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Permalink

<https://escholarship.org/uc/item/3d84941p>

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Publication Date

2024-08-01

DOI

10.7922/G29G5K53

Grocery Shopping in California and Covid-19: Transportation, Environmental Justice, and Policy Implications

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August 2024

Issue

The COVID-19 pandemic upended many aspects of our lives, including how we shop for groceries. As grocery stores scaled back their opening hours and managed access, many shoppers switched to online shopping with home delivery (“e-grocery”) or store pick-up (“click-and-pick”). Few empirical studies published to date have explored how the COVID-19 pandemic changed grocery shopping, the extent to which these changes may last, how the pandemic exacerbated grocery store access inequalities, and how access to groceries in California is intertwined with environmental justice concerns. Moreover, most studies on this topic were based on non-random samples, which can provide quick results in a fast-changing environment but their findings are not generalizable.

To address this gap in research, we considered the effects of changing grocery shopping trends on disadvantaged communities as defined by the California Environmental Protection Agency’s CalEnviroScreen 4.0 index (which identifies areas with higher environmental burdens). Using data obtained by surveying California members of KnowledgePanel,[®] the largest and oldest online probability-based panel representative of the U.S. population, we considered the following questions:

- 1) What explains the frequency of grocery shopping (in stores, via e-grocery, with click-and-pick, or other) in California and how is it likely to change after the pandemic?
- 2) What types of stores did Californians shop in for groceries

during the pandemic and who used grocery delivery companies?

- 3) Did environmental justice factors (here a higher CalEnviroScreen score, which reflects a higher pollution burden), play a role in observed changes in grocery shopping?

Key Research Findings

Only a small percentage (~1%) of Californians stopped grocery shopping in-person during the pandemic.

The percentage of Californians who never shopped for groceries in-store increased from 4.9% before to 5.9% during COVID-19. Overall, Californians went to grocery stores less frequently, but most Californians expect to shop for groceries in-store as frequently as before after the pandemic.

COVID-19 motivated many households to try e-grocery and click-and-pick.

The proportion of Californians who had never tried e-grocery dropped from 68.5% before the pandemic to 59.6% during, an 8.9% change. For click-and-pick, it dropped from 78.2% to 64.9%, a 13.3% change. Households already familiar with these alternatives used them more often. Many of the gains for e-grocery and especially click-and-pick seem here to stay, which is good news for the traditional grocers who invested in e-shopping.

Shifts in grocery shopping did not affect all Californians equally.

The relative popularity of in-store grocery shopping, e-grocery, and click-and-pick depends on the age

of respondents, their level of education, and household income. It also depends on race. Before COVID-19, African Americans and Asians did less frequent in-store grocery shopping. This difference disappeared during the pandemic. African Americans surveyed expected to grocery shop less in stores but use more e-grocery and click-and-pick after COVID-19.

Environmental injustice impacts in-store shopping but not e-grocery or click-and-pick. Residents of areas with a higher environmental burden (i.e., more pollution, as reflected by a higher CalEnviroScreen score) were less likely to grocery shop in-store, but e-grocery or click-and-pick were not affected. As expected, areas with more traffic saw less frequent in-store shopping during the pandemic, but more e-grocery and click-and-pick.

Different Californians grocery shopped differently during the pandemic. Californians who shopped at grocery stores and supermarkets (the latter offer a much broader range of products, including more household products, personal care products, cookware, or clothing) were less likely to belong to generations Y & Z (i.e., individuals born between 1981 and 2012), have more than a high school education, and/or be African American, Asian, or Hispanic. Indeed, grocery stores are often harder to access for residents of Black and ethnic neighborhoods due to a mix of prejudice and corporate strategies.¹ Socio-economic characteristics also affected shopping at other types of stores (e.g., discount stores, Warehouse Clubs, or Dollar stores).

Online grocery shopping helps alleviate some of the inequalities of in-store grocery shopping. Both e-grocery

and click-and-pick broadened access to groceries, especially in disadvantaged communities where traveling to a grocery store can be difficult because people do not have access to a vehicle or reliable transportation, or because of a lack of nearby grocery stores. By spurring the development of online grocery shopping, COVID-19 accelerated this change and helped residents of food deserts (i.e., areas with disproportionately less grocery stores) get better access to groceries.

Online grocery shopping may not reduce vehicle travel much. Click-and-pick, which does not reduce household vehicle miles travelled (VMT), seems likely to increase in popularity after the pandemic (especially among younger generations), while e-grocery, which could reduce VMT, may recede from its pandemic high because someone needs to be at home to receive an order, and e-grocery is not free. In contrast, the ubiquity of grocery stores in California makes click-and-pick (which is free) a more convenient option. To broaden the appeal of e-grocery and capitalize on its potential to reduce VMT, one option worth exploring is consolidating and delivering customer orders to a neighborhood convenience store, which would allow for removing minimum order size requirements, reducing delivery fees, and eliminating time constraints.

More Information

This policy brief is drawn from the report “Grocery Shopping in California and COVID-19 - Transportation, Environmental Justice, and Policy Implications” available at www.ucits.org/research-project/2021-39. For more information about findings presented in this brief, please contact Jean-Daniel Saphores at saphores@uci.edu.

¹<https://www.cnn.com/2020/06/16/business/grocery-stores-access-race-inequality/index.html>

Research presented in this policy brief was made possible through funding received by the University of California Institute of Transportation Studies (UC ITS) from the State of California through the Public Transportation Account and the Road Repair and Accountability Act of 2017 (Senate Bill 1). The UC ITS is a network of faculty, research and administrative staff, and students dedicated to advancing the state of the art in transportation engineering, planning, and policy for the people of California. Established by the Legislature in 1947, the UC ITS has branches at UC Berkeley, UC Davis, UC Irvine, and UCLA.

Project ID UC-ITS-2021-39 | DOI: 10.7922/G29G5K53