

Analyzing Thanksgiving Cost Trends

Brandon Habschied and Geordy Aponte

Rochester Institute of Technology: Professor Charles Border

1 INTRODUCTION

Thanksgiving in the United States is more than just a holiday; it's a cultural cornerstone where families and friends get together to spend quality time with each other and expressing their thankfulness for everything they have. One negative aspect to Thanksgiving that affects families all across the world both during and outside of the holiday seasons is the increasing threat of food insecurity from increasing food costs and rising inflation. Throughout the holiday's history, the cost of hosting a Thanksgiving dinner has steadily increased, influenced by factors ranging from agricultural practices, consumer preferences, and even changes in recipes. In this paper, we explore the data behind our increasing Thanksgiving food costs, aiming to uncover the underlying trends around this annual tradition and determine just how much a Thanksgiving meal is actually costing us today.

Each year as families and friends gather to eat traditional Thanksgiving foods such as turkey, stuffing, mashed potatoes, cranberry sauce, macaroni & cheese, pumpkin pie and bread rolls. Over the years, changes in production costs, consumer preferences and demands have impacted the affordability and accessibility of these culinary staples. Utilizing historical data from the USDA National Retail Report database[3], we aim to discover any underlying patterns between our favorite holiday food items and the effects of inflation on food in our markets.

2 RELATED WORKS

We utilized three different resources to help us with this study. Our first two are from Self Financial and Purdue University. Self provides a comprehensive examination of the cost fluctuations associated with Thanksgiving dinner in the United States spanning from 1960 to 2023. [1] Beginning in 1960, when a full Thanksgiving spread for a group of ten would set you back only \$12.92. In 2023, that total has risen to \$112.60. The cost is broken down to specific dishes of a Thanksgiving meal, from the cost of the turkey in the last 60 years to the price of the side dishes like macaroni and cheese, mashed potatoes, and much more. [1]

What's interesting is how they compare costs across the years, showing how inflation and other economic factors have impacted the affordability of our favorite holiday feast. Despite the overall increase in cost, though, the average per-person spending has remained pretty consistent. In 2023, the average cost each of the meals increased by at least 600% for each dish with most dishes increasing by 800%. [1]

Purdue University creates a similar dashboard but they focus on the years 2022-2023. Purdue differentiates their study by drilling down and focusing on the price increase per state instead of just focusing on the national average. [2] This approach offers a comprehensive

analysis of regional variations across the United States. Using their dashboard, one can explore the average cost of a Thanksgiving dinner for a family of twelve in each state, along with a breakdown of expenses for key items like turkey, stuffing, and pumpkin pie.[2]

Something to note about Purdue's site is that we were unable to find their source data. The reason why this was concerning to us was because the values of the dishes presented by Purdue were different from the values presented by Self. For example, in 2023 Purdue stated that a turkey was either \$40.00 or \$53.39 for a turkey, depending on whether it was non-organic or organic for the national average [2]. This is different from Self because Self states that in 2023 a turkey cost \$20.32. However, we were able to find Self's source to confirm this information.

Our last source focuses on the difficulty low income Americans are facing in order to afford a Thanksgiving meal, done by Kalaitzandonakes and Coppess. Through analysis based on the Gardner Survey Panel, it explores consumer responses to inflation affecting holiday menus. Key findings reveal shifts in consumer preferences and spending habits amidst inflationary pressures, including a heightened awareness of prices and a tendency to seek cost-saving alternatives.[4]

With the understanding from Kalaitzandonakes and Coppess, we plan to adjust the study and convert the cost of these Thanksgiving dishes to their purchasing power in 2024. This will give us a better understanding on affordability. By accounting for inflation, we can determine whether goods and services have become more or less affordable relative to past decades.

3 METHODOLOGY

For our data collection, we scraped the data from the Self analysis [1], then took all the data and normalized it for inflation. To normalize for inflation, we took the cumulative inflation for that year to adjust the price into 2023 terms. This brought all prices to be equivalent to the 2023 dollar. All of our data transformation was done with SQL queries in Google Big Query. Our data was then pulled into Tableau from Google Big Query to create our visualizations and analyze trends and patterns.

4 RESULTS

4.1 Turkey | Figure 1.

Turkey has shown a steady increase since 1960 with the majority of the data points being above \$20 for an average 16 pound turkey. The highest price shown was in 2022 at \$32.45 with a 2nd highest recording in 1986 at \$29.32. From 1960 to 2023, turkey showed a total price increase of 202.5% with the reasonable expectation that the price will stay in the mid 20 dollar range for a few more years with sporadic price increases such as seen in 2022.

4.2 Stuffing | Figure 2.

The cost of stuffing has been fairly consistent after 1980. From 1960 to 1980, stuffing increased from \$2.12 to \$5.66. From 1980 until 2023, the price has fluctuated between \$4.22 and \$6.92. Overall, from 1960 to present, the price of stuffing has increased 327.1% and is still on a steady but manageable incline.

4.3 Mashed Potatoes | Figure 3.

Mashed potatoes has had steady growth from 1960 to up until 2020. Through this sixty year time period, mashed potatoes had only risen in value by 193%. This was less than the 269% increase in values for the average dinner from the same time range. It wasn't until after 2020 that there was a dramatic spike in cost for mashed potatoes where the cost almost doubled from 2020 to 2023. Overall, from 1960 to 2023, there was a 360.5% price increase, the highest increases of all the records we have on record.

4.4 Cranberry Sauce | Figure 4.

The cost of cranberry sauce was the only side dish that has not had steady growth since 1960. If we refer Figure 4, we see that the cost of the cost of cranberry sauce hit its minimum value of \$0.44 in 1982. It was not until 1998 where cranberry sauce finally reached the cost that it had back in 1960. With the smallest growth, cranberry sauce only grew 137.8% from 1960 to 2023.

4.5 Macaroni & Cheese | Figure 5.

Macaroni & Cheese has had steady growth except for the year of 1990. In 1990, we see a sudden dip when referring to Figure 5. The exact sequence is \$16.53, \$8.84, and \$19.68 for the 1989, 1990, and 1991 years respectively. It is unknown what causes this dip, but we see that 1990 nears its 1960 price for a single year. Macaroni & Cheese has had a 270.9% increase since 1960.

4.6 Homemade Pumpkin Pie | Figure 6.

The data for homemade pumpkin pie has shown an aggressive increase of 338.7% from \$4.13 to \$13.99. This steady incline has consistently brought the price of making a pumpkin pie to over \$10 since 1986 and shows no symptoms of declining.

4.7 Homemade Bread Rolls | Figure 7.

We see two price spikes for bread rolls in our time span in figure 7. Our first spike in in 1980, where the price of bread rolls from \$1.08 1979 to \$1.98 in 1980 and then a second spike in 1998 where the cost was \$2.29 in 1997 and \$2.66 in 1998. These two price increases has resulted in a overall increase in cost of 313.7%.

5 CONCLUSION

In figure 8, we can see that the total cost of Thanksgiving dinner for 10 has been steadily increasing year after year. Figure 8 shows the total cost of Thanksgiving dinner utilizing additional sides and food items that we did not do individual analysis on such as green bean casserole, lettuce as our salad substitute, creamed corn, pecan pie and sweet potato casserole.

In 1960, a traditional Thanksgiving meal for 10 of your favorite friends and family would cost on average \$44.09. In 2023, this would cost families \$117.17 for the same meal, almost triple the cost. The most expensive dish at Thanksgiving dinner is typically the macaroni and cheese or the turkey. This can be different for families that go outside of the average dinner and perhaps make 2 or 3 turkeys which can increase the price of their dinner significantly. Some families practice a "pot luck" style of dinner where multiple families come and bring different dishes, due to the nature of this type of meal, we do not have the data for the cost, but under reasonable assumptions, can determine that it is likely less expensive for most families but on average around the same price per person to eat on Thanksgiving.

In figure 9, we see a comparison of the Total Cost of Thanksgiving dinner (figure 8), and compare it to the Median Household Income. Consistently we see that the cost of a Thanksgiving dinner typically costs a family 0.2% of their median income every year. From this trend, we can assume that on average, year after year, most families are not seeing any significant increase or decrease in financial burden to purchase a Thanksgiving dinner.

6 FUTURE WORK

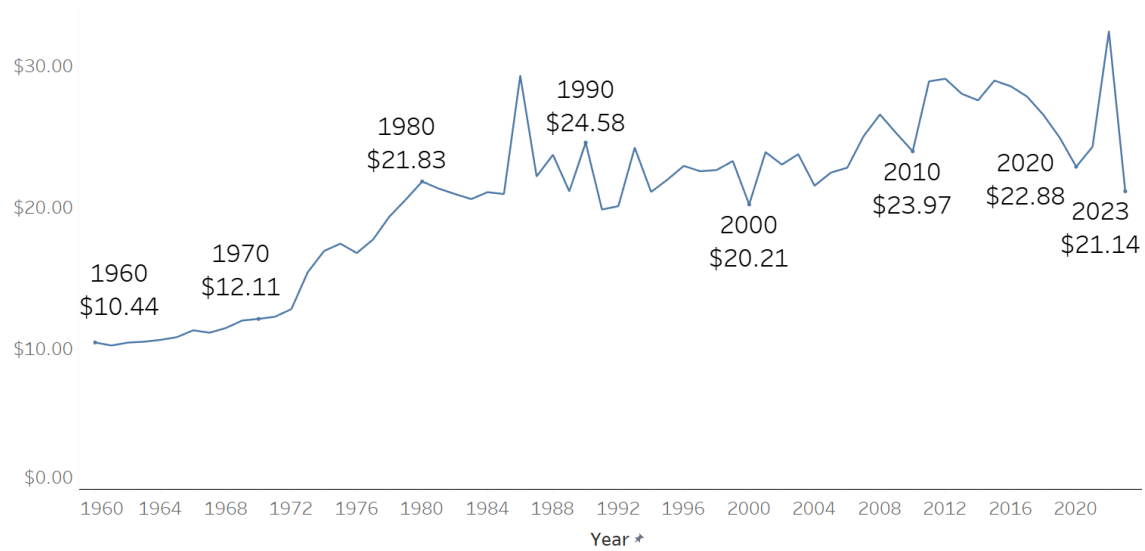
In the future, we would like to expand our studies in a few ways. First, we would like to increase the number dishes so we can conduct a greater cost analysis. For example, we feel that some items were excluded, like the cost of gravy, apple pie, or beverages which would be beneficial to include in the cost analysis as these are also very popular at a Thanksgivings dinner. Secondly, we would like to introduce an analysis to regional differences. Drilling down to the state level like Purdue could provide insight, along with sectioning the country into different areas like the east, west, mid-west, south, etc. This would be helpful because it provide insight on how cost is different in regions due to factors like like agricultural production, transportation costs, and local market dynamics which impact the cost of Thanksgiving meals. Additionally, we want to explore into consumer behavior analysis based instead of focusing on the cost of the food itself. This idea was slightly touched upon in Kalaitzandonakes' and Coppess' work, where Americans are implementing cost saving measures.

REFERENCES

- [1] 2023. The Cost Of Thanksgiving Dinner Over Time. <https://www.self.inc/info/cost-thanksgiving-dinner/#:~:text=In%201960%2C%20the%20total%20cost,average%20host%20%24111.94%20in%202023>
- [2] 2023. The Cost Of Thanksgiving Meal. <https://ag.purdue.edu/cfdas/data-resources/the-cost-of-a-thanksgiving-meal-state-by-state/>
- [3] 2024. USDA National Retail Report. <https://www.ams.usda.gov/market-news/retail>
- [4] Michael Kalaitzandonakes, Brenna Ellison, and Jonathan Coppess. 2022. Inflation on Holiday Menus: How US Consumers Are Responding to Rising Food Prices This Holiday Season, Gardner Survey Panel 3, Part 2. *farmdoc daily* 12, 184 (2022).

Figure 1: Cost of Turkey

Cost of Turkey

**Figure 2: Cost of Stuffing**

Cost of Stuffing

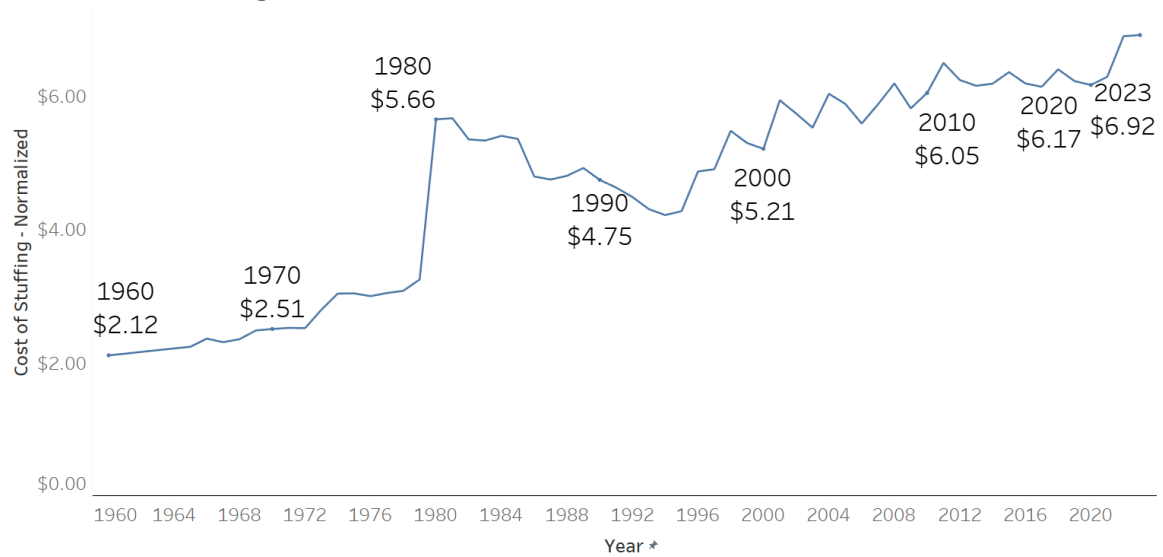


Figure 3: Cost of Mashed Potatoes

Cost of Mashed Potatoes

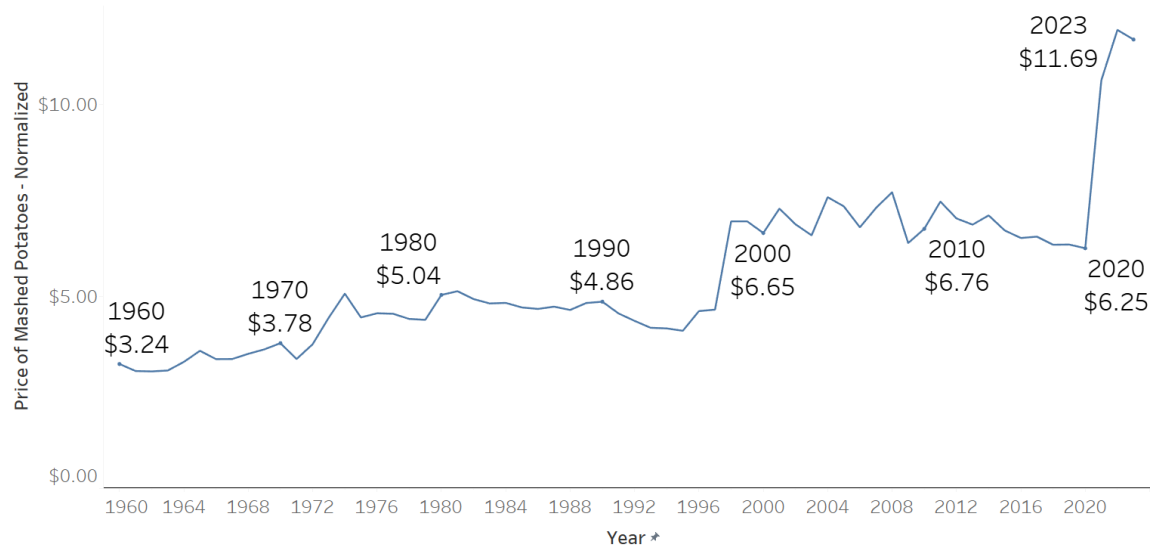


Figure 4: Cost of Cranberry Sauce

Cost of Cranberry Sauce

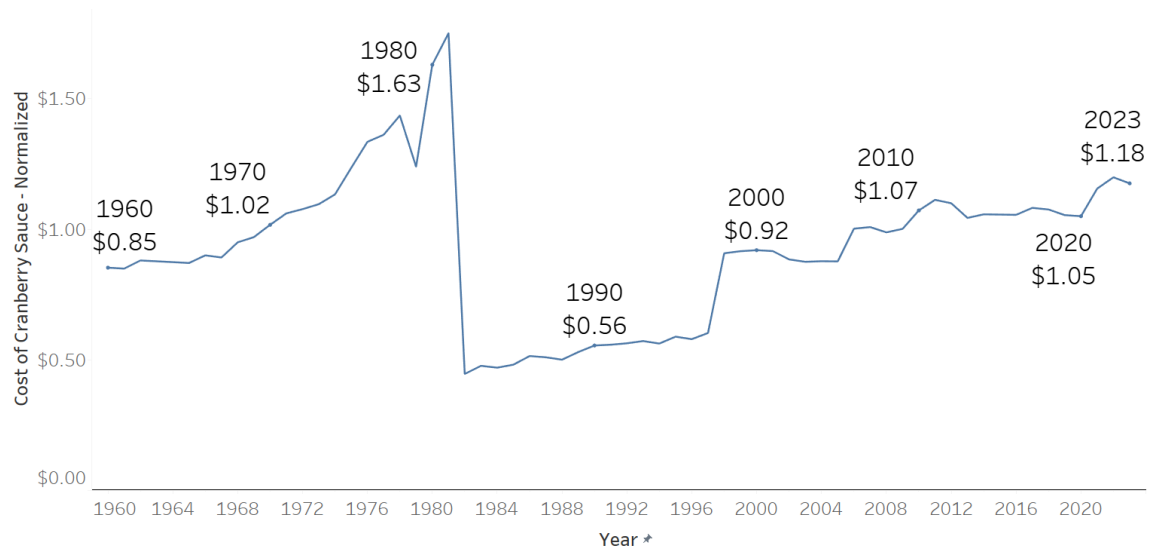
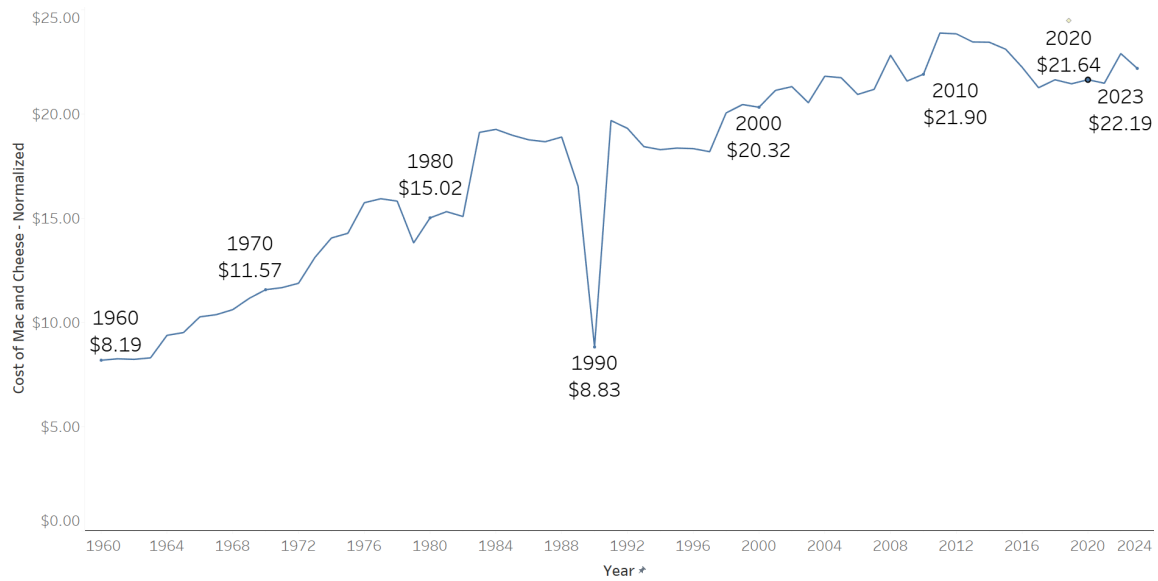


Figure 5: Cost of Macaroni & Cheese

Cost of Mac and Cheese

**Figure 6: Cost of Homemade Pumpkin Pie**

Cost of Pumpkin Pie

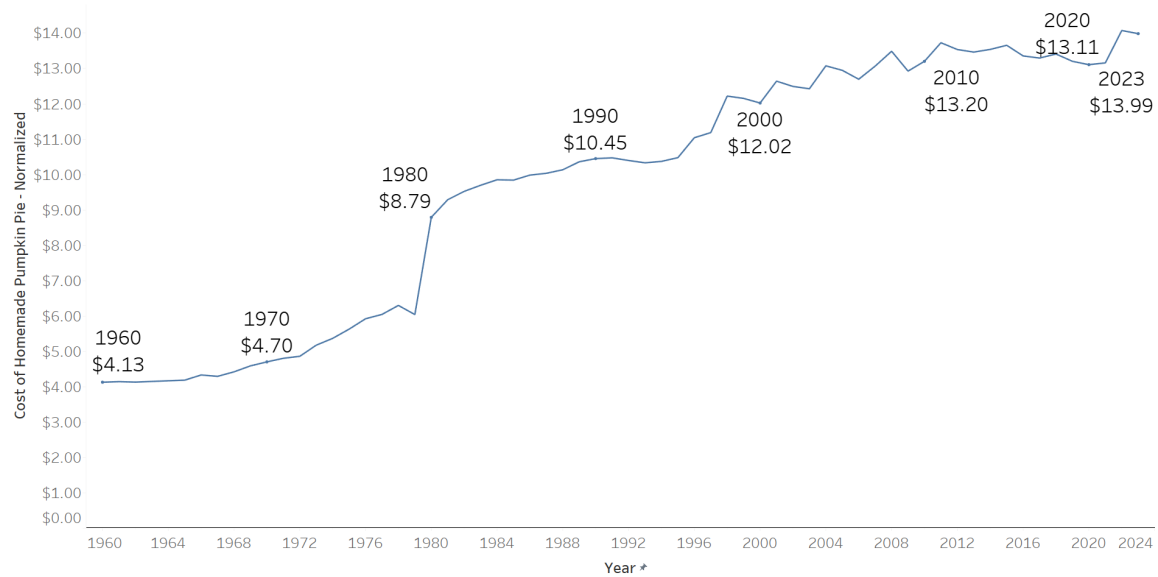


Figure 7: Cost of Homemade Bread Rolls

Cost of Bread Rolls

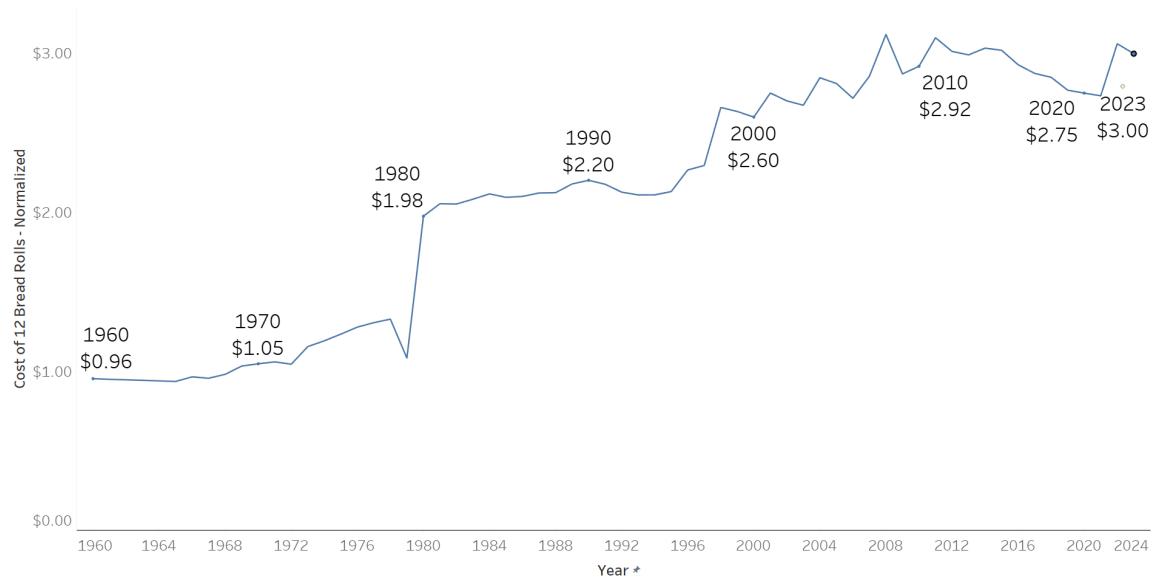


Figure 8: Total Cost of Thanksgiving Dinner

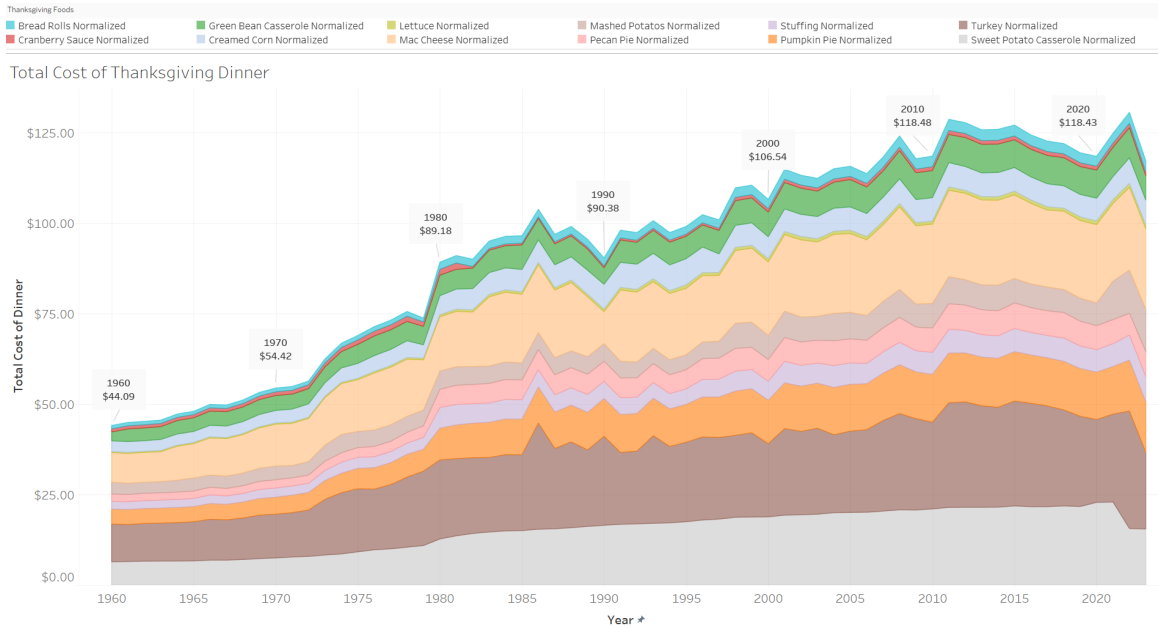


Figure 9: Cost of Thanksgiving Dinner vs Median Household Income