

2022 TAMPA BAY E-INSIGHTS REPORT



STATE OF THE
REGION

THE 2022 E-INSIGHTS REPORT IS PRODUCED BY THE MUMA COLLEGE OF BUSINESS AT THE UNIVERSITY OF SOUTH FLORIDA, A PREEMINENT RESEARCH UNIVERSITY, AND IS AFFILIATED WITH THE STATE OF THE REGION INITIATIVE.

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We are excited to present the 2022 Tampa Bay E-Insights Report that unveils new research tracking the economic competitiveness and growth of the Tampa Bay region.

A companion piece to the Regional Competitiveness Report, which presents research conducted by the Tampa Bay Partnership, this report is a multi-dimensional quantitative assessment that examines where we are compared to top markets nationwide and explores the steps policymakers could take to create a more vibrant economy.

This work is timely and important as it includes inquiries into three domains that are impacted by the COVID-19 pandemic: innovation and entrepreneurship, education, and health care. As we move toward the post-pandemic era, it is time for us to look back and assess how the pandemic has impacted our economy. These three areas were heavily impacted by the pandemic and these two reports detail some of the biggest areas affected. Our scholars used rigorous quantitative methods on both traditional economic data and real-time big data to analyze the performance of the Tampa Bay region with respect to 19 other metropolitan areas in the three economic domains.

What Gets Measured is What Gets Done.

We've worked with the Tampa Bay Partnership on this effort since 2017 and one might ask why academics in a business school have taken on this effort? My answer: Yes, we teach business, but we do so much more than simply instruct students. Our business school is shaping business thinkers. Our faculty scholars bring business challenges into the classroom by connecting with civic leaders – people like you – and using our faculty expertise to contribute to the well-being of the greater community – all while providing opportunities for our students to conduct relevant business research. Graduate students worked alongside our faculty on this inquiry, gathering and analyzing data and preparing this report, giving them a learning opportunity that is beyond measure.

To improve the region's economic health, we must know where we stand relative to similar and aspirant communities. After all, what cannot be measured cannot be improved effectively. However, we do not want to stop there. We want to take a scientific approach and work closely with the business community and policymakers to improve the economic health of the region and to make the Tampa Bay area a very attractive destination for both businesses and the people who work in them. Understanding that what gets measured is what gets done, we can then gauge our progress and make timely and effective recommendations that can lead to a maximum impact. Data is the key.

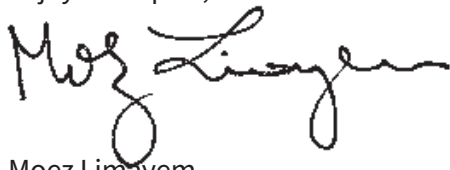
Real-Time Signals, Real-Time Findings

One unique feature of this project is its multi-dimensional approach. We derive insights about the region by using real-time big data signals, such as Google Trends, and real-time consumer spending data. We also use statistics from traditional economic indicators to derive a holistic picture. This approach assesses the economic health of the region and the impact of the COVID-19 pandemic especially as it relates to education, healthcare, innovation and entrepreneurship. Furthermore, our researchers employed econometric and simulation methods to identify policy initiatives that could boost the inclusive economic growth of the region.

The analysis reveals that the Tampa Bay region has been less impacted by COVID-19 – at least economically – when compared to other major metropolitan statistical areas in Florida, such as Miami and Orlando. The Tampa Bay region has recovered beyond the pre-pandemic level in terms of consumer spending.

The research also reveals that we have made some modest gains when it comes to racial inequality, but we have much room for improvement, particularly as it relates to meaningful and inclusive growth.

Enjoy our report,



Moez Limayem,
Lynn Pippenger Dean
USF Muma College of Business



About the USF Muma College of Business

Our mission guides what we do and our vision guides where we want to go. Our strategic priorities and values help us focus our actions.

- **Mission:** The Muma College of Business leverages analytics and critical thinking as a means to advance student success, produce scholarship with impact, and generate innovation in partnership with our stakeholders.
- **Vision:** Our vision is to be a top business school recognized for the transformative solutions produced by its scholars and graduates who lead in business and society.
- **Strategic Priorities:**
 1. **Distinctive Identity.** We infuse our teaching, research, and outreach with analytics and critical thinking.
 2. **Research with Impact.** We embrace innovative and interdisciplinary approaches to conduct impactful research for academia and practice.
 3. **Student Success.** We equip our diverse students with the knowledge and skills necessary to achieve their professional goals.
 4. **Business Engagement.** We partner with businesses worldwide to co-create and provide ideas, solutions, and intellectual capital.
 5. **Diversity, Equity, and Inclusion.** We embody, develop, and transfer a culture of diversity, equity, and inclusion.
- **Values:**
 - **Respect.** We commit to respecting and appreciating everyone.
 - **Accountability.** We accept responsibility for our actions.
 - **Integrity.** We hold ourselves to the highest ethical standards.
 - **Intellectual Curiosity.** We possess a deep and persistent desire to know and exhibit a lifelong love of learning.
 - **Collaboration.** We work with those around us to produce and create innovative business solutions.
 - **Community Engagement.** We connect to the communities around us at the local, regional, and global level.

2022 Tampa Bay E-Insights Report

Tampa Bay E-Insights report examines the economic performance of the Tampa Bay region relative to 19 other comparable Metropolitan Statistical Areas (MSAs). These MSAs were selected based on factors such as demography, size of the economy and presence of regional assets such as ports and research universities. The selected MSAs reflect both peer and aspirational relationships with Tampa Bay.

In this report, Tampa Bay is defined as the region consisting of eight counties: Citrus, Hernando, Hillsborough, Manatee, Pasco, Pinellas, Polk and Sarasota. The eight-county area includes four MSAs: Tampa-St. Petersburg-Clearwater, Homosassa Springs, Lakeland-Winter Haven and North Port-Sarasota-Bradenton. The data presented in the report for Tampa Bay is aggregated for the four MSAs. The MSAs studied in the report are shown in the map to the right.

This report analyzes the performance of the Tampa Bay region in three crucial areas of economy: innovation and entrepreneurship, education and health care. The analysis consists of three dimensions: the Tampa Bay region's performance with respect to other MSAs, the impact of the COVID-19 pandemic and racial equity.

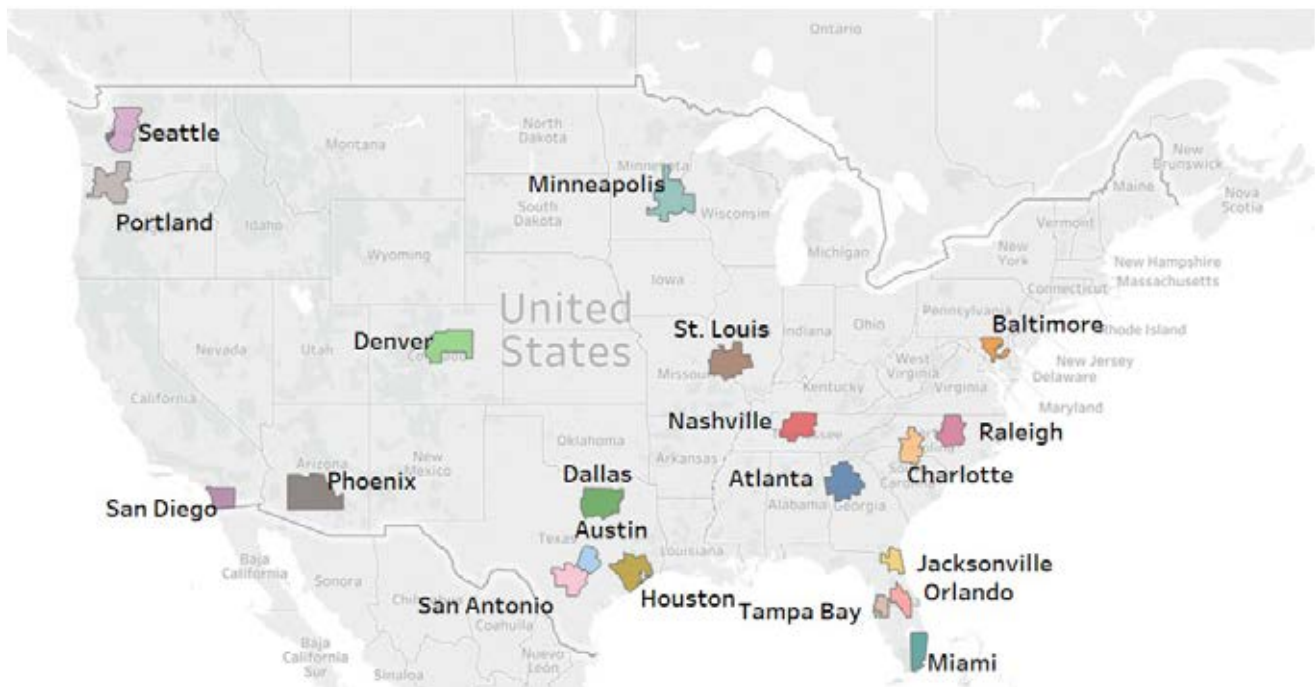
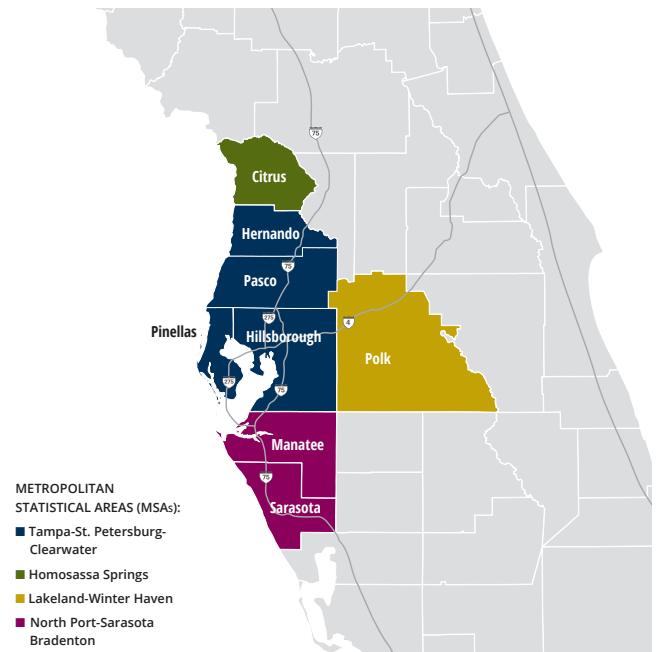


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Introduction

The Tampa Bay E-Insights report is the result of a challenging research inquiry by faculty and graduate students from the University of South Florida Muma College of Business. The goal of this initiative was to benchmark Tampa Bay across multiple economic indicators relative to 19 other Metropolitan Statistical Areas and to provide policy recommendations to move the proverbial needle when it comes to Tampa Bay’s positive ranking on different economic indicators. To this end, researchers adopted a data-driven approach because we strongly believe that data-driven insights are key to the accurate decision making and that the resulting analysis could help civic and business leaders to make informed decisions.

Since 2017, USF researchers have released four E-Insights reports. The first was a study of economic competitiveness of the Tampa Bay region. Later inquiries expanded the analysis to include inclusive economic growth, the impact of COVID-19 on the economy and racial equity. One salient feature of this analysis is that it uses real-time big data signals such as Google Trends, which tracks search queries and trends, to derive the most recent or current insights. Also, researchers employ rigorous econometric analyses to identify the primary drivers of economic growth, using the results to recommend policy initiatives.

As the nation and the world – inches toward a post-pandemic era, it is crucial to assess how the pandemic has impacted the economy. Researchers identified three domains that experienced change (or impact) due to the pandemic: innovation and entrepreneurship, education, and health care. Researchers evaluated the impact of the pandemic on each of these areas. Additionally, this year, the E-Insights report focuses on the performance of the Tampa Bay region in these three domains of as it relates to the regional economy. The report also presents insights about the impact of the COVID-19 pandemic on these domains. Finally, the report explores the racial equity in terms of access to health care and education by the minority population.



Authors and Contact Information

Faculty



Moez Limayem

Lynn Pippenger Dean, USF Muma College of Business
mlimayem@usf.edu



Balaji Padmanabhan

Director, Center for Analytics & Creativity, USF Muma College of Business
bp@usf.edu



Shivendu Shivendu

Associate Professor, USF Muma College of Business
shivendu@usf.edu

USF Muma College of Business Graduate Students



Roohid Syed

Information Systems
Doctoral Student
roohidahmed@usf.edu



Siddharth Sasidharan

MS in Business Analytics and
Information Systems Student
siddharthsasidharan@usf.edu



Divya Tyagi

MS in Business Analytics and
Information Systems Student
divyatyagi@usf.edu



Srujana Turaga

MS in Business Analytics and
Information Systems Student
srujanat@usf.edu



Ipsa Bhatt

MS in Business Analytics and
Information Systems Student
ipsa@usf.edu



Sucharitha Reddy Sura

MS in Business Analytics and
Information Systems Student
sucharithareddysura@usf.edu



Jennifer Nisely Panneer Selvam

MS in Business Analytics and
Information Systems Student
jenniferniselyp@usf.edu



Priyanka Bogala

MS in Business Analytics and
Information Systems Student
bogala@usf.edu

Executive Summary

This report presents analyses across four domains: economic competitiveness, innovation and entrepreneurship, education, and health care. For each of the domains, the insights are provided along three dimensions: the performance of the Tampa Bay region, the impact of the COVID-19 pandemic and racial equity.

This report also presents key insights from the analysis by the USF team and presents both trend analysis and results of the statistical analysis identifying the drivers of economic growth. The goal is to do more than merely benchmark the Tampa Bay region with respect to other MSAs. USF researchers also wanted to identify drivers of economic growth and present policy recommendations. The researchers used both traditional economic variables and real-time big data signals to derive the insights.

Key Takeaways: Economic Competitiveness

The trend analysis of the economic competitiveness of the Tampa Bay region paints a not-so-rosy picture. Though the Tampa Bay region's ranking improved on the various indicators over the years, the improvement has not been on par with comparison MSAs, evidenced by the declining competitive position of the Tampa Bay MSA in many areas.

In terms of unemployment rate and poverty rate, the Tampa Bay region is positioned in the bottom half of the comparison group. In terms of gross regional product per capita, the Tampa Bay MSA is positioned at rock bottom. It is clear that the region needs a stronger push along these indicators to keep up with top performing MSAs.

Key Takeaways: Inclusive Growth and Racial Equity

The analysis paints a rosy picture of the Tampa Bay area's performance along the lines of inclusive growth. Income inequality in the Tampa Bay region has declined since 2017, meaning the income divide between racial groups is narrowing. The economic indicators reflect a declining racial divide in terms of the Black-White unemployment rate gap and the Black-White poverty rate gap over the years for all the MSAs, including the Tampa Bay MSA. In terms of the Black-White unemployment rate gap, the Tampa Bay region has been in the middle of the pack over the years. In terms of Black-White poverty rate gap, the Tampa Bay MSA has consistently been in the lower half of the comparison MSA groups.

The Tampa Bay region's competitive position in terms of income inequality has improved significantly in recent years. The Tampa Bay region stands at ninth position in terms of relative economic mobility.

Key Takeaways: COVID-19's Impact on the Economy

Despite a drop in April 2020, the Tampa Bay MSA has improved significantly in terms of consumer spending. The consumer spending of the Tampa Bay region in October 2021 is 126 percent of where it was in January 2020. All of the MSAs, including the Tampa Bay MSA, suffered a significant drop in local commerce activity during the early days of the COVID-19 pandemic. However, the MSAs have recovered gradually, experiencing a slight drop in June 2021. Unemployment concern peaked in April 2020 for all the MSAs, including the Tampa Bay MSA, and has been on a declining trend ever since.

Key Takeaways: Innovation and Entrepreneurship

The innovation and entrepreneurship picture in the Tampa Bay region is not so encouraging. The Tampa

Bay region has not just been lagging on all the innovation indicators with respect to other MSAs -- it has been displaying a declining trend. Entrepreneurship activity in the Tampa Bay region is a bit more encouraging than the innovation activity. However, the entrepreneurship activity is on a declining trend as well.

Key Takeaways: Education

The Tampa Bay MSA has been performing relatively low in terms of degree production per 10,000 residents and STEM degree production per 10,000 residents. However, Tampa Bay's competitive position has generally been improving in terms of STEM degree production per 10,000 residents. The Tampa Bay is among the top performing MSAs in terms of first-time student enrollment rate.

Key Takeaways: Racial Equity Education

Racial equity in education has been improving in the Tampa Bay area over the years with the declining Black-White educational attainment rate (bachelor's degree and above) and the Black-White digital access gap. The Tampa Bay region is performing better compared to most other MSAs in terms of Black-White educational attainment rate as of 2019. However, Tampa Bay is lagging in terms of the Black-White digital access gap compared to most other MSAs.

Key Takeaways: Public Health Status

The Tampa Bay MSA's performance in terms of cardiovascular disease prevalence rate and depression prevalence rate has been poor compared to the other MSAs. Alcohol consumption in the Tampa Bay area has increased over the years. Physical activity in the Tampa Bay area has increased significantly over the years, with the Tampa Bay region standing at the No. 1 position among the comparison MSAs as of 2019.

Key Takeaways on COVID-19 Related Measures

The Tampa Bay region suffered the highest COVID-19 incidence rate among all the MSAs in the comparison groups. The Tampa Bay MSA stands third in terms of vaccination rate among Florida MSAs as of 2019.

Key Takeaways: Access to Health Care

The Tampa Bay MSA ranked low on all the indicators related to access to health care. In terms of availability of health care, the Tampa Bay MSA is standing in the last five positions with a high population-to-mental health provider ratio and the population-to-primary health provider ratio.

Key Takeaways: Government Spending on Health Care

The Tampa Bay area has been performing relatively low on Health Resources and Services Administration grants per capita over the years. However, Medicare spending per capita for the Tampa Bay MSA has been consistently higher than most other MSAs in the comparison groups. However, Medicare spending per capita for the Tampa Bay MSA declined in recent years.

Section 1: Economic Competitiveness

In this section, researchers analyzed the performance of the Tampa Bay regions' economy, looking at indicators that broadly measure the economic growth and prosperity of a region. The specific indicators used were the unemployment rate, gross regional product per capita, the poverty rate and the supplemental poverty measure, using the years 2008-2019. Researchers used data only through 2019 because that was the most recent available data at the time of the report.

The data sources for these indicators are the U.S. Bureau of Labor Statistics, the U.S. Bureau of Economic Analysis, and the U.S. Census Bureau. These sources provide data at the MSA level. For 18 MSAs, researchers pulled data directly from the sources. However, for the Raleigh-Durham MSA, which consists of two MSAs (Raleigh MSA and Durham-Chapel Hill MSA) and the Tampa Bay region, which consists of four MSAs (Tampa-St Petersburg-Clearwater MSA, Northport-Sarasota-Bradenton MSA, Homosassa Springs, and Lakeland-Winter Haven), scholars aggregated the data from the MSA level to the regional level by taking weighted averages using population as the weight. For each economic indicator, the definition and the data sources are described at the beginning of the page of that indicator.

Three charts are presented for each of the economic indicators. In the first chart, researchers present the snapshot of the indicator values for all the MSAs for three years: 2008, 2015 and 2019. The second chart presents the trend for four to five MSAs, including the Tampa Bay MSA. For these trend charts, researchers present the Tampa Bay MSA data alongside the best performing MSA, the worst performing MSA, and one or two MSAs that have shown moderate performance. The third chart illustrates the changes in the competitive positions of four to five MSAs, including the Tampa Bay region, over time. To determine the competitive position of an MSA in a year, researchers rank-ordered the MSAs based on performance of the MSAs on that indicator for each year. The best performing MSA is ranked No. 1; the worst performing MSA ranked No. 20.

In addition to traditional economic indicators, the researchers looked at real-time indicators, such as consumer spending and Google Trends, as indicators on local commerce and unemployment concerns. This section presents the insights on economic performance of the Tampa Bay region with respect to 19 other MSAs as well as the impact of COVID-19 on the economic performance of the Tampa Bay region.

Finally, key takeaways are presented for each indicator after the charts.



Unemployment Rate

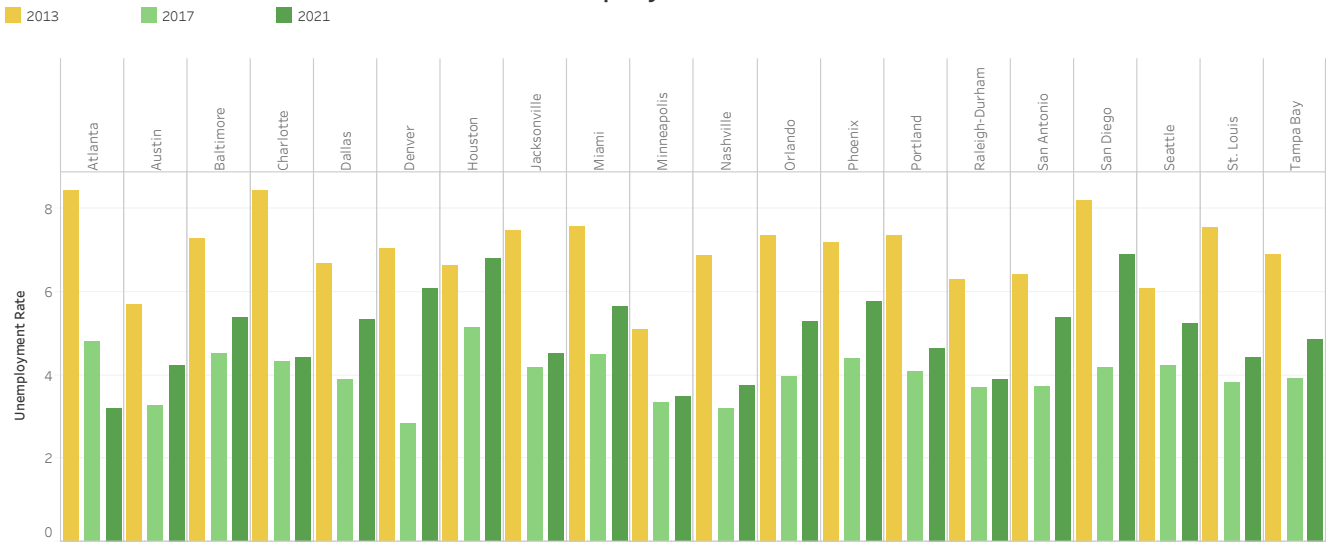
Insights

• Unemployment rates for all MSAs have been declining over the years since 2013. However, unemployment rates rose steeply in 2020 and declined again in 2021.

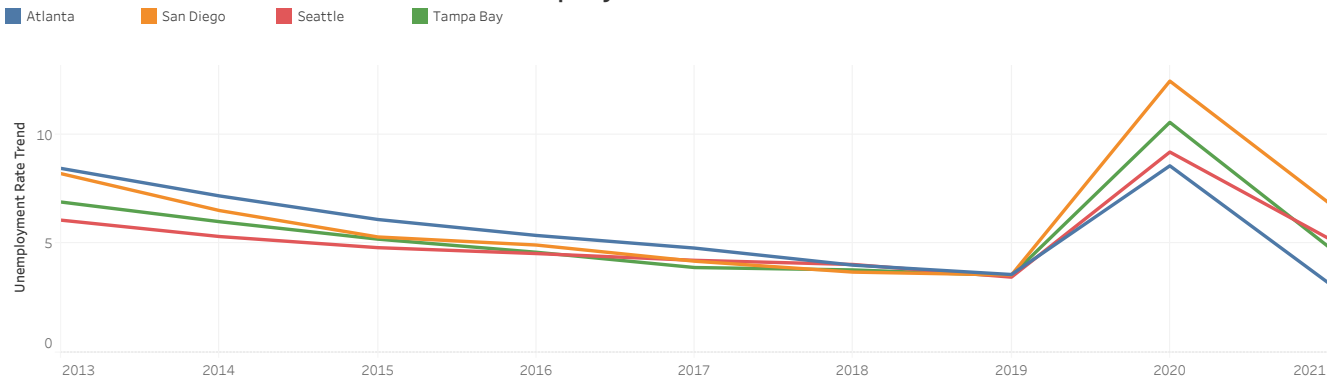
- Atlanta has been improving consistently since 2015 and is currently standing at No. 1 as of 2021.
- The Tampa Bay MSA has consistently been in the middle of the group over the years. However, the Tampa Bay MSA suffered a decline in competitive position in 2020, slightly regaining its position in 2021.

About: Measures the share of the labor force that is jobless. Generally, an individual is considered unemployed if he or she is willing and able to work but is unable to find a job.
Source: U.S Bureau of Labor Statistics, local area unemployment statistics.

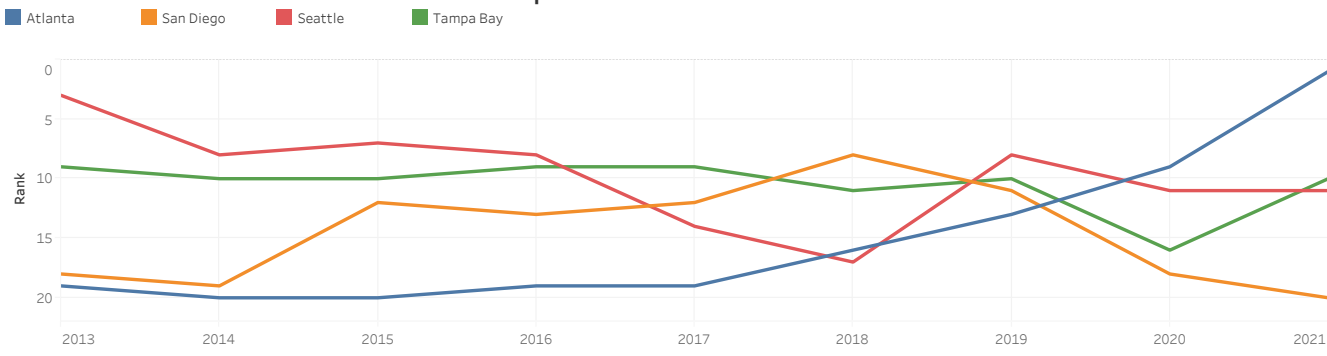
Unemployment Rate



Unemployment Rate Trend



Competitive Position Trend



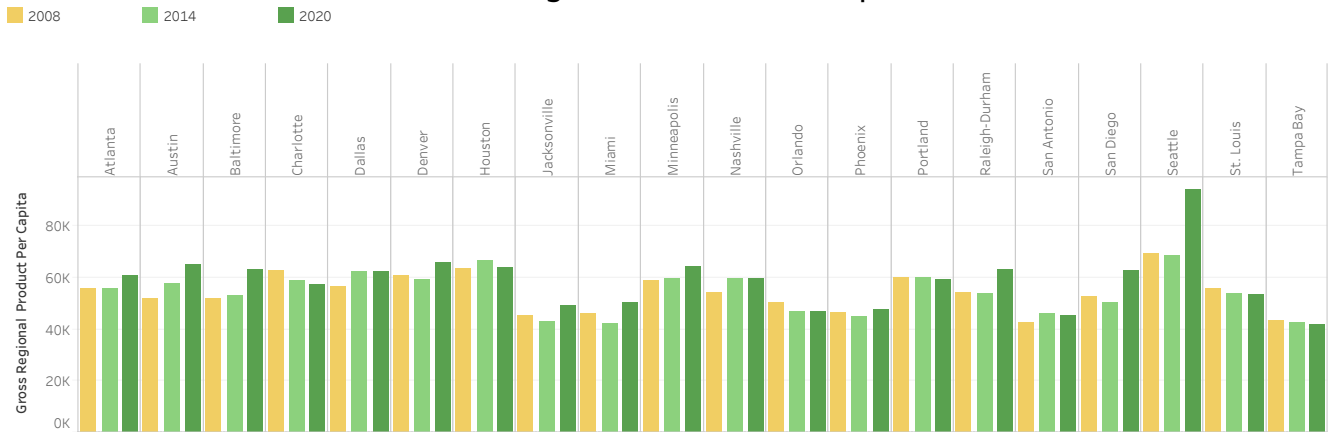
Gross Regional Product Per Capita

Insights

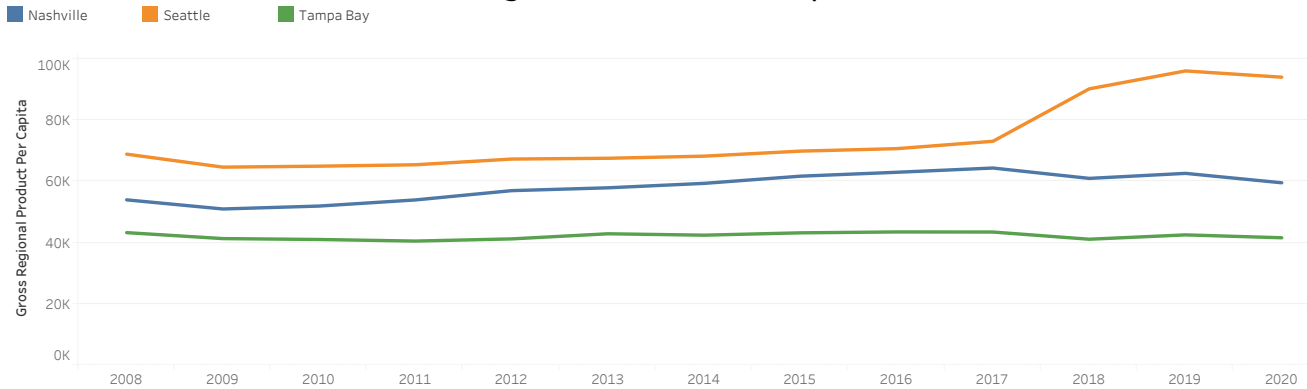
- The Tampa Bay MSA has consistently been in last place most of the years.
- Seattle has consistently been ranked No. 1 among all the comparison MSAs in terms of GRP Per capita since 2012.
- Florida MSAs rank relatively low among the comparison group.

About: This measurement divides the Gross Regional Product, the value of all goods and services produced in the region, by the population of the region.
Source: U.S Bureau of Economic Analysis, Regional Data, Per Capita Real GDP.

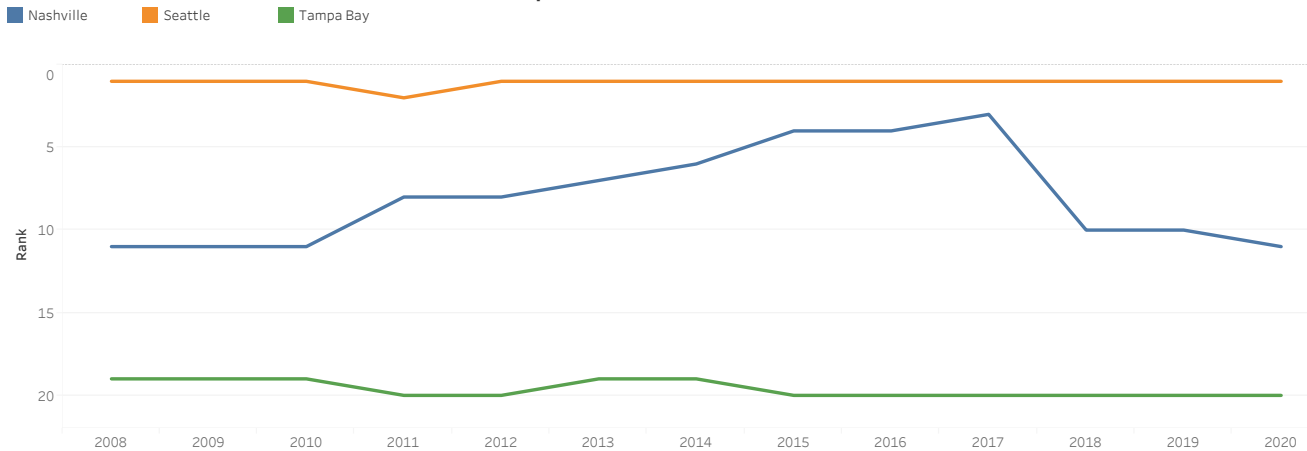
Gross Regional Product Per Capita



Gross Regional Product Per Capita Trend



Competitive Position Trend



Poverty Rate

Insights

- The Tampa Bay MSA's poverty rate increased from 2008 to 2011 yet has been declining since then.
- However, in terms of competitive position, Tampa Bay's performance declined over the years. The Tampa Bay region's competitive position declined from No. 10 in 2010 to No. 17 in 2019.
- Minneapolis consistently ranked No. 1.

About: Measures the percentage of population that is living below the federal poverty level as defined by the U.S. Census Bureau (Income thresholds vary by family size).
 Source: U.S. Census Bureau, American Community Survey, table S17001.

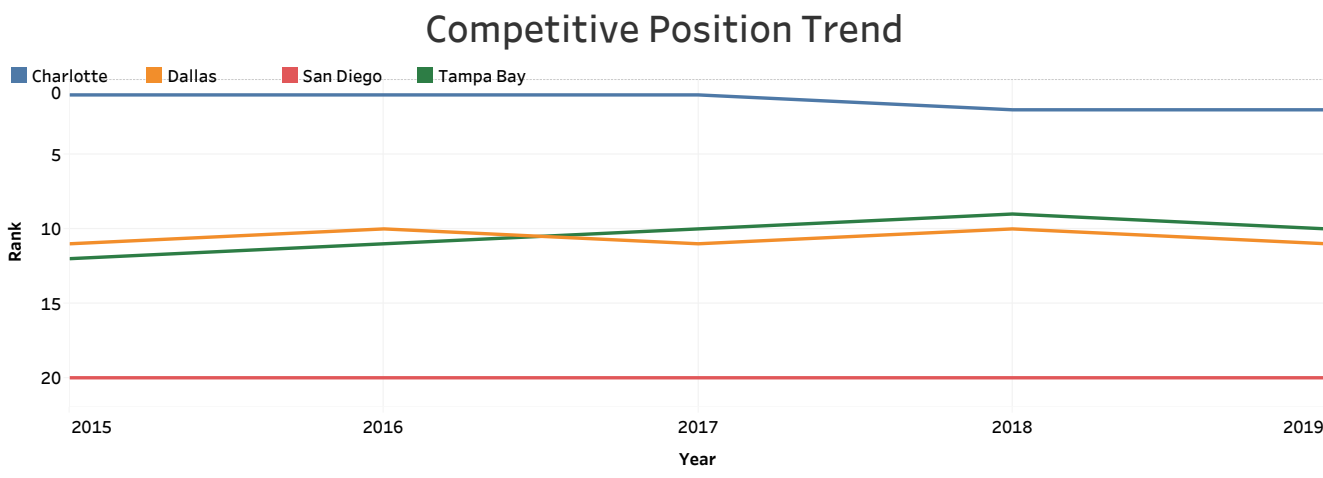
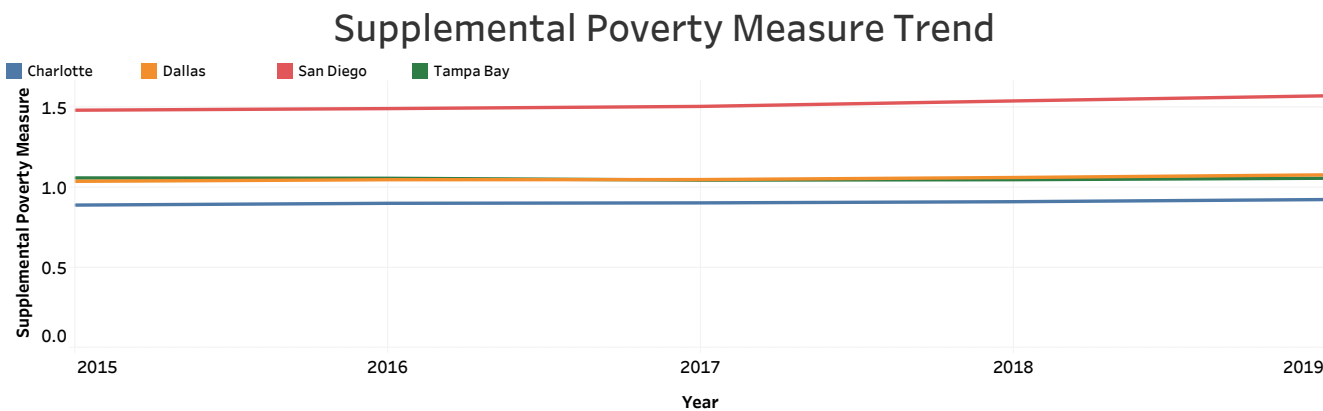
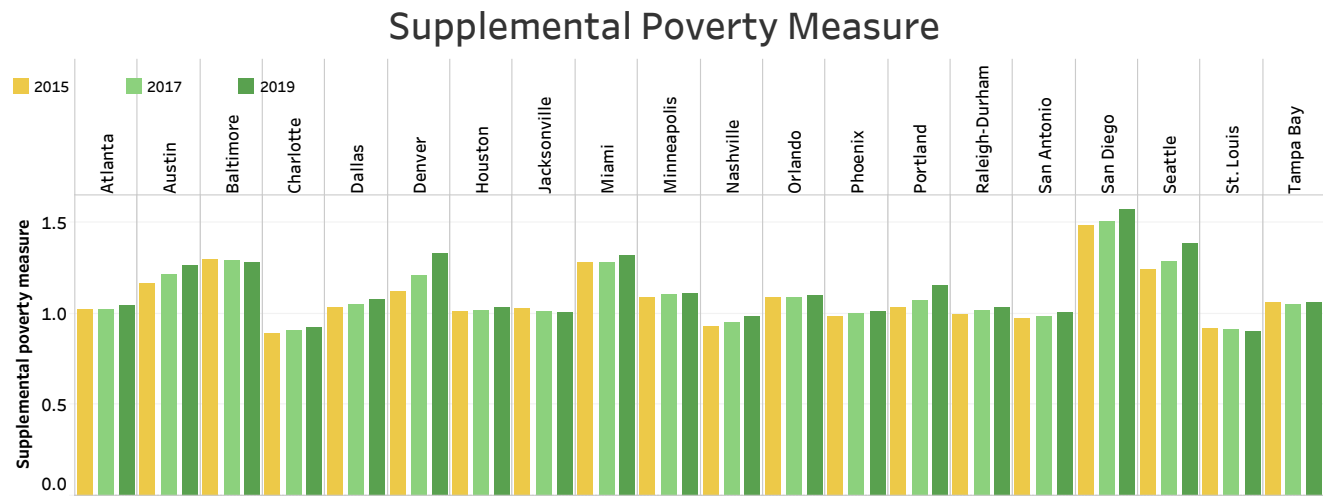


Supplemental Poverty Measure

Insights

- The Tampa Bay region's competitive position has improved from No. 12 to No. 9 during the years 2015 to 2018. However, it fell slightly to No. 10 in 2019.
- San Diego has been the worst performing MSA over the years.

About: A measure of poverty that considers non-cash benefits in addition to cash resources and subtracts necessary expenses, such as taxes and medical expenses.
 Source: U.S. Census Bureau, American Community Survey



Economic Competitiveness Key Takeaways

The trend analysis of the economic competitiveness of the Tampa Bay region paints a not-so-rosy picture. Though the Tampa Bay region's ranking improved on the various indicators over the years, the improvement has not been on par with comparison MSAs evidenced by the declining competitive position of Tampa Bay.

In terms of unemployment rate and poverty rate, the Tampa Bay region is positioned in the bottom half of the comparison group. In terms of gross regional product per capita, the Tampa Bay MSA is positioned at rock bottom. The analysis makes it clear that the region needs a stronger push along these indicators to keep up with other top-performing MSAs.

Inclusive Growth and Racial Equity

In the previous section, researchers quantitatively analyzed the performance of the Tampa Bay region along the lines of economic indicators such as unemployment rate, GRP per capita, the poverty rate, and the supplemental poverty measure. These indicators depict the strength of the Tampa Bay region's economy. However, the more important aspect is the inclusive growth. By inclusive growth, researchers mean the economic growth that is distributed fairly across different sections of the society. To this end, scholars analyzed the performance of the Tampa Bay MSA with respect to 19 other comparison MSAs along the indicators of income inequality and economic mobility.

Another important aspect of inclusive growth is the racial equity. The voice for racial equity has been growing stronger in recent times. In this section, in addition to income inequality and economic mobility and food insecurity indicators scholars also considered the variables related to racial equity indicators: The Black-White unemployment rate gap, and the Black-White poverty rate gap. The goal of the analysis is to understand how the Tampa Bay MSA is faring in terms of bridging the gap between the different social strata.



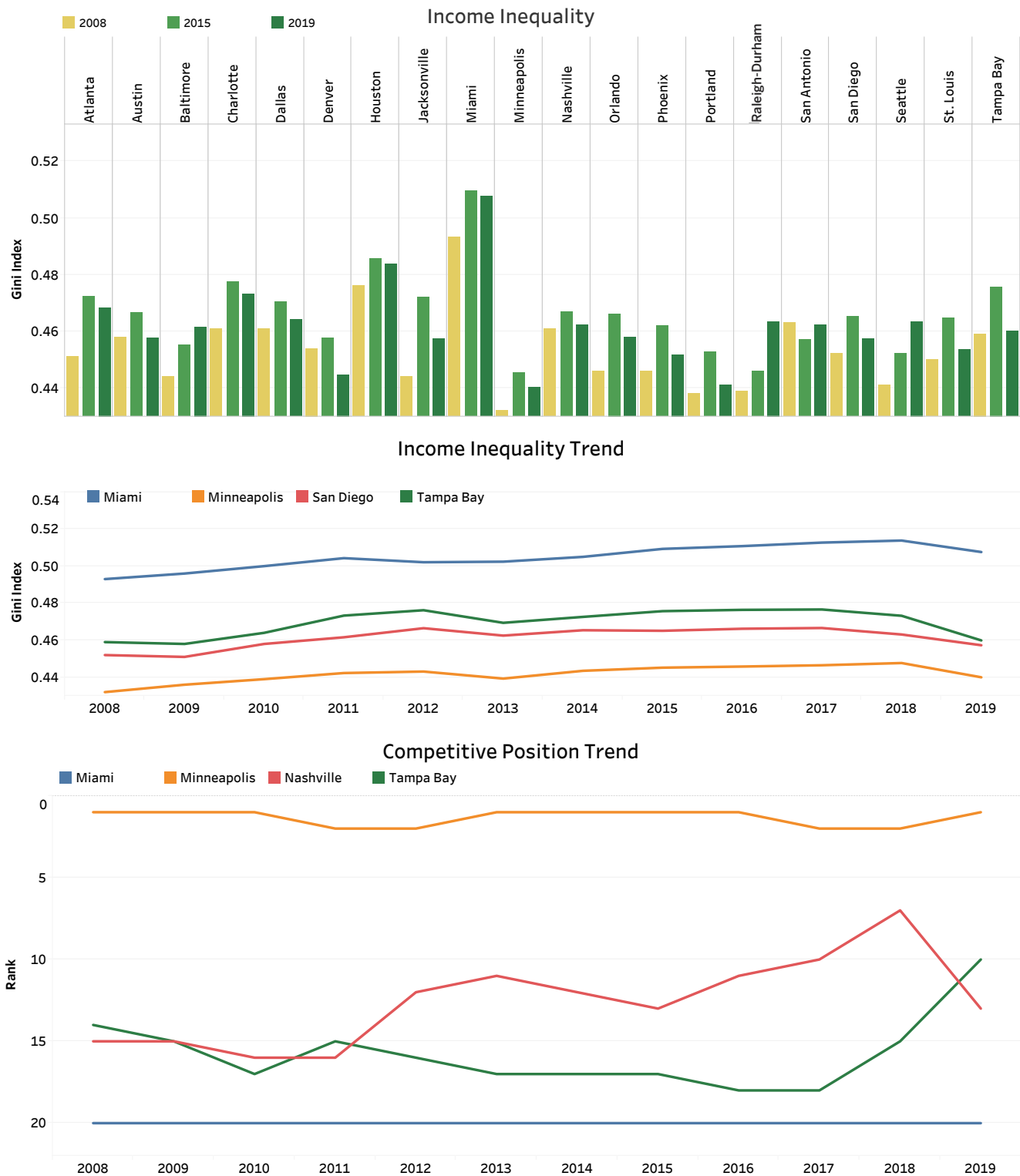


Income Inequality (Gini Index)

Insights

- Minneapolis consistently outperformed most of the MSAs.
- Miami remained at the bottom of the chart in terms of competitive position for all the years.
- Income inequality has been increasing for most of the MSAs, including Tampa Bay, until 2018. It declined slightly in 2019.
- The Tampa Bay MSA's competitive position has declined over the years, until 2017. It then rose sharply from No. 18 in 2017 to No.10 in 2019.

About: Income inequality refers to the extent to which income is distributed in an uneven manner among the population. Income inequality is measured by Gini Index, which ranges from 0 to 1. Gini Index of 0 implies perfect income equality, i.e., every individual receives equal share. Gini Index of value 1 indicates perfect income inequality, which implies that only one individual receives all the income.
Source: U.S. Census Bureau, American Community Survey.



Economic Mobility

Economic mobility broadly captures the ability of people to move from a lower income stratum to a higher income strata. This is measured using two variables: Absolute mobility and relative mobility.

Absolute Economic Mobility

One way of determining absolute economic mobility is to examine the average income percentile of children whose parents were at the 25th percentile of the national income distribution. If the children are at a higher income percentile than 25, then it indicates that there has been positive economic mobility. The higher the income percentile of the children, the higher the absolute economic mobility. For example, if, in region A, the children of parents who were at 25th percentile are at the 40th percentile, and in region B, the children of parents who were at 25th percentile are at the 32nd percentile, then one can conclude that region A has experienced higher economic mobility than region B.

“The Opportunity Atlas” is an interactive database with a user-friendly tool to assess the economic mobility across various regions in the United States. This tool provides an in-depth understanding of how the average outcomes (for example, household income) of children varied by demographic subgroups.

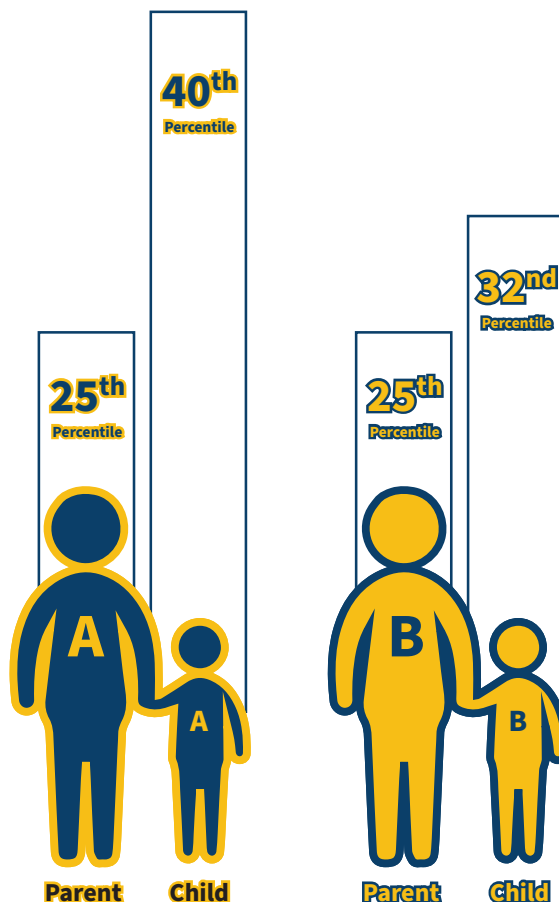
“Which neighborhoods in America offer children the best chance to rise out of poverty?” is the kind of question that can be answered by using data from the Opportunity Atlas.

The research paper “The Opportunity Atlas: Mapping the Childhood Roots of Social Mobility” by Raj Chetty, John N. Friedman, Nathaniel Hendren, Maggie R. Jones and Sonya R. Porter provides detail on how this publicly available dataset was constructed to examine children’s outcomes in adulthood using anonymized longitudinal data covering nearly the entire U.S. population. The sources of data used in this process were (1) the U.S. Census 2000 and 2010 short forms; (2) federal income tax returns from 1989, 1994, 1995 and 1998-2015; and (3) the U.S. Census 2000 long form and the 2005-2015 American Community Surveys.

Relative Economic Mobility

Relative mobility refers to the expected difference in the income percentile rank of children belonging to two parents whose income percentile rank differs by 1 unit.

For example, consider region A, with relative economic mobility of 0.2. This implies that the gap in income percentile of children of parents at the 10th percentile of income distribution and those of the parents at the 20th percentile is going to be, on average, 2. Hence, the children of these parents are closer to each other in their (percentile) ranks within their cohort, compared to how close the parents were to each other in their (percentile) ranks within their cohort. Relative economic mobility is often used to check how much individuals “move” across income percentile ranks as compared to their parents.

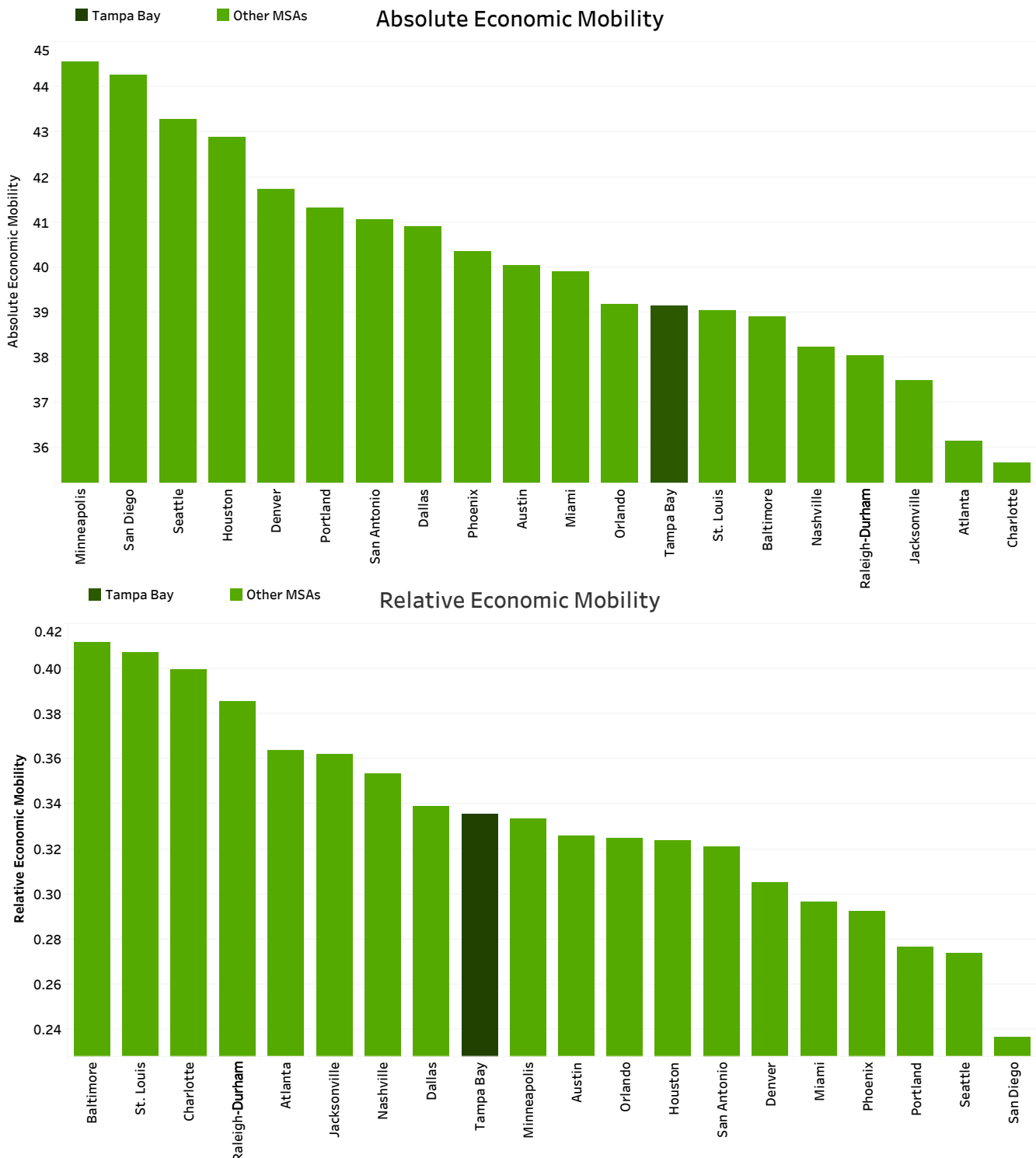


Economic Mobility

Insights

- The Tampa Bay region is ranked No. 13 in terms of absolute economic mobility.
- Minneapolis achieved the highest absolute economic mobility among all MSAs considered for this study.

About: The absolute mobility is the average rank of the children whose parents are at the 25 percentile in the income ranking (measured on a scale of 0-100). Relative mobility is the increment in the rank of the child with an increment in the rank of the parent in terms of income.
Source: Opportunity Insights



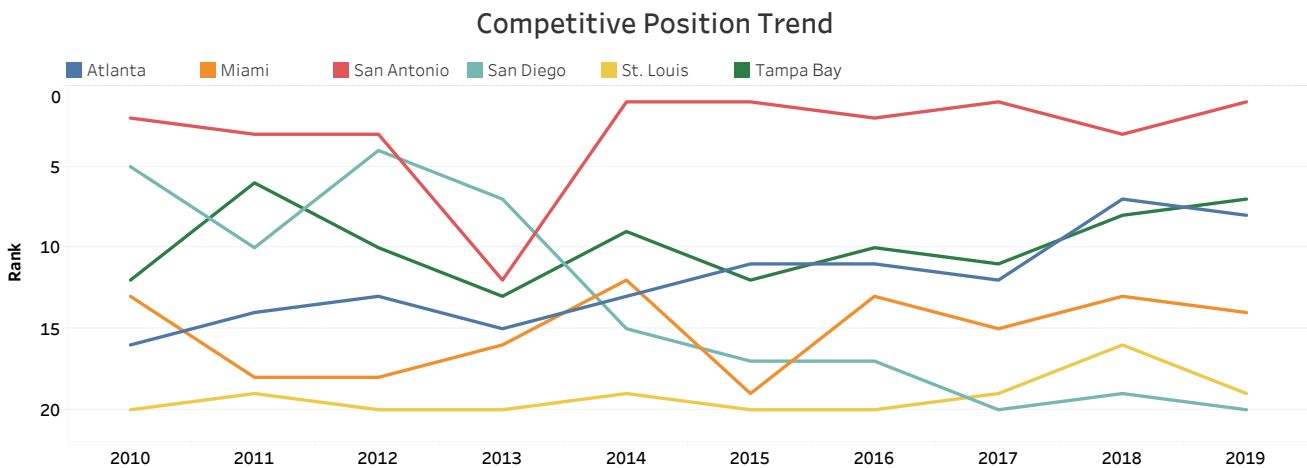
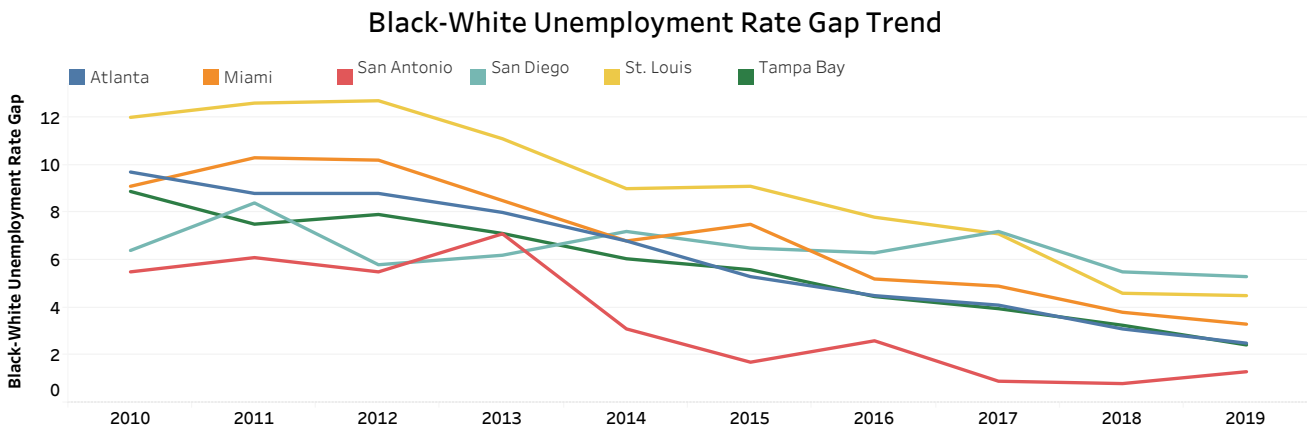
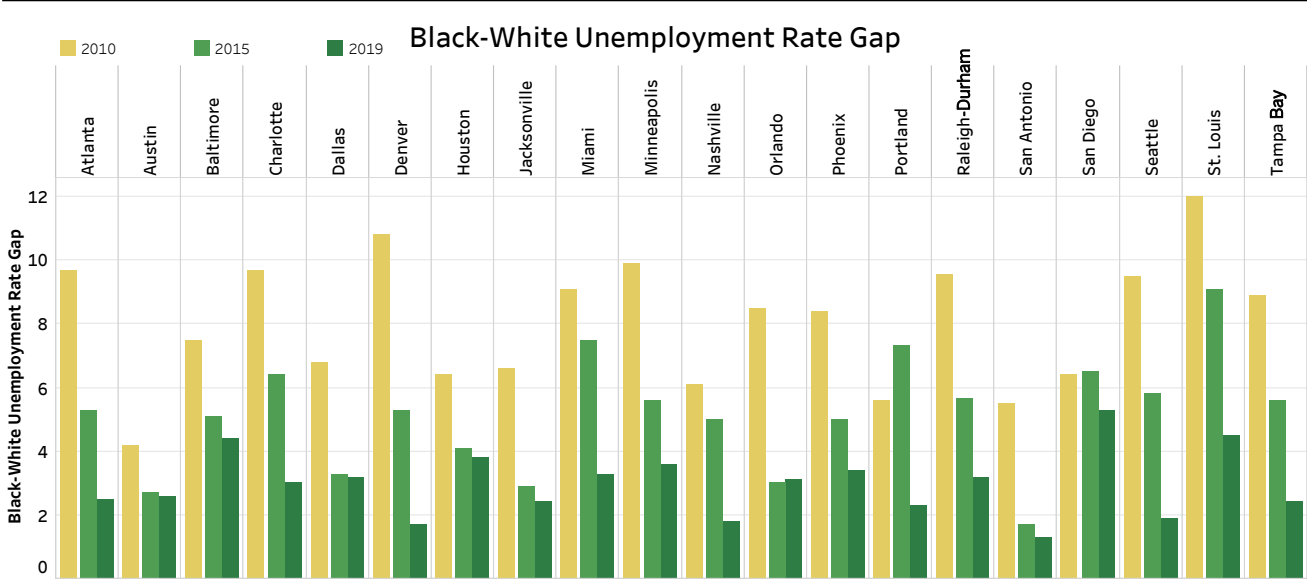
Black-White Unemployment Rate Gap

Insights

The Black-White unemployment rate gap has been decreasing for all the MSAs.

- The competitive position of the Tampa Bay MSA has fluctuated over the years. The Tampa Bay MSA stood at No. 13 in 2013 and improved to No. 4 in 2016. The Tampa Bay region is standing in the No. 6 position.
- San Antonio had the lowest unemployment rate gap in 2019 and San Diego had the highest unemployment rate gap in 2019.
- The competitive position of San Diego has declined from the No. 4 position in 2012 to the No. 20 position in 2019, whereas the competitive position of San Antonio improved from the No. 12 position in 2013 to No. 1 in 2019.

About: Measures the Black-white gap in the percentage of labor force who is not working but actively looking for employment. Calculated by subtracting the share of unemployment rate of African-Americans from share of unemployment rate of White-Americans in the MSA.
Source: U.S. Census Bureau, American Community Survey, table S2301.

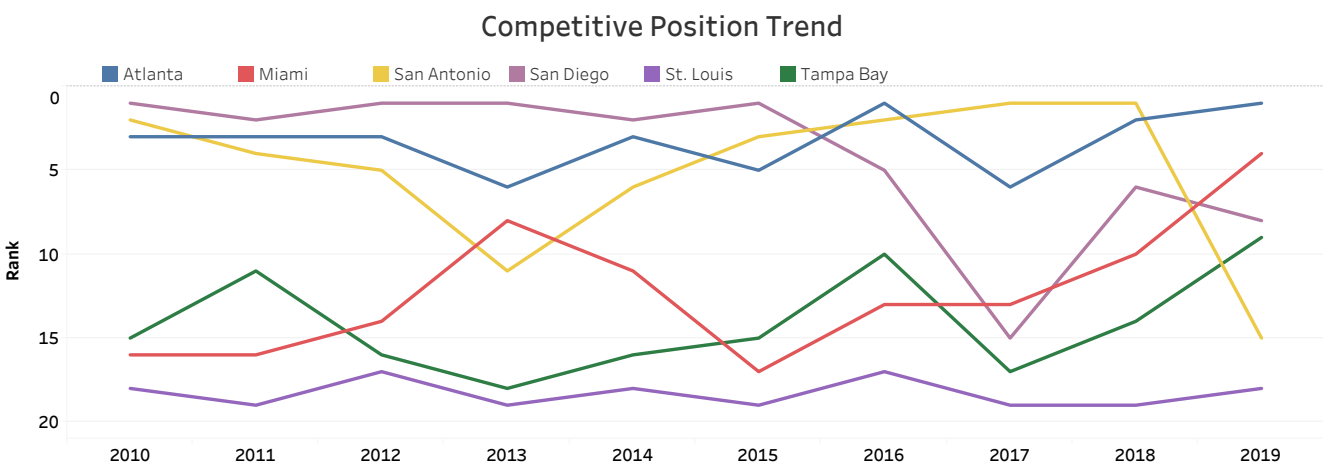
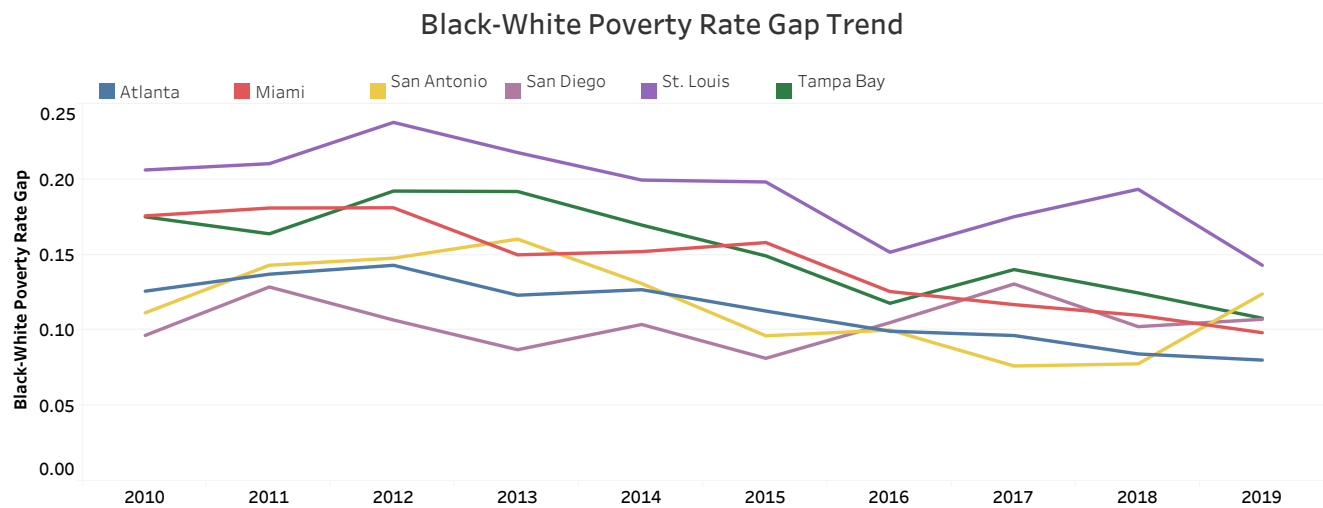
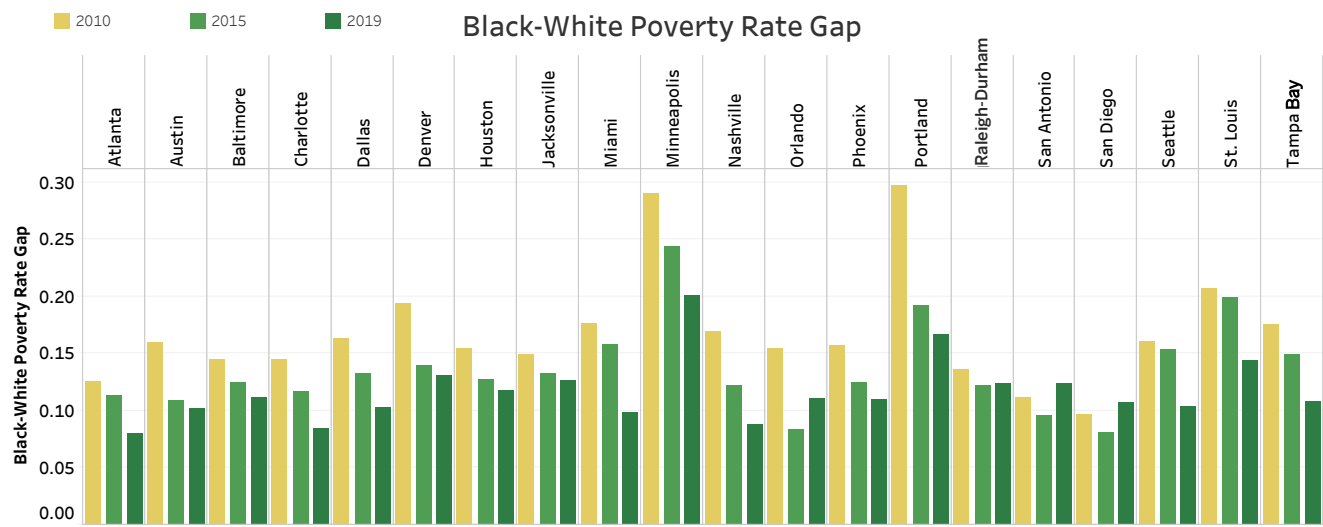


Black-White Poverty Rate Gap

Insights

- The Black-White poverty rate gap has been decreasing for all the MSAs.
- The competitive position of the Tampa Bay MSA fluctuated over the years. The Tampa Bay MSA stood at the No. 17 position in 2013 and improved to the No. 10 position in 2016.
- Minneapolis has consistently been at No.1 position for most of the years.
- As of 2019, Atlanta is having the lowest Black-White poverty rate gap among the comparison group and is standing at the No. 1 position.

About: Measures the Black-white gap in share of workers working full-time with income below the poverty line. Calculated by subtracting the average poverty rate of African-Americans from average poverty rate of white Americans in the MSA.
Source: U.S. Census Bureau, American Community Survey, table B17020.



Key Insights on Racial Equity and Inclusive Growth

The analysis paints a rosy picture of the Tampa Bay region's performance along the lines of inclusive growth. Income inequality in the Tampa Bay region has declined since 2017. The Tampa Bay region's competitive position in terms of income inequality has been improving significantly in recent years. The Tampa Bay region stands in the ninth position in terms of relative economic mobility.

The economic indicators reflect a declining racial gap in terms of the Black-White unemployment rate gap and the Black-White poverty rate gap over the years for all the MSAs, including the Tampa Bay MSA. In terms of the Black-White unemployment rate gap, the Tampa Bay MSA has been in the middle of the pack over the years. In terms of the Black-White poverty rate gap, the Tampa Bay MSA has consistently been in the lower half of the comparison MSA groups.

Drivers of Economic Growth

In the previous section, researchers looked at the performance of the Tampa Bay region in comparison to other MSAs on various indicators of inclusive economic growth. The trend graphs illustrate the direction in which the region is moving in terms of competitive position as well as actual values across the outcomes. At this juncture, a couple of questions arise:

1. What can be done so that the region performs better?
2. Are there any policy initiatives that might be taken to improve the competitive position of the Tampa Bay region in coming years?

To answer these questions, econometric models were built to identify the drivers of inclusive economic growth.

The independent variables used for the analysis are possible drivers of the economic growth. These variables fall into five different categories: economic vitality, talent, infrastructure, civic quality and innovation. These possible driver variables have been identified after many interviews with the business leaders from the greater Tampa Bay region. A total of 19 variables were considered for the analysis. The annual data for these variables for the MSAs from 2008 through 2017 was collected from federal sources such as the U.S. Census Bureau, the U.S. Bureau of Labor Statistics and the U.S. Bureau of Economic Analysis.

The data for the four Tampa Bay MSAs (Tampa-St. Petersburg-Clearwater, Homosassa Springs, Lakeland-Winter Haven and North Port-Sarasota-Bradenton) was aggregated to derive the values for the Tampa Bay region and the data for Raleigh and Durham was aggregated to derive the values for the Raleigh-Durham region. In summary, this report uses data for six outcome variables (for the economic mobility outcome variable, a different strategy was used as described below) and 22 possible economic drivers for 20 regions for 10 years. The data was adjusted for the cost of living and inflation.

Panel data methods were used to create models for each outcome. For each of the outcomes, multiple drivers were identified. One prime driver for each outcome was identified based on the strength of potential causal explanation.

The outcome variable of economic mobility has data that compares the outcome over two time intervals. Thus, this data cannot be included in the panel data model as there is only one number for each MSA which reflects opportunities for economic mobility over a long time period (around 40 years). To identify drivers for economic mobility, this report adopts an innovative approach.

The driver for economic mobility is identified by using a regression analysis where the outcome variable (or y variable) value for each MSA is derived from the Opportunity Atlas, and the values of each of potential drivers (or x variables) are derived by taking the average values of each variable over the time period.

Drivers of Inclusive Economic Growth

The significant drivers for each of the indicators of inclusive economic growth are given in the tables below. The sign indicates the direction of impact. The plus (+) sign indicates the impact in the positive direction which implies that as the value of the driver variable increases, the value of the outcome variable of interest increases. Similarly, the minus (-) sign indicates the impact in the negative direction.

The report identifies one prime driver for each of the outcome economic indicator as an actionable driver. The choice was made based on the strength of causal explanation. The prime drivers, which are highlighted in yellow, can be used for policy initiatives.

Unemployment Rate	
STEM Degree Production Per Capita	-
Transit Availability	-
Business Establishment Start Rate	-

GRP Per Capita	
STEM Degree Production Per Capita	+
Transit Availability	+
Median Household Income	+

Poverty Rate	
Transit Availability	-
Labor Force Participation Rate (Ages 25-64)	-

Income Inequality	
Educational Attainment (Bachelor's Degree or Higher)	-
Labor Force Participation Rate (Ages 25-64)	-

Economic Mobility	
Transit Availability	+

It is important to remember that, depending on the indicator, a move in a negative direction could be positive (for instance, seeing the unemployment rate go down is positive).

Analysis of Driver Results

The analysis shows that investments in transit infrastructure and higher education drive the economic growth. Policy initiatives focused on increasing investments in these key drivers hold the key to improve the competitive position of the Tampa Bay region.

USF researchers present the results of the analysis below. Keeping everything else constant, the impact of the driver on the outcome variable is shown.

Unemployment Rate:

- An increase in transit availability by 1 revenue mile per capita would result in a 0.6 percent decrease in the unemployment rate.
- An increase in STEM degree production per 1,000 individuals by 1 would result in a 1.3 percent decrease in the unemployment rate.
- A 1 percent increase in the business establishment start rate would result in a 0.6 percent decrease in the unemployment rate.

GRP Per Capita:

- An increase in transit availability by 1 revenue mile per capita would result in \$840 increase in GRP per capita.
- An increase in STEM degree production per 1,000 individuals by 1 would result in a \$1,089 increase in GRP per capita.
- A \$1,000 increase in median household income would result in a \$178 increase in GRP per capita.

Poverty Rate:

- An increase in transit availability by 1 revenue mile per capita would result in a 1.2 percent decrease in the poverty rate.
- An increase in the labor force participation rate by 1 percent would result in a 1.4 percent decrease in the poverty rate.

Income Inequality (Gini Index):

- An increase in educational attainment (bachelor's degree or higher) by 1 percent would result in a decrease in income inequality (Gini index) by 0.0001.
- A 1 percent increase in the labor force participation rate would result in a 0.004 decrease in income inequality (Gini index).

Economic Mobility:

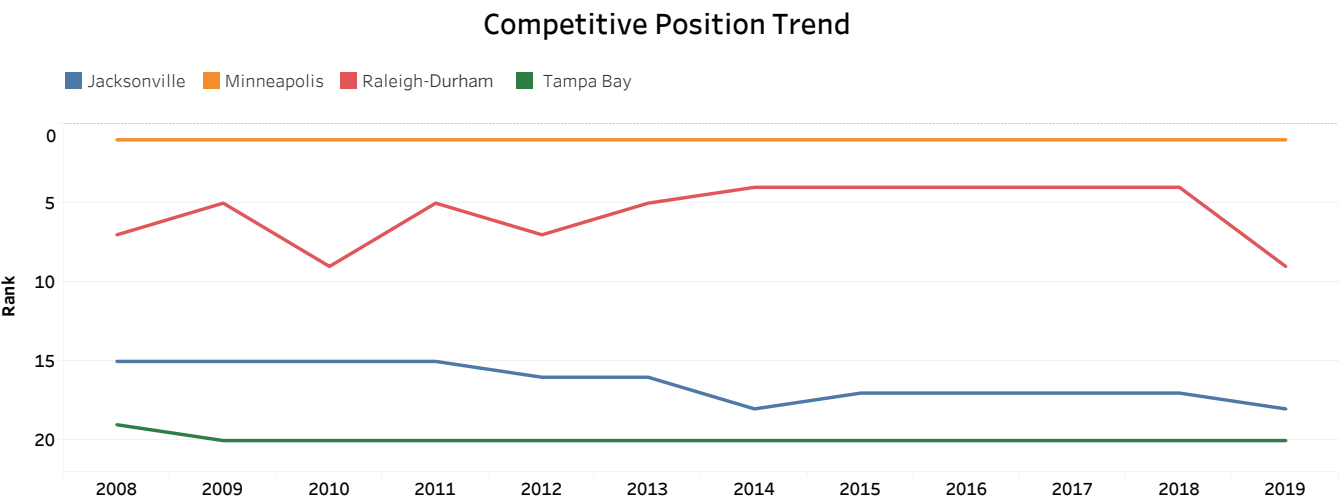
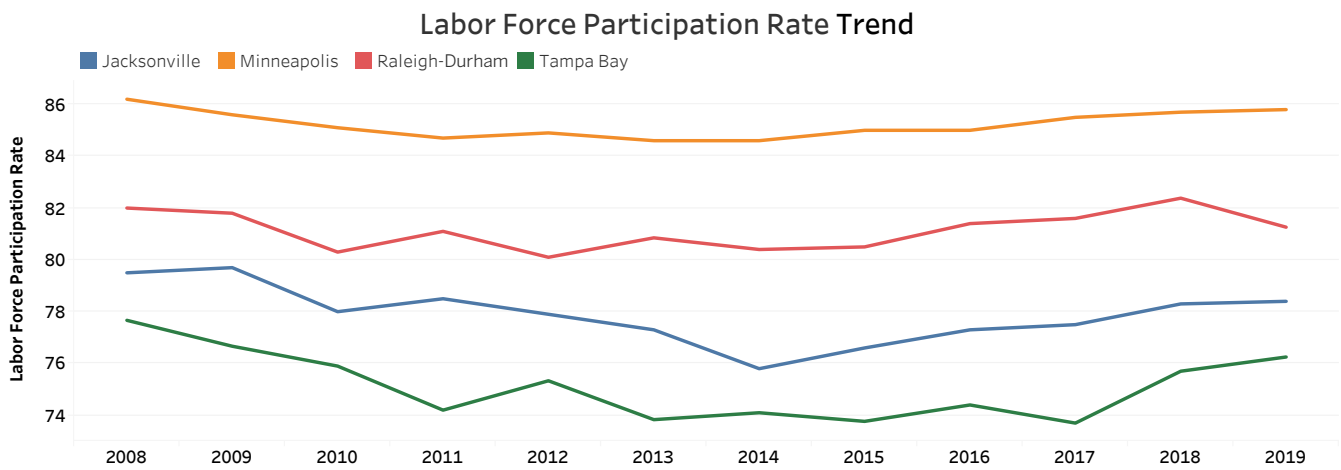
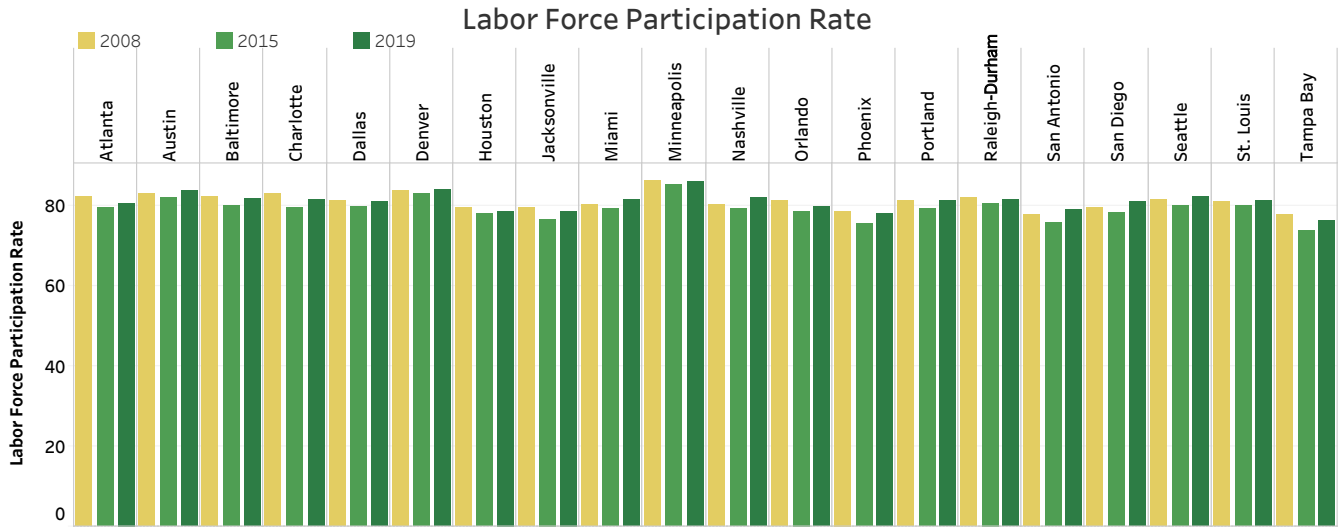
- An increase in transit availability by 5 revenue miles per capita would result in the increase in absolute economic mobility by 1 percentile.

Labor Force Participation Rate

Insights

- The labor force participation rate of the Tampa Bay MSA declined from 2008 to 2017 but has been rising since 2017.
- In terms of competitive position, the Tampa Bay region has been at rock bottom since 2019.
- Minneapolis consistently held the top position from 2008 to 2019.

About: Measures the percentage of the population ages 16 years old or older working or actively looking for work.
Source: U.S. Census Bureau, American Community Survey, table S2301.

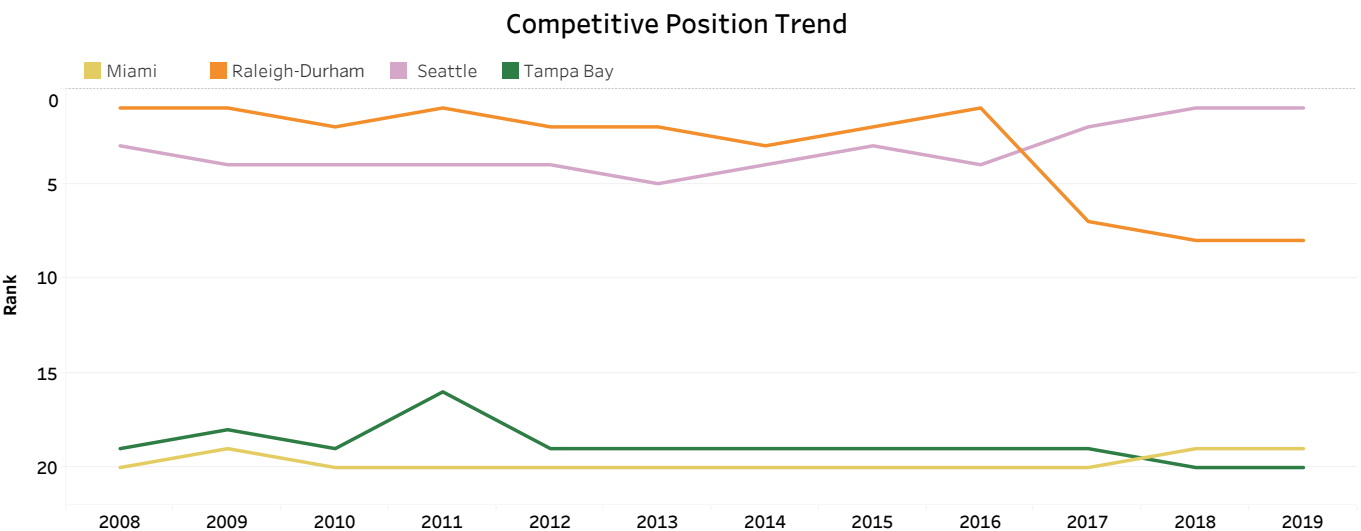
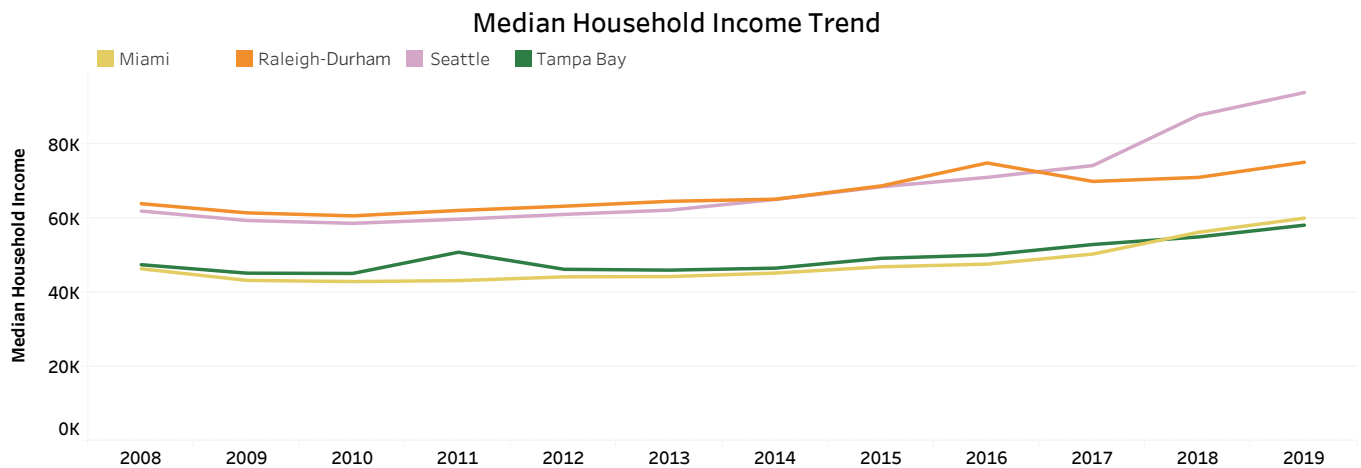
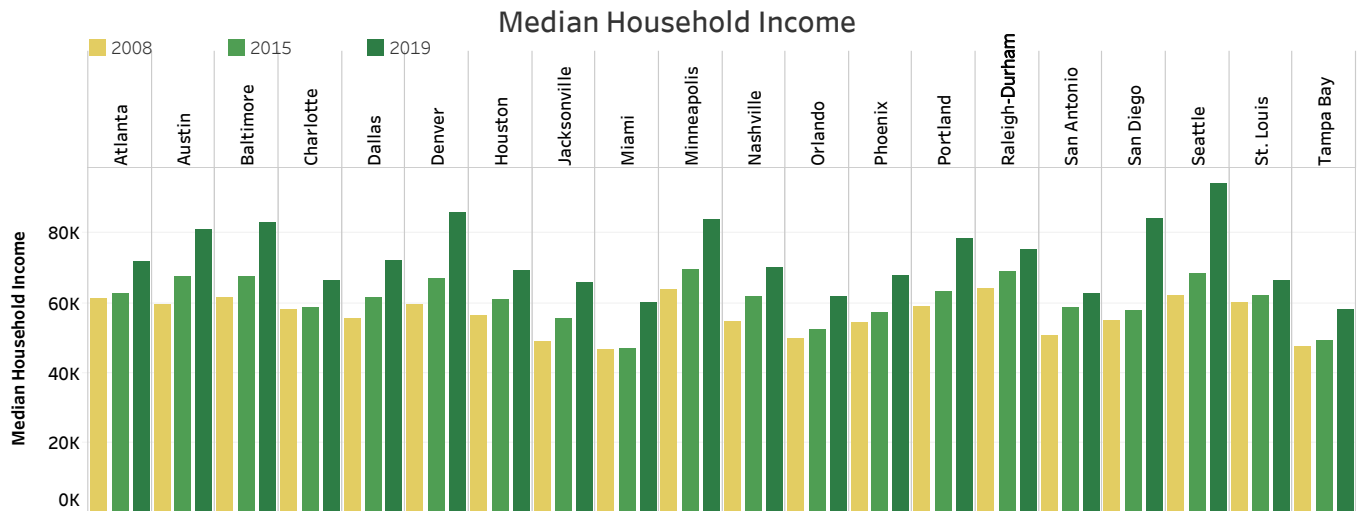


Median Household Income

Insights

- The Tampa Bay MSA has gradually improved in median household income over the years examined.
- In terms of competitive position, the Tampa Bay MSA has been fluctuating between the No. 16 and No. 20 positions. The MSA ranked last in 2018 and 2019.
- Seattle ranked first in 2018 and 2019.

About: Measures the median of household income. Median income for households, families, and individuals is computed on the basis of a standard distribution.
Source: U.S. Census Bureau, American Community Survey 2016 1-Year Estimates, table S1903.



Section 2: Impact of COVID-19 on the Economy

The COVID-19 pandemic has disrupted lives, pushed health care systems to (or in some cases beyond) capacity and caused a global economic slowdown. As of Dec. 11, 2021, there were 49.7 million COVID-19 cases and more than 794,000 deaths in the United States alone. Prior to the pandemic, the American economy was thriving. However, the pandemic has greatly impacted consumer spending and adversely affected the regional commerce.

In this section, researchers analyzed the impact and recovery of COVID-19 on the Tampa Bay MSA using data such as consumer spending and online searches related to local commerce and unemployment concern. The data sources for this analysis are Affinity Solutions and Google Trends.

Consumer spending tracks the seven-day moving average credit/debit card spending by people living in their respective MSAs relative to January 2020. Researchers calculated the percentage change of daily expenditures over the days with respect to January. They tracked the percentage change over 21 months for 20 MSAs.

They gathered the data for this through the Opportunity Insights Economic Tracker. It combines anonymized data from leading private companies – from credit card processors to payroll firms – to provide a real-time picture of indicators such as employment rates, consumer spending, and job postings across counties. The data for consumer spending comes from Affinity Solutions, the world’s leading data-led intelligence platform. It buys data of first-party credit and debit card transactions daily. Information is anonymized for analysis.

In addition to the consumer spending, researchers also analyzed signals from Google Trends. The researchers use Google Trends to analyze the consumer spending behavior to derive the understanding on the impact of COVID-19 on the commercial activity of Tampa Bay MSA. Google Trends also provides rich insights into the unemployment concern in the regions due to the layoffs that followed the spread of COVID-19. To track the local commerce activity, researchers chose the search terms, “events near me,” “movies near me,” “malls near me,” “restaurants near me,” and “concerts near me.” For the unemployment concern, researchers used the search terms “hiring freeze,” “now hiring,” “unemployment benefits,” “how to file for unemployment,” and “job openings.”

Key takeaways for each indicator after the charts.

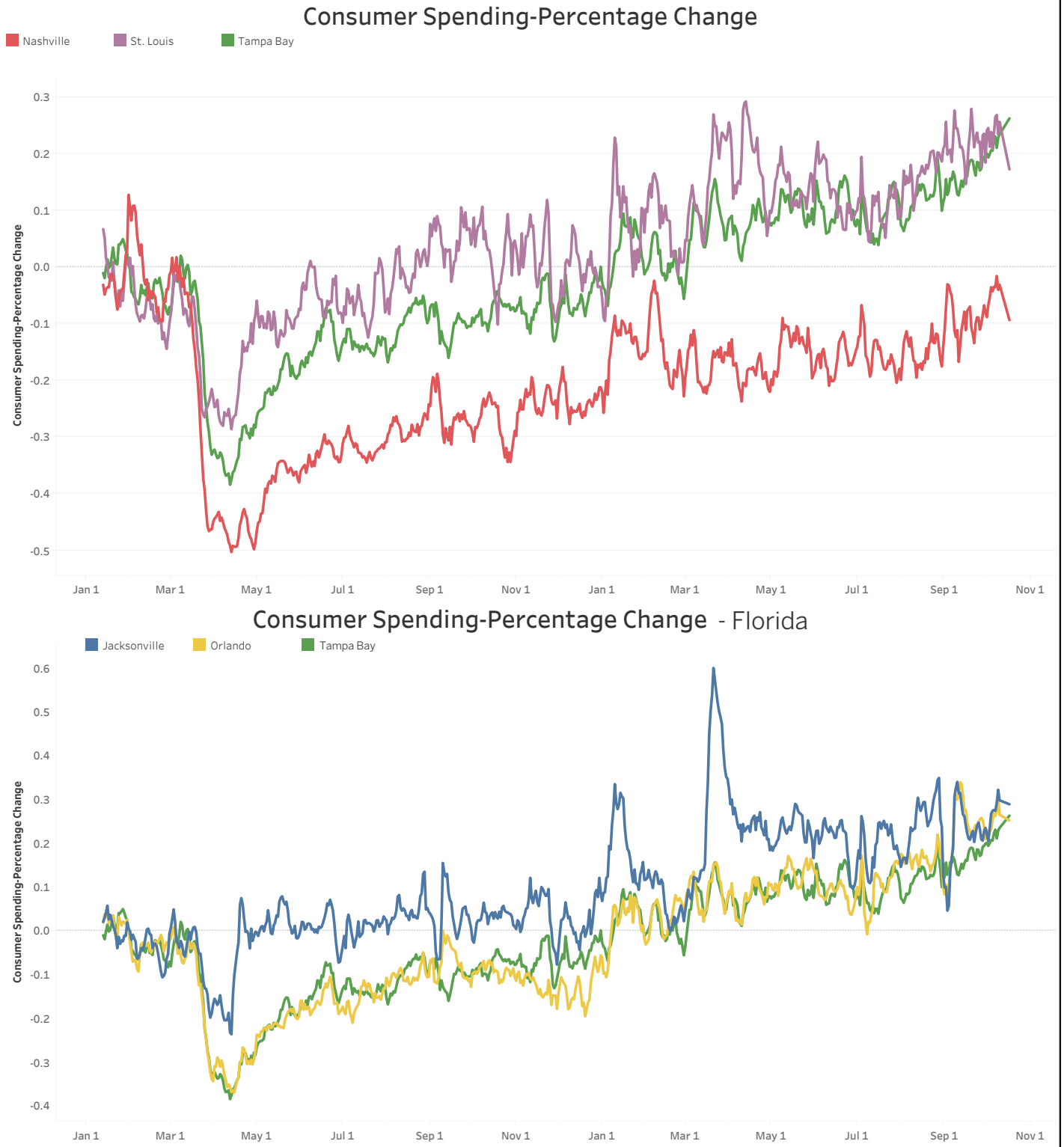


Consumer Spending - Percentage Change

Insights

- Consumer spending for most of the MSAs dropped significantly in April 2020 and has been improving ever since.
- The consumer spending for the Tampa Bay MSA has dropped to 64 percent of the January 2020 value in the month of April 2020 and has improved to 126 percent of the January 2020 value in October 2021.
- Among Florida MSAs Jacksonville has achieved highest recovery by improving from 78 percent of January 2020 value in April 2020 to 160 percent of January 2020 value in March 2021. However, Jacksonville experienced a decline following its peak in March 2021.

About: This measures the seasonally adjusted seven day moving average credit/debit card spending relative to January 4-31 2020, for people living in the MSA.
Source: Affinity Solutions - Opportunity Insights, Economic Tracker

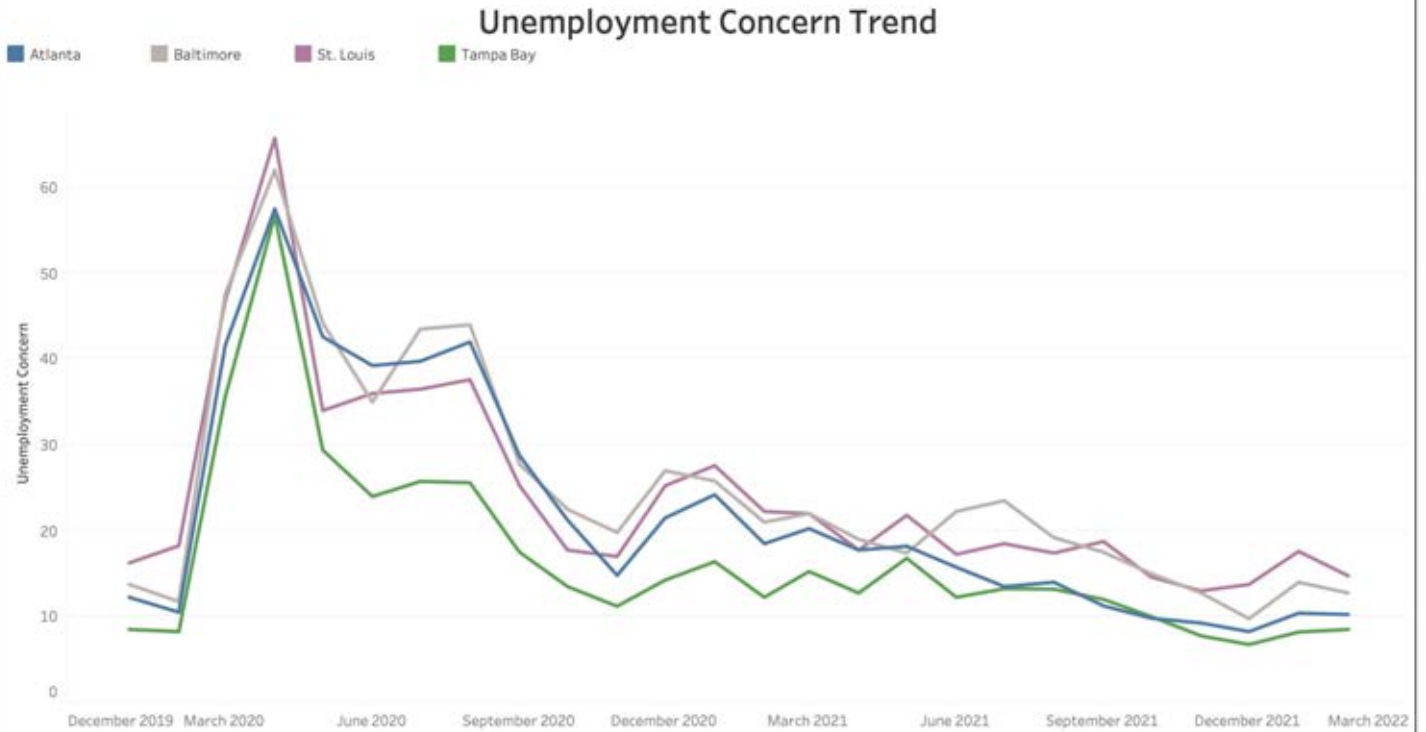


Unemployment Concern

Insights

- For most of the MSAs, unemployment concern peaked in April 2020 and has been declining since.

About: Google Trends based proxy for unemployment concern.
Source: Google Trends.



Local Commerce Activity

Insights

- Local commerce activity has dipped in April 2020 for most of the MSAs, including Tampa Bay and has been improving since, experiencing a decline after July 2021.
- The Tampa Bay region has been one of the top performing MSAs during the first half of 2021. However, Tampa Bay's competitive position saw a dip in July 2021.



Key Insights on the Impact of COVID-19 on the Economy

Consumer spending in the Tampa Bay MSA improved significantly after a drop in April 2020. Consumer spending in the Tampa Bay region in October 2021 is 126 percent of what it was in January 2020.

All the MSAs, including Tampa Bay, suffered a significant drop in local commerce activity in the month of April 2020. However, the MSAs have recovered gradually, despite a slight drop in June 2021.

Unemployment concern peaked in the month of April 2020 for all the MSAs and has been declining ever since.



Key Takeaways on Economic Competitiveness

The trend analysis of the economic competitiveness of the Tampa Bay region paints a not-so-rosy picture. Though the Tampa Bay region's ranking improved on the various indicators over the years, the improvement has not been on par with comparison MSAs, evidenced by the declining competitive position of the Tampa Bay region.

In terms of unemployment rate and poverty rate, the Tampa Bay region is positioned in the bottom half of the comparison group. In terms of gross regional product per capita, the Tampa Bay MSA is positioned at rock bottom. The analysis makes it clear that the region needs a stronger push along these indicators to keep up with other top performing MSAs.

On a positive note, the racial gap in terms of economic prosperity has been declining for most of the MSAs, including the Tampa Bay region. The Tampa Bay MSA has been improving in terms of competitive position along the lines of the Black-White poverty rate gap and income inequality.

Innovation and Entrepreneurship

Research has highlighted the importance of innovation and entrepreneurship for the economic growth of a region. Multiple research studies have identified the positive association between innovation and regional economic growth. Innovation improves productivity which fuels economic growth. Increased economic growth in turn boosts investments into the economy. Entrepreneurship also plays a major role in the economic prosperity of a region. High-tech startups attract investments and create high paying jobs contributing to the overall gross domestic product of a region. Local businesses create employment opportunities and thus play a crucial role in keeping unemployment rates low.

Considering the significant role played by innovation and entrepreneurship in the economic growth of a region, in this section, researchers benchmarked the Tampa Bay region with respect to 19 other MSAs along the lines of innovation and entrepreneurship. To measure innovation, they choose the indicators such as patents per capita, university R&D expenditures, Small Business Innovation Research (SBIR)/Small Business Technology Transfer (STTR) awards per capita, etc. To measure the entrepreneurship activity in a region, they chose the indicator, “Business Establishment Entry Rate.”

Researchers used real-time signals from Google Trends to track the innovation and entrepreneurship activity in the region. They track Google search volume for Tampa-St. Petersburg-Clearwater MSA, with respect to 19 comparison MSAs for the search terms related to innovation and small business activity. In the charts, Tampa denotes Tampa-St. Petersburg-Clearwater MSA only -- not the entire Tampa Bay region as considered for most of the other indicators in the report.

For innovation activity, researchers chose the search terms “research jobs,” “USPTO,” “marketing ideas,” “new product development,” and process improvement.” To track the entrepreneurship activity, they chose the terms “how to start business,” “business loans,” “office space for rent,” “ideas for business,” and “business registration.”

They not only benchmarked the Tampa Bay with respect to other MSAs on these indicators over the years, but also analyzed the impact of the COVID-19 pandemic on innovation and entrepreneurship in the Tampa Bay region. We end this section highlighting the key takeaways from the analysis.



Patents per 10,000 Residents

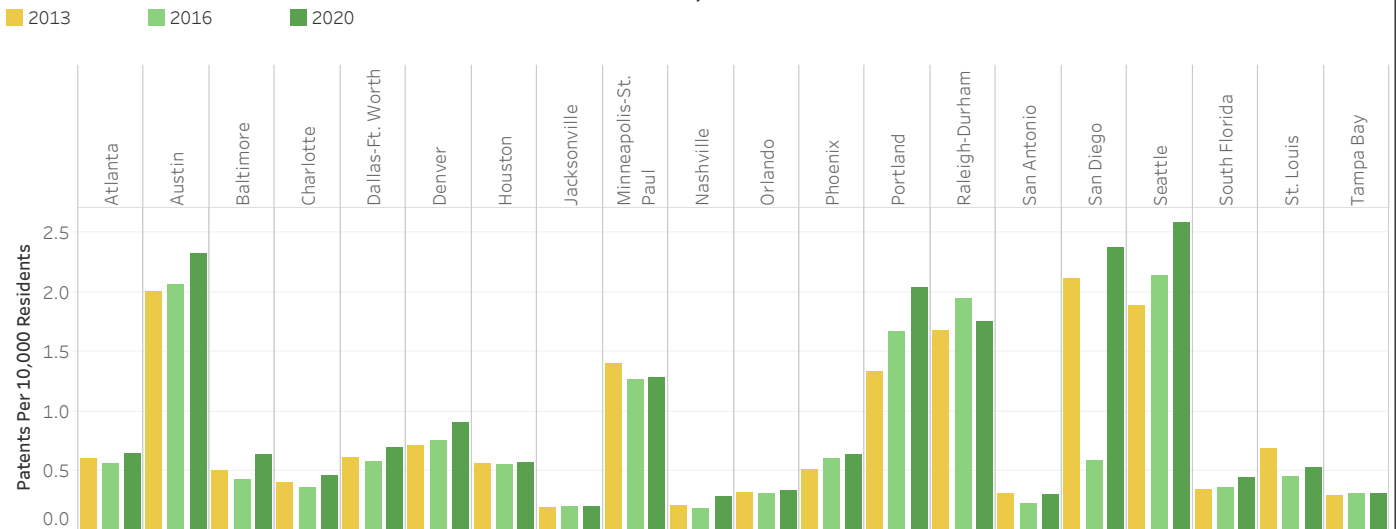
Insights

- Seattle has been at the No.1 position for all the years and has registered significant growth in patents per 10,000 residents in the recent years.
- In terms of competitive position, the Tampa Bay region consistently has been in the bottom five positions over the years.

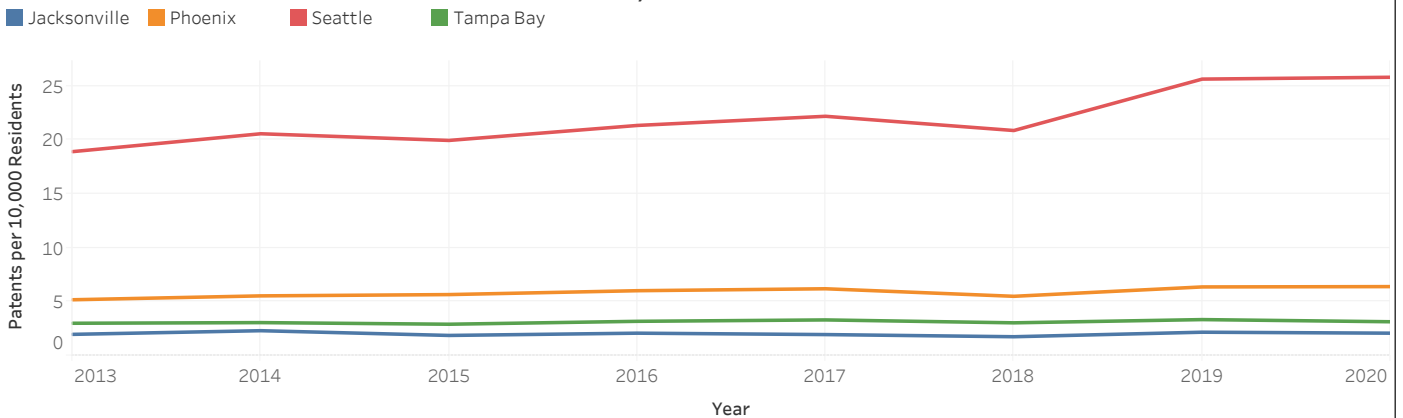
About: Number of patents registered for every 10,000 residents in the MSA .

Source: United States Patents and Trademark office.

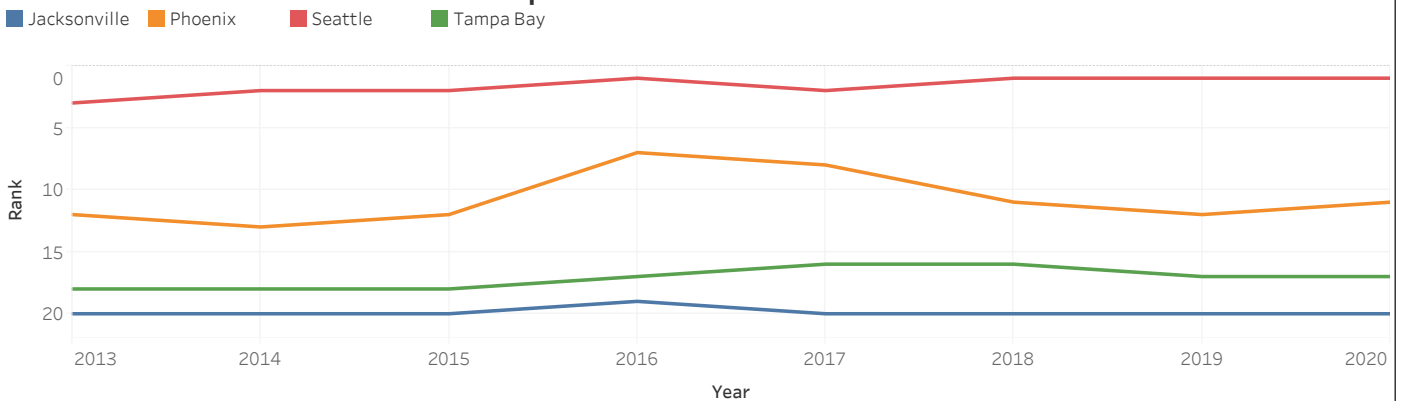
Patents Per 10,000 Residents



Patents Per 10,000 Residents Trend



Competitive Position Trend



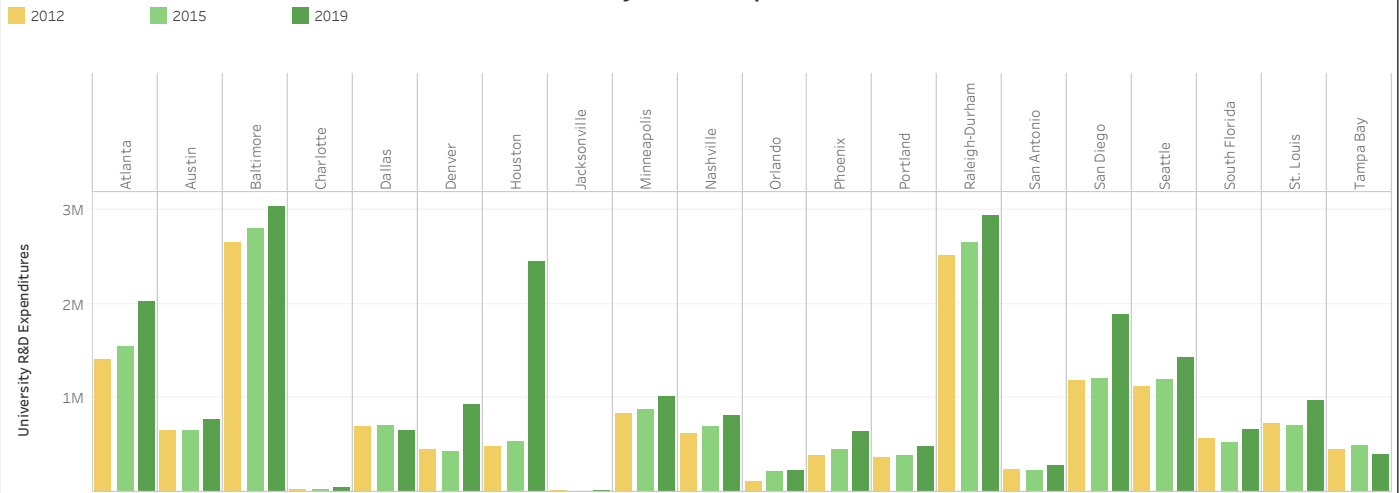
University R&D Expenditures

Insights

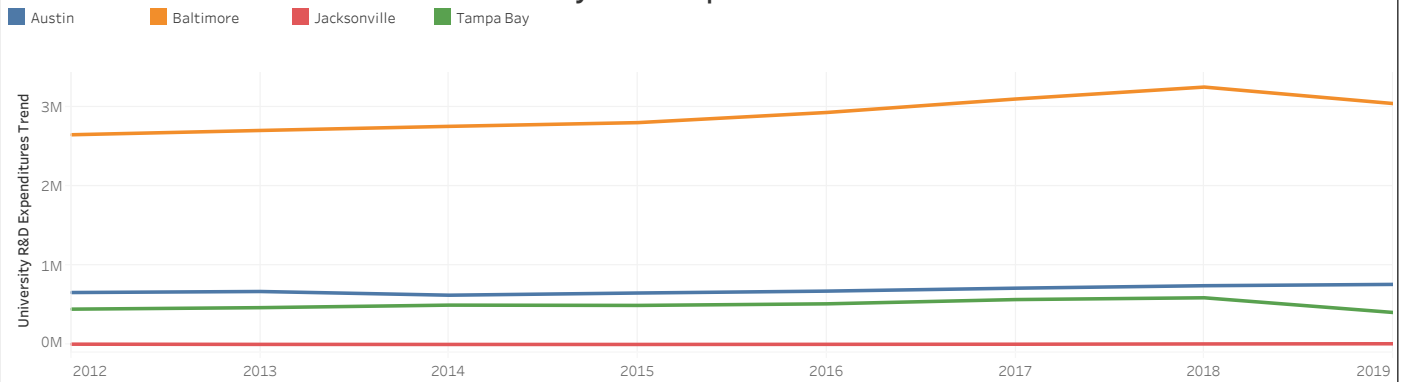
- Baltimore is ranked No. 1 in terms of university R&D expenditure among all the comparison MSAs.
- Jacksonville has consistently been in the bottom position.
- The university R&D Expenditure for the Tampa Bay MSA has slightly declined from 2018 to 2019.
- The Tampa Bay region has been declining in the competitive position over the years.

About: The measure indicates the Research and Development Expenditures at universities and colleges within the MSA.
Source: National Science Foundation, Higher Education Research and Development Survey.

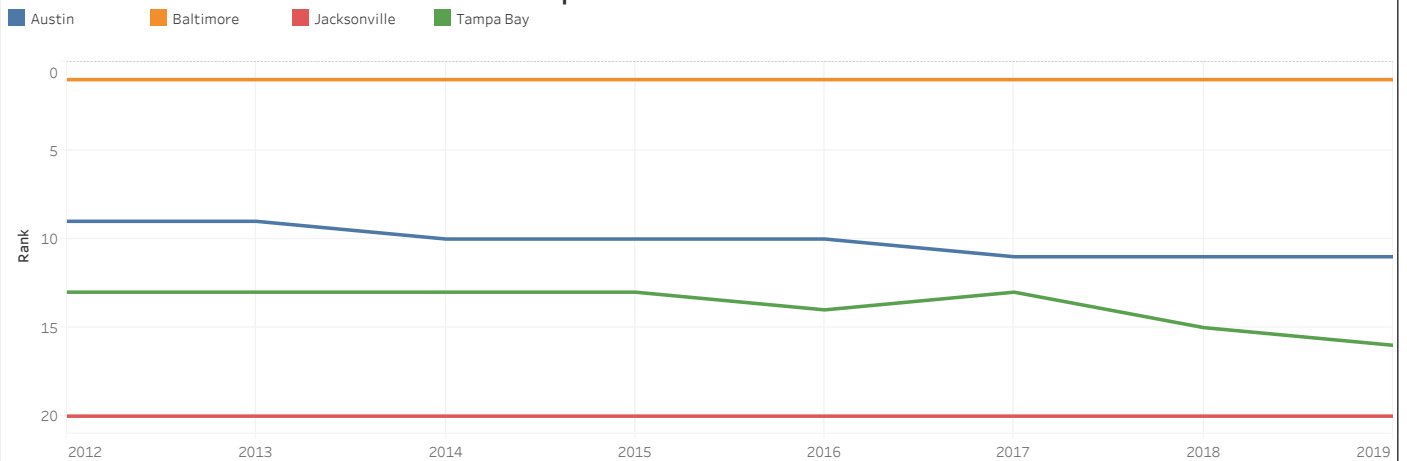
University R&D Expenditures



University R&D Expenditures Trend



Competitive Position Trend



SBIR/STTR Awards per Capita

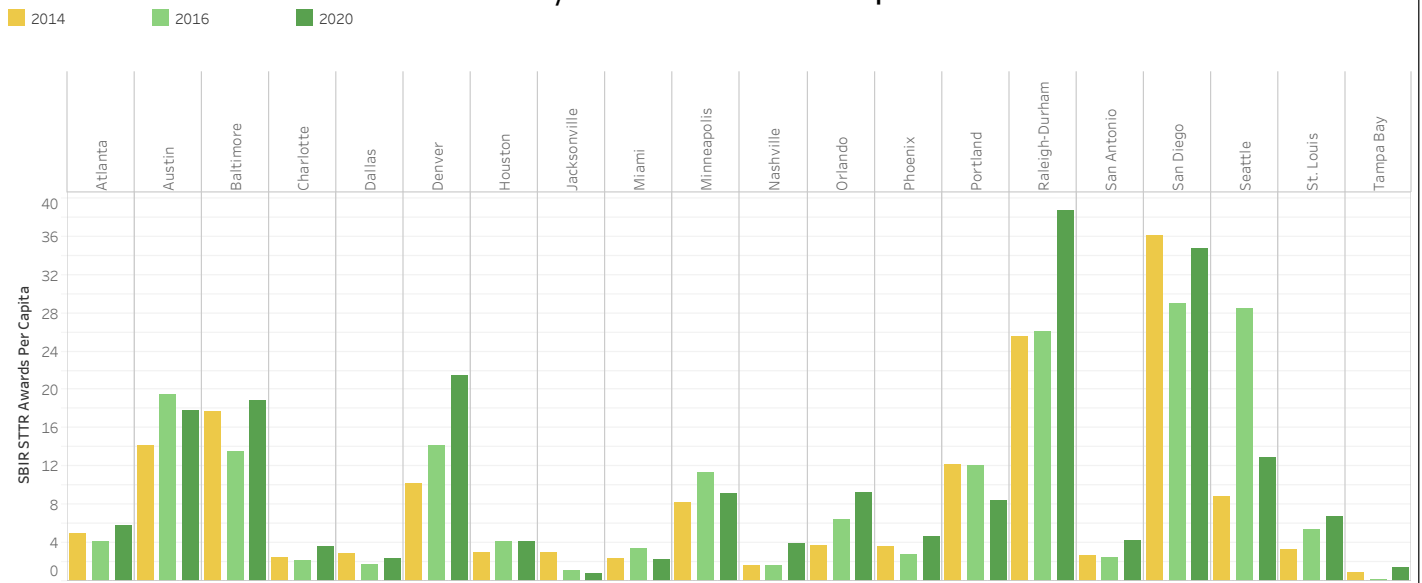
Small Business Innovation Research/Small Business Technology Transfer

Insights

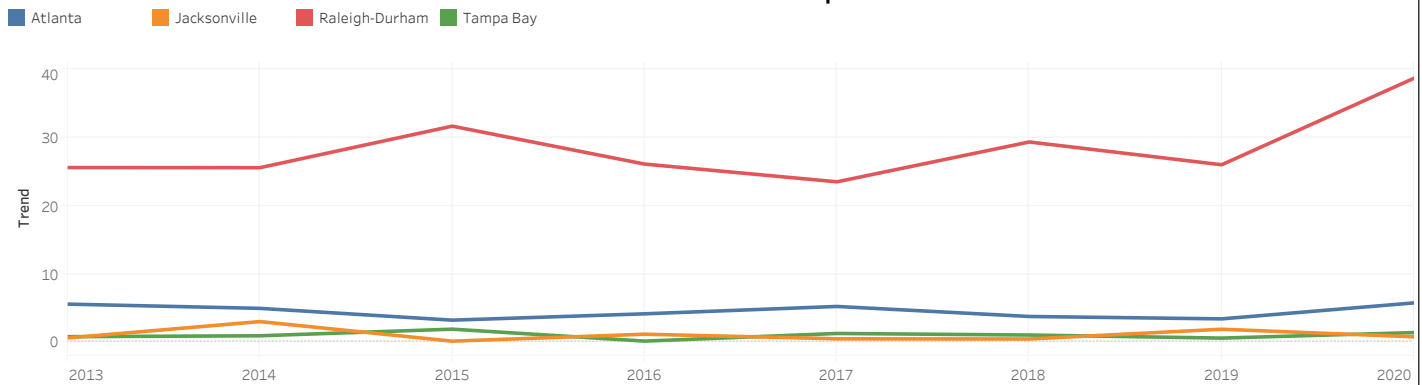
- Raleigh-Durham is ranked No. 1 in SBIR/STTR in 2020, followed by San Diego.
- The Tampa Bay MSA has consistently been in the bottom five positions since 2013.
- Jacksonville has been awarded the least SBIR/STTR in 2020.

About: Small Business Innovation Research (SBIR) and the Small Business Technology Transfer (STTR) fund proof of concept research and development through a highly competitive grant program to companies with fewer than 500 employees. This measure reports the dollar value of a region's awards divided by the population.
Source: Small Business Administration.

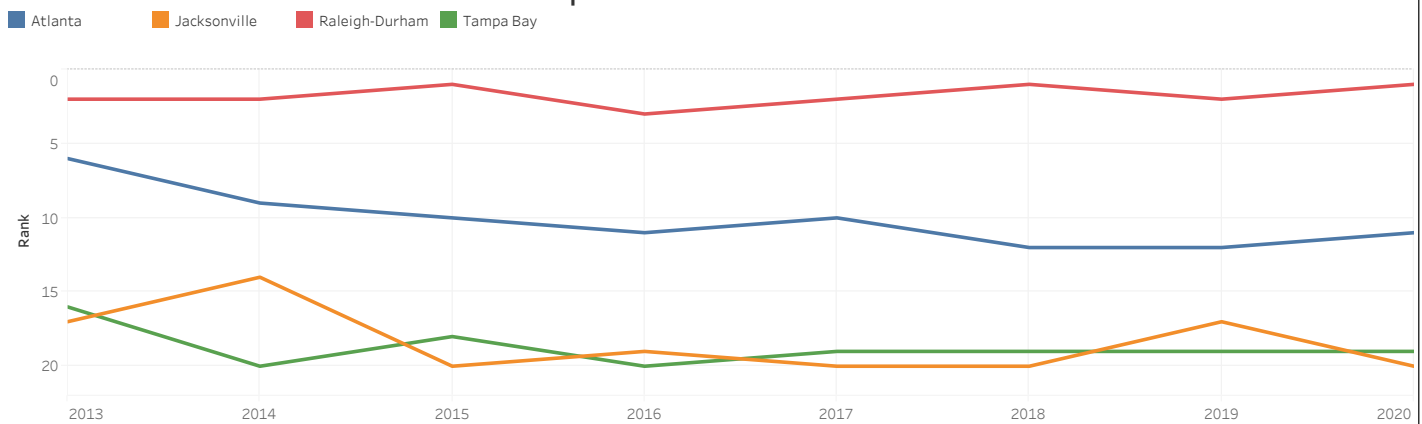
SBIR/STTR Awards Per Capita



SBIR STTR Awards Per Capita Trend



Competitive Position Trend



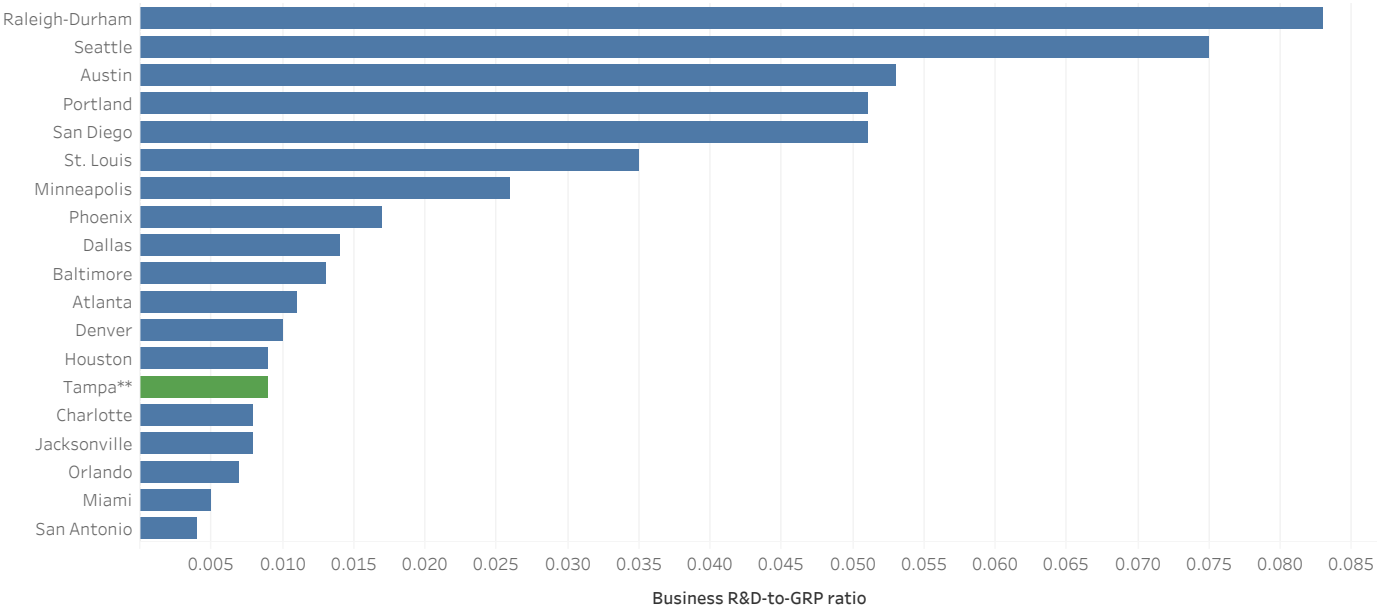
Business R&D-to-GRP Ratio

Insights

- Raleigh-Durham is ranked No. 1 in terms of R&D-to-GRP ratio in 2018 followed by Seattle.
- San Antonio is in the last position among all the comparison MSAs.
- Tampa is at No. 14.

About: Ratio between Business R&D Expenditure and Gross Regional Per Capita for MSAs for 2018.
Source: NCSES, U.S Census Bureau, Business Research and Development Survey, 2018.
*Data not available for the the Nashville MSA.
**Data for Tampa MSA is for Tampa-St. Petersburg- Clearwater MSA only and not for the entire Tampa Bay region as considered for rest of the indicators in the report.

Business R&D-to-GRP Ratio

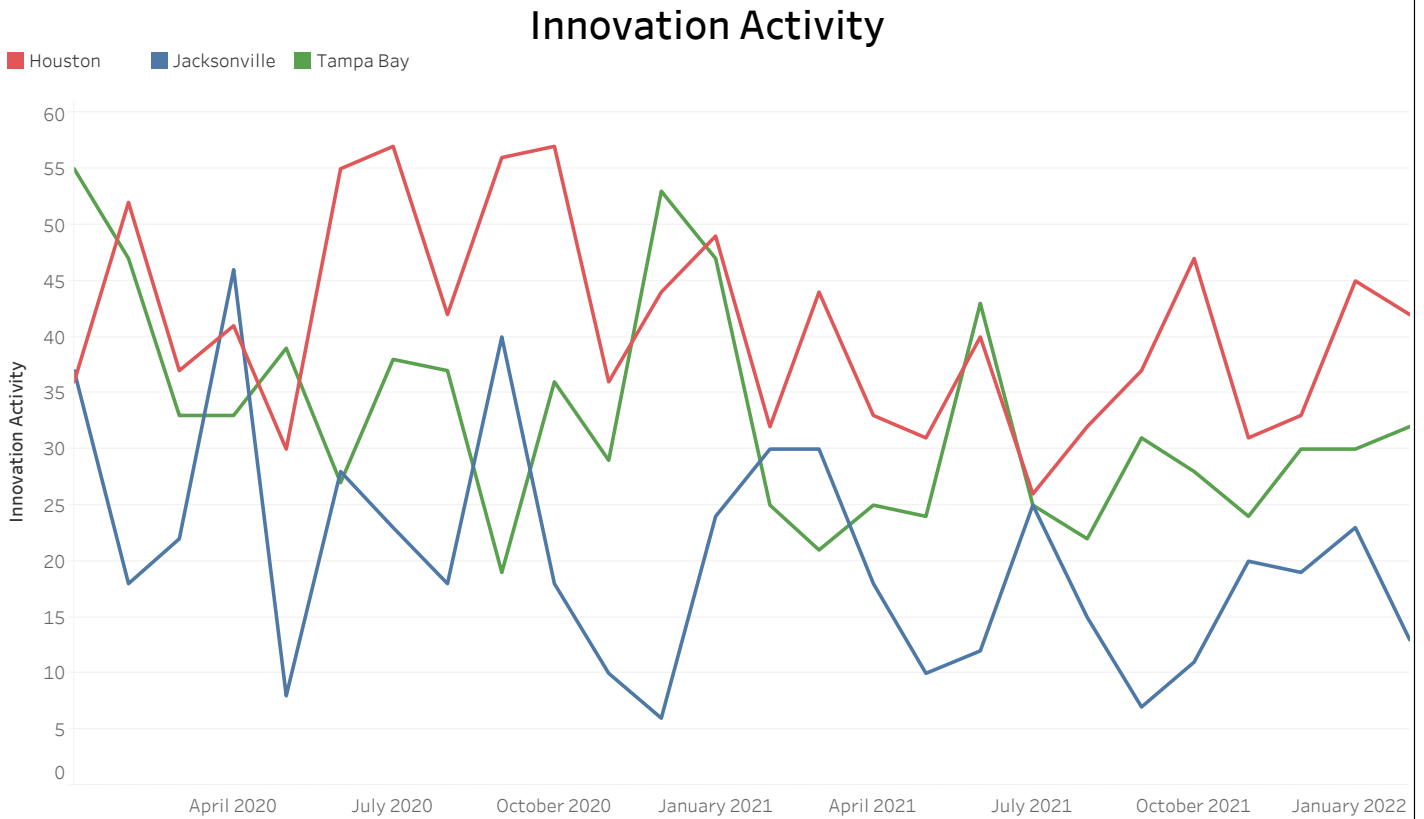


Innovation Activity

Insights

- There is no clear trend among the MSAs.
- Houston has relatively performed better compared to the other MSAs in recent months.

About: Google Trends based proxy for innovation activity in the region.
Source: Google Trends.



Key Insights on Innovation

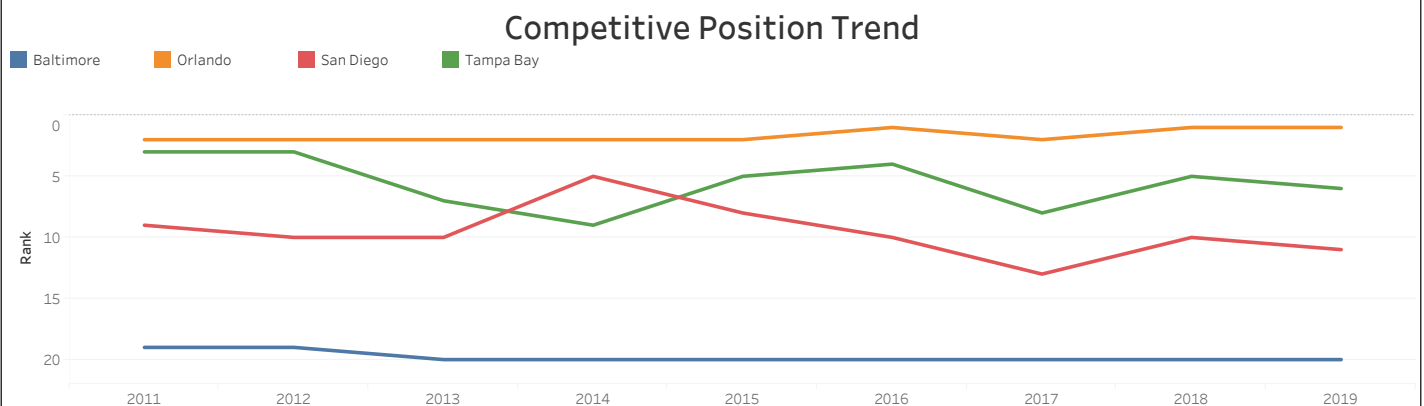
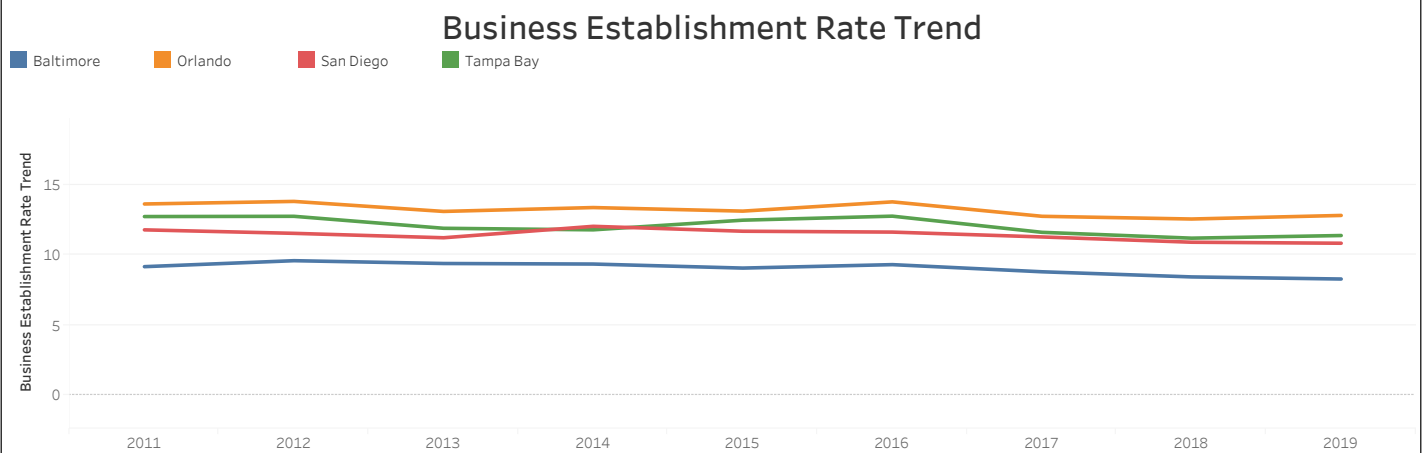
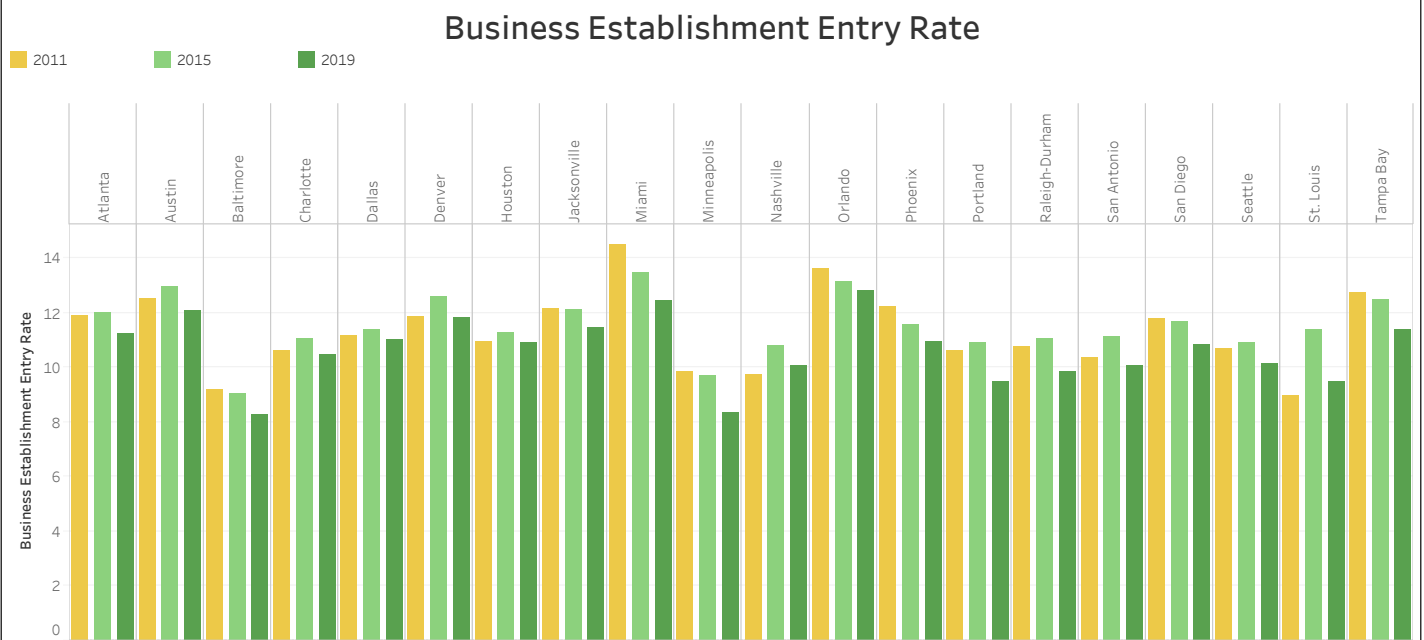
The Tampa Bay region's performance is relatively low compared to the comparison MSAs in terms of innovation. The innovation activity in the Tampa Bay region has been declining. The Tampa Bay MSA has been on the downward trend along the indicators such as patents per capita, University R&D expenditures, Small Business Innovation Research (SBIR)/Small Business Technology Transfer (STTR) awards per capita. The declining innovation activity is also reflected in the declining competitive position of the Tampa Bay MSA along the indicators of university R&D expenditures and SBIR/STTR awards per capita.

Business Establishment Entry Rate

Insights

- Orlando is ranked No. 1 among the comparison MSAs in terms of business establishment entry rate in 2019.
- The Tampa Bay MSA has consistently ranked in the top ten over the years.
- The Tampa Bay MSA has experienced a slight decline in the business establishment entry rate since 2016.
- Baltimore has remained in the last position since 2013.

About: Business establishment entry rate is defined as the count of business establishment entrants in year t divided by the average count of employment active establishments in year t and year t-1.
Source: U.S Census Bureau, Business Dynamic Statistics.

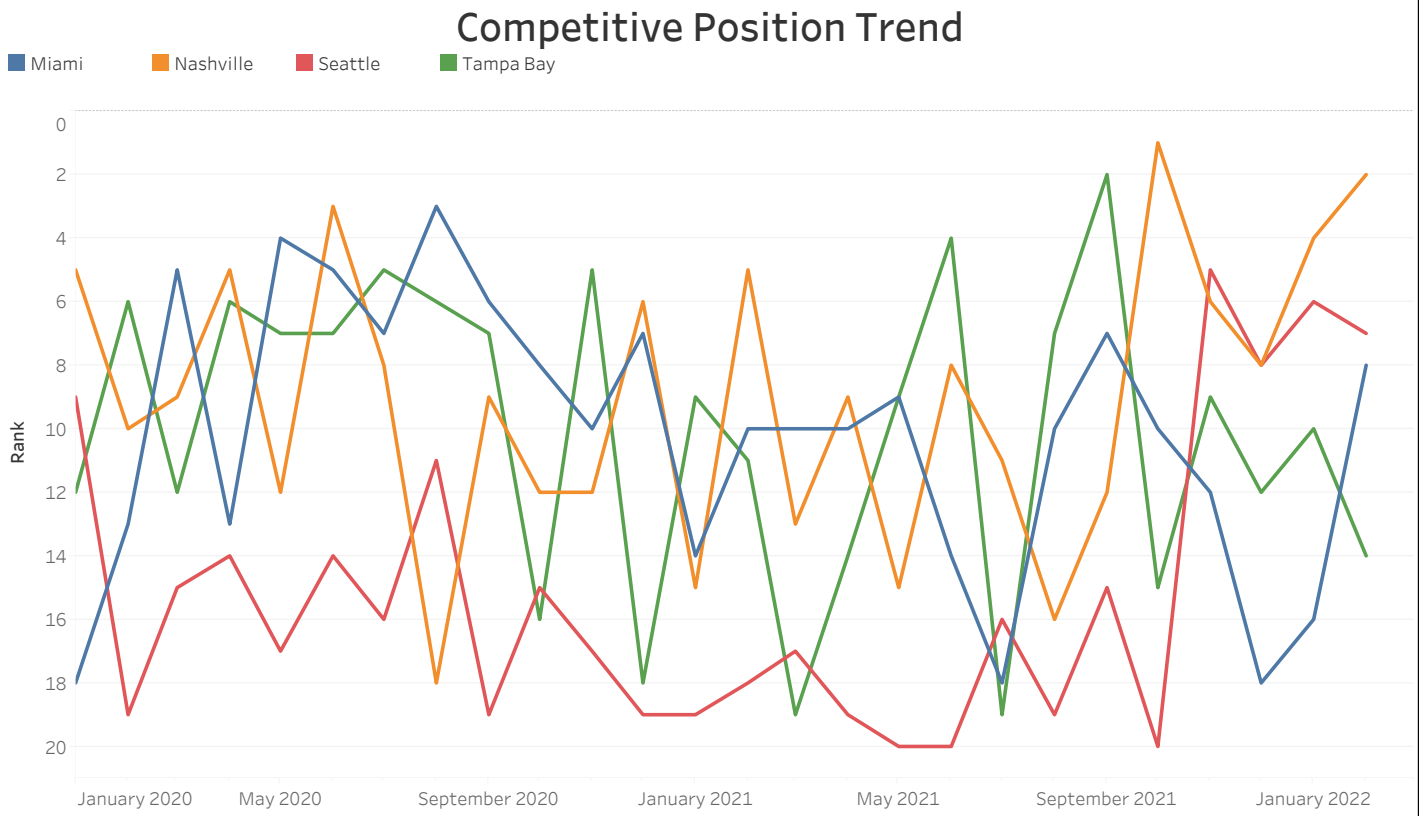
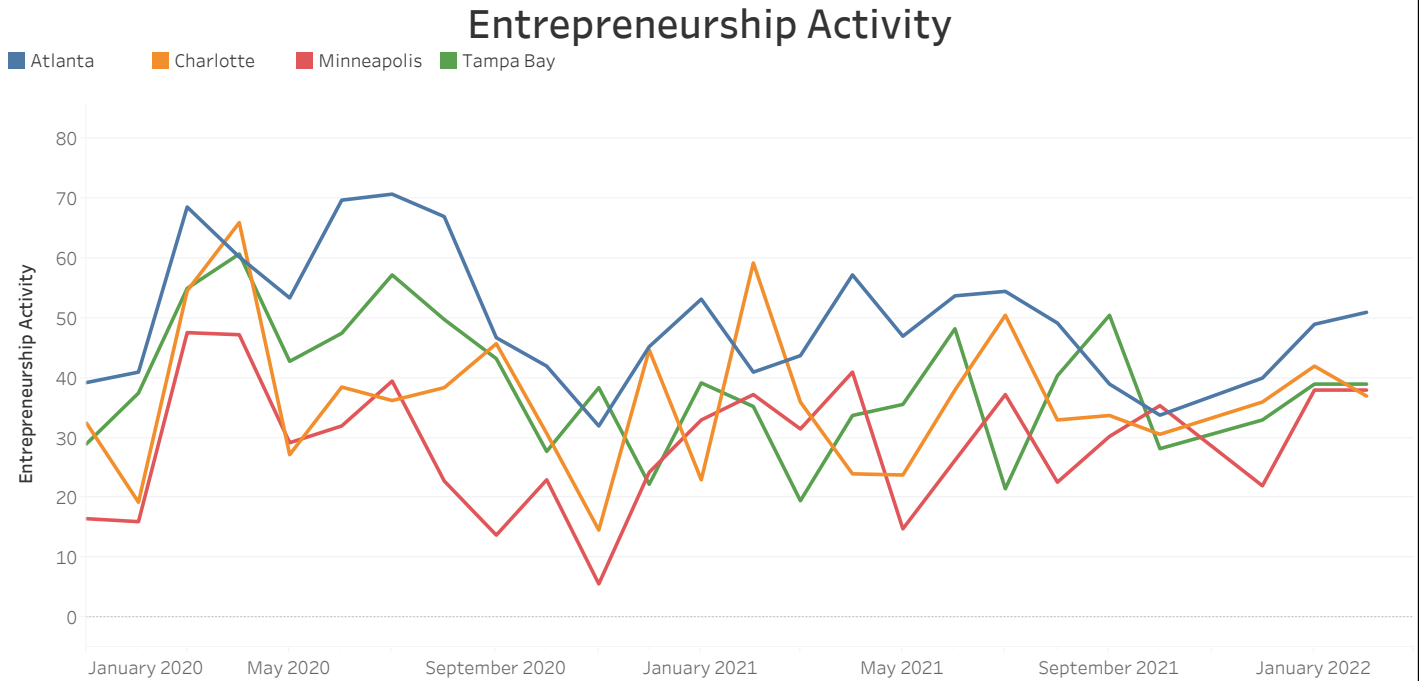


Entrepreneurship Activity

Insights

- Entrepreneurship activity peaked in July 2020 followed by a declining trend for the rest of 2020.
- There is no discernable trend for entrepreneurship activity during 2021.

About: Google Trends based proxy for entrepreneurship activity.
Source: Google Trends



Key Insights on Innovation and Entrepreneurship

The Tampa Bay MSA performed relatively well in terms of entrepreneurship as compared to innovation. The Tampa Bay region has consistently been in the top half of the comparison group. However, entrepreneurship activity in the region is declining, evidenced not only from the declining business establishment entry rate but also from the declining competitive position of the Tampa Bay region along the business establishment entry rate indicator.



Key Takeaways on Innovation and Entrepreneurship

The innovation and entrepreneurship picture in the Tampa Bay region is somewhat discouraging. The Tampa Bay MSA has not only been lagging on all the innovation indicators with respect to other MSAs, but it also has been on a declining trend. Entrepreneurship activity in the Tampa Bay region is a bit more encouraging than the innovation activity yet the entrepreneurship activity is on a declining trend as well.

Education

One area of the economy that has seen significant upheaval due to the pandemic is the education sector. The pandemic forced millions of students out of school and into online classes. The sudden shift from in-class education to online education has put millions of students, especially those belonging to underprivileged sections of society at a disadvantage as a result of their budgets. Many lack the digital infrastructure to access online classes – some don't have reliable Internet access or families do not have the equipment allowing more than one student to be online at a time. Many rely on free school lunch programs for nutritious meals. Also, such students lose much-needed attention and care from their teachers.

In this section, researchers assess how the pandemic has affected the education sector of our economy, especially the higher education domain, which plays crucial role in developing the talent resource in the economy. They analyzed the performance of the Tampa Bay MSA in terms of multiple education-related indicators such as graduation rates, degree production per 10,000 residents, etc. They also analyzed the impact of the COVID-19 pandemic on the academic performance of the students from the Tampa Bay area. Researchers also analyzed the racial gap along the lines of educational attainment. They studied the racial gap in terms of availability of digital infrastructure, which turned out to be crucial for continued learning during the pandemic.

Researchers used Google Trends indicators to assess how the students in the regions are using the internet for academic help. They looked for search trends for the related indicators such as “English help,” “online tutor,” “math homework help online,” “homework help website,” and “exam help.” As students were confined to their homes during the pandemic, they had to rely on online tools for academic help and skill improvement. To track the search activity related to the skill improvement searches, researchers chose the search terms “online degree programs,” “Udemy,” “online courses,” “online education,” and “online MBA.”



Educational Attainment Rate: Graduate/Professional

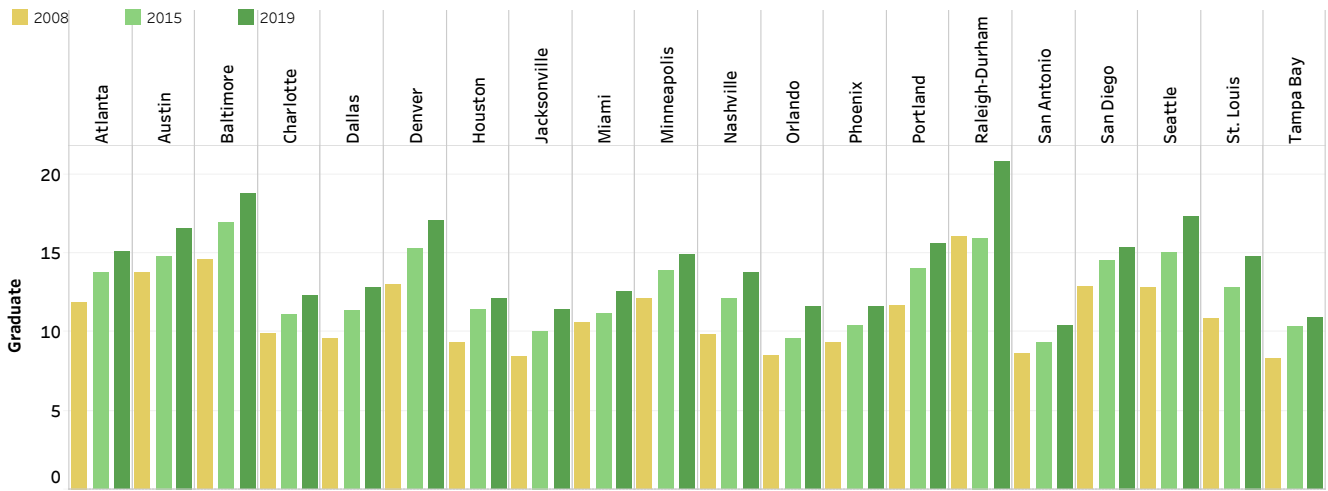
Insights

- Tampa Bay's educational attainment (graduate/professional) has been consistently increasing over the years.
- The MSA started at No. 20 in 2008 and gradually improved.
- Raleigh-Durham has the highest graduate attainment rate for 8 years and is maintaining the No. 1 rank for all the years through 2018.
- Baltimore surpassed Raleigh-Durham with the highest graduate attainment rate in 2019.

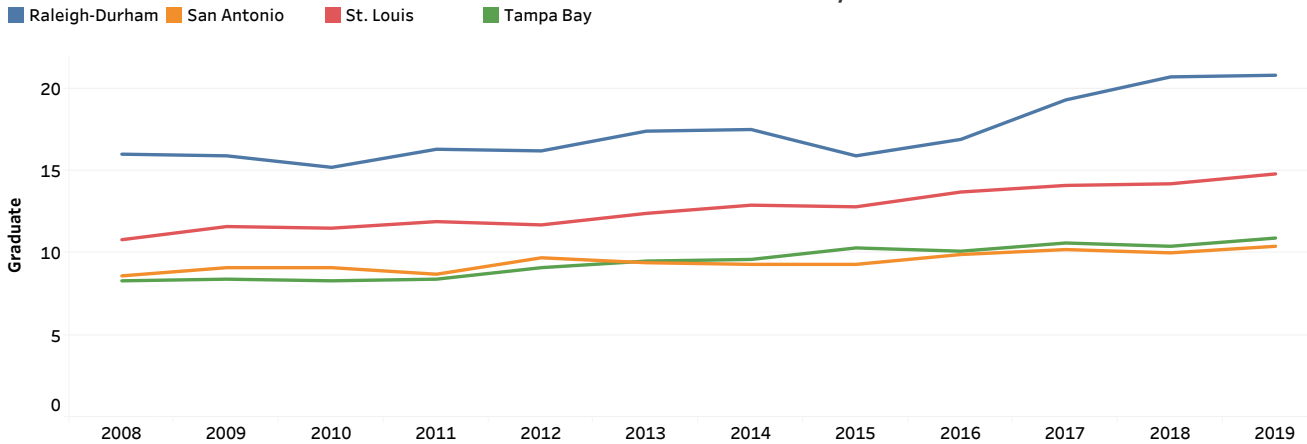
About: Measures the percentage of the population, aging 25 years or older, who have attained a graduate or professional degree.

Source: U.S. Census Bureau, American Community Survey.

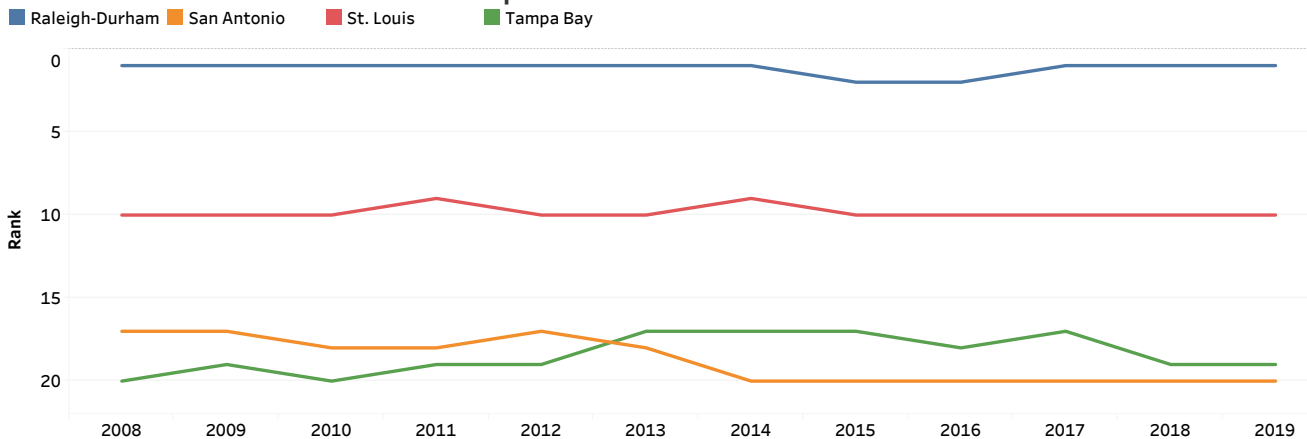
Educational Attainment Rate: Graduate/Professional



Educational Attainment Rate: Graduate/Professional Trend



Competitive Position Trend

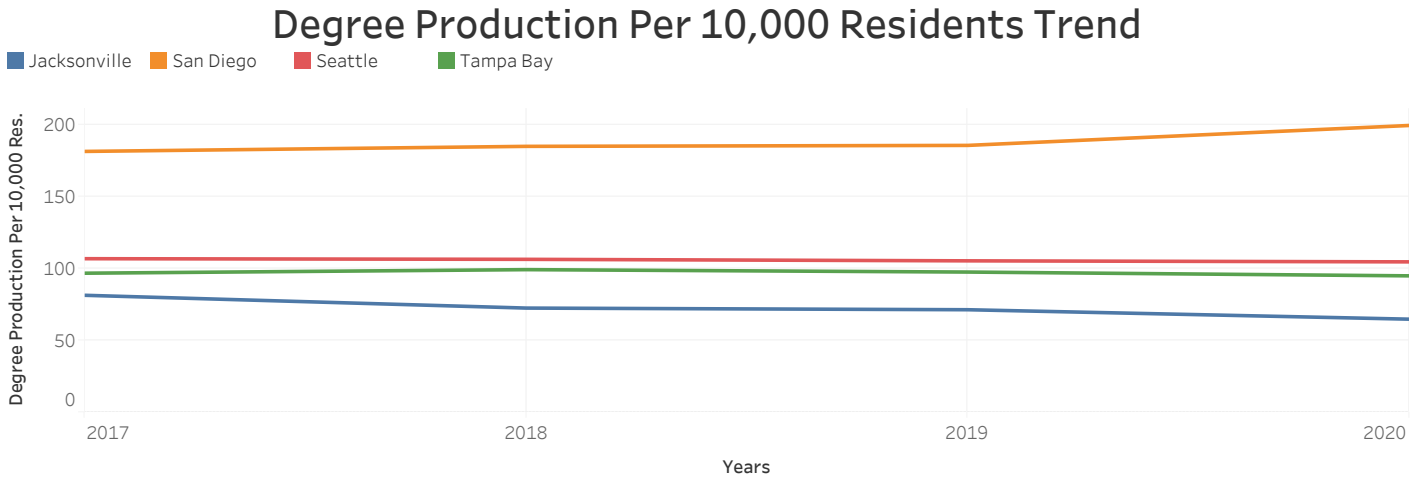
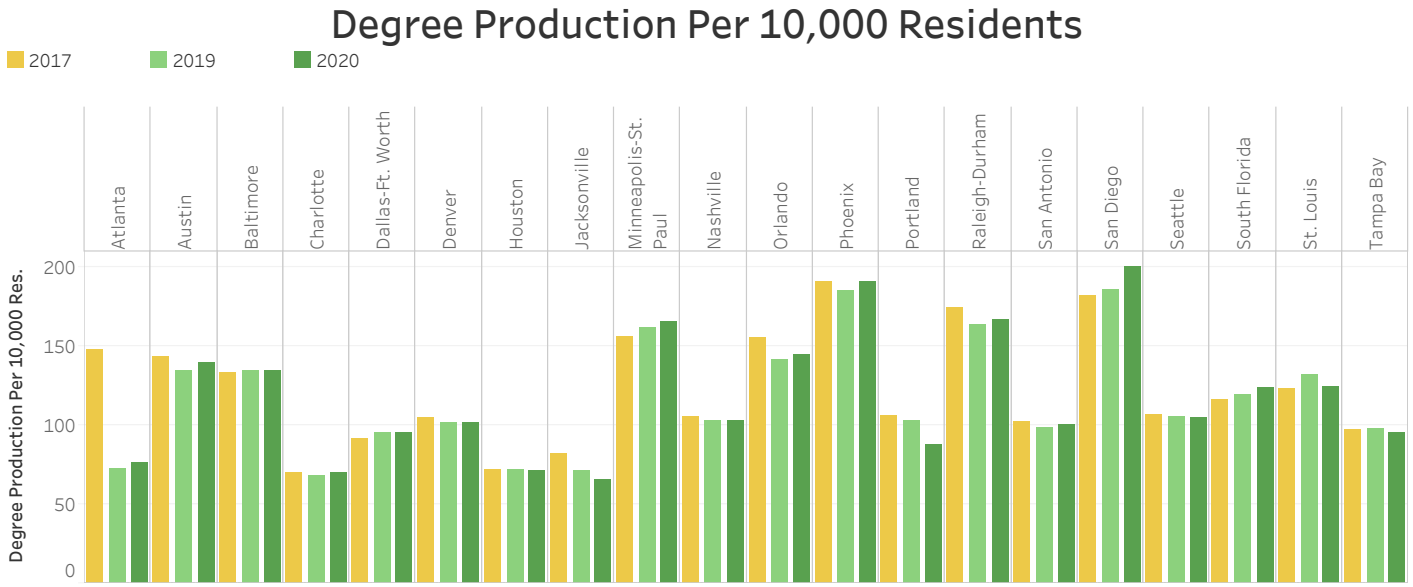


Degree Production per 10,000 Residents

Insights

- The Tampa Bay region has consistently been in the No.15 position since 2017.
- The degree production per 10,000 residents for the MSA has slightly declined from 2019 to 2020.
- San Diego has consistently been ranked No.1 since 2017.

About: Number of individuals graduating with degrees (Associate and above) per 10,000 residents.
 Source: Integrated Postsecondary Education System.



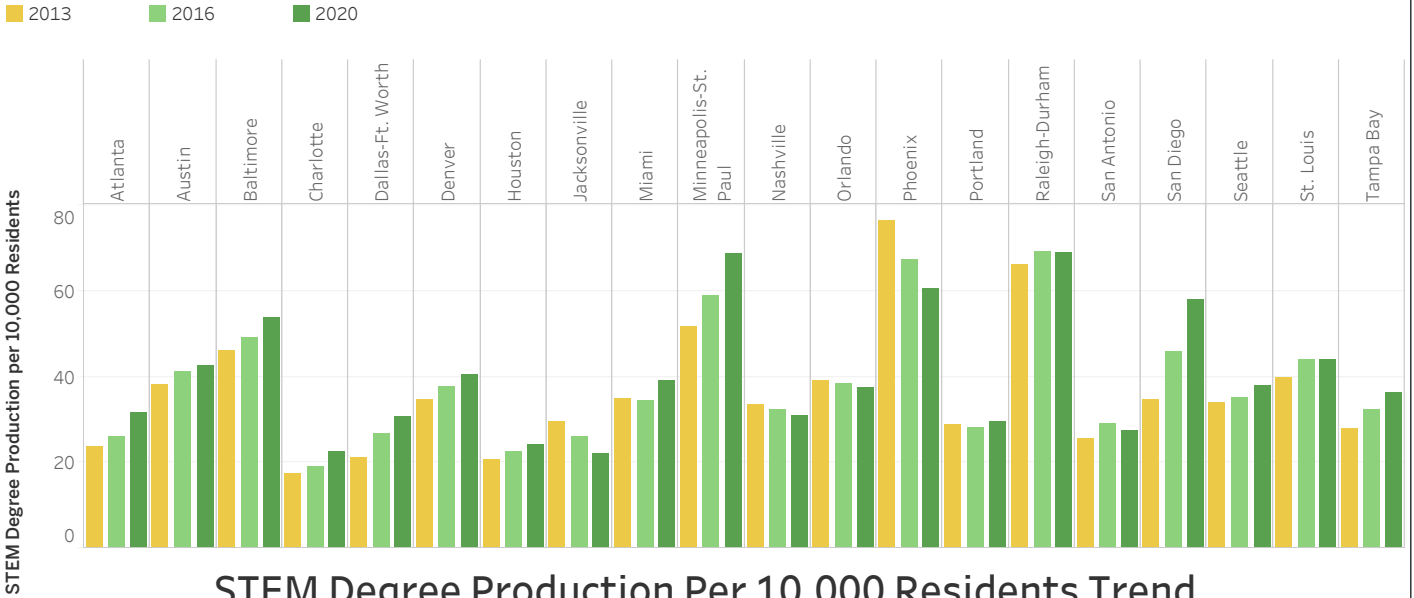
STEM Degree Production per 10,000 Residents

Insights

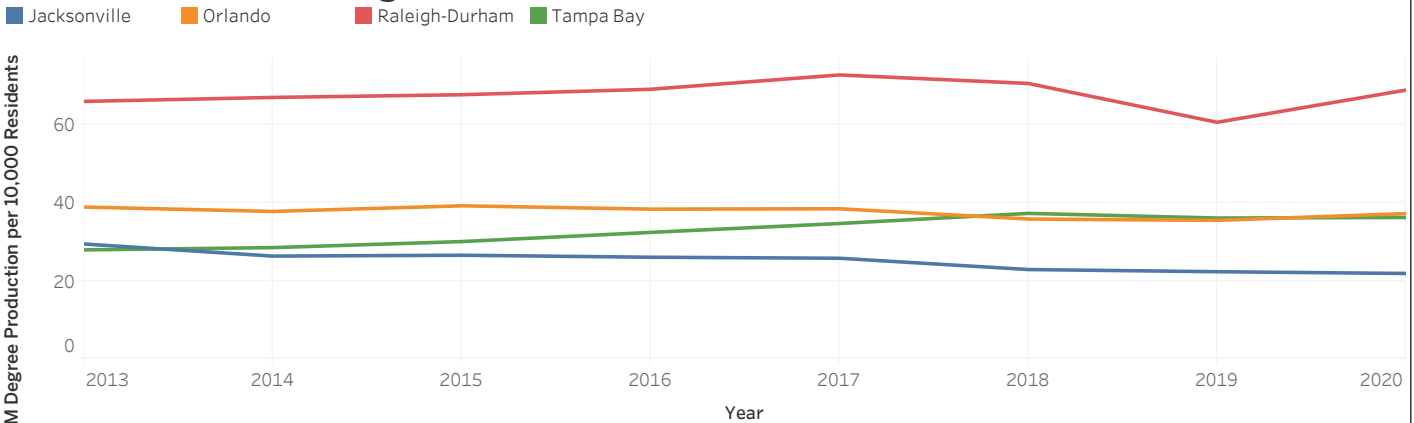
- The Tampa Bay region has improved along the years in terms of STEM Degree production per 10,000 residents.
- Raleigh-Durham has consistently ranked No.1 in terms of STEM Degree production per 10,000 residents.

About: Number of individuals graduating with degrees in science, technology, engineering and mathematics (STEM degrees) per 10,000 residents.
Source: Integrated Postsecondary Education System.

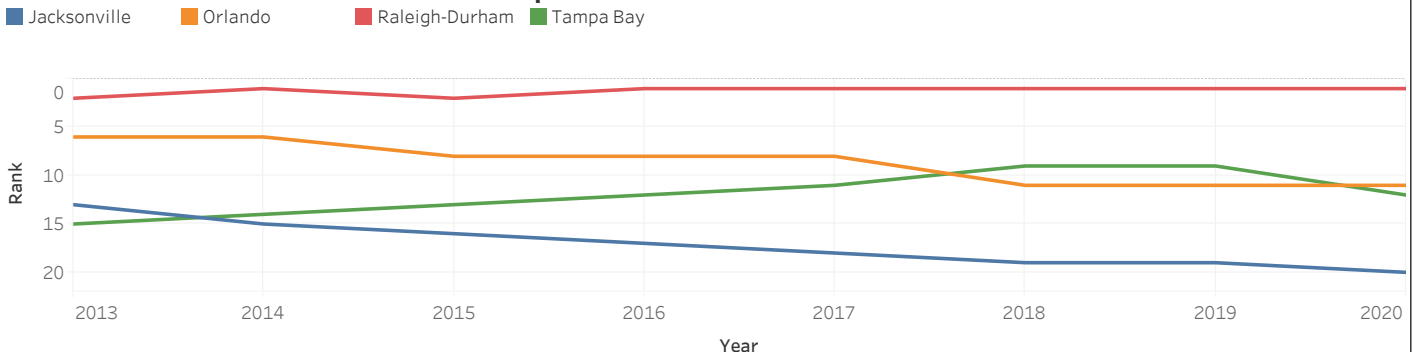
STEM Degree Production Per 10,000 Residents



STEM Degree Production Per 10,000 Residents Trend



Competitive Position Trend

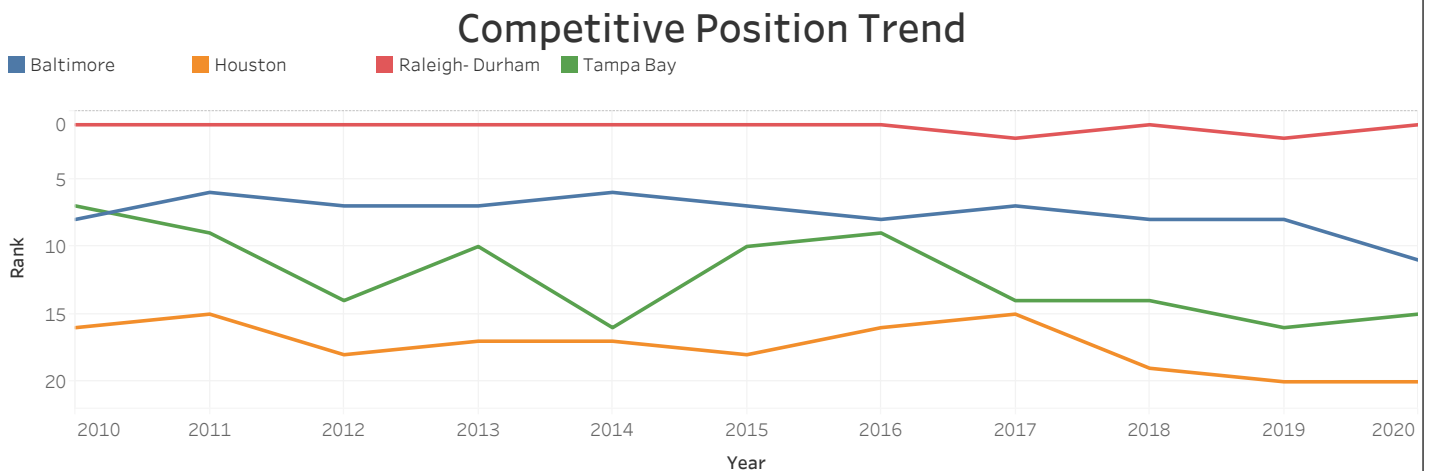
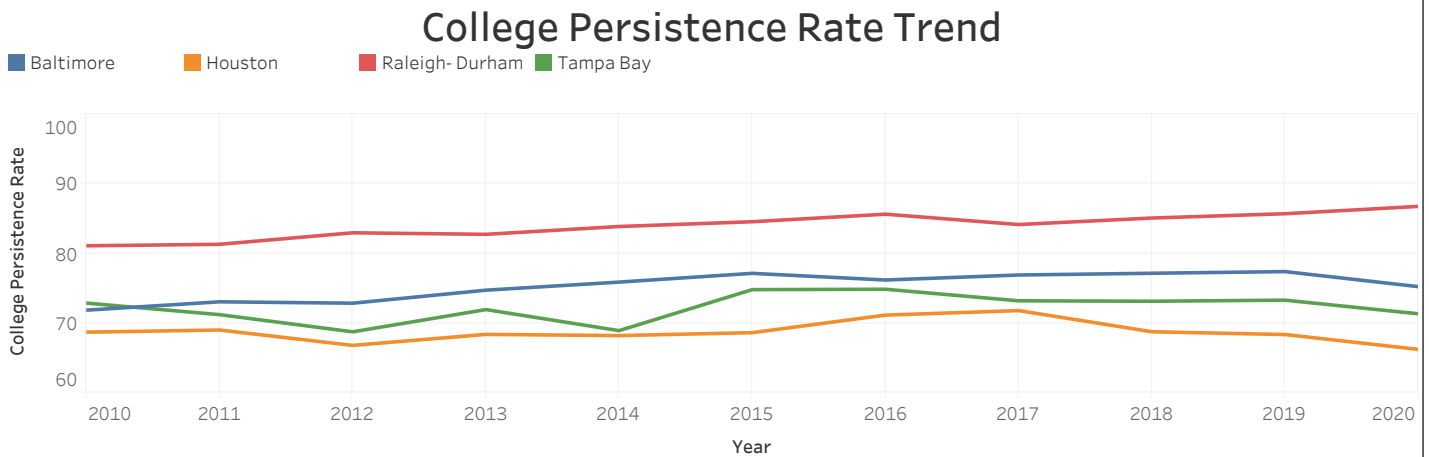
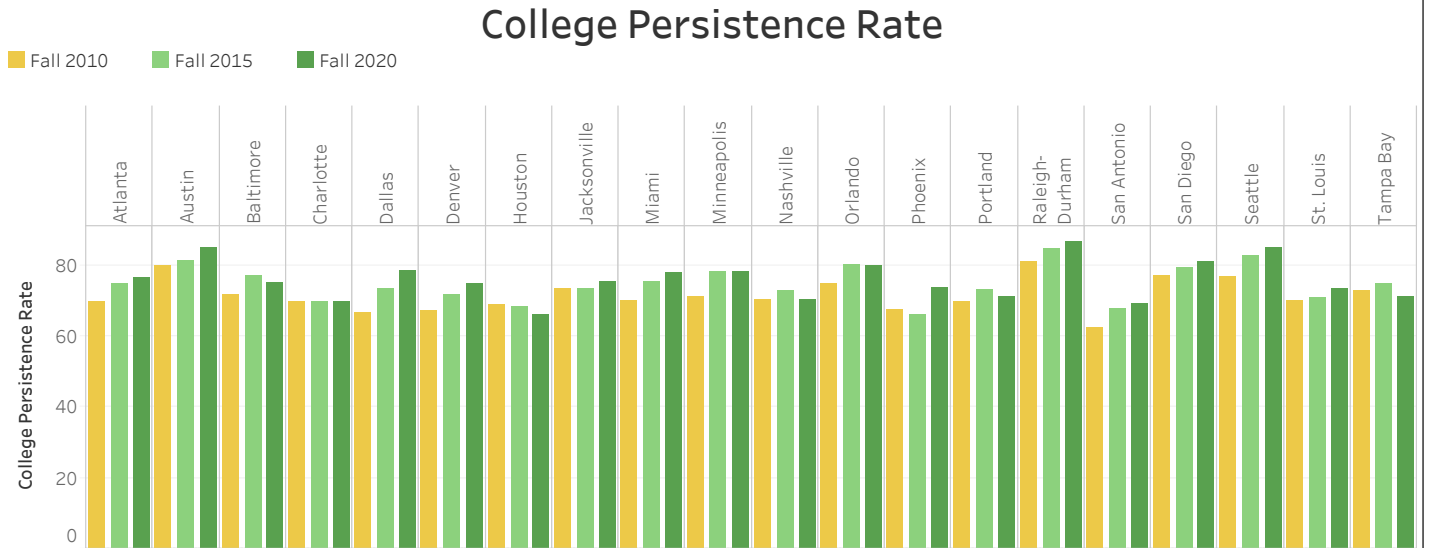


College Persistence Rate

Insights

- The college persistence rate in the Tampa Bay MSA has fluctuated over the years and has shown no clear trend.
- In terms of competitive position Tampa Bay is on a declining trend.
- Raleigh-Durham has consistently ranked No.1 for most of the years.

About: Percentage of full-time students (undergraduate and above) who retained after the first year of enrollment in college.
 Source: Integrated Postsecondary Education Data System .



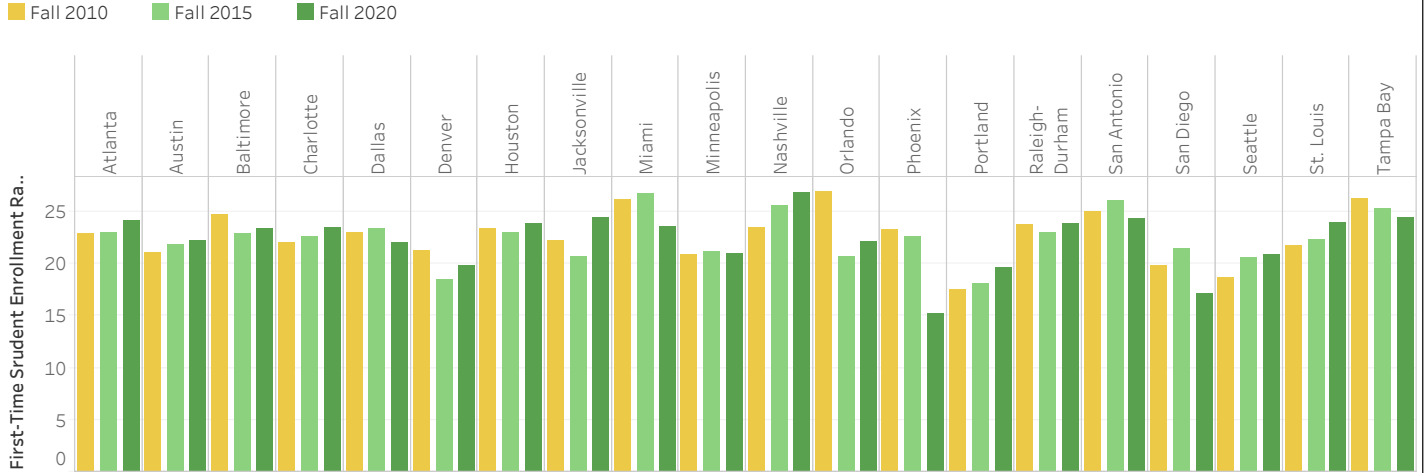
First-Time Student Enrollment Rate

Insights

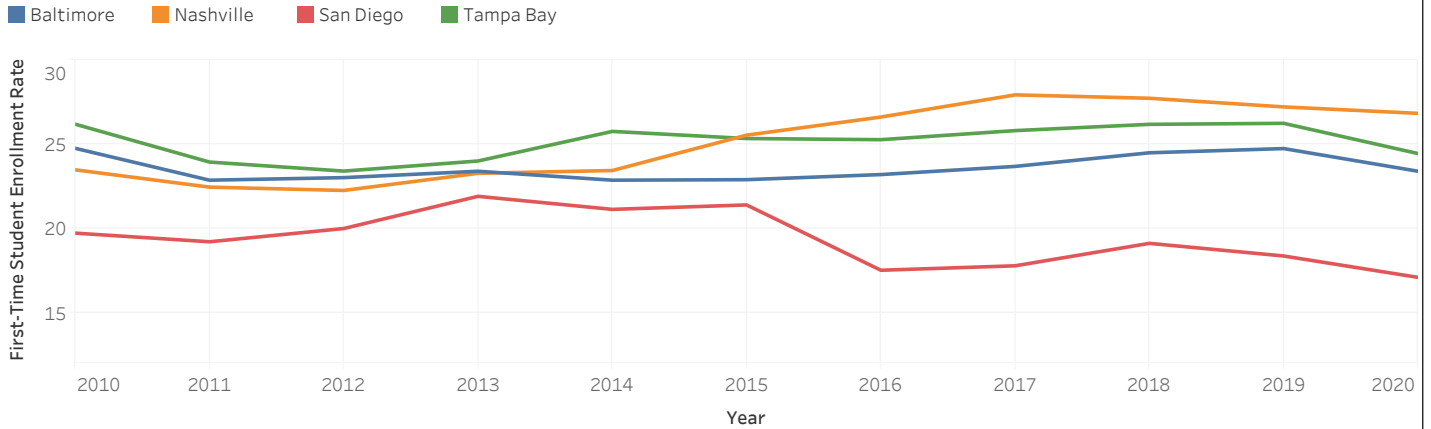
- The first-time student enrollment rate in the Tampa Bay region has been increasing over the years, experiencing a slight decline from 2019 to 2020.
- In terms of competitive position, the Tampa Bay MSA has consistently been in the top 5 positions.

About: Percentage of total students enrolled for the first time at the undergraduate level without any prior postsecondary experience.
 Source: Integrated Postsecondary Education Data System.

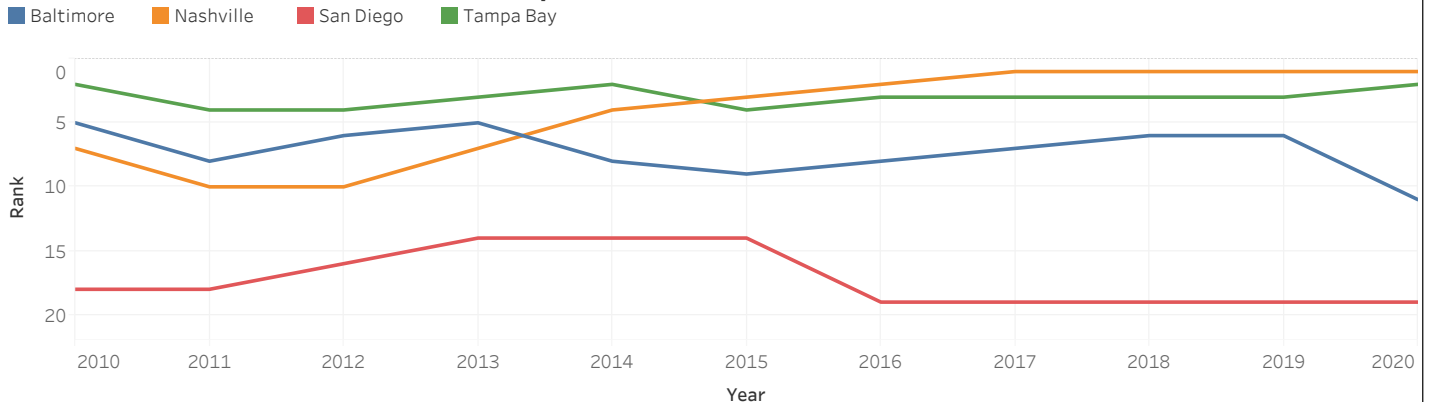
First-Time Student Enrollment Rate



First-Time Student Enrollment Rate Trend



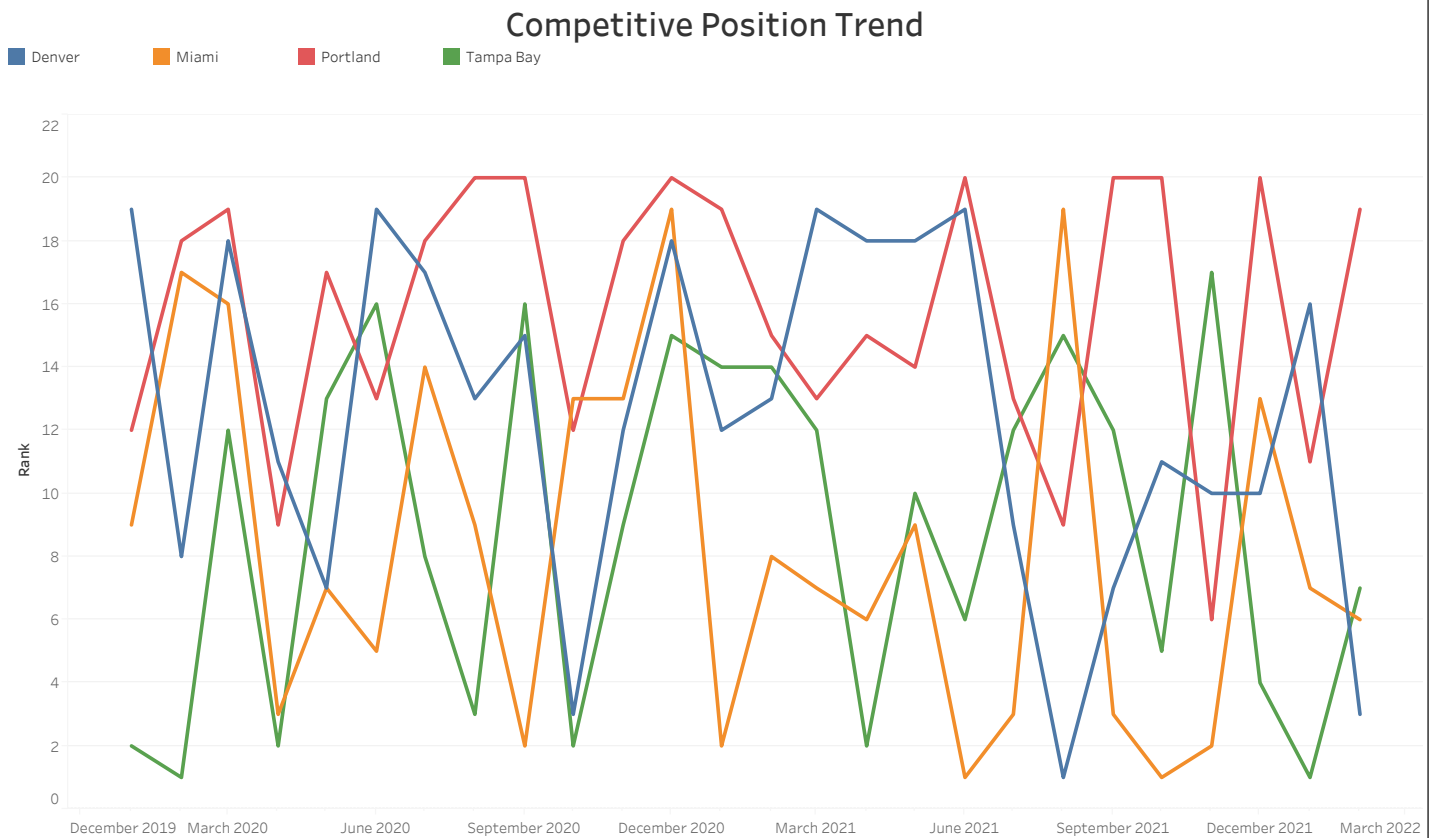
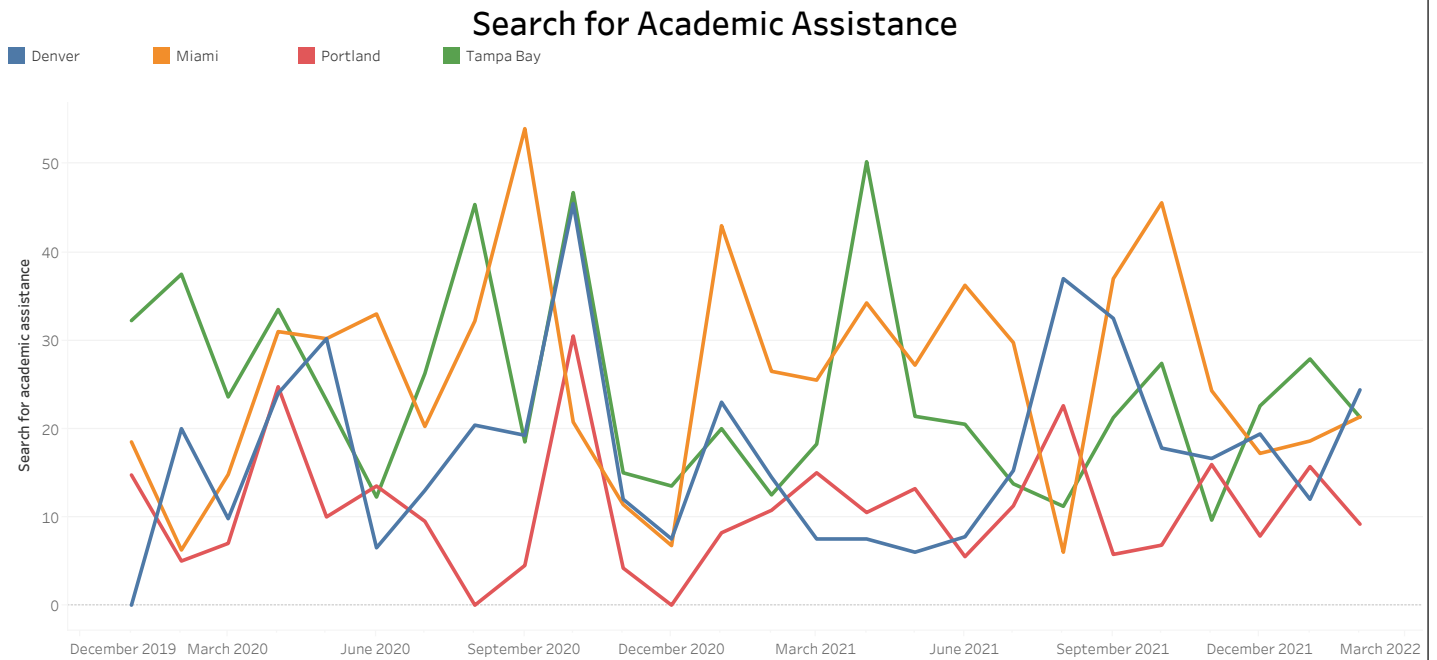
Competitive Position Trend



Search for Academic Assistance

- There is no clear trend in the research for academic assistance for MSAs studied.

About: Google Trends based proxy for search for academic assistance.
Source: Google Trends



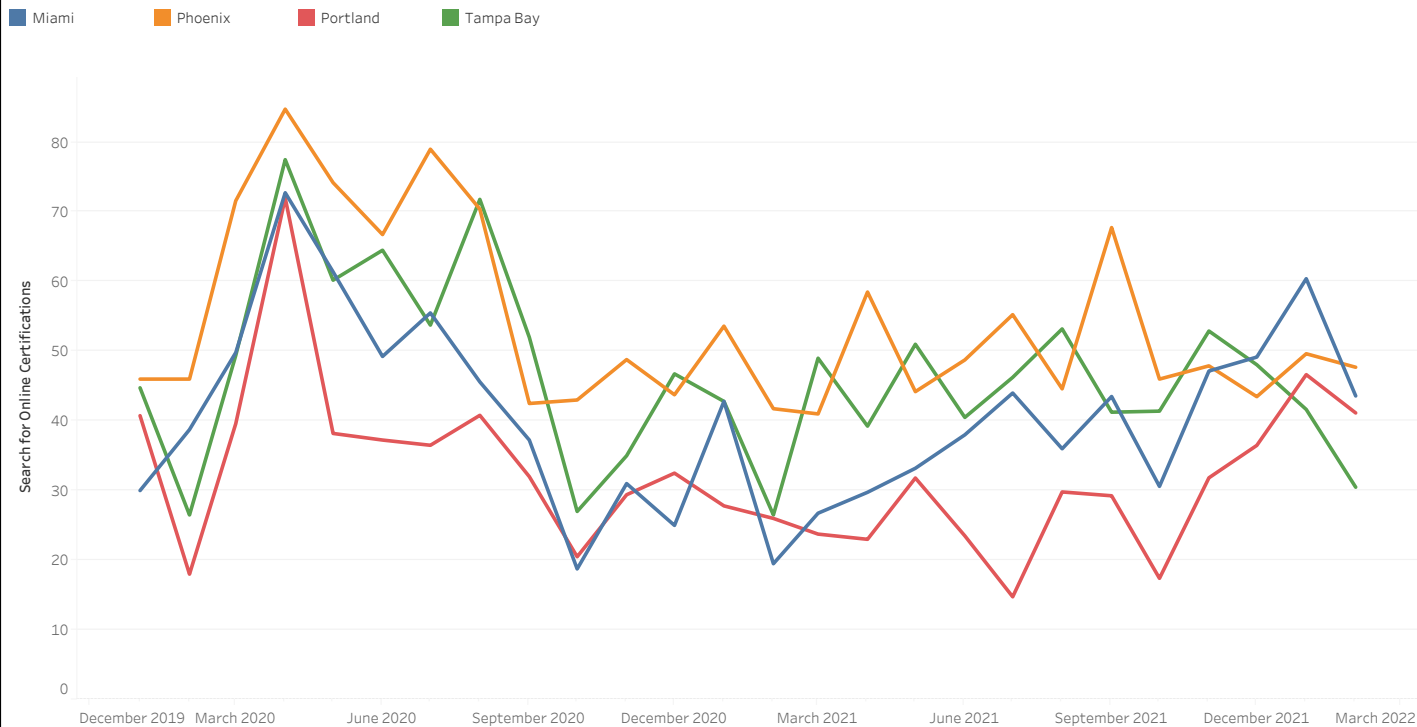
Search for Online Certifications

Insights

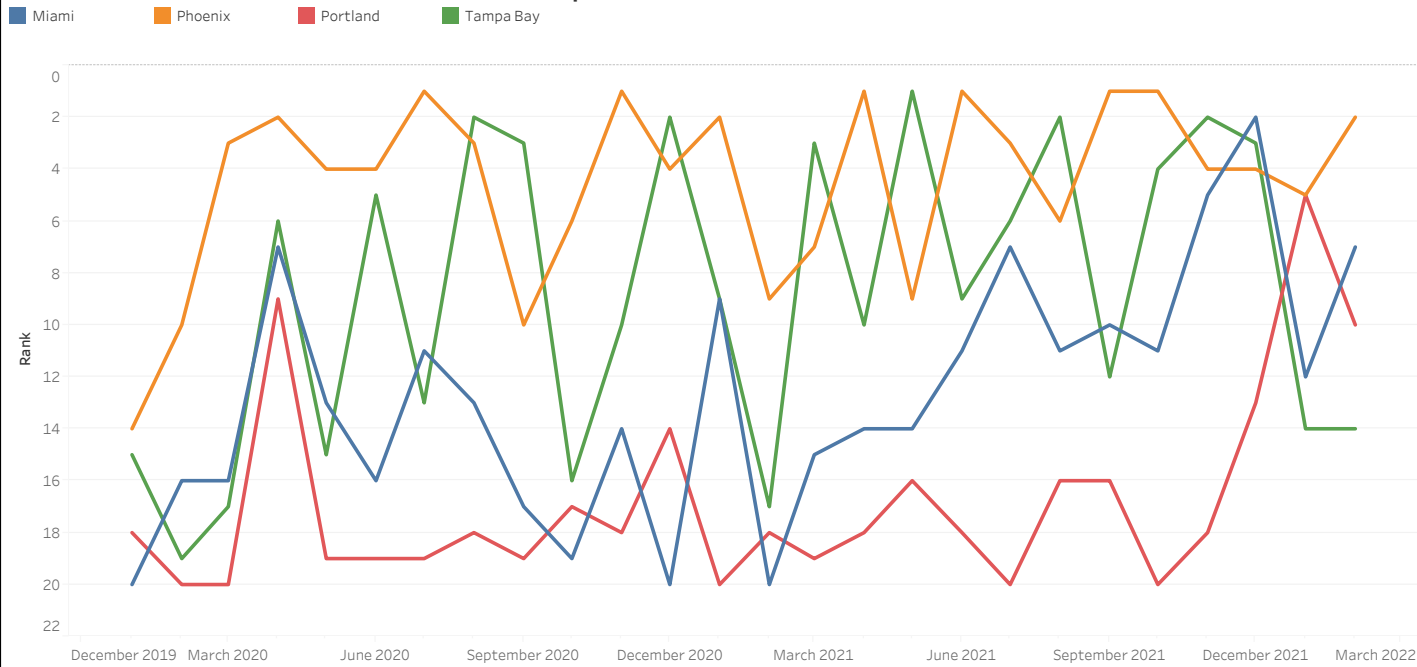
- The search for online skill improvement certifications peaked in April 2020 and has since been on a declining trend for most MSAs, including Tampa Bay.
- The Tampa Bay MSA shows no clear trend in terms of competitive positions.

About: Google Trends based proxy for public interest in online skill improvement certifications.
Source: Google Trends

Search for Online Certifications Trend



Competitive Position Trend



Key Insights on Education

The Tampa Bay MSA’s performance was encouraging for some indicators and not-so-encouraging on others. For example, the Tampa Bay MSA has been registering a gradual but steady increasing trend in terms of educational attainment and STEM degree production per capita. However, the Tampa Bay MSA’s college persistence rate and the first-time-student enrollment rate have been on a slight decline in the recent years.

The search for online certifications rose sharply during the days following the start of the COVID-19 pandemic and declined gradually in the following months.

Racial Equity in Education

In this subsection, researchers analyzed the performance of the Tampa Bay MSA along the lines of racial equity in education. They considered the Black-White Educational attainment rate (bachelor's degree and above) and the Black-White digital access gap. They studied the digital access gap because digital infrastructure, such as access to a desktop computer and a broadband internet connection, became crucial for continued learning during the pandemic because students had to stay away from schools for an entire academic year. The source for the data is the U.S. Census Bureau. The data is through 2019 only because 2019 is the latest year in which the data is available.



Black-White Educational Attainment Rate Gap

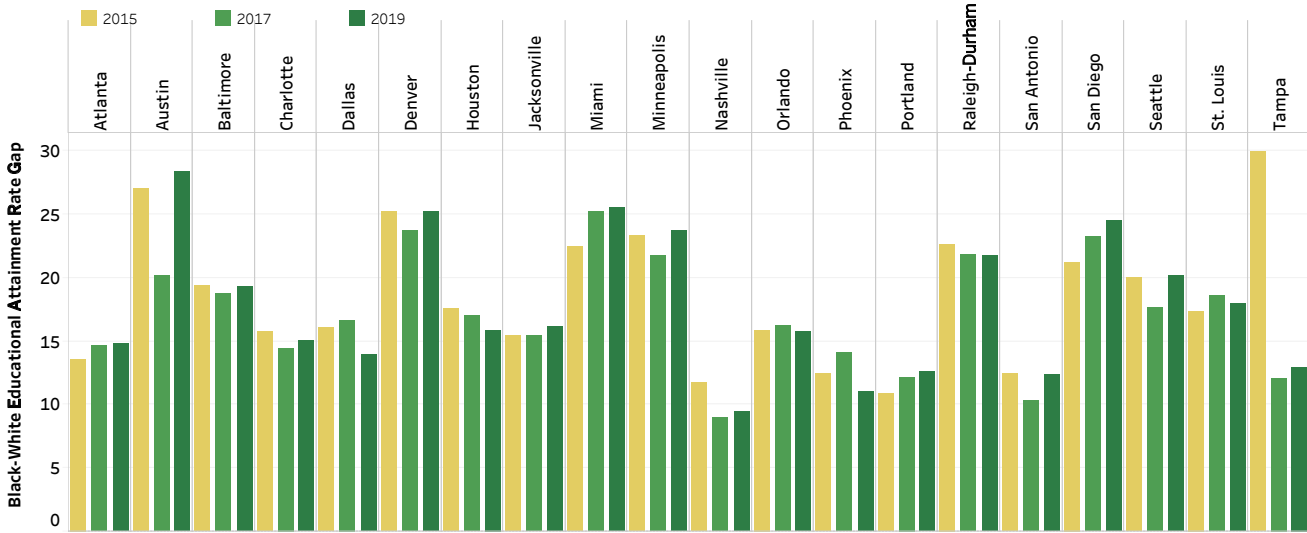
(Bachelor's Degree or Higher)

Insights

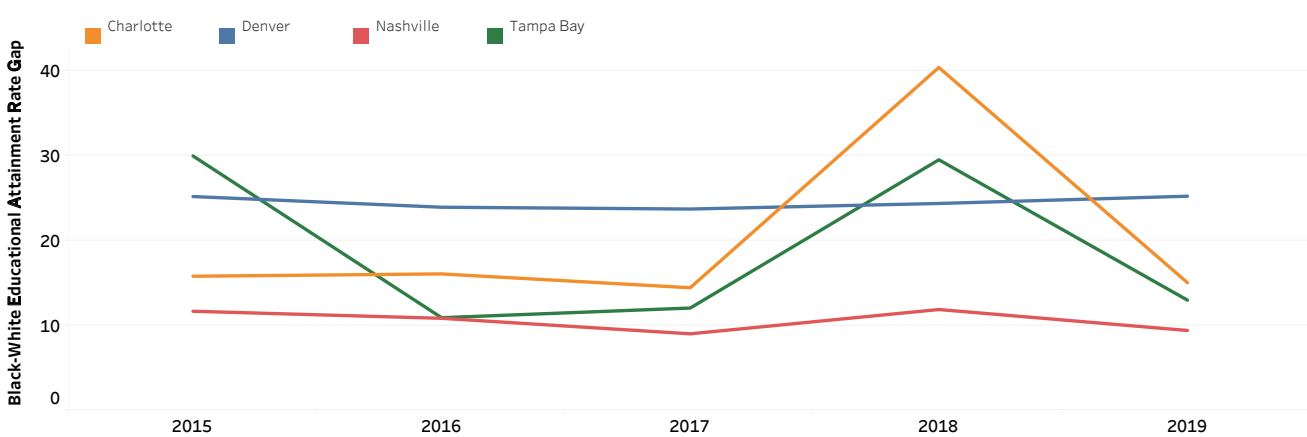
- The Tampa Bay region's Black-White gap in terms of educational attainment rate for a bachelor's degree or higher has decreased over the years.
- The Tampa Bay MSA's competitive position went from No. 20 in 2015 to No. 2 in 2016. The Tampa Bay MSA was in the No. 5 position in 2019.
- Nashville has been the best performing MSA while Denver has been the worst performing MSA during the 2015-2019 period.

About: Measures the Black-white gap in the percentage of population, ages 25 or older, who have attained a bachelor's degree or higher.
Source: U.S. Census Bureau, American Community Survey, table S1501

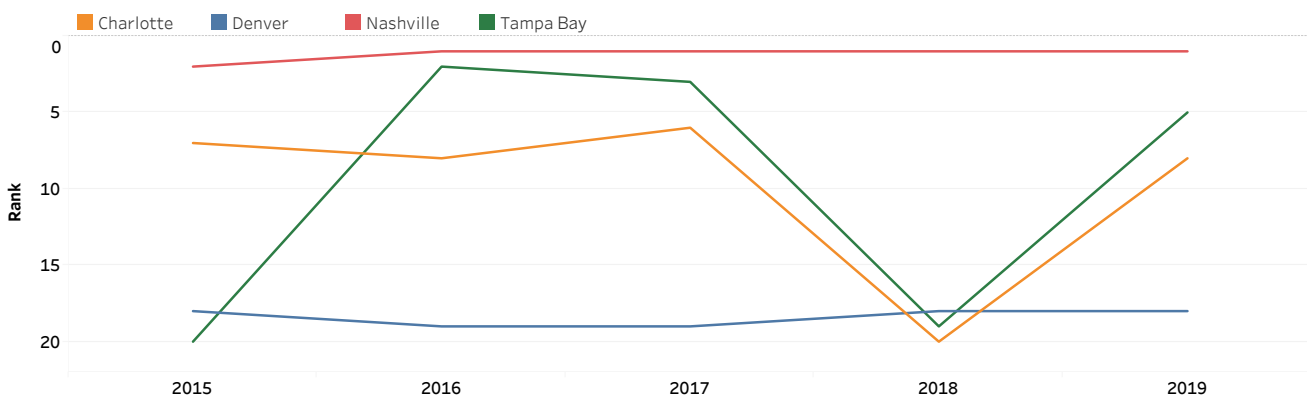
Black-White Educational Attainment Rate Gap (Bachelor's Degree and Higher)



Black-White Educational Attainment Rate Gap (Bachelor's Degree and Higher) Trend



Competitive Position Trend



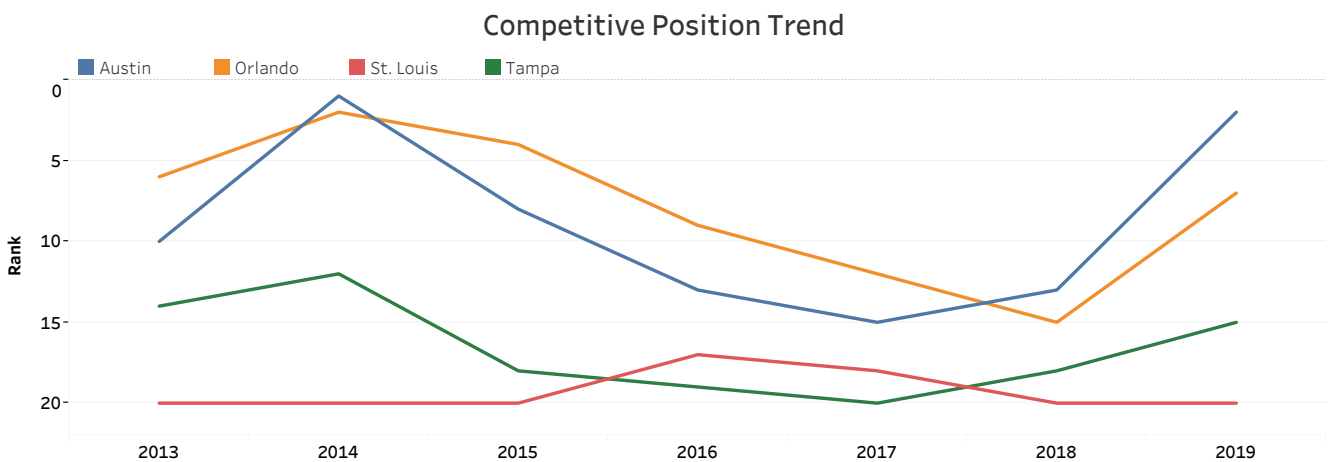
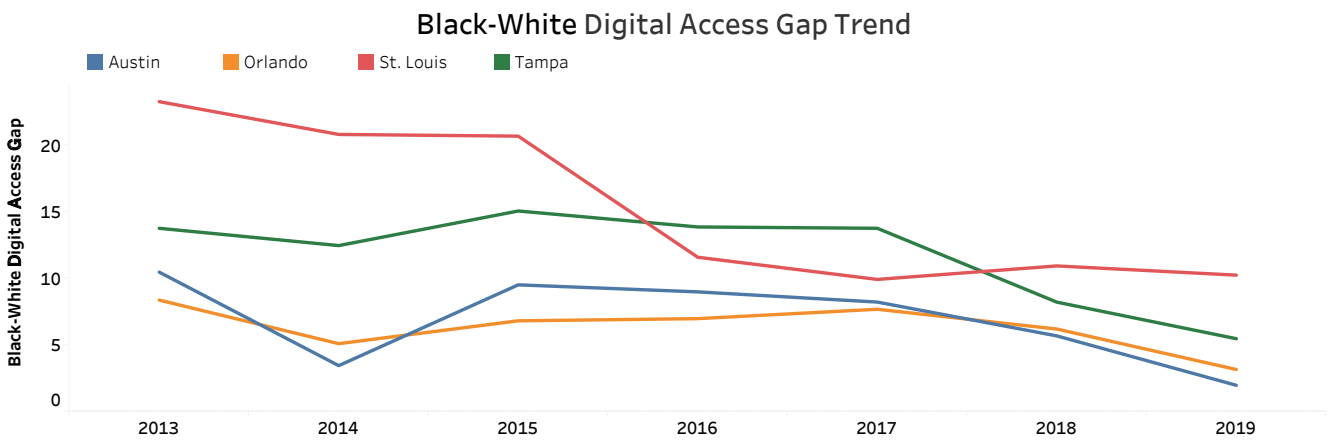
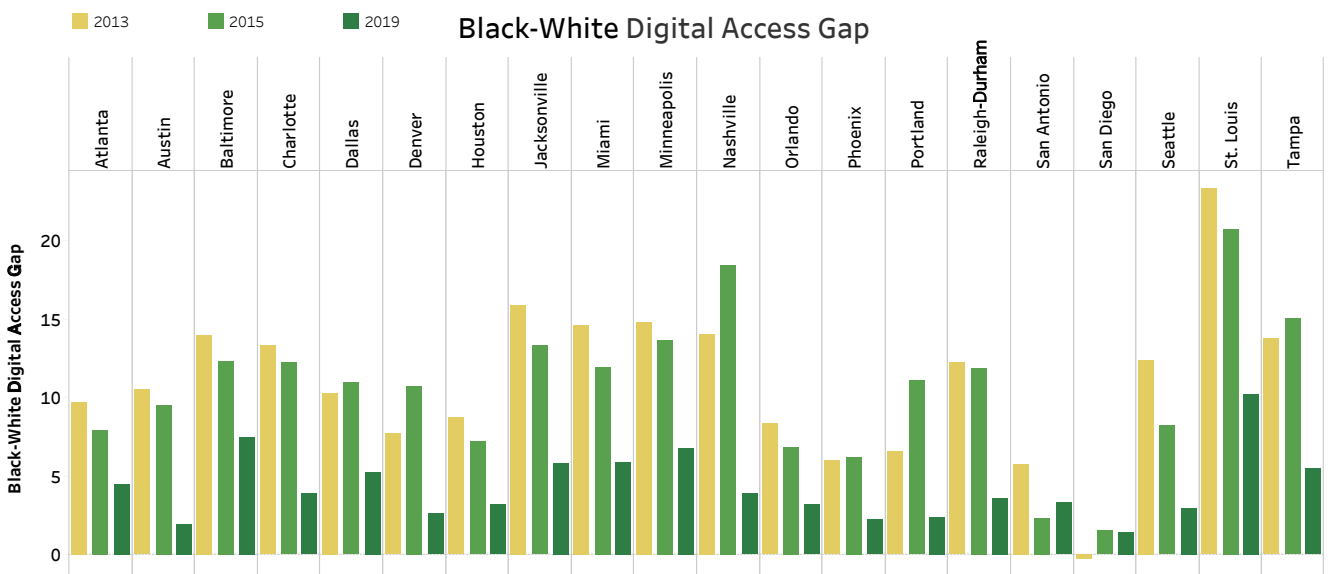
Black-White Digital Access Gap

Insights

- The Black-White digital access gap for most of the MSAs, including Tampa Bay has been declining.
- The Tampa Bay MSA's competitive position declined from 2014 to 2017. It has been increasing since 2017.
- The Tampa Bay region remains at the No. 15 position among the comparison group.

About: This measures the Black-White gap in the share of households with a computer and a dedicated physical broadband Internet subscription using a service such as cable, fiber optic, or DSL. Calculated by subtracting the African-American households with a computer and a dedicated physical broadband Internet subscription from White American households with the same.

Source: U.S. Census Bureau, American Community Survey, table B28009.



Key Insights on Racial Equity in Education

Racial equity in education has been improving in the Tampa Bay region over the years with declining Black-White educational attainment rate gap (bachelor’s degree and above) and a declining Black-White digital access gap. The Tampa Bay MSA performed better compared to most other MSAs in terms of the Black-White educational attainment rate as of 2019. However, the Tampa Bay MSA is lagging in terms of the Black-White digital access gap compared to most other MSAs.



Key Takeaways from Education

The Tampa Bay MSA has been performing relatively low in terms of degree and STEM degree production per 10,000 residents. However, the Tampa Bay MSA's competitive position in terms of STEM degree production per 10,000 residents has been steadily improving.

The Tampa Bay MSA has been among the top performing MSAs over the years in terms of first-time student enrollment rate.

The college persistence rate for the Tampa Bay MSA has not changed much over the years. However, the competitive position of the Tampa Bay MSA in terms of college persistence rate has witnessed a slight decline.

The Tampa Bay MSA has been performing well in terms of the Black-White educational attainment rate gap.



Health Care

One lesson that the pandemic taught people worldwide is the importance of health care. The resilience of any economy to the pandemic disruption is hinged upon the availability, accessibility, and affordability of the health care. This section presents an analysis related to multiple aspects of health care.

To comprehensively analyze the performance of the Tampa Bay region in terms of health care, researchers categorized health care indicators into five categories: public health status, COVID-related measures, access to health care, and government spending on health care. They used data from traditional sources such as the Center for Disease Control and County health rankings, as well as from real-time sources such as 211 calls and Google Trends. Researchers analyzed 211 call data to understand the mental health and addiction related concerns in the community. They used Google Trends data to derive insights on COVID-19 concern and searches for vaccinations in the comparison communities.

To analyze the access to health care in the comparison communities, scholars tracked the population-to-primary health care provider ratio, the population-to-mental health care provider ratio, and access to affordable health care.

Researchers tracked government spending on public health through Medicare spending per capita and Health Resources and Services Administration grants per capita.



Public Health Status

In this subsection, researchers analyzed the public health status of the comparison communities on various health-related indicators, such as the cardiovascular disease prevalence rate and the depression prevalence rate. They also studied various health-related behaviors such as dietary behavior, alcohol consumption, physical activity, etc. Researchers tracked the mental health and addiction related concerns in the communities with the help of the volume of 211 service requests for mental health and addiction-related issues.

Cardiovascular Disease Prevalence

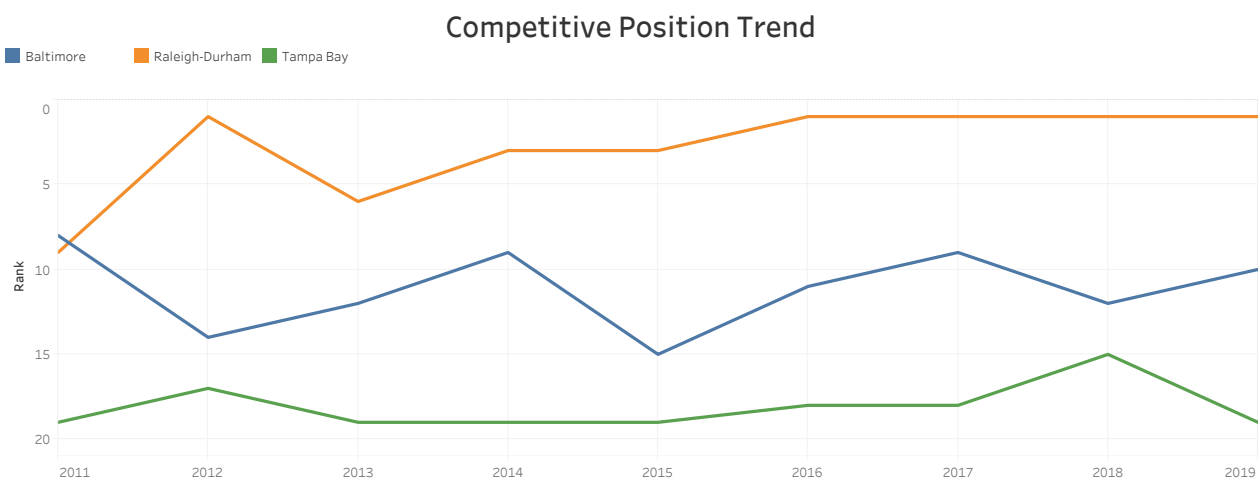
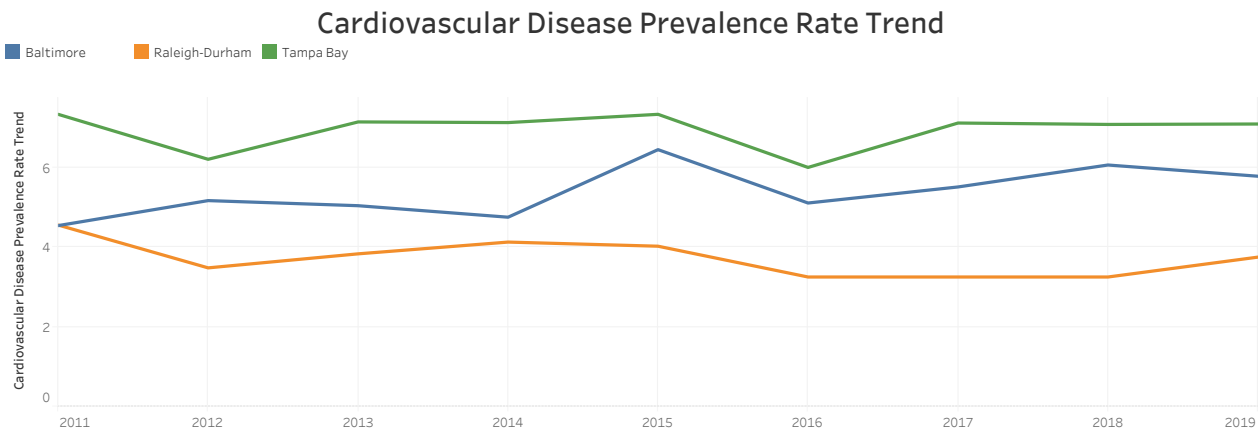
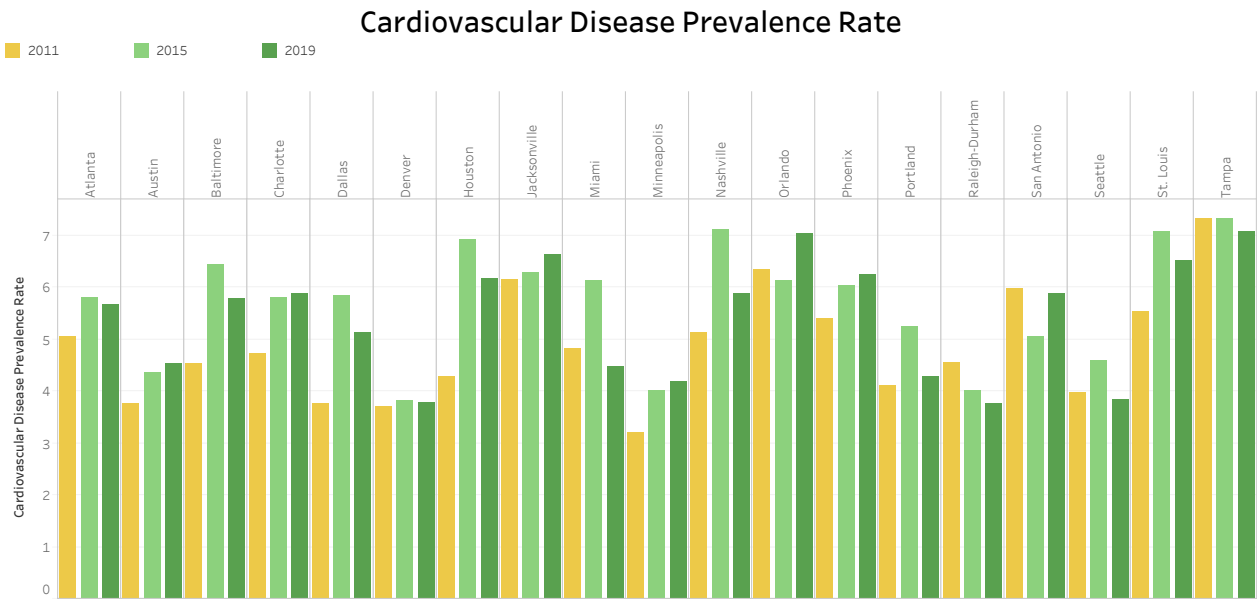
Insights

- The Tampa Bay MSA has consistently been in the bottom five positions and is ranked last in 2019 among the comparison MSAs.
- Raleigh-Durham is ranked No. 1 in cardiovascular health.
- Orlando and Jacksonville have experienced an increase in the cardiovascular disease prevalence rate.

About: Percentage of respondents who responded 'Yes' to both the question 'Ever told you had a heart attack?' and 'Respondents that have ever reported having coronary heart disease or myocardial infarction?'

Source: Behavioral Risk Factor Surveillance System (BRFSS).

*Data not available for the San Diego MSA.

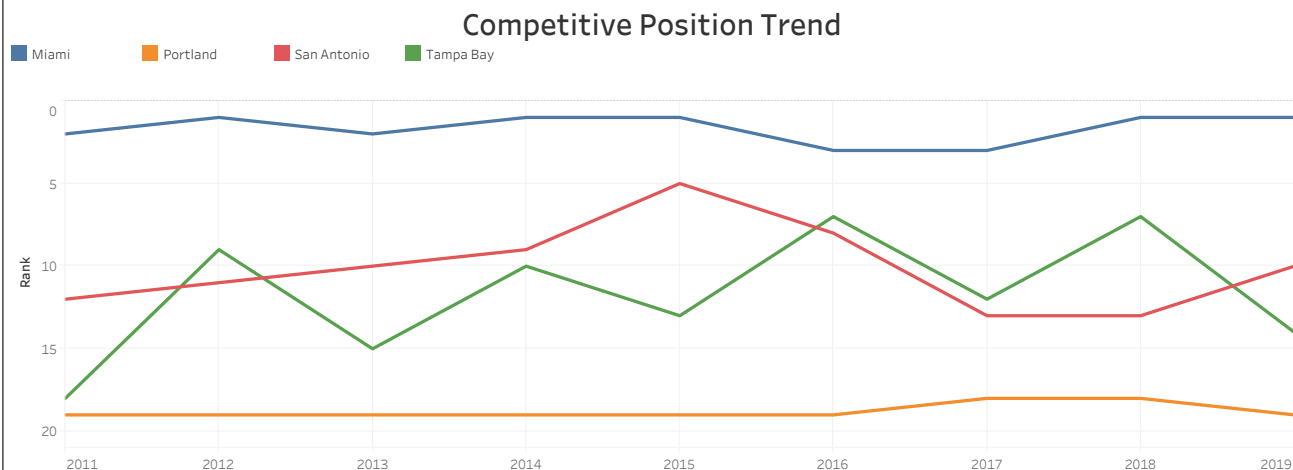
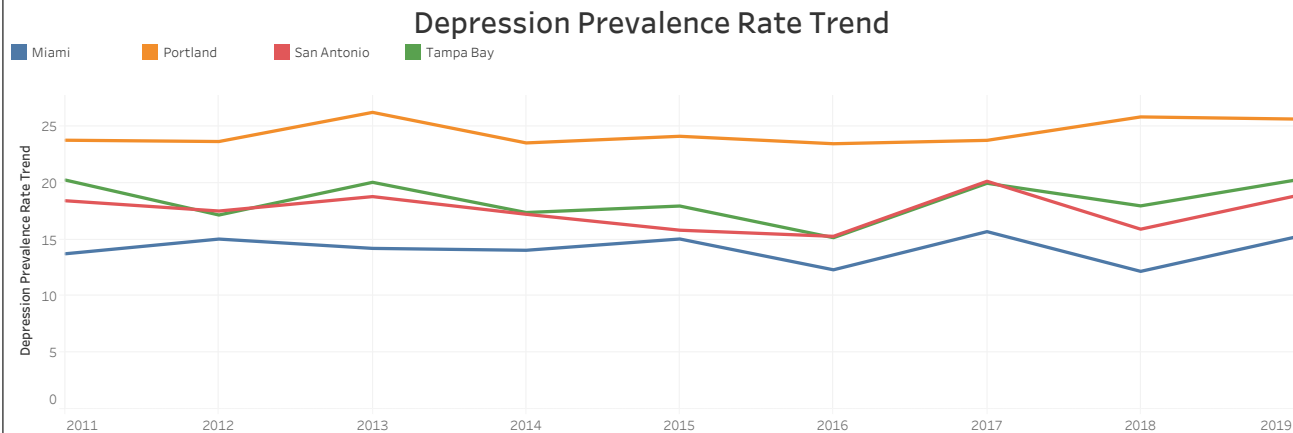
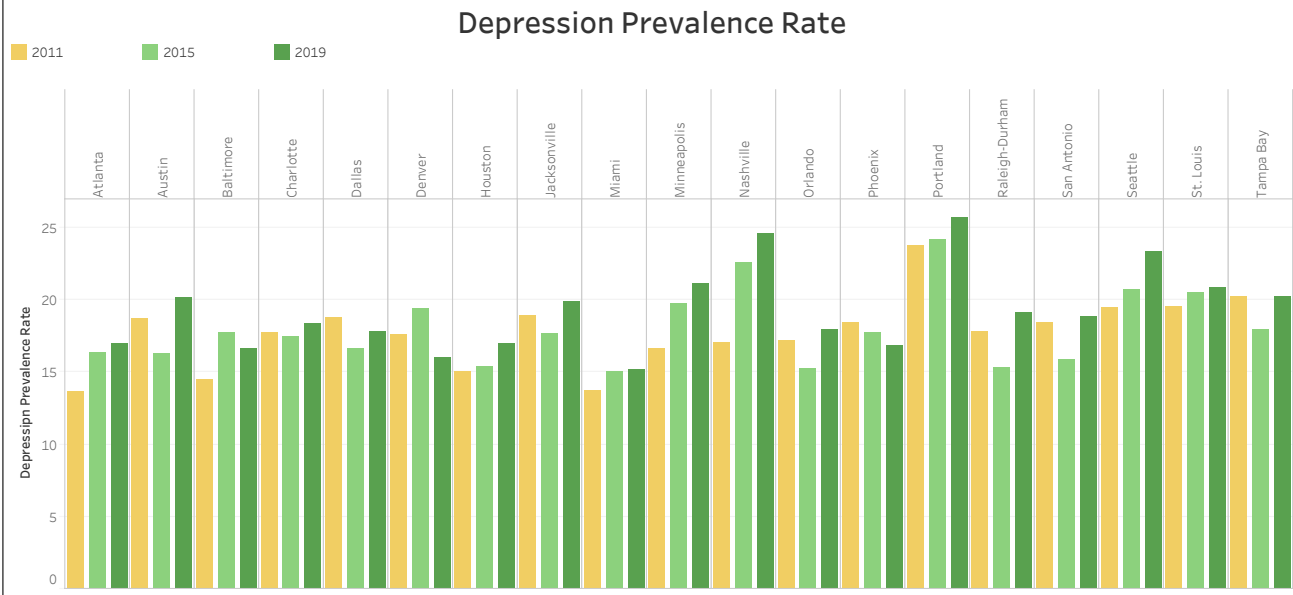


Depression Prevalence

Insights

- Miami is ranked No. 1 among all comparison MSAs for 2019.
- Tampa Bay's competitive position has fluctuated over the years and is currently ranked No. 14 among all the MSAs in 2019.
- Portland has consistently ranked last among the comparison MSAs.

About: Percentage of surveyed respondents who responded 'Yes' to the question 'Ever told you that you have a form of depression?'
Source: Behavioral Risk Factor Surveillance System (BRFSS).
 *Data not available for the San Diego MSA.

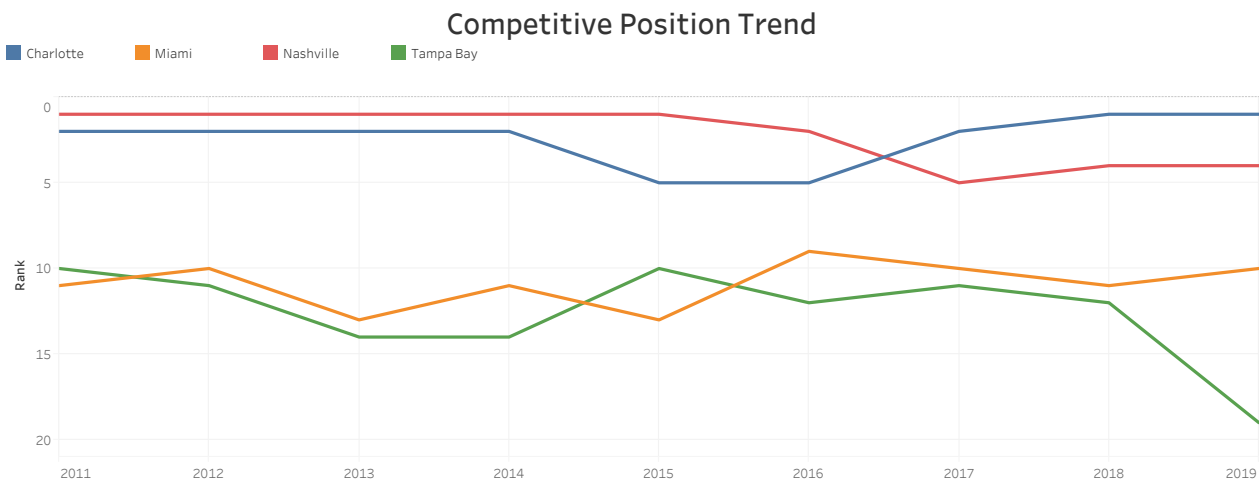
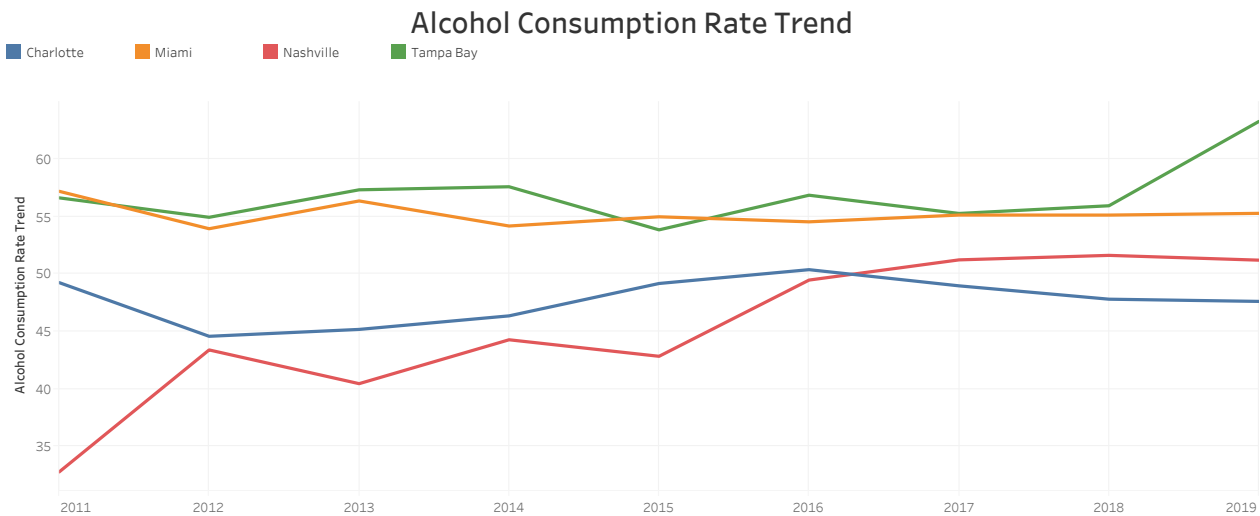
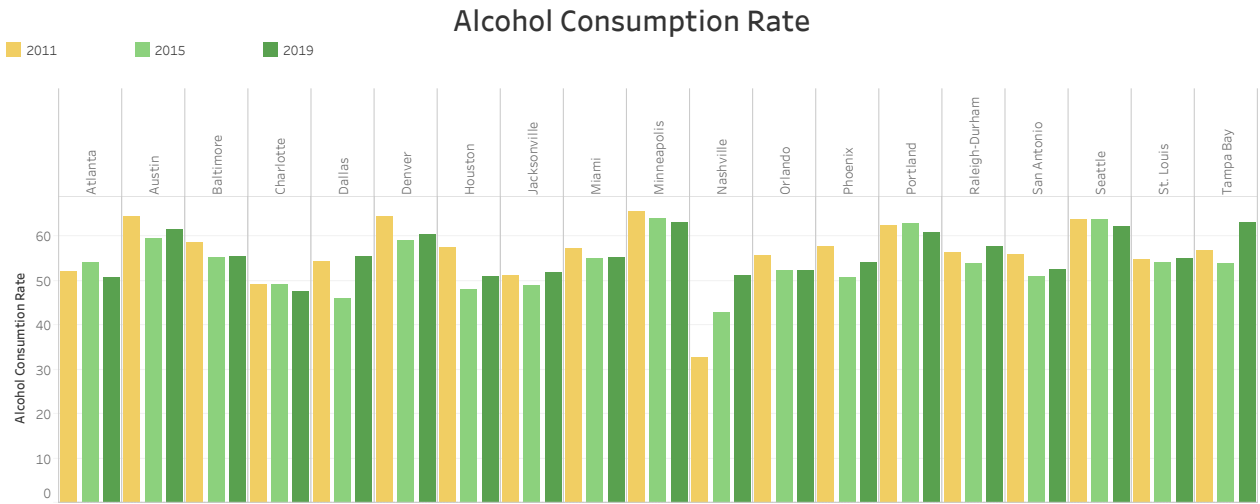


Alcohol Consumption

Insights

- The Tampa Bay region has experienced a significant increase in the alcohol consumption rate from 2018 to 2019.
- The Tampa Bay region had the highest alcohol consumption rate among the comparison MSAs in 2019.
- Charlotte had the lowest alcohol consumption rate among the comparison MSAs in 2019.
- Nashville has experienced steep increase in the alcohol consumption over the years.

About: Percentage of respondents who responded 'Yes' to the question 'Adults who have had at least one drink of alcohol within the past 30 days'.
Source: Behavioral Risk Factor Surveillance System (BRFSS).
***Data not available for the San Diego MSA.**



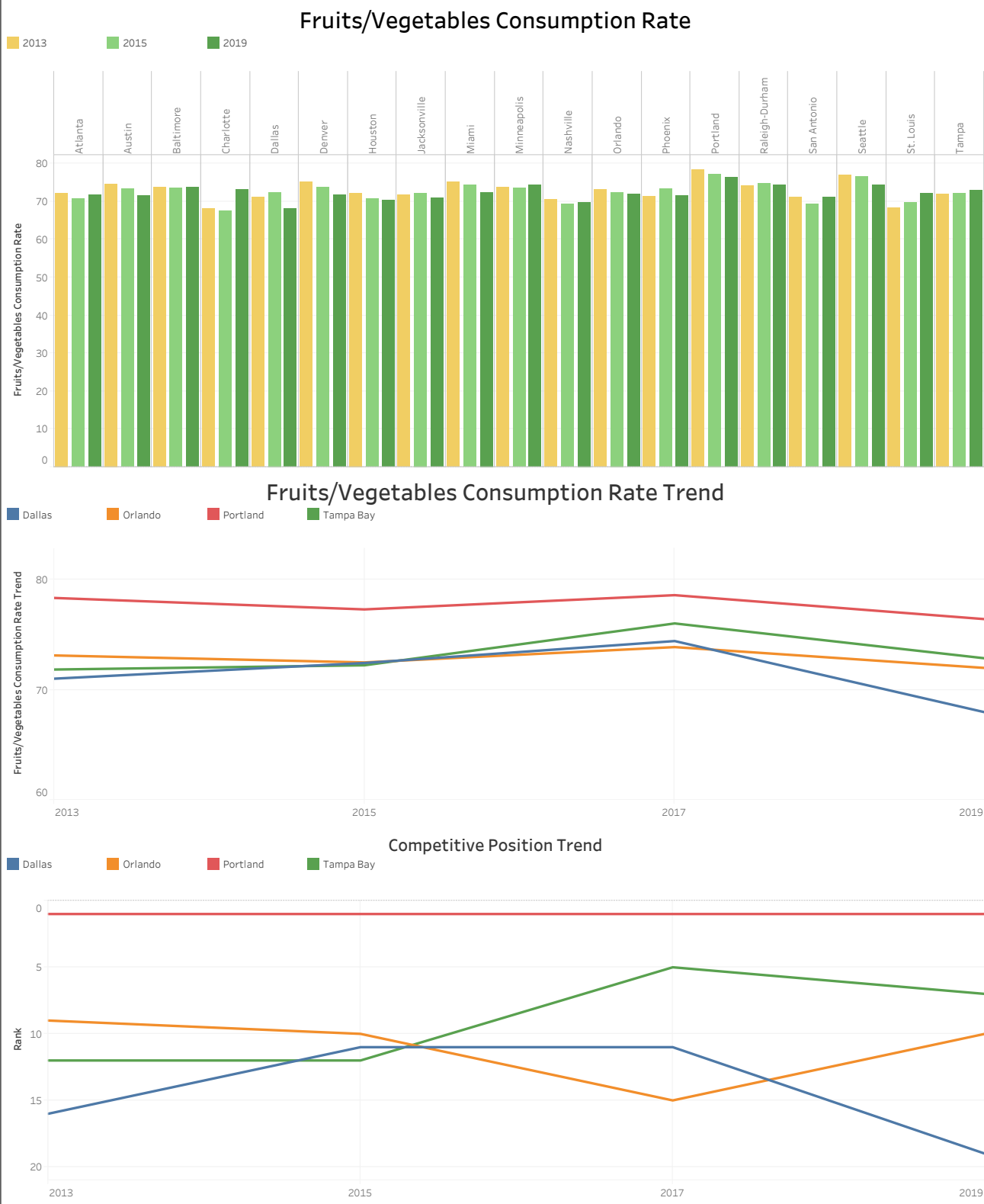
Insights

- Portland is ranked No. 1 in terms of fruits/vegetables consumption in 2019.
- The Tampa Bay MSA has improved its position in terms of fruits/vegetables consumption from rank No. 12 in 2015 to rank No. 7 in 2019.
- Dallas is at the bottom position in terms of fruits/vegetables consumption among the comparison MSAs in 2019.

About: Percentage of surveyed respondents who responded 'One or more times per day' to the question 'Consumed fruits/vegetables less than one time per day?'

Source: Behavioral Risk Factor Surveillance System (BRFSS).

*Data not available for the San Diego MSA.

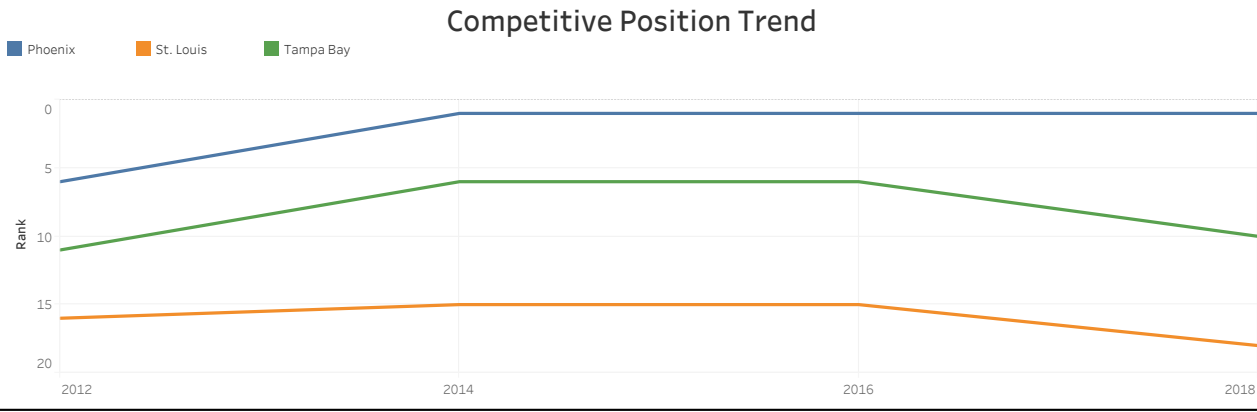
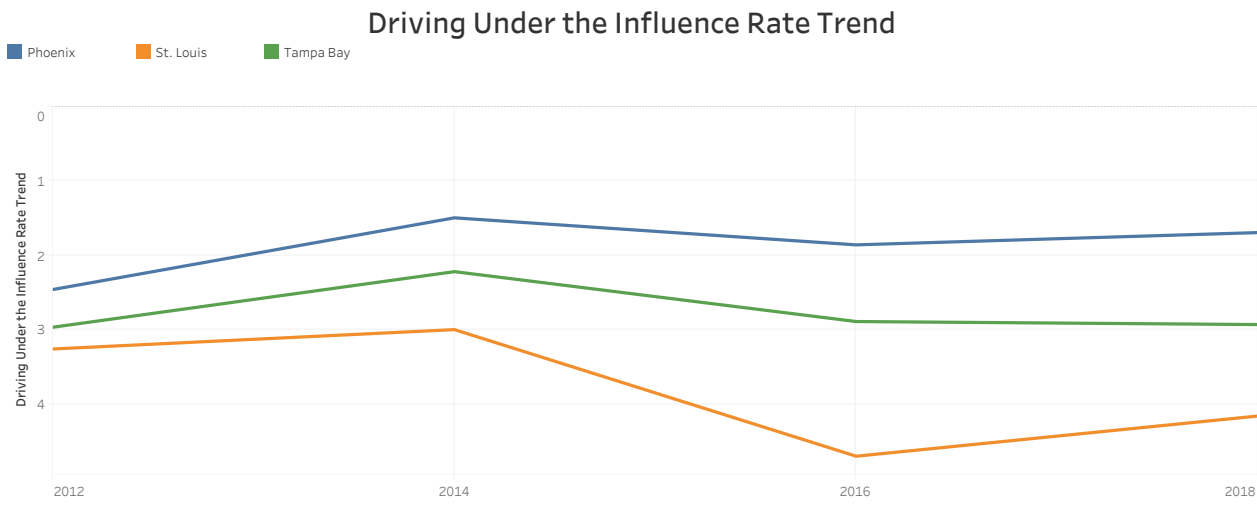
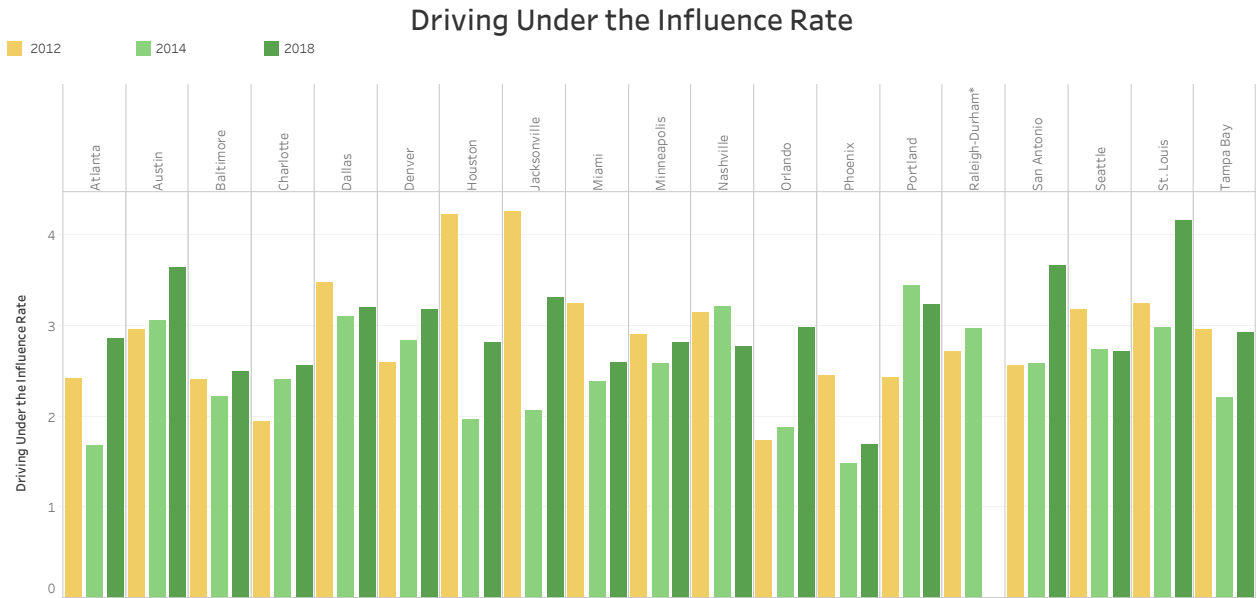


Driving Under the Influence

Insights

- Phoenix is ranked No. 1 among all the comparison MSAs.
- St. Louis is at the bottom position among all the comparison MSAs.
- The Tampa Bay region has seen an increase in the driving under the influence rate since 2014.

About: Percentage of surveyed respondents who responded 'Have driven after having too much to drink' to the question 'Respondents who have reported having driven after drinking too much?'
Source: Behavioral Risk Factor Surveillance System (BRFSS).
 *Data not available for San Diego MSA (for all years) and Raleigh-Durham MSA (for the year 2018).



Physical Activity Rate

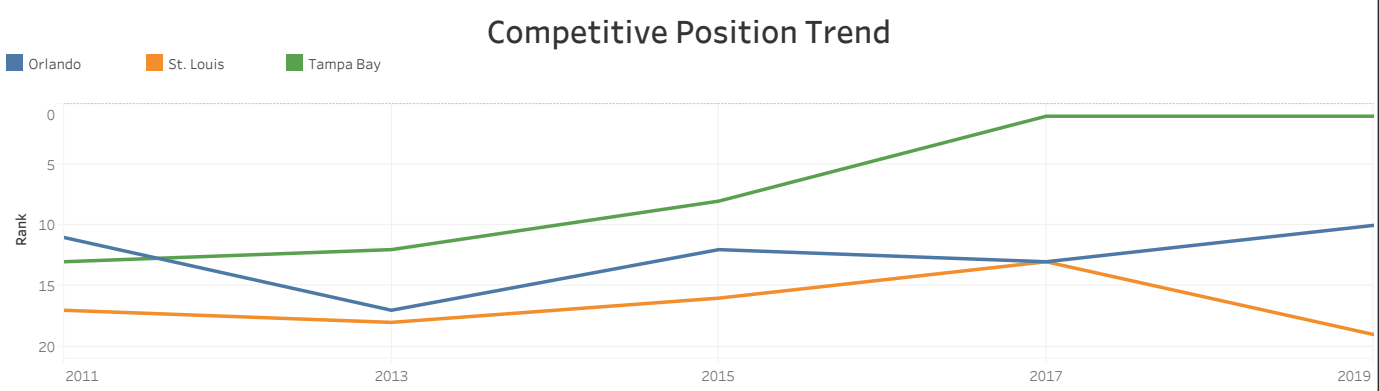
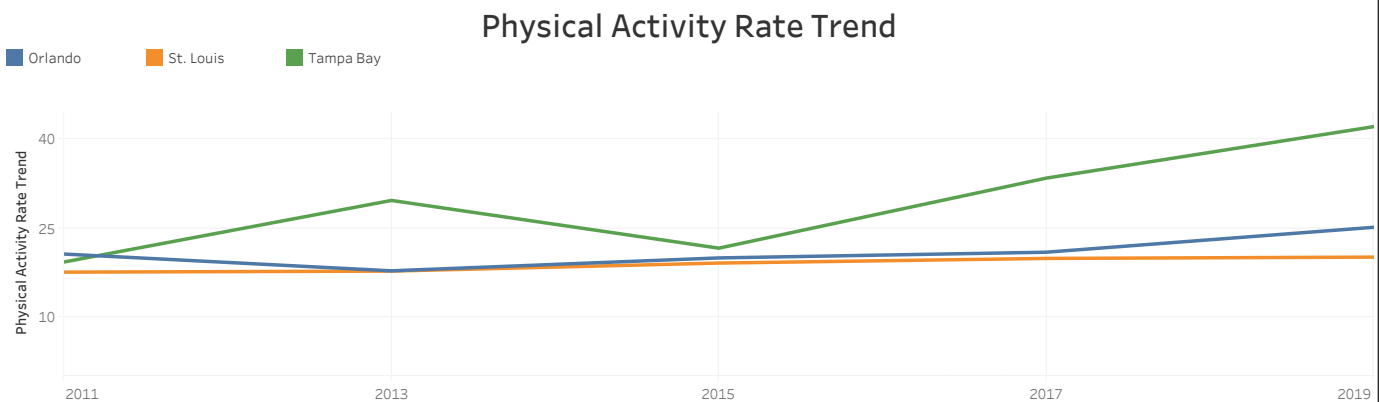
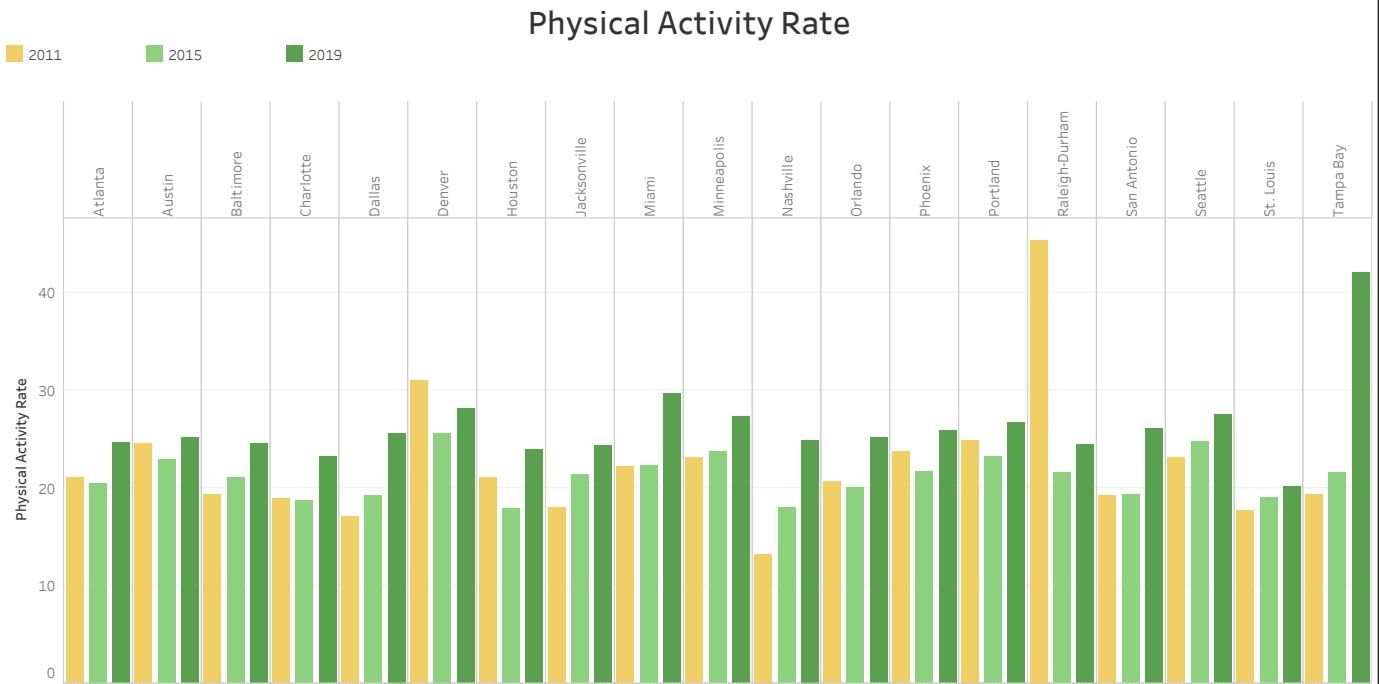
Insights

- The Tampa Bay MSA is ranked No. 1 in physical activity rate in 2019.
- The Tampa Bay MSA has improved its rank from No. 13 in 2011 to No. 1 in 2019.
- St. Louis is in the last position among all the MSAs.

About: Percentage of surveyed respondents who responded 'Yes' to the question 'Participated in Aerobic and Muscle Strengthening exercises?'

Source: Behavioral Risk Factor Surveillance System (BRFSS).

*Data not available for the San Diego MSA.



Mental Health and Addiction 211 Calls

(Per 1,000 Individuals)

Insights

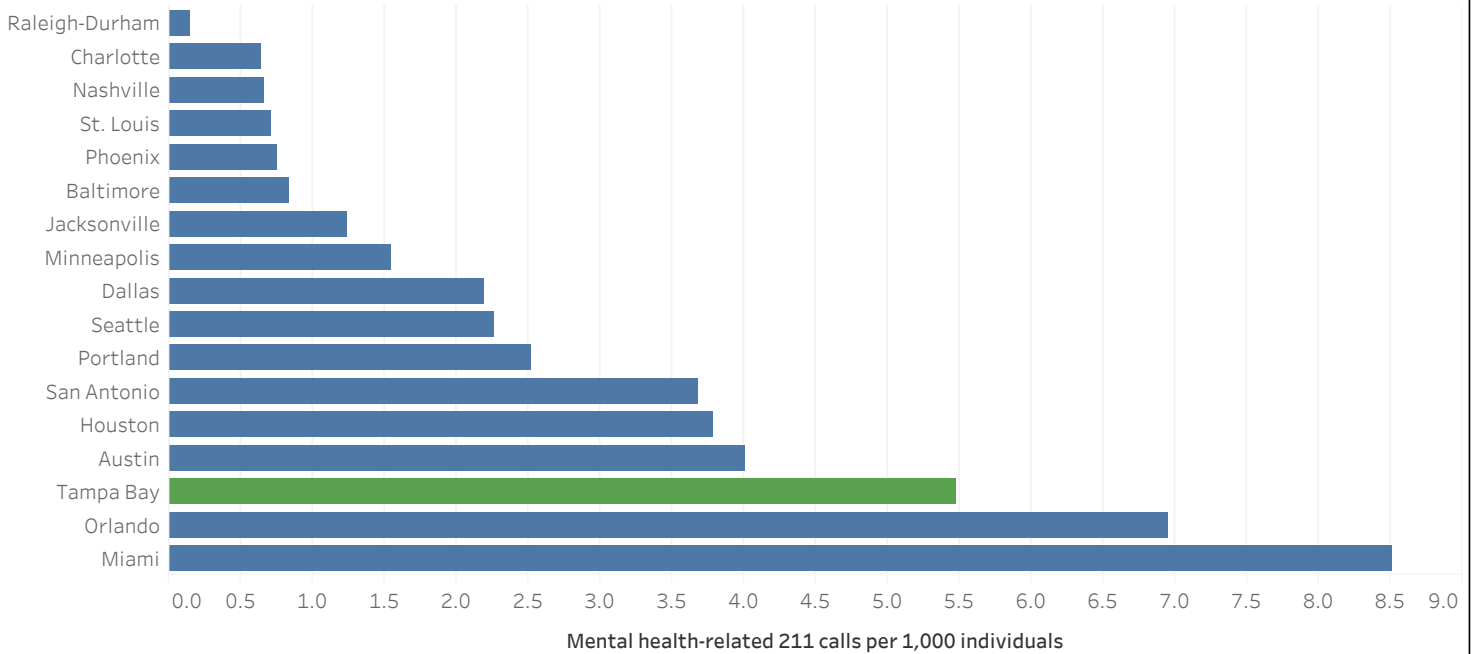
- Miami registered the highest number of mental health and addiction-related 211 calls per 1,000 individuals among the comparison MSAs.
- The Tampa Bay region registered the third highest number of mental health and addiction related 211 calls per 1,000 individuals among the comparison MSAs.

About: Mental health and addiction-related 211 calls per thousand individuals. Data collection ranged from October 2020 to October 2021.

Source: 211counts.org.

*Data not available for the Atlanta, Denver, and San Diego MSAs.

Mental Health and addiction 211 calls per capita



Key Insights on Public Health Status

The Tampa Bay MSA's performance in terms of the cardiovascular disease prevalence rate and the depression prevalence rate has been poor compared to the other MSAs. The alcohol consumption in Tampa Bay region has increased over the years while physical activity in the Tampa Bay region has increased significantly over the years. The Tampa Bay MSA is in the No. 1 position among the comparison MSAs as of 2019 in terms of physical activity.

COVID-19 Related Measures

In this subsection, researchers analyzed COVID-19 related measures such as the COVID-19 ICU bed utilization rate and the vaccination rates. They also analyzed Google search volume on the COVID-19 disease concern and the searches for vaccinations.

To understand the COVID-19 concern, they analyzed Google search volume for the search terms such as “Do I have COVID,” “COVID symptoms,” “COVID cases,” “delta variant,” and “coronavirus.” To understand the public interest in vaccinations, researchers analyzed Google search volume for the search terms such as “vaccine finder,” “COVID vaccine near me,” “COVID vaccine comparison,” “COVID booster shot,” and “COVID vaccine availability.”

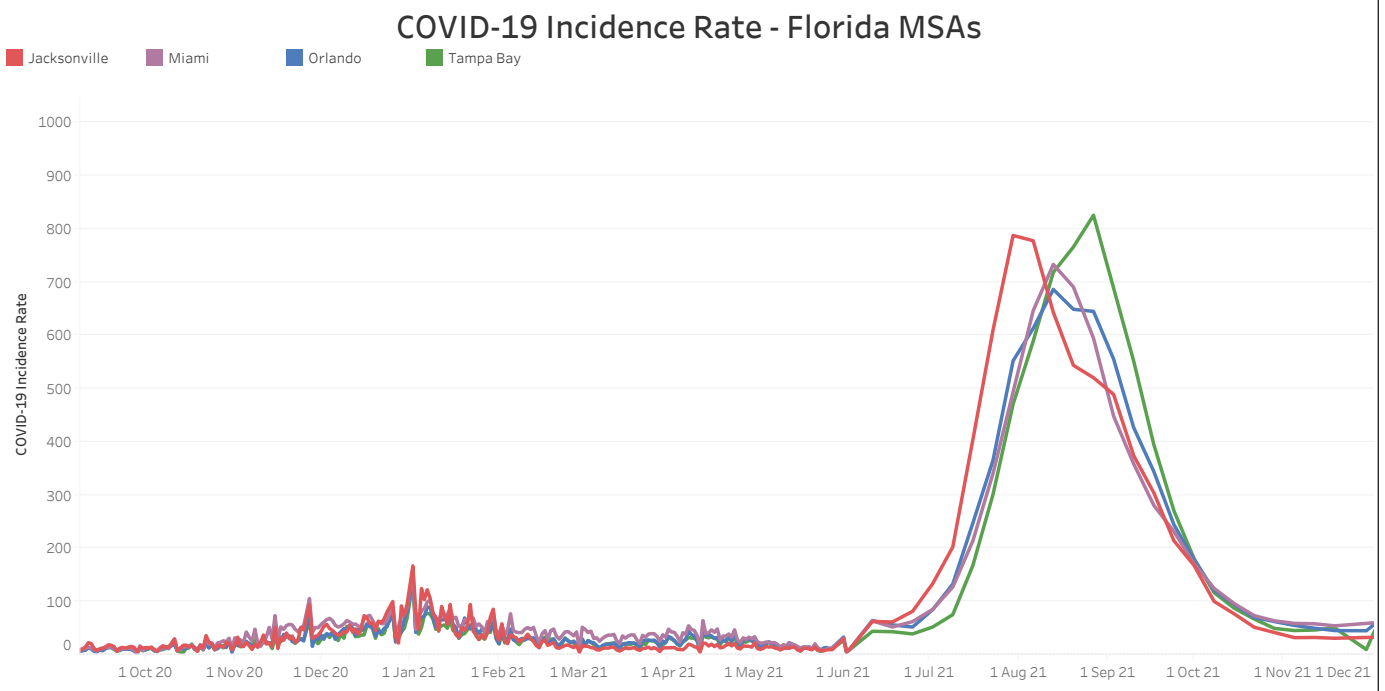
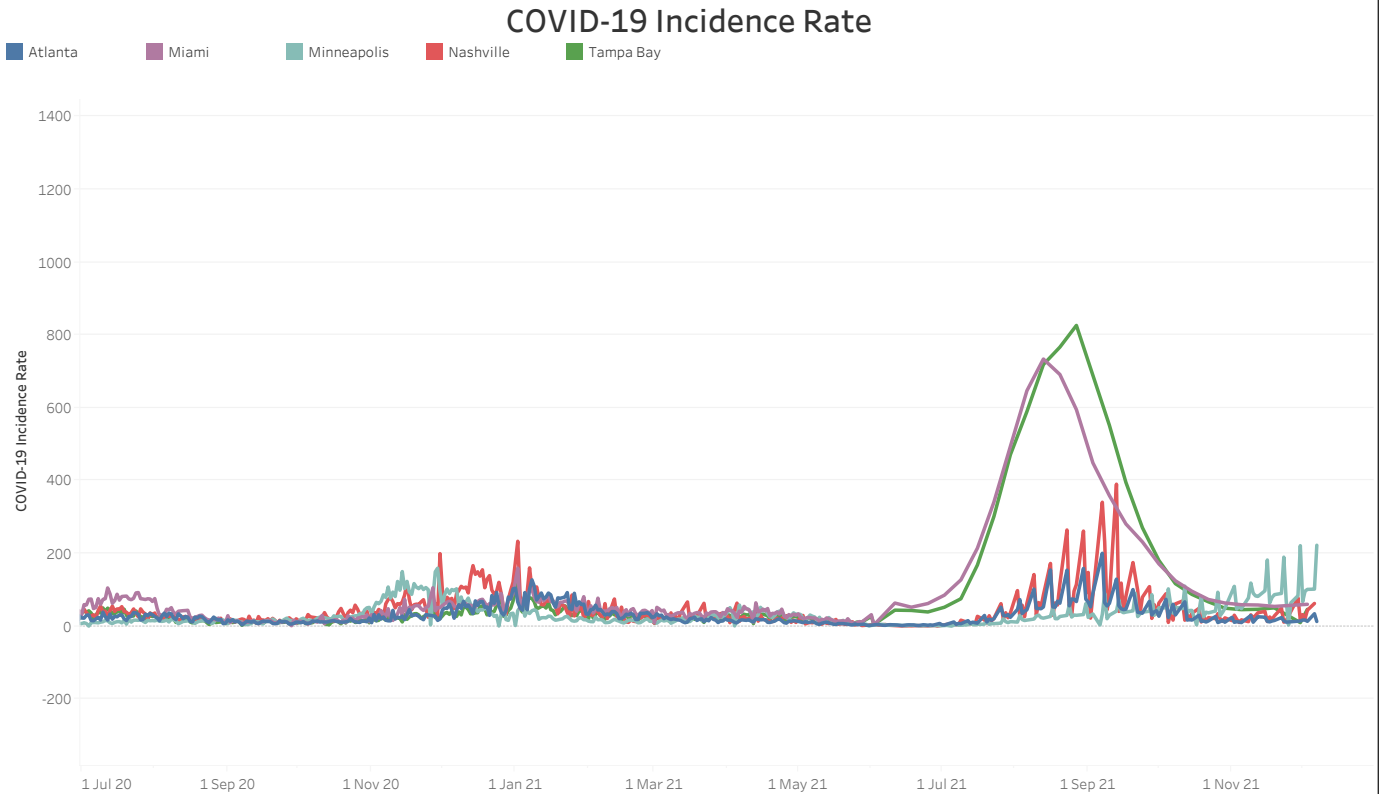
The researchers track the vaccination rates in the comparison communities. To this end, they tracked full vaccination rate and vaccinated rate: at least one dose. The researchers consider an individual to be fully vaccinated if the individual has received the second dose in a 2-dose series such as the Pfizer or Moderna vaccines, or a single-dose of Johnson & Johnson’s Janssen vaccine. To track the vaccination rate: at least one dose, the researchers consider the number of individuals who have received at least one dose of COVID-19 vaccine, including those who have received one dose of the single-shot Johnson & Johnson’s Janssen vaccine.

COVID-19 Incidence Rate

Insights

- The Tampa Bay MSA experienced the highest COVID-19 incidence rate among all the MSAs in August 2021.
- All Florida MSAs experienced a steep increase in incidence rates in August 2021.

About: The weekly average of number of COVID-19 cases reported per 100,000 residents.
Source: CDC, covidactnow.org.

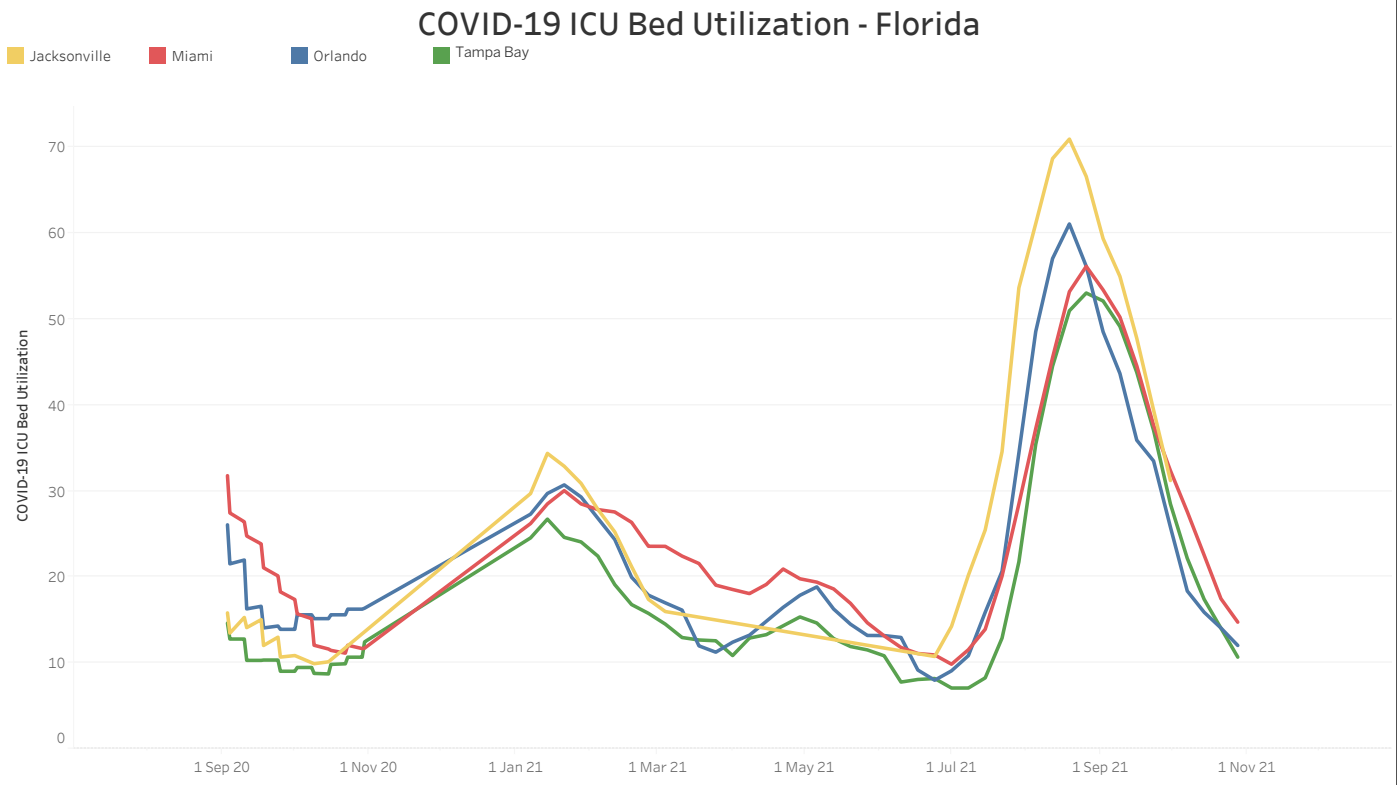
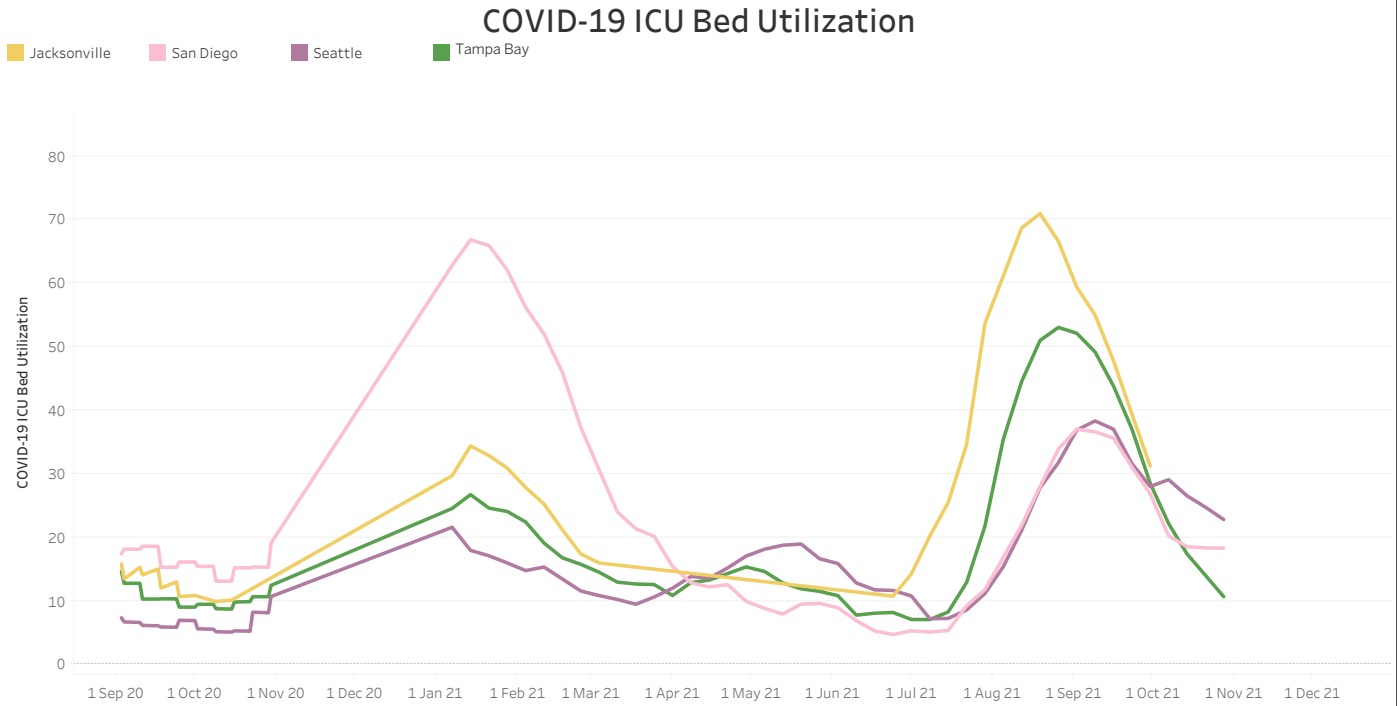


COVID-19 ICU Bed Utilization

Insights

- Most MSAs saw a steep rise in COVID-19 ICU bed utilization in the months of January and August 2021.
- The Tampa Bay MSA has the least COVID-19 ICU bed utilization among the Florida MSAs.
- Jacksonville saw the lowest rise COVID-19 ICU bed utilization followed by Orlando in August 2021.

About: Percentage of ICU beds occupied by the COVID-19 patients out of total occupied ICU beds.
Source: CDC, covidactnow.org.

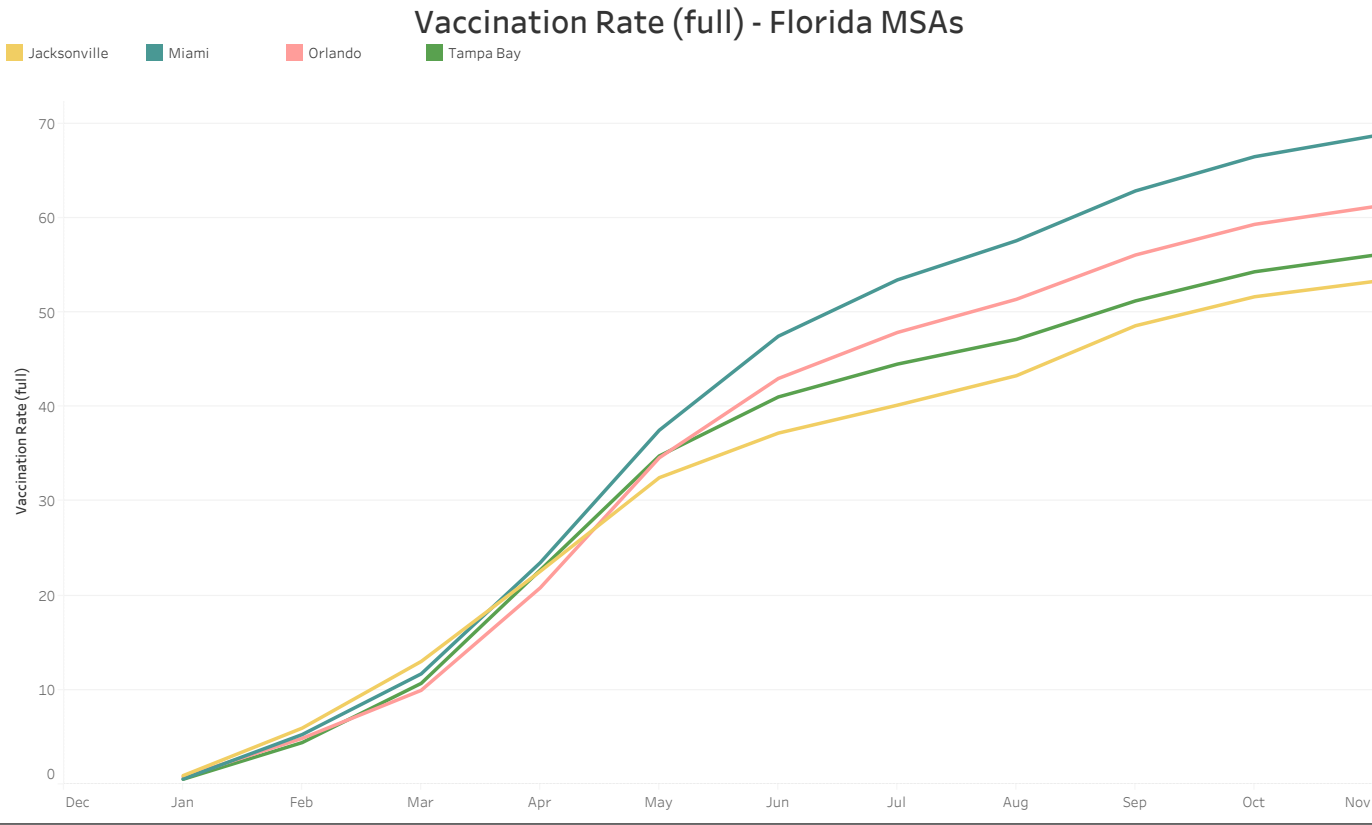
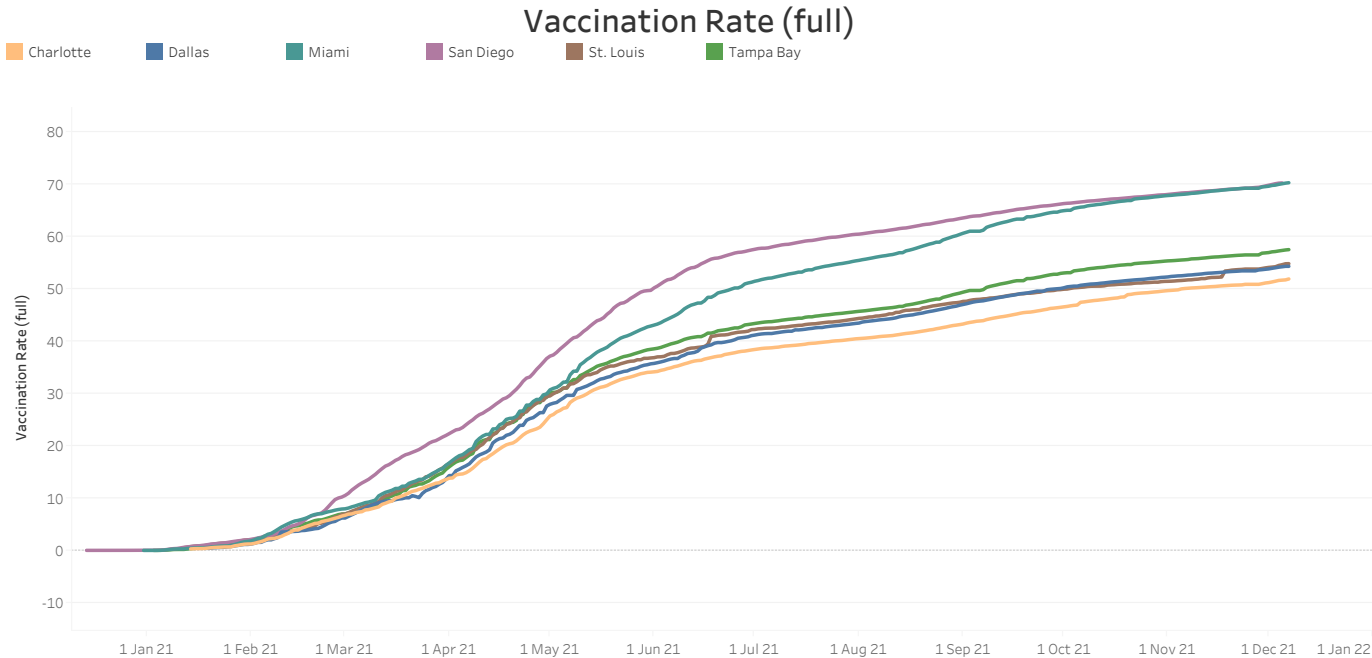


Vaccination Rate (Full)

Insights

- The Tampa Bay region is standing in third position among Florida MSAs in terms of vaccination rate (full).
- Miami has achieved the highest vaccination rate (full) among the comparison MSAs.
- Charlotte has achieved the lowest vaccination rate (full) among the comparison MSAs.

About: Percentage of population (5 years old or above) who are fully vaccinated.
 Source: CDC, covidactnow.org.

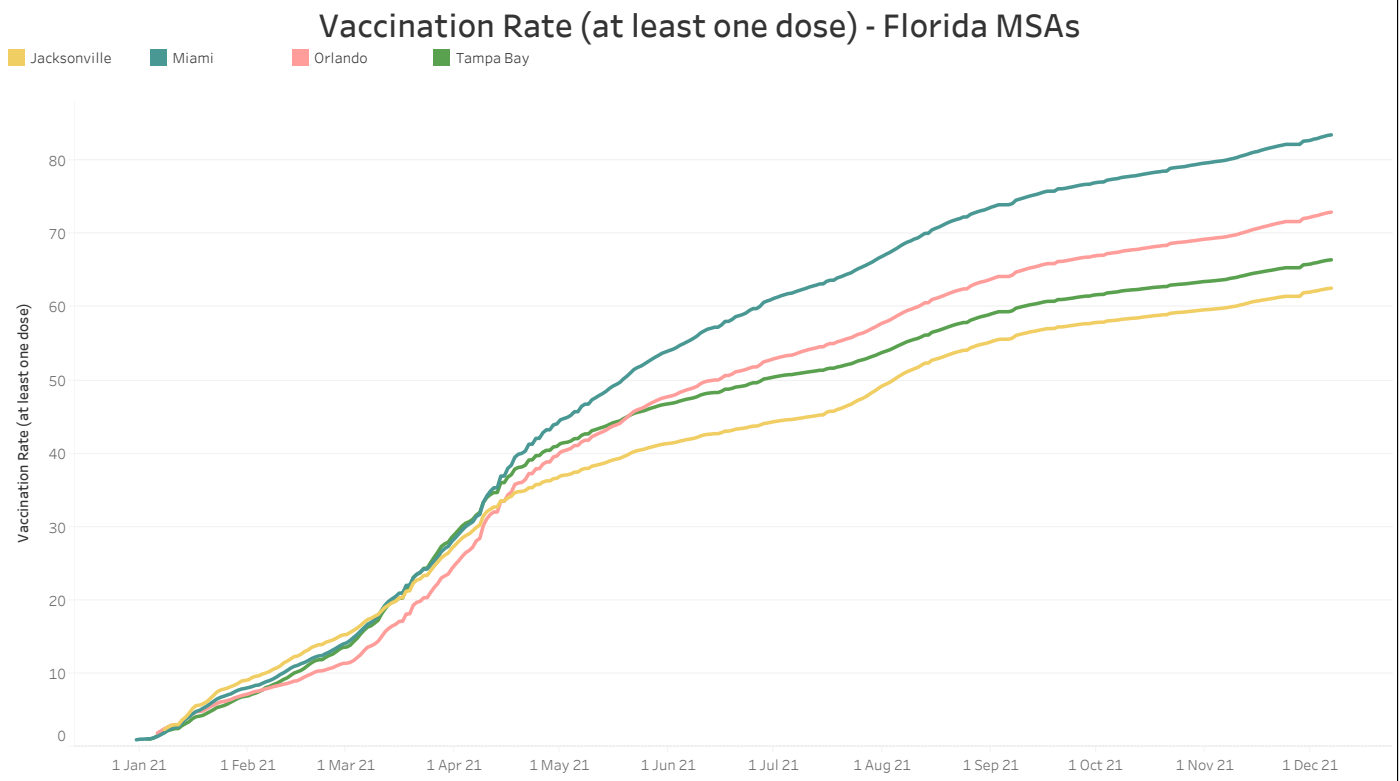
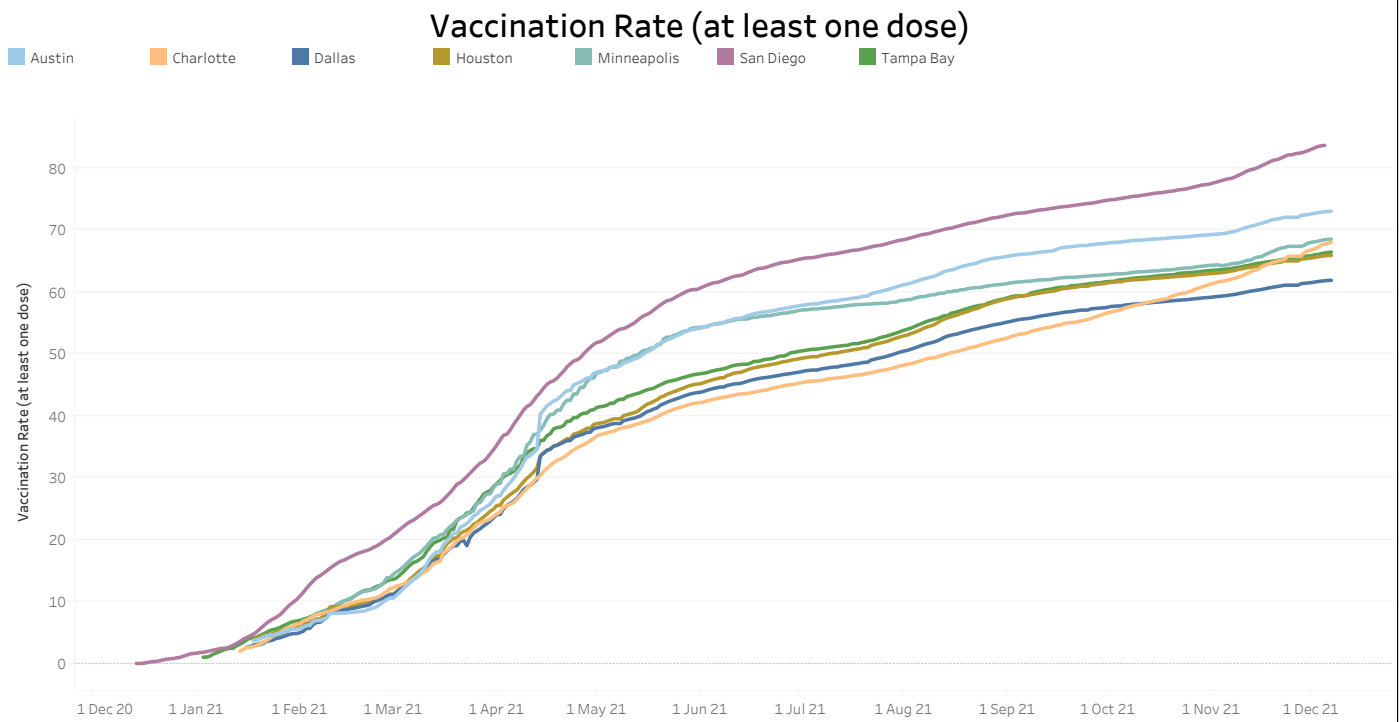


Vaccination Rate (At Least One Dose)

Insights

- The Tampa Bay MSA is standing in third position among the Florida MSAs in terms of vaccination rate (at least one dose).
- San Diego has achieved the highest vaccination rate (at least one dose) among the comparison MSAs.
- Among the Florida MSAs, Miami has achieved the highest vaccination rate (at least one dose).

About: Percentage of population (5 years old or above) who received at least one dose.
Source: CDC, covidactnow.org.

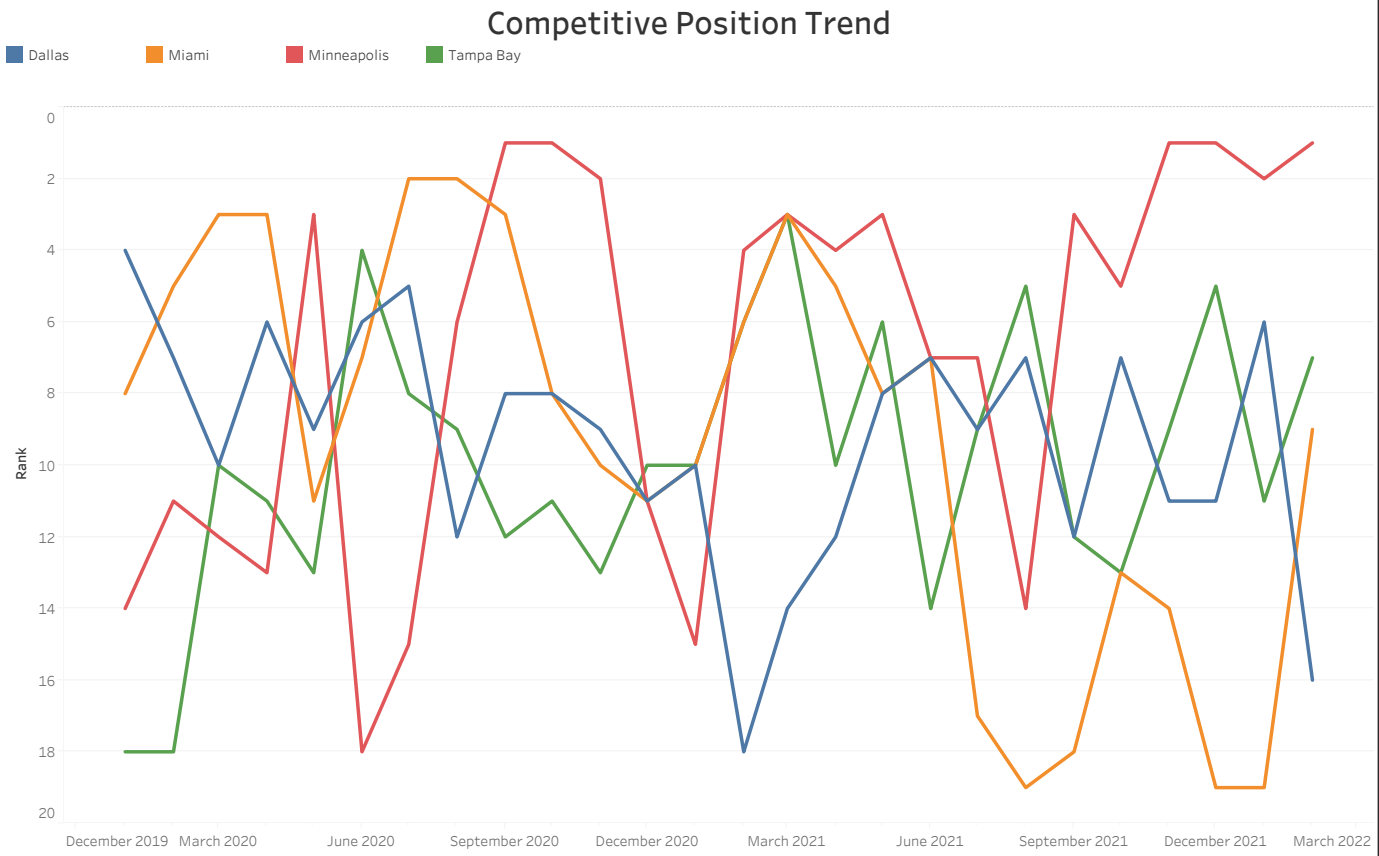
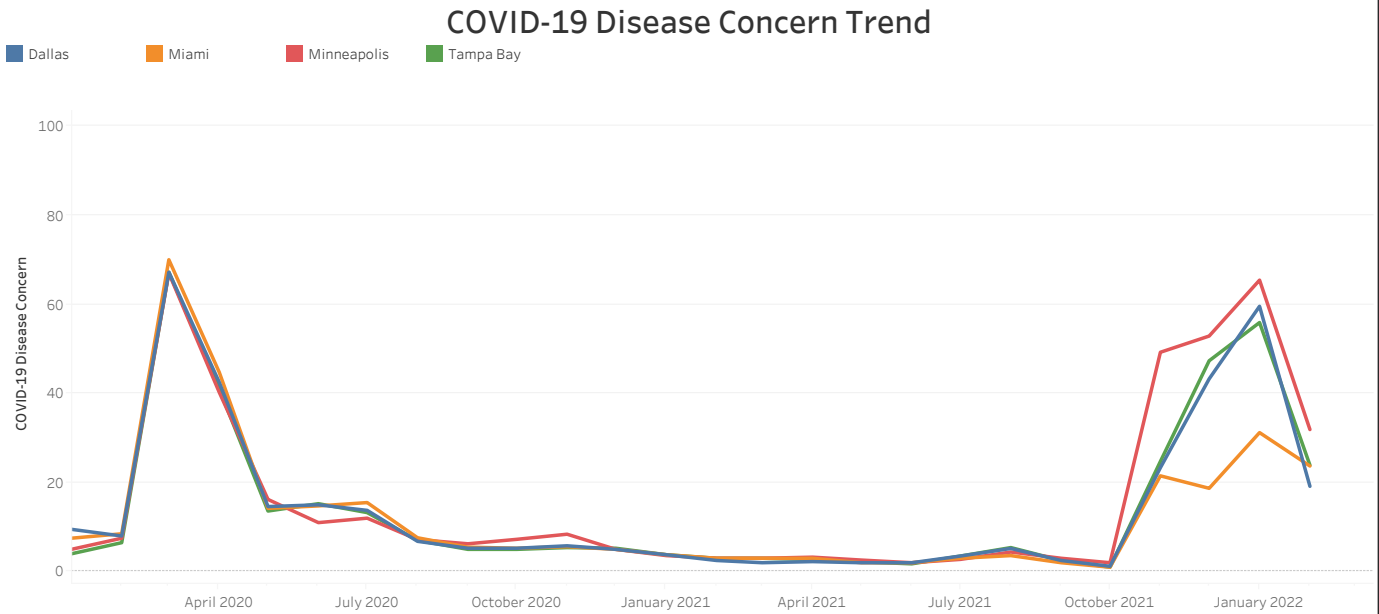


COVID-19 Disease Concern

Insights

- The COVID-19 disease concern peaked during the months of March 2020 and January 2022 for almost all MSAs including the Tampa Bay MSA.

About: Google Trends based proxy for disease concern during the COVID-19 pandemic.
Source: Google Trends



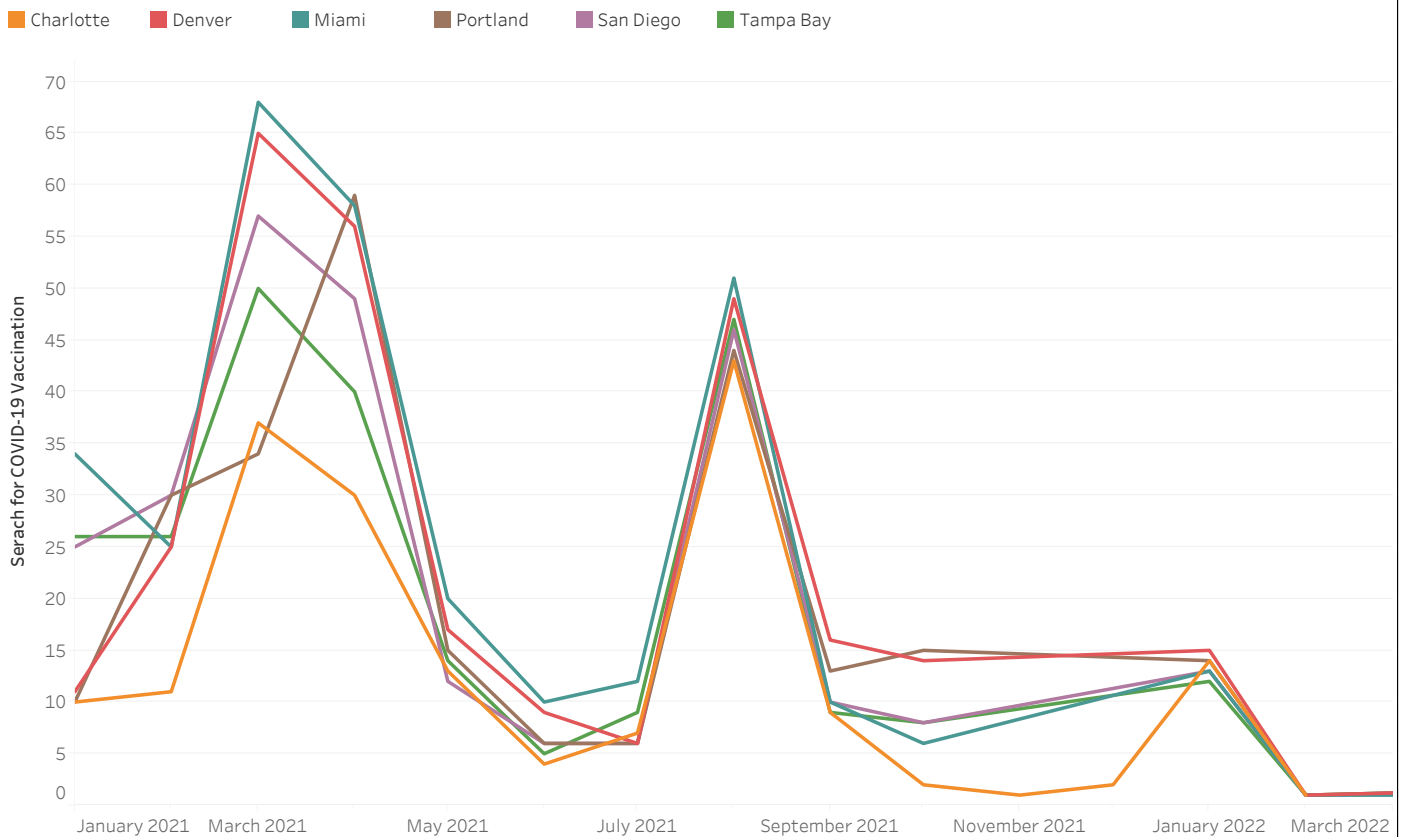
Search for COVID-19 Vaccination

Insights

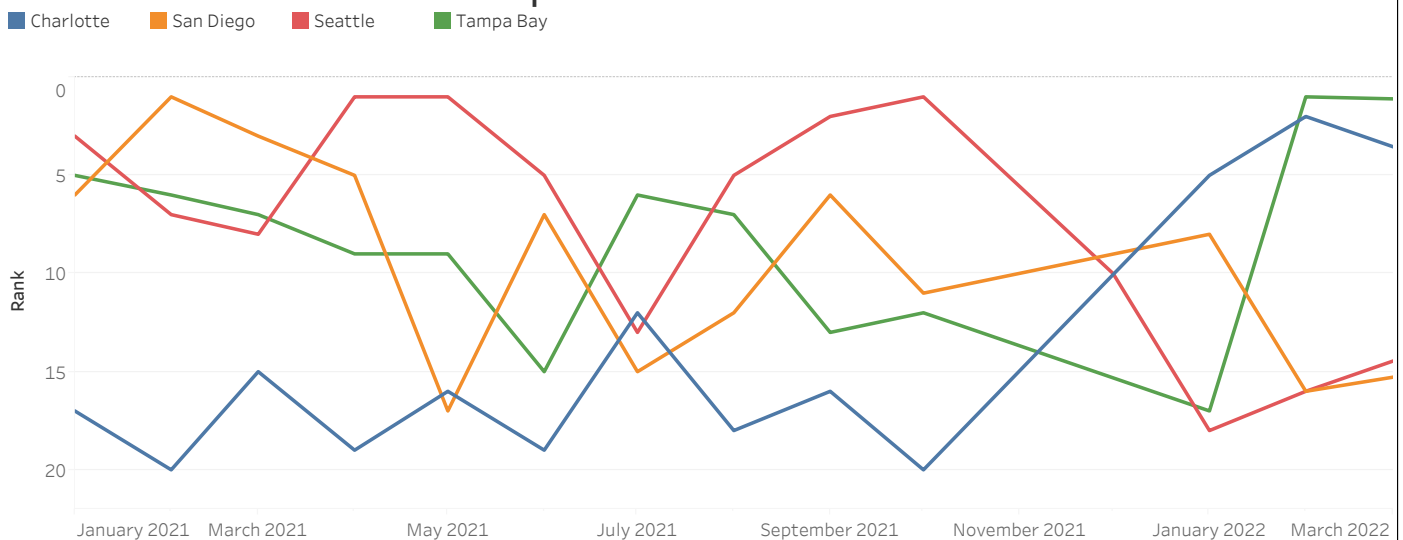
- The search for COVID-19 vaccination for all the MSAs, including the Tampa Bay MSA, peaked in the months of March 2021, August 2021 and January 2022.
- In terms of competitive position, the Tampa Bay MSA rose to the first position after January 2022.

About: Google Trends based proxy for COVID-19 vaccination.
Source: Google Trends.

Search for COVID-19 Vaccination



Competitive Position Trend



Key Insights on COVID-19 Related Measures

The Tampa Bay MSA, along with other Florida MSAs, experienced a huge increase in the COVID-19 incidence rate in August 2021. The Tampa Bay MSA registered the highest COVID-19 incidence rate among all comparison MSAs in August 2021.

The COVID-19 ICU bed utilization rate peaked for all the MSAs in the months of January and September 2021. The Tampa Bay region's COVID-19 ICU bed utilization rate was the lowest among Florida MSAs. Jacksonville experienced the highest COVID-19 ICU bed utilization rate among all the comparison MSAs at the beginning of September 2021.

In terms of vaccination rates, The Tampa Bay region ranks third among the four Florida MSAs.

Access to Health Care

Access to health care is crucial for the physical and mental well-being of any community. In this aspect, affordability of health care is as crucial as availability of health care services. Researchers analyzed the availability of health care through indicators such as the population-to-primary care providers ratio and the population-to-mental health providers ratio. Researchers analyzed the affordability of health care using the access to affordable health care rate indicator.



Population-to-Primary-Care Provider Ratio

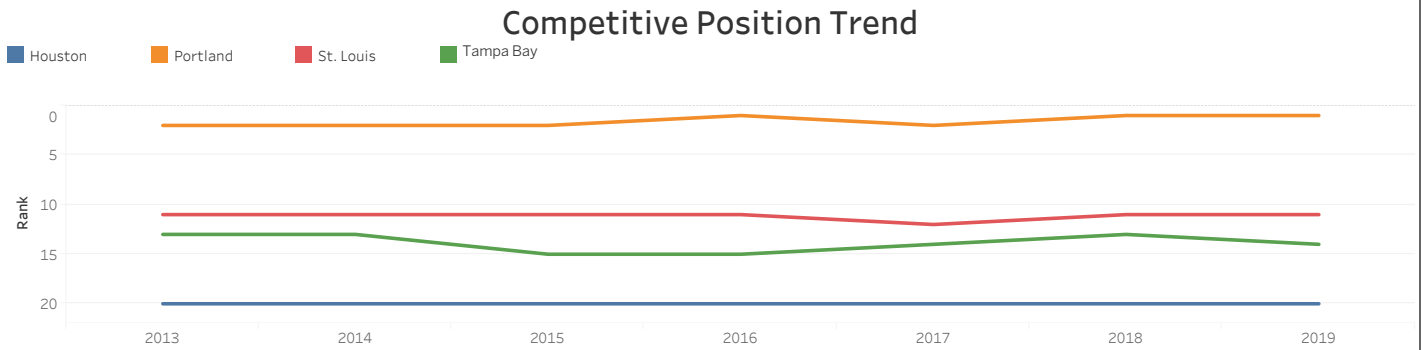
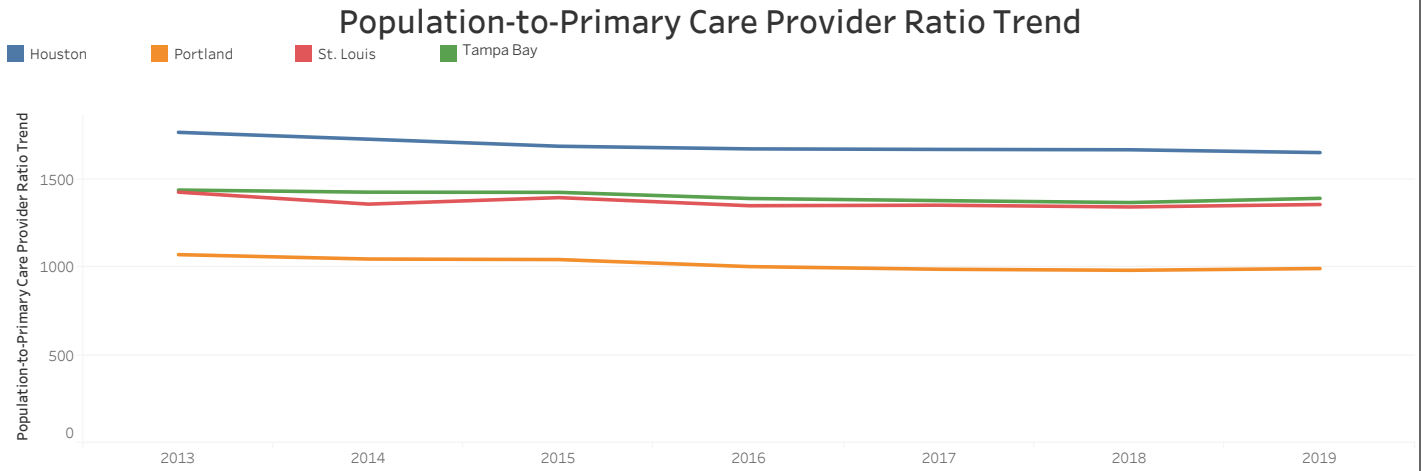
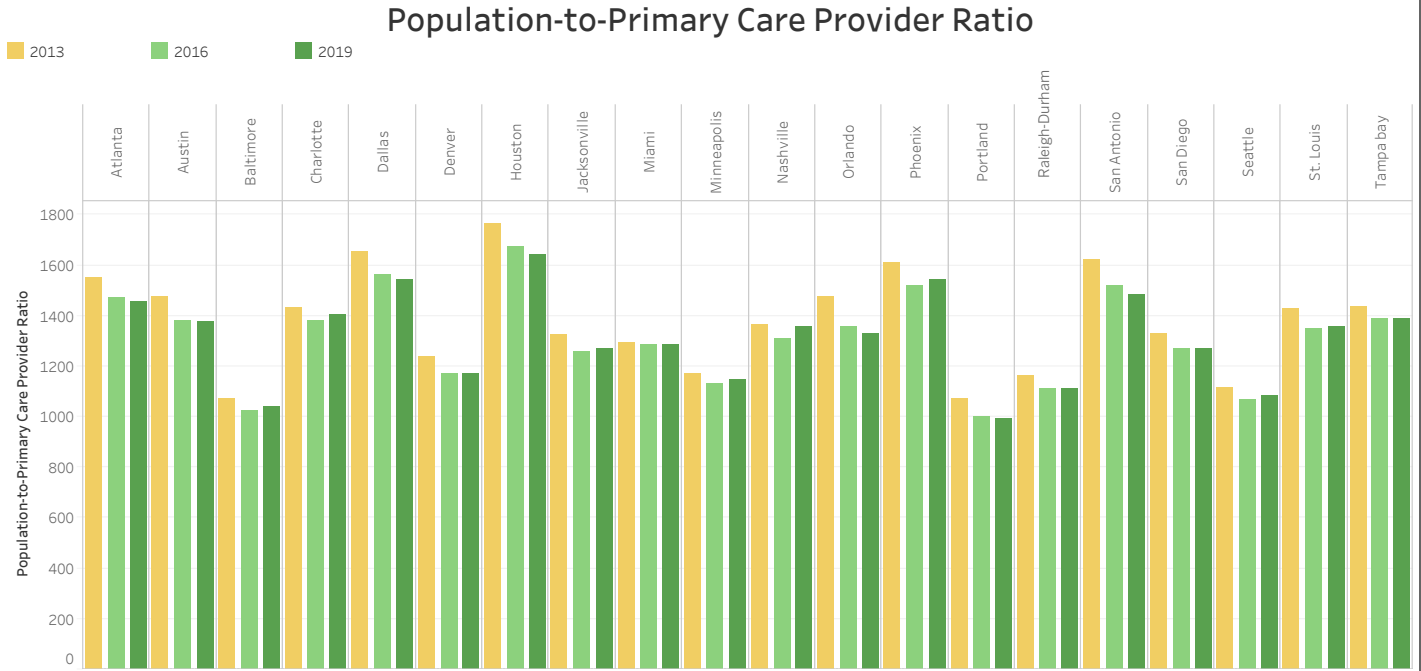
Insights

- The population-to-primary care provider ratio has been improving for all the MSAs, including the Tampa Bay MSA, over the year.
- Portland topped the list in terms of population-to-primary care provider ratio in 2019.
- Houston ranked in the last position in 2019 among the comparison MSAs.
- The Tampa Bay MSA has consistently been in the lower half of the comparison MSAs.

About: The population-to-primary-care-provider- ratio represents the number of individuals served by one primary care physician in a geographic area.

Source: countyhealthrankings.org

*Data not available for the San Diego MSA.

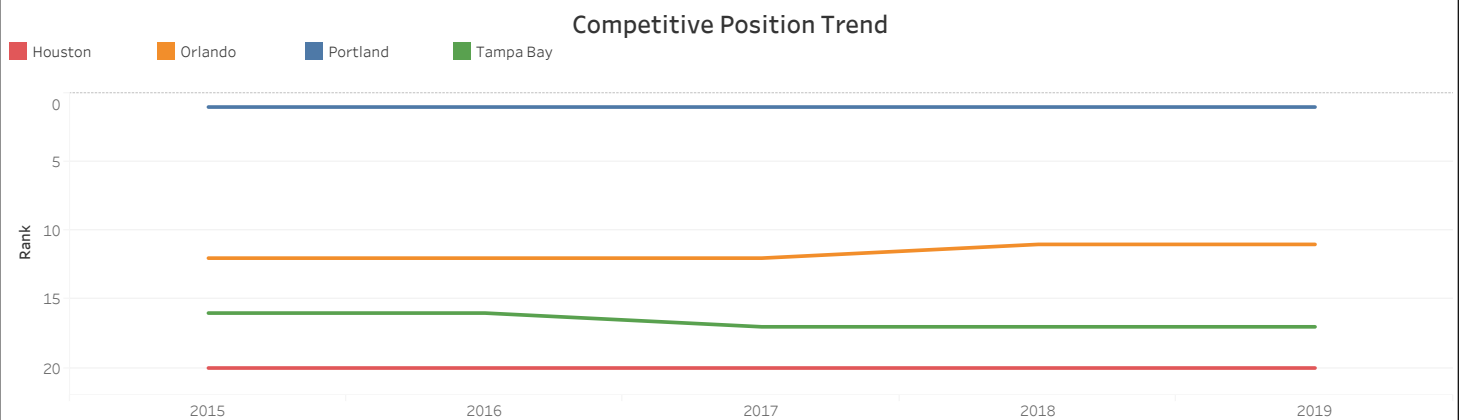
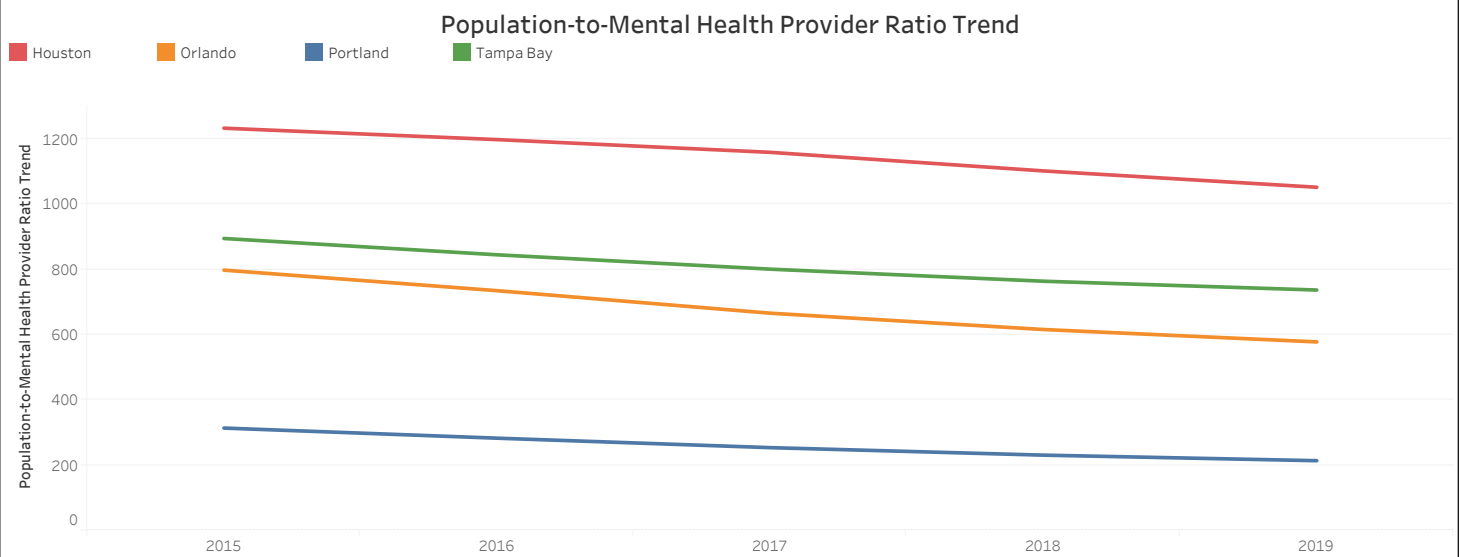
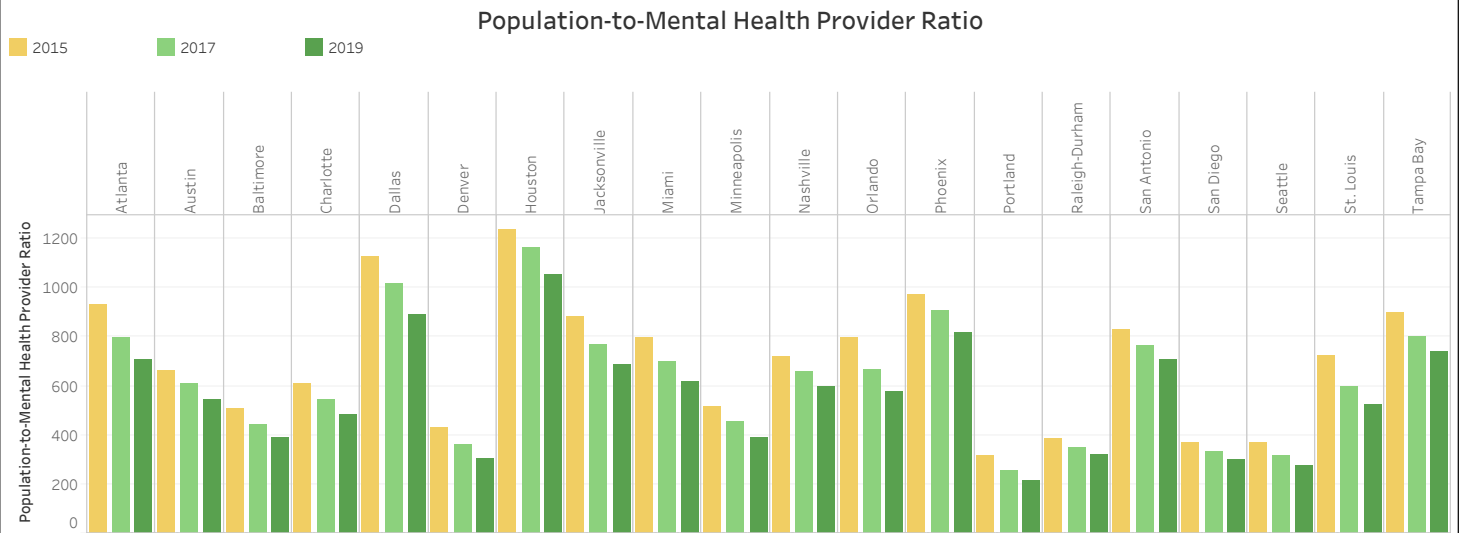


Population-to-Mental-Health Provider Ratio

Insights

- The population-to-mental health provider ratio has been improving for all the MSAs, including the Tampa Bay MSA, over the years.
- Portland has topped the list in terms of population-to-mental health provider ratio in 2019.
- Houston is at the bottom position in 2019 among the comparison MSAs.
- Tampa Bay's competitive position has slightly declined from No. 16 in 2015 to No. 17 in 2019.

About: The population-to-mental health care provider ratio represents the number of individuals served by one mental health provider in a geographic area.
 Source: countyhealthrankings.org.
 *Data not available for the San Diego MSA.



Access to Affordable Health Care

Insights

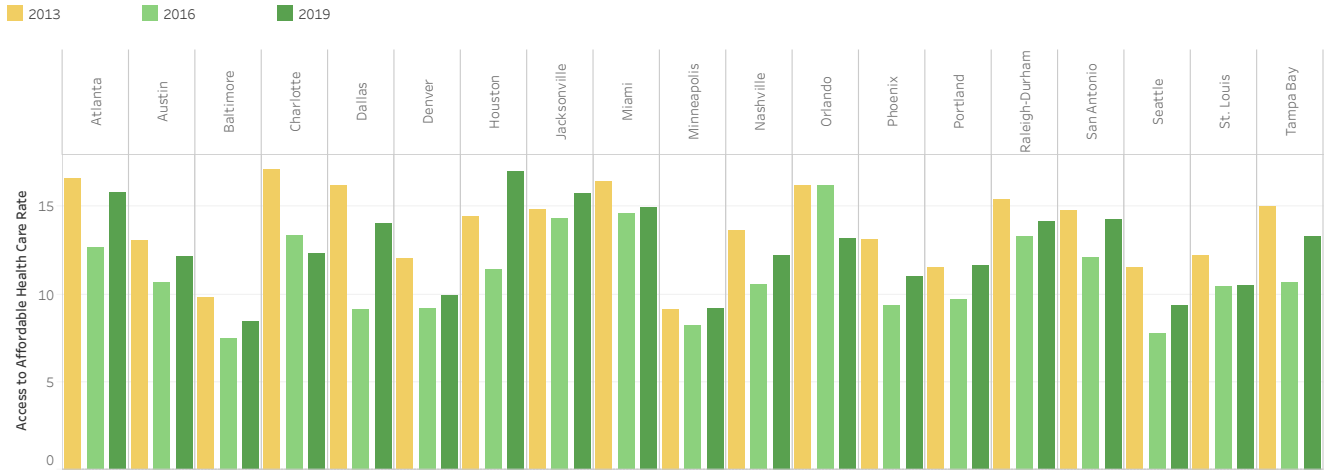
- Baltimore is consistently ranked at No.1 over the years for the least amount of residents with access to affordable health care.
- The Tampa Bay region has seen improvement in access to affordable health care rate since 2017.
- Charlotte experienced significant improvement in the ranking since 2015.

About: Measures access to affordable health care in terms of percentage of surveyed respondent who responded 'Yes' to the question 'Was there a time in the past 12 months when you needed to see a doctor but could not because of cost?'

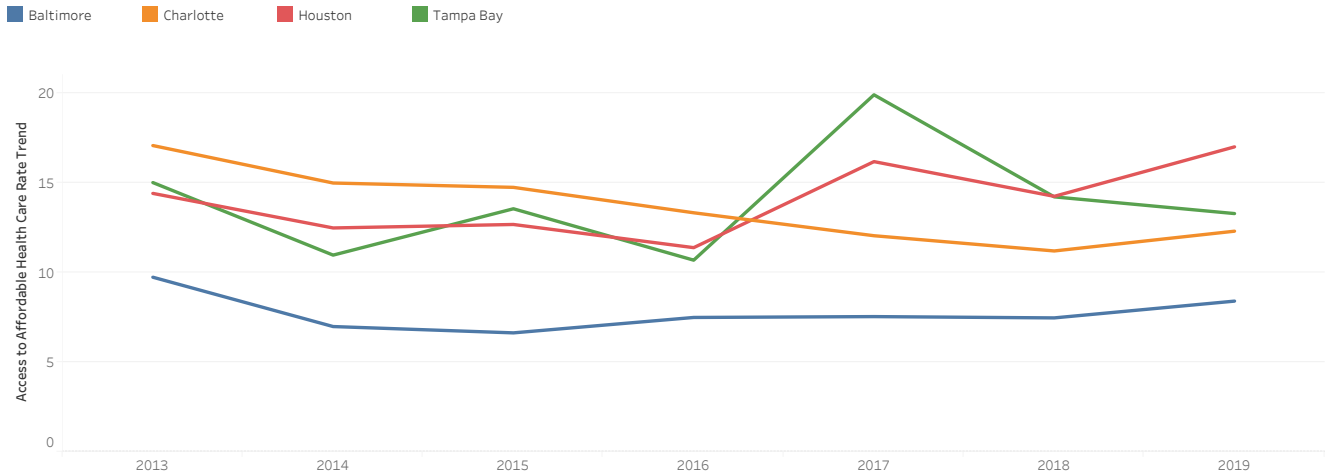
Source: Behavioral Risk Factor Surveillance System (BRFSS).

*Data not available for the San Diego MSA.

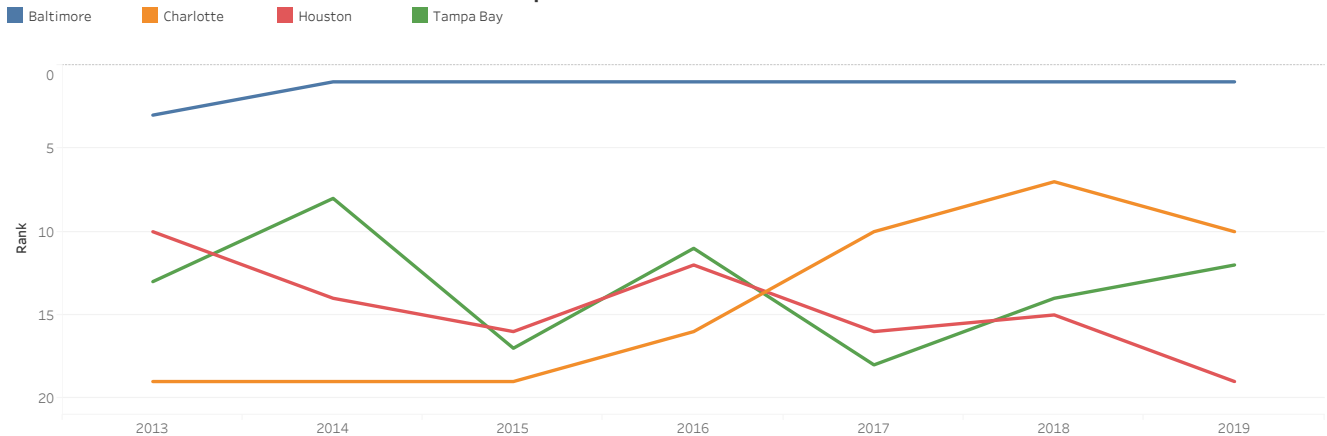
Access to Affordable Health Care Rate



Access to Affordable Health Care Rate Trend



Competitive Position Trend



Key Insights on Access to Health Care

The Tampa Bay MSA has performed poorly on all the indicators related to access to health care. In terms of availability of health care, the Tampa Bay MSA is standing in the last five positions with a high population-to-mental health provider ratio and a high population-to-primary health provider ratio. The Tampa Bay MSA also performed poorly in terms access to affordable health care rate.



Government Spending on Health Care

In this subsection, researchers analyzed health care spending by the governments in each MSA. They analyzed the indicators such as Health Resources and Services Administration grants per capita and Medicare spending per capita.



HRSA Grants per Capita

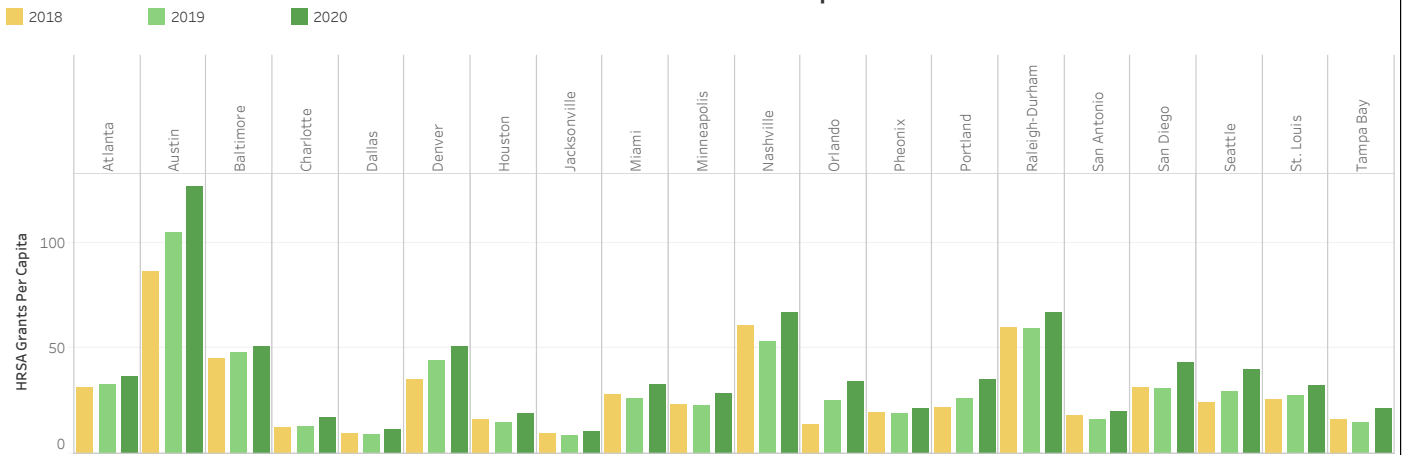
(Health Resources and Services Administration)

Insights

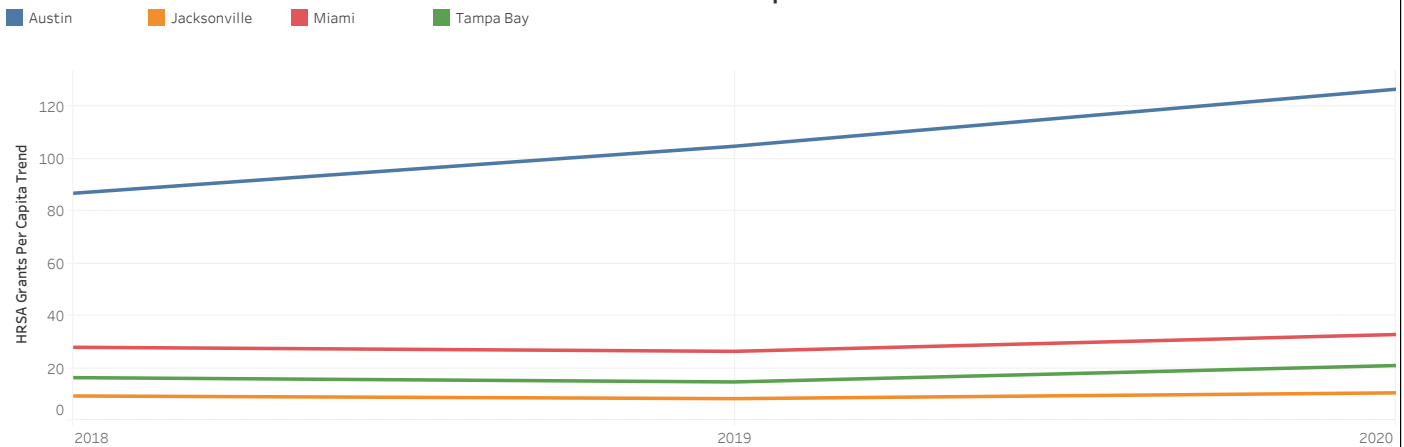
- Austin has consistently been in the first position in terms of HRSA grants per capita among all the MSAs.
- Jacksonville has consistently been at rock bottom in terms of HRSA grants per capita among all the MSAs.
- The Tampa Bay region stood among the bottom five MSAs in terms of HRSA grants per capita over the years.

About: Measures grants awarded by HRSA under various programs like health workforce, HIV/AIDS, maternal and child health, rural health, health care systems, primary health care, special initiatives and other programs.
Source: U.S. Department of Health and Human Services.

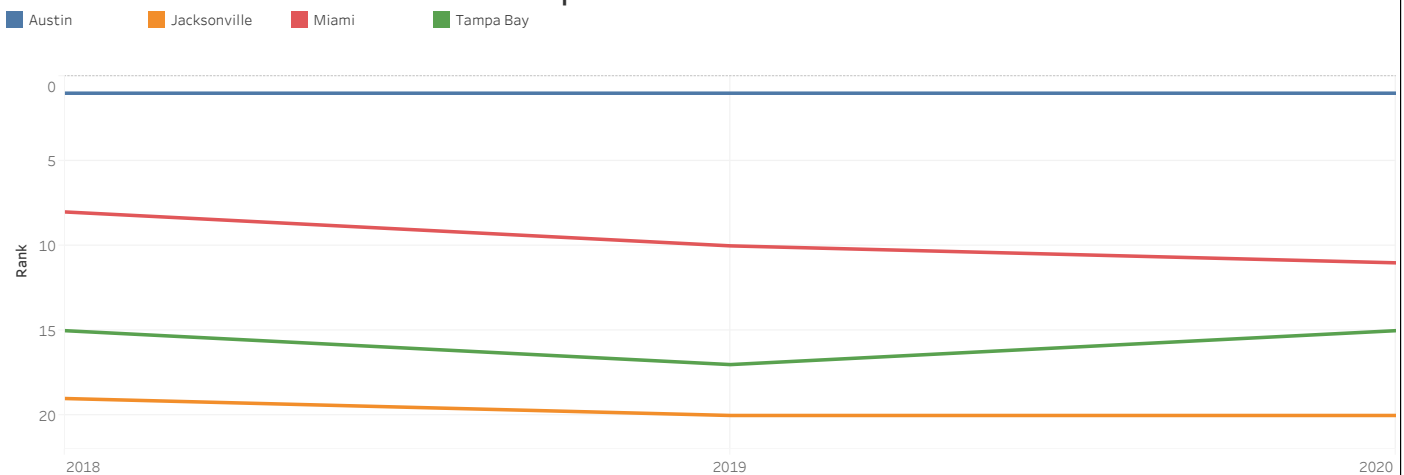
HRSA Grants Per Capita



HRSA Grants Per Capita Trend



Competitive Position Trend

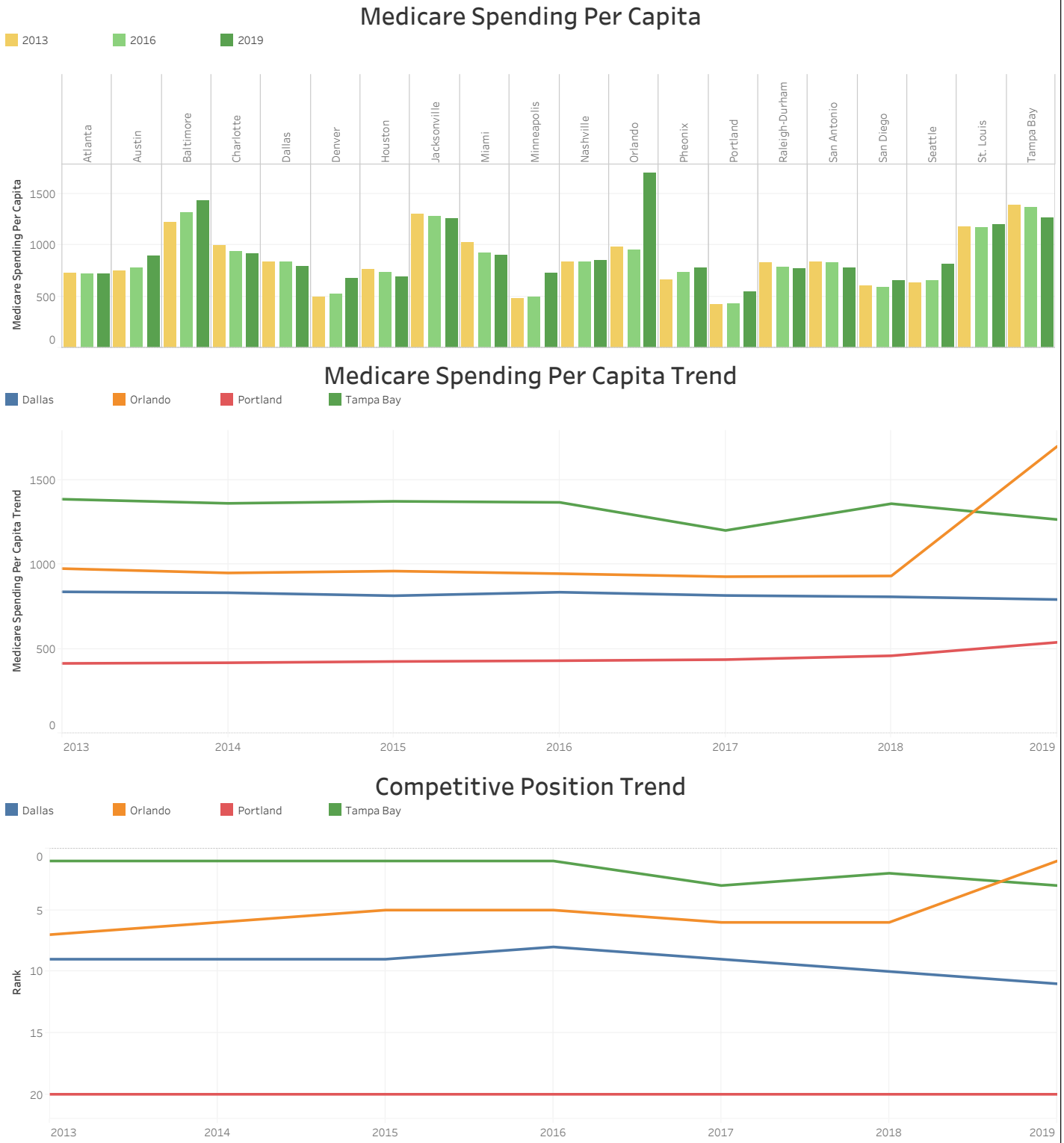


Medicare Spending per Capita

Insights

- Orlando is ranked No. 1 among all the MSAs in terms of Medicare spending per capita.
- The Tampa Bay region has maintained its rank in the top 5 for most of the years.
- Portland has consistently been at the bottom position in terms of Medicare Spending per capita.

About: Total Medicare spending in the MSA divided by the population of the MSA.
Source: Centers for Medicare & Medicaid Services (CMS).



Key Insights on Government Spending

The Tampa Bay MSA has performed relatively low on Health Resources and Services Administration grants per capita over the years. However, Medicare spending per capita for the Tampa Bay region has been consistently higher than most other MSAs compared. However, Medicare spending per capita for the Tampa Bay region has been declining in recent years.



Key Takeaways on Health Care

Public Health Status

The Tampa Bay MSA was generally a low-performing MSA in terms of public health status with a high cardiovascular disease prevalence rate and a high depression prevalence rate. In terms of health-related behavioral factors, the Tampa Bay MSA performed well in terms of physical activity but low in terms of alcohol consumption.

COVID-19 related Measures:

The Tampa Bay MSA posted the highest COVID-19 incidence rate among the comparison MSAs in August 2021. The Tampa Bay MSA stands third in terms of vaccination rate among Florida MSAs.

Access to Health Care

The Tampa Bay MSA performed poorly in terms of both availability and affordability of health care. The Tampa Bay MSA has a high population-to-primary care provider and a high population-to-mental health provider ratio.

Government Spending on Health care:

The Tampa Bay is among the top MSAs in terms of Medicare spending per capita.



Final Key Takeaways

Economic Competitiveness:

- The Tampa Bay MSA has the lowest Gross Regional Product per capita among the comparison MSAs
- Unemployment rates rose steeply in 2020 for all the MSAs, including Tampa Bay, and declined in 2021.
- Income inequality in the Tampa Bay MSA has been declining for the last few years.
- Investments in higher education and labor force participation are key to economic growth.
- The Black-White unemployment rate gap and the Black-White poverty rate gap have been declining steadily for the Tampa Bay MSA over the years.
- Consumer spending in the Tampa Bay MSA dropped in the month of April 2020 and has been increasing steadily ever since. Since March 2021, the consumer spending in Tampa Bay has been consistently above its value posted in January 2020.

Innovation and Entrepreneurship:

- The Tampa Bay MSA is among the low performing MSAs on innovation-related indicators such as patents per 10,000 residents, university research and development expenditures, Small Business Innovation Research (SBIR)/Small Business Technology Transfer (STTR) awards per capita, and Business R&D-to- GRP ratio.
- The Tampa Bay MSA has consistently been among the top half of the comparison MSAs in terms of the business establishment entry rate. However, the business establishment entry rate has generally been on a declining trend for the Tampa Bay MSA over the years.

Education:

- The Tampa Bay MSA is one of the top performing MSAs in terms of the first-time-in-college student enrolment rate.
- The Tampa Bay MSA has been among the low performing MSAs in terms of degree production per 10,000 residents. However, in terms of STEM degree production per 10,000 residents, the Tampa Bay MSA's competitive position has been steadily improving.
- The Tampa Bay MSA stands at fifth position in terms of Black-White educational attainment rate gap as of 2019.

Health Care:

- The performance of the Tampa Bay MSA in terms of public health status is generally low with a high cardiovascular disease prevalence rate, and a high depression prevalence rate.
- The Tampa Bay MSA suffered highest COVID-19 incidence rate among the comparison MSAs in August 2021.
- The Tampa Bay MSA stands third in terms of Vaccination among Florida MSAs.
- The Tampa Bay MSA is performing poorly in terms of both availability and affordability of Health care. The Tampa Bay MSA has high population-to-primary care provider and population-to-mental health provider ratios among the comparison MSAs.
- The Tampa Bay MSA is among the top MSAs in terms of Medicare spending per capita. However, Tampa Bay consistently ranks among bottom five position in terms of Health Resources and Service Administration grants per capita.

Community ideas and feedback are welcome!



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2022 TAMPA BAY E-INSIGHTS REPORT



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