

Income Equity (Part 1)

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Agenda Item #10a

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Income Equity Considerations

- ◆ In its *Road Charge Pilot Design Recommendations* report, the TAC recommended that the pilot be designed to provide data on:
 - ✧ Vehicle ownership and type
 - ✧ Number of miles driven by different income groups
 - ✧ Perceived affordability of road charge versus gas tax

- ◆ This briefing provides background on issues related to income equity, and describes the preliminary results of an analysis of likely impacts of a road charge program with respect to income equity

- ◆ Additional results will be available in Spring 2017



Key Questions Related to Income Equity

- ◆ What are the implications for income equity of adopting a per-mile flat-rate road charge?
 - ✧ Is a flat-rate road charge more or less regressive than the current fuel tax?
 - ✧ What if any rate factors should be considered and applied, and if so, by what methodology?
 - ✧ Is the assumption that low-income drivers use older, less fuel-efficient vehicles correct?
 - ✧ Are periodic lump-sum payments (versus frequent gas tax payments) less affordable to road users?



Overview of Concepts of Tax Equity

- ◆ Horizontal equity – people in a similar situation should pay similar amounts
- ◆ Vertical equity – people with greater ability to pay should pay more taxes
- ◆ Another dimension of Tax Equity is the distribution of benefits



Overview of Concepts of Tax Equity

- ◆ Historically (when most cars had about the same MPG):
 - ✧ the gas tax was arguably *horizontally* equitable
 - everyone paid the same amount to go the same distance
 - ✧ but not *vertically* equitable
 - Low-income drivers paid a higher percentage of their income in gas tax than did high-income drivers

- ◆ As MPG and MPGe have increased in newer model cars, the gas tax is believed to have become *less horizontally equitable*, and *even less vertically equitable*.



Income Equity Analysis

- ◆ Part 1 lays the groundwork to answer questions about
 - ◇ **Regressivity**
 - ◇ Rate factors
 - ◇ **Distribution of vehicle age and efficiency**
 - ◇ Perceived affordability of lump-sum payments

- ◆ Developed models to estimate the distributional impact of per-mile road charges



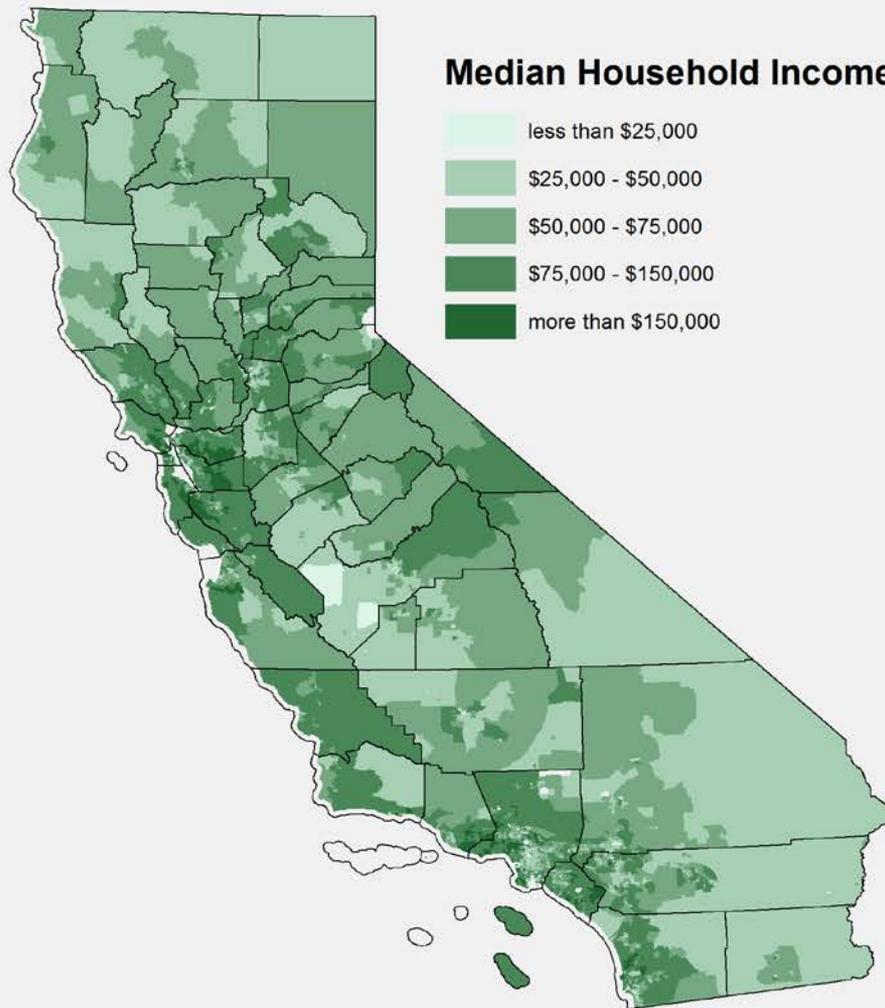
Analysis of Per-Mile Flat-Rate Road Charge in California

TAB 10a

- ◆ Previous analyses limited to data from 2001 or 2009 National Household Travel Survey (NHTS)
 - ✧ Self-reported mileage
 - ✧ Self-reported vehicle ownership
- ◆ This analysis incorporated data from 2009 NHTS, and additional data specific to California drivers
 - ✧ Data Sources:
 - 2009 NHTS
 - 2010 CHTS (California add-on to NHTS)
 - 2014 American Community Survey (ACS)
 - California-wide vehicle registration data at ZIP-code level
 - Vehicle-specific EPA fuel-economy estimates

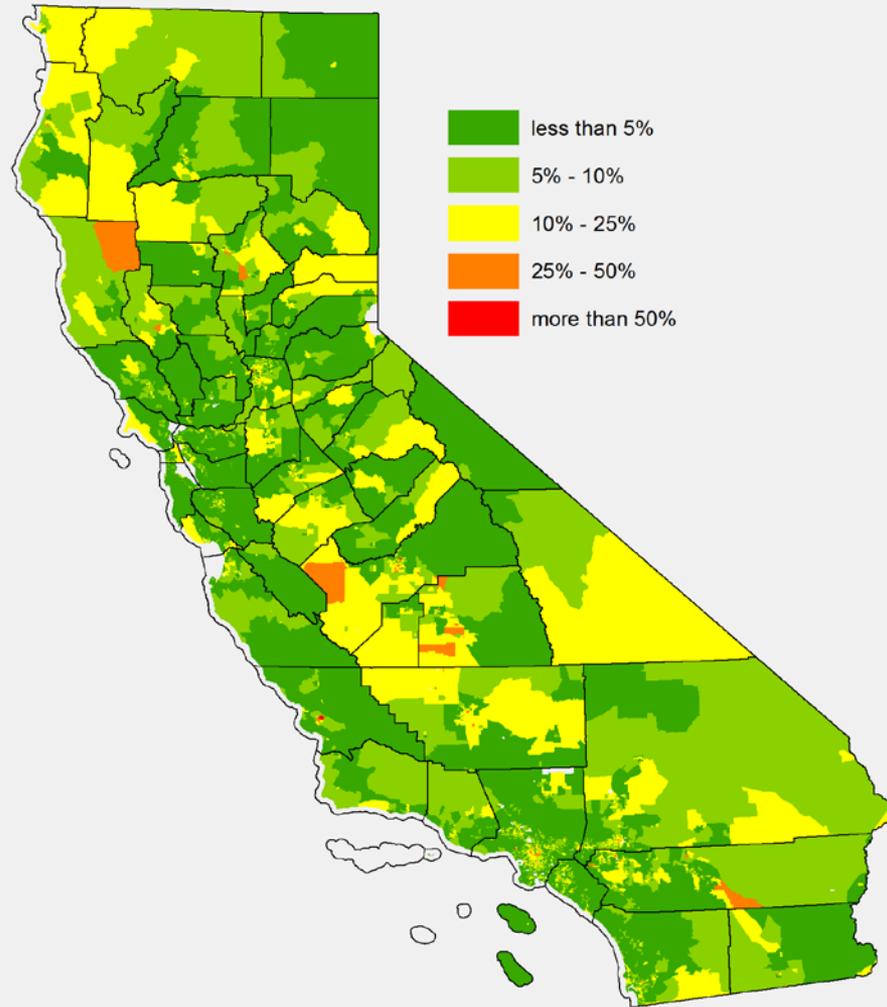


Median Household Income, by Census Tract

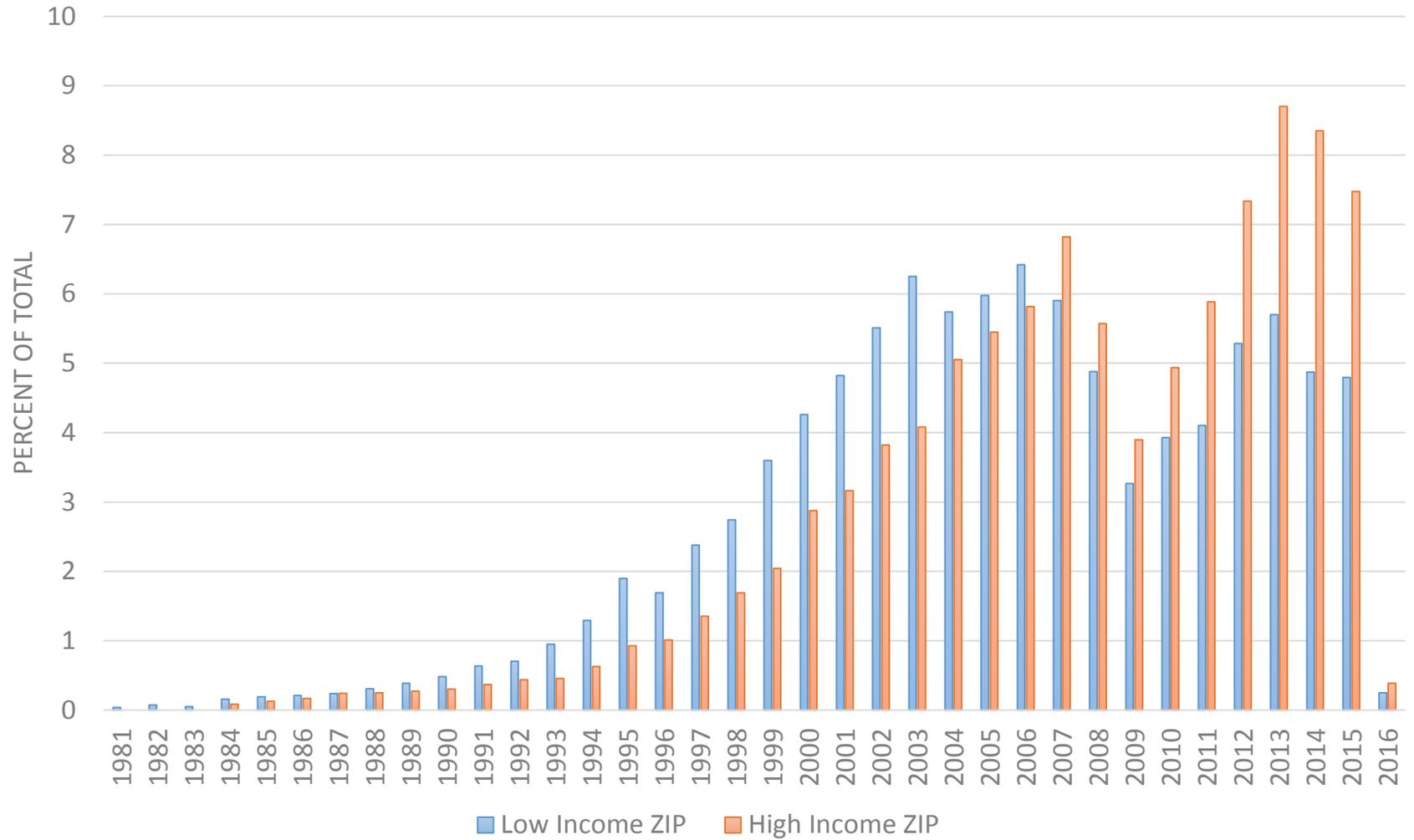


Percent of Population Over 16 Years With Income Less Than 100% of Federal Poverty Level Who Drive a Car to Place of Employment, by Census Tract

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Vehicle Model Year as Percent of Fleet



What Are the Implications for Income Equity of Adopting a Flat-Rate Road Charge?

TAB 10a

- ◆ Is a flat-rate road charge more or less regressive than the current fuel tax?
 - ✧ Analysis suggests a flat-rate per-mile charge is marginally less regressive than the current gas tax structure



What Are the Implications for Income Equity **TAB 10a** Adopting a Flat-Rate Road Charge? (continued)

- ◆ What if any rate factors should be considered and applied, and if so, by what methodology?
 - ✧ factors could be applied such as reduced per-mile rate or mileage waivers for low-income drivers
 - ✧ other remediation could be applied, such as income tax credits
 - *However, applying these factors would add to administrative cost*
 - *Some rate factors require drivers to submit additional personal information, such as proof of income*
 - *Lost revenue could need to be “made up” by other road users*
 - *Additional driver feedback during the pilot is necessary*



What Are the Implications for Income Equity of Adopting a Flat-Rate Road Charge? (continued)

TAB 10a

- ◆ Is the assumption that low-income drivers use older, less fuel-efficient vehicles correct?
 - ✧ Initial analysis based on National Household Travel Survey (2009), American Community Survey (2014) and VIN data provided by DMV suggests that the assumption is correct



What Are the Implications for Income Equity **TAB 10a** Adopting a Flat-Rate Road Charge? (continued)

- ◆ Are periodic lump-sum payments (versus frequent gas tax payments) perceived as less affordable by road users?
 - ✧ The answer to this question requires pilot participant feedback, however:
 - Initial data analysis shows that in a “transition” model where road charges are offset by gas tax paid, nearly 60% of low-income drivers would receive a net rebate
 - A further 20% are likely to see zero net difference between gas tax and road charge
 - ✧ Further analysis, and participant feedback, is required to identify any possible cash-flow issues arising after any transition period



Anticipated Data from Pilot

- ◆ Distances driven by participants
- ◆ Actual fuel consumption
- ◆ Participant attitudinal feedback on payment frequency and invoiced amounts
- ◆ Data on payment concepts and preferences



Next Steps

- ◆ Incorporate information about:
 - ✧ Actual miles driven
 - ✧ Actual fuel consumed
 - ✧ Invoice details
 - payment due
 - payment completion rates
 - payment frequency
 - ✧ Survey data regarding participant preferences on payment methods and frequencies

- ◆ Part 2 of this analysis will be completed in Spring 2017

