

Reducing Work Commutes Not Easy In Some Cities, Study Suggests

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(PhysOrg.com) -- Shorter work commutes are one way to reduce gasoline consumption, but a new study finds that not all cities are equal in how easy it would be to achieve that goal.

Research suggests that Atlanta and Minneapolis may be the U.S. metropolitan areas that would find it most difficult to reduce the miles that workers commute each day.

Meanwhile, Las Vegas and Miami may be the metro areas where it would be easiest to reduce commuting miles.

The research aimed to see how difficult it would be to reduce the average commuting trip lengths by a realistic amount -- just 3 percent -- in 26 metro areas, said Morton O'Kelly, co-author of the study and professor of geography at Ohio State University.

"These days, people have a heightened sense of the wastefulness of commuting, of the costs of driving all across a city to a job," O'Kelly said.

"But how easy it is to reduce commuting really depends on the physical circumstances of the city, such as how it is laid out."

O'Kelly conducted the study with Michael Niedzielski, a doctoral student in geography at Ohio State. The study appears in the September 2008 issue of the Journal of Transport Geography.

O’Kelly used data from the U.S. Census Bureau to examine the distribution of homes and workplaces in each metro area and determine how far commuters actually travelled to their jobs.

Then he developed a model to determine how easy it would be for residents to find workplaces closer to their homes, reducing the amount they would have to commute.

O’Kelly emphasized that the model is somewhat artificial in that the data did not let researchers match people with specific jobs and ensure that a similar job is available closer to their homes.

Instead, this model simply examined the distribution of jobs and homes around the metro area to determine a more efficient pattern of commuting.

But, he said, since the model looked at reducing average trip lengths across the whole metro area for all job types, it is reasonable to assume that there were enough similar jobs available to make commuting more efficient.

“Ideally, if you could find a comparable job at a shorter distance from your home, you could in a sense swap jobs with someone else who lives closer to your current employer,” he said.

In general, the results showed it was easier to reduce commuting miles in cities with a lot of suburban sprawl, such as those in the Sun Belt.

“Many of the Rust Belt cities of the northeast are somewhat more compact, meaning that it becomes more difficult to reduce average trip lengths,” O’Kelly said.

“But it is easier to find inefficient commutes in the newer, more sprawl-

like cities in the Sun Belt like Las Vegas or Miami, where there is not just one city center, but several. People may be going from their home in a suburb on one side of the city to a job in a suburb on the other side.”

However, Atlanta and Phoenix were exceptions in that they are Sunbelt cities where it would be difficult to reduce the average commute.

For cities like Atlanta and Phoenix, with widely separated residential and employment zones, the specific nature of development in those metro areas makes it difficult to reduce commuting miles, O’Kelly said.

But for some cities, it is simple geography that creates problems. Cities on major bodies of water, such as Buffalo or Seattle, have natural constraints on efficient commutes.

“If your metro area is spread out along a lake shore, the maximum trip lengths from one side of the city to another are going to be longer than a city with the same population but a more compact circular shape,” he said.

The best way to reduce commuting miles by 3 percent depended on the circumstances of individual cities, according to O’Kelly. In a few cities, a big gain came from reducing the drives of “extreme commuters” – those who commuted long distances to work, sometimes more than 100 miles.

For example, in Atlanta, 95 percent of commuters have commutes of 30 miles or less. But the remaining 5 percent drive as far as 121 miles to work.

“If you take away the 5 percent of most extreme commuters in a city like Atlanta, you can save quite a bit,” O’Kelly said. Still, in most cities the biggest savings came from making relatively small adjustments in more

average commuting lengths.

O’Kelly said the results show that how cities are developed can play a key role in how easy it would be to reduce driving.

“Long average commutes are a byproduct of how our cities are laid out,” he said.

Provided by Ohio State University

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