

Host Cities' Labor Market Reactions to the Super Bowl

Jason Luo

ABSTRACT

The Super Bowl, one of America's major sporting events, is the pinnacle of football showcasing. However, the game not only impacts sport fanatics, but also host cities and their economies. In fact, the event has cities scrambling to the host application. As a result of an abnormal influx of visitors, there are multiple guidelines relating to adequate existing infrastructure for a successful venue. Other than the overall view of the city, its economy is also shifted to deal with more people. Local businesses for example, offer more job openings in preparation for handling larger customer amounts. The purpose of this study is to examine the change in employment for past host cities, as well as the longevity of the changes.

Change in employment will be measured using the metrics of population, labor force, number of employed and unemployed people, and the unemployment rate. The population of a host city will be measured two years prior to the Super Bowl, the year of the Super Bowl, and two years after the Super Bowl. The other three metrics will be measured six months before the Super Bowl, the month of the Super Bowl, and six months after the Super Bowl. Thirteen host cities, starting in 2010 up to 2022, will be analyzed. The datasets will be from the Federal Reserve Bank of St. Louis (FRED), the U.S. Bureau of Labor Statistics, HomeFacts, and PopulationU.

The results display a tremendous reaction in the labor market as a result of the Super Bowl hosting. Each city experienced a different degree of employment change, however the time period and longevity of these changes were relatively similar. From the results, further studies can predict the degree of employment change based on certain city factors.

Chapter 1

INTRODUCTION

1.1 Background

Despite its colossal television numbers, the Super Bowl also attracts many in-person visitors to the year's hosting city. With the influx of visitors, many economists have proved the clear benefits for the city as a result. These benefits range from greater city exposure, economic gain, and community connection. Because of these vast benefits, cities lunge at the opportunity at hosting the coveted event. In the past, many cities were invited by the NFL to make a bid, with only a few becoming "finalists". These finalists were asked to submit a presentation to the NFL's 32 team owners, who selected the winning city. Since 2018, the NFL switched to a smaller-scale competition, as the NFL started to first contact certain venues to put together proposals. The owners would still have the final say. Selected cities often have newly renovated or created stadiums, optimal weather conditions, necessary infrastructure, and enough hospitality and entertainment areas.

An additional result of the city's influx of visitors is the influx of workers to supply the increase in demand in products and services for all industries. As an example, Super Bowl LVI reportedly brought in between 2,200 to 4,700 new jobs to the LA area ("The Business Side of

the Super Bowl”, 2023). The service industry is traditionally the primary benefiter, with more visitors requiring more restaurant and hotel workers, as well as more taxi and rideshare drivers.

1.2 Purpose of the Research

With the labor market being excessively affected by the Super Bowl, this study seeks to describe the host city’s labor industry’s reaction to hosting the Super Bowl. The study uses four major metrics to measure observe the impact on the labor market. A collection of 13 Super Bowls (2010-2022) and their host cities are analyzed. The objective is to determine how these four major metrics have responded in each of these host cities and to create an overall trend for each metric for all cities.

1.3 Significance of the Research

Other studies have often referenced the economic benefits of the Super Bowl. However, these benefits are traditionally limited to the business opportunities, overall GDP increases, and benefits in the hospitality, entertainment, and tourism industries. However, a city’s labor market’s short-term and long-term response to hosting the Super Bowl is normally not reported and is vague in terms of its longevity. This is unfortunate, given the importance of a city’s labor market.

The findings of this study provide evidence of the impact of the Super Bowl on a host city’s labor market both in the short and long-term. This could help city officials, employers, and employees understand potential benefits their city and they themselves could receive as a result of hosting the Super Bowl. Additionally, future hosters can predict the benefit for their labor market based on similarities between their city and the cities discussed in this study.

Chapter 2

METHODOLOGY

2.1 Population

Population refers to the whole number of people or inhabitants in a select region. Population is often associated with fertility and mortality rates, however it is also closely linked with a region’s economic development. More specifically, an increase in population is likely linked with an expansion in the labor market, as there are more individuals in a region who can become employed.

2.2 Labor Force

In economics, labor force is defined as the sum of the number of employed and unemployed people. In other words, the labor force includes all people age 16 and older who are classified as either employed and unemployed. Conceptually, the labor force is the number of people who are either working or actively looking for work (U.S. Bureau of Labor Statistics). This means that individuals who are no longer looking for work are not counted in the labor force. Common groups that are not part of the labor force are retired individuals and students. Part-timers are counted towards the labor force. The Super Bowl can affect the labor force level, as many part-timers are hired prior to the big event.

2.3 Number of Employed and Unemployed People

One is an employed person when they hold a position at a business. To be more specific, people are considered employed if they work at least one hour for pay or at their own business at any time during the week. People who work as unpaid workers for fifteen hours or more in a family-owned business are also considered employed (New Hampshire Employment Security). One is considered unemployed when they are a part of the labor force, without a job, and have been actively looking for a job in the previous four weeks. The Super Bowl can affect the number employed and unemployed individuals, as local businesses and the NFL look to hire and fire individuals in preparation for the big event.

2.4 Unemployment Rate

The unemployment rate is calculated as the percentage of people in the labor force who are unemployed. The unemployment rate is commonly used to measure the health of the economy. There is usually an equilibrium point for the unemployment rate where people can still find jobs without the economy becoming too inefficient. The Super Bowl can affect the unemployment rate as it can change the number of unemployed people as well as the labor force.

Chapter 3

SUPER BOWLS

3.1 Miami, Florida | Super Bowl XLIV | February 7, 2010

3.1.1 Super Bowl XLIV and Miami Overview

Super Bowl XLIV was played between the New Orleans Saints and Indianapolis Colts. The match took place on February 7, 2010 at the Hard Rock Stadium in Miami, Florida. According to Statista, the event had a spectator count of 74,059 people. Miami's well-known beaches, nightlife, and suitable venue make it a strong contender for hosting the Super Bowl each year.

3.1.2 Miami, Florida Population (2008-2012)

Table 1 presents the population size of Miami from 2008 to 2012. The number of people in Miami increases at a slight rate each year except in 2010, the year of the Super Bowl. The population peaks at 416,577 people. From 2008 to 2012, the population decreases by 966 people. The total percent change in population size is a decrease of 0.14%.

Table 1 Population Size of Miami, Florida (2008-2012)

| Year | Population Size (Person) | Percent of Change (%) |
|------------------------|--------------------------|-----------------------|
| Year - 2 (2008) | 412,115 | — |
| Year - 1 (2009) | 416,577 | 1.08 |
| Super Bowl Year (2010) | 400,798 | -3.79 |
| Year + 1 (2011) | 406,607 | 1.45 |
| Year + 2 (2012) | 411,149 | 1.12 |



| | | |
|---------------------|------|-------|
| Total Change | -966 | -0.14 |
|---------------------|------|-------|

3.1.3 Miami-Dade County Labor Force (August 2009-August 2010)

Table 2 presents the labor force of Miami-Dade County from August 2009 to August 2010. Miami-Dade County contains Miami and other nearby cities such as Miami Beach, Miami Gardens, and Kendall. The six months prior to the Super Bowl do not display a continuous increase in labor force, as the labor force decreases by 0.29% in December. Nonetheless, the labor force overall increases from August 2009 to February 2010. Following the Super Bowl, there is also no trend month by month for the six months. But again the labor force overall increases from 1,214,927 people to 1,231,560 people. The total change in labor force over the year span is an increase of 33,138 people. The combined month by month percent change in labor force is an increase of 2.79%. In other words, Miami-Dade County's labor force increases by 2.79% from August 2009 to August 2010.

Table 2 Labor Force of Miami-Dade County, Florida (August 2009-August 2010)

| Year | Month | Labor Force (Person) | Percent of Change (%) |
|------|-----------------------------|----------------------|-----------------------|
| 2009 | Month - 6 (August) | 1,198,422 | — |
| 2009 | Month - 5 (September) | 1,202,204 | 0.32 |
| 2009 | Month - 4 (October) | 1,203,763 | 0.13 |
| 2009 | Month - 3 (November) | 1,206,048 | 0.19 |
| 2009 | Month - 2 (December) | 1,202,567 | -0.29 |
| 2010 | Month - 1 (January) | 1,219,054 | 1.37 |
| 2010 | Super Bowl Month (February) | 1,214,927 | -0.34 |
| 2010 | Month + 1 (March) | 1,201,554 | -1.10 |
| 2010 | Month + 2 (April) | 1,235,962 | 2.86 |
| 2010 | Month + 3 (May) | 1,223,874 | -0.98 |
| 2010 | Month + 4 (June) | 1,218,820 | -0.41 |
| 2010 | Month + 5 (July) | 1,233,740 | 1.22 |
| 2010 | Month + 6 (August) | 1,231,560 | -0.18 |
| — | Total Change | 33,138 | 2.79 |

3.1.4 Miami-Dade County Employment and Unemployment (August 2009-August 2010)

Table 3 presents the number of employed and unemployed people for Miami-Dade County from August 2009 to August 2010. Similar to the labor force decrease in December, there is a decrease in the number of employed people in December. However, there is an increase in the number of unemployed people in December, meaning that the decrease in labor force was heavily a result of the employed individuals leaving the market. During February, the number of employed people decreases by 0.32% and the number of unemployed people decreases by 0.52%. Following the Super Bowl, there is no continuous trend for employment and unemployment. Over the year's span, the market gains 14,206 employed people, however also gains 18,932 unemployed people. In other words, employment increases by 1.42%, but unemployment drastically increases by 13.69%.

Table 3 Number of Employed and Unemployed People of Miami-Dade County (August 2009-August 2010)

| Year | Month | Employed People (Person) | Percent of Change (%) | Unemployed People (Person) | Percent of Change (%) |
|------|-----------------------------|--------------------------|-----------------------|----------------------------|-----------------------|
| 2009 | Month - 6 (August) | 1,066,351 | — | 132,071 | — |
| 2009 | Month - 5 (September) | 1,067,030 | 0.06 | 135,174 | 2.35 |
| 2009 | Month - 4 (October) | 1,068,533 | 0.14 | 135,230 | 0.04 |
| 2009 | Month - 3 (November) | 1,074,622 | 0.57 | 131,426 | -2.81 |
| 2009 | Month - 2 (December) | 1,070,098 | -0.42 | 132,469 | 0.79 |
| 2010 | Month - 1 (January) | 1,082,083 | 1.12 | 136,971 | 3.40 |
| 2010 | Super Bowl Month (February) | 1,078,671 | -0.32 | 136,256 | -0.52 |
| 2010 | Month + 1 (March) | 1,060,099 | -1.72 | 141,455 | 3.82 |
| 2010 | Month + 2 (April) | 1,094,921 | 3.29 | 141,041 | -0.29 |
| 2010 | Month + 3 (May) | 1,082,846 | -1.10 | 141,028 | -0.01 |
| 2010 | Month + 4 (June) | 1,074,800 | -0.74 | 144,020 | 2.12 |
| 2010 | Month + 5 (July) | 1,085,032 | 0.95 | 148,708 | 3.26 |
| 2010 | Month + 6 (August) | 1,080,557 | -0.41 | 151,003 | 1.54 |
| — | Total Change | 14,206 | 1.42 | 18,932 | 13.69 |

3.1.5 Miami, Florida, and United States Unemployment Rate (August 2009-August 2010)

Table 4 presents the unemployment rate of Miami, Florida, and the United States from August 2009 to August 2010. Between August 2009 and the Super Bowl, there is a steady decrease in Miami, with the rate dropping from 13.1% to 11.1%. On the other hand, there is no notable change in Florida's and the United States' rates. Following the Super Bowl, Miami's unemployment rate decreases during April and May, before increasing in June, July, and August. The total change in Miami's unemployment rate over the year's span is a decrease of 1.6%. Florida's and the United States' rates experienced changes on a smaller degree, with an increase of 0.4% and a decrease of 0.1%, respectively.

Table 4 Unemployment Rate of Miami, Florida, and United States (August 2009-August 2010)

| Year | Month | Miami UR (%) | Percent of Change (%) | Florida UR (%) | Percent of Change (%) | United States UR (%) | Percent of Change (%) |
|------|-----------------------------|--------------|-----------------------|----------------|-----------------------|----------------------|-----------------------|
| 2009 | Month - 6 (August) | 13.1 | — | 11.1 | — | 9.6 | — |
| 2009 | Month - 5 (September) | 12.9 | -0.2 | 11.1 | 0.0 | 9.8 | 0.2 |
| 2009 | Month - 4 (October) | 12.9 | 0.0 | 11.1 | 0.0 | 10.0 | 0.2 |
| 2009 | Month - 3 (November) | 12.1 | -0.8 | 10.9 | -0.2 | 9.9 | -0.1 |
| 2009 | Month - 2 (December) | 12.5 | 0.4 | 11.1 | 0.2 | 9.9 | 0.0 |
| 2010 | Month - 1 (January) | 11.4 | -1.1 | 11.5 | 0.4 | 9.8 | -0.1 |
| 2010 | Super Bowl Month (February) | 11.1 | -0.3 | 11.2 | -0.3 | 9.8 | 0.0 |
| 2010 | Month + 1 (March) | 11.2 | 0.1 | 11.0 | -0.2 | 9.9 | 0.1 |
| 2010 | Month + 2 (April) | 10.7 | -0.5 | 10.6 | -0.4 | 9.9 | 0.0 |
| 2010 | Month + 3 (May) | 10.5 | -0.2 | 10.5 | -0.1 | 9.6 | 0.3 |
| 2010 | Month + 4 (June) | 10.9 | 0.4 | 11.0 | 0.5 | 9.4 | -0.2 |
| 2010 | Month + 5 (July) | 11.1 | 0.2 | 11.4 | 0.4 | 9.4 | 0.0 |
| 2010 | Month + 6 (August) | 11.5 | 0.4 | 11.5 | 0.1 | 9.5 | 0.1 |
| — | Total Change | -1.6 | — | 0.4 | — | -0.1 | — |

3.1.6 Super Bowl XLIV General Economic Impact

Adding on to population, labor force, and unemployment changes, we can also look at potential non-surface level changes that may also aid in understanding Miami's employment change as a result of hosting the Super Bowl. According to a report from The South Florida Super Bowl Host Committee, South Florida experienced an economic impact of \$333 million. On a potentially more economically vital note, the committee also concluded that three out of every four people left Miami with the impression they would come back even if the Super Bowl wasn't being played ("Touchdown! Miami Scores \$333 Million From Super Bowl XLIV", 2010). This suggests that in addition to the obvious short-term monetary influx, long-term city appeal increases as a result of being a host city for the Super Bowl.

3.2 Arlington, Texas | Super Bowl XLV | February 6, 2011

3.2.1 Super Bowl XLV and Arlington Overview

Super Bowl XLV was played between the Pittsburgh Steelers and Green Bay Packers. The match took place on February 6, 2011 at the Cowboys' Stadium in Arlington, Texas. According to an article from ESPN written by Calvin Watkins, the event marked 103,219 stadium spectators, the highest in-person count since 1983. Super Bowl XLV marks AT&T's first Super Bowl hosting as well as Arlington's first.

3.2.2 Arlington, Texas Population (2009-2013)

Table 5 presents the population size of Arlington from 2009 to 2013. In 2010, the population decreases by 2.92%. It is the only decrease of this time span. During the Super Bowl, the population increases by 1.26%, the greatest increase of this time span. Following the Super Bowl, the population continues to steadily increase each year. The population peaks at 371,267 people. From 2009 to 2013, the population increases by 1,050 people. The total percent change in population is an increase of 0.35%.

Table 5 Population Size of Arlington, Texas (2009-2013)

| Year | Population Size (Person) | Percent of Change (%) |
|------------------------|--------------------------|-----------------------|
| Year - 2 (2009) | 370,217 | — |
| Year - 1 (2010) | 359,410 | -2.92 |
| Super Bowl Year (2011) | 363,933 | 1.26 |
| Year + 1 (2012) | 367,154 | 0.89 |
| Year + 2 (2013) | 371,267 | 1.12 |
| Total Change | 1,050 | 0.35 |

3.2.3 Fort Worth and Arlington Labor Force (August 2010-August 2011)

Table 6 presents the labor force of Fort Worth and Arlington from August 2010 to August 2011. Fort Worth is a nearby Arlington. The data shows a decrease in January 2011 of 0.25%, but an increase of 0.44% during the Super Bowl. The following months of March to July show a similar increase, with an average of 0.43% for each month, before the labor force levels

off. Following the Super Bowl, there is consistent increases per month. The total change of the labor force over the year is an increase of 2.68%. In other words, Super Bowl XLV added 30,289 people to the labor force.

Table 6 Labor Force of Forth Worth and Arlington, Texas (August 2010-August 2011)

| Year | Month | Labor Force (Person) | Percent of Change (%) |
|------|-----------------------------|----------------------|-----------------------|
| 2010 | Month - 6 (August) | 1,114,292 | — |
| 2010 | Month - 5 (September) | 1,113,862 | -0.04 |
| 2010 | Month - 4 (October) | 1,113,986 | 0.01 |
| 2010 | Month - 3 (November) | 1,118,689 | 0.42 |
| 2010 | Month - 2 (December) | 1,117,681 | -0.09 |
| 2011 | Month - 1 (January) | 1,114,851 | -0.25 |
| 2011 | Super Bowl Month (February) | 1,119,735 | 0.44 |
| 2011 | Month + 1 (March) | 1,125,120 | 0.48 |
| 2011 | Month + 2 (April) | 1,130,649 | 0.49 |
| 2011 | Month + 3 (May) | 1,134,673 | 0.36 |
| 2011 | Month + 4 (June) | 1,141,175 | 0.57 |
| 2011 | Month + 5 (July) | 1,144,069 | 0.25 |
| 2011 | Month + 6 (August) | 1,144,581 | 0.04 |
| — | Total Change | 30,289 | 2.68 |

3.2.4 Forth Worth and Arlington Employment and Unemployment (August 2010-August 2011)

Table 7 presents the number of employed and unemployed people in Forth Worth and Arlington, Texas from August 2010 to August 2011. Prior to the Super Bowl, there is a continuous increase of the number of employed people, before it suddenly decreases by 0.76% in January, one month before the Super Bowl. During the Super Bowl, it increases by 0.68%. Following the Super Bowl, there is an upward trend. Prior to the Super Bowl, there is a decreasing trend for number of unemployed people. During the Super Bowl, it decreases by 2.27%. After the Super Bowl, there is an increasing trend. Over the year's span, the market gains 30,125 employed people while only gains 164 unemployed people. In other words, employment increases by 2.92% and unemployment increases by 1.19%.

Table 7 Number of Employed and Unemployed People of Forth Worth and Arlington (August 2010-August 2011)

| Year | Month | Employed People (Person) | Percent of Change (%) | Unemployed People (Person) | Percent of Change (%) |
|------|-----------------------------|--------------------------|-----------------------|----------------------------|-----------------------|
| 2010 | Month - 6 (August) | 1,022,217 | — | 92,075 | — |
| 2010 | Month - 5 (September) | 1,024,022 | 0.18 | 89,840 | -2.43 |
| 2010 | Month - 4 (October) | 1,025,901 | 0.18 | 88,085 | -1.95 |
| 2010 | Month - 3 (November) | 1,027,719 | 0.18 | 90,970 | 3.28 |
| 2010 | Month - 2 (December) | 1,029,954 | 0.22 | 87,727 | -3.56 |
| 2011 | Month - 1 (January) | 1,022,155 | -0.76 | 92,696 | 5.66 |
| 2011 | Super Bowl Month (February) | 1,029,141 | 0.68 | 90,594 | -2.27 |
| 2011 | Month + 1 (March) | 1,035,226 | 0.59 | 89,894 | -0.77 |
| 2011 | Month + 2 (April) | 1,044,935 | 0.94 | 85,714 | -4.65 |
| 2011 | Month + 3 (May) | 1,046,583 | 0.16 | 88,090 | 2.77 |
| 2011 | Month + 4 (June) | 1,044,726 | -0.18 | 96,449 | 9.49 |
| 2011 | Month + 5 (July) | 1,047,851 | 0.30 | 96,218 | -0.24 |
| 2011 | Month + 6 (August) | 1,052,342 | 0.43 | 92,239 | -4.14 |
| — | Total Change | 30,125 | 2.92 | 164 | 1.19 |

3.2.5 Arlington, Texas, and United States Unemployment Rate (August 2010-August 2011)

Table 8 presents the unemployment rate of Arlington, Texas, and the United States from August 2010 to August 2011. In August 2010, Arlington's unemployment rate is 8.3%. In October 2010, there is a decrease of 0.3% from 8.2% to 7.9%. Similarly in December 2010, there is a decrease of 0.3% from 8.1% to 7.8%. In January, the rate increase back to 8.2%, before decreasing in Super Bowl February to 7.8%, marking a decrease of 0.4%. We also see a larger drop in the unemployment rate of Texas in February, from 8.3% to 8.0%. This may suggest that the Super Bowl's employment impact is not just limited to its host city. Through a lengthier time scope, 6 months before XLV, the unemployment rate (August 2010) is 8.3%, the unemployment rate during XLV is 7.8%, and the unemployment rate 6 months after XLV (August 2011) is 7.9%.



Table 8 Unemployment Rate of Arlington, Texas, and United States (August 2010-August 2011)

| Year | Month | Arlington UR (%) | Percent of Change (%) | Texas UR (%) | Percent of Change (%) | United States UR (%) | Percent of Change (%) |
|------|-----------------------------|------------------|-----------------------|--------------|-----------------------|----------------------|-----------------------|
| 2010 | Month - 6 (August) | 8.3 | — | 8.2 | — | 9.5 | — |
| 2010 | Month - 5 (September) | 8.2 | -0.1 | 8.0 | -0.2 | 9.5 | 0.0 |
| 2010 | Month - 4 (October) | 7.9 | -0.3 | 7.8 | -0.2 | 9.4 | -0.1 |
| 2010 | Month - 3 (November) | 8.1 | 0.2 | 8.1 | 0.3 | 9.8 | 0.4 |
| 2010 | Month - 2 (December) | 7.8 | -0.3 | 7.8 | -0.3 | 9.3 | -0.5 |
| 2011 | Month - 1 (January) | 8.2 | 0.4 | 8.3 | 0.5 | 9.1 | -0.2 |
| 2011 | Super Bowl Month (February) | 7.8 | -0.4 | 8.0 | -0.3 | 9.0 | -0.1 |
| 2011 | Month + 1 (March) | 7.7 | -0.1 | 7.7 | -0.3 | 9.0 | 0.0 |
| 2011 | Month + 2 (April) | 7.4 | -0.3 | 7.4 | -0.3 | 9.1 | 0.1 |
| 2011 | Month + 3 (May) | 7.4 | 0.0 | 7.6 | 0.2 | 9.0 | -0.1 |
| 2011 | Month + 4 (June) | 8.2 | 0.8 | 8.4 | 0.8 | 9.1 | 0.1 |
| 2011 | Month + 5 (July) | 8.1 | -0.1 | 8.3 | -0.1 | 9.0 | -0.1 |
| 2011 | Month + 6 (August) | 7.9 | -0.2 | 8.0 | -0.3 | 9.0 | 0.0 |
| — | Total Change | -0.4 | — | -0.2 | — | -0.5 | — |

3.2.6 Super Bowl XLV General Economic Impact

Adding on to population, labor force, and unemployment changes, we can also look at potential non-surface level changes that may also aid in understanding Arlington’s employment change as a result of hosting the Super Bowl. For instance, Arlington’s success with XLV headlined the city as a spotlight destination for future sporting events. Following XLV, some major events include 2011 World Series, 2011 U.S Women’s Open, 2014 NCAA Final 4, 2015 College Football Playoffs National Championship Game, and 2016 WrestleMania. All of these events have contributed to employment changes in Arlington and XLV proved the city to be a reputable host.

3.3 Indianapolis, Indiana | Super Bowl XLVI | February 5, 2012

3.3.1 Super Bowl XLVI and Indianapolis Overview

Super Bowl XLVI was played between the New York Giants and the New England Patriots. The match took place on February 5, 2012 at Lucas Oil Stadium in Indianapolis, Indiana. According to Statista, the event had an in-person spectator count of 68,658. The construction of Lucas Oil Stadium, which replaced the outdated Hoosier Dome as home of the Indianapolis Colts, led civic leaders to make bids to hold the Super Bowl.

3.3.2 Indianapolis, Indiana Population (2010-2014)

Table 9 presents the population size of Indianapolis from 2010 to 2014. There is no apparent outlier in change, each year having an average of 0.77% increase from its previous year. The lowest change is in 2011, with an increase of 0.72%, one year before the Super Bowl, and the greatest change is in 2013, with an increase of 0.83%, one year after the Super Bowl. The total percent change over the time span is an increase of 3.09%. In other words, 25,293 joined the population during the time span.

Table 9 Population Size of Indianapolis, Indiana (2010-2014)

| Year | Population Size (Person) | Percent of Change (%) |
|------------------------|--------------------------|-----------------------|
| Year - 2 (2010) | 809,804 | — |
| Year - 1 (2011) | 815,607 | 0.72 |
| Super Bowl Year (2012) | 822,006 | 0.79 |
| Year + 1 (2013) | 828,841 | 0.83 |
| Year + 2 (2014) | 835,097 | 0.75 |
| Total Change | 25,293 | 3.09 |

3.3.3 Indianapolis, Carmel, and Anderson, Indiana Labor Force (August 2011-August 2012)

Table 10 presents the labor force statistics of Indianapolis, Carmel, and Anderson from August 2011 to August 2012. During the 6 months prior to the Super Bowl, there is an average of 0.37% decrease in labor force from the previous month. There’s also a notable 0.73% decrease in January 2012, one month before the Super Bowl. During February 2012,

there is a 0.28% increase, the first positive change in labor force in 3 months. Following the Super Bowl, there are 2 months of labor force declines, with an average of 0.34% decrease per month. Later, there is a 0.98% increase in May, 1.16% increase in June, 0.10 increase in July, and a 0.76% decrease in August. The overall labor force trend for this time span is a decrease prior to the Super Bowl, a surge during the Super Bowl, and both decreases and increases following the Super Bowl.

Table 10 Labor Force of Indianapolis, Carmel, and Anderson, Indiana (August 2011-August 2012)

| Year | Month | Labor Force (Person) | Percent of Change (%) |
|------|-----------------------------|----------------------|-----------------------|
| 2011 | Month - 6 (August) | 971,875 | — |
| 2011 | Month - 5 (September) | 966,667 | -0.54 |
| 2011 | Month - 4 (October) | 971,229 | 0.47 |
| 2011 | Month - 3 (November) | 967,103 | -0.42 |
| 2011 | Month - 2 (December) | 964,791 | -0.24 |
| 2012 | Month - 1 (January) | 957,709 | -0.73 |
| 2012 | Super Bowl Month (February) | 960,430 | 0.28 |
| 2012 | Month + 1 (March) | 957,006 | -0.36 |
| 2012 | Month + 2 (April) | 954,018 | -0.31 |
| 2012 | Month + 3 (May) | 963,361 | 0.98 |
| 2012 | Month + 4 (June) | 974,529 | 1.16 |
| 2012 | Month + 5 (July) | 975,509 | 0.10 |
| 2012 | Month + 6 (August) | 968,080 | -0.76 |
| — | Total Change | -3,795 | -0.37 |

3.3.4 Indianapolis, Carmel, and Anderson, Indiana Employment and Unemployment (August 2011-August 2012)

Table 11 presents the number of employed and unemployed people for Indianapolis, Carmel, and Anderson, Indiana from August 2011 to August 2012. In August 2011, there is a decrease in labor force of 0.76%, but on a different note, the number of employed people decreased by 0.61% and the number of unemployed people decreased by 0.37%. This means that in that month, the number of employed people experienced a greater change compared to the number of unemployed people. In the following month, there is a 0.54%

decrease in labor force, 0.20% decrease in number of employed people, and a 4.02% decrease in number of unemployed people. This means that on the contrary to August, September saw a greater change in number of unemployed people compared to number of employed people. Despite having relatively similar changes in labor force, September's labor force change was significantly more of the result of unemployed people leaving the labor market while August's change was more of the result of employed people leaving the market. Moving on to January 2012, we see a decrease of 0.73% in the labor force, decrease of 1.42% in number of employed people, and an increase of 7.05% in number of unemployed people. This means that not only did labor force decrease, but a good amount of employed people were likely laid off and become unemployed one month before the Super Bowl. 7.05% is also the largest increase in number of unemployed people in the timeframe. During the Super Bowl, we see a 0.28% increase in labor force, 0.49% increase in number of employed people, and 1.84% decrease in number of unemployed people. Not only is there an increase in people able and willing to work associated with the Super Bowl, but it is a result of more people being employed and less people being unemployed, rather than an increase in labor force, because of an increase in number of unemployed people.

Table 11 Number of Employed and Unemployed People of Indianapolis, Carmel, and Anderson, Indiana (August 2011-August 2012)

| Year | Month | Employed People (Person) | Percent of Change (%) | Unemployed People (Person) | Percent of Change (%) |
|------|-----------------------------|--------------------------|-----------------------|----------------------------|-----------------------|
| 2011 | Month - 6 (August) | 887,076 | — | 84,799 | — |
| 2011 | Month - 5 (September) | 885,280 | -0.20 | 81,387 | -4.02 |
| 2011 | Month - 4 (October) | 889,475 | 0.47 | 81,754 | 0.45 |
| 2011 | Month - 3 (November) | 887,250 | -0.25 | 79,853 | -2.33 |
| 2011 | Month - 2 (December) | 887,063 | -0.02 | 77,728 | -2.66 |
| 2012 | Month - 1 (January) | 874,500 | -1.42 | 83,209 | 7.05 |
| 2012 | Super Bowl Month (February) | 878,756 | 0.49 | 81,674 | -1.84 |
| 2012 | Month + 1 (March) | 878,309 | -0.05 | 78,697 | -3.64 |
| 2012 | Month + 2 (April) | 882,902 | 0.52 | 71,116 | -9.63 |
| 2012 | Month + 3 (May) | 889,508 | 0.75 | 73,853 | 3.85 |
| 2012 | Month + 4 (June) | 895,873 | 0.72 | 78,656 | 6.50 |
| 2012 | Month + 5 (July) | 895,912 | <0.01 | 79,597 | 1.20 |

| | | | | | |
|-------------|---------------------------|---------|-------|--------|-------|
| 2012 | Month + 6 (August) | 891,680 | -0.47 | 76,400 | -4.02 |
| — | Total Change | 4,604 | 0.54 | -8,399 | -9.09 |

3.3.5 Indianapolis, Indiana, and United States Unemployment Rate (August 2011-August 2012)

Table 12 presents the unemployment rate of Indianapolis, Indiana, and the United States from August 2011 to August 2012. Starting with the unemployment rate of Indianapolis, it is either decreasing or stagnant from August 2011 to December 2011, before increasing from 9.5% to 10.0% in January 2012. In Super Bowl month, the rate decreases from 10.0% to 9.8%. Similarly, Indiana's unemployment rate as a whole decreases by 0.2%, from 9.2% to 9.0%, which suggests that the Super Bowl's employment impact is not limited to its host city. The national unemployment rate remains relatively stagnant through the Super Bowl, thus the event is likely to not impact the national level in terms of employment. The rate decreases by 0.3% in March, 0.7% in April, increases 0.2% in May, 0.3% in June, 0.4% in July, and finally decrease by 0.3% in August. Over the time span, both Indiana's rate and the national rate decrease (1.0% and 0.9% respectively).

Table 12 Unemployment Rate of Indianapolis, Indiana, and United States (August 2011-August 2012)

| Year | Month | Indianapolis UR (%) | Percent of Change (%) | Indiana UR (%) | Percent of Change (%) | United States UR (%) | Percent of Change (%) |
|------|-----------------------------|---------------------|-----------------------|----------------|-----------------------|----------------------|-----------------------|
| 2011 | Month - 6 (August) | 10.3 | — | 9.4 | — | 9.0 | — |
| 2011 | Month - 5 (September) | 9.9 | -0.4 | 9.0 | -0.4 | 9.0 | 0.0 |
| 2011 | Month - 4 (October) | 9.9 | 0.0 | 8.9 | -0.1 | 8.8 | -0.2 |
| 2011 | Month - 3 (November) | 9.6 | -0.3 | 8.7 | -0.2 | 8.6 | -0.2 |
| 2011 | Month - 2 (December) | 9.5 | -0.1 | 8.7 | 0.0 | 8.5 | -0.1 |
| 2012 | Month - 1 (January) | 10.0 | 0.5 | 9.2 | 0.5 | 8.3 | -0.2 |
| 2012 | Super Bowl Month (February) | 9.8 | -0.2 | 9.0 | -0.2 | 8.3 | 0.0 |

| | | | | | | | |
|------|-------------------------|------|------|------|------|------|------|
| 2012 | Month + 1 (March) | 9.5 | -0.3 | 8.6 | -0.4 | 8.2 | -0.1 |
| 2012 | Month + 2 (April) | 8.8 | -0.7 | 7.7 | -0.9 | 8.2 | 0.0 |
| 2012 | Month + 3 (May) | 9.0 | 0.2 | 8.0 | 0.3 | 8.2 | 0.0 |
| 2012 | Month + 4 (June) | 9.3 | 0.3 | 8.5 | 0.5 | 8.2 | 0.0 |
| 2012 | Month + 5 (July) | 9.7 | 0.4 | 8.6 | 0.1 | 8.2 | 0.0 |
| 2012 | Month + 6 (August) | 9.4 | -0.3 | 8.4 | -0.2 | 8.1 | -0.1 |
| — | Total Change | -0.9 | — | -1.0 | — | -0.9 | — |

3.3.6 Super Bowl XLVI General Economic Impact

Adding on to population, labor force, and unemployment changes, we can also look at potential non surface-level changes that may also aid in understanding Indianapolis' employment change as a result of hosting the Super Bowl. According to Rock Port Analytics, "A total of \$278 million was added to Indy's GDP as a result of the big game in February ... As a result of the game and accompanying events, \$176 million was added to area payrolls and a total \$76 million made its way into tax coffers including \$37 million in federal tax receipts, \$22 million in state tax receipts and \$18 million in local tax receipts." A report from Eagle Country 99.3 states that " Hosting Super Bowl XLVI cost the city of Indianapolis \$1.3 million ... The red ink came mainly from paying for extra police and security, while the city made \$2.9 million on taxes from car rentals, food, beverages and hotel stays." Based on these two reports, it is important to acknowledge how certain reports are overstated for the benefit of certain parties or simply overstated because the report's methodology does not take into account important factors. However, it is still apparent that Indianapolis made a profit, as revenue is greater than costs, which likely would have circulated into the employment sector. This means that during the Superbowl, not only are jobs created, but wages are also higher.

3.4 New Orleans, Louisiana | Super Bowl XLVII | February 3, 2013

3.4.1 Super Bowl XLVII and New Orleans Overview

Superbowl XLVII was played between the Baltimore Ravens and the the San Francisco 49ers. The match took place on February 3, 2013 at Caesars Superdome in New Orleans, Louisiana. According to Statista, the event had an in-person spectator count of 71,024. New Orleans as a city has hosted seven Super Bowls, seven college football championship games, and multiple yearly festivals, such as Mardi Gras and others. It is no wonder that New

Orleans’ venues, music, culture, and food make it the perfect destination for events such as the Super Bowl.

3.4.2 New Orleans, Louisiana Population (2011-2015)

Table 13 presents New Orleans’ population data from 2011 to 2015. Compared to other Super Bowl host city populations, New Orleans ranks as a relatively smaller city in between the 300,000 to 400,000 people range. Despite being in the 500,000s in the 90s, Hurricane Katrina of 2005 resulted in a 54.13% population decrease in 2006.

Despite this, the resulting years have displayed strong growth. With New Orleans’ population from 2012-16, we see a constant increase in growth for each year. Starting off with a 6.22% increase in 2012 and ending with a 1.64% increase in 2016, the growth is seemingly increasing, but at a diminishing rate.

Table 13 Population Size of New Orleans, Louisiana (2011-2015)

| Year | Population Size (Person) | Percent of Change (%) |
|------------------------|--------------------------|-----------------------|
| Year - 2 (2011) | 321,409 | — |
| Year - 1 (2012) | 341,407 | 6.22 |
| Super Bowl Year (2013) | 357,013 | 4.57 |
| Year + 1 (2014) | 368,471 | 3.21 |
| Year + 2 (2015) | 376,738 | 2.24 |
| Total Change | 55,329 | 16.24 |

3.4.3 New Orleans and Metairie, Louisiana Labor Force (August 2012-August 2013)

Table 14 presents the labor force statistics of New Orleans and Metairie from August 2012 to August 2013. In the 6 months prior to the Super Bowl, there is an average 0.13% decrease in labor force from the previous month. The earlier months show no overall trend with both increases and decreases, but we see start seeing small increases two months before the Super Bowl, starting in December 2012. January 2013’s labor force increases by 0.73%, but in February, the labor force actually decreases by 0.35%. This is likely due to the statistics being taken during the end of the month, rather than before the Super Bowl.

Theoretically, the labor force would have increased prior to the Super Bowl before decreasing after, but it is interesting to note how sudden the decrease is. The following months also show no overall trend, with an average of 0.18% increase per month from the pervious month.

Table 14 Labor Force of New Orleans and Metairie, Louisiana (August 2012-August 2013)

| Year | Month | Labor Force (Person) | Percent of Change (%) |
|------|-----------------------|----------------------|-----------------------|
| 2012 | Month - 6 (August) | 575,394 | — |
| 2012 | Month - 5 (September) | 571,399 | -0.69 |



| | | | |
|------|-----------------------------|---------|-------|
| 2012 | Month - 4 (October) | 577,350 | 1.04 |
| 2012 | Month - 3 (November) | 574,855 | -0.43 |
| 2012 | Month - 2 (December) | 575,090 | 0.04 |
| 2013 | Month - 1 (January) | 579,316 | 0.73 |
| 2013 | Super Bowl Month (February) | 577,301 | -0.35 |
| 2013 | Month + 1 (March) | 576,834 | -0.08 |
| 2013 | Month + 2 (April) | 578,976 | 0.37 |
| 2013 | Month + 3 (May) | 580,629 | 0.29 |
| 2013 | Month + 4 (June) | 590,172 | 1.64 |
| 2013 | Month + 5 (July) | 586,354 | -0.65 |
| 2013 | Month + 6 (August) | 583,476 | -0.49 |
| — | Total Change | 8,082 | 1.42 |

3.4.4 New Orleans and Metairie, Louisiana Employment and Unemployment (August 2012-August 2013)

Table 15 presents the number of employed and unemployed people in New Orleans and Metairie from August 2012 to August 2013. Looking at number of employed people, there is also no overall trend. For the 6 months before the Super Bowl, there is an average of 0.07% decrease in number of employed people per month from the previous month. However during the Super Bowl month (February), we see an increase of 0.70% followed by a 0.05% increase in March, 0.55% increase in April, before decreasing by 0.17% in May. Along with an increase in number of employed people during and after the Super Bowl, there is a substantial decrease (13.64%) in the number of unemployed people during the Super Bowl, followed by 2 months of smaller decreases. This means that during and 2 months after the Super Bowl, overall labor force was not heavily fluctuating in numbers, however more people willing and looking for work were getting hired and more people willing and looking for work who did not hold employment were either hired or left the market. It is important to note how in January - one month before the Super Bowl - there is a 22.24% increase in number of unemployed individuals. Because number of employed individuals decreased by 0.64% and labor force increased by 0.73%, it is apparent that the labor market expanded in anticipation of the Super Bowl, however many individuals were not immediately hired, in fact previous employed workers may have been laid off.

Table 15 Number of Employed and Unemployed People of New Orleans and Metairie, Louisiana (August 2012-August 2013)

| Year | Month | Employed People (Person) | Percent of Change (%) | Unemployed People (Person) | Percent of Change (%) |
|------|-----------------------------|--------------------------|-----------------------|----------------------------|-----------------------|
| 2012 | Month - 6 (August) | 534,555 | — | 40,839 | — |
| 2012 | Month - 5 (September) | 533,175 | -0.69 | 38,224 | -6.40 |
| 2012 | Month - 4 (October) | 541,049 | 1.04 | 36,301 | -5.03 |
| 2012 | Month - 3 (November) | 542,335 | -0.43 | 32,520 | -10.42 |
| 2012 | Month - 2 (December) | 540,533 | 0.04 | 34,557 | 6.26 |
| 2013 | Month - 1 (January) | 537,075 | 0.73 | 42,241 | 22.24 |
| 2013 | Super Bowl Month (February) | 540,822 | -0.35 | 36,479 | -13.64 |
| 2013 | Month + 1 (March) | 541,067 | -0.08 | 35,767 | -1.95 |
| 2013 | Month + 2 (April) | 544,035 | 0.37 | 34,941 | -2.31 |
| 2013 | Month + 3 (May) | 543,115 | 0.29 | 37,514 | 7.36 |
| 2013 | Month + 4 (June) | 545,821 | 1.64 | 44,351 | 18.23 |
| 2013 | Month + 5 (July) | 544,469 | -0.65 | 41,885 | -5.56 |
| 2013 | Month + 6 (August) | 544,008 | -0.49 | 39,468 | -5.77 |
| — | Total Change | 9,453 | 1.42 | -1,371 | 3.01 |

3.4.5 New Orleans, Louisiana, and United States Unemployment Rate (August 2012-August 2013)

Table 16 presents the unemployment rate of New Orleans, Louisiana, and the United States from August 2010 to August 2011. Between August 2012 and December 2012, we see a decent drop, as the rate is 8.5% in August while 7.1% in December. In January 2012, we see that increase in number of unemployed people reflected by a drastic 1.3% increase in the unemployment rate. However during the Super Bowl, there is the expected drop in unemployment, with the rate dropping from 8.4% to 7.5%. This decline in unemployment is also reflected by Louisiana's decrease in unemployment which drops from 7.9% to 6.9% from January to February. Again, this suggests that the Super Bowl has a wider geographic impact than just the host city. New Orleans' unemployment rate continues to experience small declines in March and April, before increasing in May.



Table 16 Unemployment Rate of New Orleans, Louisiana, and United States (August 2012-August 2013)

| Year | Month | New Orleans UR (%) | Percent of Change (%) | Louisiana UR (%) | Percent of Change (%) | United States UR (%) | Percent of Change (%) |
|------|-----------------------------|--------------------|-----------------------|------------------|-----------------------|----------------------|-----------------------|
| 2012 | Month - 6 (August) | 8.5 | — | 7.4 | — | 8.1 | — |
| 2012 | Month - 5 (September) | 7.7 | -0.8 | 6.6 | -0.8 | 7.8 | -0.3 |
| 2012 | Month - 4 (October) | 7.4 | -0.3 | 6.5 | -0.1 | 7.8 | 0.0 |
| 2012 | Month - 3 (November) | 6.7 | -0.7 | 5.9 | -0.6 | 7.7 | -0.1 |
| 2012 | Month - 2 (December) | 7.1 | 0.4 | 6.5 | 0.6 | 7.9 | 0.2 |
| 2013 | Month - 1 (January) | 8.4 | 0.7 | 7.9 | 1.4 | 8.0 | 1.0 |
| 2013 | Super Bowl Month (February) | 7.5 | -0.9 | 6.9 | -1.0 | 7.7 | -0.3 |
| 2013 | Month + 1 (March) | 7.4 | -0.1 | 6.8 | -0.1 | 7.5 | -0.2 |
| 2013 | Month + 2 (April) | 7.1 | -0.3 | 6.6 | -0.2 | 7.6 | 0.1 |
| 2013 | Month + 3 (May) | 7.6 | 0.5 | 7.0 | 0.4 | 7.5 | -0.1 |
| 2013 | Month + 4 (June) | 8.7 | 1.1 | 8.0 | 1.0 | 7.5 | 0.0 |
| 2013 | Month + 5 (July) | 8.2 | -0.5 | 7.3 | -0.7 | 7.3 | -0.2 |
| 2013 | Month + 6 (August) | 7.9 | -0.3 | 7.0 | -0.3 | 7.2 | -0.1 |
| — | Total Change | -0.6 | — | -0.4 | — | -0.9 | — |

3.4.6 Super Bowl XLVII General Economic Impact

Adding on to population, labor force, and unemployment changes, we can also look at potential non surface-level changes that may also aid in understanding New Orleans' employment change as a result of hosting the Super Bowl. A team of surveyors administered paper surveys at various New Orleans downtown locations between January 30th and February 3rd, 2013. The Division of Business and Economic Research (DBER) at the University of New Orleans analyzed the results and prepared an official report. According to the report, "The overwhelming majority (97.7%) of visitors came to the metro area with the primary purpose of attending Super Bowl XLVII events. 70.2% of the responded reported having plans to attend the game." This supports the dominating popularity of the Super Bowl, as it is the covenant event in which an entire city is fixated upon. In addition, "Super Bowl XLVII produced a total of \$480 million in net economic impact for the New Orleans metro area economy. This total economic impact consists of \$262.8 million of direct spending and \$217.2 million of secondary spending." This supports the idea of the Super Bowl producing net economic benefits for its host city, meaning its benefits override potential losses. Next, "Super Bowl XLVII was responsible for the creation and support of 5,672 full- and part-time jobs in the New Orleans area economy. These jobs created a total of \$154.0 million in additional earnings for residents of the New Orleans area." This reinforces the idea of the Super Bowl creating employment, attaching a specific number to jobs created, as well as reinforces the idea of the Super Bowl creating additional earnings for workers. Second to last, "Super Bowl XLVII generated nearly \$21.0 million of state tax revenue, including sales, hotel, gambling, and income tax. These state tax collections included \$13.1 million in direct state taxes paid from visitor spending within the local economy plus \$7.9 million of indirect tax revenues resulting from the earnings attributable to organizational, media and visitor spending. In addition to state taxes, local governments in the greater New Orleans area received over \$13.9 million in tax revenue attributable to the 2013 Super Bowl. This figure is comprised of \$10.4 million in direct local taxes and another \$3.5 million of indirect local tax revenues." Lastly, the report includes "By every measure, Super Bowl XLVII was a huge win for the city and the region," added New Orleans Mayor Mitch Landrieu. 'Our entire team worked tirelessly for several years to prepare for Super Bowl week and to show the world that nobody can host a large scale event like New Orleans. This news is a further indication that the great planning and execution by all of our partners paid off. The spending and economic impact generated by Super Bowl XLVII benefits businesses and families across our region and state while we shined under the international spotlight.' 'Greater New Orleans and the State of Louisiana proved to the world that we excel at hosting simultaneous major events, such as the Super Bowl, in first-class fashion,' said Vice Chairman of the Board of the New Orleans Saints and Pelicans, Rita Benson LeBlanc." Altogether, this reinforces the scalable impact of the Super Bowl, which has the ability to reach international attention. All of this aids the host city and in turn its employment, with future events spurring off the success of the Super Bowl, indirectly benefiting employment.

3.5 East Rutherford, New Jersey | Super Bowl XLVIII | February 2, 2014

3.5.1 Super Bowl XLVIII and East Rutherford Overview

Super Bowl XLVIII was played between the Seattle Seahawks and the Denver Broncos. The match took place on February 2, 2014 at MetLife Stadium in East Rutherford, New Jersey. According to Statista, the event had an in-person spectator count of 82,529. XLVIII is East Rutherford's only Super Bowl hosting as of 2023. MetLife Stadium also known as The

Meadowlands’ accepted bid to host the Super Bowl is especially unique, as “East Rutherford does not pass the traditional requirement of the host region having a minimum temperature of 50 degrees or a climate controlled indoor stadium” (MetLife Stadium). The NFL only granted the application with the understanding of “ that the bid would be a unique, once-only circumstance based on the opportunity to celebrate the new stadium and the great heritage and history of the NFL in the New York region” (MetLife Stadium). Thus, it is important to understand how a seemingly unpopulated area like East Rutherford is able to host the Super Bowl: they are close to major cities. But due to its smaller economic size, we should be able to observe a grander city-wide impact.

3.5.2 East Rutherford, New Jersey Population (2012-2016)

Table 17 presents East Rutherford’s population statistics from 2012 to 2016. East Rutherford experiences a 2.28% population increase in 2014, from 9,091 to 9,298. Population then dropped by 2.39% in 2015, before experiencing increases in 2016 and 2017, of 1.76% and 2.13% respectively. The total change in population size in this time period is an increase of 327 people. In other words, the population increased by 3.69%.

Table 17 Population Size of East Rutherford, New Jersey (2012-2016)

| Year | Population Size (Person) | Percent of Change (%) |
|------------------------|--------------------------|-----------------------|
| Year - 2 (2012) | 8,909 | — |
| Year - 1 (2013) | 9,091 | 2.04 |
| Super Bowl Year (2014) | 9,298 | 2.28 |
| Year + 1 (2015) | 9,076 | -2.39 |
| Year + 2 (2016) | 9,236 | 1.76 |
| Total Change | 327 | 3.69 |

3.5.3 Bergen County, New Jersey Labor Force (August 2013-August 2014)

Table 18 presents the labor force statistics of Bergen County, New Jersey from August 2013 to August 2014. The lack of East Rutherford statistics is supplemented by its county: Bergen County. The average labor force % change for the 6 months before the Super Bowl is a decrease of 0.44%. In October, we see the start of small increases, with mirrored changes in November (+0.15%) and December (+0.13%). This trend is interrupted by a 0.88% decrease in January, before jumping up by 0.97% in February, Super Bowl month. The average % change in the following 6 months is an increase of 0.12%. It is notable how a trend is forming where the following 6 months of a Super Bowl display more positive labor force changes compared to the 6 months before.

Table 18 Labor Force of Bergen County, New Jersey (August 2013-August 2014)

| Year | Month | Labor Force (Person) | Percent of Change (%) |
|------|--------------------|----------------------|-----------------------|
| 2013 | Month - 6 (August) | 479,555 | — |



| | | | |
|------|-----------------------------|---------|-------|
| 2013 | Month - 5 (September) | 474,343 | -1.09 |
| 2013 | Month - 4 (October) | 474,890 | 0.12 |
| 2013 | Month - 3 (November) | 475,623 | 0.15 |
| 2013 | Month - 2 (December) | 476,247 | 0.13 |
| 2014 | Month - 1 (January) | 472,057 | -0.88 |
| 2014 | Super Bowl Month (February) | 476,627 | 0.97 |
| 2014 | Month + 1 (March) | 478,148 | 0.32 |
| 2014 | Month + 2 (April) | 476,208 | -0.41 |
| 2014 | Month + 3 (May) | 477,526 | 0.28 |
| 2014 | Month + 4 (June) | 481,215 | 0.77 |
| 2014 | Month + 5 (July) | 484,564 | 0.70 |
| 2014 | Month + 6 (August) | 480,075 | -0.93 |
| — | Total Change | 520 | 0.13 |

3.5.4 Bergen County, New Jersey Employment and Unemployment (August 2013-August 2014)

Table 19 presents the number of employed and unemployed people in Bergen County, New Jersey from August 2013 to August 2014. In terms of number of employed people, for the pre 6 months, each is in a direct relationship with labor force, meaning if labor force increases, number of employed people also increases and conversely with decreases. The average change for the first 6 months is -0.17%. In January 2014, we see a 1.49% decrease, followed by a 0.86% increase during the Super Bowl month. This increasing trend continues in March and April, before a 0.20% decrease in May. The average % change in the post 6 months is an increase of 0.17%. Moving on to unemployment numbers, the average % change in number of unemployed people from its previous month from August 2013 to January 2013 is a decrease of 3.88%. Bergen County displays a unique trend where between August and December, unemployment is decreasing, but one month before the Super Bowl and even during the Super Bowl, number of unemployed increases. It is only in March when number of unemployed decreases, followed by a substantial decrease in April of 14.21%. The average % change in number of unemployed people from its previous month between March 2014 and August 2014 is -0.26%. Interestingly, the average change in number of unemployed is less following the Super Bowl. Compiling all three metrics together, during the Super Bowl labor force increases, number of employed people increases, and number of unemployed people

increases. This may suggest that there was a surplus of workers, who came in anticipation to get hired for the Super Bowl, but there were not enough jobs for them.

Table 19 Number of Employed and Unemployed People of Bergen County, New Jersey (August 2013-August 2014)

| Year | Month | Employed People (Person) | Percent of Change (%) | Unemployed People (Person) | Percent of Change (%) |
|------|-----------------------------|--------------------------|-----------------------|----------------------------|-----------------------|
| 2013 | Month - 6 (August) | 446,704 | — | 32,851 | — |
| 2013 | Month - 5 (September) | 443,292 | -0.76 | 31,051 | -5.48 |
| 2013 | Month - 4 (October) | 444,919 | 0.37 | 29,971 | -3.48 |
| 2013 | Month - 3 (November) | 448,954 | 0.91 | 26,669 | -11.02 |
| 2013 | Month - 2 (December) | 451,073 | 0.47 | 25,174 | -5.61 |
| 2014 | Month - 1 (January) | 444,330 | -1.49 | 27,727 | 10.14 |
| 2014 | Super Bowl Month (February) | 448,146 | 0.86 | 28,481 | 2.72 |
| 2014 | Month + 1 (March) | 450,555 | 0.54 | 27,593 | -3.12 |
| 2014 | Month + 2 (April) | 452,536 | 0.44 | 23,672 | -14.21 |
| 2014 | Month + 3 (May) | 451,630 | -0.20 | 25,896 | 9.40 |
| 2014 | Month + 4 (June) | 454,561 | 0.65 | 26,654 | 2.93 |
| 2014 | Month + 5 (July) | 455,426 | 0.19 | 29,138 | 9.32 |
| 2014 | Month + 6 (August) | 452,656 | -0.61 | 27,419 | -5.90 |
| — | Total Change | 5,952 | 1.37 | -5,432 | -14.31 |

3.5.5 East Rutherford, New Jersey, and United States Unemployment Rate (August 2013-August 2014)

Table 20 presents the unemployment rate of East Rutherford, New Jersey, and the United States from August 2013 to August 2014. For the first 5 months, there is a declining trend. However in January 2014, the rate changes from 5.3% to 5.8%, increasing by 0.5%. Reflecting the labor force statistics, the unemployment rate actually increases during the Super Bowl, from 5.8% to 6.0%. It is only in March when the rate decreases, then falling substantially in April by 0.8%. August 2013's unemployment rate is 6.6% while August 2014's unemployment rate is 5.6%. Limitations aside, this suggests the theory that hosting the Super Bowl decreases a host city's unemployment rate for at least a 6 month period.



Table 20 Unemployment Rate of East Rutherford, New Jersey, and United States (August 2013-August 2014)

| Year | Month | East Rutherford UR (%) | Percent of Change (%) | New Jersey UR (%) | Percent of Change (%) | United States UR (%) | Percent of Change (%) |
|------|-----------------------------|------------------------|-----------------------|-------------------|-----------------------|----------------------|-----------------------|
| 2013 | Month - 6 (August) | 6.6 | — | 7.9 | — | 7.2 | — |
| 2013 | Month - 5 (September) | 6.4 | -0.2 | 7.8 | -0.1 | 7.2 | 0.0 |
| 2013 | Month - 4 (October) | 6.2 | -0.2 | 7.6 | -0.2 | 7.2 | 0.0 |
| 2013 | Month - 3 (November) | 5.5 | -0.7 | 7.0 | -0.6 | 6.9 | -0.3 |
| 2013 | Month - 2 (December) | 5.3 | -0.2 | 6.8 | -0.2 | 6.7 | -0.2 |
| 2014 | Month - 1 (January) | 5.8 | 0.5 | 7.6 | 0.8 | 6.6 | -0.1 |
| 2014 | Super Bowl Month (February) | 6.0 | 0.2 | 7.7 | 0.1 | 6.7 | 0.1 |
| 2014 | Month + 1 (March) | 5.8 | -0.2 | 7.4 | -0.3 | 6.7 | 0.0 |
| 2014 | Month + 2 (April) | 5.0 | -0.8 | 6.4 | -1.0 | 6.2 | -0.5 |
| 2014 | Month + 3 (May) | 5.3 | 0.3 | 6.5 | 0.1 | 6.3 | 0.1 |
| 2014 | Month + 4 (June) | 5.5 | 0.2 | 6.6 | 0.1 | 6.1 | -0.2 |
| 2014 | Month + 5 (July) | 6.0 | 0.5 | 7.1 | 0.5 | 6.2 | 0.1 |
| 2014 | Month + 6 (August) | 5.6 | -0.4 | 6.7 | -0.4 | 6.1 | -0.1 |
| — | Total Change | -1.0 | — | -1.2 | — | -1.1 | — |

3.5.6 Super Bowl XLVIII General Economic Impact

Adding on to population, labor force, and unemployment changes, we can also look at potential non surface-level changes that may also aid in understanding East Rutherford's and its surrounding areas' employment change as a result of hosting the Super Bowl. One of the major issues that occurred was a mass transit fiasco with the New Jersey train system. According to an article from USA Today, "The game's organizers had estimated 12,000-15,000 passengers would use New Jersey trains. In reality, that number was nearly 28,000 more than an hour before kickoff, causing crowds to swell at Secaucus (N.J.) Junction, where fans complained of stifling heat and long waits through security. After the game, the congestion got so bad that the public-address announcer at the stadium asked fans to stay put until further notice. The game ended about 9:55 p.m. ET, but many weren't able to leave until after 12:30 a.m." This issue mainly stemmed from the lack of parking at the MetLife Stadium. "Out of the normal 28,000 spaces, only about 10,000 were available because of additional media and security requirements for the Super Bowl." Because of this major stepback, potential event runners may have been deterred from hosting in East Rutherford or downsized their events to meet the smaller infrastructure. This would have hurt not only East Rutherford's economy, but its employees who potentially missed out on more jobs and greater wages.

3.6 Glendale, Arizona | Super Bowl XLIX | February 1, 2015

3.6.1 Super Bowl XLIX and Glendale Overview

Super Bowl XLIX was played between the New England Patriots and the Seattle Seahawks. The match took place on February 1, 2015 at State Farm Stadium in Glendale, Arizona. According to Statista, the event had an in-person spectator count of 70,288 people. As of September 2023, Glendale has hosted the Super Bowl three times. Glendale's mild average February temperature high of 70 degrees Fahrenheit makes it a strong candidate for hosting every year.

3.6.2 Glendale, Arizona Population (2013-2017)

Table 21 presents Glendale's population data from 2013 to 2017. Each year experiences an increase in population size. 2016, the year following the Super Bowl, experiences the greatest population increase of 2.17%. During this time frame, there is an increase of 11,496 people. In other words, the population increases by 4.92%.

Table 21 Population Size of Glendale, Arizona (2013-2017)

| Year | Population Size (Person) | Percent of Change (%) |
|------------------------|--------------------------|-----------------------|
| Year - 2 (2013) | 230,047 | — |
| Year - 1 (2014) | 231,978 | 0.84 |
| Super Bowl Year (2015) | 234,844 | 1.24 |
| Year + 1 (2016) | 239,943 | 2.17 |
| Year + 2 (2017) | 241,543 | 0.67 |
| Total Change | 11,496 | 4.92 |

3.6.3 Phoenix, Mesa, Scottsdale, Arizona Labor Force (August 2014-August 2015)

Table 22 presents the labor force statistics of Phoenix, Mesa, and Scottsdale from August 2014 to August 2015. From August 2014 to January 2015, the average % change in labor force from the previous month is an increase of 0.36% per month. There is a slight increasing trend from August to November, but December displays a 0.37% decrease. In January, there is a 0.59% increase, but interestingly during the Super Bowl month, there is a 0.28% decrease. This suggests that many people enter the labor market months before the Super Bowl instead of right before. From March 2015 to August 2015, the average % change in labor force from the previous month is 0.19% per month. This is less than the 6 months before the Super Bowl.

Table 22 Labor Force of Phoenix, Mesa, and Scottsdale, Arizona (August 2014-August 2015)

| Year | Month | Labor Force (Person) | Percent of Change (%) |
|------|-----------------------------|----------------------|-----------------------|
| 2014 | Month - 6 (August) | 2,128,690 | — |
| 2014 | Month - 5 (September) | 2,143,267 | 0.68 |
| 2014 | Month - 4 (October) | 2,153,629 | 0.48 |
| 2014 | Month - 3 (November) | 2,168,430 | 0.69 |
| 2014 | Month - 2 (December) | 2,160,339 | -0.37 |
| 2015 | Month - 1 (January) | 2,173,036 | 0.59 |
| 2015 | Super Bowl Month (February) | 2,166,995 | -0.28 |
| 2015 | Month + 1 (March) | 2,173,375 | 0.29 |
| 2015 | Month + 2 (April) | 2,173,302 | <0.01 |
| 2015 | Month + 3 (May) | 2,183,151 | 0.45 |
| 2015 | Month + 4 (June) | 2,189,192 | 0.28 |
| 2015 | Month + 5 (July) | 2,196,358 | 0.33 |
| 2015 | Month + 6 (August) | 2,192,282 | -0.19 |
| — | Total Change | 63,592 | 2.95 |

3.6.4 Phoenix, Mesa, and Scottsdale, Arizona Employment and Unemployment (August 2014-August 2015)

Table 23 presents the number of employed and unemployed people in Phoenix, Mesa, and Scottsdale from August 2014 to August 2015. During the Super Bowl, there is an increase in number of employed people (0.21%), which means that a vast majority of the decrease in labor force was a result of unemployed people leaving the labor market. Between March and August 2015, the average % change in number of employed people from the previous month is an increase of 0.16%. This is also less than the 6 months before the Super Bowl. Finally, from August 2014 to January 2015, the average % change in number of unemployed people from the previous month is a decrease of 1.10% per month. The overall trend is a decrease in number of unemployed up until January, where the number of unemployed increases by 7.91%. During the Super Bowl month, the number of unemployed decreases by 8.37%. During March 2015 to August 2015, the average % change in number of unemployed people from the previous month is +0.85%. During the six month timespan before the Super Bowl, the number of unemployed people was decreasing, whereas after it is increasing. This is a unique case, as the trend has been the opposite.

Table 23 Number of Employed and Unemployed People of Phoenix, Mesa, and Scottsdale, Arizona (August 2014-August 2015)

| Year | Month | Employed People (Person) | Percent of Change (%) | Unemployed People (Person) | Percent of Change (%) |
|------|-----------------------------|--------------------------|-----------------------|----------------------------|-----------------------|
| 2014 | Month - 6 (August) | 1,994,911 | — | 133,779 | — |
| 2014 | Month - 5 (September) | 2,0166,67 | 1.09 | 126,600 | -5.37 |
| 2014 | Month - 4 (October) | 2,030,502 | 0.69 | 123,127 | -2.74 |
| 2014 | Month - 3 (November) | 2,048,080 | 0.87 | 120,350 | -2.26 |
| 2014 | Month - 2 (December) | 2,044,745 | -0.16 | 115,594 | -3.95 |
| 2015 | Month - 1 (January) | 2,048,298 | 0.17 | 124,738 | 7.91 |
| 2015 | Super Bowl Month (February) | 2,052,694 | 0.21 | 114,301 | -8.37 |
| 2015 | Month + 1 (March) | 2,061,660 | 0.44 | 111,715 | -2.26 |
| 2015 | Month + 2 (April) | 2,064,864 | 0.16 | 108,438 | -2.93 |
| 2015 | Month + 3 (May) | 2,073,158 | 0.40 | 109,993 | 1.43 |
| 2015 | Month + 4 (June) | 2,067,566 | -0.27 | 121,626 | 10.58 |
| 2015 | Month + 5 (July) | 2,074,043 | 0.31 | 122,315 | 0.57 |



| | | | | | |
|-------------|---------------------------|-----------|-------|---------|-------|
| 2015 | Month + 6 (August) | 2,072,802 | -0.06 | 119,480 | -2.32 |
| — | Total Change | 77,811 | 3.85 | -14,299 | -9.71 |

3.6.5 Glendale, Arizona, and United States Unemployment Rate (August 2014-August 2015)

Table 24 presents the unemployment rate of Glendale, Arizona, and the United States from August 2014 to August 2015. The first five months display a decreasing trend. In August, the rate is 6.8% and in December the rate is 5.6%. One month before the Super Bowl, the rate increases from 5.6% to 6.0%. During February, the rate drops back down to 5.5%. For the next 2 months, the rate decreases, then remains stagnant for 1 month. 4 months after the Super Bowl (June 2015) marks the start in rate increasing once again.

Table 24 Unemployment Rate of Glendale, Arizona, and United States (August 2014-August 2015)

| Year | Month | Glendale UR (%) | Percent of Change (%) | Arizona UR (%) | Percent of Change (%) | United States UR (%) | Percent of Change (%) |
|------|-----------------------------|-----------------|-----------------------|----------------|-----------------------|----------------------|-----------------------|
| 2014 | Month - 6 (August) | 6.8 | — | 7.4 | — | 6.1 | — |
| 2014 | Month - 5 (September) | 6.5 | -0.3 | 6.9 | -0.5 | 5.9 | -0.2 |
| 2014 | Month - 4 (October) | 6.2 | -0.3 | 6.6 | -0.3 | 5.7 | -0.2 |
| 2014 | Month - 3 (November) | 6.0 | -0.2 | 6.3 | -0.3 | 5.8 | 0.1 |
| 2014 | Month - 2 (December) | 5.6 | -0.4 | 6.2 | -0.1 | 5.6 | -0.2 |
| 2015 | Month - 1 (January) | 6.0 | 0.4 | 6.5 | 0.3 | 5.7 | 0.1 |
| 2015 | Super Bowl Month (February) | 5.5 | -0.5 | 6.1 | -0.4 | 5.5 | -0.2 |
| 2015 | Month + 1 (March) | 5.4 | -0.1 | 5.9 | -0.2 | 5.4 | -0.1 |
| 2015 | Month + 2 (April) | 5.2 | -0.2 | 5.8 | -0.1 | 5.4 | 0.0 |

| | | | | | | | |
|------|-----------------------|------|-----|------|------|------|------|
| 2015 | Month + 3 (May) | 5.2 | 0.0 | 6.0 | 0.2 | 5.6 | 0.2 |
| 2015 | Month + 4 (June) | 5.7 | 0.5 | 6.4 | 0.4 | 5.3 | -0.3 |
| 2015 | Month + 5 (July) | 5.7 | 0.0 | 6.5 | 0.1 | 5.2 | -0.1 |
| 2015 | Month + 6 (August) | 5.8 | 0.1 | 6.4 | -0.1 | 5.1 | -0.1 |
| — | Total Change | -1.0 | — | -1.0 | — | -1.0 | — |

3.6.6 Super Bowl XLIX General Economic Impact

Adding on to population, labor force, and unemployment changes, we can also look at potential non surface-level changes that may also aid in understanding Glendale’s and its surrounding areas’ employment change as a result of hosting the Super Bowl. According to an economic-impact study released at the Arizona Governor’s Conference on Tourism in Paradise Valley, the event had an overall economic impact of \$720 million, which takes into account “a multiplier factor, or ripple effect, as visitors’ dollars circulated through the local economy from one company to the next and through employee wages.” The report is featured on an AZcentral article, which also includes the fact that “some economists caution that economic-impact studies for major sporting events often overestimate the local windfall because they fail to account for the lost spending of tourists displaced by sports fans attending the event.” However, Michael Mokwa, ASU researcher and marketing professor, “discounted the displacement effect in Arizona, saying that convention groups or vacationers still come to the Valley in the week before or the week after the Super Bowl.” Interestingly, Jerry Weiers, the mayor of Glendale, reported to ESPN that the city had lost money hosting the game. Similarly in 2008, Glendale said it spent \$3.4 million, mostly on public safety, and earned only \$1.2 million in taxes from direct spending at places like hotels and restaurants. (“Glendale not cheering Super Bowl”, 2015). This shows that little of the money generated by the event actually directly aids the host city. In fact the NFL rarely reimburses the host city’s costs, meaning the actual host city loses money.

3.7 Santa Clara, California | Super Bowl L | February 7, 2016

3.7.1 Super Bowl L and Santa Clara Overview

In 2013, NFL team owners voted the 49ers’ stadium, Levi’s Stadium, as the venue for Super Bowl L. Santa Clara had beat Miami, which was stymied in its bid to stage an 11th Super Bowl when the Florida Legislature did not support financing to renovate Sun Life Stadium, the home of the Miami Dolphins (“San Francisco, Houston win Super Bowl bids”, 2013). Super Bowl L was played between the Denver Broncos and the Carolina Panthers. The match took place on February 7, 2016 at Levi’s Stadium in Santa Clara, California. According to Statista, the event had an in-person spectator count of 71,088. Super Bowl L marks Santa Clara’s first time hosting and its success has resulted in the city’s successful bid to host Super Bowl LX in 2026. Levi’s Stadium especially has been a covenant destination for world class events,

including the 2015 WrestleMania, 2019 College Football Playoff National Championship game, Taylor Swift's Eras Tour, and upcoming 2026 FIFA World Cup. Along with being in the heart of Silicon Valley, Santa Clara's temperate February average range of 45°F to 63°F make it a strong host city candidate every bid.

3.7.2 Santa Clara, California Population (2014-2018)

Table 25 presents Santa Clara's population size and change from 2014 to 2018. The population of Santa Clara increases at a slight rate each year. Interestingly, 2016 has the lowest increase at 0.67%. In other words, Santa Clara and its nearby areas hold stronger barriers to moving in compared to the temptation of one to move in compelled by the Super Bowl. During the time period, Santa Clara's population increases by 4,784 people. In other words, the population increases by 3.87%.

Table 25 Population Size of Santa Clara, California (2014-2018)

| Year | Population Size (Person) | Percent of Change (%) |
|------------------------|--------------------------|-----------------------|
| Year - 2 (2014) | 121,903 | — |
| Year - 1 (2015) | 123,176 | 1.04 |
| Super Bowl Year (2016) | 124,000 | 0.67 |
| Year + 1 (2017) | 125,472 | 1.19 |
| Year + 2 (2018) | 126,687 | 0.97 |
| Total Change | 4,784 | 3.87 |

3.7.3 San Jose, Sunnyvale, and Santa Clara, California Labor Force (August 2015-August 2016)

Table 26 presents San Jose, Sunnyvale, and Santa Clara's combined labor force from August 2015 to August 2016. San Jose and Sunnyvale are two major cities near Santa Clara and will also feel the economic and employment impact from the Super Bowl. For the 6 months before the Super Bowl, there is no general labor force trend. The average change in labor force per month is an increase of 0.02%. Labor force does increase one month before the Super Bowl. During the Super Bowl, labor force increases by a notable 0.53%. The following 6 months display no general monthly trend and the average change in labor force per month is an increase of 0.11%. This means that more people entered the labor market in the 6 month timespan following the Super Bowl compared to the 6 month timespan before the Super Bowl.

Table 26 Labor Force of San Jose, Sunnyvale, and Santa Clara, California (August 2015-August 2016)

| Year | Month | Labor Force (Person) | Percent of Change (%) |
|------|-----------------------|----------------------|-----------------------|
| 2015 | Month - 6 (August) | 1,046,047 | — |
| 2015 | Month - 5 (September) | 1,044,459 | -0.21 |

| | | | |
|------|-----------------------------|-----------|-------|
| 2015 | Month - 4 (October) | 1,049,351 | 0.47 |
| 2015 | Month - 3 (November) | 1,047,758 | -0.15 |
| 2015 | Month - 2 (December) | 1,047,273 | -0.05 |
| 2016 | Month - 1 (January) | 1,050,450 | 0.30 |
| 2016 | Super Bowl Month (February) | 1,056,027 | 0.53 |
| 2016 | Month + 1 (March) | 1,058,092 | 0.20 |
| 2016 | Month + 2 (April) | 1,050,589 | -0.71 |
| 2016 | Month + 3 (May) | 1,053,756 | 0.30 |
| 2016 | Month + 4 (June) | 1,061,713 | 0.76 |
| 2016 | Month + 5 (July) | 1,066,341 | 0.44 |
| 2016 | Month + 6 (August) | 1,062,813 | -0.33 |
| — | Total Change | 16,766 | 1.55 |

3.7.4 San Jose, Sunnyvale, and Santa Clara, California Employment and Unemployment (August 2015-August 2016)

Table 27 presents the number of employed and unemployed people in San Jose, Sunnyvale, and Santa Clara from August 2015 to August 2016. In terms of the number of employed people, there is a general upward monthly trend in the 6 months before the Super Bowl. The only decrease is in November, with a small decrease of 0.10%. The average change in number of employed people per month is an increase of 0.12%. During the Super Bowl, there is a strong increase of 0.53%, which stands out from the average 0.12% from the prior 6 months. The following 6 months do not show a general trend and the average change per month is an increase of 0.10%. This means that more people were getting hired in preparation for the Super Bowl, however the drop off after is not groundbreaking. Finally, there is no general trend in number of unemployed people during the 6 months before the Super Bowl. The average change per month is a decrease of 1.78%. Notably, there is a strong increase of unemployed people (5.95%) one month before the Super Bowl. During the Super Bowl, there is in fact a 0.55% increase, however it is much less drastic compared to the previous month. The following 6 months do not show a general trend and the average change per month is an increase of 0.62%. This aligns with the employment data, as more people are remaining unemployed after the Super Bowl.

Table 27 Number of Employed and Unemployed People of San Jose, Sunnyvale, and Santa Clara, California (August 2015-August 2016)

| Year | Month | Employed | Percent of | Unemployed | Percent of |
|------|-------|----------|------------|------------|------------|
|------|-------|----------|------------|------------|------------|



| | | People (Person) | Change (%) | People (Person) | Change (%) |
|------|--------------------------------|--------------------|---------------|--------------------|------------|
| 2015 | Month - 6 (August) | 1,001,760 | — | 44,287 | — |
| 2015 | Month - 5 (September) | 1,003,313 | 0.16 | 41,146 | -7.09 |
| 2015 | Month - 4 (October) | 1,007,182 | 0.39 | 42,169 | 2.49 |
| 2015 | Month - 3 (November) | 1,006,165 | -0.10 | 41,593 | -1.37 |
| 2015 | Month - 2 (December) | 1,007,653 | 0.15 | 39,620 | -4.74 |
| 2016 | Month - 1 (January) | 1,008,471 | 0.08 | 41,979 | 5.95 |
| 2016 | Super Bowl Month (February) | 1,013,816 | 0.53 | 42,211 | 0.55 |
| 2016 | Month + 1 (March) | 1,014,924 | 0.11 | 43,168 | 2.27 |
| 2016 | Month + 2 (April) | 1,010,522 | -0.43 | 40,067 | -7.18 |
| 2016 | Month + 3 (May) | 1,017,170 | 0.66 | 36,586 | -8.69 |
| 2016 | Month + 4 (June) | 1,018,813 | 0.16 | 42,900 | 17.26 |
| 2016 | Month + 5 (July) | 1,022,538 | 0.37 | 43,803 | 2.10 |
| 2016 | Month + 6 (August) | 1,019,896 | -0.26 | 42,917 | -2.02 |
| — | Total Change | 18,136 | 1.82 | -1,370 | -0.47 |

3.7.5 Santa Clara, California, and United States Unemployment Rate (August 2015-August 2016)

Table 28 presents the unemployment rate of Santa Clara, California, and the United States from August 2015 to August 2016. Straight off the bat, it is apparent that Santa Clara’s unemployment rate is generally substantially lower than state and nationwide average. During the 6 months before the Super Bowl, the unemployment rate seems to be relatively stagnant, with the rate being 3.7% in both August 2015 and January 2016 and minimal changes in between. During the Super Bowl, the unemployment rate also remains at 3.7%. One month after in March, the rate increases by 0.1% to 3.8%. 6 months after the Super Bowl in August, the unemployment rate returns to 3.7%. It is apparent that Santa Clara’s unemployment rate is relatively stagnant, based on other factors, and likely was minimally affected by the Super Bowl compared to other host cities. Looking at the unemployment rate of California, there is a decrease from August 2015 to the Super Bowl, as the rate drops by 0.3%. Following the Super Bowl, California’s unemployment rate is also noticeably lower than the months prior. This may suggest that Santa Clara as a host city was not affected, but surrounding areas were. Lastly, it is apparent that the Super Bowl does not substantially affect nationwide unemployment.

Table 28 Unemployment Rate of Santa Clara, California, and United States (August 2015-August 2016)

| Year | Month | Santa Clara UR (%) | Percent of Change (%) | California UR (%) | Percent of Change (%) | United States UR (%) | Percent of Change (%) |
|------|-----------------------------|--------------------|-----------------------|-------------------|-----------------------|----------------------|-----------------------|
| 2015 | Month - 6 (August) | 3.7 | — | 6.1 | — | 5.1 | — |
| 2015 | Month - 5 (September) | 3.5 | -0.2 | 5.7 | -0.4 | 5.0 | -0.1 |
| 2015 | Month - 4 (October) | 3.5 | 0.0 | 5.7 | 0.0 | 5.0 | 0.0 |
| 2015 | Month - 3 (November) | 3.5 | 0.0 | 5.7 | 0.0 | 5.1 | 0.1 |
| 2015 | Month - 2 (December) | 3.3 | -0.2 | 5.6 | -0.1 | 5.0 | -0.1 |
| 2016 | Month - 1 (January) | 3.7 | 0.4 | 5.9 | 0.3 | 4.9 | -0.1 |
| 2016 | Super Bowl Month (February) | 3.7 | 0.0 | 5.8 | -0.1 | 4.9 | 0.0 |
| 2016 | Month + 1 (March) | 3.8 | 0.1 | 5.8 | 0.0 | 5.0 | 0.1 |
| 2016 | Month + 2 (April) | 3.5 | -0.3 | 5.3 | -0.5 | 5.0 | 0.0 |
| 2016 | Month + 3 (May) | 3.2 | -0.3 | 5.0 | -0.3 | 4.8 | -0.2 |
| 2016 | Month + 4 (June) | 3.7 | 0.5 | 5.6 | 0.6 | 4.9 | 0.1 |
| 2016 | Month + 5 (July) | 3.9 | 0.2 | 5.8 | 0.2 | 4.8 | -0.1 |
| 2016 | Month + 6 (August) | 3.7 | -0.2 | 5.6 | -0.2 | 4.9 | 0.1 |
| — | Total Change | 0.0 | — | -0.5 | — | -0.2 | — |

3.7.6 Super Bowl L General Economic Impact

Lastly, it is important to consider impacts on the general economy and other sectors. In terms of direct city profit, according to the “City of Santa Clara Super Bowl 50 Fiscal Impact Report”, expenses marked \$3,497,808, revenue marked \$4,241,723, thus net income for the city was \$743,914. An independent study from Dr. Patrick Rische, CEO of Sports Impacts, estimated that the Super Bowl and its corresponding events had a net positive economic impact on the Bay Area of at least \$240 million (“Study: Super Bowl 50 Brought \$240 Million Boost To Bay Area Economy”, 2016). This is noticeably and intentionally lower than past host city estimates, as Rische wanted the study to accurately distinguish between the money spent during

the Super Bowl with the money actually spent because of the Super Bowl. “In analyzing Super Bowl 50,’ said Rishe, ‘we have applied conservative methodology that only considers spending that was directly spurred by the Big Game – while also taking into consideration spending that was likely displaced by the major event.’ To accurately determine the financial impact associated with Super Bowl 50, Rishe and his team of analysts tallied the spending by non-local game-day attendees; by out-of-towners who visited the Bay Area to participate in Super Bowl 50 events but did not attend the game itself; by non-local event participants including media, sponsors, vendors and NFL staff; and spending by event organizers on logistics and operations originating from non-local sources. Analysts did not count any spending toward the total spending that would eventually leave the Bay Area, such as money brought in by non-locally owned rental car companies. Analysts also largely excluded spending by Bay Area residents during Super Bowl week, with the assumption that local would have spent their money elsewhere in the region regardless of the presence of the Big Game” (“Study: Super Bowl 50 Brought \$240 Million Boost To Bay Area Economy”, 2016). The city of San Jose also received a \$1.25 million boost in hotel tax revenue alone (“Economic boom our bust? Mixed reviews for Super Bowl in Santa Clara”, 2016). All in all, city officials and economists have concluded that Super Bowl L was a beneficial investment and it will be interesting to compare these statistics with the ones of Super Bowl LX.

3.8 Houston, Texas | Super Bowl LI | February 7, 2017

3.8.1 Super Bowl LI and Houston Overview

Super Bowl LI was played between the New England Patriots and the Atlanta Falcons. The match took place on February 5, 2017 at NRG Stadium in Houston, Texas. According to Statista, the event had an in-person spectator count of 70,807. At the time of hosting, “Houston, the nation’s fourth-largest city, was continuing to struggle with the aftershocks of a two-year economic downturn caused by a plunge in oil prices” (“The Super Bowl Returns to a Transformed Houston”, 2017). LI is Houston’s third Super Bowl hosting and second at NRG Stadium. Since Super Bowl XXXVIII in 2004, Houston created 4,000 new dining establishments, transformed its famous Avenida de las Americas, and doubled its hotel capacity from 44,000 to 84,000 rooms (“Is Houston The NFL's Best Super Bowl Host City?”, 2017). Additionally, Houston’s average February low of 48°F and average high of 64°F allows visitors to enjoy both watching the event, as well as partake in other outdoor activities.

3.8.2 Houston, Texas Population (2015-2019)

Table 29 presents Houston’s population data from 2015 to 2019. The population of Houston increases every year except 2019. 2016, the year before the Super Bowl, exhibits the greatest increase. In this timespan, Houston’s population increases by 33,638 people. In other words, the population increases by 1.46%.

Table 29 Population Size of Houston, Texas (2015-2019)

| Year | Population Size (Person) | Percent of Change (%) |
|------------------------|--------------------------|-----------------------|
| Year - 2 (2015) | 2,286,630 | — |
| Year - 1 (2016) | 2,309,752 | 1.01 |
| Super Bowl Year (2017) | 2,317,445 | 0.33 |

| | | |
|------------------------|-----------|-------|
| Year + 1 (2018) | 2,325,502 | 0.35 |
| Year + 2 (2019) | 2,320,268 | -0.23 |
| Total Change | 33,638 | 1.46 |

3.8.3 Houston, The Woodlands, and Sugar Land, Texas Labor Force (August 2016-August 2017)

Table 30 presents Houston, The Woodlands, and Sugar Land’s combined labor force, number of employed, and unemployed people statistics from August 2016 to August 2017. The 6 months prior to the Super Bowl show no general trend for labor force. There is an average decrease of 0.19% per month. One month before the Super Bowl, the labor force decreased by a substantial 0.60%, before increasing by 0.70% during the Super Bowl’s month. The average change per month for the 6 months after the Super Bowl is an increase of 0.01%. This means that the labor force market expanded as a result of hosting the Super Bowl.

Table 30 Labor Force of Houston, The Woodlands, and Sugar Land, Texas (August 2016-August 2017)

| Year | Month | Labor Force (Person) | Percent of Change (%) |
|-------------|-----------------------------|-----------------------------|------------------------------|
| 2016 | Month - 6 (August) | 3,306,104 | — |
| 2016 | Month - 5 (September) | 3,309,586 | 0.11 |
| 2016 | Month - 4 (October) | 3,301,438 | -0.25 |
| 2016 | Month - 3 (November) | 3,306,678 | 0.16 |
| 2016 | Month - 2 (December) | 3,304,322 | -0.07 |
| 2017 | Month - 1 (January) | 3,284,575 | -0.60 |
| 2017 | Super Bowl Month (February) | 3,307,604 | 0.70 |
| 2017 | Month + 1 (March) | 3,307,651 | <0.01 |
| 2017 | Month + 2 (April) | 3,310,877 | 0.10 |
| 2017 | Month + 3 (May) | 3,297,835 | -0.40 |
| 2017 | Month + 4 (June) | 3,314,075 | 0.49 |
| 2017 | Month + 5 (July) | 3,318,941 | 0.15 |
| 2017 | Month + 6 (August) | 3,310,250 | -0.26 |

| | | | |
|---|---------------------|-------|------|
| — | Total Change | 4,146 | 0.13 |
|---|---------------------|-------|------|

3.8.4 Houston, The Woodlands, and Sugar Land, Texas Employment and Unemployment (August 2016-August 2017)

Table 31 presents the number of employed and unemployed people in Houston, The Woodlands, and Sugar Land from August 2016 to August 2017. In terms of number of employed people, there is no general trend for the 6 months prior the Super Bowl. There is an average decrease of 0.20% per month. Starting in December 2016, we see a decreasing trend, with a substantial decrease of 1.12% in January. During the Super Bowl, there is a sudden increase in employment by 0.86%. The average change per month for the 6 months after the Super Bowl is an increase of 0.11%. This means that the 6 months following the Super Bowl saw not only more people getting hired compared to the 6 months before, but employment was still increasing for a substantial amount of time following the event. The average change per month for number of unemployed people for the 6 months prior is a 0.19% increase. Starting in December 2016, we see an increasing trend in unemployment. January has a substantial increase of 8.64%. February is the beginning of a declining trend, with a decrease of 1.80%, 7.65% in March, 7.04% in April, and 2.25% in May. The average change per month for the 6 months after the Super Bowl is a decrease of 1.51%. This means that even after the Super Bowl, the unemployment market is still shrinking.

Table 31 Number of Employed and Unemployed People of Houston, The Woodlands, and Sugar Land, Texas (August 2016-August 2017)

| Year | Month | Employed People (Person) | Percent of Change (%) | Unemployed People (Person) | Percent of Change (%) |
|------|-----------------------------|--------------------------|-----------------------|----------------------------|-----------------------|
| 2016 | Month - 6 (August) | 3,115,546 | — | 190,558 | — |
| 2016 | Month - 5 (September) | 3,118,850 | 0.11 | 190,736 | 0.09 |
| 2016 | Month - 4 (October) | 3,125,120 | 0.20 | 176,318 | -7.56 |
| 2016 | Month - 3 (November) | 3,132,634 | 0.24 | 174,044 | -1.29 |
| 2016 | Month - 2 (December) | 3,126,562 | -0.19 | 177,760 | 2.14 |
| 2017 | Month - 1 (January) | 3,091,454 | -1.12 | 193,121 | 8.64 |
| 2017 | Super Bowl Month (February) | 3,117,957 | 0.86 | 189,647 | -1.80 |
| 2017 | Month + 1 (March) | 3,132,519 | 0.47 | 175,132 | -7.65 |
| 2017 | Month + 2 (April) | 3,148,076 | 0.50 | 162,801 | -7.04 |
| 2017 | Month + 3 (May) | 3,138,702 | -0.30 | 159,133 | -2.25 |



| | | | | | |
|------|--------------------|-----------|-------|---------|-------|
| 2017 | Month + 4 (June) | 3,141,506 | 0.09 | 172,569 | 8.44 |
| 2017 | Month + 5 (July) | 3,150,019 | 0.27 | 168,922 | -2.11 |
| 2017 | Month + 6 (August) | 3,138,655 | -0.36 | 171,595 | 1.58 |
| — | Total Change | 23,109 | 0.77 | -18,963 | -8.81 |

3.8.5 Houston, Texas, and United States Unemployment Rate (August 2016-August 2017)

Table 32 presents the unemployment rate of Houston, Texas, and the United States from August 2016 to August 2017. There is no general trend for the 6 months prior to the Super Bowl. In January, there is a substantial increase of 0.5%. During the month of the Super Bowl, the rate only decreases by 0.1%. However in March, the rate decreases by 0.4%, 0.3% in April and 0.1% in May before remaining stagnant at 5.0% in June, July, and August. Similar trends are present in Texas' unemployment rate, as we see a substantial increase on month before the Super Bowl, a small decline during the Super Bowl, and substantial decreases in the months following.

Table 32 Unemployment Rate of Houston, Texas, and United States (August 2016-August 2017)

| Year | Month | Houston UR (%) | Percent of Change (%) | Texas UR (%) | Percent of Change (%) | United States UR (%) | Percent of Change (%) |
|------|-----------------------------|----------------|-----------------------|--------------|-----------------------|----------------------|-----------------------|
| 2016 | Month - 6 (August) | 5.5 | — | 5.0 | — | 4.9 | — |
| 2016 | Month - 5 (September) | 5.6 | 0.1 | 4.9 | -0.1 | 5.0 | 0.1 |
| 2016 | Month - 4 (October) | 5.2 | -0.4 | 4.6 | -0.3 | 4.9 | -0.1 |
| 2016 | Month - 3 (November) | 5.1 | -0.1 | 4.5 | -0.1 | 4.7 | -0.2 |
| 2016 | Month - 2 (December) | 5.1 | 0.0 | 4.5 | 0.0 | 4.7 | 0.0 |
| 2017 | Month - 1 (January) | 5.6 | 0.5 | 5.0 | 0.5 | 4.7 | 0.0 |
| 2017 | Super Bowl Month (February) | 5.5 | -0.1 | 4.8 | -0.2 | 4.7 | 0.0 |
| 2017 | Month + 1 (March) | 5.1 | -0.4 | 4.5 | -0.3 | 4.4 | -0.3 |
| 2017 | Month + 2 (April) | 4.8 | -0.3 | 4.1 | -0.4 | 4.4 | 0.0 |

| | | | | | | | |
|------|--------------------|------|------|------|-----|------|------|
| 2017 | Month + 3 (May) | 4.7 | -0.1 | 4.1 | 0.0 | 4.4 | 0.0 |
| 2017 | Month + 4 (June) | 5.0 | 0.3 | 4.5 | 0.4 | 4.3 | -0.1 |
| 2017 | Month + 5 (July) | 5.0 | 0.0 | 4.5 | 0.0 | 4.3 | 0.0 |
| 2017 | Month + 6 (August) | 5.0 | 0.0 | 4.5 | 0.0 | 4.4 | 0.1 |
| — | Total Change | -0.5 | — | -0.5 | — | -0.5 | — |

3.8.6 Super Bowl LI General Economic Impact

Lastly it is important to consider impacts on the general economy and other sectors. According to PR Newswire, the total net economic impact from Super Bowl LI from visitors outside of Houston was \$347 million. Additionally, there was a \$4 million distribution to 78 Houston non-profits. According to Community Impact, Super Bowl was the most-watched Super Bowl event of its time, with 172 million viewers within 70% of homes across the nation. According to the Houston Super Bowl Host Committee, 10,000 volunteers also served as ambassadors for Houston for visitors. This demonstrates both the strong demand and supply of individuals brought upon by the Super Bowl. All in all, economists and reports have concluded that Super Bowl LI was a beneficial investment and continues to be for the city of Houston.

3.9 Minneapolis, Minnesota | Super Bowl LII | February 4, 2018

3.9.1 Super Bowl LII and Minneapolis Overview

Super Bowl LII was played between the Philadelphia Eagles and the New England Patriots. The match took place on February 4, 2018 at U.S. Bank Stadium in Minneapolis, Minnesota. According to Statista, the event had an in-person spectator count of 67,612 people. In May 2014, the majority of 32 NFL team owners voted for Minneapolis over 10-time host New Orleans. Later, Commissioner Roger Goodell said Minneapolis' new billion-dollar stadium was a key factor in the owners' decision ("Minnesota wins Super Bowl 2018 bid", 2018).

3.9.2 Minneapolis, Minnesota Population (2016-2020)

Table 33 presents the population change in Minneapolis from 2016 to 2020. There is a population increase every year, with the peak increase in 2017 (1.40%). During this time period, Minneapolis' population increases by 14,715 people. In other words, the population increases by 3.50%.

Table 33 Population Size of Minneapolis, Minnesota (2016-2020)

| Year | Population Size (Person) | Percent of Change (%) |
|------------------------|--------------------------|-----------------------|
| Year - 2 (2016) | 415,239 | — |
| Year - 1 (2017) | 421,072 | 1.40 |
| Super Bowl Year (2018) | 425,403 | 1.03 |
| Year + 1 (2019) | 429,606 | 0.99 |

| | | |
|-----------------|---------|------|
| Year + 2 (2020) | 429,954 | 0.08 |
| Total Change | 14,715 | 3.50 |

3.9.3 Minneapolis, St. Paul, and Bloomington Labor Force (August 2017-August 2018)

Table 34 presents Minneapolis, St. Paul, and Bloomington’s combined labor force statistics from August 2017 to August 2018. The 6 months prior to the Super Bowl show a declining trend in terms of labor force. The average change per month is a decrease of 0.29%. During the Super Bowl, there is a 0.80% increase in labor force. The average change per month for the 6 months after the Super Bowl is a 0.02% increase. This shows how the labor market is expanding more in the months following the Super Bowl compared to the months prior.

Table 34 Labor Force of Minneapolis, St. Paul, and Bloomington (August 2017-August 2018)

| Year | Month | Labor Force (Person) | Percent of Change (%) |
|------|-----------------------------|----------------------|-----------------------|
| 2017 | Month - 6 (August) | 2,015,150 | — |
| 2017 | Month - 5 (September) | 2,014,839 | -0.02 |
| 2017 | Month - 4 (October) | 1,991,543 | -1.16 |
| 2017 | Month - 3 (November) | 1,997,360 | 0.29 |
| 2017 | Month - 2 (December) | 1,993,151 | -0.21 |
| 2018 | Month - 1 (January) | 1,993,148 | <0.01 |
| 2018 | Super Bowl Month (February) | 2,009,122 | 0.80 |
| 2018 | Month + 1 (March) | 1,998,381 | -0.53 |
| 2018 | Month + 2 (April) | 1,991,766 | -0.33 |
| 2018 | Month + 3 (May) | 1,998,268 | 0.33 |
| 2018 | Month + 4 (June) | 2,017,802 | 0.98 |
| 2018 | Month + 5 (July) | 2,026,926 | 0.45 |
| 2018 | Month + 6 (August) | 2,011,084 | -0.78 |
| — | Total Change | -4,066 | -0.18 |

3.9.4 Minneapolis, St. Paul, and Bloomington Employment and Unemployment (August 2017-August 2018)

Table 35 presents the number of employed and unemployed people in Minneapolis, St. Paul, and Bloomington from August 2017 to August 2018. Similar to labor force, there is a declining trend for the number of employed people in the 6 months prior to the Super Bowl. The average change per month is also a decrease of 0.29%. During the Super Bowl, there is a 0.81% increase. The average change per month for the 6 months after is a 0.12% increase. This shows how the employment market is expanding more in the months following the Super Bowl prior to the months prior and the month of the Super Bowl displays a great spike in the market. For the 6 months prior to the Super Bowl, there is no overall trend for the unemployment market. In November 2017, the rate increases by 2.73%, increases by 14.36% in December, and 10.08% in January. The rate only increases by 0.51% during the month of the Super Bowl. The average change for the 6 months following the Super Bowl is a decrease of 2.33%. This means that following the Super Bowl, less people don't have jobs compared to prior to the Super Bowl.

Table 35 Number of Employed and Unemployed People of Minneapolis, St. Paul, and Bloomington (August 2017-August 2018)

| Year | Month | Employed People (Person) | Percent of Change (%) | Unemployed People (Person) | Percent of Change (%) |
|------|-----------------------------|--------------------------|-----------------------|----------------------------|-----------------------|
| 2017 | Month - 6 (August) | 1,949,723 | — | 65,427 | — |
| 2017 | Month - 5 (September) | 1,958,224 | 0.44 | 56,615 | -13.47 |
| 2017 | Month - 4 (October) | 1,941,329 | -0.86 | 50,214 | -11.31 |
| 2017 | Month - 3 (November) | 1,945,776 | 0.23 | 51,584 | 2.73 |
| 2017 | Month - 2 (December) | 1,934,161 | -0.60 | 58,990 | 14.36 |
| 2018 | Month - 1 (January) | 1,928,213 | -0.31 | 64,935 | 10.08 |
| 2018 | Super Bowl Month (February) | 1,943,855 | 0.81 | 65,267 | 0.51 |
| 2018 | Month + 1 (March) | 1,934,264 | -0.49 | 64,117 | -1.76 |
| 2018 | Month + 2 (April) | 1,938,891 | 0.24 | 52,875 | -17.53 |
| 2018 | Month + 3 (May) | 1,950,973 | 0.62 | 47,295 | -10.55 |
| 2018 | Month + 4 (June) | 1,957,560 | 0.34 | 60,242 | 27.37 |
| 2018 | Month + 5 (July) | 1,972,457 | 0.76 | 54,469 | -9.58 |

| | | | | | |
|------|--------------------|-----------|-------|---------|--------|
| 2018 | Month + 6 (August) | 1,957,657 | -0.75 | 53,427 | -1.91 |
| — | Total Change | 7,934 | 0.43 | -12,000 | -11.06 |

3.9.5 Minneapolis, Minnesota, and United States Unemployment Rate (August 2017-August 2018)

Table 36 presents the unemployment rate of Minneapolis, Minnesota, and the United States from August 2017 to August 2018. In August, September, and October 2017, there is a decreasing trend and in November, December, and January, there is an increasing trend. The rate remains constant at 2.8% during the Super Bowl. Following the Super Bowl, there is a decreasing trend. One possible explanation for the minimal change in unemployment during the Super Bowl could have been because an influx of workers weren't employed in Minneapolis, rather nearby cities. However, the labor force statistics which include two nearby major cities also reflect a relatively constant unemployment change during the Super Bowl. Another possibility is the city's naturally low unemployment rate, similar to Santa Clara's.

Table 36 Unemployment Rate of Minneapolis, Minnesota, and United States (August 2017-August 2018)

| Year | Month | Minneapolis UR (%) | Percent of Change (%) | Minnesota UR (%) | Percent of Change (%) | United States UR (%) | Percent of Change (%) |
|------|-----------------------------|--------------------|-----------------------|------------------|-----------------------|----------------------|-----------------------|
| 2017 | Month - 6 (August) | 3.4 | — | 3.3 | — | 4.4 | — |
| 2017 | Month - 5 (September) | 2.9 | -0.5 | 2.8 | -0.5 | 4.2 | -0.2 |
| 2017 | Month - 4 (October) | 2.4 | -0.5 | 2.3 | -0.5 | 4.1 | -0.1 |
| 2017 | Month - 3 (November) | 2.4 | 0.0 | 2.7 | 0.4 | 4.2 | 0.1 |
| 2017 | Month - 2 (December) | 2.6 | 0.2 | 3.2 | 0.5 | 4.1 | -0.1 |
| 2018 | Month - 1 (January) | 2.8 | 0.2 | 3.9 | 0.7 | 4.1 | 0.0 |
| 2018 | Super Bowl Month (February) | 2.8 | 0.0 | 3.8 | -0.1 | 4.1 | 0.0 |
| 2018 | Month + 1 (March) | 2.8 | 0.0 | 3.7 | -0.1 | 4.0 | -0.1 |

| | | | | | | | |
|------|-----------------------|------|------|------|------|------|------|
| 2018 | Month + 2 (April) | 2.4 | -0.4 | 3.0 | -0.7 | 3.9 | -0.1 |
| 2018 | Month + 3 (May) | 2.2 | -0.2 | 2.4 | -0.6 | 3.8 | -0.1 |
| 2018 | Month + 4 (June) | 2.9 | 0.7 | 2.9 | 0.5 | 4.0 | 0.2 |
| 2018 | Month + 5 (July) | 2.7 | -0.2 | 2.7 | -0.2 | 3.9 | -0.1 |
| 2018 | Month + 6 (August) | 2.6 | -0.1 | 2.6 | -0.1 | 3.8 | -0.1 |
| — | Total Change | -0.8 | — | -0.7 | — | -0.6 | — |

3.9.6 Super Bowl LII General Economic Impact

Lastly, it is important to consider impacts on Minneapolis' general economy and other regions and sectors. According to an Economic Impact Report released by The Minnesota Super Bowl Host Committee, Super Bowl LII brought with it more than \$370 million in net new spending to Minnesota adjusted for "displaced tourism" ("Super Bowl LII Generates \$450 Million for Local Economy", 2018). In Minneapolis, Super Bowl visitors spent an average of \$608 per day while normal tourists normally spend \$124 per day ("Super Bowl LII Generates \$450 Million for Local Economy", 2018). This demonstrates the increase in consumer expenditure as a result of the Super Bowl. According to Governor Mark Dayton, "Super Bowl LII left a lasting, positive impact on Minnesota's economy, small businesses, and communities" ("Super Bowl LII Economic Impact Exceeds Expectations, Generates \$450 million for Local Economy", 2018). Additionally, Maureen Bausch, CEO of The Minnesota Super Bowl Host Committee, stated: "The added benefit of hosting the Super Bowl was to make our market a destination for tourists and business travelers for years to come; of those who were visiting Minnesota for the first time for Super Bowl, more than 83% said they plan to return" ("Super Bowl LII Economic Impact Exceeds Expectations, Generates \$450 million for Local Economy", 2018). As opposed to Glendale's politicians, Minnesota's were insistently adamant that the Super Bowl was a beneficial economic investment both in the short and long run. Sport economists say otherwise. The main argument is that the NFL requires many additional expenses as well as the extreme cost of hosting the event dealt on to the host city and that the majority of the money goes to the league rather than the city. Interestingly, there is evidence that big sporting mega-events such as the Super Bowl and World Cup cause a temporary surge in happiness.

3.10 Atlanta, Georgia | Super Bowl LIII | February 3, 2019

3.10.1 Super Bowl LIII and Atlanta Overview

Super Bowl LIII was played between the New England Patriots and the Los Angeles Rams. The match took place on February 3, 2019 at Mercedes-Benz Stadium in Atlanta, Georgia. According to the Statista, the event had an in-person spectator count of 70,081 people. The Mercedes-Benz Stadium, which opened in 2017, was a major factor in the

owners' votes for Atlanta. This factor was even more favored over eleven time host New Orleans, echoing the NFL message of "build a stadium and the Super Bowl will come to town".

3.10.2 Atlanta, Georgia Population (2017-2021)

Table 37 presents Atlanta's population data from 2017 to 2021. There is a strong increasing trend from 2017 to 2019. However in 2020 and 2021, the population decreases. This is likely because of COVID-19, rather than the Super Bowl pushing people out. Overall, this shows that Super Bowls usually come to cities with growing populations, as a growing populations reflect a growing host city economy.

Table 37 Population Size of Atlanta, Georgia (2017-2021)

| Year | Population Size (Person) | Percent of Change (%) |
|------------------------|--------------------------|-----------------------|
| Year - 2 (2017) | 491,763 | — |
| Year - 1 (2018) | 498,044 | 1.28 |
| Super Bowl Year (2019) | 506,811 | 1.76 |
| Year + 1 (2020) | 498,715 | -1.60 |
| Year + 2 (2021) | 496,481 | -0.45 |
| Total Change | 4,718 | 0.99 |

3.10.3 Atlanta, Sandy Springs, and Roswell Labor Force (August 2018-August 2019)

Table 38 presents Atlanta, Sandy Springs, and Roswell's combined labor force statistics from August 2018 to August 2019. The 6 months prior to the Super Bowl don't have a clear trend. The average change per month is a decrease of 0.08%. During the Super Bowl, the labor force increases by 0.42%. There is also no clear trend for the 6 months after the Super Bowl. The average change per month is an increase of 0.01%. This means that the post-6 months of the Super Bowl displayed a stronger increasing trend compared to the 6 months prior to the Super Bowl.

Table 38 Labor Force of Atlanta, Sandy Springs, and Roswell (August 2018-August 2019)

| Year | Month | Labor Force (Person) | Percent of Change (%) |
|------|-----------------------|----------------------|-----------------------|
| 2018 | Month - 6 (August) | 3,061,789 | — |
| 2018 | Month - 5 (September) | 3,067,974 | 0.20 |
| 2018 | Month - 4 (October) | 3,085,990 | 0.59 |
| 2018 | Month - 3 (November) | 3,079,489 | -0.21 |
| 2018 | Month - 2 (December) | 3,096,400 | 0.55 |

| | | | |
|------|-----------------------------|-----------|-------|
| 2019 | Month - 1 (January) | 3,088,411 | -0.26 |
| 2019 | Super Bowl Month (February) | 3,101,377 | 0.42 |
| 2019 | Month + 1 (March) | 3,100,870 | -0.02 |
| 2019 | Month + 2 (April) | 3,076,859 | -0.77 |
| 2019 | Month + 3 (May) | 3,094,058 | 0.56 |
| 2019 | Month + 4 (June) | 3,117,989 | 0.77 |
| 2019 | Month + 5 (July) | 3,126,488 | 0.27 |
| 2019 | Month + 6 (August) | 3,103,717 | -0.73 |
| — | Total Change | 41,928 | 1.37 |

3.10.4 Atlanta, Sandy Springs, and Roswell Employment and Unemployment (August 2018-August 2019)

Table 39 presents the number of employed and unemployed people in Atlanta, Sandy Springs, and Roswell from August 2018 to August 2019. Starting with number of employed people, there is a decent increasing trend during the 6 months before the Super Bowl. The average change per month is a decrease of 0.10%. This goes against the trend, as August and January displayed overwhelming decreases, whereas the rest of the months were smaller increases. The number of employed people increased by 0.81% during the Super Bowl. The average change per month for the 6 months after the Super Bowl is an increase of 0.02%. The number of employed people increased by 1.54% between August 2018 and the Super Bowl, from 2,942,205 people to 2,987,578 people. Between the Super Bowl and August 2019, the number of employed people increased from 2,987,578 to 2,990,370, a 0.09% increase. This means that more people were getting hired in the segment prior to the Super Bowl rather than after. Moving on to the number of unemployed people, there is no clear trend for the 6 months prior to the Super Bowl. The average change per month is an increase of 0.94%. During the Super Bowl, there is a decrease of 8.93%. The average change per month for the 6 months after the Super Bowl is an increase of 0.36%. From August 2018 to the Super Bowl, the number of unemployed people decreases from 119,584 to 113,799, a 4.84% decrease. From the Super Bowl to August 2019, the number of unemployed people decreases from 113,799 to 113,347, a 0.40% decrease.

Table 39 Number of Employed and Unemployed People of Atlanta, Sandy Springs, and Roswell (August 2018-August 2019)

| Year | Month | Employed People (Person) | Percent of Change (%) | Unemployed People (Person) | Percent of Change (%) |
|------|-------|--------------------------|-----------------------|----------------------------|-----------------------|
|------|-------|--------------------------|-----------------------|----------------------------|-----------------------|

| | | | | | |
|------|-----------------------------|-----------|-------|---------|--------|
| 2018 | Month - 6 (August) | 2,942,205 | — | 119,584 | — |
| 2018 | Month - 5 (September) | 2,962,527 | 0.69 | 105,447 | -11.82 |
| 2018 | Month - 4 (October) | 2,974,380 | 0.40 | 111,610 | 5.84 |
| 2018 | Month - 3 (November) | 2,977,030 | 0.09 | 102,459 | -8.20 |
| 2018 | Month - 2 (December) | 2,981,630 | 0.15 | 114,770 | 12.02 |
| 2019 | Month - 1 (January) | 2,963,454 | -0.61 | 124,957 | 8.88 |
| 2019 | Super Bowl Month (February) | 2,987,578 | 0.81 | 113,799 | -8.93 |
| 2019 | Month + 1 (March) | 2,989,931 | 0.08 | 110,939 | -2.51 |
| 2019 | Month + 2 (April) | 2,982,680 | -0.24 | 94,179 | -15.11 |
| 2019 | Month + 3 (May) | 2,989,755 | 0.24 | 104,303 | 10.75 |
| 2019 | Month + 4 (June) | 3,001,673 | 0.40 | 116,316 | 11.52 |
| 2019 | Month + 5 (July) | 3,014,865 | 0.44 | 111,623 | -4.03 |
| 2019 | Month + 6 (August) | 2,990,370 | -0.81 | 113,347 | 1.54 |
| — | Total Change | 48,165 | 1.64 | -6,237 | -0.05 |

3.10.5 Atlanta, Georgia, and United States Unemployment Rate (August 2018-August 2019)

Table 40 presents the unemployment rate of Atlanta, Georgia, and the United States from August 2018 to August 2019. The unemployment rate decreases from 4.4% in August 2018 to 4.1% in February 2019, during the Super Bowl. There is a notable increase in the rate in December and January, as each month jumps by 0.4%. This is reflected by similar jumps in the Georgia rate and even the national rate. This means that there was likely a national economic event which in turn impacted Georgia and Atlanta's rate. In February the national rate also decreases by 0.2%, which means that there was a national level economic event which could have additionally affected Atlanta's rate combined with the effect of the Super Bowl. The rate continues to decrease from February 2019 to August 2019, dropping from 4.1% to 3.9%. Georgia's rate and the national rate drop by 0.1%.

Table 40 Unemployment Rate of Atlanta, Georgia, and United States (August 2018-August 2019)

| Year | Month | Atlanta UR (%) | Percent of Change (%) | Georgia UR (%) | Percent of Change (%) | United States UR (%) | Percent of Change (%) |
|------|-------|----------------|-----------------------|----------------|-----------------------|----------------------|-----------------------|
|------|-------|----------------|-----------------------|----------------|-----------------------|----------------------|-----------------------|

| | | | | | | | |
|------|-----------------------------|------|------|------|------|------|------|
| 2018 | Month - 6 (August) | 4.4 | — | 4.1 | — | 3.8 | — |
| 2018 | Month - 5 (September) | 3.8 | -0.6 | 3.6 | -0.5 | 3.7 | -0.1 |
| 2018 | Month - 4 (October) | 4.0 | 0.2 | 3.8 | 0.2 | 3.8 | 0.1 |
| 2018 | Month - 3 (November) | 3.7 | -0.3 | 3.5 | -0.3 | 3.7 | -0.1 |
| 2018 | Month - 2 (December) | 4.1 | 0.4 | 3.8 | 0.3 | 3.9 | 0.2 |
| 2019 | Month - 1 (January) | 4.5 | 0.4 | 4.2 | 0.4 | 4.0 | 0.1 |
| 2019 | Super Bowl Month (February) | 4.1 | -0.4 | 3.8 | -0.4 | 3.8 | -0.2 |
| 2019 | Month + 1 (March) | 3.9 | -0.2 | 3.6 | -0.2 | 3.8 | 0.0 |
| 2019 | Month + 2 (April) | 3.4 | -0.5 | 3.1 | -0.5 | 3.6 | -0.2 |
| 2019 | Month + 3 (May) | 3.6 | 0.2 | 3.3 | 0.2 | 3.6 | 0.0 |
| 2019 | Month + 4 (June) | 4.1 | 0.5 | 3.8 | 0.5 | 3.7 | 0.1 |
| 2019 | Month + 5 (July) | 4.0 | -0.1 | 3.8 | 0.0 | 3.7 | 0.0 |
| 2019 | Month + 6 (August) | 3.9 | -0.1 | 3.7 | -0.1 | 3.7 | 0.0 |
| — | Total Change | -0.5 | — | -0.4 | — | -0.1 | — |

3.10.6 Super Bowl LIII General Economic Impact

Lastly, it is important to consider impacts on Atlanta's general economy and other regions and sectors. According to Bruce Seaman, associate professor of economics at Georgia State University, the Super Bowl had a short-term economic impact of roughly \$200 million on Atlanta. The real economic benefit however, is Atlanta's positive exposure, providing for long-run economic growth. According to Wes Moss, writer for The Atlanta Journal-Constitution, "If a decade of great buzz gives Atlanta a 1 percent boost in GDP, it would add \$3 billion to \$5 billion per year to the local economy, much of it from new residents and businesses that relocate from elsewhere" ("Wes Moss: GDP of Atlanta's Super Bowl", 2019). Atlanta, which has now hosted both the Super Bowl and the Olympics, has been put on the international stage as a credible host city.

3.11 Miami Gardens, Florida | Super Bowl LIV | February 2, 2020

3.11.1 Super Bowl LIV and Miami Gardens Overview

Super Bowl LIV was played between the Kansas City Chiefs and the San Francisco 49ers. The match took place on February 2, 2020 at Hard Rock Stadium in Miami Gardens, Florida. According to Statista, the event had an in-person spectator count of 62,417 people. South Florida has hosted the Super Bowl a record 11 times.

3.11.2 Miami Gardens, Florida Population (2018-2022)

Table 41 presents Miami Gardens' population data from 2018 to 2022. During the years, there are slight population decreases, with a significant decrease of 1.10% in 2020. This is likely because of COVID-19, which resulted in the movement of residents from larger urban areas to smaller suburbs. In 2019, one year before the Super Bowl, the population decreased by 0.17%, which is less than both 2018, 2020, and 2021. This may point to Super Bowl anticipation already occurring a year prior to the event. Lastly, in 2022, the population increased by 0.73%. This can be attributed to many factors, including the initiation of the long-run impact and given exposure from the Super Bowl.

Table 41 Population Size of Miami Gardens, FL (2018-2022)

| Year | Population Size (Person) | Percent of Change (%) |
|------------------------|--------------------------|-----------------------|
| Year - 2 (2018) | 113,069 | — |
| Year - 1 (2019) | 112,877 | -0.17 |
| Super Bowl Year (2020) | 111,640 | -1.10 |
| Year + 1 (2021) | 110,881 | -0.68 |
| Year + 2 (2022) | 111,696 | 0.73 |
| Total Change | -1,373 | -1.22 |

3.11.3 Miami-Dade County Labor Force (August 2019-August 2020)

Table 42 presents Miami-Dade County's labor force statistics from August 2019 to August 2020. There is an increasing labor force trend during the 6 months prior to the Super Bowl. In August 2019, the labor force is 1,379,975 people. In February 2020, the labor force is 1,405,363, or a 1.84% increase. The labor begins to continuously increase starting from December 2019. Following the Super Bowl, there is a strong decreasing trend. This is likely because of COVID-19 resulting in a decrease of working personnel rather than Super Bowl impacts.

Table 42 Labor Force of Miami-Dade County (August 2019-August 2020)

| Year | Month | Labor Force (Person) | Percent of Change (%) |
|------|-----------------------|----------------------|-----------------------|
| 2019 | Month - 6 (August) | 1,379,975 | — |
| 2019 | Month - 5 (September) | 1,377,789 | -0.16 |

| | | | |
|------|-----------------------------|-----------|-------|
| 2019 | Month - 4 (October) | 1,400,604 | 1.66 |
| 2019 | Month - 3 (November) | 1,380,837 | -1.41 |
| 2019 | Month - 2 (December) | 1,393,720 | 0.93 |
| 2020 | Month - 1 (January) | 1,399,104 | 0.39 |
| 2020 | Super Bowl Month (February) | 1,405,363 | 0.45 |
| 2020 | Month + 1 (March) | 1,285,173 | -8.55 |
| 2020 | Month + 2 (April) | 1,194,706 | -7.04 |
| 2020 | Month + 3 (May) | 1,211,842 | 1.43 |
| 2020 | Month + 4 (June) | 1,223,167 | 0.93 |
| 2020 | Month + 5 (July) | 1,242,074 | 1.55 |
| 2020 | Month + 6 (August) | 1,262,882 | 1.68 |
| — | Total Change | -117,093 | -8.14 |

3.11.4 Miami-Dade County Employment and Unemployment (August 2019-August 2020)

Table 43 presents the number of employed and unemployed people in Miami-Dade County from August 2019 to August 2020. In terms of number of employed people, there is an increasing trend during the 6 months prior to the Super Bowl. The number goes from 1,335,418 in August 2019 to 1,375,750 in February 2020, which is a 3.02% increase. The number of employed people also begins to continuously increase each month starting in December 2019. The 6 months following the Super Bowl display a significant decreasing trend, supporting the argument of COVID-19's detrimental impact on the employment market. Lastly, there is a strong decreasing trend for number of unemployed people during the 6 month period prior to the Super Bowl. The number decreases from 44,557 in August 2019 to 29,623 in February 2020, a 33.52% decrease. Following the Super Bowl, there is a significant increasing trend of unemployed people, going from 29,623 to 127,821 in August 2020, a 331.49% increase. There is an extreme increase during April 2020, as the number increases by 233.59%, signifying that COVID-19 hit Miami-Dade the labor market the hardest in March and April.

Table 43 Number of Employed and Unemployed People of Miami-Dade County (August 2019-August 2020)

| Year | Month | Employed People (Person) | Percent of Change (%) | Unemployed People (Person) | Percent of Change (%) |
|------|-------|--------------------------|-----------------------|----------------------------|-----------------------|
|------|-------|--------------------------|-----------------------|----------------------------|-----------------------|



| | | | | | |
|------|-----------------------------|-----------|--------|---------|--------|
| 2019 | Month - 6 (August) | 1,335,418 | — | 44,557 | — |
| 2019 | Month - 5 (September) | 1,337,758 | 0.18 | 40,031 | -10.16 |
| 2019 | Month - 4 (October) | 1,363,939 | 1.96 | 36,665 | -8.41 |
| 2019 | Month - 3 (November) | 1,347,824 | -1.18 | 33,013 | -9.96 |
| 2019 | Month - 2 (December) | 1,360,804 | 0.96 | 32,916 | -0.29 |
| 2020 | Month - 1 (January) | 1,367,454 | 0.49 | 31,650 | -3.85 |
| 2020 | Super Bowl Month (February) | 1,375,740 | 0.61 | 29,623 | -6.40 |
| 2020 | Month + 1 (March) | 1,245,652 | -9.46 | 39,521 | 33.41 |
| 2020 | Month + 2 (April) | 1,062,869 | -14.67 | 131,837 | 233.59 |
| 2020 | Month + 3 (May) | 1,066,995 | 0.39 | 144,847 | 9.87 |
| 2020 | Month + 4 (June) | 1,083,772 | 1.57 | 139,395 | -3.76 |
| 2020 | Month + 5 (July) | 1,102,438 | 1.72 | 139,636 | 0.17 |
| 2020 | Month + 6 (August) | 1,135,061 | 2.96 | 127,821 | -8.46 |
| — | Total Change | -200,357 | -14.47 | 83,264 | 225.75 |

3.11.5 Miami Gardens, Florida, and United States Unemployment Rate (August 2019-August 2020)

Table 44 presents the unemployment rate of Miami Gardens, Florida, and the United States from August 2019 to August 2020. The rate decreases from 3.4% in August 2019 to 1.7% in February 2020. Following the Super Bowl, there is the expected unemployment as a result of COVID-19, with the rate jumping to as much as 17.2%. COVID-19's employment impact would have overshadowed the Super Bowl's, as it affected the national rate, which was not observable for prior Super Bowls.

Table 44 Unemployment Rate of Miami Gardens, Florida, and United States (August 2019-August 2020)

| Year | Month | Miami Gardens UR (%) | Percent of Change (%) | Florida UR (%) | Percent of Change (%) | United States UR (%) | Percent of Change (%) |
|------|--------------------|----------------------|-----------------------|----------------|-----------------------|----------------------|-----------------------|
| 2019 | Month - 6 (August) | 3.4 | — | 11.1 | — | 3.7 | — |
| 2019 | Month - 5 | 3.0 | -0.4 | 11.1 | 0.0 | 3.5 | -0.2 |

| | | | | | | | |
|-------------|------------------------------------|------|------|------|------|------|------|
| | (September) | | | | | | |
| 2019 | Month - 4 (October) | 2.7 | -0.3 | 11.1 | 0.0 | 3.6 | 0.1 |
| 2019 | Month - 3 (November) | 2.0 | -0.7 | 10.9 | -0.2 | 3.5 | -0.1 |
| 2019 | Month - 2 (December) | 1.8 | -0.2 | 11.1 | 0.2 | 3.5 | 0.0 |
| 2020 | Month - 1 (January) | 1.8 | 0.0 | 11.5 | 0.4 | 3.6 | 0.1 |
| 2020 | Super Bowl Month (February) | 1.7 | -0.1 | 11.2 | -0.3 | 3.5 | -0.1 |
| 2020 | Month + 1 (March) | 4.7 | 3.0 | 11.0 | -0.2 | 4.4 | 0.9 |
| 2020 | Month + 2 (April) | 11.1 | 6.4 | 10.6 | -0.4 | 14.7 | 10.3 |
| 2020 | Month + 3 (May) | 12.4 | 1.3 | 10.5 | -0.1 | 13.3 | -0.6 |
| 2020 | Month + 4 (June) | 13.4 | 1.0 | 11.0 | 0.5 | 11.1 | -2.2 |
| 2020 | Month + 5 (July) | 17.2 | 3.8 | 11.4 | 0.4 | 10.2 | -0.9 |
| 2020 | Month + 6 (August) | 10.0 | -7.2 | 11.5 | 0.1 | 8.4 | -1.8 |
| — | Total Change | 6.6 | — | 0.4 | — | 4.7 | — |

3.11.6 Super Bowl LIV General Economic Impact

Lastly, it is important to consider impacts on Miami Gardens' general economy and other regions and sectors. A report from The Super Bowl Host Committee stated that "Super Bowl LIV created a \$572 million economic impact for Miami-Dade County, Broward County, and Palm Beach County. The Palm Beaches received 4.4% of total revenues generated from Super Bowl LIV" ("Economic Impact Report Released for Super Bowl LIV", 2020). Other statistics include 88% of attendees at the game were out-of-town visitors, average spending per day by spectators was \$1,781 and \$2,154 for media, 61% of people reported having a "more favorable" impression of South Florida, and 41% of people planned to return to the region next year. This shows that a strong implication of hosting the Super Bowl is new interest in the region, creating further economic benefits. Additionally, before the game was played, 29 small businesses from Palm Beach County were selected to provide goods and services to the Super Bowl as part of the NFL's Business Connect program" ("Economic Impact Report Released for Super Bowl LIV", 2020). The program provided special event related contracts for South Florida businesses.

3.12 Tampa, Florida | Super Bowl LV | February 7, 2021

3.12.1 Super Bowl LV and Tampa Overview

Super Bowl LV was played between the Tampa Bay Buccaneers and the Kansas City Chiefs. The match took place on February 7, 2021 at Raymond James Stadium in Tampa, Florida. Due to COVID-19, Super Bowl LV marked the lowest attendance for a Super Bowl ever. According to Statista, the event had an in-person spectator count of 24,835. There were also 30,000 cutouts. Among the in-person fans were 7,500 vaccinated healthcare workers on an all-expense paid trip (“Super Bowl 2021: Here’s how many fans will be inside Raymond James Stadium for Super Bowl LV”, 2021). There were a plethora of safety protocols required for fans to adhere to, including social distancing, daily testing, wearing a KN95 mask at all times, making cashless purchases to reduce high-touch interactions, etc.

3.12.2 Tampa, Florida Population (2019-2023)

Table 45 presents Tampa’s population data from 2019 to 2023. In 2020, there is a significant decrease of 3.69% due to COVID-19, however the rest of the years observe decent increases. The increases in 2021, 2022, and 2023 are likely primarily attributed to individuals moving to Tampa following the alleviation of COVID-19 rather than Super Bowl impacts. In this time period, Tampa’s population decreases by 4,424 people, a 1.01% decrease.

Table 45 Population Size of Tampa, FL (2019-2023)

| Year | Population Size (Person) | Percent of Change (%) |
|------------------------|--------------------------|-----------------------|
| Year - 2 (2019) | 399,700 | — |
| Year - 1 (2020) | 384,959 | -3.69 |
| Super Bowl Year (2021) | 387,038 | 0.54 |
| Year + 1 (2022) | 392,620 | 1.45 |
| Year + 2 (2023) | 395,276 | 0.69 |
| Total Change | -4,424 | -1.01 |

3.12.3 Tampa, St. Petersburg, and Clearwater, FL Labor Force (August 2020-August 2021)

Table 46 presents Tampa, St. Petersburg, and Clearwater’s combined labor force statistics from August 2020 to August 2021. There is no significant change in labor force between August 2020 to February 2021. It goes from 1,553,489 to 1,552,388 people, a 0.07% decrease. It is notable how the labor force does not dramatically decrease given the recessive effect of COVID-19, signifying the “fight back” from hosting the Super Bowl. Following the Super Bowl, there is a surge in labor force. The labor force increases from 1,552,388 in February 2021 to 1,593,316 in August, a 2.64% increase. This increase is likely primarily a result of the economy recovering from the downturn caused by COVID-19.

Table 46 Labor Force of Tampa, St. Petersburg, Clearwater (August 2020-August 2021)

| Year | Month | Labor Force (Person) | Percent of Change (%) |
|------|-----------------------------|----------------------|-----------------------|
| 2020 | Month - 6 (August) | 1,553,489 | — |
| 2020 | Month - 5 (September) | 1,555,428 | 0.12 |
| 2020 | Month - 4 (October) | 1,561,312 | 0.38 |
| 2020 | Month - 3 (November) | 1,547,445 | -0.89 |
| 2020 | Month - 2 (December) | 1,547,903 | 0.03 |
| 2021 | Month - 1 (January) | 1,547,208 | -0.04 |
| 2021 | Super Bowl Month (February) | 1,552,388 | 0.33 |
| 2021 | Month + 1 (March) | 1,560,317 | 0.51 |
| 2021 | Month + 2 (April) | 1,561,777 | 0.09 |
| 2021 | Month + 3 (May) | 1,569,784 | 0.51 |
| 2021 | Month + 4 (June) | 1,589,619 | 1.26 |
| 2021 | Month + 5 (July) | 1,590,003 | 0.02 |
| 2021 | Month + 6 (August) | 1,593,316 | 0.21 |
| — | Total Change | 39,827 | 2.53 |

3.12.4 Tampa, St. Petersburg, and Clearwater, FL Employment and Unemployment (August 2020-August 2021)

Table 47 presents number of employed and unemployed people in Tampa, St. Petersburg, and Clearwater from August 2020 to August 2021. Interestingly, there is a decent increasing trend with number of employed people despite the constant labor force. The number of employed people increases from 1,428,053 in August 2020 to 1,476,452 in February 2021, a 3.39% increase. The fact that employment increased while labor force remained constant suggests that the unemployed in the labor force were simply converted into employed personnel. Following the Super Bowl, there is a similar increasing trend, as number of employed people increases from 1,476,452 in February 2021 to 1,523,407 in August 2021, a 3.18% increase. This is again likely due to the economy recovering from COVID-19. Lastly, in terms in number of unemployed people, there is a strong decreasing trend during the 6 month period prior to the Super Bowl. It decreases from 125,436 in August 2020 to 75,936 in February 2021, a 39.46% decrease. Again, the recovery from COVID-19 likely amplified the Super Bowl's theorized decrease in unemployment. The number of unemployed people continues to decrease

following the Super Bowl, decreasing by 7.94%, from 75,936 in February 2021 to 69,909 in August 2021.

Table 47 Number of Employed and Unemployed People of Tampa, St. Petersburg, Clearwater (August 2020-August 2021)

| Year | Month | Employed People (Person) | Percent of Change (%) | Unemployed People (Person) | Percent of Change (%) |
|------|-----------------------------|--------------------------|-----------------------|----------------------------|-----------------------|
| 2020 | Month - 6 (August) | 1,428,053 | — | 125,436 | — |
| 2020 | Month - 5 (September) | 1,440,545 | 0.87 | 114,883 | -8.41 |
| 2020 | Month - 4 (October) | 1,464,910 | 1.69 | 96,402 | -16.09 |
| 2020 | Month - 3 (November) | 1,458,595 | -0.43 | 88,850 | -7.83 |
| 2020 | Month - 2 (December) | 1,463,927 | 0.37 | 83,976 | -5.49 |
| 2021 | Month - 1 (January) | 1,463,449 | -0.03 | 83,759 | -0.26 |
| 2021 | Super Bowl Month (February) | 1,476,452 | 0.89 | 75,936 | -9.34 |
| 2021 | Month + 1 (March) | 1,487,618 | 0.76 | 72,699 | -4.26 |
| 2021 | Month + 2 (April) | 1,492,259 | 0.31 | 69,518 | -4.38 |
| 2021 | Month + 3 (May) | 1,502,519 | 0.69 | 67,265 | -3.24 |
| 2021 | Month + 4 (June) | 1,512,898 | 0.69 | 76,721 | 14.06 |
| 2021 | Month + 5 (July) | 1,517,559 | 0.31 | 72,444 | -5.57 |
| 2021 | Month + 6 (August) | 1,523,407 | 0.39 | 69,909 | -3.50 |
| — | Total Change | 95,354 | 6.51 | -55,527 | -54.31 |

3.12.5 Tampa, Florida, and United States Unemployment Rate (August 2020-August 2021)

Table 48 presents the unemployment rate of Tampa, Florida, and the United States from August 2020 to August 2021. Tampa's rate decreases from 7.8% in August 2020 to 4.9% in February 2021. Florida's rate also decreases, from 7.6% to 5.1%. The national rate also decreases, from 8.4% to 6.2%. This solidifies the theory of the observed changes as a result of the recovery from COVID-19, as even the national rate is affected. Following the Super Bowl, Tampa's rate decreases from 4.9% in February 2021 to 4.7% in August 2021. Florida's rate decreases from 5.1% to 4.6%. The national rate decreases from 6.2% to 5.2%. Tampa's rate

remaining relatively constant while Florida's and the national rate decrease further suggest that Tampa's normal unemployment rate is around 4.7% and that it has recovered from the pandemic's downturn.

Table 48 Unemployment Rate of Tampa, Florida, and United States (August 2020-August 2021)

| Year | Month | Tampa UR (%) | Percent of Change (%) | Florida UR (%) | Percent of Change (%) | United States UR (%) | Percent of Change (%) |
|------|-----------------------------|--------------|-----------------------|----------------|-----------------------|----------------------|-----------------------|
| 2020 | Month - 6 (August) | 7.8 | — | 7.6 | — | 8.4 | — |
| 2020 | Month - 5 (September) | 6.9 | -0.9 | 7.2 | -0.4 | 7.9 | -0.5 |
| 2020 | Month - 4 (October) | 5.5 | -1.4 | 6.4 | -0.8 | 6.9 | -1.0 |
| 2020 | Month - 3 (November) | 4.8 | -0.7 | 5.0 | -1.4 | 6.7 | -0.2 |
| 2020 | Month - 2 (December) | 3.9 | -0.9 | 4.2 | -0.8 | 6.7 | 0.0 |
| 2021 | Month - 1 (January) | 5.1 | 1.2 | 5.3 | 1.1 | 6.3 | -0.4 |
| 2021 | Super Bowl Month (February) | 4.9 | -0.2 | 5.1 | -0.2 | 6.2 | -0.1 |
| 2021 | Month + 1 (March) | 5.0 | 0.1 | 5.3 | 0.2 | 6.0 | -0.2 |
| 2021 | Month + 2 (April) | 5.1 | 0.1 | 5.2 | -0.1 | 6.1 | 0.1 |
| 2021 | Month + 3 (May) | 4.9 | -0.2 | 5.0 | -0.2 | 5.8 | -0.3 |
| 2021 | Month + 4 (June) | 5.5 | 0.6 | 5.6 | 0.6 | 5.9 | 0.1 |
| 2021 | Month + 5 (July) | 4.9 | -0.6 | 4.8 | -0.8 | 5.4 | -0.5 |
| 2021 | Month + 6 (August) | 4.7 | -0.2 | 4.6 | -0.2 | 5.2 | -0.2 |
| — | Total Change | -3.1 | — | -3.0 | — | -3.2 | — |

3.12.6 Super Bowl LV General Economic Impact

Lastly, it is important to consider impacts on Tampa's general economy and other regions and sectors. According to Smith Travel Research, city hotel occupancy reached 92.1% (93.8% on Saturday and 90.4% on Super Bowl Sunday). Despite the pandemic, these percentages beat out Tampa's previous 2009 Super Bowl occupancy, which totaled 84.7%. The

weekend generated a total of \$14,291,224 in hotel revenue, marking February 2020 as the second-best hotel revenue month in Hillsborough County’s history. Rob Higgins, President and CEO of the Tampa Bay Super Bowl LV Host Committee, stated, “It’s been a really challenging year for our tourism and hospitality community, so the timing of this Super Bowl and the impact it provided couldn’t be any better.” Moving on to direct implications on the city, Florida law actually dictates that all tickets sold to the game will be tax exempt, meaning that no benefit was created for Tampa. This combined with the limited capacity and free admission for healthcare workers likely resulted in low profits for Tampa.

3.13 Inglewood, California | Super Bowl LVI | February 13, 2022

3.13.1 Super Bowl LVI and Inglewood Overview

Super Bowl LVI was played between the Los Angeles Rams and the Cincinnati Bengals. The match took place on February 13, 2022 at SoFi Stadium, in Inglewood, California. According to Statista, the event had an in-person spectator count of 70,048 people. LVI marked Los Angeles’ eighth Super Bowl hosting.

3.13.2 Inglewood, California Population (2020-2024)

Table 49 presents Inglewood’s population statistics from 2020 to 2024. In 2020, the population increases by 1.44%. In 2021, the population decreases by 2.40%. This is primarily due to the pandemic. In 2022, the population recuperates, increasing by 0.87%. It is unlikely that the Super Bowl had immediate population benefits, but conclusions can be formed in a few more years. As of October 2023, the population has increased by 0.23%, which is a rather weak increase. In 2024, Inglewood’s population is projected to increase by 0.53%.

Table 49 Population Size of Inglewood, CA (2020-2024)

| Year | Population Size (Person) | Percent of Change (%) |
|----------------------------|--------------------------|-----------------------|
| Year - 2 (2020) | 107,762 | — |
| Year - 1 (2021) | 105,176 | -2.40 |
| Super Bowl Year (2022) | 106,113 | 0.87 |
| Year + 1 (2023) | 106,361 | 0.23 |
| Year + 2 (2024 Projection) | 106,924 | 0.53 |
| Total Change | -838 | -0.77 |

3.13.3 Los Angeles, Long Beach, and Glendale, California Labor Force (August 2021-August 2022)

Table 50 presents the labor force statistics of Los Angeles, Long Beach, and Glendale from August 2021 to August 2022. These are major cities near Inglewood and would be similarly affected by the Super Bowl. In August 2021, the combined labor force is 4,985,861 people. There is an increasing trend between August 2021 and February 2022. In February 2022, the combined labor force is 5,065,387 people. This means that the labor force increased by 1.60% between August 2021 and the Super Bowl. Following the Super Bowl, there is a

decreasing trend. In August 2022, the labor force is 4,927,912 people. This means that the labor force decreased by 2.71% between the Super Bowl and August 2022.

Table 50 Labor Force of Los Angeles, Long Beach, Glendale (August 2021-August 2022)

| Year | Month | Labor Force (Person) | Percent of Change (%) |
|------|-----------------------------|----------------------|-----------------------|
| 2021 | Month - 6 (August) | 4,985,861 | — |
| 2021 | Month - 5 (September) | 5,004,482 | 0.37 |
| 2021 | Month - 4 (October) | 5,009,265 | 0.10 |
| 2021 | Month - 3 (November) | 5,044,623 | 0.71 |
| 2021 | Month - 2 (December) | 5,001,852 | -0.85 |
| 2022 | Month - 1 (January) | 5,035,535 | 0.67 |
| 2022 | Super Bowl Month (February) | 5,065,387 | 0.59 |
| 2022 | Month + 1 (March) | 5,051,030 | -0.28 |
| 2022 | Month + 2 (April) | 5,000,847 | -0.99 |
| 2022 | Month + 3 (May) | 4,987,130 | -0.27 |
| 2022 | Month + 4 (June) | 4,935,287 | -1.04 |
| 2022 | Month + 5 (July) | 4,957,468 | 0.45 |
| 2022 | Month + 6 (August) | 4,927,912 | -0.60 |
| — | Total Change | -57,949 | -1.14 |

3.13.4 Los Angeles, Long Beach, and Glendale, California Employment and Unemployment (August 2021-August 2022)

Table 51 presents the number of employed and unemployed people in Los Angeles, Long Beach, and Glendale from August 2020 to August 2021. There is increasing trend for number of employed people between August 2021 and February 2022. The number increases by 5.12%, from 4,540,186 in August to 4,772,698 in February. Following the Super Bowl, there is also a decreasing trend. The number decreases by -1.58%, from 4,772,698 to 4,697,244. Lastly, from August 2021 to February 2022, there is a decreasing trend in terms of number of unemployed people. The number decreases by 34.33%, from 445,675 to 292,689. There is still a decreasing trend following the Super Bowl, as the number decreases from 292,689 to 230,668, a 21.19% decrease.

Table 51 Number of Employed and Unemployed People of Los Angeles, Long Beach, Glendale (August 2021-August 2022)

| Year | Month | Employed People (Person) | Percent of Change (%) | Unemployed People (Person) | Percent of Change (%) |
|------|-----------------------------|--------------------------|-----------------------|----------------------------|-----------------------|
| 2021 | Month - 6 (August) | 4,540,186 | — | 445,675 | — |
| 2021 | Month - 5 (September) | 4,618,625 | 1.73 | 385,857 | -13.42 |
| 2021 | Month - 4 (October) | 4,646,653 | 0.61 | 362,612 | -6.02 |
| 2021 | Month - 3 (November) | 4,720,492 | 1.59 | 324,131 | -10.61 |
| 2021 | Month - 2 (December) | 4,701,620 | -0.40 | 300,232 | -7.37 |
| 2022 | Month - 1 (January) | 4,707,533 | 0.13 | 328,002 | 9.25 |
| 2022 | Super Bowl Month (February) | 4,772,698 | 1.38 | 292,689 | -10.77 |
| 2022 | Month + 1 (March) | 4,790,465 | 0.37 | 260,565 | -10.98 |
| 2022 | Month + 2 (April) | 4,761,695 | -0.60 | 239,152 | -8.22 |
| 2022 | Month + 3 (May) | 4,763,298 | 0.03 | 223,832 | -6.41 |
| 2022 | Month + 4 (June) | 4,694,769 | -1.44 | 240,518 | 7.45 |
| 2022 | Month + 5 (July) | 4,716,142 | 0.46 | 241,326 | 0.34 |
| 2022 | Month + 6 (August) | 4,697,244 | -0.40 | 230,668 | -4.42 |
| — | Total Change | 157,058 | 3.46 | -215,007 | -61.18 |

3.13.5 Inglewood, California, and United States Unemployment Rate (August 2021-August 2022)

Table 52 presents the unemployment rate of Inglewood, California, and the United States from August 2021 to August 2022. Starting with Inglewood, in August 2021, the unemployment rate is 11.2%. Between August 2021 and February 2022, there is a strong downward trend, likely from a combination of pandemic recovery as well as Super Bowl hiring. During February, the Super Bowl's month, the unemployment rate is 6.6%. Following the Super Bowl, there is a relative decreasing trend in March, April, and May, before the rate increases back to 5.9%, remaining around that in June, July, and August. Moving on to California's rate, there is also a decent decreasing trend between August 2021 and February 2022, however the rate does suddenly increase in January from 4.8% to 5.5%. Nonetheless, the rate decreases during the Super Bowl's month from 5.5% to 4.9%. Following the Super Bowl, there also a

decreasing trend in March, April, and May, however the rate increases and remains constant around 4.0% in June, July, and August. Lastly, from August 2021 and January 2022, the national rate also experiences a decreasing trend, however not as major of a degree as Inglewood and California. In August 2021, the national rate is 5.2% and in January 2022, the rate is 4.0%. The decreasing national rate points to a national economic event, supporting the likelihood of the decrease as a result of COVID recovery. During February, the Super Bowl's month, the rate is 3.8%. After the Super Bowl, from March 2022 to August 2022, the rate remains relatively constant around 3.6%.

Table 52 Unemployment Rate of Inglewood, California, and United States (August 2021-August 2022)

| Year | Month | Inglewood UR (%) | Percent of Change (%) | California UR (%) | Percent of Change (%) | United States UR (%) | Percent of Change (%) |
|------|-----------------------------|------------------|-----------------------|-------------------|-----------------------|----------------------|-----------------------|
| 2021 | Month - 6 (August) | 11.2 | — | 7.2 | — | 5.2 | — |
| 2021 | Month - 5 (September) | 10.6 | -0.6 | 6.1 | -1.1 | 4.7 | -0.5 |
| 2021 | Month - 4 (October) | 10.3 | -0.3 | 5.8 | -0.3 | 4.6 | -0.1 |
| 2021 | Month - 3 (November) | 9.3 | -1.0 | 5.2 | -0.6 | 4.2 | -0.4 |
| 2021 | Month - 2 (December) | 8.2 | -1.1 | 4.8 | -0.4 | 3.9 | -0.3 |
| 2022 | Month - 1 (January) | 7.6 | -0.6 | 5.5 | 0.7 | 4.0 | 0.1 |
| 2022 | Super Bowl Month (February) | 6.6 | -1.0 | 4.9 | -0.6 | 3.8 | -0.2 |
| 2022 | Month + 1 (March) | 5.8 | -0.8 | 4.3 | -0.6 | 3.6 | -0.2 |
| 2022 | Month + 2 (April) | 5.5 | -0.3 | 3.9 | -0.4 | 3.6 | 0.0 |
| 2022 | Month + 3 (May) | 5.3 | -0.2 | 3.4 | -0.5 | 3.6 | 0.0 |
| 2022 | Month + 4 (June) | 5.9 | 0.6 | 4.0 | 0.6 | 3.6 | 0.0 |

| | | | | | | | |
|-------------|---------------------------|------|------|-----|------|-----|------|
| 2022 | Month + 5 (July) | 6.0 | 0.1 | 3.9 | -0.1 | 3.5 | -0.1 |
| 2022 | Month + 6 (August) | 5.9 | -0.1 | 4.1 | 0.2 | 3.7 | 0.2 |
| — | Total Change | -5.3 | — | 3.1 | — | 1.5 | — |

3.13.6 Super Bowl LVI General Economic Impact

Lastly, it is important to consider impacts on Inglewood’s general economy and other regions and sectors. According to “The Economic Impact of Super Bowl LVI” by the County of Los Angeles and City of Inglewood, the forecasted range of economic benefits of revenue from number of visitors, average hotel rates, and daytime spending person per day was between \$234 million and \$477 million, including LA tax revenue ranging between \$12 million and \$22 million. Short- and long-term benefits include community service events prior to the week and extreme media exposure. Unfortunately for workers, despite two or three times higher hotel room rates, the wages of local employees will not be multiplied. Rather, the money goes to corporate headquarters and shareholders. Because the Los Angeles Rams were playing in the Super Bowl, out of state visitors also decreased. Another popular industry is sports betting. According to the American Gaming Association (AGA), a record 31.4 million American adults planned to bet on Super Bowl LVI, meaning a wager of \$7.61 billion. Still, economic benefits caused by in-person visitors were likely less as a result of encouragement to mitigate the pandemic.

Chapter 4

FINDINGS, LIMITATIONS, AND CONCLUSION

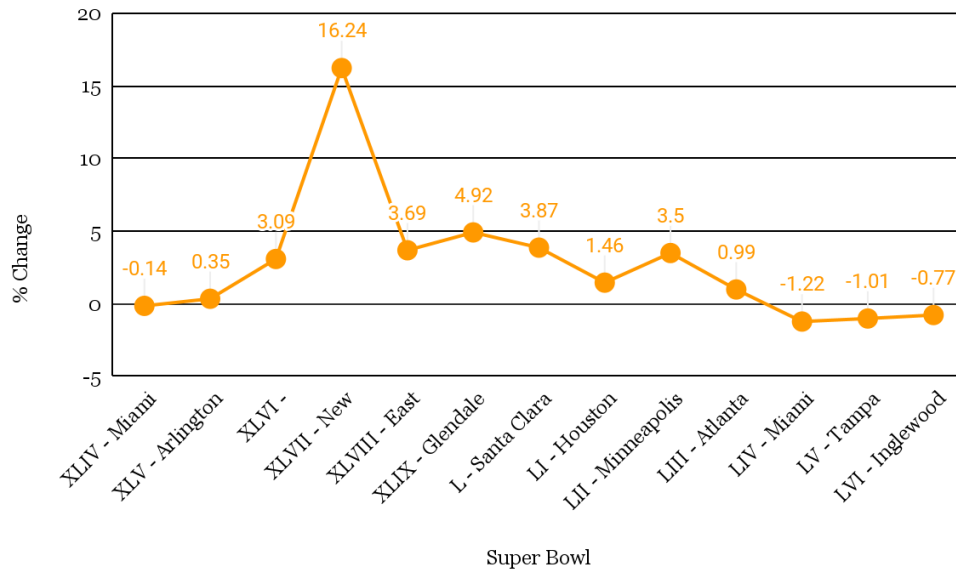
4.1 Findings

4.1.1 Super Bowl Impact on Host City Population Size

Figure 1 presents the population % change over the five years of each Super Bowl host city in this study. Out of the thirteen cities, nine experienced a population increase and four experienced a decrease. Of the four cities that experienced a decrease, three are the last three cities of the study. This means that a portion of their time period is affected by COVID-19’s population decreasing effect (As many as 73% of US counties experienced a population decline in 2021). Despite the apparent correlation between Super Bowls resulting in population growth in host cities, it is notable that population growth is a result of numerous variables, such as city size, the state of the economy, birth rate, death rate, immigration, and emigration. Still, it is conclusive that the Super Bowl Committee specifically targets growing cities to host their Super Bowls.



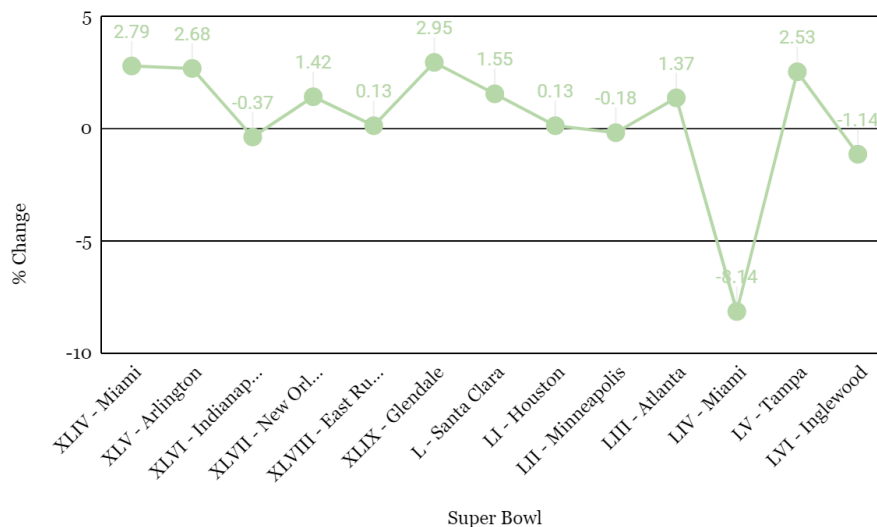
Figure 1. Population % Change Over 5 Years VS Super Bowl Host City



4.1.2.1 Super Bowl Impact on Host City Labor Force Over One Year

Figure 2 presents the combined labor force % change of each month over the year (August to August) of each Super Bowl host city of this study. Out of the thirteen cities, nine experienced a labor force increase and four experienced a decrease. The stand-out data point is Super Bowl LIV, hosted by Miami. The time period is from August 2019 to August 2020, meaning that the Miami labor force experienced the most detrimental economic effects of COVID-19. COVID’s impact would have negated the Super Bowl’s impact, thus we observe the unique data point. Of the other host cities, the range of % change is -1.14% to 2.95%. To observe the shorter-term impacts of the Super Bowl on the labor force, the time periods must be changed.

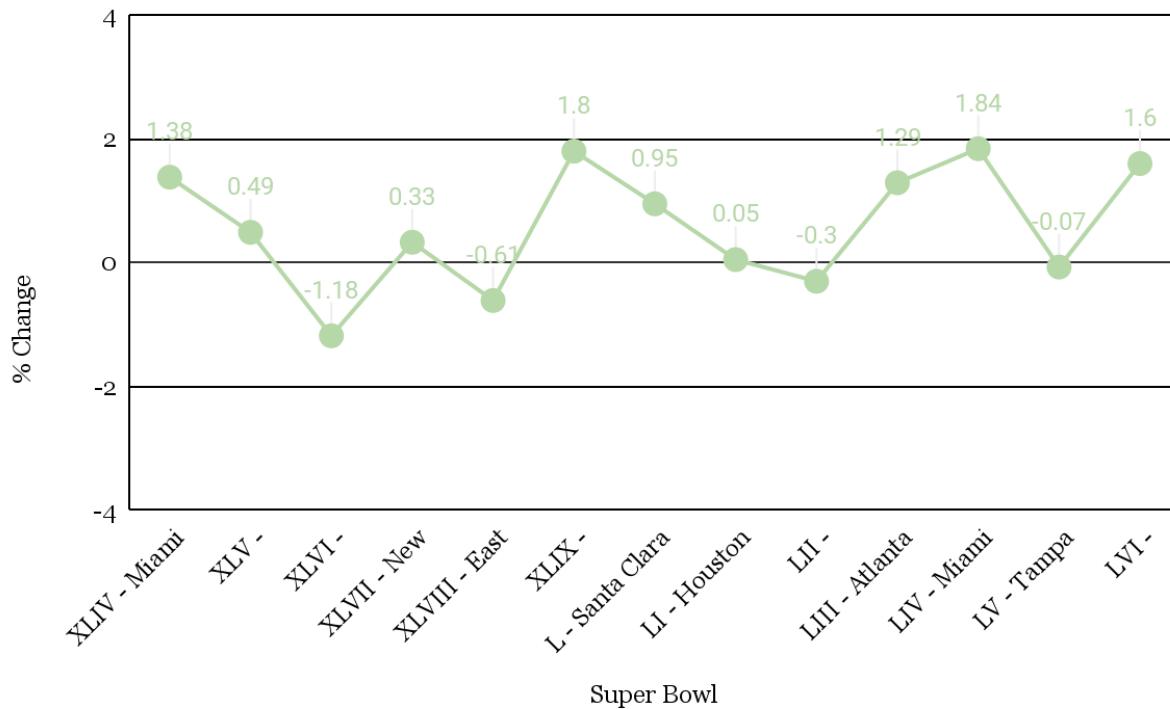
Figure 2. Labor Force % Change Over One Year VS Super Bowl Host City



4.1.2.2 Super Bowl Impact on Host City Labor Force Six Months Before Hosting

Figure 3 presents the labor force % change between August (Month-6) and Super Bowl February for the past thirteen Super Bowl host cities. Of the thirteen cities, three display a decrease in labor force. The other ten cities display slight increases, which suggests that the Super Bowl month exhibits a greater labor market than six months before. This does not, however, clearly define when the labor market actually started to grow.

Figure 3. Labor Force % Change Pre-Six Months VS Super Bowl Host City

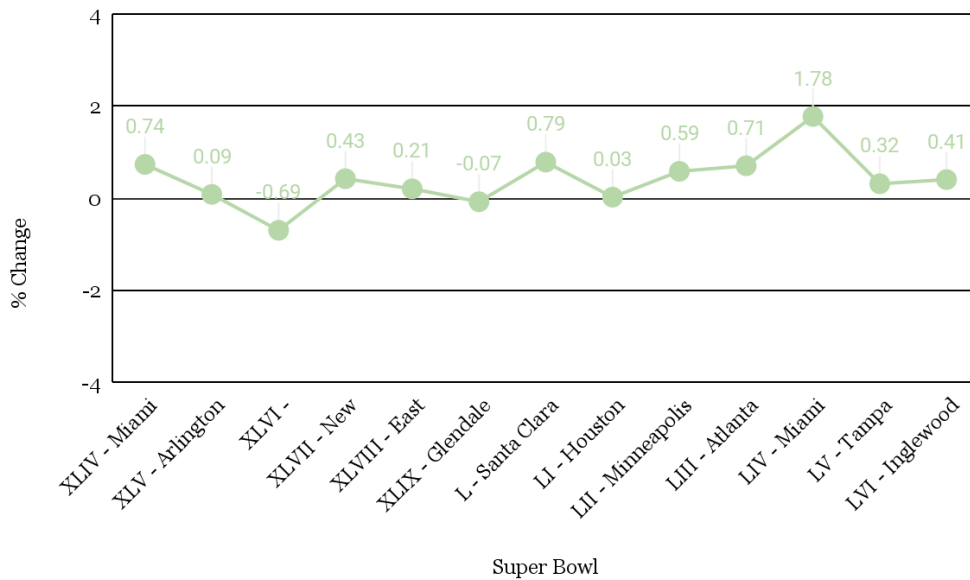


4.1.2.3 Super Bowl Impact on Host City Labor Force Three Months Before Hosting

Figure 4 presents the labor force % change between November (Month-3) and Super Bowl February for the past thirteen Super Bowl host cities. Compared to the findings of Figure 3, around half of the host cities three months before the Super Bowl experience smaller changes. This means that for certain host cities, labor forces were already increasing in the six-through four-month time period before the Super Bowl. However, the other half's labor market experienced greater changes in the three- through one-month period before the Super Bowl. This is also supported by the decreases in % change, which could mean that the Super Bowl does not increase labor force for certain cities.



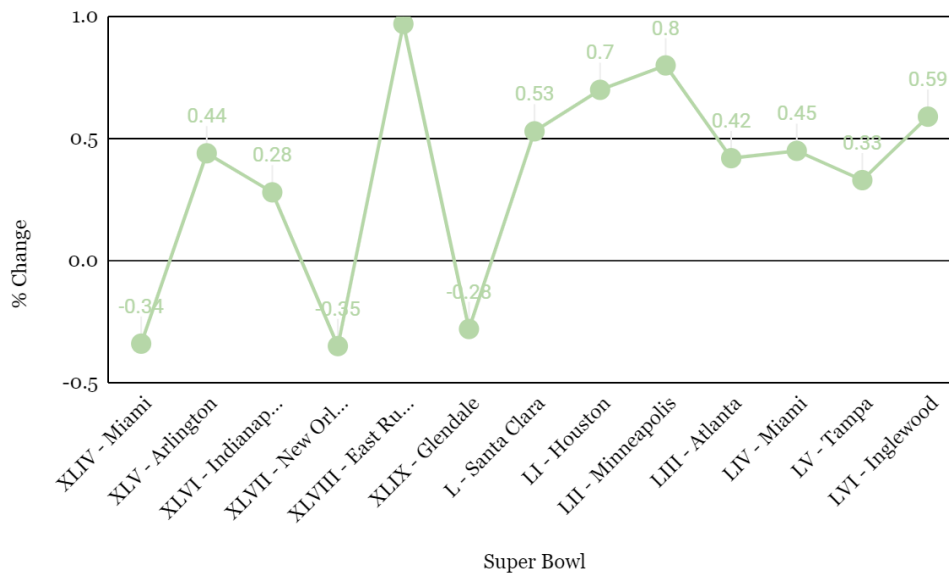
Figure 4. Labor Force % Change Pre-Three Months VS Super Bowl Host City



4.1.2.4 Super Bowl Impact on Host City Labor Force Pre-One Month VS Super Bowl Host City

Figure 5 presents the labor force % change between January (Month-1) and Super Bowl February for the past thirteen Super Bowl host cities. From January to February, three of the last thirteen host cities experienced a decrease in labor force. The range for the increases is 0.28% (Indianapolis) to 0.97% (East Rutherford). From Figure 2, the range of the increases over the entire year is 0.13% to 2.95%. This means that there is an abnormal surge in labor force between January and February, which can be attributed to the Super Bowl. The Super Bowl may influence the labor force earlier, however the greatest surge is in this period.

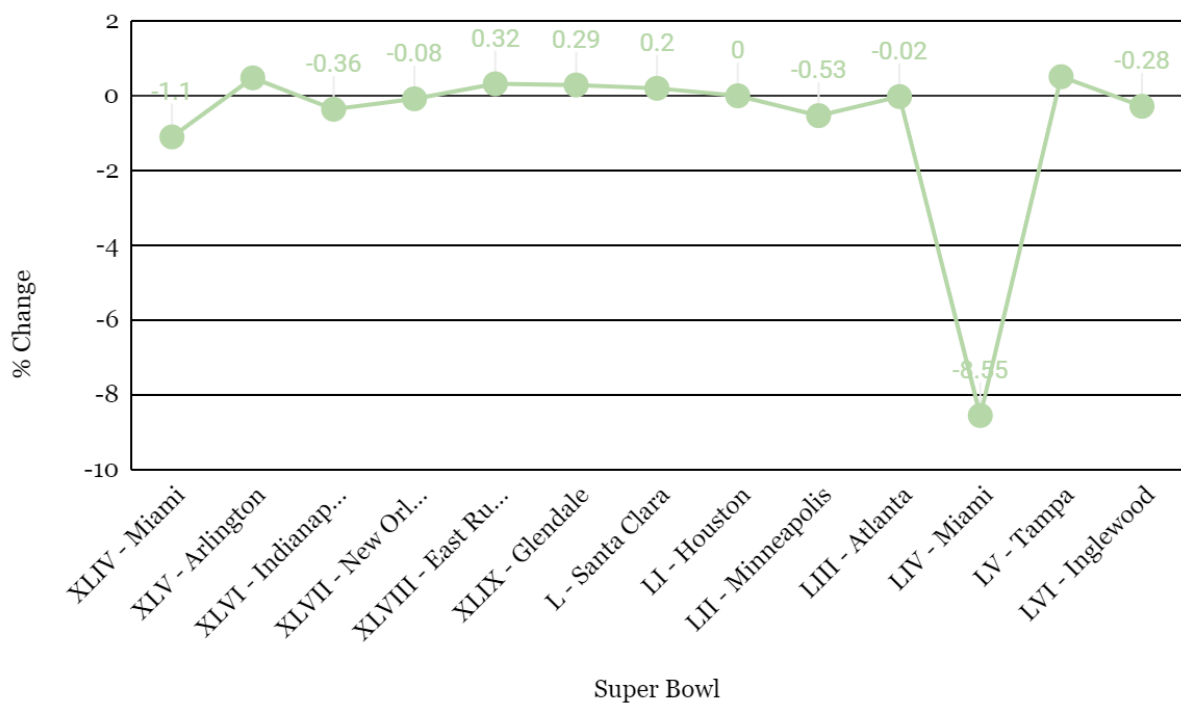
Figure 5. Labor Force % Change Pre-One Month VS Super Bowl Host City



4.1.2.5 Super Bowl Impact on Host City Labor Force Post-One Month VS Super Bowl Host City

Figure 6 presents the labor force % change between Super Bowl February and March (Month+1) for the past thirteen Super Bowls. Out of the thirteen cities, seven experienced a decrease in labor force, one experienced no change, and five experienced an increase. This means that in the one month period after the Super Bowl, certain cities' labor markets lost people. This suggests that the Super Bowl's observable labor force changes may be temporary. It also means that the greatest labor force changes as a result of the Super Bowl may fall between January and March.

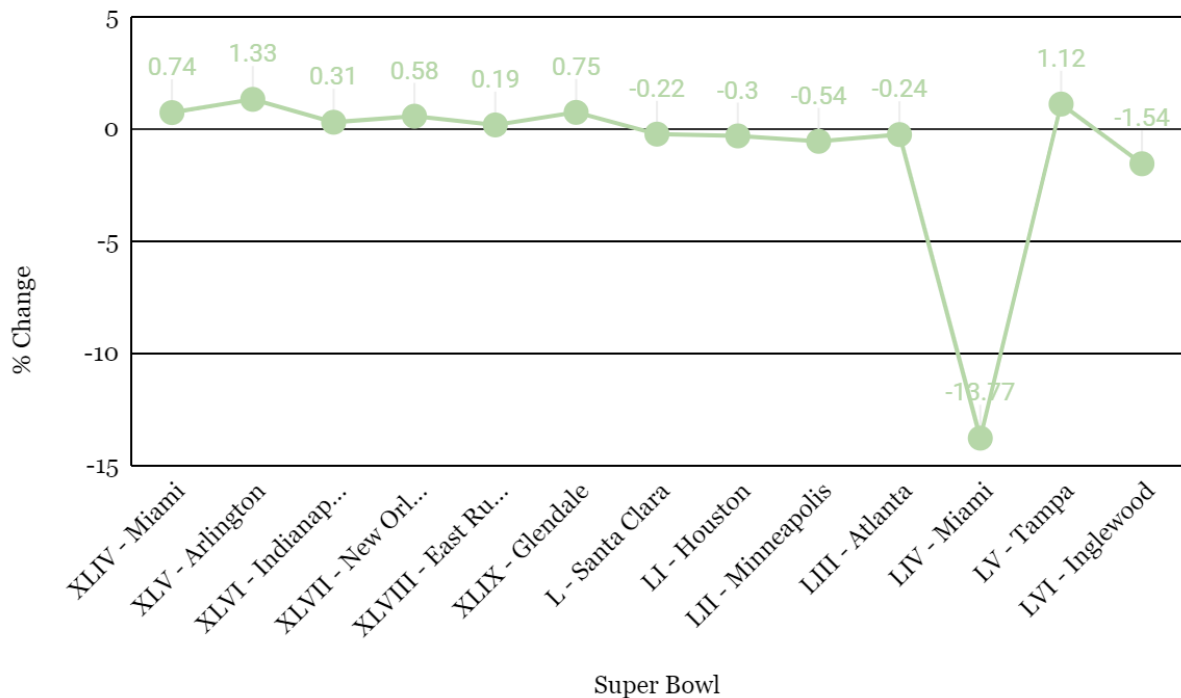
Figure 6. Labor Force % Change Post-One Month VS Super Bowl Host City



4.1.2.6 Super Bowl Impact on Host City Labor Force Post-Three Months VS Super Bowl Host City

Figure 7 presents the labor force % change, combining each month's change in the three month period following the Super Bowl for the last thirteen host cities. Out of the thirteen cities, six experienced a labor force decrease and seven experienced an increase. Since Miami's period was at the height of COVID, we can count it as an outlier. XLIV in Miami and XLVI in Indianapolis both experienced decreases in **Figure 6**, whereas they experienced an increase in this longer time period. This suggests that their markets substantially increased following the initial decline, hinting that the Super Bowl impact no longer affected the local labor force. The majority of other cities, including East Rutherford, Santa Clara, Houston, Minneapolis, Atlanta, and Inglewood, display a decrease in % change in this three month time period compared to the one month following the Super Bowl. This means that the combined % changes of April (Month+2) and May (Month+3) were usually negative. Thus, in the majority of host cities, the local labor force returned to pre-Super Bowl conditions in no more than three months.

Figure 7. Labor Force % Change Post-Three Months VS Super Bowl Host City

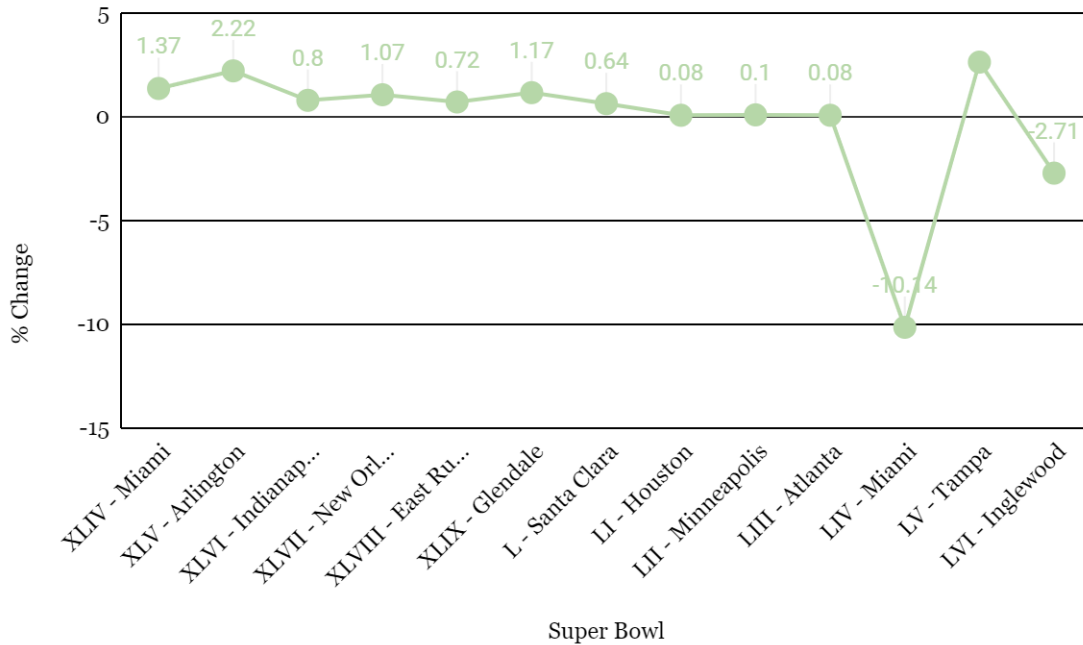


4.1.2.7 Super Bowl Impact on Host City Labor Force Post-Six Months VS Super Bowl Host City

Figure 8 presents the labor force % change between Super Bowl February and August (Month+6) in each of the last thirteen host cities. Out of the thirteen host cities, two experienced a decrease in labor force while the other eleven experienced an increase. When comparing this time period's data to **Figure 7**, every host city except Inglewood had a greater % change in this time period. When comparing this data to the six months prior to the Super Bowl, the range of % change is smaller following the Super Bowl, however more cities experienced an increase in labor force. This means that the observable labor force increases caused by the Super Bowl had completely subsided in six months and that Super Bowls are normally hosted in cities with a growing labor force.



Figure 8. Labor Force % Change Post-Six Months VS Super Bowl Host City



4.1.3.1 Super Bowl Impact on Host City Number of Employed and Unemployed People Over One Year VS Super Bowl Host City

Figure 9 presents the number of employed people % change over a one-year span from August to August. Out of the thirteen host cities, only one experienced an employment decrease and the other twelve experienced an increase. Miami’s timespan includes the height of COVID, during which numerous people lost their jobs. This means that the decrease was more of a result of the pandemic rather than the Super Bowl. The increase in the number of employed people may support the long-term expansionist theme of the Super Bowl, however the time frame is not select enough to conclude the short-term employment impact.

Figure 9. Number of Employed People % Change Over One Year VS Super Bowl Host City

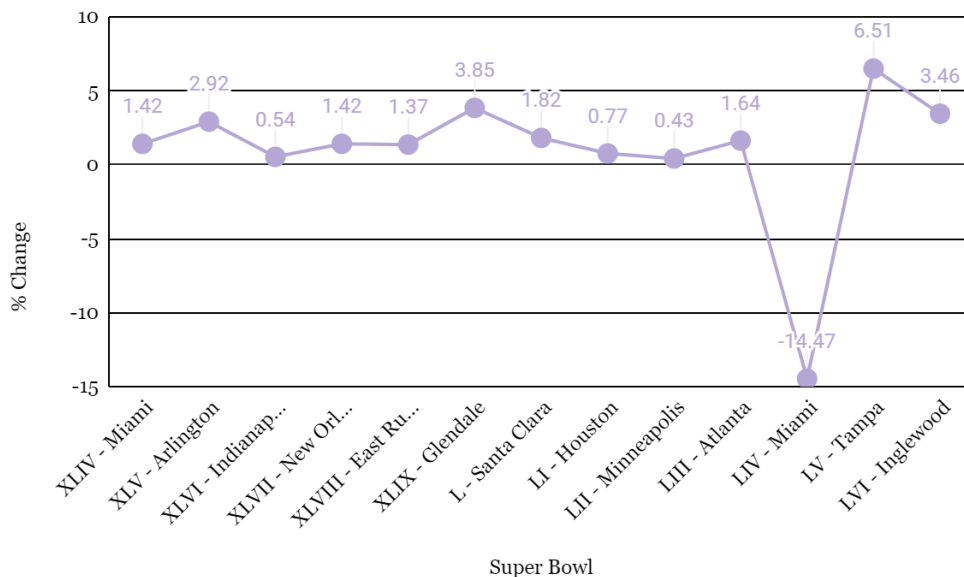
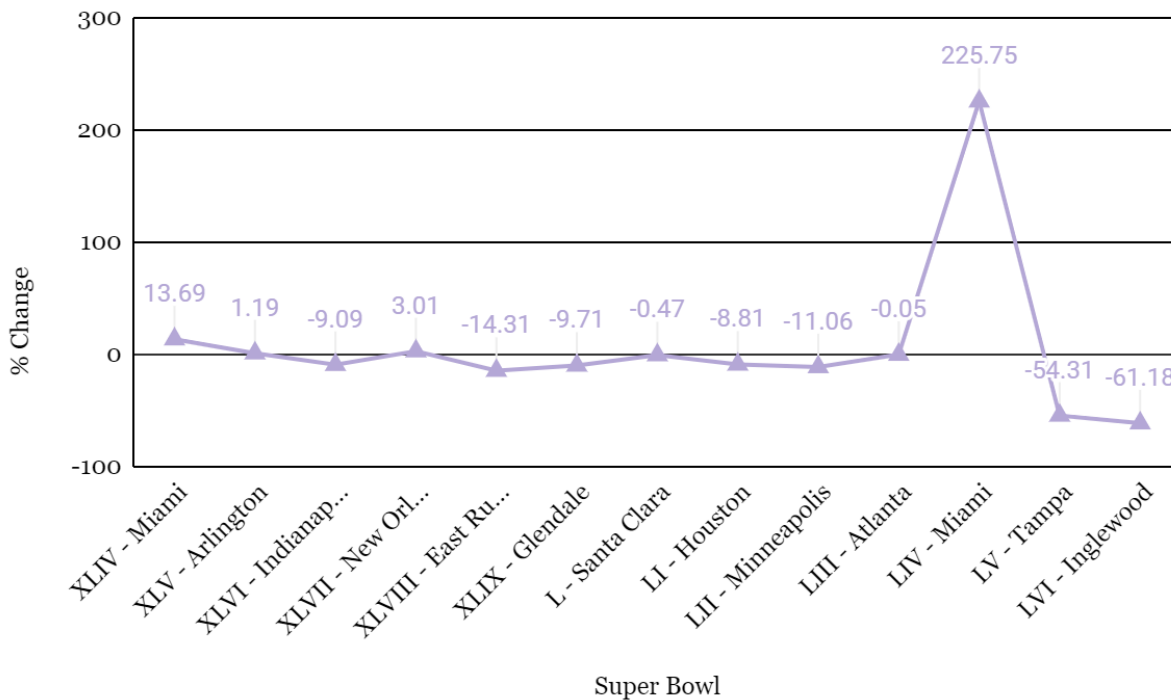


Figure 10 presents the number of unemployed people % change over a one-year span from August to August. Out of the thirteen host cities, nine experienced an unemployment decrease and four experienced an increase. Miami, Tampa, and Inglewood can be considered outliers, as they experienced either the height of COVID-19 or the economy’s rebound after the initial downturn caused by the pandemic. The majority of cities experiencing a decrease in unemployed people supports the expansionist theme of the Super Bowl.

Figure 10. Number of Unemployed People % Change Over One Year VS Super Bowl Host City



4.1.3.2 Super Bowl Impact on Host City Number of Employed and Unemployed People Before the Super Bowl VS Super Bowl Host City

Figure 11 presents the number of employed people % change before the Super Bowl. The timespans included are January (Month-1) to February (Super Bowl), November (Month-3) to February (Super Bowl), and August (Month-6) to February (Super Bowl). The overall trend is that the Month-6 -> Super Bowl line has the greatest change, then the Month-3 -> Super Bowl line, and then the Month-1 -> Super Bowl line. Interestingly, there is a noticeable gap between the Month-6 and Month-3 line, which suggests that the Super Bowl is already employing individuals in the period between August and November. Still, the greatest gap is between Month-3 and Month-1, where it is evident that the Super Bowl is rapidly employing individuals.

Figure 11. Number of Employed People Before the Super Bowl % Change VS Super Bowl Host City

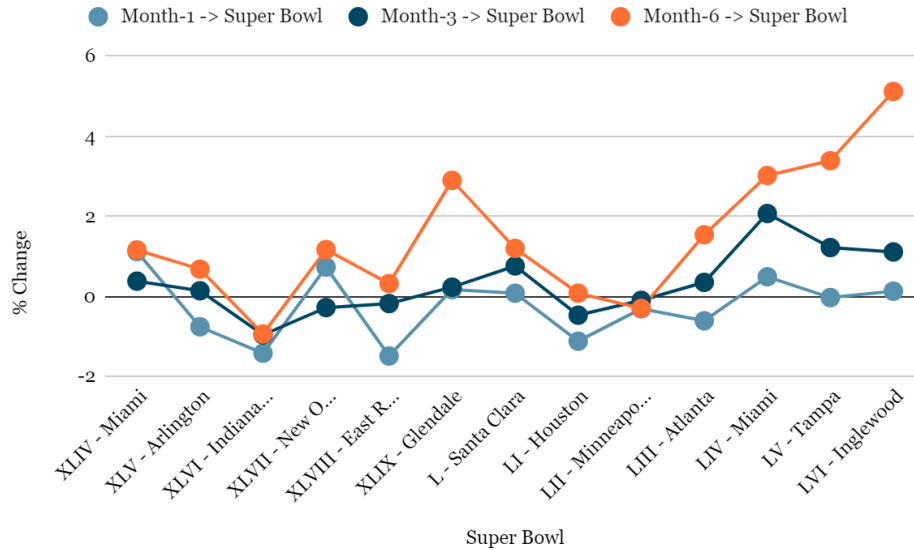
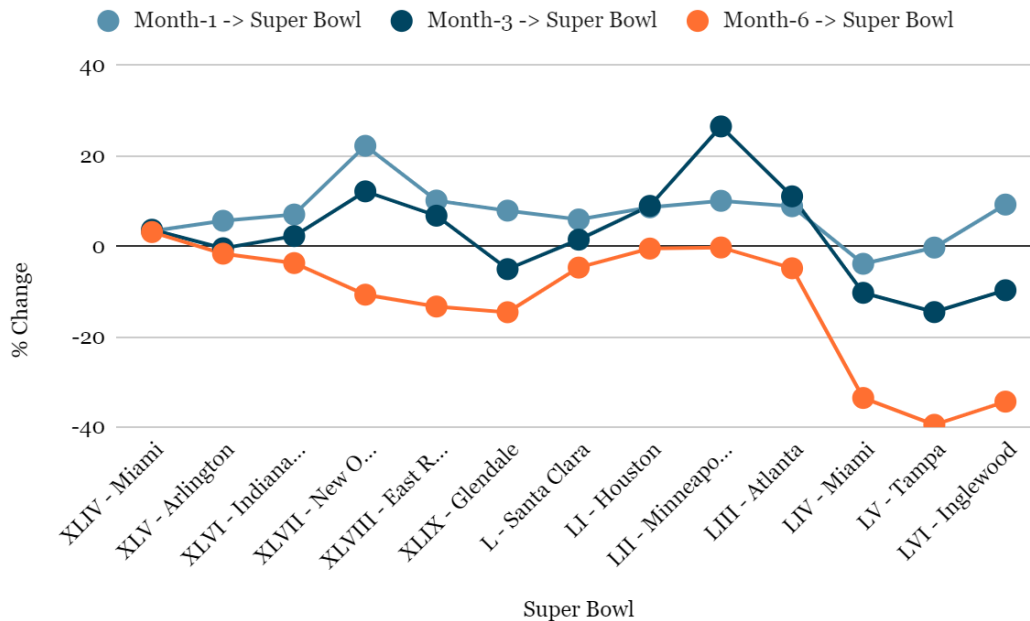


Figure 12 presents the number of unemployed people % change before the Super Bowl. The timespans included are January (Month-1) to February (Super Bowl), November (Month-3) to February (Super Bowl), and August (Month-6) to February (Super Bowl). The overall trend is Month-1 -> Super Bowl with the greatest % change, then Month-3 -> Super Bowl, and then Month-6 -> Super Bowl. The gap between Month-6 and Month-3 is also evident here, which suggests that unemployment between August and November decreases as a result of the Super Bowl. Interestingly, both Month-3 and Month-1 are mainly in the positives, meaning that in certain cases, unemployment may either increase during the Super Bowl, or workers are immediately laid off after the Super Bowl.

Figure 12. Number of Unemployed People Before the Super Bowl % Change VS Super Bowl Host City



4.1.3.3 Super Bowl Impact on Host City Number of Employed and Unemployed People After the Super Bowl VS Super Bowl Host City

Figure 13 presents the % change in number of employed people after the Super Bowl for the past thirteen Super Bowls and their host cities. The timespans included are February (Super Bowl) to March (Month+1), February (Super Bowl) to May (Month+3), and February (Super Bowl) to August (Month+6). Super Bowl LIV in Miami is a major outlier given COVID-19's impact on employment. Including it in our data would disrupt the overall trend, thus **Figure 14** was created with the same data, just excluding Super Bowl LIV in Miami. With the scale change, it is easier to observe that Super Bowl -> Month+6 has the greatest increase, then Super Bowl -> Month+3, and lastly Super Bowl -> Month+1. This means that even after the Super Bowl, employment continues to increase. In fact, the greater the amount of time that has elapsed, the greater the number of employed people is.

Figure 13. Number of Employed People After the Super Bowl % Change VS Super Bowl Host City

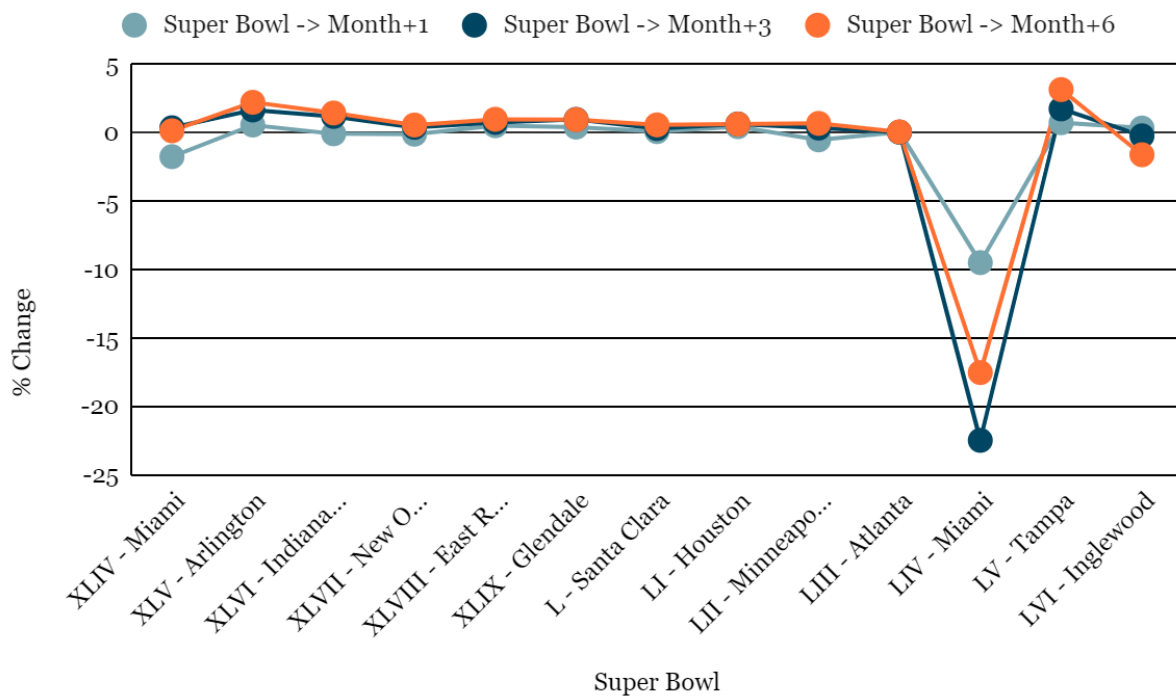


Figure 14. Number of Employed People After the Super Bowl % Change VS Super Bowl Host City (Excluding Miami LIV)

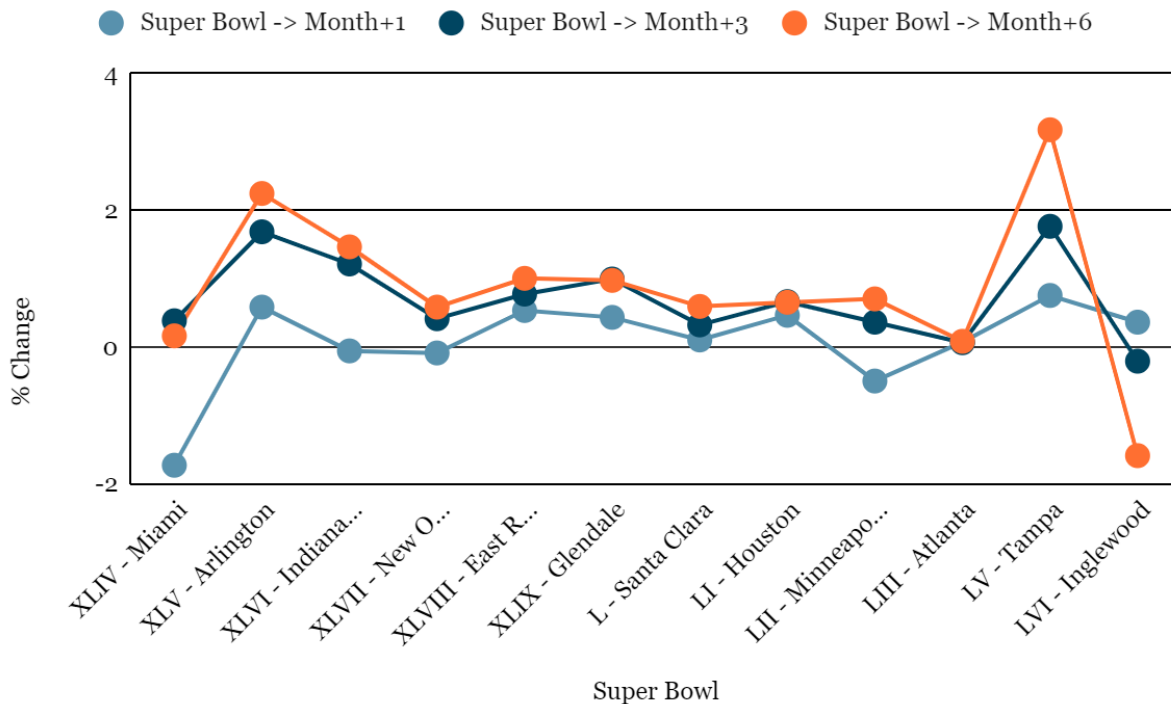


Figure 15 presents the % change in number of unemployed people after the Super Bowl for the past thirteen Super Bowls and their host cities. The timespans included are February (Super Bowl) to March (Month+1), February (Super Bowl) to May (Month+3), and February (Super Bowl) to August (Month+6). Again, Super Bowl LIV in Miami is a major outlier given COVID-19's unemployment increase. Thus, **Figure 16** presents the same data, excluding Miami. Given the much smaller scale, it is observable that the overall trend is Month+6 with the greatest % in change, then Month+1, then Month+3. This means that after the Super Bowl, the number of unemployed people continues decreasing between March (Month+1) and May (Month+3). This means that in the short-term, the Super Bowl may be the result of low unemployment in a region for around three months.



Figure 15. Number of Unemployed People After the Super Bowl % Change VS Super Bowl Host City

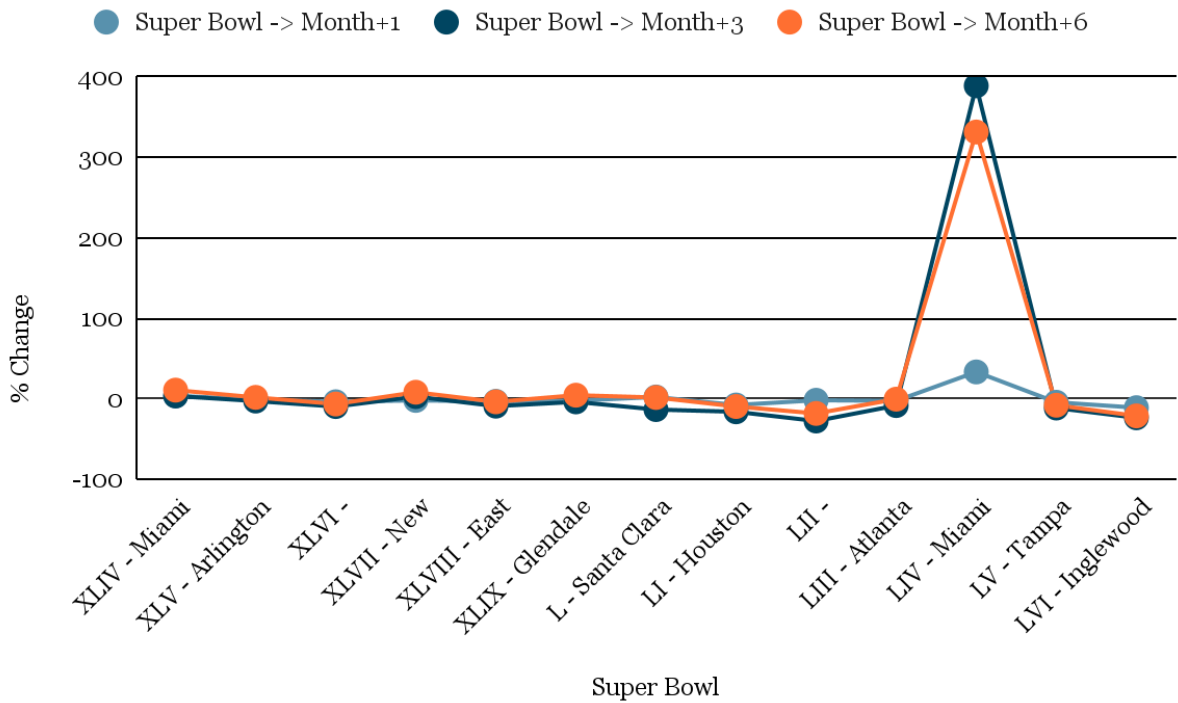
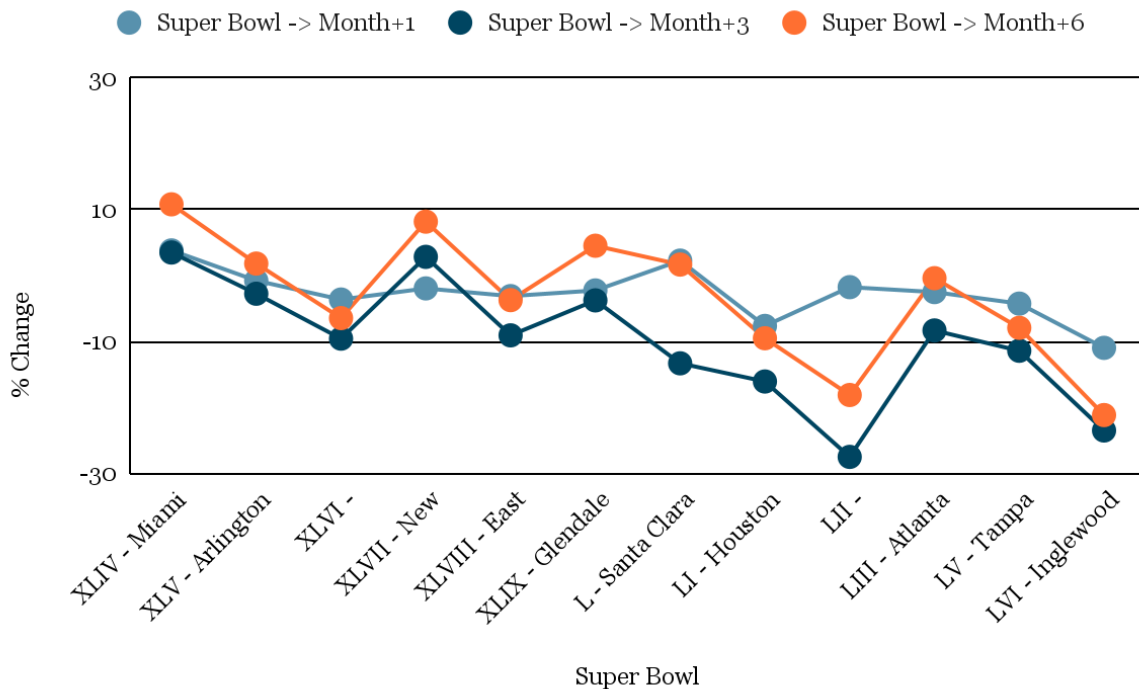


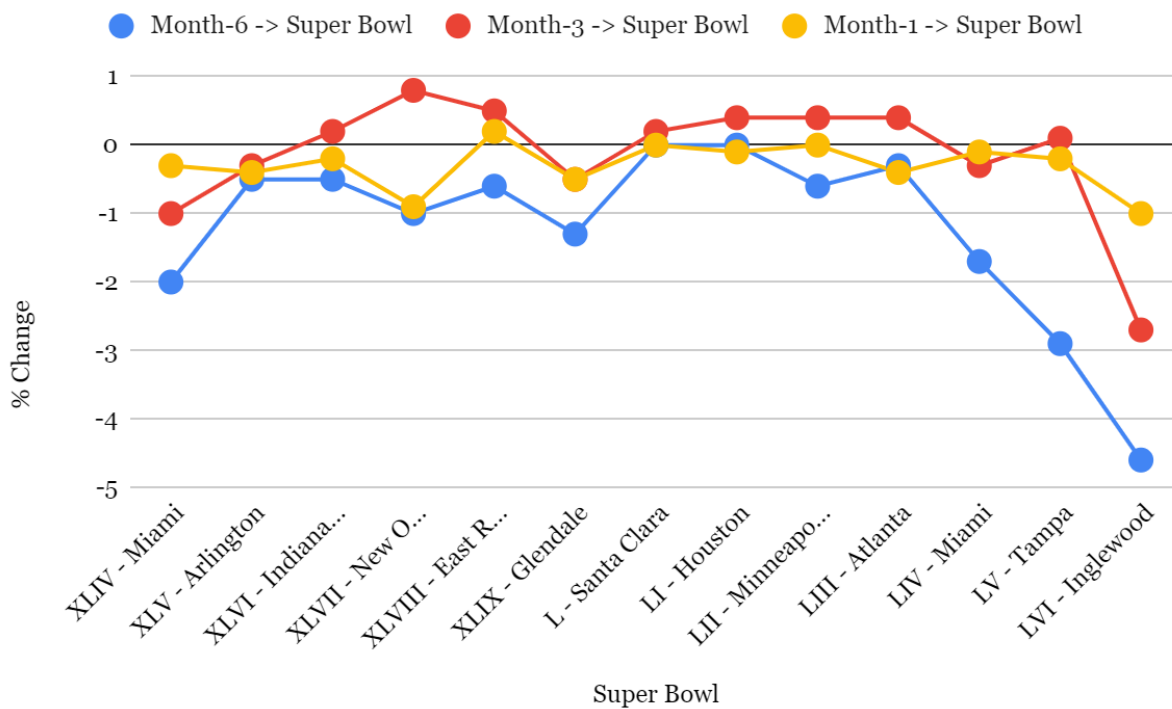
Figure 16. Number of Unemployed People After the Super Bowl % Change VS Super Bowl Host City (Excluding Miami LIV)



4.1.4.1 Super Bowl Impact on Host City Unemployment Rate Before the Super Bowl VS Super Bowl Host City

Figure 17 presents the % change in the unemployment rate before the Super Bowl for the past thirteen host cities. The three changes are the difference between the unemployment rate during the Super Bowl and August (Month-6), the difference between the Super Bowl and November (Month-3), and the difference between the Super Bowl and January (Month-1). The difference between the Super Bowl and November (Month-3) is the greatest, then the difference between the Super Bowl and January (Month-1), and finally the difference between the Super Bowl and August (Month-6). This means that three months out from the Super Bowl, there is actually the lowest number of unemployed individuals in comparison to the labor force. A possible explanation for this is that workers are already employed three months before the Super Bowl and individuals who join the market in the period between November and February (Super Bowl) are not hired, raising the unemployment rate.

Figure 17. Host City Unemployment Rate Before the Super Bowl % Change VS Super Bowl Host City



4.1.4.2 Super Bowl Impact on Host City Unemployment Rate After the Super Bowl VS Super Bowl Host City

Figure 18 presents the % change in the unemployment rate after the Super Bowl for the past thirteen host cities. The three changes are the difference between March (Month+1) and February (Super Bowl), the difference between May (Month+3) and February (Super Bowl), and the difference between August (Month+6) and February (Super Bowl). When observing the figure, it is apparent that Super Bowl LIV in Miami is a major outlier. This is due to COVID-19 majorly impacting the economy following Super Bowl LIV, skewing the unemployment rate.

Thus, **Figure 19** was created, plotting the same data except Super Bowl LIV in Miami. The greatest % change is between Month+1 and Super Bowl, then Month+6 and Super Bowl, and finally Month+3 and Super Bowl. This means that the unemployment rate is the highest one month following the Super Bowl in the short-run time period (6 months). This means that between the Super Bowl and March (Month+1), many Super Bowl workers, likely part-timers, no longer work for the NFL, resulting in a higher unemployment rate. This is supported by the findings in **Figure 16**. However, since the difference between Month+3 and the Super Bowl is the lowest, the unemployment rate immensely decreases between March (Month+1) and May (Month+3).

Figure 18. Host City Unemployment Rate After the Super Bowl % Change VS Super Bowl Host City

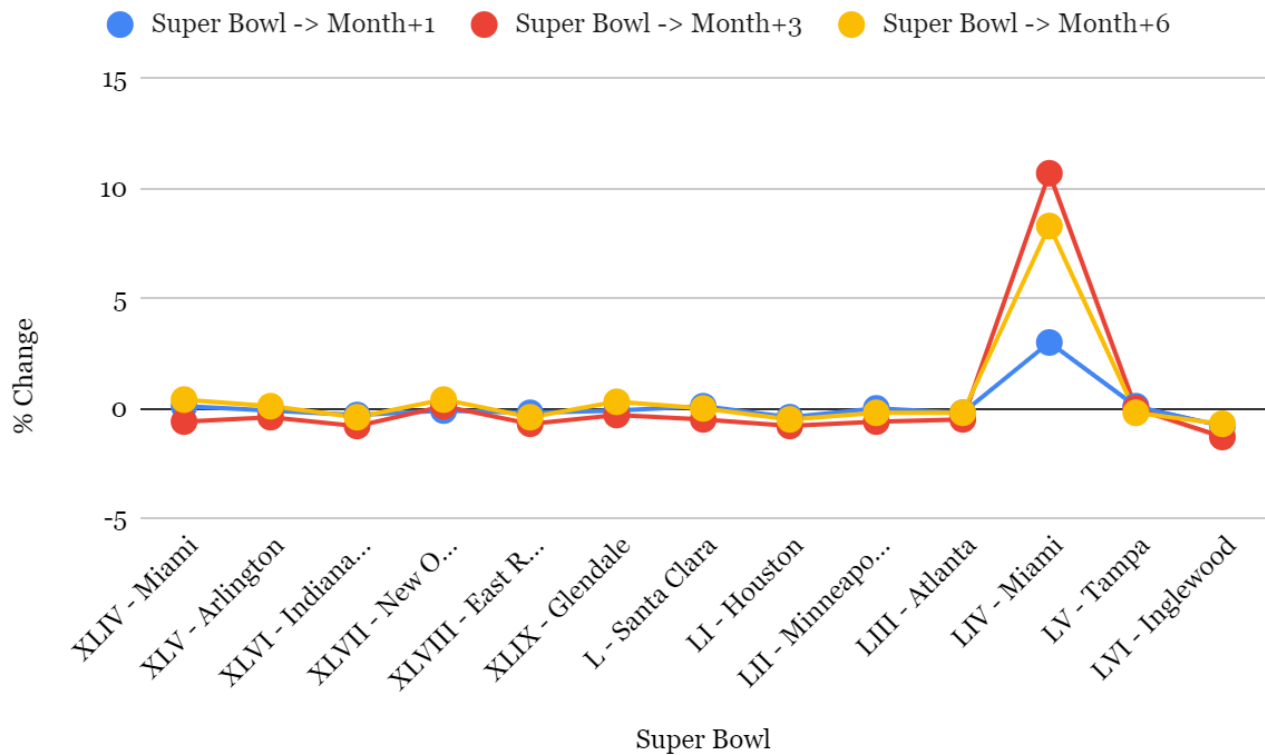
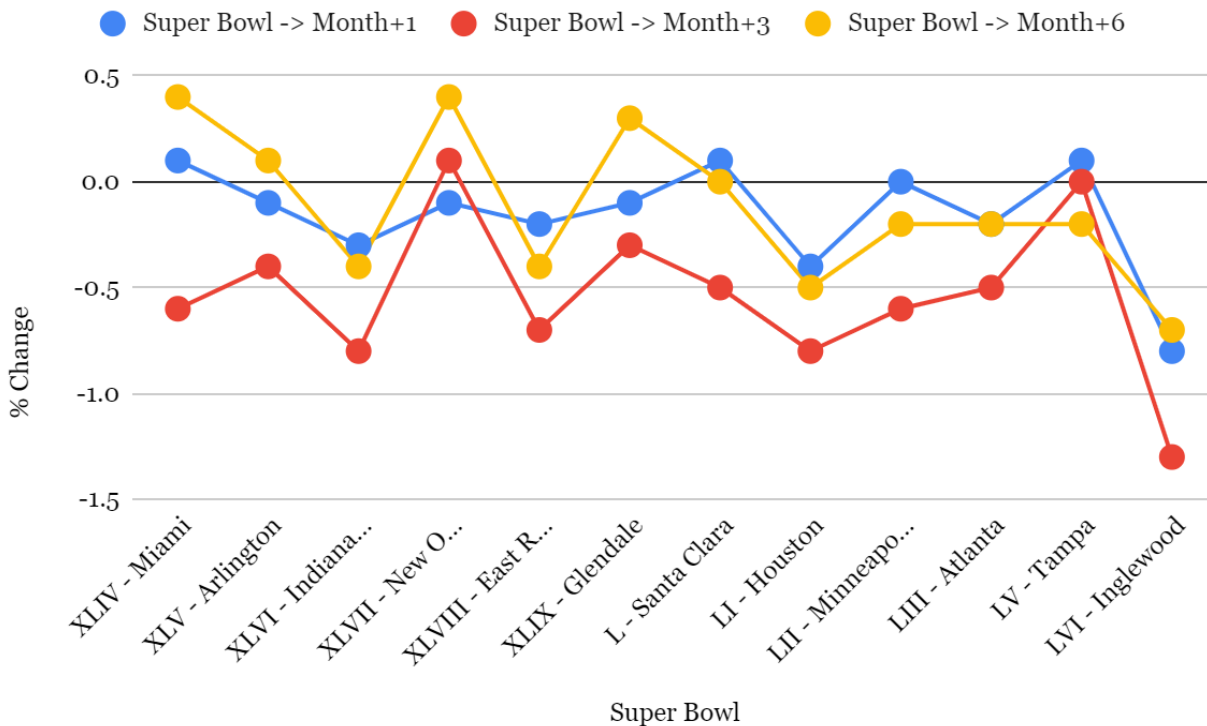


Figure 19. Host City Unemployment Rate After the Super Bowl % Change VS Super Bowl Host City (Excluding Miami)



4.2 Limitations

Although this analysis is relatively sound, there are a few nuances given the complexity of the Super Bowl and the economy. First, the time period is confined: five years for population and one year for labor force, number of employed and unemployed people, and unemployment rate. Despite this more useful timespan, it is still possible for the metrics to change as a result of the Super Bowl before or after the time period. Second, it is possible that other external events impact the metrics under consideration. It is likely that the Super Bowl is the main factor for the metrics' change during the time period, however other events can still skew data points to a degree. One major event that likely skewed results for the recent Super Bowls is COVID-19, which resulted in both a strong downturn and a strong rebound in the labor market. Third, despite the diverse selection of the thirteen analyzed cities, it is not plausible to generalize the trend and guarantee it for all host cities. Even in cities of similar infrastructure, population, and economies, other factors can still alter the metrics. Lastly, it is a well-known issue in the sports economics community that numbers, such as host city economic impact, are usually inflated for sporting events, including the Super Bowl. This may be for a variety of reasons, such as creating a more beneficial image for the NFL, not taking into account the displacement effect, and not measuring certain financial losses.

4.3 Conclusion

The Super Bowl has a major impact on the nation, the host state, and the host city. It is directly related to the observed changes in population, labor force, number of employed and



unemployed people, and unemployment rate. In terms of population, it is apparent that the Super Bowl happens in growing cities; however due to the large number of other variables that control population size, it is unlikely that the Super Bowl is the main causation for the observed increases. Regarding the labor force data, prior to the Super Bowl, local labor markets experienced the greatest increase in the one-month period before the Super Bowl. Nonetheless, there is consistent growth as early as six months before the event. Following the Super Bowl, the labor force in the majority of cities returned to “normal” conditions in no more than three months. Regarding the number of employed and unemployed people, there are observable increases in employment and decreases in unemployment over the one-year time period. Prior to the Super Bowl, the greatest surge in employed people is between November (Month-3) and January (Month-1) while the greatest decrease in unemployed people is between January (Month-1) and the Super Bowl. After the Super Bowl, the number of employed people continued increasing in a region, even for as long as six months. The number of unemployed people increased one month after the Super Bowl, continued to decrease in the following two months, and eventually increased back to “non-Super Bowl” conditions. Lastly, the lowest unemployment rate prior to the Super Bowl is three months prior and the unemployment rate is at its highest one month following the Super Bowl.

4.4 Next Steps

With these data sets and analysis of thirteen host cities’ labor market reactions to the Super Bowl, it is plausible to create a model to predict labor market reactions in future host cities based on similar city factors. These factors include but are not limited to, stadium size, proximity to major city, average temperature, and popularity of the city’s team affiliation as well as the popularity of the teams playing in the Super Bowl.

REFERENCES

1. 23, Jan, and Michael Popke E-mail Michael Popke About Michael Popke. “Super Bowl LIII by the Numbers.” *Sports Destination Management*, www.sportsdestinations.com/management/economics/super-bowl-liii-numbers-15863. Accessed 1 Dec. 2023.
2. 29, Sep. “Economic Impact Report Released for Super Bowl LIV.” *Sports Destination Management*, www.sportsdestinations.com/destinations/florida/news/economic-impact-report-released-super-bowl-liv-19455#:~:text=The%20study%20revealed%20that%20Super,generated%20from%20Super%20Bowl%20LIV. Accessed 1 Dec. 2023.
3. “Bay Area, Houston Get Super Bowls.” *ESPN*, ESPN Internet Ventures, www.espn.com/nfl/story/_/id/9298434/san-francisco-houston-win-super-bowl-bids <https://abc7news.com/financial-impact-of-super-bowl-in-santa-clara-san-francisco-to-be-discussed/1331425/>. Accessed 1 Dec. 2023.



4. Bryan DeArdo
Feb 2. "Super Bowl 2021: Here's How Many Fans Will Be inside Raymond James Stadium for Super Bowl LV." *CBSSports.Com*, 2 Feb. 2021, www.cbssports.com/nfl/news/super-bowl-2021-heres-how-many-fans-will-be-inside-raymond-james-stadium-for-super-bowl-lv/.
5. Cameron, Steve. "Why Hosting the Super Bowl Isn't Worth It, According to an Economist." *Business Insider*, Business Insider, www.businessinsider.com/super-bowl-nfl-football-hosting-cost-worth-host-cities-2019-2. Accessed 1 Dec. 2023.
6. Corbett, Peter. "Report: Super Bowl Lifted Valley Economy by \$720 Million." *The Arizona Republic*, Phoenix, 24 June 2015, www.azcentral.com/story/news/local/glendale/2015/06/23/super-bowl-valley-economic-impact/29193319/.
7. Darnell, Tim. "Super Bowl to Generate about \$190 Million for Metro Atlanta." *Atlanta, GA Patch*, Patch, 29 Jan. 2019, patch.com/georgia/atlanta/super-bowl-generate-190-million-spending-atl.
8. *Data Shows Big Economic Boost for Tampa during Super Bowl - WTSP.Com*, www.wtsp.com/article/sports/nfl/superbowl/early-data-shows-super-bowl-lv-brought-a-big-boost-to-tampas-hotel-and-air-travel/67-9b9d3058-7e9b-4ae6-a9da-3622edac715e. Accessed 2 Dec. 2023.
9. *DocumentCloud*, www.documentcloud.org/documents/1184220-20140605190910.html#document/. Accessed 1 Dec. 2023.
10. Draper, Kevin. "Windfall for Super Bowl Hosts? Economists Say It's Overstated." *The New York Times*, The New York Times, 29 Jan. 2018, www.nytimes.com/2018/01/29/sports/football/super-bowl-lii-minnesota.html.



11. "Economic Boom or Bust? Mixed Reviews for Super Bowl in Santa Clara." *KTVU FOX 2*, KTVU FOX 2, 9 Feb. 2016, www.ktvu.com/news/economic-boom-or-bust-mixed-reviews-for-super-bowl-in-santa-clara.
12. *Economic Impact of Super - Pr Newswire*, mma.prnewswire.com/media/516490/Economic_Impact.pdf. Accessed 2 Dec. 2023.
13. Gough, Christina. "Super Bowl Attendance 2023." *Statista*, 24 Apr. 2023, www.statista.com/statistics/1362951/super-bowl-attendance/.
14. Heid, Jason. "The Big Payoff of Super Bowl XLV." *D Magazine*, 17 Oct. 2022, www.dmagazine.com/publications/d-magazine/2010/super-bowl/the-big-payoff-of-super-bowl-xlv/.
15. "Impacts of Superbowl XLV to the Economy - 848 Words: Essay Example." *IvyPanda*, ivy panda.com/essays/impacts-of-superbowl-xlv-to-the-economy/. Accessed 1 Dec. 2023.
16. Marshall, Beth. "8 Stats to Know about Super Bowl LI's Economic Effect on the Greater Houston Area." *Community Impact*, Community Impact, 25 May 2017, communityimpact.com/news/2017/05/25/8-stats-know-super-bowl-lis-economic-effect-greater-houston-area/.
17. Montgomery, Dave. "The Super Bowl Returns to a Transformed Houston." *The New York Times*, The New York Times, 24 Jan. 2017, www.nytimes.com/2017/01/24/business/the-super-bowl-returns-to-a-transformed-houston.html.
18. Nelson, Tim. "Minnesota Wins Super Bowl 2018 Bid." *MPR News*, MPR News, 14 July 2019, www.mprnews.org/story/2014/05/20/minnesota-wins-super-bowl-2018-bid.



19. *New Meadowlands Stadium Receives Official Green Light from NFL to Bid ...*, www.metlifestadium.com/news/2009/12/18/new-meadowlands-stadium-receives-official-green-light-from-nfl-to-bid-for-super-bowl. Accessed 2 Dec. 2023.
20. Nfl. "Preparing for Super Bowl LV." *NFL.Com*, NFL, 28 Feb. 2023, www.nfl.com/playerhealthandsafety/health-and-wellness/covid-19/preparing-for-super-bowl-lv.
21. Organization, and ImageObject. "Uno Study Calculates \$480m Economic Impact for Super Bowl XLVII." *UNO Study Calculates \$480M Economic Impact for Super Bowl XLVII*, 28 Feb. 2023, www.neworleanssaints.com/news/uno-study-calculates-480m-economic-impact-for-super-bowl-xlvii-9906655.
22. PR, Vikings. "Super Bowl LII Generates \$450 Million for Local Economy." *Super Bowl LII Generates \$450 Million for Local Economy*, 28 Feb. 2023, www.vikings.com/news/super-bowl-lii-generates-450-million-for-local-economy-20691064#:~:text=Adjusted%20for%20%22displaced%20tourism%2C%22,been%20for%20the%20Super%20Bowl.
23. PR@VisitTampaBay.com. "Super Bowl LV Weekend Brings Hillsborough County Hotel Occupancy to 92%." *Tampa, Florida Vacations*, Visit Tampa Bay, 18 Feb. 2021, www.visittampabay.com/media/news/post/super-bowl-lv-weekend-brings-hillsborough-county-hotel-occupancy-to-92/.
24. Rosenthal, Gregg. "Atlanta, South Florida, L.A. Chosen to Host Super Bowls." *NFL.Com*, NFL, 24 May 2016, www.nfl.com/news/atlanta-south-florida-l-a-chosen-to-host-super-bowls-0ap3000000664704.
25. Salcedo, Carlos Rodríguez. "Super Bowl 2022: What's the Score with the Game's Economic Impact?" *Bloomberg Línea*, 22 Sept. 2022, www.bloomberglinea.com/english/super-bowl-2022-whats-the-score-with-the-games-economic-impact/.



26. Schrottenboer, Brent. "Lessons Learned from Mass Transit Fiasco at Super Bowl." *USA Today*, Gannett Satellite Information Network, 3 Feb. 2014, www.usatoday.com/story/sports/nfl/super/2014/02/03/super-bowl-xlvi-mass-transit-nfl-metlife-stadium/5184675/.
27. Sports, Front Office, and Nexstar Media Wire. "Super Bowl LVI: New Report Details Possible Economic Impact on L.A." *KTLA*, KTLA, 26 Oct. 2021, ktla.com/sports/super-bowl-lvi-new-report-details-possible-economic-impact-on-l-a/.
28. Summitpsnews. "Controversy Arises around Super Bowl LVI and Its Possible Covid Impact." *Summit News*, 4 Apr. 2022, summitpsnews.org/2022/02/10/controversy-arises-around-super-bowl-lvi-and-its-possible-covid-impact/.
29. "Super Bowl Economic Impact Touches down at \$571 Million." *Miami Today*, 28 Oct. 2020, www.miamitodaynews.com/2020/10/27/super-bowl-economic-impact-touches-down-at-571-million/#:~:text=According%20to%20a%20report%20released,economic%20impact%20of%20%24571.9%20million.
30. *Super Bowl Has Texas-Sized Impact on State's Economy*, www.mrt.com/business/energy/article/Super-Bowl-has-Texas-sized-impact-on-state-s-7427940.php. Accessed 2 Dec. 2023.
31. "Super Bowl LII Economic Impact Exceeds Expectations, Generates \$450 Million for Local Economy." *Office of Governor Mark Dayton and Lt. Governor Tina Smith*, 29 May 2018, www.leg.mn.gov/docs/2018/other/181224/governor/newsroom/index95c1.htm.
32. "Super Bowl XLVI Generates \$278 Million in Economic Impact for Indianapolis: Rockport Analytics." *Rockport Analytics | Just Another WordPress Site*, 18 July 2013, rockportanalytics.com/super-bowl-xlvi-generates-278-million-in-economic-impact-for-indianapolis/.
33. "Super Bowl XLVI." *Indycyclopedia.Org*, 2 June 2023, indycyclopedia.org/super-bowl-xlvi/#:~:text=The%20construction%20of%20Lucas%20Oil,but%20they%20picked%20Dallas%20instead.



34. Undefined. "Wes Moss: What Did Super Bowl 53 Do for Atlanta Financially?" *Ajc*, The Atlanta Journal-Constitution, 15 Feb. 2019, www.ajc.com/business/wes-moss-gdp-atlanta-super-bowl/aB0rzEOHJ7cHFt2s3ay3aK/.
35. Watkins, Calvin. "Super Bowl Misses Attendance Mark." *ESPN*, ESPN Internet Ventures, www.espn.com/dallas/nfl/news/story?id=6096358. Accessed 1 Dec. 2023.
36. "Why New Orleans Is Built to Host." *PCMA*, 31 Mar. 2022, www.pcma.org/why-new-orleans-is-built-to-host/.
37. Wiener, Jonathan. "How Much Does Tampa Bay Earn from Super Bowl LV?" *Boardroom*, 20 July 2021, boardroom.tv/how-much-does-tampa-bay-earn-from-super-bowl-lv/.
38. Wilson, Lea. "Houston Super Bowl Host Committee Announces Economic Impact of Super Bowl LI." *KPRC*, KPRC Click2Houston, 25 May 2017, www.click2houston.com/news/2017/05/25/houston-super-bowl-host-committee-announce-s-economic-impact-of-super-bowl-li/.
39. "Working at the 2023 Super Bowl." *JobMonkey*, 21 Mar. 2022, www.jobmonkey.com/eventjobs/super-bowl/#:~:text=Venue%20jobs%20such%20as%20Cashier,will%20attend%20the%20Super%20Bowl.
40. Data Sets are from HomeFacts, PopulationU, FRED Economic Data, and U.S. Bureau of Labor Statistics.
41. Covid Pandemic Fuelled 2021 Population Drop in 73% of U.S. Counties, www.reuters.com/world/us/covid-pandemic-fuelled-2021-population-drop-73-us-counties-2022-03-24/. Accessed 24 Dec. 2023.