Payden&Rygel

POINT of VIEW

FALL 2020

Our Perspective on Issues Affecting Global Financial Markets

I, Lettuce

How One Person's Journey to Procure a Leafy Green for a Ham Sandwich Explains the Economy

"Thus, we never see the true state of our condition till it is illustrated to us by its contraries, nor know how to value what we enjoy, but by the want of it." (Daniel Defoe, Robinson Crusoe, 1719).

The world changed on March 11, 2020.

That was the day the World Health Organization declared SARS-CoV-2 a global pandemic, the National Basketball Association (NBA) canceled its season, and Tom Hanks announced he had tested positive for Covid-19.

Cities, states, and entire nations followed this news with shutdowns and stay-at-home orders. Reality quickly set in that we might be stuck inside for days or even weeks.

And, at that moment, I had a stunning realization: *I couldn't even make a proper ham sandwich.*

«SLAPPING TOGETHER A FEW PIECES OF HAM, CHEESE, MUSTARD, LETTUCE, AND TWO SLICES OF BREAD IS EASY ENOUGH, EVEN FOR AN ECONOMIST.»

I don't mean unable to construct a sandwich—slapping together a few pieces of ham, cheese, mustard, lettuce, and two slices of bread is easy enough, *even for an economist*. I mean that, without the local supermarket, I didn't have the ingredients to put the sandwich together. That prompted a quick trip to the local store.

As I perused the crowded neighborhood supermarket (at that stage, I was the *only* customer wearing a mask and gloves), I wondered where else I could find the ingredients if not here. And at what cost? Would I just need to settle for some basic alternatives in the ensuing weeks? Maybe my "doomsday prepper" friends had been right all along, I thought to myself.

As I investigated the dilemma, I learned a few things about my food and the world. Even for the most basic goods (mere lettuce), we are at the mercy of far-flung production processes and decades of innovation.

LETTUCE START WITH THE SUPPLY CHAIN

Given the complexity of sourcing all the materials for a simple sandwich, I decided to focus on the lettuce, the simplest of my sandwich ingredients.

Nobody ever thinks about lettuce. It's derided as "rabbit food," until a pandemic strikes, that is.

It turns out there's *nothing* simple about lettuce.

That first March afternoon, my fellow shoppers were stuffing their shopping carts with leafy greens (and toilet paper, apparently). Shoppers had cleaned out the normally lush green section of the produce aisle even before I arrived.

What's a sandwich without lettuce? What's a ham sandwich craver to do? Well, despair was never an option.

«AS OF 2018, 69,400 FARMS, COVERING 24.3 MILLION ACRES, DOTTED THE CALIFORNIA LANDSCAPE.»

First, I tried to acquire some lettuce directly from the farm—any farm. As of 2018, 69,400 farms, covering 24.3 million acres, dotted the California landscape, many of which sit within just a few hours' drive from Los Angeles. Agri-promoters don't call the Central Valley of California the "salad bowl of the world" for nothing. But, no dice. Calls went unanswered and messages unreturned. Perhaps farmers had better things to do than field calls from an urban dweller looking for "some kind of arrangement to ship a few bags of lettuce a week?"

Next, I tried to sign up to join any available community-supported agriculture (CSA) farm, a program through which you get a box of vegetables delivered weekly from the farm to your front door. The problem was that my solution was not exactly a novel idea as most CSA programs have a lengthy waiting list. I finally secured a membership in a fledgling, local CSA that was contingent upon picking up the box each Sunday from the founder's front yard (no delivery capacity available).

After the initial excitement wore off, another problem cropped up. Strange as it may seem to the reader, I just never considered the fact that lettuce would not be a weekly feature in the box. Instead, I received 20 different types of squash and *lemon cucumbers*. Yes, lemon cucumbers, but no lettuce.

Naturally, I began to wonder whether agriculture was in my future. Indeed, I could go straight to the source and cultivate a garden myself, right? How hard could it be?

Quickly, I ran into another problem: I live in a condominium (a commonhold residential community, for my British friends). My wife frowned on the indoor greenhouse concept I pitched during an early lockdown dinner. I'm sure she quietly wondered, "How long am I stuck in quarantine with this person?"

"What about outdoors?" I thought. I researched the idea: To feed ten people (I figured I'd trap a few neighbors in my scheme, if only to curry favor and head off complaints), I'd need five acres of land to cultivate enough fruits, vegetables, meat, poultry, and other products.[1]

We have limited patio space and, more importantly, Homeowners' Association (HOA) rules prohibit cultivating a garden in the common areas, scuttling my backup plan. Sadly, I am not one of the fortunate few with five acres of land in the greater Los Angeles area. To come close to that sort of square footage, I'd have to acquire my entire 100-unit condo community.

«TO FEED TEN PEOPLE (I FIGURED I'D TRAP A FEW NEIGHBORS IN MY SCHEME, IF ONLY TO CURRY FAVOR AND HEAD OFF COMPLAINTS), I'D NEED FIVE ACRES OF LAND TO CULTIVATE ENOUGH FRUITS, VEGETABLES, MEAT, POULTRY, AND OTHER PRODUCTS.»

Undeterred, I contacted restaurants. As a savvy reader of the *Wall Street Journal*, I was armed with the knowledge that the business-to-business supply chain had been broken, with diners eating exclusively at home. Leafy greens were no doubt wilting on the shelves of restaurant refrigerators, ready for the taking at bargain-basement prices. Bingo. *Pay dirt*. One well-known establishment agreed to send me, via Postmates, what I thought was a massive amount of arugula since they did not have lettuce.

Here's the rub: all-in, I paid $50 to have several bags of "fresh" arugula delivered. The bevy yielded two or three salads over the ensuing days before the bulk of the shipment went bad (the restaurant sent the arugula in unsealed brown paper bags).

TIP OF THE ICEBERG

Who knew it would be so difficult to procure lettuce? As it turns out, even the simplest of salad components are a chore to produce and ship. Forget the pandemic—lettuce producers have been wrestling with these problems for decades. Until the very recent past, it was impossible even to get lettuce at home.

«WHO KNEW IT WOULD BE SO DIFFICULT TO PROCURE LETTUCE?»

Most of us take for granted how few humans are now involved in producing our food, which explains how little thought we give to it from day to day. Had we lived in Britain in 1850, one out of every five readers would be working the fields—already a stunning accomplishment. By 1880, that figure would be one in seven, and, on the eve of the First World War, one in eleven. Today, in the U.S., every agricultural worker feeds 177 other workers.

Beyond growing the stuff, a more significant hurdle lurked: How do you ship *leaves* over long distances? If you've read John Steinbeck's celebrated *East of Eden*, you already know the answer: *ice*. In California's Salinas Valley, growers packed lettuce heads on ice and shipped them to New York, hence the name: *iceberg* lettuce.[2]

When I say "packed on ice," I mean a lot of ice. Ice plants sprouted up in the Salinas Valley to furnish one-quarter of each rail car with ice and water. In early decades, roughly 30,000 carloads made the journey annually, making lettuce perhaps the first "seasonless" product. It turns out iceberg lettuce can weather both the railcars' 32-degree temperature *and* the 14-day trip, staying fresh for nearly a month from picking to plating.

«FOR EATERS, BELIEVE IT OR NOT, ICEBERG LETTUCE WAS A REVELATION. ONE ONLY NEEDS TO CONSIDER THE ALTERNATIVES TO SEE WHY.»

As the leafy green arrived by rail to restaurants in New York, Chicago, and Boston, customers *ate* it up. For eaters, believe it or not, iceberg lettuce was a revelation. One only needs to consider the alternatives to see why. Root vegetables. Carrots. Potatoes. *Cabbage*.

In 1926, a cookbook, *The Edgewater Beach Hotel Salad Book*, showcased new salad offerings.[3] The possibilities were endless. Perusing the pages today is a pleasure. My favorites include the "breakfast salad," which features boiled ham, scrambled eggs, tomato, and lettuce, and the "health salad," which includes raw peppers, cabbage, and carrots, cream cheese, and, yup, lettuce. Nearly every salad featured "lettuce" as in iceberg lettuce or the occasional smattering of romaine.

HOMAGE TO THE GROCERY STORE

By 1946, Salinas' lettuce growers had pioneered vacuum cooling, eliminating the need for ice loads. By the 1950s, nearly three-quarters of lettuce shipments were vacuum sealed. Still, a quarter of the haul went bad by the time the product reached the East Coast.[4]

Due to the massive losses involved in shipping cross-country, industry insiders wondered how better to do so. Fresh lettuce, even after being picked, continues to take in carbon dioxide and release oxygen and water. If you choke the carbon dioxide, the lettuce ferments. If you allow lettuce to continue to produce oxygen and water, it turns into green sludge.

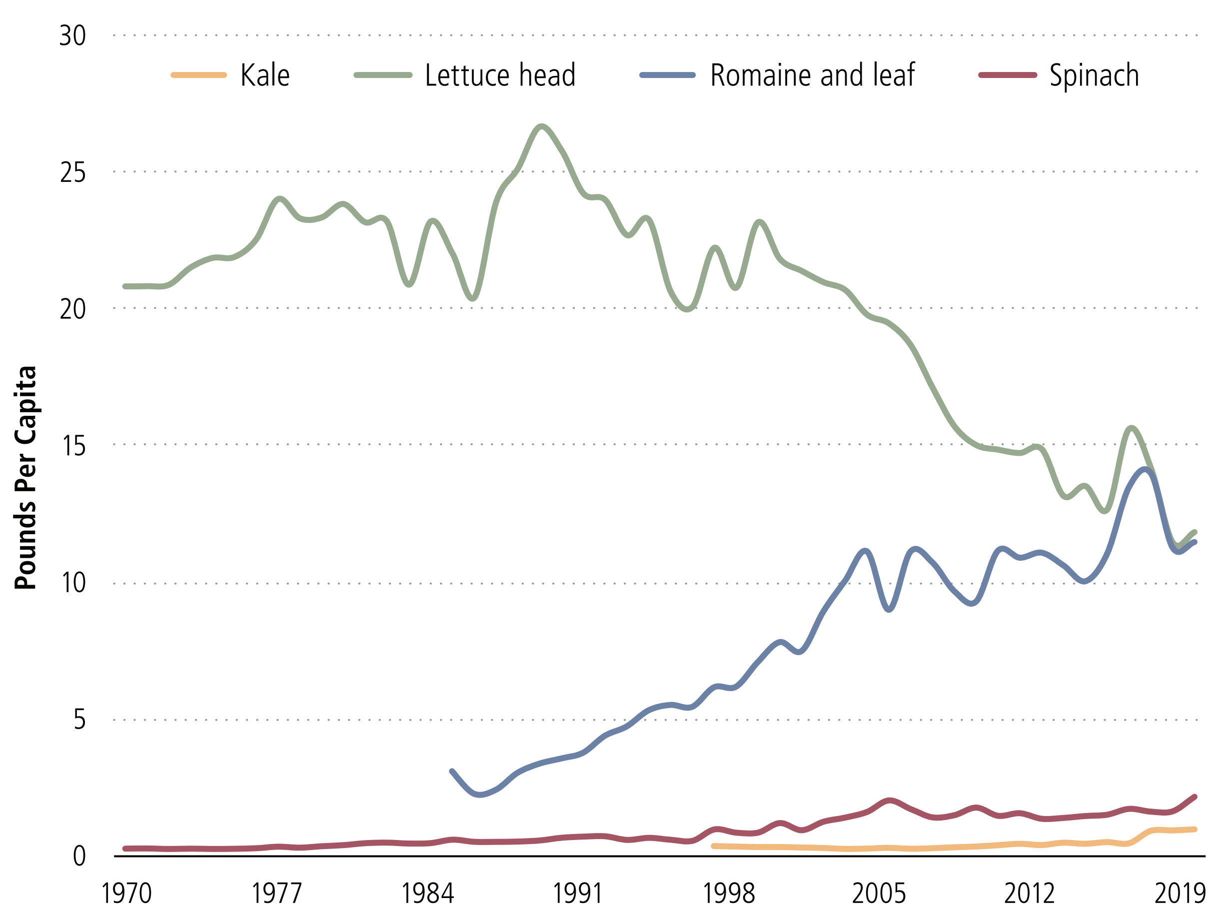
more delicate romaine leaf took off, surpassing iceberg consumption in 2018. Unlike the 1950s, salads now arrive at the stores within 24 hours of picking—yes, just one day, not 14.

The salad-shipping revolution also opened the door to fresh-shipped products of all varieties from everywhere on Earth, such as blueberries from Uruguay and strawberries from Mexico. Today, one lettuce breeder alone can feature 114 different types of lettuce.

This is not just a lettuce story. The first grocery store in America boasted *maybe* 200 products. Most of the goods available were shelf-stable commodities like sugar and flour that were scooped out of barrels on demand by customers.

During the mid-twentieth century, large chains gobbled up smaller shops and increased their market share to 50% of groceries sold. In the 1960s and 1970s, stores went from being 3,000 sq. ft. mom-and-pop shops to being 30,000 sq. ft.

fig 1. EAT YOUR GREENS: RETAIL WEIGHT OF VEGETABLES IN THE U.S. SINCE 1970



Source: USDA

Historians credit Jim Lugg with the launch of a green revolution.[5] Lugg wondered, "What if you could create an artificial atmosphere and ship the greens in there?" This prompted climate-controlled shipping containers; soon, sending a veritable cornucopia of greens (and other perishables) was possible.

Lugg then worked with polymer scientists to create individually bagged lettuce which soon took over the world. Each bag of lettuce is a technological marvel, consisting of different layers to preserve the delicate product until consumption. The year? 1988.

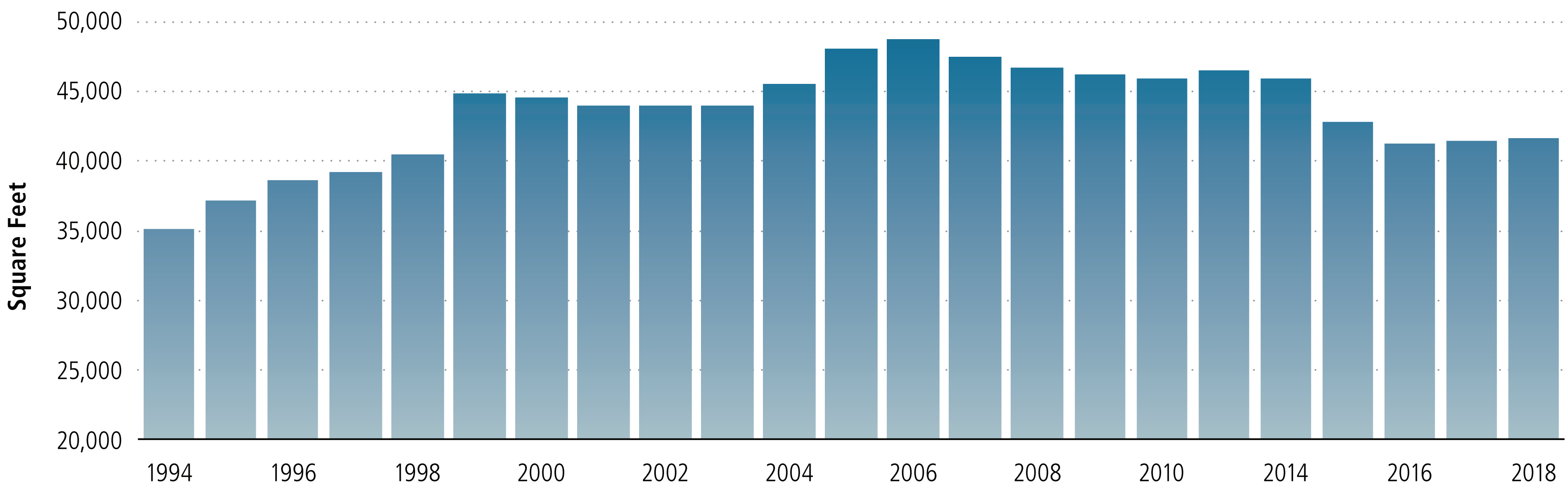
It's no coincidence that annual iceberg lettuce consumption in the U.S. peaked at 26 pounds per person in 1989 (*see Fig. 1*). Subsequently, the retail chains. However, even by 1975, the average grocery store featured fewer than 9,000 items.

Supermarkets today can measure up to 90,000 sq. ft., with the median store measuring around 40,000 sq. ft. (*see Fig. 2 on page 3*). By 2008, the number of products had quintupled to around 48,000.

VARIETY, GAINS, AND VULNERABILITIES FROM TRADE

I've had a flying start. We all have. Thanks to my predecessors, I usually don't have to spend one ounce of effort or one minute of the day wondering about lettuce. When I need it, it's there, either in my well-stocked fridge or just a quick trip to the grocery store.

fig 2. MY CUP RUNNETH OVER: MEDIAN TOTAL GROCERY STORE SIZE IN THE U.S.



Source: Food Marketing Industry Speaks (1995-2016)
*Data for 2017 is interpolated

Forget GDP, stock market levels, and fancy measures of happiness and well-being. The availability of a wide variety of goods is *the* clearest sign of our societal wealth. Yes, the wealthier we become, the more intertwined we are, and the more dependent we are upon others. In fact, it's the very source of our wealth.

Even for a product as simple as rabbit food, the bounty we enjoy on the shelves of a modest grocer is the result of decades of tinkering and intricate interconnections. If lettuce alone presents such monumental coordination and technological achievement, is there any hope for the iPhone?

The lesson of the pandemic is not that supply chains are fragile, though they are. To quote sociologist Paul Seabright, "Our everyday life is much stranger than we imagine and rests on fragile foundations."

But what are the alternatives? Self-sufficiency? As my quarantine investigation reveals, even in its most basic form, it would be impossible. At the very least, my standard of living would be vastly lower.

Or how about a sandwich czar to coordinate the system? Would consumers trade variety at the supermarket for a more secure supply chain? Some (perhaps many?) would prefer a steady, centralized supply of iceberg lettuce. A return to the 1970s? In my view, that possibility seems ... unattractive.

«BY 2008, THE NUMBER OF PRODUCTS HAD QUINTUPLED TO AROUND 48,000.»

This is not a story about my inability to make a sandwich. It's a more powerful story about how the economy works and how much we all take it for granted. Precisely because there is no centralized process, problems arise when a once-in-a-century virus forces everything to shut down. Yet the very fact that nobody is in charge is what's truly remarkable because somehow it all works ... most of the time.

I guess it took a global pandemic to fully appreciate the economy we had.

And, yes, within a week, amid my frantic efforts and an ongoing pandemic, my wife gleefully announced: the produce aisle had been restocked.

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Colleges in Crisis

Is This the End of Higher Ed as We Know It?

All college students remember the day they received their acceptance letter. An envelope or email arrives, and young pupils feel like they've taken the next step toward their future. Wherever you go in the world, high-school students fortunate enough to afford college or receive scholarships have spent countless hours on standardized tests, extracurricular activities, and application essays. As the global economy has become more service-oriented, the demand for higher education has skyrocketed.

College campuses have also become ever more impressive, with state-of-the-art labs, exceptional athletic facilities, and dormitories that can sometimes rival 5-star hotels—more "resort" than "resident hall." The University of New South Wales in Australia has spent $360 million on new facilities, while Ohio State University in the U.S. has a $220 million *annual* athletics budget.[1]

Colleges are not just places where professors in tweed blazers pontificate on the nuances of Keynesian economics; they are also places where students worldwide can spend upward of $80,000 a year for the "college experience." Suddenly this experience has either halted or changed drastically as the Covid-19 pandemic grips the global economy.

The hallowed halls of learning, bustling with activity just months ago, are now mostly empty. Colleges are facing a crisis in which most are unable to have students on their campuses; they are struggling with revenue loss from international students deferring admission and resorting to online learning, which poses a threat to their long-term sustainability. In this article, we dive into college finances, investigate the acute impacts of Covid-19, and end with hope for the future.

CASH FLOWS AND COLLEGES

While credit analysts attempt to understand corporate cash flows, we seek to lift the veil on college finances. College finances are unique. Most businesses do not raise charitable funds, build endowments, rely on public funding, *and* provide room-and-board services.

> **«EVEN FOR PUBLIC INSTITUTIONS, WHERE GOVERNMENT ALLOCATIONS PROVIDED 41% OF REVENUES, TUITION AND FEES STILL ACCOUNTED FOR 20% OF REVENUES.»**

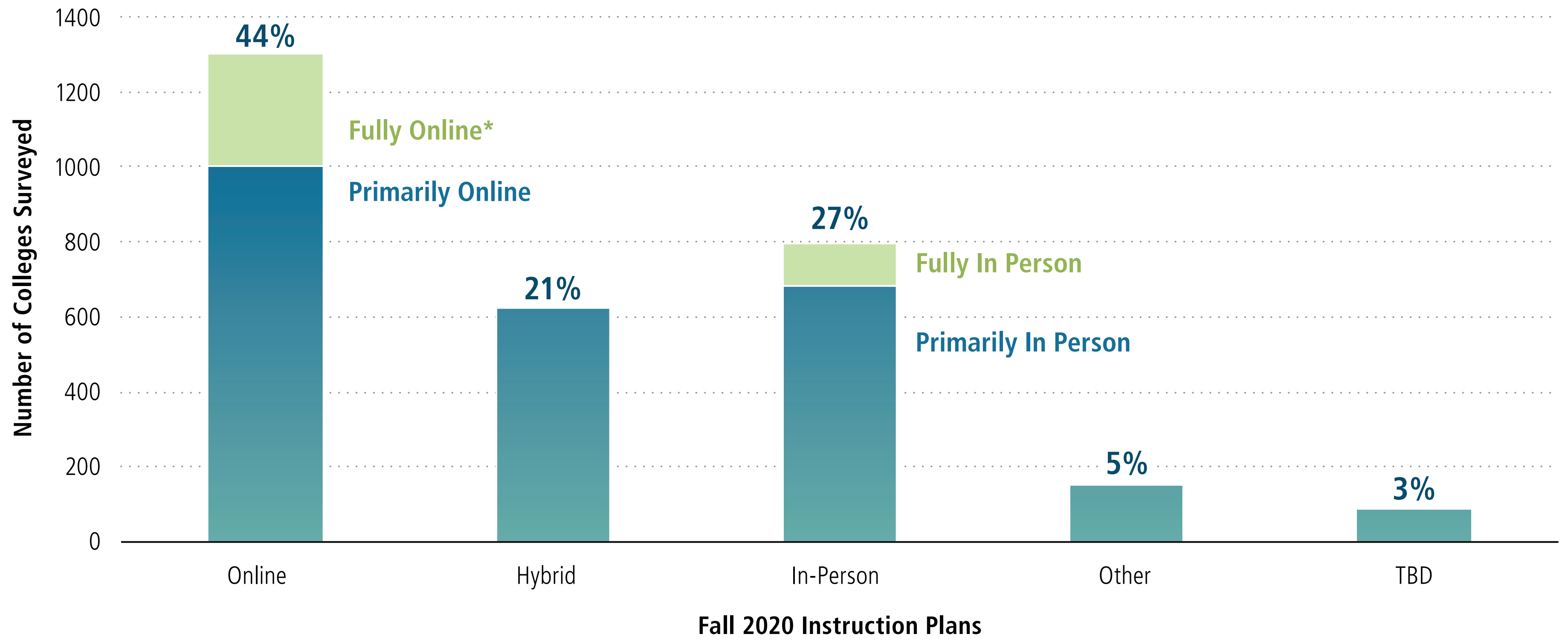
U.S. colleges generated revenues of $671 billion in 2017–2018, putting the college industry in the same league as commercial banking and supermarkets with annual revenues of $682 billion and $681 billion, respectively.[2] Breaking down those revenues, tuition and fees accounted for 31% of private non-profit institution revenues. Gifts, grants, and other revenue sources accounted for 32% of the revenues. Even for public institutions, where government allocations provided 41% of revenues, tuition and fees still accounted for 20% of revenues. Colleges also have endowments that produce investment returns, accounting for 18% of private non-profit colleges' revenues. While this diversified base of funding insulates colleges from business cycles, Covid-19 has created a perfect storm that has hurt every facet of college financing globally.

EPIDEMIOLOGY IMPACTS ENROLLMENT

The aptly named *College Crisis Initiative* surveyed almost 3,000 U.S. colleges and universities and found that 44% planned to be primarily or fully online during the Fall 2020 semester (*see Fig. 1*). Another 21% planned a hybrid model, where some courses and classes are taught on campus with online availability (e.g., certain vocational degrees require in-person training). Classrooms remain empty in a majority of U.S. colleges. While data collection was limited to colleges outside the U.S., 42% of survey respondents indicated that they planned for online or hybrid learning.

The prevalence of online learning means more students will forgo their fall study plans rather than miss out on the in-person experience that has become an increasingly important aspect of campus life. According to the *American Time Use Survey* (see Centerpiece for how people spend their time), full-time college students spent just 3.5 hours on an average weekday studying—less than the 4 hours spent on leisure and sports![3] It's unsurprising then that 67% of U.S. institutions expected enrollment declines in the Fall 2020 semester as students take a gap year or wait to return to school for "the full college experience."

fig 1. ZOOM UNIVERSITY: FALL 2020 CAMPUS PLANS FOR U.S. COLLEGES



Source: The College Crisis Initiative @ Davidson College
*Fully online = no students on campus, Primarily online = some courses in person

«HIGHER EDUCATION HAS BECOME A GLOBAL INDUSTRY, WITH AMERICA, AUSTRALIA, CANADA, AND THE UNITED KINGDOM ATTRACTING 5 MILLION INTERNATIONAL STUDENTS EVERY YEAR, COMPARED TO 2 MILLION IN 2000.»

EDUCATION AS AN EXPORT

Globally, the impact is even more severe when one considers the impact of international students' enrollment. Higher education has become a global industry, with America, Australia, Canada, and the United Kingdom attracting 5 million international students every year, compared to 2 million in 2000.[4] In Australia, international students account for 27% of overall enrollment (*see Fig. 2*).

As the share of international students has grown, so has its impact on college revenues. Leading Australian universities relied on international students for more than a third of their income. In Canada, McGill University charged international students more than 17 times what domestic students paid. Even in the U.S., where international students make up just 5% of overall enrollment, they contribute $41 billion annually to the U.S. economy. As an industry, that puts higher education exports right between pharmaceuticals and telecommunication.

«AS OF JULY, GLOBAL WORLD TRADE VOLUMES HAVE RECOVERED TO "JUST" 6.6% BELOW LAST YEAR'S LEVELS. MEANWHILE, THE NUMBER OF COMMERCIAL FLIGHTS WAS STILL 50% BELOW JULY 2019 LEVELS.»

The impact of international students is evident in the extreme actions some colleges' took to keep these students enrolled. In the U.S., a consortium of schools sued the federal government to reverse a policy that would have denied student visas to students whose schools went fully online. In the U.K., one university considered chartering a jet for 300 or so students from India, later scrapping the plans when the pandemic worsened.

«WHILE MOST BUSINESSES HAVE BENEFITTED FROM CUTTING BACK THEIR SPENDING ON EMPLOYEE LUNCHES AND COFFEE AS THEY ENGAGE IN REMOTE WORK, COLLEGES HAVE BEEN HURT BY THE PHYSICAL ABSENCE OF STUDENTS WHO ARE STILL ENROLLED.»

Covid-19 and the travel restrictions that have come with it have meant that many international students are pushing back their plans to study abroad. In a recent poll, 40% of international students said they would cancel or defer their plans.[5] As of July, global world trade volumes have recovered to "just" 6.6% below last year's levels. Meanwhile, the number of commercial flights was still 50% below July 2019 levels.[6] Many have obsessed about the trade in goods during the shutdowns, but it is the trade in higher education that should concern college economics professors.

AUXILIARY AND ATTENDANCE

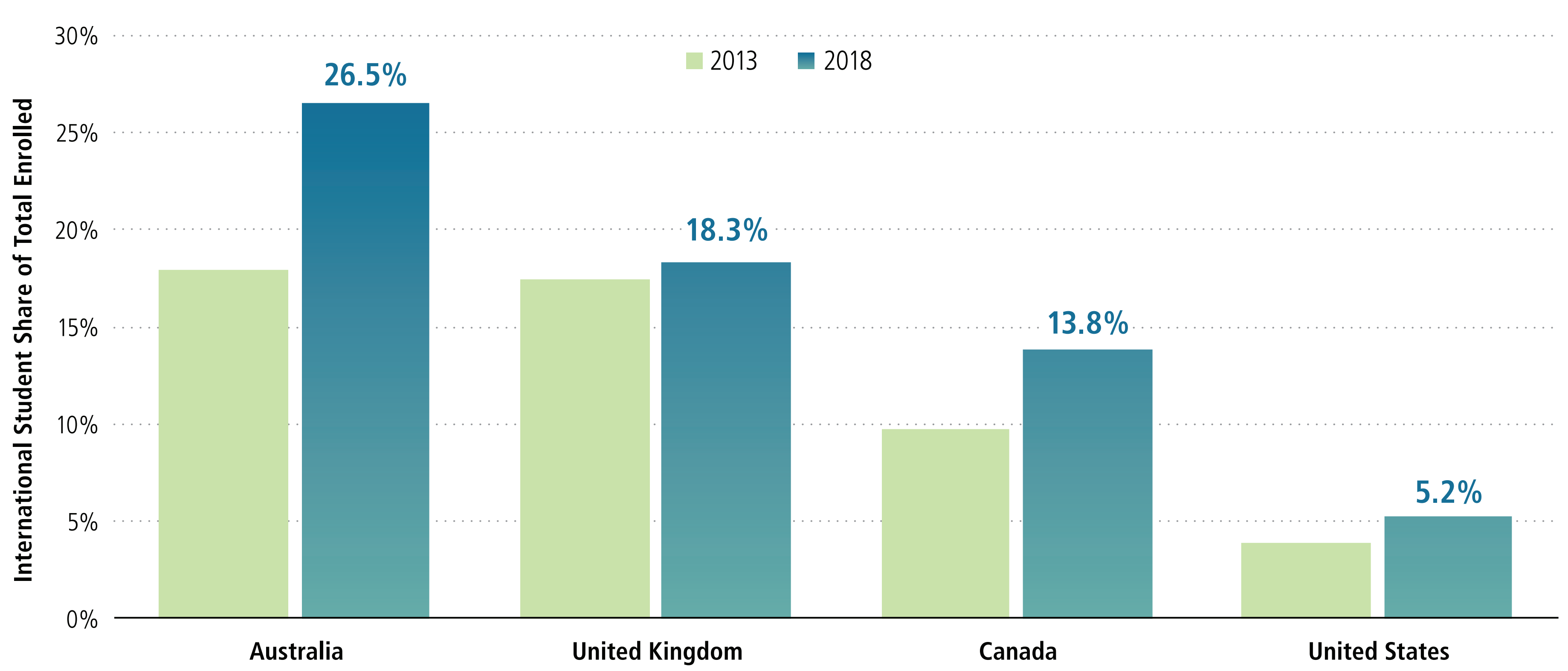
When classes are remote, there is little need for food in cafeterias, and dormitory revenues dry up as students work out of their childhood bedrooms (see the impact of changing food consumption patterns in "I, Lettuce"). While most businesses have benefitted from cutting back their spending on employee lunches and coffee as they engage in remote work, colleges have been hurt by the physical absence of students who are still enrolled. Auxiliary services like room and board are a key source of college revenue.

In the U.S., tuition and fees often include the amount charged to students for their dormitories and cafeteria meal plans. On average, in 2017-2018 private colleges in the U.S. charged $45k in tuition and another $13k in room and board! After all, the state-of-the-art gyms, gourmet food, and picturesque campuses cost money to maintain! At public colleges, the average tuition was a more manageable $18k, but room and board added another $11k.[7]

While not all students utilize room and board, fees collected from these services are especially important for public colleges because they charge less for tuition. Previously, some universities could convince or force students to study on campus for the "residential experience," but today they must entirely forgo this revenue source. Additionally, unlike businesses that can offload unproductive assets in times of lagging demand, college campuses are less likely to sell their dormitories.

Room and board is not the only auxiliary service colleges have lost due to Covid-19. Consider, as well, campus security parking citations, bookstore sales, event space rentals, and so on. We haven't even touched on athletic revenues. According to

fig 2. GLOBAL GOOD: INTERNATIONAL STUDENTS SHARE OF OVERALL ENROLLMENT



Source: Food Marketing Industry Speaks (1995-2016)
*Data for 2017 is interpolated

the American Council on Education, auxiliary revenues totaled $45 billion for U.S. colleges and universities in the 2017 fiscal year. Unfortunately, these revenue sources will not return without in-person attendance.

IS THIS REALLY THE END?

This is not the first time people have predicted the end of college as we know it. In 2012, the *New York Times* published a story entitled "The Year of the MOOC," in which "MOOC" means "massive open online course." A MOOC company founder called it the "year of disruption."[6] The death of universities never materialized, however, and most schools continued with the status quo, adopting the technology to their benefit—until 2020.

«COURSERA, A POPULAR MOOC PLATFORM, ADDED 10 MILLION USERS BETWEEN MARCH AND MAY, SEVEN TIMES THE AMOUNT ADDED DURING THE SAME TIME LAST YEAR.»

This year has been the real year of disruption for MOOCs. Coursera, a popular MOOC platform, added 10 million users between March and May, seven times the amount added during the same time last year.[8] Even colleges that were apathetic toward online learning were forced to swim with the shifting current.

Despite MOOCs' recent popularity, a recent survey by OneClass found that 75% of college students were unhappy with their "Zoom University." We are optimistic, however, that the pandemic and massive online learning shift will create more inexpensive online program opportunities that will not necessarily cannibalize the in-person university experience. If you are an international student unable to afford plane tickets and room and board, why not study and develop skills from your own home?

Some universities have already considered this. The largest computer science program in the U.S. is online, hosted by Georgia Tech, and launched *in 2014.*[9] Concerns that the same program offered online for a sixth of the cost would lead to the downfall of the in-person program were wrong. Specifically, the university found "virtually no" overlap between applicants for both programs, discovering that they were catering to a completely new market.

The democratization of education was MOOCs' ambitious goal. Maybe the pandemic will lead us there as more universities all over the world create online programs. Those who still value on-campus learning environments should remember that universities survived many pandemics, wars, MOOCs, and their own online programs before this. If students only spend 3.5 hours a day studying, they will likely soon return to campus for the other 85% of their day that made up their true college experience.

«A RECENT SURVEY BY ONECLASS FOUND THAT 75% OF COLLEGE STUDENTS WERE UNHAPPY WITH THEIR "ZOOM UNIVERSITY."»

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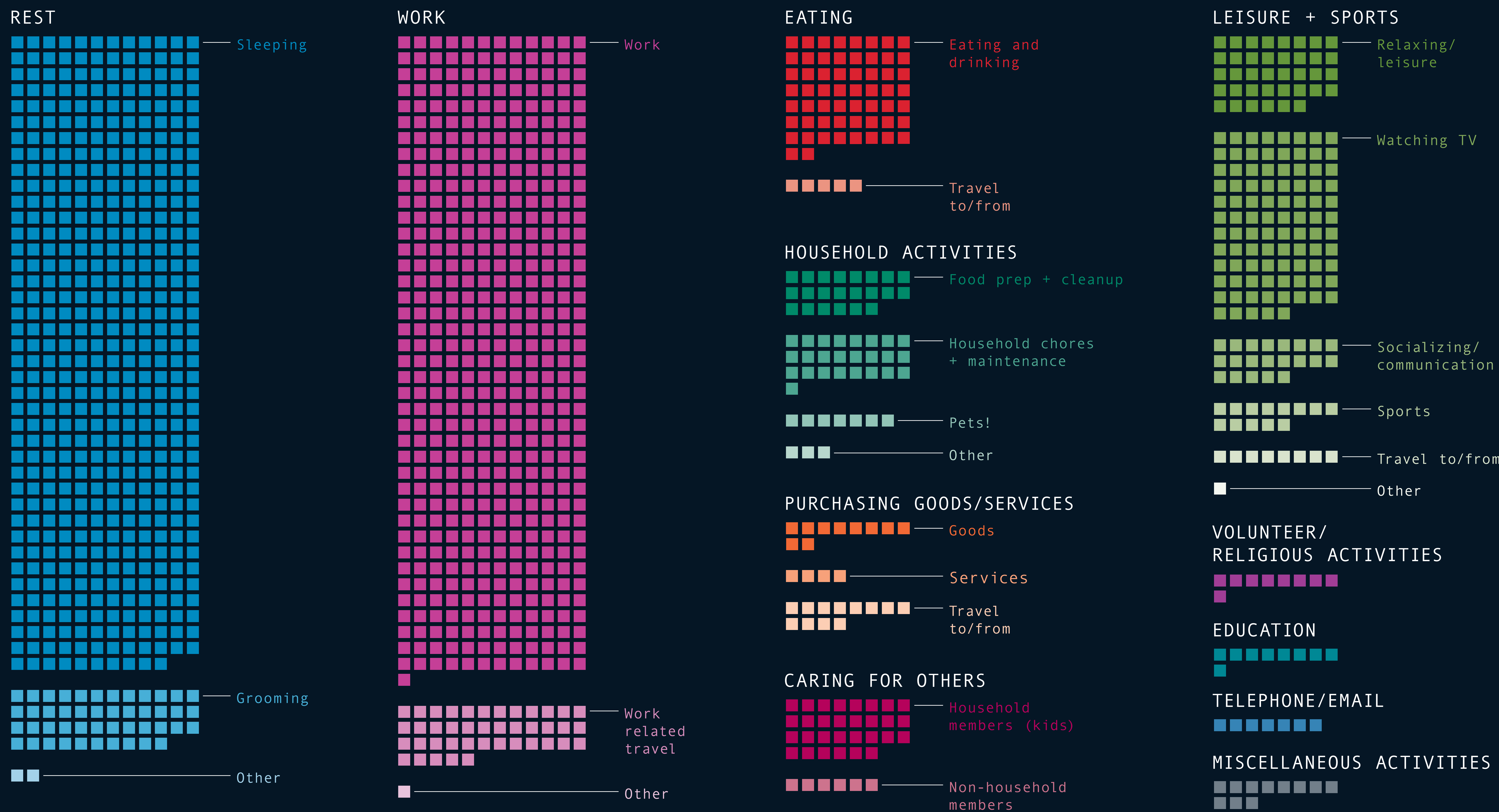
WHERE DID THE TIME GO?!

What the average person ~~does~~ *did* in a day. *(pre-COVID)*

24 hours of the average American adult's* day, broken down by the minute.

■ — 1 minute



8 hours of our day is spent at work. In the mid-19th century, average work times were 12 hours per day!

On average, Europeans work 14% fewer hours. More productive or less hard working? You decide!

Pre-Covid, 24% of workers did some or all of their work from home. That number will surely rise in the future!

The British spent 31% more time commuting to work than Americans, but more use public transit.

Need more time? 52 minutes could be freed up if we eliminated commuting to food places, household chores and food prep/cleanup.

On weekdays, Americans spent 24% more time watching television than the British.

*Specifically we look at average hours per day by employed workers on days worked (weekdays).

Source: Bureau of Labor Statistics, Brookings Institution, Eurostat

Stop Calling It "Work From Home"

The Positive Case For Remote Work

Working from home while isolating from others to avoid a novel virus has been challenging. On top of work responsibilities, you're suddenly a homeschool teacher if you have kids. Or maybe there's the stress and anxiety of worrying about the well-being of at-risk friends and family. Or perhaps faulty WiFi and an outdated personal computer make Zoom calls more aggravating than invigorating.

Regardless of your situation, working from home—or as we call it, remote work—under current circumstances has not been a walk in the park. But, is remote work *the* problem? Or did the shift to remote work occur at the wrong time, masking the benefits to the individual and society?

In this article, we set aside the Covid-19 stigma associated with remote work and instead evaluate its independent merits and drawbacks. The article first examines the positive impacts remote work has on individuals and the broader community and then discusses some challenges investors face while trying to navigate the uncertain future of commercial office space.

BUT FIRST, AN IMPORTANT ACKNOWLEDGMENT

Let's not forget the relative privilege that working from home affords, allowing us to stay safe during a time of health crisis. Many do not have that luxury. Roughly 63% of the workforce cannot work from home.[1] To all the essential workers who do not have the luxury of sheltering at home during this crisis—thank you!

For the fortunate 37%, we'll be honest: Remote work can be pretty awesome.[2] Some of the many perks include an ability to live wherever you like, no commute, fewer interruptions to workflow, flexible hours, and, well, a flexible dress code. In the context of Covid-19, however, those perks have been overshadowed by the disruptions to normal life. Despite the challenges, don't discount the benefits.

MO' MONEY, MO' SOCIAL MOBILITY

First, it's in the name—*remote*—meaning you now have the freedom to live anywhere. Many of the jobs that have adapted almost seamlessly to remote work were previously performed in offices in high cost-of-living cities, like San Francisco, New York, Hong Kong, and London. Rent in these cities for a midrange 2-bedroom apartment averages $2,000 per month.[3] For the sake of concrete comparison, if a worker from New York, where a 2-bedroom averages $2,909 a month, decided to relocate to Chicago, where a 2-bedroom averages $1,527 a month, they could save $16,584 annually! (See *Table 1*.)

Table 1

Monthly and Annual Savings Due to Lower Rental Costs

City	Monthly Rent	Annual Rent
New York	$2,909	$34,908
Chicago	$1,527	$18,324
Savings	$1,382	$16,584

Source: Deutsche Bank, Zumper National Rent Report, Payden Calculations

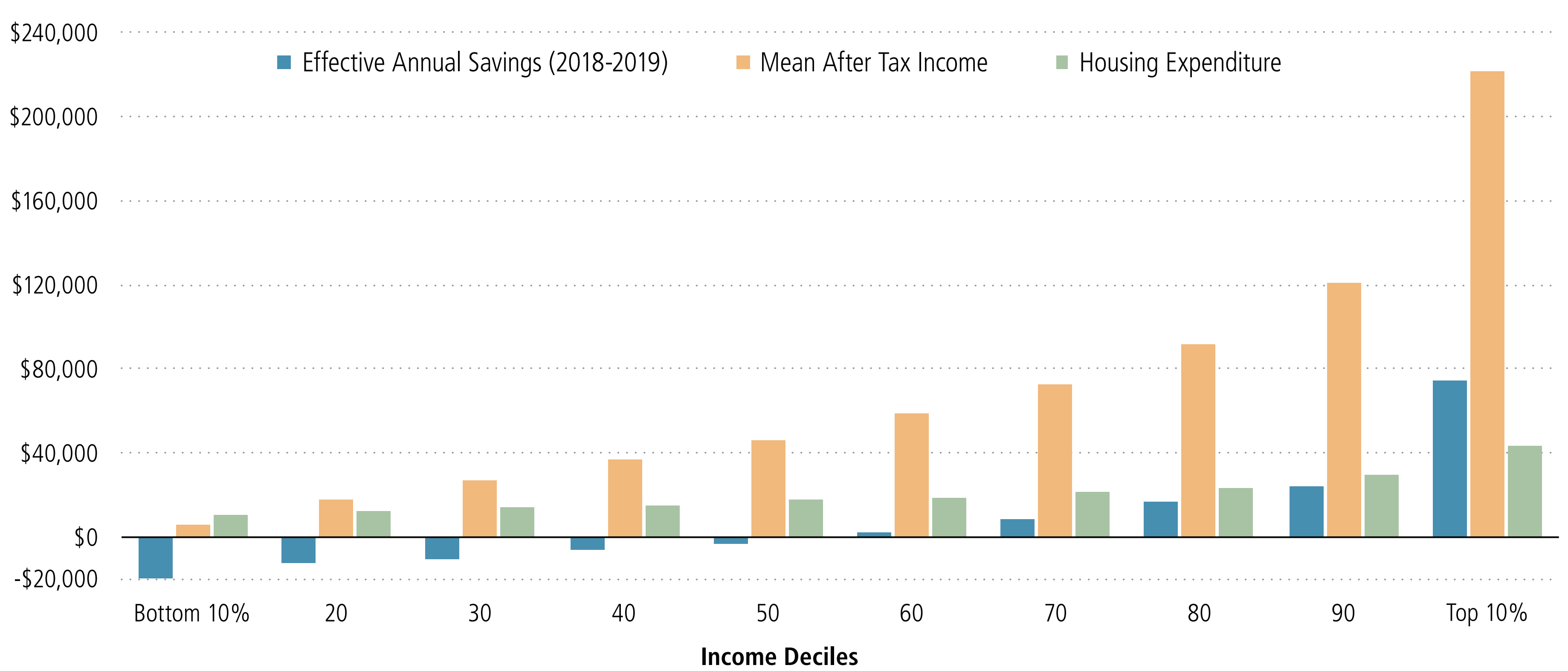
The cost savings could be even more dramatic if you relocate to Southern cities such as Baton Rouge, LA, or El Paso, TX, where the median price for 2-bedroom apartments is under $1,000 a month.[4]

> «SOME OF THE MANY PERKS INCLUDE AN ABILITY TO LIVE WHEREVER YOU LIKE, NO COMMUTE, FEWER INTERRUPTIONS TO WORKFLOW, FLEXIBLE HOURS, AND, WELL, FLEXIBLE DRESS CODE.»

And it's not just about saving on rent. It's about lifting yourself to a new socioeconomic level. Imagine you're a worker in a support staff role in New York. Moving to Chicago means you can still perform your job remotely, but you now can save more money and accumulate capital (see *Fig. 1*). According to a Pew Research Study, "Those who left the bottom of the income ladder had 6 times higher median liquid savings, 8 times higher median wealth, and 21 times higher median home equity than did those who remained stuck at the bottom."[5]

Beyond mobility, remote work democratizes the geographic and demographic pool of talent from which companies can hire. Unequal access to work has been identified as an issue of great macroeconomic concern by members of the Federal Open Market Committee, the group that directs monetary policy at the Federal Reserve.

fig 1. HIGH FIXED COSTS: HOUSING EXPENDITURE INHIBITS SAVINGS FOR LOWEST INCOME DECILES



Source: Bureau of Labor Statistics

In this way, remote work creates opportunities for those with little control over where they live, such as the spouses of servicemen and women, folks with certain health conditions, and individuals who may not be able to afford relocating. The opportunity to work remotely, from Chicago, El Paso, or Mumbai, would greatly improve access to work for those who have been excluded for structural reasons. Or, put simply, an ocean or border can no longer separate you from your dream job.

TIME: THE MOST PRECIOUS ASSET

However, money is not the only commodity with value. An often overlooked, although incredibly precious, resource is *time*.

«IN LOS ANGELES COUNTY, COMMUTERS SPEND ON AVERAGE 11 DAYS A YEAR JUST COMMUTING TO AND FROM WORK!»

If you are like many of Payden's employees and reside in high-traffic areas, you may have found yourself pondering precisely how much time you spend in the car. The answer? More than you would like!

In Los Angeles County, commuters spend, on average, 11 days a year just commuting to and from work![6] To put that in perspective, not having to commute to work not only saves you the headache of sitting in gridlock traffic but also gives you an additional week and a half of vacation time a year.

From another perhaps more tangible perspective, how many times have you wished for a few more hours in the day? Well, remote work gives workers in high-traffic areas just that. If you are one of the roughly 35% of Americans who get less than the recommended seven hours of sleep per night, an additional hour in your day saved on commuting could yield substantial health benefits.[7] For instance, many scientific studies have shown that sleep boosts the immune system, improves memory, and reduces stress—things that are, quite simply, *priceless*.

A WIN-WIN SITUATION

While it's clear there are obvious benefits to remote work for individuals, there are also less obvious and harder-to-quantify societal benefits.

«REMOTE WORK BENEFITS SOCIETY BY NORMALIZING REASONABLE ACCOMMODATIONS FOR PEOPLE WITH DISABILITIES.»

Remote work benefits society by normalizing reasonable accommodations for people with disabilities. For starters, not all office workspaces are designed with accessibility in mind. For example, take open-concept office floor plans designed to foster "random interactions." Such spaces are explicitly designed to build interruptions into the workflow in the hope of boosting creativity, camaraderie, and collaboration. However, they are not synergistic with all kinds of work, nor all kinds of workers. The option of working remotely promotes equity because it allows non-neurotypical workers, such as those living with attention deficit hyperactivity disorder (ADHD), to design workspaces that are best suited to their individual needs.

The benefits of remote work extend to individuals with physical disabilities. Despite the progress made with the passage of the Americans with Disabilities Act (ADA), many workspaces simply are not accessible. Whether it be outdated air-circulation infrastructure or offices with doors that are too narrow for mobility devices, there are innumerable ways that spaces can be exclusionary. With the ability to work remotely, the challenges of trying to design a universal space become irrelevant because individuals are allowed to design spaces that are best suited to their unique needs.

IS THIS THE END OF COMMERCIAL REAL ESTATE?

As the saying goes, there's no such thing as a free lunch. That said, after discussing all the benefits of remote work, you must be wondering: Who ends up worse off? If the headlines are to be believed, commercial real estate (CRE) investors should run for the hills.

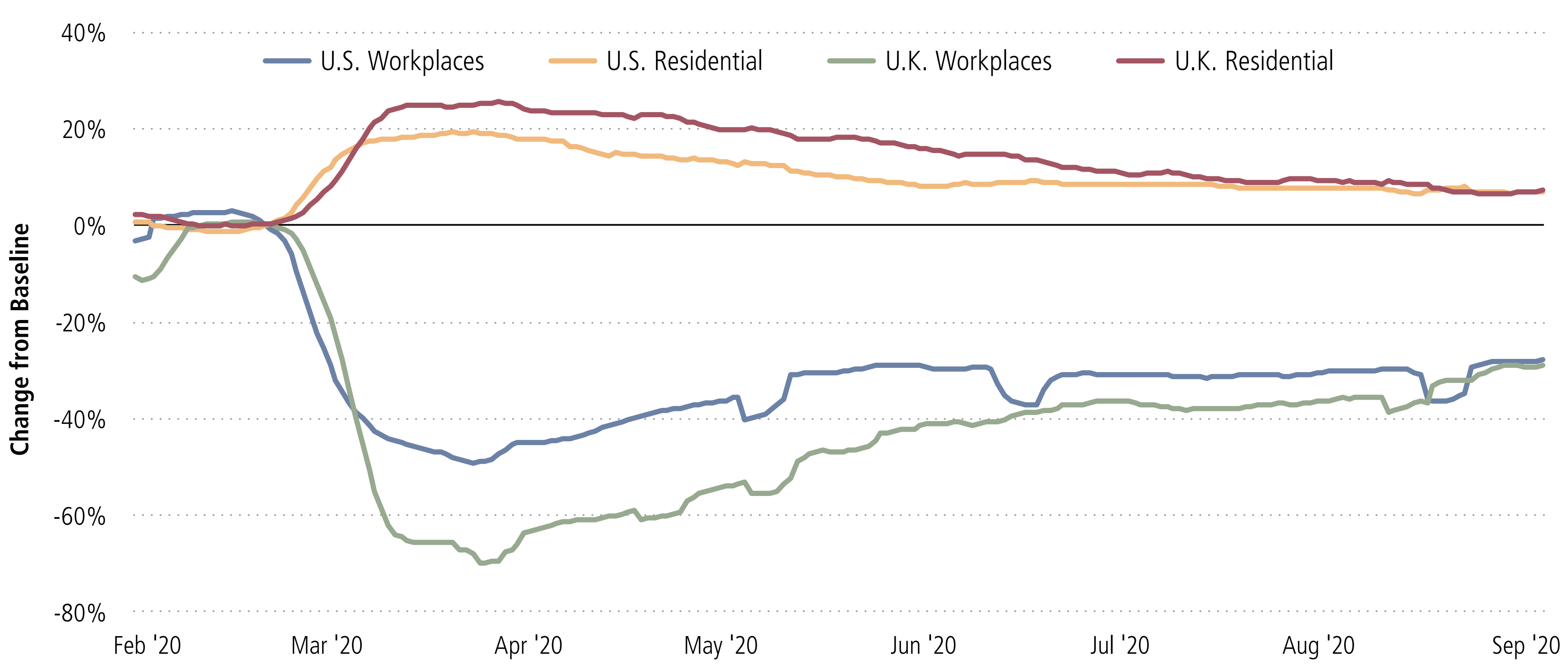
The news that many large tech companies hope to permanently transition significant parts of their workforces to remote work has spurred concerns about the future of commercial real estate (see *Fig. 2*).[8] If companies see that their workers are just as productive when working remotely, why would they want to continue paying for expensive office spaces? For investors who hold securities backed by this type of collateral, correctly answering that question is vital.

«WITH THE ABILITY TO WORK REMOTELY, THE CHALLENGES OF TRYING TO DESIGN A UNIVERSAL SPACE BECOME IRRELEVANT BECAUSE EACH INDIVIDUAL IS ALLOWED TO DESIGN A SPACE BEST SUITED TO THEIR UNIQUE NEEDS.»

There are a few reasons why CRE isn't dead yet.

For starters, not everyone is on the remote work bandwagon. In an aptly named *Wall Street Journal*

fig 2. STILL NOT COMMUTING: MOBILITY TRENDS IN THE U.S. AND THE U.K.



Source: Google

article, "Companies Start to Think Remote Work Isn't So Great After All," author Chip Cutter cites difficulty collaborating on projects, hiring, training, and integrating new employees as some of the drawbacks to an officeless environment. While many of the conclusions in this article rely on anecdotal evidence, other studies provide some more concrete evidence that folks aren't ready to give up on office spaces entirely.

One study sampling 2,100 adults globally found that 19% of folks dislike working from home, while 54% like it.[9] The same study found that 68% of people are interested in working remotely some or all of the time going forward. This would imply that, while some aspects of remote work are clearly beneficial, many people aren't ready to give up time in the office altogether.

«ESPECIALLY IN THE MIDST OF A PANDEMIC THAT HAS TURNED OUR LIVES UPSIDE DOWN, IT'S IMPORTANT TO APPRECIATE THE SMALL VICTORIES.»

On the one hand, many corporations could still see benefits to their bottom line even in a hybrid scenario because it may not be necessary to lease the same amount of space if only a fraction of their employees are in the office on any given day. On the other hand, businesses might want to maintain current square footage or even increase the amount of space they lease so employees can maintain a safe distance from one another.

It is also important to note that, even if most workers who have transitioned to remote work since the start of the pandemic continue to work from home most of the time, it is unlikely that we'll see a sudden, massive shift away from commercial office space.

First, leases for office space tend to be longer-term leases. For example, the average lease length in office REITs is eight to ten years, which means that even if firms wanted to exit their leases, they couldn't do it right away.[10]

Second, not all office jobs can be easily transitioned to online work. Jobs that require frequent collaboration tend to be performed more efficiently in person. The boost to productivity that an office setting can provide would suggest that corporations still see some benefit to leasing office space. The best example of this comes from Facebook. Despite announcing plans to transition 50% of their workforce to permanent remote positions by 2030, they just signed a new lease for a 730,000-square-foot property in New York City.[11]

In summary, while businesses will undoubtedly be more critical of the amount of space they need for workers, commercial real estate is not dead yet. There is still a case for the office, but its uses might be reconsidered.

FINDING VALUE IN DISRUPTION

2020 has been disruptive, to say the least. Regardless of who you are or where you live, your life has been changed in some way. Often, when we experience drastic change, our initial reaction is to push back against it. But many of the most important and necessary changes in our lives start out as ones we do not intend to make.

In this historic moment, let's not hold remote work accountable for all that we've lost this year. Instead, let's view remote work as an incredible tool that has allowed us to adapt to the changing world around us.

Especially in the midst of a pandemic that has turned our lives upside down, it's important to appreciate the small victories. Regardless of whether those victories are getting an extra hour of sleep or simply being able to wear your comfy pants to work, finding small joys amidst the chaos will help us through this. And as always, we hope you and yours are staying safe and well.

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California Municipal Social Impact Fund

U.S. FIXED INCOME
Absolute Return Bond Fund
Cash Reserves Money Market Fund
Core Bond Fund
Corporate Bond Fund
Floating Rate Fund
GNMA Fund
High Income Fund
Limited Maturity Fund
Low Duration Fund
Strategic Income Fund
U.S. Government Fund

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U.S. Equity Income Fund

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Sterling Reserve Fund
U.S. Dollar Liquidity Fund

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