Nearly three years after the onset of the COVID-19 pandemic, work-from-home (WFH) technologies and their effects are one of its most important and enduring economic legacies. The latest JPMorgan Chase Institute research provides detailed evidence on the changing locations of brick-and-mortar retail establishments due to the widespread adoption of WFH technologies. Using transaction data from over 70 million Chase customers, we track brick-and-mortar establishments from Q1 2017 to Q4 2021.

Each city we track experienced precipitous declines in establishments followed by recoveries, though most cities remain below their pre-pandemic levels. Our results suggest three ways the adoption of WFH behaviors have affected the location of retail establishments:

1. **Relocation of residences.** A majority of consumer shopping happens around residences and recent entry patterns for establishments reflect the new suburban locations of customers.

2. **Decline of commuting trips.** Downtown locations that heavily rely on consumption chained with commuting continue to suffer.

3. **Changes in consumer habits.** Beyond the changes in residential and employment location choices, changes in consumer habits driven by the adoption of WFH has depressed the recovery of physical retail establishments. The WFH population may make fewer overall consumption trips and have lower demand for clothing and personal care services that are less relevant for their new working environment.

### Implications

- **A change in the relative demand for different types of residential and commercial properties across space implies that the best use of land may no longer be reflected by current zoning laws.** Increased flexibility in zoning that allows for conversion between residential and commercial spaces in downtown cores may address both declining commercial demand and housing affordability problems that continue to persist despite changes in population.

- **In the short- and medium-term, a reduction in the number of establishments in city centers implies more unused commercial real estate and decreased value.** On the margin, this might lower rents and offer opportunities for entry to firms that might not have otherwise had them. Conversely, suburban areas with growing populations may benefit from increased commercial property values, especially if there is not enough existing commercial space to meet new demand. This may in turn provide new challenges for existing businesses as rents rise.

- **Local governments’ revenue streams may be affected by changing property and sales tax receipts.** Lower commercial property values in city centers will restrict the flow of funds to city governments, while rising values outside of the city center may prove a boon for local governments in suburban areas. To the extent that local governments impose sales taxes, these receipts will also be affected by the changing locations of establishments.

- **If new WFH patterns continue to negatively impact certain sectors more than others through changing consumer behavior, businesses in these sectors may still face headwinds even if they are catering to a stable or growing residential population.** Business owners and local-level decision-makers considering how to develop retail amenities should consider how this changing consumer behavior may change the mix of retail that is sustainable for different retail corridors.

- **With more retail amenities allocated to suburban areas, there may be more desire for shopping trips in suburban areas relative to commuting trips as we exit the pandemic.** Changes in transportation schedules and connections that facilitate such trips may improve the utility of transportation networks. Making such investments remains a challenge as ridership levels are still below pre-pandemic levels and federal COVID aid is spent down.
Finding 1: Retail establishments have mirrored the movement of residents from large, expensive cities into smaller, Sun Belt cities and from city centers to suburbs.

We find wide variation across cities in establishment recovery, reflecting population changes that happened during the pandemic—this relationship can be seen in the scatterplot.

Within cities, both residents and retail firms have shifted from downtown to suburban areas. The time series in the line chart shows a continuous population shift. In contrast, establishments across the city experienced an initial shock and gradual recovery. However, only suburban areas recovered to positive growth, while downtown areas continued to experience declines in establishments as of Q4 2021.

Finding 2: Neighborhoods with more exposure to the adoption of work-from-home lost more establishments

The movement of people to new residential locations is clearly correlated with establishment growth within and across cities. However, WFH adoption is likely to affect more than residential location choice—it is also likely to affect the day-to-day consumption behavior of individual consumers for a given residential choice. Conditional on other neighborhood characteristics, we find that:

- a 1 percentage point increase in neighborhood population growth is associated with a 0.3 percentage point increase in establishment growth,
- a 1 percentage point increase in neighborhood residents in WFH-ready industries is associated with a 0.25 percentage point decline in establishments, and
- a 1 percentage point increase in neighborhood jobs in WFH-ready industries is associated with a 0.12 percentage point decline in establishments.

Furthermore, the differential recovery of establishments across retail goods and services provides evidence of such a shift in demand consistent with WFH habits and that demand for a wider set of products unrelated to in-person employment is robust enough to create establishment growth near consumers’ more suburban residential locations. We find that growth in grocery stores is highest in the outer suburbs, and growth in restaurants is highest in the inner suburbs. Leisure and consumer services establishments are also growing in the suburbs, with increasing growth farther out. We expect demand for these products to be more independent of where and how residents work. In contrast, clothing and personal care services show no establishment growth anywhere in the city. This again would be consistent with stronger WFH effects if there are more residents adopting WFH farther out into the suburbs.

Downtowns have seen persistently lower growth in establishments and population since the onset of the pandemic

High-cost coastal metro areas have lost population and retail establishments while Sun Belt metro areas show gains

For more information, visit https://www.jpmorganchase.com/institute/research/cities-local-communities/downtown-downturn-covid-shock-to-brick-and-mortar

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Data Explanation

Scatterplot: Downtowns have seen persistently lower growth in establishments and population since the onset of the pandemic

The scatter plot has population growth on the y-axis and establishment growth on the x-axis, both at the metro area level. Each point on the plot represents a metro area. Growth is calculated from Q4 2019 to Q4 2021. There is a positive correlation between population growth and establishment.

View chart version

Line chart: High-cost coastal metro areas have lost population and retail establishments while Sun Belt metro areas show gains

This figure is a two-panel line chart that shows population growth and establishment growth from Q4 2019 to Q4 2021 for different parts of the city. Each chart has four lines representing average growth for neighborhoods downtown, those at the start of the outer core, those at the start of the inner suburbs, and those at the start of the outer suburbs. Growth is indexed to the same quarter in 2019. In terms of population growth, downtown neighborhoods have a continual downward trend, starting at -0.9% in Q1 2020 and ending at -8.9% in Q4 2021. The outer core started at -0.7% and continued steadily down to -3.4% by Q4 2021. The inner suburbs started at 0.1% in Q1 2020 and rose steadily to 1.0% in Q4 2021. The outer suburbs started at 0.5% growth in Q1 2020 and rose to 4.9% in Q4 2021. In terms of establishment growth, downtown neighborhoods also saw the lowest establishment growth after the pandemic. Downtown neighborhoods saw an average -12.9% growth in Q2 2020 and rose to -3.8% in Q4 2021. The outer core saw -6.1% growth in Q2 2020 and rose to -1.7% in Q4 2021. The inner suburbs saw -3.6% growth in Q2 2020 and rose to 1.1% by Q4 2021. The outer suburbs saw -1.7% growth in Q2 2020 and rose to 0.3% growth by Q4 2021.

View chart version