



Why Mobility Matters

By Ted Balaker



MOBILITY HAS ALWAYS MATTERED

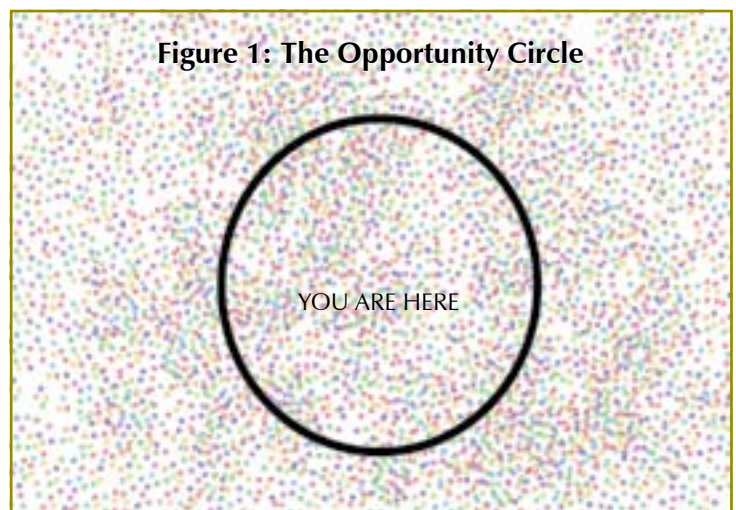
Americans rightly celebrate the freedom of opportunity, but how far would it take us if our movements were severely restricted? How might the lack of mobility affect the kind of jobs we hold, the places we explore, or even the people we marry? The freedom of mobility helps make other freedoms more meaningful. The more mobility we enjoy, the more choices we have. Mobility gives us more of what's important in life.

Imagine that you are in the center of a circle. (Figure 1). Call it your opportunity circle.

The space within the circle represents the amount of ground you can get to in a reasonable amount of time, say, one hour. The dots represent all the possible jobs you could apply for. The bigger your opportunity circle, the more jobs you can get to, and the better chance you have of landing the job that is right for you. If your mobility improves, the circle grows and you have more opportunities. If mobility degrades, the circle shrinks and you have fewer opportuni-

ties. And the dots need not represent just job opportunities. If you are an employer, the dots could represent potential customers or your available labor pool. The dots could actually represent just about anything, from dining opportunities (area restaurants) to opportunities for love (available singles). But whatever the dots represent, the bigger the opportunity circle the better.

Figure 1: The Opportunity Circle



Our ancestors had to make do with much smaller opportunity circles. Long ago they had only their feet to rely upon, and their feet couldn't carry them far. (The average person can walk about four miles per hour.) But new modes of travel—wheeled carts, animal-powered carriages, trains, cars, and planes—allowed us to cover more ground faster. And opportunities expanded alongside these improvements in mobility.

Mobility has even helped us live longer. For hundreds of years, life expectancies hovered around 40 years; but during the 1800s they began to shoot up and today life expectancies in many advanced societies approach 80 years.

What accounts for the dramatic increase in life spans? Harvard historian David Landes points to three factors:

1. Better medicine
2. Better disease prevention
3. Better nutrition

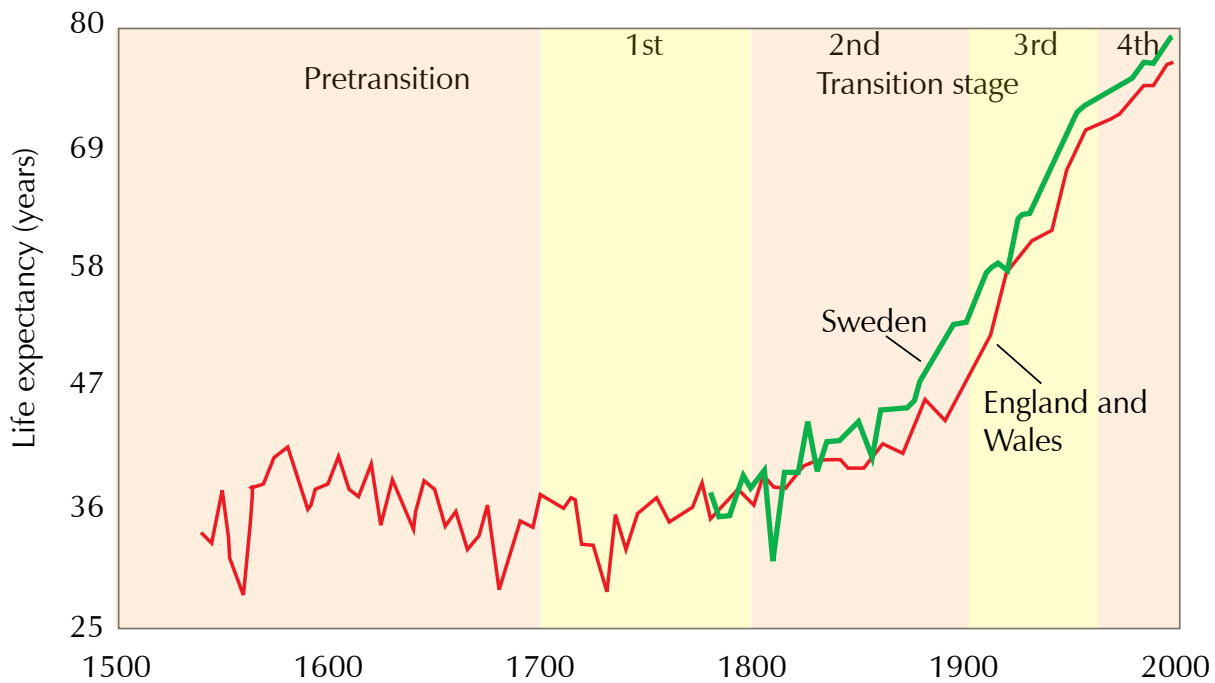
Landes notes that better nutrition “owed much to the increase in food supply, even more to *better, faster transport*. Famines became rarer; diet became more varied and richer in animal protein” (emphasis added).¹ Once the fate of townspeople rested on local food production, but improved mobility gave them insurance against poor crop

yields. Mobility allowed them to break free from isolation and trade with others to improve their living standards.

Improved mobility allowed people to multiply the benefits of the division of labor. In the 18th century, economist Adam Smith observed that how much a society benefits from the division of labor depends upon “the extent of the market.” In other words, the more people a society can trade with, the better off it will be. No doubt Smith would smile at the extent of today's markets. With eight million residents, New York is our nation's largest city and roughly 800 times the size of the cities of ancient Greece. Our agglomeration economies allow millions of people to travel within a metropolitan area to buy, sell, and play. When those within a metropolitan area are allowed to churn smoothly, the economy reaches its potential. We can cover more ground faster and that means we enjoy opportunity circles that are much larger than our ancestors had. More jobseekers are able to find the right jobs. More businesses are able to attract more customers. More people enjoy higher and higher living standards.

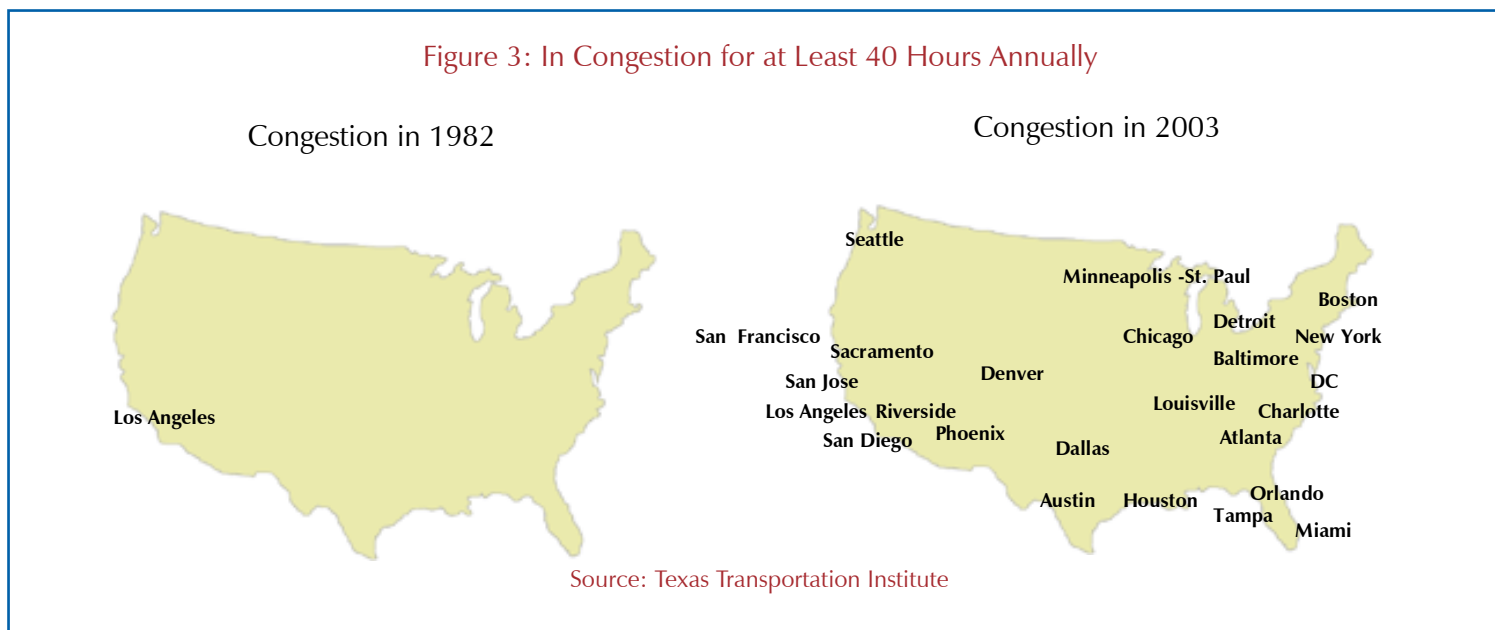
We've come so far, but now something threatens to chip away at our progress. The freedom that mobility gives us is gradually being taken away by congestion. It strangles dyna-

Figure 2: Life Expectancy



Source: John Bongaarts and Rodolfo A. Bulatao, Eds. *Beyond Six Billion: Forecasting the World's Population* (Washington, D.C.: National Academies Press, 2000).

Figure 3: In Congestion for at Least 40 Hours Annually



mism from our lives, our cities, and our nation. Some disagree. They argue that congestion is evidence of economic vitality. Yet clogged roads are evidence of economic vitality only in the same sad way clogged arteries are evidence of nutrition.

Clogged arteries sap life from even the strongest man. When blood flow slows, his speed of life slows. The activities that once provided fulfillment, joy, and prosperity become chores. The man gets winded from the slightest bit of activity. He reacts by doing less and less. He winds down.

Many of our great cities are winding down, forcing their productive residents farther and farther away. Here clogged streets sap the strength from the circulatory system of urban life. When mobility slows, the speed of life slows. Eventually, the city simply does less and less..

Congestion is more than 200 percent worse nationwide than it was two decades ago.² Now it smothers well-established areas (it's up 183 percent in Washington, D.C.) as well as upstart ones (up 475 percent in Atlanta).³ Not only has congestion gotten much worse in areas where we expect it to be bad, it's also making life increasingly sluggish across the nation, from Portland to Austin to Charlotte.

The average American now spends 47 hours a year stuck in congestion—more than an entire work week—and it's much worse in our big cities. In Los Angeles, the average driver spends 93 hours stranded on the roads. In 1983, only Los Angeles, had enough congestion to cause the average driver to spend more than 40 hours stuck in traffic. Just 20 years later, 25 areas reached this threshold (Figure 3).

The future looks bleaker still. Congestion in Los Angeles is legendary, but if our leaders continue to respond to the mobility crisis with a shrug, many more areas will succumb to LA-style gridlock. By 2030, 11 additional urban areas (Chicago, Washington D.C., San Francisco, Atlanta, Miami, Denver, Seattle, Las Vegas, Minneapolis-St. Paul, Baltimore, Portland) will suffer through conditions as bad as or worse than present day Los Angeles.⁴ Eighteen other areas, from Phoenix to Orlando, will endure a level of congestion that is only slightly less severe.

Some of the costs of congestion are quite plain to see: stress, lost time, lost money from extra gas and wear and tear on automobiles. Other costs are less obvious. Congestion can be a problem even when we avoid it. Because gridlock is so unpredictable, we build buffer time into our travel plans. We give ourselves an hour to make a trip that would take 30 minutes without congestion. Even if we manage to avoid congestion, we show up 30 minutes early and sit in a parking lot. Buffer time is wasted time and it adds up.

Commuters recognize how congestion pesters us on our way to our current job, but what is less obvious is how it robs us of a wider variety of job options. We don't even consider certain job opportunities because simply getting to them (or even to an interview) is such a chore. We are less likely to seek out a better job and more likely to stick with the less interesting, lower-paying one we already have. Likewise, congestion makes it harder for employers to attract the best employees and harder for businesses to attract as many customers as they could if travel were fast and pre-

dictable.

Congestion forces individual job seekers and businesses to pass up countless opportunities. Multiply these lost opportunities across an entire city and one can see how degraded mobility siphons vitality from our great cities and how it robs them of many of the benefits offered by agglomeration economies.

Journalists often tout a supposed urban renaissance in which everyone, from singles to empty-nesters, is moving to downtown centers. While this may be true in some cases, it obscures the bigger picture: cities are losing influence.

Since 1950, suburbia accounted for more than 90 percent of the growth in our metropolitan areas.⁵ Cities like Baltimore, Detroit, St. Louis, and Philadelphia continue to lose population; even foreign immigration cannot keep some of our most celebrated urban centers growing. In the first half of the 2000s, Chicago, San Francisco, and Boston lost population.

The situation would be less dire if demographic trends simply reflected the preference of Americans to live and work in suburban environments. Indeed, the lure of suburbia has much to do with Americans' preference for distinctly suburban features, such as single-family homes, and many businesses see value in following all these potential workers to the suburbs. But often a suburban environment is not inherently superior for businesses. They would love to stay in the city and draw on all the energy offered by agglomeration economies, but they are forced out by degraded mobility and other urban headaches created by bad policy.

U.S. Secretary of Transportation Norman Mineta recently referred to congestion as “one of the single largest threats to our economic prosperity,” but most other leaders seem to be soothed by misleading tales of urban renaissance.⁶ Too many assume that our great cities can thrive even as mobility degrades.

We can no longer regard congestion as merely an everyday irritant. Improving mobility is essential to ensuring our urban centers' long-term survival. And if we ignore the mobility crisis our cities will continue to wind down and empty out.

It's time to reassert the importance of mobility. Embracing the mobile society will improve life for individuals, for cities, and for our nation.

WHY MOBILITY MATTERS TO



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INDIVIDUALS

We rarely contemplate the importance of mobility for the same reason we rarely contemplate the importance of oxygen. Mobility is so intertwined with our everyday lives that it can be easy to forget how essential it is.

A. Mobility Expands Employment Opportunities

As noted above, mobility expands our employment opportunities. If it is difficult to get around, jobseekers must limit themselves to the relatively small number of jobs within their opportunity circle. And we don't want just any job; we want the one that offers the best combination of personal fulfillment and good pay. Maybe a jobseeker will find the perfect job a couple of miles away from home, or better yet be able to telecommute; but chances are the perfect job exists farther away. At the turn of the 19th century, roughly 90 percent of the American workforce worked in the same job category—farming. Other types of jobs were available, but jobseekers had nowhere near the variety we enjoy today.

Our economy offers countless occupations that were not available to past generations. Today America is home to 90,000 aerospace engineers, 337,000 fitness workers, 832,000 software engineers, and many others who have the kinds of jobs our great-grandparents could never have imagined.⁷ Our ancestors often had to settle for jobs that were backbreaking and dull, but we can choose from a wide array of jobs that allow us to express ourselves creatively or that allow us to make a living by doing good works. America



Reducing congestion would give residents access to more and higher paying jobs.

is home to 177,000 physical therapists and 626,000 counselors.

In days gone by, workers weren't expected to actually like their jobs, but today we have a better chance of mixing work with personal fulfillment. That is, we have a better chance if we can get to those jobs. Someone who enjoys a high level of mobility can choose from the full menu of job opportunities. But without a high level of mobility we must make do with a smaller number of choices. That makes it less likely we'll find a job that is fulfilling and pays well. For families with two earners, the chances of both finding fulfilling employment shrink as their opportunity circles shrink. More of us have been able to find jobs that put a roof over our heads and give our lives more meaning, but degraded mobility makes it harder for others to join the ranks of those who have escaped the live-to-work cycle.

A lack of mobility is a key reason why the transit-dependent poor have trouble moving up the economic ladder. Although congestion makes auto travel increasingly sluggish, driving is still generally much faster than taking transit. It takes the average transit user twice as long to get to work as the average car commuter.⁸ This is true even in the New York metro area, where transit commuters endure our nation's longest commutes (52 minutes each way). In Chicago, the average transit commute is 50 minutes and it's more than 45 minutes in San Francisco, Washington, D.C., and Philadelphia.

Most jobs are not clustered around a rail line or bus route. Rather, they are scattered throughout a metro area

and that makes the kind of point-to-point travel offered by the automobile particularly helpful. UCLA's Evelyn Blumenberg discovered that residents in the Watts section of Los Angeles who can drive have access to 59 times as many jobs as their neighbors who rely on public transit.⁹

Few things are better at helping the poor pull themselves out of poverty than improved mobility. Programs that get cars to the poor—though relatively rare—have shown strong success.¹⁰ Surveys of workers who received cars through such programs reveal that improved mobility brought them better jobs and higher wages, and a University of California, Berkeley study estimates that auto-ownership could cut the black-white unemployment gap nearly in half.¹¹

What about those of us who already own cars? We can gain greater wealth by improving mobility and reducing congestion. Researchers at the Texas Transportation Institute estimate that congestion costs the average big-city resident about \$1,000 each year in lost productivity and wasted gas. Recently two researchers looked at the other side of the issue: what would be the positive impact of improving mobility by cutting congestion?

Consultant Wendell Cox and Alan Pisarski, author of the seminal *Commuting in America* book series, analyzed the Atlanta area and found that reducing congestion would give residents access to more and higher paying jobs.¹² Cutting congestion in half would give each person an extra \$1,750 per year. Come 2030, each household would get an extra \$8,900. And what if congestion were nearly eliminated? What if it were cut by, say, 90 percent? That would give each person \$2,900 more each year. By 2030, the figure would be \$14,975 per household.¹³

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If mobility fades, the dynamism of the city fades with it.

B. Mobility and Personal Life

Mobility even gives us more opportunity for romance. Our ancestors chose their mates from within a tiny geographic orbit for they had little opportunity to travel. Sometimes we do find the love of our life in our neighborhood, but often people find the “one” across town, across the country or across the world. More mobility allows us to mix with more people and it gives us more opportunity to find the person who’s right for us. Once we do find someone to love, mobility makes it easier to add spontaneity to the relationship. We can surprise our significant other with a romantic dinner at a new restaurant or head to the lake for a stroll.

The importance of mobility continues into every stage of life. Consider the search for the right house. If an area offers a high level of mobility, house hunters can choose from among a wide assortment of properties. Some may choose to live close to work, but for others the situation is more complicated. What happens when it’s time to change jobs? And since it’s unlikely that both work in the same area, where should dual-income families live? Many families shape their travel patterns around other aspects of their lives, such as the children’s education. After all, public schools, unlike jobs, are assigned on the basis of proximity. Parents carefully shop for a house located in a good school district and when they find one this becomes the center

point of their opportunity circles. For parents, the state of mobility helps determine how much time they will spend with their children and how much time they will spend stranded on the road with strangers.

WHY MOBILITY MATTERS TO CITIES

If a city can draw on the effort and talents of more people, it will gain from the accumulated expertise of many people specializing in many different areas. As the division of labor expands, the city grows more prosperous. Yet this exhilarating vision becomes reality only if the denizens of a city are able to mix freely and efficiently. A vast metropolis has the potential to draw on the effort and talent of millions of people, but if mobility fades, the dynamism of the city fades with it. The city becomes less of a grand metropolis and more of a collection of hamlets—hamlets whose residents are increasingly isolated from each other.

A. Mobility Boosts Prosperity

When mobility fades, employers are also hurt. The drag of congestion slows all kinds of businesses. Consider businesses that deliver things, from pizza to parcels. They are forced to pay workers for their unproductive time (when

they're stuck in traffic) and forced to pay extra for gas and maintenance. Congestion slows businesses and decreases the number of customers they can serve. And because congestion is unpredictable, delivery schedules also grow more erratic. Because of traffic congestion a Fort Lauderdale-area cement company discovered that it could no longer make reliable deliveries to construction sites during the week.¹⁴ The company was forced to make Saturday deliveries and incur the extra expense of overtime pay. Often companies try to pass the cost of congestion onto customers and this makes many products, from food to furniture, more expensive than necessary. In other words, congestion can act as a hidden tax, making a wide range of goods and services somewhat more expensive.

Congestion's impact is not limited to delivery businesses. It's felt by everyone from plumbers and landscapers to salespeople and realtors. Throughout the day these people try to reach as many customers as they can, but congestion stands in their way.

It's easy to see how congestion would hurt the trucking businesses. Congestion forces independent contractors to absorb the costs of extra time, gas, and wear and tear on their own. Trucking companies face additional frustrations. They figure out how much it will cost to haul something by calculating how long it will take to get from point A to point B. Yet there's more to it than just distance. Simply contending with bottlenecks costs trucking companies an estimated \$8 billion per year.¹⁵ Since congestion makes trips longer, companies are forced to pay for more drivers, trucks, and gas. And since congestion makes travel unpredictable, they also have to throw this X-factor into the equation. Logistics professor Chip White says it's often the X-factor of unpredictably that's the "killer."¹⁶

Businesses are only as good as the people who work for them and congestion often makes it difficult for employers to find the right person for the job. From financial companies to high-tech firms, employers need people with specialized skills; and as labor pools shrink, so do their chances of finding the best employees. In San Diego, some high-tech employers regard the infamous I-5/I-805 bottleneck as the end of their labor pool, as they are unwilling to hire those who live north of the interchange.¹⁷

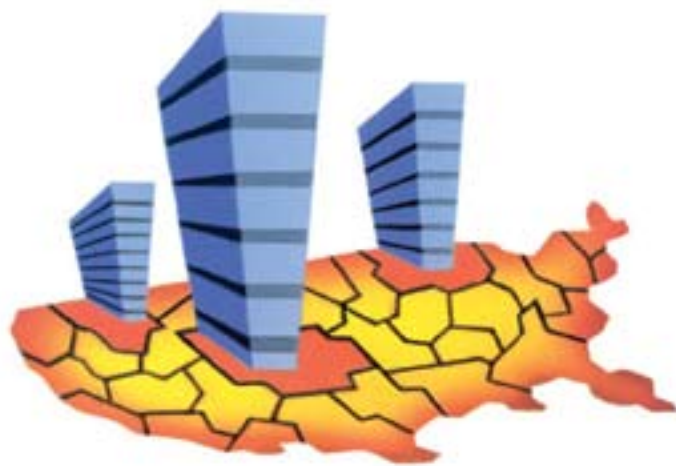
Congestion was once a background concern, but now it is moving to the foreground. According to recent surveys, congestion is residents' top concern in places like Austin, Atlanta, Portland, Minneapolis-St. Paul, San Diego, and

San Francisco. Members of the U.S. Chamber of Commerce rank it among their top concerns and in certain areas the problem is particularly acute.¹⁸ A recent survey asked Silicon Valley CEOs about their most daunting business challenges.¹⁹ In the span of a single year, congestion moved from the number nine challenge to number two. According to the executives, only the Bay Area's extremely high housing costs posed a bigger threat, and congestion was listed ahead of perennial business headaches like taxes, regulations, and health care costs.

It's the rare city that really decides to tackle congestion, but a growing number of companies have decided that if city leaders refuse to deal with congestion, they will. They'll leave. Degraded mobility now joins high housing costs, taxes, and regulations as a reason why companies leave or avoid certain cities (see Box).

Congestion prompted Dell to expand in Nashville instead of its home base, Austin. "We lost 10,000 jobs in one day," recalls a local official.²⁰ That incident sobered up leaders to the importance of mobility. Since then, Texas has

Companies Respond to Congestion



A small sample:

- Dell expands in Nashville instead of Austin.
- Sysco Foods expands far away from Portland.
- San Diego IT firm TalentFuse is forced to open a North County office because employees cannot make it to the city reliably.
- Washington D.C. area's SRA International Inc. scraps plans to consolidate offices.
- IT firm Optimus leaves Silver Spring, Maryland.

embarked on the nation's most ambitious congestion-reduction plan and recently those efforts were rewarded.

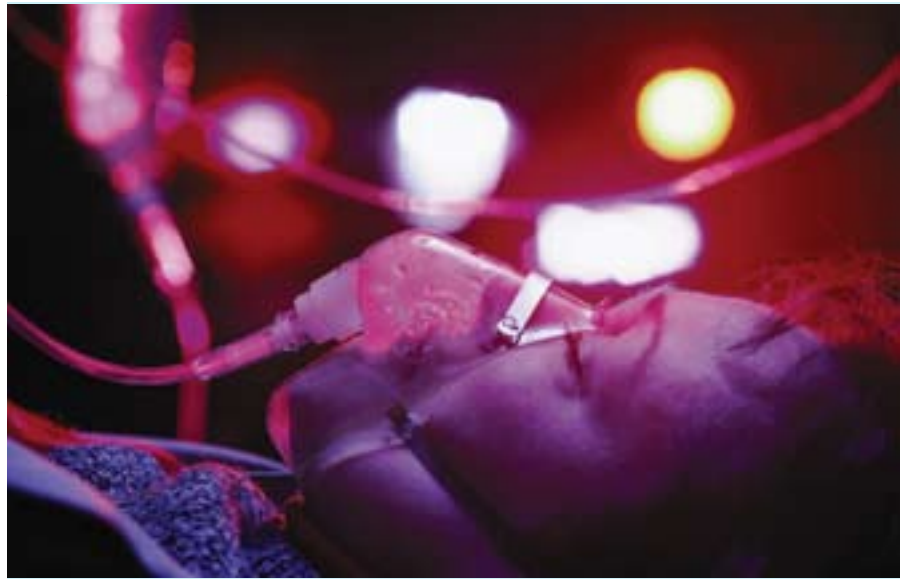
After considering many locations, Samsung decided to bring a multi-billion dollar chip manufacturing plant and 900 jobs to Austin.²¹ Transportation was one of the major reasons behind the choice. Initially, the congestion on I-35 made Samsung wary of Austin because silicon wafers from the new plant would be trucked to Dallas before being sent by plane to South Korea for final processing. Congestion can cause costly delays, but local officials' new commitment to mobility assuaged Samsung's concerns.

Congestion saps cities of their vitality, but improving mobility helps invigorate urban economies. Researchers Rémy Proud'homme and Chang-Woon Lee analyzed employment dynamics in 22 French cities.²² They discovered that when mobility increased—when people were able to increase the area they could reach in a fixed amount of time—the economy expanded. A 10 percent increase in average travel speeds was associated with a 15 percent expansion of the labor market and a 3 percent increase in productivity. Jobseekers were able to find better jobs, and employers had access to more workers and more customers.

A U.S. analysis took a similar approach and discovered similar results. The National Cooperative Highway Research Program study examined the economies of Philadelphia and Chicago and assumed a 10 percent increase in travel speeds.²³ The researchers estimate that each year this improvement in mobility would save Philadelphia businesses \$440 million and Chicago businesses \$1.3 billion. The French and American studies reveal another important point—a little mobility improvement goes a long way. Remember each analysis examines the effects of a 10 percent increase in speed. In Chicago that's the equivalent of bumping travel speeds from 33 to 36 miles per hour. If such relatively modest mobility improvements offer such hearty benefits, imagine what even greater progress might yield.

B. Mobility Improves Safety

Free-flowing traffic is relatively safe, but congestion increases the likelihood of danger. Researchers have confirmed what the rest of us have long known: congestion makes drivers frustrated and frustrated drivers do



Some states attribute between 10 and 30 percent of their highway fatalities to “secondary accidents.”

dangerous things.²⁴ They're more likely to tailgate or force their way into a turn. Often their thoughtless maneuvering results in a collision. Accidents in congested areas are often low-impact—drivers aren't traveling fast enough to do serious damage. But even fender benders can lead to higher-impact crashes. Drivers are often distracted by the commotion an accident causes and reactions like “rubbernecking” can lead to more dangerous consequences. Definitive figures are hard to come by, but some states attribute between 10 and 30 percent of their highway fatalities to these “secondary accidents.”²⁵

Congestion can increase danger in another important way: it slows emergency response. Each year roughly 67,000 Americans die from a type of cardiac arrest that is very receptive to prompt treatment.²⁶ Recently, the Mayo Clinic placed the critical marker at six minutes. If emergency care arrives within six minutes, the patient's chance of survival is great. Wait longer and the likelihood of survival drops off precipitously. In most of our nation's big cities, only between 6 and 10 percent of these people are saved.

We must also remember that much emergency transport has nothing to do with the inner workings of Emergency Medical Services. Often regular people driving regular cars take their friends and loved ones to emergency rooms. And speed is not crucial just for this special kind of cardiac arrest; many other types of emergencies are time-sensitive. Indeed, a more mobile America would also be a safer America (See Table 1).

Table 1: A Little Improvement Goes A Long Way (Safety Benefits of Fixing America’s Five Worst Bottlenecks*)

Location	Route	Crashes Avoided	Injuries Avoided	Lives Saved
Los Angeles	U.S.-101 at I-405	9,017	4,427	36
Houston	I-610 at I-10	9,362	4,597	37
Chicago	I-90/94 at I-290	4,869	2,391	19
Phoenix	I-10 at S.R. 51 and 202	4,236	2,080	17
Los Angeles	I-405 at I-10	6,061	2,976	24
TOTAL		33,545	16,471	133

* Estimated benefits based on 5-year construction period and 20-year project life

Source: American Highway Users Alliance

WHY MOBILITY MATTERS TO OUR NATION

The smooth mixing of people, products, and ideas allows entrepreneurs to recognize opportunities that used to be hidden from view. It’s this multiplication of human interaction that makes mobility so essential to the process of innovation.

A. Mobility and Trade

Some of the primary justifications for the interstate system were to integrate the American economy, to open up previously isolated regions to new opportunities, and to expand trade. The chief architect of the system envisioned a land in which one could travel “from anywhere to everywhere.”²⁷ Improved mobility improved the movement of goods, as well as people. Established trade routes grew more vibrant and countless new routes emerged. Land could be put to better use. Food grown in one region could be processed in another without sacrificing prime farmland for processing plants.

Businesses were happy to expand their consumer markets and customers enjoyed the lower prices and greater variety of goods that expanded trade brought. Take most any supermarket in any city and only the tiniest percentage of its inventory comes from local sources. Chances

are almost everything, from apples to aspirin, comes from someplace else and chances are these products arrive by truck. Trucks are the sole means of delivery for 80 percent of U.S. communities and trucking accounts for 87 percent of domestic freight transportation (see Figure 4).

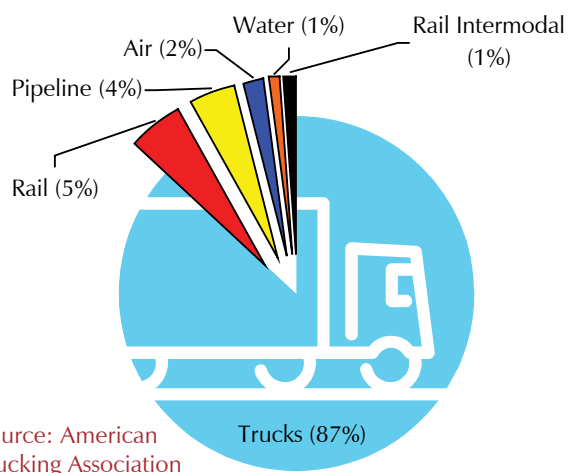
Improved mobility allows us to go to one store to fulfill countless needs and makes it easier to reach countless destinations to fulfill any one need. Whatever the task—finding the right doctor, the best mechanic, or the most creative hairstylist—the more options we can sort through, the greater our chances of success will be.

However, our transportation network was designed for a pre-NAFTA, pre-globalization America. The interstate highway system was conceived in the 1930s. Construction began in the ‘50s and was mostly complete by 1980. We have the opportunity to gain greatly from the increase in international trade, but only if goods can move efficiently from (air and ocean) ports to American consumers and from American exporters to the ports that serve as their points of departure to the global market. Today’s supply chains are global, and whenever degraded mobility slows them down less business is done.

B. Mobility and Innovation

Some nations are known for specific natural resources, crops or products, but America has always been known for its inventiveness. The concept may seem chimerical but it’s extremely powerful. It means that our success is not tied to a specific industry or product. Like a diversified investment portfolio, a diversified economy improves a nation’s chance

Figure 4: Revenue of Domestic Transportation Market by Mode (2003)





The French are quick to make use of market-based innovations. Many of our leaders worry that there isn't enough money to fight congestion, but the French often build roads with funding from the private sector.

for success. Our penchant for innovation allows Americans to be perhaps the most important shapers of future industries.

The United States has harnessed the power of the Internet more effectively than any other nation. From that has sprung the Internet Information Provider and Internet Software industries, both crucial components of the \$5 trillion tech sector. America is a world leader in financial services, pharmaceuticals, and biotechnology. It's even home to a burgeoning private space flight industry. And if it progresses in a way that is at all analogous to the aviation industry, the private space flight industry will one day employ millions of Americans.

America possesses a proud tradition of innovation, yet our nation cannot ride the momentum of its past success into the future. Our global competitors have worked hard to improve upon many of the advantages that have long distinguished our nation from the rest of the world. Entrepreneurs have enjoyed America's innovation-friendly environment, but over the years other nations have paid attention. Now many of them are liberalizing their economies and, in recent years, nations like Australia and Ireland have moved ahead of the United States in international rankings of economic freedom.²⁸ Even a former soviet satellite (Estonia) and a nation known for its lavish social welfare system (Denmark) have moved ahead of the United States.

Our nation's reputation as the land that provides employers with an educated workforce is no longer as strong as it once was. A recent American Electronics

Association study suggests that, in the future, companies will increasingly look overseas, not for cheaper labor, but for better-skilled labor.²⁹ Our transportation system is yet another example where a traditional advantage is fading.

C. Other Nations Recognize Mobility's Importance

Canada, Australia, France, and other nations we count among our traditional competitors have been quick to realize that mobility makes them stronger and more competitive. Ideas that would strike our leaders as outlandish or impossible are routinely adopted overseas. France has shown ways around (or under?) some problems that many Americans are quick to regard as insurmountable. A missing link in the A86 Paris ring road had long generated terrible congestion, yet officials were hesitant to complete the road because it would have meant building through portions of historic Versailles. But the French did not just give in to congestion. They are filling in the missing link by building tunnels deep beneath the earth, thus preserving a historic space and improving mobility.

We think of France as proudly distinguishing itself from free-market America, but when it comes to transportation policy, the French are quick to make use of market-based innovations. Many of our leaders worry that there isn't enough money to fight congestion, but the French often build roads with funding from the private sector. The A86 tunnels are being built with private money and France's 5,000-mile tolled motorway system is investor-owned.³⁰

Even our upstart competitors have embraced the idea

that mobility makes them stronger. It wasn't long ago that when the American mind thought of India, the images were that of the painfully poor. But today India is home to a large and technologically savvy workforce that feels increasingly comfortable with the tools of the 21st century economy. India has opted for a massive transportation upgrade because leaders know that their current system can only carry this new spirit of optimism so far. Building a top-notch roadway system is a key part of Bangalore's plan to transform itself into an "ideal global destination." India is doing more than improving mobility among its cities. It realizes that it is also important for people, products, and ideas to mix freely within metropolitan areas.

We would not expect our nation's innovators to accomplish much with decades-old mainframe computers. Likewise, we should not be surprised to see them struggle as they make do with a transportation system that has grown little during the past quarter-century. Today's consumers can buy a PC that is more than 1,000 times faster than one built decades ago, but in some important ways our transportation system is actually a much worse product than it



The American Society of Civil Engineers examined the condition of our roadway system and gave it a grade of D.

used to be. Mounting congestion compromises the effectiveness of our transportation system by making travel increasingly sluggish. The huge increase in use also compromises the system itself.

Road building is not a one-time task. The life span of a highway is roughly 40 to 50 years, a threshold that much of our transportation network is approaching or has already passed. Recently the American Society of Civil Engineers examined the condition of our roadway system and gave it a grade of D.³¹ Optimizing traffic lights is one of the most cost-effective methods of improving mobility, but, again, our nation scores poorly. On this subject, we earned a grade of D-minus.³² In other words, our leaders have not even made the relatively cheap and easy improvements that would boost mobility.

If our nation is to reassert itself as the land of opportunity, part of the process is reasserting the importance of mobility.

REVERSING THE SLOW SURRENDER

Our leaders' response might have been different had our nation's mobility degraded abruptly. But the process has been a gradual one, so instead of being shocked into action, lawmakers have procrastinated. They put off dealing with the problem for another year, then another, and another. Along the way, the American people have coped with degraded mobility by changing their behavior. As mounting congestion mixes with other frustrations, more decide to move away from congested cities. More businesses avoid congestion as best they can, preferring to open shop or expand in areas that offer better mobility. Yet the gradual degradation of mobility has also lulled us into making subconscious accommodations to it. We slowly shrink our opportunity circles. We pare back the list of things we might do if it were easier to get around. More of us mentally cross out more of our potential lives.

A. Congestion is Not Inevitable

If we're stuck in some particularly frustrating back-up, we might erupt in anger. But most of the time we just surrender a little bit more because we assume that degraded mobility is the natural result of an increase in population and driving. Rarely do public officials seek to undo such

feelings of surrender. Most planning agencies have decided they will not even attempt to reduce congestion—they aim only to reduce its growth. If such a plan were applied to a different policy area, Americans would not stand for it. Imagine if our leaders told us that, in the future, our education system would get worse, that there’s nothing we can do about it, and that all they hope to do is make test scores fall more slowly.

But congestion is not inevitable. Around the world, leaders and entrepreneurs have adopted innovations—some small-scale, some large—that quell congestion. Reason Foundation’s Galvin Mobility Project (GMP) will draw on these real-world success stories.³³ In the coming months a wide range of scholars will offer innovative, practical solutions for cutting congestion and improving mobility.

B. How to Reduce Congestion

Cutting back congestion will require a multi-faceted approach and some GMP solutions will include:

1. Add Physical Capacity: Sometimes policymakers assume that our congestion woes are a result of a futile attempt to build our way out of congestion. Yet the increase in driving has greatly outpaced the increase in road building. From 1980 to 2004, driving in urban areas increased by 168 percent, while urban roadway capacity increased by 51 percent.³⁴ Some assume that we would have to pave over cities in order to build enough capacity to accommodate demand. But how much would it really take? How much would it cost? How would road building affect the environment? These are just a handful of the questions the Galvin Mobility Project will address.



The GMP will also examine how future projects should be funded. The present form of highway finance, which relies heavily on fuel taxes, is unsustainable. After so many years of neglect, it will be extremely expensive just to maintain the current roadway system. Moreover, rising fuel efficiency, and the fact that fuel taxes are not indexed for inflation, cause buying power to dwindle. Laws must allow public-private partnerships to add new capacity with toll roads. The fuel tax is somewhere between a user fee and a general tax, but tolling embraces the user-fee principle in which motorists pay for what they use. Governments in places as varied as Texas, Virginia, France, Canada, and Australia have learned that the private sector is willing to fund even multi-billion dollar toll road projects.³⁵ Though still behind many other nations, the United States has already generated more than \$25 billion in private sector investment for projects that have been proposed or are in development (see Table 2).

Table 2: A Sample of Private Sector Finance

Location	Route	Project	Estimated Cost (Billions)
San Antonio to Dallas	TTC-35	Build toll road	\$7.2
Virginia	I-81	Rebuild, add toll-truck lanes	\$7.0
Dallas	I-635	Rebuild, add HOT* lanes	\$3.0
Atlanta	I-75/575	Add HOT and toll-truck lanes	\$1.8
Portland, Oregon	3 new routes	Build toll roads	\$1.0
Northern Virginia	I-495	Add HOT lanes	\$0.9
San Diego	SR 125	Build toll road	\$0.6
San Antonio	Loop 1604	Add HOT lanes	\$0.6
Fort Worth	SH-161	Build toll road	\$0.5
Denver	C-470	Add HOT lanes	\$0.4

* High Occupancy Toll (HOT) lanes allow free or reduced fare travel for certain high occupancy vehicles and are open to solo motorists who pay a variable toll.

2. Improve System Management: Proper management of the existing transportation system expands capacity without pouring asphalt. It makes the system safer, more efficient, and more reliable. Specific management tools include: incident; weather; and work zone management; law enforcement; emergency response; freeway and corridor management; active collision avoidance; highway ramp metering; and detailed traveler information.

Policymakers must take a system-wide view of mobility, for their communities will thrive—at least in part—to the degree that travel is efficient. That means deploying and operating performance information systems, expanding integrated concepts of operations, deploying Intelligent Transportation Systems (ITS) detection and control elements, negotiating improved protocols with other agencies, building new relationships with private sector entities, and, most of all, committing—as a matter of across-the-board policy—to performance-based management. Motorists should develop very tangible expectations about performance. For example, an accident or disabled car should not be allowed to back up traffic for hours; rather, it should be cleared promptly.

Expanded physical capacity works in concert with system management. Good management can achieve only so much if there is insufficient capacity, and building new capacity while tolerating inept management is a waste of

resources.

A key system management tool is road pricing. More than 10 years of evidence show that variable pricing—in which the price of the toll goes up and down with the flow of traffic—is the most effective traffic management tool. On facilities like Southern California’s 91 Express Lanes traffic in the tolled lanes flows at 65 mph, even during rush hour. Although there is often some initial reluctance, polls reveal that variable tolling eventually wins over users and non-users alike. Research has also addressed earlier concerns about equity, as variable tolling is embraced by motorists across the economic spectrum.

3. Embrace Organic Solutions: Often personalized, decentralized approaches can help reduce congestion by putting new technology to new uses. Policy should not impede such innovation. Thanks to the falling cost of computers and the rising speed of Internet connections, more Americans have been able to skip the commute entirely and work from home.³⁶ As technology continues to improve and as more managers recognize its bottom-line benefits, telecommuting will continue to expand. Politics should not stand in the way of such a promising development, and policy barriers—from restrictions against home-based businesses to taxes that unfairly target telecommuters—should be lowered or removed.

Allowing for more mixed-use development could also



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help reduce congestion. For example, traffic jams often build up around shopping centers partly because regulations segregate business and residential developments. When many cars head for the same location, it's only natural to expect congestion. If supermarkets and retail shops were allowed more location flexibility, they could be sprinkled throughout a community rather than confined to a few locations. Congestion would dip as traffic is spread across more locations.

CONCLUSION: TOWARD A MOBILE SOCIETY

We cannot continue to pretend that our nation can thrive as mobility continues to degrade. If we simply go on ignoring the mobility crisis our cities will continue to wind down and empty out. But, to many, congestion seems nearly as unstoppable as gravity. As the authors of an in-depth analysis put it, many business owners have simply accepted congestion as “a part of the cost of doing business.”³⁷ What if that could be changed? Don't bother them with hypothetical worlds for they simply “cannot imagine how different the business would be” without congestion. But why not imagine a world where people, products, and ideas mix freely? What might the mobile society be like? Our opportunity circles would expand. Jobseekers would have access to more and better job opportunities. Business owners could attract more customers and better employees.

Some might find the preoccupation with speed and efficiency rather unseemly. Enjoy life's journey, they might say. But sitting in gridlock is one of the least fulfilling things we do. We are trying to do something that's important to us, but congestion holds us back. No wonder we get so frustrated. But in a mobile society, the stress of sitting in gridlock and the anxiety of never knowing when it would strike would be lifted. Since travel would be more efficient, we could get to and from work, run our errands, and have more time to spend with our loved ones. We could stay home and relax or we could do just about anything—explore a new neighborhood, drop in on a friend, take in a concert, go to a new restaurant, the zoo, the park, the beach, the gym, and know that our journey would be swift.

When it comes to the future of mobility, politicians and pundits tell us to lower our expectations; perhaps it's time to raise them instead. ■

RELATED REASON FOUNDATION STUDIES

Robert W. Poole, Jr. and Ted Balaker, *Virtual Exclusive Busways: Improving Urban Transit While Relieving Congestion*, Policy Study No. 337, September 2005: reason.org/ps337.pdf

Peter Samuel, Project Director: Robert W. Poole, Jr. *Should States Sell Their Toll Roads?* Policy Study No. 334, May 2005: reason.org/ps334.pdf

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Balaker's work has appeared in the *Investor's Business Daily*, *Washington Times*, *Los Angeles Daily News*, *Orange County Register*, *Chicago Tribune*, *Atlanta Journal-Constitution*, *Reason* and *Playboy*, among other print outlets. Broadcast outlets include ABC News Radio *Perspectives* and The CBS Evening News.

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