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CONSUMER FOOD INSIGHTS

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INTRODUCTION

Consumer Food Insights (CFI) is a monthly survey of more than 1,200 American adults from across the country. Since January 2022, the Center for Food Demand Analysis and Sustainability (CFDAS) at Purdue University has used this survey to track trends and changes in consumer food demand and food sustainability behaviors.[1] Visit purdue.ag/CFDAS or contact cfdas@purdue.edu for more details.

In this issue, we revisit the demographic breakdown from our May 2023 report and dive into the last 33 months of CFI data based on per person weekly food spending. The groups are defined as thrifty (<$50/week), moderate ($50-85/week) and liberal ($85</week) and are of similar sizes.[2] We partnered with Dr. Valerie Kilders, assistant professor of agribusiness marketing at Purdue University, to ask additional questions related to consumers' food ordering application use.

KEY INSIGHTS FROM SEPTEMBER

- Those who spend the least on food score lowest on nutrition, security and economic sustainability.
- Around two-thirds of consumers have used a food ordering app; almost half of those use them at least once a week.
- Thrifty spenders are more inclined to use discounts than moderate and liberal food spenders.
- A large share of consumers attribute the additional fees in food ordering apps to operating expenses and convenience.
- Food insecurity is higher among thrifty food spenders (23%) than among moderate (12%) and liberal (8%) food spenders.
- Mirroring food insecurity, 29% of thrifty food spenders report utilizing free food resources, like food banks, to supplement their diets.

SFP INDEX +0*
72/100

FOOD INSECURITY +0
13%

FOOD SPENDING -6
$185/WEEK

GROCERY STOCKOUTS +0
9%

*+/- in upper right corner tracks the unit change in the statistic from the previous month or quarter, depending on data collection frequency

FOOD ORDERING APPS

How do Americans use food ordering applications?

Additional questions this month gauge the use of food ordering apps for delivery or takeout. Around two-thirds of consumers have utilized a food ordering application at least once, with around one-third only having used one for delivery (**Figure 1**). Current food ordering application usage is relatively the same among those who report using them for delivery and those who report using them for takeout (**Figures 2 and 3**). Around a quarter of food app users use them less than once a month, with almost half of users saying they order food for delivery or takeout on an app at least once a week.

Figure 1. *"Have you ever used a food ordering mobile application (e.g., UberEats, Grubhub, or restaurant app) to order food for delivery or takeout?"*, Sep. 2024

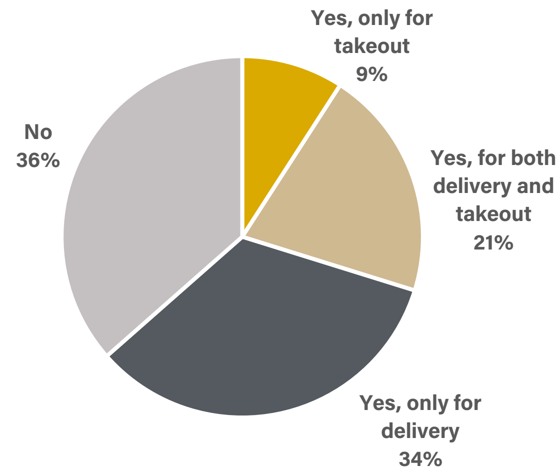


Figure 2. "*How often do you use food ordering apps (e.g., UberEats, Grubhub or restaurant app) to order food for* ***delivery****?"*, Sep. 2024

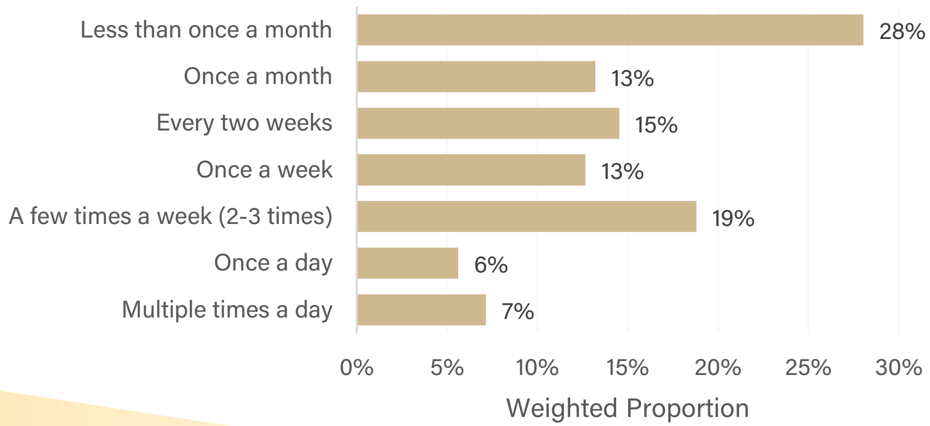
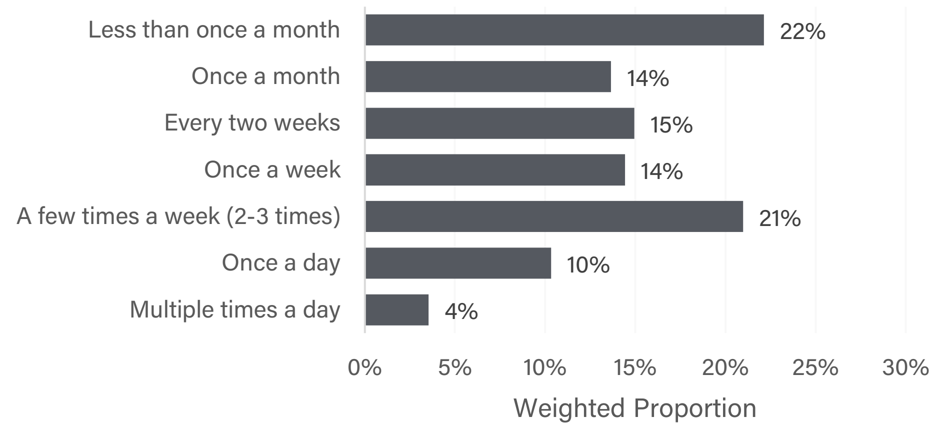


Figure 3. "*How often do you use food ordering apps (e.g., UberEats, Grubhub or restaurant app) to order food for* ***takeout****?"*, Sep. 2024



FOOD ORDERING APPS

Does food ordering app usage vary by per person food spending?

There is no clear correlation between food ordering app usage and per person weekly food spending, though it is surprising to see around 20% of thrifty food spenders utilizing a food ordering app at least once a day. The majority of consumers use an app a few times a week or less (**Figures 4 and 5**).

We also reaffirm previous research that finds an inverse relationship between online food ordering service use and age.[3] Among food app users, the frequency of use of food ordering apps is highest among younger consumers (**Figure 6**).

Figure 4. Food Ordering App Use for Delivery by Per Person Weekly Food Spending, Sep. 2024

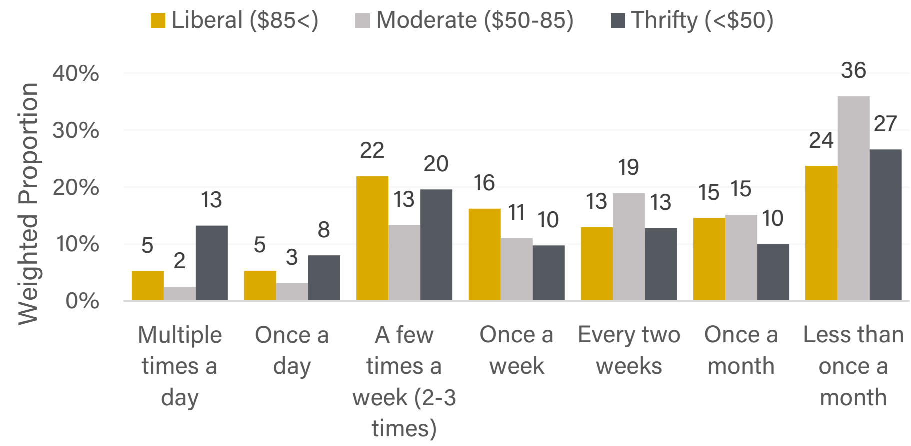


Figure 6. Average Age by Food Ordering App Use, Sep. 2024

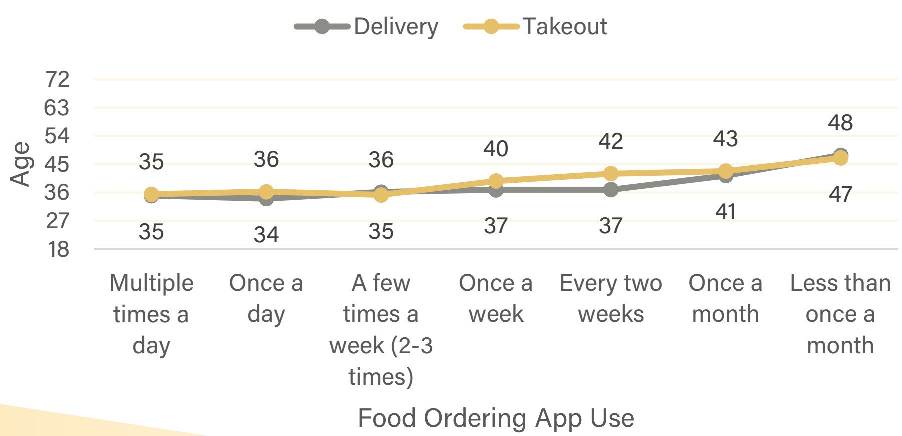
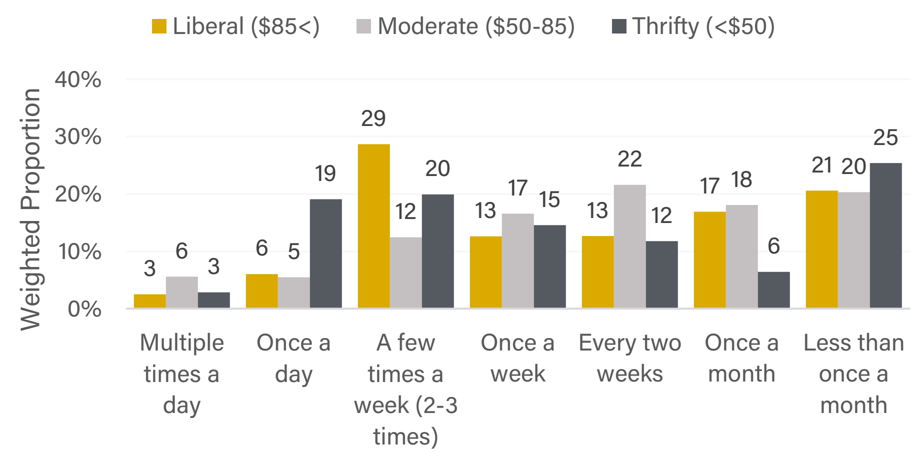


Figure 5. Food Ordering App Use for Takeout by Per Person Weekly Food Spending, Sep. 2024



FOOD ORDERING APPS

How do consumers interact with food ordering applications?

In addition to app usage, we further ask consumers what their food ordering experience is like. We find that the majority of consumers (68%) "sometimes", "often" or "always" use discount offers or promo codes when ordering food online (**Figure 7**). Disaggregating by per person weekly food spending reveals an interesting difference between thrifty (<$50), moderate ($50-85) and liberal food spenders ($85<) (**Figure 8**). Almost half of thrifty spenders apply a discount or promo code to their purchase "often" or "always" when ordering food online, relative to less than one-third of moderate and liberal spenders.

Figure 7. *"How often do you use discount offers or promo codes when ordering food online?"*, Sep. 2024

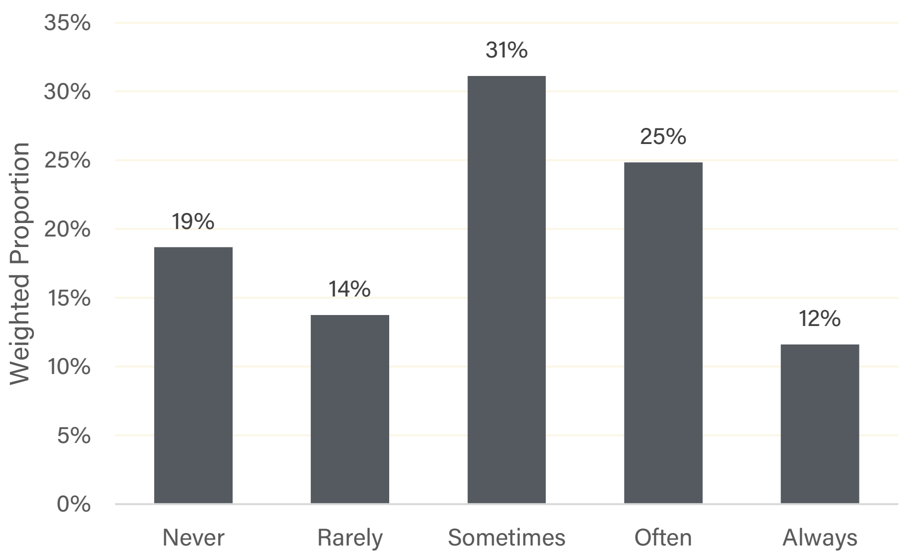
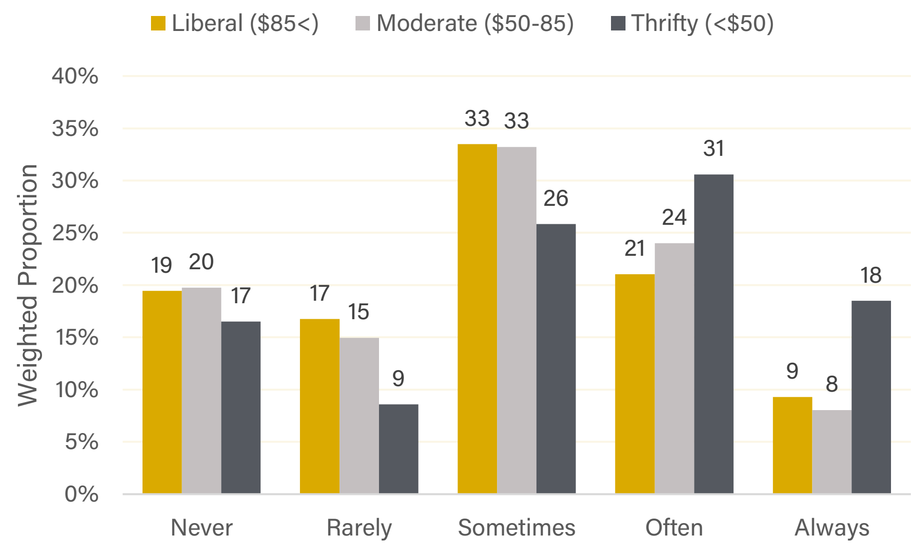


Figure 8. *"How often do you use discount offers or promo codes when ordering food online?"* by Per Person Weekly Food Spending, Sep. 2024



FOOD ORDERING APPS

How do consumers interact with food ordering applications?

Tipping culture has become a hot topic in the food service industry in recent years post-pandemic, with many consumers becoming disgruntled with expectations of higher tip amounts for services.[4] Thinking about this sentiment, we wanted to gauge how much people typcially tip for food delivery orders. Around half of consumers say they tip between 10% and 19% for food delivery orders, while around 14% say they do not tip for this service (**Figure 9**).

Figure 10 shows no substantial difference in the tipping percentage between households with different per person weekly food spending. Those who are thrifty with their food spending may seek out lower food costs through the use of discounts and promo codes when utilizing online food ordering services, but tipping is not an area where they seek more cost savings relative to other consumers.

Figure 9. *"How much do you typically tip on a food delivery order?"*, Sep. 2024

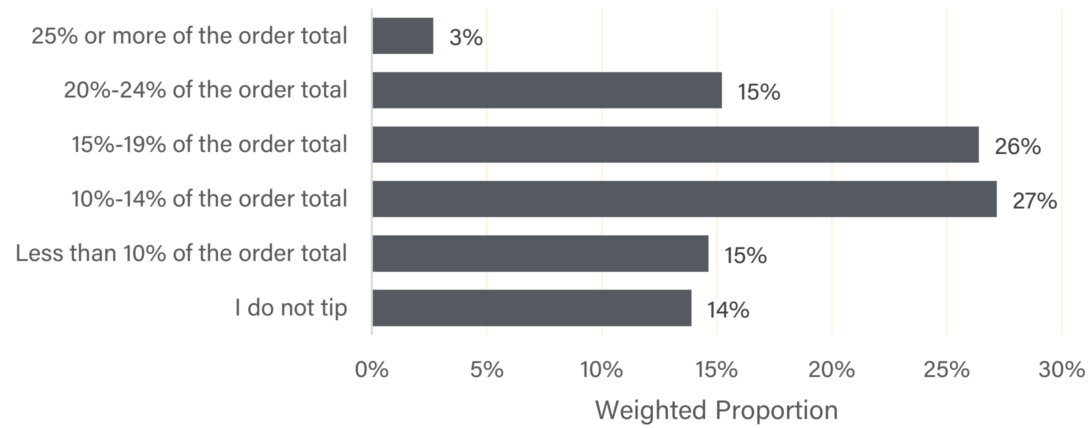
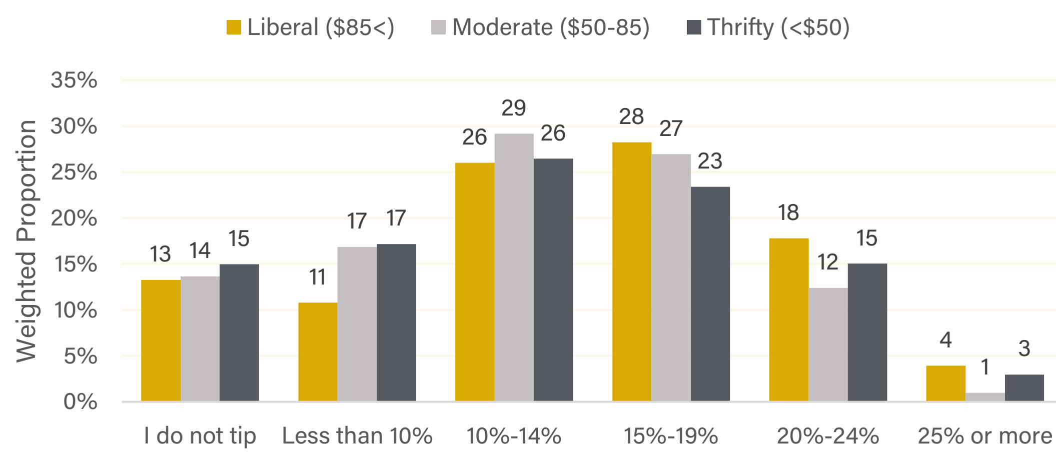


Figure 10. *"How much do you typically tip on a food delivery order?"* by Per Person Weekly Food Spending, Sep. 2024



FOOD ORDERING APPS

What do consumers think about the additional fees associated with food ordering apps?

Finally, we ask consumers an open-ended response question about what they think the additional fees associated with many food ordering applications are paying for (**Figure 11**). After text-mining the responses, one of the most common words and phrases that appeared in consumers' responses was "delivery fee." Other themes included costs associated with the service, such as fuel expenses and compensation for the employee's time for food delivery. The cost of administering and operating the app was also a common theme. While some responses attribute the fees to corporate greed with words like "profit" appearing 29 times, most responses associate the fees with operating expenses (fuel, insurance, time, etc.) or the convenience of the service being provided.

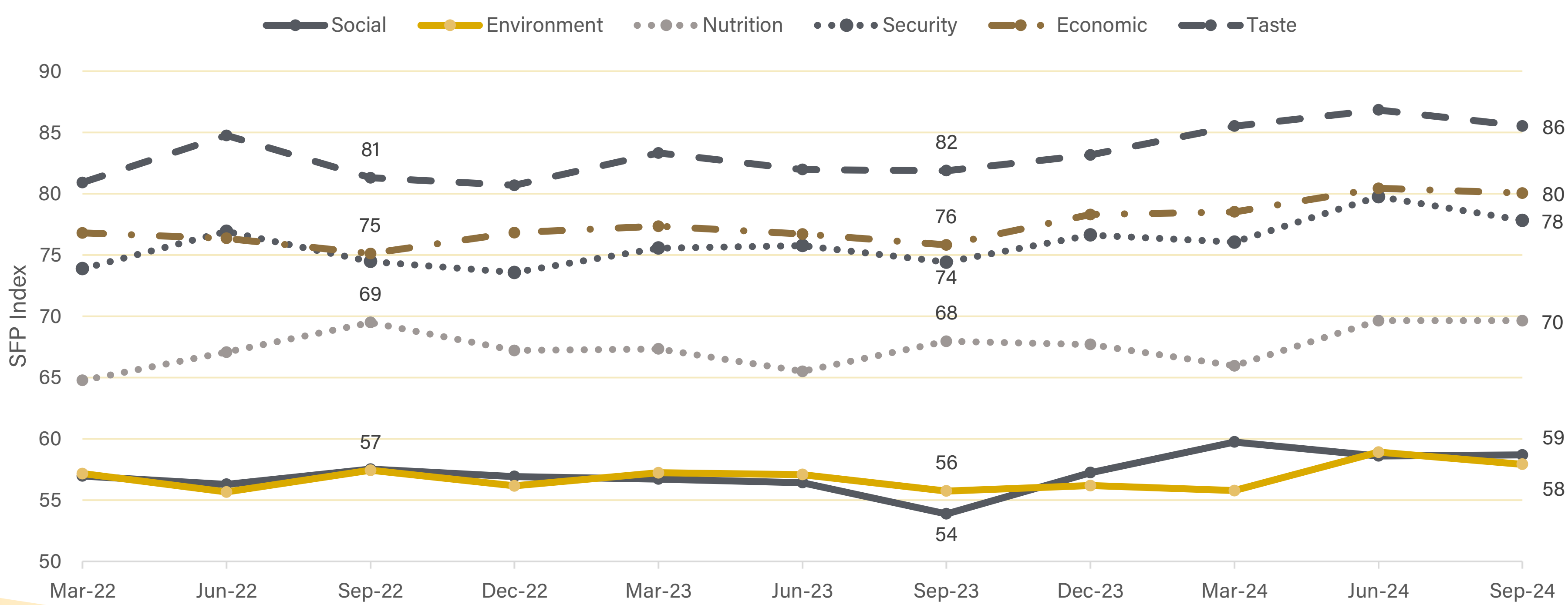
Figure 11. *"In a couple words, what do you think the additional fees associated with food ordering apps are paying for?"*, Sep. 2024

SUSTAINABLE DIETS

Are Americans making sustainable food purchasing decisions?

The Sustainable Food Purchasing (SFP) Index[5] remains relatively stable across most sub-indicators (**Figure 12**). The overall SFP Index remained unchanged from June 2024 at 72. Similar with our food value findings from last month, consumers continue to primarily purchase food based on taste and their budgets. The nutrition sub-indicator, which includes buying mostly fruits, veggies, nuts beans, avoiding highly processed foods and buying foods with a diversity of nutrients, is in the middle of the pack. Fewer consumers are purchasing foods with environmental and social sustainability in mind, relative to the other components. We have not observed a significant trend in the index.

Figure 12. Sustainable Food Purchasing (SFP) Index, Jan. 2022 - Sep. 2024

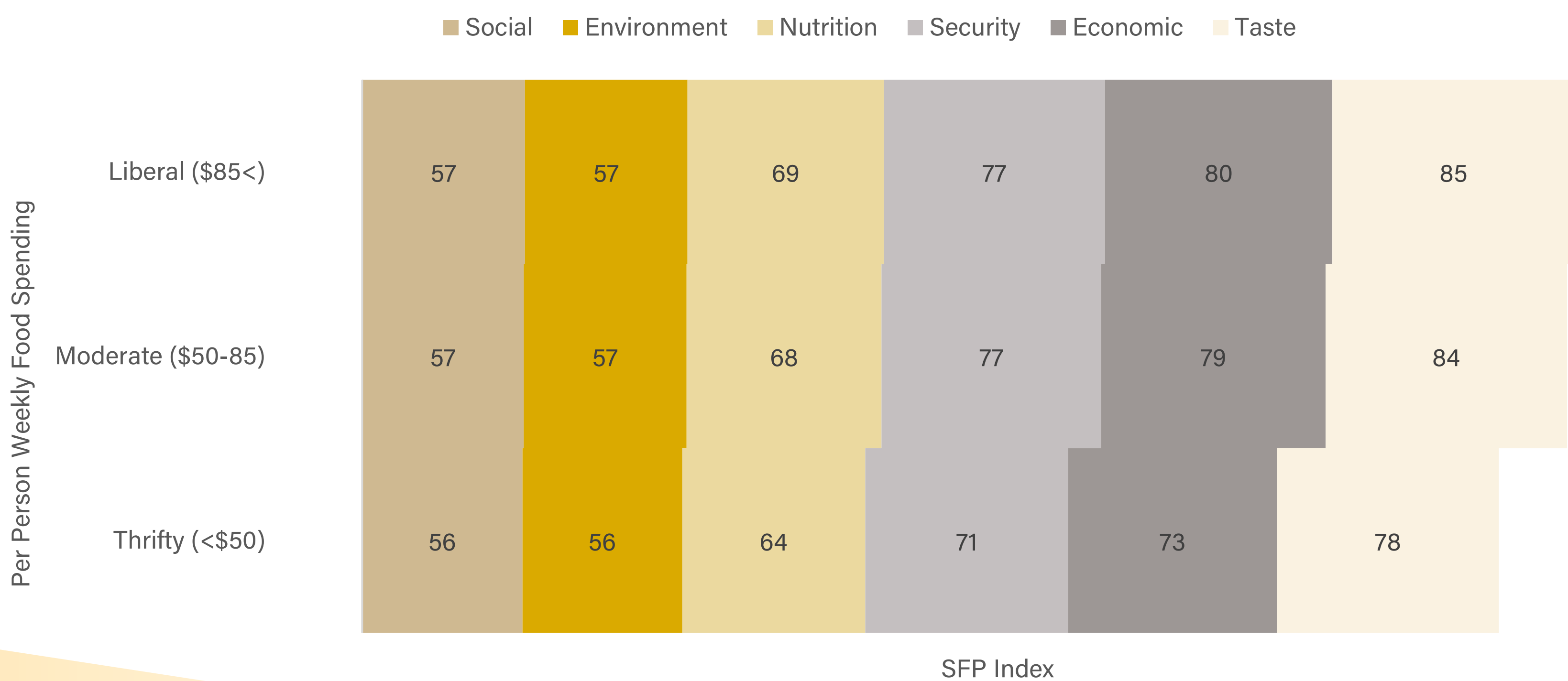


SUSTAINABLE DIETS

Does food spending correlate with sustainable food purchasing decisions?

The SFP Index indicators diverge when the index is disaggregated by per person weekly food spending (**Figure 13**). In particular, those who spend less than $50 per person per week on food (thrifty spenders) tend to score lower on the *nutrition, security, economic* and *taste* indices compared to those who are in the moderate ($50-85) and liberal ($85<) food spending groups. Having a tight food budget can make food purchasing goals harder to achieve. For instance, part of economic sustainability is having the ability to buy food whenever and wherever the consumer wants. This may be difficult with less disposable income and give us some insight into the differences we observe.

Figure 13. Sustainable Food Purchasing (SFP) Index, Jan. 2022 - Sep. 2024



FOOD EXPENDITURES

How much are American households spending on their food?

Each month, consumers report their household's weekly spending on food from the last 30 days (**Figure 14**). On average, consumers reported spending about $118/week on groceries (FAH) and $67/week on restaurants and other carryout this month (FAFH).[6]

The consumer estimate of food inflation over the past twelve months rose slightly from August, increasing from 5.4% to 5.6% (**Figure 15**). We do not observe a definitive trend for this estimate based on the last few months of data collection. Consumer expectations for future food prices remains relatively unchanged from last month after dropping 0.4 percentage-points in each of the two months prior. Despite food inflation cooling substantially since mid-2022, consumer estimates of food inflation have observed a weaker downward trend over time and have been fairly steady around 6.0% the past year. The effects of the food price shock post-COVID are likely still being felt by many.

Figure 14. Weekly Household Food Expenditures, Jan. 2022 - Sep. 2024

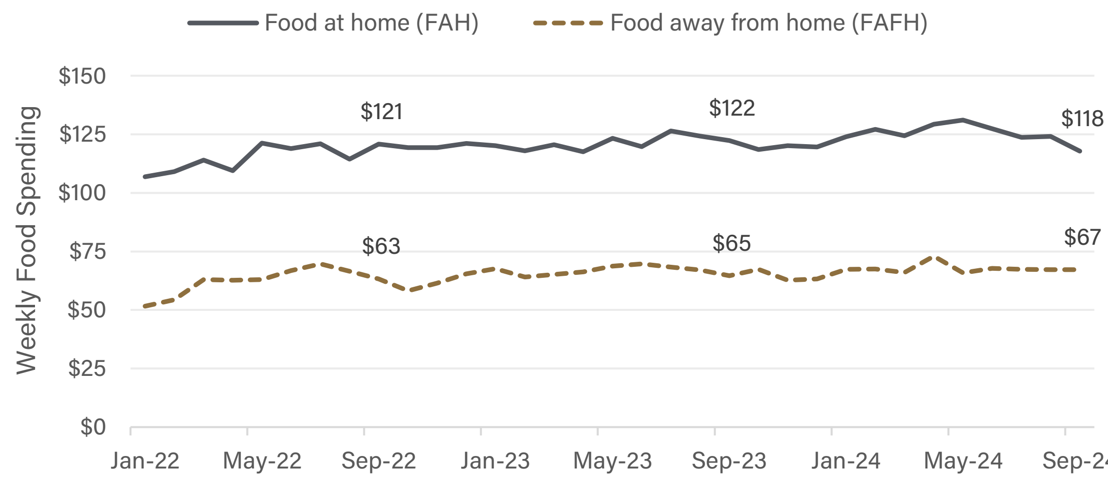
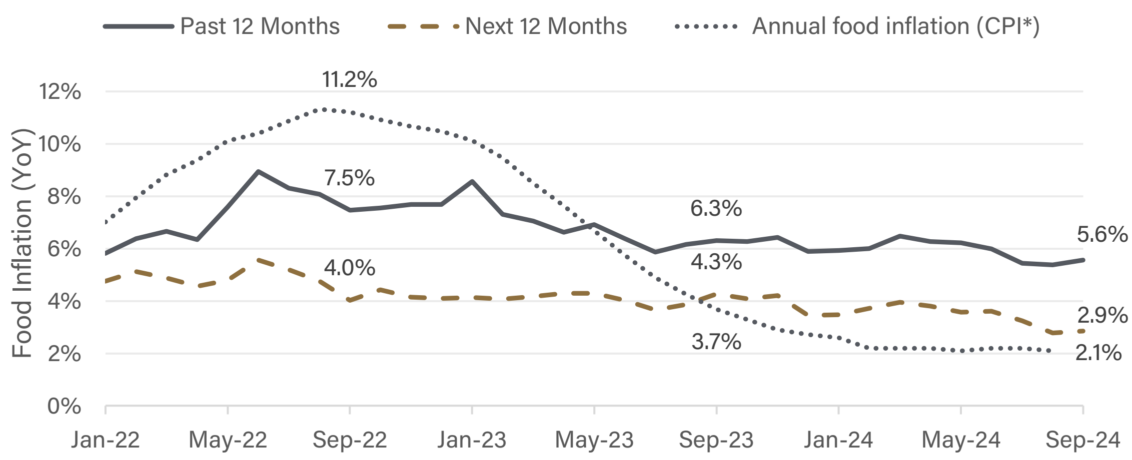


Figure 15. Consumer Estimates of Food Inflation Compared to Gov. Estimate, Jan. 2022 - Sep. 2024



*The Consumer Price Index (CPI) is a measure of inflation computed by the U.S. Bureau of Labor Statistics.

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FOOD EXPENDITURES

How has spending per person changed over time?

While breaking down our CFI survey data by per person food spending, it is worth visualizing how spending per person has changed over time. Due to the inelastic demand for food items, this trend can tell us a bit about how consumers are adjusting to higher food prices. As we see, per person weekly food spending has trended upward at a gradual rate over time, starting around $72 per person per week in January 2022 when the CFI was first administered to around $83 in September 2024 (**Figure 16**). With the rise in food prices at the store and at restaurants, consumers are needing to adjust their budgets in order to purchase the same foods. With food prices showing no sign of decreasing in the near future, the ability to purchase the same foods as prior to the spike in prices will largely be dictated by wage growth.

Figure 17 reveals a positive correlation between per person weekly food spending and annual household income. Understandably, food budgets have more flexibility to expand as income goes up. This shines a light on the situation many thrifty food spenders are facing. The amount spent per person is more likely a result of income constraints rather than choice. It also provides valuable insights that support the proceeding results in the "Food Security" section.

Figure 16. Average Weekly Household Food Spending Per Person, Jan. 2022 - Sep. 2024

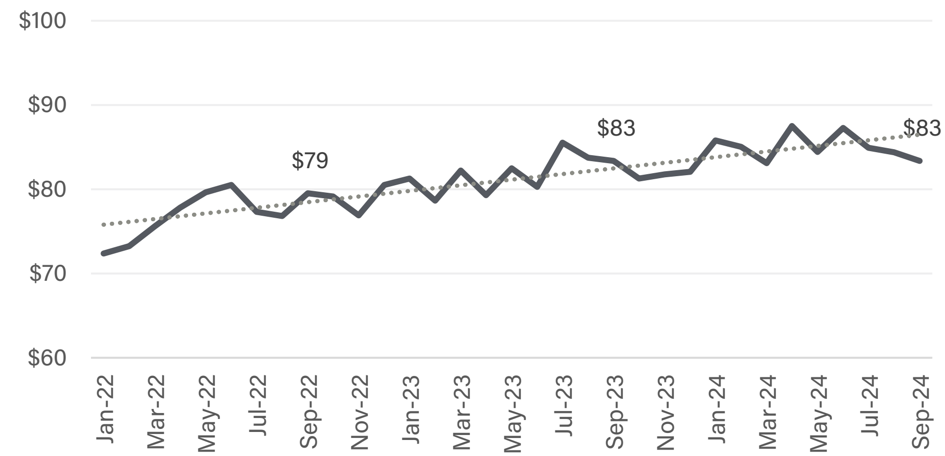
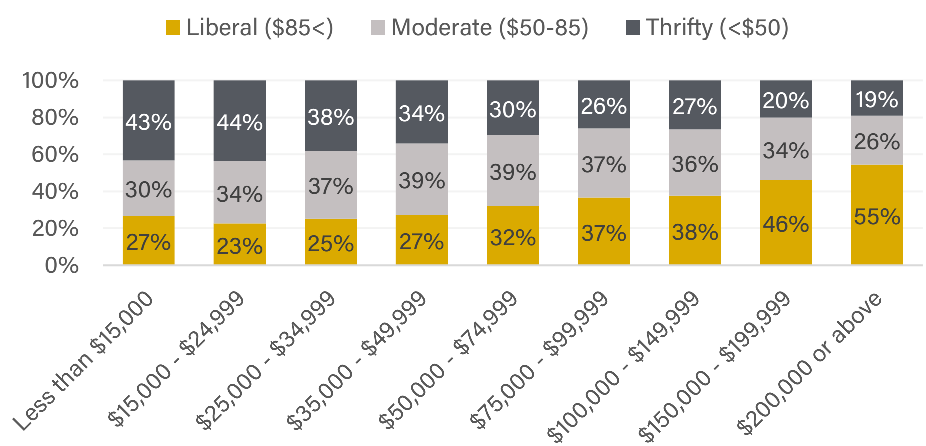


Figure 17. Average Weekly Household Food Spending Per Person by Annual Household Income, Jan. 2022 - Sep. 2024



FOOD SECURITY

Which Americans are having trouble buying food for their families?

Based on a set of six standard questions about food purchased and eaten in the past 30 days, we estimate national food insecurity to be 13% (**Figure 18**).[7]

Figure 19 further shows that around one-quarter of thrifty food spenders are food insecure compared to 12% of moderate and 8% of liberal food spenders. We also see thrifty food spenders utilizing free food resources at a higher rate (**Figure 20**). Households that spend less per person on food may not be in a financial position to obtain sufficient quantities of nutritionally adequate food at the store, making the availability of food pantries crucial to supplement their diets.

Figure 18. Rate of Household Food Insecurity in the Last 30 Days, Jan. 2022 - Sep. 2024

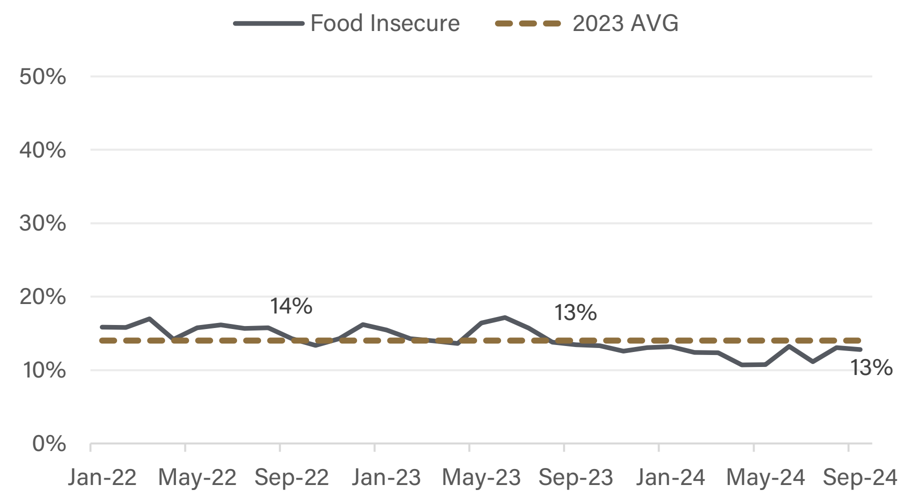


Figure 19. Rate of Household Food Insecurity in the Last 30 Days by Per Person Weekly Food Spending, Jan. 2022 - Sep. 2024

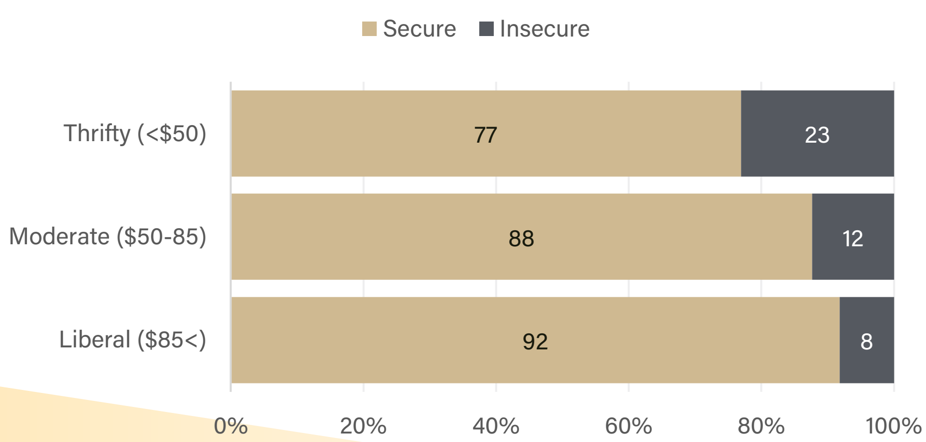
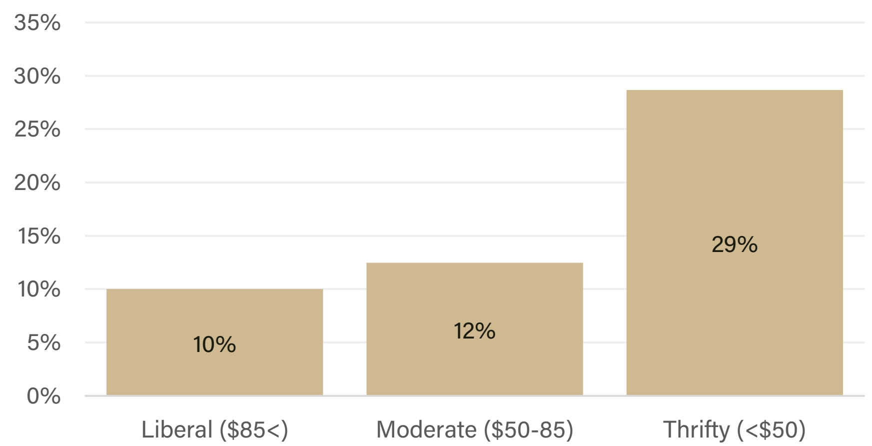


Figure 20. Share of Households Receiving Free Food in the Last 30 Days by Per Person Weekly Food Spending, Jan. 2022 - Sep. 2024



CONSUMER BEHAVIORS

How are Americans navigating their food environment?

Consumers who spend less than $50 per week on food are more likely to grow their own food garden, whether at home or on a community plot, though gardening is not necessarily the most cost effective way to obtain food (**Figure 21**). We also observe around 14% of thrifty food spenders adhering to a vegetarian or vegan diet relative to just 6% of moderate and liberal food spenders (**Figure 22**). This is not entirely surprising given that meat tends to be a more expensive source of protein compared to other vegetarian/vegan-friendly high protein foods such as beans and tofu. However, the same cannot be said about plant-based meats, which remain more expensive than conventional meat on average.[8]

Diving into a variety of consumer behaviors, we observe thrifty food spenders choosing generic over brand name foods more frequently than liberal spenders (**Figure 23**). It is no surprise that thrifty spenders choose plant-based proteins more often given the larger share who adopt plant-based diets. Overall, we do not observe many significant differences between the three food spending groups when it comes to the surveyed food behaviors.

Figure 21. Rate of Food Gardening by Per Person Weekly Food Spending, Jan. 2022 - Sep. 2024

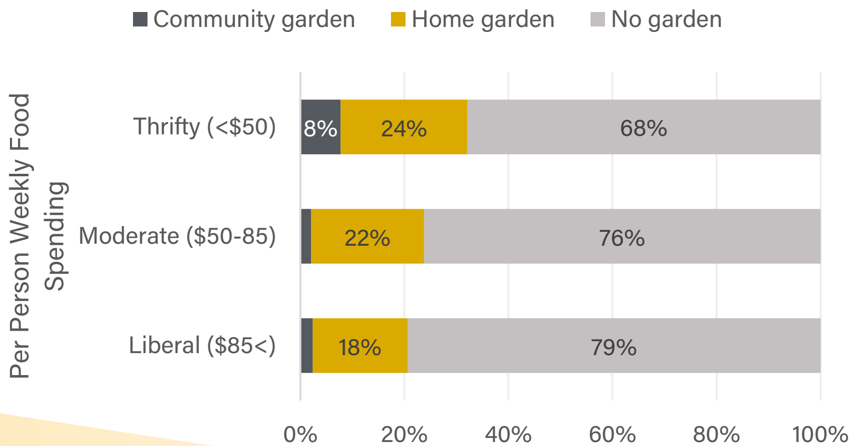
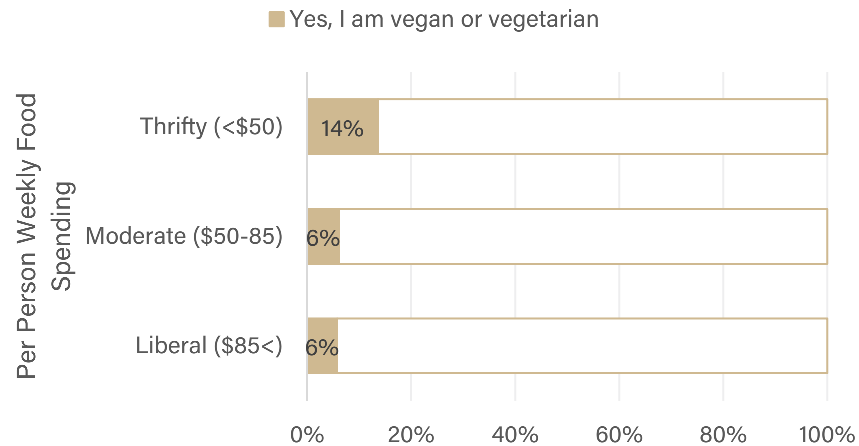


Figure 22. Rate of Vegetarianism/Veganism by Per Person Weekly Food Spending, Jan. 2022 - Sep. 2024



CONSUMER BEHAVIORS

Figure 23. Frequency of Consumer Shopping and Eating Habits by Per Person Weekly Food Spending, Aug. 2022 - Sep. 2024

	Liberal ($85<)	Moderate ($50-85)	Thrifty (<$50)
Chose generic foods over brand-name foods	3.1	3.3	3.5
Chose local foods over non-local foods	3.1	3.0	3.1
Chose wild-caught fish over farm-raised fish	3.0	2.8	2.9
Chose grass-fed beef over conventional beef	3.0	2.8	2.9
Chose cage-free eggs over conventional eggs	2.9	2.7	2.9
Chose organic foods over non-organic foods	2.8	2.6	2.8
Chose plant-based proteins over animal proteins	2.4	2.3	2.6
Checked the use-by/sell-by date at the store	4.1	4.1	4.0
Checked the nutrition label before buying new foods	3.5	3.4	3.4
Checked for natural or clean labels	3.0	2.9	3.1
Checked where my food originated	2.9	2.8	2.9
Checked for food recalls	2.8	2.8	3.0
Checked for GMO ingredients	2.8	2.7	2.9
Checked how my food was produced	2.7	2.7	2.8
Took steps to reduce food waste at home	3.7	3.8	3.8
Recycled food packaging	3.6	3.4	3.5
Threw away food past the Use-By date	3.3	3.2	3.3
Composted food scraps	2.3	2.3	2.6
Ate fruits and vegetables without washing them	2.1	2.1	2.4
Ate rare or undercooked meat	1.9	1.8	2.1
Ate raw dough or batter	1.8	1.8	2.2

Jan. 2022 - Sep. 2024

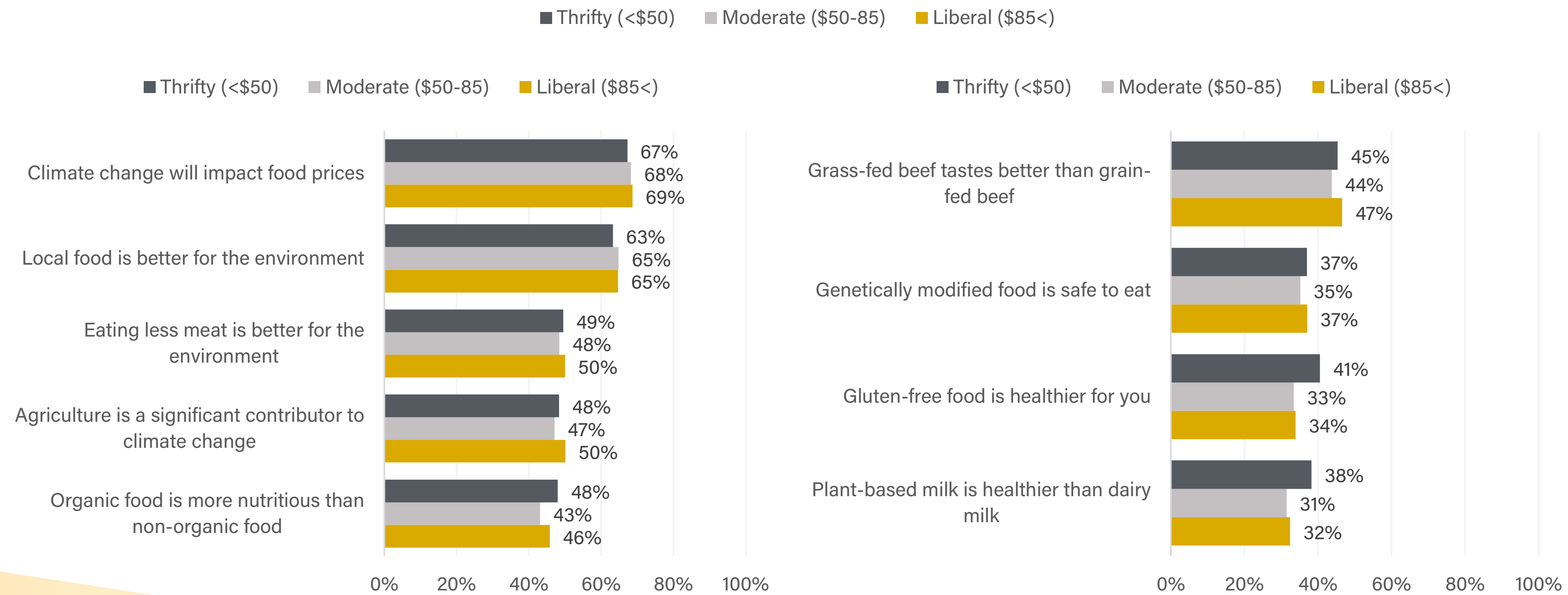
Mean Score	
5	Always
4	Often
3	Sometimes
2	Rarely
1	Never

CONSUMER BELIEFS

What do Americans believe about their food and food system?

Figure 24 summarizes the level of agreement consumers have regarding statements about our food system. Food spending does not clearly correlate with the beliefs about the food system that we surveyed. Thrifty, moderate and liberal food spenders show similar levels of agreement with statements pertaining to the environmental impact of our food system. We see some slight divergence when it comes to beliefs about the healthfulness of gluten-free foods and plant-based milk, with thrifty spenders agreeing to a greater degree. This is an interesting finding, given that many such food options come at a premium relative to their 'regular' counterparts.

Figure 24. Share of Consumers who 'Somewhat Agree' or 'Strongly Agree' with Claims about Food by Per Person Weekly Food Spending, Jan. 2022 - Sep. 2024



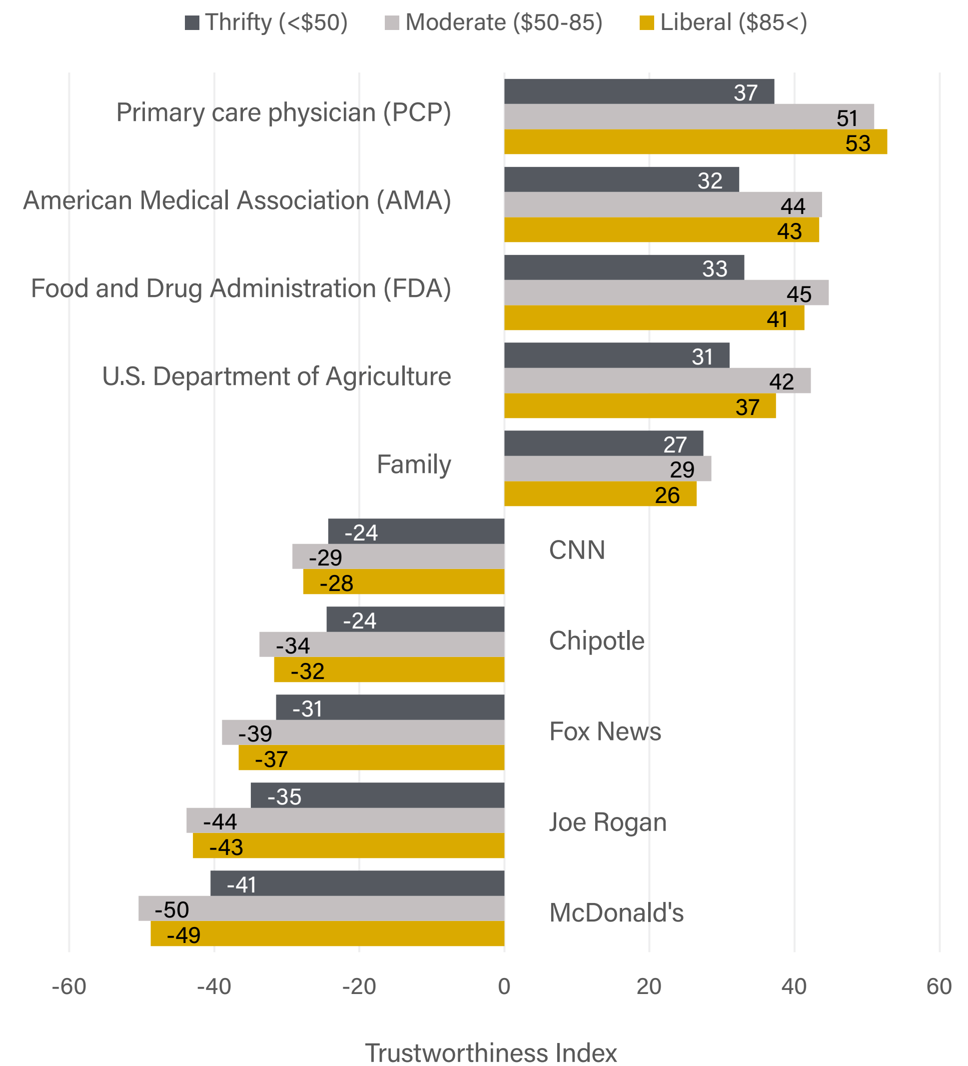
CONSUMER TRUST

Who do Americans trust on topics of food?

Respondents select their most-trusted and least-trusted sources of information about healthy and sustainable food, which are scored on a Trust Index from -100 (least trusted) to 100 (most trusted).[9]

Figure 25 reveals that higher spenders tend to trust professional and government institutions more while trusting news organizations and food companies less. For example, there is a 16-point gap in trust for primary care physcians (PCPs) between liberal spenders and thrifty spenders and an 8-point gap in distrust for McDonald's. The overall trust index has not seen a significant change over time, as organizations tasked with ensuring we have a safe and reliable food system continue to be picked by respondents as the most trustworthy sources of information about sustainable and healthy foods. Large food corporations and media outlets continue to rank lower on the trustworthiness index.

Figure 25. Trust Index of Food-Related Information Sources by , Jan. 2022 - Sep. 2024



ENDNOTES

1 Data were collected from an online panel maintained by the company Dynata over a four-day period from August 19-22, 2024. The eligible population included U.S. adults ages 18+. A weighting method called iterative proportional fitting (or raking) was applied to ensure a demographically balanced sample by age, sex, race, census region, income, and SNAP participation. Population proportions reflect the most recent complete year of ACS Census data (2022). Every respondent from the previous month was re-contacted and asked to take the survey again. Not all respondents retake the survey, so the sample is filled with a new pool of respondents each month. Data collection for every survey begins on the third Monday of each month, unless otherwise dictated by holidays or extenuating circumstances. This report is released on the second Wednesday of the following month.

2 Per person weekly food spending takes total weekly food-away-from-home and food-at-home as reported by respondents, divided by household size.

Sample size Jan. 2022 - Sep. 2024:	Thrifty (<$50) (n=12,464); Moderate ($50-85) (n=14 ,901); Liberal ($85<) (n=13,689)
Sample size Sep. 2024:	Thrifty (<$50) (n=371); Moderate ($50-85) (n=403); Liberal ($85<) (n=447)

3 Keeble, M., Adams, J., Sacks, G., Vanderlee, L., White, C. M., Hammond, D., & Burgoine, T. (2020). Use of Online Food Delivery Services to Order Food Prepared Away-From-Home and Associated Sociodemographic Characteristics: A Cross-Sectional, Multi-Country Analysis. International journal of environmental research and public health, 17(14), 5190. https://doi.org/10.3390/ijerph17145190

4 Kelly, J. (2023). Tipflation: Americans Think Tipping Culture Is 'Out Of Control' And Workers Should Be Paid More. Forbes. Retrieved September 25, 2024, from https://www.forbes.com/sites/jackkelly/2023/08/01/tipflation-americans-think-tipping-culture-is-out-of-control-and-employees-should-be-paid-more/

5The Sustainable Food Purchasing (SFP) Index is a self-reported measure of food purchasing designed to assess how well consumer shopping habits align with healthy diets from sustainable food systems, as described by the EAT-Lancet Commission on Food, Planet, Health. A top score of 100 reflects consumer food purchasing that aligns with a set of key recommendations for better nurturing human health and supporting environmental sustainability. The SFP Index includes six components—Nutrition, Environment, Social, Economic,

ENDNOTES

Security, and Taste—correlating with the different strategies for achieving food systems transformation.

6 Food at home (FAH) refers to food sales meant for home or off-site consumption and the value of donations and non-market acquisitions, which is acquired from outlets such as grocery stores, convenience stores, direct sales, etc. Food away from home (FAFH) refers to food sales meant for immediate consumption, federal food programs, and food furnished as an ancillary activity, which is acquired from outlets such as restaurants, bars, schools, etc.

7 High or marginal food security (i.e., food secure): 0-1 reported indications of food-access problems; little indication of change in diet or food intake. Respondents who reported an U.S. Census Region above 185% of the Federal poverty line were also screened as having high food security. This determination was made according to research by Ahn et al. (2020), which shows that using a modified income-based screening procedure for internet surveys better approximates government estimates of food insecurity. Low food security (i.e., food insecure): 2-4 reported indications of reduced quality, variety, or desirability of diet; little indication of reduced food intake. Very low food security (i.e., food insecure): 5-6 reported indications of disrupted eating patterns, changes in diet, and reduced food intake.

8 The Good Food Institute (2021). Reducing the price of alternative proteins. https://gfi.org/wp-content/uploads/2021/12/Reducing-the-price-of-alternative-proteins_GFI_2022.pdf

9 Trust questions were not fielded in the Consumer Food Insights survey from October 2022 - December 2022.