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The COVID-19 Recovery Has Stalled

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Overview

After a rapid and deep crash with the onset of the COVID-19 pandemic and associated lockdowns, economic activity rebounded sharply from mid-April through the end of June across the country. However activity has fallen from its peaks in early July and has been flat over the past ten days or so, roughly in line with the spread of the virus and the re-imposition of more stringent public health restrictions in different locations. In many states economic activity by mid-July was back where it was roughly one month earlier, if not lower.

In this brief I analyze economic activity using foot traffic in commercial locations in different states. For Wisconsin in particular, there was a sharp drop in activity during March, bottoming out at a 67% year-over-year decline in mid-April, with roughly 75% drops for hotels and 70% for restaurants. Activity recovered substantially since then, accelerating following the May 13 invalidation of the Safer at Home order, before slowing in July. Total activity peaked at 21% down in early July before dropping to -28%. The retail sector, which has been one of the strongest throughout the pandemic, had recovered sharply from mid-April to the start of July, before falling off. In particular, by July 3 retail activity was up 4% year-over-year, but over the last ten days has been down 10%, a drop of 14 percentage points. Other industries, including accommodations and food and health care have followed similar patterns.

Similar recent trends are evident in different states around the country, even those which have followed very different trajectories during the pandemic. Arizona and Texas had been among the first states to reopen rapidly, and they have also seen some of the sharpest increases in recent coronavirus problems. Activity in both retail and the accommodations and food sector bounced back sharply in May, but was roughly flat for the month of June, before falling off in recent weeks. Wisconsin and Florida both had more severe impacts of the lockdowns, but were among the fastest rebounding states from mid-April through early July. But retail activity in both states has fallen about 14 percentage points from the peak, and has been flat for the past 10 days. By contrast, California and New York had some of the strongest lockdown restrictions and have been the slowest to reopen. Thus these states had a larger reduction in activity and slower recovery than the others. Nonetheless, California and New York have also seen a drop in activity from peaks in early July, and relative stagnation recently.

Data Source

The foot traffic data in this brief was provided by SafeGraph, a data company that aggregates anonymized location data from numerous applications in order to provide insights about physical places. To enhance privacy, SafeGraph excludes census block group information if fewer than five devices visited an establishment in a month from a given census block group. In particular, I use the SafeGraph Patterns dataset, which measures foot-traffic patterns to 3.6 million commercial points-of-interest from over 45 million mobile devices in the United States. The population sample is a panel of opt-in, anonymized smartphone devices, and is well balanced across USA demographics and geographies. In addition to the individual data being anonymized, SafeGraph only reports certain place traffic and data aggregations. The patterns data describe how many people visit a location, how long they stay, where they came from, where else they go, and more. This data provides incredible detail on the activity of a sample of roughly 10% of the US population.

SafeGraph provides daily observations on an evolving panel of locations that include at least 5 visits from the sample of devices. The data is typically released monthly, but has been released weekly starting in March 2020 (which also includes hourly data). The most recent release covers foot traffic through July 19, 2020. To deal with changes in the panel over time, I focus on relative, year-over-year changes. For each year I track a consistent set of locations, and normalize their relative visits to the average for the first week in March. These series provide a measure of relative change over the course of each year, but do not account for seasonal patterns. Thus I then take ratios of the normalized 2020 and 2019 series, which I call the relative visits. By construction the average over March 1-7 in this series is one, so it is interpretable as year-over-year changes relative to the first week of March. As discussed below, I also break out the results into broad industries (using two-digit NAICS codes) as well as finer industries (five digit NAICS codes).

Since I focus on overall activity, I use foot traffic measured as visits per day per location. While this measure is clearly correlated with sales, especially for retail locations, it is also clearly imperfect. The number of visits does not capture changes in the ratio of visitors to buyers or changes in sales per buyer. Moreover, as noted above, many stores and restaurants have increased their delivery business during the COVID-19 pandemic and these delivery transactions are missed, although takeout orders for pickup would still be captured. As I showed in other work, consumers have shifted substantially toward on-line purchases, and are also buying more on each of their less frequent visits to stores. The foot traffic in this brief thus is best as a measure of in-store transactions, which is only part of sales. But especially for the question of reopening addressed here, focusing on gains in in-store transactions is appropriate.

Foot Traffic in Wisconsin

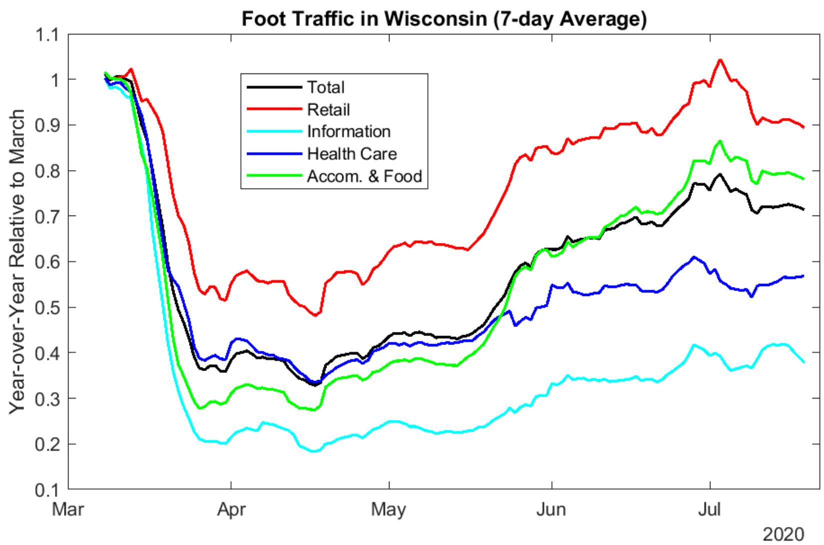

Figure 1: Relative visits for all locations and select industries in Wisconsin during 2020 vs. the same period in 2019. 7-day moving average of year-over-year visits, normalized to first week of March.

In Wisconsin, beginning in mid-March the state moved in steps toward implementing stronger measures, banning gatherings of specified sizes, closing restaurants, and then implementing the "Safer at Home" order on March 25. This order closed non-essential business and imposed severe travel restrictions. Grocery stores and big-box retailers remained open, but other non-essential retail closed. With dining areas of restaurants closed, many either closed completely or switched to takeout and delivery.

While the order remained in place, there was some loosening of restrictions in late April and early May, first allowing more retail transaction with curbside pickups, later allowing small retail businesses to open with severe capacity restrictions. Then on May 13 the order was invalidated by the state Supreme Court, and control reverted to the local level. While most counties removed restrictions, a few counties (Milwaukee and Dane, in particular) initially continued to follow most, if not all, of the provisions of the original state order, before later relaxing some restrictions.

As a baseline measure of the changes in economic activity due to COVID-19, I look at the aggregated daily number of visits at locations in Wisconsin beginning in March 2020. Because of the strong day-of-week effects, the data are aligned starting with the first Sunday in March (3/3/19 and 3/1/20). For simplicity I refer to the 2020 date in what follows. I focus on relative visits, defined as the ratio of same-location visits per day in

2020 over the corresponding value in 2019. Figure 2 plots a select number of these industries. To smooth out the strong day-of-week effects, the figure shows 7-day averages. Since the dataset focuses on commercial foot traffic, industries not shown generally have few visits. Overall, the declines across all locations have been severe and generally followed the same trends across industries. There was a 55% overall drop in late March, ticking down to a decline of 67% in the week ending April 17, before recovering somewhat later in the month and into May. Not surprisingly, the largest declines were in industries that were effectively shut down: education (schools), information (especially movie theaters), and accommodation and food services (hotels and restaurants). While full-service restaurants were been able to salvage some revenue by moving to takeout and delivery, they saw a substantial drop in activity.

Overall activity has substantially recovered from its low point in mid-April. First, during April and early May consumers and businesses adapted to the new situation, and some minor restrictions in the Safer at Home order were lifted. For example, curbside pickup from retail establishments was allowed. By the week ending May 15, total activity in Wisconsin was down roughly 56%, a rebound of about 11 percentage points. The recovery accelerated following the removal of the Safer at Home order on May 13. In particular, overall activity was down 35% year-over-year for the week ending June 6, and thus was up an additional 21 percentage points since the Supreme Court decision. Put another way, more than half of the total 67% drop in activity has been recovered.

After the initial rapid burst in activity with reopening, the economy continued to recover, at a strong but slightly less rapid rate through early July. Activity increased in all sectors, but was especially strong for the hardest hit sector of accommodations and food services, and particularly full service restaurants. Retail also grew sharply and exceeded last year's levels.

However since July 3 the recovery has gone in reverse, and now remains nearly 30% below last year's levels overall. At least part of the year-over-year drop is likely due to the difference in the timing of the holiday in 2019 vs. 2020, but some is also likely due to the resurgence of the virus and the re-imposition of additional health restrictions in some locations (Dane County in particular). Total activity peaked around 21% down in early July, but ended around 28% down by the end of the sample on July 19, with activity flat over the past ten days. In particular, by July 3 retail activity was up 4% year-over-year, but over the last ten days has been down 10%, a drop of 14 percentage points. Other industries, including the hardest-hit accommodations and food sector, as well as health care, have followed similar patterns. Across many industries activity by July 19 stood at or below the levels of one month earlier.

Activity in Other States

While we have closely followed activity in Wisconsin over the course of the pandemic, similar patterns hold across the United States. In particular, activity in all states dropped rapidly from mid-March through mid-April, and recovered with reopenings and loosening of restrictions during May and June. Moreover, all states have seen activity peak in by early July (sometimes earlier), with a decline and then relative stagnation over the past ten days.

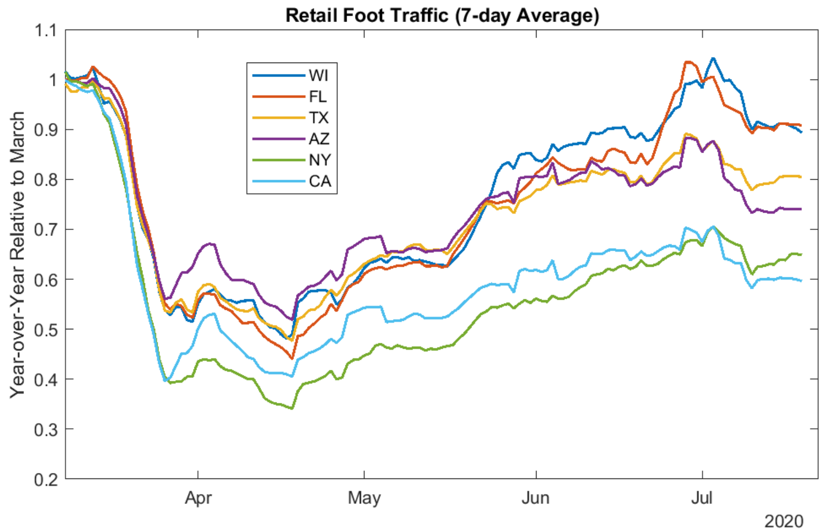

Figure 2: Relative visits for the retail sector in select states during 2020 vs. the same period in 2019. 7-day moving average of year-over-year visits, normalized to first week of March.

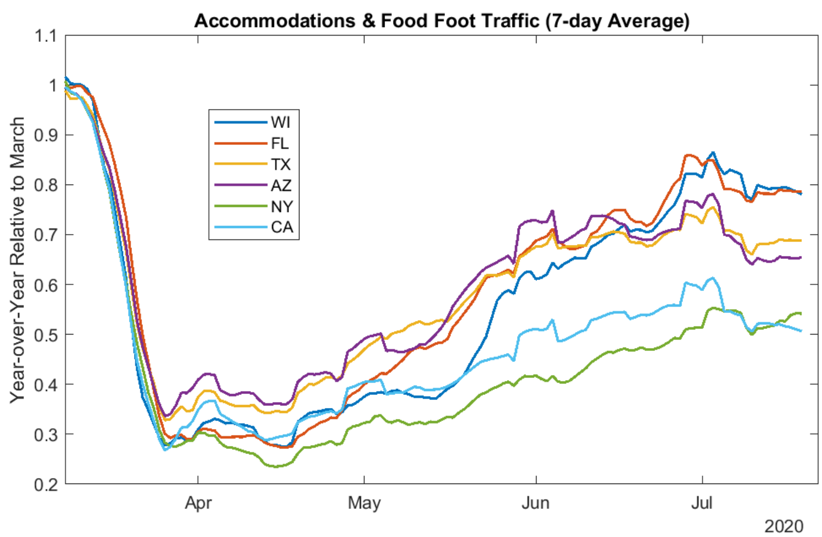

Figure 3: Relative visits for the retail sector in select states during 2020 vs. the same period in 2019. 7-day moving average of year-over-year visits, normalized to first week of March.

While these same general patterns hold true for all states, the magnitude of losses and speed of recovery has differed substantially across states. Figure 2 shows activity in the retail sector and Figure 3 shows the accommodations and food sector for different states around the country. The states shown are representative of three different experiences and strategies: early reopeners (Arizona and Texas), fast rebounders (Wisconsin and Florida), and slow reopeners (New York and California). The trends in retail and accommodations and food were similar across states, with accommodations & food suffering more during the pandemic and seeing less overall recovery.

Arizona and Texas had been among the first states to reopen rapidly, and they have also seen some of the sharpest increases in recent coronavirus problems. Activity in both retail and the accommodations and food sector in these states bounced back sharply in May, but was roughly flat for the month of June. Activity decreased in early July, and has been flat over the past ten days or so. The relative stagnation occurred earlier in these early opening states, whose recovery is now back to levels last seen in May.

Wisconsin and Florida both had more severe impacts of the lockdowns, but were among the fastest rebounding states from mid-April through early July. In both states retail activity had fully recovered by the end of July, increasing year-over-year from 2019 to 2020. But retail activity in both states has fallen about 14 percentage points from the peak, and has been flat for the past 10 days. Similar rapid recovery followed by slight decline and stagnation occurred in the accommodations and food sector. In these states activity is now back to where it was in mid-June, roughly one month earlier.

By contrast, California and New York had some of the strongest lockdown restrictions and have been the slowest to reopen. Thus these states had a larger reduction in activity and slower recovery than the others. Nonetheless, California and New York have also seen a drop in activity from peaks in early July, and relative stagnation recently. The declines have been more severe in California, which has experienced an increase in the spread of coronavirus and the mandated closures of some businesses. By contrast, after experiencing a very severe outbreak in March and April, the virus has remained controlled in New York recently. Thus even though activity in New York dropped in early July, it has trended up slowly in recent days. By contrast, California has recently had flat retail activity and a relatively sharp decline in activity at accommodations and food, in conjunction with the re-closing of bars and indoor dining.