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Where You Should Move to Make the Most Money: America's Superstar Cities

A tech-driven concentration of talent since the 1980s has helped the rich get richer. But it has also sharpened an urban-rural divide that, some say, threatens growth.

By

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Technology is creating an economy in which superstar employees work for superstar firms that gather them into superstar cities, leading to a stark geographic concentration of wealth unlike any seen in the past century.

The latest example of this is Apple announcing this past week a billion-dollar investment in a new campus that could ultimately accommodate up to 15,000 employees in a city already red hot with talent (Austin, Texas). That follows Amazon's recent choice to put its two new headquarters in existing superstar cities (New York and Washington, D.C.).

When economists talk about "superstar" anything, they're referencing a phenomenon first described in the early 1980s. It began as the product of mass media and was put into overdrive by the internet. In an age when the reach of everything we make is greater than ever, members of an elite class of bankers, chief executives, programmers, Instagram influencers and just about anyone with in-demand technical skills have seen their incomes grow far faster than those of the middle class.

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In this winner-take-all economy, the superstar firms—think Apple, Google and Amazon, but also their increasingly high-tech equivalents in finance, health care and every other industry—appear to account for most of the divergence in productivity and profits between companies in the U.S.

As firms cluster around talent, and talent is in turn drawn to those firms, the result is a self-reinforcing trend toward ever-richer, ever-costlier metro areas that are economically dominant over the rest of the country. Ironically, the internet that many of the firms power isn't helping. While it was supposed to erase distance, it can't yet replace high-quality face-to-face communication required for rapid-fire innovation.

Members of the Federal Reserve, among others, have warned that the rise of geographic inequality and a deepening urban-rural divide threaten growth in the U.S. This has led some to declare that rural America is the "new inner city," plagued by poverty, drugs and "deaths of despair." Similar patterns of migration of wealth to cities appear to be playing out all over the world.

For most of the 20th century, this divide did not exist.

"Something changed in 1980," says Mark Muro, a senior fellow and director of the metropolitan policy program at the Metropolitan Policy Program at the Brookings Institution. "What happened was the introduction of the PC." He adds, "Until about then, metros were becoming more like each other. Incomes were converging, and industries were becoming more distributed across place."

From the early 1970s through the 1980s, companies like IBM , Digital Equipment Corp. and Apple used mainframes, minicomputers and eventually PCs to make companies—and the first technologically adept superstar workers—more productive. Mr. Muro calls it the first wave of the "digitalization" of work.

The internet was supposed to lead to a golden age of distributed workforces. In some ways it did: The proportion of workers who do their jobs remotely is now at least 20% and growing.

But superstar firms continue to insist that their top-performing employees cluster in global headquarters or at least regional offices, costs and congestion be damned.

Facebook 's new office is literally the world's largest open-plan workspace, even though workers generally hate them. Apple's new HQ in California was designed from the ground up to force people to bump into each other and collaborate. Amazon could have saved a bundle by creating an entirely virtual "HQ2." After all, the—mostly online—tools for identifying tech talent work anywhere, and can spot a great coder in Arkansas or India.

But even the most modern communication technologies are limited: They can't carry as much information as a real-life, face-to-face collaboration. Slack, email and instant messaging are famous for their inability to convey tone, and the resulting crossed wires.

The internet can't yet replace the face-to-face communication required for rapid-fire innovation.

The more a firm is dependent on innovation—that is, leveraging technology to be the absolute best at what it does—the more intense the collaboration of its superstar employees. Famously, Google's only two "Level 11" engineers (on a scale of 1 to 10) code

by sitting next to one another, staring at the same screen and working on a single keyboard.

Technologists who employ both remote workers and people collected into an office have debated and analyzed the phenomenon at great length. Their own experience boils down to this bon mot from venture capitalist Marc Andreessen: There's a "huge premium to being 10% better at executing," meaning that while it can be a pain to bring workers to a central office, it's worth it even if it leads to an incremental gain in productivity.

Johnathan Nightingale, former vice president of Firefox at Mozilla, has pointed out that while remote work can be sustainable, anything that slows down a startup in the critical first few years can mean losing to a faster competitor. Whether or not this is the case, it's become such an accepted way of thinking in tech that companies—even big ones that only "think like a startup"—obey it as if it were a law.

Attempts to turn cities outside of Silicon Valley into superstar cities by making them tech hubs have met with mixed success. Metro areas succeed when they capitalize on their existing talents. One reason Amazon chose Nashville, Tenn., for a big regional office, says Mr. Muro, could be that it's already a hub for medical IT and digital patient records.

Using data from time-use surveys conducted by the federal government, Mr. Muro and his colleagues created an index of every metro area in the U.S., ranking them by how much workers in each use computers to accomplish their jobs. This yields a measure of the digitalization of every job, industry and city surveyed.

The results include both exactly what you would expect—Silicon Valley is No. 1—and some illustrative surprises. Salt Lake City, home to the "Silicon Slopes," is No. 12 on the list, right behind the tech hub of San Francisco and ahead of tech-happy Seattle. Austin, where Apple is expanding, is No. 9 on the list.

LET'S GET DIGITAL

Top 12 U.S. metropolitan areas in 2016 by mean digital score, according to Brookings Institution analysis of federal data

- San Jose-Sunnyvale-Santa Clara, Calif.
- California-Lexington Park, Md.
- Huntsville, Ala.
- Boulder, Colo.
- Durham-Chapel Hill, N.C.
- Trenton, N.J.
- Washington D.C.-Arlington-Alexandria, Va.-Md.-W.Va.
- Boston-Cambridge-Newton, Mass.-N.H.
- Austin-Round Rock, Texas
- San Francisco-Oakland-Hayward, Calif.
- Ann Arbor, Mich.
- Salt Lake City

Unlike other rankings, from real-estate prices to venture-capital investment, the Brookings index shows us not only which cities have done well and become

unaffordable. It also shows which still-affordable ones should, by the superstar logic, do well in the future.

Not everyone agrees that technology is a primary driver of geographic inequality. Stacy Mitchell, co-director of the nonprofit Institute for Local Self-Reliance, argues that many of these trends are better explained by changes in policy, which since the early 1980s have in many distinct ways given large companies free rein to merge, dominate markets, pursue government subsidies and tax breaks, and in general grow larger at the expense of small, medium and local businesses.

"In particular, the 1982 merger guidelines are very specific in that the only thing that matters [when considering antitrust] is economic efficiency, which is translated into consumer welfare and low prices," she adds.

The cities with the most startups and investment tend to see more business formation, but a long-term challenge lurks: If a superstar city becomes too large, the service workers who aren't benefiting from the boom will be priced out. In the end, this might limit the size of these cities—at least until many of those workers are replaced by robots.

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