Examiner rated this an A

Inflation in the US—a mathematical investigation on statistics and money.

To what extent has inflation within the US economy impacted the contracts of players in the MLB of similar caliber?

Mathematics

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Contents

Introduction

Baseball is a staple in the United States of America. It is known as "America's Pastime" and millions of fans watch and attend baseball games daily. In the history of Major League Baseball (MLB), there have been thousands of players that have come through and played. According to Forbes, the MLB is worth $36 billion, as the average MLB team is worth $1.2 billion (Ozanian, 2015). There are a variety of ways for a team to become valuable, but the most successful way is to sign star players. But, to win the "sweepstakes" for the stars, a team will spend millions of dollars per year in the player's contract. Conversely, players in the 20th century made only a fraction of the amount players make today. This is because of inflation. Over time, the value of the dollar fluctuates, either increasing or decreasing the spending value. This instability can be dangerous for consumers, as the value of their money could change at any given time. The best way to examine inflation is by looking at items of great value, like player contracts. So, I will be researching **to what extent has inflation within the US economy impacted the contracts of players in the MLB of similar caliber?** Throughout this essay, I will be exploring the career of one of the greatest and, at the time, highest paid player in the MLB, Babe Ruth. To contrast the value of Ruth's contract, I will also explore the early career of current MLB star and highest paid player in the MLB, Mike Trout. Then, rates of inflation will be calculated, allowing me to compare the contracts of the two players when the money is converted. Finally, advanced

baseball statistics, or sabermetrics, are investigated to show just how grossly Babe Ruth was underpaid, or how overpaid Mike Trout is.

Babe Ruth

Early Life

George Ruth Jr, famously known as Babe Ruth, was born in 1895 in Baltimore, Maryland, USA. He attended St. Mary's Industrial School for Boys, and it is here where he learned to play baseball. ("Ruth's Childhood", n.d.). His career would get a jumpstart in the winter of 1914, as he met Jack Dunn, the manager of the Baltimore Orioles. Dunn, seeing the incredible talent of Ruth, was ready to pay him $600 to play professional baseball for Baltimore (Keyser, 2014).

Career

Red Sox.

Ruth's value would skyrocket in the MLB, and his contract would reflect just that. Struggling to financially keep the Orioles afloat, Jack Dunn had no choice but to sell off his best players to Major League teams ("Babe Ruth Biography", n.d.). Ruth would be sold to the Boston Red Sox, which is where he played for 6 years, accumulating 342 hits, 49 home runs (HR), leading the league in 1918 and 1919 with 11 and 29 respectively, and

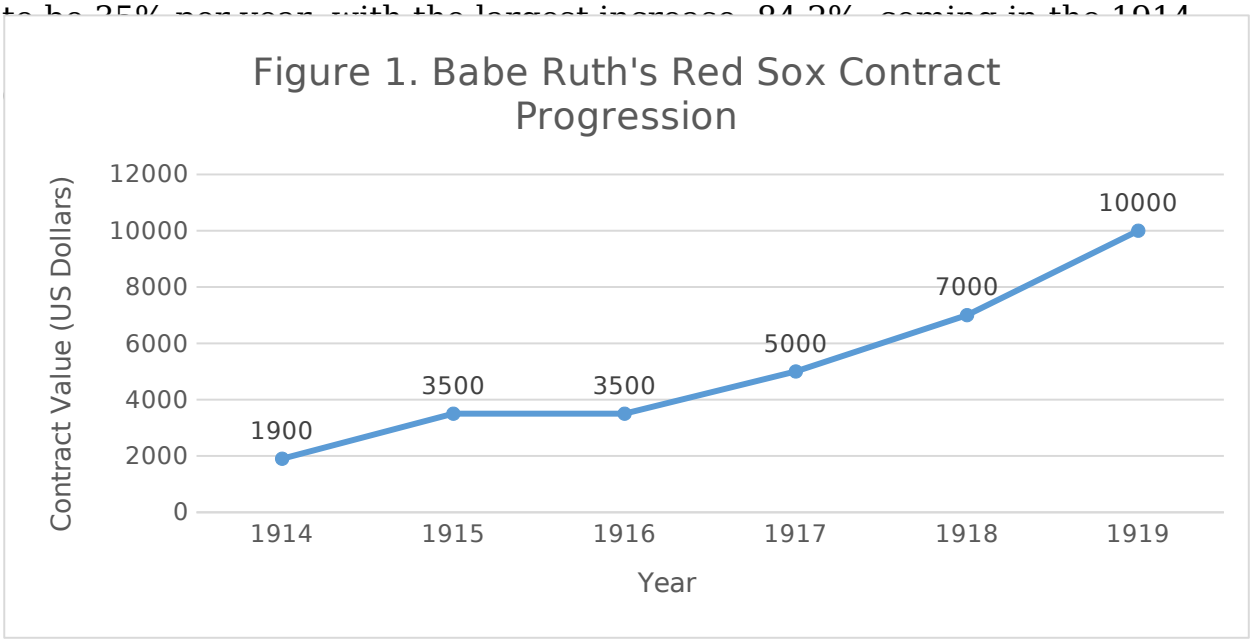
posting a batting average of .308 (“Babe Ruth”, n.d.). Batting average is a statistic used in baseball to calculate the average hitting performance of a batter, expressed as a ratio of a batter’s safe hits per official times at bat.

AVG = (Hits) / (Official At Bats)

Ruth’s average in those six years is relatively low at .308, but Ruth was a complete player that did what very few players have ever done—be a consistent pitcher too. In those six years, Ruth won 89 games, struck out 483 batters, and had an earned run average (ERA) of 2.19 (“Babe Ruth”, n.d.). The ERA is the most accurate statistic to show the success of a pitcher, as it calculates the average amount of earned runs given up per 9 innings pitched. So naturally, the lower the ERA, the better.

ERA = 9 x (Earned Runs Allowed) / (Innings Pitched)

Ruth’s 1.75 ERA in 1916 ranks as the 22nd lowest ERA by a starting pitcher in MLB history (“Sortable Player Stats”, n.d.). For the Red Sox to keep Ruth’s talents, they needed to pay him his worth. As shown in Figure 1 (Babe Ruth Salary Draws, n.d.), Ruth’s value increased each year, averaging to be 25% per year, with the largest increase, 84.2%, coming in the 1914



Yankees.

The legendary career of Babe Ruth goes beyond his days in Boston, as he is most famously known as a member of the New York Yankees. The Red Sox stumbled in 1919, but Ruth had a career year. He broke the MLB single season home run record with 29, and tallied 114 runs batted-in (RBI). This sensational season from the plate, along with a solid 9-5 record as a pitcher ("Babe Ruth", n.d.), drew a lot of attention from teams. The Red Sox owner, Harry Frazee, refused to pay Ruth the increased salary he demanded. Frazee had no choice but to sell him off to the New York Yankees, who offered him $100,000 ("Purchase of Babe Ruth", 2009).

In six short seasons, the value of Ruth's buyout increased a staggering 16,566.67%, going from $600 in 1914 to $100,000 in 1920. It was in this

year that Babe Ruth would be the highest paid player in the MLB, earning $20,000 per year for the next two years. But, in 1922, Ruth would leave an impression on the league, both with his stats and his value. The 1921 season ended with Babe Ruth emerging at the top of many statistical batting categories, as he led the league in runs, home runs, and runs batted-in with 177, 59, and 168 respectively (“Babe Ruth”, n.d.). This led the Yankees to pay Ruth historic money. Ruth earned himself $52,000 per year for the next five years, becoming the first player to earn more than $50,000 per year. Ruth would hold the title for the highest paid player in the league for thirteen consecutive seasons, spanning from 1922 to 1934 (Haupert, 2012). He continued to lead the pack in terms of salary, as the $80,000 he earned per year in 1930 and 1931 would not be exceeded until 1947 (“Famous First Salary Levels”, n.d.).

Retirement

Following the 1935 season, Babe Ruth decided to call it quits. It had been twenty-two seasons of success. According to Sporting News, Ruth is “the greatest baseball player of all time” and “the greatest baseball player of the 20th Century” by Sports Illustrated (as cited in “Highlights and Awards”, n.d.). He finished his career with 2,873 hits, 714 home runs, 2,214 runs batted-in, and had a .342 batting average. He won the Most Valuable

Player award (MVP) in 1923, a Batting Title, ERA Title, and an astounding seven World Series Championships (“Babe Ruth, n.d.). Ruth was paid like a champion as well. Including multiple dividends, Ruth’s worth is believed to be well over $1,000,000 (“Babe Ruth Stats”, n.d.). A value like this was unheard of in the early 20th century, but compared to the contracts of today’s players, it is miniscule. Inflation has had various impacts on the value of the American dollar, and such impacts can be shown through the contract and salary of one of the MLB’s current best players, Mike Trout.

Mike Trout

Career

Mike Trout’s career began with the 2009 MLB Draft, as the Los Angeles Angels selected him with the 25th overall pick (“The Millville Meteor”, 2016). Trout went to the Angels’ minor league system where he soon became the #1 prospect in the MLB (“When They Were Prospects”, 2015).

In 2012, Trout put up one of the most impressive rookie campaigns of all time, as he won the Rookie of the Year Award with a .326 batting average, 182 hits, 30 home runs, and 83 runs batted-in. Trout also became the first player in MLB history to hit 30 home runs, steal 45 bases, and score 125 runs, all while being a rookie. This production from Trout would continue for the next year as well, finishing with more hits (190), runs batted-in (97), and just three fewer home runs (27) while maintaining a

batting average of .323 (“Mike Trout Stats”, n.d.). Trout’s incredible initial seasons came at a bargain for the Angels, as he was still under his rookie contract. This contract, which included a $1,215,000 signing bonus in 2009, earned Trout a total of $2,621,000 from 2009 to 2013 (“Estimated Career Earnings”, n.d). To show just how little Trout got paid compared to other stars in the MLB, just look at former MVP Alex Rodriguez. In Figures 2 and 3, the production of Alex Rodriguez and Mike Trout from 2011 to 2013 is compared, along with their earnings during those same years (“Mike Trout” & “Alex Rodriguez” & “Alex Rodriguez Stats", n.d. & n.d & n.d.).

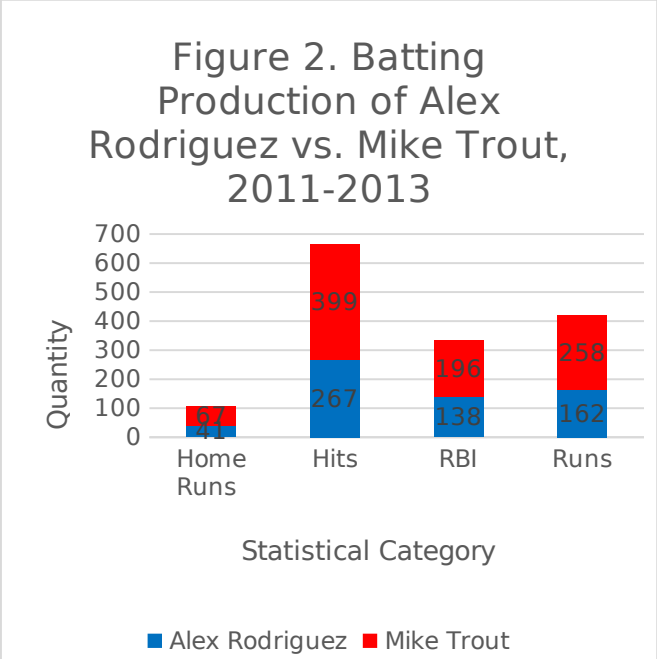


Figure 2. A graph comparing Alex Rodriguez’s and Mike Trout’s common hitting statistics from 2009-2013. Data adapted from *Baseball Reference*, n.d., Retrieved from https://www.baseball-reference.com/players/r/rodrial01.shtml, and *Baseball Reference,* n.d., Retrieved from https://www.baseball-reference.com/p

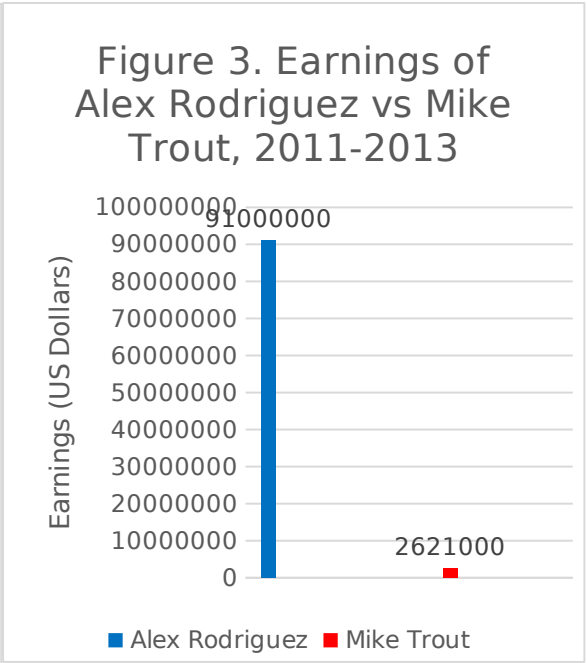


Figure 3. A graph comparing Alex Rodriguez’s and Mike Trout’s earnings from 2009-2013. Data adapted from *Spotrac,* n.d., Retrieved from http://www.spotrac.com/mlb/new-york-yankees/alex-rodriguez-597/cash-earnings/, and *Spotrac*, n.d., Retrieved from http://www.spotrac.com/mlb/los-

The Angels saw the production from Trout and did everything they could to keep him. Before the 2014 season, the Angels signed Trout through 2020, a six-year contract worth $144,500,000 (“Trout Gets 6 Years”, 2014). This contract would pay dividends for the Angels, as Trout continued the scorched pace that he set through his first three full seasons. The same season that he signed his contract in, Trout would go on to win the 2014 Most Valuable Player award, setting a career high in home runs. The next two seasons would provide more of the same for the Angels, as he combined for 70 home runs, 190 runs batted-in, and 227 runs, all while having a batting average of .307. He finished 2nd in MVP voting in 2015, only to win it in 2016 (“Mike Trout”, n.d.). The money that Trout has and will be making is a direct reflection on his incredible play on the field, as he has earned about $29,121,500 through his annual salary alone through the 2016 season —being only 25 years of age and having only six complete seasons played in the MLB. Trout’s value is only skyrocketing. From the years 2018 to 2020, Trout is set to become the first player in MLB history to make more than $34,000,000 per season (“Famous First Salary Levels”, n.d.), and is on pace to have earned more than $148,000,000 after the 2020 season (“Estimated Career Earnings”, n.d.).

Inflation

It is baffling that arguably the greatest player in MLB history made only a fraction of the amount of money in his entire career compared to a single contract of an upcoming star in today’s game. Such change in the

value of the dollar in the U.S. economy is because of inflation. The process of inflation is defined as “the rate at which the general level of prices for goods and services is rising and, consequently, the purchasing power of currency is falling” (“Inflation”, n.d.). This tends to be an annual occurrence, as the inflation rate of the US dollar has gone up about 3.16% per year between 1914 and 2016 (“Inflation Calculator”, n.d.). These specific years were selected because of the timeframe of the two players that are being examined, as Babe Ruth signed his first contract in 1914, and 2016 is the last completed MLB season at the time of this essay. Below is the formula to calculate inflation (“Inflation Calculator”, n.d.):

((Consumer Price Index in year “X”) / (Consumer Price Index in year “Y”)) x Year “Y” USD value = Year “X” USD value

The Consumer Price Index (CPI) can be found on online databases, as the value varies by month. The CPI is defined as “a measure of the average change over time in the prices paid by urban consumers for a market basket of consumer goods and services” (“Inflation Calculator”, n.d.), or in other words, a value used to measure the change.

Through calculations, $1 in the year 1914 would be worth about $24.38 in 2016, showcasing nearly a 2,300% increase in prices. To exemplify this stark increase, in 1914, a gallon of gas would set back a consumer about $0.12 (“Cost in 1914”, n.d.), whereas in 2016, a gallon of gas costed about $2.15 on average (Garcia, 2016). Such change shows a

1,691.67% increase in gas prices. It is not quite as drastic as the change in rate of inflation, but still a significant increase. Moving to a larger scale, a car in 1914, like the Ford Model T, costed nearly $550 (“Ford Model T”, n.d.). The 2016 Ford Focus started at $21,875 (“Ford Focus Pricing”, 2016). Since they were first mass-produced, the percent change from the 1914 Ford Model T to the 2016 Ford Focus is about a 3,877.27% increase, substantially greater than the 2,300% increase of the US dollar since 1914. Seeing this evidence, it exemplifies that the greater the value of something, the more it gets impacted by inflation.

Contract Comparison

To begin, Ruth’s earnings from 1919 to 1924, the best six-year span of his career, will be compared to the first six seasons of Trout’s earnings. From 1919 to 1924, Babe Ruth’s salary earned him a total of $206,000 (“Babe Ruth Stats”, n.d.). Mike Trout, on the other hand, made a total of $29,121,500 as of the conclusion of the 2016 season (“Estimated Career Earnings”, n.d.). After calculations, the percent change from Babe Ruth’s earnings in his best six-year span compared to those of Mike Trout is a monumental 14,036.65%.

Next, I will go into their earnings in their entire career to compare. In twenty-two seasons in the MLB, Ruth earned approximately $900,000

(“Babe Ruth Stats”, n.d.). Mike Trout, at the end of his current contract that he is under, is set to make $141,121,500 by the end of 2020 (“Estimated Career Earnings”, n.d.). Even in twelve less seasons, the percent change from Trout’s estimated earnings to Ruth’s is 15,580.16%. To match, through Ruth’s first ten seasons, the same length of the contract that Trout signed, he earned $186,200. This blows the percent increase from 15580.16% all the way up to 75690.28%. This is a significant increase, but not the largest percent increase we’ve seen. By including another four years to the calculation for Babe Ruth (1920-1923), it included three years (1920, 1922-1923) that Ruth was the highest paid player in the MLB (Haupert, 2012.). This brings the percent change down from when the first six seasons was being compared, and dropped from 94,144.33% to 75,690.28%. With Ruth being the highest paid player for the next eleven seasons after that, it makes a significant impact on the percent change of the two players’ entire careers, as previously mentioned, the drop went from 75,690.28% to just 15,580.17%.

It may be hard to compare numbers and values like these because of the effects of inflation. Before I analyze the statistical numbers of the players and if they were worth the contracts, I am going to put the value of Babe Ruth’s contract into today’s US dollars. Ruth’s career spanned from 1914 to 1935. These results are seen within Chart 1, having an average inflation rate of 1.51%.

Chart 1. Babe Ruth’s converted earnings

Year	Earnings	Value of Dollar in 1935
1914	$1,900	$1.37
1915	$3,500	$1.36
1916	$3,500	$1.26
1917	$5,000	$1.07
1918	$7,000	$0.91
1919	$10,000	$0.79
1920	$20,000	$0.68
1921	$30,000	$0.77
1922	$52,000	$0.82
1923	$52,000	$0.80
1924	$52,000	$0.80
1925	$52,000	$0.78
1926	$52,000	$0.77
1927	$70,000	$0.79
1928	$70,000	$0.80
1929	$70,000	$0.80
1930	$80,000	$0.82
1931	$80,000	$0.90
1932	$75,000	$1.00
1933	$52,000	$1.05
1934	$37,500	$1.02
1935	$25,000	$1.00

Chart 1. Babe Ruth's converted salary earnings into 1935's dollar value. Data adapted from *Baseball Almanac,* n.d., Retrieved from http://www.baseball-almanac.com/tsn/babe_ruth_salary.shtml, and *US Inflation Calculator*, n.d., Retrieved from http://www.usinflationcalculator.com/

So, when taking Ruth's final career earnings via salary, I use the value of the US dollar in 1935. Adjusting the $900,000 Ruth made in total to it's worth in 1935, the total comes up to $772,283. This number was reached by taking Ruth's yearly salary from 1914 to 1935 and multiplying it by the value of $1 in that year converted into 1935. For example, in 1914, $1 would be worth $1.37 in 1935. Ruth made $1,900 in 1914, so when

multiplied, Ruth's adjusted salary for 1914 would be $2,603. The amount of money he made converted into 1935 US dollars is significantly lower because of deflation from 1918 to 1931. In those thirteen years, $1 in 1914 was more valuable than $1 in those years. The lowest the value dipped was in 1920, as $1 in 1914 would only be worth $0.68 in 1920. It was not until 1932 that the value of $1 in 1914 started to inflate again, as $1 in 1930 was worth $1 in 1935, increased by a few cents, then leveled back down to $1. Now that I have Ruth's converted career earnings as of 1935, I can now convert that into the value of dollars in 2016.

((CPI in 2016 (240.007)) / (CPI in 1935 (13.7))) x $772,283 =

$13,529,439.85

So, in today's economy, Babe Ruth's $772,283 in career earnings as of 1935 would be equivalent to $13,529,439.85 in 2016's value. Over a twenty-two-year career, that averages out to him getting paid about $614,974.54 per year in today's value of the US dollar. This number alone shows the unusual impact of inflation throughout the years, as one of the greatest players to ever step foot on a baseball diamond got paid, on average, a little more than half a million dollars per year.

Sabermetrics

With the emergence of better players as the league continues to move forward, experts create even more statistics to measure the value of a player. Recently, the word "sabermetrics" has been tossed around baseball,

creating new stats to analyze. Sabermetrics is the “mathematical and statistical analysis of baseball records” and, as defined by Bill James, the father of sabermetrics, “the search for objective knowledge about baseball” (as cited in “A Guide to Sabermetric Research”, n.d.).

Wins Above Replacement

One of the best-known sabermetric stats is Wins Above Replacement (WAR). The WAR of a player measures how much better a player is than a replacement player and accumulates throughout an entire career. The calculation for WAR is quite complicated, as it is done as followed (“WAR For Position Players”, n.d.):

WAR = (Batting runs + Base Running Runs + Fielding Runs + Positional Adjustment +League Adjustment + Replacement Runs) / (Runs Per Win)

This formula includes all aspects of baseball to show just how good a player is and how many additional wins they provide over a replacement. Many of these numbers needed, however, need to be found on data bases that collect statistics, such as the values for weighted runs above average, home park factors, positional adjustments, and runs per win (“WAR For Position Players”, n.d.).

Due to the extreme lengths it takes to calculate a player’s WAR, I am able to extract the WAR of Babe Ruth and Mike Trout from various baseball statistical websites. As a hitter, Ruth’s accumulated career WAR is 163.1. To put that statistic into perspective, that is the highest WAR in MLB

history by any positional player. The next closest, Barry Bonds, comes in at 162.4. To recall, Ruth did not spend the entirety of his career as a position player. Ruth pitched at least 1 inning in ten different seasons, adding an additional 20.6 WAR to his career total. This addition tallies Ruth career total WAR to 183.0. Mike Trout, on the other hand, has played on 1/3rd of the number of seasons as Ruth, but still has breath-taking numbers, especially in WAR. As of the end of the 2016 season, Trout's accumulated career WAR comes up to 48.5. This WAR statistic for Trout is already better than a number of those of players already in the Hall of Fame, such as Earl Averill (48.0 WAR) and George Kell (37.4 WAR) ("Career Leaders For WAR", n.d.).

To further emphasize the greatness of Ruth, he owns five of the ten, including the top three, best single season WAR statistics in the history of the MLB. Arguably the best single season in history, Ruth's 1923 season leads the way with a 14.1 WAR, followed by his 1921 and 1927 seasons with a 12.9 and 12.4 WAR respectively. Mike Trout's best season in terms of WAR, 2012, is also high up on the list, as it is tied for the 22nd best season in

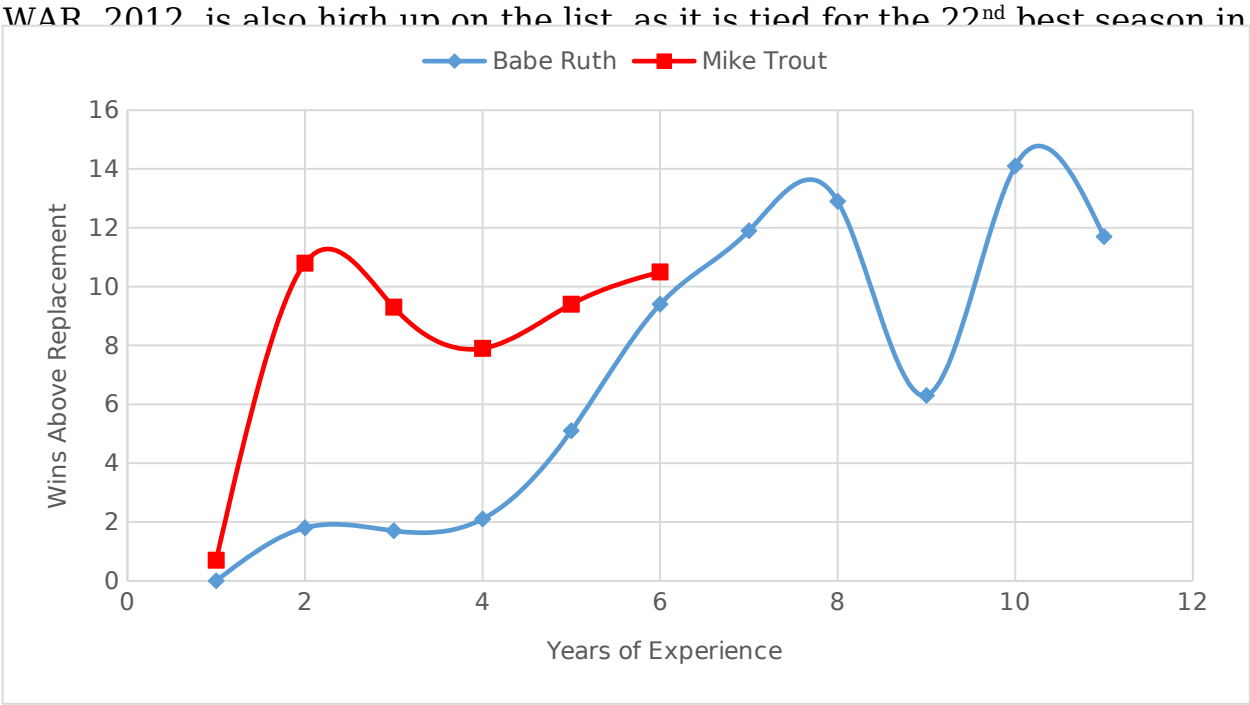


Figure 4. Babe Ruth's seasonal WAR from 1914 to 1924, including his best six-year span (1919 to 1924) compared to Mike Trout's seasonal WAR for his young career. Data adapted from *Baseball Reference*, n.d., Retrieved from https://www.baseball-reference.com/players/r/ruthba01.shtml, and

all time is, and who the greatest player today is. Both have been analyzed in this essay, but in today's currency, one has been paid like an MVP, while the other has been paid like a struggling minor leaguer. One has not been severely impacted by the effects of inflation, while the other has. Both players have posted unbelievable statistics in their careers, but one player

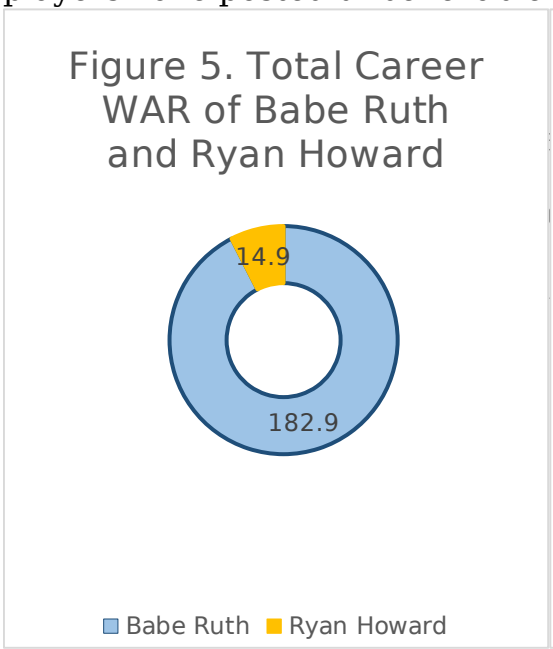


Figure 5. Total Career WAR of Babe Ruth and Ryan Howard

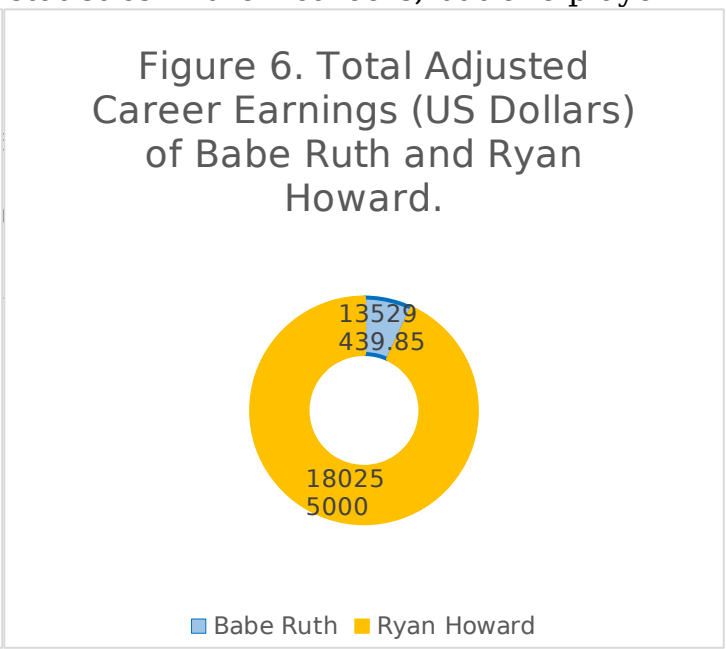


Figure 6. Total Adjusted Career Earnings (US Dollars) of Babe Ruth and Ryan Howard.

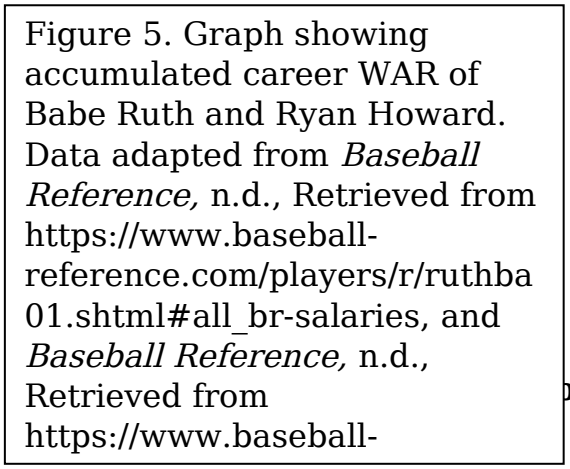


Figure 5. Graph showing accumulated career WAR of Babe Ruth and Ryan Howard. Data adapted from *Baseball Reference,* n.d., Retrieved from https://www.baseball-reference.com/players/r/ruthba01.shtml#all_br-salaries, and *Baseball Reference,* n.d., Retrieved from https://www.baseball-

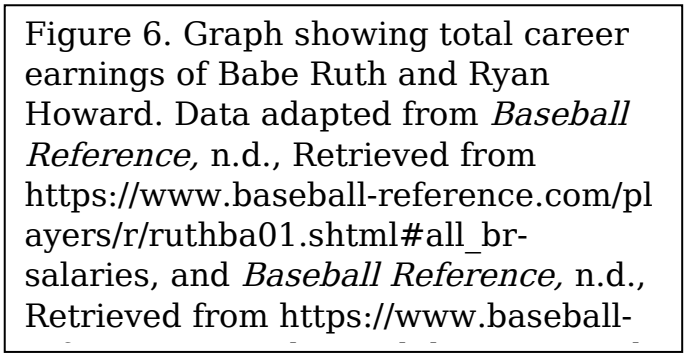


Figure 6. Graph showing total career earnings of Babe Ruth and Ryan Howard. Data adapted from *Baseball Reference,* n.d., Retrieved from https://www.baseball-reference.com/players/r/ruthba01.shtml#all_br-salaries, and *Baseball Reference,* n.d., Retrieved from https://www.baseball-

onclusion

Money talks. People work their entire lives so they can receive goods and services in return for it. Money is scary, too. The value of that hard-earned money could drop in an instant. Everything that they've ever worked for—gone. Of the billions of people that have stepped foot on Earth, only a fraction has been graced with the ability to play a sport professionally and make millions of dollars doing so. Babe Ruth is the greatest baseball player of all time, and inflation hurt the value of his earnings. Players of today would laugh at the $600,000 per year he would make in today's value. Conversely, Mike Trout is playing in the best era possible. He is putting up

incredible numbers annually and is getting paid greatly for that. Is he as good as Ruth? Not yet, but the money says otherwise.

There are two distinct ways one could look at this research. They could see the stats that Ruth accomplished in his career and think it is a crime to have paid him as little as his teams did. Or, they could compare Trout's stats to to Ruth's and think it is a crime to pay someone that much money to play baseball. Times have changed, though, as baseball has become commercialized. The all-around skill of the players has increased, which has led the sport to become an integral part of American culture. By being just that, it allows for more investment, allowing players to be rewarded nicely in their contracts. This may not always be the case, as it is hard to predict what the value of the dollar will do in years to come. Inflation or deflation is bound to occur, so in the near future, not only will player contracts look a lot different, but so will the prices around us. What $1 is now will not be $1 in the foreseeable future, but that does not call for panic. It effects everyone in the society, and only time will tell the benefits or repercussions.

References

1914 Ford Model T. (n.d.). Retrieved from http://www.conceptcarz.com/vehicle/z1676/Ford-Model-T.aspx

2016 Ford Focus For Sale - 2016 Focus Pricing & Features. (n.d.). Retrieved 2017, from https://www.edmunds.com/ford/focus/2016/

A Guide to Sabermetric Research. (n.d.). Retrieved from http://sabr.org/sabermetrics

Alex Rodriguez. (n.d.). Retrieved from http://www.spotrac.com/mlb/new-york-yankees/alex-rodriguez-597/cash-earnings/

Alex Rodriguez Stats. (n.d.). Retrieved from https://www.baseball-reference.com/players/r/rodrial01.shtml

Babe Ruth Biography. (n.d.). Retrieved from http://www.espn.com/mlb/player/bio/_/id/27035/babe-ruth

Babe Ruth Salary Draws. (n.d.). Baseball Almanac. Retrieved from http://www.baseball-almanac.com/tsn/babe_ruth_salary.shtml

Babe Ruth Stats. (n.d.). Baseball Almanac. Retrieved from http://www.baseball-almanac.com/players/player.php?p=ruthba01

Babe Ruth Stats. (n.d.). Retrieved from https://www.baseball-reference.com/players/r/ruthba01.shtml#all_br-salaries

Career Highlights and Awards. (n.d.). Babe Ruth. Retrieved from http://www.baberuth.com/

Career Leaders & Records for WAR Position Players. (n.d.). Retrieved from https://www.baseball-reference.com/leaders/WAR_bat_career.shtml

Elias Sports Bureau. (n.d.). Mike Trout Stats. ESPN. Retrieved from http://www.espn.com/mlb/player/stats/_/id/30836/mike-trout

Famous First Salary Levels. (n.d.). Baseball Almanac. Retrieved from http://www.baseball-almanac.com/firsts/first9.shtml

Garcia, A. (2016, January 2). AAA thinks gas prices will remain low in 2016. Retrieved from http://money.cnn.com/2016/01/02/news/aaa-gas-prices-2016/index.html

Haupert, M. (2012, Fall). MLB's annual salary leaders since 1874. Society for American Baseball Research. Retrieved from http://sabr.org/research/mlbs-annual-salary-leaders-1874-2012

Inflation. (2016, June 29). Investopia. Retrieved from http://www.investopedia.com/terms/i/inflation.asp

Mike Trout. (n.d.). Baseball Reference. Retrieved from http://www.baseball-reference.com/bullpen/Mike_Trout

Mike Trout. (n.d.). Retrieved from http://www.spotrac.com/mlb/los-angeles-angels-of-anaheim/mike-trout-8553/cash-earnings/

Mike Trout Batting Stats. (n.d.). Retrieved from https://www.baseball-reference.com/players/t/troutmi01-bat.shtml

Mike Trout gets 6 years, $144.5M. (2014, March 29). Retrieved from http://www.espn.com/los-angeles/mlb/story/_/id/10692095/los-angeles-angels-mike-trout-agree-six-year-extension

Mike Trout -The Millville Meteor- life Story. (2017, January 22). Retrieved from https://yoursportsfeeder.com/2016/06/08/mike-trout-millville-meteor/

New York Yankees announce purchase of Babe Ruth. (2009). Retrieved from http://www.history.com/this-day-in-history/new-york-yankees-announce-purchase-of-babe-ruth

Ozanian, M. (2015). MLB Worth $36 Billion As Team Values Hit Record $1.2 Billion Average. Forbes. Retrieved from https://www.forbes.com/sites/mikeozanian/2015/03/25/mlb-worth-36-billion-as-team-values-hit-record-1-2-billion-average/#70686e84fd59

Position Player WAR Calculations and Details. (n.d.). Baseball Reference. Retrieved from http://www.baseball-reference.com/about/war_explained_position.shtml

Ruth's Childhood. (n.d.). Retrieved from http://www.baberuthcentral.com/babe-ruth-biography/ruths-childhood/

Ryan Howard Stats. (n.d.). Retrieved from https://www.baseball-reference.com/players/h/howarry01.shtml

Single-Season Leaders & Records for WAR Position Players. (n.d.). Retrieved 2017, from https://www.baseball-reference.com/leaders/WAR_bat_season.shtml

Sortable Player Stats. (n.d.). Retrieved from http://mlb.mlb.com/stats/sortable.jsp#elem=%5Bobject Object %5D&tab_level=child&click_text=Sortable Player pitching§ionType=sp&statType=pitching&page=1&ts=15045457416

93&split=&season=2017&game_type='R'&playerType=ALL&timefra me=&season_type=SINGLE&active_sw=&sortColumn=era&sortOrde r='desc'&extended=0&league_code='MLB'

The Early Life and Career of Babe Ruth in His Own Words. (2014, July 11). Retrieved from http://mentalfloss.com/article/57707/early-life-and-career-babe-ruth-his-own-words

US Inflation Calculator. (n.d.). US Inflation Calculator. Retrieved from http://www.usinflationcalculator.com/

WAR for Position Players. (n.d.). Fangraphs. Retrieved from http://www.fangraphs.com/library/war/war-position-players/

What did things cost in 1914? (n.d.). Retrieved from https://www.reference.com/history/did-things-cost-1914-b0182b0c72964792

When they were prospects: Mike Trout. (2015, January 27). Retrieved from http://m.mlb.com/news/article/107660672/when-they-were-prospects-mike-trout/