



Regional Mobility Dialogue Series: Results and Summaries

Can Congestion Pricing Improve Mobility?

March 20, 2018

Leonard Transportation Center, CSUSB

Sponsored by:

HNTB

Introduction

All transportation issues are local. Therefore, it is essential to have conversations with local stakeholders to understand how to improve local conditions. This is the goal of the Leonard Transportation Center's (LTC) Regional Mobility Dialogue Series. We are working to bring decision makers, experts, and community members together to discuss critical transportation topics and look for possible solutions. The Dialogue held on March 20, 2018 was focused on answering the question, "Can Congestion Pricing Improve Mobility?"

Congestion on the freeways and roadways in Southern California continues to negatively impact quality of life in the region. With increases in population and the amount of goods traveling through the region, (as well as many other considerations), congestion is predicted to get worse. This series discussed the potential benefits and concerns of using congestion pricing to improve mobility. The benefits of congestion pricing come from maximizing underused roadway capacity (as in the case of converting underutilized HOV lanes to tolled express lanes) and/or modifying people's commuting behavior through economic incentives (such as using time-of-day pricing to incentivize off-peak travel or applying cordon pricing for heavy traffic destinations). This is a different model than building new road capacity to ease congestion. Because it is a model based in economics, some have expressed concerns about equity. One concern is that congestion pricing limits the ability of everyone to be able to travel when and where they want – because some can't afford to pay a toll. There is also concern about traffic diversion onto arterial or even residential roads as people figure out ways to avoid paying tolls on congestion priced corridors. In order to address these issues and more, three nationally recognized speakers addressed the realities of congestion pricing as a tool to mitigate congestion and provided possible solutions to the traffic management conundrum in Southern California. The following is a summary of their presentations and the top three ideas from the audience members to move this Dialogue forward.

The Regional Perspective: Kome Ajise, Director of Planning, Southern California Association of Governments

Kome Ajise is the Director of Planning at the Southern California Association of Governments (SCAG), the nation's largest Metropolitan Planning Organization. A big part of Director Ajise's job includes developing projects and strategies to address the region's transportation challenges and improve system performance. He is also responsible for long-range transportation planning specific to goods movement, aviation, transit and passenger rail, transportation demand management/transportation systems management, intelligent transportation systems, and transportation finance. Kome also oversees a comprehensive program of environmental issues analysis with emphasis on land use, housing, active transportation, air quality, and environmental justice.

"Some of us in the public sector were very reticent to talk about pricing. And it is always very interesting because pricing has been around; in fact it was the way roads used to be operated a

long time ago. At the turn of the century, most roads were priced. But today, we seem to be very cagey talking about pricing. Just about every time we talk about it, it is like talking about a new topic, like we are just beginning to talk about pricing, when in fact, we've lived with it forever, we have to deal with it, and it is very sensitive. Now, I am going to give a disclaimer, that anything that I say today, cannot be held against me because of that sensitivity. The notion is that when you talk about pricing, people think and have a lot of imagination: its government heavy handiness, its taxation, its all of these other things. But the one thing that is fundamental that we need to think about when we think about pricing, hopefully, at least the way I approach it, is the transportation system cannot be allowed to just be used without management," said Kome.

Director Ajise went on to discuss the importance of our region remaining competitive in the movement of goods by saying, "When you have a system in Southern California, such as we have, trying to move the economy is basically the economy in motion using transportation; whether you talk about highways or railways or the transit system its moving people and goods back and forth. That is the essence of transportation. If you want to stay competitive as a region, which we want to be competitive as a region, we are the 16th largest economy in the world and we do not get to be that way without a world-class transportation system; without the arteries and movement of goods and services. We get to be that way because we actually have the capacity to interact and have economic activity occur. And to continue to maintain that trillion dollar economy and grow it and be competitive, we have to make sure our system does not get bogged down. To the extent that the system becomes inefficient and you cannot move goods, the rational economy will find a way to move those goods, and it might be away from the region. So that is the imperative we have in the planning of the system as we go forward."

He summed up his discussion about congestion pricing by reiterating the importance of maintaining the free flow of vehicle movement, and having throughput depends on how well the system is managed. "So trying to make sure that the first obligation is for mobility, for speed improvement, for person throughput and to be mindful of the user time, the value of time people are spending. Keeping that in mind is how you manage a system and assuring people that when we say you will be able to get from Point A to Point B in x amount of time that the system allows you and guarantees you that to fulfill the economic objectives you have."

Kome ended his speech by discussing how it is important for us as region to identify the gaps in our system, "So we have to start thinking about how we complete the system gaps that we have. How we expand the transit system to provide that choice and how we expand some of our active transportation components of the system. Such that not everybody needs to get in a car and drive."

Support for Congestion Pricing: Baruch Feigenbaum, Assistant Director of Transportation Policy, Reason Foundation

Baruch Feigenbaum is Assistant Director of Transportation Policy at the Reason Foundation, a non-profit think tank advancing free minds and free markets. Mr. Feigenbaum has a diverse background researching and implementing transportation issues including revenue and finance, public-private partnerships, highways, transit, high-speed rail, ports, intelligent transportation systems, land use, and local policymaking. Mr. Feigenbaum is a member of the Transportation Research Board Bus Transit Systems and Intelligent Transportation Systems Committees, and chairs the Bus Rapid Transit Conference Committee. He has appeared on NBC Nightly News and CNBC, and some of his work has been featured in the *Washington Post* and *Wall Street Journal*.

Mr. Feigenbaum discussed what congestion pricing is and what it means for our region. “What is congestion pricing? Congestion pricing uses variable pricing to change and help manage the demand on a roadway. Why? Why would we want to variably change pricing? What is the point of this? So the majority of drivers on the roads during rush hours are not commuters. And if you think about it, it always blows my mind, because why would someone be driving around rush hour if they do not have to? But the reality is that a lot of folks make trips that they could be making outside of rush hour. And so we found that pricing, more than vehicle restrictions, more than urban road boundaries, more than anything like that is the best way to manage behavior.”

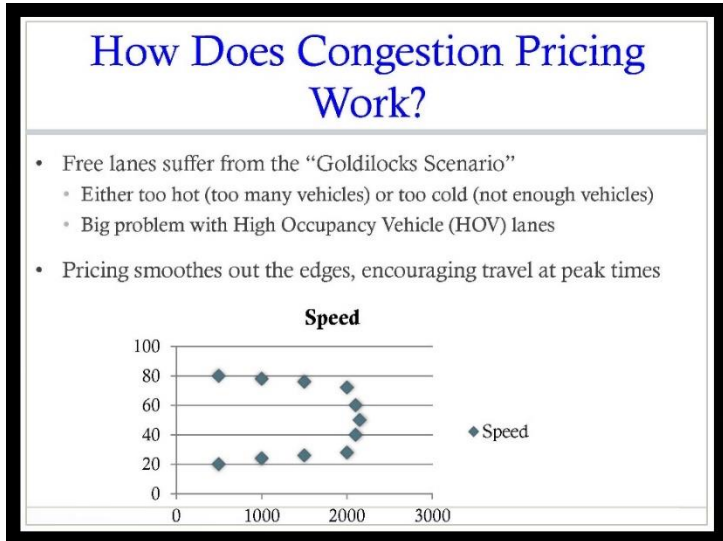
According to Mr. Feigenbaum, there are four types of congestion pricing, which are:

1. Variable Priced Lanes, as seen in SR 91
2. Variable tolls on Roadways, SR 133
3. Cordon Charges, found in Singapore
4. Area-wide charges, found in Stockholm, which are similar to Cordon Charges but just a little different geography

What is Congestion Pricing

- Definition: Uses variable pricing to help manage demand on a roadway
- Why
 - Majority of rush hour drivers are not commuters
 - Those drivers respond to pricing more than vehicle restrictions or land use changes to shift behavior
- Four different types of pricing strategies
 - Variably priced lanes ex) SR 91
 - Variable tolls on roadways ex) SR 133 (sort of)
 - Cordon charges ex) Singapore
 - Area-wide charges ex) Stockholm

There are various residential and commercial destinations in our region, and this adds to the challenges of operating transit. “Free lanes suffer from the ‘Goldilocks Scenario’, also carpool lanes, HOV lanes with restrictions. Either, those lanes and GP lanes are too hot, meaning that they got too many vehicles, or they are too cold, meaning there is not enough vehicles. So the problem is, how then, do you create a lane that has a consistent travel time in a consistent quality experience. And we found that using pricing does that.”



Some of us may not be aware of how tolling now works in the 21st century. There used to be toll booths on the toll roads that one could stop at and pay a fee to use that toll road. This is no longer the case. Mr. Feigenbaum elaborated on this common misconception.

21st Century Tolling

- Requires toll gantry equipment and toll transponders
- Vehicles recorded passing underneath toll gantries,
 - Toll transponders “speak” with toll gantries
- Customers are sent a bill in the mail or funds are withdrawn from the account
 - Customer has account with pre-paid balance
 - Option to pre-pay with cash in store or at toll agency
- No tollbooths, no toll collectors, low administrative costs

“21st Century Tolling has something called, toll gantry, which is an overhead device that basically is able to know when a vehicle goes under the device and it notes by communication with the toll transponder, which is basically just a window sticker. So I like to say that the transponders speak with the toll gantries. The customers are then sent a bill in the mail or funds are withdrawn from the account.” Individuals open an account and deposit monies to maintain a balance and the tolls are automatically deducted. The account is

automatically refunded with a credit card when the balance falls below a certain amount. There are options to also pay with cash. This system is much more efficient than maintaining tollbooths and toll collectors. It is safer than the old system and there is a lower administrative cost.

How do you Solve Congestion in Southern California?

- Populated, growing areas have problem of induced demand
- Cars in California are considered a normal good, people have extra trips to make that they don't currently make due to congestion
- Widening expressways with free lanes contributes to induced demand by inducing new trips
- There are benefits of new trips (more job opportunities, better access to leisure)
- However, if highways fill with cars as soon as they are widened, they don't solve congestion
 - Example I-405 widened Carmageddon, freeway congested again in less than 12 months



Southern California has severe congestion and the economic, social and environmental costs are considerable. These congested areas experience induced demand, in other words, cars traveling by car in economic terms, is a normal good. Widening expressways will help free up lanes and contribute to induced demand by generating new trips. Those who are reluctant to make trips due to the congestion, will make those trips, if that overcrowding clears. Nonetheless, if the freeways

become congested as soon as they are widened, it does not solve the problem.

Tolling is used as a means of reducing congestion, but some believe that congestion pricing is regressive because everyone is charged the same. In reality tolling is far less regressive than sales tax; the lanes are an option and drivers are not forced to use them. Research shows that tolled lanes benefit and are valued by lower-income workers because many of them commute to jobs they must be on time, and paying for the toll lane is better than being fired for being late. Research studies show that toll lanes are used an average of once a week, not for every trip.


Tolling's Effect on Working Class Families

- Some have argued congestion pricing is regressive because everybody is charged the same
 - In reality most regressive funding mechanism is actually sales tax
- Toll lanes are used an average of once a week, not for every trip
- Toll lanes are used by everyday folks not wealthy
 - 5 most popular vehicles: Toyota Camry, Honda Accord, Toyota Corolla, Honda Civic, Ford F-150
- Toll lanes are valued most by lower-income workers because they have jobs in which they are required to be on-time
 - Having option of paying toll is better than being fired
 - Useful for picking a child up from daycare instead of paying late fee
- Research studies show toll lanes more valuable to lower-income than wealthy



Tolling Controversies Solved

- Some toll projects have had a bumpy road
- But problems have been addressed
- SR 91 Non-compete clause
 - Entity is compensated for new free lanes
 - Today, regions can build anything in the long-range plan without compensation
- SR 125 bankruptcy
 - Opened in depths of Great Recession, political and environment pressures increased costs
 - Today, functions as an effective roadway



The buildout of toll roads has experienced a few bumps along the way but these have been addressed and for the most part resolved. Mr. Feigenbaum’s presentation provided a reasoning for the need for tolling as a tool in the transportation infrastructure system. In order to keep people and the economy moving forward, tolling is an important component of the transportation infrastructure.

A Critique of Congestion Pricing: Rhodes “Dusty” Rigsby, M.D. and MBA, City Mayor of Loma Linda, California

Dr. Dusty Rigsby is Mayor of the City of Loma Linda and Vice President for Transitional Care at Loma Linda University Health. He divides his time among administration, practicing Internal Medicine, and serving the citizens of Loma Linda. He has served on the board of SANBAG/San Bernardino County Transportation Authority for nearly 10 years. His expertise in transportation policy is that of an armchair quarterback, refreshingly unhindered by the limitations of orthodoxy. He opines on the proper role of government and enjoys searching for solutions to problems by starting with a clean sheet of paper.

Mayor Rigsby believes that having congesting pricing will help the flow of traffic and that a volume constrained optimized toll lane will have increased throughput, rather than a stagnant crowded lane. With this said, Mayor Rigsby does believe in a concept of pari-mutuel -tolling. “I agree that there is a lot of advantage to having congestion pricing, it helps control the flow and there are some people that say ‘even if you have enough money to build the freeways, you should still toll, because that gets more throughput than if you do not.’ So then the question becomes, well what do you do with the excess revenue? And my proposal is, to do something analogist to, greyhound racing or horse racing. Have you ever been to a horse racing track? At a horse racing track, everybody bets different combinations of first, second and third place. And if a bunch of people bet the same way you do, you get fairly low odds, if you are the only one who sticks his neck out on a long shot, then you get very high odds. But what happens is all of the money is put into a pot, they generate odds based on how different people place a bet, and the house takes out something they call ‘vigorish’, which is a percentage, for the operations and profit of the house, for the race track. Then, they redistribute all of the bets to the winners, based upon

the odds they have obtained. My suggestion is that we do the same thing and it would be an extremely proactive approach that will cause an awful lot of news.” This approach is similar to parimutuel betting in horse racing. It is a system of mutual tolling, with individuals who want or need to travel fast paying the drivers who are able to go slower. Users will be paying each other, rather than the government.

This system would dictate everyone having transponders or linked electronically to the roads. Those driving in the fast lane would be paying more, those in the slower lanes would have their accounts credited from any excess revenue. In this sense, everyone would be encouraged to have a transponder and it would be a great marketing tool for the program. “People that are paying \$10 to go faster will result in .50 cents for people going slower, based on the ratios. And you will take out the financing expense from the revenue, you take out the operating expense and some nominal amount for projects that are affected by the toll lane itself. The excess revenue would be redistributed to the people and it would take away the moral hazard generated by toll roads.

Moving the Dialogue Forward: Ideas from the Participants

After the presentations, Dialogue attendees discussed the ideas presented and worked together in groups to discuss solutions to moving the discussion forward. The top three ideas from each table have been categorized and summarized here.

Develop New Ideas around the Possibilities of Congestion Pricing: There were a number of considerations that the audience members/participants of this Dialogue had around congestion pricing. Individuals were intrigued about new ways to think about congestion pricing and how to make it better for the consumer.

- Detail the pay more for higher speeds and less for lower speed.
- Target the concept of toll-lanes and use of other modes of transportation.
- Expand the concept of toll-lanes and use of other models of transportation.
- Target policies that promote sweet spots in toll-lanes.
- Toll lanes in an AV/shared economy.
- Cordon pricing?
- Pricing transparency?
- Love the (horse race) analogy for ideas.
- Agency monitoring success of the system
- Coming up with options to returning more to the consumer.
- Electric vehicle/ hybrid impact
- Commercial vehicle impact
- Social equity
- More seamless end user capability - campaign when buying cars, etc.
- Staying competitive – ports losing business, airports etc.
- Having managed lanes improve general purpose lane - lose weight by losing your belt.
- What will replace gas taxes in the future? To make infrastructure maintenance fair

Develop Different Incentive Programs to Change Commuting Patterns and Improve Use of

Public Transit: Many participants voiced their opinion that public transit and incentives for end users need to be part of the solution. This supports the reality that the solutions to the traffic problems are found in a multimodal, multipurpose infrastructure system.

- Tax incentive for employees for alternative work schedules. Example, trucking industry.
- Discussing other options with different transportation
- More options on regular lanes
- Transit playing in more
- Giving more incentives for commuting such as transit and public transportation
- Need more options for the mixed flow lanes so that people aren't getting stuck in more traffic as the prices increase.
- There is no silver bullet solution. Transit still needs to be point of conversation. Commuter transit needs to be more frequent.
- Increase incentives, mainly in discounts besides carpooling.

Continue Working With and Educating the Users of the Transportation Infrastructure (the

Public): The final main point addressed by the participants was to continue with public education and outreach. This is a major goal of the Dialogues and the organizers are working to continue the discussion.

- Get public to understand time frames of planning, design before work on highways can start. It can take 3-5 years to start construction once a project is approved to proceed.
- Public outreach.
- Returning more to the consumer
- Misconception = how do we educate/ outreach more
- Pursue outreach – education – to address misconceptions/perception – revenue is legislative tied to the congress.
- Increase public awareness of benefits.

Final Comments

Transportation mobility and throughput considerations are important to the region's economic competitiveness and quality of life. Work needs to continue in order to address ways by which commute times can be decreased and traffic alleviated. Congestion pricing, competitive transit options, and the behavior of the consumer are all important considerations in managing mobility. The LTC is prepared to continue working on these issues with key stakeholders and propose possible solutions found from research and public outreach programs. The need for finding a solution cannot be understated as anyone who has lived in Southern California for many years can attest.