

Introduction

In recent years, millions of U.S. metropolitan area residents have come to regard traffic congestion as their most serious local and even regional problem—with good reason. From 1982 to 1999, the average percentage of daily traffic subject to congestion in seventy-five metropolitan areas nearly doubled, rising from 17 percent in 1982 to 33 percent in 1999. The Texas Transportation Institute’s annual analysis of traffic congestion in 1999 concluded, “The average length of congested periods increased from about 2 to 3 hours in 1982 to 5 to 6 hours by 1999.”¹

Unlike many basically more important American social problems—poverty, hunger, low-quality education, homelessness, and drug addiction—traffic congestion is directly experienced every day by millions of American commuters of all income levels. They have become outraged over the waste of their precious time and money caused by repeated traffic delays. Their anger has been a powerful force leading many local government officials to adopt policies to manage suburban growth. However, myriad factors affect traffic flows, so the extent and intensity of congestion are still difficult to measure and track reliably. Therefore, it is hard

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to determine scientifically just how well existing anticongestion policies are working.

Yet most metropolitan-area residents believe traffic congestion is worse than it was five or ten years ago.² The statistics suggest that congestion is rising primarily in metropolitan areas that are either very large—containing more than 2 million residents—or experiencing absolutely large growth. In 2000 the Texas Transportation Institute measured congestion by the ratio of the average time required to make a trip in rush hours versus making the same trip in uncongested periods. The ten U.S. metropolitan areas with the greatest congestion, in order of severity, were Los Angeles (with a ratio of 1.82 to 1), San Francisco, Chicago, Washington, Seattle, Boston, Miami, San Jose, Denver, and New York-Northern New Jersey (with a ratio of 1.41 to 1).³ The average annual hours of delay in travel per peak-hour traveler caused by congestion in seventy-five metropolitan regions increased from 16 hours in 1982 to 62 hours in 2000—almost quadrupling.⁴

Why Reducing Traffic Congestion—Or Slowing Its Increase—Is Important

To people who experience it, traffic congestion is exasperating because of the time they lose sitting in traffic jams and the frustration of crawling along instead of moving at “normal” driving speeds. To society as a whole, traffic congestion is undesirable because it misallocates scarce resources and causes economic inefficiency and psychological stress. The Texas Transportation Institute estimated that congestion “wasted” \$67.5 billion dollars in seventy-five metropolitan areas during 2000 because of extra time lost and fuel consumed, or \$505 per person, compared with what would have happened without congestion.⁵ Time lost in delays (at \$12.85 an hour) accounted for about 68.5 percent of that estimated total cost; the rest was fuel costs.

In reality, these social cost estimates are based on a false premise: that peak-hour travel in these regions could have been accomplished without any congestion if only society had better policies. As explained in chapter 2, modern societies are organized in such a way that so many people need to travel during peak hours, morning and evening, that no feasible arrangements or policies could accommodate them all without significant delays. In short, a major amount of daily peak-hour traffic congestion is inescapable in every large metropolitan area in the world. There-

fore, it is unrealistic to conclude that all the “excess travel time” experienced during peak hours versus nonpeak times when no congestion exists could ever be eliminated—and is all therefore “wasted” because of ineffective policies. The hypothetical alternative of “congestion-free” travel during peak hours is an unattainable myth. So comparing that illusory alternative with what happens and declaring the time difference “wasted” is a misleading exercise.

Furthermore, although the Texas Transportation Institute’s estimates of congestion costs appear almost staggering when aggregated over an entire year, they seem much smaller when they are viewed on a daily basis. If there are 240 working days in a year, and each worker makes two commuting trips per day, and all congestion costs computed by the Texas Transportation Institute are allocated to the resulting 480 trips, then the estimated cost of congestion per person is \$1.05 per trip, of which \$0.72 is in time and \$0.34 in cash. An annual average loss of thirty-six hours in delay over the same 480 trips is only 4.5 extra minutes per commuting trip each day. These costs seem much more bearable than the aggregated figures that are usually quoted in analyses of traffic congestion.

However, traffic congestion causes two other important social costs. It adds expense to countless businesses by delaying millions of goods shipments, thereby reducing the nation’s productive efficiency. And the unpredictability of daily delays forces many travelers to add more-than-the-average delay to their normal trip planning in case they encounter really horrendous congestion. This causes further total losses of time.

Moreover, congestion generates other significant costs besides losses of time and fuel and delays in shipping. Government authorities tend to respond to public demands to “do something” about congestion by devoting more resources than may be socially optimal to building roads and subsidizing public transportation. Congestion also causes urban development to spread out more than it otherwise would because many firms and workers try to reduce travel time by decentralizing jobs and housing. The total costs of these distortions cannot be even roughly estimated, but they are surely large.

Such distortions arise partly because individual drivers and businesses do not have to face the true social costs of their private decisions about where and when to travel or how to influence the travel of others. Consequently, the associated market price signals do not trigger socially efficient outcomes. For example, individual commuters do not have to pay

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the costs of the added congestion they impose on others when they drive onto a crowded expressway during peak hours. The commuter frustration that builds up in traffic undoubtedly also helps increase interpersonal conflicts at work and at home.

The Focus of This Book

The 1992 version of this book—*Stuck in Traffic*—assessed the public policies then available for attacking this problem.⁶ It provided an overview of research on the subject by transportation experts and land-use planners and examined the advantages and disadvantages of the principal strategies being proposed to reduce traffic congestion. However, many new ideas have been advanced since then, based on more recent research and experience. Therefore, the time seems ripe to take advantage of this new knowledge and visit the subject again.

This discussion focuses on five questions: how does peak-hour traffic congestion arise? Why has it become worse? What tactics might reduce it—or at least slow down its intensification? Which tactics would be the most effective? To what extent would the most effective tactics require regionwide planning and policies, rather than purely local ones? To answer these questions, one must look at the effects of congestion on the allocation of scarce resources, the relationship between land use and traffic flows in rapidly growing areas, and the benefits of regional solutions over purely local ones.

This book contains new chapters not present in the original edition on some fundamental benefits of traffic congestion, how bad U.S. congestion has become, accidents and other incidents as causes of congestion, coping with congestion by expanding public transit, and levels of congestion in other parts of the world. It also contains a new appendix on the dynamics of congestion. And I have extensively revised and updated the original chapters retained here.