

## CASE STUDY

# GREENSBORO PIEDMONT TRIAD INTERNATIONAL AIRPORT – EXPANDING TRAFFIC IN THE SHADOW OF LARGER REGIONS

The Piedmont Triad Region (the Region or the Triad) in north central North Carolina encompasses twelve counties and is anchored by three cities: Greensboro, Winston-Salem, and High Point. That area's Combined Statistical Area (CSA) is the 33<sup>rd</sup> largest in the country. Greensboro, with a 2019 estimated population of nearly 300,000, is the largest of the three cities. The region's economy has long been oriented around transportation, as railroads developed in the area before the Civil War to link central North Carolina to points west and south. It is also a region with a concentration of manufacturing.

Home to approximately 1.7 million, the Region is served by Piedmont Triad International Airport (GSO or the airport). To the south is the larger Greater Charlotte area, home of nearly 2.8 million and the location of one of American Airlines' hubs at Charlotte Douglas International Airport (CLT). To the east is the Raleigh-Durham area with a population of about 2.1 million and home of the state's capital and the Research Triangle Park, served by Raleigh-Durham International Airport (RDU). GSO is the third largest airport in North Carolina after CLT and RDU in terms of passenger traffic.

The region is included as a case study to demonstrate how shadow airports competing for market share of passenger traffic can still achieve economic growth and contribute to regional economic objectives such as growing and developing the workforce.

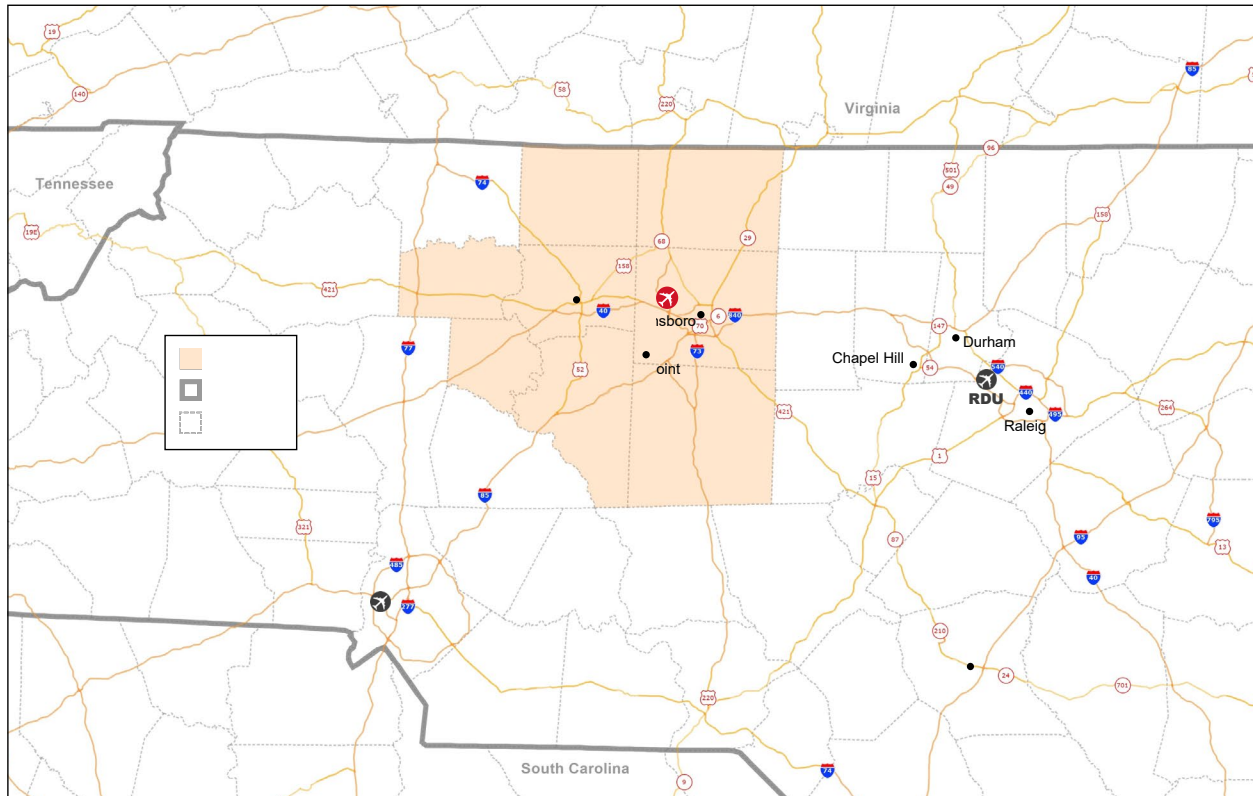
### [Introduction to the Region and Its Economy](#)

The Region's economy has changed significantly over time. As recently as the middle of the 1900s, the region's economy was centered largely on tobacco, textiles, and furniture. Since then, it has evolved to a blend of trade, manufacturing and service businesses as well as its universities and colleges. Local industry is characterized by the production of a wide range of products, including aircraft, machinery, electronics equipment, textiles, apparel and tobacco, and expansion in the aircraft maintenance, transportation and financial services industries.

The continued evolution of the region's economy is marked by the presence of a wide variety of specialized business sectors including aerospace and aviation, automotive and heavy truck manufacturing, biomedical and life sciences, tech and entrepreneurship, and logistics. Between 2014 and 2019, employment in the aerospace sector grew by 40%, while the automotive industry workforce increased by 30%. The region is positioning itself to test and service the next generation of technology in transportation, including electric unmanned aircraft, self-driving cars, electric freight trucks and hybrid-electric vertical takeoff and landing (eVTOL) aircraft.



Figure 1: The Piedmont Triad Region in Central North Carolina



According to the U.S. Bureau of Economic Analysis (BEA), in 2019, the Greensboro-High Point MSA produced \$44.5 billion in current-dollar total GDP. This ranked 74th among MSAs (out of 384 total). It represents a decline in the region's national ranking from 2009, when it ranked 65th among MSAs.<sup>1</sup> The Winston-Salem MSA is slightly smaller (2019 population 676,008, ranked 87<sup>th</sup>) and produced \$36.2 billion in GDP in 2019.

The region's population and employment have grown moderately since 2008. Table 1 summarizes the changes in key socio-economic characteristics for the period. As shown, from 2008 through 2019:

- Total population rose by nearly 125,000 (8 percent). By contrast, population for the state of North Carolina rose by 13 percent.
- Total employment increased by almost 60,000 (6 percent). For the state as a whole, total employment rose by 14 percent.

<sup>1</sup> <https://apps.bea.gov/regional/bearfacts/action.cfm>



- Average per capita income (nominal dollars) rose from \$35,300 to \$44,700 (27 percent). Expressed in constant 2019 dollars, the increase was 4 percent. Per capita incomes for the state of North Carolina also rose by 27 percent in nominal dollars.
- The number of establishments operating in the region declined slightly.<sup>2</sup>

Table 1: Change in Major Socio-Economic Variables, Triad Region 2008-2019

	2008	2015	2019	Change 2008-15		Change 2015-19		Change 2008-19	
				#	%	#	%	#	%
Population	1,565	1,637	1,689	72	5%	53	3%	124	8%
Total Employment	923	931	982	9	1%	50	5%	59	6%
Private Non-farm Employment	819	830	882	11	1%	52	6%	63	8%
Government Employment	94	91	90	(2)	-3%	(1)	-1%	(4)	-4%
Income per Capita (\$)	\$35,308	\$40,186	\$44,683	\$4,878	14%	\$4,497	11%	\$9,375	27%
Number of Establishments	39	38	39	(2)	-4%	1	2%	(1)	-2%

Source: BEA, U.S. Census Bureau

Note: All figures in 1000s except for income per capita, which is shown in nominal dollars.

### Regional Economic Strengths

The region has significant strength in economic activity relating to transportation. The Piedmont Triad is home to nearly 200 aerospace companies including Honda Aircraft, HAECO Americas, Cessna, North State Aviation, B/E Aerospace, Honda Aero and Federal Express.<sup>3</sup> Five of the top 60 companies on the Fortune 500 list have operations in the Greensboro area, including Proctor & Gamble, UPS, Federal Express, AT&T and UnitedHealth Group.

In addition to the aerospace and aviation-related industries, several major logistics operations are located in the Region. These include EPS Trucking, Old Dominion Freight, drayage companies, an Inland Port, Norfolk Southern Railroad and the Amazon Fulfillment Center in Kernersville, NC and three Amazon last-mile distribution facilities. In addition, Federal Express and UPS both have extensive operations in the area. FedEx operates its Mid-Atlantic hub at GSO and established a Ground “super hub” sorting and distribution center in nearby Kernersville. UPS’s facilities employ over 2,000 people in the area.<sup>4</sup>

<sup>2</sup> The BEA uses data from the U.S. Census Bureau on “establishments,” which it defined as “An establishment is a single physical location at which business is conducted or services or industrial operations are performed. It is not necessarily identical with a company or enterprise, which may consist of one or more establishments. Establishment counts represent the number of locations with paid employees any time during the year.” The count excludes government establishments except for certain situations, such as state-operated retail liquor stores, local government-owned/operated hospitals, and federally-chartered credit unions.

<https://www.census.gov/programs-surveys/susb/about/glossary.html>

<sup>3</sup> City of Greensboro, Comprehensive Annual Financial Report, July 2019, p. V.

<sup>4</sup> CAFR p. VII.



Changes in employment for all major NAICS sectors are summarized in Table 2. The largest sectors by employment in 2019 were health care and manufacturing. Between 2008 and 2019, the sectors with the greatest growth were Transportation and Warehousing (25 percent) and Real Estate (23 percent). The Arts, Entertainment, and Recreation sector also grew by over 25 percent. Conversely, employment in Manufacturing and Construction fell. Employment figures in certain key sectors like Information, PST, and Management of Companies for 2008 were suppressed to protect confidentiality. However, employment estimates were available for 2015. Employment PST and Management of Companies increased, as did employment in the Health Care Sector.

Table 2: Changes in Employment by Major Sector 2008-2019

Industry Sector	2008	2015	2019	Change 2008-19	
				Number	Percent
Construction	59,336	47,709	56,842	(2,494)	-4%
Manufacturing	118,783	104,064	104,802	(13,981)	-12%
Wholesale trade	N/A	N/A	38,241	N/A	N/A
Retail trade	95,420	96,490	99,592	4,172	4%
Transportation and warehousing	34,417	N/A	43,076	8,659	25%
Information	N/A	10,055	9,996	N/A	N/A
Finance and insurance	44,487	42,914	48,419	3,932	9%
Real estate and rental and leasing	33,124	35,932	40,683	7,559	23%
Professional, scientific, and technical services	N/A	42,702	46,342	N/A	N/A
Management of companies and enterprises	N/A	16,543	17,077	N/A	N/A
Administrative services	67,652	78,416	78,023	10,371	15%
Educational services	N/A	26,854	24,172	N/A	N/A
Health care and social assistance	N/A	109,424	118,221	N/A	N/A
Arts, entertainment, and recreation	15,373	16,387	19,400	4,027	26%
Accommodation and food services	61,400	65,544	74,213	12,813	21%
Other services (except gov't and gov't enterprises)	51,044	56,463	56,978	5,934	12%
Total private nonfarm employment	818,717	829,688	882,105	63,388	8%
Government and government enterprises	93,852	91,439	90,160	(3,692)	-4%
<b>Total employment</b>	<b>922,589</b>	<b>931,428</b>	<b>981,923</b>	<b>59,334</b>	<b>6%</b>

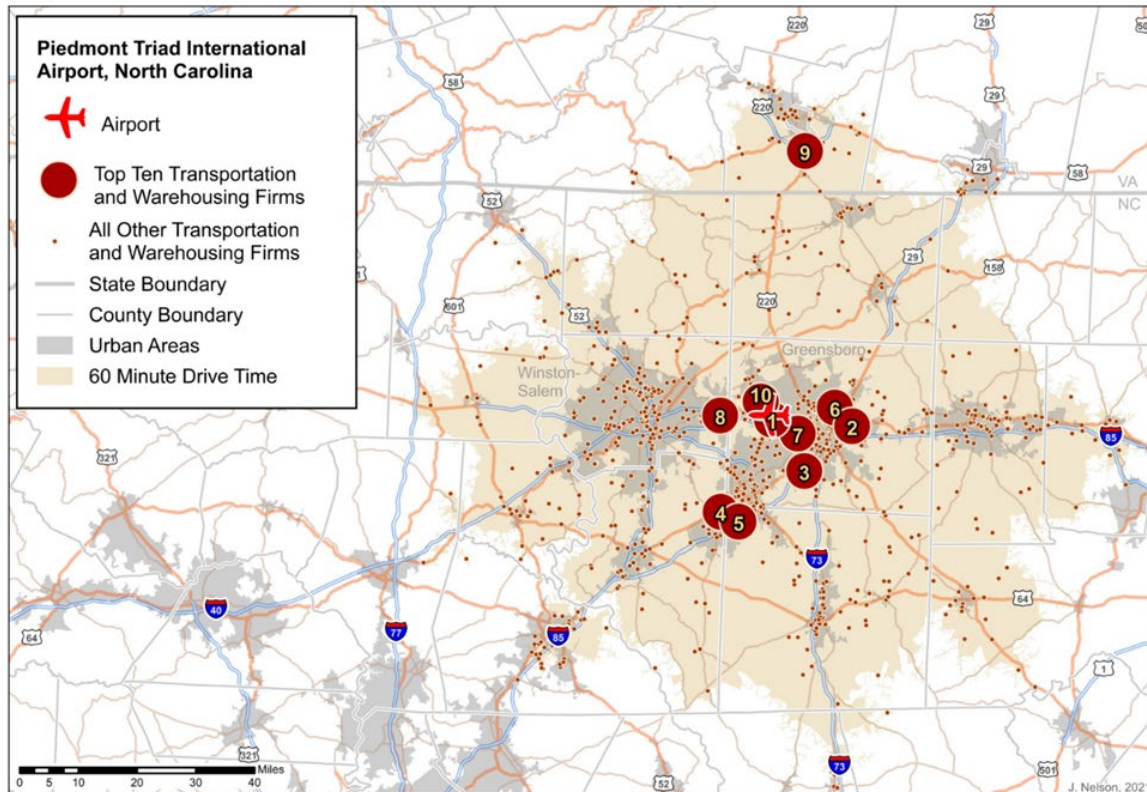
Source: BEA

Note: N/A = Data suppressed to void disclosure of confidential information; estimates are included in higher-level totals. Farm employment not shown but included Total.



Figure 2 illustrates a 60-minute drive time around GSO and the location of Transportation and Warehousing (T&W) businesses within that area. The largest are all within the urban area.

Figure 2: Spatial Distribution of Transportation and Warehousing Firms (NAICS 48-49) in the GSO Airport One-Hour Drive Time Trade Area



Source: ESRI Business Analyst

Key highlights of socio-economic activity *within the 60-minute drive of the airport*:

- The total estimated 2019 population was 1.72 million. Of that, 1.06 million (61 percent) were considered “working age” (between the ages of 18 and 64).
- The economy supported over 59,000 businesses employing nearly 800,000. In terms of major industry sectors (defined by NAICS codes), the largest based on total employment was Manufacturing (110,000 employees) followed by Finance, Insurance, and Real Estate with over 42,000. The Transportation and Warehousing sector included over 1,100 businesses that employed nearly 19,000.
- Of the total population, 18.9 percent held a Bachelor’s degree and another 10.2 percent held a Graduate or Professional degree.



## Economic Clusters

The U.S. Cluster Mapping Project's analysis of the region also highlights its broad economic strength. The area's economy features multiple tradeable clusters that are among the top performers in the country, and several are of notable strength. Those include the traditional furniture and textile industry clusters as well as downstream chemical products and T&W.

- The Furniture Cluster includes subclusters of manufacturing of household and office furniture along with wood cabinets and woodworking. This includes metal, wood, upholstered and non-upholstered furniture. The region is ranked in the top ten nationally in this cluster. Its 2018 LQ was 5.83.
- The Textile Cluster includes subclusters of mills for knitting, fabric, yarn and thread as well as textile and fabric finishing, and household textile products. The region is ranked in the top ten nationally in this cluster. Its 2018 LQ was 12.25. A related cluster is Apparel. The region's 2018 LQ was 2.63.
- The Downstream Chemical Products cluster includes subclusters for personal care and cleaning products; dye, pigments, and coatings; and processed chemical products. The region is ranked in the top fifteen nationally. Its 2018 LQ was 3.42.
- Transportation and Warehousing includes the subclusters of trucking, ground transportation support activities, air transportation, and specialty air transportation (e.g., nonscheduled charter air transportation). The region is ranked in the top 50 nationally. Its 2018 LQ was 1.34.

Other traded clusters that the U.S. Cluster Mapping Project identifies as particularly strong for the region were Insurance Services and Printing Services.

Table 3 shows the strongest traded sectors by total employment in 2018 along with employment in each in 2008. It indicates the changes in employment among these sectors. It reveals the continued decline in the traditional furniture and textile clusters with increasing activity in Business Services and Education.



Table 3: Changes in Employment in Major Industry Clusters 2008-2018

Cluster Name	2008	2018	Change	
			Number	%
Business Services	18,918	22,371	3,453	18%
Distribution and Electronic Commerce	21,081	19,091	(1,990)	-9%
Furniture	11,579	7,412	(4,167)	-36%
Transportation and Logistics	6,276	6,671	395	6%
Textile Manufacturing	9,986	5,674	(4,312)	-43%
Insurance Services	4,947	5,058	111	2%
Plastics	5,099	4,672	(427)	-8%
Hospitality and Tourism	6,354	4,630	(1,724)	-27%
Education and Knowledge Creation	3,897	4,361	464	12%
Downstream Chemical Products	3,253	3,585	332	10%
Information Technology and Analytical Instruments	3,954	3,082	(872)	-22%
Automotive	2,864	2,915	51	2%
Printing Services	3,191	2,490	(701)	-22%
Marketing, Design, and Publishing	3,386	2,290	(1,096)	-32%
Financial Services	4,747	2,175	(2,572)	-54%

Source: U.S. Cluster Mapping Project data for the Greensboro-High Point Metropolitan Area.

### Overview of the Airport and its Services

GSO is located in Guilford County, west of Greensboro. The Airport is owned and operated by the Piedmont Triad Airport Authority (“Authority”), established by the North Carolina legislature in 1942. Members of the Authority’s Board of Directors are appointed by the governing bodies of the counties of Guilford and Forsyth and the cities of Greensboro, High Point and Winston-Salem. Management of the Airport is the responsibility of the Executive Director.

The FAA classifies GSO as a small hub airport. In 2019, GSO was the 96<sup>th</sup> busiest airport in the country based on enplaned passengers.

### The Catchment Area and the Shadow Cast by CLT and RDU

GSO generally defines its catchment area to include the 12 counties in north central North Carolina. However, it faces significant challenges in attracting and retaining passengers due to the region’s proximity to other major airports nearby. The major drivers of consumers’ air service decisions are price and service levels (e.g., flight frequency or timing, aircraft size, airline of preference, etc.) Consumers in the Triad thus can take advantage of flight opportunities not only at GSO but at the other two major competing airports.

As a result, GSO leaks traffic to RDU and CLT, for multiple reasons.

- Both RDU and CLT offer a larger number of destinations that can be served on a nonstop basis. Because CLT is a major hub for American, those destinations also include international points. In June 2019, CLT offered scheduled services to 42 international destinations. RDU also had flights to six international destinations.



- Both RDU and CLT have more offerings from low cost carriers, most notably Southwest and JetBlue, neither of which operate at GSO. In June 2019, Southwest scheduled daily flights from RDU to 15 destinations from RDU. JetBlue also operated daily flights to three locations. At CLT, Southwest made daily flights to five locations and JetBlue to two.
- Access to both airports is relatively fast and easy via interstate highways. Depending on a customer's location in the region, drive times can range from 1.5 hours to 2 hours or less to RDU or CLT.

To a less extent, Concord-Padgett Regional Airport north of Charlotte also draws passenger traffic from the area, because Allegiant Airlines operates from there to leisure destinations that it does not serve from GSO.

The airport recognizes that the level of service and presence of an airline at one, two or all three of the airports affects the scope of its catchment area. When GSO offers a unique service among the competing airports, the reach of the catchment area expands.

- If an airline offers service to a destination and operates at all three airports, then GSO's catchment area is only about 35 miles. This sweeps in the areas of Greensboro, High Point and Winston-Salem and their suburbs.
- If an airline operates a unique service at GSO (e.g., flights to a particular market), then the catchment area may be as wide as 60-75 miles. It includes small markets in southern Virginia.

Table 4 summarizes the estimated percentage of passengers that the airport captures, among those who live within 35 miles of the airport (encompassing the three large cities in the region).

Table 4: Percent of Triad Region Travelers Captured by Airport

Airport	Passengers	Share
GSO	371,448	37%
RDU	354,010	35%
CLT	257,865	26%
Other	20,117	2%
<b>Total</b>	<b>1,003,440</b>	<b>100%</b>

Source: GSO

Note: Only travelers within 35 miles of airport considered.

As a result, GSO leaks roughly two-thirds of its traffic to other airports. Slightly more of that leakage is lost to RDU.

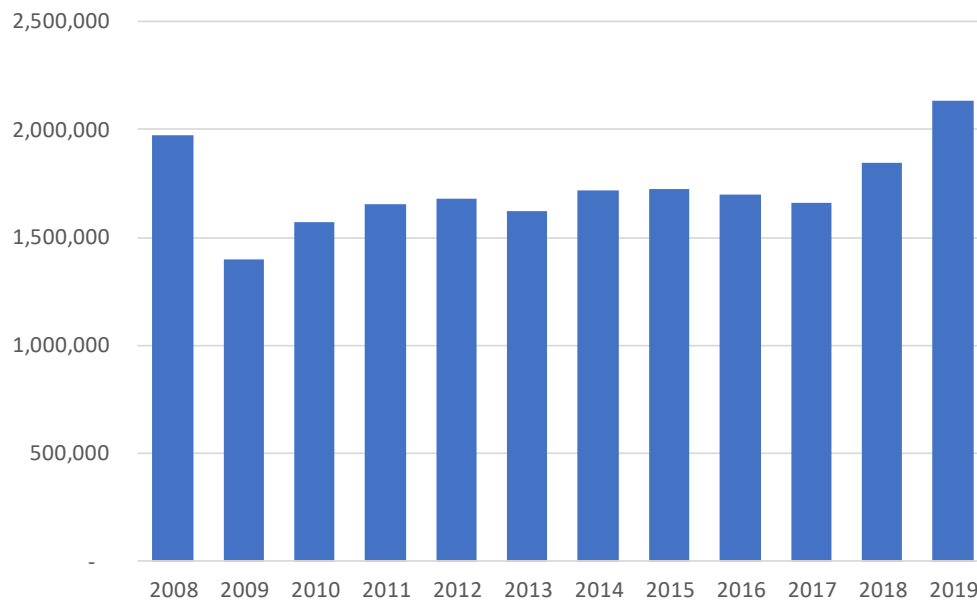




### Air Service Activity at GSO

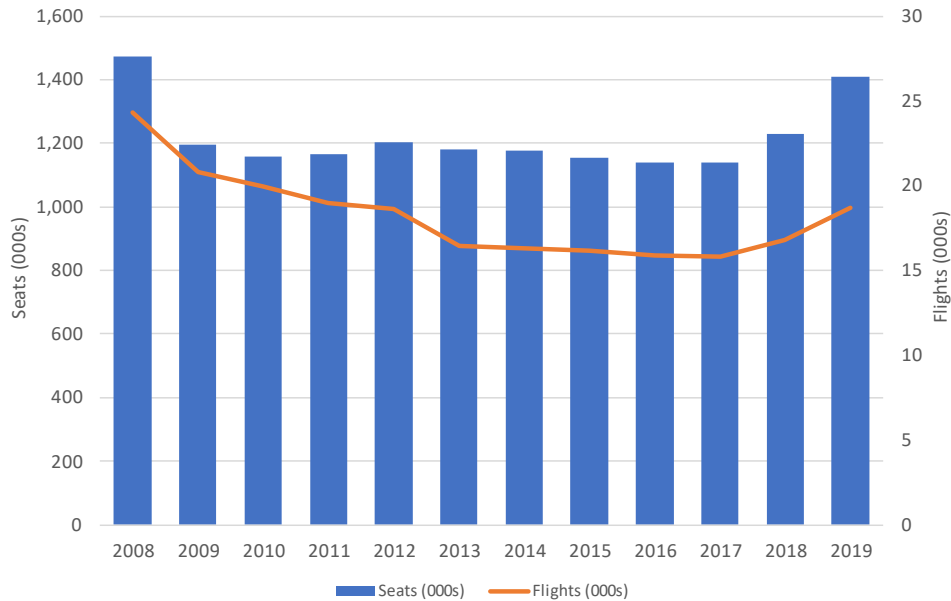
Passenger traffic at GSO is primarily customers originating at or destined for the region – Origin and Destination (O&D) traffic. At times in the airport’s history, it has served as a “mini-hub” for different airlines. In the mid-1990s, GSO was a hub for Continental Lite, a subsidiary of Continental Airlines. That effort ceased operations in 1995. More recently, short-lived Skybus Airlines used GSO as a hub in 2007-2008, but the airline ceased operations in 2008. Consequently, virtually all of the airport’s passenger activity is local rather than connecting. Figure 3 shows the change in total O&D passenger traffic from 2008 to 2019. Since the drop in 2009, O&D traffic has generally recovered, rising from 1.4 million to 2.1 million (an increase of 52 percent).

Figure 3: Change in O&D Passengers at GSO



The Airport has experienced a slow return of airline capacity to 2008 levels in the last 11 years. In 2019, the Airport nearly regained all the capacity that it had provided in 2008. Available capacity changed little between 2010 and 2017. Since then, capacity increased 24 percent.

Figure 4: Changes in Available Seat Capacity and Flights 2008-2019



Source: T-100 data from Diio Mi by Cirium

Over the period, in response to significant financial losses tied to the Great Recession, U.S. airlines made changes to their fleets and network operations. This included changes in service to different hubs and a broad “up-gauge” of aircraft, especially serving smaller airports. At GSO, the airport lost service to what had been legacy network airline hubs at Cleveland, Memphis, and Minneapolis-St. Paul. In addition, average aircraft size rose 57 seats per departure in 2009 to 75 in 2019.

In 2019, Delta and American basically divided the GSO market. Delta was slightly larger based on seat departures, with 40 percent, but American carried 39 percent of the traffic and served seven destinations vs. three for Delta. United, Allegiant, and Spirit also operate at the airport, with United operating to its major hubs in Chicago, New York Newark, and Washington Dulles, while the two ULCCs serve leisure destinations in Florida.

Table 5: Summary of Service Offerings at GSO 2019

Airline	Flights	Seats	% of Total	Markets *
Delta	5,190	543,808	40%	3
American	8,701	539,290	39%	7
United	3,548	180,500	13%	3
Spirit	437	68,841	5%	3
Allegiant	223	37,689	3%	2
<b>Total</b>	<b>18,098</b>	<b>1,370,128</b>	<b>100%</b>	<b>16</b>

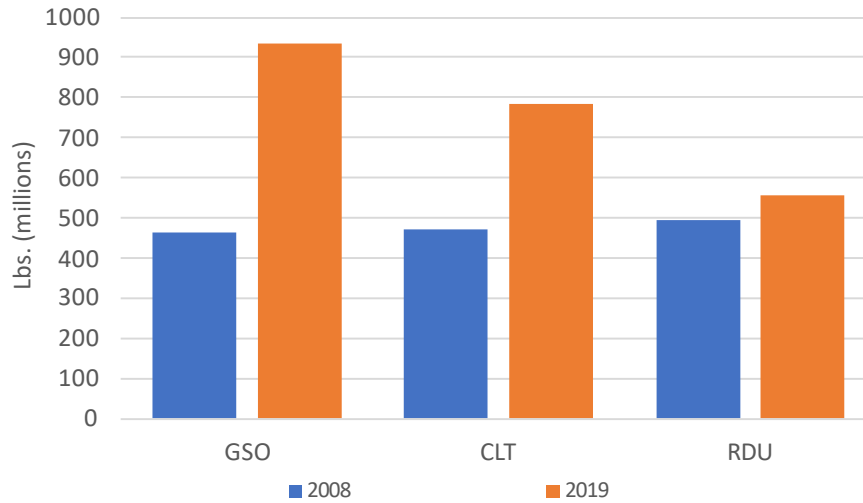
Source: T-100 market data from Diio Mi by Cirium.

Note: \* Total markets shown are unique airport destinations. Two carriers both serve LGA and ORD.

### Cargo and Freight Activity at GSO

GSO is the largest cargo airport in North Carolina and the 35th largest cargo airport in the United States based on landed weight. In 2019, total landed cargo and freight weight at GSO exceeded that at CLT by almost 20 percent and at RDU by nearly 70 percent. Figure 5 shows the change in total landed weights at the three major airports in North Carolina, comparing data for 2008 and 2019.

Figure 5: Change in Total Landed Weight at North Carolina’s Major Airports, 2008 v. 2019



Source: FAA

FedEx opened its mid-Atlantic hub at GSO in 2010 and fully stood up the operation in 2018. Today, FedEx occupies a one million square foot facility on the Airport. FedEx is a major regional employer with its operations at GSO and its ground facility in nearby Kernville, NC.

### Air Service Development

The airport’s air service development efforts resulted in returning capacity and passenger traffic to 2008 levels. Between 2008 and 2019, the Airport attracted but then lost a variety of air services. In many of these instances the loss of service was not necessarily due to a lack of regional market demand, but instead to broader economic or industry conditions, such as airline mergers and general consolidation.

Between 2008 and 2019 the Airport succeeded in expanding consumer choice by:

- Retaining and expanding the service from Allegiant,
- Attracting Spirit Airlines to the market in 2018,
- Retaining non-stop competition in the New York LaGuardia (LGA) market by convincing American to continue service to New York LaGuardia after its slot divestiture there. Delta also operates to LGA. United also serves the New York market from GSO by flying to New York Newark Liberty International Airport.



- Working with American to expand the number of nonstop destinations served from six to seven. American and US Airways had both served GSO in 2008.

The Airport’s pre-pandemic goals for its passenger air service development program included adding new destinations and growing existing services. GSO’s goals include:

- New non-stop markets where demand and leakage retention/recapture justifies the business case for service either to a new hub or another major market
- Attracting additional ULCC or LCC air carriers to expand consumer choice
- Focusing on reducing leakage and improving passenger retention

### Connectivity Analysis

High quality transportation – of all modes – is a prerequisite for sustained economic growth and competitiveness for a region. Specifically, these factors of economic development are driven by productivity growth which is underpinned by trade, foreign investment, and innovative activity – all of which are facilitated by connectivity. “Connectivity” generally means the ability to reach a wide range of places in a short amount of time. Connectivity is not simply a matter of the number of routes or number of frequencies operated. Connectivity is fundamentally about access to markets and regions.

GSO is not the only commercial airport serving the region, as noted, and therefore is not the only source of air connectivity; however, changes in connectivity at GSO affect how quickly and conveniently the immediate area can be accessed.

Connectivity can be quantified in a variety of ways. The figure below summarizes the change in connectivity at GSO between 2008 and 2019 using a method developed by the International Air Transport Association (IATA). The IATA “connectivity index” estimates the quality of air service at an airport based on the degree of service to other airports with the largest and most diverse route networks, as a proxy for how accessible the local economy is to the rest of the world.<sup>5</sup> The change in GSO’s connectivity index or score is charted below, by indexing the score against 2008 levels for comparison.

---

<sup>5</sup> The IATA connectivity index measures the number and size of destinations served, as well as the frequency of service to each destination and the number of onward connections available from those destinations. Service to airports with the highest total seat capacity (e.g. ATL) receive the highest weighting. Thus, the index recognises that connections to major global gateways provide greater global connectivity than connections to the same number of spoke ends. The formula for the index is calculated as follows:

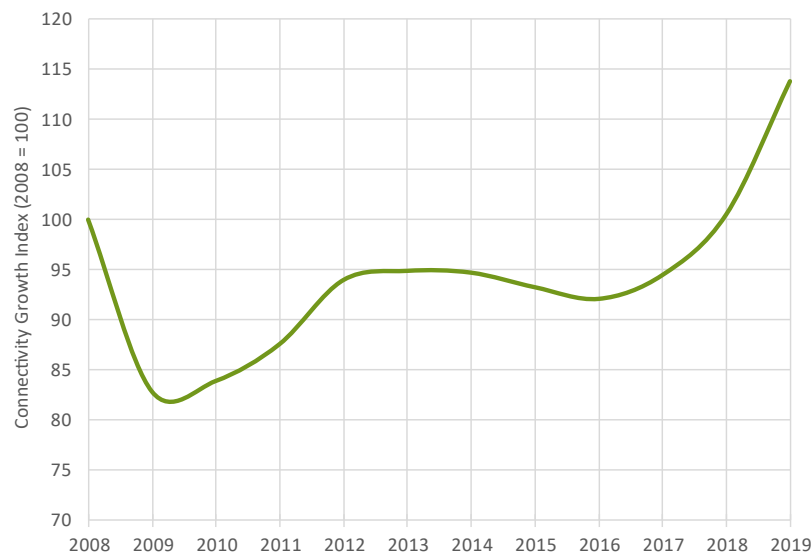
$$\frac{[ \text{Number of destinations} \times \text{Weekly Frequency} \times \text{Seats per flight} ]}{\text{Weighted by the Size of the Destination Airport}}$$

Scalar factor of 1000



Changing economic conditions along with airline mergers (DL/NW, UA/CO and AA/US) had a profound impact on consumer choice and connectivity at GSO, with reduced service suppressing connectivity below pre-Recession levels. However, connectivity at GSO has recovered slightly faster than overall seat capacity and passenger traffic. Connectivity returned to 2008 levels by 2018 and continued to grow, driven by expanded capacity to major national hubs like Atlanta (ATL), Chicago O’Hare (ORD), and Dallas/Ft. Worth (DFW). All else being equal, each additional seat serving these airports yields a higher level of connectivity than seats going to smaller airports with fewer onward destinations. By maintaining a diversity of service into several hubs and gradually rebuilding capacity, GSO has been able to recover its connectivity. As of 2019, GSO’s connectivity was 14 percent higher than 2008 levels.

Figure 6: GSO Connectivity Growth Index (2008=100)



Note: Chart shows the IATA Connectivity Index for GSO, indexed against 2008 (2008 = 100).

Source: InterVISTAS analysis of Innovata schedule data from Diio Mi.

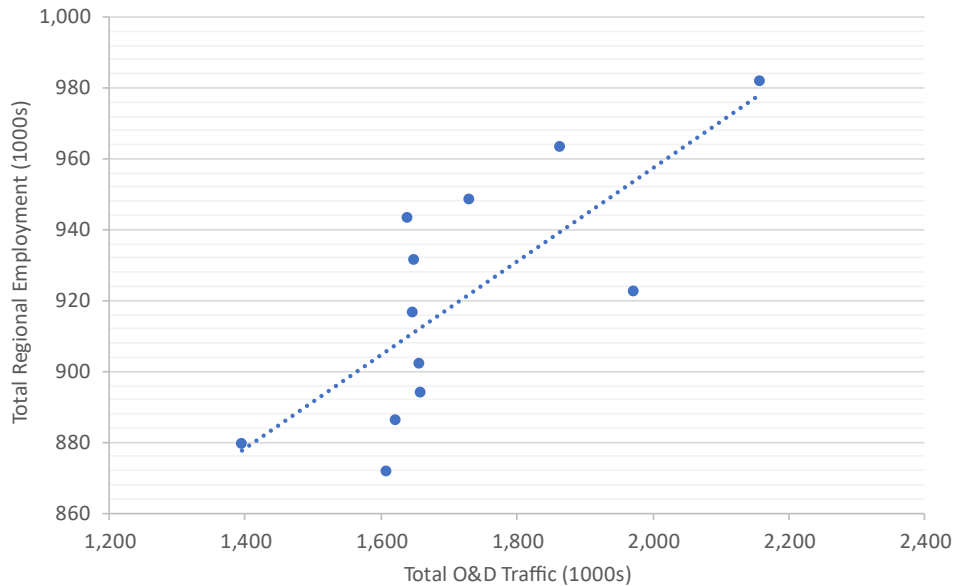
#### Analysis of Air Service and Economic Variables

In the Triad, passenger traffic is relatively highly correlated with total regional employment. This means that as one variable rises, so does the other. As total regional employment increases, total O&D traffic at GSO also increases. However, the correlation does not demonstrate causation. It is not unambiguous that changes in employment necessarily lead to changes in O&D activity. The opposite could equally be true: That changes in O&D traffic led to changes in regional employment. As shown in Figure 7 below, the relationship between the two concepts is positive, and the strength of the statistical correlation ( $R^2 = 0.747$ ) is relatively strong.<sup>6</sup>

<sup>6</sup> The correlation strengthens to 0.808 if the results from 2008 are excluded. Traffic then was affected by the presence of SkyBus, which ceased operations in that year.



Figure 7: Relationship between Total Regional Employment and Total O&D Passenger Traffic

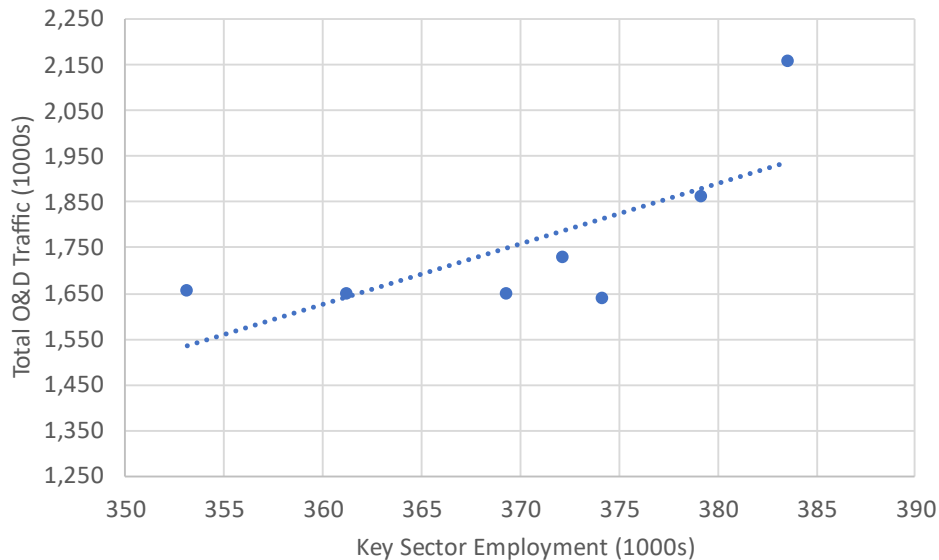


If the analysis is limited to employment in sectors that are more reliant upon air service, the strength of the correlation remains roughly the same. Figure 8 illustrates the relationship between total O&D traffic and employment in the “aviation-reliant” sectors: Manufacturing; wholesaling; information technology; finance and insurance; real estate; professional, scientific, and technical services; administrative and support services; and management of companies. The correlation coefficient for the two variables here is 0.717.<sup>7</sup> As before, the correlation does not establish causation. Correlation does not mean that changes in employment necessarily lead to changes in O&D activity. The opposite could equally be true: That changes in O&D traffic led to changes in aviation-reliant employment.

<sup>7</sup> For this analysis, fewer years of data are available because employment in many sectors was suppressed to protect confidentiality. Consequently, the analysis covers the period 2013-2019 only.



Figure 8: Relationship between Total O&amp;D Traffic and Aviation-Reliant Employment



### Air Service Development and Regional Stakeholders

A former executive director at GSO believes that “...the airport is a reflection of the community.”<sup>8</sup> With economic performance (e.g., jobs, job growth and economic output) as the primary consideration, air service patterns serve as a lagging indicator of economic growth.

Growing the pipeline of business on and adjacent to the airport is a goal of the airport in cooperation with its regional partners. Extensive interactions with its partners are a key to the airport’s economic development initiatives. As a result, the airport’s links to the community tie primarily to employment at and around the airport and the role the airport plays in economic development. The airport’s value to the regional economy is measured first by regional employment levels and secondarily by the air service offered at GSO. In terms of air service, firms in the region with international parent companies will use CLT for quick access to international destinations. Yet many employees of businesses in the area choose to fly out of GSO due to its connectivity, convenience, and location.

One key regional stakeholder is the Piedmont Triad Partnership (PTP), whose primary objective is to promote prosperity, growth, and economic development in the region. In August 2018, the PTP launched a strategy named the “Carolina Core” -- a 120+ mile stretch of central North Carolina from west of Winston-Salem to Fayetteville encompassing Greensboro and High Point and in close proximity to Charlotte and the Research Triangle.<sup>9</sup> The region’s assets include approximately 2 million people, over 30 post-secondary education institutions, as well as four “mega sites” (approximately 7,200 acres), industrial sites, research parks, and mixed-use developments. An objective of the Carolina Core initiative is to attract 50,000 new jobs to the region by 2038.

<sup>8</sup> Ted Johnson, former Executive Director, GSO.

<sup>9</sup> Source: Nccarolinacore.com



The PTP partners with the airport to support regional economic development initiatives. The PTP’s sectors of interest include biomedical and life sciences, technology, transportation and logistics, and automotive manufacturers, all of which rely on air service offerings in the region for their travel needs. However, a major focus in the region is aviation and aerospace. As evidence of the commitment to growing the aerospace sector, PTP and other regional stakeholders funded a dedicated sales position to market the region to the aerospace industry. The regional partnership’s efforts to support and expand high value sectors of the economy will drive greater demand for both passenger and cargo air services.

An aerospace-centered airport economic development strategy is built on the theme of “The Center of North Carolina Aerospace.” In partnership with the Carolina Core initiative, GSO has positioned the airport as at the center of the North Carolina aerospace sector based on its success in attracting aerospace business to the airport, the presence of nearly 200 aerospace companies in the region, and GSO’s vision for its 4,000-acre campus. Among the on-airport partners of the airport is the T.H. Davis Aviation Center of the Guilford Technical Community College, which has 600 students in technical fields that support the aerospace sector.<sup>10</sup> Aerospace workforce training programs at GSO directly benefit airport businesses.

GSO invested in the future of the regional economy with the GSO Aerospace “Mega site.” Also known as the PTI Aerospace Center, the site has 1,000 acres of land ready for development, direct ground access to the interstate highway system, and a taxiway bridge offering access to the GSO airfield.<sup>11</sup> The investment in the site is a recognition of the value that the Airport contributes to facilitating economic development.

### Communicating the Airport’s Economic Impact

The State of North Carolina Department of Transportation, Division of Aviation contracted with North Carolina State University, Institute for Transportation Research and Education to conduct a state-wide study of economic contribution of North Carolina airports. The most recent report covered airport operations for 2019.<sup>12</sup> This study highlighted the following for GSO:

- 30,015 jobs
- \$1,630,780,000 in Personal income
- \$204,727,000 in State and local taxes
- \$8,641,160,000 in Economic output

These figures represent the impacts of on-airport contributions (jobs, income and spending by tenants such as airlines, rental car companies and airport security), airport capital projects and operations (construction, facility maintenance and operational services), and visitor spending.

---

<sup>10</sup> <https://www.gtcc.edu/about/campuses/aviation.php>

<sup>11</sup> Source: Nccarolinacore.com

<sup>12</sup> Source: State of North Carolina, “North Carolina The State of Aviation What Aviation Means to our Economy, January 2021.” Economic impact in 2019.





The airport uses the information from these economic impact studies in its communications with regional stakeholders, local, state and federal government officials, and with businesses it seeks to attract.

GSO and other airports used the information from the reports to persuade the State of North Carolina to revise the formula its uses to distribute aviation grants. The airports argued that the economic impact-based formula better represents the total economic value of the airport to the State of North Carolina.