

Understanding Retail Salmon Expenditure Across U.S. Household Demographics

Noah Robinson^{1,2}, Kehinde Ojo¹, Scott Knoche¹

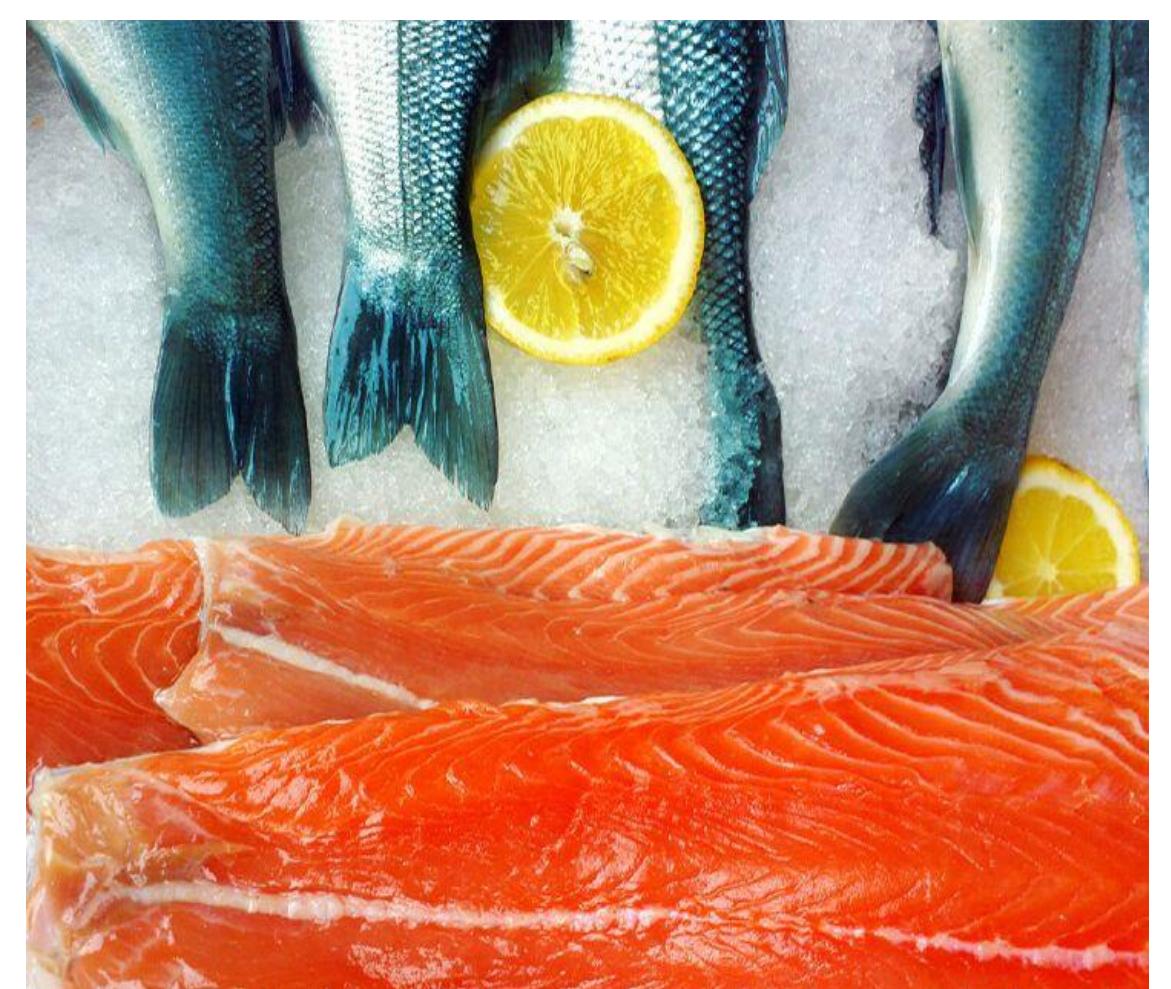
¹Patuxent Environmental and Aquatic Research Laboratory, Morgan State University, St. Leonard, MD

²School of Business Administration, Morgan State University, Baltimore, MD



Overview

- In 2023, U.S. consumers spent approximately \$53.6 billion on seafood products
- Salmon ranked as the second most consumed seafood in the U.S., with a per capita consumption of 2.70 pounds in 2023
- Consumer seafood preferences and spending behavior vary by socio-demographic factors
- Understanding which household characteristics drive salmon consumption can inform targeted marketing strategies and evidence-based policy decisions



Objective

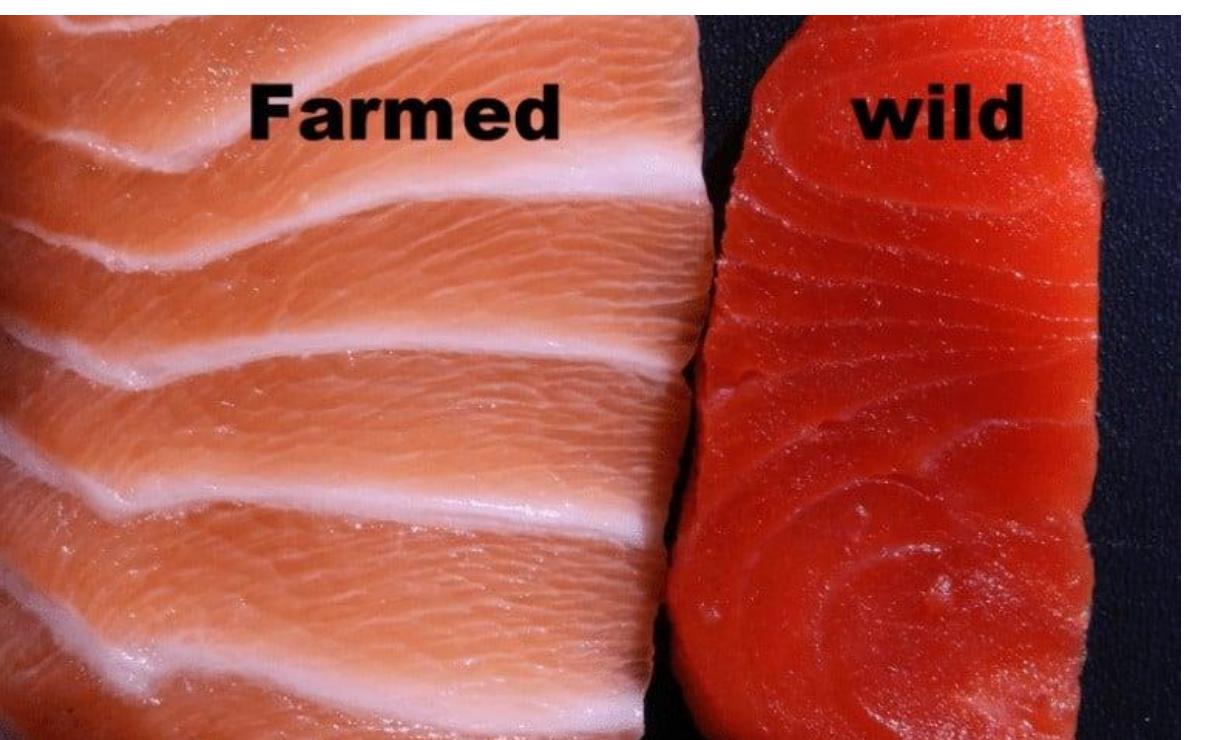
Explore how retail salmon expenditure differs by household characteristics such as race and income

Literature Review

- Love et al. (2020) found that seafood consumption and spending vary significantly by household income, education, and race, with higher income households more likely to purchase seafood
- Sun et al. (2025) found that per capita seafood demand varies by region, with the Southern U.S. showing the highest retail sales, while the East North Central region (which includes Ohio, Michigan, Illinois, Indiana, and Wisconsin) reported the lowest per capita consumption
- USDA Economic Research Service (2024) shows that food purchasing behavior varies by income, race, and household composition, especially for high-value protein foods like salmon

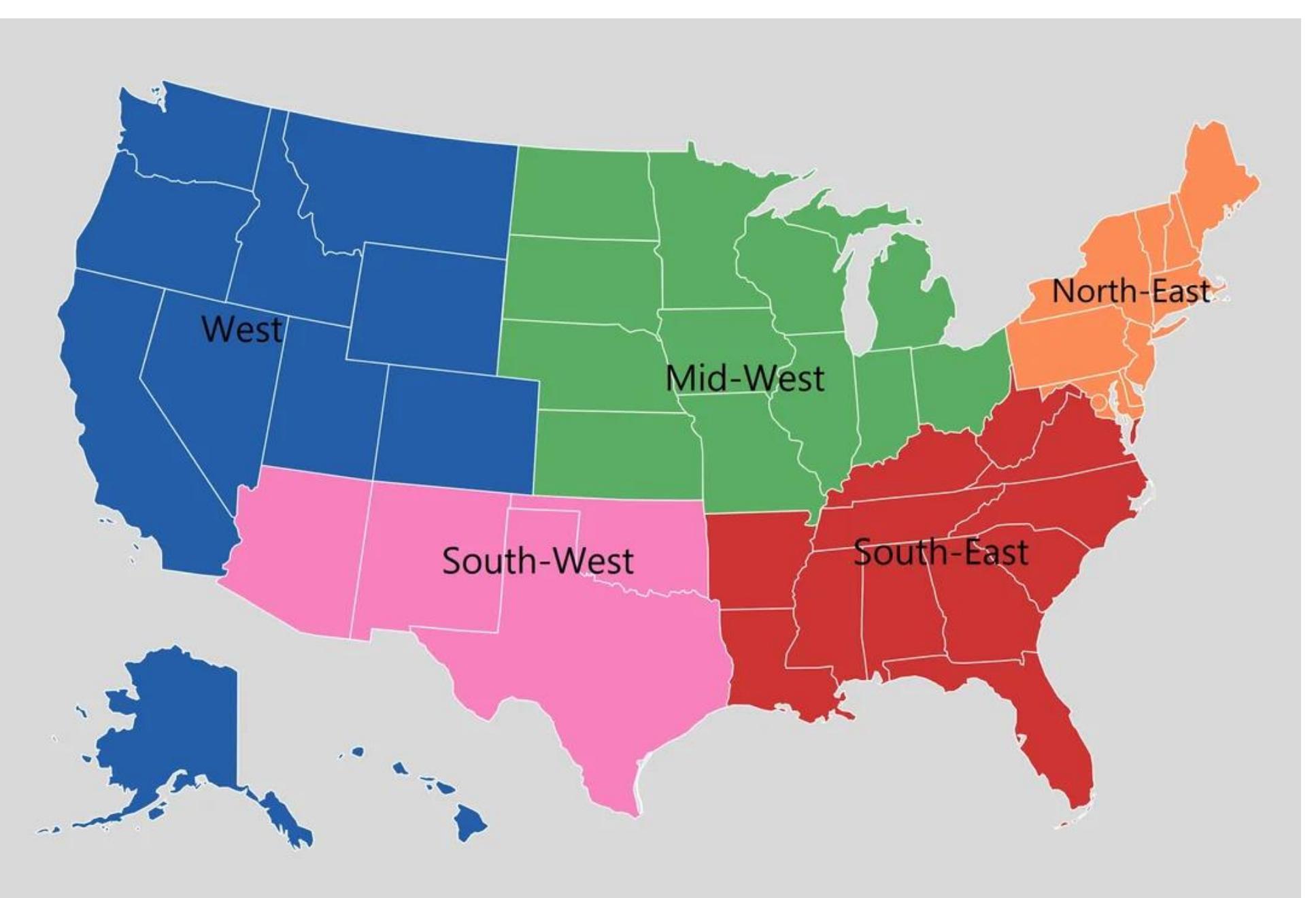
Data

- This research will use Circana Consumer Network data provided by Circana Inc. through the U.S. Department of Agriculture Economic Research Service
- The scanner data tracks consumer food purchases across various demographics.
- I will use salmon expenditure data by household demographics for 2023



Methods

- To understand whether there are differences in total retail salmon expenditure by household characteristics in 2023:
 - I will use descriptive statistics such as frequencies, bar charts, and cross-tabulation tables
 - I will perform chi-square tests to check for statistically significant associations between consumer expenditure groups and demographic characteristics



Expected Results

- I expect the chi-square analysis results to show a statistically significant association between expenditure group and the following variables: region, race, and income
- The findings will suggest that households spend on salmon varies meaningfully by income group, race, and region

Summary

- The findings will suggest that Salmon marketing and product placement strategies should be tailored based on household demographics
- This study will reveal consumer segmentation for salmon, which can help salmon producers, stakeholders, and policymakers better understand who the core buyers of salmon are and improve marketing strategies
- Next steps: continue analyzing household scanner data to identify salmon spending patterns based on product characteristics such as farmed vs. wild and fresh vs. frozen

References

- Love, D. C., Asche, F., Young, R., Nussbaumer, E. M., Anderson, J. L., Botta, R., ... & Thorne-Lyman, A. L. (2022). An overview of retail sales of seafood in the USA, 2017–2019. *Reviews in Fisheries Science & Aquaculture*, 30(2), 259–270.
- Sun, L., Kumar, G., & Engle, C. (2025). Factors influencing seafood sales in US retail markets. *Journal of the World Aquaculture Society*, 56(1), e70000.
- U.S. Department of Agriculture, Economic Research Service. (2024). *Retail food environment and healthy food access: Development and use of the Food Retail Environment Healthy-Quality (FREHQ) measure* (Technical Bulletin No. 1964). https://www.ers.usda.gov/sites/default/files/_laserfiche/publications/108710/TB-1964.pdf

Acknowledgements

I would like to express my sincere gratitude to the U.S Department of Agriculture (USDA) for providing the data that made this research possible. I am especially grateful to the National Oceanic and Atmospheric Administration (NOAA) for funding my internship, and to Kehinde Ojo and Scott Knoche for offering me the opportunity to participate in this valuable research experience.

*These findings in this poster are those of the authors and do not necessarily reflect the views of the National Oceanic and Atmospheric Administration (NOAA), the U.S. Department of Agriculture (USDA), or Circana