The GoDaddy/UCLA Anderson Forecast Microbusiness Activity Index Update, 2022Q2

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In July 2021, the UCLA Anderson Forecast in partnership with GoDaddy Inc. published a new Microbusiness Activity Index (MAI) index on the formation, growth, and dynamics of online microbusinesses using data provided by GoDaddy.[1] The MAI is highly correlated with key economic indicators including employment and unemployment and provides timely insight into local economic activity. Quarterly reporting of the index with commentary and analysis continues with the current report.

Highlights of 2022Q2 report

- **The overall microbusiness activity index increased from 104.9 in March 2022 to 105.7 in June 2022.**
- **Each additional 1 point increase in the MAI was correlated to a 0.1 percentage point decrease in the unemployment rate among counties in the U.S. for this period. Each additional 1 point increase in the participation index was correlated to a 0.2 percentage point decline in the unemployment rate among counties in the U.S. for this period.**

This report is the 2022 Q2 update[2] and contains data up to June 2022 for the nation, states, metropolitan areas, and counties. The activity or composite index for microbusiness in the U.S. (blue line in Figure 1) increased to 105.7 in June 2022 from 104.9 from March 2022. The Microbusiness Activity Index (MAI) has a positive trend since the first observation of the index in April 2020.

The MAI is composed of three sub-indices: (1) *Infrastructure* which includes human capital and digital infrastructure including broadband and computer access (black line in Figure 1). These are long-term factors, which do not change much from one quarter to the next. This sub-index is derived from the American Community Survey data and updated upon its annual release. The 2021 update has an increase from 100 in 2020 to 102.7 in 2021 reflecting improvements in education attainment (increase of 0.07 school years) and access to broadband (82.7% to 85.2% of households) and computers (90.3% to 91.9% of households).

(2) *Participation* (green line in Figure 1) includes the density and growth rate of online microbusinesses and online microbusiness owners. Compared to a wide range of changes and increase of the engagement index, it seems there was not much dynamics of the participation index in Figure 1. In fact, the participation index increased from 100.3 in March 2022 to 100.9 in June 2022, which could translate to an annual growth

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[1] See https://www.anderson.ucla.edu/about/centers/ucla-anderson-forecast/projects-and-partnerships/godaddy

[2] In this report, the definition of online microbusiness and their owners for the inclusion of this index computation were changed to better represent active microbusinesses. As a result, about 14% of microbusiness and their owners included in the previous reports were dropped. For instance, in September 2020, the old series has 39.9 million of microbusiness while the new series has 34.5 million. Therefore, the MAI in this report presents a more accurate cross-sectional and over time compared to the previous ones. By and large, the new series and the old series show a similar time trend.

of 2.4%, not an insignificant number. It reflects partly growth rate of microbusiness (0.6%) and growth rate of microbusiness owner (1%) over the past three months. As mentioned in the previous report, we find that the participation index is the major driver of local economic activities. More discussion is as follows.

(3) *Engagement* (red line in Figure 1) includes a variety of measures of online and website engagement. The engagement index fluctuated from 112.8 in December 2021 to 112 in March 2022, 103.8 in April, 118.2 in April, 116.1 in May, and 113.1 in June. Despite its sizable volatilities, the engagement index has been increased to 113 in June 2022 from 100 in April 2020, indicating that microbusinesses are more engaged in online activity. For example, one major component to drive the rising trend is the average web traffic index to microbusiness website. And they also contribute partially the increased level and volatilities of the MAI.

Figure 1. Microbusiness Activity and Sub-Indices (Even-Weight, U.S.)
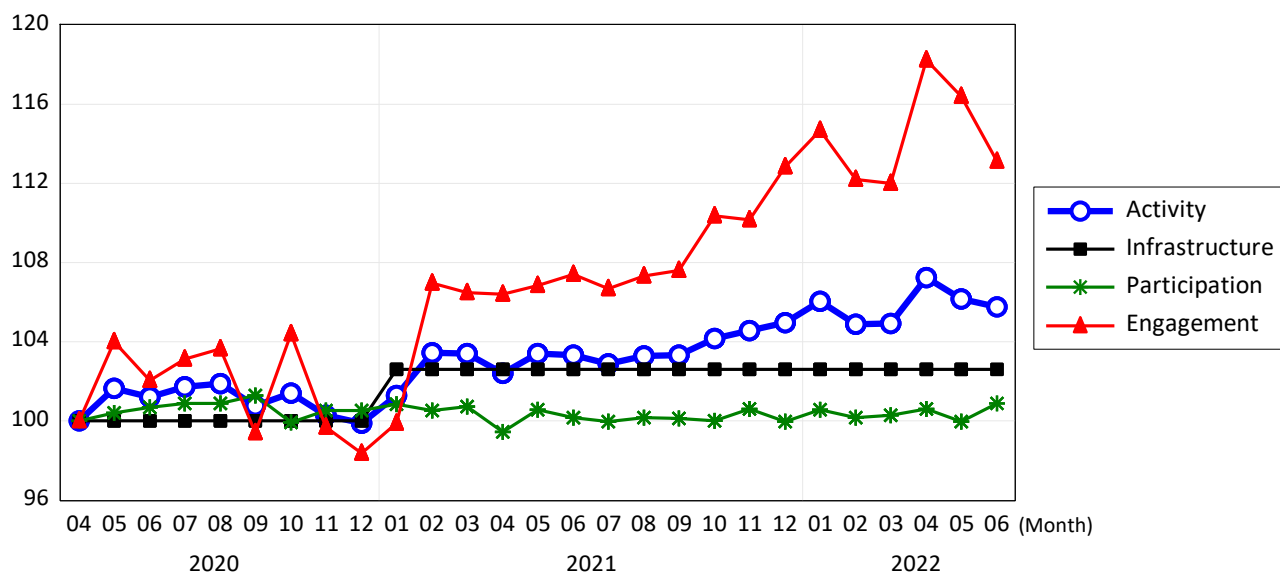
Appendix A shows the correlation between the MAI in April 2020 and the following change of unemployment rates from April 2020 to June 2022 of a county. We can see a negative correlation between these two variables. A regression analysis in the sample period of April 2020 to June 2022 also describes a significantly inverse relationship—a county with a higher MAI will see a better labor market outcome. To be more precise, each additional 1 unit increase in the MAI leads to a 0.1 percentage point decline in the unemployment rate. This is consistent with our previous updated reports and research reports published in 2021.

Appendix B shows the correlation between the participation index in April 2020 and the following change of unemployment rates from April 2020 to June 2022 of a county. We can see an even stronger negative correlation between these two variables. A regression analysis also provides a significantly inverse relationship—each additional 1 unit increase in the participation index leads to a 0.2 percentage point decline in the unemployment rate. There is also an inverse correlation between the infrastructure index and change of unemployment—each additional 1 unit increase in the infrastructure index leads to a 0.04 percentage point decline in the unemployment rate. We did not find significant correlation between the engagement index and change of unemployment.

These correlations are consistent with the economics of investment. A region with more investment in human capital and broadband and computer access ought to have a lower unemployment rate. Educated entrepreneurs and workers can use technology and the Internet to create businesses and value in today's knowledge and digital economy[3]. The participation index is related to labor market outcomes because online microbusiness fosters the creation of jobs. For example, in our July 2021 report, "What Drives Microbusiness Formation and Growth?" we document evidence of correlations between the macroeconomy and microbusiness. In addition, a survey[4] conducted by GoDaddy's of its customers, documents direct evidence of the correlation. The survey finds that 21% of microbusiness owners were not employed when they started the microbusiness. That means microbusiness formation and growth lowered unemployment rates. 28% said that they hired 2 to 4 employees, contributing to payroll and employment growth.

The participation index is an extensive margin index (formation and growth of microbusiness). The engagement index is an intensive margin index (activeness of microbusiness). Although the intensive margin is not related to employment and jobs, it is likely related to income, and therefore other aspects of the local economy. In the same survey, GoDaddy found that 66% of microbusiness owners earned up to several thousand dollars a month via their business engagement.

Figure 2 shows the level of the MAI by state in June 2022. The darker the green color, the higher the activity index. Washington DC (113), Utah (110), Colorado (110.1), Maryland (108.8), Oregon (108.7), and California (108.2) had the highest levels of the index. Mississippi (99.8), Vermont (99), Rhode Island (99), and Maine (87) had the lowest levels. Figure 3 shows the changes in the MAI by state from June 2021 to June 2022. The darker the blue color, the larger the increase. We can see Connecticut (+8.6), Massachusetts (+6.1), New Jersey (+3.6), Alaska (+3.3), Utah (+3.2), and Arizona (+3.1) experienced higher growth in the index over the past year. New Hampshire (-0.08), Delaware (-1.36), Maine (-13.9) experienced negative growth. The participation index for New Hampshire and Maine was the main drag while the engagement index for Delaware was the major negative force. Unlike county data discussed in the previous sections, we do not find a significant and meaningful association between MAI and state economic activity. One possible explanation is a washed-out effect. Say a state with two counties: one with high MAI and low unemployment while the other with low MAI and high unemployment, which would support high correlation. But up to the state level, two counties added up and averaged out—medium MAI and medium unemployment, resulting in no correlation.

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[3] See as documented in our June 2021, "Digital Infrastructure, the Economy, and Online Microbusinesses."
[4] Conducted from February 17 to 22, 2002, with 2,289 responses across the country and a response rate of 1%.

Figure 2. Microbusiness Activity Index by State, June 2022
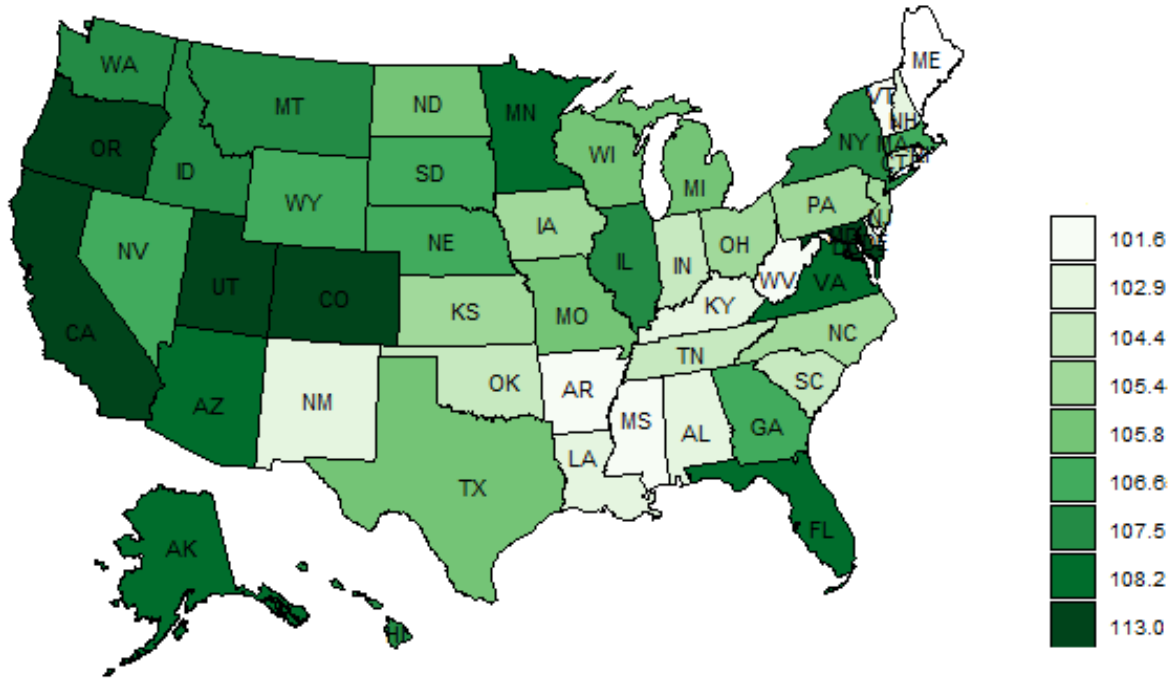
Note: Base month year is April 2020

Figure 3. Microbusiness Activity Index Changes by State, June 2021 to June 2022

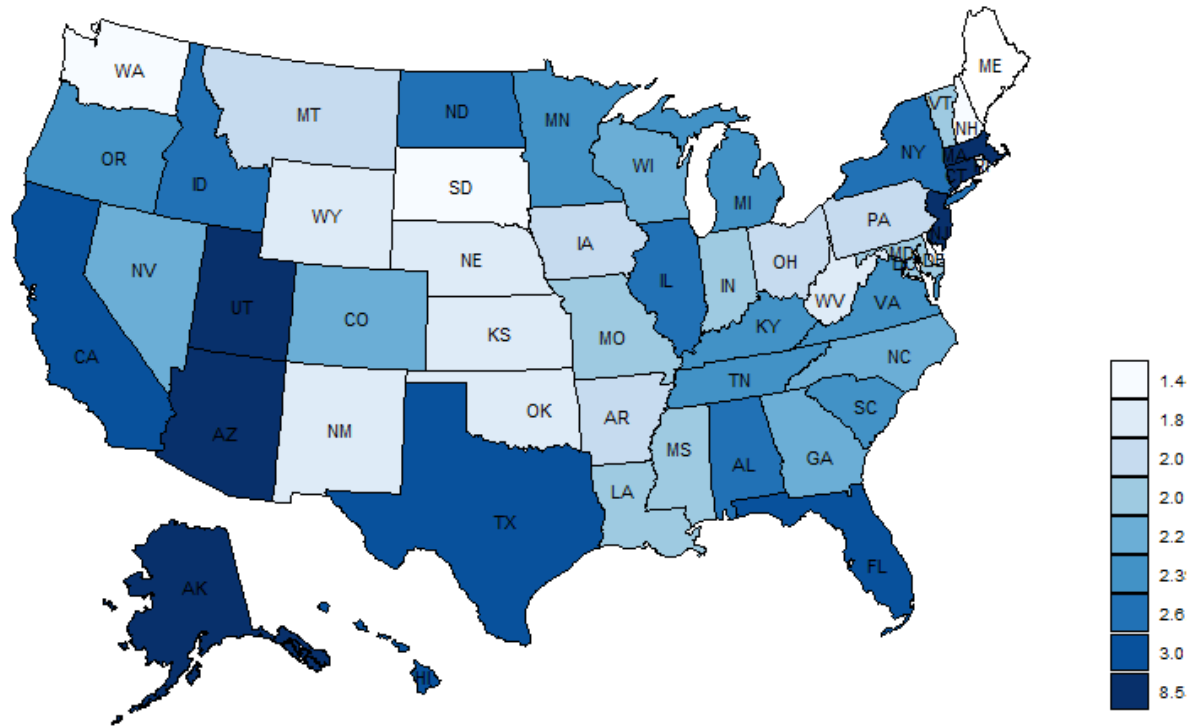|	
	1.4
	1.8
	2.0
	2.0
	2.2
	2.3
	2.6
	3.0
	8.5

Figure 4 shows the MAI by county in June 2022. The colors go from dark blue for the highest index values to dark red for the lowest index values. The variation across counties is similar to the variation in prior months. Coastal regions and major cities tend to have higher values of the index, while inland and rural regions tend to have lower values. Counties with high values of the index due primarily to their infrastructure index (which includes a measure of human capital) are Fairfax City, VA (122.2), Howard County, MD (120), and Arlington County, VA (117.2). Counties with high values due to their participation index are Gilpin County, CO (121), and Gunnison County, CO (121).

Figure 5 shows the changes in MAI by county from June 2021 to June 2022. The colors go from dark blue for the highest increase in index values to dark red for the highest decline in index values. Similar to what we saw in Figure 4, coastal regions, such as California and Northeast, had higher growth in MAI over the past year. In a separate research[5], we identify that after controlling for demographic, socioeconomic, and industry variables, a county with a higher MAI is positively associated with a higher employment-to-population ratio.

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[5] See William Yu, "What Explains the Variation in Unemployment Rates Across the United States?" Anderson Forecast Quarterly Report, September 2022, p 77 – 89.

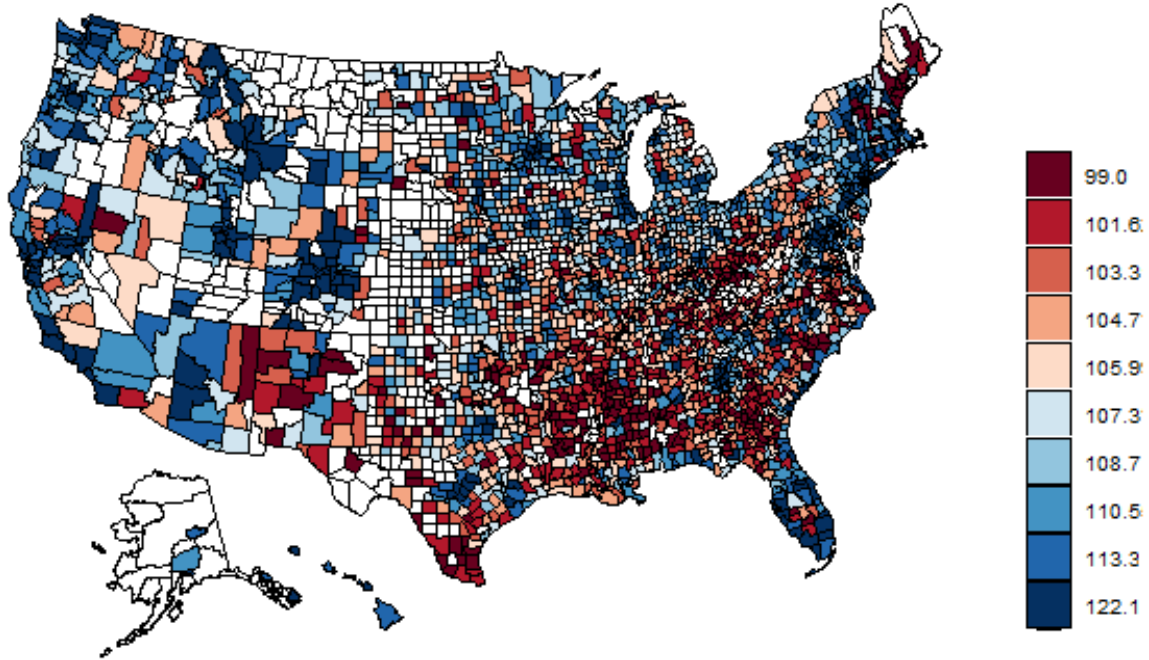**Figure 4. Microbusiness Activity Index by County, June 2022**

■	99.0
■	101.6
■	103.3
■	104.7
■	105.9
■	107.3
■	108.7
■	110.5
■	113.3
■	122.1

Figure 5. Microbusiness Activity Index Changes by County, June 2021 to June 2022

■	-1.09
■	0.23
■	1.02
■	1.61
■	2.06
■	2.42
■	2.83
■	3.28
■	4.09
■	73
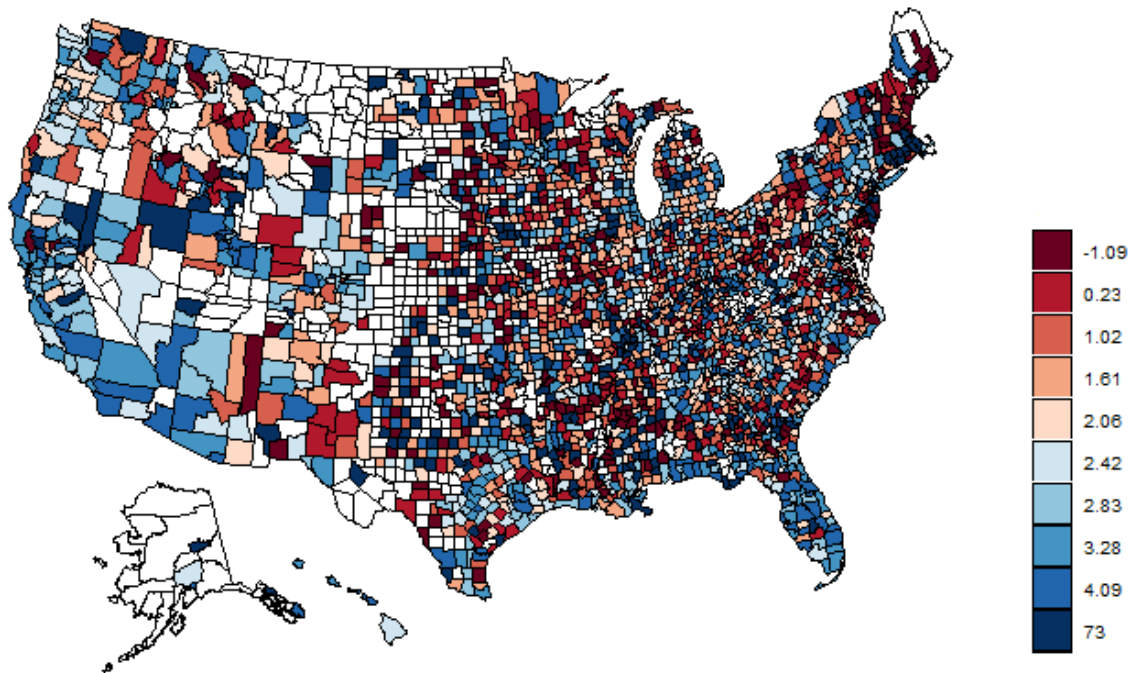
Figure 6 shows the MAI for 30 selected major metros (Metropolitan Statistical Areas) in April 2020, June 2021 and 2022. In June 2022 San Jose (Silicon Valley) had the highest activity index value (117.1), followed by San Francisco (115.9), Washington DC (115.1), San Diego (114.8), Raleigh (114.5), Denver (114.3) and Austin (108.8). On the other hand, Philadelphia (104.9), Las Vegas (104.1), and San Antonio (101.3) had the lowest activity values. For example, San Antonio has the lowest MAI is mostly due to its low infrastructure index (108.7 vs. San Jose's 124.2). Over the past year, the MAI increased across most metros, except Seattle. Boston, Phoenix, San Diego, and Miami had the largest increases in the value of their activity indexes.

In June 2022 Miami (108) had the highest value of the participation index, followed by Las Vegas (107.8), Los Angeles (107.7), and San Diego (107.6). Over the past year, the participation index increased across all 30 metros, except for Seattle. Boston (+4), Chicago (+1.2), and Raleigh (+1) had the largest increase in the index, and San Francisco (+0.28), Kansas City (+0.26), and Seattle (-2.26) the smallest or negative (Figure 7).

In June 2022 San Jose (114.9) had the highest value of the engagement index, followed by Minneapolis (114.1), Boston (113.2), San Francisco (112.9), and St. Louis (112.5). As addressed in the previous report, San Jose remained as the top metro with its superior rankings on both infrastructure and engagement indices. That is reflective of the fact that Silicon Valley is not only the home to the most prominent Big Tech companies, but also to many small startups who aspire to be part of Big Tech (Figure 8).

Figure 6. Microbusiness Activity Index, Selected 30 Metros, April 2020, June 2021, and June 2022
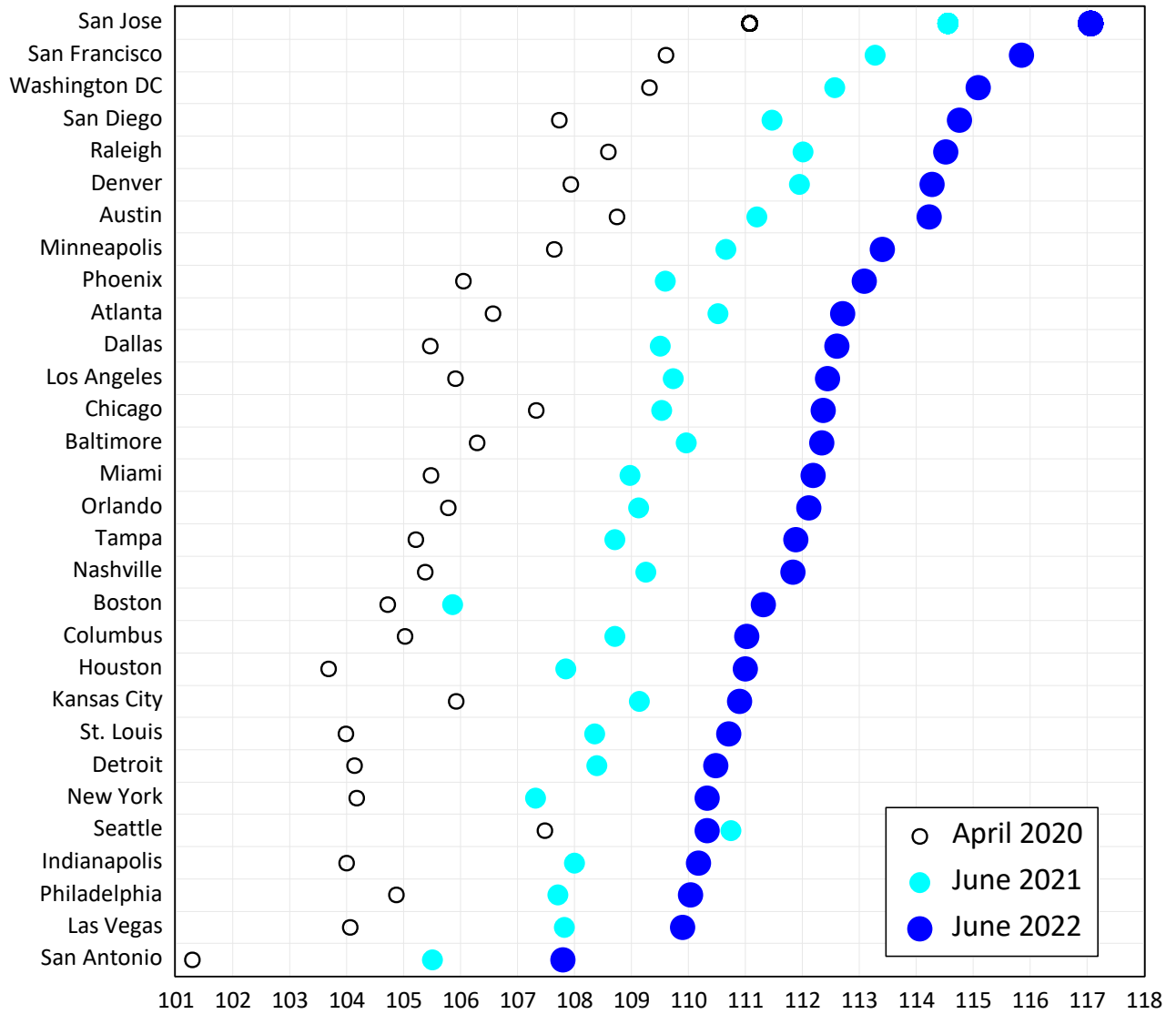
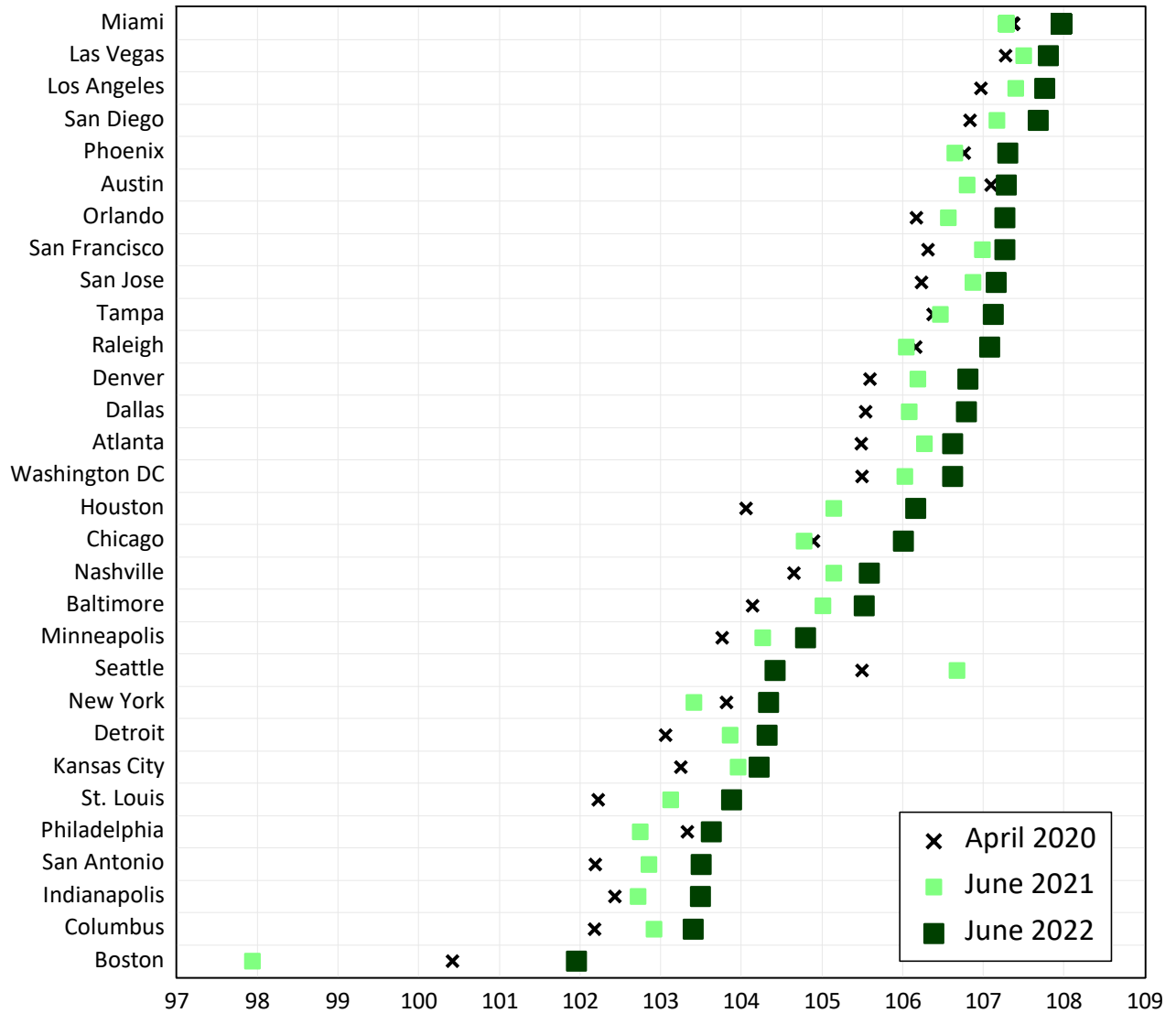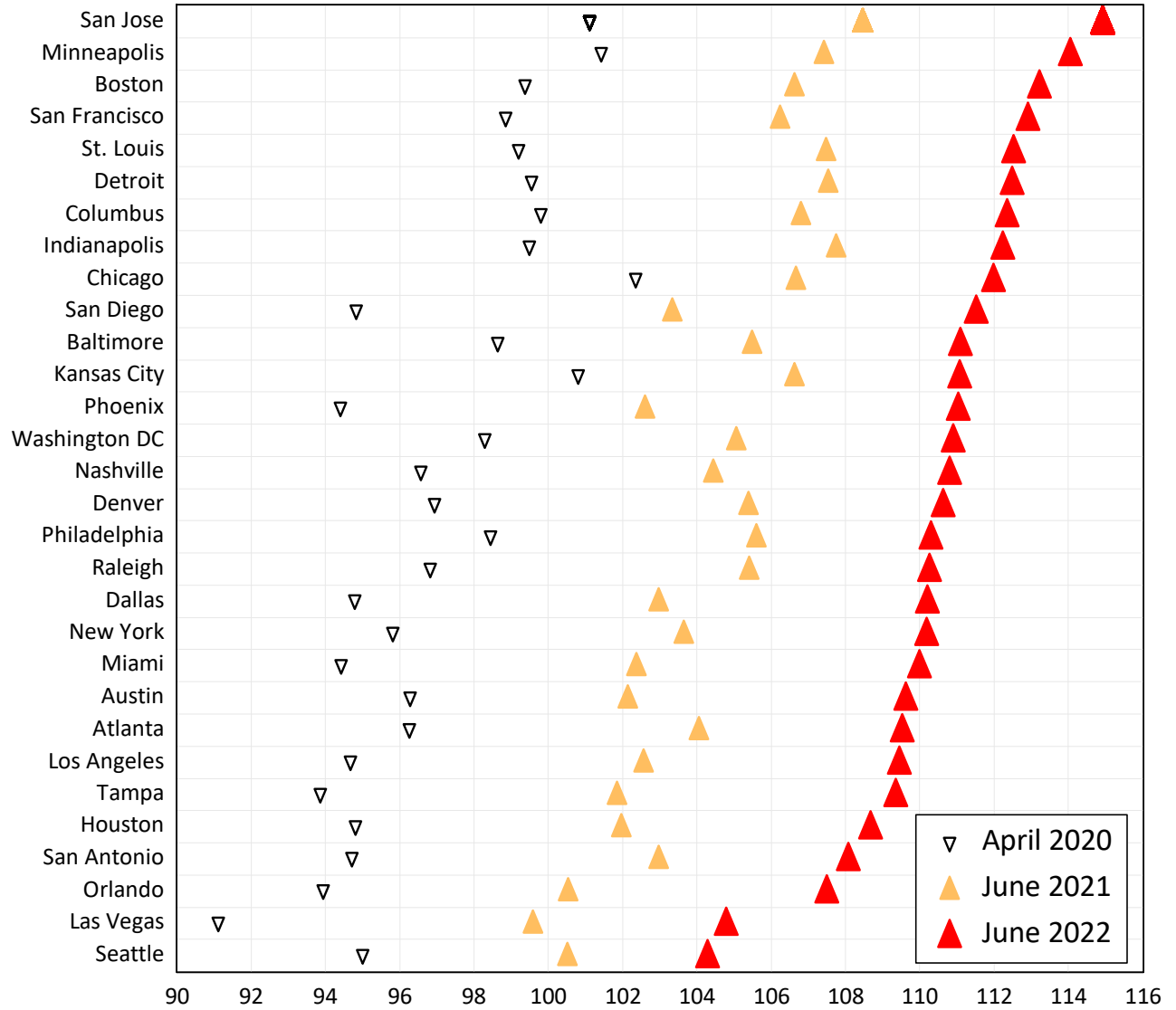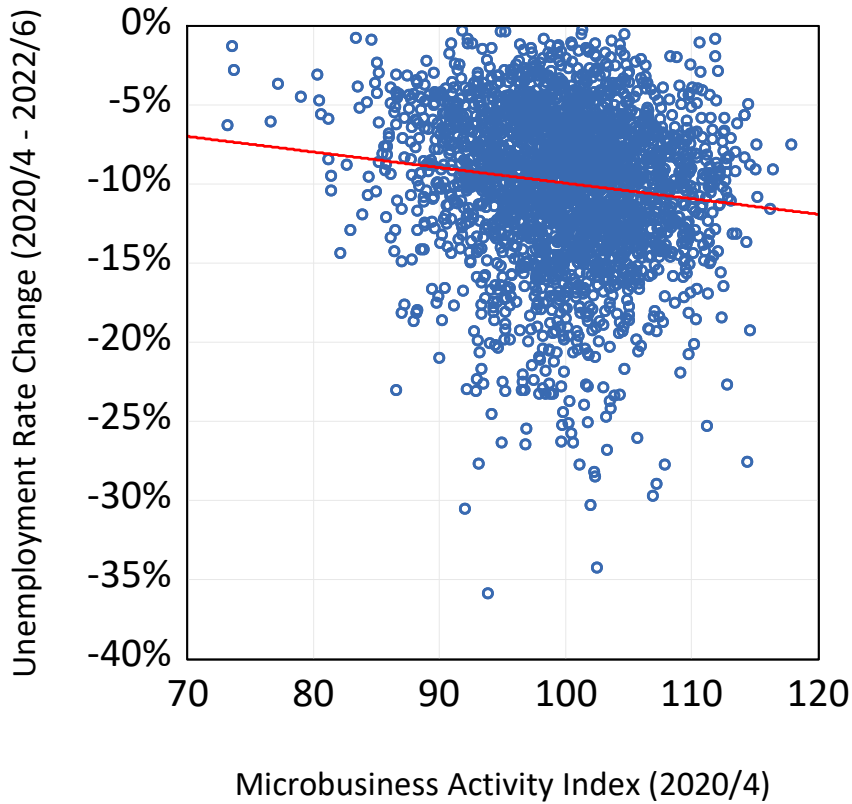**Figure 7. Microbusiness Participation Index, Selected 30 Metros, April 2020, June 2021, and June 2022**

Figure 8. Microbusiness Engagement Index, Selected 30 Metros, April 2020, June 2021, and June 2022

Appendix A

Figure with y-axis labeled "Unemployment Rate Change (2020/4 - 2022/6)" ranging from 0% to -40%, and x-axis labeled "Microbusiness Activity Index (2020/4)" ranging from 70 to 120.

Appendix B

The Participation Index (2020/4)