

## Enrico Moretti, *The New Geography of Jobs*, Chapter 5

### THE INEQUALITY OF MOBILITY AND COST OF LIVING

AMERICANS HAVE HISTORICALLY been an unusually mobile people, constantly seeking better economic conditions. Yet this process of geographical readjustment is not perfect. In fact, it is highly uneven. Even if everyone is completely free to move to look for a better life elsewhere, not everyone takes advantage of the opportunity. As it turns out, this has profound implications for inequality in America.

In Italy, where I grew up, most people spend their entire lives in the city where they were born, which is often the city where their parents were born. Young Italians are particularly immobile. In a study published in 2006, I calculated that Italians tend to live with their parents until quite late in life: 82 percent of Italian men between the ages of eighteen and thirty still live at home. And when they do leave the parental nest, they do not move far away. Young people commonly get an apartment in the same neighborhood as their parents, often in the same building. While Italians may be an extreme case, Europeans are generally much more geographically rooted than Americans. Compared with people in most other developed nations, Americans are outliers. The Great Recession has temporarily slowed Americans' mobility, but once the economy rebounds, people will start moving again.

This willingness to relocate is a large factor in the country's prosperity, and it always has been. Tocqueville remarked in the nineteenth century that "millions of men are marching at once toward the same horizon; their language, their religion, their manners differ; their object is the same. Fortune has been promised to them somewhere in the west, and to the west they go to find it." In the late nineteenth and early twentieth centuries, migration from rural communities to urban areas provided the crucial labor that fueled the expansion of America's mills and factories. The economic historian Joe Ferrie, one of the foremost experts on this issue, noted that migration "facilitated the exploitation of natural resources at locations distant from the narrow band of initial settlement on the Atlantic coast. Farmers moved to more fertile land in the Ohio River Valley in the late eighteenth century and on to the Great Plains by the middle of the nineteenth century. And mineral and timber resources were worked by migrants to the West and the Northwest. By the Civil War, much of the gap in wages between the West and the East in the Northern states had been erased." More than that of any other developed country, America's population has always been on the move, chasing the next opportunity. Using a detailed data set painstakingly assembled from original entries in historical censuses, Ferrie estimated that even in the nineteenth century, Americans' propensity to move was twice that of residents of Great Britain or Japan in the same period.

Today about half of American households change addresses every five years, a number that would be unthinkable in Europe, and a significant number relocate to a different city. About 33 percent of Americans reside in a state other than the one in which they were born, up from 20 percent in 1900. This staggering degree of mobility has both positive and negative effects. On the one hand, moving has social and personal costs. Americans tend to live farther from their parents and siblings than Europeans. When they have children, they are less able to rely on their family for help in raising them. They are less attached to their neighborhoods and less familiar with their neighbors. But there are also advantages to mobility: if the economic conditions in a region are not particularly good, Americans are apt to look for better opportunities elsewhere. By contrast, Italians and other Europeans tend to stay put. At the individual level, Italians are giving up career opportunities and higher salaries to be close to their parents and friends. At the national level, this immobility worsens the unemployment problem and lowers overall job and income growth. In some regions of Italy (typically in the north), there is an abundance of high-paying jobs and virtually no unemployment. In other regions (typically in the south), there are very few jobs, low salaries, and high unemployment. By not moving north, young Sicilians and Neapolitans effectively increase the unemployment in their region, a situation that leads to less prosperity and stunts Italy's potential for growth.

Although Americans as a whole have always been much more mobile than Europeans, there are large differences among them, with some groups much more willing to move than others. At the time of the Great Migration in the 1920s, when more than 2 million African Americans abandoned the South for industrial centers in other regions, less educated individuals were more likely than others to migrate in search of better lives. Today the opposite is true: the more education a person has, the more mobile she is. College graduates have the highest mobility, workers with a community college education are less mobile, high school graduates are even less, and high school dropouts come at the bottom of the list.

In this respect, American high school dropouts are more similar to Italians than to American college graduates. And it's not because of a lack of opportunities. The United States is a large and diverse nation, and it is always possible to find cities and states that are doing better than others. These geographical differences can be very large. In 2009, at the peak of the Great Recession, unemployment in Detroit reached 20 percent, while unemployment in Iowa City, about 500 miles west of Detroit, was only 4 percent. The experience of unemployed workers in the two cities could not have been more different. A 4 percent unemployment rate is so low that economists consider it effectively zero for all practical purposes. It means that anyone looking for a job in 2009 could have found one in Iowa City in a short time, but finding a job in Detroit could have taken years. These staggering geographical differences are not just specific to periods of recession. Even in more normal times, unemployment in

Detroit can be double the rate in fast-growing cities. And yet, unemployed people in Detroit do not all leave at the same rate. While college graduates are streaming out of that city, the flow of high school graduates is much slower, and the flow of high school dropouts is a mere trickle.

In total, almost half of college graduates move out of their birth states by age thirty. Only 27 percent of high school graduates and 17 percent of high school dropouts do so. These differences in mobility rates reflect the fact that some attend college out of state, but they mostly reflect differing propensities to look for work elsewhere. Using data from millions of individual histories from the economic census, the Notre Dame economist Abigail Wozniak matched workers in their late twenties to the economic conditions they faced in their state when those workers were eighteen and about to enter the labor market. Some of these young workers were fortunate and entered the labor market in states that, at the time, had a strong economy; others were less fortunate and entered the labor market in states with a weak economy. While being fortunate or unfortunate had little to do with schooling, how these young workers reacted to their fortune largely depended on their education. Wozniak found that among those who entered the labor market in bad times, a large portion of the college graduates relocated to states with stronger economies, while the majority of the high school graduates and high school dropouts did not move.

This implies that the job market for professional positions is a national one, while the job market for manual or unskilled positions tends to be more localized, so that people ignore good job opportunities in other cities. This is not just an American phenomenon but almost universal among rich countries. In the United Kingdom, the unemployment rates of highly educated workers in different regions are similar, because the high propensity to migrate tends to equalize job opportunities across regions, while the unemployment rate of less educated workers is vastly different. When Europeans are asked by pollsters whether they are “attached to their town or village,” the number answering that they are “Not at all attached” or “Not very attached” is high in countries such as Finland, Denmark, and the Netherlands, which have high average educational levels, and low in countries such as Portugal and Spain, which have low average levels of education.

## **Reducing Unemployment with Relocation Vouchers**

The relative lack of mobility of less educated Americans has large economic costs. We have seen that the changes in the global and national economy are causing an increase in inequality among workers with different skill levels, with the less skilled being hit the hardest. Differences in geographical mobility, coupled with increasing polarization among American cities, only exacerbate the problem.

Thus, some of the earning inequality between highly skilled and low-skilled workers reflects mobility differences: if the less educated people were more able and willing to move to cities with better job opportunities, the gap between college graduates and high school graduates would shrink.

By being less mobile, less educated workers are also significantly more likely to be unemployed. Figure 10 shows the difference in unemployment rates for different educational groups over the past twenty years. Unemployment among all groups fluctuates, depending on the strength of the national economy. It was high in the early 1990s, reached its lowest level at the peak of the dot-com boom in 2000, and climbed up sharply during the Great Recession of 2008–2010.

But the most interesting feature of the graph is that in both good and bad years, college graduates—the group with the highest mobility—have the lowest unemployment rate, while high school dropouts—the group with the lowest mobility—consistently have the highest unemployment rate. High school graduates and workers with a community college education are in between. While the difference in unemployment rates reflects many factors, the willingness to move is an important difference among the four groups. It is not just that less educated individuals are more likely to be out of work at any particular time; they also have to deal with the long-term consequences. Evidence indicates that workers' skills tend to deteriorate during long bouts of unemployment, and this further widens the gulf between the skilled and the unskilled.

Why does a lack of education lead to lower mobility? For some, it reflects a dearth of information about opportunities elsewhere, a shortage of the kinds of skills necessary to make a big life change, and especially a lack of cash. Relocating is like an investment: you spend money up front, to cover the direct costs of the move and your living expenses until a job becomes available, in exchange for a better job later. But many unemployed workers with low skills are unable to make this investment, because they have limited savings and limited access to credit. In this case, the lack of mobility is not a choice but the result of external constraints that limit people's freedom of movement. In other cases, the lower propensity to move reflects cultural differences between the two groups. Like some Italians, some less educated Americans choose not to move away, presumably because they value staying near their family and friends more than better job prospects. Although this has an economic cost, it is a perfectly legitimate choice.

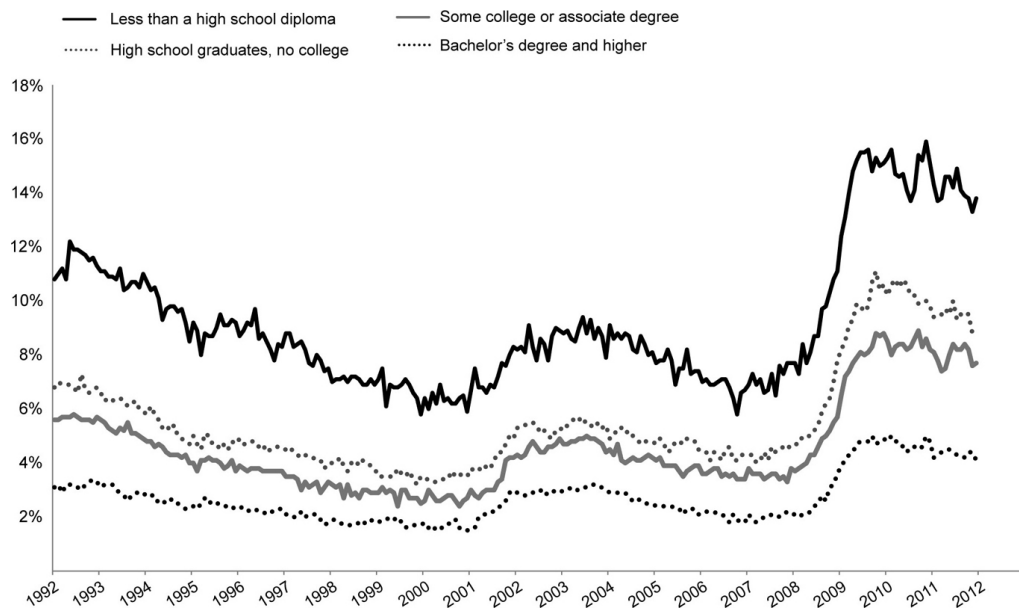


Figure 10. Unemployment rates by level of education

Source: Adapted from a graph by Bill McBride, [calculatedriskblog.com](http://calculatedriskblog.com).

This distinction between causes is important, because it suggests a policy reform that could end up helping those workers whose lack of mobility is not a choice. The unemployment insurance system, which was introduced during the 1930s, is essentially the same now as it was then. Currently, an out-of-work person who qualifies for unemployment insurance receives a check from the government that covers part of his previous salary. What is striking about the system is that it does not provide any incentive for unemployed workers to look for jobs in places with better labor markets. If anything, it discourages mobility from high-unemployment areas to low-unemployment ones, because it does not compensate for the difference in cost of living. If you are living off an unemployment check in Flint, you do not have a lot of incentives to move to Austin to look for a new job, because your housing expenses would double but your check would still reflect the cost of living in Flint.

The unemployment insurance system should be adjusted to reflect the vast and growing differences in economic fortunes among American cities. Unemployed people living in areas with above-average unemployment rates should receive part of their unemployment insurance check in the form of a mobility voucher that would cover some of the costs of moving to a different area. In other words, instead of encouraging out-of-work residents to remain in Flint, the federal government could help them relocate to Texas (or wherever they might choose to go) with financial support that covers a portion of their moving expenses. This would help those who would like to move but are stuck because they lack cash.

Remarkably, this policy would also help those who are not willing to move. The reason is simple, although not widely recognized. If there are one thousand unemployed workers looking for jobs in a city

where there are only one hundred job openings, the probability of each worker finding a job is one in ten. But if five hundred of these unemployed workers are encouraged to relocate by a mobility voucher, the probability that each of the remaining workers finds a job is doubled. In a climate of high unemployment, the fewer people like you who are looking for a job, the better your chances of finding one. This points to a surprising conclusion: unemployed workers who stay in a local labor market with high unemployment effectively impose a cost, or negative externality, on everyone else in that market, while workers who move away generate a positive externality. A mobility voucher is a way to deal with this. By increasing the number of workers who are willing to relocate, the voucher benefits both those who move, who end up with better jobs elsewhere, and those who stay, who end up with a better chance of finding a job. (Of course, this only works for the nation as a whole if the externality created by an unemployed worker is larger in cities with high unemployment than in cities with low unemployment—a reasonable assumption. Otherwise, mobility vouchers would simply shift the problem around, with no real benefit for total unemployment.)

In practice, a mobility voucher could take the form of an additional payment over and above the current unemployment insurance payment for those who move out of areas with above-average unemployment. Or it could come out of the current unemployment insurance payment, in the form of lower benefits for those who stay (with exceptions for those with health conditions or family constraints). The first case is a subsidy for those who move; the second is a tax on those who stay. If people cannot move because they don't have savings and/or they have limited access to credit, the effect on their mobility is likely to be larger with the first type of voucher. A combination of the two approaches is also possible.

This idea is not completely new. The government already provides a limited relocation allowance as part of Trade Adjustment Assistance, an obscure federal aid program that helps workers who have lost their jobs as a result of foreign trade. It is time to extend the allowance to include all workers receiving unemployment insurance.

In 1968 the Harvard economist John F. Kain proposed the theory of “spatial mismatch.” Poor people and minorities, he argued, face a structural disadvantage in the labor market because of the geographical mismatch between the location of housing and the location of jobs within each city. His basic idea was that the poor tend to be concentrated in the urban core of American cities, far from many suitable jobs. Not only do the poor face higher commuting costs, but because they live farther from potential employers, they also have less information about job openings, and this further depresses their employment opportunities. Kain argued that this geographical dislocation, combined with lower car ownership rates and lack of efficient public transit, results in higher unemployment rates. The sociologist

William Julius Wilson embraced the notion of spatial mismatch in his influential book *The Truly Disadvantaged*, which highlighted the role of mismatch as one of the root causes of racial differences in the United States. Effectively, the spatial mismatch theory attributes economic inequality in part to the patterns of residential segregation within each city.

While historically such differences may have played a role, today it is differences *across* cities that are more likely to be the source of mismatch. The divide between well-educated workers with high-paying, secure jobs and less educated workers with low-paying jobs is connected to the geographical divide between thriving cities and struggling ones. In the debate over inequality in America, people often overlook this aspect. As the gulf between the labor markets in American cities grows, the lower propensity of less skilled workers to move becomes more and more costly.

While the high mobility of well-educated Americans tends to be good for their careers, it presents state governments with a big challenge. By funding local universities and colleges, states heavily subsidize the higher education of their residents in the hope of fostering economic growth at the local level. In the United States, the current subsidy to students at public universities is on the order of 80 percent. As we saw, the overall level of human capital in an area is one of the most important drivers of local prosperity. State legislatures' support for higher education is based on the hope that it will raise labor productivity and attract innovative businesses. However, the fact that college-educated Americans are so mobile makes the states' efforts less effective.

A team of University of Michigan economists led by John Bound has found that the number of degrees conferred by local colleges and universities has only a modest effect on the number of university-educated workers within the state. States like Michigan and Ohio, with world-class systems of public higher education, struggle to retain many of their college graduates, who are more drawn to opportunities in California and New York. For the average recipients of bachelor's degrees, Bound and his coauthors found only a weak link between the number of students who graduated from a state university and the number who ended up staying in that state. For recipients of M.D. degrees, they found no connection whatsoever: the number of doctors who stayed in Michigan had nothing to do with the number of doctors produced by the University of Michigan. Because of the high mobility of college graduates, the Michigan economists concluded that states have limited power to influence the skill levels of their workforces in a meaningful way by investing in higher education. The pull of innovation hubs dwarfs their efforts. This is great news for the cities that attract the college graduates—these cities effectively receive free human capital paid for by someone else. But it significantly limits the ability of struggling states to build a sustainable base by investing in higher education. Bound's finding also has interesting implications for educational policy. It suggests that the financing of public colleges and

universities should not be left solely to states. Given that the social benefit of investment in higher education is not contained within the borders of a state, an efficient educational policy is one in which the federal government plays a role in supporting part of this investment.

We now turn to another important aspect of Americans' mobility: its relation to real estate prices. We have seen that there are large and growing differences in wages among American cities. One of the primary reasons that people aren't moving en masse to San Francisco or Boston, despite the promise of higher wages, is that these cities are very expensive to live in. How is cost of living affecting the Great Divergence?

## **The Surprising Relationship Between Inequality and Real Estate**

The city of Norilsk, in northern Siberia, sits on one of the earth's largest reserves of nickel and platinum. Because nickel is a necessary component of steel, Soviet planners made the development of Norilsk a priority during the 1930s. Stalin sent a delegation of experts to explore the region, and the experts reported that it would be difficult to attract workers to the city even by offering premium wages. Conditions there were simply too hellish: extremely cold temperatures, sometimes dropping to 45 degrees below zero, five months of winter darkness, and a depressing landscape with virtually no vegetation made it one of the most hostile environments on the planet. Although the precious metal reserves in the area could, in theory, support many jobs, planners could not come up with wages high enough to compensate workers for the horrible living conditions. For someone like Stalin, of course, these were trivial details. The feared state police, the NKVD, took over responsibility for the development of the city and turned it into a gulag—a Soviet labor camp. About 100,000 political prisoners died building the city and laboring in its mines. For decades the melting of the snowpack during the summer months revealed the bones of workers who had perished.

In the Soviet Union, as in other communist regimes in Eastern Europe and China, the state had the power to forcibly move labor where it was needed. This gave rise to “artificial” cities such as Norilsk—cities that would not have existed in a free society. In the United States, workers are free to choose where they want to live. As we saw, Americans take advantage of this and move around more than citizens of most other countries. But there is a catch to this freedom. Living in places that are perceived as more desirable, either because they offer a higher quality of life or because they offer better jobs, tends to cost more. This is not surprising. Unlike the Soviet economy, which assigned resources based on a five-year plan, a market economy uses prices to allocate resources, and in this case the scarce resource is land in attractive cities. If a city has great weather, Americans tend to move there in large



numbers, and in doing so they bid up the price of real estate. Good weather may not have a sticker price, but we implicitly pay for it, just as we pay for a nicer car or a larger TV. The same is true for good public schools, low crime rates, and excellent local restaurants. Every attractive feature of a city ends up being capitalized, at least in part, into higher property values.

This simple observation has an unexpected implication: those who actually end up benefiting from these features are not necessarily those who are directly affected by them. Pollution levels in Southern California have decreased dramatically over the past twenty years, especially in Los Angeles, thanks to cleaner-burning gasoline and more aggressive regulation. Some neighborhoods have experienced more improvements than others, with ozone reductions ranging from 3 to 33 percent, depending on the area. You might think that residents of the neighborhoods that have experienced the largest pollution declines are the net winners, but that depends on whether they own or rent their homes. One study found that the larger the decline in pollution levels, the larger the increase in the desirability of the neighborhood and therefore the higher the price of real estate. In one low-income neighborhood, for example, ozone concentrations declined by 24 percent but housing costs increased by 10.8 percent. The price increase benefited property owners, who became both healthier and richer, but left renters healthier but poorer. Effectively, the price change acted as an unintended redistribution mechanism that shifted some of the benefits of air-quality improvements away from one group and toward another.

The same principle applies when a city labor market improves and local jobs are created. In the United States, we can see a clear correlation between local labor market conditions and the cost of living. Table 3 shows the metropolitan areas with the highest and lowest costs of living today. To create the table, I used data on about one million households, including both renters and homeowners, and data from the Bureau of Labor Statistics on the price of consumer goods. To measure cost of living, one needs to add up the local price of all the things consumed by residents. How does the average American household spend its money? Most people give the wrong answer. People tend to grossly overestimate the amount of money they spend on food, gas, and groceries, probably because they purchase these items regularly. In reality, the average American spends only 14 percent of her income on food and beverages and 17 percent on transportation. This is not very much. The other categories account for even less of the family budget: apparel (3 percent), medical care (6 percent), recreation (5 percent), education and communication (6 percent). (The way Americans divide their family budget is fairly similar to the way families in other countries do, with the main exception being Italian families, whose share of clothing expenditures is double that of Americans.) By far the largest item in the budget is housing, which accounts for 40 percent of spending. This means that most of the differences in cost of living among metropolitan areas reflect differences in the cost of housing, which in turn mostly reflect differences in

the cost of land. Other differences arise from the price of local services—things like haircuts and restaurant meals—but these count considerably less, because their share of the budget is smaller. Moreover, they too mostly reflect the cost of land. For example, a haircut is more expensive in New York than in Dallas because it costs more to rent a store and because the salary of the hairstylist is higher to compensate for the higher cost of living. The same is true for restaurant meals, therapy sessions, legal services, and nanny services.

**TABLE 3: METROPOLITAN AREAS WITH HIGH AND LOW COSTS OF LIVING**

HIGHEST COST OF LIVING	LOWEST COST OF LIVING
1. San Jose, CA	271. Youngstown-Warren, OH/PA
2. Stamford, CT	272. Lima, OH
3. San Francisco–Oakland– Vallejo, CA	273. Terre Haute, IN
4. Santa Cruz, CA	274. Sharon, PA
5. Santa Barbara–Santa Maria–Lompoc, CA	275. St. Joseph, MO
6. Ventura–Oxnard–Simi Valley, CA	276. Lynchburg, VA
7. Boston, MA	277. Williamsport, PA
8. Honolulu, HI	278. Joplin, MO
9. Santa Rosa–Petaluma, CA	279. Brownsville–Harlingen–San Benito, TX
10. Salinas–Seaside–Monterey, CA	280. Duluth-Superior, MN/WI
11. New York–Northeastern NJ	281. Johnson City–Kingsport–Bristol, TN/VA
12. Washington, DC/MD/VA	282. Altoona, PA
13. Los Angeles–Long Beach, CA	283. Alexandria, LA
14. San Diego, CA	284. McAllen-Edinburg-Pharr-Mission, TX
15. Seattle-Everett, WA	285. Danville, VA
16. Trenton, NJ	286. Gadsden, AL
17. Bridgeport, CT	287. Anniston, AL
18. Fort Lauderdale–Hollywood–Pompano Beach, FL	288. Johnstown, PA
19. Austin, TX	
20. Anchorage, AK	

The table confirms that areas at the top of the list tend to be the ones with the strongest labor markets—the ones where wages and productivity are highest. San Jose is first, followed by Stamford and

San Francisco. Many American innovation hubs are in the top group—Boston, Washington, D.C., San Diego, Seattle, and Austin. Anchorage is an exception, because many of its necessities have to be imported. Because the data reflect the entire metropolitan area, New York is only number eleven; taken alone, the city of New York would be at the top of the list. By contrast, the areas with the most affordable cost of living tend to have the weakest labor markets. At the very bottom of the list we find Johnstown, Pennsylvania, a declining manufacturing town, where the cost of living is four times lower than that of San Jose. Other metro areas near the bottom include Anniston, Alabama; Gadsden, Alabama; and Danville, Virginia. The relation between the strength of a labor market and the cost of housing is not deterministic, but it depends on several factors, including quality of life (better quality of life means higher housing costs, all other things being equal) and how easy it is to build new houses to accommodate increases in demand (easier housing development means lower costs).

These facts have a bearing on how we interpret measures of inequality among workers and between cities. Let's start with the latter. When the labor market in a city strengthens, both workers' earnings and the cost of housing tend to increase. These increases have two separate effects on residents. First, the increase in housing costs offsets some of the increase in salaries. In cities like Johnstown, people have low nominal salaries, but since mortgages are lower than elsewhere, an average salary has more purchasing power. By contrast, people in New York, Washington, and Boston have higher nominal salaries, but their effective salaries are not as high, because much of their wage tends to go toward paying the mortgage. This helps explain why not everyone has left Johnstown to move to Boston or New York. In practice, differences in average earnings among U.S. cities adjusted for cost of living are about 25 percent smaller than unadjusted differences.<sup>10</sup>

However, this is not the end of the story. Just as with improvements in air quality, the effect of a strong labor market on a family ultimately depends on whether that family belongs to the 70 percent of Americans who own their homes or the 30 percent who rent. Homeowners in strengthening labor markets gain twice, both because of higher wages and because of higher property values. For them, the effect on well-being is larger than the increase in purchasing power because of the capital gains on their property. This highlights an unexpected conclusion: a significant part of the wealth created by America's dynamic innovation sector accrues not just through the labor market but through the housing market. These capital gains are an important channel through which residents of innovation hubs benefit from the strength of their local economy. For renters, however, the effect of higher earnings is tempered by the increase in their monthly housing costs. Therefore, the ultimate effect on their well-being depends on which of these two forces prevail. The larger the increase in wages and the smaller the increase in rents, the better for them. As in the case of air quality, the change in real estate prices effectively redistributes

the wealth created by job growth from one group to another. As we will soon discover, local governments have the power to manage the increases in local cost of living and can therefore determine whether homeowners or renters are the ones to gain the most from a strengthening labor market.

This relationship between local labor markets and cost of living also affects the way we think about inequality between workers. Most of the public debate on inequality focuses on the striking differences in salaries and incomes, but what really matters is how much people can buy with their earnings. When economists started measuring inequality this way, they found that the difference in consumption between rich and poor—from groceries to clothes, electronics to health care—is not as large as the difference in salary. How can the consumption gap between the rich and the poor be smaller than the income gap?

An important explanation for this apparent contradiction has to do with where people live. In recent research, I found that since 1980, the amount that the typical college graduate spends on housing has grown much faster than the amount the typical high school graduate spends. This trend does not just reflect better or larger houses owned by college graduates. It mostly reflects differences in where groups with different skills tend to congregate. As we have seen, over the past three decades, jobs for college graduates have increasingly concentrated in expensive metropolitan areas—brain hubs like San Jose, San Francisco, Boston, New York, and Washington, D.C.—while jobs for high school graduates have increasingly concentrated in heartland cities with a low cost of living. While in 1980 the difference in housing costs between the two groups was small, it has grown by more than three times. This is important, because it implies that college graduates end up spending more for housing and therefore have less money for other goods and services. It is as if college graduates have experienced a higher inflation rate than high school graduates. Therefore the difference in living standards between highly educated Americans and less educated Americans, while large, is actually somewhat smaller than you might think.

## Gentrification and Its Discontents

Just as improvements in air quality can have unintended consequences, a stronger labor market can sometimes have a dark side. Higher real estate prices can displace the poor, significantly altering the mix of residents in a community. Eventually these changes can affect a city's very identity. For example, think of Boston in the 1970s. Its economy was in terrible condition, bogged down by an old manufacturing base and high unemployment. But over the past three decades it has flourished, thanks to jobs in innovation and finance. The transformation was not just economic but also demographic and cultural. It resulted in a profound remaking of the social texture of the city, its urban form, and its quality

of life. While many of these changes were for the better, there were also significant social costs. Many longtime residents ended up being priced out of their own neighborhoods. And even those who stayed were not spared, as the character of some communities shifted in sudden and sometimes uncomfortable ways. Those who moved to Boston between 1990 and 2010 tended to have college degrees and professional occupations. Those who moved out tended to have low levels of schooling and nonprofessional jobs. The lifestyles, values, and social identities of the two groups could not have been more different.

The debate about the costs of local economic development can get acrimonious. Local activists in cities such as Cambridge, Berkeley, Washington, D.C., and Santa Monica love to hate this sort of economic change, arguing that it should be stopped at any cost because it ends up hurting communities. While it is clear that there are costs, it is useful to clarify who bears them and what the best way to minimize them is.

As we have seen, original homeowners benefit from gentrification. It is important to recognize that this group can be socially quite distinct from the gentrifiers—the college-educated professionals, the innovators, the entrepreneurs. Almost by definition, a gentrifying neighborhood is one in which many of the original residents, including the property owners, are not particularly wealthy. Take the Mission District, the neighborhood of San Francisco where I live. It is one of the areas of the city that has been most affected by the influx of college-educated high-tech professionals. Since it is close to the freeway, many workers in Silicon Valley who prefer an urban lifestyle end up here. Remarkably, the people who are benefiting most from this influx of high-tech workers are the largely Latino homeowners who have been selling their property to the newcomers—people like the Mexican American couple who owned a nice two-story Victorian near my house that had been in the family for decades. They decided to sell it for \$950,000 and move to the suburbs, where they could buy a similar-sized house for half the price and live off the balance.

What about all the other residents, people who never had any property to begin with? In many large urban areas, most residents are renters and are therefore hit hard by an increase in cost of living. This is especially painful for the elderly and those with low incomes who end up relinquishing their houses, memories, neighbors, and social networks—in a word, much of their lives—and have to start from scratch somewhere else. What should we do to protect them from sudden displacement?

The typical reaction in many communities is stringent land-use regulation designed to slow down socioeconomic change. These laws tend to come in two flavors. The first focuses on commercial real estate and seeks to moderate gentrification by limiting the number of new office buildings. One of the most extreme cases is the city of Berkeley, which in an effort to protect “good blue-collar jobs” has

effectively stunted high-tech growth in the entire west side of the city. Large parts of eastern San Francisco are also slated for light manufacturing in the vain hope that the industry will bounce back. The second kind focuses on residential real estate and seeks to limit new market-rate construction, particularly in transforming neighborhoods. In effect, the first kind seeks to limit the inflow of new employers in the innovation sector, while the second seeks to limit the inflow of new residents. Both aim to reduce private investment with the intent of preserving the existing economic and cultural demographics.

In my view, both approaches are misguided and unlikely to be effective at managing gentrification. Constraining new high-tech office buildings amounts to reducing the number of jobs that a city can create, because it is quite unlikely that factories will open in the urban core of cities like San Francisco and Santa Monica. Because of the multiplier and spillover effects, this policy ends up hurting the very people it is intended to help. Indeed, the most important lesson of the multiplier and spillover effects is that unskilled workers in a city have much to gain from the fortunes of the more skilled workers who live next door, as their very livelihoods often depend on sustained growth in the innovation sector: more skilled residents in a city mean more and better jobs for the less skilled. The policy also hurts nonresidents. As we have seen, innovation hubs are among the most productive areas in the United States, and this higher productivity attracts workers from everywhere in the nation. This level of productivity cannot be easily replicated elsewhere, because of the strong forces of agglomeration. Thus, curtailing job creation in America's innovation hubs is apt to result in a net job loss for the country. It is a terrible waste of resources—one that makes our unemployment rate worse.

Curtailing new residential developments also makes little sense. It is the equivalent of creating jobs in a city but then denying those jobs to any applicant who comes from somewhere else. Moreover, it is likely to accelerate the displacement of poor residents, not to slow it down. The reason is quite simple: rationing new housing in a city invariably results in even higher real estate prices. It makes intuitive sense: if there is high demand for housing in a city, reducing supply can only raise the price. In a series of recent studies, the urban economist Ed Glaeser and various collaborators have uncovered clear evidence that cities that adopt more restrictive residential development policies invariably end up with higher housing costs relative to wage levels. By contrast, cities that are proactive in allowing urban housing development end up with lower housing costs.

The real solution to the problem of gentrification is exactly the opposite of restricting new residential development. Instead of limiting new housing, innovation hubs should encourage it. If managed correctly through smart growth policies, more housing does not mean more sprawl and congestion, especially if it is concentrated in the urban core and is accompanied by an expansion of the public transit

system. These kinds of progressive urban development policies can significantly mitigate the negative effects of gentrification while promoting the serendipitous urban social interactions that foster knowledge spillovers and innovation.

A good example is Seattle. When economic conditions there began to improve, thanks to the expansion of high-tech jobs, the city decided to increase the number of new housing units available to families by allowing a significant amount of infill urban development—the type of development that focuses on making an area denser by renovating existing buildings and developing empty lots, thus avoiding sprawl. This increase in supply kept real estate prices in check. While there clearly were price increases, they were lower than those of cities like San Francisco and Boston, which aggressively limit new housing. Essentially, this acted like a redistribution mechanism that favored renters over homeowners. It meant that a larger share of the wealth created by the rise of the local high-tech sector went to the former group instead of the latter.

Seattle was also fortunate to have farsighted business leaders. In contrast to those in most other American cities, major retailers in Seattle decided to stay downtown. The Nordstrom family, together with the other department stores at the time—most important, Frederick & Nelson—wanted to head off the “exodus to the mall” phenomenon. This decision encouraged urban planners to embrace a retail-based urban center, an unusual move for American cities. Things would be very different today if Nordstrom had fled. The simultaneous growth of high-tech jobs in and around the downtown area and high-density housing in the city’s walkable neighborhoods reversed middle-class flight from the city center and ultimately resulted in a lower crime rate, vibrant cultural offerings, and new restaurants. As new residents flocked to the urban core, public schools experienced noticeable improvements. Test scores increased, and not just for those children who had well-educated parents but also for children whose parents were less well educated and who had non-high-tech jobs.

In the end, from the point of view of a city, gentrification is a good problem to have, because it is a sign of economic success and job growth. Dozens of decaying cities would love to have this problem. At the same time, gentrification has serious social consequences. The solution is not to discourage local job creation in the innovation sector, hoping that manufacturing jobs will magically return. The solution is to manage the process of economic growth in smart ways, to minimize the negative consequences for the weakest residents and maximize the economic benefits for all.