Title: Consumer Responses to the COVID-19 Crisis: Evidence from Bank Account Transaction Data

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Abstract:
This paper uses transaction-level customer data from the largest bank in Denmark to estimate consumer responses to the COVID-19 pandemic and the partial shutdown of the economy. We find that aggregate card spending has dropped sharply by around 25% following the shutdown. The drop is mostly concentrated on goods and services whose supply is directly restricted by the shutdown, suggesting a limited role for spillovers to non-restricted sectors through demand in the short term. The spending drop is somewhat larger for individuals more exposed to the economic risks and health risks introduced by the COVID-19 crisis; however, pre-crisis spending shares in the restricted sectors is a much stronger correlate of spending responses.

Data description
Our analysis uses transaction data for about 760,000 individuals who hold their main current account at Danske Bank, the largest retail bank in Denmark with a customer base that is roughly representative of the Danish population. For each individual, we observe every purchase made by cards through accounts at the bank from 1 January 2018 and through the period of shutdown of large parts of the Danish economy that began on 11 March 2020. This allows us to construct a customer-level measure of total spending at the daily frequency and, exploiting a standardized classification of merchants, a breakdown of total spending by expenditure category. The dataset also contains basic demographic information such as age and gender and allows us to construct a measure of income based on the bank’s algorithm for categorizing account inflows.

JEL codes
E21, G50, I10

Key-words
Covid-19 crisis, household spending, transaction data