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The Wisconsin Economy During COVID-19: Lockdown and Reopening

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Abstract

This brief summarizes data on the Wisconsin economy since the onset of the COVID-19 pandemic.

In particular, I analyze economic activity using foot traffic at commercial locations around the state. 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, accelerating with the invalidation of the Safer at Home order in May, before slowing in July. Total activity peaked at 21% down in early July before dropping to -28%. The drop was due both to the holiday timing and the resurgence of the virus and the re-imposition of public health restrictions. Since mid-July activity has been largely unchanged, with total activity now down 26% and retail off 20% from 2019.

Gains in the accommodations and food sector, which was hardest hit, have been strong since reopening. Bars and restaurants saw over 150% growth from April to June, although activity remains down around 25%. The strongest recent recovery has been in health care, which is now up 20% year-over-year. Madison had a sharper activity drop than the rest of the state due to the closing of the UW, and its slower reopening has meant a slower recovery. Again, most geographic locations and most sectors have been flat for weeks.

I also analyze labor market data from a sample of mostly small businesses. By mid-April 48% of these businesses were closed, with employment down 59%. Employment recovered to within 1% of the baseline before declining slightly, and has fallen slightly recently to -7% (some due to Labor Day). The food and drink sector had a larger 72% employment drop in April, with open locations having minimal staffing. As food and drink establishments reopened, they brought back more workers. However the recovery in this sector stalled in mid-June, with employment still down roughly 17%, suggesting more permanent closures.

Finally, I analyze data on consumer spending from transactions. After plummeting in March and April, spending in Wisconsin recovered rapidly, with year-over-year gains during May-July before tailing off recently. Spending is now down 0.5% from 2019. Consumption patterns have shifted, with more spending on groceries and less at restaurants and travel, and a growing share of spending has moved on-line, as in-store sales remain over 10% down.

Overview

The COVID-19 pandemic is leading to unprecedented social and economic disruptions around the globe. During March 2020 the economies in many locations ground to a halt, as social distancing measures to slow the spread of the virus increasingly led to businesses being shut down and workers ordered to shelter in place. By early April, 42 of the 50 states in the US had imposed statewide "stay-at-home" orders to slow the spread of the virus and mitigate its impact, and many of the remaining states had similar orders in some localities. However by May all states had loosened restrictions and moved toward reopening their economies at varying speeds.

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.

In this brief I focus on activity in Wisconsin, using a new data source of foot-traffic in commercial locations. I focus on year-over-year same-location changes in the state. There was a rapid drop of roughly 55% in overall activity during the last two weeks of March 2020 compared to 2019, which fell further to a roughly 67% decline during the week of April 17, the low point. Activity recovered some from that point, as businesses and consumers adapted and there was some loosening of restrictions. The recovery accelerated following the removal of the stay at home order, and continued growing through early July. The gains have been especially strong for bars and restaurants, which were largely shuttered and forced to rely on delivery and takeout under the order. They saw activity jump by roughly 150%, relative to their depressed April levels, after the order was invalidated.

After the Fourth of July holiday weekend, activity slowed slightly. At least some of the reduction may be due to the different year-over-year weekly alignment of the holiday, but some is surely due as well to the resurgence of the virus and the re-imposition of public health restrictions in some areas. Total activity peaked around 21% down in early July, but was 28% down by mid-July. After a brief recovery from that relative low, activity has been largely unchanged for several weeks. Total activity is now down 26% year-over-year and retail down 20%.

In addition, I show that the metro areas of Milwaukee and Madison have suffered larger declines in activity throughout the pandemic. This is especially true for Madison, as the absence of students at the University of Wisconsin led to declines of 70-75% in activity through April. Both metro areas have implemented slower reopening plans with more restrictions, and have recovered at a slower rate than the rest of the state after the Safer at Home order. In particular, total activity in both cities remains lower, with Madison in particular being around 11 percentage points lower than the rest of the state. Milwaukee has seen a recent recovery, matching the rest of the state, while Madison continues to lag.

Both metro areas also saw significant protests over the last two weeks following the killing of George Floyd on May 25. While I had thought that the protests may show up as additional foot traffic unrelated to regular economic activity, there seems to be little evidence of it. I do find a couple of isolated locations in Milwaukee and Madison where the foot traffic increases seem to correspond to protests, but these are isolated cases and do not seem to impact the overall statistics.

Beyond the foot traffic data, I also analyze labor market data from mostly small and medium sized-businesses, which largely follows the same trends. By mid-April more than 40% of these businesses were closed, with employment down more than 50%. Since that time, there has been a substantial recovery, as now around 8% of the locations remain closed and with employment down about 7%. (The most recent data is a bit distorted by the different timing of the Labor Day weekend in 2019 and 2020.) The food and drink sector had a larger 70% employment drop through April, as not only did 58% of locations close, but those remaining open had minimal staffing. As food and drink establishments have reopened, they have brought back more workers, with employment now down 17%. Nonetheless, this sector seems to have suffered more permanent closures, with 12% of locations still closed.

Finally, I analyze consumption trends in Wisconsin, using a new data source of weekly transactions. After plummeting in March and April, spending in Wisconsin recovered relatively quickly in May and June to increases over 2019. Since that point consumption growth has been relatively flat, with a slight decline in recent weeks. Consumption patterns have also shifted, with more spending on groceries and less at restaurants and travel. A growing share of spending has moved on-line, as online activity has increased 21% year over year, while in-store sales remain over 10% down.

Data Sources

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 September 6, 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 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.

For the labor market, I use data from Homebase, a company that provides scheduling software to tens of thousands of small businesses across the US. As described by Bartik et al. (2020), "This scheduling software generates granular data on exact hours worked every day for all hourly employees at customer firms, providing a much higher-frequency and more detailed picture of employment and hours than traditional labor market datasets. This greater detail and higher frequency come at some costs; Homebase's customer base is disproportionately composed of small firms in food service, retail, and other sectors that employ many hourly workers."

For consumer spending, I use weekly transactions data from Earnest Research, which provides a clearer picture on the behavior patterns of American consumers. This dataset provides a broad sample of aggregated consumption/transaction data, from a sample of roughly 6 million households (with 25-30 million credit and debit cards) nationwide. The

data is weekly, and is released with a 1 week delay, with the latest data for the week ending June 10. The data set tags individual transactions at recognized brands and merchants, a collection of roughly 2,000 merchants, and then aggregates them into categories and sub-categories. Thus the Earnest data misses local retailers, non-chain restaurants, and others, as well as cash transactions. Nonetheless, in other work I have shown that aggregate Earnest sales match national retail sales data quite well, particularly for certain categories, where the Earnest data captures 80-90% of the variation in official statistics.

Furthermore, the Earnest data has multiple levels of disaggregation. The data allow for geographic decomposition (by region, state, CBSA, and city), although with varying degrees of coverage, and so varying accuracy. The data also has decompositions by category (apparel, grocers, department stores, etc.) and sub-category (i.e. grocers divided into: discount grocers, meal kits, online grocers, specialty grocers, and supermarkets). Finally, the data has separate metrics (sales, transactions, and sales per transaction), as well as separate purchasing channels (in-store, online, or store card). The Earnest data thus provides interesting insights which were unavailable elsewhere.

Changes in Economic Activity

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.

To illustrate the dynamics of different industries during the pandemic, it is useful to first look at visits for select industries. Figure 1 shows the relative number of visits at hotels (NAICS 721110) and grocery stores (NAICS 445110) in 2019 and 2020, normalized to the mean of the first week in March is equal to one. The hotel visits track each other closely for the first ten days in March (apart from a spike on one day), then start to diverge during the second week, with 2020 plummeting in the third week. This is consistent with how the crisis evolved: initially many people cut back on vacations and inessential travel, until in very rapid succession most travel altogether came to a halt. Visits at hotels were down 75% or more throughout April, but starting in mid-May have recovered substantially. Over the last several weeks hotel visits have recovered to about 20% down.

Grocery stores fared quite differently: 2020 foot traffic spiked in the middle of March as people stocked up in preparation for lockdowns, before leveling off around the same values as 2019 for mid-March and early April. A sharp drop on Easter Sunday led to a further decline that week, before recovering and stabilizing less than 10% down from 2019 over the rest of the sample. Even though foot traffic is down slightly, as we'll see below, total sales at grocery stores have increased year-over-year, with a large increase in sales per transaction.

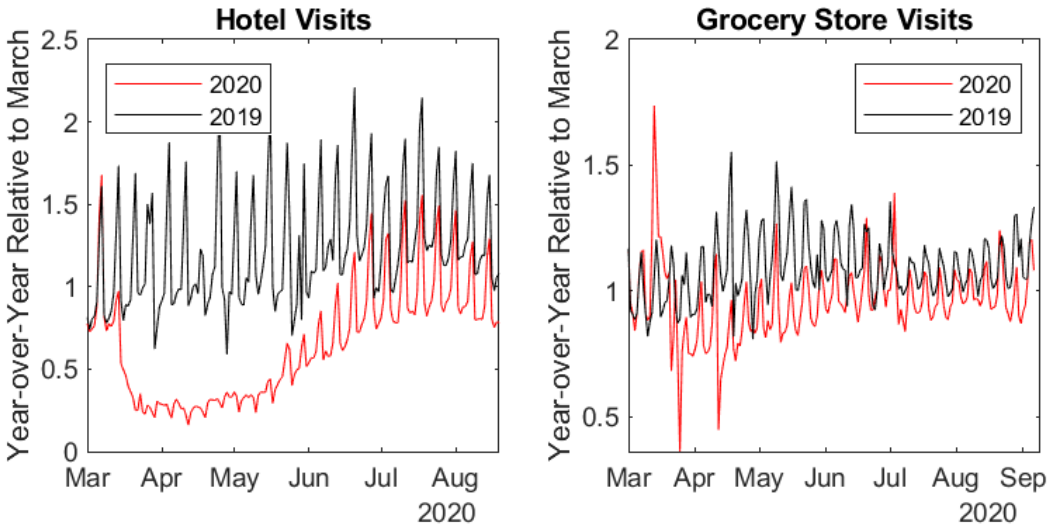

Figure 1: Relative visits for hotels and grocery stores in Wisconsin during 2020 vs. the same period in 2019.

Table 1 lists the decline in year-over-year relative visits for selected industries, grouped by NAICS codes, and Figure 2 plots a select number of these industries. To smooth out the strong day-of-week effects, the table and figure report 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 through May and June. 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 decline.

Both Table 1 and Figure 2 make clear that activity has substantially recovered from its low point in mid-April, and we can break this recovery into stages. 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, which is shown with a vertical black line in the figure. 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 had been recovered.

After the initial burst in activity with reopening, the economy continued to recover through early July. Activity increased in all sectors, but especially in the hardest hit sector of accommodations and food services. Retail also grew sharply and exceeded 2019

NAICS Code	Industry Title	4/17	5/15	6/12	7/10	8/14	9/4
--	All Locations	67.26	56.45	33.07	28.62	24.92	26.25
31-33	Manufacturing	42.96	31.37	11.53	-1.63	21.55	22.92
42	Wholesale Trade	70.18	61.91	38.60	29.91	16.93	7.21
44-45	Retail Trade	52.86	39.62	19.46	20.62	19.17	19.82
48-49	Transportation and Warehousing	64.42	54.66	37.26	47.79	39.29	31.67
51	Information	82.24	76.39	63.62	60.89	53.39	40.74
52	Finance and Insurance	56.35	48.56	36.13	37.74	27.80	16.25
53	Real Estate Rental and Leasing	65.92	52.93	27.26	21.91	21.76	19.82
61	Educational Services	90.70	88.83	75.18	63.89	59.40	51.06
62	Health Care and Social Assistance	65.20	55.19	39.36	18.74	-0.92	-20.85
71	Arts, Entertainment, & Recreation	71.85	57.75	25.15	28.32	25.05	22.82
72	Accommodation and Food Services	72.53	62.15	36.72	28.91	26.97	27.35
81	Other Services (except PA)	61.43	47.53	28.85	22.41	13.01	8.88
92	Public Administration	55.65	48.84	33.83	50.91	47.56	42.31

Table 1: Percentage decline in relative visits for selected industries in Wisconsin during 2020 vs. the same period in 2019. 7-day average of year-over year visits, normalized to the first week of March.

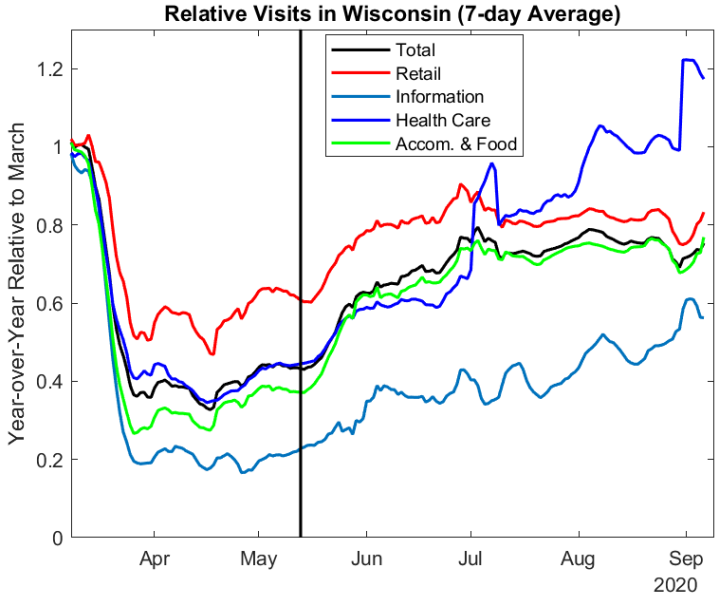

Figure 2: Relative visits for all locations and select industries in Wisconsin during 2020 vs. the same period in 2019. 7-day moving average of year-over-year visits, normalized to first week of March.

levels. However starting in early July the recovery went in reverse, dropping to nearly 30% down overall. At least part of the drop was likely due to the difference in the timing of the holiday in 2019 vs. 2020, but some was also likely due to the resurgence of the virus and the re-imposition of additional health restrictions in some locations (Dane County in particular). But after this decline, activity has been largely unchanged for several weeks, with total activity now down 26% and retail down 20%. The largest recent gains have been in the health care sector, which is now 20% above 2019 levels.

Figure 3: Same-location visits for bars and full service restaurants in Wisconsin over the last several weeks (relative to April 26, 2020, left panel), and 7-day average year-over-year relative traffic (right panel).

Recent Changes in Economic Activity

Figure 3 illustrates the recent rapid increase in activity at full service restaurants and bars. Following the Wisconsin Supreme Court case invalidating the stay-at-home order, there were numerous news stories of people rushing to bars in the state. The left panel of Figure 3 shows that there was indeed a large relative increase in activity on the initial weekend following the order, with foot traffic at bars up 60% and restaurants up 30% from the previous weekend. These increases continued over the following week leading into Memorial Day weekend, with foot traffic on May 22 up 75% in bars and 64% in full service restaurants over May 8. Activity continued to grow over the next couple of weeks, and is now up over 150% since Safer at Home order was removed.

However the increase in activity at restaurants and bars was an increase from a very low level. The right panel of Figure 3 shows restaurants and bars have seen sharp recovery in from mid-May to early July, peaking around the holiday weekend for the Fourth before falling off slightly. For most of the last several weeks activity has been relatively unchanged, with a slight increase at the end of the sample during the Labor Day weekend. As discussed above, the recovery seems to have stalled in recent weeks with the worsening of the virus spread and the re-imposition of health restrictions. It's too soon to know if the slight increase recently is a new trend or a temporary rise due to the holiday. For the most recent week, activity was down 15% in bars and 20% in restaurants from a year earlier. This is strong growth considering activity had been down 75% or more.

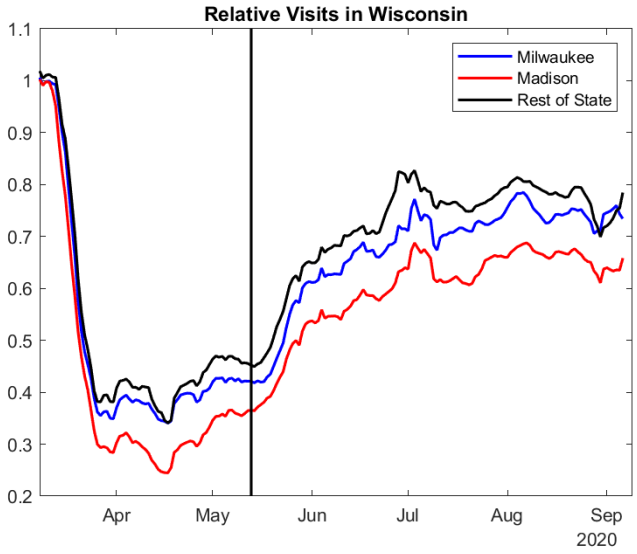

Figure 4: Relative visits for Milwaukee MSA, Madison MSA, and the rest of the state. 7-day average year-over-year traffic, indexed to March.

Changes in Metro Areas

In addition to breaking out traffic by industry, the SafeGraph data allows me to separate trends across different locations. Figure 4 shows the relative trends for the two largest metropolitan areas in Wisconsin -- Milwaukee and Madison -- as well as the remainder of the state. Both metro areas and the remainder of the state all show very similar overall trends, but with varying magnitudes of changes. The declines in total traffic were somewhat larger in these metro areas than in the state overall. The shutdown of UW-Madison and the absence of thousands of students drove an especially large decline in Madison, where foot traffic was down 70-75% from late March through mid-April, before recovering later in the month into early May.

Moreover, following the Supreme Court decision, while much of the state went without any mandated restrictions, both Milwaukee County and Dane County imposed county-level orders that kept much of the statewide order in place. Both metro areas have eased restrictions, but for an extended time kept significant restrictions in place, particularly in Dane County which has also recently reversed course and tightened some restrictions again. Thus while both metro areas have recovered, they have done so at a slower rate than the rest of the state, and the gap in activity to the rest of the state has widened. Madison generally faced a larger decline and slower recovery than Milwaukee, and activity has been relatively flat in Madison recently. Over the past couple of weeks, Milwaukee has caught up to the rest of the state, while Madison continues to lag, with activity still down about 35%.

Both metro areas, like many cities around the country and indeed the world, have seen significant protest activity over the last couple of weeks following the killing of George

Floyd in Minneapolis on May 25. These protests have brought significant numbers of

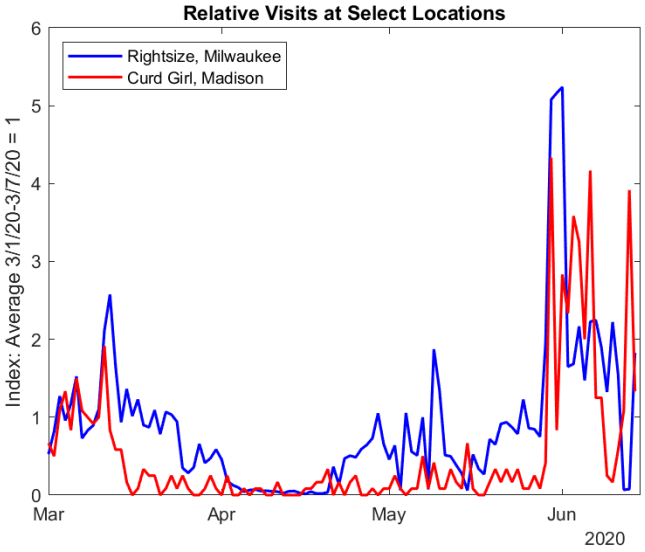

Figure 5: Relative visits at locations in Milwaukee and Madison near protest activity.

people into the streets, and I had thought that the protests may show up as additional foot traffic unrelated to regular economic activity. However there seems to be little evidence that the protest showed up significantly in the data.

By looking into the individual location data around the locations of most protest activity, I did find a couple of isolated locations in Milwaukee and Madison where the foot traffic increases seem to correspond to protests. Two examples are shown in Figure 5: Rightsize Facility, a furniture service company in downtown Milwaukee, and Curd Girl, a food cart near Capitol Square in Madison. The figure shows the daily visits for each location, indexed to the average during the first week of March. (Each location had one anomalous data point during the sample, which I replaced with an average on surrounding days. This did not affect the comparison.) Both locations show significant spikes in activity starting on May 30 that correspond to large protests which took place in their areas. However these are isolated cases, and I did not find any similar spikes even at locations in the same vicinity. Thus the protests do not seem to impact the overall economic activity statistics for the metro area, let alone for the state

Labor Market Data

While the foot traffic data is indicative of economic activity, it is an indirect measure that is correlated with sales. Thus I now turn to a labor market data source, which provides direct economic data on business closings and employment. In particular, I use data from Homebase, a company that provides scheduling software to tens of thousands of small businesses across the US. As described by Bartik et al. (2020), "This scheduling software generates granular data on exact hours worked every day for all hourly employees at customer firms, providing a much higher-frequency and more detailed picture of employment and hours than traditional labor market datasets. This greater

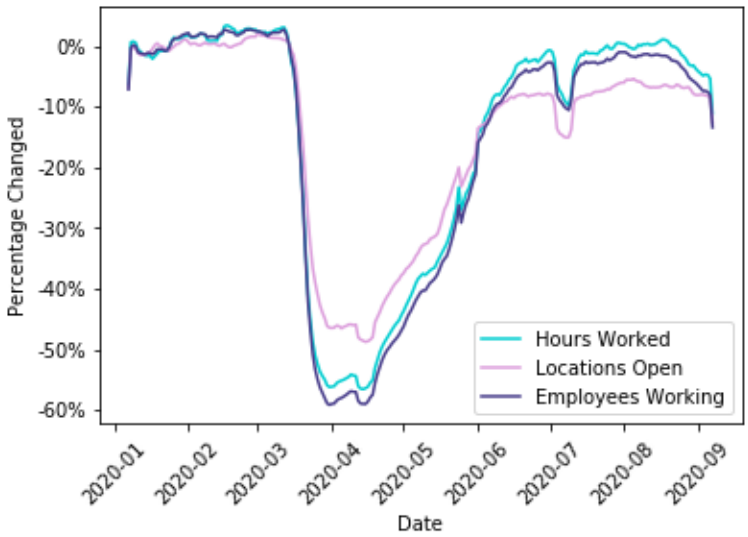

Figure 6: Changes in employees working, locations open, and hours worked at small businesses in Wisconsin. 7-day averages of daily data.

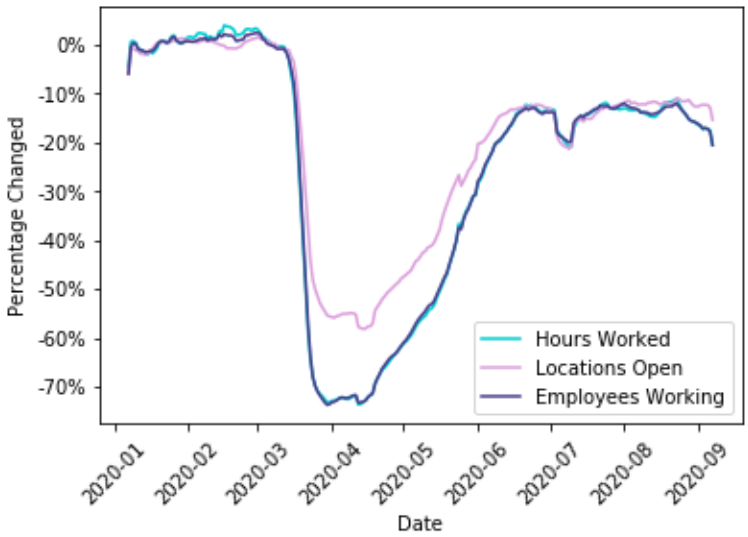

Figure 7: Changes in employees working, locations open, and hours worked at small businesses in the food and drink industry in Wisconsin. 7-day averages of daily data.

detail and higher frequency come at some costs; Homebase's customer base is disproportionately composed of small firms in food service, retail, and other sectors that employ many hourly workers." Thus this while this data provides direct labor market indicators, it is less comprehensive in coverage than the Safegraph foot traffic data. Nonetheless it provides a similar overall message on both on the scale and timing of the decline and recovery in activity.

In particular, Figure 6 shows summary data for all locations in Wisconsin, showing the same-location changes in the number of employees working, the number of locations

open, and the total hours worked. That is, I look at locations which were active between March and June in 2019 and also were active on March 1, 2020. Each data series is indexed to the median value for that day of the week during the month of January, with the percentage changes shown. There are very strong day-of-week effects throughout the pandemic, with more locations closing and fewer employees working on the weekends. To ease interpretation, I again show 7-day averages. Since hours and employment generally track each other, I mostly focus on openings and employment in the following discussion.

Again, the data shows relative stability during early March, followed by a rapid decline in all measures which bottom out on April 12. At the low points through April, on weekdays roughly 40% of locations were closed, and roughly 50% of employees were working. On weekends, these numbers dipped down to roughly 67% declines in openings and larger declines in employment. Figure 6 shows the averages of these daily effects, which resulted in as many as 48% of locations closed and a 59% reduction in employment during April.

As in the foot traffic data, there has been a sharp recovery which began around May and before leveling off recently. The flattening of activity began somewhat earlier in this data, around June 20. Apart from the Fourth of July weekend, the number of locations open has hovered around a 7% reduction since mid-June, which may reflect permanent closures. However employment continued to grow until early July, roughly returning to baseline around only 1% down. This suggests a reallocation of workers across companies, with growth in employment-per-location at the surviving businesses. In recent weeks employment has tailed off, perhaps due to more businesses being unable to survive in the new conditions with reduced capacity. Employment recently has been down about 7%, with a larger drop over Labor Day weekend.

Figure 7 shows the same data but now for what Homebase calls the “food and drink” industry, essentially restaurants and bars. The overall patterns are similar to all locations, but with a couple important differences. This sector saw a sharper drop and less of a recovery than the broader labor market. Hours and employees working track each other very closely, but there is larger difference with locations open. That is, at the depths of the crisis roughly 58% of food and drink locations closed, but employment fell by over 72%. This reflects significantly reduced staffing, as restaurants moved toward takeout and delivery during the lockdown.

There was also a strong recovery in this sector starting in mid-April, but it leveled off by mid-June. Over the recovery, the gap between locations open and employment narrowed. That is, not only were food and drink establishments open, but they expanded their services relative to the lockdown period, and were able to bring back more workers. However instead of continuing to recover to baseline levels, the recovery stalled out in mid-June with employment down around 12-13% for the past few weeks. This suggest a higher rate of permanent closures and employment loss in the food and drink industry, which has faced lower demand as well as continued or strengthened

capacity restrictions in some locations. As with all industries, employment has fallen somewhat over the past couple of weeks, although there has been relatively little change in openings.

Figure 8: Total spending in Wisconsin and the rest of the United States, four-week year-over-year growth.

Consumer Spending

Turning to consumer spending, the Earnest Research data shows similar overall patterns, but with less volatility in spending. That is, while consumption dropped with economic activity dropped, consumers were able to smooth the declines and shift their spending habits. This meant a shift in the channel of spending, with an increasing share of sales online, as well as the makeup of their consumption bundles, as spending on dining out dropped by groceries increased.

Figure 8 shows how consumption has changed, both nationally and in Wisconsin, through the COVID-19 pandemic. In particular, I show the four-week year-over-year sales growth, which smooths some of the weekly fluctuations. Overall, the trends were very similar nationally and in Wisconsin, with slightly larger declines nationwide than in the state. The patterns are also the same as in our other indicators: after hitting bottom in mid-April there has been sharp growth in consumption. While spending growth has been stronger in Wisconsin than the rest of country over the course of the recovery, the gap has narrowed over the past few weeks as growth in Wisconsin has slowed slightly. In recent weeks consumer spending in Wisconsin has fallen 0.5% year-over-year as compared to a 0.9% drop in the rest of the country.

Figure 9 illustrates the shift consumption patterns by separating two categories of spending from all others. In the left panel, we see that grocery store spending spiked in

March and into April, and has remained high. However grocery spending growth has decreased and spending on other categories has recovered. Over the past month, grocery spending is up over 13.8% from 2019. Spending on all other categories plummeted from mid-March to mid-April, but is roughly back to baseline, up 0.3% from 2019. The right panel shows spending on travel, which collapsed in April, bottoming out at a 79% fall. Travel spending has only recovered slightly, remaining 54% down year-over year.

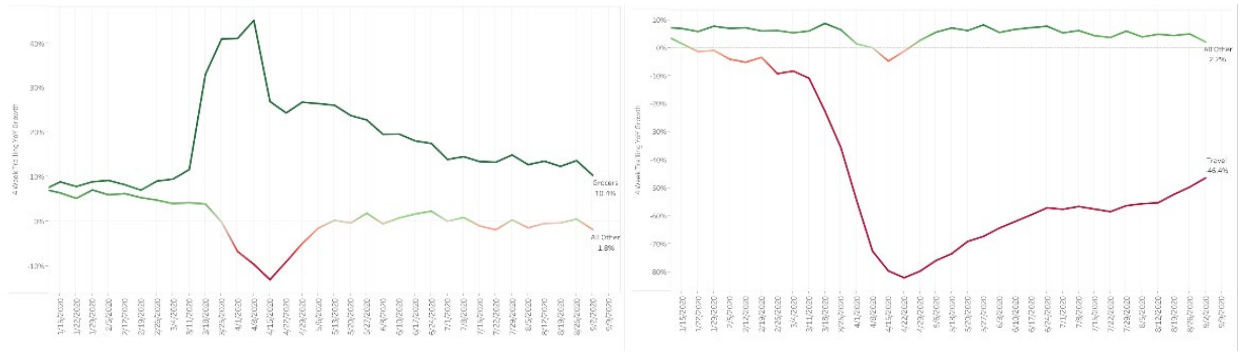

Figure 9: Total spending at grocers (left panel) and on travel (right panel) as well as all other spending in Wisconsin, four-week year-over-year growth.

Figure 10: Total spending online and in-store in Wisconsin, four-week year-over-year growth.

Figure 10 shows how the buying patterns of Wisconsin consumers have shifted toward on-line activity. As the pandemic spread, and then particularly after Governor Evers issued the statewide "Safer at Home" order on March 25 closing non-essential businesses

and limiting travel, in-store sales and transactions fell sharply. Total sales were down 15% at the end of March, but in-store sales were down 30% at that point, while online sales ramped up over that period. Over the past few months, as total sales have recovered and are now up year-over-year, in-store sales have remained lower. Moreover, in-store sales have dropped recently, and are down 10.6% year-on-year, roughly consistent with the foot traffic at retail locations. In fact, in-store transactions are down about 12%, similar to the retail foot traffic data, but sales per transaction are up. Online sales growth has slowed from its peak but remains high, up 21.1% year-over-year. While online sales played an important role in allowing consumers to cushion the impact of the pandemic shock, they have also diverted sales from local businesses. That is, while statewide businesses have increased their online presence during the crisis, much of the online transactions were through national retailers like Amazon.