2009 Georgia Annual Logistics Report

A FOCUS ON PROVIDERS

PRESENTED BY:

The Georgia Center of Innovation for Logistics

IN CONSULTATION WITH:

GrowthEconomics inc.

INDUSTRY COLLABORATION:

Metro Atlanta Chamber Logistics Council
Georgia Motor Trucking Association
Georgia Railroad Association
Atlanta Air Cargo Association
Atlanta Chapter of the Council of Supply Chain Management Professionals
Savannah Chapter of the Council of Supply Chain Management Professionals
Georgia Economic Developers Association
International Warehouse and Logistics Association
International Freight Forwarders and Customs House Brokers Association of Atlanta
Savannah Maritime Association
Atlanta Maritime Association

Georgia®
Centers of Innovation
Logistics

Greetings,

I am honored to present the first release of *Georgia's Annual Logistics Report: A Focus on Providers*. Georgia is known for many things: from Tybee's beaches to the Blue Ridge Mountains, from peaches to poultry, and from Coca-Cola and Delta Airlines to The Home Depot. Every place we go, product we buy or successful company we can think of, it involves and likely relies upon logistics. Georgia is indeed the "State of logistics".

First, Georgia is the "State of logistics" because of our impressive inventory of assets...

This report will bring to light important details surrounding those assets. A few highlights include: 21,200 miles of highways used by over 1M trucks per week and 5,000 miles of railroad track to deliver cargo valued at $200 billion all over the country. Additionally, our State has a distinctive geographical "corner store" advantage, including being home to the 3rd largest, fastest growing and one of the most efficient seaport container terminals in the Nation, and the World's busiest airport.

Second, Georgia is the "State of logistics" because of our innovative focus and bright future...

We all know that research, technology and partnerships can help drive competitiveness in any industry and Georgia's Centers of Innovation program provides focused expertise and resources to uniquely assist the State in attracting and growing businesses in our strategic industries. The established supply-chain-technology community in metro Atlanta complements our statewide university and technical college system, which offers over 100 programs with logistics-related classes, certificates and degrees. This is making Georgia better positioned every day to handle the forecasted volumes of cargo coming our way.

This report represents a new information platform, which will spark conversations and hopefully some new ideas. From here, backed with the data, facts and figures, we can work towards realistic and actionable solutions. I also hope you will identify areas of the report you want to explore in more detail. If so, please don't hesitate to contact us or visit our website logistics.georgiainnovation.org to share your thoughts.

This inaugural year, we have a great opportunity to create the clear, common voice needed to keep this industry moving forward. Your ideas, insight, experience and leadership are both the map and the fuel to deliver us where we want to go. There is a saying that "without a destination, anywhere is fine" and without your collaboration we could indeed end up anywhere.

I look forward to working with each of you as we strengthen our position as the premier "State of logistics".

Sincerely,

Page Siplon
Executive Director,
Center of Innovation for Logistics

TABLE OF CONTENTS

1 An Introduction To Logistics 1

Logistics: Many Definitions, Many Applications 1

The Logistics Industry : An Ecosystem 2

Categorizing The Ecosystem 3

A. The Logistics Providers 3

B. The Logistics Users 4

Selection Of Industries: Filtering A National System Of Codes 4

Integrating The Data 5

Comparing Apples To Apples? 5

2 Structure And Dynamics Of The Sector 7

Georgia's Logistics Providers: The Base Numbers 7

Georgia's Logistics Providers: Location Of The Industry 8

Logistics Provider Trends & Activity (1990-2009) 10

Logistic Provider Establishments 10

Logistics Provider Employment 11

Logistics Provider Sales 13

3 Benchmarking Competitiveness And Cost 15

The 2009 Georgia Economic Outlook 15

Transportation 16

Railroads 17

Trucking 17

Airlines 18

Ports 18

Georgia's Economy: Indicators, Indexes & Comparisons 19

Coincident Economic Activity Index 19

The Baltic Dry Index: A Leading Indicator 20

Regional & National Benchmarking 22

Selected Logistics Rankings/Performance 22

Doing Business In Georgia 22

Overall State Economic Competitiveness 24

Logistics & Business Costs 25

4 International Trade And Activity 27
Georgia's Top Ten.....27
Sea Cargo Trade Profile.....28
Growth.....28
Exports.....29
Imports.....30
Air Cargo Profile.....31

5 Logistics Concentration 33
Logistics Concentration Index.....34
National Comparison.....34
Regional Comparison.....34
Shift-Share Growth Analysis.....37
National Analysis.....37
Regional Analysis.....38

6 Productivity Factors.....41
Globalization And Capacity.....41
Deregulation And Cost Pressures.....42
Outsourcing: Third And Fourth Party Logistics Providers.....42
Education And Training: A Foundation For Productivity.....43
Sales Productivity: Small Establishments.....45
Labor Productivity: Transportation & Warehousing.....46

7 Economic Impact Of Logistics Providers 47
State And Regional Impact.....48
Employment Impact.....48
Gdp By State Impact.....49
Statewide Labor Income Impact.....49
Proprietor's Income Impact.....49
Value-Added Impact.....49
Regional Employment Multipliers.....49
Cross-Industry Impact.....50
Employment Impact By Sector.....51
Labor Income Impact By Sector.....52
Gdp By State Impact By Sector.....52

8 Georgia's Freight Flow Profile 53
Infrastructure Highlights 53
Road.....53
Rail 54
Air 54
Sea 54
Domestic Truck Freight Flow.....55
Projected 2007-2027 Truck Freight Flow.....55
County Level Flow Distribution.....56
Total Tonnage Distribution, Truck.....57
Total Value Distribution, Truck.....58
Total Movement Distribution, Truck.....59
Top Truck-Hauled Commodities.....60
Top Trading Partner States.....61
The Roads Most Travelled.....63
Top Five Import/Export State Truck Flows.....64
Domestic Rail Freight Flow.....67
County Level Flow Distribution.....68
Total Tonnage Distribution, Rail.....69
Total Value Distribution, Rail.....70
Total Movement Distribution, Rail.....71
Top Rail-Hauled Commodities.....72
Top Rail Trading Partner States 72
The Tracks Most Travelled.....74
Top Five Import/Export State Rail Flows.....75
Freight Opportunities : Applying The Data 77
International Cargo Connections: Georgia's Import Opportunity.....77
International Cargo Connections: Georgia's Export Opportunity 78
Georgia's "Corner-Store" Location 79
Air: The Most Expensive Item To Ship.....80

9 Innovation In Logistics 83
Growth Of The Logistics Technology Industry 83
Logistics Technology Report: North America.....84
Rating The Logistics Technologies.....84
Motivating Technology Decisions.....87

10 Industry Collaboration 89

1 An Introduction to Logistics

LOGISTICS: MANY DEFINITIONS, MANY APPLICATIONS

The line between disorder and order lies in logistics...

Sun Tzu

Logistics is the stuff that if you don't have enough of, the war will not be won as soon as.

General Nathaniel Green, Quartermaster, American Revolutionary Army

THE WORD LOGISTICS originates from the ancient Greek *logos* which means "ratio, word, calculation, reason, speech, oration." Logistics as a concept is widely considered to have evolved from the military's need to supply troops as they moved from their base to a forward position; in ancient Greece as well as the Roman and Byzantine empires, there were military officers bearing the title *Logistikas* who were responsible for financial matters and supply distribution.

There are many definitions and interpretations for the term logistics. A quick Google search for "definition of logistics" returns over 5,000 websites, each with multiple suggestions and ideas. There are also many other words and phrases that accompany or are interchanged for the term logistics such as supply chain, demand chain, transportation management, just-in-time, reverse logistics, material handling and planning.

The Council of Supply Chain Management Professionals (CSCMP) has defined logistics as:

> "... that part of Supply Chain Management that plans, implements, and controls the efficient, effective forward and reverse flow and storage of goods, services and related information between the point of origin and the point of consumption in order to meet customers' requirements."

Note that the "point of consumption" refers only to businesses. While the final point of sale might be household consumption, only the value addition of businesses is counted. So, more accurately, this definition refers to "goods, services and related information between the point of origin and the last point of value addition.[1] "

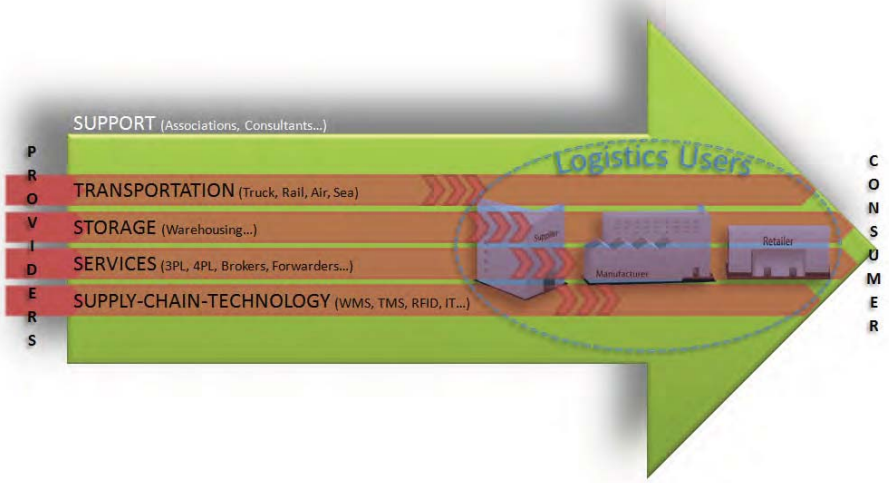
1 Logistics Costs and U.S. Gross Domestic Product - FHWA Freight Management and Operations, 2005

One might say that in its simplest form, logistics is the movement of items from point A to point B. But whether those items are people in transit, a care package from home or an 18-wheeler loaded with flat-screen televisions, there are many more dots to connect to move those items from origination to destination. Information technology, financial transactions, security systems, physical infrastructure and specialized third-party services are not normally first to mind, but they are vital pieces of the logistics process.

THE LOGISTICS INDUSTRY :: AN ECOSYSTEM

THE LOGISTICS INDUSTRY is essentially the sum of its trucking, rail, air cargo, warehousing and services industries. Like an ecosystem, which is formed by the interaction of a community of organisms with their physical environment, the elements of this "industry of industries" interact with each other and so depend on each other directly or indirectly.

THE IMAGE BELOW depicts how the users of logistics (in blue) interact with those industry partners that provide the desired products and services (along the arrow).



Categorizing the Ecosystem

Equally as complex as the activities in logistics are the businesses that perform them. The Center of Innovation for Logitics has created a set of categories and subcategories by which to classify these businesses.

To begin, the logistics industry has two main categories: LOGISTICS PROVIDERS (companies rendering logistics services) and LOGISTICS USERS (companies consuming logistics services).

A. THE LOGISTICS PROVIDERS

The logistics providers are divided into three sub-categories: CORE, RELATED and SUPPORT. These categories are used multiple times throughout this report, so the table below is provided to better illustrate the industries represented in each category.

LOGISTICS PROVIDER DEFINITIONS

CORE INDUSTRIES

Organizations involved with the direct movement of cargo and freight and whose primary business creates and/or connects major nodes in the global supply chain. Core industries are broken into two subgroups:

- Facilities (warehouses, ports...)
- Transportation (truck, rail, air...)

RELATED INDUSTRIES

Consists of two categories: enabling, which helps move goods faster and more efficiently through the supply chain typically through technology improvements or offerings; and traditional, which provides goods and services directly to the infrastructure (core industry) of the supply chain.

- Enabling (logistic software, engineers...)
- Traditional (cargo container manufacturers, third-party providers...)

SUPPORT INDUSTRIES

This group of companies provides services to both the core and related industries but does not physically touch the cargo. Support industries include labor organizations such as associations and unions, as well as professional services such as accounting, legal and consulting.

This report focuses on logistics providers, which contribute significantly to the Georgia economy. The most prominent part of the logistics provider sector lies with industries defined as Core Transportation and Core Facilities, representing close to 65 percent of logistics provider employment in Georgia. The concentration of these industries is about 20 percent higher than the national average.

B. THE LOGISTICS USERS

The logistics users are the customers of the logistics providers. This group is divided into three sub-categories: RAW MATERIALS PRODUCTION, MANUFACTURING and WHOLESALE DISTRIBUTION.

LOGISTICS USER DEFINITIONS

RAW MATERIALS PRODUCTION

Establishments engaged in producing unprocessed natural products that will be used in manufacturing. These include both durable and non-durable materials.

MANUFACTURING

Establishments engaged in the mechanical or chemical transformation of materials or substances into new products, which may be finished in the sense that they are ready for utilization or consumption, or may be semi-finished to become a raw material for an establishment engaged in further manufacturing

WHOLESALE DISTRIBUTION

Establishments engaged in selling merchandise to retailers; to industrial, commercial, institutional, farm, construction contractors; to professional business users or to other wholesalers.

Establishment
A private enterprise with a distinctive line of business operating at a single address, as opposed to firm-level data that includes multiple establishments.

Selection of Industries: Filtering a National System of Codes

Extensive deliberation went into the selection of the specific industries that make up the logistics provider and user sectors in the state of Georgia. The final list of industries spans all parts of the freight supply chain, from management to facilities.

Note that we are using establishment-based data. An establishment is a private enterprise with a distinctive line of business operating at a single address, as opposed to firm-level data that includes multiple establishments.

There are two numerical systems used to categorize companies: the six-digit Standard Industrial Classification (SIC) codes and the North American Industrial Classification System (NAICS). These systems include thousands of possible choices for companies to describe their services, products or activities. They are adequate for very general information gathering and broad statistics but can create a false impression of a particular industry unless examined in greater detail.

For example, over 4,600 establishments in thirty-six different SIC codes are classified as trucking companies that move freight. However, within these codes, truck and trailer rental companies, household movers and limousine services also are returned. These types of companies, while still important to Georgia, do not fit into the ecosystem of logistics as defined above.

To capture details about the warehousing segment of the logistics industry, one would look to the SIC industry group "Public Warehousing and Storage." This group contains twenty-three SIC codes and indicates there are 2,127 warehousing and storage companies in Georgia. While true at face value, the results also include self-storage and mini-warehouses which, by the definitions presented earlier, are not logistics providers and should not be counted as such.

Integrating the Data

Much thought and attention was devoted to creating an accurate list of industry codes and a detailed set of rules that direct the inclusion or removal of establishments from Georgia's master list. Working directly with the authors of business databases, academic experts and others, these rules and code lists were developed to serve as the common thread linking the multiple data sources utilized to create this report.

It is important to note that much of the data contained herein is founded on a business database that reports only through 2006; this information has been supplemented with additional resources that contain near-time data. *The final 2009 data and results are calculated projections based on actual companies and the historical trends observed from 1990 through 2008.*

Comparing Apples to Apples?

The calculated employment values were evaluated for general accuracy of scale against a variety of established national measurements. As seen below, differing data sets and categorization yield different results; however, these comparisons do reinforce that our findings are in keeping with the more general national projections. This report weighs all measurements and calculations to the conservative (low) side.

COMPARISON OF EMPLOYMENT ESTIMATES

TRANSPORTATION AND WAREHOUSING, 2006

Source	Definition	Employment Number
NETS	Full- and part-time employment of all types of establishments	199,537
Bureau of Economic Analysis	All full- and part-time employment, including all self-employed	208,027
Quarterly Census of Employment and Wages (ES202), BLS	Only employment subject to state unemployment insurance laws and unemployment compensation for federal employees program	186,200
Current Employment Survey (CES), BLS	Nonfarm survey data based primarily on establishments selected from the QCEW administrative records	164,600
County Business Patterns, Bureau of the Census	Business register records, supplemented with records from census collections and administrative records; excludes most government workers	164,058
Non-Employer Statistics, Bureau of the Census	Firms with no payroll employment in the reference week	33,427
Economic Census, Bureau of the Census (2002)	Census survey; excludes most government-owned establishments, non-employer establishments and several industries, among them, rail transportation	117,182

2 Structure and Dynamics of the Sector

Logistics Employment in Georgia, 2009

Providers:	121,000
Users:	884,000
Total:	1,005,000

Logistics providers comprise approximately 12 percent of all logistics employment in Georgia.

GEORGIA'S LOGISTICS PROVIDERS: THE BASE NUMBERS

THE PREVIOUS CHAPTER provided an overview of the sub-categories used to define logistics providers. The chart below demonstrates the totals of these sub-categories across three areas: ESTABLISHMENTS, EMPLOYMENT and SALES.

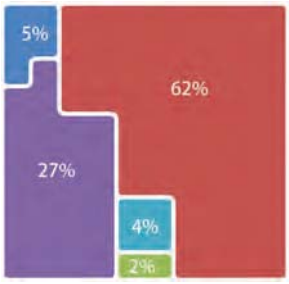
GEORGIA LOGISTICS PROVIDER VALUES

ESTIMATES, 2009

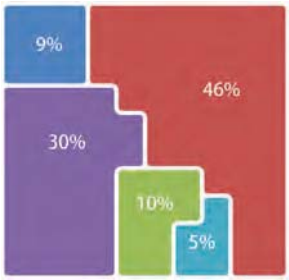
	Establishments	Employment	Sales
Core Facilities	5% 517	9% 10,690	5% $788,409,943
Core Transportation	62% 6,830	46% 55,361	36% $5,610,216,284
Related Enabling	2% 175	10% 12,468	9% $1,425,049,807
Related Traditional	27% 2,992	30% 35,990	43% $6,800,551,074
Support	4% 6,333	5% 6,333	7% $1,015,290,969
Total	**10,912**	**120,842**	**$15,639,518,077**

Source: NETS, InfoUSA, CorpTech

Logistics Provider Establishments 2009 Estimate



Logistics Provider Employment 2009 Estimate

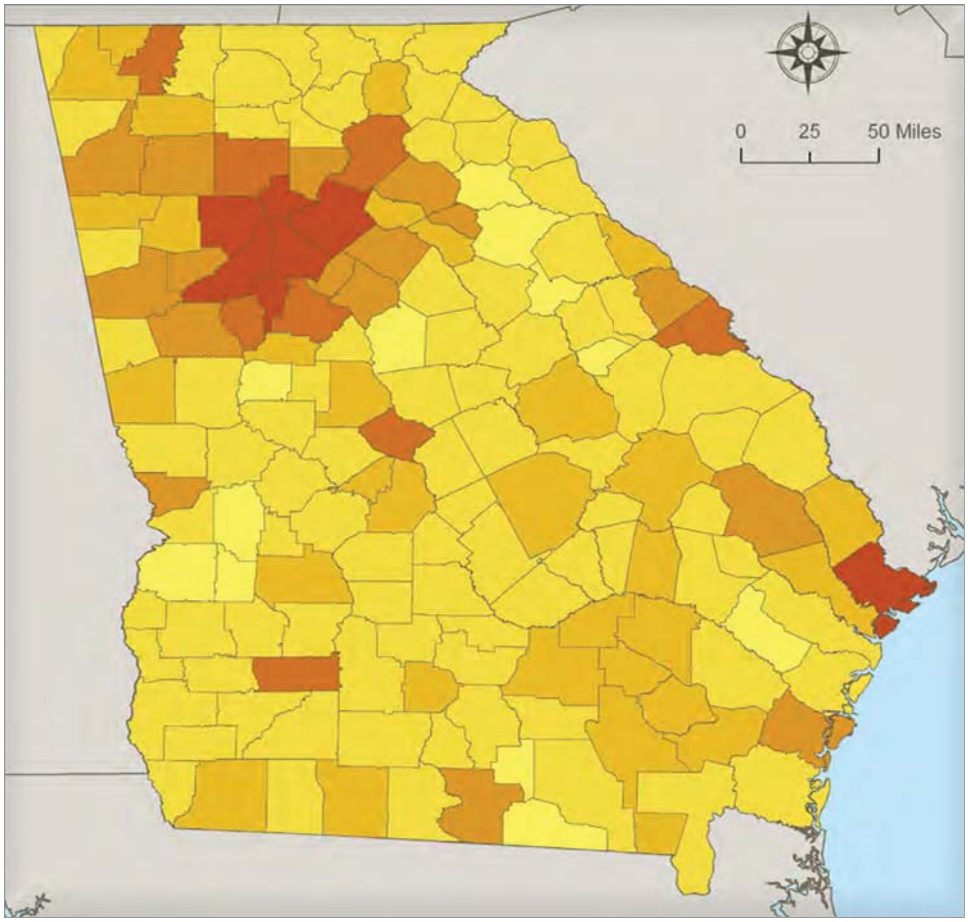


Logistics Provider Sales 2009 Estimate

If we place the percentage shares of the three measurements side by side, interesting facts begin to emerge. For example, Core Transportation has the largest portion of establishments, but only half as much of the overall sales share. In contrast, both the Related categories have a greater employment and sales percentage compared to their share of the overall provider industry.

GEORGIA'S LOGISTICS PROVIDERS: LOCATION OF THE INDUSTRY

CORE, RELATED AND SUPPORT INDUSTRIES BY COUNTY

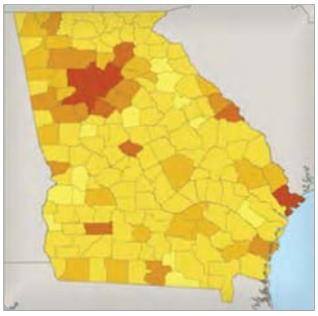


LEGEND

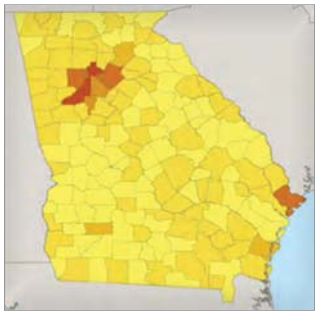
Establishment Count

- 0
- 1 – 10
- 11 – 25
- 26 – 50
- 51 – 100
- 101 – 393

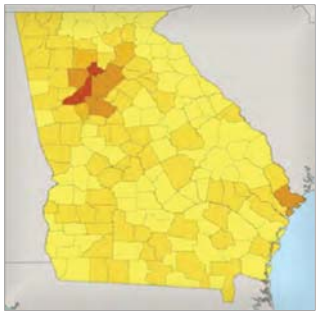
Core industries



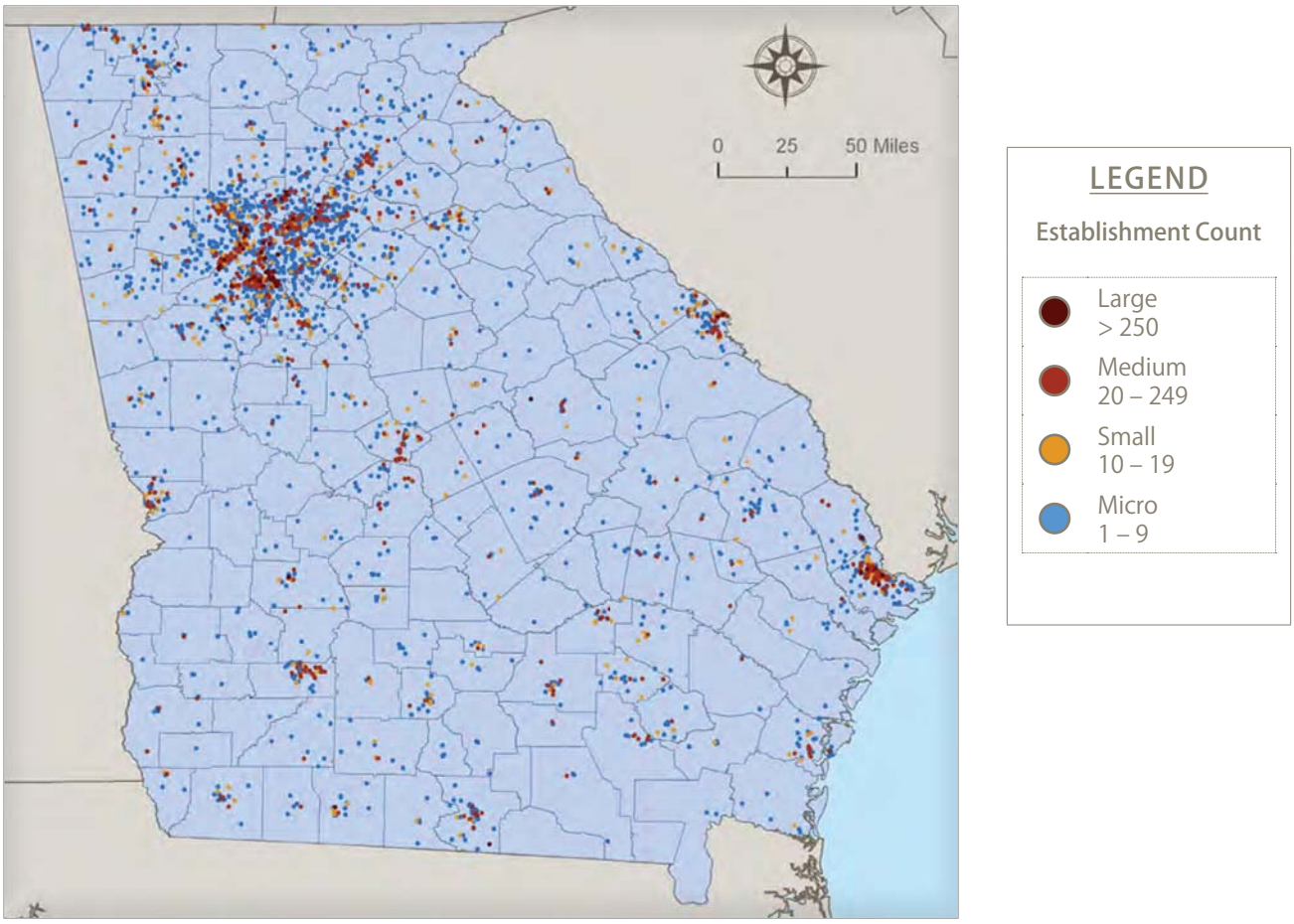
Related Industries



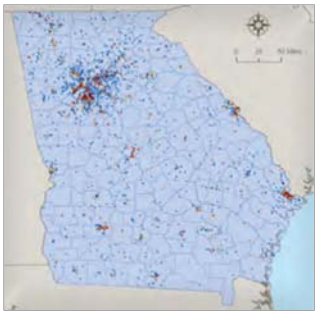
Support Industries



CORE, RELATED AND SUPPORT INDUSTRIES BY EMPLOYMENT SIZE



Core industries



Related Industries

Support Industries

LOGISTICS PROVIDER TRENDS & ACTIVITY (1990-2009)

Reminder

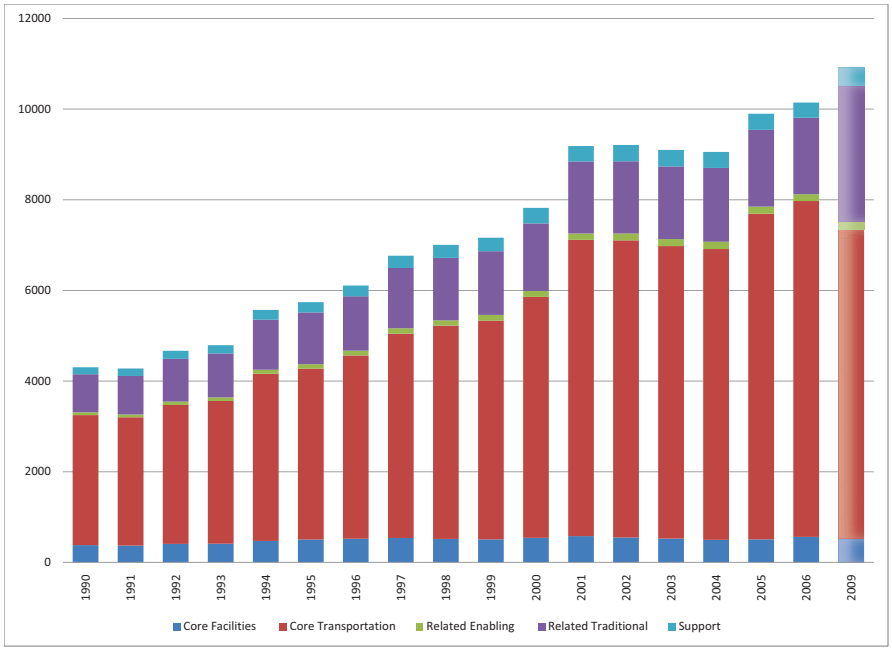
Data and results for 2009 are carefully calculated projections based on actual companies and the historical trends observed from 1990 through 2008.

Logistic Provider Establishments

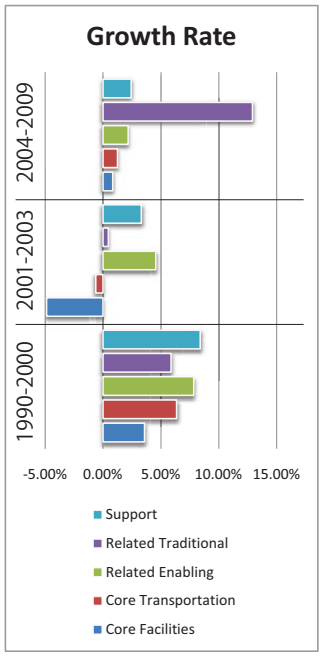
The charts below illustrate the breakdown of logistics provider establishments and growth trends since 1990. By far, the overall industry is dominated by Core Transportation and Related Traditional establishments. These serve as the foundation for many different industries throughout Georgia.

Establishments	
Core Facilities	5% 517
Core Transportation	62% 6,830
Related Enabling	2% 175
Related Traditional	27% 2,992
Support	4% 6,333
Total	**10,912**

LOGISTICS PROVIDER ESTABLISHMENTS, 1990-2009



Source: NETS, InfoUSA, CorpTech



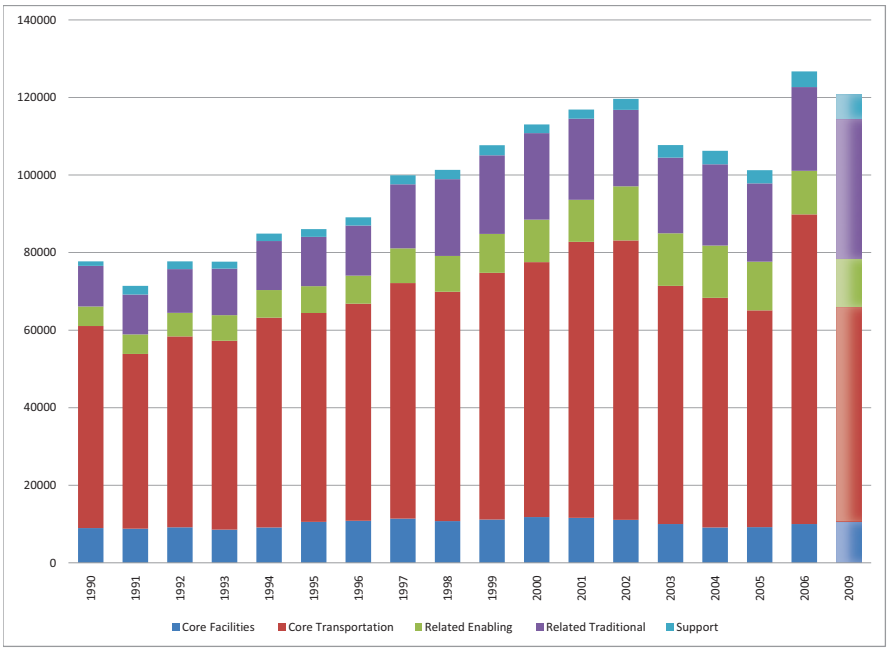
By examining the growth and concentration of establishments over three periods, one can see how the different sectors have weathered the different business cycles. Core Facilities were hardest-hit in the previous recession and have since rebounded; however, the growth in the number of new facilities has not regained the momentum of the previous decade. The number of Related Enabling and Support establishments continued to grow throughout the last recession, but that growth rate has since decreased. It is interesting to note that Related Enabling establishments grew at a rate of almost 5 percent during a period in which the average growth rate for all establishments was lower nationwide. This indicates a potential period of high technology adoption for the logistics industry despite the recession.

Logistics Provider Employment

It is estimated that the logistics provider industries in Georgia (as defined in this report) will encompass over 120,000 jobs in 2009. Core Transportation is the major employer in the logistics sector with 55,361 workers.

Employment	
Core Facilities	9% 10,690
Core Transportation	46% 55,361
Related Enabling	10% 12,468
Related Traditional	30% 35,990
Support	5% 6,333
Total	**120,842**

LOGISTICS PROVIDER EMPLOYMENT, 1990-2009



LOGISTICS ESTABLISHMENTS BY EMPLOYMENT SIZE

GEORGIA ESTIMATES, 2009

Establishments	1-9	10-19	20-99	100-249	250-500	501+	Total
Core Facilities	60%	18%	17%	3%	2%	0%	5%
Core Transportation	86%	7%	6%	1%	<1%	<1%	63%
Related Enabling	34%	20%	24%	15%	4%	3%	2%
Related Traditional	76%	13%	10%	1%	<1%	1%	27%
Support	80%	6%	11%	1%	2%	<1%	4%
Total	81%	9%	8%	1%	0.4%	0.3%	100%

Source: NETS, InfoUSA, CorpTech

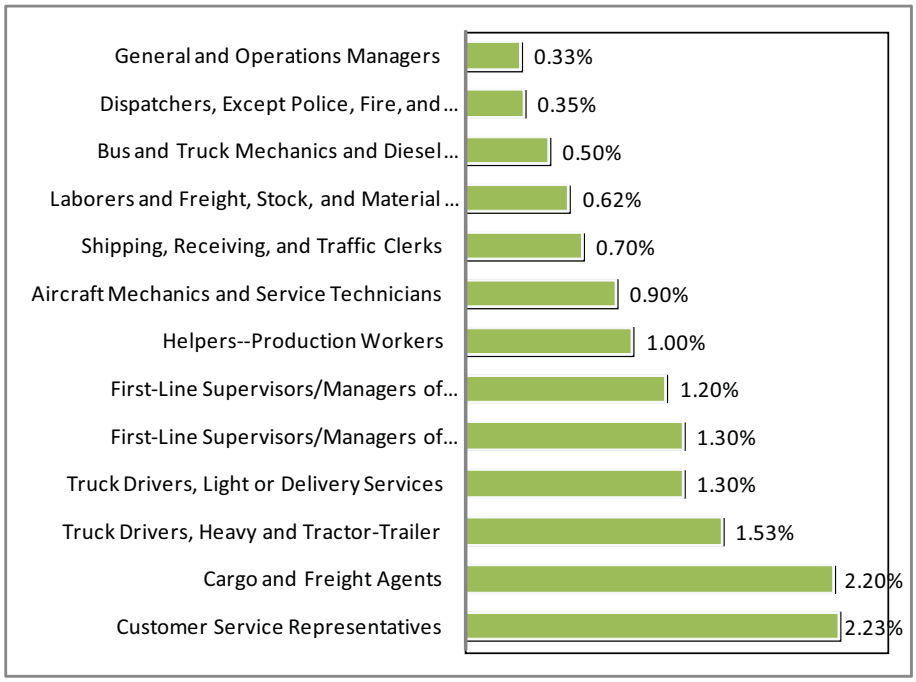
Approximately 81 percent of establishments in the logistics provider sector employ 1–9 workers.

In general, logistics, like nearly all industries, is fueled by small business.

Approximately 81 percent of establishments in the logistics provider sector employ 1–9 workers. This is especially representative of the Core Transportation and Support categories. Related Enabling industries stand out as the most equally distributed between the first three small-to-medium size categories and have almost double the share of large establishments relative to other sectors. In general, logistics, like nearly all industries, is fueled by small business.

Looking forward, employment in the Core industry category is still expected to grow at over 1 percent compounded annually based on Georgia's 2016 occupational and industry projections. A selection of logistics related occupations and their annual projected growth rate follows.

GROWTH PROJECTIONS FOR SELECTED OCCUPATIONS, 2006-2016



This chart is in line with expected total growth for Georgia's transportation and warehousing sector and the state's projections for nonfarm employment growth. Although made before the current economic downturn, the national projections for 2016 indicate similar logistics provider job growth for the United States. As Georgia tends to grow faster in employment than the national average, an estimated 1 percent annual job growth rate for the Core industries can be expected.

While there are many economic factors and industry conditions that contribute to employment activity, it is important to consider that some of the employment reductions – particularly in the Core Facilities and Transportation industries – are likely attributable to significant overall productivity improvements and technology integration into existing processes. Technology is discussed further in Chapter 9.

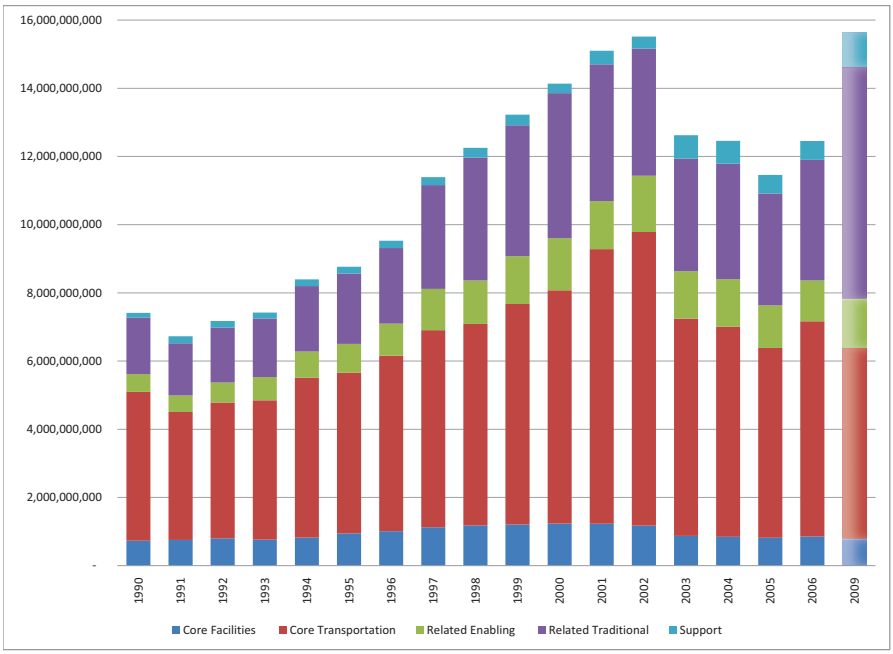
Logistics Provider Sales

Georgia's logistics providers are expected to generate direct sales of $15.64 billion through 2008. (For information on the indirect impact that both sales and employment have on the overall economy, see Chapter Seven.)

Of this estimated $15.64 billion in sales, greater than 35 percent is attributed to the Core Transportation industries and over 43 percent is attributed to the Related Traditional industries. Since 2004, sales have increased 25 percent, growing at a compound annual rate of almost 5 percent. While Core Facilities and Core Transportation industries decreased in sales between 2004 and 2009 by 7 percent and 9 percent respectively, the decrease remained significantly smaller than the national average.

Sales	
Core Facilities	5% $788,409,943
Core Transportation	36% $5,610,216,284
Related Enabling	9% $1,425,049,807
Related Traditional	43% $6,800,551,074
Support	7% $1,015,290,969
Total	**$15,639,518,077**

LOGISTICS PROVIDER SALES, 1990-2009



Source: NETS, InfoUSA, CorpTech

Despite decreases in the Core industries, median sales in the logistics provider sector remained nearly 14 percent higher than the overall private sector. In fact, every logistics provider category had median sales values higher than that of aggregate private sector businesses.

MEDIAN SALES, 2006

Core Facilities	325,000
Core Transportation	150,000
Related Enabling	1,176,100
Related Traditional	500,000
Support	185,000
All Logistics Providers	160,000
Private Sector	140,000

Source: NETS

With a greater variable trend line than employment figures, sales data is difficult to forecast. To our knowledge there are no sales forecasts by industry at the state level; however, national projections for 2006–2016 expect inflation-adjusted GDP in the Core and Related Traditional industry categories to grow approximately 3.4 percent annually in the U.S. while overall output is expected to grow only 3 percent. With the recent downturn, output growth projections are likely to be adjusted downward.

3 Benchmarking Competitiveness and Cost

Summary

The broad reach of the logistics ecosystem and the many industries which depend on it make logistics closely tied to the overall economy. This chapter begins with a review of the Georgia annual economic outlook provided by the University of Georgia and is followed by a look at a few national indicators and Georgia's position, strengths and rankings compared to the U.S. through a wide variety of perspectives.

THE 2009 GEORGIA ECONOMIC OUTLOOK

Provided by Terry College of Business, University of Georgia

GEORGIA'S INFLATION-ADJUSTED GDP is forecast to increase by 1.2 percent, which is nearly a full percentage point lower than the 2.1 percent advance in state GDP estimated for 2008. The 2009 increase in Georgia's GDP will be very close to the 1 percent growth expected for the nation. Although the annual percentage gains in the state's GDP for both 2008 and 2009 will be positive, Georgia's GDP is forecast to drop in the final quarter of 2008 and the first quarter of 2009, and it will continue to be pummeled by high oil prices, turmoil in the nation's financial markets, the housing recession and the deepening recession in nonresidential construction.

On an annual average basis, the state's nonagricultural employment will decline by 0.1 percent in 2009, which is about the same as the 0.2 percent loss expected in nationwide employment. The annual averages, however, obscure the pattern of mild to moderate job losses that began in mid-2008 and will extend through the first quarter of 2009. One consequence of these job losses – in some sectors – will be a dramatic rise in the unemployment rate from 4.4 percent in 2007, to 6 percent in 2008, to 7.5 percent in 2009. The state's unemployment rate will top out at 8 percent in the final quarter of 2009.

Job losses in the private sector will be concentrated in housing, manufacturing, forestry, financial services, real estate, employment services and the hospitality industry. Job losses in the public sector will occur primarily in state government, but the local government headcount also will drop due to lower collections from local option sales taxes, an unprecedented flattening of property tax digests and reduced transfers from state government.

By mid-2009, transportation firms, retailers, wholesalers, financial institutions and the arts/entertainment industry will be adding to their staffs.

When net hiring resumes in mid-2009, job growth initially will be very unbalanced and quite weak. The pace of job growth will be fastest in staffing and temp agencies, health care and defense. By mid-2009, transportation firms, retailers, wholesalers, financial institutions and the arts/entertainment industry will be adding to their staffs. Shortly thereafter, the hospitality industry will be on the upswing. Heavy job losses will continue in both construction and manufacturing, however.

Despite continuing job losses in several important sectors, Georgia's nominal personal income will expand by 4.2 percent in 2009, which equals 1.7 percent growth on an inflation-adjusted basis. The push to personal income growth will not begin until after the upturn in the labor market begins in the second quarter, however. One positive development is that much of the job growth will occur in metropolitan areas of the state where prevailing salary levels are relatively high. Also, the average weekly hours worked and hourly wages should increase slightly. One negative factor is that capital gains will not help income growth very much.

Many of the positive forces underlying the forecast for the second quarter upturn in both the Georgia and U.S. economies are the same. Housing will have bottomed out in both sales and starts, and home price depreciation will be less of a factor. Businesses will begin to hire and will continue to spend for equipment. The global economy will expand slowly. The dollar will strengthen, but not enough to diminish prospects for export-oriented businesses. Consumer price inflation will shrink. Oil prices will not climb higher, but will remain volatile. Finally, the federal fiscal stimulus will be significantly larger.

But there are some very powerful negative forces, too. The recession in nonresidential construction will intensify, and job losses in manufacturing will deepen. Still tight credit standards plus lingering uncertainty in the financial markets will restrain growth in business spending as well as sales of consumer items typically bought on credit. Nonetheless, the tumult in the nation's financial markets should diminish rather than increase.

Transportation

Containerized cargo shipments will be the main force contributing to the growth of Georgia's transportation sector, and will insure that cargo volumes grow slightly faster than state GDP.

Rate competition in even the strongest sectors will intensify.

Slower growth of cargo into and out of Georgia's ports, smaller increases in international trade, decreases in industrial production and tightfisted consumers mean anemic growth in total cargo volumes. Containerized cargo shipments will be the main force contributing to the growth of Georgia's transportation sector, and will insure that cargo volumes grow slightly faster than state GDP. The biggest challenge will be declines in U.S. GDP in the final quarter of 2008 and the first quarter of 2009, especially given that the declines will be focused on transportation-intensive sectors of the economy such as housing and durable goods manufacturing. Slow GDP growth in subsequent quarters also limits the industry's prospects for 2009. Nonetheless, bigger shipments of many nondurable consumer and manufactured goods, capital equipment, coal, agricultural products and processed foods are expected to more than offset smaller shipments of home building materials and home-related consumer durables and cars. Consequently, rate competition in even the strongest sectors will intensify.

RAILROADS

Georgia's 4,700-mile rail network is the largest in the Southeast, and most rail service is provided by Norfolk-Southern and CSX. Despite the poor prospects for U.S. GDP growth, business conditions favor the railroads. Demand growth will exceed capacity growth, but the growth rates will be lower and they will converge. These growth dynamics will keep rates high, but probably will prevent them from going any higher unless fuel prices spike. Overall profits will increase only slightly in 2009.

Despite the poor prospects for U.S. GDP growth, business conditions favor the railroads. Demand growth will exceed capacity growth

The continued success of Georgia's ports will be a big plus for the railroads. Inter-modal shipping of consumer goods and light industrial products will grow, and there also will be more shipments of industrial and communications equipment. Also, railroads should not have any problem passing fuel costs onto shippers, since rail is an extremely fuel-efficient transportation mode. High trucking costs, increased highway congestion and more concern about air quality are some additional factors that favor the railroads.

Inter-modal shipping of consumer goods and light industrial products will grow, and there also will be more shipments of industrial and communications equipment.

Shipments of agricultural products, processed food, electrical equipment, machinery and coal will increase slightly. Shipments of consumer goods probably will decline slightly in the first part of the year, but should rebound in second half. Chemicals volume probably will be flat or down only slightly. The outlook anticipates lower shipments of building materials, however. Coal is the rail industry's largest source of shipments and a major contributor to its profits, and due to increases in power consumption, electric utilities are expected to use more coal. High natural gas prices will be a significant factor behind utilities rising demand for coal.

TRUCKING

Due to both the 2008-2009 recessions and the slow recovery that will begin in the third quarter of 2009, the balance of power will favor shippers over truckers. But slower growth in truck freight coupled with more competition within the more profitable sectors will keep trucking firms from raising rates enough to fully offset higher costs. Truckers' net margins therefore will erode. Despite the slowdown in volume growth, the recent string of very profitable years will encourage carriers to add trucks in 2009, but the pace of expansion will be quite modest.

Despite the slowdown in volume growth, the recent string of very profitable years will encourage carriers to add trucks in 2009, but the pace of expansion will be quite modest.

Meanwhile, several factors will push trucking companies to get bigger. First, more outsourcing of products from overseas, especially China, favors carriers that can manage distribution both domestically and globally. Second, large retailers often prefer to deal with select trucking firms that offer the broadest range of services. Third, large trucking companies can achieve economies of scale in distribution, especially when it comes to managing global supply chains. Finally, larger companies probably will find it easier to cope with the driver shortage than will smaller companies.

In the wake of new fuel emissions standards, equipment costs are expected to rise. Meanwhile, high insurance costs and high deductibles constitute an ongoing problem, especially for firms that transport hazardous materials. Ever-increasing and volatile fuel prices are the biggest wild card in the forecast, but barring more political instability in major oil producing countries – or other catastrophes – pressures on fuel costs will not intensify in 2009.

AIRLINES

Vigorous competition within the industry will continue to limit pricing power, curbing ticket prices even when costs rise. The competition among the airlines also has trained customers to be more price-sensitive. Meanwhile, airlines' costs for fuel, security, debt service and federal tax burdens continue to rise. Since many of these problems are structural rather than cyclical, it takes more than just a long period of sustained economic growth to heal the large network airlines. Barring government intervention, major carriers that are unable to lower costs to more closely match those of the low-fare carriers are unlikely to survive the restructuring.

Despite Delta's ongoing restructuring, only 4,900 air transportation jobs have been lost in Georgia, which amounts to a drop of only 11 percent. This substantially smaller percentage decline reflects the fundamental strength of the customer base in Atlanta.

For most airlines, fuel and labor are the largest components of costs. There is not much that the industry can do to control fuel costs, but since 9/11, 130,200 air transportation jobs have been cut nationwide. That amounts to a 21 percent drop in employment. Despite Delta's ongoing restructuring, only 4,900 air transportation jobs have been lost in Georgia, which amounts to a drop of only 11 percent. This substantially smaller percentage decline reflects the fundamental strength of the customer base in Atlanta.

PORTS

Georgia's deepwater ports industry will thrive by tapping directly into the growth that is taking place overseas, by diversifying its services and by taking market shares from other U.S. ports. In 2009, the ports will set another in a long series of new records in terms of cargo volumes. Traffic volumes appear to be ahead long-term projections. For example, the latest cargo statistics from Savannah's port indicate that in fiscal year 2008, the port experienced a 14.9 percent increase in the number of TEU's (Twenty-foot Equivalent Units), establishing itself as the nation's fourth busiest and fastest growing container facility. The Port of Brunswick is seeing gains, too, especially in the shipping of agricultural products. The recently completed harbor deepening project helped the Colonel's Island Terminal in Brunswick to post a 29.4 percent year-over-year increase in tons handled; and its break-bulk facility reported an 85.6 percent increase bulk cargoes activity.

The superb performance of Georgia's ports relative to other ports reflects strong comparative advantages that allow them to expand their share of regional and national waterborne cargo traffic. These comparative advantages are the result of a series of strategic expansions over many years. The Georgia Port Authority indicates that because the Port of Savannah attracts

container volume faster than any other state, harbor deepening is a top priority. Also on the fast track are four projects dubbed "The Cargo Beltway" that must be completed to keep cargo moving along the last miles to and from the waterfront. When these projects are completed, trucks will be able to access the Port of Savannah directly from both I-16 and 95, easing surface street traffic and simultaneously improving the port's productivity.

The deepwater ports create substantial economic impacts, too. Together, they generate $58 billion in sales and $25 billion in gross state product, and support 286,000 full- and part-time jobs. This means that about one job out of fourteen depends on them in some way. Ports operations also help to preserve Georgia's manufacturing base and foster growth of the state's massive logistics, distribution and warehousing industries.

About one job out of fourteen depends on the seaports in some way.

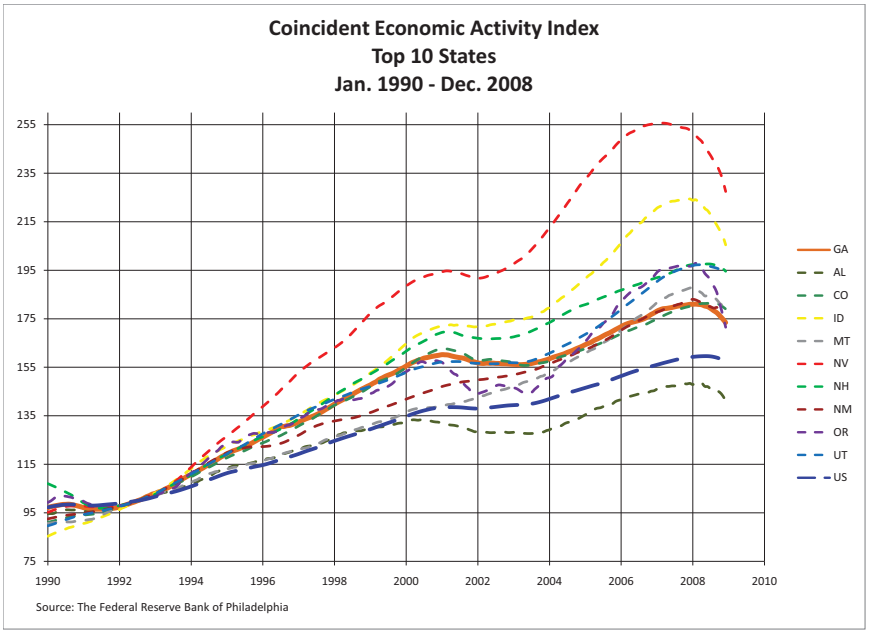
GEORGIA'S ECONOMY: INDICATORS, INDEXES & COMPARISONS

Coincident Economic Activity Index

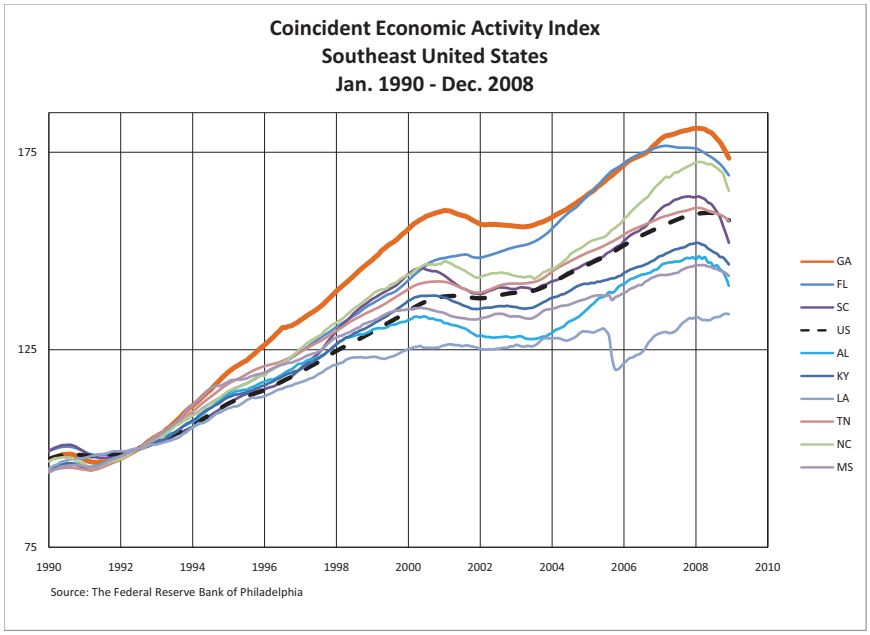
The coincident economic activity index is a single summary statistic that tracks the current state of the economy. The index is computed from a number of data series that move systematically with overall economic conditions. A rise in the index indicates an expansion of economic activity and a decline in the index indicates a contraction in economic activity. Each of the regional indexes is computed using data on employment, real earnings, the unemployment rate and average weekly hours worked in manufacturing. Each index is then retrended so its long-term growth rate matches the corresponding growth rate of real earnings.

Coincident Economic Activity Index

Georgia currently ranks not only in the top 10 states in the country, but also ranks #1 in the Southeast with regards to this activity index and referenced states.



Job growth between 1990 and 2006 was for example about 64 percent higher than the U.S. average (Bureau of Economic Analysis).



Compared to its 1992 index of coincident indicators, Georgia has shown much stronger improvement than the U.S. average or any of its neighboring states. Job growth between 1990 and 2006 was for example about 64 percent higher than the U.S. average (Bureau of Economic Analysis). In the charts above you can see Georgia currently is not only in the top ten states in the country, but also currently first in the Southeast with regards to this activity index.

The Baltic Dry Index: A Leading Indicator

The Baltic Dry Index is owned and operated by the member buyers and sellers. The exchange maintains prices on several routes for different cargoes and then publishes its own index, the BDI, as a summary of the entire dry bulk shipping market. This index can be used as an overall economic indicator as it shows where end prices are heading for items that use the raw materials that are shipped in dry bulk.

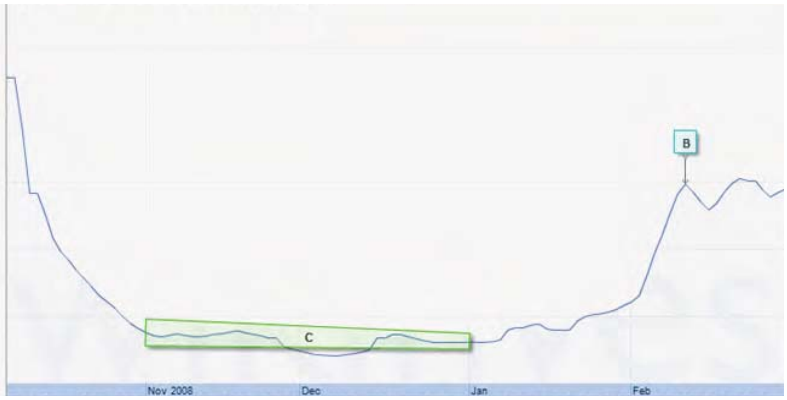
The BDI offers a real time glimpse at global raw material and infrastructure demand. The trading is limited only to the member companies, and the only relevant parties securing contracts are those who have actual cargo to move and those who have the ships to move it. [1]

1 Source: www.wikinvest.com/stock/Baltic_Dry_Index_-_BDI_(BALDRY)

Because dry bulk primarily consists of materials that function as raw material inputs to the production of intermediate or finished goods, such as concrete, electricity, steel and food, the BDI is also seen as an efficient economic indicator of future economic growth and production. The BDI is termed a leading economic indicator because it predicts future economic activity.

Unlike stock and bond markets, the BDI "is totally devoid of speculative content," says Howard Simons, an economist and columnist at TheStreet.com. "People don't book freighters unless they have cargo to move."

BALTIC DRY INDEX
OCTOBER 2008 TO MARCH 2009



Source: www.wikinvest.com/stock/Baltic_Dry_Index_-_BDI_(BALDRY)

A chart of the Baltic Dry Index is above and, as you can see, the index can be quite volatile. The run up from 2005 to the end of 2007 was primarily due to Chinese demand for industrial precursors to production and its shift from coal exporter to importer. There was also a shortage of supply for dry bulk cargo ships and a large backlog at shipyards. The combination of these two factors caused a nearly 200 percent gain in the index reaching an all-time high of 11,459 on May 16th, 2008. From June through October 2008, the index lost 85 percent of its value as demand for shipping plummeted. This is due to a simultaneous convergence of several factors. Chief among these is the rapid slowdown in the "global growth" phenomenon. In addition to this, credit has been nearly impossible to get for the purchase of goods and the payment of time charters on the vessels.[2]

As of March 10th you can see the all-time lows reached in the December time frame of near 600 are fading and the BDI is currently around the 2,200 mark.

2 Source: www.wikinvest.com/stock/Baltic_Dry_Index_-_BDI_(BALDRY)

Regional & National Benchmarking

As earlier chapters have emphasized, logistics is very much a derived demand – it depends to a large extent on the health and demand growth of the overall economy.

This section summarizes key nationwide benchmarking studies that compare states or regions on their overall attractiveness for businesses and economic competitiveness.

SELECTED LOGISTICS RANKINGS/PERFORMANCE

- In terms of revenue, over 90 percent of the global top twenty-five third party logistics providers have operations in Georgia (Global Logistics and Supply Chain, 2008)
- The 2007 Logistics Quotient ranked the Atlanta metro area among the top one percentile of the most logistics-friendly cities in the United States. Savannah ranked in the top ten percentile.
- Twenty of the top one hundred IT logistics companies are located in Georgia (Inbound Logistics, 2006)

Bureau of Business Research, Ball State University (2008)

7 Best States for Manufacturing and Logistics

Site Selector, Expansion Management and Logistics Today (2006)
Top Logistics Friendly Cities

6 Atlanta

7 Savannah

DOING BUSINESS IN GEORGIA

2009

- There are 640,000 incorporated businesses in Georgia; 97.5 percent employ fewer than 500 people (the national average is 99.7 percent). Of these businesses, 95 percent employ fewer than fifty people; 50 percent employ fewer than five people (State of the State, 2/09)
- Georgia ranks in the top three nationally for number of franchisors (>100) headquartered in the state (IFA, 1/09)

Chief Executive Magazine
Best and Worst States for Businesses

4 Overall Best State

14 Access to Capital

15 Transportation

16 Technology and Innovation

16 Cost of Business

2008

- Georgia's Stage One business growth rate was 2.8 times the national average; Stage Two business growth was 2.4 times the national average (Lowe Foundation, 11/08)
- For five years, Georgia has ranked seventh in the top ten pro-business states (Pollina Corporate Real Estate, 5/08)
- Six Georgia companies made the list of the 50 fastest growing, women-owned companies in the U.S. (Entrepreneur.com, 11/08)

CNBC
Top States for Businesses

8	Overall
2	Workforce
3	Transportation
9	Cost of Living
14	Access to Capital
16	Technology and Innovation

Forbes
Best States for Business

5	Overall
5	Regulatory Environment
6	Labor
6	Growth Prospects
10	Economic Climate

2007

- 98,514 incorporated businesses were started in Georgia; 90,456 were domestic and 8,058 were foreign (State of the State, 2/08)

Expansion Management
Top Areas for Business Attraction

12	Top 20 Small Counties: Jackson County
13	Top 20 Large Counties: Fulton County

Small Business Survivor Index

12	Friendliest Policy Environment for Entrepreneurs

U.S. Census Bureau

4	"Lone Wolves" (Non-Employer Businesses)

OVERALL STATE ECONOMIC COMPETITIVENESS

2009

ALEC-Laffer State Competitiveness Index

8 Economic Outlook

2008

Pew Trust and Governing Magazine
Best Managed States

5 Overall Performance (B+)
13 Infrastructure Management (B)

Forbes

3 Alternative Energy from Biomass

AeA Cyberstates

12 High Technology Industry

2007

Kauffman Foundation

3 Rate of Entrepreneurial Activity

CNBC
Best States to Do Business

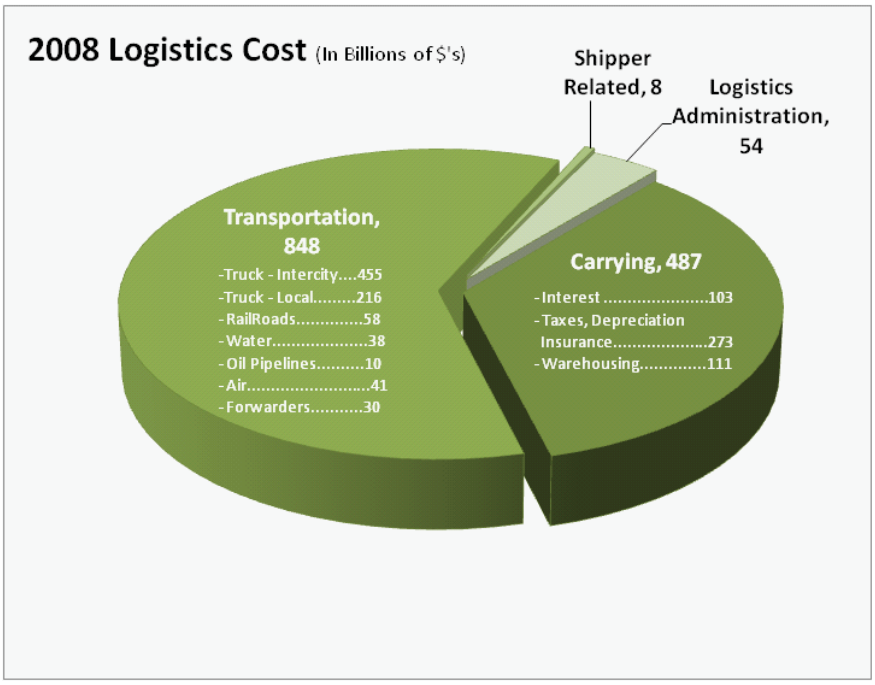
4 Overall Best State
4 Non-Employer Busienss Growth
4 Entrepreneurship

Corporation for Enterprise Development
Development Report Card of the Unites States

C Economic Development
C Business Vitality
C Development Capacity

LOGISTICS & BUSINESS COSTS

IN RECENT YEARS, wholesale inventories have started to increase as retailers have tightened their inventories. This puts warehousing costs in the forefront of logistics costs. The number of commercial warehouses in the U.S. is estimated at 8,000 with 1.3 billion square feet of space. Market growth was 7.7 percent for 2007 and commercial warehousing now constitutes one-third of total U.S. warehousing.[3]



Data Source: CSCMP 19th Annual National State of Logistics Report

The 19th annual State of Logistics Report by the Council of Supply Chain Management Professionals estimated total U.S. logistics costs in 2007 grew to nearly $1.4 trillion, an equivalent of 10.1 percent of U.S. GDP.

Truck transportation costs, warehousing costs and taxes, depreciation, obsolescence, insurance and interest represent the biggest cost components.

3 *Warehousing in North America – 2009*, Armstrong Associates, Inc.

4 International Trade and Activity

GEORGIA'S TOP TEN

TOP INTERNATIONAL TRADING PARTNERS, 2007

2007 Ranking	Country	GA's US Ranking	Total Trade 2007	Change from 2006
1	China	6	$18,353,596,629	17.15
2	Germany	4	$8,052,051,332	14.29
3	Japan	9	$7,739,599,996	-6.22
4	South Korea	6	$4,677,087,001	7.41
5	United Kingdom	7	$4,636,599,403	10.50
6	Ireland	3	$3,484,443,215	4.67
7	Australia	2	$3,108,564,338	18.15
8	Italy	4	$3,001,079,441	23.42
9	Malaysia	6	$2,788,381,841	16.89
10	France	9	$2,530,175,497	32.29

Source: 2008 Georgia Trade Numbers by WorldCity

TOP EXPORT COMMODITIES BY VALUE, 2007

Ranking	Top Export	GA's US Ranking	Total Trade	Change from 2006
1	Regional jet parts	3	$2,561,541,998	32.71
2	Motor vehicles for trans. people	10	$1,585,236,669	20.58
3	Chemical wood pulp, not dissolving grade	1	$1,277,907,249	32.14
4	Aircraft	7	$1,139,055,665	47.59
5	Aircraft parts	8	$941,827,773	3.76
6	Medical instruments	6	$929,385,295	17.42
7	Cotton, not carded or combed	2	$853,287,466	30.33
8	Electrical equipment for line telephony	11	$817,191,242	-1.91
9	Motor vehicles for trans. goods	5	$691,035,909	-16.18
10	Computers	12	$663,180,819	-10.47

Source: 2008 Georgia Trade Numbers by WorldCity

According to the Georgia World Trade Numbers compiled by WorldCity, the state's international trade figures totalled an impressive $93.8 billion in 2008: $33.6 billion in exports and $60.2 billion in imports.

Although 2008 volumes were lower across the country (the Ports of Los Angeles and Long Beach reported a 40 percent decrease in February 2009), Georgia is still poised to top many categories and lead the country in efficiency, reliability and growth of its logistics industry and international trade.

Georgia's top ten trading partners also position Georgia in the top ten nationally.

Seven of these partnerships demonstrated double digit positive growth.

Please note that these figures are for all modes of transport, including air and sea.

Top Export Commodities by Value, 2007

Georgia's U.S. Ranking	
1	Chemical wood pulp
2	Cotton
3	Regional jet parts

Top Import Commodities by Value, 2007

Georgia's U.S. Ranking	
1	Heavy construction equipment
4	Furniture
5	Medicine

TOP IMPORT COMMODITIES BY VALUE, 2007

Ranking	Top Import	GA's US Ranking	Total Trade	Change from 2006
1	Motor vehicles for transporting people	11	$4,558,593,206	-2.54
2	Medicine	5	$4,343,715,086	25.42
3	Computers	6	$3,568,728,165	48.1
4	Oil, not crude	14	$1,360,026,099	5.71
5	Motor vehicle parts	9	$1,359,289,483	24.01
6	Electric equipment for line telephony	10	$1,277,381,122	64.02
7	Furniture, parts	4	$1,188,595,134	17.07
8	Petroleum gases, other gaseous hydrocarbons	9	$1,146,856,044	8.17
9	Self-propelled heavy construction equip-ment	1	$896,231,609	-35.51
10	Regional jet parts	4	$830,069,791	-8.15

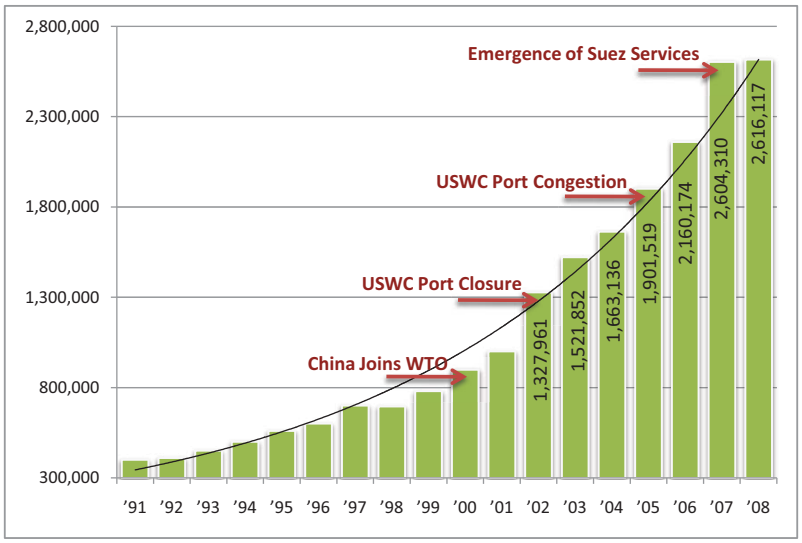
Source: 2008 Georgia Trade Numbers by WorldCity

SEA CARGO TRADE PROFILE

Container Volume Growth

2004 – 2005	14.3%
2005 – 2006	13.6%
2006 – 2007	20.6%
2007 – 2008	0.4%

TEU GROWTH CHART, 1991-2008
GEORGIA PORTS AUTHORITY



Exports

TOP TEN COMMODITY GROUPS FOR EXPORTS, CY08
FROM SAVANNAH

- Automotive: 5%
- Chemical: 6%
- Clay: 10%
- Fabrics (Incl Raw Cotton): 5%
- Food: 13%
- Machinery, Appliances and Electronics: 6%
- Paper and Wasteboard (Incl Waste): 12%
- Resins and Rubber: 6%
- Retail Consumer Goods: 5%
- Wood Pulp: 16%
- Other: 16%

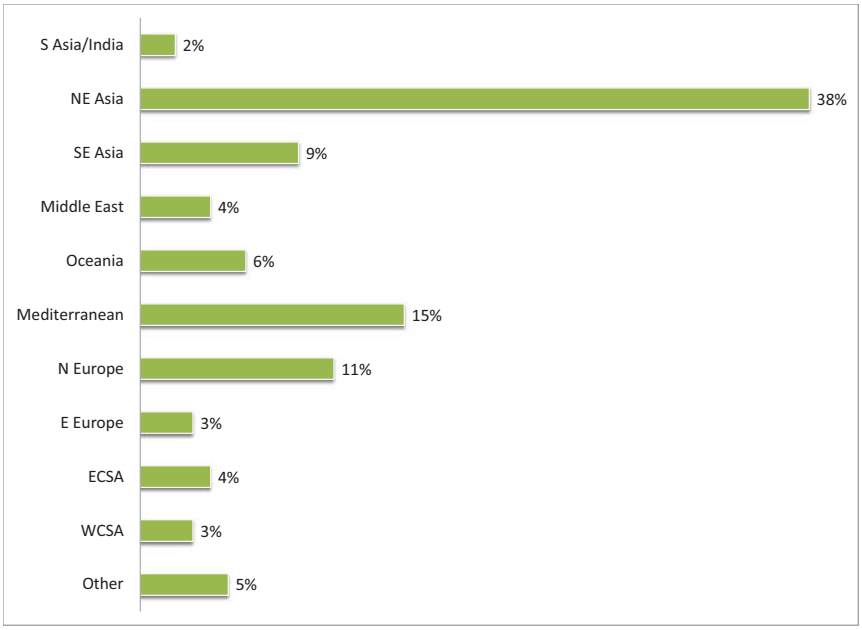
Exports

Savannah had the highest market share of all ports in the South Atlantic for five of its top ten export commodities in 2008.

These five included wood pulp, which was Savannah's top export commodity, and food, which was Savannah's fastest growing commodity.

Food exports (particularly poultry, grocery products, and soybeans) increased 23,371 TEUs and 23 percent over 2007.

TOP TEN TRADE LANES FOR EXPORTS FROM SAVANNAH, CY08



Source: PIERS

Imports

Savannah had the highest market share of all ports in the South Atlantic for seven of its top ten export commodities in 2008, including the top four.

Furniture was Savannah's top import commodity, while food was Savannah's fastest growing commodity. Food imports (particularly beer and ale, canned food and shellfish) increased 15,010 TEUs and 29 percent over 2007.

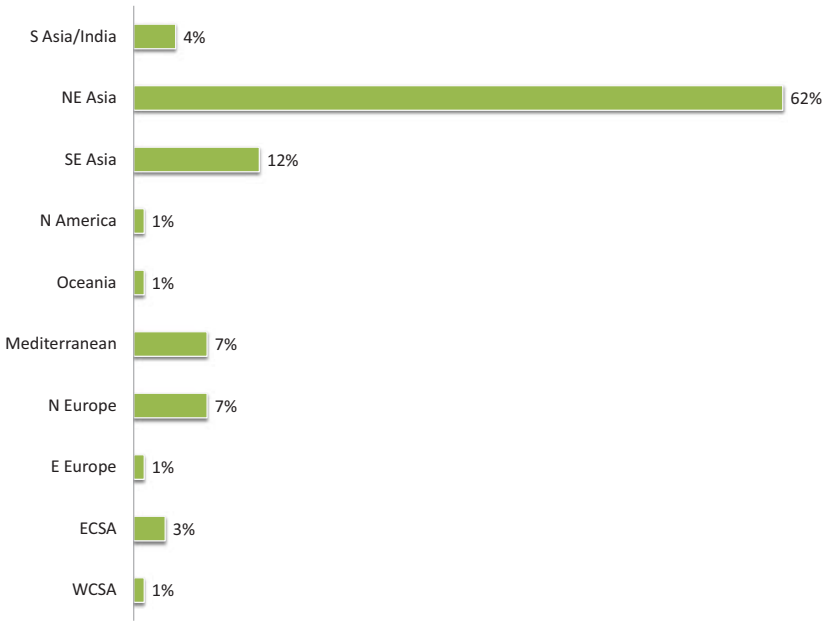
Northeast Asia was Savannah's fastest growing trade lane between 2004 and 2008, increasing by 237,840 TEUs and 55 percent.

Imports

TOP TEN COMMODITY GROUPS FOR IMPORTS, CY08
INTO SAVANNAH

- Apparel: 5%
- Automotive: 6%
- Food: 6%
- Furniture: 17%
- Hardware and Houseware: 9%
- Machinery, Appliances and Electronics: 11%
- Mineral: 5%
- Retail Consumer Goods: 14%
- Rugs, Sheets, Towels, Blankets: 3%
- Toys: 5%
- Other: 19%

TOP TEN TRADE LANES FOR IMPORTS INTO SAVANNAH, CY08



Source: PIERS

AIR CARGO PROFILE

OUT GOING AIR CARGO (ENPLANEMENT) , 2007–2008*

Airport			2007 Total Freight (LBS)	2008* Freight (LBS)
ATL	Atlanta	Hartsfield-Jackson	749,688,823	525,113,728
ABY	Albany	Albany Dougherty County	29,722,808	21,301,102
SAV	Savannah	Savannah/Hilton Head Int.	6,768,617	2,240,390
SVN	Savannah	Hunter Army Air Field	1,106,208	504,496
LSF	Columbus	Lawson Army Air Field	533,123	-
CSG	Columbus	Columbus Metropolitan	288,796	178,831
WRB	Macon	Robins Air Force Base	226,966	142,904
LZU	Lawrenceville	Gwinnett County	32,044	7,548
AHN	Athens	Athens Municipal	28,008	10,313
GVL	Gainesville	Gainesville Municipal	24,120	-
PDK	Atlanta	DeKalb Peachtree	21,960	-
AGS	Augusta	Bush Field	2,704	16,117
MCN	Macon	Lewis B Wilson Int.	1,822	1,282
QQT	Peachtree City	Peachtree City-Falcon Field	1,252	-
		Total	788,447,304	549,516,711

Note

These figures are for freight only and do not include mail.

IN COMING AIR CARGO (DEPLANEMENT) , 2007–2008*

Airport			2007 Total Freight (LBS)	2008* Freight (LBS)
ATL	Atlanta	Hartsfield-Jackson	918,985,148	621,309,328
ABY	Albany	Albany Dougherty County	35,200,425	24,939,956
SAV	Savannah	Savannah / Hilton Head	9,664,801	6,473,511
CSG	Columbus	Columbus Metropolitan	289,507	60,513
VAD	Valdosta	Moody Air Force Base	101,200	-
AGS	Augusta	Bush Field	68,195	39,581
RMG	Rome	Richard B Russell	26,984	-
AHN	Athens	Athens Municipal	18,911	7,199
LZU	Lawrenceville	Gwinnett County	12,928	16,244
GVL	Gainesville	Gainesville Municipal	10,880	-
PDK	Atlanta	Dekalb Peachtree	950	1,925
VLD	Valdosta	Valdosta Regional	662	34
MCN	Macon	Lewis B Wilson	348	23,714
SVN	Savannah	Hunter Army Air Field	0	195,704
WRB	Macon	Robins Air Force Base	0	147,141
		Total	964,380,951	653,214,850

* 2008 data consists of January–September only | Source: www.transtats.bts.gov

5 Logistics Concentration

ANOTHER WAY TO evaluate the economic importance of Georgia's logistics provider industries is to compare the employment and sales share of these industries with that of the nation. The result of this comparison is referred to as a CONCENTRATION INDEX. If the concentration index is >1, it tells us that industry is more concentrated in Georgia than is typical nationally. If this result is also coupled with a significant employment number, the index can be a indication of future industry strength and job growth. The reverse is true for an index value of <1.

For simplification, the resulting concentration indexes have been grouped into relative levels ranging from *below average* to *very high*. For analysis purposes, Georgia counties were grouped into regions, as seen below.

Note

Because comparison data is only available through 2005, the following information is not a current snapshot; rather, it is a look at the historical concentration levels. As we continue to collect data and report on the industry in years to come, we will have more data to identify trends and changes in the state's industry concentrations.

GEORGIA LOGISTICS CONCENTRATION - REGIONS

LEGEND

Region

- Coastal
- Southeast
- Southwest
- Central
- East
- Northeast
- Atlanta Area
- Northwest

LOGISTICS CONCENTRATION INDEX

National Comparison

When this process is applied to three large employment segments of the logistics provider industry, two of the three – Core Transportation and Related Traditional – have a significant employment and sales concentration. In contrast, Core Facilities industries do not present as strong a relative concentration in the state in terms of either employment or sales.

Atlanta was ranked the fifth largest logistics employer in the United States by Harvard Business School in 2001.

Cluster Mapping Project, Institute for Strategy and Competitiveness

GEORGIA LOGISTICS CONCENTRATION INDEX

NATIONAL BY INDUSTRY GROUP, 2005

	Employment	Sales
Core Facilities	Average	Below Average
Core Transportation	Above Average	Average
Related Traditional	High	Above Average

Source: NETS

Regional Comparison

Regions within Georgia have diverse patterns of concentration for logistics provider activity. The concentration index is not a measure of the overall logistics employment in a region nor logistics employment in a region relative to the state as a whole. Rather, it shows the amount of logistics providers in a region relative to that region's overall employment.

For example, Atlanta is a very large logistics hub in absolute count of users and providers, but when one looks at logistics providers relative to its overall employment, the concentration is not as great as in some other areas of Georgia.

Atlanta's total employment is more than two times the Southwest region, yet Core and Related Traditional employment is only 1.4 times that of the Southwest. To look at it another way, the Southwest's Core and Related Traditional providers are almost 3 percent of the region's total employment, while in the Atlanta region it is 2 percent of the overall employment.

The South and the Coastal areas are particularly concentrated with Core Transportation and Related Traditional industries. Indeed the Coastal emphasis on Related Traditional businesses (where the industry also has the highest employment count among the regions) is mostly responsible for the high statewide concentration index for this category. The Northeast also has some concentration in Related Traditional industries. None of the areas have a strong employment or sales focus in Core Facilities, which is particularly underrepresented in the East.

REGIONAL LOGISTICS CONCENTRATION INDEX, 2005

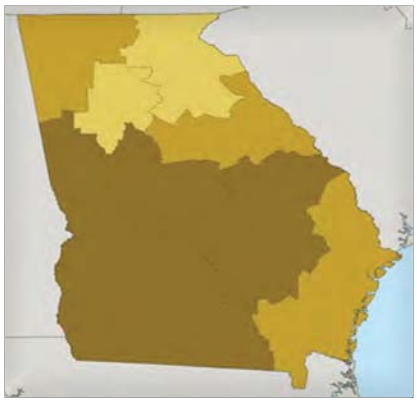
CORE FACILITIES

Employment

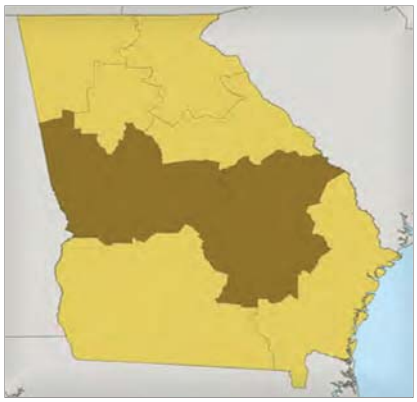
Sales

CORE TRANSPORTATION

Employment

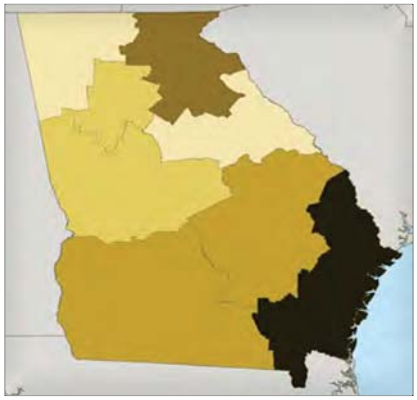


Sales

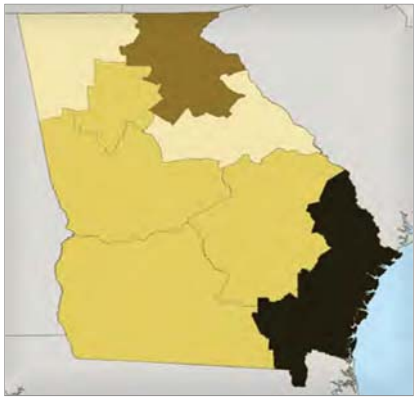


RELATED TRADITIONAL

Employment



Sales



LEGEND

Region Concentrations

- Below Average
- Average
- Above Average
- High
- Very High

GEORGIA LOGISTICS CONCENTRATION INDEX

BY REGION AND INDUSTRY GROUP, 2005

		Employment	Sales
0 – Atlanta Area	Core Facilities	Average	Average
	Core Transportation	Average	Average
	Related Traditional	Average	Average
1 – Northwest	Core Facilities	Average	Below Average
	Core Transportation	Above Average	Above Average
	Related Traditional	Below Average	Below Average
2 – Northeast	Core Facilities	Below Average	Below Average
	Core Transportation	Average	Average
	Related Traditional	High	High
3 – East	Core Facilities	Below Average	Below Average
	Core Transportation	Above Average	Average
	Related Traditional	Below Average	Below Average
4 – Central	Core Facilities	Average	Average
	Core Transportation	High	High
	Related Traditional	Average	Average
5 – Southwest	Core Facilities	Below Average	Below Average
	Core Transportation	High	Average
	Related Traditional	Above Average	Average
6 – Southeast	Core Facilities	Below Average	Below Average
	Core Transportation	High	High
	Related Traditional	Above Average	Average
7 – Coastal	Core Facilities	Below Average	Below Average
	Core Transportation	Above Average	Average
	Related Traditional	Very High	Very High

Source: NETS

The high concentration observed in the Core Transportation and Related Traditional categories in the regions above can reflect several factors, such as an above average local demand for these industries (confirming their significant contribution to the economy) or depressed productivity levels (from lagging technology or an inefficient labor force). To examine this further, we will look at what is known as a SHIFT-SHARE GROWTH ANALYSIS in the next section which will illustrate the growth in these logistics provider industries.

SHIFT-SHARE GROWTH ANALYSIS

SHIFT-SHARE ANALYSIS is a common economic tool that decomposes employment growth (positive or negative) into three units:

NATIONAL GROWTH

Change expected due to growth in the overall national economy, not specific to the industry or local economy. Its standardized measures serve as benchmarks.

INDUSTRY GROWTH

Change expected due to growth in the industry at the national level, not specific to the local economy. If this growth rate is higher than the national growth rate it implies that the industry in the state is growing faster because of the industry mix (i.e., there is a higher share of faster growing industries in the state).

REGIONAL GROWTH

Change that is due to the dynamics of the local economy. Positive values in the Regional Growth indicate where the local economy is competitive relative to the national overall economy and industry.

Core Facilities, Core Transportation and Related Traditional categories constitute 94 percent of the establishments and 86 percent of both sales and employment in the logistics provider industry.

Because of the limitation of available and compatible datasets, this level of analysis is only available to 2005 and only possible for selected industries: Core Facilities, Core Transportation and Related Traditional. These categories constitute 94 percent of the establishments and 86 percent of both sales and employment in the logistics provider industry, however, and should therefore provide valuable data. For clarity, the calculated numerical results were categorized as "––" (indicating a significant decrease) to "++" (indicating more positive growth).

National Analysis

The concentration index for Core Facilities showed low employment and sales concentration. Similar negative growth in Core Transportation was influenced by the industry mix, as well as by regional factors.

STATEWIDE SHIFT-SHARE ANALYSIS, 2001-2005

	National Growth	Industry Growth	Regional Growth
Core Facilities	–	–	–
Core Transportation	–	–	–
Related Traditional	–	+	++

Source: NETS

In contrast to the other two key industries, Related Traditional showed a strong regional growth and its industry mix improved overall performance. Together with a significant employment and sales concentration index, it represents a strong economic asset that can fulfill demand beyond local and current needs and not be limited by productivity concerns.

LEGEND

Shift-Share Growth

- – – Decrease
- – Decrease
- + Increase
- ++ Increase
- +++ Increase

Regional Analysisv

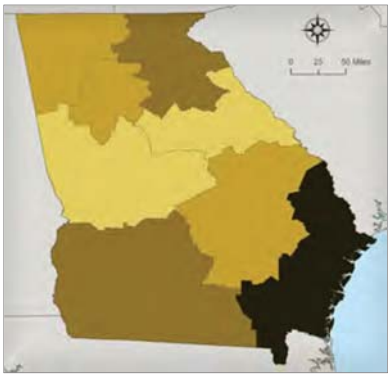
A look at the growth decomposition by region confirms the findings of the concentration index for the Coastal region: not only is there a high specialization in Related Traditional establishments, but also a growing base. (The South stands out as a generally growing area.) The data also shows that even though the concentration index and overall growth analysis in this chapter does not cite Core Facilities as regionally growing, there are some areas in the state – particularly the Southeast and the Coastal regions – where it is.

REGIONAL SHIFT-SHARE GROWTH ANALYSIS, 2001-2005

Core Facilities

Core Transportation

Related Traditional



REGIONAL SHIFT-SHARE GROWTH ANALYSIS, 2001-2005

		Growth Values
0 – Atlanta Area	Core Facilities	–
	Core Transportation	–
	Related Traditional	+
1 – Northwest	Core Facilities	–
	Core Transportation	– –
	Related Traditional	+
2 – Northeast	Core Facilities	–
	Core Transportation	++
	Related Traditional	++
3 – East	Core Facilities	– –
	Core Transportation	++
	Related Traditional	–
4 – Central	Core Facilities	–
	Core Transportation	++
	Related Traditional	–
5 – Southwest	Core Facilities	– –
	Core Transportation	++
	Related Traditional	++
6 – Southeast	Core Facilities	+++
	Core Transportation	++
	Related Traditional	+
7 – Coastal	Core Facilities	+
	Core Transportation	++
	Related Traditional	+++

Source: NETS

6 Productivity Factors

THE LOGISTICS INDUSTRY has undergone remarkable improvements in technology and efficiency over the last decade, resulting in an industry that is smaller in size with higher output per worker – doing things better, faster, cheaper, greener.

The cost of freight logistics in the U.S. was $1.4 trillion in 2007; equivalent to 10.1 percent of GDP, according to CSCMP's 19th Annual State of Logistics Report. Even though this is an improvement from its decade-low 8.6 percent in 2003, it remains below the 17.9 percent of GDP reached in 1980. According to the report, fuel prices "are the largest single factor affecting the transportation segment."

GLOBALIZATION AND CAPACITY

WHILE PRODUCTIVITY IMPROVEMENTS have generally reduced the size of the industry, a favorable dollar has increased trade flows, in turn increasing demand for logistics services. In addition to exchange rate fluctuations, general globalization has stimulated a revolution in transportation systems and practices. In many respects, the logistics sector itself has been a significant stimulus for globalization. Globalization has reduced costs and exposed industries and companies previously protected by trade barriers to higher levels of competition and opportunities for trade. Growth in international trade has fueled logistics growth and will continue to do so, while advances in logistics accelerate global trade. Trade volumes are expanding at more than twice the rate of industrial production (global GDP has grown 3 percent a year since 2000, up from 2.8 percent a year during the 1990s). In current dollar terms, world trade doubled during the 1990s and has doubled again since 2000 (The World Bank).

Air cargo growth is expected to expand at an average annual rate of 5.8 percent during the next two decades, with a threefold increase in worldwide air freight, according to The Boeing Company's World Air Cargo Forecast 2008/2009.

Dealing with technological advances and growing organizational complexities demands an adequate supply of skilled workers for the logistics sector. While the share of traditional logistics jobs has decreased nationally as a result of these productivity improvements and the outsourcing of typical in-house activities, jobs have become more challenging, demanding higher wages and more creativity and initiative. The increasing complexity of the global supply chain continues to add new challenges to supply chain management. However, the negative perception of these industries as low-pay employers continues to make it difficult to attract sufficiently skilled workers.

Taking into account only confirmed terminal expansion projects, the Annual Review of Global Container Terminal Operators 2008 (Dewry Shipping Consultants), estimates that by 2013 container throughput will exceed available capacity.

Deregulation and Cost Pressures

The deregulation of the aviation, rail, motor carrier and maritime shipping industries over the past twenty-five years opened the door to thousands of new competitors, creating an environment that spawned innovative, efficient and affordable transportation services. Deregulation also supported the rapidly globalizing economy and played a role reshuffling transportation.

The logistics platform is changing because logistics companies have optimized the use of current resources, primarily truck-oriented, and in order to gain the next level of savings for customers, must seek to incorporate multi-modalism.

John W. McCurry
"Global Sourcing Casts Logistics In A New Light."
Site Selection Magazine,
September 2004

Concerns for the environment and energy conservation have further affected the structure of the logistics sector as energy-efficient supply chains have become less of a choice than a competitive necessity. As a consequence, railroads have experienced a comeback. Class I freight railroads have averaged a 7.5 percent return on their net investment, up from 2 percent in the 1970s according to the American Association of Railroads.

Outsourcing: Third and Fourth Party Logistics Providers

Increasing supply chain management complexities, rapid advances in technology and cost pressures have further fueled growth in the area of third-party logistics (3PL) providers. Outsourcing or off-shoring the management of logistics services beyond transportation allows companies to find the most cost efficient solution to their logistics needs, as well as granting them wider access to expertise and the latest logistics and information technology products (IT) and services. Another example of this outsourcing activity is the continued emergence of more non-asset based fourth-party logistics providers that are managing multiple 3PLs and even more complex IT needs.

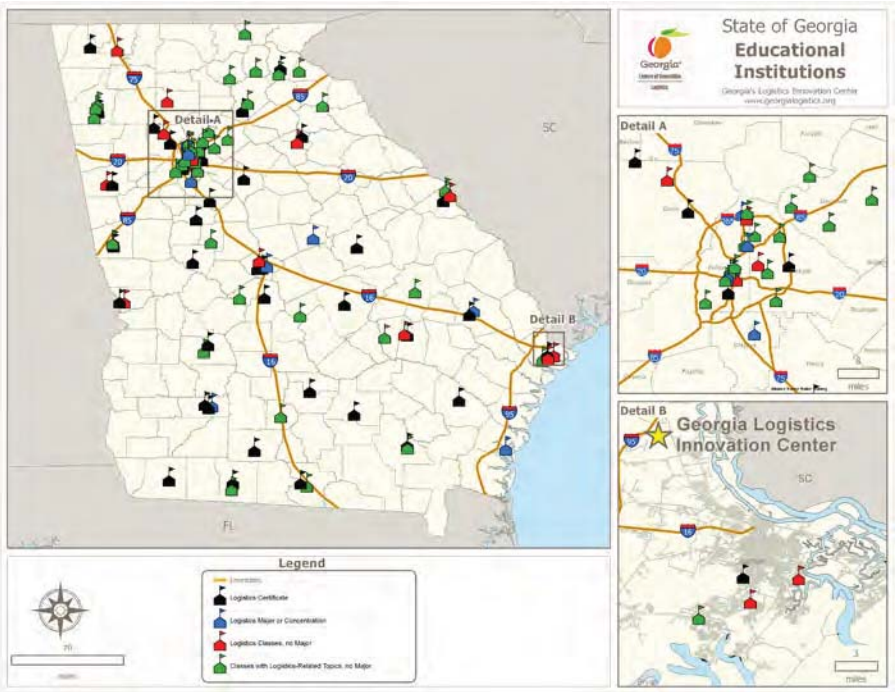
> "Outsourced logistics partnerships are taking companies to places they've never been before – both in terms of emerging logistics markets as well as the level of supply chain complexity and strategy necessary to meet ever-changing global demands. As businesses become more inclined to partner with multiple niche logistics providers – maintaining expertise in specific verticals, operating regions, or service capabilities – their supply chains are evolving into multi-tiered networks, stratified by numerous transportation and logistics contracts from raw materials procurement to domestic point of consumption."
>
> Joseph O'Reilly, *Inbound Logistics* Magazine:
> www.inboundlogistics.com/articles/features/0707_feature03.shtml

Even with these changes, the provision of logistics services remains in essence the efficient and effective movement of goods, services and information to ensure the creation of the maximum value added in the economic system. In turn, this spurs even more demand for additional logistics activities and services. The overall logistics activity of a state is therefore more than just trucking or rail companies and similar providers of logistics services, but also encompasses the users of logistics services. The DERIVED DEMAND characteristic of logistics services implies that the health and future of the sector is integrally linked with the performance of the overall economy. One of the most significant determinants for logistics services is variation in a state or nation's GPD: the more active an economy, the more freight in circulation due to producer and consumer demands. Consequently, as state and national economies go, so goes the logistics sector.

As State and National economies go, so goes the logistics sector...

EDUCATION AND TRAINING: A FOUNDATION FOR PRODUCTIVITY

The map and summary table below show the quantity and location of the many education and training resources available in Georgia. These include 39 programs offering a logistics focused certificate, 19 granting a major or concentration in logistics, 15 programs providing logistics classes but not a major and 27 offerings of classes with logistics-related topics, but no major. A few of these programs offer both a certificate and a major and three others do not have a physical presence in Georgia but instead are offered virtually.



A few of these programs offer both a certificate and a major and three others do not have a physical presence in Georgia but instead are offered virtually.

LOGISTICS CERTIFICATE

Alliance Tractor Trailer Training Center	Macon State College
Altamaha Technical College	Middle Georgia Technical College
Athens Technical College	Moultrie Technical College
Atlanta Technical College	North Georgia Technical College
Augusta Technical College	North Metro Technical College
Bainbridge College	Northwestern Technical College
Columbus Technical College	Ogeechee Technical College
Coosa Valley Technical College	Okefenokee Technical College
Darton College	Sandersville Technical College
DeKalb Technical College	Savannah Technical College
East Central Technical College	South Georgia College
Flint River Technical College	South Georgia Technical College
Albany Technical College	Southeastern Technical College
Central Georgia Technical College	Southern Polytechnic State University
Devry University Georgia	Southwest Georgia Technical College
Embry-Riddle Aeronautical Univ	University of Phoenix
Georgia Virtual Technical College	Valdosta Technical College
Griffin Technical College	West Central Technical College
Heart of Georgia Technical College	West Georgia Technical College
Lanier Technical College	

LOGISTICS MAJOR OR CONCENTRATION

Albany State University	Central Georgia Technical College
American InterContinental University - Buckhead	Clark Atlanta University
American InterContinental University - Dunwoody	Embry-Riddle Aeronautical Univ
Clayton State University	Georgia Institute of Technology
Coastal Georgia Community College	Georgia Institute of Technology
Georgia College & State University	Georgia Virtual Technical College
Georgia Military College - Robins AFB	Macon State College
Georgia Southern University	Mercer University
Albany Technical College	Southern Polytechnic State University
	University of Phoenix

LOGISTICS CLASSES, NO MAJOR

Argosy University-Atlanta Campus	Reinhardt College
Columbus State University	Savannah State University
Dalton State College	South University
Devry University - Georgia	Troy University
Emory University	University of Georgia
Georgia State University	University of West Georgia
Kennesaw State University	Wesleyan College
Paine College	

CLASSES WITH LOGISTICS-RELATED TOPICS, NO MAJOR	
Abraham Baldwin Agricultural College	Gwinnett College
Agnes Scott College	Herzing College - Atlanta
Armstrong Atlantic State University	ITT Technical Institute
Ashworth University	Lagrange College
Atlanta Christian College	Life University
Atlanta Metropolitan College	Mercer University In Atlanta
Augusta State University	Middle Georgia College
Bauder College	Morehouse College
Berry College	North Georgia College & State University
Brenau University	Oglethorpe University
Brewton-parker College	Piedmont College
Brown Mackie College - Atlanta	Savannah River College
East Georgia College	Shorter College
Emmanuel College	Thomas University
Fort Valley State University	Toccoa Falls College
Gainesville State College	Truett-mcconnell College
Georgia Gwinnett College	Valdosta State University
Georgia Highlands College	Waycross College
Georgia Perimeter College	Westwood College
Georgia Southwestern State University	Young Harris College
Gordon College	

SALES PRODUCTIVITY: SMALL ESTABLISHMENTS

A FAIRLY SIMPLE method to gauge productivity is to compare the total sales generated by an industry sector with its level of employment, returning a ratio of sales per employee. Reviewing this sales productivity ratio for small to mid-size businesses is often used to forecast industry growth; these businesses contribute to the dynamism of an industry by creating higher-paying jobs, providing opportunities for career employment and exporting and investing in the future through research and development.

In the private economy overall, high productivity is usually concentrated with mid- to large size companies. However, there are several logistics provider categories that show a higher level of productivity in the very small establishments, such as Core Facilities and especially the Related Traditional sectors. Overall, Related Traditional industries appear to be the most productive businesses in the sector and are above the overall private industry average as well.

SALES PRODUCTIVITY BY INDUSTRY CATEGORY, 2006

THREE-YEAR AVERAGE OF SALES PER EMPLOYEE

	1-9 Employees	10-99 Employees	100+ Employees	Total
Core Facilities	**$101,613**	$87,213	$70,328	$82,452
Core Transportation	$91,080	$94,580	$118,226	$101,940
Related Enabling	**$110,540**	**$186,393**	$115,095	$160,102
Related Traditional	**$188,228**	$128,880	$101,934	$106,620
Support	**$123,005**	$101,596	**$162,304**	$136,189
All Logistics Providers	$113,679	$115,712	$111,979	$113,762
All Private Industries	$94,288	$136,418	$151,798	$138,840

Source: NETS

LABOR PRODUCTIVITY: TRANSPORTATION & WAREHOUSING

Georgia ranks third in the Southeast and twenty-first in the nation for private GDP per full- and part-time jobs in transportation and warehousing, with a GDP per job level almost exactly the national average.

SOUTHEASTERN UNITED STATES, 2006

S.E. Ranking	State	GDP Per Job	U.S. Ranking
1	Tennessee	$70,474	16
2	Kentucky	$69,012	17
3	**Georgia**	**$66,839**	**21**
4	Virginia	$64,041	27
5	Alabama	$61,865	35
6	Florida	$61,360	36
7	Mississippi	$58,993	39
8	North Carolina	$56,721	42
9	South Carolina	$54,791	43
	50-State Average	$66,855	

Source: Bureau of Economic Analysis

UNITED STATES, 2006

Ranking	State	GDP Per Job
1	Alaska (trucking)	$170,963
2	Wyoming (rail)	$129,402
3	Nebraska	$97,139
4	Montana	$81,896
5	North Dakota	$77,768

Source: Bureau of Economic Analysis

7 Economic Impact of Logistics Providers

THE NUMBERS ANALYZED in this report have been direct establishment, employment and sales data solely for the logistics industry. However, it is also important to know what impact the logistics industry has on other segments of the economy, as well as the state as a whole. This is known as economic impact and generally describes the quantity and type of jobs and dollars dependent on the industry. This economic impact calculation and the process used to obtain it is widely recognized and has been performed on practically every industry and sub-industry nationwide.

NOTE: Data required to perform this impact modeling is available only up to 2006, thus the results in this chapter are representative of that year.

For the purposes of this modeling effort, the following regions were defined and are used throughout Chapter 7:

IMPACT REGIONS OVERVIEW

LEGEND

Region

- North Central
- East Central
- Inland Coastal
- Coastal
- South East
- West Georgia
- Mountain

STATE AND REGIONAL IMPACT

UTILIZING THE CALCULATED number of direct logistics provider jobs in the logistics industry, the total economic impact of these enterprises was calculated for the state and for seven sub-regions of Georgia. This economic impact determination and modeling was accomplished using a widely respected and nationally recognized tool called IMPLAN (Impact Analysis for Planning). It was created at the University of Minnesota in 1989 and has been a standard tool for impact modeling ever since.

STATE AND REGIONAL IMPACT OF LOGISTICS PROVIDERS

Employment Impact
Additional 740 jobs per 1000

GDP by State Impact
Additional $640,000 per $1 million

Statewide Labor Impact
Additional $590,000 per $1 million

Proprietor's Income Impact
$836 million

Value Added Impact
$9.51 billion

The IMPLAN input-output model calculated five measures of statewide economic impact of the logistics provider industry:

- Impact of employment on that of other industry sectors
- Economic impact of gross regional output (GDP by state)
- Total value of labor income and total jobs
- Total value of proprietor's income
- Economic impact of value-added

STATE AND REGIONAL IMPACT OVERVIEW, 2006

Region	Employment	GDP by State	Labor Income	Proprietor's Income	Value Added
Mountain	13,199	$1,706	$532	$67	$765
North Central	85,432	$11,438	$4,369	$489	$6,221
West	11,573	$1,308	$432	$96	$667
East Central	4,049	$484	$163	$18	$240
Inland Coastal	3,860	$427	$129	$25	$184
Southeast	9,540	$1,457	$448	$102	$652
Coastal	11,651	$1,581	$539	$40	$779
Total	139,304	$18,400	$6,642	$836	$9,507

* All dollar amounts are in millions of 2007 dollars

EMPLOYMENT IMPACT

The IMPLAN model estimated direct logistics provider employment at about 80,000. The economic activity of logistics providers and the money spent by their employees resulted in the creation of an additional 59,000 jobs, meaning that over 139,000 jobs were directly employed by or depended upon logistics providers statewide. That is a job multiplier of 1.74, or for every 1000 new jobs created by logistics providers, an additional 740 jobs are created in other sectors of the Georgia economy. As a typical employment multiplier in tourism is about 1.3, the contribution of logistics providers to Georgia's employment rate is significant.

GDP BY STATE IMPACT

The direct GDP by state, or the direct total value of all output of logistics providers, was $11.2 billion in 2007 dollars and was 2.8 percent of total state GDP ($396.5 billion in 2007). That production multiplied to all other sectors of the economy for a total impact of $18.4 billion. The total output of logistics providers and those dependent on logistics providers accounted for 5 percent of GDP by state. In the case of the output impact of logistics providers, the output multiplier was 1.64, or for every $1 million in new services produced by logistics providers, the other sectors in the state's economy grew by an additional $640,000. This is a fairly large multiplier; for example, the retail services multiplier is only about 1.4.

STATEWIDE LABOR INCOME IMPACT

Statewide, direct labor income from logistics providers was $4.2 billion in 2007 dollars. The direct labor income multiplied to a total labor income impact of $6.6 billion. This equates to a labor income multiplier of 1.59 or ,for every $1.0 million in new logistics providers labor income, total labor income statewide grew by an additional $590,000.

PROPRIETOR'S INCOME IMPACT

The IMPLAN proprietor's income measurement simply shows the income of business owners. This is not a measure of the return to the investors in capital, but the income of the owners of business enterprises. Statewide, logistics providers direct proprietor's income was about $516 million in 2007 dollars. With a multiplier of 1.62, the total economic impact equaled $836 million.

VALUE-ADDED IMPACT

The other measures of economic activity reported from the IMPLAN analysis are essential sub-components of the estimated GDP by state. Value added is simply a calculation of the difference between the cost of material and services needed to make a product and the selling price of the final product. Statewide, the direct value added by logistics providers was $5.3 billion in 2007 dollars, creating an impact of over $9.51 billion.

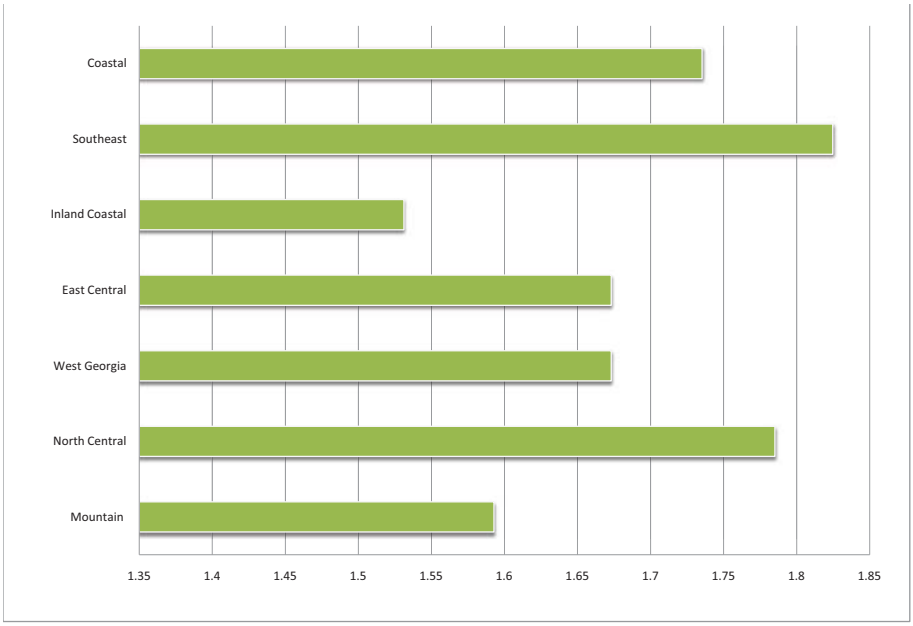
REGIONAL EMPLOYMENT MULTIPLIERS

EMPLOYMENT MULTIPLIERS DIFFER between regions and for regions compared to the state. For example, statewide the employment multiplier was 1.74. The large employment multiplier in the Southeast region, 1.82, explains why the region, which is smaller in terms of direct employment, is larger in the percent share of logistics provider employment.

As expected, given the area's complex and large economy, the North Central region had the second largest employment multiplier at nearly 1.78.

The Coastal region's employment multiplier was closest to the state average of 1.74, suggesting that it, like the North Central economy, contains logistics service specialists that also serve other regions.

EMPLOYMENT MULTIPLIER BY REGION



CROSS-INDUSTRY IMPACT

THE MULTIPLIERS MEASURE the linkages of the logistics providers to the dependent sectors of the economy. Because of these linkages, a variety of jobs are created across diverse sectors within each regional economy. The table below compares the three impact measures of employment, GDP by state and labor income side by side.

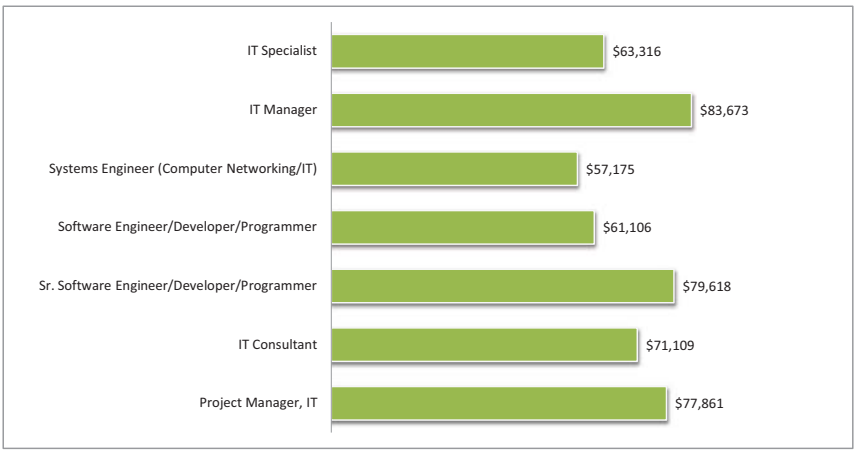
CROSS-INDUSTRY IMPACT OVERVIEW, 2006

Industry	Employ-ment	GDP by State	Labor Income
Logistics	52%	51%	57%
Agriculture, Mining and Utiliities	1%	1%	1%
Manufacturing and Construction	5%	13%	7%
Retail Trade	6%	3%	4%
IT and Professional Services	22%	22%	23%
Educational, Health and Other Services	10%	5%	7%
Government and Non-Profit	4%	5%	2%

Employment Impact by Sector

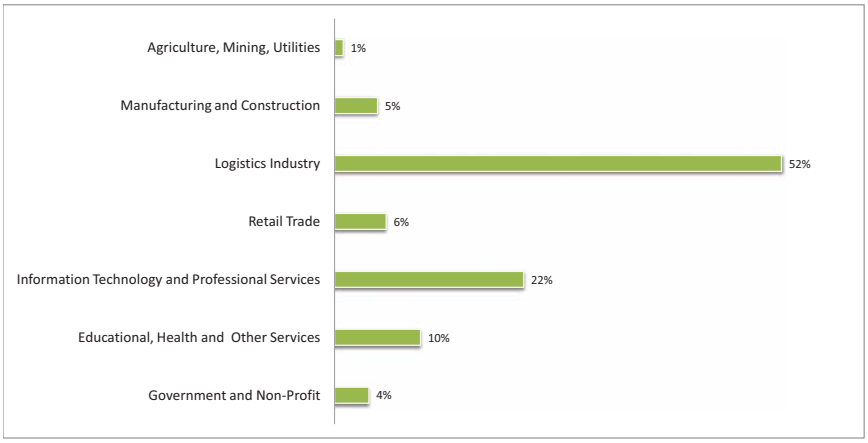
The high percentage of information technology (IT)–related logistics dependent jobs is very significant as the IT-related services industry is among the economy's largest and fastest sources of employment growth, increasing by 616,000 in the U.S. from 1994-2004 (an 8 percent annual growth rate). The chart below also provides a snapshot of the types of high salary ranges associated with this industry.

SALARY RANGES, INFORMATION TECHNOLOGY SECTOR



www.payscale.com/research/US/industry=Information_Technology_(IT)_Services/Salary

STATEWIDE TOTAL EMPLOYMENT BY INDUSTRY SECTOR



IMPACT BY SECTOR

Employment
Outside the logistics industry, the highest employment impact was found in the it and Professional Services sector with 22 percent of dependent jobs created

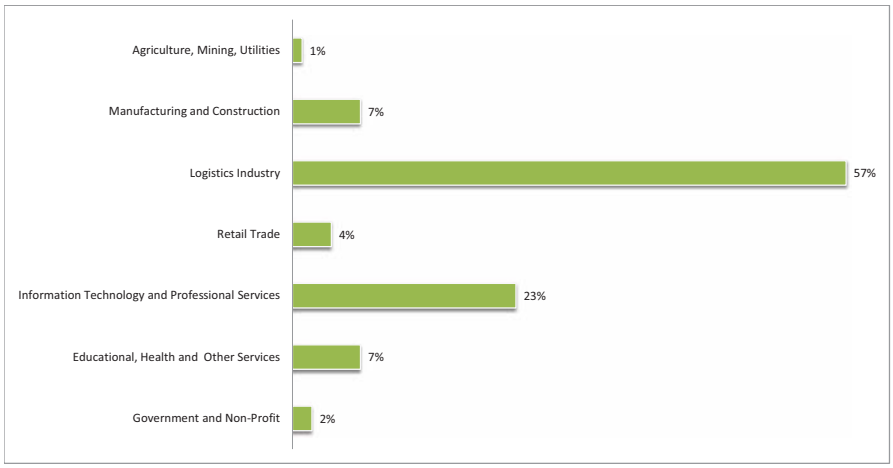
Labor
Only 43 percent of the total labor income impact spilled over into non-logistics industries.

GDP by State
The logistics-dependent manufacturing and construction sector contributed 13 percent of total GDP by state. This is a potential indicator of higher than average productivity for logistics dependent manufacturing and construction establishments.

Labor Income Impact by Sector

This section illustrates that only 43 percent of the total labor income impact spilled over into non-logistics industries. This reveals a larger relative labor income percentage when compared with employment for logistics providers (employment is 52% and yet, retains 57% of the labor income).

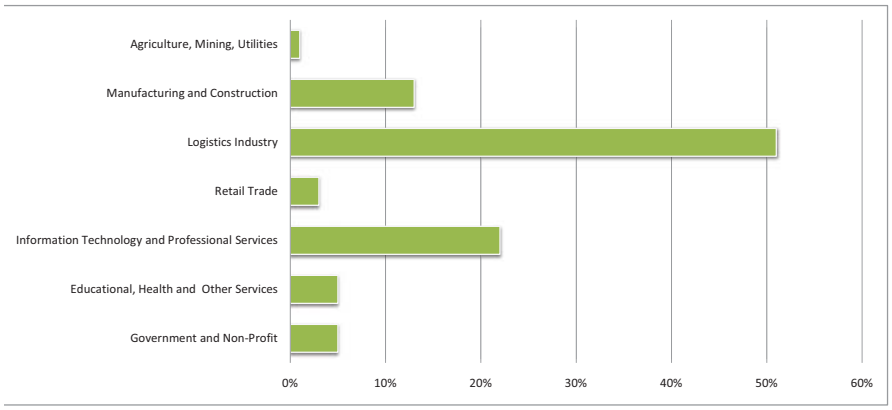
STATEWIDE TOTAL LABOR INCOME BY INDUSTRY SECTOR



GDP by State Impact by Sector

The GDP by state in 2007 was $396.5 billion (www.bea.gov/regional/gsp). Together, the logistics providers and identified dependent industry sectors represented about 5 percent of this total state output. As shown below, 49 percent of this output spilled over to non-logistics sectors.

STATEWIDE TOTAL GDP BY STATE BY INDUSTRY SECTOR



While the logistics-dependent manufacturing and construction sector represented 5 percent of total employment, it contributed 13 percent of total GDP by state. This is a potential indicator of higher than average productivity for logistics dependent manufacturing and construction establishments.

8 Georgia's Freight Flow Profile

THIS REPORT HAS provided an in-depth look at many different aspects of Georgia's logistics industry. One area that connects all the components and companies in logistics is the freight being moved, stored and/or processed. This chapter utilizes significant data elements from IHS-Global Insight's Transearch database and combines them with a variety of other sources. The data, however, is just a starting point: the important and more difficult part is asking the right questions of the data to create information. This chapter is a summary of Georgia freight movements and presents only a small sample of the possibilities of this data platform.

Note

The information found in this chapter covers mainly the truck and rail movement of freight.

While air and sea movements are critical to the overall freight picture, they serve as the end points for sending or receiving cargo and as such are covered separately in Chapter Four

FREIGHT FLOW DEFINITIONS

IMPORT

Cargo flowing into a destination in Georgia

EXPORT

Cargo originating in Georgia and flowing out

INTRA

Cargo that both originates and has a destination in Georgia

THROUGH

Cargo that neither originates nor terminates in Georgia but passes through using Georgia's infrastructure

INFRASTRUCTURE HIGHLIGHTS

Road

Each week a combined 12 million tons moves on Georgia's 1,200 miles of interstate highways and 20,000 miles of federal and state highways. Georgia is home to six of the top fifty cargo carriers, including the world's number one carrier, UPS. Ranked ninth nationally with nearly 450,000 commercially licensed Georgia truck drivers, cargo is within two or fewer days from 80 percent of the U.S. industrial and commercial markets.

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Rail

Georgia has the seventh most total rail miles, fifth most rail tons terminating in a state, and is ranked thirteenth for the number of railroads in a state.

With nearly 5,000 miles of railroad track and the largest intermodal facility on the east coast, Georgia originates 24 million and terminates over 75 million rail-tons of cargo every year. Georgia has the seventh most total rail miles, fifth most rail tons terminating in a state, and is ranked thirteenth for the number of railroads in a state.

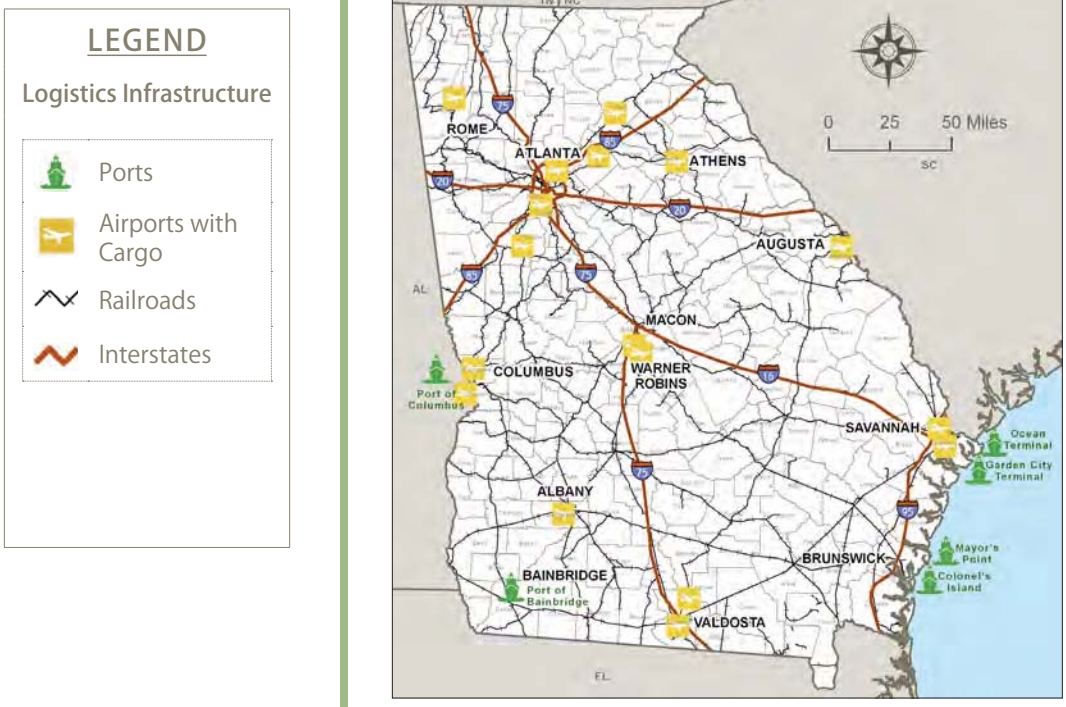
Air

The world's busiest passenger airport, Atlanta's Hartsfield-Jackson International is also the eleventh largest based on cargo, has more than 1.5 million square feet of cargo handling space and is just one of Georgia's 144 public and private airports. The airport also allows businesspersons to reach 80 percent of the U.S. market within two hours of flight time and any major North American city within four.

Sea

The third largest container port in the nation, the Georgia Ports Authority terminal in Savannah handled more than 2.6 million TEUs in 2008 and expects to handle over 4.4 million TEUs by 2018. The Brunswick facility, where automobiles volumes have quadrupled, is the sixth largest auto port in the nation.

GEORGIA LOGISTICS INFRASTRUCTURE, 2009



DOMESTIC TRUCK FREIGHT FLOW

THIS SECTION EXPLORES the movement of freight throughout the nation via truck. Note that the data discussed does not include movements from Canada nor Mexico, and begins with 2007.

2007	Truck Tons	Cargo Value	Truck Loads
Import	106,380,868	$385,193,742,854	8,851,234
Export	118,071,185	$336,804,786,682	9,348,563
Intra-GA	226,021,926	$349,311,341,291	23,563,784
Through	190,325,118	$790,803,808,072	10,734,611
Total	640,799,096	$1,862,113,678,898	52,498,193

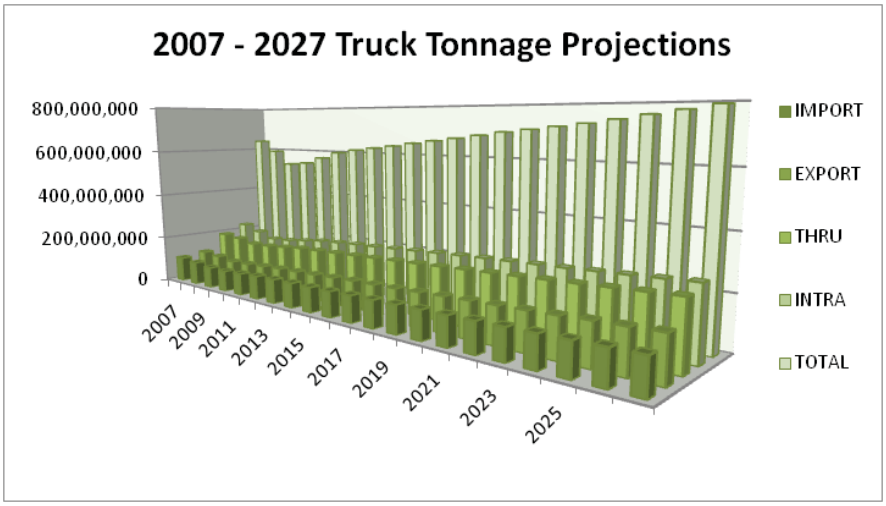
SOURCE: IHS-GLOBAL INSIGHT INC.

These projections suggest a nearly 18.2 percent drop in tonnage between 2007 and 2009, when the volumes will begin to slowly rebound.

Overall, between 2010 and 2027 these current projections also show a growth of close to 50 percent or a 260 million ton increase, yielding the flow of nearly 800 million tons per year by 2027.

As seen above, there were nearly twice as many movements from origins and destination pairs inside Georgia than any other scenario, followed closely by cargo that was flowing directly through Georgia and destined for another location. It is also interesting to note the almost double value difference between intrastate flow and that flowing through the state. This is primarily due to commodity type and their declared values.

Projected 2007-2027 Truck Freight Flow



SOURCE: IHS-GLOBAL INSIGHT INC.

These projections suggest a nearly 18.2 percent drop in tonnage between 2007 and 2009, when the volumes will begin to slowly rebound. Overall, between 2010 and 2027 these current projections also show a growth of close to 50 percent or a 260 million ton increase, yielding the flow of nearly 800 million tons per year by 2027.

County Level Flow Distribution

A closer look at the Georgia counties that comprise this overall flow shows that Fulton County contributes about 25 percent of the total import tonnage and Chatham County contributes roughly the same for exports. In total, there are nineteen counties contributing over 1 million tons each to yearly import tonnage, thirteen of which are over 2 million tons. Likewise, there are twenty-five counties contributing over 1 million tons each to yearly export tonnage, eleven of which are over 2 million tons.

Million-Ton IMPORT Counties	
Destination	Tons
Fulton	28,354,215
Chatham	8,677,489
Gwinnett	4,315,205
DeKalb	4,248,574
Cobb	3,574,647
Tift	3,427,215
Richmond	3,033,269
Carroll	2,956,327
Clayton	2,748,225
Muscogee	2,630,894
Coffee	2,473,136
Lowndes	2,461,220
Dougherty	2,306,558
Bibb	1,791,290
Washington	1,279,766
Troup	1,276,050
Wilkinson	1,247,071
Floyd	1,196,664
Bartow	1,035,330

Million-Ton EXPORT Counties	
Origination	Tons
Chatham	24,747,960
Fulton	14,315,413
DeKalb	4,510,309
Gwinnett	3,762,409
Glynn	3,632,475
Richmond	3,497,863
Cobb	2,789,090
Tift	2,687,926
Bibb	2,341,544
Hall	2,180,890
Whitfield	2,138,084
Gordon	1,730,203
Washington	1,501,080
Clarke	1,493,460
Troup	1,474,861
Lowndes	1,370,231
Floyd	1,354,432
Bartow	1,324,244
Elbert	1,280,639
Dougherty	1,261,408
Thomas	1,256,127
Henry	1,245,993
Walker	1,178,024
Muscogee	1,132,618
Clayton	1,019,921

SOURCE: IHS-GLOBAL INSIGHT INC.

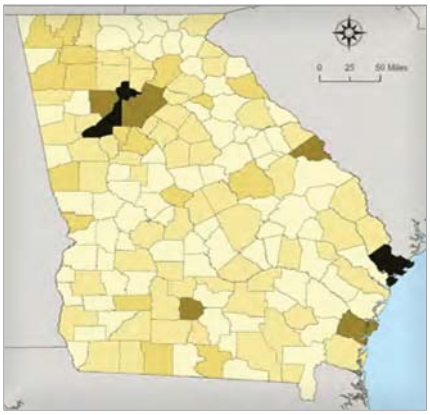
While shown to be more accurate, measuring freight flow by tonnage is only one way to analyze freight flow activity. In the following maps there are significant differences in many places where tonnage, value and actual moves do not coincide. This is due to multiple factors, primarily including

the commodity type being moved.

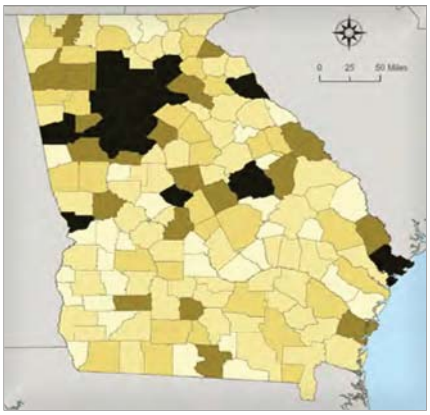
Total Tonnage Distribution, Truck

U.S. CARGO FLOW IN TRUCKLOAD TONS...

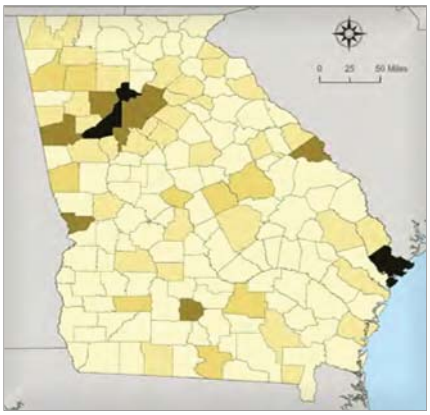
Originating in the State of Georgia (Export)



Within the State of Georgia (Intra)



Into the State of Georgia (Import)



LEGEND

Tons

- 0 – 250,000
- 250,001 – 1,000,000
- 1,000,001 – 2,500,000
- 2,500,001 – 5,000,000
- 5,000,001 – 24,747,960

SOURCE:
IHS-GLOBAL INSIGHT INC.

U.S. CARGO FLOW IN TRUCKLOAD VALUES (US DOLLARS)...

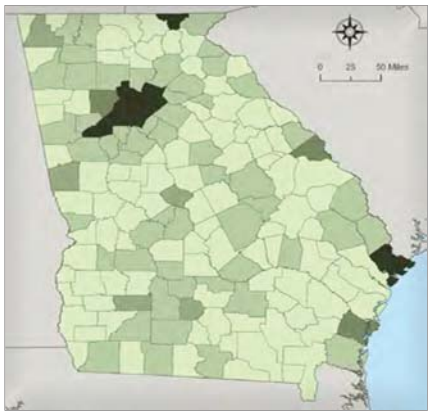
LEGEND

U.S. Dollars

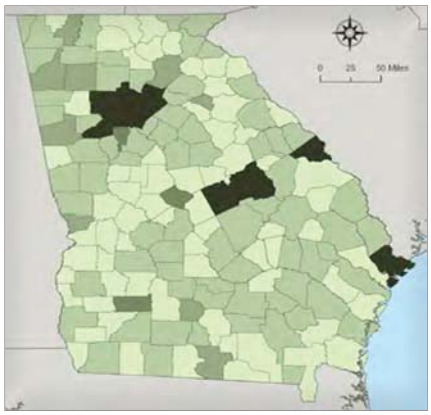
- 0 – 500,000,000
- 500,000,001 – 5,000,000,000
- 5,000,000,001 – 10,000,000,000
- 10,000,000,001 – 20,000,000,000
- 20,000,000,001 – 50,898,579,279

SOURCE:
IHS-GLOBAL INSIGHT INC.

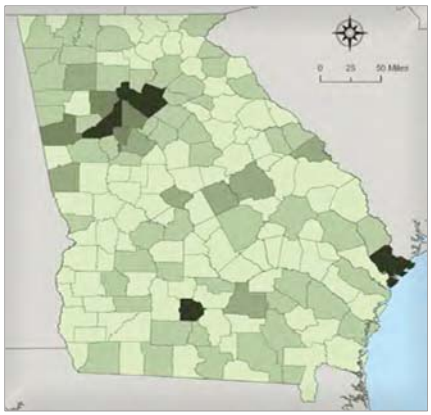
Originating in the State of Georgia (Export)



Within the State of Georgia (Intra)



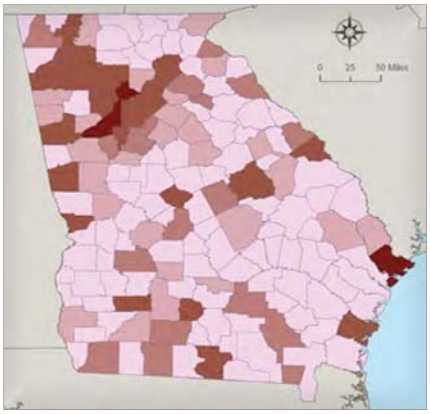
Into the State of Georgia (Import)



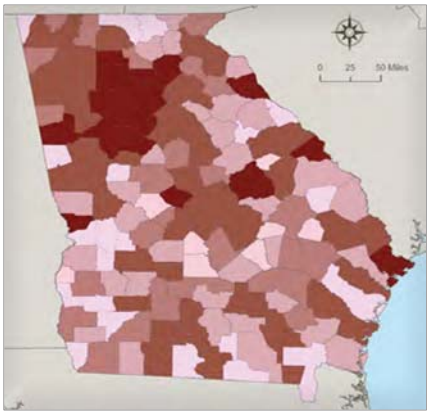
SOURCE: IHS-GLOBAL INSIGHT INC.

U.S. CARGO FLOW IN NUMBER OF MOVEMENTS...

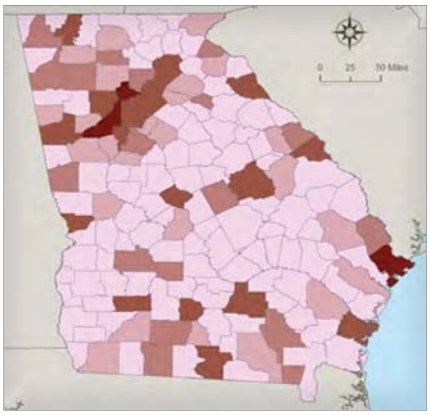
Originating in the State of Georgia (Export)



Within the State of Georgia (Intra)



Into the State of Georgia (Import)



SOURCE: IHS-GLOBAL INSIGHT INC.

LEGEND

Number of Moves

- 99 – 25,000
- 25,001 – 50,000
- 50,001 – 100,000
- 100,001 – 500,000
- 500,001 – 1,355,402

SOURCE:
IHS-GLOBAL INSIGHT INC.

Top Truck-Hauled Commodities

The tables below show the top commodity types that contributed more than 1 million tons in 2007, as classified by the federal government.

The top commodity label of *Warehouse & Distribution Center* is more accurately a grouping of commodities, or a category that describes the many finished products and goods coming and going from a distribution center. This can essentially be thought of as a secondary movement, and thus it is no surprise this grouping is top in both the import and export sides, contributing roughly 13 percent and 25 percent respectively.

Note

As mentioned previously, the commodities types being moved are of great importance. Not only does this data element help explain tonnage and value differences, but with further analysis it also allows a better understanding of these commodity-specific supply chains.

Million-Ton IMPORT Commodities	
Commodity	**Truck Tons**
Warehouse & Distribution Center	12,231,757
Primary Forest Materials	8,663,136
Potassium Or Sodium Compound	5,304,654
Broken Stone Or Riprap	4,812,130
Misc Plastic Products	3,390,530
Liquefied Gases, Coal Or Petroleum	3,270,379
Clay Ceramic Or Refrac Minerals	2,958,089
Nonmetal Minerals, Processed	2,943,060
Metallic Ores	2,569,260
Gypsum Products	2,171,327
Plywood Or Veneer	2,098,626
Petroleum Refining Products	2,092,845
Dressed Poultry, Frozen	1,936,923
Woven Carpets, Mats Or Rugs	1,717,635
Asphalt Paving Blocks Or Mix	1,609,806
Plastic Mater Or Synthetic Fibers	1,534,388
Misc Agricultural Chemicals	1,522,700
Concrete Products	1,505,644
Sugar, Refined, Cane Or Beet	1,475,691
Motor Vehicles	1,381,841
Dressed Poultry, Fresh	1,293,387
Tufted Carpets, Rugs Or Mats	1,282,842
Misc Indus Inorganic Chemicals	1,217,627
Processed Poultry Or Eggs	1,193,238
Motor Vehicle Parts Or Accessories	1,184,618
Cut Stone Or Stone Products	1,123,459
Misc Food Preparations	1,105,126
Misc Fresh Vegetables	1,012,479

SOURCE: IHS-GLOBAL INSIGHT INC.

Million-Ton EXPORT Commodities	
Commodity	Truck Tons
Warehouse & Distribution Center	22,953,918
Broken Stone Or Riprap	7,890,853
Gravel Or Sand	7,433,254
Primary Forest Materials	5,252,335
Misc. Field Crops	4,830,057
Petroleum Refining Products	3,631,798
Primary Iron Or Steel Products	2,597,768
Chem or Fertilizer Mineri Crude	1,994,207
Misc Plastic Products	1,844,712
Misc Wood Products	1,759,335
Concrete Products	1,674,352
Liquefied Gases, Coal Or Petroleum	1,656,651
Electrometallurgical Products	1,540,291
Soft Drinks Or Mineral Water	1,162,505
Metallic Ores	1,114,347
Misc Nonmetallic Minerals	1,049,007
Prepared Or Canned Feed	1,015,674

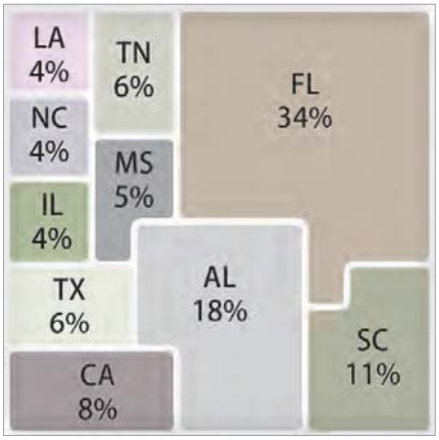
SOURCE: IHS-GLOBAL INSIGHT INC.

Georgia's ten top trading partner states contribute on average 73 percent of tonnage, dollar value and total movement of cargo flowing both into and out of Georgia.

Top Trading Partner States

Georgia sends and receives cargo from nearly every state in the nation. The ten top states are essentially trading partners with Georgia, playing significant roles in Georgia's overall trade by contributing on average, 73 percent of tonnage, dollar value and total movement of cargo flowing both into and out of Georgia.

Top 10 Truck Origins



Top 10 Truck Destinations

TOP TEN TRUCK ORIGINS

Origin	Truck Tons	Truck Value	Truck Loads	Ton %	Value %	Load %
FL	27,691,377	$46,351,536,084	2,191,192	26.03	12.03	24.76
AL	14,977,863	$35,204,973,701	1,228,699	14.08	9.14	13.88
SC	9,387,293	$26,229,874,509	1,566,687	8.82	6.81	17.70
CA	6,202,533	$53,533,643,940	339,351	5.83	13.90	3.83
TN	5,235,017	$17,181,195,710	530,780	4.92	4.46	6.00
TX	5,213,746	$20,094,024,582	242,881	4.90	5.22	2.74
MS	4,124,912	$21,117,932,235	218,501	3.88	5.48	2.47
IL	3,457,363	$16,427,196,303	177,896	3.25	4.26	2.01
NC	3,343,678	$13,662,068,937	558,073	3.14	3.55	6.31
LA	3,018,633	$8,175,096,701	148,607	2.84	2.12	1.68

TOP 10 TOTAL	82,652,415	$257,977,542.702	7,202,667	77.69	66.97	81.37
50 STATE TOTAL	106,380,868	$385,193,742,854	8,851,234			

SOURCE: IHS-GLOBAL INSIGHT INC.

TOP TEN TRUCK DESTINATIONS

Destination	Truck Tons	Truck Value	Truck Loads	Ton %	Value %	Load %
FL	18,173,961	$47,714,902,009	1,461,029	15.39	14.17	15.63
NC	12,345,276	$24,802,937,728	716,494	10.46	7.36	7.66
SC	11,537,086	$19,012,317,356	1,276,696	9.77	5.64	13.66
TN	8,640,026	$13,717,850,068	1,055,994	7.32	4.07	11.30
AL	7,451,813	$18,627,194,364	1,607,659	6.31	5.53	17.20
VA	6,070,102	$12,529,865,045	311,429	5.14	3.72	3.33
NY	5,255,603	$20,692,906,086	265,914	4.45	6.14	2.84
TX	4,206,503	$23,732,979,847	236,795	3.56	7.05	2.53
LA	4,039,827	$10,777,657,567	229,514	3.42	3.20	2.46
CA	3,904,694	$16,120,357,145	209,284	3.31	4.79	2.24

TOP 10 TOTAL	81,624,890	$207,728,967,215	7,370,808	69.13	61.68	78.84
50 STATE TOTAL	118,071,185	$336,804,786,682	9,348,563			

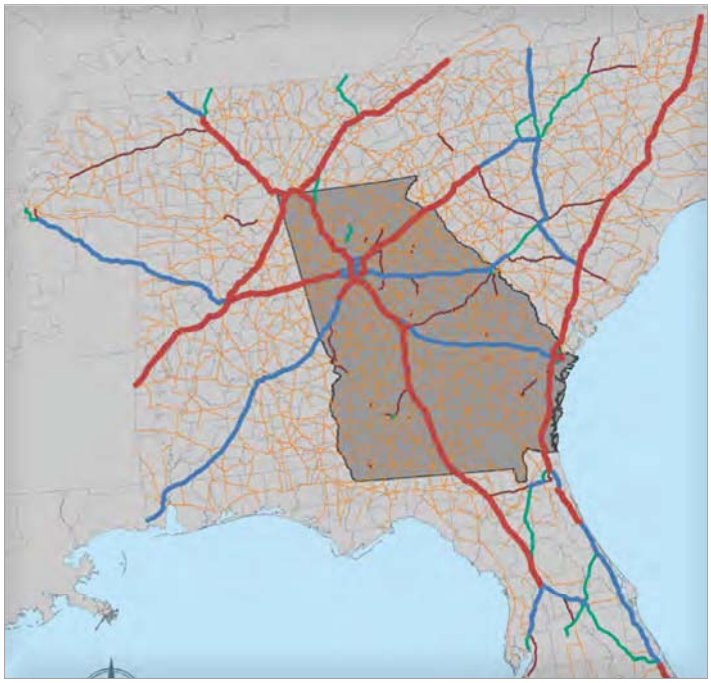
SOURCE: IHS-GLOBAL INSIGHT INC.

The Roads Most Travelled

The final level of detail for truck flow is found in exploring the likely cargo routes from point A to point B. The maps below provide this detail and demonstrate the accumulation of cargo tonnage along roads that feed together and then its dispersion as it is siphoned off in multiple directions. The maps begin with the total aggregate tonnage of all flow directions and then drill-down to show the multiple contributing factors.

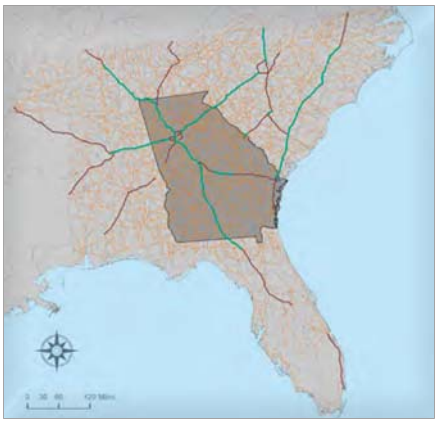
TRUCK TONNAGE FLOW, 2007

Total Tonnage Flow



Import Tonnage Flow

Export Tonnage Flow



LEGEND

Tons

- 0 – 5,000,000
- 5,000,001 – 10,000,000
- 10,000,001 – 20,000,000
- 20,000,001 – 40,000,000
- 40,000,001 – 113,555,930

SOURCE:
IHS-GLOBAL INSIGHT INC.

LEGEND

Tons

- 0 – 5,000,000
- 5,000,001 – 10,000,000
- 10,000,001 – 20,000,000
- 20,000,001 – 40,000,000
- 40,000,001 – 113,555,930

SOURCE:
IHS-GLOBAL INSIGHT INC.

Intra Tonnage Flow

Through Tonnage Flow

Top Five Import/Export State Truck Flows

The top five origin and destination states for truck hauled cargo in Georgia contribute roughly 60 percent and 50 percent of the total tonnage flowing in their respective category. Note that the following state tonnage flows are scaled the same.

LEGEND

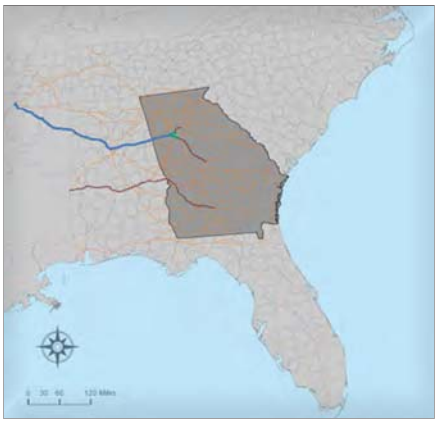
Tons

- 0 – 500,000
- 500,001 – 1,500,000
- 1,500,001 – 3,00,000
- 3,000,001 – 6,000,000
- 6,000,001 – 12,613,309

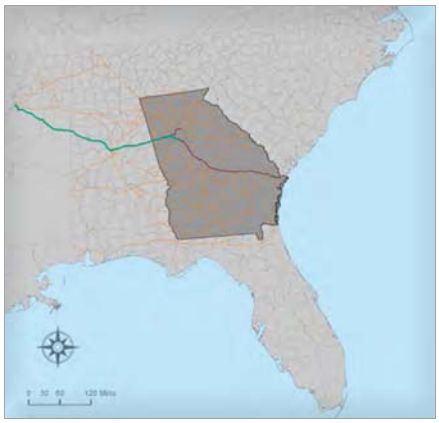
SOURCE:
IHS-GLOBAL INSIGHT INC.

CALIFORNIA

Import From



Export To



FLORIDA

Import From

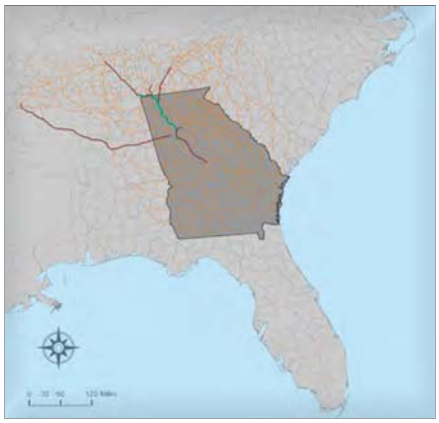
Export To

The top five tonnage origin (import) states are: Florida, Alabama, South Carolina, California and Tennessee.

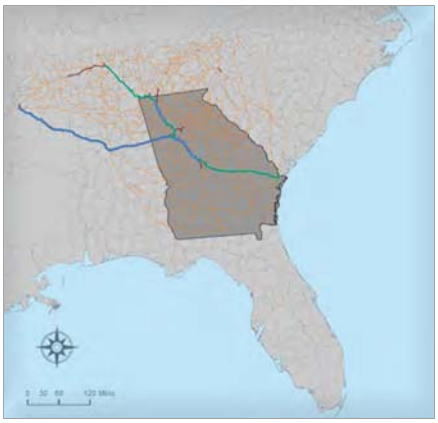
The top five tonnage destination (export) states are: Florida, North Carolina, South Carolina, Tennessee and Alabama.

TENNESSEE

Import From

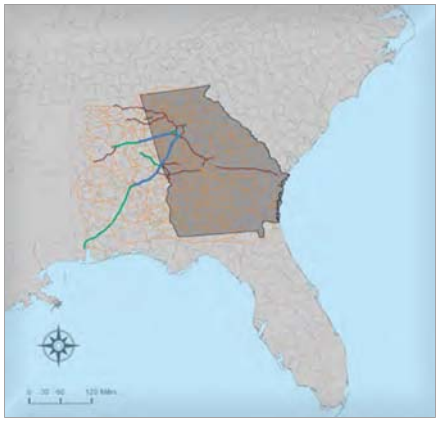


Export To



ALABAMA

Import From



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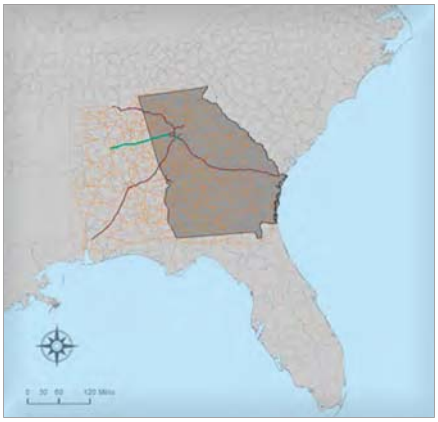


LEGEND

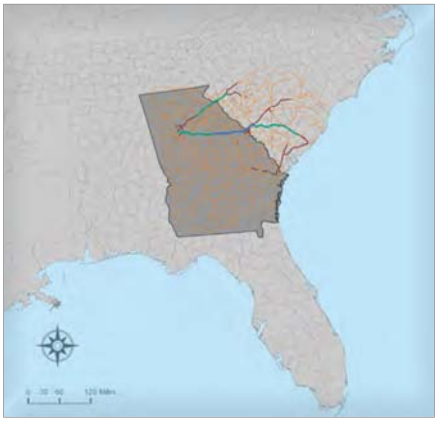
Tons

- 0 – 500,000
- 500,001 – 1,500,000
- 1,500,001 – 3,00,000
- 3,000,001 – 6,000,000
- 6,000,001 – 12,613,309

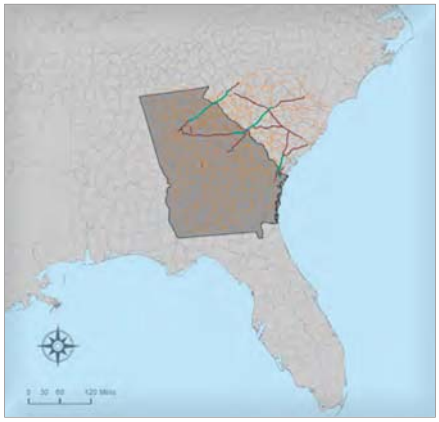
SOURCE:
IHS-GLOBAL INSIGHT INC.

SOUTH CAROLINA

Import From



Export To



NORTH CAROLINA

Export To

LEGEND

Tons

- 0 – 500,000
- 500,001 – 1,500,000
- 1,500,001 – 3,000,000
- 3,000,001 – 6,000,000
- 6,000,001 – 12,613,309

SOURCE:
IHS-GLOBAL INSIGHT INC.

DOMESTIC RAIL FREIGHT FLOW

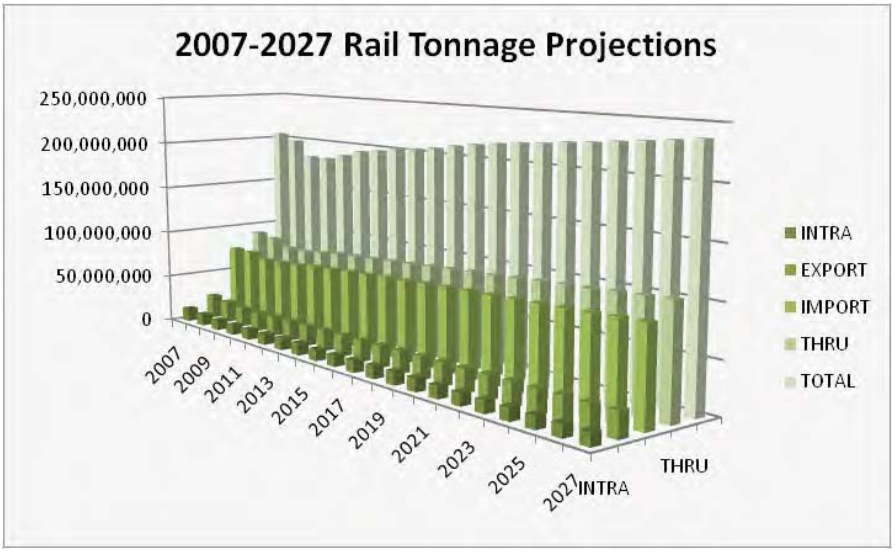
This section explores the movement of cargo via rail. Many of the details and explanations on the data structure are applicable here as well.

2007	Total Tons	Total Value	Total Units
Import	75,476,799	$50,120,112,527	1,207,260
Export	24,346,137	$26,736,299,258	619,019
Intra	13,820,339	$6,358,407,280	244,161
Through	91,161,909	$125,810,308,452	1,702,449
Total	204,805,184	$209,025,127,518	3,772,889

SOURCE: IHS-GLOBAL INSIGHT INC.

Tonnage is projected to decline roughly 11 percent from 2007 through 2009, and then begin a slight recovery in 2010. From that point, the current projections are for a 30 percent growth through 2027.

Similar to truck flow, the combination of import and export flow tonnages roughly compare to the total of cargo flowing through our State. It is also apparent that only approximately 7 percent of the rail tonnage is solely an internal Georgia move, and thus, a majority of the tonnage is either coming, going or passing through our State.



The data reflects the same current downturn as found in other modes of transport and other sectors of the nation's economy. Tonnage is projected to decline roughly 11 percent from 2007 through 2009, and then begin a slight recovery in 2010. Following the recovery, tonnage is projected to grow by 30 percent through 2027.

County Level Flow Distribution

A closer look at the counties in Georgia that comprise the overall flow shows Monroe and Bartow Counties contributing approximately 22 percent and 13 percent, respectively, of the total import tonnage. For exported rail tonnage, these top five counties collectively account for over 51 percent of the tonnage and is roughly distributed at 10 percent per county.

Million-Ton IMPORT Counties	
Destination	Tons
Monroe	16,582,405
Bartow	10,123,968
Fulton	6,946,436
Carroll	4,807,437
Chatham	4,488,478
Cobb	2,952,053
Coweta	2,881,680
Floyd	2,086,862
Hall	1,807,773
Glynn	1,288,756
Lowndes	1,283,615
DeKalb	1,089,884
Gwinnett	1,071,924
Richmond	1,058,660

Million-Ton EXPORT Counties	
Origin	Tons
Fulton	3,034,600
Talbot	2,671,927
Chatham	2,589,500
Richmond	2,138,293
Washington	2,111,620

SOURCE: IHS-GLOBAL INSIGHT INC.

With a closer look at the breakdown of the 7 percent or roughly fourteen-million tons strictly flowing inside of Georgia, it can be seen that Chatham County is included in all three types of moves. The Counties below represent the top contributors for the various movement types for 2007.

Intra-State Destinations	
County	Tons
Jones	1,833,612
Warren	1,771,806
Monroe	1,366,076
Chatham	1,137,480
Jefferson	1,034,221

Intra-State Origins	
County	Tons
Chatham	5,405,704
Glynn	1,287,812
Richmond	805,732
Wayne	743,124
Lowndes	506,836

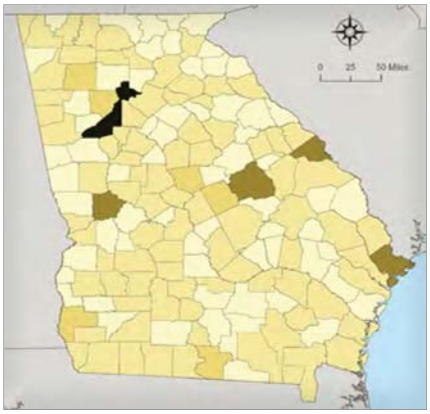
Intra-County Moves	
County	Tons
Chatham	81,740
Richmond	72,160
Wilkinson	9,880

SOURCE: IHS-GLOBAL INSIGHT INC.

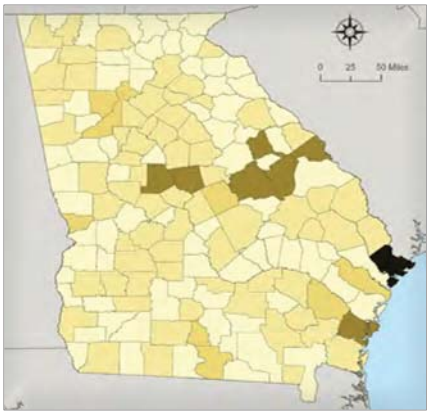
Note: The data in this table was uniquely extracted to provide a greater level of clarity and cannot be combined as it would cause double counting of the tonnage

U.S. RAIL FLOW IN TONS...

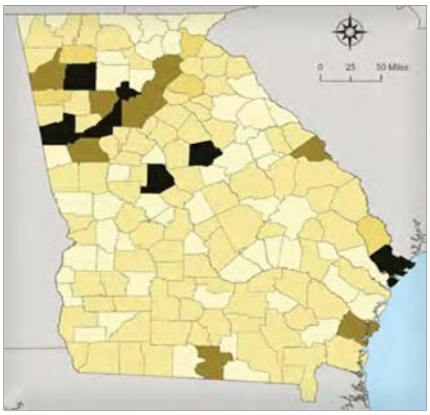
Originating in the State of Georgia (Export)



Within the State of Georgia (Intra)



Into the State of Georgia (Import)



LEGEND

Tons

- 0
- 1 – 500,000
- 500,001 – 1,000,000
- 1,000,001 – 3,000,000
- 3,000,001 – 16,582,406

SOURCE:
IHS-GLOBAL INSIGHT INC.

U.S. RAIL FLOW IN VALUE (U.S. DOLLARS)...

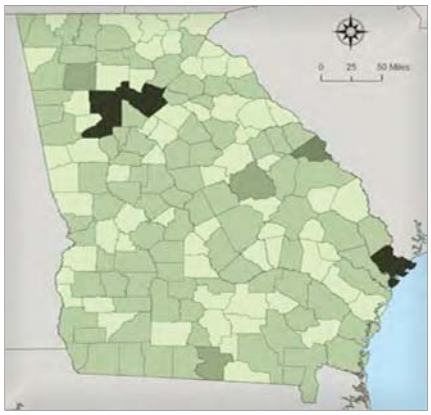
LEGEND

U.S. Dollars

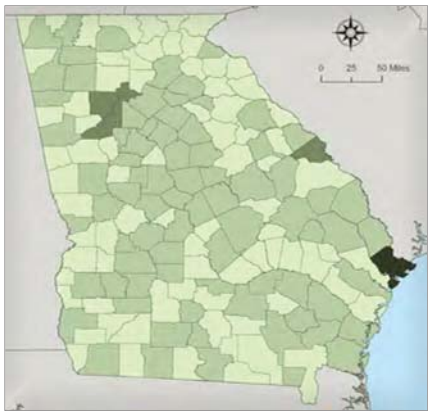
- 0
- 1 – 500,000,000
- 500,000,001 – 1,000,000,000
- 1,000,000,001 – 2,000,000,000
- 2,000,000,001 – 16,034,834,760

SOURCE:
IHS-GLOBAL INSIGHT INC.

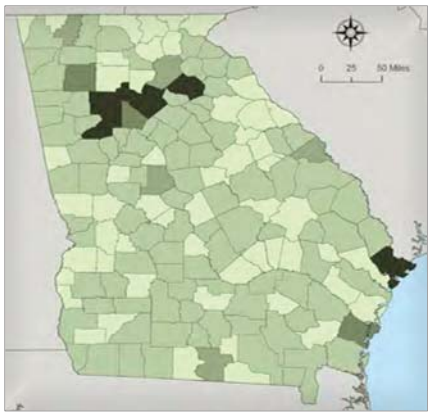
Originating in the State of Georgia (Export)



Within the State of Georgia (Intra)

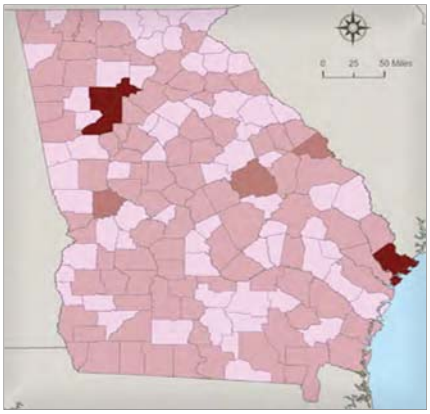


Into the State of Georgia (Import)

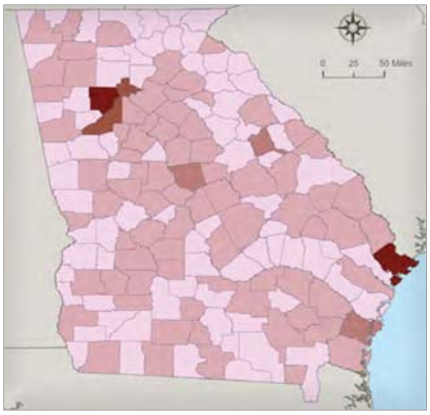


U.S. RAIL FLOW IN NUMBER OF MOVEMENTS...

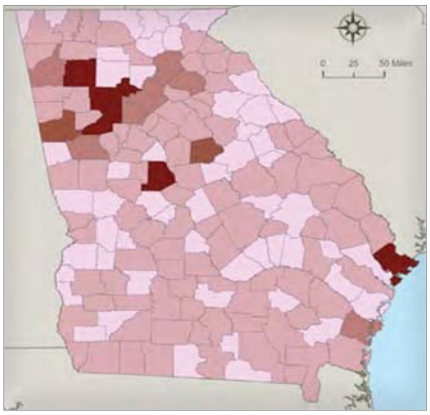
Originating in the State of Georgia (Export)



Within the State of Georgia (Intra)



Into the State of Georgia (Import)



LEGEND

Number of Moves

- 0
- 1 – 15,000
- 15,001 – 30,000
- 30,001 – 60,000
- 60,001 – 294,812

SOURCE:
IHS-GLOBAL INSIGHT INC.

Top Rail-Hauled Commodities

Analysis of the commodities flowing via rail reveals that close to 54 percent of the import tonnage is coal and another 7 percent are grain products. On the export side, the data shows a combined 34 percent is involved with bulk stone and processed mineral type materials.

Top Rail-Hauled Commodities

The third listed commodity for both imports and exports is FAK shipments, which stands for Freight All Kinds and is primarily attributed to intermodal movements.

2007 Half-Million Ton Georgia Commodities

Coming Into Georgia (IMPORT)	
Commodity	**Rail Tons**
Bituminous Coal	40,921,481
Grain	5,265,532
FAK Shipments	3,877,640
Portland Cement	1,911,680
Plastic Mat Or Synth Fibers	1,903,536
Oil Kernels Nuts Or Seeds	1,800,243
Soybean Oil Or By-Products	1,569,789
Nonmetal Minerals Processed	1,096,748
Fiber Paper Or Pulp board	1,057,840
Motor Vehicles	1,031,120
Pulp Or Pulp Mill Products	983,720
Wet Corn Milling Or Milo	753,316
Semi-trailers Returned Empty	728,840
Corrosive Materials	715,840
Gravel Or Sand	700,644
Primary Iron Or Steel Products	692,596
Potassium Or Sodium Compound	594,732

Leaving Georgia (EXPORT)	
Commodity	**Rail Tons**
Broken Stone Or Riprap	4,579,455
Nonmetal Minerals Processed	3,744,560
FAK Shipments	2,610,720
Fiber Paper Or Pulp Board	2,046,080
Metal Scrap Or Tailings	1,367,952
Primary Forest Materials	1,177,628
Semi-trailers Returned Empty	522,720
Oxidizing Materials	515,920

SOURCE: IHS-GLOBAL INSIGHT INC.

Top Rail Trading Partner States

Top 10 Rail Origins

Top 10 Rail Destinations

TOP TEN RAIL CARGO ORIGINS

State	Rail Tons	Value	Units	Ton %	Value %	Unit %
TN	19,704,027	7,474,083,384	266,577	26.11	14.91	22.08
KY	16,230,525	3,741,908,284	158,641	21.50	7.47	13.14
VA	6,270,025	419,095,377	57,274	8.31	0.84	4.74
AL	6,262,014	5,905,530,256	129,532	8.30	11.78	10.73
IN	4,575,299	2,102,239,384	51,405	6.06	4.19	4.26
IL	4,218,521	5,199,990,951	98,982	5.59	10.38	8.20
LA	3,226,488	7,202,133,402	85,744	4.27	14.37	7.10
SC	2,446,604	1,798,152,107	38,136	3.24	3.59	3.16
FL	1,755,000	1,274,739,400	63,672	2.33	2.54	5.27
OH	1,748,827	2,571,322,226	30,334	2.32	5.13	2.51

TOP 10 TOTAL	64,688,503	$35,117,872,544	949,963	85.71	70.07	78.69
50 STATE TOTAL	75,476,799	50,120,112,527	1,207,260			

SOURCE: IHS-GLOBAL INSIGHT INC.

TOP TEN RAIL CARGO DESTINATIONS

State	Rail Tons	Value	Units	Ton %	Value %	Unit %
FL	6,269,576	$3,576,783,480	106,475	25.75	13.38	17.20
AL	2,673,984	$2,408,255,555	78,752	10.98	9.01	12.72
SC	1,562,700	$1,617,597,142	41,432	6.42	6.05	6.69
TN	1,355,624	$2,225,768,323	52,184	5.57	8.32	8.43
IL	1,173,410	$3,126,211,922	66,448	4.82	11.69	10.73
LA	1,168,132	$2,089,900,243	46,453	4.80	7.82	7.50
NC	1,093,852	$821,696,647	20,436	4.49	3.07	3.30
TX	906,368	$1,425,108,534	30,124	3.72	5.33	4.87
VA	761,692	$432,725,230	10,172	3.13	1.62	1.64
PA	752,148	$1,061,817,659	29,556	3.09	3.97	4.77

TOP 10 TOTAL	17,717,486	$18,785,864,735	482,032	72.77%	70.26%	77.87%
50 STATE TOTAL	24,346,137	$26,736,299,258	619,019			

SOURCE: IHS-GLOBAL INSIGHT INC.

The Tracks Most Travelled

The final level of detail for rail tonnage flow is found in exploring the likely cargo routes from point A to point B. The maps below provide this detail and demonstrate the accumulation of cargo tonnage along routes that feed together and then its dispersion as it is siphoned off in multilple directions. The maps begin with the total aggregate tonnage of all flow directions and then drill-down to show the multiple contributing factors.

LEGEND

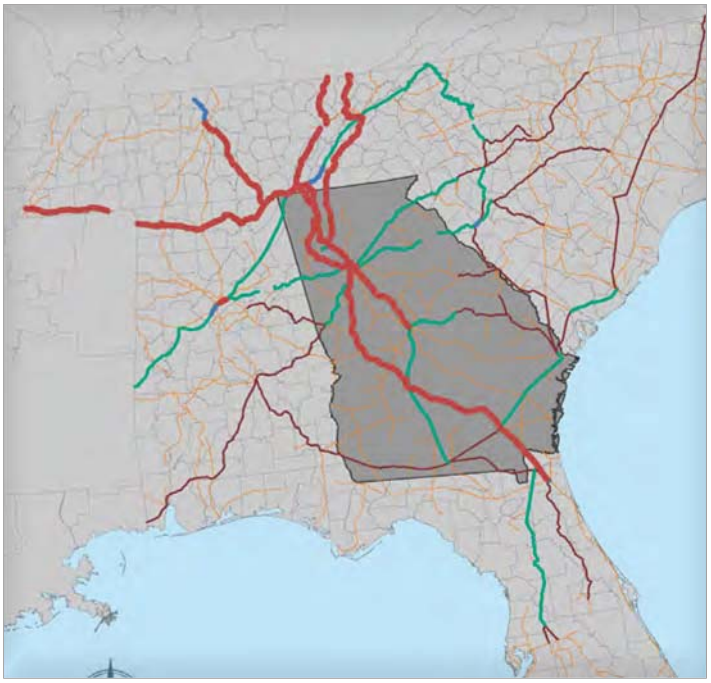
Tons

- 2,120 – 5,000,000
- 5,000,001 – 10,000,000
- 10,000,001 – 15,000,000
- 15,000,001 – 20,000,000
- 20,000,001 – 51,511,722

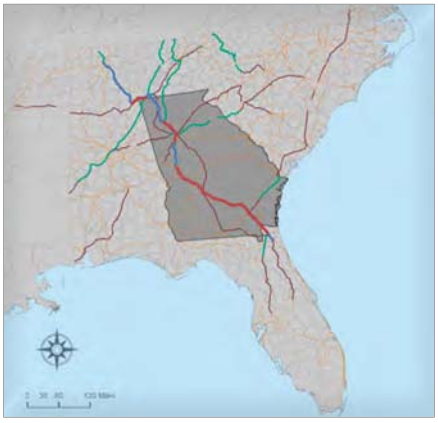
SOURCE:
IHS-GLOBAL INSIGHT INC.

RAIL TONNAGE FLOW, 2007

Total Tonnage Flow

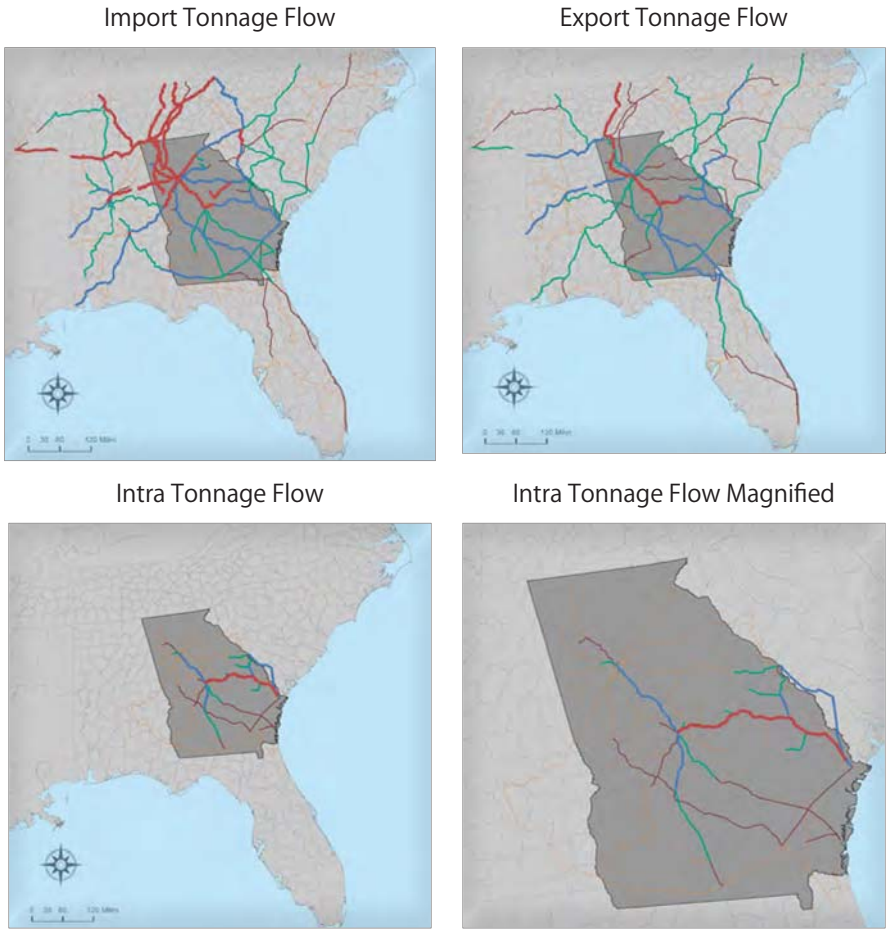


Through Tonnage Flow



NOTE:
The maps shown here for the total and through tonnage are on a different scale than that used for import, export, and intra-Georgia rail freight flow.

This situation was avoided whenever possible, but proved necessary here in order to show a better representation of the distribution of rail cargo flow.



LEGEND

Tons

- 2,120 – 250,000
- 250,001 – 500,000
- 500,001 – 1,500,000
- 1,500,001 – 3,000,000
- 3,000,001 – 34,074,563

SOURCE:
IHS-GLOBAL INSIGHT INC.

Top Five Import/Export State Rail Flows

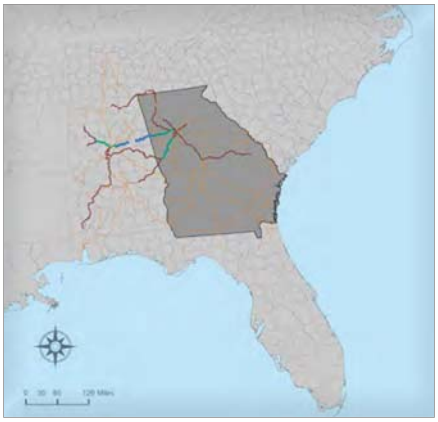
The top five origin and destination states for rail cargo in Georgia contribute roughly 70 percent and 50 percent of the total tonnage flowing in their respective category.

The top five origin states (in order of tonnage) are: TN, KY, VA, AL and IN.

The top five destination states for Georgia rail cargo are (in order of tonnage): FL, AL, SC, TN, IL.

ALABAMA

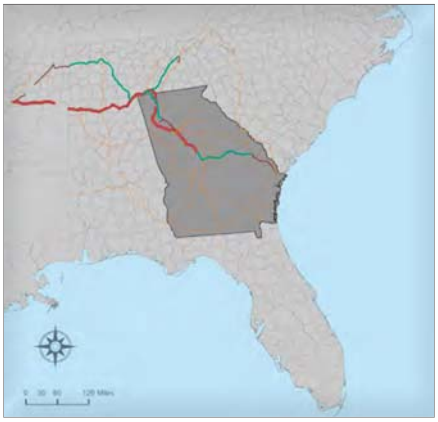
Import From



Export To

TENNESSEE

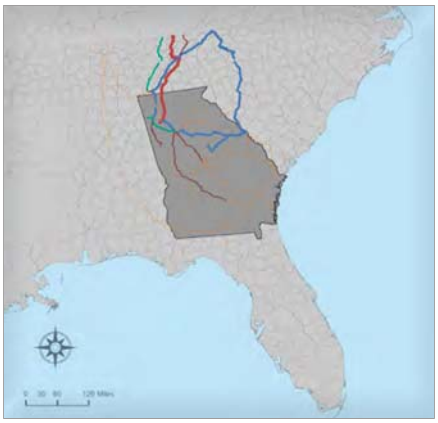
Import From



Export To

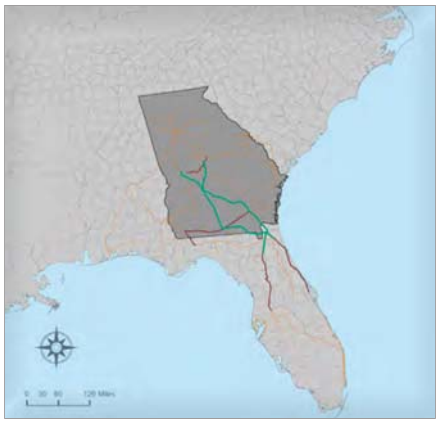
KENTUCKY

Import From



FLORIDA

Export To



LEGEND

Tons

- 0 – 250,000
- 250,001 – 500,000
- 500,001 – 1,000,000
- 1,000,001 – 5,000,000
- 5,000,001 – 18,510,627

SOURCE:
IHS-GLOBAL INSIGHT INC.

VIRGINIA

Import From

SOUTH CAROLINA

Export To

INDIANA

Import From

ILLINOIS

Export To

LEGEND

Tons

- 0 – 250,000
- 250,001 – 500,000
- 500,001 – 1,000,000
- 1,000,001 – 5,000,000
- 5,000,001 – 18,510,627

SOURCE:
IHS-GLOBAL INSIGHT INC.

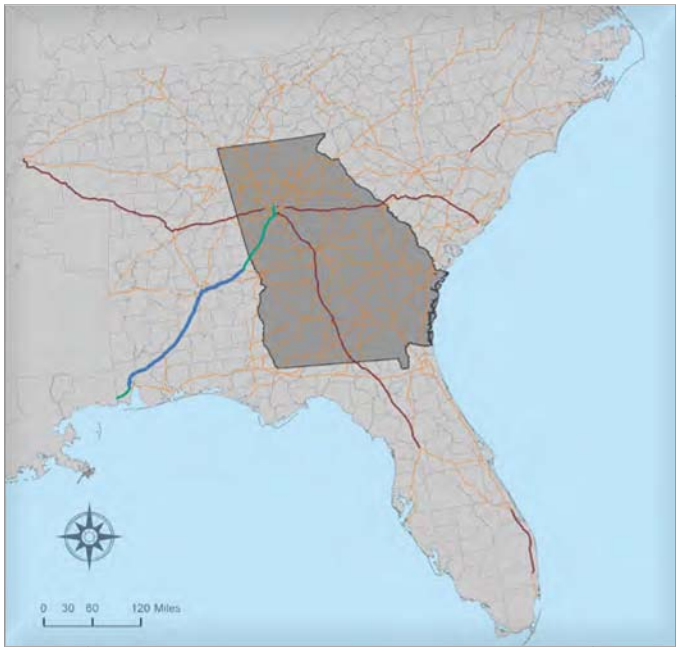
FREIGHT OPPORTUNITIES - APPLYING THE DATA

International Cargo Connections: Georgia's Import Opportunity

The following displays cargo destined for Georgia that entered the U.S. from ports outside of the state. This primarily includes water borne cargo, but may also include potential air cargo. While the total amount of cargo falling into this category in relatively small (less than 1 percent of overall tonnage and value), this still presents an opportunity for growth.

INTERNATIONAL CARGO FLOW ROUTES IN TRUCK TONS

IMPORT TONNAGE FLOW



LEGEND

Tons

- 500 – 250,000
- 250,001 – 500,000
- 500,001 – 1,000,000
- 1,000,001 – 2,000,000
- 2,000,001 – 4,196,471

SOURCE:
IHS-GLOBAL INSIGHT INC.

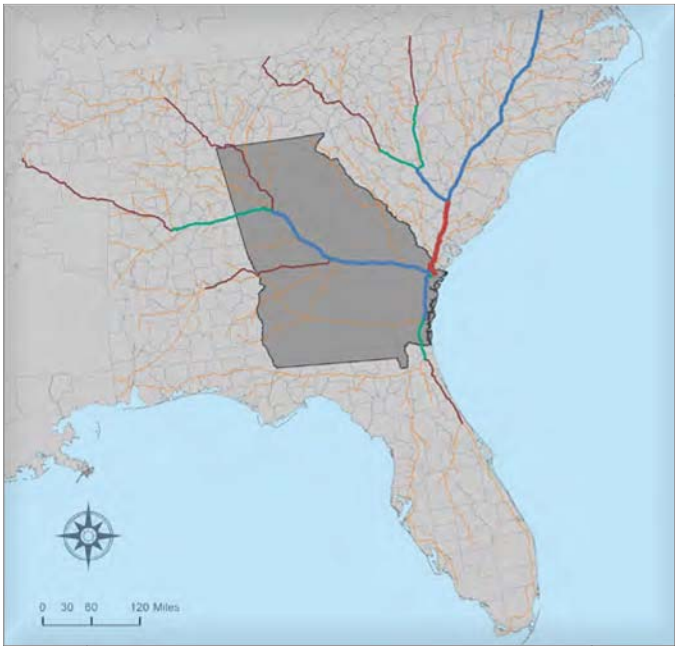
Top Origins (approx.)	Tons
Biloxi, MS	567,368
Charleston, SC	409,687
Los Angeles, CA	321,001
Mobile, AL	319,479
Houston, TX	276,192
Jacksonville, FL	237,054
Wilmington, NC	205,633
Fort Lauderdale, FL	153,801
Miami, FL	106,244
New Orleans, LA	97,065
Philadelphia, PA	80,140
San Francisco, CA	54,145

International Cargo Connections: Georgia's Export Opportunity

Very similar to the import opportunity above, Georgia has freight originating here but then leaving the U.S. from elsewhere. This primarily includes water borne cargo, but also may include some air cargo. The grand total of all cargo falling into this category constitutes less than 1 percent of both total overall tonnage (0.75 percent) and value (0.79 percent) flowing and four percent of exported cargo.

INTERNATIONAL CARGO FLOW ROUTES IN TRUCK TONS

EXPORT TONNAGE FLOW



LEGEND

Tons

- 500 – 250,000
- 250,001 – 500,000
- 500,001 – 1,000,000
- 1,000,001 – 2,000,000
- 2,000,001 – 4,196,471

SOURCE:
IHS-GLOBAL INSIGHT INC.

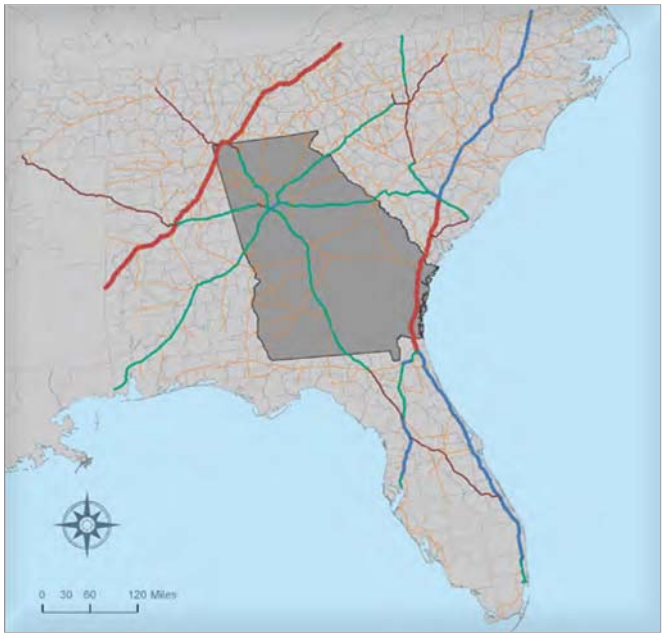
Top Destinations (approx.)	Tons
New York, NY	287,644
Jacksonville, FL	194,937
Miami, FL	190,975
Charlotte, NC	147,206
Los Angeles, CA	132,546
Charleston, SC	124,715
Memphis, TN	122,647
Birmingham, AL	121,818
Cleveland, OH	101,891
New Orleans, LA	99,919
San Francisco, CA	89,929
Dallas, TX	83,179

Georgia's "Corner-Store" Location

Georgia has become a crossroad of cargo flow due to its advantageous geographic position: much international cargo with an origination and destination outside of Georgia passes through the state en route. The total cargo in this category constitutes a little more than 1 percent of total overall tonnage and 4 percent of cargo flowing through the state.

INTERNATIONAL CARGO FLOW ROUTES IN TRUCK TONS

THROUGH TONNAGE FLOW



LEGEND

Tons

- 500 – 250,000
- 250,001 – 500,000
- 500,001 – 1,000,000
- 1,000,001 – 2,000,000
- 2,000,001 – 4,196,471

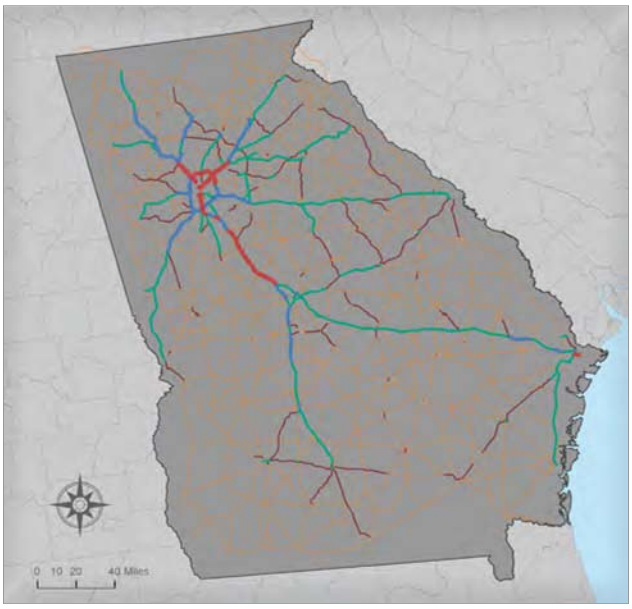
SOURCE:
IHS-GLOBAL INSIGHT INC.

Top Origins (approx.)	Top Destination States	Tons
Houston, TX	NJ, MD, NH, DE, NY, MA	1,526,805
Charleston, SC	CA, TX, FL, AL	820,097
Miami, FL	PA, NC, SC, MA, NJ	691,530
Tampa, FL	NY, MD, NJ, MA, VA	671,866
Fort Lauderdale, FL	NY, NJ, SC	656,814
New Orleans, LA	NY, NJ, CT, MD	561,507
New Jersey	TX, FL, LA, AL, MS	437,546
Baton Rouge, LA	NJ. NY, CT, MD	407,523
Manatee County, FL	NY, IL, MA, NJ, OH	218,932
Biloxi, MS	NY. CT, MA, NJ, MD	217,586
Mobile, AL	CT, MD, NJ, NC, TN	207,247
Los Angeles, CA	SC, TN	175,550
Wilmington, NC	TX, CA, FL	118,780
Baltimore, MD	TX, FL, LA, AL	105,000
Norfolk, VA	TX, FL, AL	104,777

Air: The Most Expensive Item to Ship

It is said that air is the most expensive item to ship, as empty movements are inefficient and costly. Intrastate empty truck movements totaled 12.6 million in 2007, or approximately 51 percent of all intrastate truck movements. The majority of empty movements are localized within a few counties' radius of the origin.

EMPTY TRUCK MOVEMENTS, 2007: INTRASTATE



LEGEND

Tons

- 500 – 50,000
- 50,001 – 100,000
- 100,001 – 300,000
- 300,000 – 600,000
- 600,001 – 1,880,172

SOURCE:
IHS-GLOBAL INSIGHT INC.

Top Destinations

	#1	#2	#3	#4	#5
Origin	**Fulton**	**Chatham**	**Cobb**	**DeKalb**	**Gwinett**
#1	Fulton	Chatham	Fulton	Fulton	Fulton
#2	Gwinnett	Effingham	Cobb	Gwinnett	Gwinnett
#3	DeKalb	Glynn	DeKalb	DeKalb	DeKalb
#4	Cobb	Bulloch	Gwinnett	Cobb	Cobb
#5	Clayton	Liberty	Pickens	Clayton	Forsyth
Total	3,062,654	1,040,383	845,858	757,190	611,095

Top Destinations

	#6	#7	#8	#9	#10
Origin	**Cherokee**	**Hall**	**Bibb**	**Carroll**	**Tift**
#1	Pickens	Fulton	Bibb	Fulton	Tift
#2	Fulton	Hall	Fulton	Cobb	Dougherty
#3	Cobb	Elbert	Chatham	Carroll	Chatham
#4	Forsyth	Forsyth	Houston	DeKalb	Colquitt
#5	Bartow	Gwinnett	Washington	Gwinnett	Turner
Total	388,063	289,749	222,682	207,913	206,982

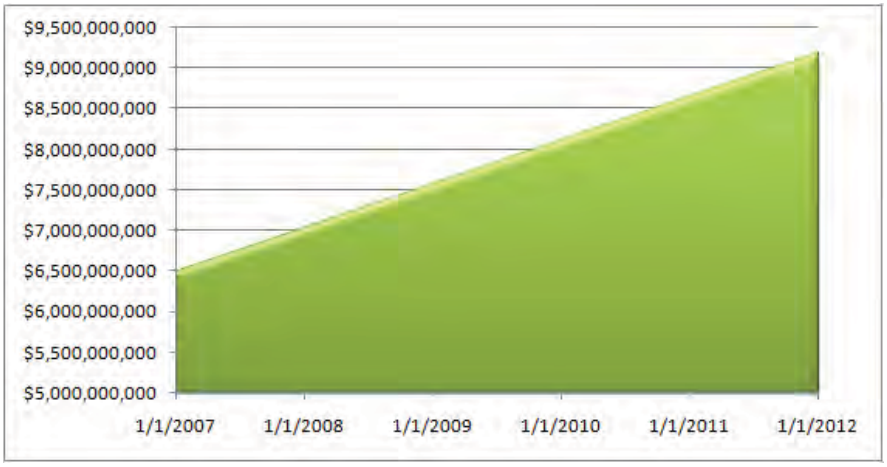
9 Innovation in Logistics

GROWTH OF THE LOGISTICS TECHNOLOGY INDUSTRY

The market for SCM technology will grow from $6.5 billion in 2007 to nearly $9.2 billion in 2012.

THE PROJECTED COMPOUNDED annual growth rate for supply chain management (SCM) technology is 7 percent from 2007 through 2012 based on a current AMR Research report. The market for SCM technology will grow from $6.5 billion in 2007 to nearly $9.2 billion in 2012. This growth rate is likely to be driven by the difficult economic challenges of the future that will offer opportunities for SCM technology to be adopted. These economic challenges include: high inflation, rising commodity prices, threats to brand security, and cash preservation.

PROJECTED INDUSTRY GROWTH, 2007-2012



In a recent survey by *Logistics Management,* roughly 60 percent of the participants acknowledged that their investments in SCM technology would remain at current levels, with 21 percent saying that they would increase. The major reasons given for increases were the need for improved visibility to customers, increased delivery speeds, and more updated tools and processes. The survey also notes that the three most appealing areas of SCM are inventory optimization with 48 percent, warehouse management systems with 42 percent, and demand planning with 40 percent.[1]

1 Source: Jeff Berman, Group News Editor, Logistic Management, 2/1/2009

LOGISTICS TECHNOLOGY REPORT: NORTH AMERICA

The following was extracted from the 2008 EyeForTransport Logistics Technology Report: http://events.eyefortransport.com/logisticstechusa/report.shtml

For Reference

WMS
Warehouse Management Systems

TMS
Traffic Management Systems

YMS
Yard Management Systems

ERP
Enterprise Resource Planning

MRP
Material Requirement Planning

IT
Information Technology

RFID
Radio Frequency Identification

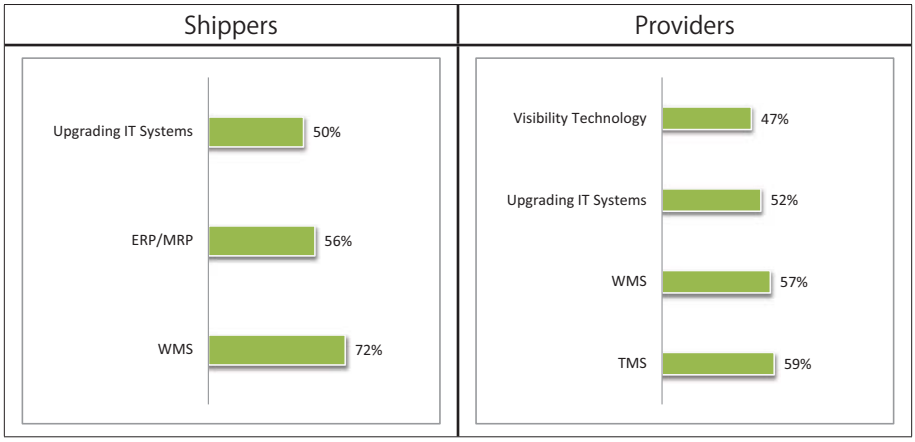
THIS REPORT, RELEASED November 20th, 2008, summarizes the insights of over 300 supply chain and logistics industry executives from companies including Agility Logistics, IBM, FedEx, Apple, Penske and Maersk Logistics. Their responses provide an interesting perspective on the use of IT and technology for supply chains in the current climate and provide insight into potential future trends.

Executives agreed almost unanimously (97 percent) that the economic crisis was having a negative effect on their business. Despite this, 83 percent of shippers and 73 percent of transport and logistics providers are confident that their business will see growth next year. Executives' predictions about business growth are closely tied to their plans for technology investment next year: 63 percent of companies who do expect to see growth next year also plan to increase their investment in technology services and solutions, compared with only 23 percent of companies who do not expect to see growth.

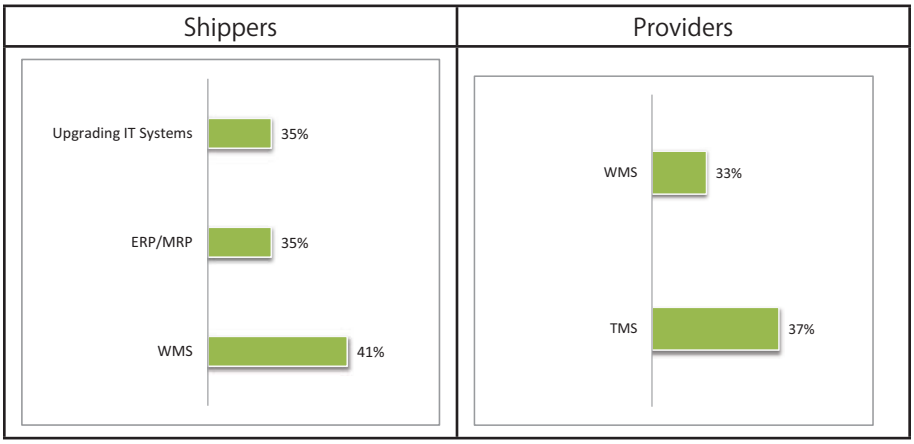
Rating the Logistics Technologies

Note: Respondents could select multiple answers

MOST USED TECHNOLOGIES

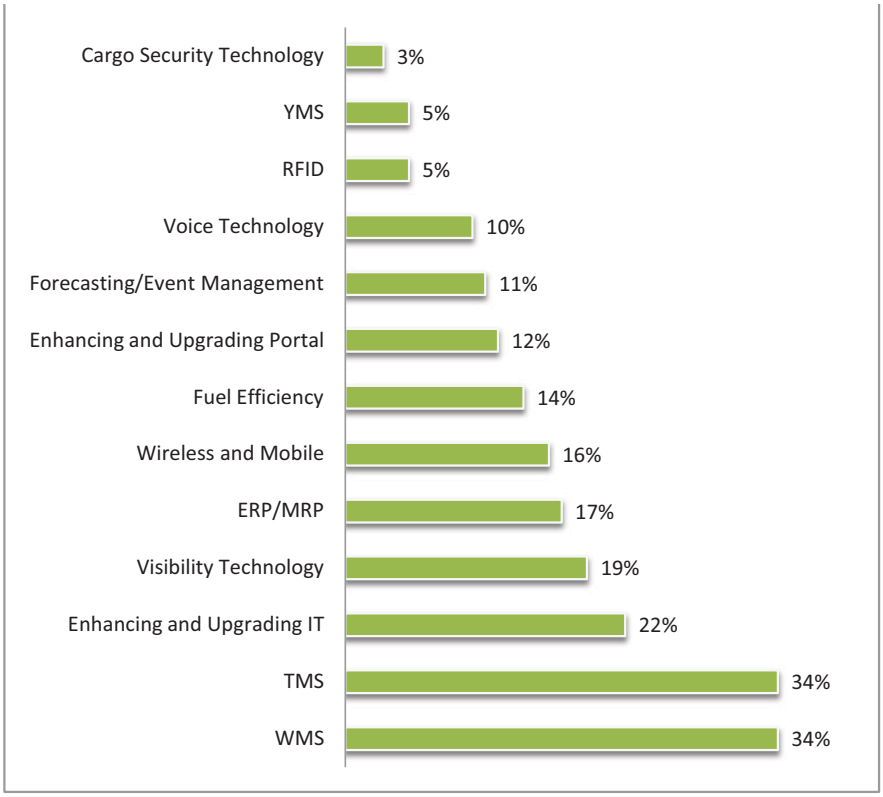


BEST ROI TECHNOLOGIES

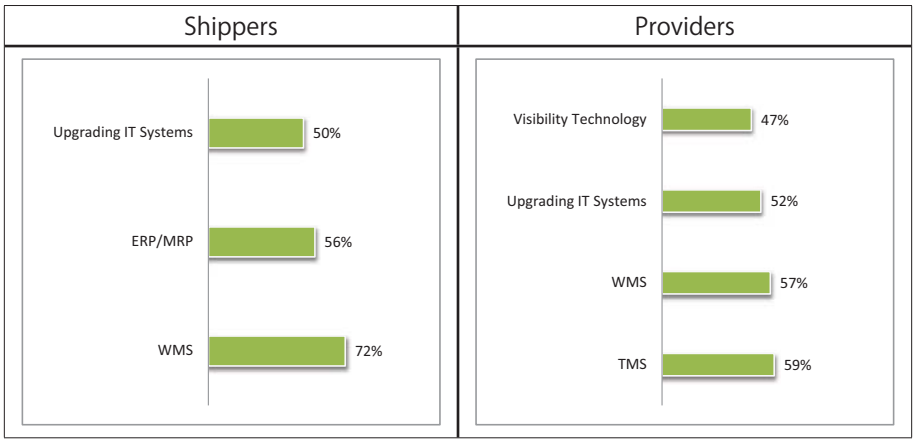


The complete combined results for best ROI are below. As the graph shows, the combined winners for best return on investment were WMS and TMS with Enhancing & Upgrading IT Solutions also gaining a strong portion of the vote.

BEST ROI RESULTS COMBINED

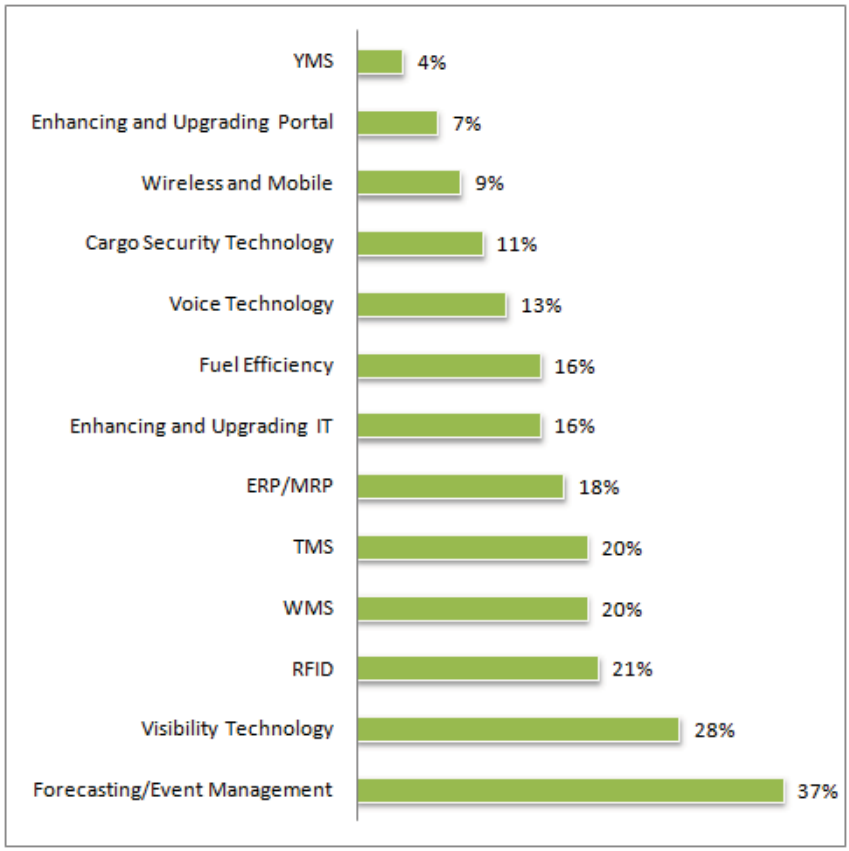


TECHNOLOGIES MOST IN NEED OF IMPROVEMENT



The combined votes for technologies needing the most improvement are below. As the graph shows, executives think Forecasting & Event Management technologies need the most improvement, with Visibility Technology gaining the next highest amount of combined votes.

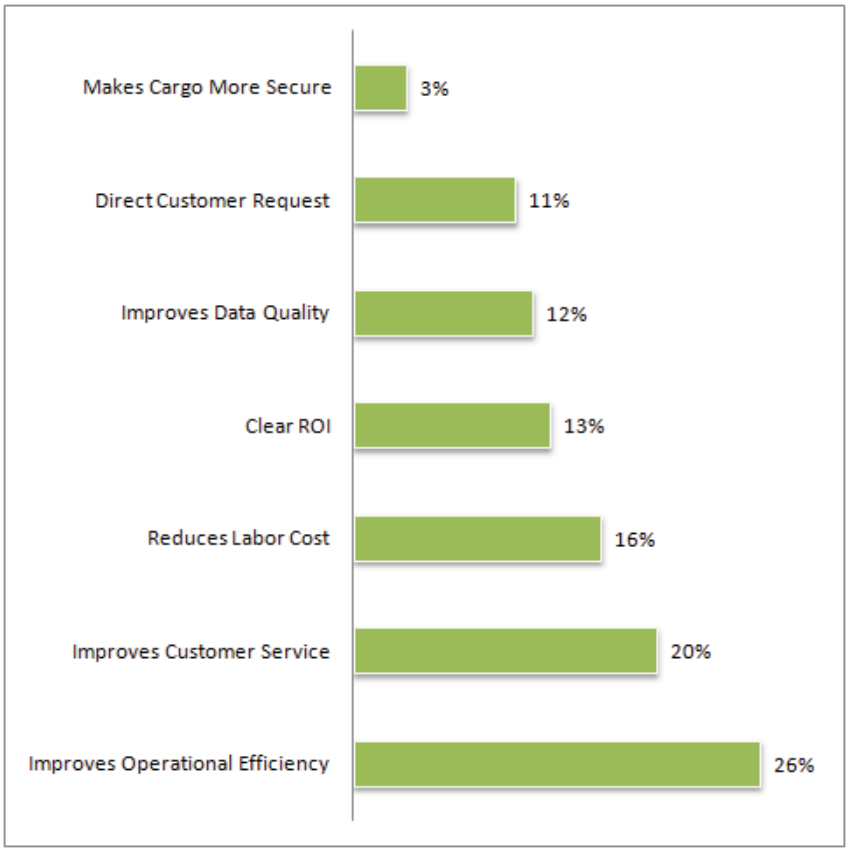
TECHNOLOGIES MOST IN NEED OF IMPROVEMENT COMBINED



Motivating Technology Decisions

Although ROI is a quick and easy measure of a technology product's effectiveness, it is by no means the primary deciding factor for executives making technology and IT investments. When asked which factors matter most, executives responded as follows

DECISION MAKING FACTORS



10 Industry Collaboration

GEORGIA CENTER OF INNOVATION FOR LOGISTICS

LOGISTICS.GEORGIAINNOVATION.ORG

The Center of Innovation for Logistics is Georgia's leading resource for accelerating logistics growth and competitiveness in the state. The innovation center team connects and works directly with all logistics sectors to identify common problems and innovative solutions. The result is a competitive edge for Georgia companies gained through access to applied university research, product commercialization and matching grant funds. Enhanced by the collaboration of technology firms and academia, the center provides connections and resources to address the constant challenges of "The 3 V's of Logistics: Volume, Velocity and Visibility."

ATLANTA AIR CARGO ASSOCIATION (AACA)

ATLANTAAIRCARGO.COM

The Air Cargo Association is a forum comprised of representatives of several of Atlanta's air cargo firms including Certified Air Carriers, Air Freight Forwarders, IATA Agents, Air/Truck Motor Carriers, ACI Pickup & Delivery Contractors, Customs Brokers, Warehouse Operators, and Allied Services.

METRO ATLANTA CHAMBER LOGISTICS COUNCIL

LOGISTICSATLANTA.COM

In 2003, the Metro Atlanta Chamber established a logistics cluster economic development initiative and the Atlanta Logistics Innovation Council to attract, grow and retain high value logistics industry companies and jobs. Since 2003, the Chamber recruited companies that created more than 6,000 logistics jobs and helped establish direct air cargo service with China. The Atlanta Logistics Innovation Council won an international best-practice award from the International Economic Development Council (IEDC) in 2006 for its strategy to grow this sector. For more information visit www.LogisticsAtlanta.com.

GEORGIA MOTOR TRUCKING ASSOCIATION (GMTA)

GMTA.ORG

The Georgia Motor Trucking Association is the only organization in the state that provides full-time service and representation for the trucking industry. The Association serves as the "voice" of the trucking industry in Georgia. The mission of the Georgia Motor Trucking Association is to work to make Georgia the best state in the nation in which to base and operate a trucking company.

GEORGIA RAILROAD ASSOCIATION (GRA)

GEORGIARAILROAD.ORG

The Georgia Railroad Association is a voluntary organization dedicated to delivering the railroad industry message to public officials, to participating in public debate of public policy issues affecting the industry and to providing information to state and public officials. GRA supports safe transportation, economic development and private enterprises. GRA provides a forum for Georgia railroads to share information and to promote knowledge and understanding of the role of railroads in the safe, efficient and economic freight transportation of goods.

INTERNATIONAL FREIGHT FORWARDERS AND CUSTOMS HOUSE BROKERS ASSOCIATION OF ATLANTA (IFFCHBA)

Independent Freight Forwarders and Customs House Brokers Association of Atlanta. The IFFCHBA is an affiliate member of the NCBFAA. The IFFCHBA meets monthly to address the current issues faced by the international transportation industry.

SAVANNAH MARITIME ASSOCIATION (SMA)

SAVANNAHMARITIME.COM

The Savannah Maritime Association is a partnership of maritime-related companies dedicated to the development and safety of our port. The SMA strives to foster cooperation and the exchange of information in order to achieve common goals. The SMA works for the common benefit of all participants in Georgia's Ports, Federal, State, City, Commercial and Community organizations. SMA identifies and achieves common goals and objectives for the Maritime Community.

ATLANTA MARITIME ASSOCIATION (AMA)

ATLMARITIME.ORG

The mission of the Atlanta Maritime Association is to serve Atlanta's regional international ocean cargo community by offering industry-specific educational events, networking opportunities, and discussion forums which foster growth and excellence. The AMA is a non-profit organization with volunteer leadership. AMA members consist of more than 100 firms and organizations - containerized, bulk, and break-bulk ocean cargo carriers, customs house brokers, freight forwarders, motor carriers, NVOCCs, port authorities, warehousing operations, consultants, and other allied services.

ATLANTA CHAPTER OF THE COUNCIL OF SUPPLY CHAIN MANAGEMENT PROFESSIONALS (CSCMP)

ATLANTACSCMP.ORG

SAVANNAH CHAPTER OF THE COUNCIL OF SUPPLY CHAIN MANAGEMENT PROFESSIONALS (CSCMP)

The Council of Supply Chain Management Professionals is the preeminent worldwide professional association of supply chain management professionals. The mission of both the Atlanta and Savannah Chapters of CSCMP is to provide educational, career development, and networking opportunities to individuals involved in supply chain management.

GEORGIA ECONOMIC DEVELOPER ASSOCIATION (GEDA)

GEDA.ORG

The Georgia Economic Developers Association is a non-profit association of professionals and volunteers who are involved with the economic development of the cities and counties of Georgia. GEDA was organized to increase the effectiveness of individuals involved in the practice of economic development in Georgia by encouraging cooperation, exchange of information, and upgrading of professional skills.

INTERNATIONAL WAREHOUSE AND LOGISTICS ASSOCIATION (IWLA)

IWLA.COM

IWLA is a trade association of warehouse logistics providers that helps members run high-quality, profitable businesses. IWLA focuses on the warehouse logistics business, providing ideas and information that make it easier for member companies to succeed.