

Search All NYTimes.com
The New York Times
Friday, April 16, 2010

Business

Economix

Explaining the Science of Everyday Life



April 13, 2010, 8:25 am

Why Humanity Loves, and Needs, Cities

By [EDWARD L. GLAESER](#)



Nicky Loh/Reuters Residents sit on the waterfront with a view of the Singapore skyline.



[Edward L. Glaeser](#) is an economics professor at Harvard.

For much of its early existence, our species spread out.

Many millennia ago, we left our primordial homes in search of places where fewer people were competing over nature’s abundance. In the 19th century, settlers extended across North America to get access to Iowa’s rich soil and Montana’s mines.

But now humanity is marked more by concentration than by spread. In 2007, one-half of the world’s population became officially urban. One-third of Americans inhabit [just 16 large metropolitan areas](#), which collectively use only a tiny fraction of the country’s land mass.

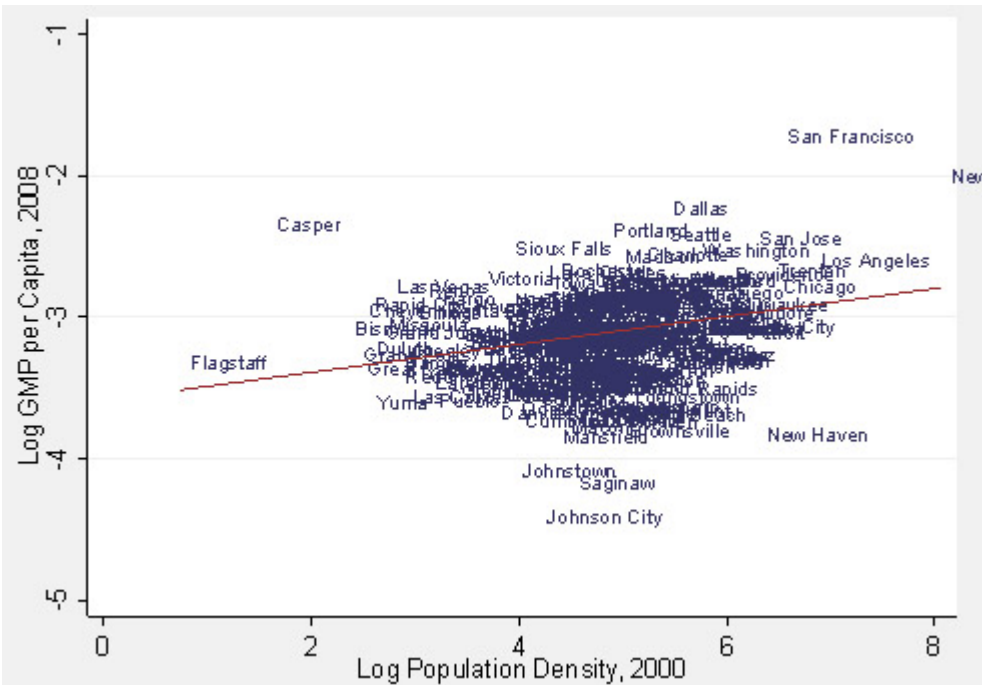
Given the vastness of the globe, why do human beings choose to live so close to one another?

Understanding the appeal of proximity — the economic advantages of agglomeration — helps make sense of the past and future of cities. If people still clustered together primarily to reduce the costs of moving manufactured goods, then cities would become increasingly irrelevant as transportation costs continue to decline.

If cities serve, as I believe, primarily, to connect people and enable them to learn from one another, than an increasingly information-intensive economy will only make urban density more valuable.

About 30 months ago, the National Bureau of Economic Research convened a conference on the economics of agglomeration and the [fruits of that conference](#) were just published. As I edited the volume and strongly believe in the quality of its contents, I’m going to draw from it in a couple of blog posts.

Perhaps the clearest reason why people cluster together in cities is that wages and productivity rise with density.



Edward L. Glaeser

The figure shows the 25 percent correlation between the logarithms of population density and 2008 gross metropolitan product per capita (using 2000 Census population numbers). Per capita productivity increases by 4 percent as population density rises by 50 percent.

But why does productivity rise with density?

The first essay in the book, by Pierre-Philippe Combes, Gilles Duranton, Laurent Gobillon and Sébastien Roux, attacks this productivity puzzle using data on more than eight million French male workers. They are concerned with two potential sources of bias. First, it may be that productivity is causing density, instead of density causing productivity.

Here's how the four co-authors try to deal with this potential problem. They argue that longstanding geological features of an area — like the quality of a city's soil — should have little direct impact on productivity in a developed economy today. If they are right, then natural geographic attributes would affect current productivity only indirectly, by increasing population density over time. Researchers can therefore use historical data to try to correct for this reverse causality. They find that the productivity-density link drops little after making this correction.

A second problem is that more skilled people might choose to live in more dense areas.

Across American metropolitan areas, there is a modest (25 percent) correlation between area density and the share of the population with college degrees. To address this issue, the co-authors first control for other types of characteristics of workers and industries. Their more high-powered approach looks at people who migrate from one place to another, and then asks whether wages rise or fall when people move into different metropolitan areas.

By looking only at the wage changes that come with mobility, they are able to correct for aspects of workers' skill sets and abilities that aren't captured by years of education.

In their data, they find that about one-third of the connection between density and productivity disappears with this movers-based estimation, which suggests that workers' ability (beyond what degree they've earned) is important.

I found an even larger change when I [started using this approach](#) more than 15 years ago, but interpreting these results is tricky.

If cities enable the accumulation of skills, then the movers' data will understate the true effects of density. If cities are machines for learning, as suggested by the fact that wages rise more quickly in cities, then a young person who moves from rural India to Bangalore won't become instantly more productive.

The result on the wage gains of movers suggest that some of the productivity differences across space may reflect the selection of more skilled people into cities. But in my opinion, they somewhat overcorrect, and eliminate the impact that cities have on learning. As such, they may be something of a lower bound on the true connection between productivity and density.

Other essays in the volume focus on the changing nature of agglomeration economies. Jed Kolko writes about services, which now dominate most United States urban areas.

Mr. Kolko highlights a fundamental difference between manufacturing and services. For manufacturing firms it doesn't much matter if suppliers or customers are in the same ZIP code or the same state. Goods are cheap to move. But services seem tied to suppliers and customers

that are in the same ZIP code. Since face-to-face contact is so much a part of service provision, they are drawn to the extreme densities of cities.

In the penultimate essay in the book, Giacomo Ponzetto and I ask, “Did the Death of Distance Hurt Detroit and Help New York?”

Improvements in transportation and communication costs made it cost-effective to manufacture in low-cost areas, which led to the decline of older industrial cities like Detroit. But those same changes also increased the returns to innovation, and the free flow of ideas in cities make them natural hubs of innovation. Since the death of distance increased the scope for new innovation, idea-intensive innovating cities were helped by the same forces that hurt goods-producing cities.

Humanity is a social species and our greatest gift is our ability to learn from one another. Cities thrive by enabling that learning, and they have become only more important as knowledge has become more valuable. Understanding what makes cities work is more important than ever.

Related Posts

From Economix

- [What Makes Cities Great](#)
- [Bulldozing America's Shrinking Cities](#)
- [Why Has Globalization Led to Bigger Cities?](#)
- [Why Is New York's Unemployment Rate \(Relatively\) Low?](#)
- [Teach Your Neighbors Well](#)

-
- Previous post [Where Professors Make the Most](#)
 - Next post [Mapping World Debt](#)

18 Readers' Comments

1. Aly-Khan Satchu

Nairobi Kenya

April 13th, 2010

4:16 pm

The Point is that the Curve rises exponentially between Density and per capita income ?

Aly-Khan Satchu

www.rich.co.ke

Recommended by 0 Readers

2. [Robert](#)

Washington, DC

April 13th, 2010

4:58 pm

As I backpacked across the west Australian outback 20+ years ago this riddle's answer became obviously clear. If one farms or mines then one needs large 1000 or 10000 acre parcels to earn an income. However, if one isn't farming or mining then cities have more customers, more jobs, more restaurants, better housing, better schools and more and better of just about everything! In short, rural becomes synonymous with poor and cities become synonymous with prosperity!

In addition, today rural areas are hotbeds of nepotism and public corruption. The capable migrate to greener pastures and those left behind tend to own the land, possess fewer successful migration genes and by hook or crook come to dominate the local government feeding trough! Exhibit A see Manchester in Clay County KY otherwise known as Appalachia where 8 local government officials were just convicted of vote buying, vote stealing and an array of public corruption crimes. That particular area claims 100+ unsolved homicides, a county wide drug investigation problem not to mention a level of ignorance unsurpassed by any other area in the country.

And we really wonder why cities tend to do better?

Robert
Washington, DC
Recommended by 3 Readers

[3. R.E.Dinlocker](#)

Florida

April 13th, 2010

4:58 pm

Friendliness is not in small town America. Friendliness is in cities where you do not go to get away, but go to get involved. C.S. Lewis said it best in his book, "This is New York."

Recommended by 9 Readers

4. Carl R
San Francisco
April 13th, 2010
4:58 pm

Cities are a marketplace for humans and their services. The article only gets close to that by mentioning services, but seems to miss it.

Detroit may well have been a good place for a human skilled at making car parts to sell his or her services 70 years ago. Cars aren't handcrafted these days. I don't think they have made a case that cities have changed recently. Transportation enters into the equation by transporting humans; markets generally cover as big an area as you can get to in a day or so, and you can get a very long ways in a day now, with 16-hour jet flights.

If you specialize in something, it is natural to go where you have multiple customers. If you live in Silicon valley, and work in internet routers, and Cisco fires you, how convenient that there are other jobs in the area that don't require you to move. Similarly if you are a banker in London, or a TV producer in LA.

Recommended by 2 Readers

[5. Preston L. Bannister](#)

Foothill Ranch, California

April 13th, 2010

6:09 pm

Jobs are the primary reason people move to dense over-sized cities. If you need to find a job, cities are your best bet. For all practical purposes, that is the only reason huge cities (like New York) exist.

Otherwise such over-sized cities are an unpleasant place to live. Your gross income might be higher, but expenses are high, so your net income is less (at least for ordinary folk).

There might be some combination of lowered density and smaller overall size that yields a city that is a good place to live. New York was once such a place. The myth of New York as the greatest city in the world was first written many decades back. The New York of that time was much smaller and less dense.

Folk who can, take their job (or business) elsewhere. One surprise was finding who was buying houses in the less-populated places of the Western US. The most-able (and perhaps slightly lucky) are moving out of cities. The less-able and/or lucky are moving to the big cities.

Recommended by 2 Readers

[6. Lorak G. Selrak](#)

Vancouver

April 13th, 2010

7:26 pm

One interesting, but unmentioned connection here is between learning and learning institutions. If Glaeser is right, (and I think he is) then educational institutions ought to focus their institutions in large cities--despite the obvious disadvantages in land costs. And for the most part they do. Most of our major research universities are either in or near a large urban area. As an academic (e.g. a professional learner) I have a horror of isolated places because they make many sorts of learning more difficult. In contrast, the best place for me to find work is guess where: New York City.

Recommended by 4 Readers

[7. rjs00](#)

N.E. Ohio

April 13th, 2010

7:26 pm

will this experiment in urbanization will fail when fossil fuels run out?

Recommended by 1 Readers

[8. WoosterSquareCommune](#)

New Haven

April 13th, 2010

7:26 pm

I think your graph may be inaccurate. You can't compare center city density to metropolitan product, since in some metro areas, the center city contains only a tiny fraction of the population of the metropolitan area. Please publish the source data so we can see.

Recommended by 2 Readers

[9. Fla Joe](#)
Miami
April 13th, 2010
7:27 pm

This data is referring to metropolitan areas rather than a set of city boundaries. But urban areas all over the world have the highest incomes - remember Jane Jacobs book, the Cities and the Wealth of Nations. Since economic returns appear greatest in big urban areas people move to those with the greatest financial potential and its safe to assume that these motivated individuals in turn stimulate growth and productivity - very Richard Florida like.

The interesting thing is how many people constantly predict the demise of big urban areas due to changes in technology. But it seems that only fringe economic functions can drift off to cyberspace, while real service - finance, education, medical care, design & development activities do best in big urban concentrations. There is growth in some rural areas that have almost full urban amenities (Jackson Hole, college towns, etc.). But most rural agricultural or extractive regions are in population decline worldwide. Ten million Chinese a year are moving to the country's booming big cities and it is happening in India too..

Recommended by 2 Readers

[10. Anonymous BE](#)
Belgium
April 13th, 2010
7:49 pm

Most Americans seem to prefer neither the high density of cities nor the low density of rural areas, but rather the medium density of the suburbs, in the (perhaps vain) hopes of achieving the best of both worlds.

Recommended by 0 Readers

[11. HIGHLIGHT \(what's this?\)](#)

notadmin
manhattan
April 13th, 2010
7:50 pm

Our decision to stay in the city (Manhattan in our case) instead of going to the suburbs or even to relocate to rural midwest (where my husband is from) has a lot to do with human capital and social interaction.

We are giving up having a small private backyard for parks and playgrounds within walking distance, where social encounters happen by chance with people from very different backgrounds and interests. In NYC the exchange of ideas happen in a natural way. My own productivity goes up even while being a housewife. We do many errands at once while walking around (like "From city to gym" article from the Financial Times from last week).

Otherwise (especially in a rural environment) half of my time would be spend driving and my husband would have a long commute. Not only is a waste of time, but it's sedentary, polluting and costly (we don't need to own a car at all here in the city). Social interaction will be limited to people that think like us, reinforcing our own biases and not leading to open mindedness nor learning from others.

One thing though is that to take advantage of what the city has to offer a young family needs

leisure time and willingness more than money (from my own experience). Cities can end up being more kid friendly than suburbs and rural communities.

Recommended by 9 Readers

[12. TheJadedCynic](#)

Work

April 13th, 2010

8:01 pm

I found this article fascinating, but the reader comments were illuminating in regards to the biases of city dwellers versus "Green Acres" types. In fact, oh denizen of the wide open spaces, city life is actually less expensive than rural life in many respects. And density is obviously the cause. In NY City for example, the most basic staples of life including clothing, food, and entertainment, are both easier to procure and less expensive than in rural areas due to sheer proximity. I lived in Atlanta, GA's suburban area for several years, and the lack of shopping choices and the need to travel long distances for nearly anything was highly inconvenient. In NYC nearly anything you can conceive of is typically only a few blocks away, especially in Manhattan.

As for nostalgia for the supposedly "good old days of NYC", hogwash! This city is more livable, safe, clean, and interesting than it's ever been! Show me a city as large as NYC, where you are as safe as we are here, and I'll move there tomorrow. Provided they have decent pizza, theater, nightlife, restaurants, actually know what a bagel is, and where you can have a decent suit made or buy one off the rack at a reasonable price and still be in fashion.

Good luck!

Recommended by 3 Readers

[13. Paul](#)

New York

April 13th, 2010

8:28 pm

Very intriguing summary. I hope to look at the book. The thesis seems sound.

One of your peripheral statements irked me. Cities "use" a tremendous amount of territory, although they "occupy" a tiny amount. Just consider how many farms, road and landfills are required to operate a modern large city. NYC deforms its periphery with transportation routes, which would not be there otherwise, and ships its garbage to landfills as far as Ohio and Virginia. Braudel has described the power of cities over their peripheries in many works.

Recommended by 6 Readers

[14. shelbyshocha](#)

neenah

April 13th, 2010

8:28 pm

I like the end of a comment above, "cities can end up being more kid friendly than suburbs & rural communities"

Tell that to a mother asking why her child was shot in the back going to buy some milk.

Unless your spouse earns the big bucks and one is insulated from the dirt, I don't see how the big city can be a good thing.

Recommended by 1 Readers

[15. Brendan](#)

New Jersey

April 13th, 2010

8:42 pm

Cities are for people who depend on others.

Recommended by 0 Readers

[16.](#) Howard Des Chenes

Brooklyn, NY

April 13th, 2010

10:08 pm

The idea that rural life is somehow a "more natural" state of being is a pernicious myth. One might certainly prefer a bucolic life, or not, but Cities are as natural as termite mounds. They began as centers of manufacturing and resource processing before (yes, before) the advent of agriculture or animal husbandry (see Catal Huyuk.) Most innovations and complex forms of production almost always begin in the city, where the diversity and redundancy of jobs (a benevolent type of inefficiency) encourages competition, breakaway businesses, and the creative recombination of techniques (e.g., bicycle manufacturers began making early aircraft frames). These forces, while they provide opportunities and high wages, also put space at a premium (my rural friends wonder why I would pay such high rents) and so the less profitable work is constantly pushed to the more affordable perimeter of the city and out into the country. Most medieval European cities still had farms within their walls, and the majority of 19th century New York's grain was supplied from the immediate countryside. The rural region of a city would traditionally develop economically with its city, developing its own satellite towns and cities in the process. Unfortunately, since cities are products of extremely dynamic physical, economic and biological forces, and prone to sudden (Pompeii) or gradual (Detroit) collapses, the less volatile, rural region that finds itself without its city winds up more or less intact but stagnant.

Recommended by 1 Readers

[17.](#) F.E.B.

Montana

April 14th, 2010

4:40 pm

In the last twenty-five years the small towns and rural settlements in America have been artificially stripped of most of their brightest and most productive citizens because they have been forced to operate under rules made by ignorant city-dwellers.

Healthy, multi-faceted, multi-cultural, and multi-racial communities have been turned into ghost towns as eco-friendly lumber harvesting has been replaced by government mandated neglect, small-family farms have been economically ruined by impossible codes (while giant impersonal Agra-businesses thrive), and secondary incomes from land-based wealth are diminished.

The forced evacuation of hardworking rural citizens to Big Cities was not caused by the allure of the city so much as the poverty Big City mandates created. These displaced people took the jobs that many only marginally employable people had in the cities. It is impossible to beat a farmer's work ethic!

This meant that the less-educated low-income city workers, many of whom had qualified for a house loan for the first time in their lives, lost jobs to this rural influx.

Lacking the educational resources and multi-generational work ethic of the new rural influx, marginal city workers defaulted on home loans Big Time. Making high-risk loan packages toxic.

We in the country have lost many artists, dance instructors, mechanics, musicians, theater people because the land-based jobs that ultimately supported them have been destroyed by environmental laws that are destructive to the environment---no matter what they sound like to people sheltered from reality in a city's cocoon. We still have many creative souls left. We just don't have much money.

Nor are we creating as much wealth for others as we did forty years ago.

I make about half as much money as I would in a major metropolitan area, but the diverse people I meet are not casual strangers encountered in a park, they are neighbors. Power outages are rare & not a big deal when they occur. The local community theaters are true community accomplishments. Our art festivals are amazing.

I like visiting museums & admiring masterpieces.

I'm so grateful I get to live in scenic beauty.

Recommended by 1 Readers

18. OGT

Quincy, MA

April 14th, 2010

4:47 pm

Looking at the graph I have two questions; What is the R Squared on that fit line? And, how does it change if you take out the obvious outliers, NYC and SF.

Also, I can't say I found your dismissal of the reverse causation, more productivity leading to higher density, at all convincing. Everything we know about land pricing and real estate development leads us to believe more productive locations will be both more valuable and more highly developed. Your invocation of Detroit, on the other hand, ably demonstrates how the loss of relative productivity has lead to a significant decrease in density, as Detroit has lost half its population.

Obviously many economic activities can not be efficiently handled in dispersed rural locations and may need significant populations in order to draw the skill sets needed to sustain them, but that doesn't necessarily make the case for a linear automatic productivity increases tied to density as you have implied here.

Recommended by 0 Readers