Title: Consumers’ Mobility, Expenditure and Online-Offline Substitution Response to COVID-19: Evidence from French Transaction Data

Authors:
- David Bounie, i3, CNRS, Telecom Paris, Institut Polytechnique de Paris; Email: david.bounie@telecom-paris.fr
- Youssouf Camara, i3, CNRS, Telecom Paris, Institut Polytechnique de Paris; Email: yocamara@telecom-paris.fr
- John W. Galbraith, Department of Economics, McGill University; CIREQ, CIRANO; Email: john.galbraith@mcgill.ca

Abstract: This paper investigates a number of general phenomena connected with consumer behaviour in response to a severe economic shock, using billions of French card transactions measured before and during the COVID-19 epidemic. We examine changes in consumer mobility, anticipatory behaviour in response to announced restrictions, and the contrasts between the responses of online and traditional point-of-sale (off-line) consumption expenditures to the shock. We track hourly, daily and weekly responses as well as estimating an aggregate fixed-period impact effect via a difference-in-difference estimator. The results, particularly at the sectoral level, suggest that the recourse of the online shopping option diminished somewhat the overall impact of the shock on consumption expenditure, thereby increasing resiliency of the economy.

Data: We exploit a set of transactions made on millions of bank cards in France, over the period before the mandatory containment, namely January - March 16 2019 and 2020, and the period during the containment, namely March 17 to April 5 2019 and 2020, totaling nearly four billion transactions.

JEL codes: E21, E62, E61

Key words: COVID-19, consumption expenditure, consumer mobility, online commerce, resiliency, transaction data.