

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Industry	Total number of industries
Life Sciences	4
Metals & Mining	11
Not-for-Profits	5
Real Estate	3
Retail	29
Telecom svcs. & equip.	11
Transportation - Land & Sea	25
Unclassified	1
Total	295

Location Quotient Chart 2006-2016

Miami-Fort Lauderdale-Pompano Beach MSA Industry Clusters
Location Quotients (LQ) 2006-2016



Explanation of quadrant titles

Premium: dominant industries with export capability
Legacy: mature but changing industries with importance to the region
Emerging: industries beginning to bring significance to the area
Passive: industries losing market share that could erode the economic base

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Each of the 27 cluster categories are evaluated through the methodology detailed above, resulting in some re-assignment to new clusters or retention of industry components in original cluster designations. A brief explanation for each action is as follows:

1. **Aviation/aerospace** – Shift from Premium 2006 status to Legacy 2016 status requires attention, but still a dominant industry. Recommendation: Retain, but remove space vehicles and guided missile mfg. industries.
2. **Agriculture** – Continuation of Passive 2006 to Passive 2016 denotes no new opportunities. Recommendation: Withhold.
3. **Automotive** – Change from 2006 Passive to 2016 Emerging indicates some potential opportunities. Recommendation: Withhold, but re-assign some wholesale components to new International trade and logistics cluster.
4. **Business services** – Decline from 2006 Legacy to 2016 Passive requires immediate action. Recommendation: Retain and rename Global Business Services; assign some components to Headquarters & management operations, Intl trade & logistics, and create new Alternative energy cluster.
5. **Chemicals** – Positive change from 2006 Passive to 2016 Emerging status indicates opportunity for promotion. Recommendation: Retain, but rename Advanced materials & hi-tech mfg.
6. **Computers & electronic equipment** – Emerging status for both 2006 and 2016 may indicate some stalling in further development. Recommendation: Withhold, but separate into other clusters devoted to logistics, life sciences, energy and marine industries.
7. **Construction services & materials** – Fall-off to Legacy 2016 from 2006 Premium status shows some weakening in the sector. Recommendation: Withhold, but assign Architectural/engineering and specialized design services to Alternative energy cluster, and wholesaling to International trade and logistics cluster.
8. **Consumer products** – Change from 2006 Legacy to 2016 Premium reveals growth in key component industries Recommendation: Withhold, but re-assign wholesaling components to Intl trade & logistics cluster.
9. **Consumer services** – Legacy status for both 2006 and 2016 shows continued dominance of the industry, but new growth requires some action. Recommendation: Withhold, but reassign some components to a new enhanced tourism cluster and marine components to a new Marine cluster.

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10. **Education** – 2006 and 2016 Premium status reveals how important this industry is to the market. Recommendation: Retain, but rename Human resources and development & higher education; assign flight education to the Aviation/aerospace cluster.

11. **Energy & utilities** – Emerging status for 2006 and 2016 will require support to promote the cluster for growth. Recommendation: Retain, but assign to Alternative energy; reassign wholesaling components to Int'l trade & logistics cluster.

12. **Environmental services** – Negative shift from 2006 Emerging to 2016 Passive foretells of possible weakening in remediation services component. Recommendation: Retain, but re-group with Alternative energy cluster and expand to include renewable resources.

13. **Financial services** – Premium position for both 2006 and 2016 indicates dominant role of this industry. Recommendation: Retain, rename Global business services, and re-group with key components from Business services.

14. **Food & beverages** – Change from 2006 Passive to 2016 Emerging shows some strength in specific sectors. Recommendation: Withhold, but re-assign wholesaling industries to Int'l trade & logistics cluster.

15. **Health care** – Fall-off from 2006 Emerging to 2016 Passive status shows some weaknesses needing to be addressed. Recommendation: Retain, but consider as a supplemental cluster target; re-assign non-patient care related industries into the Life sciences cluster.

16. **HQ & Management operations** – Positive shift from 2006 Passive to 2016 Emerging indicates growth potential. Recommendation: Retain, and absorb some key elements of Business services.

17. **Industrial manufacturing** – Change to 2016 Emerging from 2006 Passive may reveal positive movements in certain sectors related to manufacturing, such as wholesaling. Recommendation: Withhold, but re-assign wholesale and repair industries to Int'l trade & logistics cluster.

18. **Information & media** – Real growth is seen in this cluster, with shift from Emerging in 2006 to premium status for 2016. Recommendation: Retain, and rename Global media & production.

19. **Leisure & tourism** – Slight decline from 2006 Premium to 2016 Legacy position may indicate softening in this key driver. Recommendation: Retain, but consider as a supplemental target renamed as Enhanced tourism; assign marina industries to Marine cluster.

20. **Life sciences** – Both 2006 and 2016 place this cluster in Passive status, but State of Florida continues to advance the potential for growth. Recommendation: Retain, but absorb non-patient care related scientific components from health care.
21. **Metals & mining** – Emerging status is continued from 2006 through 2016, without much change in employment. Recommendation: Withhold, but re-assign the wholesaling components to Intl. trade & logistics.
22. **Not-for-profits** – Decline from 2006 Emerging to 2016 Passive reveals negative trends. Recommendation: Withhold, but re-assign business organizations to HQ & management operations cluster.
23. **Real estate** – Softening of this dominant industry from 2006 Premium to 2016 Legacy status is only partially reflected by effects of the recession. Recommendation: Withhold.
24. **Retail** – Another key sector, change from stronger Premium position in 2006 to 2016 Legacy may be as a result of population decline. Recommendation: Withhold, but assign wholesale industries to Intl. trade & logistics cluster.
25. **Telecommunications services & equipment** – 2006 Emerging position will be replaced by 2016 Passive status as jobs are shifted. Recommendation: Withhold, but combine cable and Internet-based industries with Information and media into newly formed Global media & production.
26. **Transportation** – Land & sea – Recommendation: Retain, but combine with logistics components; assign ship and boat industries to Marine cluster; and assign passenger cruise transportation to a supplemental Enhanced tourism cluster.
27. **Unclassified** – Although change to premium is indicated for 2016 from 2006's Emerging location, no other data is available, and the cluster is omitted from further consideration.

Cluster Summary

- ❖ **Advanced Materials & Hi-tech Mfg.**
- ❖ 10 recommended industry components
- ❖ Potential total job gain of 4,633 jobs
- ❖ Potential High skill/high wage job gain of 654 jobs
- ❖ **Alternative Energy & Renewable Resources**
- ❖ 10 recommended industry components



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- ❖ Potential total job gain of 5,217 jobs
- ❖ Potential High skill/high wage job gain of 5,217 jobs

Aviation/Aerospace

- ❖ 5 recommended industry components
- ❖ Potential total job gain of 2,855 jobs
- ❖ Potential High skill/high wage job gain of 1,959 jobs

Global Business Services

- ❖ 10 recommended industry components
- ❖ Potential total job gain of 18,188 jobs
- ❖ Potential High skill/high wage job gain of 18,188 jobs

HQ & Management Operations

- ❖ 9 recommended industry components
- ❖ Potential total job gain of 16,092 jobs
- ❖ Potential High skill/high wage job gain of 14,354 jobs

Human Resources Development & Higher Education

- ❖ 6 recommended industry components
- ❖ Potential total job gain of 9,625 jobs
- ❖ Potential High skill/high wage job gain of 255 jobs

Global Media & Production

- ❖ 10 recommended industry components
- ❖ Potential total job gain of 3,655 jobs
- ❖ Potential High skill/high wage job gain of 2,973 jobs

International Trade & Logistics

- ❖ 11 recommended industry components
- ❖ Potential total job gain of 5,901 jobs
- ❖ Potential High skill/high wage job gain of 5,901 jobs

Life Sciences

- ❖ 9 recommended industry components
- ❖ Potential total job gain of 6,473 jobs
- ❖ Potential High skill/high wage job gain of 5,543 jobs

Marine

- ❖ 3 recommended industry components
- ❖ Potential total job gain of 5,643 jobs