

**The COVID-19 Pandemic and Grocery Shopping Behavior:
Who are the Hybrid Shoppers?**

**Brenna Ellison, Purdue University, bdelliso@purdue.edu
Kendra Personett, Purdue University, kpersone@purdue.edu**

*Selected Paper prepared for presentation at the 2023 Agricultural & Applied Economics Association
Annual Meeting, Washington DC; July 23-25, 2023*

Copyright 2023 by [authors]. All rights reserved. Readers may make verbatim copies of this document for non-commercial purposes by any means, provided that this copyright notice appears on all such copies.

The COVID-19 Pandemic and Grocery Shopping Behavior: Who are the Hybrid Shoppers?

It has been well documented that the onset of the COVID-19 pandemic affected how consumers acquired food. Many studies that examined consumer food behaviors early in the pandemic found increased rates of online grocery shopping (e.g., Chenarides et al., 2021; Ellison et al., 2021; Jensen et al., 2021). However, research from time periods later in the pandemic suggests that while rates of online shopping remain higher than pre-pandemic levels, rates of in-person grocery shopping are much higher and have been consistent throughout the pandemic (Ellison, Ocepek, and Kalaitzandonakes, 2022). Jointly, these findings suggest a growing class of hybrid grocery shoppers that utilize both in-person and online grocery shopping options. The purpose of this research is to 1) examine rates of hybrid shopping throughout the COVID-19 pandemic and 2) explore which consumers are more or less likely to engage in hybrid grocery shopping.

Methods

We used online survey data from six cross-sectional surveys that were fielded throughout the COVID-19 pandemic to study hybrid grocery shopping behavior: September 2020; December 2020; March 2021; May 2022; August 2022; and November 2022. Each survey had approximately 1,000 U.S. respondents; respondents were recruited to be nationally representative based on gender, age, income, and geographic region.

We defined a hybrid grocery shopper as an individual who has engaged in in-person grocery shopping *and* online grocery shopping in the last 14 days. Individuals were asked about each behavior separately; those who answered “yes” to each were re-categorized as hybrid grocery shoppers.

To determine which socio-demographic characteristics are associated with hybrid grocery shopping behavior, we used a linear probability model to regress hybrid grocery shopping as a function of gender, age, income, education, geographic region, household size, children in household, and SNAP participation. We modeled each survey wave separately in order to investigate whether the types of individuals who engaged in hybrid shopping changed over time.

Summary of Key Results

Over the six time periods studied, rates of hybrid grocery shopping varied (24% - 36%). Across all time periods, younger individuals (18-34 and 35-54 years of age) were significantly more likely to engage in hybrid grocery shopping than their older counterparts. Outside of the first survey wave, we also consistently find that households with children are significantly more likely to engage in hybrid grocery shopping. In the first survey wave (Sept. 2020), we find that SNAP recipients were more likely to be hybrid shoppers, which likely aligns with the expansion of online grocery shopping options for SNAP users. During the first big surge of COVID-19 cases (Dec. 2020 and Mar. 2021), we find that higher-income and more educated households were more likely to engage in hybrid shopping, but these effects did not consistently persist into later time periods.

Discussion

This research increases our understanding of hybrid grocery shopping behavior, which has important implications for food retailers. Our results show that younger individuals and households with children are more likely to consistently engage in hybrid grocery shopping.

Thus, promotional strategies for these groups should likely include both in-store and online shopping options. For older shoppers, promotions should likely be focused on in-store purchases only.

While our results suggest that the class of hybrid shoppers is relatively stable (e.g., not fading as we move through the pandemic), there is still much we do not know about hybrid shoppers. For example, we do not know how hybrid shoppers divide up their baskets – e.g., how much is spent in-person vs. online? How frequently do they utilize each mode of shopping? Do they use the same retailer(s) for in-person and online shopping? What foods are in their in-person and online shopping carts? We leave these issues to future research.

References

- Chenarides, L., Grebitus, C., Lusk, J.L., & Printezis, I. (2021). Food consumption behavior during the COVID-19 pandemic. *Agribusiness*, 37(1), 44-81.
- Ellison, B., McFadden, B., Rickard, B.J., & Wilson, N.L.W. (2021). Examining food purchase behaviors and food values during the COVID-19 pandemic. *Applied Economic Perspectives and Policy*, 43(1), 58-72.
- Ellison, B., Ocepek, M., & Kalaitzandonakes, M. (2022). U.S. household food acquisition behaviors during the COVID-19 pandemic. *PLOS ONE*, 17(7), e0271522.
- Jensen, K.L., Yenerall, J., Chen, X., & Yu, T.E. (2021). US consumers' online shopping behaviors and intentions during and after the COVID-19 pandemic. *Journal of Agricultural and Applied Economics*, 53(3), 416-434.