OPPORTUNITY INSIGHTS

The Economic Impacts of COVID-19:

Evidence from a New Public Database Built Using Private Sector Data

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How has COVID-19 affected our economy and what policies will foster a recovery for all Americans?

Government surveys of households and businesses show that COVID-19 reduced GDP and increased unemployment sharply. These sources, while critical for measuring the scope of the crisis, are more limited in their capacity to inform policy decisions. In particular, national surveys are neither frequent nor large enough to reveal how the crisis has affected specific areas or subgroups.

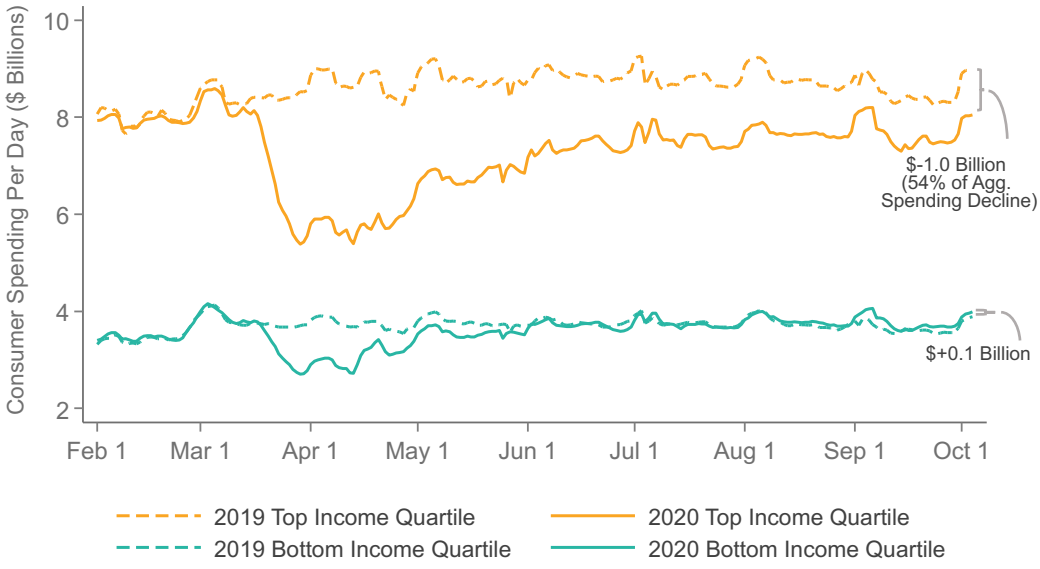
In response to this challenge, we created the **Opportunity Insights Economic Tracker,** a freely available interactive website that measures economic activity at a granular level in real time. The tracker is built using anonymized data from several private companies, such as credit card processors and payroll firms. From this data, we construct statistics on consumer spending, employment rates, and other indicators by county, industry, and (pre-crisis) income level. These new statistics allow us to study how COVID-19 has affected the economy with unprecedented precision.

Because government statistics reveal that almost all of the reduction in GDP came from a reduction in consumer spending, we begin by studying the drivers of this sharp drop in spending. We then examine the impacts of spending reductions on businesses and workers. Finally, we analyze the effects of policies enacted to mitigate these economic impacts and discuss what our findings imply for policy going forward.

KEY FINDINGS

- As COVID-19 infections increased in March, high-income households sharply reduced their spending, primarily on services that require in-person interactions.
- Because of this reduction in spending by high-income consumers, businesses in the most affluent neighborhoods in America lost more than half of their revenue.
- As these businesses lost revenue, they laid off their employees, particularly low-income workers. Nearly 50% of low-wage workers working in the highest-rent ZIP codes lost their jobs, compared with 30% in the lowest-rent ZIP codes.
- Policy efforts to date — stimulus payments to households and Paycheck Protection Program loans to small businesses — have not led to a rebound in spending at the businesses that lost the most revenue. As a result, they have had a limited impact on the employment rates of low-income workers.
- In the long-term, the only way to drive economic recovery is to invest in public health efforts that will restore consumer confidence and spending.
- In the meantime, providing and extending targeted assistance to low-income workers impacted by the economic downturn (such as through unemployment benefits) is critical for reducing hardship and addressing disparities in COVID's impacts.

FIGURE 1: Consumer Spending Changes During COVID-19 Crisis, by Income Group



This graph plots spending for households in the top vs. bottom 25 percent of the income distribution in 2019 and 2020. Income is imputed based on the ZIP code where households live.

Data Source: Affinity Solutions. Click here for up-to-date data.

FINDING 1

High-income households accounted for most of the reduction in spending.

Most of the reduction in consumer spending resulted from reductions by high-income households. As of May 31, more than two-thirds of the total reduction in credit card spending since January had come from households in the top 25 percent of the income distribution. Meanwhile, households in the bottom 25 percent continued to spend at the same levels they had before the crisis, as illustrated in Figure 1.

High-income households cut spending primarily because of health concerns rather than a loss of income or purchasing power. Spending fell most on services that require in-person interaction and thereby carry a risk of COVID-19 infection, such as transportation and food services.

The pattern of spending reductions during this recession differs sharply from that of prior recessions, during which spending on services remained essentially unchanged while spending on durable goods (e.g., new appliances or cars) fell sharply.

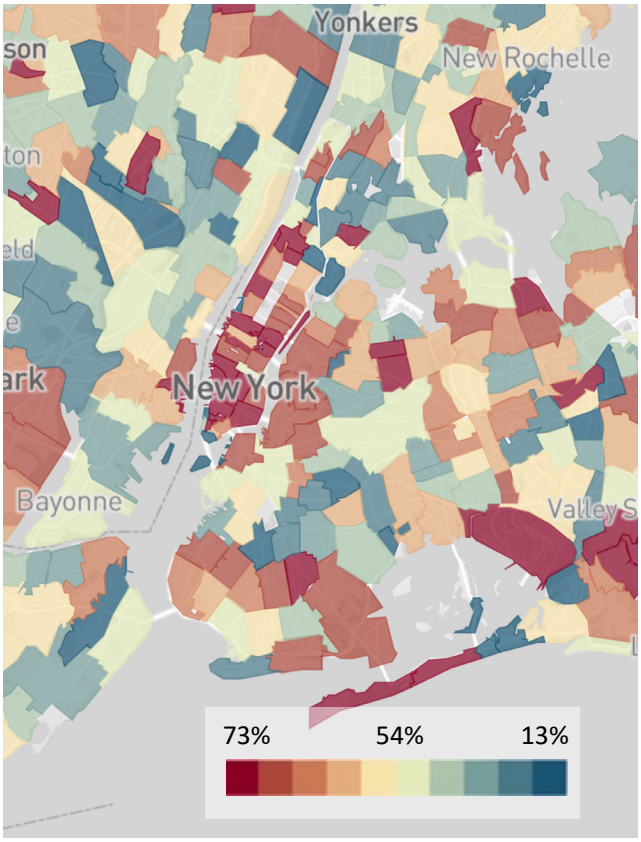
FINDING 2

Small business revenues declined most in affluent areas.

Next, we examine the impacts of the consumer spending shock on businesses, recognizing that the sectors in which spending fell most consist of goods produced by small, local businesses (e.g., restaurants).

Small businesses in the most affluent ZIP codes — which tend to cater to high-income customers — lost more than 50% of their revenue when COVID-19 hit, as compared with 30% in the least affluent (low rent) ZIP codes. This pattern is illustrated in the map of New York City in Figure 2 below; businesses on the Upper East Side of Manhattan lost far more revenue than those in Harlem or the Bronx.

FIGURE 2: Small Business Revenue Losses from Jan to Apr 2020 by Zip Code in NYC



This map shows changes in small business revenues by ZIP code. Red areas show places where businesses lost more revenue.

Data Source: Womply

FINDING 3

Job losses at small businesses have been largest in affluent areas.

As businesses lost revenue, they laid off their employees. In the highest-rent ZIP codes, more than 50% of low-wage workers at small businesses were laid off within two weeks after the COVID-19 crisis began; by contrast, in the lowest-rent ZIP codes, fewer than 30% lost their jobs.

The map in Figure 3 illustrates this result by showing changes in employment rates of low-income workers by ZIP code in New York. Low-income people working in rich areas of the city were most likely to have lost their jobs, mirroring the pattern of small business revenue losses.

Businesses in more affluent areas not only laid off more low-wage workers but are also posting fewer jobs to hire new workers, suggesting that the recovery may take longer in such areas.

EVALUATING POLICY RESPONSES

The government has implemented a number of policies in an effort to mitigate the economic effects of the pandemic. How successful were these efforts, especially in raising the employment levels of the low-income workers who have experienced the largest job losses?

FINDING 4

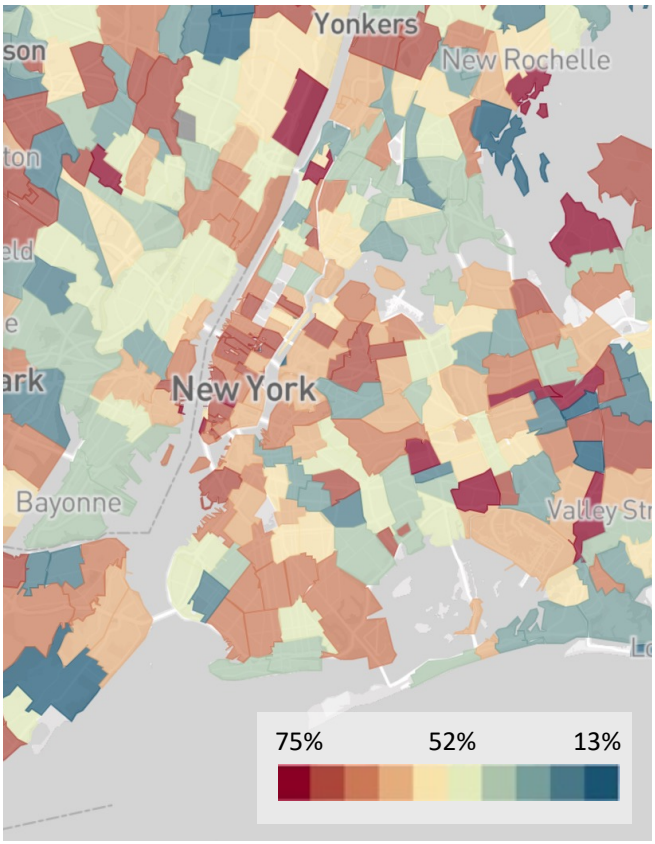
State-ordered re-openings of economies had small effects on economic activity.

Some states began to re-open non-essential businesses as early as April 20, while others waited until the end of May. By comparing the trajectory of early-opening states to similar states that remained closed, we find that re-openings increased spending and revenues only modestly.

For example, Figure 4 shows that consumer spending patterns in Colorado and New Mexico were nearly identical from February through May despite the fact that Colorado began re-opening select businesses on May 1 and New Mexico on May 16. We also find little or no impact of earlier re-openings on employment rates.

These findings show that it is the fear of COVID-19 itself, not executive orders restricting business activity, that are the primary cause of reduced economic activity and job loss.

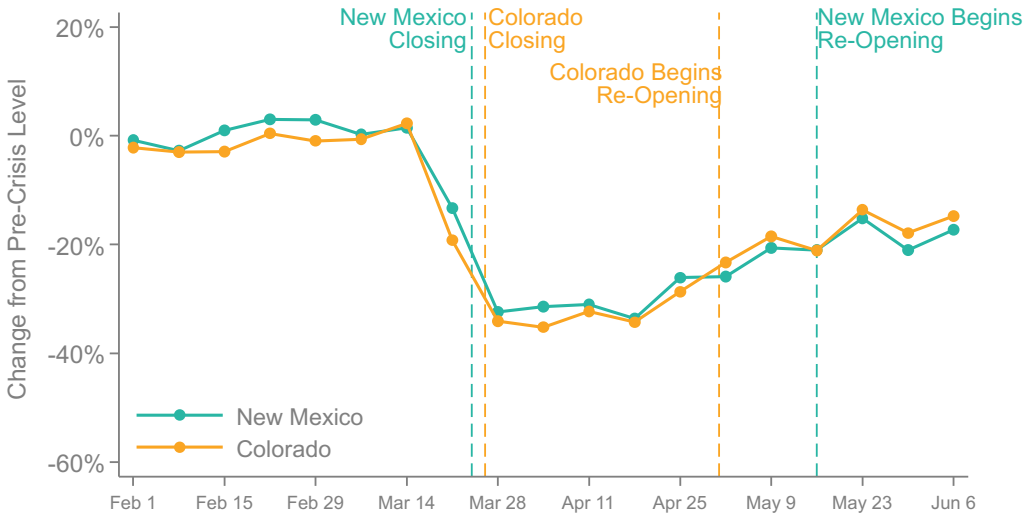
FIGURE 3: Reductions in Employment Rates of Low-Income Workers by ZIP Code in NYC



This map shows changes in employment rates for low-wage workers by the ZIP code of their employer. Red areas show places where workers were more likely to lose their jobs.

Data Source: Earnin

FIGURE 4: Effects of Re-Opening on Consumer Spending: Colorado vs. New Mexico



This graph shows trends in consumer spending in Colorado and New Mexico around the times of the stay-at-home and re-opening orders.

Data Source: Affinity Solutions

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FINDING 5

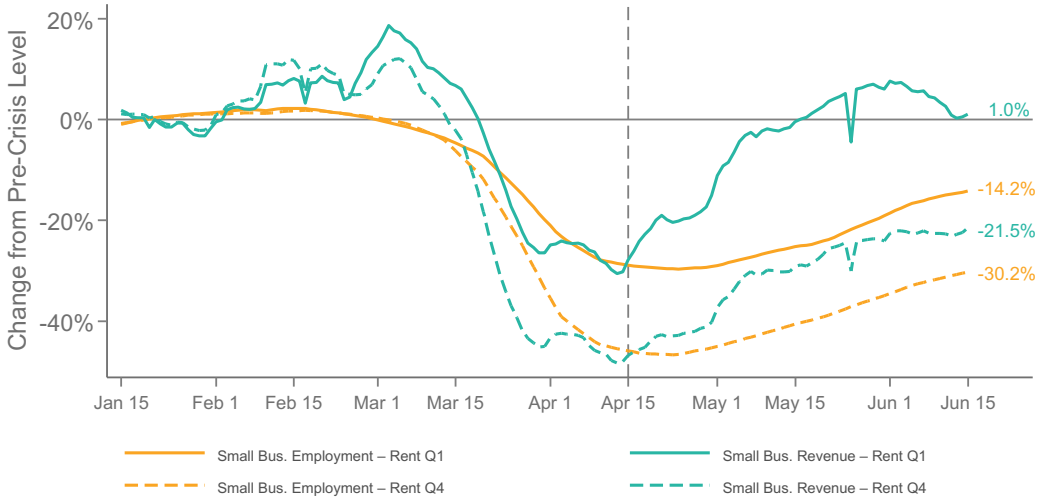
Stimulus payments increased spending substantially, especially among low-income households. But they did not lead to large gains for the businesses most affected by the crisis or to increases in employment.

The CARES Act allocated nearly $300 billion in direct payments to households, the majority of which arrived on April 15. We find that spending increased sharply immediately following these deposits, especially among low-income households.

However, most of the additional spending induced by the stimulus went to goods that require no in-person contact (e.g., orders of durable goods). The businesses most affected by the crisis — in particular, small businesses in affluent areas — received relatively little of the revenue from this surge in consumer spending. Perhaps as a result, employment growth has significantly lagged spending growth, leaving employment rates recovering at slow rates, especially in affluent areas (Figure 5).

The national employment rate may rise as firms begin to rehire workers; however, employment is likely to remain depressed in more affluent counties, where local business revenues have not recovered significantly despite the stimulus.

FIGURE 5: Impact of Stimulus Payments on Business Revenue and Employment



This graph plots total spending for high– and low-income consumers as well as employment levels in high– and low– rent areas around the time of the stimulus payment provided through the CARES Act.

Data Source: Earnin and Womply

FINDING 6

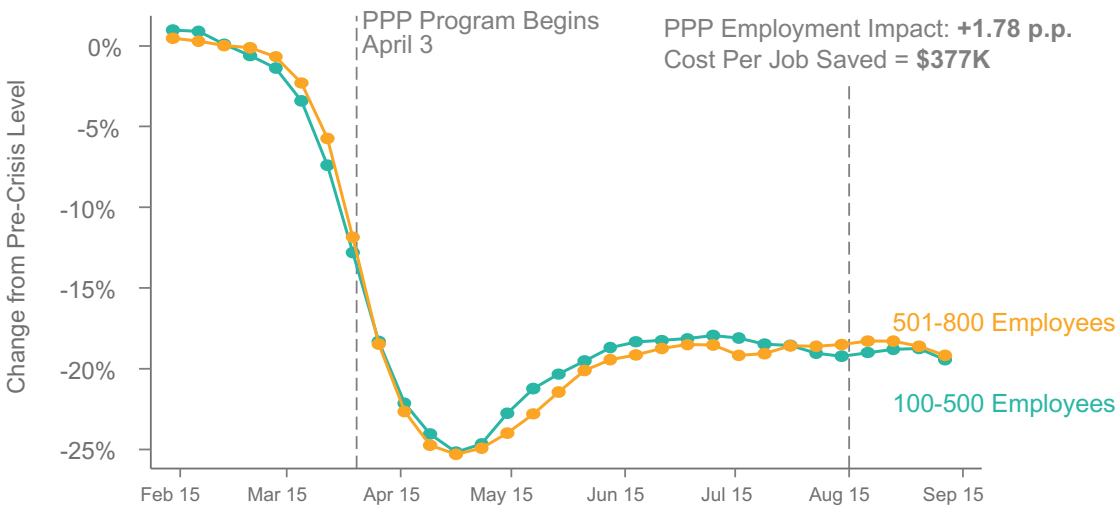
Loans to small businesses have had little impact on employment rates.

Congress also devoted more than $500 billion to small business loans as part of the Paycheck Protection Program (PPP), so named because the loans do not need to be repaid if businesses maintain employment at pre-crisis levels.

Firms with fewer than 500 employees were eligible for PPP loans. In Figure 6, we assess the program's effect on employment of low-wage workers by comparing employment patterns at firms above and below the 500-worker eligibility cutoff. Both hours worked (shown in Figure 6) and changes in payroll are very similar for smaller and larger firms, implying that the PPP had little effect on small business employment to date. This may be because the businesses that took up PPP assistance were in sectors that were less affected the crisis and already intended to keep most of their workers on payroll. Because of its limited effectiveness, we find that each job saved through the PPP program cost taxpayers more than $370,000.

The small increases in employment that have occurred at businesses regardless of PPP eligibility appear to be attributable to the increase in consumer spending that resulted partly from the stimulus and perhaps more broadly from receding health concerns.

FIGURE 6: Impact of Paycheck Protection Program Loans on Employment



This graph shows changes in hours worked for businesses of various sizes around the time of the PPP loan disbursements. Firms with less than 500 employees were eligible for PPP.

Data Source: Paychex and Earnin

WHAT THIS ANALYSIS MEANS FOR POLICY GOING FORWARD

A large initial reduction in spending by high-income households driven by health concerns about COVID-19 has cascaded through to a loss of business for firms that cater to high-income customers, leading to layoffs of low-wage workers at those businesses. Given this sequence of events, the only path to full economic recovery in the long run is to restore consumer confidence by focusing on health policies that will address the virus itself. Traditional economic tools — loans to firms or blanket stimulus payments to households — may have weaker effects on restoring employment in the sectors and areas where it fell most when the fundamental constraint on spending is health concerns. Relatedly, payroll tax reductions also may not increase revenues among businesses that were hit hardest since they do not target relief to households that have lost the most income.

The only path to full economic recovery in the long run is to restore consumer confidence by focusing on health policies that will address the virus itself.

In the meantime, it is critical to focus on supporting the many low-income individuals who have lost their jobs to limit hardship and further economic losses. For instance, extending unemployment benefits or other programs that provide support specifically to those who have lost income may be more valuable than making further stimulus payments to all households or loans to small businesses.

Our findings also suggest that it may be useful to consider assistance targeted specifically to low-income people who are employed (or were previously employed) in areas that have suffered the largest losses – such as affluent, urban areas – since prior experience suggests that relatively few people move to other labor markets to find new jobs after recessions, leading to long-term income losses in hard-hit areas.

Of course, these results could change over time: the recession may turn into a more traditional economic shock as time passes, in which case tools such as stimulus and liquidity could become much more impactful in areas with depressed spending. The tracker constructed here can be used to monitor economic activity and evaluate policy impacts on an ongoing basis in this crisis and beyond, providing a new tool to support economic policy in the age of big data.

Want to learn more?

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Explore the Data

All materials are freely available for use with citation

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