The Impacts of Covid-19 on US Retail: An Empirical Investigation

Grantee: Northwestern University

Center Name: Tier I University Transportation Center on Telemobility

Research Priority: Improving Mobility of People and Goods

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Project Description: Covid-19 clearly increased the demand for online shopping. But Covid likely also affected offline shopping: the timing, frequency, and duration of customers’ store visits are all likely different because of Covid. Moreover, both the online and the offline effects of Covid likely vary by location. And these effects have strategic implications for retailers’ omnichannel portfolios. For example, big brick-and-mortar players such as Target and Walmart managed to use curbside pickup to grow both their revenues and their profits during Covid. We aim to empirically understand Covid’s effects on customers’ shopping behavior, and the resulting implications for retailers’ omni-channel portfolios. We especially interested in retailers with strong brick-and-mortar assets (such as Walmart and Target).

Outputs: We aim to produce the following outputs:

- Descriptive analyses of the changes in urban-to-rural migration patterns in the US during Covid, relative to the year before.
- Descriptive analyses of the changes in customers’ timing of store visits (e.g., time of the day and day of the week) during Covid, relative to the year before.
- Descriptive analyses of the changes in customers’ frequency of store visits (e.g., once per week or once per month) during Covid, relative to the year before.
- Descriptive analyses of the changes in customers’ dwell time of retail store visits during Covid, relative to the year before.
- Ideally, descriptive analyses of the changes in customers’ preferences for store pickup versus home delivery during Covid, relative to the year before.

Outcomes/Impacts: Our findings can have several implications for retailers’ omni-channel portfolios. Specifically, our findings could imply:

- A change in retailers’ investment in physical assets (e.g., stores, showrooms, or lockers), both in terms of the assets’ number and in terms of their location.
- A change in retailers’ store management practices (e.g., inventory management and stuff scheduling).
- A change in retailers’ relative investment in store pickup versus home delivery capabilities.

Distribution of Customers’ Visits Across Dates of the Week Between March and September
Notes: The curves take into account all the visits to Walmart, Target, and Best Buy stores during the reported time windows, as captured by the Safegraph dataset. As you can see, the distribution of visits across days of the week was “smoother” during Covid, compared to the two years before.