



DeKalb County **TARGET INDUSTRY REPORT**

May 1, 2014



8121 Bee Cave Road, Suite 100
Austin, TX 78746

TABLE OF CONTENTS

Introduction.....	3
Target Industry Selection Process.....	6
Recommended Target Industries & Niches.....	12
<i>Professional & Business Services</i>	13
<i>Life Sciences</i>	29
<i>Tourism</i>	45
<i>Logistics</i>	56
<i>Construction & Support Trades</i>	72
<i>Advanced Manufacturing</i>	82
Retail Leakage Analysis.....	98
Project Next Steps.....	100
Appendix.....	101
<i>I. Report Methodology & Narrative Content</i>	102
<i>II. Occupational Analysis Methodology</i>	103
<i>III. Industry Definitions by NAICS Codes</i>	104
<i>IV. Cost of Operations Sources</i>	107
<i>V. County Industry Cluster Heat Maps</i>	108
About AngelouEconomics.....	111

INTRODUCTION

AngelouEconomics (AE) is proud to work with DeKalb County in the creation of a comprehensive economic development strategy (CEDS). The CEDS process is designed to leverage the assets and promote the strengths of the county to further expand the economic base, grow employment opportunities, and reposition DeKalb County as the most business friendly county in the State of Georgia.

This Target Industry Report is the third phase in the Comprehensive Economic Development Strategy process and provides a close look at the industry cluster activities in DeKalb County.

The first two phases of the CEDS process provided insight into the economic outlook for DeKalb County and the realities and desires for new economic activity in the county. That information led to the development of a thematic focus for the industries targeted in this report. These themes, which are described in the following pages, combined with an analysis of industry clusters, allowed for the determination of target industries that will anchor strategies for long-term economic development.

This project could not be achieved without the vision of the project Steering Committee members who direct the efforts to develop a strategic plan that guarantees quality of life to area residents and success for existing businesses and industries to come.

Following this introduction is a discussion of how target industries are selected, utilizing economic data and analysis specific to DeKalb County. After that, each target industry is presented, with particular attention paid to trends in employment, wages, and establishments. Each section also details occupations found within that industry and suggests niche markets to focus economic development efforts.

Comprehensive Economic Development Strategy



RECURRING THEMES

Up to this point, AE has received input from more than a hundred businesses and more than 1,600 community residents and stakeholders. Residents of DeKalb County are invested in their community and passionate about its future. They have spoken candidly about what they like about the county, what they dislike, and how they envision the county's future.

When speaking about DeKalb County's business community, certain themes rise to the surface. These themes pertain to what DeKalb County is and what it aspires to be. The four themes are **green**, **clean**, **sustainable**, and **creative**. These themes are defined on the right.

While AE has its own target industry selection process based on data, both quantitative and qualitative, these themes will provide context for each industry. By identifying how each target industry fits into one or more of these themes, the proper conceptual framework is created for thinking strategically about each industry.

Whether it is the firmly ingrained Life Sciences cluster anchored by Emory University and the CDC, or the recently emerging creative class that defines DeKalb County's future, most businesses in the county can be classified by one or more of these four themes.

Green: An industry is “green” when there is an attempt to offset the environmental costs (e.g. air pollution) of production. Thus, biofuels can be considered green because they can help reduce the pollution that comes from burning fossil fuels.

Clean: An industry is “clean” when it produces nearly no waste or pollution. Accounting, for example, is relatively clean because their waste product is mostly paper. Industries can be green but not clean, like some types of manufacturing or utilities.

Sustainable: An industry is “sustainable” if it is not particularly prone to, or is not likely to cause, disruptions in economic or environmental conditions. An industry like construction is typically tied to the overall economic condition in an area, meaning that jobs in that industry are less sustainable. Whereas, the niche market of constructing LEED-certified buildings is considered sustainable because those buildings are less likely to disrupt the environment.

Creative: An industry is “creative” if it seeks to innovate traditional thinking or enrich the lives of consumers. Thus, the film industry is creative because we find entertainment value in movies, and advanced manufacturing could be considered creative due to the focus on new methods of production.



THEME ELEMENTS

DeKalb County can create a unified vision for economic development by retaining and attracting industries that reflect an economy that is **green, clean, sustainable, and creative**.

To do so, DeKalb County needs to reach for the goals of:

1. Utilizing Workforce Skills - which includes highly-skilled knowledge workers, technical workers, and innovative workers, as well as semi-skilled workers
2. Building a Growth-Oriented Economy - through entrepreneurship, commercialization, and business retention

DeKalb's workforce is composed of workers with diverse skills levels. Better utilizing these workers by focusing on the niche markets of the targeted industries allows for an overall expansion of the county's economy.

To attract industries that are green, clean, sustainable, and creative, DeKalb also needs to be growth-oriented by focusing on niche markets that foster entrepreneurship, capitalize on commercialization, and help to retain certain kinds of businesses already in the county.

In addition to defining each industry by its associated themes, each target industry will be further identified by any and all elements that may apply. Those elements are defined on the right.

Knowledge Workers: Highly-skilled workers with expertise in a particular scientific discipline or business activity.

Technical Workers: Workers who also have obtained specialized skills in process-based activities, but have been traditionally thought of as blue-collar.

Innovative Workers: Individuals with potential to revolutionize a particular method of producing or distributing a good or service.

Semi-Skilled Workers: Workers that have acquired general competence in a variety of activities, but have yet to obtain higher skills.

Entrepreneurship: The spirit associated with starting one's own business venture and designing the products that go with it.

Commercialization: The process of introducing new and innovative products, services, or processes into the larger market.

Business Retention: Keeping select economic activities in the county in order to keep the local economy stable.



TARGET INDUSTRY SELECTION PROCESS

The process outlined in this section will determine which industries will serve as target employment industries for DeKalb County. The themes defined in the introduction will be applied to the industries that result from the methodology in this section.

AE has conducted a cluster analysis of DeKalb County to analyze the relative strength and dominance of industries there. These clusters were analyzed to determine national and local/regional growth trends and assets that benefit industry development. This analysis provides a basis for the identification of target industries for the county.

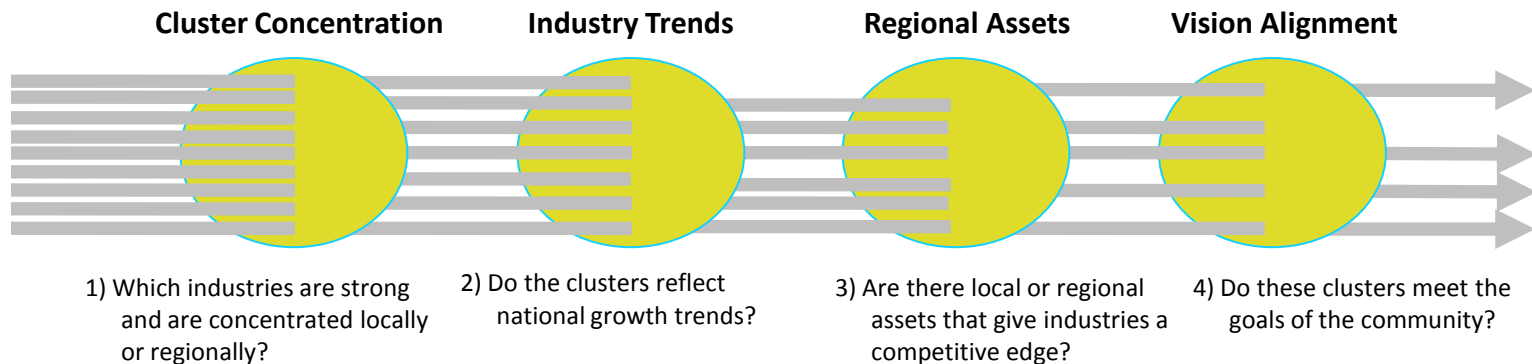
Our approach includes four processes, each acting as a filtering mechanism by which industries are screened for suitability. In many ways, target industry selection is best described as target industry “elimination.” The following chart illustrates systematic process by which an industry is selected as a target.

Through the cluster analysis, we can determine the unique strengths DeKalb County can leverage over their competitors to attract the attention of industries that the county would like to attract.

The focus on target industries allows the county to address any weaknesses that may be significant to the local businesses. Policies can be developed to ease the process and cost of doing business in DeKalb County for industry-specific companies.

An economic strategy tailored to target industries can also provide methods of support for workforce training, infrastructure, and quality of life to successfully market the area and attract industries.

TARGET INDUSTRY SELECTION PROCESS



STEP ONE: Determine Existing Regional Clusters

Industry clusters are highly integrated groups of businesses with strong vertical and horizontal linkages. Vertical linkages include the suppliers and customers in a region that combine to create a competitive business model, whereas horizontal linkages include the relationships between competing companies--which often recruit from the same labor pool of talent--and supporting public institutions. Clusters often mature when businesses expand their relationships with existing supplier firms in a region. As the clusters grow, additional supplier firms are attracted to the region, eventually creating a well-diversified “critical mass” of production, labor, and information.

To assess the strength of a cluster in a regional economy, the location factor (or quotient) for each cluster is analyzed. These factors are calculated by comparing the cluster’s share of total local employment to its national share. This location quotient will yield a value generally between 0 and 5. A result of 1 demonstrates that the cluster commands an average or expected share of the local economy. Cluster location factors greater than 2 indicate a strong cluster agglomeration. Factors less than 0.5 indicate weak clusters.

The supersector LQs serve as a useful tool in gauging industry strength. However, the target industries presented in this report may not correlate directly with the BLS supersectors. The target industries analyzed in this report are custom definitions, using NAICS codes, which may contain components of one or more supersectors. This methodology allows for the analysis to capture the unique characteristics of DeKalb County’s workforce.

DeKalb County Industry Concentrations: 10 Strongest Industries (By Location Quotient, 2011)

Industry Supersector	Employees	LQ
Educational services	17,391	3.25
Information	9,089	1.62
Management of companies and enterprises	5,577	1.39
Transportation and warehousing	11,120	1.31
Administrative and waste services	19,844	1.23
Wholesale trade	12,993	1.12
Professional and technical services	16,617	1.03
Health care and social assistance	34,972	1.01
Retail trade	30,978	1.01
Real estate and rental and leasing	3,869	0.97

Source: BLS

Location Quotient (LQ)

A calculated ratio between the local economy and the national economy that indicates industry concentration.

LQ = 1.0 indicates average concentration

LQ > 2.0 indicates a strong cluster

LQ < 0.5 indicates a weak cluster



Balance of Labor Imports / Exports

SECTOR (RESIDENTS EMPLOYED IN SECTOR)	2011 LABOR IMPORT/EXPORT QUOTIENT	CHANGE 2002-2011
Health Care and Social Assistance (34,112)	0.88	-20.9%
Educational Services (27,315)	0.81	-53.2%
Retail Trade (26,041)	0.83	-8.7%
Accommodation and Food Services (23,122)	1.20	-8.6%
Professional, Scientific, and Technical Services (22,991)	1.18	-20.5%
Waste Management and Remediation (22,807)	1.17	5.8%
Public Administration (17,565)	1.00	-58.8%
Transportation and Warehousing (13,914)	0.93	-7.7%
Finance and Insurance (13,311)	1.36	3.8%
Manufacturing (13,135)	1.02	23.9%
Information (12,499)	0.88	-27.5%
Wholesale Trade (12,202)	0.87	-8.2%
Other Services (excluding Public Administration) (6,975)	0.92	-13.8%
Construction (6,236)	0.61	-45.1%
Management of Companies and Enterprises (5,459)	0.91	20.3%
Real Estate and Rental and Leasing (5,343)	1.21	-14.6%
Arts, Entertainment, and Recreation (3,410)	1.27	-46.8%
Utilities (786)	0.76	-40.2%

Source: BLS

BALANCE OF LABOR IMPORTS/EXPORTS

The Balance of Labor Imports / Exports table to the left illustrates the proportion of residents who live in DeKalb County and work in a particular industry relative to the number of jobs located within DeKalb County for that industry. A quotient of 1.00 means that for every DeKalb citizen working in an industry, there is a corresponding job in that industry within the county's borders. If the quotient is less than 1.00, it means there are more jobs than workers in DeKalb County, and outside labor must be brought in, or "imported," to fill those jobs. Conversely, a quotient greater than 1.00 implies that more DeKalb residents work in an industry than there are jobs in that industry and thus, the excess labor is "exported" to surrounding areas.

Key Findings:

- Overall, DeKalb is a net importer of labor
- Net exporters of labor, such as Accommodation and Food Services, require at least some labor to be provided from the surrounding areas
- The trend of labor importation has increased in recent years, with only four industries importing a smaller percentage of labor in 2011 than they did in 2002



STEP TWO:

Do Local Industry Clusters Reflect National Growth Trends?

As part of the industry selection process, each potential industry target is vetted against national growth trends. By selecting industry targets that align with national growth trends, DeKalb's leadership strategies pertaining to target industries will have a greater chance of success.

Industry clusters that are growing both locally and nationally provide great potential for industry targets. Industry clusters that are weak locally but growing nationally could represent opportunities for economic development in DeKalb.

This methodology, however, is not absolute. There is room for flexibility if a particular industry shows unique characteristics not present in the data.

To further align DeKalb's target industries with prevailing national trends, AE has completed an occupational analysis for each selected target industry. An occupational analysis identifies key occupations within each industry and the demand for that occupation locally and nationally. See appendix II for a more detailed methodology of the occupational analysis.

5-Year Employment Growth by Supersector

Supersector	DeKalb County	United States
Utilities	-35.8%	0.6%
Construction	-17.4%	-28.0%
Manufacturing	-25.5%	-17.1%
Wholesale trade	-15.5%	-5.8%
Retail trade	-3.6%	-4.6%
Professional and technical services	3.4%	3.8%
Management of companies and enterprises	13.3%	7.2%
Administrative and waste services	-6.6%	-7.0%
Educational services	17.8%	15.3%
Health care and social assistance	8.8%	12.1%
Transportation and warehousing	0.9%	-3.5%
Information	-24.7%	-12.0%
Finance and insurance	-9.3%	-8.3%
Real estate and rental and leasing	-20.4%	-11.4%
Arts, entertainment, and recreation	51.4%	1.1%
Accommodation and food services	4.4%	2.2%

10-Year Employment Growth by Supersector

Supersector	DeKalb County	United States
Utilities	-56.9%	-8.3%
Construction	-40.1%	-19.2%
Manufacturing	-46.1%	-28.6%
Wholesale trade	-32.5%	-3.2%
Retail trade	-14.8%	-3.4%
Professional and technical services	-3.5%	11.7%
Management of companies and enterprises	-63.8%	11.6%
Administrative and waste services	-0.6%	-0.3%
Educational services	344.2%	35.2%
Health care and social assistance	16.3%	27.2%
Transportation and warehousing	14.7%	-2.0%
Information	-46.7%	-25.5%
Finance and insurance	-32.4%	-2.4%
Real estate and rental and leasing	-29.6%	-6.2%
Arts, entertainment, and recreation	49.4%	7.8%
Accommodation and food services	-2.4%	12.6%

Source: BLS



STEP THREE:




Do Local Assets Exist that Give the Industry a Competitive Advantage?

Every community has unique strengths that companies can leverage to create competitive advantages. These strengths can include such things as tax structure, infrastructure, market proximity, and workforce skills, among others.

The challenge is to identify key assets in the county and region that will support a wide range of industries to thrive, while working to improve the DeKalb brand.

The location scorecard in each target industry section identifies key assets in DeKalb and opportunities for improvement with regard to specific industry location requirements.

DeKalb County's Assets

-  Strategic Location
-  Quality of Life
-  Competitive Utility Rates

-  R&D Expenditures Per Capita
-  Low Cost of Living
-  Affordable Housing Options
-  MARTA
-  Strong Higher Education Institutions
-  Short Commute Times
-  High Levels of Educational Attainment
-  Patents & Patents Per Capita



STEP FOUR:

Do the Targets Meet Community Goals?

The growth of industry clusters requires a coordinated effort. Government officials, economic developers, business leaders, and the public must be united in their vision and enthusiastic in their support to grow industry clusters that are considered a good fit for DeKalb County.

This consensus and broad support is particularly critical when a county lacks a strong local concentration in a targeted cluster. The lack of cluster concentration does not rule out an industry as a target, but it does indicate that local efforts must be more focused and enhanced to successfully grow the desired industry with limited resources.

During the course of this project, AngelouEconomics conducted numerous interviews with public and private sector leaders. Many of these leaders represented key industries currently located in DeKalb. Through this public input process, AE received a great deal of information regarding the types of businesses that local residents desire to retain and attract.

With these steps completed, AE identified six target industries, each with their own corresponding niches that will provide the best mix of employment to meet community goals, while being achievable within larger economic trends.

As industry activities often overlap, several of the same or similar recommended components are found in multiple industries of this report.



RECOMMENDED TARGET INDUSTRIES & NICHEs

Economic Development Activities:

	Professional & Business Services	Life Sciences	Tourism	Logistics	Construction & Support Trades	Advanced Manufacturing
Mature/Core Targets <ul style="list-style-type: none"> Retention Expansion 	Consulting, Accounting, & Marketing	Biotechnology	Cultural Tourism	Warehouse Distribution	Homebuilding	Fabricated Metals Manufacturing
	Engineering			Truck Terminals	Contracting	Light Manufacturing & Assembly
Diversification Targets <ul style="list-style-type: none"> Attraction Entrepreneurship and Small Business Development 	E-Commerce	Health IT	Youth Sporting Events	Back Office Support Services	Construction Materials Manufacturing	Laboratory Equipment & Supplies
	Creative Design	Proteomics	Bed & Breakfast Inns			
		Bioinformatics				
Emerging Targets <ul style="list-style-type: none"> Expansion Attraction Entrepreneurship and Small Business Development 	Entrepreneur Enabled Businesses	Senior Care Centers	Dynamic Tour Packages	Specialized Freight Trucking		Medical Equipment & Supplies



PROFESSIONAL & BUSINESS SERVICES

INDUSTRY OVERVIEW

Professional and Business Services - *Business services are, in their broadest sense, occupations geared toward providing services in the business world. Professional services are those requiring niche educational training, such as architects, engineers, accountants, doctors, and lawyers.*

Professional and Business Services (PBS) firms exist both as subsidiary operations for parent firms as well as outsourced third-party service providers. Entrepreneur business services is one of the fastest growing sectors of the US economy.

The industry meets the criteria of clean, sustainable, and creative. Companies that do business in professional and business services within DeKalb County are clean in their operations, sustainable over the long-term, and offer career choices that are creative and innovative.

PBS firms DeKalb County also meets many of the theme elements:

- Jobs in this industry include knowledge, technical, and innovation workers. Wages in this industry are well above regional and national averages.
- Businesses in this industry are typically small and locally owned. The opportunity for entrepreneurship is high.
- Business retention efforts could be expanded to reduce the outflow of businesses and keep them operating within the county.

- Green
- Clean
- Sustainable
- Creative

- Knowledge Workers
- Technical Workers
- Innovative Workers
- Semi-Skilled Workers
- Entrepreneurship
- Commercialization
- Business Retention



A BROADER PERSPECTIVE ON PROFESSIONAL & BUSINESS SERVICES

Professional and Business Services is the largest sector of the U.S. economy. The industry, which covers everything from computer systems design and engineering to telemarketing and law, helps determine a business' global competitiveness. Economies with this industry are able to attract technologically advanced companies that require high-skill jobs. The result is an improved quality of life and a higher standard of living.

In a globalized world, they can also account for a sizable share of exports too: In 2009 the UK's treasury estimated that professional services accounted for half of the country's service exports.

Emerging countries looking to integrate into the global marketplace often turn to nations with mature service sectors like Canada, Germany, the U.S., and the Netherlands for guidance. It's one reason that 57,000 professional and business service jobs were added to the US economy in March, and 1.2 million over the last two years, according to the Labor Department.

Law professionals with fluency in English are a hot export in this industry, as are accountants and management consultants.



Global Industry Clusters
London
Frankfurt
Hong Kong
Shanghai
Singapore

Sources: AE, ReferenceUSA



INDUSTRY CHARACTERISTICS

DeKalb County is currently a regional player in PBS because it is close to Downtown Atlanta, but with affordable real estate options. The creative class which comprises this industry’s workforce is growing, and DeKalb County is particularly well positioned to attract key PBS sectors. The computer systems design sub-sector, which contains a number of fast-growing occupations relevant to the PBS industry, is a natural fit.

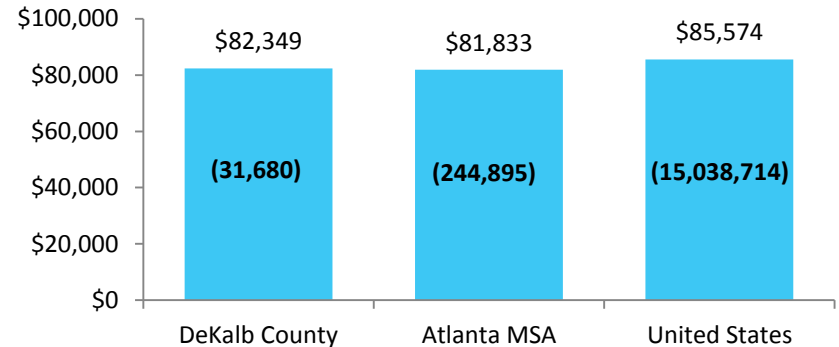
Similarly, it would be beneficial to target the specialized design services sub-sector, which includes graphic and interior designers, because of past growth.

As of 2012, there are approximately 32,000 PBS employees in the county. Those employees make slightly above regional earnings but below the national average.

The county’s business climate may pose challenges to the growth of these industries. However, with concerted efforts, the industry offers great potential to help grow and revitalize DeKalb County. The county can look to certain cities within the county for success stories. Dunwoody and Decatur have both managed to do well in the PBS industry.

Proximity factors are ranked very high in the county, with access to main thoroughfares and Atlanta’s international airport. Furthermore, DeKalb County is well positioned geographically to serve the region.

**Average Wages in Industry, 2012
(Employment Level)**



INDUSTRY CRITERIA

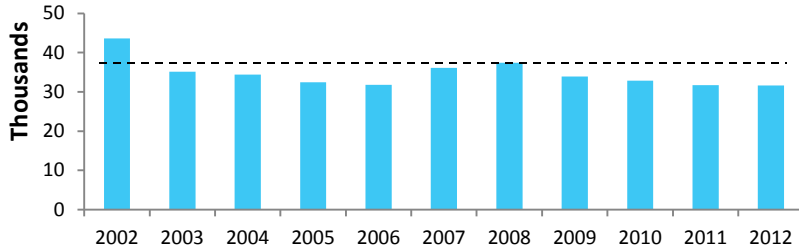
- Skilled professional workforce in DeKalb County
- Appropriate regional demographics
- Quality and scope of available infrastructure
- Proximity and abundance of client businesses
- International airport access
- Business climate & cost factors
- Low utility and wage rates
- Public policy support
- Physical site availability
- Communications/technology infrastructure
- Low risk of business interruption

Sources: BLS, AE

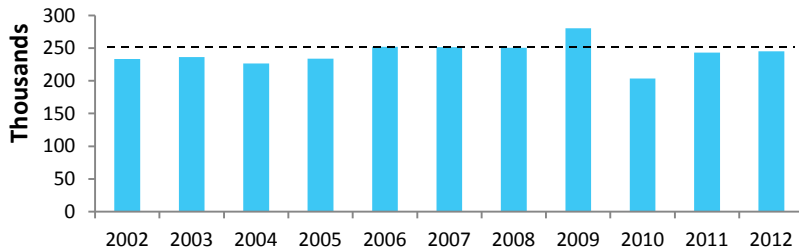


PBS EMPLOYMENT

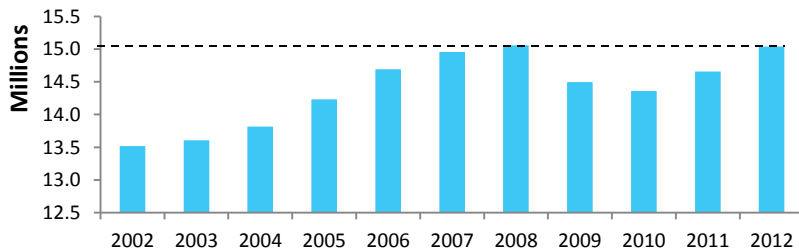
DeKalb County



Atlanta MSA



United States



Local Employment Trends

Employment in PBS in the county has undergone a slight decline for most of the last decade, though it has stabilized more recently.

The county's trends in employment generally mirror those of Atlanta and the nation, but with slightly less pronounced spurts of growth and contraction.

This suggests DeKalb County can do more to leverage its resources to boost employment and services during upticks in the business cycle. On the other hand, it also indicates that the county has been somewhat immune to bursts of contraction in the industry.

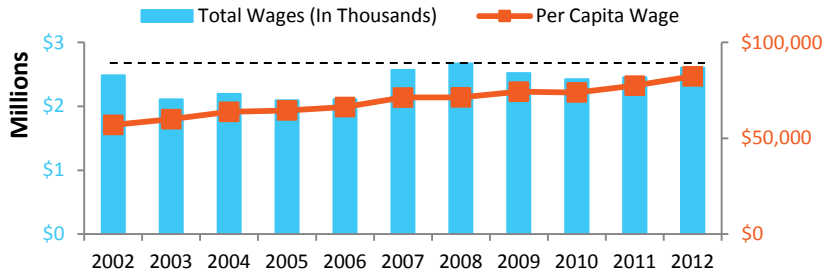
National Employment Trends

Nationally, employment in the industry had strong gains until the 2008 recession. After a brief period of contraction, it has since rebounded by 67,000 employees, or 4.7%.

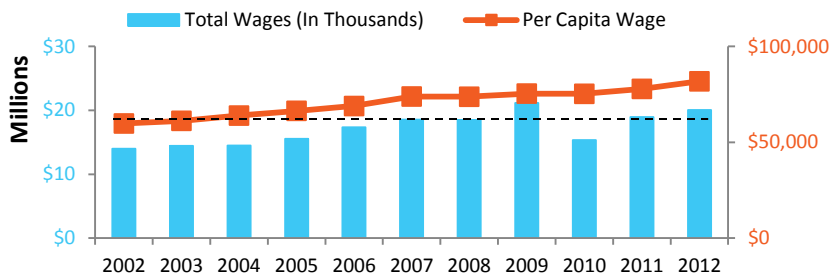


PBS WAGES AND PAY

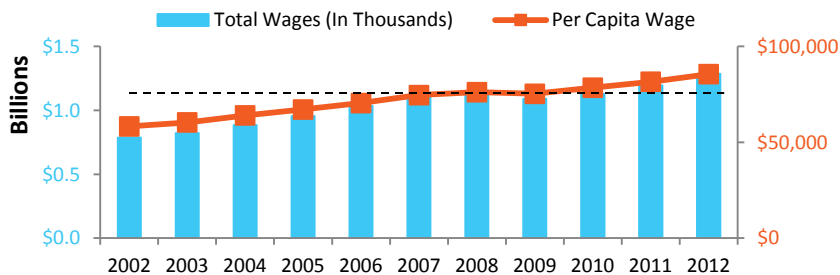
DeKalb County



Atlanta MSA



United States



Local Wage Trends

Per capita and total wages have risen over the last decade and have been consistent with regional and national trends.

Average annual wages are all within \$4,000 of each other. DeKalb County is in a unique position where it is competitive for both businesses and labor.

The local costs of labor are competitive and wages are not an obstacle to attracting skilled workers in this industry. Likewise, the costs of labor are not prohibitive for companies looking to enter the DeKalb County market.

Regional and National Wage Trends

Regionally, total wages fell by 23% in 2010. Much like employment, wages have been able to rebound strongly. Wages, being “stickier” than employment, did not fluctuate as markedly.

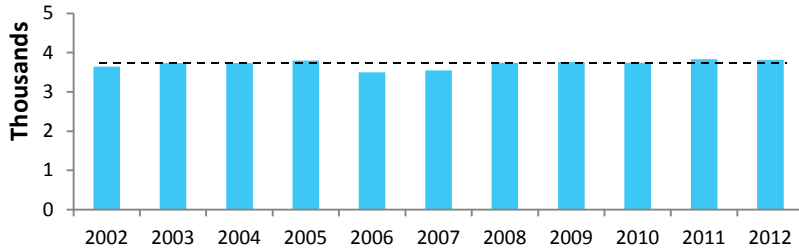
Nationally, total and per capita wages were much more stable through the recession and have maintained a steady positive trajectory.

Sources: BLS, AE

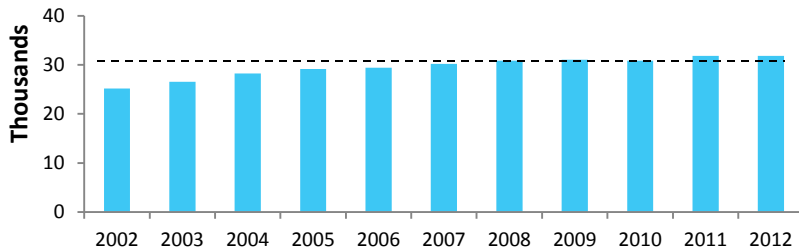


PBS ESTABLISHMENTS

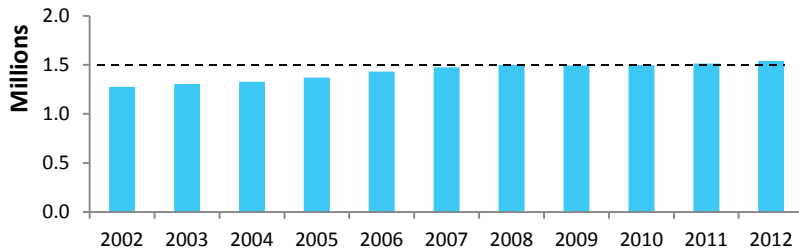
DeKalb County Establishments



Atlanta MSA Establishments



United States Establishments



Local Establishment Trends

Business establishment levels are closely correlated to employment levels. As such, establishment trends look somewhat similar to employment trends but without as much year-to-year fluctuation.

Establishment trends weathered the Great Recession relatively unscathed and have continued on a slight upward trajectory.

Regional & National Establishment Trends

Here again, regional and national business establishment growth mirrors DeKalb County.

PBS establishments have grown in number nationally. The service sector accounts for 68% of the U.S. economy and employment accounts four out of five jobs.

Sources: BLS, AE



PBS SECTORS & AREAS OF GROWTH

The sectors of the Professional and Business Services industry relevant to DeKalb County include Finance, Insurance, Professional Services, and Technical Services. The table to the right shows which sectors have experienced **employment growth** in 5- and 10-year time periods.

Looking at the past growth trends:

- The Finance sector grew nationally. DeKalb County has the proper assets in this sector to facilitate growth going forward.
- Insurance has grown in the county despite regional and national decline. The strong local cluster presents an opportunity to attract further growth as the industry consolidates.
- Professional Services grew nationally. These types of services offer the creative occupations within PBS and DeKalb County could do more to grow this sector through improving its business climate.
- Technical Services grew locally, regionally, and nationally. This sector offers potential for additional high-skill job creation.

Sector	Positive 5-Year Growth (2008-2012)			Positive 10-Year Growth (2003-2012)		
	COUNTY	MSA	US	COUNTY	MSA	US
Finance						X
Insurance	X			X		
Professional Services			X			X
Technical Services	X	X	X	X	X	X

SECTOR COMPONENTS	
Finance	
	Depository Credit Intermediation
	Nondepository Credit Intermediation
	Activities Related to Credit Intermediation
	Other Financial Investment Activities
Insurance	
	Insurance Carriers
	Agencies, Brokerages, and Other Insurance Related Activities
Professional Services	
	Legal Services
	Accounting, Tax Preparation, Bookkeeping, and Payroll Services
	Architectural, Engineering, and Related Services
	Management of Companies and Enterprises
	Advertising, Public Relations, and Related Services
Technical Services	
	Specialized Design Services
	Computer Systems Design and Related Services
	Management, Scientific, and Technical Consulting Services
	Scientific Research and Development Services
	Other Professional, Scientific, and Technical Services

Sources: BLS, AE



Key Occupations in the Professional & Business Services Industries

Occupation	United States Occupational LQ	DeKalb County MSA LQ	10-year U.S. Growth Projection (%)	United States Salary	DeKalb County MSA Salary	Education Needed
Personal Financial Advisors	8.32	1.21	32.10	\$90,820	\$109,220	Bachelor's degree
Actuaries	8.03	0.81	26.70	\$106,680	\$104,220	Bachelor's degree
Architects, Except Landscape and Naval	7.54	1.17	24.50	\$78,690	\$81,390	Bachelor's degree
Credit Analysts	6.78	1.88	19.70	\$69,500	\$65,650	Bachelor's degree
Architectural and Civil Drafters	6.76	0.88	3.20	\$50,550	\$52,370	Associate's degree
Lawyers	6.15	1.20	10.10	\$130,880	\$145,010	Doctoral or professional degree
Financial Analysts	6.05	1.43	23.00	\$89,410	\$80,180	Bachelor's degree
Photographers	5.93	1.31	12.50	\$36,330	\$29,550	High school diploma or equivalent
Interior Designers	5.44	1.88	19.30	\$52,970	\$48,400	Bachelor's degree
Anthropologists and Archeologists	5.16	1.52	20.70	\$60,230	\$71,110	Master's degree
Computer Systems Analysts	5.01	1.47	22.10	\$83,800	\$76,710	Bachelor's degree
Computer Programmers	4.96	1.73	12.00	\$78,260	\$89,910	Bachelor's degree
Software Developers, Applications	4.93	1.04	27.60	\$93,280	\$86,880	Bachelor's degree
Operations Research Analysts	4.83	1.15	14.60	\$79,830	\$79,880	Bachelor's degree
Environmental Engineers	4.74	1.44	21.90	\$85,140	\$75,160	Bachelor's degree
Management Analysts	4.68	2.30	21.90	\$88,070	\$92,930	Bachelor's degree
Civil Engineers	4.67	1.05	19.40	\$84,140	\$90,860	Bachelor's degree
Financial Specialists, All Other	4.64	1.05	6.10	\$67,020	\$61,800	Bachelor's degree
Software Developers, Systems Software	4.61	1.37	32.40	\$102,550	\$96,990	Bachelor's degree
Financial Managers	4.34	1.12	8.80	\$123,260	\$128,110	Bachelor's degree

Source: BLS, AE



BUSINESS DEVELOPMENT

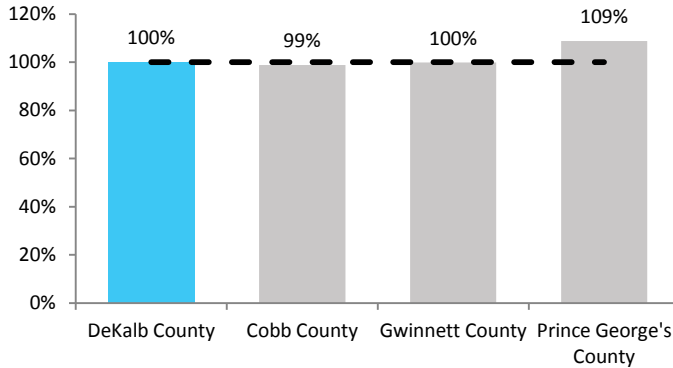
Based on the recommended target industry, AE suggests attending the following or similar conferences in order to gain a firmer understanding of industry trends as well as to establish industry contacts and market the region's available assets related to the industry. Host cities of each conference may change year to year.

PROFESSIONAL & BUSINESS SERVICES CONFERENCES, 2014		
Conference	Description	Date
IEEE INTERNATIONAL CONFERENCE ON SERVICES COMPUTING	This international conference looks at how services computing is affecting business modeling, business consulting, solution creation, service delivery, and software architecture design, development and deployment.	June 27 - 29, 2014
NATIONAL FORUM ON BALANCING INNOVATION WITH CONSUMER PROTECTIONS IN EMERGING PAYMENT SYSTEMS	Experts at this conference provide insights and tools necessary to navigate the legal, compliance, technical, and business hurdles arising from new payment products and technologies.	March 24- 25, 2014
THE AMERICAN INSTITUTE OF ARCHITECTS 2014 CONVENTION	This key conference for architecture and design professionals places a heavy emphasis on sustainable innovation designed to better living conditions globally. This three-day event will give exposure to the cutting edge of architectural advances, and bring together top architecture, design, and construction professionals.	June 26-28, 2014
GLOBAL CONFERENCE ON SERVICE MANAGEMENT	This conference will look at the changes in strategic thinking for businesses worldwide. It will mainly discuss topics like hospitality and tourism management, education management and delivery and banking and financial services.	January 2015

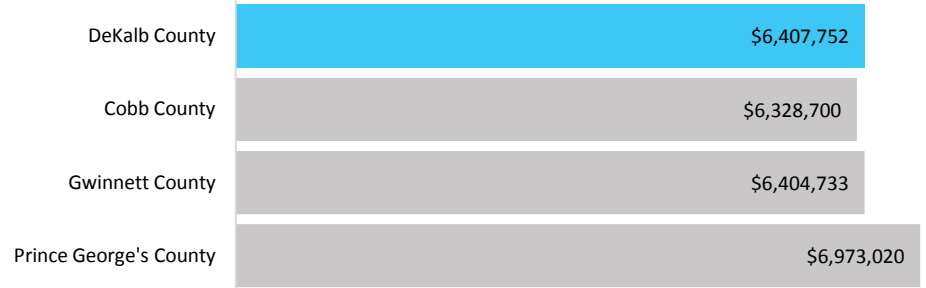


PBS (CALL CENTER) COST OF OPERATIONS

Local Cost of Operations Index



Total Annual Operating Costs



Factors of Analysis

In order to achieve direct comparisons of annual operating costs within DeKalb County and the benchmark communities for this industry, uniform conditions for a hypothetical company were applied to the cost variables of each specific community. Operating costs were calculated across five primary cost categories including employee payroll, fringe and mandated benefits, utilities, building/lease payment and property tax. A general outline of the parameters used has been provided below.

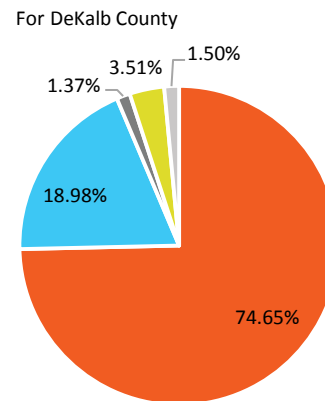
- Lease of 30,000 SF of Flex Space
- \$1,500,000 Capital Investment in Computers, Machinery, and Equipment
- Total Workforce of 120 Employees
- Monthly Electricity Demand of 45,000 kWh
- Monthly Water usage of 100,000 gallons
- Monthly Natural Gas Demand based on Climate Zone

*If leased space is greater than 10,000 SF, it is assumed it is a Triple Net Lease. If it less than 10,000 SF, it is assumed it is a gross lease.

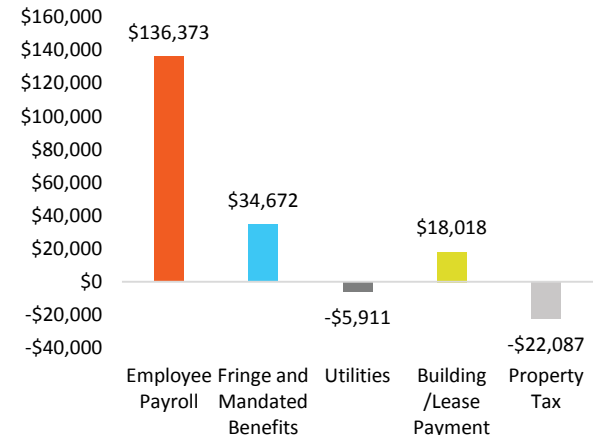
Source of Annual Costs

- Employee Payroll
- Fringe and Mandated Benefits
- Utilities
- Building / Lease Payment
- Property Tax

Breakdown of Total Annual Costs



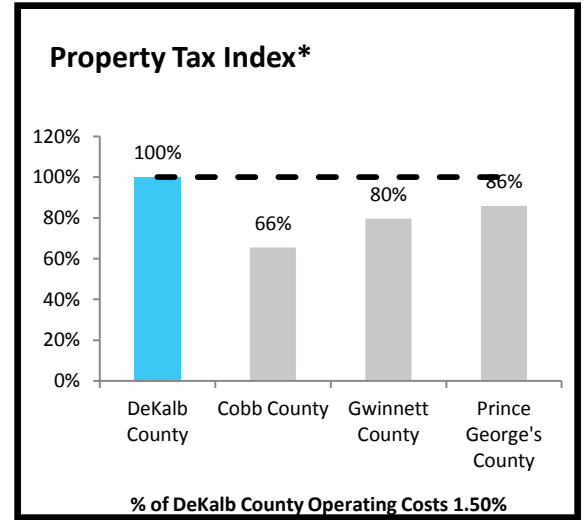
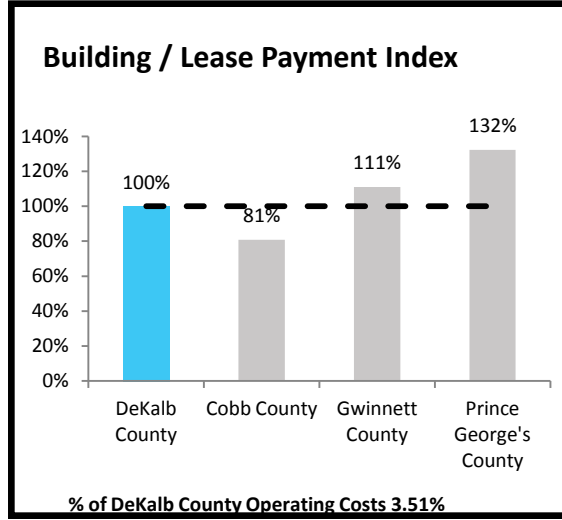
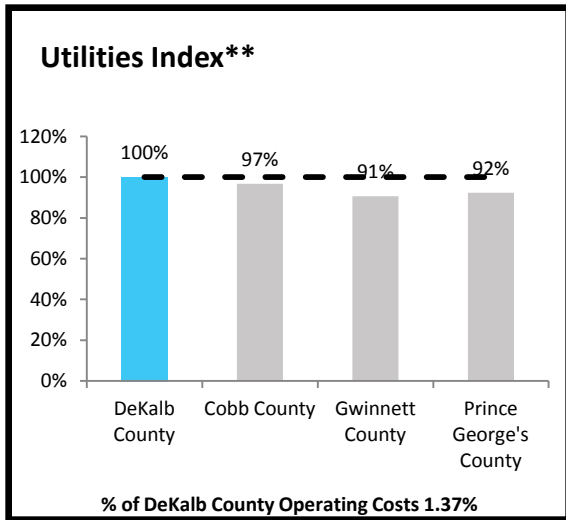
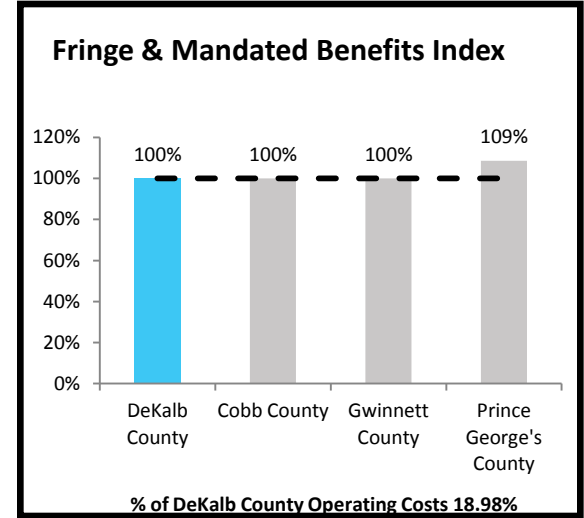
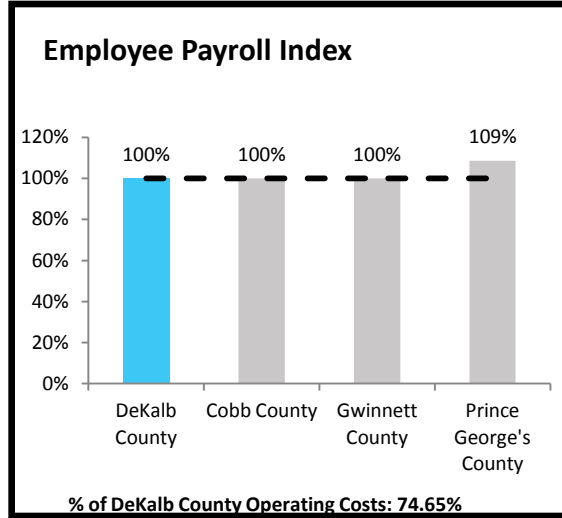
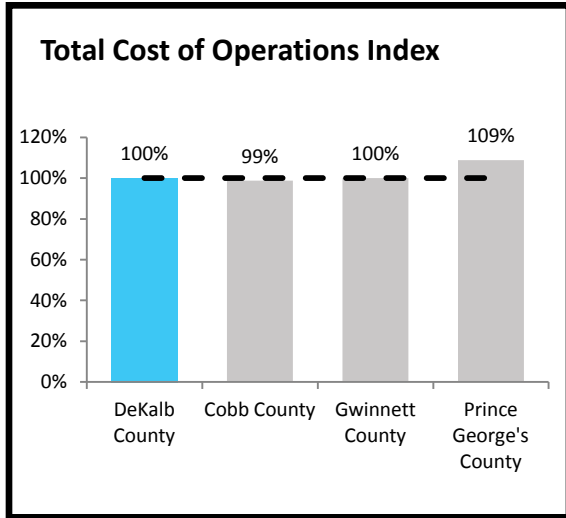
Differential Cost Advantage Vs. Benchmarks



Sources: See Appendix IV



PBS (CALL CENTER) COST OF OPERATIONS



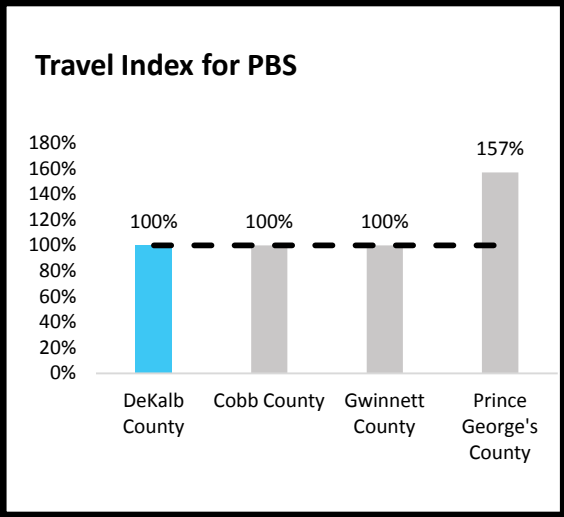
*Property taxes reflect tax rates for unincorporated counties, individual cities within each county may levy additional property taxes.

**Electric Rates based off of primary utility supplier in the county. Different rates may be found using different utilities.

Sources: See Appendix IV



PBS (CALL CENTER) COST OF OPERATIONS



Sources: See Appendix IV

*Freight index created by calculating average shipping cost to ship 10,000 pounds of general freight from benchmark county to New York City, NY, Chicago, IL and Los Angeles, CA.

**Travel Indices created by calculating average round trip flight and 2 night hotel stay from benchmark county to three major industry clusters for the respective industries.



PBS (CALL CENTER) COST OF OPERATIONS

Occupational Profile for PBS (Call Center)

Occupation Description	Number of Employees
General and Operations Managers	2
Administrative Services Managers	2
Accountants and Auditors	2
Computer User Support Specialists	2
First-Line Supervisors of Office and Administrative Support Workers	6
Secretaries and Administrative Assistants, Except Legal, Medical, and Executive	6
Customer Service Representatives	100
Total Workforce	120

Cost of Operations Comparison – Raw Data Table

Metro Area	Employee Payroll	Fringe and Mandated Benefits	Utilities	Building / Lease Payment	Property Tax	Total Operating Cost
DeKalb County	\$4,783,240	\$1,216,107	\$87,524	\$224,618	\$96,263	\$6,407,752
Cobb County	\$4,783,240	\$1,216,107	\$84,656	\$181,582	\$63,115	\$6,328,700
Gwinnett County	\$4,783,240	\$1,216,107	\$79,352	\$249,327	\$76,707	\$6,404,733
Prince George's County	\$5,192,360	\$1,320,123	\$80,832	\$297,000	\$82,705	\$6,973,020

Cost of Operations Comparison – Cost Differences

Metro Area	Employee Payroll	Fringe and Mandated Benefits	Utilities	Building / Lease Payment	Property Tax	Total Operating Cost
Cobb County	\$0	\$0	-\$2,868	-\$43,036	-\$33,148	-\$79,052
Gwinnett County	\$0	\$0	-\$8,172	\$24,709	-\$19,556	-\$3,019
Prince George's County	\$409,120	\$104,016	-\$6,692	\$72,382	-\$13,558	\$565,268
Average Cost Difference	\$136,373	\$34,672	-\$5,911	\$18,018	-\$22,087	\$161,066

Sources: See Appendix IV



PBS (CALL CENTER) SUPPLY CHAIN ANALYSIS

PBS MULTIPLIERS

Sector (Implan Code)	Direct	Indirect	Induced	Total
Business support services (386)	1.0	0.356734	0.489290	1.846024

TOTAL ECONOMIC IMPACTS

	Employment	Labor Income	Output
Direct Effect	120	856,562	1,500,000
Indirect Effect	5	216,104	530,111
Induced Effect	6	264,517	727,910
Total Effect	131	1,337,183	2,758,021
State & Local Tax Revenue			97,033

SUPPLY CHAIN IMPACTS: OUTPUT

Sector	Total Output
Telecommunications	\$59,706
Employment services	\$54,602
Real estate establishments	\$40,377
Food services and drinking places	\$25,644
Couriers and messengers	\$23,382
Monetary authorities and depository institutions	\$22,181
Management, scientific, and technical consulting	\$17,560
Management of companies and enterprises	\$16,028
Legal services	\$15,808
Accounting, tax preparation, and bookkeeping	\$15,632

SUPPLY CHAIN IMPACTS: EMPLOYMENT*

Sector	Jobs
Employment services	1.41
Food services and drinking places	0.42
Services to buildings and dwellings	0.29
Real estate establishments	0.28
Office administrative services	0.20
Management, scientific, and technical consulting	0.17
Computer systems design services	0.16
Couriers and messengers	0.16
Accounting, tax preparation, and bookkeeping	0.14
Investigation and security services	0.13

SUPPLY CHAIN IMPACTS: LABOR INCOME**

Sector	Labor Income
Employment services	\$40,754
Telecommunications	\$11,226
Management, scientific, and technical consulting	\$10,394
Food services and drinking places	\$10,259
Computer systems design services	\$9,989
Management of companies and enterprises	\$9,522
Office administrative services	\$8,303
Accounting, tax preparation, and bookkeeping	\$7,933
Couriers and messengers	\$7,321
Legal services	\$6,140

Source: Implan

*All employment figures are presented in job years. One job year is equal to one full-time worker who is employed for one year.

** Labor income includes employee compensation (wages and benefits) and proprietor income.



RANKING OF DEKALB COUNTY'S PROFESSIONAL & BUSINESS SERVICES INDUSTRY

Assessment Rationale	PBS Variable	Leading	Strong	Average	Weak
<ul style="list-style-type: none"> Slight negative growth over the last decade Recent incremental positive growth 	Employment Trends			●	
<ul style="list-style-type: none"> Wages have risen, keeping pace with regional and national averages Wages are competitive for both businesses and employees 	Wage Trends	●			
<ul style="list-style-type: none"> Business establishment numbers have held steady in recent years No significant fluctuation during the recession 	Business Establishments		●		
<ul style="list-style-type: none"> DeKalb County does have a base of highly skilled workers, but many professionals come from outside the county to fill PBS job openings DeKalb County educational institutions are partly responsible for producing highly-educated individuals in this industry 	Employee Skill Set		●		
<ul style="list-style-type: none"> DeKalb County's total operating costs are higher than two (Cobb and Gwinnett) of the three benchmarks The county is not competitive in property taxes and utilities 	Cost of Operations				●
	Overall PBS Industry			●	

Source: AE



PROFESSIONAL & BUSINESS SERVICES NICHE MARKETS

Entrepreneur-Enabled Businesses: Risk taking is critical for financial health and DeKalb County lacks strong support for entrepreneurs. The county should look to offer more of such resources over the long-term. Currently, a range of regional incubators are available, including CollabTech, the Innovation Factory, and Gwinnett Innovation Park; these resources draw entrepreneurs out of DeKalb County into competitor counties.

Georgia is also just one of three states to have passed laws allowing crowdfunding for small businesses. Applying technology in various forms will help entrepreneurs distinguish their products and services.

E-commerce: Business conducted over the Internet, or e-commerce, is forecast to grow 13% this year, with US online shoppers spending \$262 billion. Growth, in fact, is expected to outstrip traditional brick-and-mortar retailers, and startup costs are usually far lower. Because of e-commerce's borderless nature, success in this niche is less beholden to the overall economic climate in DeKalb County than other niches.

Engineering: From transportation to utilities, engineers will play a key role in the county's attempts to reverse its infrastructural decline, and in improving structures, systems, and processes more broadly.

Consulting, Accounting, & Marketing: Marketers help get the word out and build a brand. Consultants provide expertise, often in the form of knowledge or skills, while accountants steer a business toward financial health and help maximize earnings. These "traditional" niches have a very current role to play in distinguishing DeKalb County businesses amid tighter regional competition.

Creative Design: Creativity can add value to a product or service, solve problems, attract tourists – if not energize an entire community. It is integral to a range of sectors, including media, architecture, IT, film and music, while technological advances provide myriad new ways to apply and market creativity.

Metro Atlanta ranks favorably in terms of overall creativity, while DeKalb County is third among the area's counties with 2,056 creative businesses. Being that creativity is less the domain of individuals and more a social process that blossoms through collaboration and competition (and often in urban areas), the county is favorably positioned to enlarge its creative footprint.



LIFE SCIENCES

INDUSTRY OVERVIEW

LIFE SCIENCES - Services, products, and activities that are broadly related to research, manufacturing and other activities focused upon or utilizing living organisms, with particular attention to activities relating to the maintenance or restoration of health.

The Life Sciences industry is currently one of the largest in the U.S. economy and is projected to undergo the swiftest growth in employment and wages among all industries over the next ten years.

Life sciences relies on high levels of scientific and technology research, and therefore depends heavily on research institutions such as universities. Moreover, funding requirements within the industry are substantial, placing companies and entrepreneurs that work within the industry in particular need of readily accessible venture capital, government funding, and other sources of funding.

Life sciences in DeKalb County also meet many of the theme elements:

- Jobs include knowledge, technical, and innovation workers. Wages paid in this industry are at or above regional and national averages.
- Progression in this industry relies on small businesses that pursue ideas and technological advancements made in the public sector.
- As businesses grow, access to larger markets becomes vital. The county's first-rate research institutes can become strategic partners for accessing new markets through commercialization and technology transfer.
- Growth begets growth. However, retention of existing companies is just as important as business attraction for sustained economic growth.

- Green
- Clean
- Sustainable
- Creative

- Knowledge Workers
- Technical Workers
- Innovative Workers
- Semi-Skilled Workers
- Entrepreneurship
- Commercialization
- Business Retention



A BROADER PERSPECTIVE ON LIFE SCIENCES

International players in Life Sciences have seen their stock rise through some combination of government investment, talent-attraction policies, and linkages with analog industries.

China's go-to strategy has been to trade market access to foreign companies for technology transfer. The city-state of Singapore makes it a point to outbid rivals for the world's best talent.

Countries with a high overall technological aptitude, like Sweden, Japan, the UK, and Germany, are able to link Life Sciences with other fields, such as agricultural sciences and food production.

Leading life science countries tend to adopt policies that improve their innovation ecosystems. These might include tax incentives, short drug approval times, and friendly immigration policies.

Looking ahead, more complex forms of innovation will be a determinant of success, as a bulk of life science products are derived from low-molecular-compound technology. This has produced a shortage of high-molecular compound technology.



Global Industry Clusters

United Kingdom

France

Switzerland

Malta

South Korea

Sources: AE, ReferenceUSA



INDUSTRY CHARACTERISTICS

Life Sciences is an enormous asset to DeKalb County. The county has world-class research institutions that receive billions of dollars for the research and development of new ideas and technologies. In addition to the familiar names of Emory University, the DeKalb Medical Center, and the CDC, Mercer University offers the only Ph.D. pharmacy program in the entire region. This type of research creates a catalyst for supply chain support services.

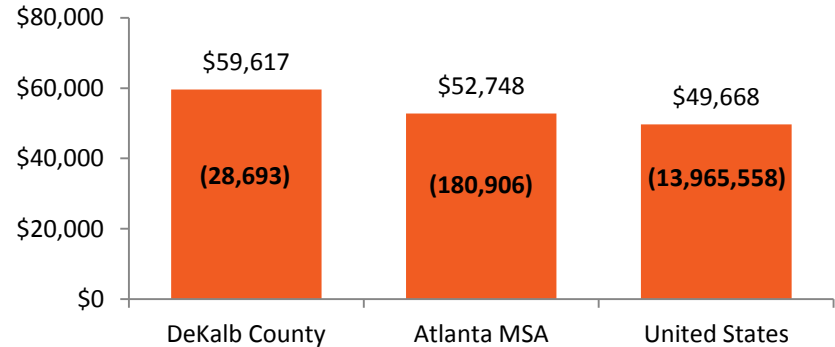
Many private sector businesses – essential to advancing the industry and supporting industry operations – operate within DeKalb County.

As of 2012, there are nearly 30,000 employees in Life Sciences in DeKalb County. Those employees earn \$59,617 on average, which far surpasses regional and national averages.

Proximity factors rank high for the county. In addition, DeKalb County has a sufficient amount of qualified workers to meet skills-set demands in Life Sciences.

The largest challenges that face DeKalb County’s life science industry include venture capital, high taxes and overall ease of doing business. Being that Life Sciences is very capital intensive, access to venture capital is crucial; private sector businesses rely on venture capital the same way that universities rely on federal funds for research and development.

**Average Wages in Life Sciences, 2012
(Employment Level)**



INDUSTRY CRITERIA

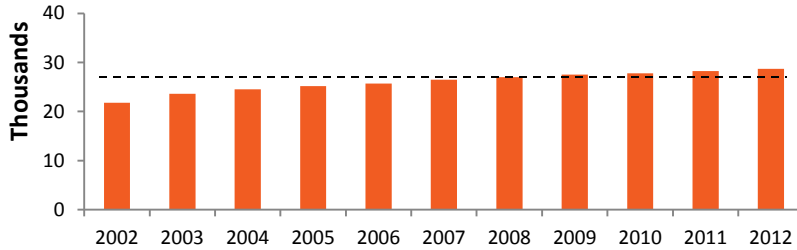
- Skilled professional workforce
- Entrepreneurial environment
- Existing medical presence
- Available venture capital
- Proximity to market
- Institutional research and development
- Affordable lab space
- International airport access
- Business friendly climate
- Low tax environment
- Public policy support

Sources: BLS, AE

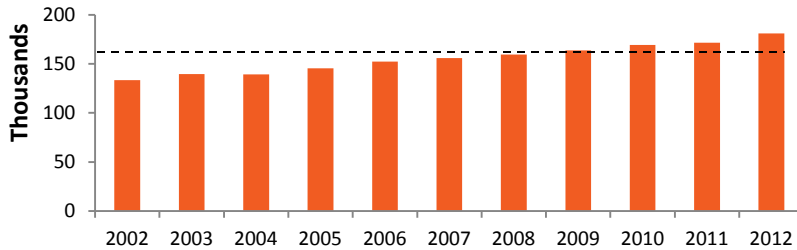


LIFE SCIENCE EMPLOYMENT

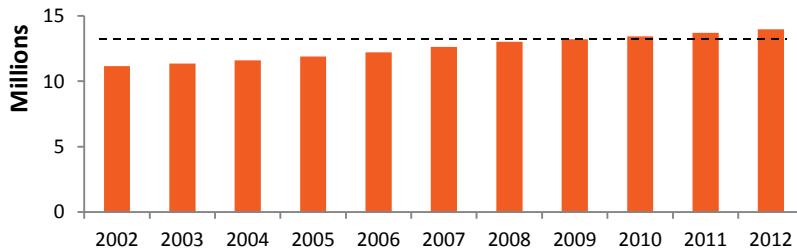
DeKalb County Employment



Atlanta MSA Employment



United States Employment



Local Employment Trends

Employment in Life Sciences has undergone a slow but steady increase over the last decade. The county's major assets have allowed this industry to be resilient in the wake of the recent recession.

Even though this industry is performing well, and has been for more than 10 years, it has not reached its full potential. A focus on commercialization will expand private sector investment and employment. Once private sector investment starts growing, the local industry supply chain will fill in through private sector support services.

Regional & National Employment Trends

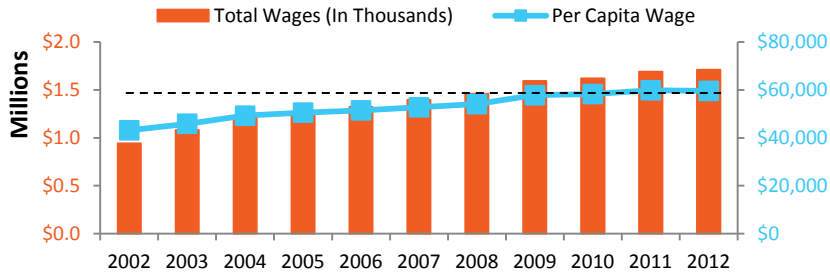
Growth in the MSA has also remained positive. MSA growth was particularly strong in 2012 with an increase of around 150,000 workers.

National employment in the Life Sciences industry has been steadily positive over the entire 10-year timeline. By all accounts, the Life Sciences industry is expected to continue to grow and to expand as new technologies are discovered and new advancements are explored.



LIFE SCIENCE WAGES AND PAY

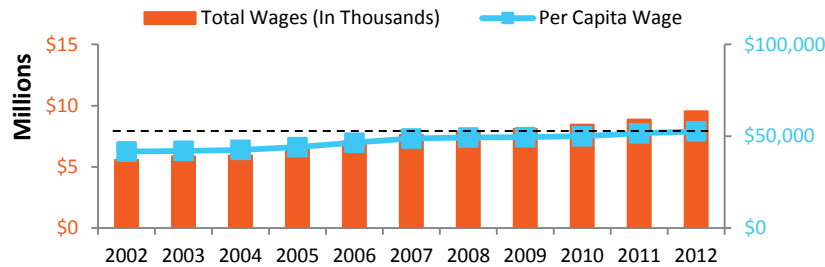
DeKalb County Wages and Pay



Local Wage Trends

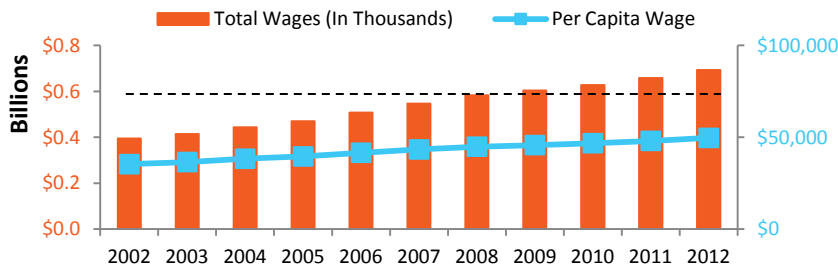
Life sciences wages in DeKalb County have consistently held higher than regional and national averages. The strong growth in wage could make it difficult to attract new companies to the county.

Atlanta MSA Wages and Pay



Per capita wages continue to tick up slowly even as total wages increase. This implies that the market is out of equilibrium due to unmet demand; despite a larger number of employees in the workforce, wages continue to grow. This will continue to be the case until DeKalb County has enough Life Sciences workers to meet public and private sector demand.

United States Wages and Pay



Regional & National Wage Trends

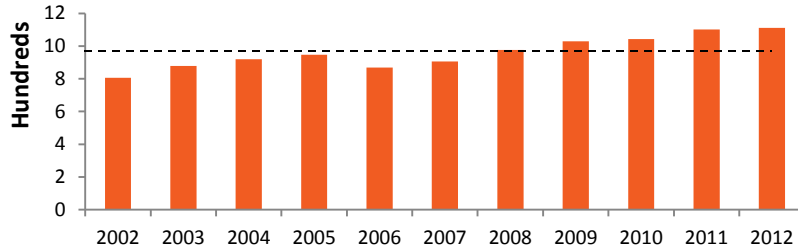
National aggregate wages saw a slight increase in 2012, as did per capita wages. Total wages have risen more briskly, possibly indicating that per capita wages have been offset by growth in the number of employees entering the labor market.



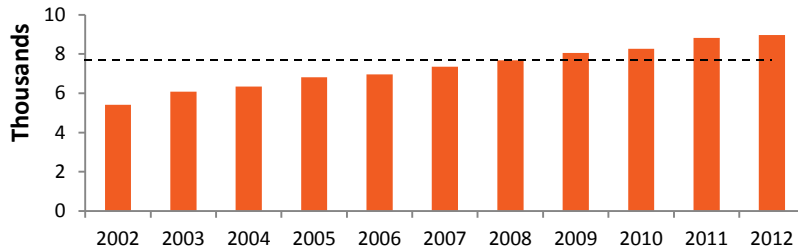
Sources: BLS, AE

LIFE SCIENCE ESTABLISHMENTS

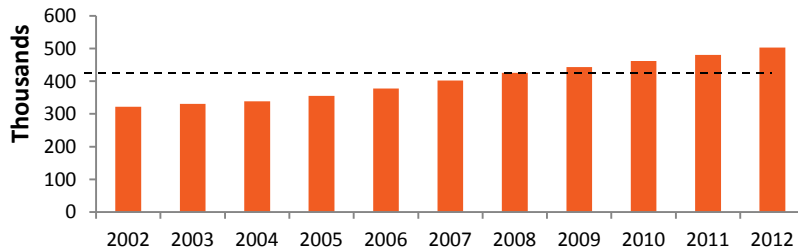
DeKalb County Establishments



Atlanta MSA Establishments



United States Establishments



Local Establishment Trends

Business establishment growth has been steady and reliable over the last decade. As employment remained positive, so did the growth in establishments.

The strength of this industry in DeKalb County is again showcased by the continued growth in establishments, despite the 2008 economic recession.

Regional & National Establishment Trends

Regional and national business establishments underwent similar growth patterns – positive and predictable.



LIFE SCIENCE SECTORS & AREAS OF GROWTH

The sectors of the Life Sciences industry that are relevant to DeKalb County include Hospitals and Facilities, Services, Manufacturing, and Technology. The table to the right shows which sectors have experienced **employment growth** in 5- and 10-year time periods.

Looking at the past five-year growth trends:

- While Hospitals and Facilities has grown regionally and nationally, the sector failed to do so in DeKalb County. But as demand for hospitals and facilities increases, overall sector growth in DeKalb County is likely to follow.
- The Services sector has experienced growth at all geographical levels. DeKalb County should continue to support this sector.
- Life Sciences Manufacturing has grown nationally in recent years. The opportunity for DeKalb will come with commercialization. As ideas are turned into products, companies will be looking for manufacturers close to home.
- Technology is another sector that has seen growth across the board. This sector will benefit from PBS sector growth. The cross-pollination of ideas is at the heart of an entrepreneurial culture.

Sector	Positive 5-Year Growth (2008-2012)			Positive 10-Year Growth (2003-2012)		
	COUNTY	MSA	US	COUNTY	MSA	US
Hospitals & Facilities		X	X	X	X	X
Services	X	X	X	X	X	X
Manufacturing			X			
Technology	X	X	X	X	X	X

SECTOR COMPONENTS	
Hospitals and Facilities	
	Outpatient Care Centers
	Medical and Diagnostic Laboratories
	General Medical and Surgical Hospitals
	Nursing Care Facilities (Skilled Nursing Facilities)
	Other Residential Care Facilities
Services	
	Home Health Care Services
	Other Ambulatory Health Care Services
	Individual and Family Services
	Child Day Care Services
Manufacturing	
	Medical Equipment and Supplies Manufacturing
Technology	
	Custom Computer Programming Services
	Computer Systems Design Services

Sources: BLS, AE



Key Occupations in the Life Sciences Industries

Occupation	United States Occupational LQ	DeKalb County MSA LQ	10-year U.S. Growth Projection (%)	United States Salary	DeKalb County MSA Salary	Education Needed
Respiratory Therapists	8.76	0.94	27.70	\$57,200	\$53,150	Associate's degree
Medical Equipment Preparers	8.32	0.81	17.50	\$32,260	\$31,500	High school diploma or equivalent
Cardiovascular Technologists and Technicians	8.16	0.75	29.30	\$53,050	\$52,880	Associate's degree
Medical and Clinical Laboratory Technologists	8.13	0.96	11.30	\$58,640	\$57,470	Bachelor's degree
Surgical Technologists	8.02	0.89	18.90	\$43,480	\$42,390	Postsecondary non-degree award
Nuclear Medicine Technologists	7.50	0.62	18.90	\$70,840	\$68,260	Associate's degree
Diagnostic Medical Sonographers	7.33	0.67	43.50	\$66,360	\$61,680	Associate's degree
Radiation Therapists	6.74	0.88	20.30	\$80,410	\$77,980	Associate's degree
Emergency Medical Technicians and Paramedics	6.62	1.05	33.30	\$34,370	\$31,900	Postsecondary non-degree award
Exercise Physiologists	6.62	1.09	27.90	\$47,610	\$42,120	Master's degree
Medical and Health Services Managers	6.48	0.88	22.40	\$98,460	\$94,200	Bachelor's degree
Licensed Practical and Licensed Vocational Nurses	6.47	0.77	22.40	\$42,400	\$39,770	Postsecondary non-degree award
Recreational Therapists	6.31	0.99	17.10	\$44,280	\$40,840	Bachelor's degree
Dietitians and Nutritionists	5.70	0.59	19.70	\$56,170	\$52,610	Bachelor's degree
Occupational Therapists	5.23	0.70	33.50	\$76,400	\$73,180	Master's degree
Physical Therapists	5.09	0.67	39.00	\$81,110	\$79,630	Doctoral or professional degree
Microbiologists	2.97	1.86	13.30	\$73,250	\$86,180	Bachelor's degree
Pharmacists	2.53	0.90	25.40	\$114,950	\$113,130	Doctoral or professional degree
Epidemiologists	2.21	0.95	23.60	\$71,400	\$64,230	Master's degree
Chemists	1.86	0.60	3.80	\$76,870	\$76,470	Bachelor's degree

Sources: BLS, AE



BUSINESS DEVELOPMENT

Based on the recommended target industry, AE suggests attending the following or similar conferences in order to gain a firmer understanding of industry trends as well as to establish contacts and market the region's available assets related to the industry. Host cities of each conference may change year to year.

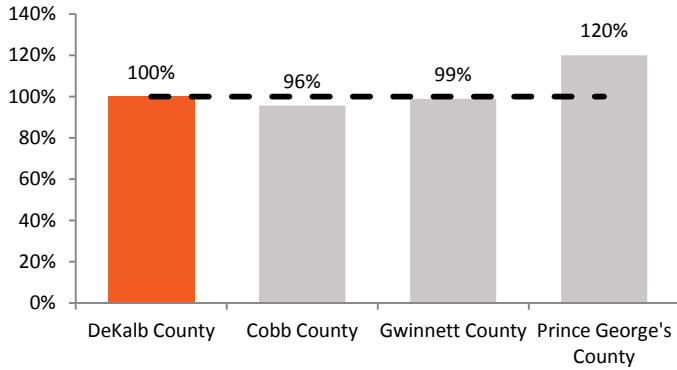
LIFE SCIENCES CONFERENCES, 2014

Conference	Description	Date
MEDICAL DEVICE SUMMIT WEST	This event focuses on reducing risk and increasing return through cutting-edge business strategies and technological innovation.	July 2014
BIO INTERNATIONAL CONVENTION	The convention, featuring 1,700 exhibitors, is where high-level executives and influential decision makers come to discover new players in the industry, form partnerships and evaluate emerging technologies.	June 23-26, 2014
INSTITUTE FOR HEALTHCARE IMPROVEMENT ANNUAL NATIONAL FORUM	This event unites thousands of health care leaders, visionaries, and front-line practitioners from around the world to exchange ideas regarding quality health care and how to improve health.	December 7 - 10, 2014
PITTCON CONFERENCE & EXPO	This is world's largest annual conference and exposition for laboratory science, offering the latest technology and instrumentation from nearly 950 exhibitors, a diverse Technical Program of over 2,000 sessions, and unique networking opportunities with colleagues from 87 countries.	March 2-6, 2014
BIO-IT WORLD CONFERENCE & EXPO	This conference unites 2,500+ Life Sciences, pharmaceutical, clinical, healthcare, and IT professionals from 30+ countries. The Expo provides a platform to share information and discuss enabling technologies that are driving biomedical research and the drug development process.	April 29-May 1, 2014
LIFE SCIENCE INNOVATION NORTHWEST	This conference attracts public and private investors, investment bankers and industry executives focused on business development and partnering opportunities in Life Sciences.	June 19-20, 2014
INTERNATIONAL CONFERENCE ON PROTEOMICS AND BIOINFORMATICS	This event promotes exchange of knowledge and research techniques with experts from pharmaceutical and biotech companies, academicians from leading universities, and scientists from research institutions.	August 4-6, 2014



LIFE SCIENCES (TEST KIT R&D) COST OF OPERATIONS

Local Cost of Operations Index



Total Annual Operating Costs



Factors of Analysis

In order to achieve direct comparisons of annual operating costs within DeKalb County and the benchmark communities for this industry, uniform conditions for a hypothetical company were applied to the cost variables of each specific community. Operating costs were calculated across five primary cost categories including employee payroll, fringe and mandated benefits, utilities, building/lease payment and property tax. A general outline of the parameters used has been provided below.

- Lease of 40,000 SF of Flex Space
- \$11,500,000 Capital Investment in Computers, Machinery, and Equipment
- Total Workforce of 50 Employees
- Monthly Electricity Demand of 65,000 kWh
- Monthly Water usage of 80,000 gallons
- Monthly Natural Gas demand based on climate zone

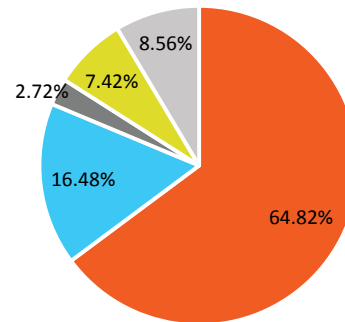
*If leased space is greater than 10,000 SF, it is assumed it is a Triple Net Lease. If it less than 10,000 SF, it is assumed it is a gross lease.

Source of Annual Costs

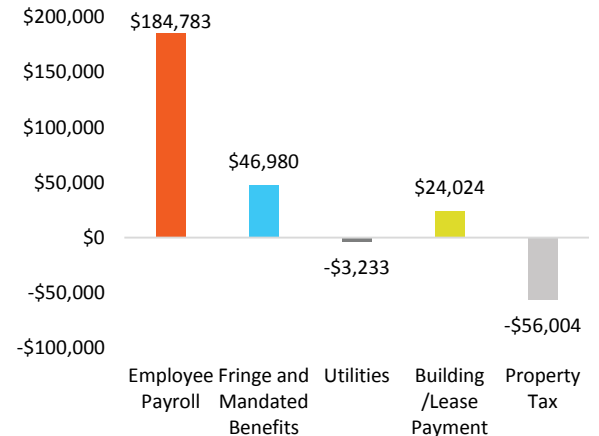
- Employee Payroll
- Fringe and Mandated Benefits
- Utilities
- Building / Lease Payment
- Property Tax

Breakdown of Total Annual Costs

For DeKalb County



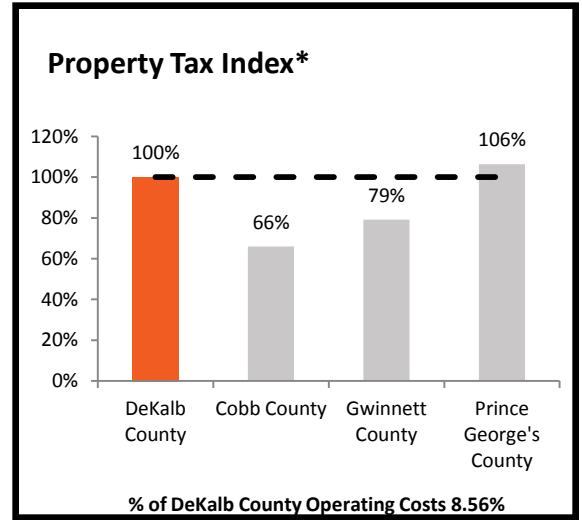
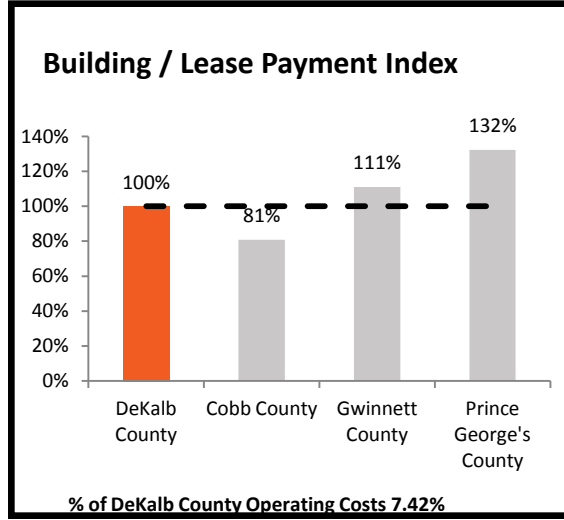
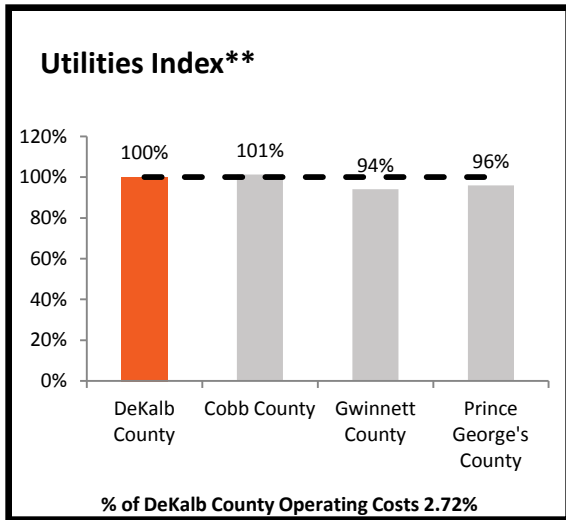
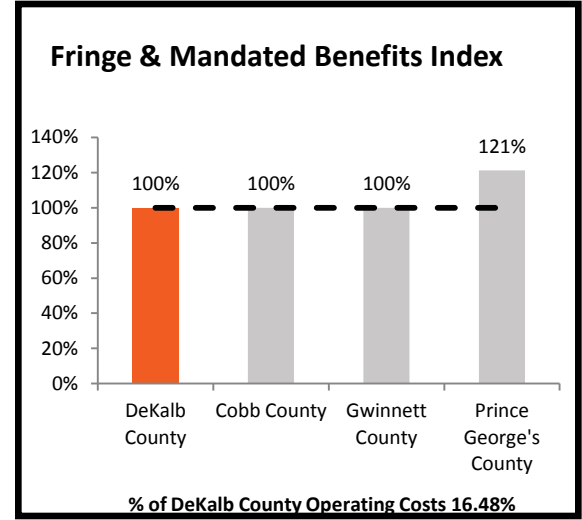
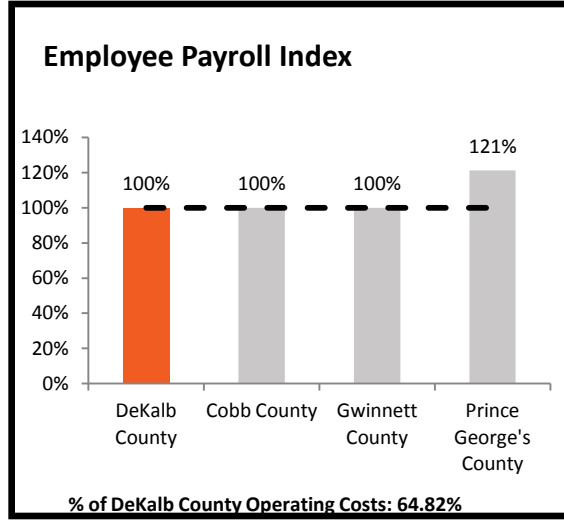
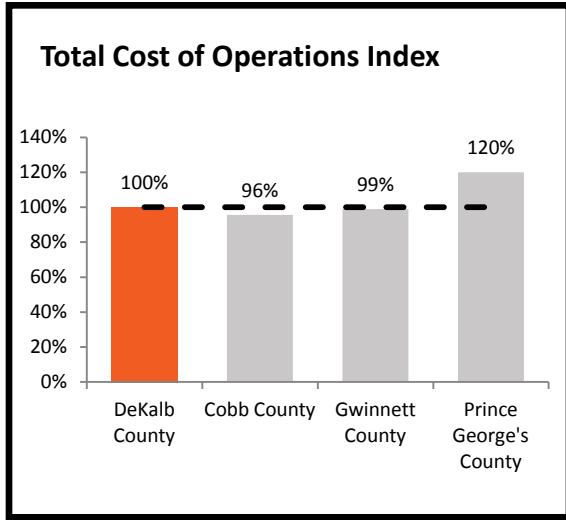
Differential Cost Advantage Vs. Benchmarks



Sources: See Appendix IV



LIFE SCIENCES (TEST KIT R&D) COST OF OPERATIONS



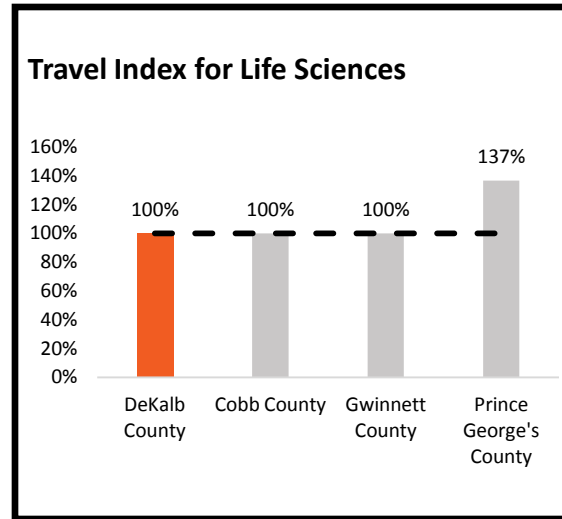
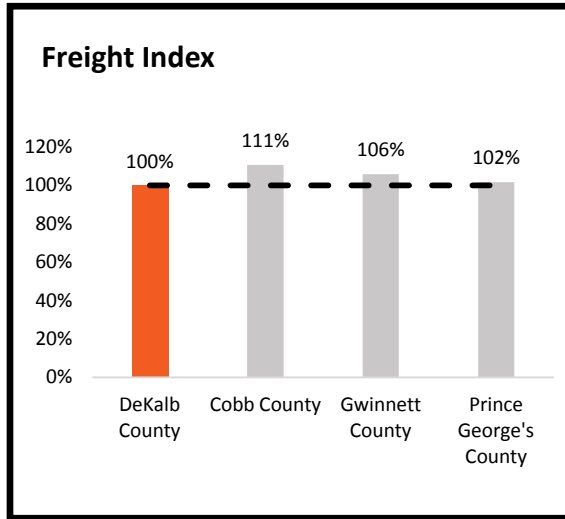
*Property taxes reflect tax rates for unincorporated counties, individual cities within each county may levy additional property taxes.

**Electric Rates based off of primary utility supplier in the county. Different rates may be found using different utilities.

Sources: See Appendix IV



LIFE SCIENCES (TEST KIT R&D) COST OF OPERATIONS



Sources: See Appendix IV

*Freight index created by calculating average shipping cost to ship 10,000 pounds of general freight from benchmark county to New York City, NY, Chicago, IL and Los Angeles, CA.

**Travel Indices created by calculating average round trip flight and 2 night hotel stay from benchmark county to three major industry clusters for the respective industries.



LIFE SCIENCES (TEST KIT R&D) COST OF OPERATIONS

Occupational Profile for Life Sciences (Test Kit R&D)

Occupation Description	Number of Employees
General and Operations Managers	1
Natural Sciences Managers	3
Industrial Engineers	4
Chemical Engineers	4
First-Line Supervisors of Production and Operating Workers	4
Office and Administrative Support Workers, All Other	2
Receptionists and Information Clerks	2
Secretaries and Administrative Assistants, Except Legal, Medical, and Executive	6
Chemical Technicians	8
Pharmacy Technicians	7
Life, Physical, and Social Science Technicians, All Other	7
Maintenance and Repair Workers, General	2
Total Workforce	50

Cost of Operations Comparison – Raw Data Table

Metro Area	Employee Payroll	Fringe and Mandated Benefits	Utilities	Building / Lease Payment	Property Tax	Total Operating Cost
DeKalb County	\$2,617,480	\$665,477	\$109,805	\$299,491	\$345,761	\$4,038,014
Cobb County	\$2,617,480	\$665,477	\$111,130	\$242,109	\$227,857	\$3,864,053
Gwinnett County	\$2,617,480	\$665,477	\$103,268	\$332,436	\$273,634	\$3,992,295
Prince George's County	\$3,171,830	\$806,417	\$105,319	\$396,000	\$367,781	\$4,847,347

Cost of Operations Comparison – Cost Differences

Metro Area	Employee Payroll	Fringe and Mandated Benefits	Utilities	Building / Lease Payment	Property Tax	Total Operating Cost
Cobb County	\$0	\$0	\$1,325	-\$57,382	-\$117,904	-\$173,961
Gwinnett County	\$0	\$0	-\$6,538	\$32,945	-\$72,127	-\$45,719
Prince George's County	\$554,350	\$140,940	-\$4,486	\$96,509	\$22,020	\$809,333
Average Cost Difference	\$184,783	\$46,980	-\$3,233	\$24,024	-\$56,004	\$196,551



LIFE SCIENCES (TEST KIT R&D) SUPPLY CHAIN ANALYSIS

LIFE SCIENCES MULTIPLIERS

Sector (Implan Code)	Direct	Indirect	Induced	Total
Scientific research and development services (376)	1.0	0.419922	0.405355	1.825277

TOTAL ECONOMIC IMPACTS

	Employment	Labor Income	Output
Direct Effect	50	\$4,906,296	\$11,500,000
Indirect Effect	42	\$1,917,849	\$4,793,300
Induced Effect	39	\$1,683,858	\$4,633,801
Total Effect	131	\$8,508,003	\$20,927,102
State & Local Tax Revenue			\$625,727

SUPPLY CHAIN IMPACTS: OUTPUT

Sector	Total Output
Maintenance and repair construction	\$483,759
Real estate establishments	\$350,952
Services to buildings and dwellings	\$349,751
Monetary authorities and depository institutions	\$308,423
Miscellaneous scientific, and technical services	\$301,439
Management, scientific, and technical consulting	\$272,188
Employment services	\$235,365
Telecommunications	\$220,387
Architectural, engineering, and related services	\$186,026
Legal services	\$181,939

SUPPLY CHAIN IMPACTS: EMPLOYMENT*

Sector	Jobs
Services to buildings and dwellings	6.96
Employment services	6.08
Maintenance and repair construction	3.03
Management, scientific, and technical consulting	2.57
Real estate establishments	2.46
Food services and drinking places	2.06
Architectural, engineering, and related services	1.60
Securities, commodity contracts, and investments	1.36
Legal services	1.29
Office administrative services	1.28

SUPPLY CHAIN IMPACTS: LABOR INCOME**

Sector	Labor Income
Maintenance and repair construction	\$212,717
Employment services	\$175,674
Management, scientific, and technical consulting	\$161,119
Services to buildings and dwellings	\$130,978
Miscellaneous scientific, and technical services	\$116,731
Architectural, engineering, and related services	\$109,933
Management of companies and enterprises	\$71,247
Legal services	\$70,667
Office administrative services	\$52,173
Food services and drinking places	\$50,694

Source: Implan

*All employment figures are presented in job years. One job year is equal to one full-time worker who is employed for one year.

** Labor income includes employee compensation (wages and benefits) and proprietor income.



RANKING OF DEKALB COUNTY'S LIFE SCIENCES INDUSTRY

Assessment Rationale	Life Sciences Variable	Leading	Strong	Average	Weak
<ul style="list-style-type: none"> • Employment as been primarily positive, even through the recession • Employment growth is stable and predictable 	Employment Trends		●		
<ul style="list-style-type: none"> • DeKalb County's wages for Life Sciences are higher than regional and national averages • Wage growth could attribute to difficulty in recruiting businesses to the county 	Wage Trends			●	
<ul style="list-style-type: none"> • Business establishments have grown consistently and reliably over the entire 10-year observation period • Growth remained positive despite the economic recession 	Business Establishments		●		
<ul style="list-style-type: none"> • Life Science industry is strongly developed but lacks commercialization and depth of supply chain • Research institutions are world-class and receive billions in R&D funding 	Existing Local Industry Assets		●		
<ul style="list-style-type: none"> • High-skill jobs in DeKalb County have strong national growth potential • Educational institutions offer high quality degree programs 	Employee Skill Set		●		
<ul style="list-style-type: none"> • Total operational costs in Life Sciences are higher than two of the benchmarks (Cobb and Gwinnett) • Property taxes are a major disadvantage for DeKalb County 	Cost of Operations				●
	Overall Life Sciences Industry			●	

Source: AE



LIFE SCIENCES NICHE MARKETS

Biotechnology: Infrastructure and funding for Life Sciences at local institutions like Emory University, the American Cancer Society, and the CDC provide a strong foundation on which to grow this, and other, life science niches. These larger institutions rely heavily on small- and mid-sized laboratories for new discoveries and innovations. Success is driven by commercialization of innovations and discoveries, so a strong infrastructure of technology transfer between universities, governmental organizations, and smaller firms is vital.

Bioinformatics: This niche involves the development of software tools that help retrieve and organize data to produce biological knowledge. Rapid growth in genome collection and sequencing has boosted demand for bioinformatics. Bioinformatics is also crucial for disease research and drug discovery.

Bioinformatics is expected to be a \$9.1 billion industry by 2018, with an annual growth rate of 25%. Biotech, by contrast, is forecast to grow by 1.6%.

Proteomics: Studying how proteins function is essential to understanding biological systems. The genomic niche will be worth an estimated \$17 billion by 2017. DeKalb County's preexisting Life Sciences infrastructure is well suited to capitalize on this growing niche.

Health IT: Automated healthcare information systems can lower costs while boosting efficiencies, consumer care and profits. The niche is in high demand as the healthcare system undergoes a dramatic restructuring and online healthcare verges on becoming a disruptive industry. President Obama is investing \$56 billion over the next five years in "paperless medicine," to transition doctors toward electronic health records (EHRs). Health IT on the whole is expected to produce between 50,000-100,000 jobs within the near future, and Georgia already has some 200 healthcare information technology companies. Wearable technologies, self monitoring systems, and EHR ecosystems are specific areas expected to record strong growth.

Senior Care Services: Georgia is home to more than 1.5 million people over 60, with the age demographic set to grow 20 % – faster than any other age group – between now and 2030. DeKalb County, meanwhile, is home to an ample number of senior care centers and thus well geared toward providing related services. To ensure all of DeKalb's senior citizens are properly cared for, targeting this niche should also account for non-profit senior care organizations. The organizations, which predominantly rely on donations for funding, provide services to home bound and low income seniors who often have no other means of support.



TOURISM

INDUSTRY OVERVIEW

Tourism - *Tourism as an industry focuses on destinations, travelers, and the businesses that accommodate those travelers. Professions within it include travel agents, event planners, museum curators, archivists, and various supporting occupations.*

Being that tourism requires travel, the industry is not considered clean. In recent years, however, tourists have begun to turn toward green and other more socially conscious ways to experience their destinations.

Eco-tourism looks to offset environmental costs associated with travel through environmentally friendly activities and accommodations. In this regard, some parts of the industry could be considered green. Tourism is also creative in that it is the energy, passion, and enriching experience that attracts tourists to their destinations.

Tourism in DeKalb County also meets many of the theme elements:

- Tourism jobs in DeKalb County include knowledge and innovation workers as well as semi-skilled workers.
- Those with an entrepreneurial passion can enter into this industry, which celebrates creativity and ingenuity.

- Green
- Clean
- Sustainable
- Creative

- Knowledge Workers
- Technical Workers
- Innovative Workers
- Semi-Skilled Workers
- Entrepreneurship
- Commercialization
- Business Retention



A BROADER PERSPECTIVE ON TOURISM

Along with the US (where 29 states count Tourism among their top three industry earners), France, China, Spain, and Italy rounded out the top five tourist destinations last year.

There is no single formula to Tourism success. Some destinations are gifted with natural beauty, great weather, or an ancient past. Others are synonymous with cosmopolitanism, cleanliness, efficiency, or great cuisine. The commonality among them is differentiation, which leads to international recognition and curiosity.

Sometimes – though hardly always – this is achieved through branding, which draws the eye to a nation’s strengths and enticements. Branding a destination can be risky and expensive, the challenge being to amalgamate a nation’s disparate parts into a catchy whole. Just ask the UK, whose Cool Britannia campaign was disconnected from much of the nation.

Having a targeted presence abroad as well as online can help rope in tourists. Tourism Australia operates in more than 20 markets in six regions. It has also successfully targeted tourists online, where research, planning, and booking play an increased role in attracting tourists.

Safety and political stability lend themselves to success, as does a favorable geopolitical image. The US, for instance, notched 23.9 million tourists in 2007, when anti-Americanism was at its peak, compared to 68 million in 2012.



Global Industry Clusters
Italy
China
United Kingdom
Spain
France

Sources: AE, ReferenceUSA



INDUSTRY CHARACTERISTICS

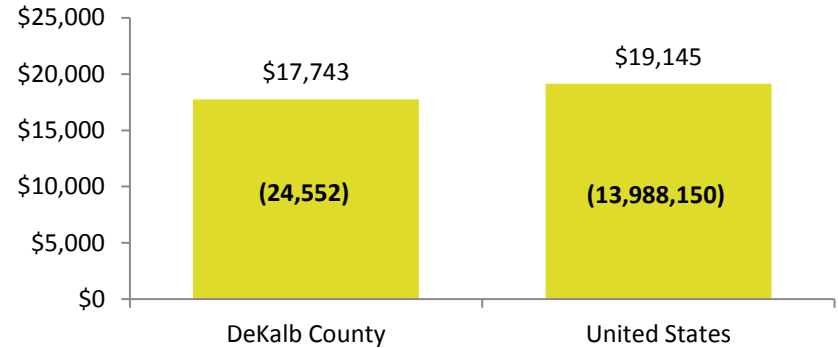
DeKalb County could do more to establish itself as a tourist destination. Average industry wages for the entire US is nearly \$2,000 higher than in DeKalb County. Some 25,000 people are employed in the local industry.

Tourism happens everywhere, but significant natural, historical, and cultural assets can attract complimentary businesses. DeKalb County has struggled to identify and nurture such assets, making for untapped potential.

DeKalb County is easily accessible through its proximity to the nation’s busiest airport and main connecting thoroughfares and railways. Stone Mountain is an obvious natural attraction that has been underutilized and consideration should be given on how to use this attraction to expand the industry to include other attractions.

A reliable, experienced workforce – the building block for such expansion – does exist, and labor costs are reasonable, making for some underutilized comparative advantages.

**Average Wages in Tourism, 2012
(Employment Level)**



INDUSTRY CRITERIA

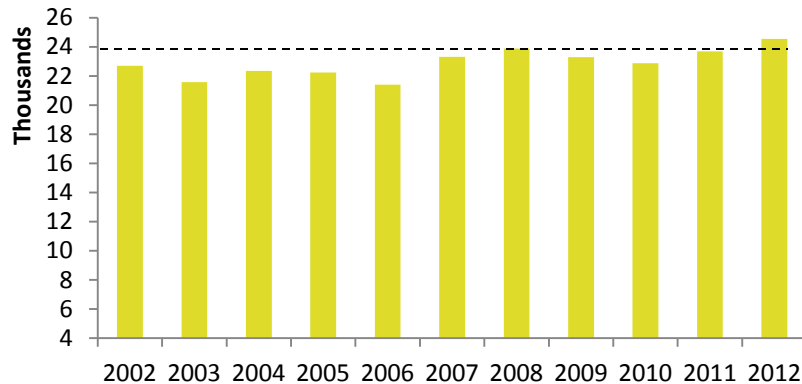
- Reliable workforce with hospitality experience
- Low labor cost
- Natural, Historical, and cultural assets
- Entertainment Venues
- Transportation infrastructure
- Strong airport accessibility
- Low cost of doing business
- Stable regulatory environment
- Hotel/Convention Space
- Food support

Sources: BLS, AE



TOURISM EMPLOYMENT

DeKalb County Employment

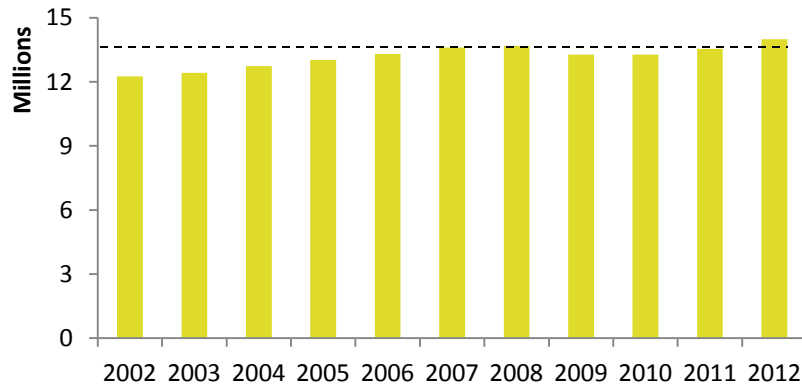


Local Employment Trends

Tourism-related employment in the county has fluctuated significantly across the 10-year period, though it has undergone an encouraging uptick during the last three years.

The fluctuations in the county's employment are greater than the national average. Creating a tourist experience and selling tour packages could help stabilize the industry.

United States Employment



Regional & National Employment Trends

Employment nationally has grown steadily over the last decade, with a predictable brief downturn related to the global economic crisis.

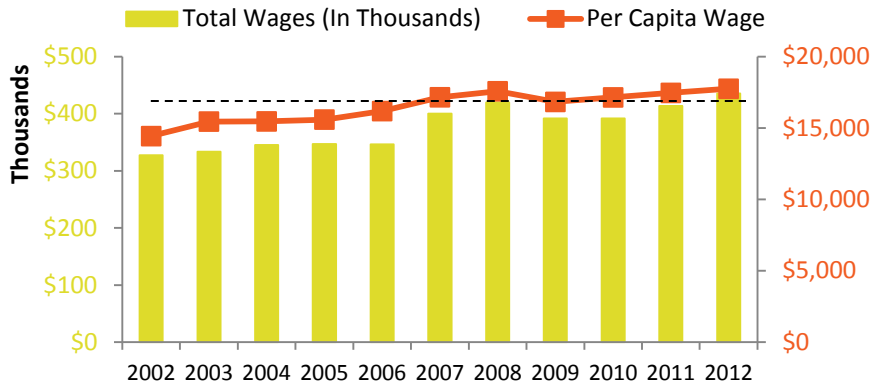
As of 2012, the U.S. continues to have the second largest number of international tourists, behind France. However, those same tourists, spent more than \$126 billion in the U.S., more than twice the amount of the second highest country, which was Spain.

Sources: BLS, AE



TOURISM WAGES AND PAY

DeKalb County Wages and Pay

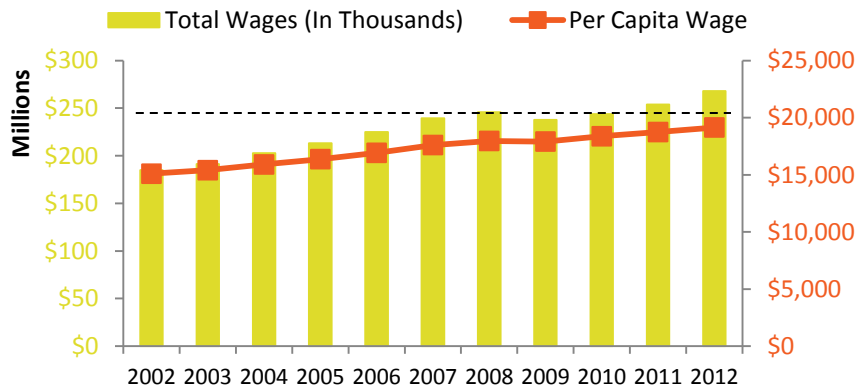


Local Wage Trends

Per capita wages are lower for DeKalb County than they are nationally. Total wages have closely followed per capita wages. Both have seen a slight upward trend over the 10-year period.

Many occupations in the Tourism industry are seasonal. This means that that employment in this industry is more flexible than for other industries. As such, total and per capita wages have a stable relationship between each other, even though total wages fluctuate mildly.

United States Wages and Pay



Regional & National Wage Trends

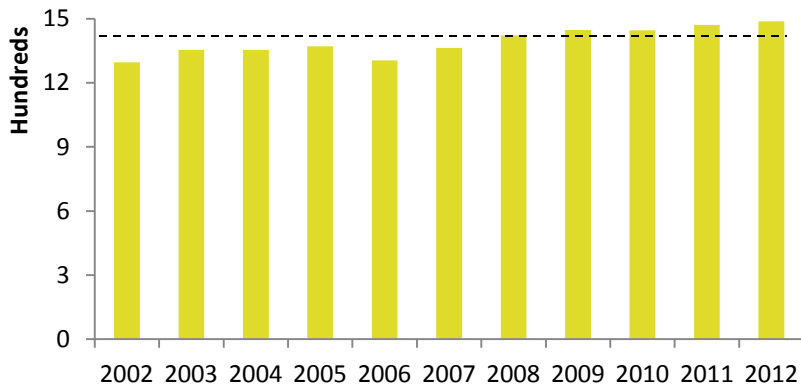
Wage and per capita trends have been more volatile compared to movement nationally, which has undergone steady growth over the 10-year period, despite the sluggish national economy.

Sources: BLS, AE

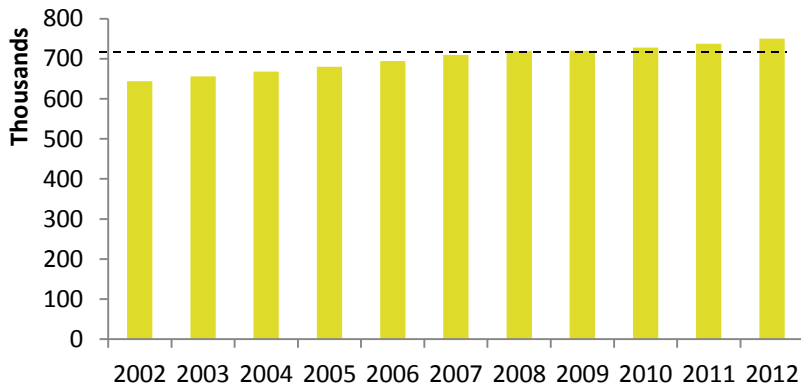


TOURISM ESTABLISHMENTS

DeKalb County Establishments



United States Establishments



Local Establishment Trends

While there may be year to year losses, the overall number of establishments in DeKalb County have increased consistently since 2002. DeKalb currently has nearly 1,500 establishments, compared to less than 1,300 in 2002.

The creation of tour packages could bolster establishments in the Tourism industry. Apart from the companies administering the tour services, additional local establishments – such as bed and breakfasts – could enhance the tourist experience.

Regional & National Establishment Trends

National establishment growth has been similar to that of DeKalb County. The number of establishments grew by over 16%, or 106,000 establishments, from 2002-2012.

Sources: BLS, AE



TOURISM SECTORS & AREAS OF GROWTH

Travel services, Attractions, and Hospitality are the Tourism sectors that matter most to DeKalb County. These sectors include travel accommodation, museums, historical sites, amusement, gaming, and recreation industries.

The table to the right shows which sectors have experienced **employment growth** over 5- and 10-year periods.

- Travel Services is an industry that has not grown at any level of geography over the 5- or 10-year time period. However, this is the sector that would be responsible for creating tour packages for the county that would bring people in, have an itinerary of activities planned, and get them to stay over an extended period of time.
- The Attractions sector has grown locally, regionally, and nationally in the short term and the long term. Attractions such as Stone Mountain and the Arabia Mountain Nature Preserve offer additional untapped potential.
- Hospitality has grown locally and beyond, both over the 5- and 10-year period. This sector directly supports the Travel Services and Attractions sectors.

Sector	Positive 5-Year Growth (2008-2012)			Positive 10-Year Growth (2003-2012)		
	COUNTY	MSA	US	COUNTY	MSA	US
Travel Services						
Attractions	X	X	X	X	X	X
Hospitality	X	X	X	X	X	X

SECTOR COMPONENTS
Travel Services
Travel Accommodation Services
Attractions
Museums, Historical Sites, and Similar Institutions
Amusement, Gambling, and Recreation Industries
Hospitality
Accommodation and Food Services

Sources: BLS, AE



Key Occupations in the Tourism Industry

Occupation	United States Occupational LQ	DeKalb County MSA LQ	10-year U.S. Growth Projection (%)	United States Salary	DeKalb County MSA Salary	Education Needed
Hotel, Motel, and Resort Desk Clerks	9.33	1.01	11.10	\$21,960	\$19,430	High school diploma or equivalent
Athletes and Sports Competitors	8.95	0.42	21.60	\$75,760	\$79,430	High school diploma or equivalent
Lodging Managers	8.95	0.70	8.30	\$54,800	\$64,710	High school diploma or equivalent
Chefs and Head Cooks	8.36	0.91	-0.80	\$46,570	\$43,640	High school diploma or equivalent
Food Service Managers	8.10	0.81	-3.30	\$52,580	\$47,130	High school diploma or equivalent
Amusement and Recreation Attendants	6.93	1.16	14.20	\$20,020	\$18,500	Less than high school
Tour Guides and Escorts	6.55	0.44	17.90	\$26,280	\$29,390	High school diploma or equivalent
Fitness Trainers and Aerobics Instructors	6.43	0.55	24.00	\$36,900	\$44,020	High school diploma or equivalent
Baggage Porters and Bellhops	5.71	0.70	12.40	\$23,090	\$21,990	High school diploma or equivalent
Museum Technicians and Conservators	4.19	0.61	6.80	\$42,920	\$44,600	Bachelor's degree
Recreational Protective Service Workers	3.54	1.20	12.30	\$20,720	\$21,150	High school diploma or equivalent
Driver/Sales Workers	3.45	1.14	10.30	\$27,730	\$26,570	High school diploma or equivalent
Amusement Machine Servicers and Repairers	2.58	1.13	22.10	\$32,700	\$34,060	High school diploma or equivalent
Meeting, Convention, and Event Planners	2.36	1.38	43.70	\$49,830	\$47,170	Bachelor's degree
Coaches and Scouts	2.03	0.48	29.40	\$36,680	\$41,480	High school diploma or equivalent
Athletic Trainers	2.02	0.83	30.00	\$44,010	\$43,240	Bachelor's degree
Supervisors of Personal Service Workers	1.80	0.70	13.50	\$38,300	\$35,170	High school diploma or equivalent
Massage Therapists	1.49	1.48	20.10	\$40,350	\$44,930	Postsecondary non-degree award
Archivists	1.47	0.61	11.70	\$50,810	\$53,920	Bachelor's degree
Set and Exhibit Designers	1.10	1.86	9.90	\$54,310	\$43,820	Bachelor's degree

Sources: BLS, AE



BUSINESS DEVELOPMENT

Based on the recommended target industry, AE suggests attending the following or similar conferences in order to gain a firmer understanding of industry trends as well as to establish industry contacts and market the region's available assets related to the industry. Host cities of each conference may change year to year.

TOURISM CONFERENCES, 2014		
Conference	Description	Date
TRAVEL SOUTH DOMESTIC SHOWCASE	This event serves as a regional marketplace focused solely on the cultural, musical, artistic, and culinary heritage of the south.	February 23 - 26, 2014
PRSA TRAVEL AND TOURISM CONFERENCE	This conference will engage those involved in travel arrangement and PR services. The event seeks to provide travel and hospitality communicators with the tools and techniques to succeed in today's fast-paced marketplace.	June 8 - 11, 2014
GEORGIA GOVERNOR'S TOURISM CONFERENCE	Conference focuses on how to better market destinations, hotels and attractions.	September 3 - 5, 2014
SOUTHEAST TOURISM SOCIETY FALL FORUM	This conference seeks to help attendees understand how the power of tourism can transform communities and create new opportunities. Previous conferences have covered topics like, media, big data, research trends, and how to succeed in a rapidly changing industry.	October 12 - 15, 2014
TRAVEL SOUTH INTERNATIONAL SHOWCASE	Top international tour operators and receptive buyers attend this conference to meet one-on-one with southern travel suppliers to grow southern tourism.	December 1 - 3, 2014



RANKING OF DEKALB COUNTY'S TOURISM INDUSTRY

Assessment Rationale	Tourism Variable	Leading	Strong	Average	Weak
<ul style="list-style-type: none"> • Employment levels fluctuate year to year • Overall, employment is growth is slow, but positive 	Employment Trends				
<ul style="list-style-type: none"> • Wage growth is strong, growing by 23% between 2002 and 2012 • Wages remain low compared to national averages, which makes the county more competitive for new businesses 	Wage Trends				
<ul style="list-style-type: none"> • Establishments have increased steadily, even through the recession • Overall, establishment growth follows the same national growth trend 	Business Establishments				
<ul style="list-style-type: none"> • DeKalb County has the semi-skilled workers necessary to fill jobs within the Tourism industry 	Employee Skill Set				
	Overall Tourism Industry				

Source: AE



TOURISM NICHE MARKETS

Cultural Tourism: Linking the arts, history, heritage, and tourism – Cultural Tourism is among the fastest growing sub-sectors of Tourism in the U.S. From 2004-2010, cultural tourists rose 69% to 15.4 million visitors. They also tend to stay longer and visit more destinations than ordinary tourists. Moreover, Atlanta is home to the country’s busiest airport. Developing cultural attractions will help the county better leverage these auspicious trends.

Bed & Breakfast Inns: These quaint, homey lodgings offer a more personalized form of stay than traditional accommodations. Focusing B&B’s on local and state history and pricing rooms moderately can improve their draw, not only with visitors to DeKalb but among discerning, budget-minded tourists to Atlanta.

Youth Sporting Events: Youth athletics is one of the fastest growing tourism niches in the country, with the economic activity of youth sports related travel alone exceeding \$7 Billion. Without sound regional sporting infrastructure, DeKalb County is missing the chance to attract youth tournaments, training camps, and other youth sports programs from across the state and beyond. Hosting regional youth sporting events will not only boost earnings but allow the county to showcase its wider offerings.

Dynamic Tour Packaging: With the growth of budget airlines and online booking, the package tour sub-sector has taken a hit over the last decade. But a subset that is seeing considerable growth is dynamic packaging, which allows tourists to build their own packages and add-ons in which prices fluctuate based on availability. Not to be confused with dynamic “bundling,” in which customers essentially build their own packages, true dynamic packaging offers a limited range of hotel, air and car options, usually from a specific seller, who receives higher than usual price discounts from airlines, hoteliers, and car rentals in exchange for disclosing only the overall price to consumers rather than those for specific services.

This means sellers can keep prices low while maintaining their profit margins. DeKalb County is home to Stone Mountain Park, the most visited attraction in Georgia. Additionally, the county also has the Fernbank Museum of Natural History and the Arabia Mountain National Heritage Area. Tour packages created around these already popular destinations offer significant potential for county businesses.



LOGISTICS

INDUSTRY OVERVIEW

LOGISTICS - *the process of planning, implementing, and controlling the efficient flow of goods and services through the supply chain from producer to consumer. Distribution includes all freight carriers (air, trucking, and intermodal) and warehousing.*

Until recently, most manufacturing firms coordinated their own warehousing and flow mechanics. Now, these services are often outsourced to develop advanced just-in-time delivery systems. The integration of international trade, logistics, and distribution into one continuous supply chain driven by free trade has put this industry at the forefront of economic growth.

Logistics and distribution companies that can capture small and medium sized businesses entering the global market will experience above average growth. These are the businesses that DeKalb County is best suited to support because of its proximity to major interstate corridors and transportation hubs as well as its reasonable labor costs.

Logistics in DeKalb County also meet many of the theme elements:

- Jobs in this industry include knowledge and technical workers as well as semi-skilled workers.
- As technology and trade regulation continue to evolve, the Logistics industry has great opportunities for entrepreneurs to innovate new and more efficient ways to store and distribute goods.
- Retention of DeKalb's Logistics companies will be critical to the continued development of this industry. Many of those companies are located in the Southwest area of the county, where the location advantage is greatest.

- Green
- Clean
- Sustainable
- Creative

- Knowledge Workers
- Technical Workers
- Innovative Workers
- Semi-Skilled Workers
- Entrepreneurship
- Commercialization
- Business Retention



A BROADER PERSPECTIVE ON LOGISTICS

In the World Bank’s latest ranking of logistic hubs, all OECD countries landed in the top third – communicating the inevitable “logistics gap” between low- and high-income countries. The gap typically results from discrepancies in infrastructure, technology, stability, and good governance. Still, there is significant variance in the quality of logistics among OECD countries.

Germany landed the top spot on the Bank’s list through well-planned infrastructure, hassle-free customs, responsive tracking, and fast delivery of goods.

Hong Kong’s cargo-friendly airport, its massive container seaport and its free port status have ensured its reputation as leading Logistics hub. Singapore has helped distinguish itself through efficiency and competitive costs.

The Netherlands, the world’s second ranked port, is part of the “Blue Banana,” a corridor of economically vibrant European cities. To maximize this geographical advantage, the country has established dense infrastructure for all modes of transport, including 2,500 kilometers of roads with direct, easy access to all major towns and cities in the Netherlands; distribution centers with a regional focus and specific to one type of transport only; and large open ports that cluster their activities.



Global Industry Clusters
Port of Amsterdam
Dubai
Singapore
Shanghai
United Kingdom Ports

Sources: AE, ReferenceUSA



INDUSTRY CHARACTERISTICS

The Atlanta MSA is an important logistical hub for the Southeast United States. It is important for DeKalb county to capitalize on this fact as it pursues its economic revitalization.

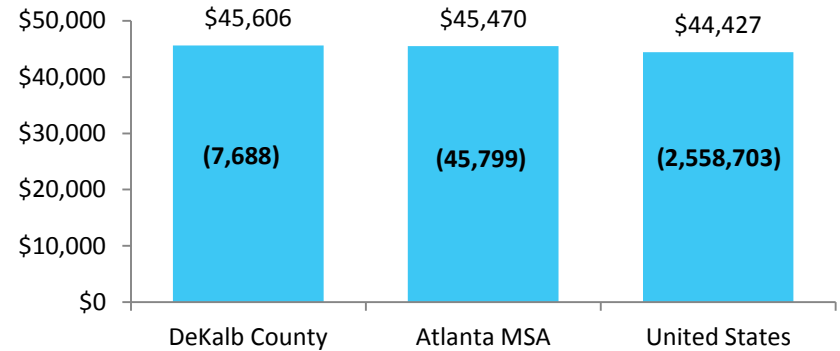
DeKalb County, as part of the Atlanta MSA, is in the perfect position to establish itself as an important logistical center. Its location at the intersection of three Interstate highways as well as its proximity to both a major rail hub and Hartsfield-Jackson Atlanta International Airport are all major assets to be leveraged in this pursuit.

As of 2012, there are over 7,500 people employed in this industry within DeKalb County, with the average wage just slightly higher than the national average.

The county has many inherent logistical advantages. It is the first inland port from Savannah, using readily accessible interstate highways, such as I-75 and I-16. DeKalb County also offers the closest hub of truck terminals to the Hartsfield-Jackson Airport.

The infrastructure that supports this industry is outdated and decaying. Streets are too narrow to support safe two-way traffic. Additionally, truck routes lack sufficient signage, which results in trucks driving through residential neighbourhoods. However, the Southwest area of the county has such great location advantages, companies are willing to deal with those challenges just to be located there.

**Average Wages in Logistics, 2012
(Employment Level)**



INDUSTRY CRITERIA

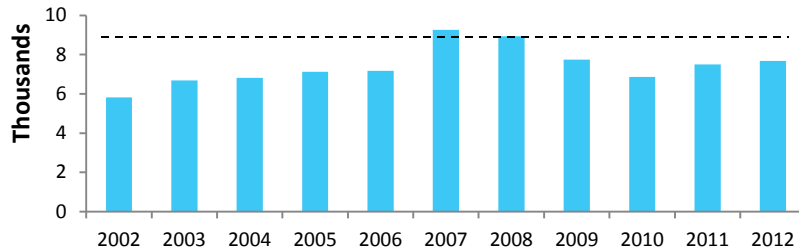
- Solid transportation infrastructure
- Access to international sales and distribution channels
- Low labor costs
- Availability of inexpensive land
- Availability of inexpensive utilities
- Export and import products
- Proximity to market
- Hub airport access
- Public policy support

Sources: BLS, AE

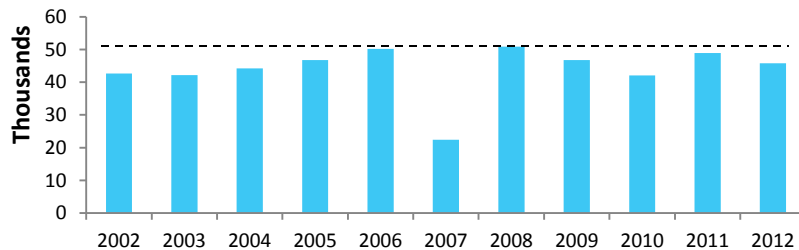


LOGISTICS EMPLOYMENT

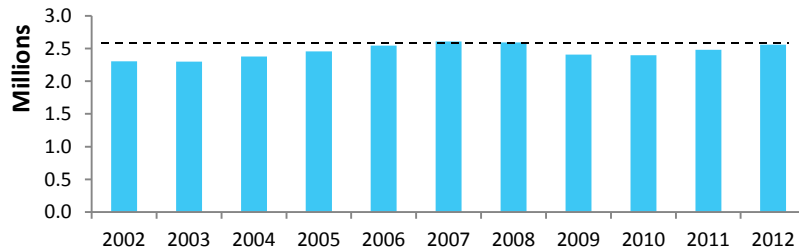
DeKalb County Employment



Atlanta MSA Employment



United States Employment



Local Employment Trends

As with many industries, DeKalb County's employment declined sharply during recessionary years of 2008 to 2010, shedding over 2,000 jobs from its 2007 peak.

That said, employment has shown a healthy rebound in recent years. Moreover, DeKalb County's Logistics industry has still seen a net growth of nearly 2,000 jobs since 2002, although employment is still substantially below the pre-recession peak.

Regional & National Employment Trends

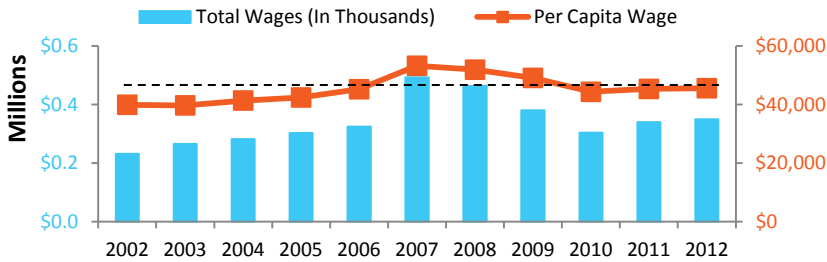
Regional and national trends are similar to that of DeKalb County, although regional employment has been much more volatile in its recovery while national employment has been much more stable overall.

It should be noted that the marked dip in 2007 for the MSA is the result of missing data from the Bureau of Labor Statistics, and not an actual drop in employment.

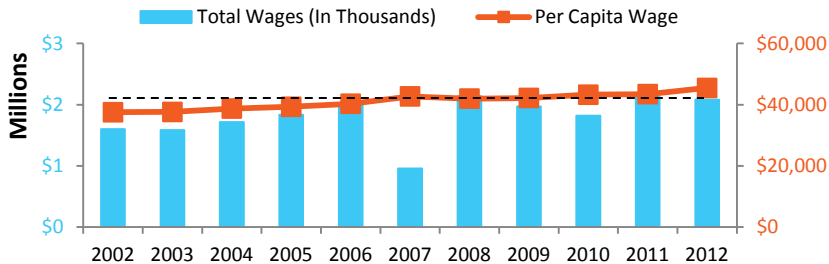


LOGISTICS WAGES AND PAY

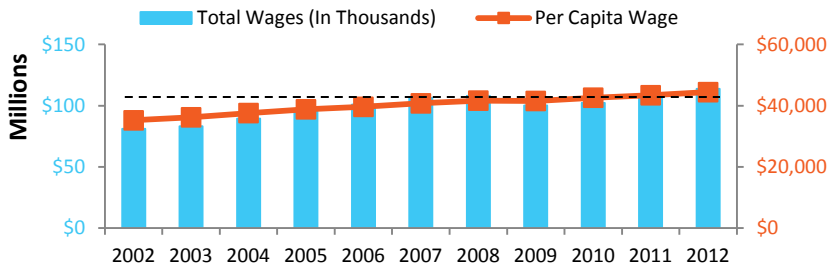
DeKalb County Wages and Pay



Atlanta MSA Wages and Pay



United States Wages and Pay



Local Wage Trends

Both average and total wage trends in DeKalb County mirror employment trends almost perfectly, with a marked decline during the recession and a recovery in recent years. While the drastic decline in average nominal wage is unique to DeKalb County, it was likely a correction of sorts as the County's peak average wage in 2007 was over 20% higher than the national and MSA averages.

Regional & National Wage Trends

Regionally and nationally average and total wages have seen relatively consistent and stable growth since 2002.

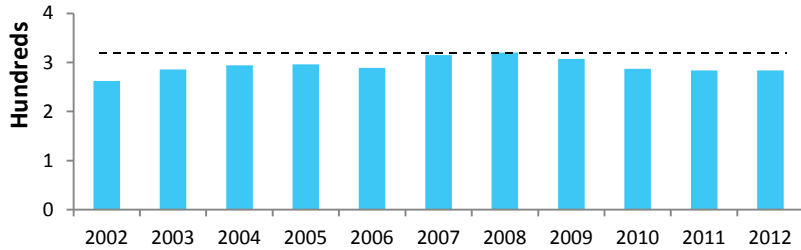
As with employment, the MSA is missing data for 2007, creating the illusion of a sharp decline.



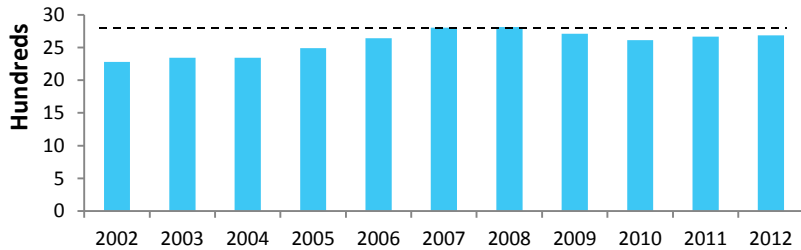
Sources: BLS, AE

LOGISTICS ESTABLISHMENTS

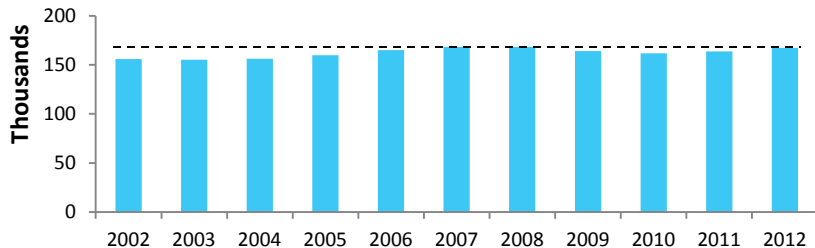
DeKalb County Establishments



Atlanta MSA Establishments



United States Establishments



Local Establishment Trends

DeKalb's establishments within the Logistics industry took the expected loss during the recession. The decline was understandably less drastic than employment, although it has been slower to recover losses.

That said, the Logistics industry has still exhibited net establishment growth over the last decade, up almost 10% since 2002.

Regional & National Establishment Trends

The expected pattern also plays out both regionally and nationally. Notably, the industry has rebounded significantly faster at the national level with the number of establishments in 2012 being down less than one percent from the 2007 peak.



LOGISTICS SECTORS & AREAS OF GROWTH

The sectors of the Logistics industry that are relevant to DeKalb County are Distribution, Warehousing, and Transportation. The table to the right shows which sectors have experienced **employment growth** in 5 and 10 year time spans for DeKalb County, the Atlanta MSA, and the nation as a whole.

Looking at past growth trends:

- DeKalb County has exhibited positive growth in all Logistics sectors of the last 10 years, correlating with national trends.
- On the five year horizon, the picture is slightly less optimistic, with only the Transportation sector showing employment growth. In contrast, both the MSA and nation as a whole had positive growth in two out of the three Logistics sectors.
- While this lack of five year net growth is not ideal, each sector has grown from 2011-2012, the last year for which data is available, indicating that all of these sectors have strong growth potential looking forward.

Sector	Positive 5-Year Growth (2007-2012)			Positive 10-Year Growth (2002-2012)		
	COUNTY	MSA	US	COUNTY	MSA	US
Distribution		X		X		X
Warehousing		X	X	X	X	X
Transportation	X		X	X	X	X

SECTOR COMPONENTS	
Distribution	
	General Freight Trucking
	Specialized Freight Trucking
	Support Activities for Air Transportation
	Support Activities for Road Transportation
	Process, Physical Distribution, and Logistics Consulting Services
Warehousing	
	Warehousing and Storage
Transportation	
	Charter Bus Industry
	Other Transit and Ground Passenger Transportation

Sources: BLS, AE



Key Occupations in the Logistics Industries

Occupation	United States Occupational LQ	DeKalb County MSA LQ	10-year U.S. Growth Projection (%)	United States Salary	DeKalb County MSA Salary	Education Needed
Cargo and Freight Agents	30.39	1.33	29.30	\$42,310	\$39,770	High school diploma or equivalent
Heavy and Tractor-Trailer Truck Drivers	21.26	0.99	20.60	\$40,360	\$42,000	High school diploma or equivalent
Aircraft Cargo Handling Supervisors	19.10	1.71	20.30	\$50,830	\$54,670	High school diploma or equivalent
Commercial Pilots	16.79	0.99	21.20	\$80,140	\$99,820	Postsecondary non-degree award
Bus Drivers, Transit and Intercity	14.26	1.02	14.80	\$38,470	\$33,100	High school diploma or equivalent
Aircraft Mechanics and Service Technicians	12.69	2.42	6.30	\$55,690	N/A	Postsecondary non-degree award
Transportation Inspectors	11.98	2.65	14.40	\$66,470	\$66,090	Some college, no degree
Transportation and Distribution Managers	11.94	1.57	10.00	\$88,920	\$85,110	High school diploma or equivalent
First-Line Supervisors of Transportation and Material-Moving Machine and Vehicle Operators	11.65	1.10	14.30	\$55,430	\$54,650	High school diploma or equivalent
Conveyor Operators and Tenders	10.99	0.95	11.50	\$31,360	\$29,800	Less than high school
Light Truck or Delivery Services Drivers	10.59	1.12	14.70	\$33,940	\$36,140	High school diploma or equivalent
Bus, Truck, and Diesel Engine Mechanics	10.46	0.90	14.50	\$43,660	\$45,480	High school diploma or equivalent
Industrial Truck and Tractor Operators	8.45	1.37	11.80	\$32,090	\$30,070	Less than high school
Laborers and Freight, Stock, and Material Movers	7.65	1.14	15.40	\$26,410	\$26,680	Less than high school
Machine Feeders and Offbearers	5.52	0.91	0.10	\$28,680	\$27,820	Less than high school
Shipping, Receiving, and Traffic Clerks	4.47	1.25	0.30	\$30,700	\$30,530	High school diploma or equivalent
Weighers, Measurers, Checkers, and Samplers	3.25	1.03	12.00	\$29,750	\$30,380	High school diploma or equivalent
Packers and Packagers, Hand	3.03	1.47	8.60	\$22,470	\$21,610	Less than high school
Logisticians	1.83	0.72	25.50	\$75,670	\$68,680	Bachelor's degree
Health and Safety Engineers	1.19	1.57	13.00	\$79,760	\$72,790	Bachelor's degree

Sources: BLS, AE



BUSINESS DEVELOPMENT

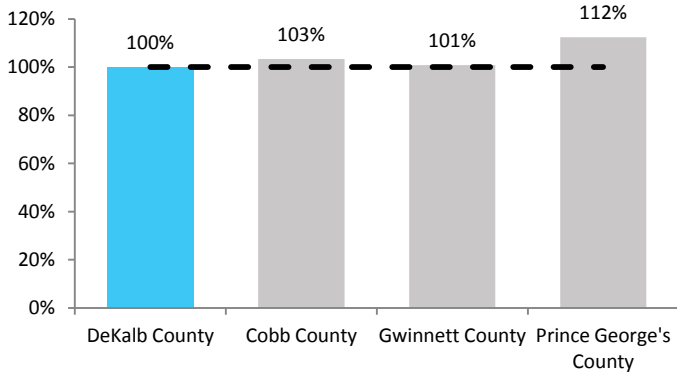
Based on the recommended target industry, AE suggests attending the following or similar conferences in order to gain a firmer understanding of industry trends as well as to establish industry contacts and market the region's available assets related to the industry. Host cities of each conference may change year to year.

LOGISTICS CONFERENCES, 2014		
Conference	Description	Date
INTERNATIONAL WAREHOUSE LOGISTICS ASSOCIATION CONVENTION & EXPO	Assists members to create more profitable third-party logistics companies. The IWLA Convention & Expo promises great networking and education for 3PL leaders - or anyone involved in independent warehousing and logistics.	March 23 - 25, 2014
WAREHOUSING EDUCATION & RESEARCH COUNCIL	WERC offers resources that help distribution professionals stay at the leading edge including educational events, performance metrics for benchmarking, practical research, expert insights and peer-to-peer knowledge exchange.	April 27 - 30, 2014
SUPPLY CHAIN CONFERENCE	This is a unique forum for retailers and manufacturers to establish collaborations that foster supply chain efficiency, reduce costs, and improve their bottom line. The conference seeks to disseminate real-world strategies through interactive discussions and content-rich sessions addressing today's supply chain issues.	February 17 -19, 2014
RETAIL SUPPLY CHAIN CONFERENCE	This conference features programming designed by industry professionals that focuses on international sourcing, transportation, distribution, omni-channel, inventory management, and leadership and development.	February 23 - 26, 2014

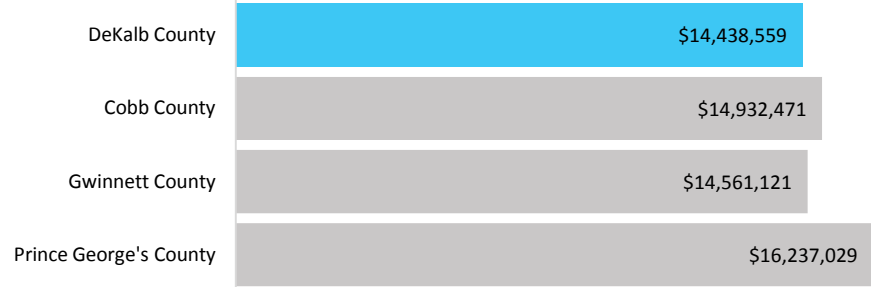


LOGISTICS (WAREHOUSE) COST OF OPERATIONS

Local Cost of Operations Index



Total Annual Operating Costs



Factors of Analysis

In order to achieve direct comparisons of annual operating costs within DeKalb County and the benchmark communities for this industry, uniform conditions for a hypothetical company were applied to the cost variables of each specific community. Operating costs were calculated across five primary cost categories including employee payroll, fringe and mandated benefits, utilities, building/lease payment and property tax. A general outline of the parameters used has been provided below.

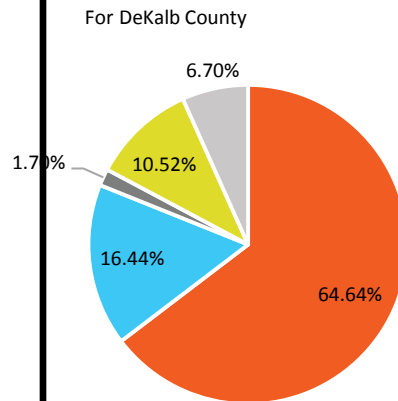
Lease of 350,000 SF of Warehouse Space
 \$20,000,000 Capital Investment in Computers, Machinery, and Equipment
 Total Workforce of 270 Employees
 Monthly Electricity Demand of 210,000 kWh
 Monthly Water usage of 300,000 gallons
 Monthly Natural gas demand based on climate region

*If leased space is greater than 10,000 SF, it is assumed it is a Triple Net Lease. If it is less than 10,000 SF, it is assumed it is a gross lease.

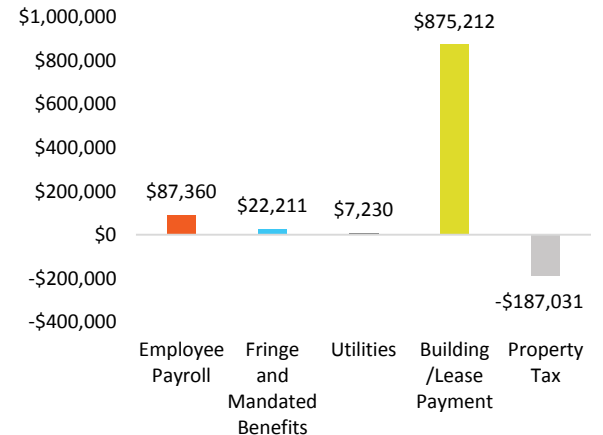
Source of Annual Costs



Breakdown of Total Annual Costs



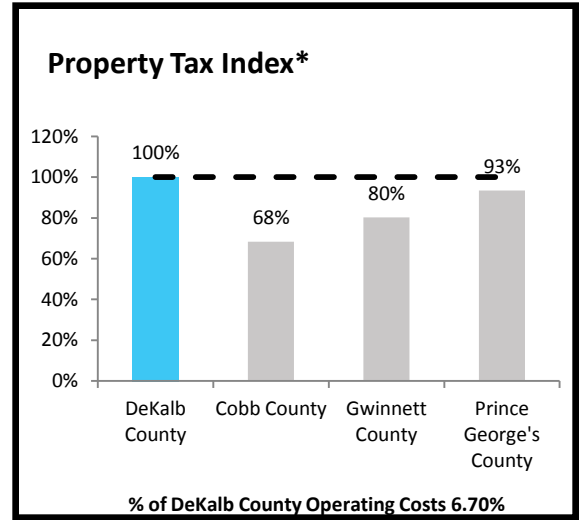
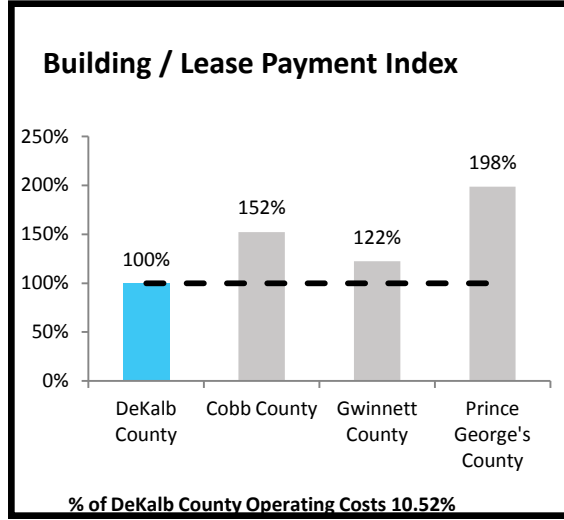
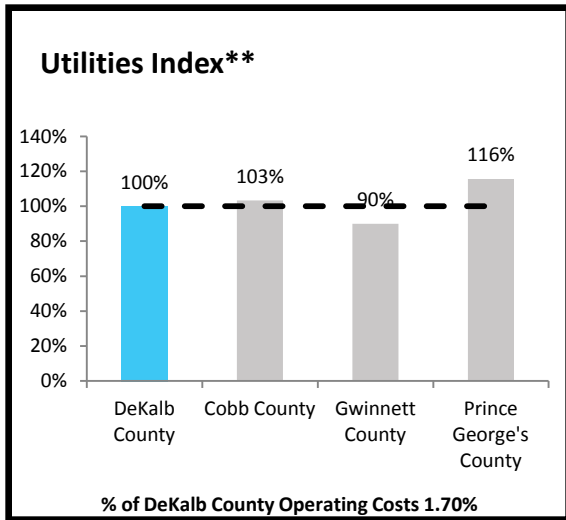
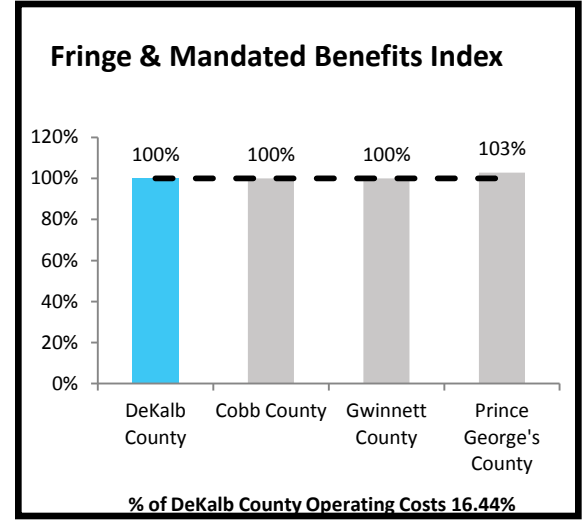
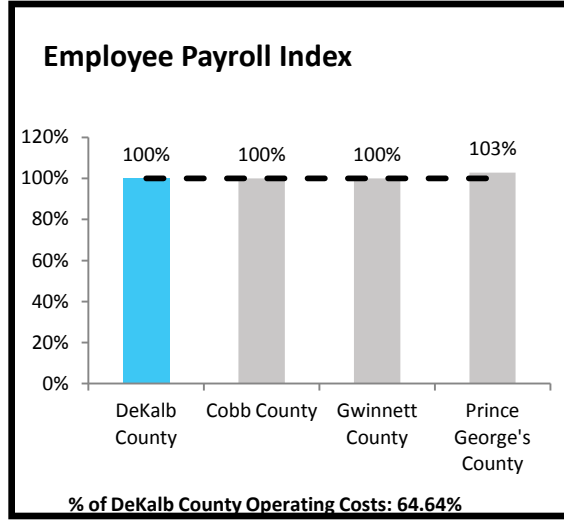
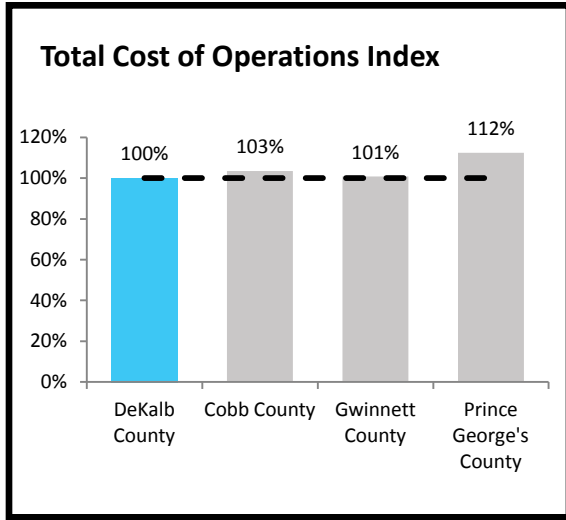
Differential Cost Advantage Vs. Benchmarks



Sources: See Appendix IV



LOGISTICS (WAREHOUSE) COST OF OPERATIONS



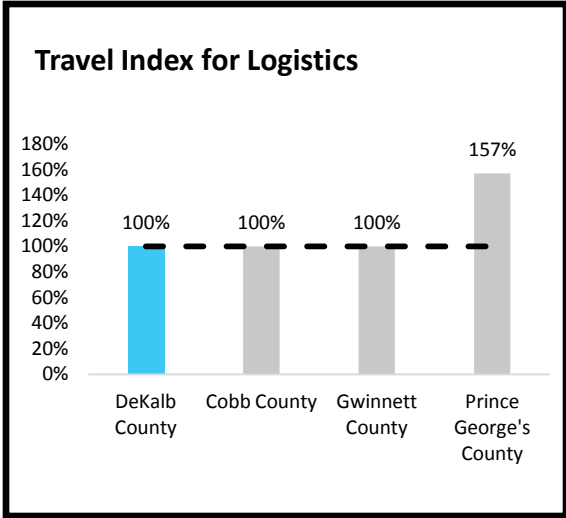
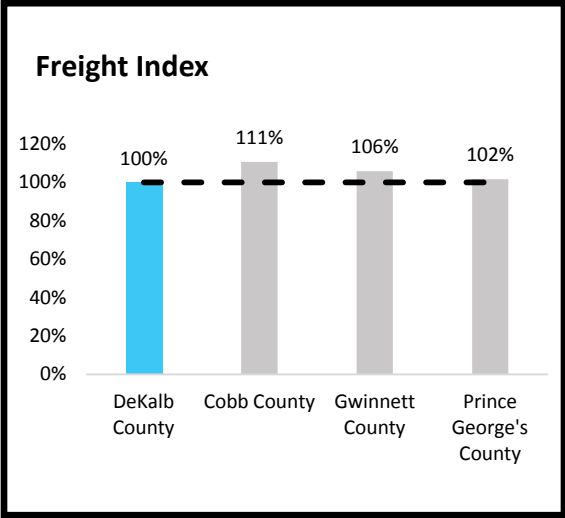
*Property taxes reflect tax rates for unincorporated counties, individual cities within each county may levy additional property taxes.

**Electric Rates based off of primary utility supplier in the county. Different rates may be found using different utilities.

Sources: See Appendix IV



LOGISTICS (WAREHOUSE) COST OF OPERATIONS



Sources: See Appendix IV

*Freight index created by calculating average shipping cost to ship 10,000 pounds of general freight from benchmark county to New York City, NY, Chicago, IL and Los Angeles, CA.

**Travel Indices created by calculating average round trip flight and 2 night hotel stay from benchmark county to three major industry clusters for the respective industries.



LOGISTICS (WAREHOUSE) COST OF OPERATIONS

Occupational Profile for

Occupation Description	Number of Employees
General and Operations Managers	2
First-Line Supervisors of Production and Operating Workers	12
First-Line Supervisors of Office and Administrative Support Workers	8
Secretaries and Administrative Assistants, Except Legal, Medical, and Executive	8
Laborers and Freight, Stock, and Material Movers, Hand	120
Material Moving Workers, All Other	72
Heavy and Tractor-Trailer Truck Drivers	24
Bookkeeping, Accounting, and Auditing Clerks	6
Logisticians	6
Shipping, Receiving, and Traffic Clerks	12
Total Workforce	270

Cost of Operations Comparison – Raw Data Table

Metro Area	Employee Payroll	Fringe and Mandated Benefits	Utilities	Building / Lease Payment	Property Tax	Total Operating Cost
DeKalb County	\$9,333,700	\$2,373,032	\$245,437	\$1,518,682	\$967,708	\$14,438,559
Cobb County	\$9,333,700	\$2,373,032	\$253,501	\$2,311,273	\$660,966	\$14,932,471
Gwinnett County	\$9,333,700	\$2,373,032	\$220,921	\$1,856,591	\$776,878	\$14,561,121
Prince George's County	\$9,595,780	\$2,439,664	\$283,578	\$3,013,818	\$904,189	\$16,237,029

Cost of Operations Comparison – Cost Differences

Metro Area	Employee Payroll	Fringe and Mandated Benefits	Utilities	Building / Lease Payment	Property Tax	Total Operating Cost
Cobb County	\$0	\$0	\$8,064	\$792,591	-\$306,743	\$493,912
Gwinnett County	\$0	\$0	-\$24,516	\$337,909	-\$190,831	\$122,562
Prince George's County	\$262,080	\$66,632	\$38,141	\$1,495,136	-\$63,519	\$1,798,470
Average Cost Difference	\$87,360	\$22,211	\$7,230	\$875,212	-\$187,031	\$804,982



LOGISTICS (WAREHOUSE) SUPPLY CHAIN ANALYSIS

LOGISTICS MULTIPLIERS

Sector (Implan Code)	Direct	Indirect	Induced	Total
Warehousing and storage (340)	1.0	0.186383	0.484600	1.670982

TOTAL ECONOMIC IMPACTS

	Employment	Labor Income	Output
Direct Effect	270	\$12,572,048	\$20,000,000
Indirect Effect	32	\$1,477,511	\$3,709,674
Induced Effect	81	\$3,499,013	\$9,638,600
Total Effect	383	\$17,548,571	\$33,348,274
State & Local Tax Revenue			\$1,281,375

SUPPLY CHAIN IMPACTS: EMPLOYMENT*

Sector	Jobs
Employment services	5.07
Real estate establishments	4.44
Services to buildings and dwellings	2.41
Couriers and messengers	1.27
Other support services	0.79
Office administrative services	0.78
Maintenance and repair construction	0.76
Accounting, tax preparation, and bookkeeping	0.69
Management, scientific, and technical consulting	0.64
Business support services	0.56

SUPPLY CHAIN IMPACTS: OUTPUT

Sector	Total Output
Real estate establishments	\$634,344
Electric power generation and distribution	\$245,377
Employment services	\$196,257
Couriers and messengers	\$188,587
Telecommunications	\$142,368
Management of companies and enterprises	\$129,524
Maintenance and repair construction	\$121,672
Services to buildings and dwellings	\$121,058
Monetary authorities and depository institutions	\$108,165
Wholesale trade businesses	\$84,156

SUPPLY CHAIN IMPACTS: LABOR INCOME**

Sector	Labor Income
Employment services	\$146,484
Management of companies and enterprises	\$76,947
Real estate establishments	\$65,764
Couriers and messengers	\$59,047
Maintenance and repair construction	\$53,501
Services to buildings and dwellings	\$45,335
Electric power generation and distribution	\$43,776
Management, scientific, and technical consulting	\$40,350
Accounting, tax preparation, and bookkeeping	\$38,555
Wholesale trade businesses	\$34,649

Source: Implan

*All employment figures are presented in job years. One job year is equal to one full-time worker who is employed for one year.

** Labor income includes employee compensation (wages and benefits) and proprietor income.



RANKING OF DEKALB'S LOGISTICS INDUSTRY

Assessment Rationale	Logistics Variable	Leading	Strong	Average	Weak
<ul style="list-style-type: none"> Significant positive net employment growth since 2002 Recent years show industry wide employment recovery, although employment is still well below pre-recession peak 	Employment Trends			●	
<ul style="list-style-type: none"> Industry wages are only slightly higher than national average, making them less attractive to employers Wages have undergone significant downward correction since 2007, making them more in line with MSA and national averages 	Wage Trends			●	
<ul style="list-style-type: none"> Business establishments have exhibited 10% net growth since 2002 DeKalb is still well below its pre-recession establishment level and is recovering at a slower rate than the nation 	Business Establishments			●	
<ul style="list-style-type: none"> Logistics industry has ability to higher across the full spectrum of skill levels, creating economic opportunity for all demographics 	Employee Skill Set	●			
<ul style="list-style-type: none"> DeKalb has a slight cost advantage over its benchmarks, driven mostly by cheap land and labor costs DeKalb's tax rates are overall higher than its benchmarks, representing its single greatest cost disadvantage 	Cost of Operations		●		
	Overall Logistics Industry			●	

Source: AE



ADVANCED LOGISTICS NICHE MARKETS

Specialized Freight Trucking: This niche requires specialized equipment for transport, like flatbeds, tankers and refrigeration trailers. Demand will grow as construction and manufacturing pick back up. Employment in this niche has grown 14% over the last five years and wages per capita in 2012 were \$43,420.

Back Office Support Services: This niche refers to the behind-the-scenes tasks of running a company and may include IT, human resources, and accounting. Many corporations now outsource this niche to lower-cost destinations, and DeKalb County should leverage its comparatively lower cost of doing business with metro Atlanta, which ranks fourth among US cities in the number of Fortune 500 companies headquartered there.

Truck Terminals: Resolving infrastructure issues related to truck transportation will help attract business to the county and make it more cost effective. The county should look to update its preexisting truck terminal infrastructure and improve accessibility to the terminals through revisions to roadways and related supportive infrastructure.

Warehouse Distribution: Strong regional economic activity, DeKalb County's nearness to Atlanta International Airport and the availability of unincorporated land in its southwestern portion make this niche a good fit for the county.



CONSTRUCTION & SUPPORT TRADES

INDUSTRY OVERVIEW

CONSTRUCTION AND SUPPORT TRADES (CST) - *Construction is the creation of improvement of man-made structures. It can include residential, commercial, and industrial building construction, or civil construction, which encompasses infrastructure and utilities. Construction support trades are those that enable but do not directly participate in construction operations, to include material and equipment providers and contractors.*

Construction was one of the industries hit hardest by the recession, as great economic uncertainty and liquidity issues caused both public and private entities to rethink new construction projects, or even abandon ongoing projects.

Now that the economic recovery is picking up momentum, DeKalb County has an opportunity to capitalize on the nationwide resurgence in the industry. New technologies and eco-friendly construction practices provide a unique opportunity to DeKalb CST entities as they work to complete projects halted during the recession and work on new projects. An excellent example of such a project is the proposed redevelopment of the Doraville GM plant. The proposed conversion of the site into a “livable, mixed-use, transit-oriented development” is an opportunity for a innovative, socially responsible industry resurgence and can serve as a model for similar projects in the future.

CST in DeKalb also meet many of the theme elements:

- CST employs workers across the full spectrum of skill levels, from architects, to skilled tradesmen, to semi-skilled workers.
- Growing emphasis on green construction practices provides opportunities to entrepreneurs and innovators.
- Retention of DeKalb’s existing CST firms will be essential to industry growth.

- Green
- Clean
- Sustainable
- Creative

- Knowledge Workers
- Technical Workers
- Innovative Workers
- Semi-Skilled Workers
- Entrepreneurship
- Commercialization
- Business Retention



INDUSTRY CHARACTERISTICS

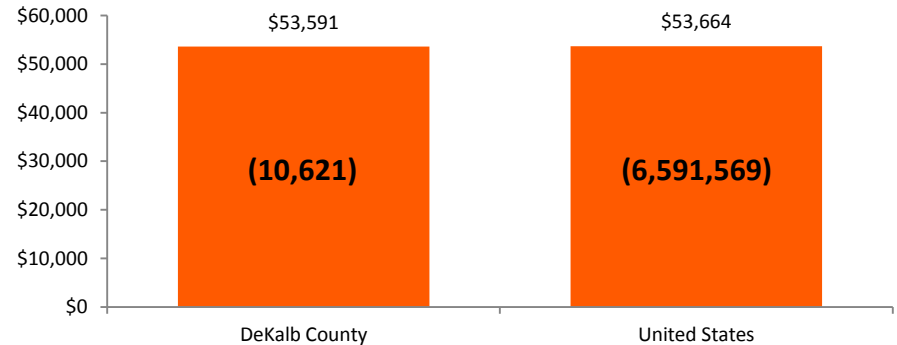
As the national economy continues to recover and the population of the Atlanta MSA continues to grow, DeKalb County faces an opportunity for a resurgence in its CST industry for both commercial and residential structures. The county already has a strong network of homebuilders that will be ready for the potential resurgence.

As of 2012, there are approximately 10,500 employees in CST in DeKalb County. These workers earn close to the national average.

DeKalb County meets many of the industry criteria needed for success. Notable exceptions are a lack of business confidence to drive new construction projects within the county and a lack of work training programs for specialized construction trades.

CST is an industry that is very sensitive to the conditions of the economy as a whole, and will thus improve as DeKalb undertakes efforts for broader economic revitalization. However, thought should be given to creating job training programs to ensure DeKalb County CST firms are ready to fulfil growing demand.

**Average Wages in CST, 2012
(Employment Level)**



INDUSTRY CRITERIA

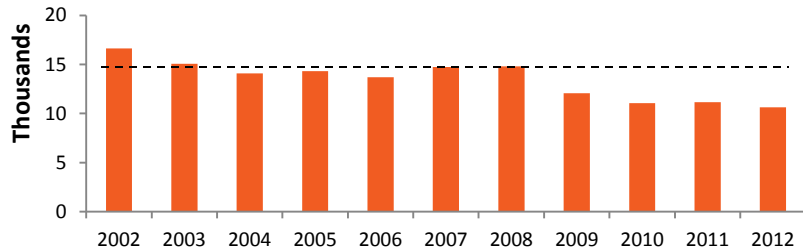
- Solid transportation infrastructure
- Access to construction materials and equipment
- Low labor costs
- Availability of inexpensive land
- Availability of inexpensive utilities
- Growing local and regional population
- Business Confidence
- Workforce Training
- Public policy support

Sources: BLS, AE

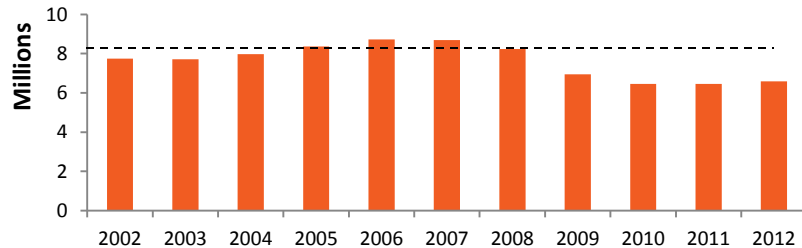


CST EMPLOYMENT

DeKalb County Employment



United States Employment



Sources: BLS, AE

Employment Trends

CST employment has declined drastically in DeKalb County, declining over one-third since 2002. While the industry enjoyed a brief resurgence in the pre-recession years, the recession eliminated all of those employment gains, and then some.

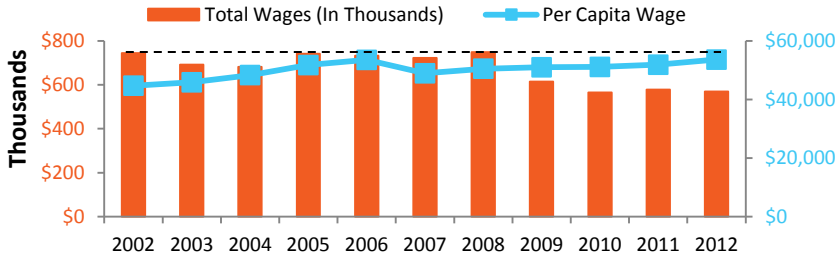
This is similar to national employment trends, although the decline is much more pronounced for DeKalb County, with the nation suffering only a 15% net loss since 2002.

The Atlanta MSA was excluded from the CST industry analysis as reliable data was not available.

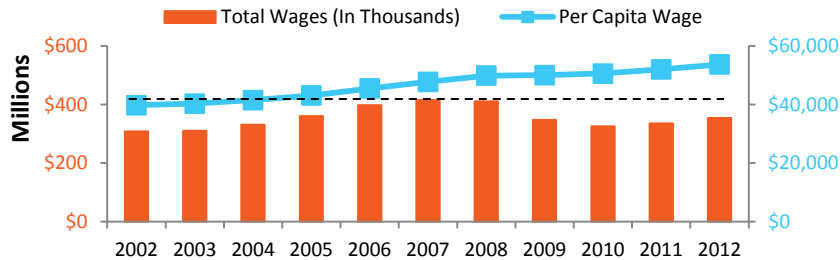


CST WAGES & PAY

DeKalb County Wages and Pay



United States Wages and Pay



Sources: BLS, AE

Wage Trends

DeKalb County’s average CST wage growth outpaced national wage growth in the early to mid 2000s, with the County’s average wage being over \$8,000 higher than the national average at its peak, in 2006.

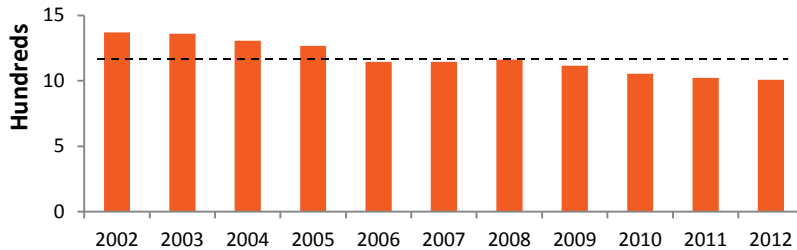
However, 2007 brought a major decline in the average wage for CST employees in DeKalb, closing the wage differential to less than \$1,500 higher than the national average.

Since then, the gap has continued to close with the national average pay actually surpassing DeKalb’s in 2011. This is not necessarily bad, as the DeKalb County wages have grown at a relatively stable rate since the 2006 decline and the lower wages can ensure labor costs are not a deterrent for undertaking new construction projects.

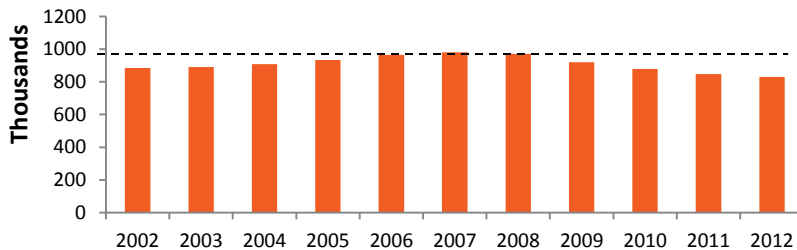


CST ESTABLISHMENTS

DeKalb County Establishments



United States Establishments



Sources: BLS, AE

Establishment Trends

Local and National trends for establishment numbers are very similar to the corresponding employment numbers, although the losses are less pronounced.

While DeKalb has seen a loss of over 300 establishments within the CST industry since 2002, this represents only a 25% decline in establishments, compared to the over 33% decline in employment.

Net losses at the national level are even less dramatic, with the number of establishments down only 6% from their 2002 level.



CST SECTORS & AREAS OF GROWTH

The sectors of the Construction and Support Trades industry that are relevant to DeKalb County include Building Construction, Civil Construction, and Construction Support. The table to the right shows which sectors have experienced **employment growth** in the last year.

Looking at past growth trends:

- Over the last ten years, all of the CST sectors have suffered a net loss in employment at both the County and national level.
- On the one-year horizon, DeKalb County has not exhibited any employment growth for relevant sectors, although individual components have experienced growth.
- Nationally, all three sectors have realized modest growth from 2011-2012. This is indicative of the larger economic turnaround supporting a resurgence in construction activities. It is likely, as DeKalb capitalizes on national economic trends and embarks on its own economic revitalization endeavors, that these growth rates will be seen at the County level as well.

Sector	Positive 1-Year Growth (2011-2012)	
	COUNTY	US
Building Construction		X
Civil Construction		X
Construction Support Trades		X

SECTOR COMPONENTS
Building Construction
Residential Building Construction
Nonresidential Building Construction
Foundation, Structure, and Building Exterior Contractors
Building Finishing Contractors
Civil Construction
Utility System Construction
Highway, Street, and Bridge Construction
Other Heavy and Civil Engineering Construction
Construction Support Trades
Land Subdivision
Building Equipment Contractors
Other Specialty Trade Contractors
Lumber and Other Construction Materials Merchant Wholesalers
Machinery, Equipment, and Supplies Merchant Wholesalers

Sources: BLS, AE



Key Occupations in the Construction and Support Trades Industry

Occupation	United States Occupational LQ	DeKalb County MSA LQ	10-year U.S. Growth Projection (%)	United States Salary	DeKalb County MSA Salary	Education Needed
Roofers	19.84	0.71	17.80	\$38,760	\$36,010	Less than high school
Cement Masons and Concrete Finishers	19.10	0.76	34.60	\$39,870	\$38,230	Less than high school
Elevator Installers and Repairers	18.22	1.02	11.30	\$74,140	\$68,720	High school diploma or equivalent
Structural Iron and Steel Workers	17.93	0.96	21.90	\$50,740	\$43,050	High school diploma or equivalent
Carpenters	16.86	0.61	19.60	\$44,520	\$43,320	High school diploma or equivalent
Construction Managers	16.21	0.97	16.60	\$90,960	\$88,290	Associate's degree
Plumbers, Pipefitters, and Steamfitters	16.20	0.79	25.60	\$52,950	\$46,210	High school diploma or equivalent
Construction Laborers	15.98	0.92	21.30	\$34,490	\$31,550	Less than high school
Electricians	14.93	1.08	23.20	\$53,030	\$47,060	High school diploma or equivalent
HVAC Mechanics and Installers	14.26	1.13	33.70	\$45,830	\$44,610	Postsecondary non-degree award
Paving, Surfacing, and Tamping Operators	14.15	1.15	22.10	\$40,170	\$32,450	High school diploma or equivalent
Pipelayers	14.01	0.70	25.30	\$39,970	\$33,160	High school diploma or equivalent
Carpet Installers	12.74	1.11	10.40	\$40,930	\$34,390	Less than high school
Sheet Metal Workers	12.58	0.68	17.50	\$46,870	\$40,480	High school diploma or equivalent
Operating Engineers	12.38	0.69	23.50	\$46,270	\$35,390	High school diploma or equivalent
Telecommunications Line Installers and Repairers	5.78	1.87	13.60	\$51,920	\$36,720	High school diploma or equivalent
Electrical Power-Line Installers and Repairers	5.74	1.28	13.20	\$62,280	\$46,220	High school diploma or equivalent
Structural Metal Fabricators and Fitters	1.93	0.90	15.70	\$37,260	\$33,800	High school diploma or equivalent
Industrial Machinery Mechanics	1.84	0.69	21.60	\$48,690	\$46,250	High school diploma or equivalent
Civil Engineers	1.78	1.05	19.40	\$84,140	\$90,860	Bachelor's degree

Sources: BLS, AE



BUSINESS DEVELOPMENT

Based on the recommended target industry, AE suggests attending the following or similar conferences / webinars in order to gain a firmer understanding of industry trends as well as to establish industry contacts and market the region’s available assets related to the industry. Host cities of each conference may change year to year.

CONSTRUCTION & SUPPORT TRADES CONFERENCES, 2014		
Conference	Description	Date
DODGE WEBINAR SERIES	Managing a small commercial construction business can be daunting. Often overworked and underpaid, contractors must maintain a flow of project leads, network and sell to “good” customers, manage ever-changing contracts and keep abreast of safety and technology advancements just to stay in business. This webinar series will address these issues with real observations and solutions collected from successful contracting business owners and brought to you in an informative and collaborative environment.	April-June 2014
SOUTHEAST BUILDING CONFERENCE	SEBC is the largest regional builder trade show in the Southeast providing the latest in products and services that include state-of-the art advances in technology, Hurricane mitigation and techniques, Florida Building Code, energy efficiency and green-building along with many other areas of home construction.	July 24-25, 2014
2014 AICPA NATIONAL CONSTRUCTION INDUSTRY CONFERENCE	The 2014 AICPA Construction Industry Conference is designed to bring together top industry experts and thought leaders to share their insights and experience to help guide you through today’s complex construction industry – the new complexities, the biggest challenges and where there’s room for new opportunities. Having a deep understanding of the latest trends, strategies, and best practices is essential for financial professionals to be successful.	December 4-5, 2014



RANKING OF DEKALB COUNTY'S CST INDUSTRY

Assessment Rationale	CST Trades Variable	Leading	Strong	Average	Weak
<ul style="list-style-type: none"> Despite a pre-recession employment resurgence, DeKalb County has seen a drastic loss in CST employment since 2002 While the rate of job loss within the industry has stabilized, DeKalb County has yet to see any industry wide employment recovery 	Employment Trends				
<ul style="list-style-type: none"> Average wages are slightly higher than the national industry average, but the gap continues to close, making the industry more competitive 	Wage Trends				
<ul style="list-style-type: none"> While not as pronounced as decline in employment, DeKalb County has experienced considerable establishment loss since 2002 The establishment decline for the County was markedly more dramatic than what was experienced nationally 	Business Establishments				
<ul style="list-style-type: none"> While some CST components are strong, such as homebuilders, others lack job training programs 	Employee Skill Set				
	Overall CST Industry				

Source: AE



CST NICHE MARKETS

Construction Materials Manufacturing: Construction will be part and parcel of any economic renaissance in the county, and developing this niche will create jobs for semi-skilled workers. Demand will come from the entire metro area, where construction grew faster than any other industrial supersector last year at 12%.

Contracting: Growth in construction will drive demand for contractors. Contracting can also cater to semi-skilled workers.

Homebuilding: Since 2000, housing vacancies in DeKalb County have grown 76% while home ownership has declined 7%. The good news is median home sale prices in the county have risen since 2011, and an economic revival will lift them further. Strategic homebuilding will revive old neighborhoods, give rise to dynamic new ones, and stimulate growth in retail and other industry sectors. This strategic homebuilding should be appropriate for all of DeKalb's socioeconomic groups and include multi-family and mixed income housing options.



ADVANCED MANUFACTURING

INDUSTRY OVERVIEW

Advanced Manufacturing - *Advanced manufacturing is a category of manufacturing that utilizes innovative technologies to make better products and improve the methods to produce those products.*

The future of manufacturing, in DeKalb County and nationally, is both quick and detailed, but is above all smarter. The kinds of manufacturers that can prosper in a new American economy need to “green” their production methods and think creatively about how consumers will use them.

It is no secret that all kinds of manufacturing jobs have become harder to find in recent decades for American workers. Nearly every city in the country has seen a declining manufacturing base. Yet, between 2011 and 2012, there has been some signs of growth in certain manufacturing sectors. The impact that these kinds of jobs can have is huge for the places that can attract them.

Advanced manufacturing meets a number of the theme elements:

- Despite current trends, the jobs that remain in manufacturing will require a range of skills. Semi-skilled workers will be needed as well as workers that have specialized technical skills and also, workers that think in innovate ways.
- Supporting entrepreneurs with new and exciting ways of commercializing advances in research can give this industry a much needed breath of fresh air.
- Even though manufacturers are not quite as mobile as other businesses, the county must explore ways of keeping manufacturers operating within the county.

- Green
- Clean
- Sustainable
- Creative

- Knowledge Workers
- Technical Workers
- Innovative Workers
- Semi-Skilled Workers
- Entrepreneurship
- Commercialization
- Business Retention



A BROADER PERSPECTIVE ON ADVANCED MANUFACTURING

Many of the world's fastest growing manufacturers, including Vietnam, China, Brazil, and India, are finding success through a mix of cheap labor, reliable infrastructure, and attractive tax rates. They've also secured positions in the global supply chain.

But their competitiveness – and perhaps their long-term outlook – are hindered by below average labor productivity, innovation, and intellectual property protection, as well as endemic corruption. With new cheap labor alternatives always on the horizon, sustained success for these upstarts is likely to depend on moving up the value chain.

Lacking in cheap labor, developed nations like Germany, the U.S., Japan, South Korea, and Canada have excelled through high-skilled workforces, innovation, strong regulatory policies, and concentration on sophisticated, high-quality goods that emerging countries have difficulty replicating. The Germans have a saying, “We make the thing that goes inside the thing that goes inside the thing.”

In what is perhaps a fitting irony, some companies from the developed world specialize in manufacturing the machine tools that developing countries need to develop their own manufacturing bases.

In both cases, trade, finance, and tax policies are playing a more central role in a country's competitiveness, according to Deloitte's 2013 Global Manufacturing Competitiveness Index.



Global Industry Clusters

Germany

China

Taiwan

Malaysia

Philippines

Sources: AE, ReferenceUSA



INDUSTRY CHARACTERISTICS

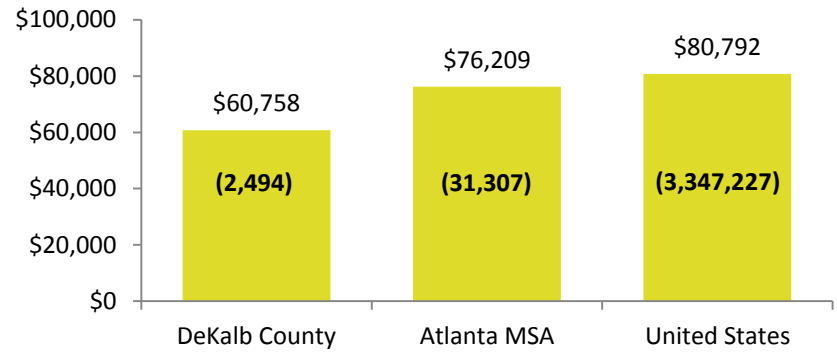
The Advanced Manufacturing industry fits for DeKalb County because it has the capacity to provide workers with technical and innovative skill sets. The County also has the manufacturing and logistics infrastructure to support innovative, entrepreneurial, and next-generation manufacturing.

DeKalb County manufacturing wages are well below the regional and national averages. However, it remains a well paying industry and the lower than average wages will be attractive to employers.

DeKalb's proximity to major road, rail, and air transportation hubs make it a viable option for manufacturers as there are many logistics and distribution options. However, businesses face some regulatory hurdles. Permitting has been a challenge, but the County has taken strategic measures to improve those processes and those measures are likely to be implemented in the coming months.

Although DeKalb's manufacturing sector has generally seen decline in recent years, it has the historical infrastructure and other assets required to support a resurgence in Advanced Manufacturing.

**Average Wages in Advanced Manufacturing, 2012
(Employment Level)**



INDUSTRY CRITERIA

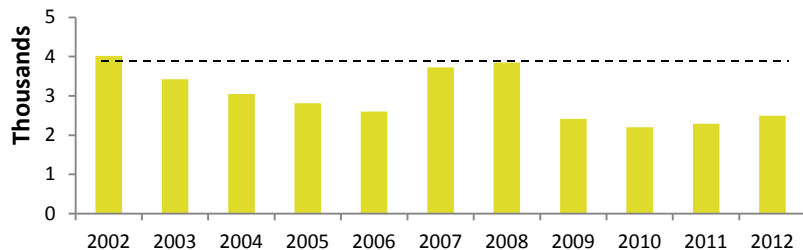
- Skilled & trained workforce
- Low labor cost
- Transportation infrastructure
- Strong airport accessibility
- Stable regulatory environment

Sources: BLS, AE

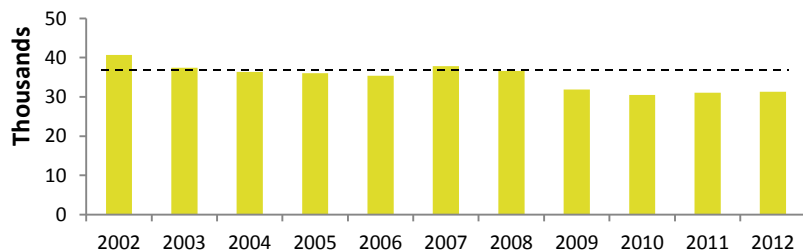


ADVANCED MANUFACTURING EMPLOYMENT

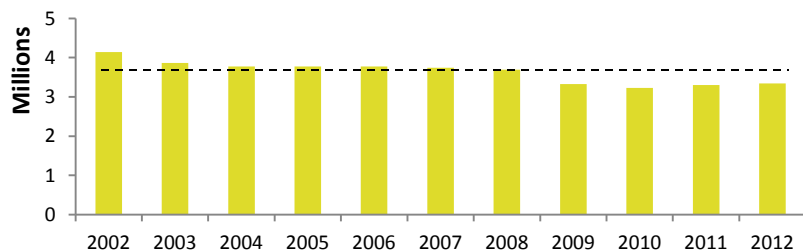
DeKalb County Employment



Atlanta MSA Employment



United States Employment



Local Employment Trends

Like much of the nation, DeKalb county has continued to lose manufacturing jobs over the past decade. However, following the recession, employment has slowly begun to stabilize and recover, with 2012 employment being over 200 jobs higher than 2010 employment.

The 2007 and 2008 spikes in DeKalb County employment are likely data anomalies, although the specific source of the anomaly has not been identified with either public or private sources. This data does not detract from the overall trends presented.

Regional & National Employment Trends

Regionally and nationally, the manufacturing industry has seen a net decline over the past decade, although like many industries the losses have been significantly more pronounced for DeKalb County.

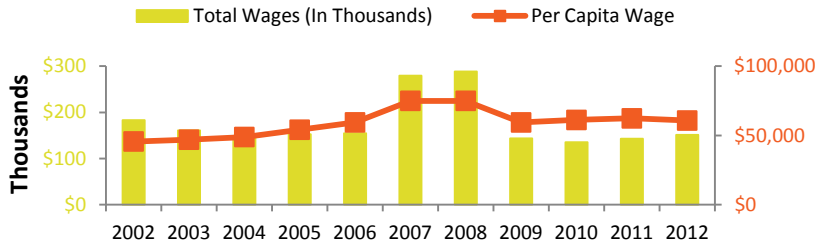
Overall, the industry exhibits modest employment recovery from the 2010 trough.

Sources: BLS, AE

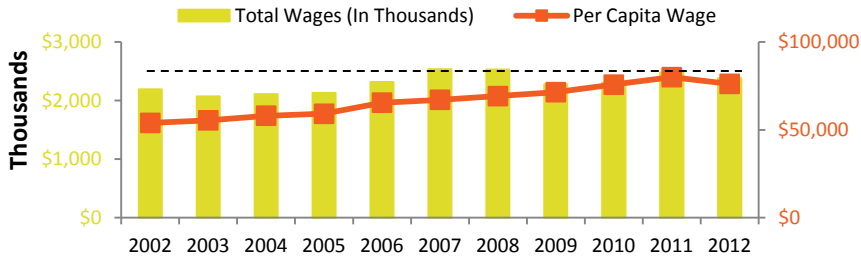


ADVANCED MANUFACTURING WAGES AND PAY

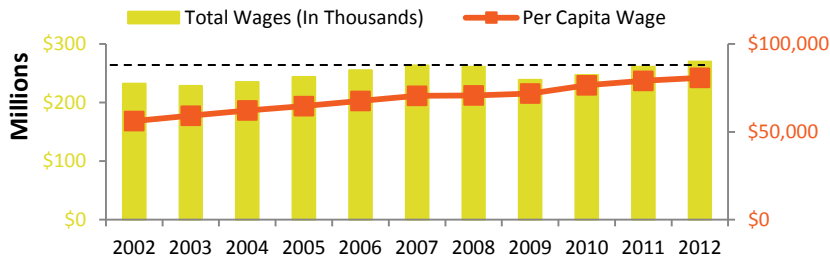
DeKalb County Wages and Pay



Atlanta MSA Wages and Pay



United States Wages and Pay



Local Wage Trends

Although wage levels have historically been low for DeKalb County, wages have shown consistent, if modest, growth over the past decade.

Here again, the 2007 and 2008 spikes in DeKalb County employment are likely data anomalies. This data does not detract from the overall trends presented.

Regional & National Wage Trends

While nationally employment has declined, manufacturing wages have continued to rise both regionally and nationally.

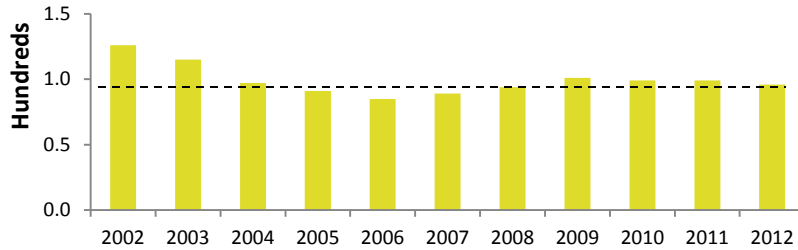
Moreover, wages have grown at a significantly faster rate both regionally and nationally.



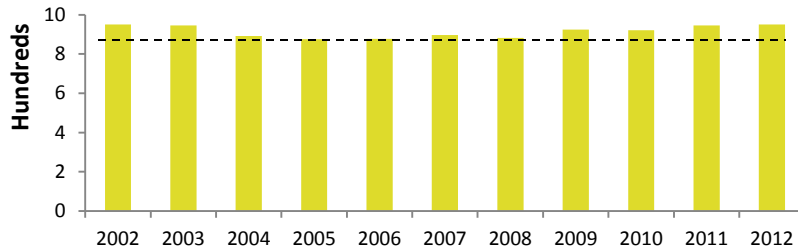
Sources: BLS, AE

ADVANCED MANUFACTURING ESTABLISHMENTS

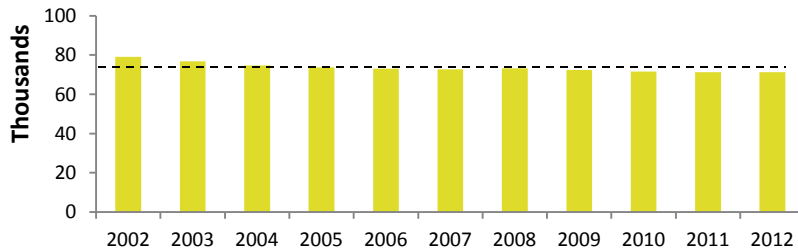
DeKalb County Establishments



Atlanta MSA Establishments



United States Establishments



Local Establishment Trends

Interestingly, DeKalb County has seen establishment growth since 2007. Establishments declined only marginally during the recent recession.

While establishments are down from their 2002 level, the increase is encouraging as it suggests an entrepreneurial aspect to DeKalb's manufacturing sector.

Regional & National Establishment Trends

The MSA is similar to DeKalb County, exhibiting net establishment growth on both the 5- and 10-year horizons.

While national establishments are down nearly 10 percent since 2002, the losses have been relatively insignificant since 2007.



ADVANCED MANUFACTURING SECTORS & AREAS OF GROWTH

The sectors which are strongly tied to Advanced Manufacturing are made up of Chemical Manufacturing, Heavy Manufacturing, and Computer & Electrical Equipment Manufacturing.

The table to the right displays the make up of Advanced Manufacturing and the **employment growth** for each component of the industry within the last year of available data. The one-year horizon is used to show recent resurgences in manufacturing employment, as the five and ten-year horizon's show near universal employment losses.

Looking at past year's growth trends:

- DeKalb County has experienced growth in Heavy Manufacturing and Computer & Electronic Equipment Manufacturing. Expansion of the Chemical Manufacturing sector would increase jobs requiring knowledge and technical workers.
- Atlanta realized growth in only one analyzed manufacturing sector: Heavy Manufacturing.
- The U.S. has seen growth in all three sectors analyzed over the recent year.

Sector	Positive 1-Year Growth (2011-2012)		
	COUNTY	MSA	US
Chemical Manufacturing			X
Heavy Manufacturing	X	X	X
Computer & Electrical Equipment Manufacturing	X		X

SECTOR COMPONENTS	
Chemical Manufacturing	Chemical Manufacturing
Heavy Manufacturing	Machinery Manufacturing
Computer & Electrical Equipment Manufacturing	Computer and Electronic Product Manufacturing
	Electrical Equipment, Appliance, and Component Manufacturing

Sources: BLS, AE



Key Occupations in the Advanced Manufacturing Industry

Occupation	United States Occupational LQ	DeKalb County MSA LQ	10-year U.S. Growth Projection (%)	United States Salary	DeKalb County MSA Salary	Education Needed
Computer Hardware Engineers	28.61	0.64	9.00	\$103,980	\$92,770	Bachelor's degree
Avionics Technicians	26.57	1.68	6.90	\$55,440	\$54,080	Postsecondary non-degree award
Electromechanical Equipment Assemblers	22.42	0.68	0.80	\$32,950	\$32,990	High school diploma or equivalent
Electrical Engineers	18.38	0.90	7.00	\$91,810	\$84,880	Bachelor's degree
Industrial Engineers	16.56	0.89	6.40	\$82,100	\$81,330	Bachelor's degree
Electronics Engineers, Except Computer	16.14	1.11	4.90	\$95,250	\$87,190	Bachelor's degree
Electro-Mechanical Technicians	16.03	1.19	0.50	\$53,480	\$53,740	Associate's degree
Electrical and Electronics Drafters	15.24	0.76	5.40	\$58,490	\$62,160	Associate's degree
Architectural and Engineering Managers	13.39	1.11	8.60	\$133,240	\$127,130	Bachelor's degree
Mechanical Engineering Technicians	11.85	0.48	3.90	\$53,830	\$50,160	Associate's degree
Plating and Coating Machine Setters, Operators, and Tenders, Metal and Plastic	11.80	0.79	9.30	\$31,830	\$38,260	High school diploma or equivalent
Mechanical Engineers	9.24	0.55	8.80	\$84,770	\$79,480	Bachelor's degree
Mechanical Drafters	8.70	0.65	11.10	\$53,270	\$53,150	Associate's degree
Industrial Production Managers	8.21	0.67	9.10	\$97,490	\$90,070	Bachelor's degree
Machinists	7.51	0.57	8.50	\$40,860	\$40,100	High school diploma or equivalent
Team Assemblers	5.94	1.05	5.50	\$29,910	\$28,900	High school diploma or equivalent
Production, Planning, and Expediting Clerks	5.84	1.09	6.60	\$45,450	\$42,050	High school diploma or equivalent
Extruding and Drawing Machine Setters, Operators, and Tenders, Metal and Plastic	5.80	0.97	8.30	\$34,060	\$34,830	High school diploma or equivalent
Fiberglass Laminators and Fabricators	5.63	0.85	-1.80	\$29,960	\$30,220	High school diploma or equivalent
Structural Metal Fabricators and Fitters	5.19	0.90	15.70	\$37,260	\$33,800	High school diploma or equivalent

Sources: BLS, AE



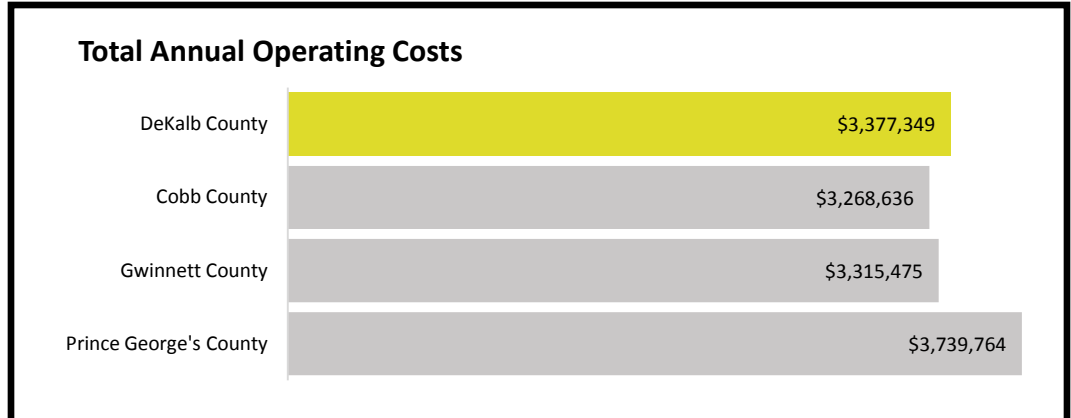
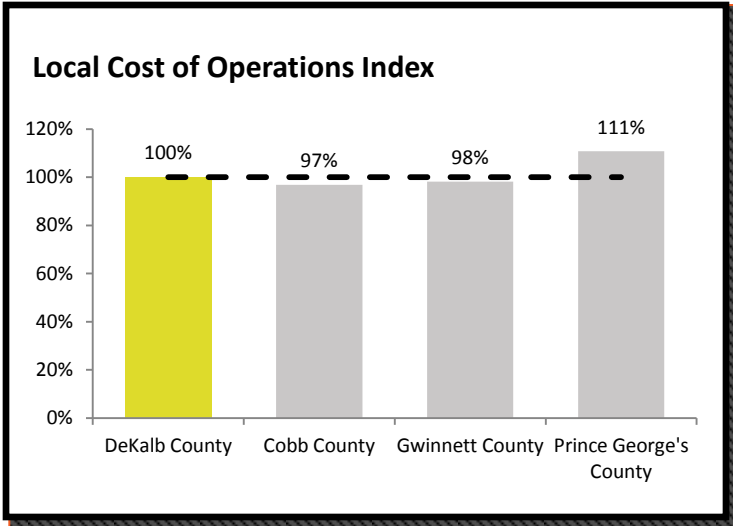
BUSINESS DEVELOPMENT

Based on the recommended target industry, AE suggests attending the following or similar conferences in order to gain a firmer understanding of industry trends as well as to establish industry contacts and market the region's available assets related to the industry. Host cities of each conference may change year to year.

ADVANCED MANUFACTURING CONFERENCES, 2014		
Conference	Description	Date
ADVANCED DESIGN AND MANUFACTURING IMPACT FORUM CONFERENCE	This conference will focus on the intersection of advanced design and manufacturing in industrial and consumer applications. In particular, it will emphasize suppliers involved with advanced design and manufacturers of hardware/equipment/functional systems.	August 17 - 20, 2014
ATLANTIC DESIGN AND MANUFACTURING	The largest advanced design and manufacturing trade show serving the Northeast, the conference caters to those looking for new ideas, innovations and solutions. Experts from aerospace, medical, electronics, IT, defense transportations will arrive with projects in hand.	June 10 - 12, 2014
ATX Midwest	This conference will feature top automation experts, leading suppliers of software, raw materials and manufacturing equipment, components, sub assemblies and contract services used in OEM products.	October 15 - 16, 2014



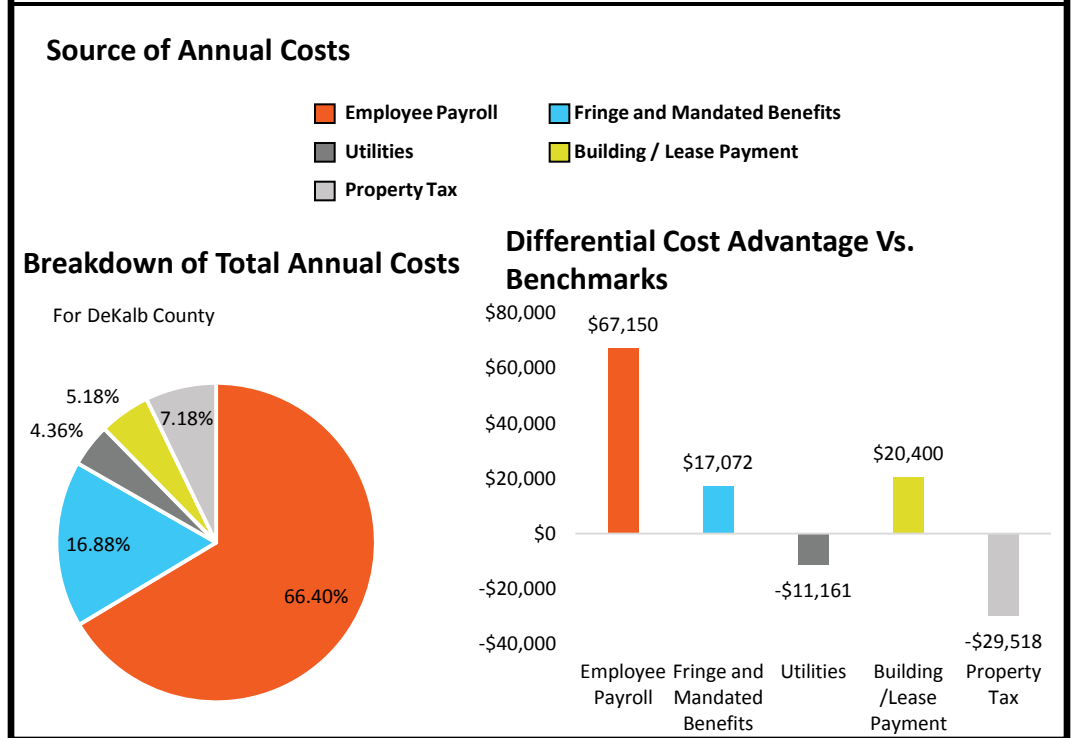
MANUFACTURING (MEDICAL IMPLANT MANUFACTURER) COST OF OPERATIONS



Factors of Analysis

In order to achieve direct comparisons of annual operating costs within DeKalb County and the benchmark communities for this industry, uniform conditions for a hypothetical company were applied to the cost variables of each specific community. Operating costs were calculated across five primary cost categories including employee payroll, fringe and mandated benefits, utilities, building/lease payment and property tax. A general outline of the parameters used has been provided below.

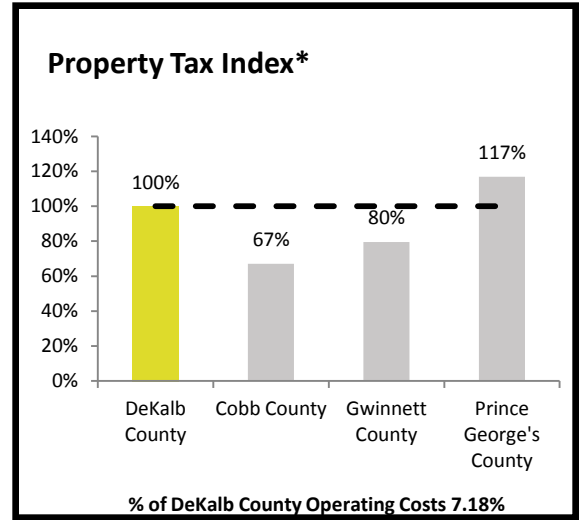
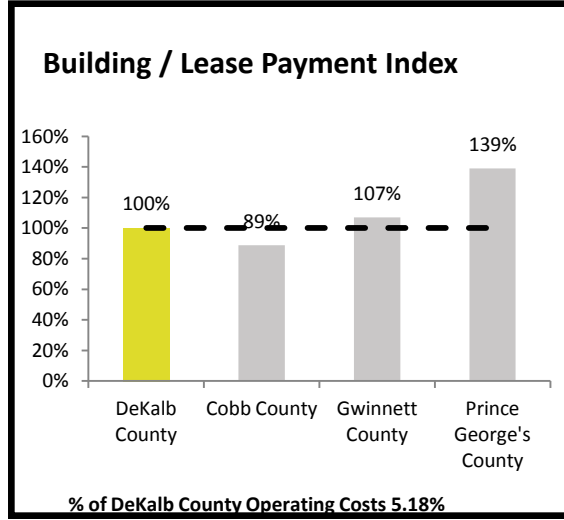
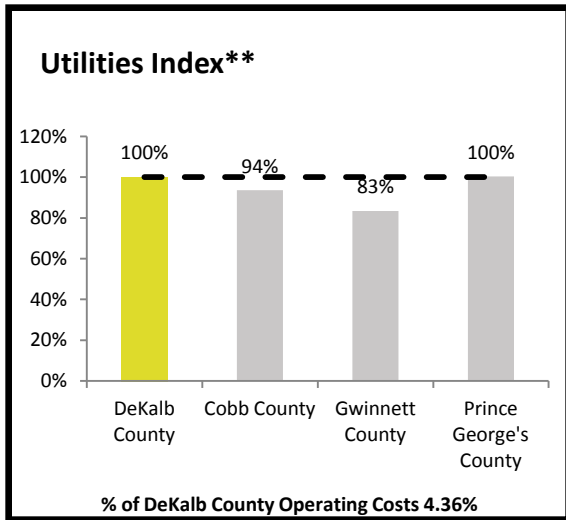
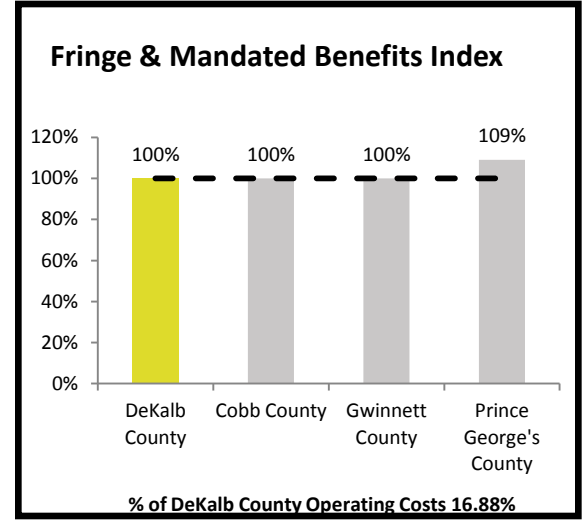
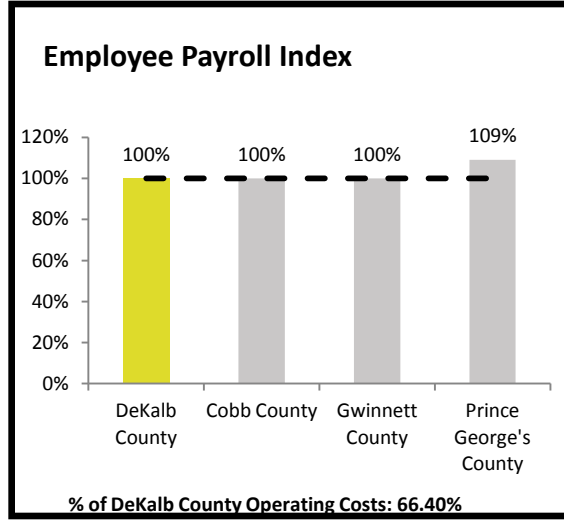
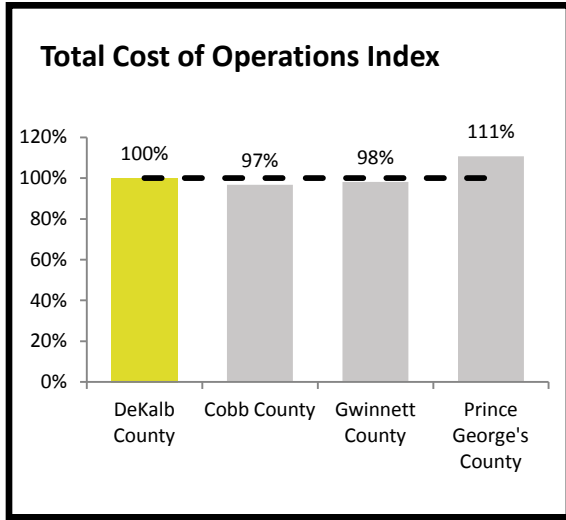
- Lease of 30,000 SF of Industrial Space
- \$10,000,000 Capital Investment in Computers, Machinery, and Equipment
- Total Workforce of 46 Employees
- Monthly Electricity Demand of 100,000 kWh
- Monthly Water usage of 300,000 gallons
- Monthly Natural Gas demand based on climate region



Sources: See Appendix IV



MANUFACTURING (MEDICAL IMPLANT MANUFACTURER) COST OF OPERATIONS



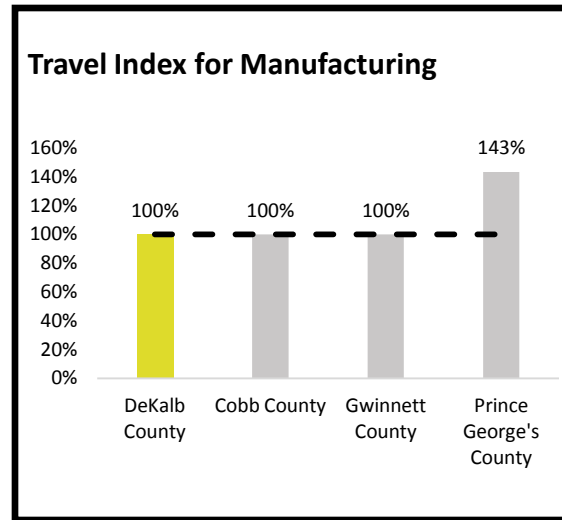
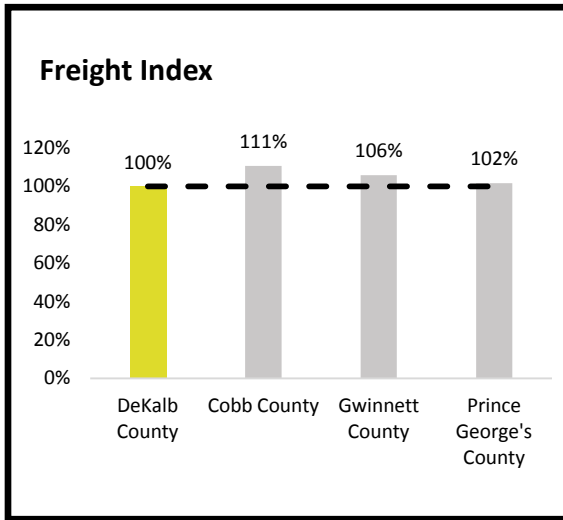
*Property taxes reflect tax rates for unincorporated counties, individual cities within each county may levy additional property taxes.

**Electric Rates based off of primary utility supplier in the county. Different rates may be found using different utilities.

Sources: See Appendix IV



MANUFACTURING (MEDICAL IMPLANT MANUFACTURER) COST OF OPERATIONS



Sources: See Appendix IV

*Freight index created by calculating average shipping cost to ship 10,000 pounds of general freight from benchmark county to New York City, NY, Chicago, IL and Los Angeles, CA.

**Travel Indices created by calculating average round trip flight and 2 night hotel stay from benchmark county to three major industry clusters for the respective industries.



MANUFACTURING (MEDICAL IMPLANT MANUFACTURER) COST OF OPERATIONS

Occupational Profile for Manufacturing

Occupation Description	Number of Employees
General and Operations Managers	1
Human Resources Specialists	1
Inspectors, Testers, Sorters, Samplers, and Weighers	1
First-Line Supervisors of Production and Operating Workers	3
Secretaries and Administrative Assistants, Except Legal, Medical, and Executive	2
Maintenance and Repair Workers, General	2
Sales Representatives, Wholesale and Manufacturing, Technical and Scientific Products	2
Medical Appliance Technicians	10
Electrical and Electronic Equipment Assemblers	10
Biomedical Engineers	7
Machinists	2
Laborers and Freight, Stock, and Material Movers, Hand	4
Computer Network Support Specialists	1
Total Workforce	46

Cost of Operations Comparison – Raw Data Table

Metro Area	Employee Payroll	Fringe and Mandated Benefits	Utilities	Building / Lease Payment	Property Tax	Total Operating Cost
DeKalb County	\$2,242,610	\$570,169	\$147,192	\$174,900	\$242,478	\$3,377,349
Cobb County	\$2,242,610	\$570,169	\$137,700	\$155,400	\$162,757	\$3,268,636
Gwinnett County	\$2,242,610	\$570,169	\$122,676	\$187,200	\$192,820	\$3,315,475
Prince George's County	\$2,444,060	\$621,386	\$147,716	\$243,300	\$283,302	\$3,739,764

Cost of Operations Comparison – Cost Differences

Metro Area	Employee Payroll	Fringe and Mandated Benefits	Utilities	Building / Lease Payment	Property Tax	Total Operating Cost
Cobb County	\$0	\$0	-\$9,492	-\$19,500	-\$79,720	-\$108,712
Gwinnett County	\$0	\$0	-\$24,516	\$12,300	-\$49,658	-\$61,874
Prince George's County	\$201,450	\$51,217	\$524	\$68,400	\$40,824	\$362,415
Average Cost Difference	\$67,150	\$17,072	-\$11,161	\$20,400	-\$29,518	\$63,943

Sources: See Appendix IV



MANUFACTURING (MEDICAL IMPLANT MANUFACTURER) SUPPLY CHAIN ANALYSIS

ADVANCED MANUFACTURING MULTIPLIERS

Sector (Implan Code)	Direct	Indirect	Induced	Total
Surgical appliance and supplies manufacturing (306)	1.0	0.238934	0.278787	1.517721

TOTAL ECONOMIC IMPACTS

	Employment	Labor Income	Output
Direct Effect	46	\$3,253,770	\$10,000,000
Indirect Effect	15	\$886,810	\$2,402,272
Induced Effect	24	\$1,023,998	\$2,818,663
Total Effect	85	\$5,164,578	\$15,220,936
State & Local Tax Revenue			\$406,563

SUPPLY CHAIN IMPACTS: OUTPUT

Sector	Total Output
Wholesale trade businesses	\$320,506
Securities, commodity contracts, and investments	\$205,574
Management of companies and enterprises	\$162,716
Telecommunications	\$126,216
Monetary authorities and depository institutions	\$119,590
Advertising and related services	\$101,213
Radio and television broadcasting	\$94,342
Miscellaneous professional and technical services	\$92,166
Real estate establishments	\$91,078
Management, scientific, and technical consulting	\$83,697

SUPPLY CHAIN IMPACTS: EMPLOYMENT*

Sector	Jobs
Securities, commodity contracts, and investments	1.61
Wholesale trade businesses	1.40
Management, scientific, and technical consulting	0.79
Food services and drinking places	0.74
Employment services	0.73
Services to buildings and dwellings	0.65
Real estate establishments	0.64
Management of companies and enterprises	0.64
Legal services	0.59
Advertising and related services	0.53

SUPPLY CHAIN IMPACTS: LABOR INCOME**

Sector	Labor Income
Wholesale trade businesses	\$131,960
Management of companies and enterprises	\$96,666
Radio and television broadcasting	\$58,398
Management, scientific, and technical consulting	\$49,543
Securities, commodity contracts, and investments	\$37,471
Miscellaneous professional and technical services	\$35,691
Legal services	\$32,409
Advertising and related services	\$29,394
Accounting, tax preparation, and bookkeeping	\$27,829
Transport by truck	\$26,307

Source: Implan

*All employment figures are presented in job years. One job year is equal to one full-time worker who is employed for one year.

** Labor income includes employee compensation (wages and benefits) and proprietor income.



RANKING OF DEKALB COUNTY'S ADVANCED MANUFACTURING INDUSTRY

Assessment Rationale	Advanced Manufacturing Variable	Leading	Strong	Average	Weak
<ul style="list-style-type: none"> Declining employment, but has recently stabilized One-year employment growth in 50% of analyzed components 	Employment Trends				
<ul style="list-style-type: none"> Consistent but modest wage growth Wages remain competitive, as they are well below regional and national averages 	Wage Trends				
<ul style="list-style-type: none"> Establishments have exhibited net positive gains over past 5-years but have not come near pre-recession levels 	Business Establishments				
<ul style="list-style-type: none"> DeKalb County's semi-skilled workforce is well suited to the expansion of Advanced Manufacturing 	Employee Skill Set				
<ul style="list-style-type: none"> DeKalb is roughly comparable with local benchmarks for operational costs Operations are markedly cheaper in DeKalb County than in regional competitor, Prince George's County, MD 	Cost of Operations				
	Overall Advanced Manufacturing Industry				

Source: AE



ADVANCED MANUFACTURING NICHE MARKETS

Fabricated Metals Manufacturing: This niche involves shaping of metal into intermediate or end products. Demand will be driven in no small part by the success of construction, logistical, and other manufacturing-based niches. Manufacturing of fabricated metals often involves specialization of a limited range of products, allowing small- and medium-sized manufacturers to effectively compete.

Medical Equipment and Supplies: Health care is the country's largest – and fastest growing – sector. It is also undergoing numerous technological breakthroughs. All of which places stronger demand on medical equipment and supplies. DeKalb County, with its robust healthcare infrastructure, is in position to capitalize on this thriving niche.

Laboratory Equipment and Supplies: This niche is closely tied to health and sciences and to breakthroughs in innovative sub-sectors like pharmaceuticals and biotech. Research institutions like Emory and the CDC will help sustain demand.

Light Manufacturing and Assembly: This niche generally involves the creation, assembly, and/or packaging of more consumer-oriented products. This can include but is not limited to clothing, consumer, electronics, furniture, and home appliances and accessories.



RETAIL LEAKAGE ANALYSIS

RETAIL LEAKAGE ANALYSIS

A retail leakage assessment explores the relationship between the retail sales of DeKalb County establishments (local supply) and the retail purchases of DeKalb County Residents (local demand). To conduct this analysis, the supply and demand of over 30 retail sectors are reviewed.

When retail sales exceed resident purchases, it is considered a “retail surplus.” When resident purchases exceed the sales of local retail establishments it is called “retail leakage.”

KEY FINDINGS

While a retail leakage is present in many of DeKalb County’s individual retail sectors, overall the county has a net retail surplus of nearly \$400 million. This translates into a roughly 3% excess of supply over local demand.

The largest surpluses are found in the following sectors:

- Automobile Dealers (\$300+ Million)
- Electronic Shopping (\$200+ Million)
- Health & Personal Care Store (\$135+ Million)

The greatest retail leakages are occur in the following sectors:

- Grocery Stores (\$100+ Million)
- Clothing Stores (\$85+ Million)
- Limited-Service Eating Places (\$65+ Million)

The tables on the following slides provide a detailed break down of retail sales, purchases, leakages, and surpluses in DeKalb County.



DeKalb County, GA Retail Leakage Analysis

Retail Sector	Retail Sales of DeKalb Establishments (Supply-Retail Sales)	Retail Purchases of DeKalb Residents (Demand-Retail Potential)	Retail Leakage	Leakage / Surplus Factor*
Total Retail Sales	\$7,532,885,482	\$7,136,612,516	\$396,272,966	2.7
Motor Vehicle & Parts Dealers	\$1,017,426,571	\$1,316,703,175	\$299,276,604	12.8
Automobile Dealers	\$829,436,995	\$1,130,158,364	\$300,721,369	15.3
Other Motor Vehicle Dealers	\$22,261,986	\$69,817,332	\$47,555,346	51.6
Auto Parts, Accessories & Tire Stores	\$165,727,590	\$116,727,479	-\$49,000,111	-17.3
Furniture & Home Furnishings Stores	\$129,954,138	\$158,337,728	\$28,383,590	9.8
Furniture Stores	\$58,811,824	\$92,990,223	\$34,178,399	22.5
Home Furnishings Stores	\$71,142,314	\$65,347,505	-\$5,794,809	-4.2
Electronics & Appliance Stores	\$232,291,463	\$214,258,933	-\$18,032,530	-4.0
Bldg Materials, Garden Equip. & Supply Stores	\$132,235,597	\$216,200,434	\$83,964,837	24.1
Bldg Material & Supplies Dealers	\$118,516,815	\$186,018,806	\$67,501,991	22.2
Lawn & Garden Equip & Supply Stores	\$13,718,782	\$30,181,628	\$16,462,846	37.5
Food & Beverage Stores	\$1,298,857,800	\$1,169,477,996	-\$129,379,804	-5.2
Grocery Stores	\$1,190,021,324	\$1,087,757,684	-\$102,263,640	-4.5
Specialty Food Stores	\$24,173,774	\$22,642,447	-\$1,531,327	-3.3
Beer, Wine & Liquor Stores	\$84,662,702	\$59,077,865	-\$25,584,837	-17.8
Health & Personal Care Stores	\$392,242,166	\$527,276,196	\$135,034,030	14.7
Gasoline Stations	\$838,864,828	\$781,356,423	-\$57,508,405	-3.5

Source: ESRI

* **Leakage factor** is defined as the percentage less than the demand being supplied within a given retail category. For example, a leakage of 50% indicates that only half of the demand is currently being supplied. **Surplus factor** is defined as the percentage greater than the demand being supplied within a given retail category. A surplus of 50% indicates that the supply exceeds the demand by 50%.



DeKalb County, GA Retail Leakage Analysis

Retail Sector	Retail Sales of DeKalb Establishments (Supply-Retail Sales)	Retail Purchases of DeKalb Residents (Demand-Retail Potential)	Retail Leakage	Leakage / Surplus Factor*
Clothing & Clothing Accessories Stores	\$523,359,496	\$425,322,872	-\$98,036,624	-10.3
Clothing Stores	\$401,496,299	\$313,834,475	-\$87,661,824	-12.3
Shoe Stores	\$65,760,079	\$52,226,038	-\$13,534,041	-11.5
Jewelry, Luggage & Leather Goods Stores	\$56,103,118	\$59,262,359	\$3,159,241	2.7
Sporting Goods, Hobby, Book & Music Stores	\$143,666,431	\$153,587,733	\$9,921,302	3.3
Sporting Goods/Hobby/Musical Instr Stores	\$98,822,309	\$117,613,031	\$18,790,722	8.7
Book, Periodical & Music Stores	\$44,844,122	\$35,974,702	-\$8,869,420	-11.0
General Merchandise Stores	\$1,282,760,086	\$1,247,603,453	-\$35,156,633	-1.4
Department Stores Excluding Leased Depts.	\$477,344,602	\$425,192,713	-\$52,151,889	-5.8
Other General Merchandise Stores	\$805,415,484	\$822,410,740	\$16,995,256	1.0
Miscellaneous Store Retailers	\$127,924,302	\$142,908,738	\$14,984,436	5.5
Florists	\$10,853,357	\$6,653,385	-\$4,199,972	-24.0
Office Supplies, Stationery & Gift Stores	\$39,715,156	\$37,499,351	-\$2,215,805	-2.9
Used Merchandise Stores	\$22,214,589	\$20,329,313	-\$1,885,276	-4.4
Other Miscellaneous Store Retailers	\$55,141,200	\$78,426,689	\$23,285,489	17.4
Nonstore Retailers	\$190,865,636	\$414,382,381	\$223,516,745	36.9
Electronic Shopping & Mail-Order Houses	\$140,344,940	\$345,016,163	\$204,671,223	42.2
Vending Machine Operators	\$22,078,737	\$21,738,442	-\$340,295	-0.8
Direct Selling Establishments	\$28,441,959	\$47,627,776	\$19,185,817	25.2
Food Services & Drinking Places	\$826,164,002	\$765,469,420	-\$60,694,582	-3.8
Full-Service Restaurants	\$320,942,194	\$307,231,366	-\$13,710,828	-2.2
Limited-Service Eating Places	\$440,633,855	\$375,186,363	-\$65,447,492	-8.0
Special Food Services	\$28,858,437	\$24,729,868	-\$4,128,569	-7.7
Drinking Places - Alcoholic Beverages	\$35,729,516	\$58,321,823	\$22,592,307	24.0

* **Leakage factor** is defined as the percentage less than the demand being supplied within a given retail category. For example, a leakage of 50% indicates that only half of the demand is currently being supplied. **Surplus factor** is defined as the percentage greater than the demand being supplied within a given retail category. A surplus of 50% indicates that the supply exceeds the demand by 50%.

Source: ESRI



PROJECT NEXT STEPS

TRANSITION TO PHASE IV

Appropriate target industries and niches are essential for economic development retention, expansion, and recruitment efforts. Without a strategic approach, resources will not be maximized for return on investment. It is important for project stakeholders to remember that this is not the strategy but research that supports the final recommendations.

The industries and niches presented in this report provide a strong balance for DeKalb County between immediate opportunities for economic development and a long-term path for the region. Many of them utilize the county and region's existing strengths and assets, while others rely on these attributes to move into emerging markets that will sustain the local economic base in years to come.

By focusing its resources and efforts on developing and supporting the target industries in this report, DeKalb's economic development leaders can not only build upon the community's strengths in existing industries, but also work to diversify the local economy by leveraging local assets that can support emerging opportunities.

The next step in the process of this study is to present DeKalb with a set of strategic recommendations and an implementation plan that will act as a roadmap for the County's economic development efforts.



APPENDIX

- I. REPORT METHODOLOGY & NARRATIVE CONTENT
- II. OCCUPATIONAL ANALYSIS METHODOLOGY
- III. INDUSTRY DEFINITIONS BY NAICS CODES
- IV. COST OF OPERATIONS SOURCES
- V. COUNTY INDUSTRY CLUSTER HEAT MAPS



I. REPORT METHODOLOGY & NARRATIVE CONTENT

As described in the portion of this report titled “Target Industry Selection Process,” the project team completed an in-depth analysis specific to DeKalb County that included site visits and interviews with key private and public sector stakeholders.

The results of this analysis formed the basis for the identification and selection of recommended target industries and for the determination of target niches within those industries. Particular emphasis was placed by the project team on the selection of targets that best fit the unique characteristics of DeKalb County and offered the best opportunities for success. The research, as well as the recommendations provided, have been directed specifically to meet the economic development needs and objectives of the County and will guide further research and recommendations to be prepared by the project team in future stages of this project.

Certain portions of this report draw upon previously completed research conducted by AngelouEconomics for internal use or for separate projects, and were selected for inclusion in this report for their specific relevance to the challenges and opportunities currently affecting DeKalb. In some cases, narrative remarks may be included in other documents completed by AE, specifically those relating to the explanation of research processes, definitions, national and global trends, industry-wide conditions and dynamics, and national economic data.

Reasonable efforts have been made to ensure that all data and information that was completed by other organizations and government agencies have been properly sourced throughout this report. Further information about the methods, research, or recommendations featured in this report can be made available upon request by the client.



II. OCCUPATIONAL ANALYSIS METHODOLOGY

For each target industry recommended, AE has completed a regional occupational snapshot, highlighting occupations within each target industry that are in demand nationally, and identifying how a region “measures up” in terms of its current concentration of those jobs.

For each target industry occupational analysis the following information is provided:

- U.S. Occupational LQ (*how prevalent a particular occupation is within the industry studied across the U.S.*)
- DeKalb MSA*LQ (*how prevalent a particular occupation is locally relative to the U.S. as a whole*)
- 10-year growth potential of occupation
- U.S. Salary/Wages
- DeKalb MSA* Salary/Wages
- Required education level of occupation

To ensure that occupational data remains relevant into the future, only occupations with positive projected job growth rates were chosen. Exceptions are made to this rule in the event that a particular occupation is especially important to DeKalb County. This importance is defined by a presence of local assets or local growth trends that negate broader occupational trends nationwide.

* DeKalb MSA refers to the Atlanta MSA, of which DeKalb County is a component.



III. INDUSTRY DEFINITIONS BY NAICS CODES

NAICS Components of Life Sciences Industry	
NAICS Code	Description
3391	Medical Equipment and Supplies Manufacturing
6214	Outpatient Care Centers
6215	Medical and Diagnostic Laboratories
6216	Home Health Care Services
6219	Other Ambulatory Health Care Services
6221	General Medical and Surgical Hospitals
6231	Nursing Care Facilities (Skilled Nursing Facilities)
6239	Other Residential Care Facilities
6241	Individual and Family Services
6244	Child Day Care Services
541511	Custom Computer Programming Services
541512	Computer Systems Design Services

NAICS Components of Tourism Industry	
NAICS Code	Description
7121	Museums, Historical Sites, and Similar Institutions
5615	Travel Arrangement and Reservation Services
713	Amusement, Gambling, and Recreation Industries
72	Accommodation and Food Services

Source: AE



NAICS Components of Professional and Business Services Industry

NAICS Code	Description
5221	Depository Credit Intermediation
5222	Nondepository Credit Intermediation
5223	Activities Related to Credit Intermediation
5239	Other Financial Investment Activities
5241	Insurance Carriers
5242	Agencies, Brokerages, and Other Insurance Related Activities
5411	Legal Services
5412	Accounting, Tax Preparation, Bookkeeping, and Payroll Services
5413	Architectural, Engineering, and Related Services
5414	Specialized Design Services
5415	Computer Systems Design and Related Services
5416	Management, Scientific, and Technical Consulting Services
5417	Scientific Research and Development Services
5418	Advertising, Public Relations, and Related Services
5419	Other Professional, Scientific, and Technical Services
5511	Management of Companies and Enterprises

NAICS Components of Logistics Industry

NAICS Code	Description
4841	General Freight Trucking
4842	Specialized Freight Trucking
4855	Charter Bus Industry
4859	Other Transit and Ground Passenger Transportation
4881	Support Activities for Air Transportation
4884	Support Activities for Road Transportation
4931	Warehousing and Storage
541614	Process, Physical Distribution, and Logistics Consulting Services

Source: AE



NAICS Components of Construction and Support Trades Industry

NAICS Code	Description
2361	Residential Building Construction
2362	Nonresidential Building Construction
2371	Utility System Construction
2372	Land Subdivision
2373	Highway, Street, and Bridge Construction
2379	Other Heavy and Civil Engineering Construction
2381	Foundation, Structure, and Building Exterior Contractors
2382	Building Equipment Contractors
2383	Building Finishing Contractors
2389	Other Specialty Trade Contractors
4233	Lumber and Other Construction Materials Merchant Wholesalers
4238	Machinery, Equipment, and Supplies Merchant Wholesalers

NAICS Components of Advanced Manufacturing

NAICS Code	Description
325	Chemical Manufacturing
333	Machinery Manufacturing
334	Computer and Electronic Product Manufacturing
335	Electrical Equipment, Appliance, and Component Manufacturing

Source: AE



IV. COST OF OPERATIONS SOURCES

Employee Payrolls: Bureau of Labor Statistics Occupational Employment Statistics (<http://www.bls.gov/oes/current/oessrcma.htm>)

Employee Benefits: Bureau of Labor Statistics Employer Costs for Employee Compensation (<http://www.bls.gov/ro7/ro7ecec.htm>)

Electric / Natural Gas Rates: Energy Information Administration (<http://www.eia.gov/>)

Water / Sewer Rates: DeKalb County Department of Watershed Management (<http://www.dekalbwatershed.com/admin/Uploads/rates.pdf>)

Cobb County Water Department (<http://water.cobbcountyga.gov/Files/CustSrvBillPmts.html>)

Gwinnett County Government
(<http://www.gwinnettcountry.com/portal/gwinnett/Departments/PublicUtilities/RatesandFeeSchedule>)

Prince George's County
(<http://www.princegeorgescountymd.gov/sites/sustainable/Services/WaterAndSewer/Pages/default.aspx>)

Land Costs / Property Lease Rates: Averages found from LoopNet (www.loopnet.com)

Construction Costs: Reed Construction Data (<http://www.reedconstructiondata.com/rsmeans/models/> 2012 Means Construction Indexes)

Property Tax Rates: DeKalb County Tax Commissioner (<http://web.co.dekalb.ga.us/taxcommissioner/pdf/Millage.pdf>)

Cobb County Assessor's Office (http://www.cobbassessor.org/cobbga_dnn)

Gwinnett County Tax Commissioner
(<http://gwinnetttaxcommissioner.manatron.com/Tabs/Property/BillingInformation/MillageRateInformation.aspx>)

Maryland Department of Assessments and Taxation (<http://www.dat.state.md.us/sdatweb/taxrate.html>)

Industry Clusters: U.S. Cluster Mapping (<http://clustermapping.us/home/>)

Travel Costs: Bureau of Transportation Statistics (<http://www.rita.dot.gov/bts/airfares>)

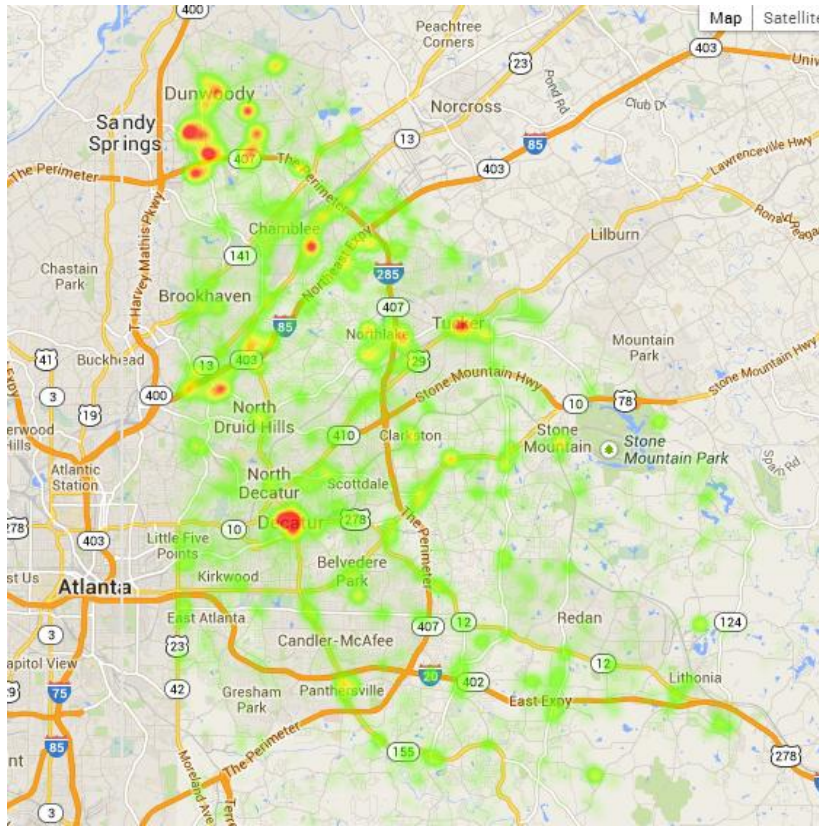
Hotel Costs: Hotel Price Index (http://files.hotel-price-index.com//2010/full-year/pdf/HPI_USA_2010.pdf)

Freight Costs: UShip (www.uship.com)

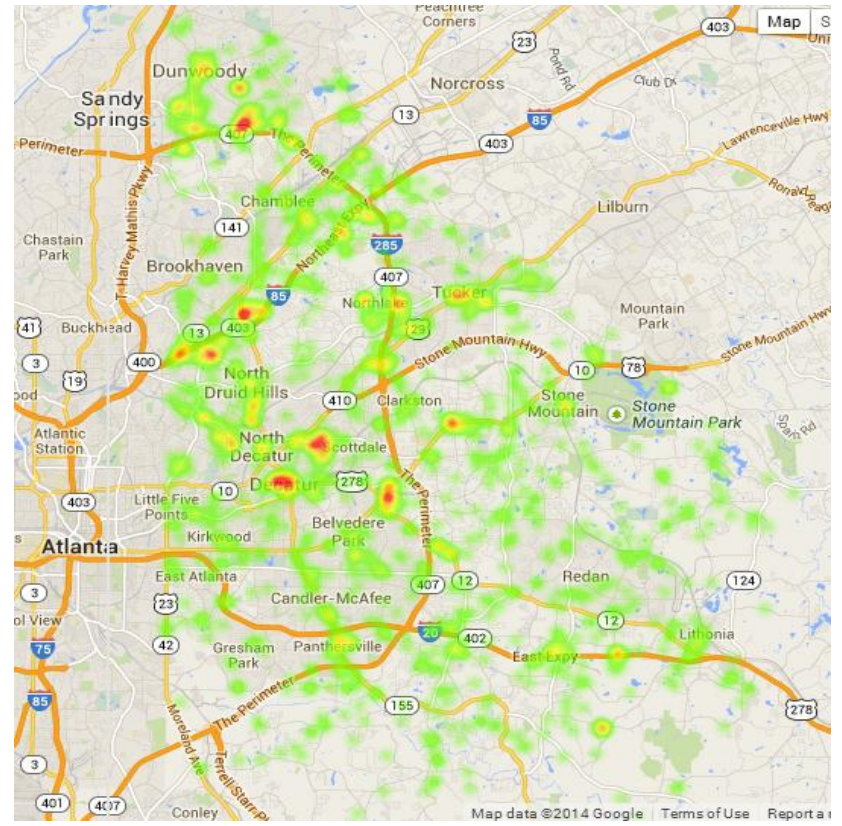


V. COUNTY INDUSTRY CLUSTER HEAT MAPS

Professional & Business Services



Life Sciences



“Heat map” of DeKalb County Businesses



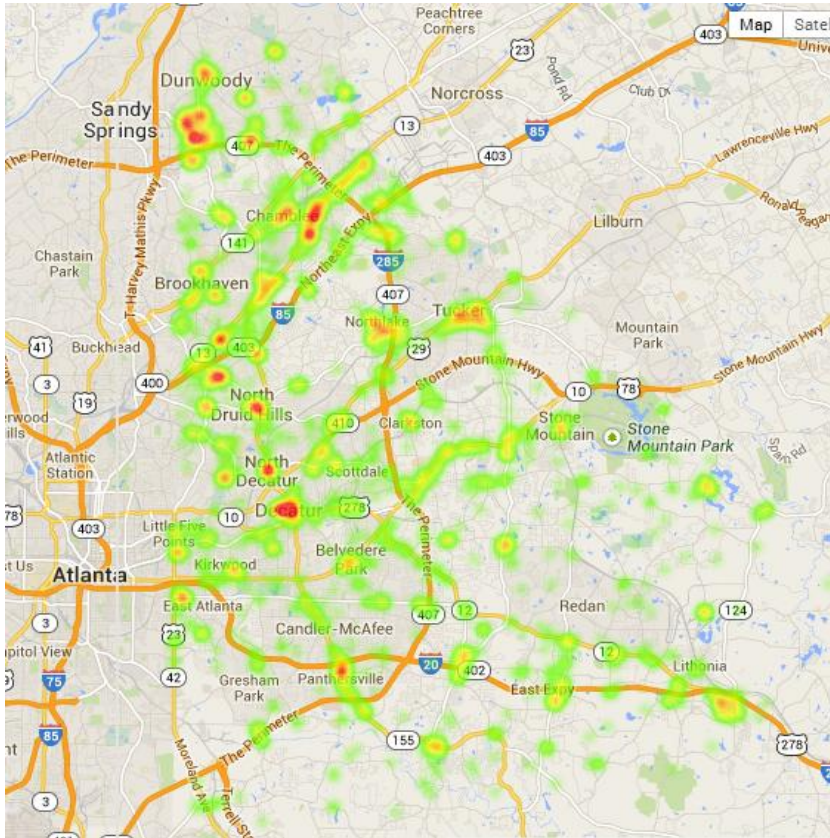
Lower Density

Higher Density

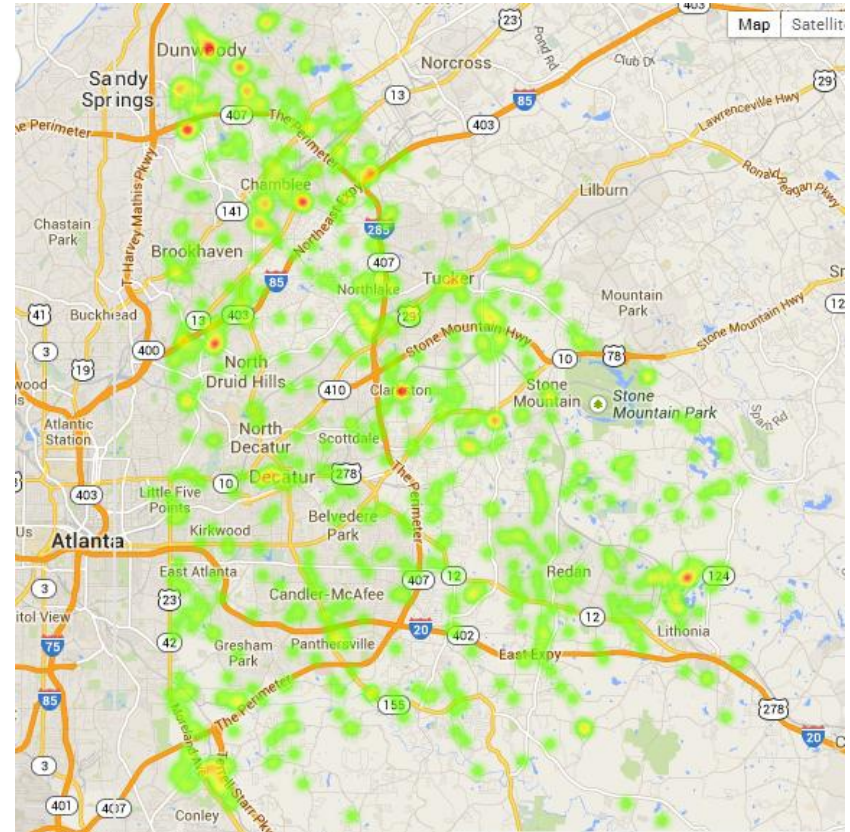
Sources: AE, ReferenceUSA



Tourism



Logistics



Sources: AE, ReferenceUSA

“Heat map” of DeKalb County Businesses

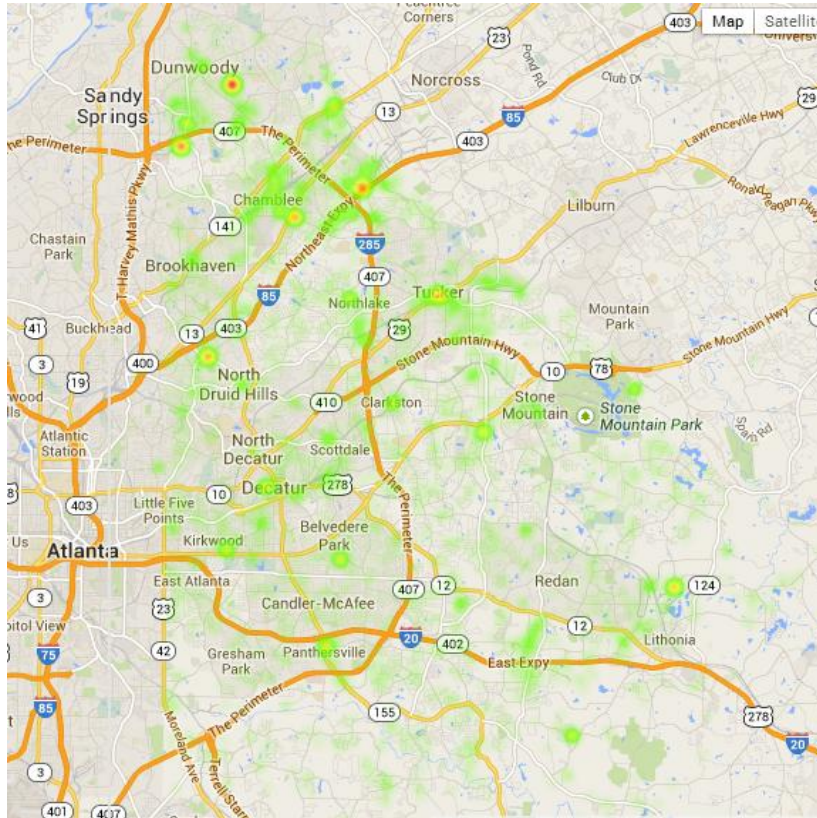


Lower Density

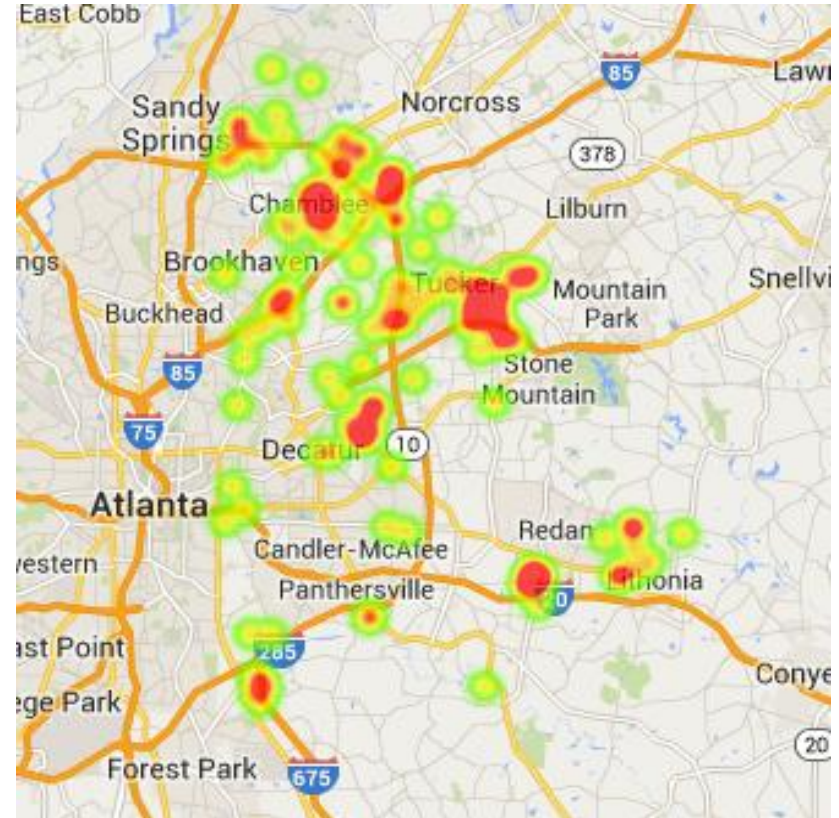
Higher Density



Construction & Support Trades



Advanced Manufacturing



Sources: AE, ReferenceUSA

“Heat map” of DeKalb County Businesses



Lower Density

Higher Density



ABOUT ANGELOUECONOMICS



ANGELOUECONOMICS

AngelouEconomics partners with client communities and regions across the United States and abroad to candidly assess current economic development realities and identify opportunities.

*Our goal is to leverage the unique strengths
of each region to
provide new, strategic direction
for economic development*

As a result, AngelouEconomics' clients are able to diversify their economies, expand job opportunities and investment, foster entrepreneurial growth, better prepare their workforce, and attract 'new economy' companies.

To learn more, visit www.angeloueconomics.com

PROJECT TEAM

Angelos Angelou
Principal Executive Officer

Dane Anderson
Project Manager

William Mellor
Associate Project Manager

Ioannis Gatsiounis
Associate Project Manager

Timothy Shea
Economic Development Intern

