
Remote work: An example of how to identify a downtown-related trend breeze that probably will outlast the COVID-19 crisis

Received: 27th September, 2020

N. David Milder

Founder and President, Danth, USA

N. David Milder is Founder and President of Danth, Inc., a nationally recognised authority on downtown revitalisation. For over 45 years he has utilised his market research and management skills to assess the potentials of downtowns and recommend revitalisation and recruitment strategies and programmes. David also has managed several downtown special districts, has authored three books and numerous articles. His recent research has focused on the new normal for downtowns, Central Social Districts, and downtown small business development.

Danth, Inc., 83-85 116th St #3d, Richmond Hill, New York 11418, USA

E-mail: info@danth.com; Web: www.ndavidmilder.com

Abstract Crises are well known for their ability to create significant economic, social and political changes. In their midst, however, it is often difficult to identify those new trends that will last well beyond the crisis. That can make planning to resolve major problems difficult until the crisis eases or passes. To facilitate useful contingent planning, this paper outlines a process for identifying those trend breezes most likely to endure and be true and impactful trends. It then applies this analytical process to the huge increase in remote working that the COVID-19 pandemic has sparked. The analysis demonstrates that remote work was growing before the crisis, has other trends that reinforce it and that employees and employers have strong non-health reasons to continue a robust level of its use. Moreover, remote work probably will have significant economic impacts on urban, suburban and rural communities long after the pandemic eases. It thrives best in the industries most dependent on creative/knowledge workers and a critical mass of them are now committed to remote working. Employers that refuse to oblige them are likely to have a more difficult time recruiting and retaining such highly skilled and much sought after workers, especially since they are already in short supply.

Keywords: *remote work, trends, trend breezes, open offices, broadband, creative workers, knowledge workers*

INTRODUCTION

Opining experts have noted several trends or phenomena emerging during the COVID-19 crisis that might have serious long-term impacts on downtowns and Main Street districts. Among them are:

- Greater use of pavements and public

spaces for commercial and leisure purposes;

- Acceleration of the process of creative destruction in the retail industry due to decreased customer foot traffic and increased online sales;
- Changes in commuting patterns, with public transport use declining and single

passenger auto commuting strongly resurging;

- An expected resurgence of small merchant start-ups as the crisis ebbs;
- Growth in remote working.

This paper will focus on remote working and use it to try to outline how we might now make a decently reliable decision about whether or not a putative trend that has attracted attention during the COVID-19 crisis will *probably* endure and be seriously impactful well past the current crisis.

TRENDS AND TREND BREEZES

To say that phenomena are real trends we must, at a minimum, be certain of their present existence. That is usually fairly easy to determine. There are, however, a number of other questions about them around which there can be greater uncertainty. Will they persist long into the future? Will they maintain their current characteristics and strengths? What will their impacts be? The trends or phenomena around which there is such uncertainty should more properly be called *trend breezes*, since while they definitely now exist and are being observed, their strength, intensity, direction and longevity have potentials for considerable variation. When their strength, intensity and direction acquire better known and predictable ranges, then they truly can be called real trends. Even with trend breezes, however, although our knowledge is incomplete, we might now know or learn enough to identify *those most likely to endure* and have significant impacts and consequently do viable and useful *contingent planning*.

SOME KNOWNs

Analytically, looking at these trend breezes, we are not in a state of total

ignorance. There are some realities we now know with a good deal of certainty that can ground our critical thinking about them:

- Crises very often are associated with major social, economic and/or political changes, often disrupting previously well embedded behaviours, attitudes and institutions. At times, the changes they spark initially appear minor or go unnoticed. We should be on alert for important changes the COVID-19 crisis may unleash and try to differentiate between those with strong and weaker potentials for longevity and impacts;
- Crises tend to reinforce or mutate existing trends. One very important way this is done is that the crisis reinforces the weakness a trend was already inflicting on some people and organisations and may also reinforce the rewards it gives to others. Prior to the COVID-19 crisis, many parts of our society and economy already were in a mutating, strengthening, weakened, or fragile condition: 1) retail chains, small retailers, restaurants, personal service operations, small cultural/arts/entertainment organisations; 2) the millennial and Gen Z age cohorts; 3) various racial and ethnic groups; 4) online businesses (eg Amazon) and social media (eg Facebook and Twitter) had enormous growth;
- The mechanism through which COVID-19 has its greatest impact on existing downtown related trends and spawning new ones has been through our need for social distancing. It is disturbing the way we work, travel, shop and play;
- While the intensity of the need for distancing is, however, likely to diminish with the emergence of a vaccine, an effective therapeutic, or community immunity, it may last long enough to unleash changes in

behaviours or strongly strengthening the levels of existing behaviours that then are kept on long-term for a variety of reasons unrelated to public health. This is an important key to their longevity and strength;

- They do so because they strongly meet some of the other needs or wants of various groups of people or organisations. For example, while the emergence of residential indoor plumbing in the 19th century was sparked by a response to major outbreaks of cholera, typhoid and yellow fever, its popularity grew for reasons unrelated to the need of coping with those diseases. Indoor plumbing became a highly desirable and necessary amenity in its own right. Today, our often-palatial bathrooms have little to do with our hygienic needs;
- In general, trends last when they have large levels of user buy-ins by various groups. A good example of this was the growing flight to the suburbs after the Second World War, when real estate developers, local government officials, retailers and consumers all sparked its growth;
- Crises can unleash trend breezes that are reinforced by other trend breezes. For example, the increased risk and reduced use of mass transit can reinforce remote work. This increases their likelihood of turning into real trends;
- The impacts of these trend breezes can vary in strength. From a downtown revitalisation perspective, our concern should be on those that are already displaying significant impacts, or that can be analytically shown to have such large potential impacts that they warrant attention now;
- The strength of trend breezes can vary geographically, so different types of downtowns probably will be affected differently by them. For example, remote work may reduce the demand

for office space, eateries and retail in our larger downtowns, but provide a significant new consumer market segment for suburban residential landlords and developers, retailers and eateries;

- We must recognise what we do not know. At this moment, we still do not know with any accuracy or certainty about a lot of things including how many downtown businesses have closed for good, how many have been severely weakened, or when consumer spending and employment levels will return to acceptable levels;
- We live in a really uncertain world, where we often need to act on less than perfect information. Many actions are taken without any sense of absolute certainty. Most business people, political leaders and officials, and most of us in everyday life, need to make decisions and plans based on less than perfect information, but information that is deemed the best we can get, although at least good enough to make a decision. This usually involves individuals making subjective probability estimates about the reliability of the decision-related information they are considering, and the outcomes of the actions they might take;
- Consequently, with regard to trend breezes, an analytical procedure that can help decision-makers determine whether a COVID-19-related trend breeze will probably have an impactful existence after the crisis wanes is likely to be of considerable value.

SOME CRITERIA FOR ASSESSING THE POTENTIAL LONGEVITY OF TREND BREEZES

From the above, I would suggest the following criteria for identifying trend breezes that are likely to last and become true trends:

1. There are reliable data that support the current existence of the trend breeze;
2. It existed, even if at a weaker level, before the COVID-19 crisis. This signal is even stronger if it was growing prior to the crisis;
3. It helps people and/or organisations cope with current crisis conditions;
4. There are large important ‘user groups’ sparking its growth;
5. The groups are engaging in trend related behaviours for non-health reasons that can endure once the COVID crisis has ebbed;
6. There other trends or trend breezes that reinforce the trend breeze in question;
7. The potential post-crisis impacts of the trend breeze are deemed significant enough to warrant attention;
8. There is an identifiable geographic variation in the presence of the trend breeze that affects its potential prevalence — and we have a good explanation for where the trend will and will not be strong. This ability to explain this variation enhances its credibility and our confidence that we properly understand this trend.

REMOTE WORKING

One might reasonably argue that were it not for remote work, our economy today would be far worse off. It has kept many companies alive, enabled the high-tech industries to even prosper, assured adequate incomes for many households.

Remote working pre-COVID

Seeds of the Internet date back to 1962, but the version that first approximates how we know it today appeared in 1991 with the World Wide Web. By 1993, Phil Burgess had noted the emergence of ‘lone eagles’ who could use telecommunications assets, including the emerging Internet,

to maintain sophisticated and well-paying jobs while living in high quality of life locations distant from major metropolitan areas.¹ Later in the 1990s and early 2000s, telecommuting was a hot topic, and some observers saw it leading to a decentralisation of economic power to less densely populated areas. Cyber districts were briefly hot as a revitalisation strategy. Joel Kotkin’s *The New Geography* book, for example, saw cities flourishing if they were situated on large fibre optics pipes and could offer the types of lifestyle assets knowledge workers liked.

But this decentralisation never came to pass and the terminology shifted from telecommuters and lone eagles to remote workers. The data most often used by analysts to identify remote workers/telecommuters/lone eagles is from the Census Bureau’s America Community Survey (ACS) that asks members of about 3.5m households a question about how they get to work. Full-time employees who answered ‘worked at home’ to the question, ‘What was your primary means of transportation to work during the survey week?’ are considered remote workers. In 2015, only about 3 per cent of the US workforce worked from home at least half of the time, an increase of 115 per cent since 2005.² Most of the reports about remote workers have come from companies and organisations that have an interest in their growth, so their write-ups tend to focus on the more impressive growth percentages than their current absolute numbers or percentage of the workforce.

In 2014, Kotkin and Cox did a follow-up study on lone eagles in the 52 largest metropolitan areas and cities over 25,000 in the US. They found, using the ACS data, places with numbers high enough to command some attention:

- ‘[The met areas] with the highest proportions of home-based workers

are generally those with high-tech, information-based economies. Tops is San Diego, a major center for digital and biomedical businesses, where 6.6% of workers are based at home’;

- ‘The bulk of our leading work-at-home locales are tech-oriented suburbs or exurbs. These include several communities around the often traffic-clogged greater Atlanta area, including No. 2 John’s Creek (13.1%) and No. 6 Alpharetta (10.6%)’;
- ‘More than 5 million Americans aged 55 or older run their own businesses or are otherwise self-employed, according to the Small Business Administration, and their numbers soared 52% from 2000 to 2007 ... This entrepreneurial push could correlate with the movement of aging boomers to more rural communities, and sleepier outer suburbs. Contrary to the much-hyped notion of a ‘back to the city’ movement among boomers, Census research suggests that if they move at all, most head further to the periphery. At the top of our list of communities over 25,000 is the coastal North Carolina city of Jacksonville, home to the Marine Corps’ Camp Lejeune and a good number of military retirees. A remarkable 13.8% of the people in this highly affordable, scenic community of 70,000 work out of their homes, roughly three times the national average. The median home price in Jacksonville: \$141,000.’³

Gallup has a huge survey panel of about 195,000 US employees that are drawn from establishments likely to be incorporated and have employees. Its samples consequently probably reflect a different population than the general population tapped by the ACS, and one that probably better reflects what is happening in companies with lots of employees officed in our larger cities.

Year		Percent of Employees Who..
2012	2016	
39%	43%	Worked any portion of their time remotely
24%	31%	Worked 80% to 100% of their time remotely
9.4%	13.3%	Estimated percent of all employees who worked remotely 80% to 100% of their time.

Figure 1: Estimate of percentage of employees in Gallup study who worked remotely 80–100 per cent of the time 2012 and 2016

Source: Gallup⁴

Figure 1 shows that in 2016, 43 per cent of their respondents worked at least some of the time remotely and that 31 per cent of them worked 80–100 per cent of their time remotely. Consequently, it is possible to calculate that 13.3 per cent of all these employees worked 80–100 per cent of the time remotely. Moreover, that percentage is a substantial increase over the 9.4 per cent estimated for 2012. They are full-time or very close to full-time workers. Since the percentage of remote workers increases with the total number of employees a company employs, looking only at firms that have at least 5,000 employees would mean that just those firms had about 5.4m full-time or almost full-time remote jobs in 2016.

These findings by Gallup suggest that the level of full-time remote working was probably far more extensive pre-COVID in the types of firms found in our major downtowns, 13–14 per cent, than the national ACS data might indicate, 3 per cent. The Kotkin-Cox study shows that, even if we generously interpret all people who work at home as remote workers, the peak level for a city, large or small, also was about 13 per cent. The fact that Gallup found that about another 30 per cent of its surveyed workers worked remotely at least part-time in the pre-crisis period, however, indicates that a lot more of them could easily become full-time

remote workers, because they already had some experience doing it.

The Great Recession trend breeze

During that crisis, there also was a noticeable, if not large increase in the number of corporations interested in ramping up their remote work programme because of its ability to tap larger talent pools and especially its ability to reduce expenditures for leasing expensive office spaces. This interest waned, however, as the economy improved.

The open office model of working

An important factor that helped thwart the growth of remote work was a kind of flash flood adoption of the ‘open office’ model for utilising office spaces that was made famous by some very successful high-tech companies such as Google and Apple. It supposedly stimulated creativity by fostering spontaneous social interactions. Yahoo once had a very large remote workforce, but when Marisa Mayer — habituated to Google’s famed open offices — took over, she famously shut down the remote working. The COVID-19 crisis, however, has sparked a need for social distancing that has seriously weakened the viability of the open office model.

Levels of remote work during the COVID-19 crisis

Many major corporations, often those with large downtown office spaces — eg Google, Microsoft, Morgan Stanley, JP Morgan Chase, Capital One, Zillow, Slack, Amazon, PayPal, Salesforce — quickly responded to the need for social distancing by encouraging and facilitating their employees to work at home.⁵ Several other high-tech companies such as Twitter, Square, Facebook, Shopify,

Box and Slack have already indicated that either all of their workers or very substantial portions of them can work at home even after the pandemic is over.⁶

Research on the level of remote work based on surveys of workers

Two survey research approaches have been used to study how the COVID-19 pandemic has influenced remote working. One is to survey workers, the other is to survey corporate officials. Using the first approach, in April and May 2020 a team at MIT used Google’s online survey tool in two waves and had over 50,000 individual respondents. That is a huge sample, but biased toward only those with Internet access, so it will be somewhat overstating the level of remote work in the nation’s workforce. Nonetheless, its findings indicate that the pandemic greatly increased the number of remote workers, and at a level — about 300+ per cent — that has not been seen before: ‘Of those employed pre- COVID-19 ... about half are now working from home, including 35.2% who report they were commuting and recently switched to working from home.’⁷

Research on the level of remote work based on surveys of company officials

Surveys by the Federal Reserve Bank of New York of business leaders in its region in April 2020 found that those in service industries were reporting 60.5 per cent of their workforces were now working from home, while those in manufacturing industries were reporting remote work at 26.5 per cent. Both numbers are much higher than the pre-crisis national levels described above.⁸

A team at the Harvard Business School (HBS), with a national research perspective, issued an insightful working paper in June 2020 also based on surveys

of business officials. They had several important findings:

- The overall levels of remote work are high. About 45 per cent of those in smaller businesses reported having at least some of their employees working remotely, averaging about 22 per cent of their workforces. The larger companies averaged 79 per cent of their workforces working remotely;
- There is, however, considerable variation across industries. The research by Dingel and Neiman about which occupations and industries are more suited for remote work did ‘a remarkably good job of predicting the industry level patterns of remote work’ (more about this below);
- Remote work is much more common in industries with better educated and better paid workers;
- ‘Employers think that there has been less productivity loss from remote working in better educated and higher paid industries’;
- ‘[M]ore than one-third of firms that had employees switch to remote work believe that remote work will remain more common at their company even after the COVID-19 crisis ends.’⁹

The major value of the HBS study is the confirmation of the important research by Dingel and Neiman about the occupations and industries most prone for remote work. The industries they found with the highest shares of jobs that can be done at home are: educational services, 83 per cent; professional, scientific, and technical services, 80 per cent; management of companies and enterprises, 79 per cent; finance and insurance, 76 per cent; information, 72 per cent. Among the least prone industries are retail trade, 14 per cent and accommodations and food services, 4 per cent. Arts, entertainment and recreation was also relatively low at

30 per cent.¹⁰ This study combined with the HBS team study show that we now know not only about the new levels of remote work, but also about the industries in which it is most likely to grow. Also, very evident is the fact that those with the greatest potentials for remote work, current and future, are those that occupy large proportions of the office spaces in our larger downtowns. On the other hand, those industries that are more likely to occupy storefronts in many downtowns have very modest to low potentials for remote work. These propensities are unlikely to change in the foreseeable future.

Geographic variation

Roberto Gallardo and Richard Florida have created and made available to the public (see Figure 2) a very interesting data set that also builds on

Name	State	Vulnerability
Autauga	Alabama	Low
Baldwin	Alabama	No
Barbour	Alabama	High
Bibb	Alabama	High
Blount	Alabama	Moderate
Bullock	Alabama	Moderate
Butler	Alabama	High
Cahown	Alabama	Low
Chambers	Alabama	Moderate
Cherokee	Alabama	Moderate
Chilton	Alabama	High
Choctaw	Alabama	High
Clarke	Alabama	High
Clay	Alabama	High
Cleburne	Alabama	High
Coffee	Alabama	Low
Colbert	Alabama	Moderate
Conecuh	Alabama	High
Coosa	Alabama	High
Covington	Alabama	Moderate
Crenshaw	Alabama	High
Cullman	Alabama	High

Figure 2: Which communities are most able, and which are most vulnerable to take advantage of the shift to remote work

Source: Gallardo and Florida¹¹

the Dingel-Neiman findings to measure how prepared over 3,000 counties are for developing a significant remote work capability given their existing workforces. They begin with the conclusion that:

‘[...] a substantial share of Americans will be working remotely for the foreseeable future. Surveys and polling data suggest that more Americans desire to work remotely in the wake of the current health crisis. And we can expect an increased share of the workforce and companies to remote work as they realize the cost-savings and other benefits.’¹²

They looked at variables related to two key factors that have considerable geographic variation: 1) the availability of digital connectivity; and/or 2) the share of workers employed in industries and occupations that are amenable to remote work. Instead, however, of focusing on those counties that are best prepared, they ‘focused on how vulnerable (weak) counties are by looking at the places that have inadequate digital connectivity — including access to the Internet and devices — and places where a higher share of workers are employed in industries/occupations that are not remote work friendly’. Counties are then classified on their ‘vulnerability’ (see Figure 2). Those counties labelled ‘no’ or ‘low’ are best positioned for growing remote work, while those labelled ‘high’ are very poorly positioned. Those interested can go to the PCRCD website to find out how their county is classified, and to access the raw data on which that classification was based.

While these data certainly speak to the potentials for counties to encourage their current workforces to obtain and maintain jobs connected — to either employers or clients — in distant market areas, it does not address the other important path through which remote work can

spark economic growth: attracting new Internet-competent residents based on the county’s quality of life offerings and the availability of sufficiently robust Internet connections. Savvy economic developers will pursue both strategies.

I have looked at the PCRCD data for about 30 suburban and rural counties in New York, New Jersey, Ohio, Wisconsin, Wyoming, Nebraska, North Carolina, Vermont, New Hampshire and Maine that have downtowns I know fairly well. With very few exceptions, they all are rated ‘no’ or ‘low’ — that is, they have good potentials for developing a ‘remote workforce’. Since, to my knowledge, few if any, have focused on such a strategy, remote working represents for them a significant untapped viable path for economic growth. This certainly will not be the case with all counties, but it will be for a very significant number of them.

How remote work helps people and/or organisations cope with crisis conditions

There are two important groups whose views and behaviours determine the level of remote working: the employers and their employees. As the data cited above shows, remote work has allowed companies, especially the large ones that produce or use a lot of technology, to stay operational and keep their employees working. That has allowed both the companies and the worker households to keep their financial heads above water during this crisis. It has also dealt with the need for social distancing and allowed the workers to feel safer.

The grave danger of the current crisis, however, creates such a high level of need that it may overcome the long-existing concerns about remote work held by both employers and employees. Among those for employers are:

- Can productivity be maintained?;
- Can remote workers be adequately supervised?;
- Can the corporate culture, team spirit and level of spontaneous creativity be maintained?

Prior to the crisis, there were some studies that indicated remote working was more productive than traditional office work.¹³ As the HBS report noted, corporate leaders then were not finding that during the crisis remote work was reducing productivity. Also, a study during the pandemic by Cushman & Wakefield found that 'Productivity can occur anywhere, not just at the office ... During the pandemic, effective team collaboration has reached new heights, through better leverage of remote collaborative technology.'¹⁴ Yet, since those reports, Jamie Dimond, CEO of JP Morgan Chase, has stated that the productivity of his remote workers had declined compared to in-office workers. Whether this was truer for his 'traders' than his other personnel is unknown. Prudence suggests treating the productivity issue as a complex one, with many related answers still uncertain.

The questions related to the corporate culture, team spirit and levels of creativity definitely remain unresolved. The strong collaboration Cushman & Wakefield discovered 'is task oriented collaboration and not the kind that creates opportunities for informal learning and mentoring'. Still, it should be noted that while online collaboration tools such as Zoom are, at best, partial substitutes for face-to-face encounters, they are certainly not entirely without merit when it comes to creativity. Researchers are also hard at work to improve their ability to communicate and support emotional understandings, which also can be conducive to creativity. Nevertheless, some corporate leaders, even those in high-tech firms, such as Reed Hastings at Netflix, oppose remote work

because of its threat to their corporate cultures.

More promisingly, some corporations are also considering ways for their remote workers to have opportunities for these vital face-to-face meetings by adding hotel conference features and functions to their existing major downtown office locations or creating new suburban hubs that would focus on them.¹⁵ If these 'hotel offices' stimulate informal meetings, prior research on technology transfer suggests that they could be fairly successful. An advantage of the suburban locations is that remote workers could easily use their cars, instead of public transport, to get there.

For employees, the concerns have been:

- *Can they create and maintain the internal social connections needed to have a strong upward career path within the company?* As just noted above, many corporations are thinking about innovations that could help resolve this problem. Yet, Jamie Dimond at Chase thinks his younger remote workers will be badly handicapped when it comes to making these personal connections. Most of the remote workers I have met are, however, career satisfiers, who want a really good job they can enjoy, while also having the quality of life they and their families want. They are not those who aspire to rise to their company's C-suite;
- *Can they maintain the social connections within the corporation that make work more enjoyable and enhance their ability to be creative?* Coming once a week or twice a month to an office hotel location could be very helpful here. Personally, I have been working at home full-time since 1990, and while I do visit clients and professional friends and attend conferences, most of my person-to-person contacts have been by phone or e-mail. I have not found my remote working has inhibited any creativity on my part;

- *Can they cope with increased demands on their time and attention by other household members since they are spending so much more time at home?* This concern has grown considerably for remote workers with children as the COVID-19 crisis has endured and schools stay closed. It will very likely ease as the crisis ebbs and schools reopen.

The important ‘user groups’ sparking its growth and their non-health reasons for supporting remote work

An April 2020 survey by Gallup found that:

‘Three in five U.S. workers who have been doing their jobs from home during the coronavirus pandemic would prefer to continue to work remotely as much as possible, once public health restrictions are lifted. In contrast, 41% would prefer to return to their workplace or office to work, as they did before the crisis.’¹⁶

While surveys are just pictures taken at one point in time, even if substantial erosion in the desire for increased remote working in the future has occurred since April, it is still highly likely that such support will be substantially higher than pre-crisis levels.

For employees, remote work offers a number of substantial benefits:

- They are better able to live where they believe that can have the quality of life they are seeking. If there is one thing we can learn from both Florida and Kotkin it is the importance of quality of life in the decision making of creatives/knowledge workers about where they want to live. Remote work can make it easier for them to take their jobs with them or to find new jobs, or to create their own jobs. For many of them who are nesting, but not in the very top

income tiers, and living in our very expensive large cities, remote work can enable them to find better and more affordable housing in suburban or rural areas;

- Greatly reducing the aggravation, time spent and financial costs of commuting. The pre-crisis study, the 2017 ‘State of Telecommuting in the U.S. Employee Workforce’, found that: ‘Full-time telecommuters save over \$4,000 each year ... (and) half-time telecommuting employees save an average of \$2,677 annually in commuting costs’;¹⁷
- They have more time for leisure activities. That same 2017 study found, for example, that ‘By not spending time commuting every day, the average (remote) employee also gains back the equivalent of over two workweeks (11 days) per year’;
- They have better control over their work schedules;
- They can spend more time with other members of their households.

For employers, there are several possible benefits, but to properly understand them it is important to envision the way many corporations and their real estate advisers now see how and where their employees will work in the future. That vision increasingly includes a combination of a lot more remote working with the continued use of office spaces, although how those offices will be used, where they will be located, and how much space will be needed is still being worked through.¹⁸ The conclusions reached will probably vary by firm and industry. Some important considerations are that while remote working serves to reduce the demand for office space, the need for social distancing increases the demand for it. Also in the equation are the safety and service levels of local mass transit and how corporations’ real estate costs could be saved by moving to cheaper suburban locations.

- *Remote work reduces rent payments:* In our larger downtowns 50–60 per cent of the office employees probably are now working remotely and 60 per cent of them want to continue doing so after the crisis. That suggests a probable upper bound of between 30–36 per cent in the number who will no longer use downtown office spaces. The 64–70 per cent of employees who continue to work downtown will need greater amounts of space to maintain social distancing. How much that space per worker increase might be will probably vary by each office location. Remote work might serve as a damper on the rising cost of total rents, since it reduces the number of workers needing space, especially when the amount of space per worker must be substantially increased. If the space costs of maintaining social distancing are significantly larger than the savings generated by the remote workers, then corporate leaders might be induced to encourage even more remote working. Or they might decide to follow their remote workers to the suburbs where they can save significantly on office rents. It is doubtful, however, that too many would totally give up their prestigious and strategic locations in our major central business districts (CBDs). Two other important questions are: how long will the crisis last, and will the larger amounts of space per employee created for social distancing be kept after the health crisis? Bottom line: how the dynamic of remote work pressuring for reduced spaces, while the greater need for social spaces pressures for much larger spaces, will play out on downtown office rents still remains to be seen.
 - *Productivity and creativity:* As noted above, remote workers can increase productivity. The supposed creative benefits of open offices have been called into question, and companies are thinking about ways such as office hoteling to facilitate creativity for their remote workers. If many of these remotes now cluster in some suburbs, then the lauded spontaneous interactions might happen on a more informal and decentralised level, perhaps around suburban downtown coffee shops, spas or gyms;
 - *Accessing a larger talent pool:* Many companies in the high-tech and FIRE (finance, insurance and real estate) industries are finding it harder to get the talent they want. Recent actions at the federal level, by making it far more difficult to tap foreign talents, especially STEM (science, technology, engineering or mathematics) workers, have worsened that situation. Remote work can help relieve it;
 - *Workforce retention:* It always costs a fortune and takes valuable time and effort to replace workers, especially those with considerable talent. Many major employers — especially those prone to be downtown office tenants — are now encountering sizeable proportions of their workforces who want to either work mostly on a remote basis or to do so far more often;
 - *Saving on labour costs:* Facebook and some other high-tech companies have announced that remote workers who move away or are already located in distant climes will not be paid on par with those working in their offices since their costs of living will be lower. While a potential financial incentive for employers, it also could be a passive aggressive way of opposing remote work. Their position is certainly a disincentive for some of their potential remote workers.
- One might reasonably argue that the personnel-related factors are likely to be the strongest motivators for corporate

leaders in today’s economies where highly skilled workers have become such a critical asset. It is what differentiates the current remote work trend breeze from the one sparked by the Great Recession. The sheer number of highly skilled people now remote working, liking it and wanting to do more of it in the future is far larger than ever. Companies that do not offer remote work are likely to lose skilled workers to firms that do. At the same time, the demand for STEM workers continues to grow, while recruitment from abroad has become more difficult.

Other trends or trend breezes that reinforce the growth of remote work

Housing affordability issues in our large central cities were recharging the movement of households to suburban and rural areas. Remote work enables these movers to take their jobs with them or to get new ones. The skilled workers who want more living space at an affordable price have an incentive to adopt remote working. That housing affordability was a growing problem in our major cities was well known many years before the crisis, as the data in Figure 3 demonstrates.

William Frey, the well-known demographer, has found that it has contributed to a new flight to the suburbs in our largest metro areas (see Figure 4):

‘Major metropolitan areas with populations exceeding 1 million sustained the biggest growth slowdowns and, in several cases, population losses over the last four years, as have the urban cores within them.’²⁰

‘This recent demographic dispersal can be attributed to an upturn in the economy and, to a lesser degree, the housing market in the last half of the 2010s. These factors gave young adult millennials and others the wherewithal to find jobs and homes in suburbs and more parts of the country, which were not available to them in the

immediate aftermath of the 2007 to 2009 Great Recession.’²¹

The extent of this flight during the current crisis in the New York City (NYC) area, and if it will continue on after its ebb, are matters of some debate. Reports of wealthy residents fleeing to second homes or purchasing them are plentiful, but whether that means they are deserting the city completely or just more often than in the past is unknown. But the present demand by current NYC residents to buy homes in suburban and rural scenic areas has burgeoned, as this recent headline in the *New York Times* demonstrates: ‘New Yorkers are Fleeing to the Suburbs: “The Demand is Insane”’.²³ Similar reports have appeared about the situation in San Francisco.

The huge problems of big city mass transit systems

Public transport systems that are perceived to be unsafe, incapable of providing desired service levels, and/or uncomfortable can motivate workers who might use them to try remote working. Just as COVID-19 has hurt people with serious pre-existing health conditions the

City	Ratio	City	Ratio
Manhattan	15.60	Denver	6.60
San Francisco	13.80	Portland	6.40
Los Angeles	12.10	Chicago	5.90
Boston	10.00	Austin	5.50
San Jose	9.00	Phoenix	5.00
Seattle	8.70	San Antonio	4.70
San Diego	8.30	Houston	4.50
Washington DC	7.50	Charlotte	4.40
Dallas	6.60	Fort worth	4.00
Severely Unaffordable: 5.1 and over			
Seriously Unaffordable: 4.1–5.0			
Moderately Unaffordable: 3.1 to 4.0			
Affordable: 3.0 and under.			

Figure 3: Ratio of local median household income in some selected cities in 2017

Source: Richter¹⁹

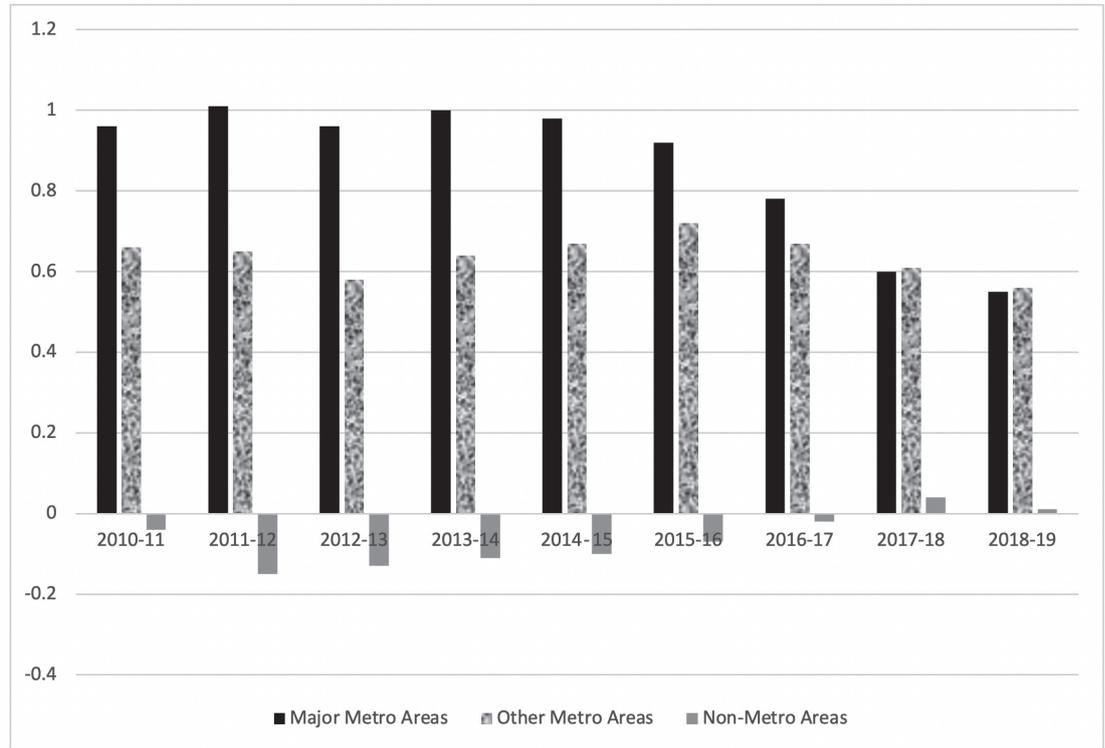


Figure 4: Annual growth rates for metropolitan and non-metropolitan populations 2010–19

Source: Frey²²

most, so its impacts have badly injured companies, industries and transit systems with comparable weaknesses. Prior to the crisis in 2017, transit ridership, mostly on buses, had fallen in 31 of 35 of our major metropolitan areas, including the seven that serve a majority of transit riders.²⁴ The subway system in NYC was getting slammed for its terrible service and failures to implement needed major improvements to signalling for about a decade. NJT Transit also was suffering from a myriad of problems, as was the management of the Metro in the Washington DC area.

When COVID-19's impacts really hit with full force, commuter rail 'all but disappeared': ridership on the New York region's Metro North fell by 95 per cent; Metra, which serves suburban Chicago, fell by 97 per cent; PATCO in suburban Philadelphia had a similar drop. 'Heavy rail' ridership also fell nearly as severely:

NYC's subways dropped by about 90 per cent, although the figure has since rise to about 25 per cent; Metrorail in DC also fell by about 90 per cent; San Francisco's Bay Area Rapid Transit system checked in with a 97 per cent decline, much worse than Los Angeles Metro Rail's decrease of 75 per cent.²⁵ Many of these former riders are now using remote work to keep their jobs.

The emerging problem that may continue to structure public attitudes negatively towards our largest transit systems, and indirectly reinforce remote work, is that their financial futures have become very uncertain. The Metropolitan Transit Authority in NYC, for example, needs to cover a US\$16+bn deficit running through 2024, and other large transit agencies are also facing very significant deficits. These troubled large agencies are the ones that are very reliant

on the farebox for most of their revenues, and that is a very unlikely source for raising the huge amounts of needed new revenues.

Quality of life concerns are bringing people to or back to the suburbs, and small towns in rural areas

Remote work meshes nicely with the strong inclinations of creative/knowledge workers and others to highly value their quality of life because it can enable them to have meaningful and well-paying jobs wherever they want to live, even if that is far from where their employers/clients are located.

As the Trulia survey data in Figure 5 indicates, not everyone is living now where they want to live, even when it comes to urban, suburban or rural areas. Based on that data, about 7 per cent, or 17.3m of US adults, would like to live in a rural area, but now do not. That is greater than the entire population of Greece or Hungary or Sweden. There are probably a significant number of potential remote workers among them.

Back in 2017, I wrote an article about quality of life retail recruitment in towns with populations under about 35,000. In it I noted that new and attractive independent downtown retail shops have been opened in many of these communities by people who moved to them because of the quality of life they offered. Their shops were a way to financially support that quality of life. Some of these downtowns' best shops

were 'organically recruited' in this manner, so their economic importance often far outweighs their absolute numbers.²⁷

My research then on these smaller communities seldom came across any strategy that even mentioned remote workers overtly, although a number were concerned about attracting creative workers, mainly artists who could also attract tourists. In my personal encounters, however, I often met lone eagles who were remote working.

In 2019, a follow-up look dug deeper into the topic of rural creatives and found that:

- *Rural areas have people in creative class occupations, but fewer of them:* Urban county workforces have about 30 per cent in creative occupations, while rural ones only have about 20 per cent. Moreover, most rural creatives are not artists, and quite a few are in remote work-prone occupations;
- *People being drawn to small and rural communities by their quality of life assets is not a new trend:* This has been going on for some time, especially by 'boomerangers', ie returning former residents;
- *The in-migrants are often quite skilled:* These skills, however, often are not honed in colleges;
- *While young adults may be leaving, 30–49-year-olds may be returning:* Brain gains were often countering brain drains. The boomerangers arrive mostly as family units and it is the family-oriented quality of life benefits the small town offers that is a crucial factor in these moves back home.²⁸

	Urban Areas	Suburban Areas	Rural Areas
A) Live Today	25%	53%	21%
B) Would Like to Live in 5 Yrs	22%	50%	28%
Delta B- A	-3%	-3%	7%

Figure 5: Where people live today and would like to live in five years (2014)

Source: Trulia²⁶

More recently, there have been some reports of communities in Wisconsin trying to recruit remote workers and some of these efforts predated the current pandemic. Prof. Steve Deller, at University Wisconsin–Madison Extension, surveyed

county extension agents and received several reports of such programmes. He found that

‘almost all of the responses came from “high amenity” counties. Some are focusing on the high stock of recreational housing ... “why not move to your lake front home and live year-round and telecommute?” Others are trying to build out working spaces in town.’²⁹

One might reasonably expect that such programmes are not confined to just Wisconsin, although their numbers may still be relatively low. Indeed, a project by Danth, Inc. in Meredith, NH, back in 2006 found several second homeowners who had been working in Boston, but then decided to become full-time residents and remote workers in Meredith.

The weakening of the open office workplace paradigm

The weakening of the open office workplace paradigm will remove a significant amount of opposition to remote work from corporate C-suites and their consultariats. Signs were appearing prior to COVID-19, but that weakening has accelerated rapidly since the virus appeared because it is so out of line with the current needs for social distancing. A recent and valuable report by JLL has noted the following about the current status of the open office concept:

- This model focused on increasing worker densities by lowering the worker space ratio to 75 SF to 150 SF per employee from the 325 SF of the 2000s. To counter that crowding, workers were offered lots of communal spaces and amenities such as free food and gyms. ‘The mixed performance of dense open plans, the new mandate of social distancing today, and the likely lingering psychological effects

of this outbreak on employees in the foreseeable future could combine to create some decompression in the workplace’;

- The pandemic is forcing tenants and building owners to rethink the open office communal spaces, shared amenities, as well as crowded ‘bottlenecks’ such as lobbies, elevators, bathrooms and cafés;
- Very significantly, in 2019, a major study found that under open office plans ‘face-to-face interactions dropped by 70 percent, when compared to more traditional space, and digital interactions increased to compensate’.³⁰

So much for open offices facilitating creativity by spontaneous interactions.

As the open office model disappears, there will be far fewer attempts to foster worker creativity by crowding them together. That will further reinforce the acceptance of remote work.

The potential post-crisis impacts of remote work that are significant enough to warrant our attention

On urban downtowns

The largest impacts on these downtowns will be caused by the number of office workers who no longer work there on a daily basis, be they full-time or part-time remote workers. This will reduce pedestrian flows — in some locations that might be a good thing — and reduce the sales potentials of many downtown eateries, retailers and personal service operations. In many downtowns, such as in NYC, that is now being felt in extremis, with over 80 per cent of Manhattan’s workforce not in its office buildings. As noted above, I am estimating that about 30–36 per cent in the remote-prone industries will continue to work remotely post-crisis. Since about 14 per

cent were probably already doing so pre-crisis, that means the net increase will be between 16 per cent and 22 per cent. It also means that the office worker market spending potentials for local merchants to capture will likely be about 16–22 per cent less than in the pre-crisis years.

The impact of remote workers on how much downtown office space will be needed and occupied is far less certain, because that will depend more on how many workers are still officed there, how much space each worker will occupy, and the costs of that space. If 78–84 per cent of the workers return, but are given 50 per cent more space to allow for proper social distancing, then the tenant will need to rent 17–26 per cent more space; 56–68 per cent more space if the space per employee ratio is doubled. Then there is the question of rent levels, and tenants will probably want space costs PSF to be reduced as their total space needs increase. Remote work does not incur any space costs for employers. Consequently, office tenants with needs for large increases in space who do not get a PSF rent reduction may become motivated to encourage more remote working, or to rent cheaper spaces in the suburbs. There is a decent chance the need to increase the space per worker ratio will lead to more workers moving out of our downtowns than does remote working.

To some unknown degree now, remote working is likely to increase the number of people who live in or near the downtown (the live-workers) who decide to move to suburban or rural locations. Early in the crisis, some experts mentioned the possibility of a significant deflation in real estate values. In the housing market, that has not been happening so far for homes that are high-cost. If enough of these downtown residents leave, then downtown housing costs may decline and that might reduce the attraction of remote working.

On suburban downtowns

Suburbs are communities that are primarily developed to serve residential needs in terms of housing and supportive operations such as neighbourhood retail and personal and professional services. Normally, they are not strong employment centres, since most residents hold jobs located elsewhere in the region. Yet some suburbs, such as Dublin, OH and Morristown, NJ are major employment centres. Indeed, these chosen few can have more people working in them than there are residents. Yet a study found that even when large workforces are present, the live-work level in and near the suburban downtowns was only 3.1 per cent compared to 19.1 per cent in the downtowns of independent cities (cities at the cores of small metro or micropolitan areas).³¹

There is a strong and reasonable expectation that a lot of these new remote workers will be either existing suburban residents or former big city residents who move to a suburb. Their biggest economic impacts in their downtowns are their potential daily expenditures; the dollars they used to spend in their centre city downtown will be available to their suburban downtown merchants. Most of these remotes will be using home offices to keep expenses down, supplemented by carrying their laptops to nearby coffee shops and libraries to get a needed change of scenery and possibly developing and enjoying social contacts. The new remotes are unlikely to present any substantial new demand for office space. A few may opt for a co-worker space, but probably only on a very part-time basis for reasons of social networking and avoiding noisy households. Co-worker spaces also have become very problematic for remotes because of their density and expense, and corporate users appear to like them more than the lone eagles.

The most important impact of the

increased number of remote workers may be the potentials they could present for developing in these suburban downtowns far stronger, more supportive and more attractive entrepreneurial environments. Smart economic developers will begin to think about how they can turn their downtowns into havens for remote workers that can help them do their jobs more easily and more effectively, and then how that also could help attract more start-up entrepreneurs. The key types of places in these entrepreneurial environments would be libraries, coffee shops, eateries, vibrant public spaces, gyms, spas, maker spaces, colleges and community colleges. What also would be needed is a downtown organisation that identifies all of those working at home, including these remote workers, and convenes social and informational meetings on a regular basis where they can all meet and get to know each other. This is a task that far too few downtown organisations can or want to take on.

Nationally, about 5 per cent of the workforce works at home. More remote working may translate into significantly more suburbs approaching the 8–10 per cent level that would make such an entrepreneurial environment much more viable.

On rural towns

Remote working promises to be a real game-changer for those rural towns that have adequate broadband — and there are many of them. It is important to note that large absolute numbers are not required for a significant positive benefit to emerge. Yes, remote work can provide rural workers in remote-prone occupations with the ability to win jobs in larger and distant labour markets. It also, however, enables the attraction of those who want to live in rural areas but currently do not, and who have such jobs, or who

can create them, or find them. Towns with scenic and leisure assets will be additionally advantaged in attracting such new residents and remote workers. Such ‘residential recruitment’ can bring vital new skills, financial resources, networking contacts and vitality into a community.

The depopulation of rural areas has been attributed to a lack of well-paying jobs and attractions that motivates their young people to move to more interesting cities with better employment and leisure opportunities. Remote work promises to reduce the power of that depopulation path while making it easier for more boomerangers to return, often bringing their enhanced skill levels with them.

Many of these rural towns can also develop themselves as havens for remote workers and develop the kind of supportive entrepreneurial environment that the suburban downtowns can develop. Because of their size and consequent modest financial and staff resources, the supportive services for such an environment would probably have to be provided on a regional basis.

Is remote working a real, lasting and potentially significantly impactful trend?

One might reasonably argue that it is, because:

- So many workers now are remote working and is meeting the needs of important groups and organisations, eg companies and many of their workers;
- It is not a new trend breeze, and even a few years before the pandemic, its growth had accelerated among firms that are likely to occupy large amounts of downtown office space, although nowhere near the level it would reach during the pandemic;
- There are strong non-health incentives for corporations and workers to

continue high levels of remote work after the crisis. For the companies, remote working's ability to help them attract and retain highly skilled people is probably the most important. Also, the rival open office model has proven to be, at the least questionable, regarding its putative advantages for nurturing productivity and creativity. Remote working provides employees with all sorts of quality of life advantages ranging from greater freedom to live where one wants and can better afford, to having more leisure time and less hassles from commuting, to being better able to adjust one's workday schedule to one's needs and wants;

- There are other trends that reinforce the remote work trend breeze. The foremost is the desire of creative/knowledge workers to live in places that have the quality of life features they prefer. Another is the housing affordability problem in our major cities. A newer one is the bad shape of our biggest public transport systems that today has little prospect of being resolved anytime soon. Finally, the lost glamour of the open office model takes away a conceptual platform for criticizing remote working;
- There is sufficient evidence to believe that it is very probable that remote working will have substantial impacts. It will probably reduce the number of people working in the office buildings of our major downtowns, although not at as high a level as some may have thought. That will be reflected in reduced office worker consumer expenditures in these downtowns. It probably will not, however, directly lead to a reduction in the amount of occupied office space. Suburban downtowns could benefit from new remote workers bringing additional consumer expenditure potentials for their merchants and additional

demand for housing. The presence of a significant number of them will increase their ability to create a viable and supportive small-town entrepreneurial environment. The largest relative potential impacts of remote work probably will be on rural towns with sufficient broadband access: it will help them to close the brain drain spigot, while opening the one for brain gain. That will ease pressures for depopulation while making it easier for the 17m+ American adults who prefer to live in rural areas, but now do not, to make that move.

References

1. Burgess, P. (April 1994), 'Lone Eagles Are a Varied Species', *The Rocky Mountain News*, reproduced in 'Tax – home office deduction: Hearing before the Committee on Small Business, House of Representatives, One Hundred Fourth Congress, First Session, Washington, DC, January 19, 1995', available at http://archive.org/stream/taxhomeofficeded00unit/taxhomeofficeded00unit_djvu.txt (accessed 24th September, 2020).
2. Flexjobs (2017), 'State of Telecommuting in the U.S. Employee Workforce', available at <https://www.flexjobs.com/2017-State-of-Telecommuting-US> (accessed 24th September, 2020).
3. Kotkin, J. and Cox, W. (February 2014) "'Lone Eagle' Cities: Where the Most People Work From Home', *New Geography*, available at <http://www.newgeography.com/content/004195-lone-eagle-cities-where-the-most-people-work-from-home> (accessed 22nd September, 2020).
4. Gallup (December 2016), 'State of the American Workplace', p. 151, available at <http://news.gallup.com.reports/199961/state-american-workplace-report-2017.aspx> (accessed 24th September, 2020); Gallup developed 'State of the American Workplace' using data collected from more than 195,600 US employees via the Gallup Panel and Gallup Daily tracking in 2015 and 2016, and more than 31m respondents through Gallup's Q12 Client Database. First launched in 2010, this is the third iteration of the report.
5. Kelly, J. (May 2020), 'Here Are The Companies Leading The Work-From-Home Revolution', *Forbes*, available at <https://www.forbes.com/sites/jackkelly/2020/05/24/the-work-from-home-revolution-is-quickly-gaining-momentum/#2887b2f61848> (accessed 22nd September, 2020).

6. McLean, R. (June 2020), 'These companies plan to make working from home the new normal. As in forever', CNN Business, available at <https://www.cnn.com/2020/05/22/tech/work-from-home-companies/index.html> (accessed 22nd September, 2020).
7. Brynjolfsson, E., Horton, J., Sharma, G., Ozimek, A., Rock, D. and Tu Ye, H-Y. (May 2020), 'COVID-19 and Remote Work: An Early Look at US Data', Square Space, available at https://static1.squarespace.com/static/5e5e75f9e1e4270af54307cc/t/5f63a3873f879a5254c2d6ec/1600365449880/remote_work+%2829%29+%281%29.pdf (accessed 22nd September, 2020).
8. Federal Reserve Bank of New York (April 2020), 'Empire State Manufacturing Survey/ Business Leaders Survey: Supplemental Survey Report, Business Report Extensive Fallout from Coronavirus', available at https://www.newyorkfed.org/medialibrary/media/survey/business_leaders/2020/2020_04supplemental.pdf?la=en (accessed 24th September, 2020).
9. Bartik, A., Cullen, Z., Glaeser, E., Luca, M. and Stanton, C. (June 2020), 'What Jobs are Being Done at Home During the COVID-19 Crisis? Evidence from Firm-Level Surveys', Working Paper 20-138, Harvard Business School, available at https://www.hbs.edu/faculty/Publication%20Files/20-138_ec6ff0f0-7947-4607-9d54-c5c53044fb95.pdf (accessed 22nd September, 2020).
10. Dingel, J. and Neiman, B. (June 2020), 'How Many Jobs Can be Done at Home?', White Paper, University of Chicago, Booth School of Business, NBER and CEPR, available at https://bf.uchicago.edu/wp-content/uploads/BFI_White-Paper_Dingel_Neiman_3.2020.pdf (accessed 22nd September, 2020).
11. Gallardo, R. and Florida, R. (September 2020), 'Which Communities Are Most Able and Which Are Most Vulnerable to Take Advantage of the Shift to Remote Work', Purdue University, Center for Regional Development, available at <https://pcrd.purdue.edu/remote-work-and-the-coronavirus/> (accessed 27th September, 2020).
12. *Ibid.*, note 11.
13. Bloom, N. (January 2014), 'To Raise Productivity, Let More Employees Work from Home', Harvard Business Review, available at <https://hbr.org/2014/01/to-raise-productivity-let-more-employees-work-from-home> (accessed 22nd September, 2020).
14. Cushman & Wakefield (Spring 2020), 'The Future of the Workplace: How will COVID-19 and data shape the new workplace ecosystem?', available at <https://www.cushmanwakefield.com/en/insights/covid-19/the-future-of-workplace> (accessed 22nd September, 2020).
15. Phillips, T. (July 2020), 'Flexible Workspace Will Again Rise Post COVID-19', Harvard Business Review, available at <https://hbr.org/2014/01/to-raise-productivity-let-more-employees-work-from-home> (accessed 22nd September, 2020).
16. Brenan, M. (April 2020), 'U.S. Workers Discovering Affinity for Remote Work', Gallup, available at <https://news.gallup.com/poll/306695/workers-discovering-affinity-remote-work.aspx?version=print> (accessed 22nd September, 2020).
17. *Ibid.*, note 2.
18. Morphy, E. (August 2020), 'It Appears that Companies Really Do Plan to Reduce Their Office Footprints', GlobeSt, available at https://www.globest.com/2020/08/27/it-appears-that-companies-really-do-plan-to-reduce-their-office-footprints/?kw=It%20Appears%20that%20Companies%20Really%20Do%20Plan%20to%20Reduce%20Their%20Office%20Footprints&utm_source=email&utm_medium=en&utm_campaign=nationalamalert&utm_content=20200827&utm_term=rem&enlcmp=nltrplt4&slreturn=20200922060919; Beaudoin, C., Georgules, J. and Raicht, T. (April 2020), 'Tenant needs in a post-pandemic world', JLL, available at <https://www.us.jll.com/en/trends-and-insights/research/2020-first-look-navigating-post-COVID-19>; *Ibid.*, note 14.
19. Richter, W. (October 2019), 'The most unaffordable housing markets in North America', Business Insider, available at <http://www.businessinsider.com/the-most-unaffordable-housing-markets-in-north-america-2017-10> (accessed 22nd September, 2020).
20. Frey, W. (April 2020), 'Even before coronavirus, census shows U.S. cities' growth was stagnating', Brookings Institution, available at <https://www.brookings.edu/research/even-before-coronavirus-census-shows-u-s-cities-growth-was-stagnating/> (accessed 22nd September, 2020).
21. *Ibid.*, note 20.
22. Reproduced with permission from Frey, W. H. (April 2020), 'Report: Even before coronavirus, census shows U.S. cities' growth was stagnating', Brookings Institute, available at <https://www.brookings.edu/research/even-before-coronavirus-census-shows-u-s-cities-growth-was-stagnating/> (accessed 24th September, 2020).
23. Haag, M. (August 2020), 'New Yorkers Are Fleeing to the Suburbs: "The Demand Is Insane"', *New York Times*, available at <https://www.nytimes.com/2020/08/30/nyregion/nyc-suburbs-housing-demand.html?action=click&module=Top%20Stories&pgtype=Homepage> (accessed 22nd September, 2020).
24. Siddiqui, F. (March 2018), 'Falling transit ridership poses an "emergency" for cities, experts fear', *Washington Post*, available at https://www.washingtonpost.com/local/trafficandcommuting/falling-transit-ridership-poses-an-emergency-for-cities-experts-fear/2018/03/20/ffb67c28-2865-11e8-874b-d517e912f125_story.html (accessed 22nd September, 2020).
25. Puentes, R. (April 2020), 'COVID's Differing Impact on Transit Ridership', Eno, available at

- <https://www.enotrans.org/article/covids-differing-impact-on-transit-ridership/> (accessed 22nd September, 2020).
26. Survey of 2,088 Americans by Kolko, J. (January 2015), 'Urban Headwinds, Suburban Tailwinds', Trulia, available at <https://www.trulia.com/research/cities-vs-suburbs-jan-2015/> (accessed 24th September, 2020).
 27. Milder, N. D. (Summer 2017), 'Quality-Of-Life Based Retail Recruitment', *Economic Development Journal*, Vol. 16, No. 3, pp. 38–45, available at https://www.lai.org/sites/default/files/docs/edj_malizia_-_summer2017l.pdf (accessed 22nd September, 2020).
 28. Milder, N. D. (July 2019), 'Quality of Life (QoL) Retail Recruitment Update', Downtown Curmudgeon blog, available at <https://www.ndavidmilder.com/2019/07/quality-of-life-qofl-retail-recruitment-update> (accessed 22nd September, 2020).
 29. Deller, S. (September 2020), Private e-mail communication to the author on 4th September, 2020. Errin Welty at the WEDC also e-mailed the author valuable information about some of these programmes.
 30. *Ibid.*, note 18, Beaudoin *et al.*
 31. Ryan, W. and Milder, N. D. (April 2020), 'Live-Work as a Downtown Population Growth Engine in Independent and Suburban Communities', Downtown Curmudgeon blog, available at <https://www.ndavidmilder.com/2020/04/live-work-as-a-downtown-population-growth-engine-in-independent-and-suburban-communities> (accessed 22nd September, 2020).