



Analyzing the growth in consumer spending on Food

By: Michael Eisenberg, Wesley Thomas and Edwin Fleurant



Questions of Interest

- How does each state's nominal and constant dollar sales compare to that at the national level?
- What states have the highest and lowest food sales?
 - Which states have the largest increase in food sales between 1997 and 2022?
- How have salaries and food prices increased over time?
 - Is there a relationship between the two variables? If so, what is this relationship?
 - Do some states more closely correlate food sales and salaries than others?
 - Which states spend the most of their income on food?
- What is the per capita food sales for each state?
 - How is it different between states and the national level?
 - Do per capita food sales increase or decrease based on major economic or world events, such as the 2008 recession?



Data Sets

- USDA Food Expenditure Series
 - State food sales, with taxes and tips, for all purchasers
 - State food sales per capita, with taxes and tips, for all purchasers
- Secondary Datasets
 - Bureau of Economic Analysis dataset for median per capita income
 - World bank data for population of the United States

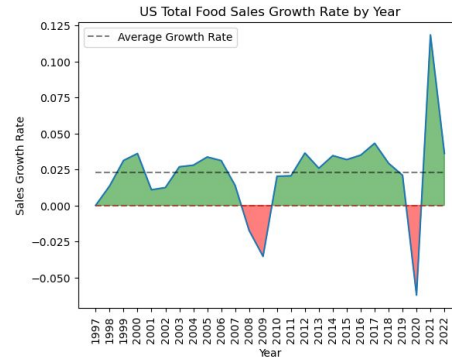
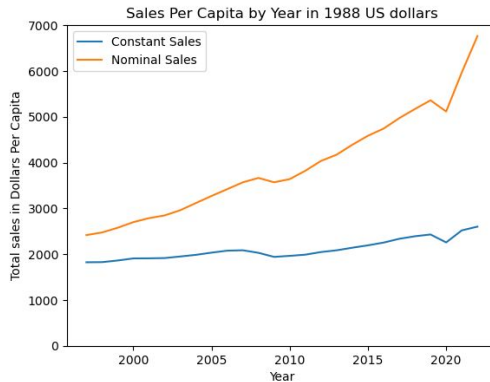


Data and Sanity Check

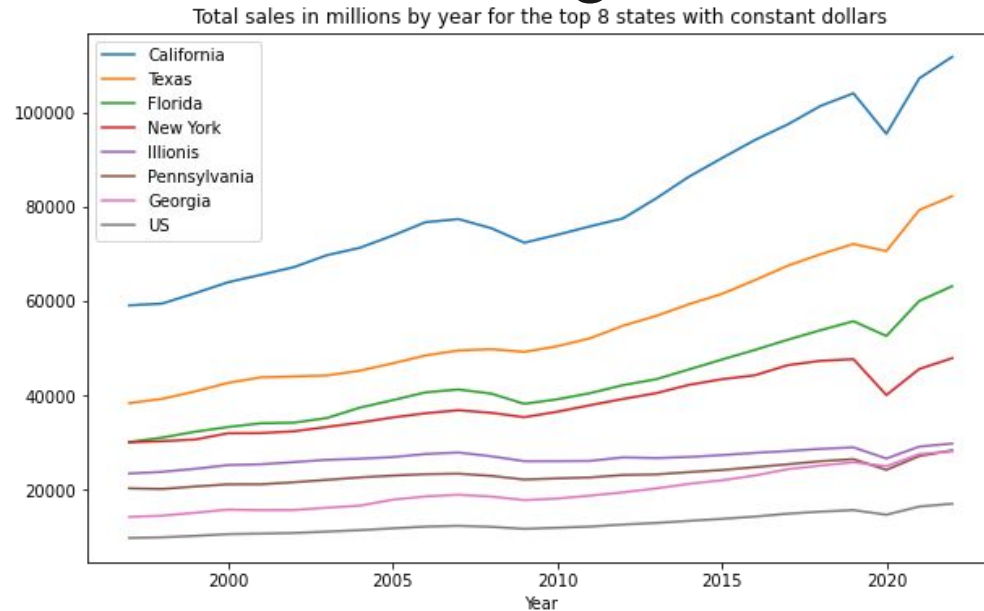
	Year	State	FAH sales million nominal U.S. dollars with taxes and tips	FAFH sales million nominal U.S. dollars with taxes and tips	Total sales million nominal U.S. dollars with taxes and tips	FAH sales million constant 1988 U.S. dollars with taxes and tips	FAFH sales million constant 1988 U.S. dollars with taxes and tips	Total sales million constant 1988 U.S. dollars with taxes and tips
0	1997	Alabama	5,789.30	3,465.67	9,254.97	4,342.91	2,644.37	6,987.28
1	1998	Alabama	6,064.24	3,841.10	9,905.35	4,482.77	2,855.59	7,338.36
2	1999	Alabama	6,408.45	4,101.04	10,509.50	4,663.24	2,976.07	7,639.31
3	2000	Alabama	6,752.33	4,352.40	11,104.73	4,784.95	3,088.45	7,873.40
4	2001	Alabama	6,895.12	4,604.09	11,499.21	4,750.33	3,181.66	7,932.00
5	2002	Alabama	7,027.29	4,845.79	11,873.08	4,779.21	3,274.28	8,053.49
6	2003	Alabama	7,226.87	5,204.53	12,431.40	4,811.03	3,434.63	8,245.66
7	2004	Alabama	7,427.67	5,580.12	13,007.79	4,757.14	3,572.01	8,329.15
8	2005	Alabama	7,751.12	5,922.87	13,673.99	4,865.33	3,684.75	8,550.08
9	2006	Alabama	7,736.35	6,326.07	14,062.43	4,763.66	3,818.41	8,582.07

Initial Exploration

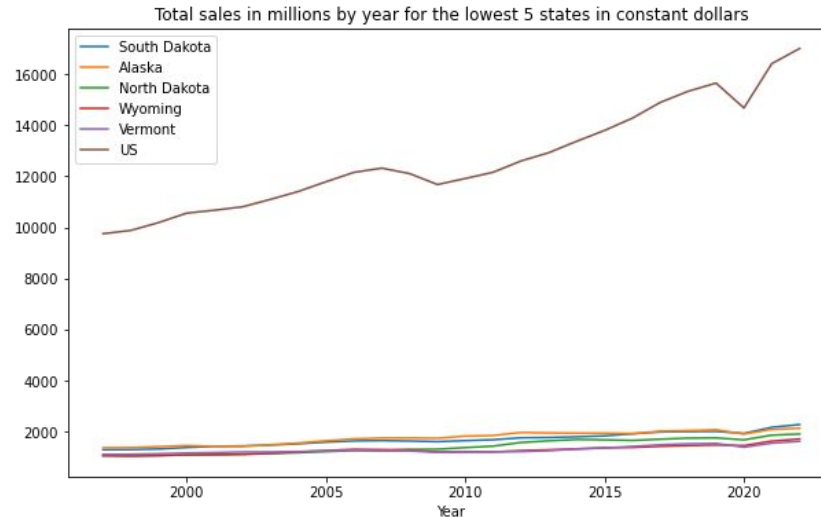
- Nominal and Constant Sales at the national level increased every year
 - Except for “economic disaster events” such as the 2008 recession
- The growth rate was positive in every year except during the economic disaster years
- Consumers continue to spend more on food over time, even adjusted for inflation



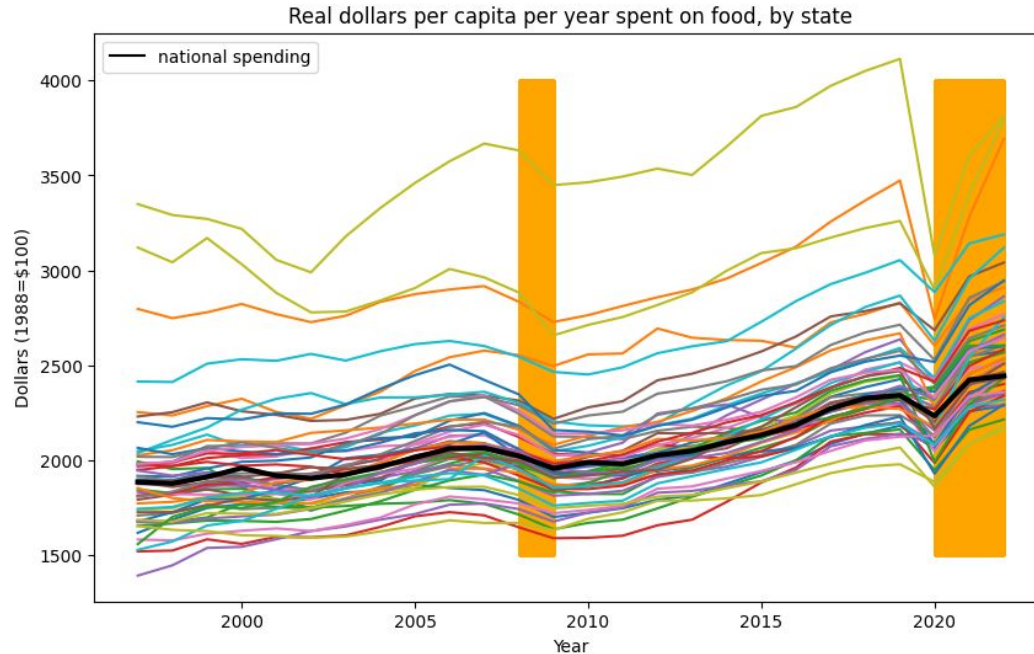
How does the Constant sale compare to the national Average



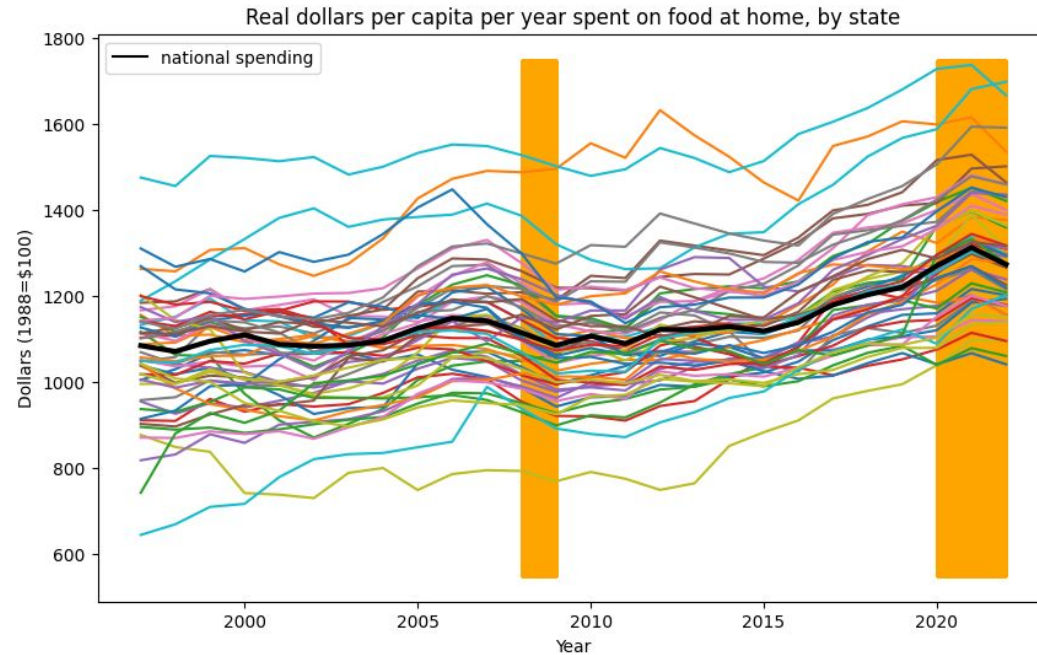
How does the Constant sale compare to the national Average



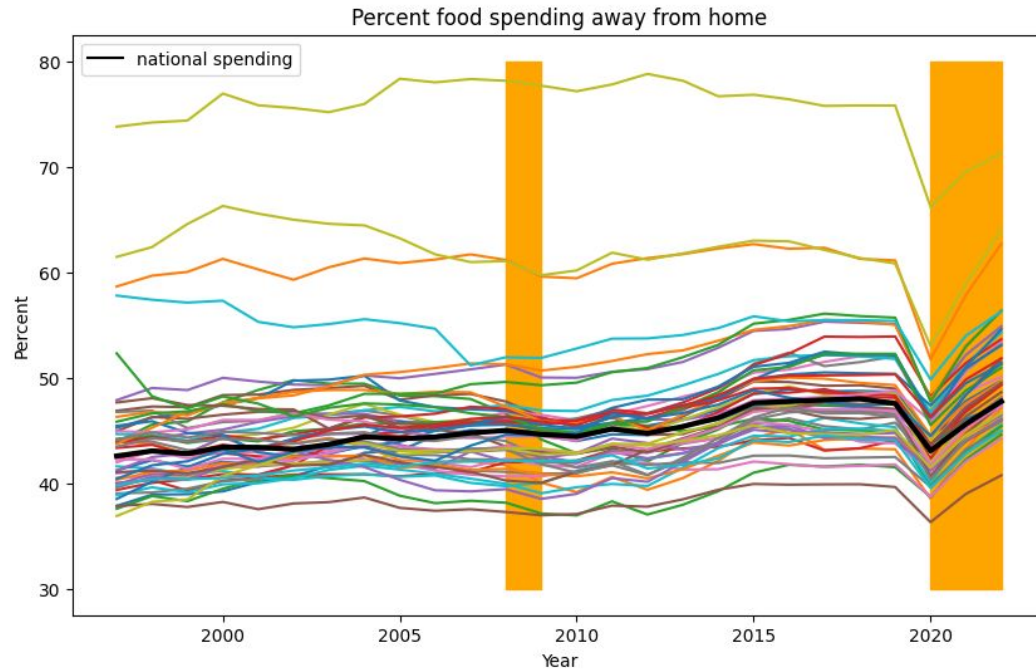
How have per capita food sales for each state changed?



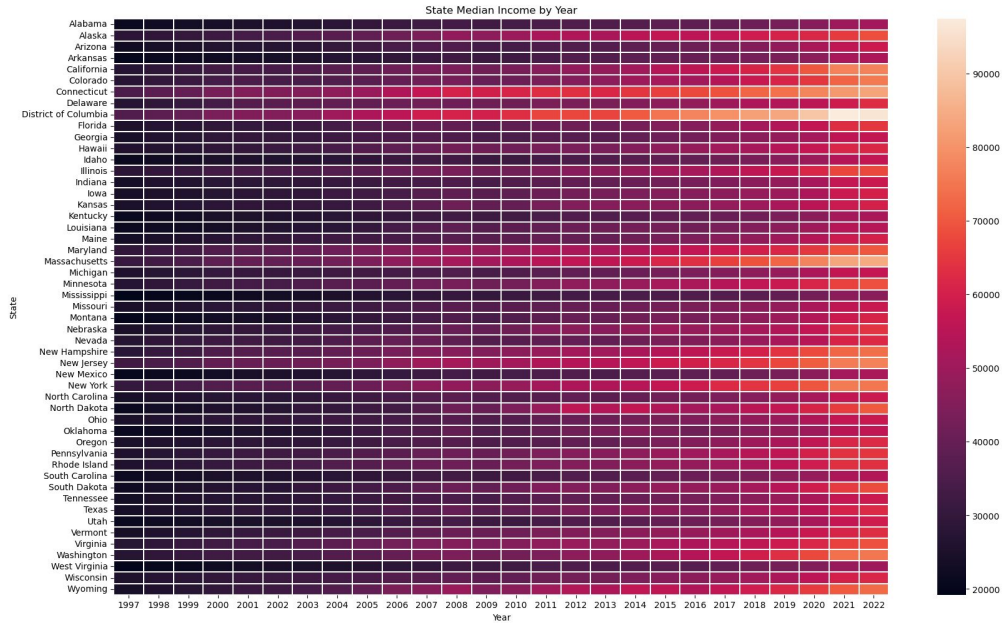
How have per capita food sales for each state changed?



How have per capita food sales for each state changed?

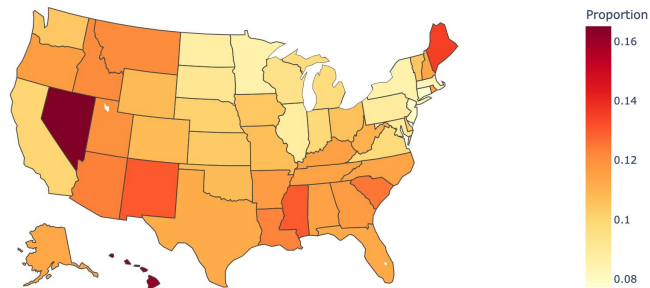


Relationship Between Food and Salary



Relationship Between Food and Salary

Proportion of Food Spend to Median Income in 2022





Conclusion

- Consumers have been spending more money on food at the national and state levels, and not just due to inflation.
- All states have faced higher spending on food adjusting for inflation, and wages have not kept up enough
- Food costs are clearly on the rise, even adjusting for inflation, and wages must be higher or food spend must decrease to limit spending what is already a significant portion of a paycheck on food