



All Risk, No Reward

Identifying the Economic Fallout From Premature Reopenings

By Christian E. Weller and Ryan Zamarripa

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It has been nearly six months since the first case of COVID-19 was reported in the United States, and states and localities have since struggled with how to best balance public safety and economic activity. The Trump administration's repeated abdication of responsibility for addressing the health and economic crises during the initial stages of the coronavirus pandemic has led to widespread speculation of what path forward is best and, as a result, a patchwork of lockdown restrictions. The administration also failed to provide enough tests; refused to help fund states enough personal protective equipment (PPE); left states and localities to compete against each other for ventilators and other medical equipment; pushed states to open before it was safe to do so; and opposed extending much-needed benefits to struggling families.¹ As such, the burden of addressing the public health crisis and its economic fallout has largely fallen on state governments and their elected officials, some of whom have openly stated that the economic costs of imposing stay-at-home orders are worse than the public health gains.

The Trump administration's failure to lead has caused massive confusion and uncertainty, especially as some governors followed President Donald Trump's lead on downplaying the seriousness of the disease, while others were less willing to take unnecessary risks with the public's health.² State policy responses to the pandemic have consequently varied drastically. Some states, such as South Dakota, never enacted a statewide stay-at-home order, while others, such as Michigan, kept theirs in place for more than two months. These uneven health policy responses only compounded the uncertainty—surrounding both individual health concerns as well as the economy at large—that resulted from the Trump administration's lack of leadership early on. Absent consistent, comprehensive, and competent federal leadership, the pandemic and subsequent recession have taken an unnecessarily large and prolonged toll on people's health and livelihoods.

The evidence suggests that limited interventions, including quick reopenings or a lack of statewide stay-at-home orders, have resulted in resurgent virus outbreaks.³ As the pandemic takes hold anew in many states, recently reopened businesses have closed again either voluntarily or because states have reimposed restrictions.⁴ The record spikes in new cases have led to both widespread health emergencies and massive economic uncertainty. Businesses and people do not know whether it is safe to go about their daily lives and thus have pulled back yet again on their activities.

This economic uncertainty harms states with limited policy interventions, and past carelessness in addressing the pandemic will likely translate into future economic pain. A wide range of concurrent economic indicators—for instance, from the U.S. Census Bureau’s weekly Household Pulse Survey— shows that the preliminary outlook is bleak.⁵ The authors’ rough analysis of the data that distinguish between states with short and long stay-at-home orders, divided at the median length of 53 days, shows the following trends for a range of economic indicators:

- Concurrent indicators such as employment status as well as the ability to meet mortgage or rent obligations and to purchase normal levels of food have worsened in states with short stay-at-home orders after those orders ended. In comparison, the same metrics improved in states with long stay-at-home orders. At a minimum, states with fewer serious policy interventions, which puts their residents’ lives at risk, did not experience better economic outcomes than the states that were more cautious.
- Future indicators, including expected job losses and future mortgage troubles, either worsened to a lesser degree or improved in states with long stay-at-home orders compared with states with short stay-at-home orders. States with weaker health policy responses could end up seeing slower economic recoveries than states with stronger health policy measures because their populations will continue to struggle financially from the pandemic for a longer period of time.⁶

A rough analysis of the data indicates that states with more serious restrictions did not see worse economic outcomes and managed to better protect the public’s health. However, the states that gambled with people’s health and lives by not shutting down or by opening back up too quickly have nothing to show for it economically. Because much of the justification surrounding the rushed reopenings relied on the premise that an economic rebound would follow, these results are critical to the conversation around how to get the economy back on track.

Instead of the whack-a-mole approach to which the United States is currently adhering, the Trump administration should set out strong federal safety guidelines; implement a testing and tracing program; continue to support workers; provide much-needed aid to state and local governments; and inject more financial stimulus to consumers. Implemented sooner, a more consistent, comprehensive, and competent federal response could likely have prevented a lot of unnecessary suffering without significantly affecting the trajectory of the economy.

Rushed reopenings appear not to have boosted economies

The Census Bureau publishes a weekly Household Pulse Survey with data since the end of April 2020. At the time of writing, the public-use data consist of nine weekly surveys, which have a number of features that make them valuable to explore trends across states with respect to policy interventions. The data are nationally representative, and the

Census Bureau collects information from a relatively large number of people to ensure that there are enough data points across states and weeks for a detailed analysis. Since the data go back to late April, they capture the end of all stay-at-home orders where such orders existed, during the time period when the Census Bureau conducted the survey.

Importantly, the survey covers vital metrics for households during the pandemic. Concurrent measures include difficulty paying rent or the mortgage, ability to afford enough food, and job losses. The survey also includes forward-looking measures such as people's confidence in making next month's rent or mortgage payments and expected job losses.

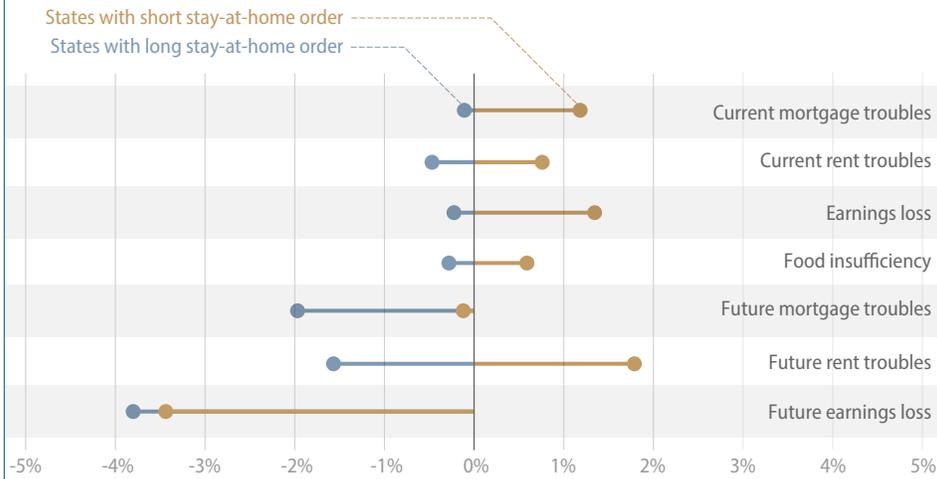
The analysis in this brief considers changes in four concurrent and three forward-looking metrics around the time states ended their stay-at-home orders, in two groups of states: those with short and those with long stay-at-home orders using the median length of 53 days. The four concurrent measures are whether renters did not pay their rent or deferred it last month; whether homeowners with a mortgage did not pay or deferred their mortgage last month; whether households sometimes or often did not have enough to eat in the past seven days; and whether a household lost job-related income since March 17. The three forward-looking measures indicate whether renters have no or only slight confidence in paying their rent next month or expect to defer it; whether homeowners with a mortgage have no or only slight confidence in paying their mortgage next month or expect to defer it; and whether people expect to lose work-related income in the next four weeks. In each case, the analysis compares the relevant metric during and after the stay-at-home order.

Figure 1 shows how each metric changed in states with short stay-at-home orders compared with those with long stay-at-home orders before and after the stay-at-home orders ended. For each of the metrics, states with long stay-at-home orders experienced larger drops in affirmative response rates than states with short stay-at-home orders, indicating that personal economic conditions worsened in states in the former group.

The tables in the Appendix then show the difference in each metric during and after the stay-at-home orders for the two groups of states as well as the difference in the two differences for each state.⁷ A negative value of this difference in differences indicates that states with long stay-at-home orders are improving faster or declining more slowly on a particular measure than states with short stay-at-home orders. Inversely, a positive value of the difference in differences indicates that states with long stay-at-home orders are faring worse than states with short stay-at-home orders after those orders ended.

FIGURE 1
Changes in personal economic conditions were worse for people in states with shorter stay-at-home orders

Percentage-point change in likelihood before and after stay-at-home orders ended



Notes: People experiencing food insufficiency are those who reported having sometimes or oftentimes not enough to eat. People have current mortgage trouble if they did not pay their mortgage or deferred it last month. People are defined as having rent troubles if they did not pay their rent or deferred it last month. People are defined as having future mortgage troubles if they have no or only slight confidence in paying next month's mortgages or expect to defer it. People are defined as having future rent troubles if they have no or only slight confidence that they will be able to pay next month's rent or expect to defer it. States are considered to have had short stay-at-home orders if their stay-at-home orders lasted fewer than 53 days—the median length of stay-at-home orders across all states. All other states are considered to have had long stay-at-home orders. Transition periods are defined as one week before to one week after the stay-at-home order ended. States around the median stay-at-home order lengths had stay-at-home periods from 50 days to 53 days. Differences and differences of differences are presented in percentage points. All other data are in percent. All data are population weighted.

Sources: Calculations based weekly data through week seven of U.S. Census Bureau, "Household Pulse Survey," available at <https://www.census.gov/programs-surveys/household-pulse-survey/data.html> (last accessed July 2020). Dates on states' stay-at-home orders taken from Opportunity Insights, "Opportunity Insights: Economic Tracker," available at tracktherecovery.org (last accessed July 2020).

To show that the results are robust to time periods and states in each subgroup, the tables in the Appendix present three alternative calculations. The first calculation excludes three weeks—the week before, during, and after the end of the stay-at-home order, dubbed the transition period. Leaving out data from those transition periods could reduce the noise—unusually wild movements in data—that could happen around a change with an uncertain effect such as the reopening of a state's economy. The second alternative calculation only looks at the transition periods, which thus captures only short-term differences. That way, the calculation captures whether any differences between groups of states associated with reopenings after short and long public health responses—in other words, risky and cautious—are temporary. If the difference in differences is greater during the transition periods than during the weeks outside the transition periods, the effect is temporary. The final alternative calculation excludes 10 percent of states that had stay-at-home orders that were close to the median length. States with stay-at-home orders that lasted from 50 days to 53 days are not part of this calculation.

The baseline results in the first three data columns in Table 1 in the Appendix show that, at a minimum, states with riskier health policies did not fare better than states with more cautious approaches. For all metrics, the difference in differences is negative, indicating that states with long stay-at-home orders saw stronger improvements or smaller

deteriorations in the relevant measures after the end of the stay-at-home orders than was the case for states with shorter stay-at-home orders. Take, for example, the share of homeowners having trouble paying their mortgage. In states with long stay-at-home orders, that share dropped from 12 percent during the stay-at-home order to 11.9 percent afterward: a 0.1 percentage-point improvement. In states with short stay-at-home orders, this share increased from 11.4 percent to 12.5 percent: a 1.1 percentage-point deterioration. The difference between the changes in the two states is 1.2 percentage points. (see Table 1 in the Appendix) Since all concurrent measures improve in states with long stay-at-home orders and worsen in states with short stay-at-home orders, the differences in differences are always negative. (see Table 1 in the Appendix) In the case of the three forward-looking measures, states with long stay-at-home orders improve faster than states with short stay-at-home orders. The differences in differences, though, are often relatively small, indicating that at a minimum, states that acted more cautiously did not see a slower recovery than those that took a riskier route.

The alternative calculations in Table 1 highlight that this overarching conclusion is robust, as the direction of the changes does not depend on the exact sample of states and weeks. The size of the differences, though, does depend on the sample of weeks. The differences associated with the end of stay-at-home orders in the two groups of states characterized by risky and cautious public health policies are particularly large when transition periods are excluded and relatively small during just the transition periods. These results suggest that any effect from more cautious public health responses may last longer, although it is too early to tell, and the long-term impact will depend to a large degree on interactions among people and thus the potential spread of the virus across state lines.

A possible explanation: State interdependence

The results indicate that state public health policy interventions, specifically stay-at-home orders, may have limited effects on economic outcomes on individual states. The size of the effects shown in Table 1 in the Appendix is relatively small after all.

This likely follows from the heavy economic interdependence that states have with each other. A state that may have pursued an aggressive reopening strategy may see only small economic gains since much of its economic activity depends on business interactions with states that acted more cautiously. In the same vein, the fallout from greater economic uncertainty that follows from the resurgent virus and reimposition of public health measures may also be limited in the states that opened too soon since a more stable economic recovery in more cautious states could spill over.

This interdependence of states may hold several lessons. First, policy actions that have adverse public health consequences, such as a quick reopening, slow the economic recovery not just in that state but in other states as well. Second, only a coordinated health and economic policy effort led by the federal government can reduce both the

health risks and the economic uncertainty associated with them to ensure a robust recovery. Third, leaving most of the policy responsibility to states to counter the pandemic and rebuild their economies requires individual states to undertake much larger efforts on their own than would be necessary if the federal government coordinated and financially supported such policies. The current approach of every state for itself has wrought myriad public health risks, reflected in surging virus outbreaks, and in many states has produced no noticeable economic gains.

A path forward

Rather than force states to navigate the coronavirus pandemic and resulting economic downturn on their own, the federal government should commit to a series of policies to contain the pandemic, restore consumer confidence, and get the economy back on track. The uncertainty surrounding the state of the pandemic has led to a drop in spending and, as a result, a sharp decrease in U.S. aggregate demand.⁸ The first step to shoring up optimism is understanding the full picture of how the pandemic is spreading, how it is changing, and what individuals must do to keep themselves and their families safe. As such, the Trump administration's first action should be to enact a comprehensive testing and tracing program, such as the one outlined in the Health and Economic Recovery Omnibus Emergency Solutions (HEROES) Act. The act passed the U.S. House of Representatives in May 2020 and would allocate \$75 billion for COVID-19 testing and contact tracing.⁹

In the same vein, the federal government must guarantee that workers have greater power in refusing to work in unsafe conditions by implementing emergency Occupational Safety and Health Administration (OSHA) standards. The Every Worker Protection Act, which was included in the HEROES Act, would mandate that the administration set temporary standards. Ideally, OSHA would increase its inspections and penalties for employer noncompliance and focus resources in any workplace deemed high risk—not just health care facilities. It should also increase ventilation filtration standards, tighten PPE requirements, and emphasize more stringent employee personal hygiene routines. Crucially, the updated standards should also require employers to inform their employees of potential exposure to COVID-19 and publicize these findings to keep the public informed of where outbreaks are occurring.

Emergency OSHA standards would help mitigate both the public health crisis and the economic recession. By ensuring that all workers are adequately protected, the standards would slow the spread of the virus among those who are keeping what is left of the economy running. At the same time, by publishing data on outbreaks by local geography, OSHA would demonstrate to consumers that it is taking the pandemic seriously and provide those in safe areas the peace of mind needed to return to normal consumption habits.

Third, the federal government must provide state, local, territorial, and tribal governments with much-needed financial aid. Government agencies across the nation are facing massive budget shortfalls, and due to widespread balanced budget requirements, many are faced with a harrowing decision: cut crucial services and lay off workers in the middle of one of the worst public health crises in American history, or raise taxes on recession-battered citizens, many of whom have also lost health care along with their jobs. Either option would lead the United States away from controlling the pandemic and realizing a full economic recovery. Instead, the federal government should provide direct aid to localities and increase the federal medical assistance percentage (FMAP)—the share of costs from public health insurance programs that the federal government pays—to help states cope with the projected surge in Medicaid and Children’s Health Insurance Program (CHIP) enrollment. The HEROES Act, which allocates \$915 billion in direct grants to states, localities, tribes, and territories, would help keep local governments running. The bill likewise would increase the Medicaid FMAP by a total of 14 percentage points until June 30, 2021, ensuring that states are able to pay for health care during these critical times.

Finally, the federal government needs to continue to financially support the working class until the pandemic has ended. As the data in this brief demonstrate, shutting down the economy is a necessary short-term sacrifice that must be made in order to restore consumer confidence and get the economy back on track. As such, the federal government must financially support those who by circumstance cannot go back to work under current conditions. Another round of stimulus checks would be a good start, but they should more generously consider dependents and be increased to up to \$6,000 per household, as outlined in the HEROES Act. The Pandemic Unemployment Assistance program, which provides laid-off workers with \$600 weekly, must also be extended until at least the end of January 2021 and expanded to include gig workers, independent contractors, part-time workers, and the self-employed. Finally, the rental aid and mortgage relief outlined in the HEROES Act would provide further stability for already vulnerable populations.

Conclusion

Shoring up personal finances for workers will allow them to support their families and meet their financial obligations until the pandemic has ended and they are able to work again. Each of these policies implemented individually would help in the long run, but their benefits are compounded when included together. State lawmakers must ensure that their constituents are able to afford food and shelter while the economy is shut down. By providing strong guidance on how to combat a pandemic that pays no attention to state lines, coupled with robust economic relief for those who need it, the federal government should spearhead a powerful, centralized response to a pandemic that continues to rage. The federal government has the capacity to restore confidence, protect lives, and rebuild the American economy back to its pre-pandemic state, but only if it commits to a response as aggressive as the pandemic—and quickly.

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Appendix

TABLE 1

Results of difference-in-difference analysis of states with long stay-at-home orders compared with short stay-at-home orders

Results with no restrictions on reopenings

Outcome	Before end of stay-at-home order	After end of stay-at-home order	Differences between states and periods
Current mortgage troubles			-1.3%
Short stay-at-home order	11.4%	12.5%	1.2%
Long stay-at-home order	12.0%	11.9%	-0.1%
Current rent troubles			-1.2%
Short stay-at-home order	17.6%	18.4%	0.8%
Long stay-at-home order	19.0%	18.5%	-0.5%
Lost job			-1.6%
Short stay-at-home order	44.9%	46.2%	1.4%
Long stay-at-home order	49.2%	48.9%	-0.2%
Food insufficiency			-0.9%
Short stay-at-home order	10.2%	10.8%	0.6%
Long stay-at-home order	10.2%	9.9%	-0.3%
Future mortgage troubles			-1.8%
Short stay-at-home order	17.4%	17.3%	-0.1%
Long stay-at-home order	17.1%	15.1%	-2.0%
Future rent troubles			-3.4%
Short stay-at-home order	30.9%	32.7%	1.8%
Long stay-at-home order	33.3%	31.7%	-1.6%
Expects job losses			-0.4%
Short stay-at-home order	35.5%	32.1%	-3.4%
Long stay-at-home order	37.3%	33.5%	-3.8%

Notes: People experiencing food insufficiency are those who reported having sometimes or oftentimes not enough to eat. People have current mortgage trouble if they did not pay their mortgage or deferred it last month. People are defined as having rent troubles if they did not pay their rent or deferred it last month. People are defined as having future mortgage troubles if they have no or only slight confidence in paying next month's mortgages or expect to defer it. People are defined as having future rent troubles if they have no or only slight confidence that they will be able to pay next month's rent or expect to defer it. States are considered to have had short stay-at-home orders if their stay-at-home orders lasted fewer than 53 days—the median length of stay-at-home orders across all states. All other states are considered to have had long stay-at-home orders. Transition periods are defined as one week before to one week after the stay-at-home order ended. States around the median stay-at-home order lengths had stay-at-home periods from 50 days to 53 days. Differences and differences of differences are presented in percentage points. All other data are in percent. All data are population weighted. The figures in the table may not add up correctly due to rounding.

Sources: Calculations based weekly data through week seven of U.S. Census Bureau, "Household Pulse Survey," available at <https://www.census.gov/programs-surveys/household-pulse-survey/data.html> (last accessed July 2020). Dates on states' stay-at-home orders taken from Opportunity Insights, "Opportunity Insights: Economic Tracker," available at tracktherecovery.org (last accessed July 2020).

TABLE 2

Results of difference-in-difference analysis of states with long stay-at-home orders compared with short stay-at-home orders

Results without transition periods

Outcome	Before end of stay-at-home order	After end of stay-at-home order	Differences between states and periods
Current mortgage troubles			-4.4%
Short stay-at-home order	8.9%	12.9%	4.0%
Long stay-at-home order	12.4%	12.0%	-0.4%
Current rent troubles			-3.9%
Short stay-at-home order	15.1%	18.5%	3.4%
Long stay-at-home order	19.0%	18.6%	-0.4%
Lost job			-3.6%
Short stay-at-home order	42.4%	46.4%	3.9%
Long stay-at-home order	48.7%	49.0%	0.4%
Food insufficiency			-2.2%
Short stay-at-home order	8.9%	10.9%	1.9%
Long stay-at-home order	10.2%	10.0%	-0.3%
Future mortgage troubles			-6.8%
Short stay-at-home order	13.2%	17.4%	4.2%
Long stay-at-home order	17.8%	15.2%	-2.6%
Future rent troubles			-6.0%
Short stay-at-home order	27.8%	32.3%	4.5%
Long stay-at-home order	33.6%	32.0%	-1.5%
Expects job losses			-2.7%
Short stay-at-home order	34.1%	31.8%	-2.3%
Long stay-at-home order	38.5%	33.5%	-5.0%

Notes: People experiencing food insufficiency are those who reported having sometimes or oftentimes not enough to eat. People have current mortgage trouble if they did not pay their mortgage or deferred it last month. People are defined as having rent troubles if they did not pay their rent or deferred it last month. People are defined as having future mortgage troubles if they have no or only slight confidence in paying next month's mortgages or expect to defer it. People are defined as having future rent troubles if they have no or only slight confidence that they will be able to pay next month's rent or expect to defer it. States are considered to have had short stay-at-home orders if their stay-at-home orders lasted fewer than 53 days—the median length of stay-at-home orders across all states. All other states are considered to have had long stay-at-home orders. Transition periods are defined as one week before to one week after the stay-at-home order ended. States around the median stay-at-home order lengths had stay-at-home periods from 50 days to 53 days. Differences and differences of differences are presented in percentage points. All other data are in percent. All data are population weighted. The figures in the table may not add up correctly due to rounding.

Sources: Calculations based weekly data through week seven of U.S. Census Bureau, "Household Pulse Survey," available at <https://www.census.gov/programs-surveys/household-pulse-survey/data.html> (last accessed July 2020). Dates on states' stay-at-home orders taken from Opportunity Insights, "Opportunity Insights: Economic Tracker," available at tracktherecovery.org (last accessed July 2020).

TABLE 3

Results of difference-in-difference analysis of states with long stay-at-home orders compared with short stay-at-home orders

Results with transition periods only

Outcome	Before end of stay-at-home order	After end of stay-at-home order	Differences between states and periods
Current mortgage troubles			1.6%
Short stay-at-home order	11.7%	10.3%	-1.5%
Long stay-at-home order	11.4%	11.5%	0.2%
Current rent troubles			-0.4%
Short stay-at-home order	18.0%	17.8%	-0.2%
Long stay-at-home order	19.0%	18.4%	-0.6%
Lost job			-1.1%
Short stay-at-home order	45.2%	45.1%	-0.1%
Long stay-at-home order	49.9%	48.6%	-1.2%
Food insufficiency			-0.5%
Short stay-at-home order	10.4%	10.3%	0.0%
Long stay-at-home order	10.1%	9.6%	-0.5%
Future mortgage troubles			0.5%
Short stay-at-home order	18.1%	16.4%	-1.6%
Long stay-at-home order	16.1%	15.0%	-1.1%
Future rent troubles			-6.0%
Short stay-at-home order	31.4%	35.1%	3.7%
Long stay-at-home order	32.9%	30.6%	-2.3%
Expects job losses			-0.6%
Short stay-at-home order	35.8%	34.1%	-1.6%
Long stay-at-home order	35.8%	33.6%	-2.2%

Notes: People experiencing food insufficiency are those who reported having sometimes or oftentimes not enough to eat. People have current mortgage trouble if they did not pay their mortgage or deferred it last month. People are defined as having rent troubles if they did not pay their rent or deferred it last month. People are defined as having future mortgage troubles if they have no or only slight confidence in paying next month's mortgages or expect to defer it. People are defined as having future rent troubles if they have no or only slight confidence that they will be able to pay next month's rent or expect to defer it. States are considered to have had short stay-at-home orders if their stay-at-home orders lasted fewer than 53 days—the median length of stay-at-home orders across all states. All other states are considered to have had long stay-at-home orders. Transition periods are defined as one week before to one week after the stay-at-home order ended. States around the median stay-at-home order lengths had stay-at-home periods from 50 days to 53 days. Differences and differences of differences are presented in percentage points. All other data are in percent. All data are population weighted. The figures in the table may not add up correctly due to rounding.

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TABLE 4

Results of difference-in-difference analysis of states with long stay-at-home orders compared with short stay-at-home orders

Results excluding states with stay-at-home orders near the median length of time

Outcome	Before end of stay-at-home order	After end of stay-at-home order	Differences between states and periods
Current mortgage troubles			-0.8%
Short stay-at-home order	11.8%	12.7%	0.9%
Long stay-at-home order	12.0%	12.1%	0.1%
Current rent troubles			-0.7%
Short stay-at-home order	18.5%	18.7%	0.2%
Long stay-at-home order	19.1%	18.5%	-0.6%
Lost job			-1.1%
Short stay-at-home order	45.3%	46.2%	0.9%
Long stay-at-home order	49.5%	49.3%	-0.2%
Food insufficiency			-0.7%
Short stay-at-home order	10.7%	11.0%	0.3%
Long stay-at-home order	10.1%	9.8%	-0.4%
Future mortgage troubles			-1.4%
Short stay-at-home order	18.0%	17.7%	-0.4%
Long stay-at-home order	17.0%	15.3%	-1.7%
Future rent troubles			-2.8%
Short stay-at-home order	31.9%	33.1%	1.2%
Long stay-at-home order	33.3%	31.7%	-1.6%
Expects job losses			0.0%
Short stay-at-home order	35.9%	32.2%	-3.6%
Long stay-at-home order	37.6%	33.9%	-3.6%

Notes: People experiencing food insufficiency are those who reported having sometimes or oftentimes not enough to eat. People have current mortgage trouble if they did not pay their mortgage or deferred it last month. People are defined as having rent troubles if they did not pay their rent or deferred it last month. People are defined as having future mortgage troubles if they have no or only slight confidence in paying next month's mortgages or expect to defer it. People are defined as having future rent troubles if they have no or only slight confidence that they will be able to pay next month's rent or expect to defer it. States are considered to have had short stay-at-home orders if their stay-at-home orders lasted fewer than 53 days—the median length of stay-at-home orders across all states. All other states are considered to have had long stay-at-home orders. Transition periods are defined as one week before to one week after the stay-at-home order ended. States around the median stay-at-home order lengths had stay-at-home periods from 50 days to 53 days. Differences and differences of differences are presented in percentage points. All other data are in percent. All data are population weighted. The figures in the table may not add up correctly due to rounding.

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Endnotes

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- 5 U.S. Census Bureau, "Household Pulse Survey: Measuring Household Experiences during the Coronavirus (COVID-19) Pandemic," available at <https://www.census.gov/householdpulsedata> (last accessed July 2020); Raj Chetty and others, "Opportunity Insights Economic Tracker," Opportunity Insights, available at <https://tracktherecovery.org/> (last accessed July 2020).
- 6 Importantly, the data analysis stops with data through June 23, before states such as Arizona, Florida, and Texas reimposed pandemic measures and people lost their jobs again.
- 7 The data analysis does not account for the pandemic spread. Epidemiological data such as positive cases are not comparable over time, and data on hospitalizations are not always completely reported. These differences do not affect the conclusions if either businesses and people react to the reality of the virus instead of how it is measured or if there are no systematic differences in testing and reporting between states with short and long stay-at-home orders.
- 8 Geert Bekaert, Eric Engstrom, and Andrey Ermolov, "Aggregate Demand and Aggregate Supply Effects of COVID-19: A Real-time Analysis" (Washington: Board of Governors of the Federal Reserve System, 2020), available at <https://www.federalreserve.gov/econres/feds/files/2020049pap.pdf>.
- 9 Health and Economic Recovery Emergency Solutions (HEROES) Act, H.R. 6800, 116th Congress, 2nd sess., available at <https://www.congress.gov/bill/116th-congress/house-bill/6800>.