Do Interest Rates, Quell or Control Non-Essential Spending?

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Abstract
This year, American citizens have seen a rise in interest rates to reduce inflation, but even with the rise of interest rates citizens are spending money on non-essential items. My theory is that interest rates have no effect on non-essential spending. To test this theory, I pulled data from the blog Renaissance Tour 2023 and data from the Federal Reserve. After pulling the data, I ran several correlations and ran a Multivariate OLS regression. My findings show no statistical relationship between interest rates and average ticket price, supporting my theory.

On July 26, 2023, the Federal Reserve raised the interest rate to 5.5 percent to quell inflation (Board of Governors of the Federal Reserve System, August 30, 2023). At this time, Americans spent excessively on non-essential spending noted by the many who attended the summer concert tour of Beyoncé Renaissance tour with an average ticket price of $1800(Smialek, Holman, August 13, 2023). I observed that despite how high interest rates are as of now, some citizens are still spending vast amounts of money on concerts. My theory is non-essential spending is not quelled or controlled by the increase in interest rates set by the Federal Reserve. The outline of the current paper is as follows, I start with a definition of non-essential spending. I then move on to the literature review the literature I reviewed went in depth on some forms of nonessential spending in all forms. The literature all showed some insight of American spending. I then move on to the road map of my theory and that is the theoretical framework; I followed this up with the method of research I used and my predictions of the findings. The findings section is where I discuss my findings after the running of the statistical models. Finally, I address the implications and conclusions of my research.

Defining non-essential spending

The talk of non-essential spending can lead a regular person to ask what nonessential spending is. Well, there is not a direct answer since each person views nonessential spending differently, but pulling all the definitions together we see a pattern that is spending that does not hold any value to the survival of that company or person. Now, some can say that each purchase they make is essential; well, (Keinan et al. 2008) would classify this as Hyperopia or Lamins' terms regretting a purchase in the future. This means having this feeling about a purchase and the purchase not being a necessity, which means this purchase is non-essential. My research will hopefully show that we all must change the current idea of what is luxury and what is necessary. This conclusion is implied due to the variety in terms of non-essential spending.

Literature review

Literature that attempts to understand non-essential spending differs as there are differing definitions of non-essential. But what makes the current literature lacking is they tend to attack important things as non-essential. In most literature, there is a focus on social spending, and how it affects the debt (Rudra, 2004; Amanda, 2014; Faircy, 2011), the development of the world economy (Avelino, 2005) (Nooruddin, 2006; Simmons, 2006) (Mexi, 2018), and military spending (Lin, 2009) This is all government spending, but not individual spending, which has received far less attention from researchers. Current literature does not lead to the idea that smaller luxuries such as attending concerts are non-essential. If we think about non-essential spending, the literature equates it to social spending. The literature defines social spending as "when a federal government spends money to directly provide social benefits to citizens" (Faricy et al., 2014). Many literatures talk about social spending and military spending such as Rudra (2004) and Lin (2009). As to how social spending and globalization are linked, some would say that this issue is non-essential (Rudra, 2004), whether one would consider this non-essential is based on the concept of luxury. Some governments have a problem with military spending, mainly because of the argument of what is enough money spent.

Faricy's (2011) theory was that a political party's choice between indirect and direct social expenditures is primarily motivated by a desire to alter the balance between public and private sectors. Faricy (2011) takes the concept of what is essential and non-essential to each political party; they lay out the fact of how the Democratic party will donate to the public sector to tilt the balance of the two systems. They also point out how the Republican party will do the same but donate to the private sector in reverse. They also came to a consensus that each party has a certain preference for balance in society, and this preference stems from the morals of each party. They used a regression analysis as their method. The reason this was interesting was the fact that there was no statistical relationship between Democratic control of government and greater changes to the annual percentage change for social expenditures. This would not have been seen without the regression analysis. Faricy (2011) also hinted that getting public opinion would help with the allocation of funds. At the end of the study, Faricy finally concluded his research; "that is each party putting a financial strain on the economy in its way."

Cox et al. (2020) get at this notion of non-essential spending in their study of how spending slowed during the pandemic. Their theory is that the Covid-19 pandemic caused a lack of spending and a spike in saving. They connected the fact that the lack of interactions and going outside caused a slowing process of spending. The authors found that at the start of the pandemic, there was a cut in spending since no one was going out, and this led to their theory. However, by mid-April spending recovered, and we saw substantial changes in all forms of income; this could be due to online shopping. The truth was that the government adjusted to the situation, and there is a trend that shows that this was brought about due to government income support. Their methodology was that they took data provided by JPMCI and, this data was income, spending, and savings data. This was then turned into financial patterns to follow millions of Chase customers' spending. Then, the data was transferred into graphs that show trends. Once this was done the authors ran a regression on their data and compared the columns. The author's study was interesting given that it was used from data provided by a major banking institution; however, their research was biased because it did not include the other banking institutions.

As for interest rates, Rochon et al. (2008) offer up many theories on this long-discussed topic. In each of these theories, the rate of interest affects something or some phenomenon in the economy. In the first theory, which is the conventional theory, it is suggested that the interest rate is the price of money; in which the interest rate affects the demand for more money. They then offer up another theory which is the theory of endogenous money. This theory flips the first theory in the sense that the supply of money adapts to the demand for credit (Smithin, 2008; Keynes 1937). This implies that the interest rates impact the supply of money on the terms citizens running out of money and looking towards credit, which interest rates control. The idea of interest having an enormous impact on many things such as credit and demand for money are all common ideas. “Although there does not seem to be a clear grasp on how interest rates impact economic growth” (Rochon et al., 2008). Considering this, it is prevalent to assume that interest rates impact many other things yet to be studied.

Theoretical framework

The constant raising of the interest rate has always been key to America to its success in the past. This is the Federal Reserve's way of quelling inflation rates (Federal Reserve Bank of Clevland, 2023).

On July 26, 2023, the Federal Reserve raised the interest rate to 5.5 percent to quell inflation (Board of Governors of the Federal Reserve System, August 30, 2023). This is a common ploy the Federal Reserve uses to quell all inflation, and to do that the raising of the interest rate is supposed to quell all forms of spending. But looking at this observation the recent expenditures of citizens do not match the customary practices that were used in the past. This inference can be seen by looking at the Beyoncé Renaissance tour with an average ticket price of $1800 (Smialek, Holman, August 13, 2023) that millions of citizens paid to see; yet raising interest rates is supposed to quell this form of spending. I also thought abought how one can define non-essential spending. Some say it is when one spends money on something that has no value, but each person sees value in things differently. Although the truth is for something to be essential, lack of it will hinder one's survival. Seeing a Beyonce concert will help your mental state but that purchase cannot help you survive in the long run such as food, water, or shelter. Another clue on how one can define non-essential spending is by referring to Maslow's hierarchy of needs (Taormina et al, 2013) The chart would show that essential spending and needs will help you fill your hierarchy of needs. Finally, non- essential spending will leave one with a sense of Hyperopia or regret from shopping, (Keinan et al. 2008). You will feel guilty about buying an item that you know is not needed to help you in your everyday survival.

Consider the analogy that the country of the United States is run as a company that always has had an old system in place to combat problems that interfere with the company's well-being. However, a good company knows that what worked in the past may not work in the future with the changes in the world around it, so it is more than likely that the company of the United States needs to think the same. Doing this would mean that we would have to change the common mindset that is used to understand the economy. This led me to my theory that it is not a casual concept we all learn; this theory does not go along with the common school of political science and economics. The reason is that we are taught that if we raise interest rates this in turn will quell spending then in turn decrease inflation. The puzzle here is that this is not the case, and many citizens are spending more money. My theory can help explain what happened in the summer of 2023 and the 2008-2009 economic crisis when America was faced with similar situations, and yet recognize each situation as its own incident with similar steps leading up to their perspective crisis. I theorize that when people face tough times, they engage in spending that makes them feel better. Raising interest rates will have no impact on this form of non-essential spending because it does not address its root causes.

I operationalize non-essential spending used to make one feel better as the calculable amount of money American citizens spent on one particular non-essential item, which is the 2023 Beyonce summer Renaissance tour. To test the proposed theory, this paper offers the following hypothesis: in comparison to U.S. ticket sales for the Beyonce Renaissance concert, U.S. citizens will not be more, or less likely to make non-essential purchases when interest rates are high compared to when interest rates are low.

Methodology and predictions

To test this theory, data was procured from the blog Renaissance Tour 2023 which is hosted on the website WordPress. They procured the data from the live nation website. The reason for this is to allow regular citizens who have no ties with the concert business to access data that usually requires a certain amount of clearance from the vendors. The data I collected was on the Beyonce summer concert tour in 2023, and data was collected from each concert date in her North American tour. This datum is essential to have because a concert is a luxury that few can afford so when someone goes this is nonessential spending. The next set of data came from the Federal Reserve and that is the interest rates from this summer. This was done to give an exact form of timeline that should be studied. The next set of data came from the Federal Reserve, too, the inflation rates of this summer. Finally, the last set of data came from the Bureau of Labor Statistics from each state. This gave the unemployment rate to all the states. All these data sources are relevant to the interest rate because they shape and form the economy. Each variable measure was coded differently the independent variable measure and covariates were coded as interest rate unemployment rates, and inflation rate in both the correlation and the regression. The dependent variable measure was coded into one distinct category: total number of tickets.

I ran correlations between each of the independent and dependent variables. All these correlations showed that there was not a strong relationship between the variables so to get a better understanding of the relationship between the variables a regression was run on the measures of the variables. The regressions that were ran revealed many answers to my research such as there was a small statistical relationship between total number of ticket solids and unemployment rates and inflation rates. This insinuates that with more data a more definitive answer can be introduced .. I then ran several correlations and a Multivariate OLS regression. Regressions are used by many who use continuous data such as Cox et al. (2020). Before running this data, my expected findings were that there would be a statistically significant relationship between interest rates and nonessential spending. If this is true, that means that interest rates do not quell nonessential spending.

Findings

The findings of the OLS regression, with number of tickets sold as the dependent variable, show there is some statistical relationship between the inflation rate, unemployment rates and number of tickets. This is indicated by the P value with level of measure of $p<0.10$. The R squared shows that knowing the values of the independent variables explains 19% of the variance in the number of tickets sold.

Table 1: The regression of Number of Tickets Sold and the Independent Variable Measures

Independent Variable	Coefficient/Standard Error
Interest rate	32,500.26 (108,956.9)
Inflation rate	65,733.8* (37,379.71)
Unemployment rate	12,115.19* (6,555.192)
Constant	-374,790.9 (539,417.9)
R squared	0.1909
N	37

The dependent variable is the number of tickets standard error in parenthesis **=p<0.05, *=p<.10

Table 1 shows there is a disconnect between average ticket price and interest rates and inflation rates. Although there is a connection between average ticket price and unemployment rates.

Table 2: The P value of number of tickets sold and the measures of the independent variable

Independent Variable	P value
Interest rate	0.767
Inflation rate	0.088
Unemployment rate	0.074
Constant	0.492

The dependent variable is the number of tickets standard error in parenthesis **=p<0.05.

In Figure 1 we see that there is also a relationship between the number of tickets and unemployment providing more information on the idea of a relationship between tickets and unemployment rate.

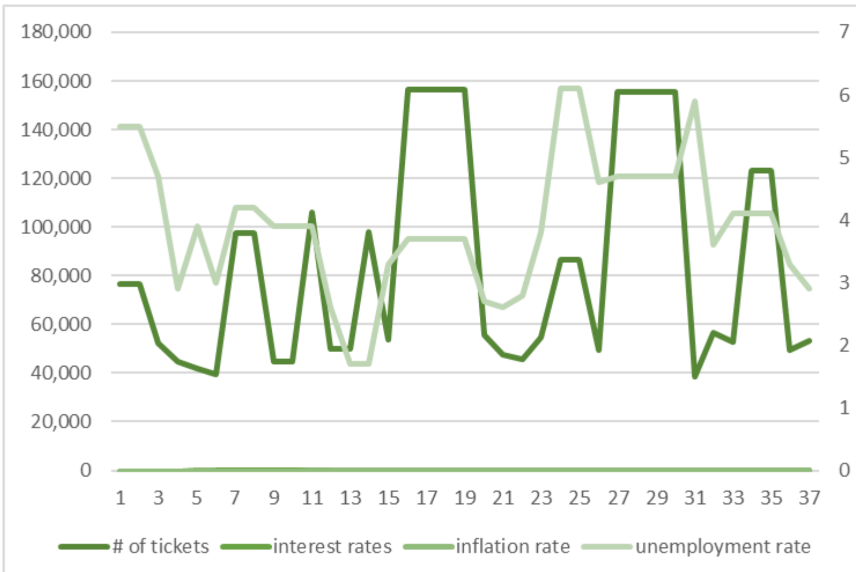

Figure 1. The Relationship between the Number of Tickets and Interest Rates, Inflation Rates, and Unemployment Rates

Findings/Implications and Conclusion

My hypothesis stated that the interest rate does not affect nonessential spending. Given this knowledge, if we see there is a statistical relationship between these variables then this suggests the theory was incorrect. Interest rates did not have a statistically significant relationship with tickets sold, and its sign was positive. This indicates my hypothesis is supported – raising interest rates does not quell nonessential spending. I theorized that this is because people spend on concerts to make themselves feel better when facing tough times. To add more support to this, there being a relationship between inflation rate, unemployment rate and number of tickets suggest a multitude of inferences. First, we see a rise in ticket sales when the unemployment rate is high; this could mean that people are spending money to escape the fact of not having employment. We also see more tickets sold rise as inflation rates rise. This also suggests people may be engaging in nonessential spending to make themselves temporarily feel better despite the added strain on their finances. We can apply this theory to many other things. This research if explored more can be used on other concepts other than concerts. The research can be used on other forms of nonessential spending such clothing, shoes, even make up. A major form of nonessential spending can be the newest model of car even though someone has a perfect car at home. My research can even be used to aid in the study of shopping addictions. If we apply this to a government budget, no matter how high the interest rate is some members of the government will spend money on nonessential situations and items. My theory can also be a starting point for more new theories that have to do with economics. The theory can also be expanded upon by adding more data sets to further the idea of what can be non-essential. My findings suggest the Federal Reserve may need to consider new strategies. The Reserve can factor in the issue with non-essential spending. They can do this by raising the interest on non-essential items. Political leaders may also need to focus more on how people feel during hard times.

This research also gives a new concept to non- essential spending, and how can one define it. In conclusion, my theory is unconventional. The reason for this is that many people do not understand the economy since it is constantly changing. New theories must be developed that will tie in the idea of Hyperopia and nonessential spending and look at it in many forms. There has been a lack of research on nonessential spending, and this could mean that researchers try to avoid this topic because of how closely this topic judges the spending everyone participates in. However, governments will struggle to develop effective economic policies if they fail to understand what drives spending on non-essential items.

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