Introduction:

The Tax Cut and Jobs Act of 2017, signed into effect by President Donald Trump on December 22, 2017, created vast tax reform for corporations and individuals. The act is considered one of the largest tax code overhauls, as it created new implications that widely changed business practices and individual livelihood (Floyd).

One major aspect of the Tax Cut and Jobs Act of 2017 was aimed at benefiting large corporations by creating a single corporate tax rate of 21%. Prior to the act, this corporate tax rate was approximately 35%, which suggests that corporations will ultimately pay less money in taxes. Another important aspect of the act is that it repealed the corporate alternative minimum tax, which can lead to large tax savings, particularly for C Corporations. The Job Tax and Cut Act of 2017 also changed tax treatment regarding such areas as immediate expensing, pass-through income, interest, cash accounting, net operating losses, Section 199 of the tax code, and foreign earnings for corporations (floyd).

From the individual perspective, tax rates were also lowered in each tax bracket; however, these tax reductions are expected to reverse in 2025. The tax rates for individuals are also dependent on the individual’s filing status. For example, as per the act, the standard deduction for couples married but filing jointly increased to $24,000, rose to $12,000 for those filing single, and is $18,000 for those filing as Head of Household. Another primary component of the Tax Cut and Jobs Act of 2017 was that it terminated the individual mandate of the Affordable Care Act, which forced individuals to pay a tax penalty if they did not have health
care coverage. Other provisions of the Tax Cut and Jobs Act affecting individuals include changes to the tax code that involve family credits and deductions, the inflation gauge used for tax indexing, itemized deductions, alternative minimum tax, retirement plans and health savings accounts, student loans and tuition, Pease limitations, and estate tax (Floyd).

Ultimately, it has been debated as to what will be the economic impact of the act. For instance, the Department of Treasury argues that there will be an increase in revenue and GDP to about 3% over a 10 year period, whereas the Federal Reserve suggests that there will be an opposite effect. Additionally, according to the Joint Committee on Taxation, it seems that there will be a large increase in national debt from the implications of the act (Floyd).

In general, it seems that the act will mostly benefit shareholders, who are typically high earners, due to the lowering of the corporate tax rate as well as the removal of the corporate alternative minimum tax. In contrast, it is expected that the act will hurt middle and lower class individuals in the long run, as the tax provisions regarding tax bracket rates are set to expire. Furthermore, due to the removal of the individual mandate of the Affordable Care Act, it is expected that health care will be unaffordable for many, causing a decline in national well-being (Floyd).

**Research Objectives:**

My research aims to discover what the effects of the Tax Cut and Jobs Act of 2017 has had on six key industries. These industries include agriculture, construction, manufacturing, services, finance (including insurance, and real estate), and utilities (incorporating transportation, communication, electric, gas, and sanitary services). In essence, I will investigate which industries are paying more or less taxes as a result of the act. I will also look into which industries are more efficient and which industries seem to benefit the most from the act. In
determining these factors, I will calculate various ratios to show relationships between income
tax and assets, income tax and revenue, and income tax compared to earnings. I also removed
outliers that possibly skewed findings, which in effect, eliminates the outliers as an explanation
for data points that seem unusual.

**Findings and Discussion by Industry:**

_Agriculture:_

Within the agricultural industry, the income tax to earnings ratio seems relatively
constant from 2007-2016. However, there seems to be a large decline in 2017, with the income
tax ratio dropping from 24.25% in 2016 to -112.93 in 2017. While this may be attributed to the
implementation of the act, there is a large increase in 2018, driving the income tax ratio up to
0.69% (Appendix A). The percent change from 2017 to 2018 is -100.61%. In looking at income
tax as a percentage of revenue, it seems to follow the same trend. The income tax to revenue
ratio remains constant at around 1.5%; however it declines to -5.51% in 2017. There is then an
increase to -0.16% in 2018 (Appendix B). The percent change from 2017 to 2018 is -97.04%. In
looking at a breakdown of all of the companies represented within the agricultural industry over
the years 2008 to 2019, the average income tax to revenue ratio is 0.42%. The income tax to
asset ratio remains steady from 2008 to 2017, dipping from 1.58% in 2016 to -1.63% in 2017.
The ratio then rises to -0.04% in 2018 (Appendix C). The percent change from 2017 to 2018 is
-97.69%. The average income tax to asset ratio for all of the companies within the agricultural
industry from the years 2008 to 2019 is 0.42%.

It seems as though the Tax Cut and Jobs Act of 2017 had a large impact on the
agricultural industry. Most farms are considered pass-through entities, meaning that these
businesses are potentially subject to individual and business income tax rates. This may involve
various credits, deductions, and deferrals affecting the tax rate paid by each company. Moreover, farm size plays an important role in determining the effective income tax rate for each business (Williamson & Bawa). It seems that midsized farms experience a greater reduction in the effective tax rate due to various implications of the act. Additionally, farms that produce high value crops seem to be favored by the act as they are expected to see a decline in the effective tax rate (Williamson & Bawa). Lastly, as a result of the Tax Cut and Jobs Act of 2017, larger farms are expected to benefit from having the ability to fully expense depreciable assets, which will ultimately result in less taxes paid, but possibly increase deferred tax liabilities (Williamson & Bawa). In essence, it seems that certain farms are bound to benefit more than other farms based on size and individual deductions that are applicable in individual cases. Perhaps there is a large decline in the income tax ratio in 2017 because many farms were able to fully expense their assets, which is a benefit that will have to be paid in future years. Moreover, since farms as considered pass through entities, there are individual tax considerations that are unique to each farm, which may be a possible cause of a decline and then increase in all of the ratios. Other considerations that may affect the effective tax rate are labor force participation, household investment portfolio, and income realization. The Tax Cut and Jobs Act of 2017 has also made changes to itemized deductions and tax credits, which can lower the amount of taxes paid. Overall, it seems that the agricultural industry heavily benefited from the act, as it allows farms to depreciate assets, receive favorable treatment for producing certain crops, and have the option to receive credits from being a pass-through entity (Williamson & Bawa). While the ratios discussed before all seem to increase after 2017, it is too soon to tell whether the potential benefits from the act will be beneficial in the long run. There are many aspects that contribute to determining the effective tax rate of each farm. Furthermore, while there is a huge increase in the
income tax ratio in 2018 and 2019, there seems to be a relatively steady rate from 2018 to 2019 in looking at the asset and revenue ratios.

Construction:

The construction industry seems to experience a negative income tax to earnings ratio from the years 2008 to 2013. However, there seems to be an increase in the ratio in 2010 to 29.77%, but this is followed by a large decline in 2012, causing the ratio to fall to -20.82%. Perhaps this is attributed to the recession in 2008. In 2008, housing prices fell, mortgage backed securities decreased, and the construction industry faced a hit as they could no longer sell houses with a large profit. However following 2014, the income tax ratio increased to 41.75% in 2017 and 94.81% in 2019. In fact, the percent change from 2017 to 2018 was 103.10%, suggesting that there was a large increase in income taxes paid, possibly as a result of the act (Appendix D).

The income tax to revenue ratio remains relatively constant from 2007 to 2019, experiencing negative figures in 2012 and 2013. The income tax to revenue ratio hit 2.33% in 2017, which is the highest percentage over the years. The percent change from 2017 to 2018 is -25.79%, showcasing a decrease in the ratio following its peak in 2017 (Appendix E). The average income tax to revenue ratio for all companies in the construction industry over the years 2007 to 2019 is 0.59%. Lastly, the income tax to asset ratio follows the same pattern, as there are negative figures in 2012 and 2013. The income tax to asset ratio is 2.68% in 2017, and seems to experience a decrease in years following 2017. The percent change in this ratio from 2017 to 2018 is -27.23%, showing a decline in income taxes relative to assets. The average asset ratio for all of the companies over the years 2007 to 2019 is 0.90%. The peak figure is at 5.61% in 2008, followed by a large decrease in 2009 till 2013. This seems logical as the housing bubble burst in 2008, creating a recession which heavily affected the housing market (Appendix F).
As a result of the recession in 2008, GDP declined significantly, affecting the ability of Americans to spend money and pay their mortgages. The construction industry had a hard time recovering from this recession as millions of construction jobs were lost (Wright). In fact, prior to the recession, the construction industry was one of the fastest growing industries (Wright). Additionally, the cost of materials increased during this period. Unfortunately, the construction industry is heavily dependent on consumer spending, which may have been lacking due to the recession. Despite the occurrences in 2008, the construction industry faced another recession in 2012 as sectors, such as the private sector, did not recover as forecasted (Stothart). These factors taken together may explain why the income tax ratios experienced a decline in 2012 and 2013, as the construction industry was slow to recover from the events of 2008. It seems that the companies took a large hit in terms of profit, thus creating an income tax benefit. After the act was passed, the economy seemed to be experiencing growth, thus leading to more construction projects. Moreover, many cities, such as Philadelphia, are undergoing gentrification, which involves large construction projects. By increasing the number of construction projects, it is likely the construction companies will intake more revenue, and therefore, have a high taxable income. Additionally, certain legislation from the Tax Cut and Jobs Act has negatively impacted the construction industry, which may explain the 100% increase in the income tax ratio from 2017 to 2018. A reduction in mortgage interest deductions can lead to a decline in construction projects as contractors utilize loans to pay for construction endeavors (“Examining the Effects of TCJA Legislation in 2019”). Also, the construction industry is unlikely to benefit from the new pass-through deductions as passive income is not included and specified service trades will not be considered to have qualified business income. (“Examining the Effects of TCJA Legislation in 2019”).
Manufacturing:

The income tax ratio seems to decline slightly from 2007 to 2016. However, the ratio increased from 22.97% in 2016 to 24.75% in 2017. In 2018, the ratio decreased to 17.95% and then to 16.61% in 2019. The percent change from 2017 to 2018 is -27.49% (Appendix G). The income tax to revenue ratio seems to mimic that of the income tax to earnings ratio. There is a steady decline from 2007 to 2016. In 2017, the ratio increased from 1.82% to 2.10%. The ratio then declines again to 1.46% in 2018 and 1.15% in 2019. The percent change from 2017 to 2018 is -30.62%. The average income tax to revenue ratio from 2007 to 2019 for all of the companies within the manufacturing industry is -1.32% (Appendix H). Lastly, the income tax to asset ratio seems to decrease tremendously from 2007 to 2008, declining from 16.18% to 3.49%, respectively. Following 2009, the ratio seems to increase slightly each year until 2013. The ratio then decreases, hitting 1.16% in 2016. In 2017, the ratio increased slightly to 1.31%; however, the ratio continues to decline to 0.99% in 2018 and 0.75% in 2019. The percent change from 2017 to 2018 is -24.78%, showcasing a decline in the income tax to asset ratio. The average income tax to asset ratio for all of the companies within the manufacturing industry from 2007 to 2019 is 0.71% (Appendix I).

The manufacturing industry will benefit heavily from the decline in the corporate tax rate as many of the negative impacts of the act on this industry will be compensated for by the overall decrease of the tax rate (Boeving & Haggerty). For instance, under the Tax Cut and Jobs Act, the Domestic Production and Activities Deduction was repealed. The Domestic Production and Activities clause of the tax code was aimed to reward businesses for producing goods in the United States, despite potentially being more expensive than manufacturing overseas. Thus, the repeal of this act will inevitably hurt businesses that manufacture products domestically.
On the other hand, the new legislation regarding bonus depreciation is beneficial to manufacturers as they are able to expense 100% of the depreciation on assets. Manufacturers require lots of machinery and equipment to produce products efficiently; therefore, they will have many assets in which they can expense the depreciation. Additionally, new provisions regarding net operating losses may benefit many companies as they can use prior losses to offset taxable income, thus resulting in a decline in taxes paid. Ultimately, the manufacturing industry seems to have a relatively stable rate from 2007 to 2019, while experiencing slight declines from each year. Perhaps the benefits and consequences of the act effectively cancel each other out, thereby creating only small changes in the income tax ratios. It seems as though earnings for the manufacturing industry experiences periods of decline, which may suggest why the rates have declined slightly over the years.

Transportation, Communications, Electric, Gas, and Sanitary Services

The utilities industry experienced a significant decline in income tax per earnings ratio from 83.03% in 2007 to 46.88% in 2008. Following 2008, the ratio remained relatively constant until 2017. The ratio dropped from 23.19% in 2016 to -17.10% in 2017. In 2018, the ratio increased nearly two fold to 13.25%. In fact, the percent change from 2017 to 2018 is -177.47% (Appendix J). The income tax to revenue ratio for the utilities industry seems to remain steady at around 2.5% until 2017, where the ratio drops to -1.73%. The ratio then spikes back up to 1.31% in 2018. The percent change from 2017 to 2018 is -175.41%. The average income tax to revenue ratio for all companies within the utilities industry from the years 2007 to 2019 is 1.15% (Appendix K). The income tax to asset ratio follows a similar pattern to the income tax to earnings ratio. There is a large decline from 2007 to 2008 as the ratio decreases from 10.43% to
The asset ratio then remains constant from 2008 to 2016. In 2016, the ratio is 0.95%, but drops to -0.67% in 2017. The ratio then increases to 0.53% in 2018. The percent change from 2017 to 2018 is -178.92%. The average income tax to asset ratio for all companies within the utilities industry from 2007 to 2019 is 0.59% (Appendix L).

It seems as though the Tax Cut and Jobs Act of 2017 had a large impact on the utilities industry. The utilities industry is experiencing considerable benefits from the reduction of the corporate tax rate as they are now subject to paying less taxes (Davoren et al). Also, the bonus depreciation clause allows utility companies to immediately expense 100% of depreciation on assets. Since utility companies can require a lot of assets, this will create a large deduction in 2017 (Davoren et al). For instance, in the transportation industry, there are an abundance of vehicular assets that can qualify for bonus depreciation treatment. Moreover, the act allows for companies to carry over net losses indefinitely. The utilities industry had large reserves of losses prior to 2017, thus allowing them to use these losses to offset their income in 2017 (Davoren et al). Perhaps this explains why there is such a large decrease in the income tax ratios when jumping from 2017 to 2018. The Tax Cut and Jobs Act also does not subject utility companies to interest limitations. Additionally, as a result of the act, the utilities industry became subject to IRS Normalization rules which regulated the cost of utilities services as well as created rules to govern amortization and regulatory liabilities (Davoren et al). These features of the act taken together seems to explain why there was such a large decline in the income tax ratios in 2017 and a large increase in the years following.

Finance, Insurance, and Real Estate

The finance industry seems to experience large fluctuations in their income tax to earnings ratio from 2007 to 2019. For instance, the ratio drops from 56.02% in 2007 to 0.86% in
2008. Perhaps this gap can be attributed to the recession that began in 2008. The rate then shot back up to 62.01% in 2009. From 2010 to 2012, the ratio remains relatively stable, but drops to 8.87% in 2013. The ratio then goes up to 27.33% in 2014 and steadily declines until reaching 20.74% and later 14.85% in 2019. The percent change of this ratio from 2017 to 2018 is -33.48% (Appendix M). The income tax to revenue ratio also showcases many fluctuations from year to year; however, there are no extreme percentage jumps. The ratio falls from 8.72% in 2007 to -0.12% in 2009. However, the ratio remains relatively constant until it peaks in 2014 at 5.17%. Each year after that experiences a decline with a ratio of 3.78% in 2017 and 2.50% in 2018. The percent change from 2017 to 2018 is -33.80%. The average income tax to revenue ratio for all of the companies in the finance industry from 2007 to 2019 is 3.01% (Appendix N). The income tax to asset ratio barely experiences any fluctuations as the minimum percentage is -0.01% in 2008 and the maximum is 0.35% in 2014. The asset ratio percentage is 0.21% in 2017 and 0.15% in 2018, which is still a -27.46 percent change. The average asset ratio from 2008 to 2019 for all of the companies in the finance industry is 0.42% (Appendix O).

One implication of the Tax Cut and Jobs Act of 2017 that may impact the finance industry is the Interest Deduction Limitation. This limitation may cause companies to look for alternative ways to finance projects, as this provision of the act will limit the amount of interest that is deductible (Fine & Gray). Moreover, the corporate tax rate has been reduced to 21%, causing a decline in the amount of taxes paid as well as the amount of deferred taxes created (Fine & Gray). The Tax Cut and Jobs Act also repealed the alternative minimum tax clause, which may provide companies with a refund starting in 2018 (Fine & Gray). This may suggest why the income tax ratios are declining after 2017. Net Operating Losses are also allowed to be carried forward indefinitely, allowing companies to offset gains with previous losses, thereby
reducing the amount of taxes paid (Fine & Gray). The Tax Cut and Jobs Act also removed the
deduction that allows business entertainment expenses to be written off (Fine & Gray). In the
finance industry, there are many client meetings that may involve meals or entertainment;
therefore, the elimination of this deduction may reduce tax savings. Overall, it seems as though
the benefits outweigh the consequences as the income tax ratios either decline or remain
relatively constant after 2017 within the finance industry.

Services

Within the service industry, it seems as though the income tax to earnings ratio remains
consistent from years 2007 to 2016, ranging from approximately 21% to 30%. However, in
2008, the income tax to earnings ratio was 39.58%, which may be related to the 2008 recession.
In 2017, the ratio is 33.27%, which seems to be on the higher end of the numbers from prior
years. The ratio declines to 14.66% in 2018, but increases to 17.13% in 2019. The percent
change from 2017 to 2018 is -55.92%, showing a decline in taxes paid (Appendix P). The
income tax to revenue ratio for the service industry drops from 7.83% in 2007 to 3.73% in 2008.
From 2009 to 2016, the ratio ranges from 3-4%. In 2017 the ratio reaches 4.59% but drops to
1.89% in 2018, but then increases to 1.94% in 2019. The percent change in the revenue ratio
from 2017 to 2018 is -58.78%. The average income tax to revenue ratio for all of the companies
listed in the service industry from 2007 to 2019 is 0.91% (Appendix Q). The income tax to asset
ratio experiences a huge drop from 2007 to 2008, going from 46.22% to 4.43%, respectively.
The ratio then has an overall decline from 2009 to 2014. However, this spike in 2014
immediately declines in 2015 till 2017. In 2017 the income tax to asset ratio for the service
industry is 2.45%, whereas in 2018 it drops to 1.19% and 0.97% in 2019. The percent change in
the asset ratio from 2017 to 2018 is -51.63%. The average income tax to asset ratio for all companies in the service industry from 2007 to 2019 is 0.69% (Appendix R).

In addition to the changes in the corporate tax rate and NOL carryforward, a major piece of legislation of the Tax Cut and Jobs Act of 2017 that affects the service industry is the addition of code section 199A ("Tax Reform and the Service Industry"). This code section allows a 20% deduction of qualified business income, specifically for a domestic pass-through entity ("Tax Reform and the Service Industry"). While there are many exceptions and strict qualifications to receive the deduction under 199A, it can provide a considerable decrease in taxes paid. The aspects of the law that affect the finance industry are applicable to the service industry as most of the time they function in the same fashion. The finance and service industry revolve around providing value to clients that is not represented in a physical asset.

Conclusion:

Overall, there seems to be some overlap between the implications of the Tax Cut and Jobs Act of 2017 and different industries. It seems that the change in the corporate tax rate, bonus depreciation, and the NOL carryforward are common aspects of the tax code that benefit each industry. Additionally, the recession of 2008 seems to play a big role in a decline in taxes, as companies suffered profit losses and therefore decreased taxable income. Despite this, there are many aspects of the tax code that have affected each industry in different ways. While it seems that there was an overall decline in taxes paid across each industry, there are certainly industries that have paid more in taxes than others. In comparing the percent changes among all industries with regards to the income tax to earnings ratio, it is clear that the construction industry pays the most with an increase in taxes of 103.10% from 2017 to 2018. Next is the manufacturing industry at -27.49%, followed by the finance industry at -33.48%, the services
industry at -55.92%, the agriculture industry at -100.61% and finally, the utilities industry at -177.47%. The income tax to revenue ratio also follows this order, with the construction industry benefiting the least and the utilities industry receiving the most favorable treatment. In terms of the income tax to asset ratio, the manufacturing industry is the worst off with a percent change of -24.78%. Regardless, the utilities industry has the largest negative percent change of 178.92%, showcasing that they received a large decline in taxes relative to assets after the act was enacted. Additionally, each industry had a constant change between each of the ratios except the construction industry. For instance, the construction industry had a percent change of 103.10% for the income tax to earnings ratio but had a -25.79 percent change from 2017 to 2018 for the income tax to revenue ratio. On the other hand, the finance industry had a percent change of 33.48% for the income tax to earnings ratio and a -33.80% percent change for the income tax to revenue ratio. This trend was the same for all the other industries. By having consistent change across the ratios, it becomes clear that the Tax Cut and Jobs act seemed to benefit the utilities industry the most and the construction and manufacturing industries the least. Despite seeing these trends, more years of data need to be collected to determine if these ratios will provide the same results and validate that the act has led to an overall decline in taxes paid for most. Since each industry is also affected more or less by individual mandates, it is difficult to conclude the overall effects of the act on each industry without breaking down each industry by company and analyzing what legislation has the greatest effect on each company.
Works Cited


Appendix:

A: Income Tax as a Percentage of Earnings from 2007 to 2019 in the Agricultural Industry

![Income Tax as a Percentage of Earnings from 2007 to 2019 in the Agricultural Industry](chart1.png)

B: Income Tax as a Percentage of Revenue from 2007 to 2019 in the Agricultural Industry

![Income Tax as a Percentage of Revenue from 2007 to 2019 in the Agricultural Industry](chart2.png)
C: Income Tax as a Percentage of Assets from 2007 to 2019 in the Agricultural Industry

D: Income Tax as a Percentage of Earnings from 2007 to 2019 in the Construction Industry
E: Income Tax as a Percentage of Revenue from 2007 to 2019 in the Construction Industry

F: Income Tax as a Percentage of Assets from 2007 to 2019 in the Construction Industry
Appendix G: Income Tax as a Percentage of Earnings from 2007 to 2019 in the Manufacturing Industry

Appendix H: Income Tax as a Percentage of Revenue from 2007 to 2019 in the Manufacturing Industry
Appendix I: Income Tax as a Percentage of Assets from 2007 to 2019 in the Manufacturing Industry

J: Income Tax as a Percentage of Earnings from 2007 to 2019 in the Utilities Industry
K: Income Tax as a Percentage of Revenue from 2007 to 2019 in the Utilities Industry

![Graph showing income tax as a percentage of revenue from 2007 to 2019 in the Utilities Industry.]

L: Income Tax as a Percentage of Assets from 2007 to 2019 in the Utilities Industry

![Graph showing income tax as a percentage of assets from 2007 to 2019 in the Utilities Industry.]
M: Income Tax as a Percentage of Earnings from 2007 to 2019 in the Finance Industry

N: Income Tax as a Percentage of Revenue from 2007 to 2019 in the Finance Industry
O: Income Tax as a Percentage of Assets from 2007 to 2019 in the Finance Industry

P: Income Tax as a Percentage of Earnings from 2007 to 2019 in the Service Industry
Q: Income Tax as a Percentage of Revenue from 2007 to 2019 in the Service Industry

R: Income Tax as a Percentage of Assets from 2007 to 2019 in the Service Industry