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GDP and the NFL

The relationship between macroeconomic factors and the performance of professional sports teams is a topic that has long intrigued both economists and sports analysts. While it may seem intuitive that a thriving economy could have a positive impact on sports teams, the question remains: to what extent does the strength of the economy influence the performance of teams, particularly in high-profile leagues like the NFL? This paper seeks to answer that question by exploring the connection between the United States' economic health—measured through Gross Domestic Product (GDP)—and the performance of NFL teams, both during periods of economic growth and crisis.

This was a topic of interest for our group because we are all athletes who enjoy watching football and were intrigued by the idea of how the economy affected the game.

In addressing this question, we utilize a series of quantitative analyses, starting with a linear regression model to examine the correlation between GDP and average points scored by NFL teams. We also investigate how times of economic distress, such as the housing crisis of 2009 and the COVID-19 pandemic of 2020, impacted team performance. Additionally, we consider whether certain NFL teams capitalized more than others on organizational improvements that could have been facilitated by a growing economy.

Our findings provide significant insights into the ways in which economic cycles shape professional sports. We show that a healthier economy, as reflected by higher GDP, is generally associated with better team performance, likely due to increased consumer spending, greater investment in team resources, and improved facilities. Conversely, our analysis of economic crises reveals surprising results: team performance actually improved during times of economic turmoil, potentially due to increased leisure time among the population, enhanced marketing efforts, and opportunities for players to focus on skill development during periods of disruption.

Ultimately, our study underscores the complex and sometimes paradoxical relationship between economic conditions and NFL performance. While the traditional view may suggest that a stronger economy naturally leads to better sports outcomes, our research suggests that periods of economic distress may also provide unique opportunities for growth and performance improvement within the league. Through this analysis, we offer a deeper understanding of how external economic factors can influence the dynamics of professional sports.

Our first question was, does the increase in the economy's strength result in better-performing football teams? We measure this by running a linear regression model to see how the measure of GDP is connected with the average points scored. We found that they were positively correlated at a significant level because of the R-square of .6887. We find this makes sense because a higher GDP means that the economy is in a healthier state, and when the economy is in a healthy state, consumers trust it. When consumers trust it, they are spending more money on things they wouldn’t if the economy was going down, meaning things like luxury items or activities. Attending an NFL game would be considered a luxury item. If a consumer is spending more money on the NFL, then the NFL managers can afford to invest more in their team with things such as better facilities, whether it be recovery facilities or training facilities. They can afford larger contracts, and they could invest in a better training staff.

The second question that we were wondering about was if times of crises negatively affect the performances of teams. Two times of crisis that we focused on were the housing crisis, which occurred in 2009, and the pandemic that occurred from COVID in 2020. The way that we measured performance was through record percentages, which are wins divided by losses. During these times of distress, we found that the record percentages were higher during times of economic distress like the two examples we gave. When looking at the housing crisis, the viewer ratings were way up due to the fact that people had more free time because of the high unemployment rate during that time period. The players were also in financial distress, and what better way to alleviate the stress and blow off steam than to compete in the game that you love? Then during COVID due to all the rules, it gave players some extra time to work on themselves as players. They were able to improve their skills individually and collectively as a team. Then there was also an increase in advertising and marketing with an increase in player collabs and more Redzone purchases, which basically means more channels paid to be able to broadcast the NFL games. This was due to the fact that viewers increased because since many Americans were out of work, they had more free time, so they had time to relax and watch football.

Our third question is if specific teams took advantage more than others of their organizations’ improvement as the economy was improving. When looking at the data for this question we found that with a decreasing coefficient of GDP and an increasing GDP factor the game may be so skilled that passing isn’t having a chance to catch up. As well as the fact that passing plays could be a lagging indicator because playbooks are so large when looking at what a football team could do to try and score which is not always a passing play. Defensives are too deceptive at disguising coverages and passing efficiency cannot keep up with them. So, it is a difficult question to truly answer as many of the factors could be contradictory if they are growing or not. This is because if the offense gets better and the defense gets better then the stats won’t necessarily look any better since they counter each other out.

To answer these questions together as an overall question of whether GDP really affects NFL performance. In determining the NFL’s performance, there are millions of factors to consider that could possibly contradict each other when looking at the numbers. However, when answering our questions and breaking down the research the way that we did, we were able to determine that there was significant evidence that as the economy grows with respect to GDP, then there is improved performance in the NFL on average per team. Something that we did not expect to find within our research is that the performance and ratings were up during specific times of economic crises, including the housing crisis in 2009 and the COVID pandemic in 2020.

Resources

<https://www.imf.org/en/Publications/fandd/issues/Series/Back-to-Basics/gross-domestic-product-GDP#:~:text=GDP%20measures%20the%20monetary%20value,the%20borders%20of%20a%20country> ​

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