

BTUAI · Analytical Report

Remote Work

and the Economics of Cities

What the data tells us as of 2026

01 How Many People Work From Home

Since May 2020, Stanford University's Survey of Working Arrangements and Attitudes (SWAA) has asked American workers every month what share of their workdays they spend at home. Over that period it has collected more than 200,000 responses.

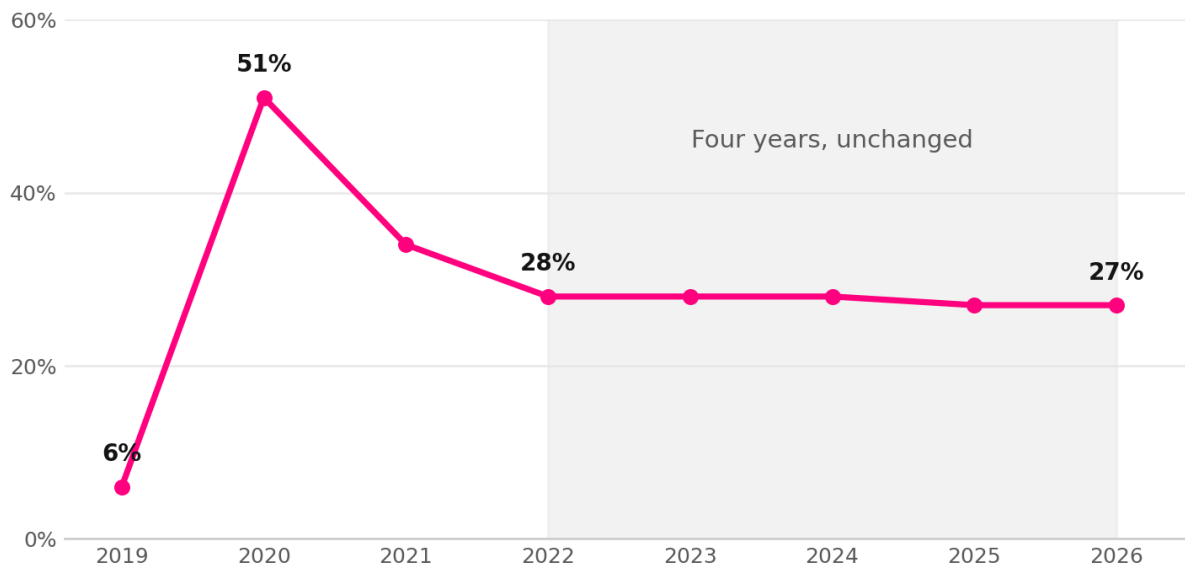


Chart 1. Share of paid full workdays done from home. United States, 2019–2026.

Before the pandemic this figure was 5–7 percent. In spring 2020 it rose above 50 percent, by 2022 it had settled at about 28 percent, and it has stayed there since. In March 2026 it was 27 percent. Over the same period dozens of large companies made a return to the office mandatory, but the data shows no trace of it.

According to April 2026 data, 12 percent of American workers are fully remote, 26 percent work in a hybrid arrangement and 62 percent work fully on site. Other official sources give different figures because they measure different things: the American Time Use Survey (ATUS) shows 19.8 percent, the Current Population Survey (CPS) shows 14.3 percent of hours worked, and the American Community Survey (ACS) shows 13.9 percent of workers as fully remote.

Working from home depends on education. Among people with a university degree, 31 percent of workdays are done from home, compared with 19 percent among those with only a high school diploma. This is why the change mainly affected one place: the office districts of large cities.

02 How Much Office Space Is Empty and in Which Buildings

Office vacancy in the United States is at a historic high. According to Moody's, it reached 19.6 percent at the end of 2023, surpassing the records of 1986 and 1991. In the first quarter of 2026 it stands at 21

percent. Other firms report lower figures (CBRE 18.3 percent, CoStar 14 percent), but all agree that the level is a record.

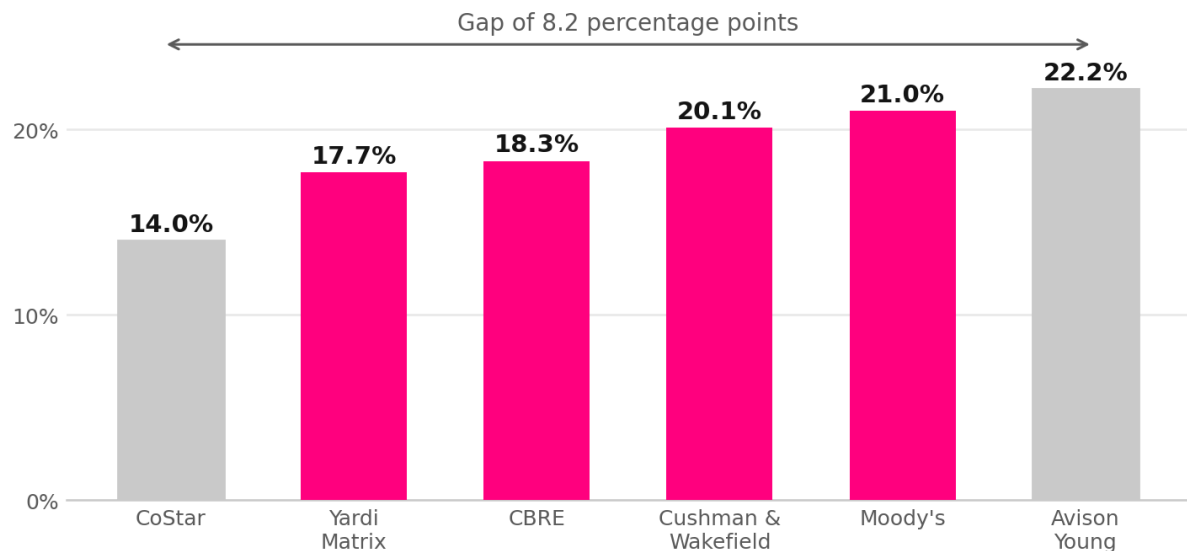


Chart 2. US office vacancy according to six different sources, first and second quarter of 2026.

This average hides two opposite stories. According to JLL, 60 percent of all empty office space is concentrated in just 10 percent of buildings, while almost 40 percent of buildings are fully occupied. In New York, occupied space in Class B and C buildings fell by 8 percent, while in the best buildings it grew by 11 percent.

According to the MSCI index, office property prices in city centres fell by 46 percent over five years, compared with only 6 percent in the suburbs. If working from home were the only cause, demand would have fallen equally everywhere, and that did not happen.

03 The Forecast That Cities Would Go Bankrupt

In 2022–2023, Columbia University professor Stijn Van Nieuwerburgh described a scenario he called the "urban doom loop": office values fall, property tax revenue shrinks, the city cuts spending, services deteriorate, people leave, and values fall even further.

"Cities will have to balance their budgets, which means cutting spending on safety, cleaning, transport and education. That makes the city a less attractive place."

Stijn Van Nieuwerburgh, Columbia University, October 2023

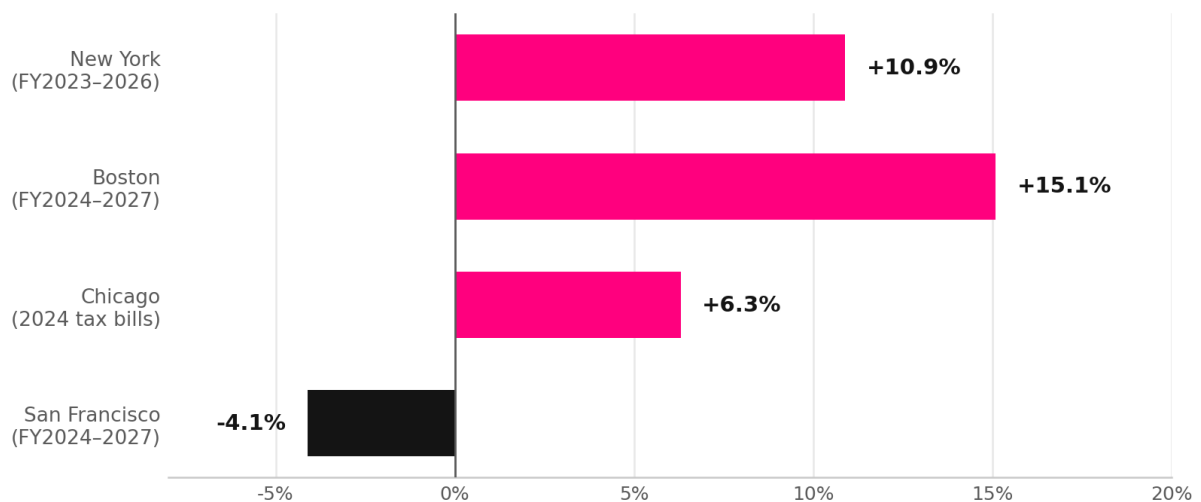


Chart 3. Property tax revenue in four cities. Growth in New York, Boston and Chicago, decline in San Francisco.

Three years later, this scenario has not materialised. In New York, property tax revenue fell only once, by 6 percent in fiscal year 2022, and then grew every year, reaching 35.3 billion dollars in fiscal year 2026. In Boston the tax grew every year, from 3.14 billion to 3.61 billion, and the city kept its top credit rating for the thirteenth year in a row. The exception is San Francisco, where revenue fell by about 4 percent and Moody's downgraded the city in 2024, citing remote work directly.

The explanation lies in the law. Tax assessments lag behind market prices by years: in New York, changes in the assessed value of large buildings are phased in over five years. In Massachusetts, the law caps the total tax levy, so falling property values do not reduce the total, they only change who pays it. In addition, rising residential values offset the decline in commercial property: across 213 cities, property tax revenue grew by 3.4 percent in fiscal year 2025.

In other words, the tax did not disappear, someone else paid it. According to a 2025 calculation in Chicago, downtown commercial properties paid 129 million dollars less, while homeowners paid 469 million more. The median residential bill rose by 16.7 percent, and in poorer neighbourhoods the increase ranged from 99 to 133 percent.

According to a 2026 study by the Pew Charitable Trusts, none of the five cities it examined had entered a doom loop, "at least not yet". The forecast itself has a horizon of 2029.

04 How Public Transport Was Hit

In public transport the losses were immediate. At New York's transit agency, the share of fares and tolls in operating revenue fell from 52 percent in 2019 to 39 percent in 2024. On San Francisco's BART metro, this share dropped from about 70 percent to 30 percent.

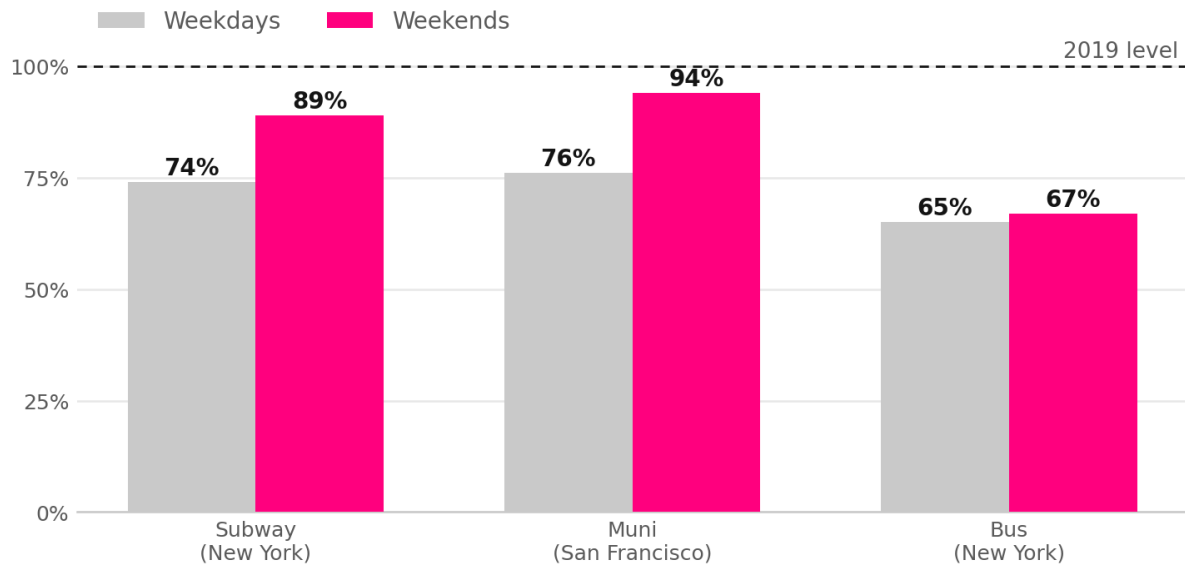


Chart 4. Ridership recovery compared with 2019: weekdays and weekends.

Ridership did not fall evenly; the shape of the week changed. On the New York subway in 2025, weekday ridership was 74 percent of the 2019 level, while weekend ridership was 89 percent. The largest drop is between 7 and 11 in the morning, which means what was lost was the morning commute, not the city. In London, Paris and Seoul, ridership has recovered to 91–98 percent of the 2019 level.

The deficits were mostly covered by political decisions. New York raised its payroll tax, and the state of Illinois approved 1.2 billion dollars a year in new funding in 2025. San Francisco's BART remains unresolved: its deficit is 375–400 million dollars a year, its reserves run out in 2027, and the question goes to a referendum in November 2026.

05 Why Offices Are Not Empty in Tokyo, Seoul and London

If empty offices were purely the result of remote work, it should have happened everywhere. In 2026, office vacancy is 1.5 percent in Tokyo, about 4.2 percent in Seoul, 8.6 percent in central London, 8.5 percent in Germany's major cities, 11.4 percent in the Paris region, and between 18 and 21 percent in the United States. In early 2026, rents for the best offices in Tokyo grew at one of the fastest rates in their history.

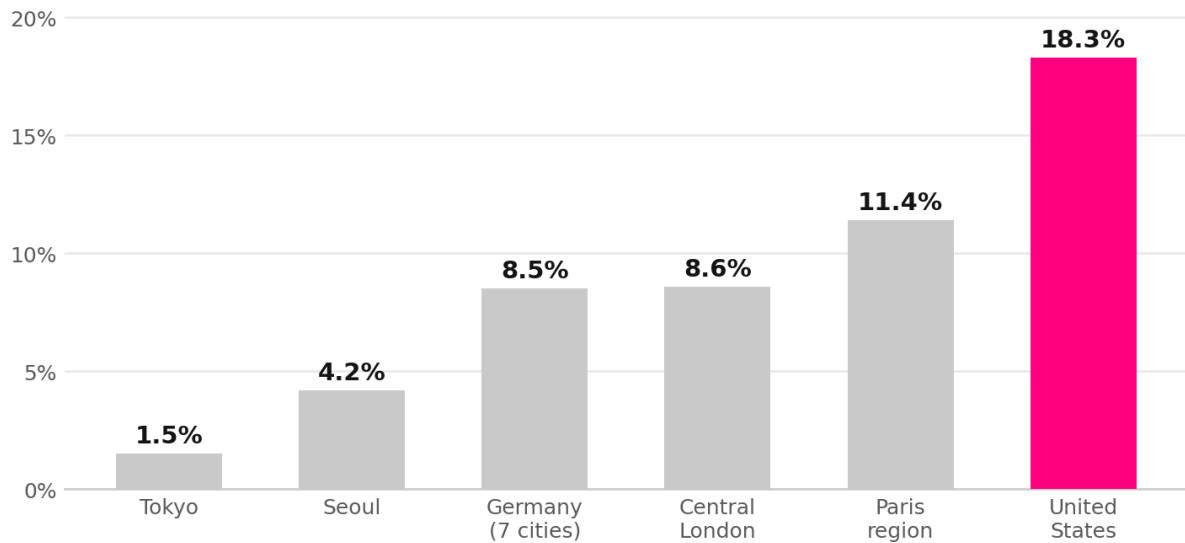


Chart 5. Office vacancy, first and second quarter of 2026.

Part of the explanation is work culture. According to a survey of 42,426 workers in 34 countries, people in English-speaking countries work from home 1.4 days a week on average, in Europe 0.8 days, in Asia 0.7 days, and in South Korea only 0.4 days. The authors link this difference to how individualistic a society is and to how long its lockdowns lasted.

The other part is construction. In America, remote work coincided with a large building boom: in 2019 alone, 57 million square feet of new office space was delivered, and at the end of the year another 130 million was under construction. This space reached the market in 2020–2023, just as interest rates were rising fast. For this reason, the American office crisis is not a universal consequence of remote work.

06 Where People Moved and What Happened to Rents

A common belief is that people moved from expensive cities to cheap states. A 2024 study by Bloom and Ramani shows a different picture. The 12 largest US cities lost 8 percent of the population of their central districts, but 58 percent of those who left moved to the suburbs of the same city, 29 percent to a smaller city, and only 4 percent to rural areas. This fits a hybrid arrangement: if you need to be in the office twice a week, you cannot move far away.

Large cities then recovered thanks to international migration. The New York metropolitan area gained more than 213,000 people in 2023–2024. In 2024–2025, however, international migration nearly halved and growth slowed again.

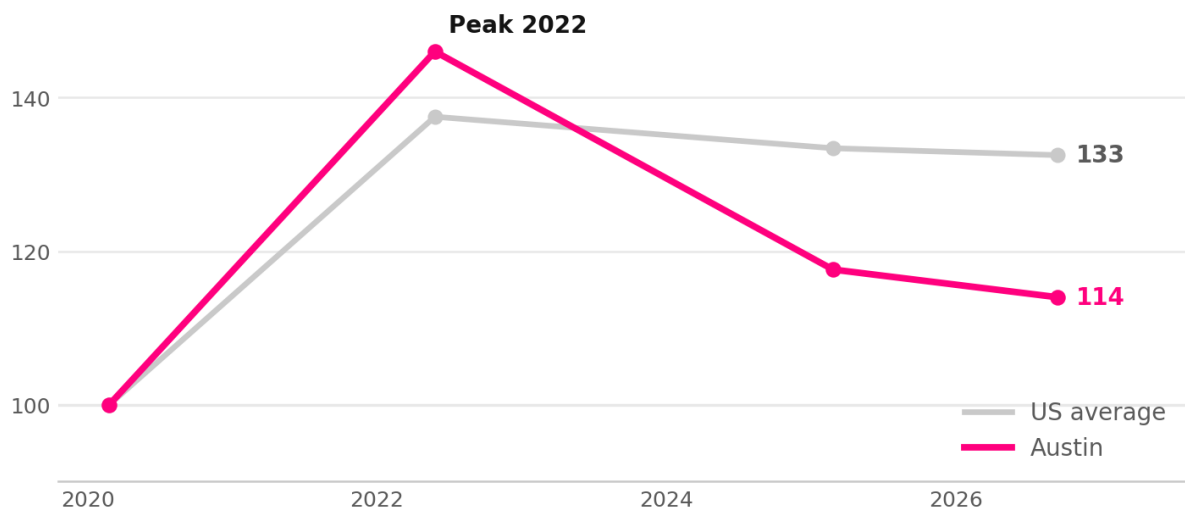


Chart 6. Rent index in Austin and the US average, 2020–2026.

The most telling example for rents is Austin, which was a symbol of the remote work boom. In August 2021, rents rose by 40.3 percent year on year, and then fell. Over 2020–2025, rents in Austin rose by just 17.6 percent in total, compared with 33.4 percent nationally. The reason is construction: Austin issued more than 15 new housing permits per 1,000 residents, San Francisco about 2. In San Francisco, rents rose by 26 percent in 2025–2026, the fastest rate in the country.

The money people used to spend around the office did not disappear. A study in Lyon found that about 72 percent of this spending moved closer to people's homes, while total spending in the metropolitan area stayed unchanged. The problem is distribution: one central London district lost about 8,000 service jobs, while the same amount of gains was spread across 161 suburbs.

07 How Remote Work Affects Productivity

In a randomised experiment by Bloom, Han and Liang (Nature, 2024) at the Chinese company Trip.com, half of 1,612 employees worked from home two days a week. After two years there was no difference in performance reviews or promotions, while quitting fell by a third.

–33%

Reduction in quitting in the hybrid group, from 7.2 percent to 4.8 percent. Among women the reduction was 54 percent.

A study in India found the opposite: in Chennai, data entry workers working from home were 18 percent slower. At an American call centre, remote employees answered 12 percent fewer calls, but only 4 percentage points of that gap were caused by remote work itself; the rest was explained by who chooses such jobs. The negative results mostly concern fully remote work; no such harm has been confirmed for hybrid work.

The most serious negative effect concerns young people. According to a 2026 study, when a programmer sits next to their teammates, they receive 18.3 percent more feedback on their code. When working remotely, junior employees lose this learning. In occupations where remote work is possible, youth unemployment rose relative to older workers in 2022–2024.

Workers themselves value this option highly: according to the SWAA survey, working from home two or three days a week is worth the equivalent of a 7 percent pay rise to them on average.

08 What Cities and Companies Tried

Cities relied on converting offices into housing, and companies on mandatory returns to the office. Both approaches have had modest results.

3,709

Of the 55,339 apartments counted as "under construction" in January 2024, 3,709 were completed by the end of the year.

Over five quarters, conversions, demolitions and redevelopment together removed about 33 million square feet, while about 1,089 million square feet stand empty. Only 9 percent of office buildings are physically suitable for conversion, and projects need large subsidies: in New York, the tax break costs 1.4 million dollars per apartment.

What actually reduces vacancy is that new construction has almost stopped: space under construction fell from 130 million square feet in 2019 to 15.4 million, a drop of 88 percent. The Canadian city of Calgary is often cited as a conversion success, but by June 2026 only 8 projects had been completed there, with about 800 apartments, and downtown vacancy is still close to 30 percent.

Mandatory return to the office has been introduced by 55 percent of Fortune 100 companies, compared with only 5 percent in 2023. According to sensor data, required office days increased by 12 percent, but actual attendance rose by only 1–3 percent. A study of S&P 500 companies found no improvement in

profitability or share value, while employee satisfaction fell. After mandates were introduced, staff turnover rose by 14 percent, mainly among senior employees and women.

In January 2025, the US federal government ordered all its employees back to the office. The share of federal employees working fully on site rose to 46 percent, but office attendance in downtown Washington rose only from 47 to 51 percent of the pre-pandemic level.

09 Conclusions

The level of working from home has been stable since 2022–2023. In the United States, about a quarter of workdays are done from home, and mandatory returns to the office have barely changed this figure.

The crisis was real but narrow. It hit older office buildings in city centres and transport fare revenue, but it did not break city budgets. Instead, the tax burden shifted to homeowners.

Housing costs are determined by supply. Austin built a lot and rent growth slowed; San Francisco could not build, and its rents are now rising faster than anywhere else.

Hybrid work does not harm performance and helps keep employees, while mandatory returns did not improve performance. The highest price is paid by junior employees and by the central districts that lost service jobs.

This is not a universal phenomenon: the American crisis was caused by a combination of a construction boom, high interest rates and work culture.

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