

ATLANTA

From Railroad City to Metropolis



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Background

Over the past century, Atlanta has relied largely on its physical amenities as a critical economic advantage, which has transformed the city from an industrial railroad hub into a thriving metropolis of over 470,000 people (US Census). Despite Atlanta's ideal location and abundance of natural resources, no one could have predicted that this region would eventually become an international commercial center. Rather, the success and growth of Atlanta was indeed the result of deliberate economic and policy decisions that continue to shape the region into a business capital, where opportunities and competitive advantages flourish.

As the cultural and economic center of the Southeastern United States region, Atlanta has become a business powerhouse, attracting a highly talented workforce that has catalyzed entrepreneurship and innovation throughout the region. The city's most notable feature is its diverse economy, with dominating sectors in a myriad of fields including commerce, finance, research, technology, education, media, art, and entertainment. The growth in these industries, coupled with Atlanta's relatively supportive business climate, have cultivated the city's economy to be one of the fastest growing and eleventh largest in the nation today (Bernardo, 2017). More than two-thirds of all goods and services produced in the state of Georgia come from the Atlanta Metropolitan Statistical Area (MSA), which is home to nearly 5.5 million residents and over 150,000 businesses (US Census). Given the high density of people and businesses in the Atlanta MSA, the health of the state's economy, as well as the larger Southeast region, is intrinsically linked to Atlanta's success.

Much of Atlanta's growth can be attributed to the Hartsfield International Airport, the world's busiest airport, which accommodates more than 260,000 passengers daily (Yamanouchi, 2012). Located near the center of Atlanta, this airport connects global partners with local businesses to increase economic outputs and build the city's stake in the worldwide market. Atlanta's strength as a gateway of passenger transportation has helped attract and grow a sturdy base of Fortune 1000 corporate headquarters, including prominent companies like Coca-Cola, Turner Broadcasting, Delta Airlines, Porsche, and Equifax that have generated almost \$360 billion in revenues in 2014 alone (Williams and Torian, 2015). The presence of their primary transportation hub has propelled Atlanta into international notoriety and continues to be an important economic engine for the city.

Within the region, the Atlanta Metropolitan Statistical Area's (MSA) transportation needs are serviced by the Metropolitan Atlanta Rapid Transit Authority (MARTA). This public transport operator provides an integrated bus network that links to 48 miles of rail rapid transit and is the only self-funded system in the United States, receiving no money from the state (Porter, 2002). While MARTA's daily ridership includes more than half a million passengers, the Atlanta MSA contains over 36 miles of multi-lane highways and nearly 2,000 miles of arterial roadways, characterizing the region's car dependency (Porter, 2002). Today, many of the largest job centers in the region are not serviced by public transit, which impacts interregional connectivity and access to employment.

Atlanta's transit and infrastructure conditions exemplify a severe disconnect between major transit stations and the suburban region, where most of region's jobs are located (Brookings, 2013). Compared to the residents of benchmark cities of Dallas, Denver, and Seattle, the residents of Atlanta face significantly longer commutes impacting their overall quality of life (Invest Atlanta, 2014). Unlike each of these cities, Atlanta has not significantly expanded its regional rail transit network for decades, but a recently approved ballot measure aims to change that situation (Snyder, 2015).

To expand MARTA's network throughout the region, Atlanta passed T-SPLOST, a citywide special purpose local option sales tax for transportation to generate over \$2.5 billion in revenue to fund major transit projects (Freemark, 2017). The most high-profile project currently moving through the pipeline is the Atlanta Beltline, a 22-mile, interconnected system of public parks, multi-use trails, and transit built alongside historic railroad corridors that encircle the downtown area. Modeled after New York City's High Line, this project is designed to catalyze housing development while weaving elements of green space, public art, urban farming, and healthy living (Fausset, 2016).

Aside from infrastructure, Atlanta's \$300 million arts industry plays a significant role in building a strong economic foundation by branding the city's culture of creativity (Invest Atlanta, 2014). This industry supports over 9,400 full-time jobs, which are anchored by institutions such as the Woodruff Arts Center, home to the Atlanta Symphony Orchestra, the Alliance Theatre, and the High Museum of Art (Invest Atlanta, 2014). Atlanta's rich history of civil rights movements, music, and arts and the high volume of prestigious universities gave rise to the city's creative class, which is a key driving force for economic development in this post-industrial city (Florida, 2002). This emergent class of creative professionals, such as those in Atlanta's business, technology, entertainment, and education sectors, draws on complex bodies of knowledge to provide innovative initiatives to the city (Florida, 2002).

Amongst the major developments that have occurred within the past few decades, no project could compare to the enormous impact of the 1996 Summer Olympic Games, which took place right in the heart of Atlanta. One of the lasting legacies of the games is Centennial Olympic Park, which spurred economic development downtown and was partly responsible for the influx of population growth in the Atlanta MSA (Lohr, 2011). Despite the promise of hundreds of thousands of jobs that would be created from the Olympics, Atlanta suffered high unemployment rates compared to the nation in the years following the games (Lohr, 2011). The net migration in the city proper increased from 6,496 people to 54,441 between 2010 and 2016 while the unemployment rate dropped from 11.3 percent to 5.3 percent, which remains higher than the national average of 4.8 percent (US Census).

Flagship developments such as Olympic stadiums are common economic development tools, but as demonstrated in Atlanta's case, they do not always stimulate new development. As learned in the success of the Guggenheim Museum Bilbao, city's must integrate flagship developments with a variety of contextual factors such as transit and community partnerships to sustain growth from those projects, while leveraging existing arts and related commercial activity (Grodach, 2010). Otherwise, businesses and cultural amenities do not manifest as planned and can lead to certain pockets of the community reaping

substantially more benefits than others. Thus, the city took a gamble with the stadium developments, but was not equipped to sustain the growth from the games and is now focusing on rebuilding some of the neighborhoods that were overlooked from the Olympic opportunity.

Although Atlanta is considered an economic mecca for its business development and relatively affordable cost of living, the city's wealth and promise does not always extend to many of its residents, particularly those of color. The city's legacy of suburbanization, combined with unbalanced growth between the northern and southern parts of the region, created an economic divide, where a disproportionate number of new residents, jobs, and wealth exist in the more affluent and white north side (Brookings, 2013). This has shaped the city's racial landscape, giving rise to two vastly different Atlantas that underscore the fact that the place where children grow up can determine their prospects of success in life (Williams and Torian, 2015).

While the city has increasingly become diverse in recent years, it remains racially segregated primarily along the highways (Bernardo, 2017). The interstate 20 freeway acts as physical divider separating the wealthier, majority-white communities in the north from the lower-income, black neighborhoods in the south (Williams and Torian, 2015). Even though the Atlanta MSA's overall economy thrives, the city ranked first for income inequality, where one in four of its residents live in poverty (Lowrey, 2014). This concentration of poverty shown in the *Appendix* map mostly lies in the southern area of the city, where most of Atlanta's low-income black workers reside and have little access to reliable transportation that would allow them to tap into the region's growing job market on the north side. To advance the local economy for all segments of their population, Atlanta must address the institutional barriers that continue to prevent people from gaining opportunities in the city and region.

Atlanta's traditional economic development model focused on property-led regeneration, which failed to consider how rapid suburbanization would steer the decline of the city's industrial base (Ricchiuto, 2017). Past revitalization efforts mainly focused on bringing development downtown and creating more mixed use, transit-oriented developments; however, these efforts took precedence over strategies to revitalize Atlanta's declining industries and neighborhoods. As a result, the Atlanta MSA has fared the worst nationally in the recent recession because of the consequent imbalance in its economy (Hoelzel and Green-Leigh, 2012). This is conveyed in the Atlanta MSA's ranking as one of the poorest labor market performers among the twelve largest metropolitan areas (US Bureau of Labor Statistics, 2012). The city attempted to revitalize its manufacturing industry, but the diminished supply, land availability, and changing workforce have prevented this resurgence.

Despite their once booming housing market, Atlanta now faces challenges with their real estate economy. From 2001 to 2012, the Atlanta MSA's gross domestic product (GDP) per capita fell by 7.2 percent while the average GDP growth of all national MSAs increased by 6.5 percent. Atlanta's steady growth in property values is indicative of the city's gradual recovery from the 2007 housing recession (Invest Atlanta, 2014). In 1991, housing prices in the Atlanta MSA paralleled national averages; however, in 2012, prices were 25 percent

lower than the national average signaling a sharp decline in real estate. Recent efforts have brought a degree of revival in the industry by bringing property values up by 12.1 percent, but they remain lower than national average (Realtor.com, 2014).

Today, Atlanta's economic development strategy aims to reinvent the city as a hotbed of innovation and entrepreneurship, which capitalizes on the city's robust knowledge-based economic ecosystem and highly skilled workforce. There is potential for an economic renaissance considering that the Atlanta MSA's growth in GDP since 2009 outpaced that of both the New York and Los Angeles regions, making it the nation's seventh largest in total GDP (Invest Atlanta, 2017). The crime rate, which has indirect impacts to the city's public image and economy, also dropped significantly by 38 percent from 2000 to 2012, compared to a 12 percent decrease nationally during the same period (Invest Atlanta, 2014). Additionally, Atlanta has an emerging startup cluster and through its Civic Impact Loans program, the city has introduced a series of seed capital to grow social startups such as honorCode, Gilliam's Community Garden, and Marddy's, which are all contributing to improvements in K-12 education, urban agriculture, and culinary pipelines (Civic Atlanta, 2017).

Atlanta's talented workforce and urban amenities have afforded the city a myriad of opportunities making it resilient to economic storms. Moving forward, however, Atlanta must leverage its strengths and community assets to build on a new model of urbanism – one that encourages innovation and wealth creation while generating good jobs, economic development, and a better quality of life for everyone (Glaeser, 2010). The goal of this report is to highlight Atlanta's economic development strategies currently employed in the region, analyze leading industry and job clusters, present findings, and provide recommendations to further bolster Atlanta's economy as an exemplar for social equity, regional sustainability, and innovation.

Fast Facts



472,522
City Population



\$47,527
Area Median Income



\$320 Billion
Metro Area Economy



5.6%
Unemployment Rate



24.6%
Poverty Rate



\$217,300
Average Home Value

Current Economic Development Strategies

Atlanta's economic development agency, Invest Atlanta, produced a report capturing the city's historic strengths and identified opportunities through their comprehensive economic development strategy, *Without Limits: A Three Pillar Strategy for a Resurgent Atlanta Economy*. This document outlines key recommendations that serve as building blocks to revitalizing and growing Atlanta's position as a world-class city.

Pillar One: Solidify Fundamentals

The first section of Invest Atlanta's report summarizes the prerequisites to a well-functioning city, which enables an educated and skilled workforce. Building a thriving city requires strong fundamentals in infrastructure, schools, businesses, and public safety to foster a high quality of life where people invest in their neighborhoods and raise families.

This pillar focuses on Atlanta's attractiveness as a place where people not only work, but live. Due to the city's soaring population growth in recent years, Invest Atlanta proposed several ways to bolster its residential base within the downtown area. One of their primary strategies include increasing mixed-use, transit-oriented developments where housing, retail, and transit converge into a single site to encourage walkability and connectedness. One of the largest and most recent developments that incorporated these elements is the Ponce City Market, a 1.1 million-square-foot project in Southeast Atlanta. This project created 300,000 square feet of retail and restaurants, 450,000 square feet of office space, and 260 residential units, which are all adjacent to the Atlanta BeltLine (Weible, 2013). Downtown Atlanta plans to step up this type of mixed-use approach by leveraging private capital with public housing development funds to increase its much needed housing stock.

Identifying creative funding approaches is another component of Invest Atlanta's strategy. The goal is to distribute the burden of public improvements from local businesses and residents to national and private investors. One main example is Atlanta's Tax Allocation District (TAD) program, the city's tax increment financing model. This is a key economic development tool that earmarks future property tax revenue towards public amenities including housing, community centers, parks, and infrastructure. This incentivizes private developers to invest in targeted areas to gain tax subsidies for their projects while providing a significant revenue stream for public projects (Invest Atlanta, 2014).

According to a recent report, Atlanta leads the nation with one of the highest crime rates – an unfortunate statistic that the city aims to remedy through a collaborative network of community partnerships (Stebbins, 2016). Public safety is crucial component to economic development because the city's public perception of safe neighborhoods and business districts affects the assessed value on its neighborhoods. Place management organizations such as Community Improvement Districts employ community liaisons to provide “eyes on the street,” a key component of a vibrant street life that helps to deter crime and foster a

sense of neighborhood security (Jacobs, 1961). This system complements Atlanta's Police Department and adds additional support to their services (Forbes, 2016).

The next component in this pillar involves synergizing businesses, people, and resources to enhance workforce pipelines to high quality, meaningful jobs. Atlanta aims to bolster their "workforce development ecosystem" by evaluating current workforce programs for opportunities, strengthening ties with existing industries, and then leveraging their competitive advantage with increased human capital.

Augmenting their workforce development strategies, Atlanta plans to strengthen their K-12 education system ensuring students graduate with the range of skills needed to succeed in the workforce. Atlanta's current labor force is not adequately prepared to meet the evolving needs of employers and the city's emerging tech cluster. Thus, the city has developed a framework to broaden internship and mentoring programs to align labor supply with industry demand in the region's growing science, technology, engineering, and mathematics sectors.

Lastly, Invest Atlanta's strategy to solidify fundamentals requires building up an empowered economic development subcabinet. This subcabinet would be composed of multiple stakeholders in the region including the private and nonprofit sector, elected officials, relevant department heads, and other key figures to monitor and address fundamental issues that are critical to the health of Atlanta's economy. The subcabinet's agenda would explicitly focus on providing neighborhood amenities, improving education, and reducing crime while sustaining economic development efforts.

Pillar Two: Foster Innovation and Entrepreneurship

Atlanta's higher education infrastructure makes the city a prime destination for entrepreneurship and innovation. This pillar in Invest Atlanta's economic development report outlines strategies leveraging Atlanta's strong institutional research base. By fostering incubators, collaboration networks, and existing assets, the city aims to promote greater business and entrepreneurial development, which are key drivers for sustained economic development.

The first recommendation in this pillar involves building a robust entrepreneurial network that links venture capital and management expertise to emerging businesses. Invest Atlanta already begun this process by establishing Startup Atlanta, a non-profit program designed to cultivate a network of seed funders, mentorship connections, and collaborative programming as the recipe for high startup growth. The overall goal is to develop a cluster economy, much like that in Silicon Valley, where complementarities and access to specialized information motivate a top degree of productivity and innovation within a geographic concentration (Porter, 1998). This cohesive web of companies in a particular industry provides an enduring competitive advantage that is highly localized and effectuates human capital externalities (Glaeser, 2012). Atlanta's new Tech Village models a small-scale version of this strategy, which capitalizes on an interconnected entrepreneurial base. This will

ultimately strengthen the city's base as a premier destination for talented individuals and employers alike by fostering an innovation district.

To further develop Atlanta's entrepreneurial ecosystem, the city aims to deepen their pool of venture capital to support innovation businesses at every stage of their development. By expanding resources available to startups, Atlanta will be able to commercialize innovation and increase the number of high quality jobs in technology, business, finance, and more. The city's Startup Atlanta Pre-Seed Fund Project provides seed funding from \$50,000 to \$250,000 aimed to carry innovation businesses to the stage of self-sufficiency, which will continue to attract private sources of venture capital. This model will only be competitive if complementary funds are matched by private resources (Invest Atlanta, 2014).

As part of their last strategy to foster an innovation economy, Atlanta seeks to enhance the city's business support services. Every point of interaction between businesses and the city government is an opportunity for the city to assist business owners and their efforts to grow the local economy, whether it involves reducing parking requirements, streamlining building permits, or providing better coordinated services. This is a critical component in attracting and retaining businesses in the region because increased responsiveness by the city will reduce business costs, facilitate growth, and improve Atlanta's position as an effective place to conduct business.

Pillar Three: Attract, Retain, and Grow Investment

Atlanta's unparalleled market access with the world's busiest airport and the concentration of world-class institutions of higher education make the city a top opportunity for business development. Employers are attracted to the city's pool of local talent, who mostly graduate with STEM degrees from universities such as Georgia Tech, Emory University, Morehouse College, and other elite institutions. This has created a highly educated workforce where 47.9 percent of people age 25 and older hold a college degree compared to 33.4 percent nationwide (US Census Bureau). The city plans to take advantage of these universities as anchor institutions that will spur research and development in targeted industries.

Part of this model stems from the idea that human capital is the primary factor to a city's success (Glaeser, 2012). By nurturing an environment of higher education, urban productivity heightens bringing direct benefits to both the people and the city (Glaeser, 2012). While one of Atlanta's strengths is their diverse array of industries already thriving within the region, Invest Atlanta focuses on bringing more investment in both traditional employment centers and emerging industries that could experience more growth. This is part of their overall strategy to strengthen Atlanta into a more balanced, stronger economy.

Atlanta's dynamic metropolitan region also derives benefits from their vast transportation networks that provide interconnected access from the city to the larger metro region, and even to the world. Atlanta's proximity to certain outlets such as the Savannah Port, the fourth busiest and fastest growing seaport in North America, interstate highways, and the Southeast Rail Terminus all provide businesses with multimodal freight access to deliver goods and

services (Invest Atlanta, 2014). This increases Atlanta's degree of global connectedness and international investment.

As part of this pillar to improve the business environment, Invest Atlanta plans to convene public-private industry working groups to assess and prioritize needs in human, physical, and financial capital to grow targeted industries. These working groups would also identify recommendations to optimize the regulatory framework that would alleviate challenges in the business development cycle. Certain efforts are already underway such as the Atlanta Committee for Progress, which coordinates task forces composed of corporate executives, civic leaders, and field experts to address the city's economic development goals. These groups would then suggest refinements to local policies that would leverage Atlanta's resources to attract additional businesses in the targeted sectors. For instance, incentives, public-private partnership structures, or mandates could be created to link industries to community colleges, expand incubators for research, provide seed capital for entrepreneurs, or subsidize costs in housing construction.

Another prong in this pillar involves boosting the level of exports from the region, which capitalizes on international trade. The city's new Metropolitan Export Plan targets key strategies to better connect companies to their global partners, which enhances Atlanta's competitiveness using their flourishing market intelligence sector. This plan targets export-related services as an important driver for job creation and domestic growth, where Atlanta exported \$20 billion in goods and services abroad in this sector, ranking the city 13th among major metropolitan areas in the nation (Brookings, 2013). Small businesses are likely to benefit from this strategy because most export services, as opposed to manufactured goods, require little upfront capital investment. This allows the city to strengthen this portion of Atlanta's economy by marketing Atlanta's exportable services, which are augmented by their transportation networks.

Lastly, attracting businesses requires marketing Atlanta's rich resources that could support growth and development. Invest Atlanta plans to develop non-profit partnerships that would coordinate communication efforts to advertise the city's assets to the global market. This would help close deals with prospects who are considering Atlanta as a site to develop their businesses. Relationships fostered in partnerships with nonprofits, corporate leadership, and government entities would forge new efficiencies and innovations, further attracting major employers.

The three pillars of Invest Atlanta's economic development strategies provide a broad, unified approach to bolstering the city's job creation and competitive advantage while sustaining long-term growth. These strategies require public and private partnerships to create actionable initiatives and performance measures, which leverages Atlanta's existing assets and top industries. While Invest Atlanta's document provided a comprehensive summary of the region's economy, our report deepens the analysis and provides concrete recommendations to address key issues facing their city, which will be detailed in the next sections.

Methodology & Analysis

Occupational Analysis

An in-depth analysis of Atlanta's occupational clusters provides a better understanding of the city's economy and helps to inform policy decisions moving forward. Data from the Bureau of Labour Statistics (BLS) and county business patterns from the NAICS (North American Industry Classification System) was used for this analysis. The data focused on the Atlanta-Sandy Springs-Roswell, Georgia MSA, the ninth largest MSA in the nation, and comparisons were made between 2010 and 2015 (US Census Bureau).

TABLE 1: Employment Industries for Atlanta MSA and United States (BLS)

Industry	Annual Average Employment in 2015	Annual Average Employment in 2010	Annual National Average Employment in 2015	Annual National Average Employment in 2010
Construction	N/A	87,263	64,23,866	54,89,499
Education and Health Services	3,01,569	2,55,957	210,80,792	186,56,160
Financial Activities	1,49,884	1,32,942	78,28,679	74,01,812
Goods-Producing	2,61,977	2,31,019	207,16,645	187,75,587
Information	81,691	75,531	27,54,109	27,03,886
Leisure and Hospitality	2,64,888	N/A	151,00,935	130,06,814
Manufacturing	1,55,589	1,40,958	122,91,676	114,87,496
Natural Resources and Mining	N/A	2,798	20,01,103	17,98,592
Other Services	62,163	55,064	43,08,880	43,49,563
Professional and Business Services	4,33,651	3,55,975	196,07,372	167,12,011
Service-Providing	18,50,601	15,85,711	975,91,072	874,25,645

Trade and Transport	5,47,692	4,86,771	266,70,095	244,42,734
Unclassified	9,064	N/A	2,40,211	1,52,667

In 2015, Service-Providing and Trade and Transport were the highest employment industries in Atlanta and throughout the nation as shown in *Table 1*. Professional and Business Services and Education Health Services also experienced tremendous growth in Atlanta from 2010. During the same time, Professional and Business Services and Construction saw the highest growth nationwide. Since BLS data was not available for the Construction industry in the Atlanta region, this report used NAICS data to acquire in-depth numbers for that sector.

Table 2: Employment Sector (NAICS)

Sectors	Employment in Georgia (2010)	Employment in Georgia (2015)	Nationwide Employment (2010)	Nationwide Employment (2015)
Total for All Sectors	2,003,047	2,241,972	111,970,095	124,085,947
Accommodation and Food Services	200,873	243,090	11,312,122	13,196,892
Administrative and Support and Waste Management and Remediation Services	170,823	187,227	8,977,265	11,112,465
Agriculture, Forestry, Fishing and Hunting	416	516	156,055	160,144
Arts, Entertainment, and Recreation	28,143	33000	2,003,595	2,230,822
Construction	94,993	112718	5,389,271	6,008,286
Educational Services	55,430	58,762	3,273,527	3,642,170
Finance and Insurance	106,978	116,561	5,928,696	6,135,914
Health Care and Social Assistance	225,921	256,203	17,787,859	19,221,864
Industries Not Classified	162	293	N/A	24,155
Information	99,043	100,551	3,124,036	3,394,317

Management of Companies and Enterprises	97,821	105,327	2,832,953	3,308,759
Manufacturing	124,031	143,591	10,862,838	11,605,501
Mining, Quarrying, and Oil and Gas Extraction	1,025	1,733	581,582	743,660
Other Services (except Public Administration)	92,629	99,251	5,204,445	5,401,233
Professional, Scientific, and Technical services	174,484	191,475	7,822,417	8,798,260
Real Estate and Rental and Leasing	39,884	43,634	1,946,424	2,065,427
Retail Trade	238,189	268,261	14,496,625	15,704,167
Transportation and Warehousing	103,362	119,529	4,011,989	4,616,568
Utilities	N/A	13,242	638,058	639,234
Wholesale Trade	134,405	147,008	5,598,507	6,076,109

Diving into the industries, *Table 2* portrays that Retail Trade, Health Care and Social Assistance, and Accommodation and Food Services were the highest employment sectors in Atlanta and nationwide in 2015. This shows the dominance of the service-providing industry. Between 2010 and 2015, Accommodation and Food Services and Healthcare and Social Assistance witnessed the most employment growth both in Atlanta and at the national level, which further highlights the significance of service-providing industries in the area. While construction had some growth in Atlanta, the employment in the section was comparatively low.

Location Quotients (LQ) were calculated to analyze the employment contribution at the national level by Atlanta. Location Quotients are calculated using the following formula:

$$LQ = \frac{\frac{\text{Local Occupation Employment}}{\text{Total Local Employment}}}{\frac{\text{National Occupational Employment}}{\text{Total National Employment}}}$$

Sectors with LQs greater than 1 are considered employment exporters and economy contributors, while LQs smaller than 1 are considered to be employment importers and showed the lack of industry significance in the region (Blakely and Leigh-Green, 2010).

Table 3: Comparison of Location Quotients for Industries (NAICS)

Industry	LQ 2015	LQ 2010
Management of Companies and Enterprises	1.76	1.93
Information	1.64	1.77
Transportation and Warehousing	1.43	1.44
Wholesale Trade	1.34	1.34
Professional, Scientific, and Technical Services	1.20	1.25
Real Estate and Rental and Leasing	1.17	1.15
Utilities	1.15	NA
Finance and Insurance	1.05	1.01
Construction	1.04	0.99
Accommodation and Food Services	1.02	0.99
Other Services (except Public Administration)	1.02	0.99
Retail Trade	0.95	0.92
Administrative and Support and Waste Management and Remediation Services	0.93	1.06
Educational Services	0.89	0.95
Arts, Entertainment, and Recreation	0.82	0.79
Health Care and Social Assistance	0.74	0.71
Manufacturing	0.68	0.64
Industries Not Classified	0.67	N/A
Agriculture, Forestry, Fishing, and Hunting	0.18	0.15
Mining, Quarrying, and Oil and Gas Extraction	0.13	0.10

Table 3 shows that the Management of Companies and Enterprises and Information industries were the dominant employment contributors in Atlanta and were also two of the highest employers in the greater region. Finance and Insurance, Construction, Arts, Entertainment, and Recreation, Health Care and Social Assistance, and Accommodation and Food Services were also able to show some significant growth in the employment distribution.

Shift-Share Analysis

Table 4: Comparison of Location Quotients for Occupations (BLS)

Occupation Title	LQ 2015	LQ 2010
Computer and Mathematical Occupations	1.48	1.379
Business and Financial Operations Occupations	1.3	1.305
Management Occupations	1.27	1.405
Transportation and Material Moving Occupations	1.22	1.147
Arts, Design, Entertainment, Sports, and Media Occupations	1.08	0.836
Legal Occupations	1.07	1.216
Sales and Related Occupations	1.07	1.069
Office and Administrative Support Occupations	1.01	1.095
Installation, Maintenance, and Repair Occupations	1.01	1.039
Food Preparation and Serving Related Occupations	0.99	0.977
Protective Service Occupations	0.94	0.885
Education, Training, and Library Occupations	0.92	1.008
Architecture and Engineering Occupations	0.88	0.888
Healthcare Practitioners and Technical Occupations	0.83	0.801
Production Occupations	0.83	0.740
Construction and Extraction Occupations	0.82	0.808
Building and Grounds Cleaning and Maintenance	0.8	0.820
Personal Care and Service Occupations	0.75	0.718
Healthcare Support Occupations	0.71	0.622
Community and Social Service Occupations	0.7	0.704

Life, Physical, and Social Science Occupations	0.6	0.620
Farming, Fishing, and Forestry Occupations	0.21	0.196

According to BLS data in *Table 4*, Computer and Mathematical, Business and Financial Operations, and Management occupations were the biggest exporter for jobs in 2015, while Arts, Design, Entertainment, Sports, and Media Occupations began to establish themselves at the national level. Most occupations in Atlanta saw minor changes in LQ from 2010 to 2015, which implies simultaneous growth with the nation, so more in-depth analysis with industry LQs was needed. To understand the employment landscape in Atlanta, a comparison between the MSA growth rate from 2010 to 2015 and national growth rate was conducted using shift-share analysis.

Table 5: Shift-Share Analysis for Industries (BLS)

Industry	Local Growth Rate (2010 to 2015)	National Growth Rate (2010 to 2015)	G Shift	Shift Share Coefficient
Total, All Industries	13.29%	9.13%	9.13%	4.16%
Federal Government	-9.81%	-7.53%	9.13%	-2.28%
State Government	1.31%	-0.85%	9.13%	2.16%
Local Government	-3.75%	-1.22%	9.13%	-2.52%
Goods-Producing	13.40%	10.34%	9.13%	3.06%
Natural Resources and Mining	NA	11.26%	9.13%	NA
Construction	NA	17.02%	9.13%	NA
Manufacturing	10.38%	7.00%	9.13%	3.38%
Service-Providing	16.70%	11.63%	9.13%	5.08%
Trade, Transportation, and Utilities	12.52%	9.11%	9.13%	3.40%
Information	8.16%	1.86%	9.13%	6.30%

Financial Activities	12.74%	5.77%	9.13%	6.98%
Professional and Business Services	21.82%	17.33%	9.13%	4.50%
Education and Health Services	17.82%	13.00%	9.13%	4.82%
Leisure and Hospitality	NA	16.10%	9.13%	NA
Other Services	12.89%	-0.94%	9.13%	13.83%
Unclassified	N/A	57.34%	9.13%	N/A

As depicted in *Table 5*, most industries in Atlanta were growing at a marginally greater rate than the national levels. While the Information industry in the City of Atlanta underperformed compared to the national growth rate, the growth in this industry was exceedingly high for Atlanta region.

Using these LQs and shift-share coefficients, we conducted a cluster analysis to determine if these industries had local advantages and how they may have benefitted from certain clusters responsible for their growth. As described in Leigh-Green and Blakely's *Planning Local Economic Development: Theory and Practice*, industries could be classified into four groups:

- a. Growing Industries (High LQ and High Shift-Share Coefficient)
- b. Transforming Industries (High LQ but Low Shift-Share Coefficient)
- c. Emerging Industries (Low LQ but High Shift-Share Coefficient)
- d. Declining Industries (Low LQ and Low Shift-Share Coefficient)

According to this process, growing industries are significant contributors to the region and might have competitive advantages over other regions due to presence of other significant supporting industries. This theory is reinforced by Michael Porter's findings on cluster economics, which highlights the productive impacts of related companies in close geographic proximity (Porter, 1998). The industries were divided into these assigned groups, and further occupational data was studied to identify job clusters.

Table 6: Comparative and Competitive Advantages Matrix (Leigh-Green and Blakely, 2013)

Not Competitive (Low Shift Share)	Competitive (High Shift Share)	
<u>Transforming Industries</u> Arts, Entertainment, and Recreation	<u>Growing Industries</u> - Service-Providing - Trade, Transportation and Utilities - Information - Financial Activities - Professional and Business Services - Leisure and Hospitality	High LQ
<u>Declining Industries</u> - Federal Government - Local Government - Natural Resources	<u>Emerging Industries</u> - State Government - Education and Health Services - Goods Producing - Manufacturing - Construction	Low LQ

Based on the groupings in *Table 6*, we could see how different industries are contributing to Atlanta's economy, which helps guide future development around these clusters. Information, Professional and Business Services, and other growing industries help provide for job creation and an expanding economy. The large presence of mega-corporations and smaller companies is a major factor behind this growth. Transforming industries such those in Arts, Entertainment, and Recreation relatively high LQs and is well supported by growing industries like Leisure and Hospitality. Education and Health Services is also one of the few emerging industries in Atlanta and is augmented by their prominent Finance and Insurance industry.

Thus, it is critical to provide for the infrastructure that helps these businesses expand and lift the burden from the city. At the same time, it is crucial to identify innovative solutions to bring growth to the declining and emerging industries by implementing special reforms. Service-Providing, Professional and Business Services, and Trade, Transportation and Utilities were the largest employers in the Atlanta MSA, which included major companies like UPS, Delta Airlines, Coca Cola, and First Data Corporation.

Cluster Analysis

Table 7: Atlanta MSA Location Quotients for Transportation Cluster

Occupation	2015 LQ
Airline Pilots, Co-Pilots, and Flight Engineers	4.95
Mathematical Technicians	4.81
Statistical Assistants	3.93

Tire Builders	3.50
Communications Equipment Operators, All Other	3.14
Avionics Technicians	2.70

Airline Pilots, Co-Pilots and Flight Engineers had the highest LQ of 4.95 in 2015 while Mathematical Technicians and Statistical Assistants followed, showing the cluster presence of jobs related to the trade and transportation industry.

Table 8: Atlanta MSA Location Quotients for Information Cluster

Occupation	2015 LQ
Mathematical Technicians	4.81
Database Administrators	2.07
Computer Network Support Specialists	1.80
Computer Network Architects	1.74
Computer User Support Specialists	1.67
Software Developers, Systems Software	1.61
Software Developers, Applications	1.54
Computer Programmers	1.51
Computer and Mathematical Occupations	1.48
Computer Systems Analysts	1.39
Computer and Information Research Scientists	1.33

Mathematical Technicians and other computer-related occupations had the highest LQs and align with Atlanta's finance and service-providing industries demonstrating the region's growing information cluster.

Table 9: Atlanta MSA Location Quotients for Real Estate Cluster

Occupation	2015 LQ
Landscape Architects	2.65
Real Estate Sales Agents	2.41
Electrical Power-Line Installers and Repairers	2.06
Pest Control Workers	1.95
Elevator Installers and Repairers	1.89
Helpers—Electricians	1.70
Health and Safety Engineers, Except Mining Safety Engineers and Inspectors	1.65
Environmental Engineers	1.57
Environmental Engineering Technicians	1.52
Appraisers and Assessors of Real Estate	1.48
Interior Designers	1.42
Electronics Engineers, Except Computer	1.42
Electronic Home Entertainment Equipment Installers and Repairers	1.41

Property, Real Estate, and Community Association Managers	1.36
Mechanical Door Repairers	1.24
Electrical and Electronics Engineering Technicians	1.13
Architectural and Civil Drafters	1.08
Civil Engineering Technicians	1.06

Real estate and construction industries were some of the highest economic contributors in Atlanta's past and because of the city's dependency in this sector, they suffered the most during the 2007 housing collapse (Winzer, 2017). Still, occupations related to this industry have a relatively high LQ presence in this domain. While housing market rates are still 25 percent below national housing rates in certain areas of Atlanta, the industry is experiencing some recovery since the recession.

Table 10: Atlanta MSA Location Quotients for Arts and Entertainment Cluster

Occupation	2015 LQ
Artists and Related Workers, All Other	2.44
Producers and Directors	1.84
Advertising and Promotions Managers	1.69
Sound Engineering Technicians	1.60
Fine Artists, Including Painters, Sculptors, and Illustrators	1.57
Marketing Managers	1.50
Graphic Designers	1.35
Broadcast Technicians	1.32
Meeting, Convention, and Event Planners	1.14
Public Relations and Fundraising Managers	1.08
Agents and Business Managers of Artists, Performers, and Athletes	0.98

Atlanta is home to a developing arts and entertainment cluster, which is supported by major production studios such as CNN and Pinewood Atlanta Studios, the primary entity responsible for producing some of Marvel's recent blockbusters. The city's emergence in these industries indicate opportunities for capitalizing on these trends.

Findings

Based on our analysis on location quotients and shift-share coefficients, there are strong occupational clusters related to information, real estate, transportation, arts, and entertainment. Each of these industry clusters are major contributors to Atlanta's economy and employs a significant portion of the population within the Atlanta MSA. The overall health of these fields supports sustained economic development while also providing pathways for smaller related industries to grow.

Arts, entertainment, and recreation are some of the fastest growing industries and is highly supported by an already established presence of leisure and hospitality in the region, which is chiefly responsible for bringing tourism to the city. On another note, management and information sectors have lost some exports considering the saturation of those industries nationwide, but the upcoming Mercedes Headquarters could spur new growth in these industries along with others (Ruch, 2016).

Real estate could reawaken as a dominant cluster in Atlanta, but refinements to education and health care services must be prioritized to set the foundation for this cluster to thrive. The growing presence of these clusters in Atlanta could be used to address social and economic issues in the city while bringing dispersing economic development evenly across the region. The next section of this report details our recommendations that takes advantage of the diverse economy in Atlanta and synthesizes the findings of our cluster analysis.

Top Five Clusters



Management



Real Estate



Arts & Entertainment



Information



Transportation

Recommendations

Recommendation 1: Expedite construction and rehabilitation by streamlining development processes through zoning amendments and concessions

Without natural boundaries to control development, Atlanta's urban sprawl has characterized much of the city's suburban landscape and segregated affluent neighborhoods from the lower income inner city. Since the housing market collapse in 2007, Atlanta's real estate economy has been experiencing a steady recovery, but still does not mirror the same level of prominence it once had in past generations. Housing is a critical issue in the region because over 48 percent of households are cost-burdened by their rents (Hunt, 2015). Using occupations and industries present in the Atlanta MSA's real estate cluster, we recommend the City of Atlanta consider streamlining measures to expedite development and rehabilitation in infrastructure, transportation, public safety, and most importantly, housing.

The Atlanta region has relatively high LQs related to real estate occupations, which demonstrates this growing opportunity for the city. As a whole, the real estate cluster is a significant contributor to the country's economy, accounting for 28 percent of the national GDP (Ling, 2012). Part of the reason why Atlanta struggles in this realm is due to existing policies that elongate the development process driving up overall costs. Atlanta should expand their participation in the real estate market by enabling construction and development industries to build more efficiently shortening project timelines.

Considering Atlanta's current state of housing, this recommendation suggests zoning amendments that would allow increased densities and foster more mixed-used developments. This would come in the form of easing parking requirements for new developments, which requires developers to build expensive lots that can raise the total cost of their projects. Coupling this with reduced or eliminated permitting fees would help developers pencil out projects more easily allowing for an influx in the housing stock. This would accelerate housing construction to a grander scale while optimizing growth in the real estate industry.

Another issue facing housing infrastructure in Atlanta is in the maintenance of their physical buildings. Blighted properties are costing the city between 1.6\$ million and \$2.9 million a year in direct services, with even greater economic losses on property values (Kinney, 2016). Working with the Historic Preservation Division, the city should consider Los Angeles's Adaptive Reuse Ordinance as a model for rehabilitation. This ordinance played a significant role in the revitalization of downtown LA by reducing permitting requirements to improve infrastructure and could be instituted into Atlanta's policies. There are many historic corridors in Atlanta that could be modernized if the zoning code allowed for more compact units and a mixture of uses in these spaces.

Recommendation 2: Utilize corporate social responsibility and educational partnerships to cultivate a “New Collar” workforce

The Atlanta MSA’s public education system have inadequately prepared young adults to be competitive for the jobs in the region’s rapidly growing innovation clusters. To ensure that residents are pipelined into the growing number of technology, science, business, and entertainment positions, Atlanta should leverage their high density of universities and partner with leading companies to establish programs in local schools training students to be workforce ready.

Major companies in Atlanta could establish pathways to support career development and on-the-job training for many residents, creating a “New Collar” workforce – a concept where companies provide education and specific training related to the job requirements. For instance, Delta Airlines partnered with 37 schools across the country to give thousands of students the technical knowledge needed to work as aviation maintenance technicians, ideally pipelining them into future jobs with Delta (Spector and Cappetta, 2017). Similar programs could be created for the information and entertainment clusters as well as the emerging tech cluster, which are major employment sectors in Atlanta. By using companies and their corporate social responsibility policies, Atlanta can build new opportunities for innovation and employment in the downtown area.

There are many compelling reasons why forging many of these training programs near the downtown area is ideal. Michael Porter summarizes these reasons as the inner city’s strategic location, local market demand, regional integration, and industrial workforce, which makes up the formula that allows clusters to succeed (Porter, 1995). Atlanta, more specifically, has more to gain from this considering their racial and economic divide. When new jobs are created in the Atlanta MSA, only about 5.7 percent of them go to the city of Atlanta (Brookings, 2016). While Northern suburban areas experienced job growth rate close to 20 percent, the southern region of lower-income black households saw a minor dip in employment (Brookings, 2016). By concentrating workforce training programs in areas that are experiencing higher poverty rates, the city can address some of the disparities in the region while providing more higher quality jobs and opportunities to thrive.

Facebook’s recent Community Compact illustrates exactly how this recommendation can be envisioned. Community groups throughout the Silicon Valley have collaborated with Facebook and other educational institutions to develop a long-term agreement that will create affordable homes, protect tenants, prevent displacement, and increase access to jobs in the East Palo Alto area (Public Advocates, 2016). One of the main objectives in this deal was to create economic opportunities to communities surrounding the Facebook campus that have not experienced nearly the same level of growth as the company. Thus, this compact supports a pipeline training program and the position of a community liaison who is tasked to connect residents to open opportunities at Facebook.

Atlanta can resemble this model to increase direct pathways into the region’s top clusters, further building the city’s human capital that will harden the foundation for future success. This, in turn, will seek to address some of the employment challenges in the city.

Recommendation 3: Develop and expand an arts district from Downtown to Midtown

Atlanta's Hartsfield International Airport brings millions of visitors every year fostering the city's luster as a top tourist destination in the United States. People come to experience the extremely dynamic arts and culture that stem from the city's rich civil rights history and broad diversity of entertainment hubs. Capturing the exuberance and spirit of Atlanta, our last recommendation is to extend Midtown's already flourishing arts district to the downtowns creating a vibrant, arts corridor in the city.

Despite the marginal increase in the LQ of the city's arts, entertainment, and cultural industry from 0.836 in 2010 to 1.08 in 2015, Atlanta remains an entertainment capital of the Southeastern United States region. Cultural assets in this transforming industry such as the Georgia Aquarium, CNN Headquarters, Fox Theatre, and Philips Arena support the city's branding as the "Hollywood of the South." Growth in this cluster could bring economic benefits through increased tourism revenue while stimulating growth in other areas such as innovation and entrepreneurship. The city has made it clear that it wants to build on this potential. In 2015, Atlanta offered \$15 million in tax incentives to help develop Georgia Tech's second phase of Tech Square, a 1.4 million-square-foot, mixed-use urban development that incorporates education, research, hospitality, office, retail, and residential areas. This project is situated in Midtown, where our recommendation targets as the incubator for an expansive innovation district.

Given the vast potential of agglomeration economies, innovation districts capitalize on economic, physical, and social assets that synergizes the relationship between people, firms, and place (Glaeser, 2010). To continue attracting, retaining, and growing investment in the city, Atlanta must leverage their existing transit system, MARTA, to connect both the northern and southern districts seamlessly. There are currently only two major stops connecting both districts on the transit line where a concentration of hotels and attractions exist. By building new transit stops and expanding outwards to surrounding communities, Atlanta can bring in a greater diversity of arts and culture for its visitors. This would increase walkability in the city and bolster the urban core of the city, which takes advantage of Atlanta's arts, entertainment, and hospitality clusters. These changes would provide regional interconnectivity that is crucial to the core of arts and tourism. Moreover, by magnifying and leveraging the arts cluster, the city will create an innovation ecosystem – one that facilitates idea generation and accelerates commercialization.

To strengthen the local base who might be impacted by gentrification due to the looming economic effects of an emerging arts district, the city should consider policy measures that protect existing residents from displacement. Our recommendation suggests implementing a suite of policies including but not limited to rent stabilization in new affordable housing projects, development agreements, and project labor agreements, which will all involve the community through the transformation of their neighborhoods.

Conclusion

The Atlanta MSA has been experiencing a steady recovery from the housing collapse of 2007, but is becoming home to diverse, resilient economy. Management, information, transportation, real estate, and arts and entertainment are the key clusters that we determined have the most potential in the region. Though there are certain socioeconomic problems in Atlanta due to its history of unregulated development, it is becoming the home of an increasing number of corporations and highly skilled workforce, which is responsible for improving the overall quality of life in the city and for all its inhabitants.

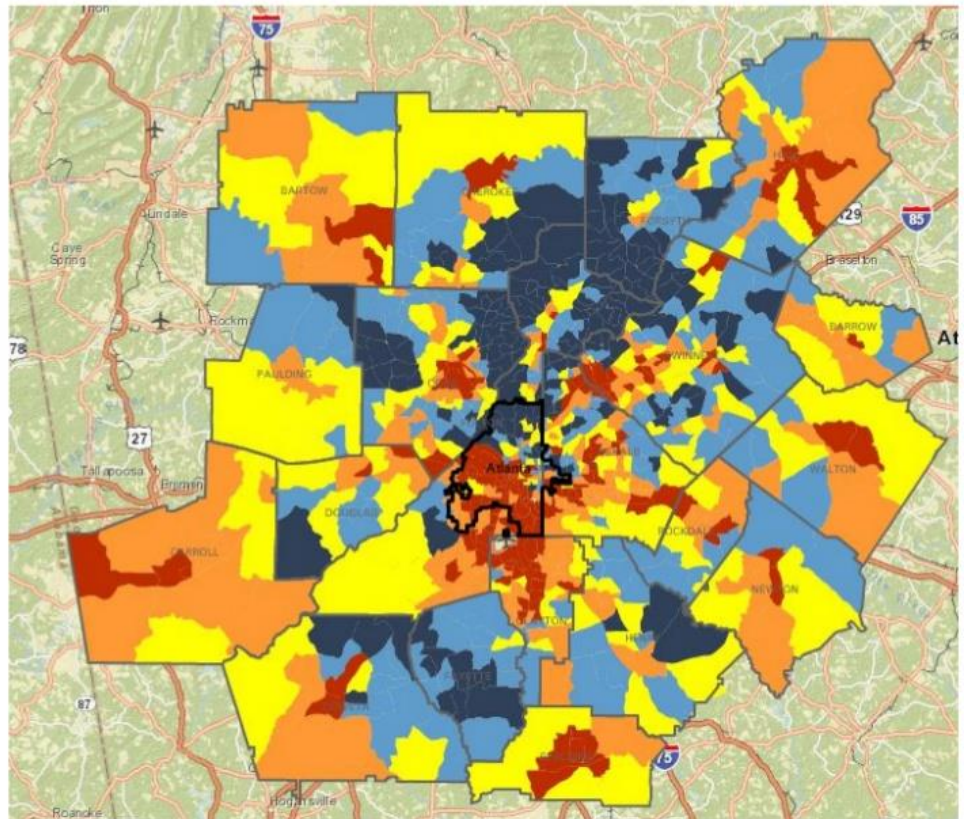
Our recommendations work in tandem to provide a comprehensive strategy to Atlanta's future economic development. We seek to address Atlanta's bring regional sustainability while addressing the city's growing income inequalities. First, by catalyzing the housing development process, we are ensuring that key infrastructure is in place for the foundation of a well-functioning city. The next is to focus on workforce development through education and job pipelines, to produce a generation of highly-skilled and flexible workers for the modern, technological era. Lastly, as a homage to Michael Porter's cluster studies, our recommendation aims to incubate innovation and arts, primarily through the extension of an innovation region that threads through every sector of Atlanta. Together these recommendations build a sustainable economy that will ensure Atlanta remains a model city, not just in the Southeastern region, but globally. Atlanta is one of the fastest growing cities in the US – it is imperative that we harness this growth and facilitate the city's position in economic development, leadership, and resiliency.

Appendix – Income Heat Map



This map shows neighborhood median household income levels, where blues are the highest household incomes and reds are the lowest. As can be seen, neighborhoods north of the City of Atlanta have among the highest incomes in the region.

Household Incomes by Neighborhood



Source: 2009-2013 American Community Survey, via Neighborhood Nexus

References

- County Business Patterns, NAICS data, 2010-2016.
- Globalization and World Cities Research Network. (2016). "The world according to Globalization and World Cities Research Network, 2016." Retrieved from: <http://www.lboro.ac.uk/gawc/world2016t.html>
- Hoelzel, Nathanael and Green-Leigh, Nancy. (2012). "Atlanta: How to Remake Cities as Places for Twenty-First Century Manufacturing." Progressive Planning. Retrieved from: http://www.plannersnetwork.org/wp-content/uploads/2012/01/PNmag_W12.pdf
- Ling, David. (2012). "Real Estate Principles: A Value Approach" McGraw-Hill.
- The Brookings Institution Center on Urban and Metropolitan Policy. (2016). "Moving Beyond Sprawl: The Challenge for Metropolitan Atlanta." Retrieved from: <https://www.brookings.edu/wp-content/uploads/2016/06/atlanta.pdf>
- US Bureau of Labor Statistics, Census of Employment and Wages. 2010-16
- Porter, Michael E. (2002). "Atlanta-Columbus: Clusters of Innovation Initiative." Council on Competitiveness. Retrieved from <http://www.compete.org/storage/images/uploads/File/PDF%20Files/Atlanta%20Cluster%20Final.pdf>
- Williams, Janelle and Torian, Sarah. (2015). "Change the Odds: the Race for Results in Atlanta." Annie E. Casey Foundation. Retrieved from <http://www.aecf.org/m/resourcedoc/aecf-ChangingTheOddsWeb-2015.pdf>.
- Florida, Richard. "The Rise of the Creative Class: Why Cities Without Gays and Rockbands are Losing the Economic Development Race". Taken From The Washington Monthly. Online: <http://www.washingtonmonthly.com/features/2001/0205.florida.html>
- Grodach, C. (2010). Beyond Bilbao: Rethinking Flagship Cultural Development and Planning in Three California Cities JPER Vol. 29 (3).
- Porter Michael, "Clusters and the New Economics of Competition," Harvard Business Review, November-December 1998, pp. 77-90.
- Porter, Michael (1995). "The Competitive Advantage of the Inner City." Harvard Business Review 35: pp. 55-71.
- Glaeser, Edward. (2010, Feb). Agglomeration Economics. National Bureau of Economic Research. The University of Chicago Press.
- Glaeser, Edward. (March 9, 2010). "Betting on Atlanta." New York Times. Retrieved from: <https://economix.blogs.nytimes.com/2010/03/09/betting-on-atlanta/>
- Lohr, Kathy. (August 2011). "The Economic Legacy of Atlanta's Olympic Games." NPR. Retrieved from <https://www.npr.org/2011/08/04/138926167/the-economic-legacy-of-atlantas-olympic-games>.
- Yamanouchi, Kelly. (March 2012). "Hartsfield-Jackson remains No. 1 airport." The Atlanta Journal-Constitution. Retrieved from <http://www.ajc.com/business/hartsfield-jackson-remains-airport/hWd2oV1fucpuksliI2tWhK/>
- Fisher, Daniel. (October 19, 2012). "America's Most Dangerous Cities: Forbes". Huffington Post. Retrieved from: https://www.huffingtonpost.com/2012/10/18/most-dangerous-cities_n_1981764.html
- Daley, Richard and Katz, Bruce. (April 22, 2013). "Atlanta Can Flourish in Global Economy" Brookings. Retrieved from: <https://www.brookings.edu/opinions/atlanta-can-flourish-in-global-economy/>
- Weible, David. (November 29, 2013). "Ponce City Market: Atlanta's History in the Making." National Trust for Historic Preservation. Retrieved from: <https://savingplaces.org/stories/ponce-city-market-atlantas-history-making#.WiWxlUqnEuV>
- Christie, Les. (January 27, 2014). CNN Money. "Top 10 cities people are moving to" CNN Money. Retrieved from: http://money.cnn.com/gallery/real_estate/2014/01/27/cities-moving/index.html

- Lowrey, Annie. (Feb 2014). "Study Finds Greater Income Inequality in Nation's Thriving Cities." The New York Times. Retrieved from <https://www.nytimes.com/2014/02/20/business/economy/study-finds-greater-income-inequality-in-nations-thriving-cities.html>.
- Atlanta regional Commission. (July 2014). "Does Economic Disadvantage Matter for Student Achievement?" Retrieved from: <http://documents.atlantaregional.com/regional-snapshot/2014/july/edu-k12.pdf>
- Invest Atlanta. (December 2014). "Without Limits: A Three Pillar Strategy for a Resurgent Atlanta Economy." Retrieved from: <http://www.investatlanta.com/wp-content/uploads/Atlanta-Econ-Dev-Strategy-Report-finalversion.pdf>
- Snyder, Tanya. (July 22, 2015). "Major MARTA Expansion Could Transform the Atlanta Region." USA street blog. Retrieved from: <https://usa.streetsblog.org/2015/07/22/major-marta-expansion-could-transform-the-atlanta-region/>
- Hunt, April. (September 2015). "Claim about Atlanta's affordable housing hits the mark." Politifact Georgia. Retrieved from <http://www.politifact.com/georgia/statements/2015/sep/25/matthew-charles-cardinale/claim-about-atlantas-affordable-housing-hits-mark/>.
- Kinney, Jen. (February 2016). "Atlanta's Properties Are Costing City Millions." Next City. Retrieved from <https://nextcity.org/daily/entry/atlas-blight-cost-city-millions>.
- Investopedia. (July 1, 2016). "A Guide to Buying a House in the U.S." Realtor.com. Retrieved from: <https://www.investopedia.com/articles/personal-finance/041514/what-200000-will-buy-atlanta-real-estate-market.asp>
- Fausset, Richard. (Sept 2016). "A Glorified Sidewalk, and the Path to Transform Atlanta." The New York Times. Retrieved from: <https://www.nytimes.com/2016/09/12/us/atlanta-beltline.html>.
- Ruch, John. (September 2016). "Mercedes-Benz USA breaks ground on new Sandy Springs headquarters." Springs Publishing LLC. Retrieved from <http://www.reporternewspapers.net/2016/09/26/mercedes-benz-usa-breaks-ground-new-sandy-springs-headquarters/>.
- Stebbins, Samuel. (November 2016). "America's 25 Murder Capitals." 247WallSt. Retrieved from <http://247wallst.com/special-report/2016/11/01/americas-25-murder-capitals/>.
- Public Advocates Making Rights Real. (November 2016). "Compact to Increase Equity, Opportunity, and Access in Silicon Valley." Retrieved from <http://www.publicadvocates.org/wp-content/uploads/ETB-Facebook-CBA-2016-Fully-Executed.pdf>.
- Ricchiuto, Katy. (March 2017). "The 4 Trends Setting Atlanta's Urban Regeneration Story Apart." EcoDistricts. Retrieved from <https://ecodistricts.org/atlanta-urban-regen-trends/>.
- Freemark, Yonah. (June 2017). "Atlanta's Raising \$2.5 Billion to Invest in Transit. Will It Be Money Well-Spent." Streetsblog USA. Retrieved from <https://usa.streetsblog.org/2017/06/02/atlas-raising-2-5-billion-to-invest-in-transit-will-it-be-money-well-spent/>.
- Winzer, Ingo. (August 2017). "Sub-Prime Mortgages Still Taking Their Toll on Atlanta Home Prices." Forbes. Retrieved from <https://www.forbes.com/sites/ingowinzer/2017/08/07/sub-prime-mortgages-still-taking-their-toll-on-atlanta-home-prices/#74f097f52cc9>.
- Spector, Nicole and Cappetta, Michael. (September 2017). "Companies and Colleges Unite to Train 'New Collar' Students." NBC Business News. Retrieved from <https://www.nbcnews.com/business/business-news/companies-colleges-unite-train-new-collar-students-n802251>.
- Cervone, Andrea. (September 8, 2017). "Three Atlanta Social Entrepreneurs Awarded Civic Impact Loans." Civic Atlanta. Retrieved from: <http://www.civicatlanta.org/civic-impact-loans-press-release/>
- Bernardo, Richie. (Oct 2017). "2017's Fastest-Growing Cities in America." WalletHub. Retrieved from <https://wallethub.com/edu/fastest-growing-cities/7010/#methodology>