Longer View: The Fairness of Congestion Pricing

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Can congestion pricing be fair? On the surface, using tolls to fight traffic seems to perfectly illustrate the tension between efficiency and equity. Traffic congestion is an inefficiency. Roads get congested because they are underpriced — free to use even when demand is high. Underpriced goods suffer shortages (think fancy TVs on Black Friday), and congestion is basically a shortage of road. At busy times, drivers want more road space than space is available, and as a result they must wait. In waiting they lose time, get stressed, emit pollution, slow each other down, and increase the risk of crashes.

Maybe some readers are already objecting. How can anyone call roads free? What about gas taxes and registration fees? The distinction here is subtle. The government collects money to *provide* roads (through gas taxes and other fees), but rarely charges a price to access them, and certainly not a price based on demand. For most things we buy, the price we pay reflects not just the cost of providing the good, but also how much other people value it. That's why homes on the beach cost more than identical homes further inland. The price of driving, however, doesn't change as the road gets more valuable. The gas tax is the same if you drive at rush hour on a busy freeway or midnight on a rural byway.

The gas tax doesn't change with demand for the road because it isn't actually a charge for using the road. It's a charge for burning gas. You can pay lots of gas tax and barely use the road (buy an SUV and leave the engine running in your driveway) and you can pay no gas tax and use the road a lot (drive an electric car). Put simply, while we pay lots of fees *around road use*, we don't pay any fees to directly *use the road*. That small difference makes all the difference. It means that at busy times, the roads are underpriced — free to use when demand is high. That underpricing, in turn, creates the shortages we call congestion.

Underpricing's solution is accurate pricing. Congestion tolls work by charging more for roads in times and places of higher demand — more at 8 a.m. than 8 p.m., more on Monday than Sunday, more on urban freeways than in the urban fringe. When governments price roads properly, traffic flows freely.

The trouble is that prices ignore people's ability to pay. The poor would pay the same toll as the rich, so solving the efficiency problem could create an equity problem. Some low-income drivers, when confronted with a toll, could switch to transit. But good transit doesn't exist in many areas, and some low-income people (for instance, landscapers) rely on vehicles for work. Pricing could force these drivers to either pay tolls or forego travel. Scenarios like this have led opponents to decry priced roads as "Lexus Lanes" for the rich, and a tax on the poor.

How valid are these concerns? Fairness is important, and American public policy too often neglects it. Any congestion pricing program, moreover, must protect poor drivers. The poor contribute little to America's traffic congestion, and society shouldn't saddle them with the burden of alleviating it. But the fact that pricing *could* create equity problems doesn't mean it must. Nor does it mean that for the sake of equity

all roads should be free. Few equity agendas in other areas of social policy, after all, demand that all goods be free. Almost no one, for example, suggests that all food be free because some people are poor. Society instead identifies poor people and helps them buy food. So why should all roads be free because some drivers are poor? Most drivers *aren't* poor, many poor people (including the poorest) don't drive, and most driving is done by the middle and upper classes. It is entirely possible to price our roads while maintaining a commitment to economic fairness.

Free roads are not a good way to help poor people. Virtually every fairness-based criticism of priced roads — they help the rich more than the poor, they prevent some people from traveling, they actively harm the poor — also applies to free roads. On free roads, the rich drive more than the poor. Unpriced roads get congested, and congestion prevents some people from traveling. Congestion also creates pollution, and the pollution actively harms poor people. It is appropriate to worry that pricing could be unfair, but we should not pretend our status quo is progressive or benign. Priced roads and free roads differ not because one causes harm and the other doesn't, but because one comes with a built-in solution to the harms it causes, while the other lets its harms go unnoticed and uncompensated.

The unfairness of free roads

Do free roads help the poor? Poor people have little money, so holding down prices can help them. But poverty is fundamentally a problem of low incomes, not high prices. The ideal anti-poverty program would therefore transfer money to low-income people and let them spend it as they see fit, not selectively lower the price of some goods and hope that poor people want them. Ideal programs aren't always feasible, of course, and efforts to give poor people money often encounter political resistance. Sometimes keeping prices low is the best we can do. But if lowering prices is the path we take, we should either lower prices *only* for the poor (as we do with food stamps) or — if we lower them for everyone — do so only for goods the poor use disproportionately (as we do with transit fares). Free roads, especially at peak hours, satisfy neither of these criteria.

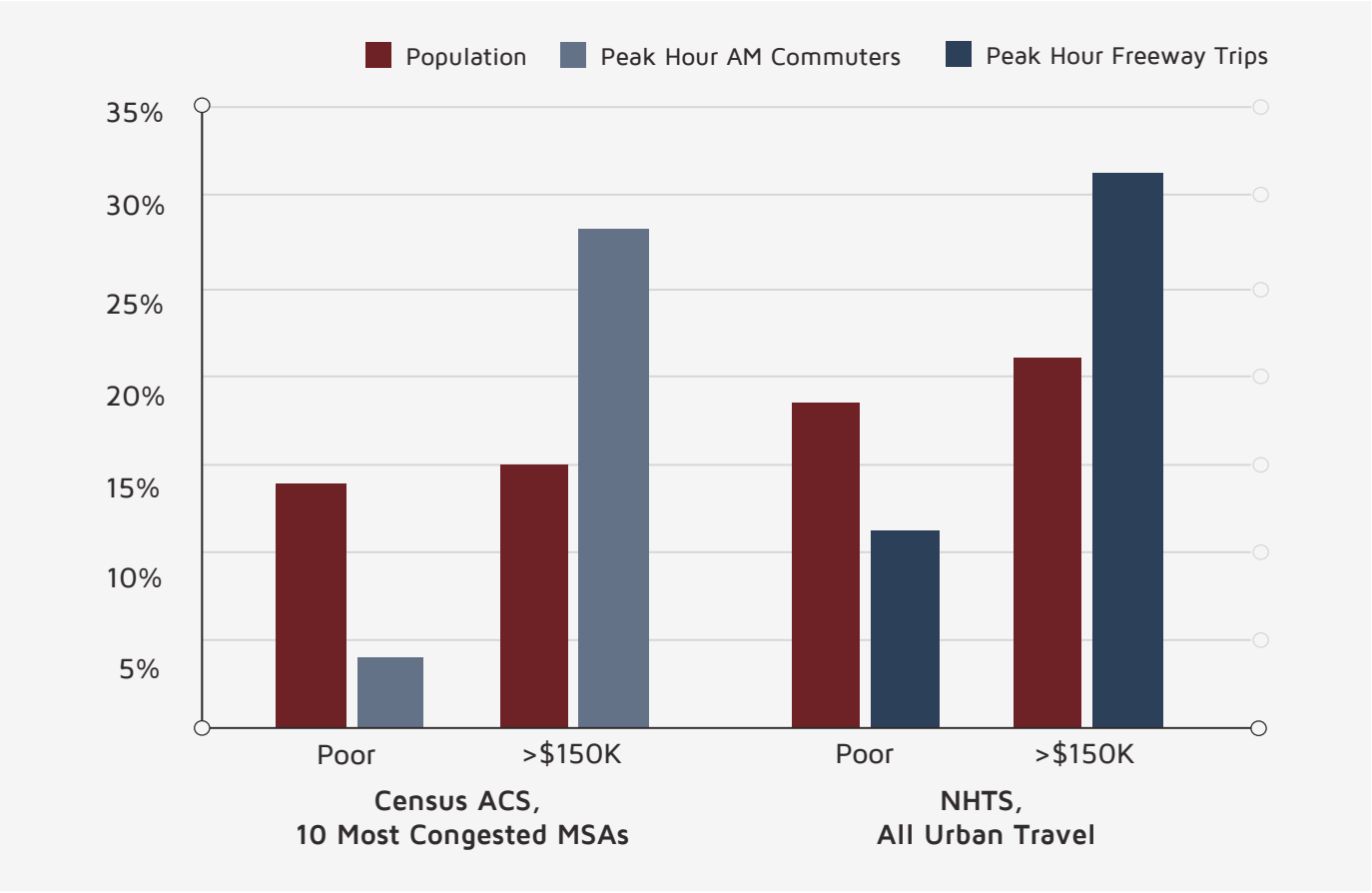
To see why, think of everything you must do before using a free road. You need to buy a car, fuel it, inspect it and insure it — already you've spent thousands of dollars. If that's beyond your means, free roads give you little benefit. If you *can* afford this investment, the free road helps you, but only in proportion to your ability to keep spending, since every time you use the road you are also burning gas, putting additional wear on your vehicle, and hastening the day it needs to be repaired or replaced.

In public finance terms, free roads look less like a progressive transfer (the government moving resources from rich to the poor) and more like a matching grant (the government moving resources to people who can first produce resources themselves). Matching grants have their uses, but for obvious reasons they are terrible ways to assist the disadvantaged. Free roads "help" the poor, but only after the poor have made large investments, both upfront and ongoing, in the depreciating assets that are cars.

The argument here is not that poor people don't drive. The United States is built around automobiles, and even low-income people make most trips by car. But the poor drive much less than the affluent. They are particularly less likely to drive in peak directions at peak times, when tolls would be highest. This is so in part because the poor are less likely to be employed, and in part because when they are employed they are more likely to work at off-peak hours (for example, as janitors or waitstaff or retail clerks), and not commute in peak directions (e.g., driving from the city to suburban malls).

Figure 1 shows data from the 2011 U.S. Census (the left pair of bars) and the 2009 National Household Travel Survey (the right). Both tell the same story: in the morning peak, the poor are under-represented on the roads, while the rich are over-represented. The Census data show that in the United States' 10 most congested urban areas, poor households are 14 percent of the population, but only 4 percent of peak-hour drive commuters. Households earning more than $150,000 per year, meanwhile, account for 15 percent of the population but 28 percent of peak-hour drive commuters. Most drive trips aren't commutes, of course, and many commutes don't

Figure 1. Poverty and affluence in morning peak period travel



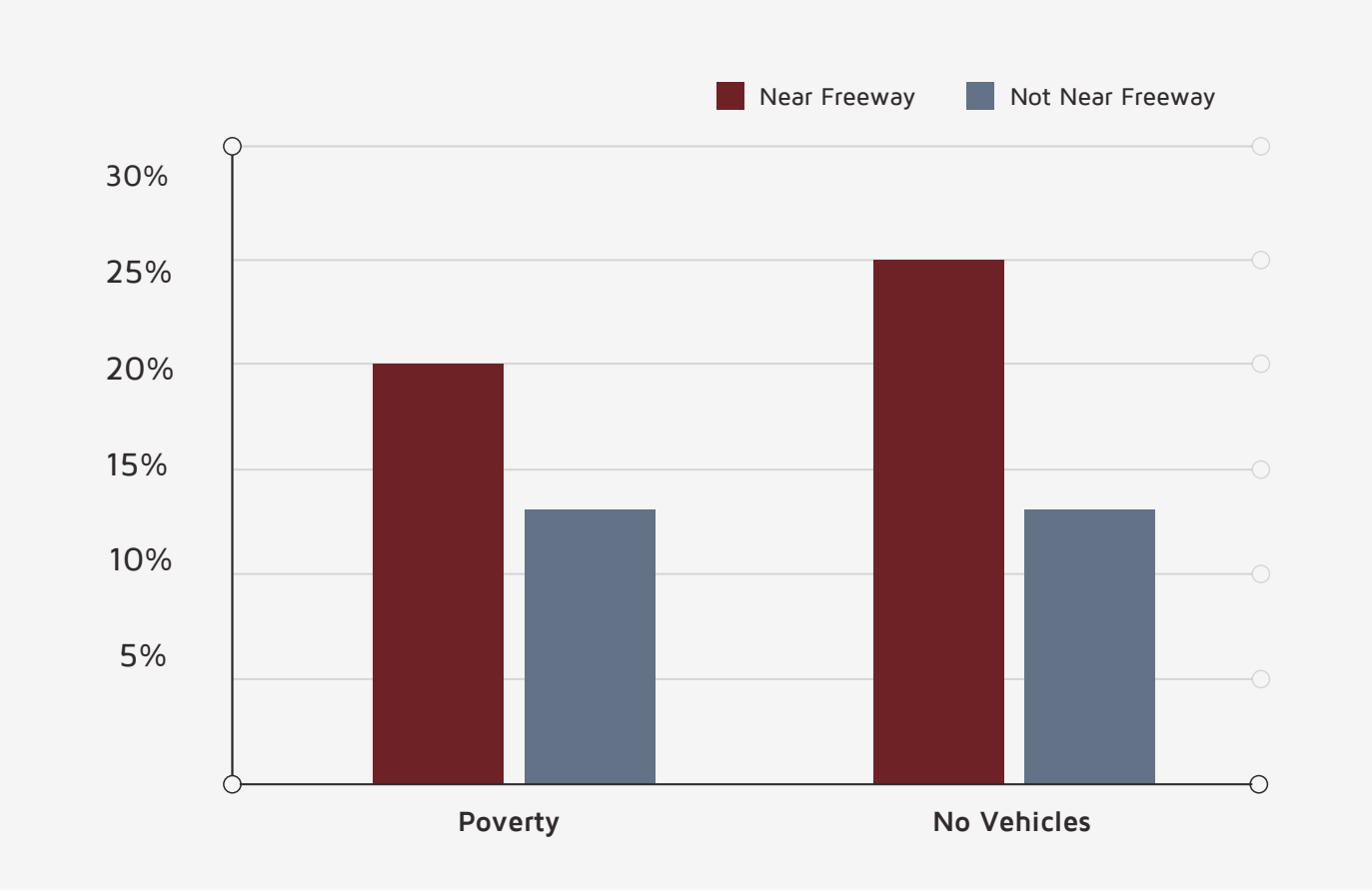
occur on crowded roads, but the NHTS data show that even if we account for these factors — by examining all morning peak driving on urban freeways areas — the story doesn't really change. The poor account for 19 percent of the urban population but only 11 percent of peak freeway driving trips, while households earning more than $150,000 a year are 21 percent of the population but make 31 percent of peak freeway driving trips.

These data suggest that free roads are indeed a subsidy, but not one for the poor. Free roads are instead a subsidy to the affluent that some poor people — those prosperous enough to have reliable cars — can enjoy. Keeping roads free delivers no benefit to many people in need (those too poor to drive), and many benefits to people whose needs have been more than met.

Do free roads harm the poor? They can. When roads are free they get congested. Congestion's most visible costs — lost time, wasted fuel, and crashes — fall largely on drivers, which means they fall largely on the affluent. But congestion also creates vehicle emissions, which are most harmful within a short distance of congested roads. Since low-income people are more likely to live near freeways and other congested facilities, they bear a disproportionate burden of the pollution's costs.

Figure 2 examines the 10 most congested urban areas in the United States, and compares the population living within 1,000 feet of a freeway to the population that does not. Twenty percent of the freeway-adjacent population is poor, compared to 13 percent of people who aren't freeway-adjacent. These averages, moreover, conceal much larger disparities in individual regions. In New York, the poverty rate in freeway-adjacent places is almost double that in places without freeways, and in Atlanta, Boston, and Seattle it is at least twice as large. In total, the freeway-adjacent parts of these regions are only 0.3

Figure 2. Poverty status and vehicle ownership by freeway adjacency, 10 most congested U.S. urban areas



percent of the land area, but hold over 2 percent of the population in poverty. Households close to the freeways, furthermore, are more than twice as likely to lack automobiles as households farther away. Thus people who live near unpriced freeways tend to enjoy fewer of the freeways' benefits (because they own fewer cars and drive less) while suffering more of the freeways' costs (because they must breathe the emissions of those who drive more).

These costs aren't trivial. Vehicular air toxics are the largest cause of air-pollution-related cancer in the United States, and car-based pollutants also cause respiratory disease, cardiac disease, and preterm birth — which in most years is the leading cause of infant mortality in the country. Fortunately, most preterm babies survive, but the condition has been linked to lifelong disadvantage. Exposure to traffic congestion at an early age is thus both a consequence and cause of poverty, an example of the intergenerational transmission of disadvantage that economist Janet Currie calls "inequality at birth."

The fairness of priced roads

Priced roads pose an equity problem because they are regressive: their burden rises as income falls. A toll designed to maximize a road's performance (for example, maintain speeds of 55 mph) is levied without consideration of driver income. London's congestion charge, for example, is $15 per vehicle, regardless of who is in the vehicle. On efficiency grounds, this makes sense: cars don't consume less space, and cause less congestion, simply because the people driving them have less money. On equity

grounds, however, it can be troubling; $15 is a bigger obstacle for a poor person than a rich one.

Does this regressivity make pricing unfair? From one perspective, no. Congestion prices are fair the same way water meters or carbon taxes are fair: If you're going to use a resource, you should pay for it, not push some of the costs — in time, pollution, or crash risks — onto others. Pricing is *not* fair, however, according to the "ability to pay" principle, which holds that those who have more should pay more. It is the ability-to-pay perspective that yields the "Lexus Lane" critique: fast travel for the lawyers, lost trips for the landscapers.

Again, though, how are free roads different? On free roads, those who have more don't pay more — everyone pays nothing. And while congestion charging might stop some people from driving, by making it too expensive in money, *congestion* also stops some people from driving, by making it too expensive in time. Tolls can deprive a landscaper of precious earnings, but so can traffic jams, if they prevent him from reaching an additional job before day's end. Is it worse to have paid roads where prices prevent some trips, or free roads where shortages do the same? To paraphrase the writer Frances Spufford: what's the difference between being able to afford something that isn't available, and not being able to afford something that is?

Maybe charging people in time is inherently fairer than charging people in money? Time, after all, is a great equalizer: the rich have more money, but everyone has only 24 hours per day. So when we trade in time, everyone starts with equal endowments. But equality and fairness are not the same thing, and neither is synonymous with well-being. People with the same amount of time might, in different circumstances, value that time very differently. When everyone with a car can access roads for free, that's equality. But is it fair if, as a result, someone on their way to give birth gets slowed down by someone on their way to buy potato chips?

Free roads advance equality, but do so by leveling down rather than up. They offer equality in misery: every driver, regardless of income, suffers from the poor performance of our roads. This is an odd form of equality to strive for. Most people would want equal access to *good service*, not just equal access for its own sake.

Pricing delivers good service. It ends the shortage of roads. If some people can't afford the price, that's a problem, but the price itself contains the solution. Pricing creates revenue, and governments can give some of that revenue to poor people. A great advantage of money is that spending it doesn't make it disappear; it just makes it available for others. A rich person's toll payment can thus become a poor person's toll support. We can use the congestion charge to deter the potato chip buyer, the revenue to help the landscaper, and the open road to help the pregnant woman. But we need prices to do it. We cannot pursue such redistribution if we pay for roads in time. Time isn't like money. Time, once spent, is gone forever.

In summary, we can charge prices to advance efficiency, and use the revenue to protect equity. If this logic sounds familiar, it should. It describes our existing approach to most vital infrastructure. Governments regularly charge regressive user fees for water, electricity, and heating fuel. These services are all at least as important as roads, and precisely because we charge for them, we don't see daily shortages of them. When utility bills burden low-income people, we don't respond by making all utilities free. Nor do we say that metering shouldn't occur until every household has an "alternative" to water or electricity. We just use some of the meter revenue to reduce the burden on the poor. And yet few people consider water, gas or electric meters unfair. Most of us understand that these meters don't exist to punish the poor. They exist to discourage wasteful use by the rest of us. The same can be true of road prices.

Conclusion: A false choice

Suppose we had a world where all freeways were priced, and where we used the revenue to ease pricing's burden on the poor. Now suppose someone wanted to change this state of affairs, and make all roads free. Would we consider this proposal fair? The poorest people, who don't drive, would gain nothing.

The poor who drive would save some money, but affluent drivers would save more. Congestion would increase, and so would pollution. The pollution would disproportionately burden low-income people. With priced roads, poor drivers were protected by payments from the toll revenue. With pricing gone, the revenue would disappear as well, and so would compensation for people who suffered congestion's costs.

This proposal, in short, would reduce both efficiency *and* equity. It would harm the vulnerable, reward the affluent, damage the environment, and make a functioning public service faulty and unreliable. Most people would view the idea with skepticism — the same way they might view a proposal to abolish water meters. Today, however, this situation is not a proposal but our status quo, and so it is a *departure* from this scenario, not its introduction, that arouses our suspicion. We have so normalized the current condition of our transportation system that we unthinkingly consider it fair and functional. It is neither. Our system is an embarrassment to efficiency and an affront to equity. The choice between fairness and efficiency, in this case, is a false one. Charging prices would increase efficiency. Dedicating some revenue to the poor would protect equity. Falling pollution might well advance equity. There is nothing intrinsically unfair about pricing roads, or intrinsically fair about leaving them free. And people who worry about harms to the poor when roads are priced, but not when roads are free, may be worried more about the prices than the poor.

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Further Reading

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