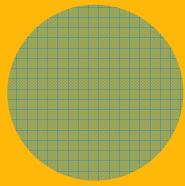


Using National Household Survey Data for Transportation Decision Making
June 2011

MODE EQUITY: CURRENT FINDINGS AND IMPLICATIONS

Sandra Rosenbloom
Professor, The University of Arizona

Nancy McGuckin
Consultant, Travel Behavior Associates

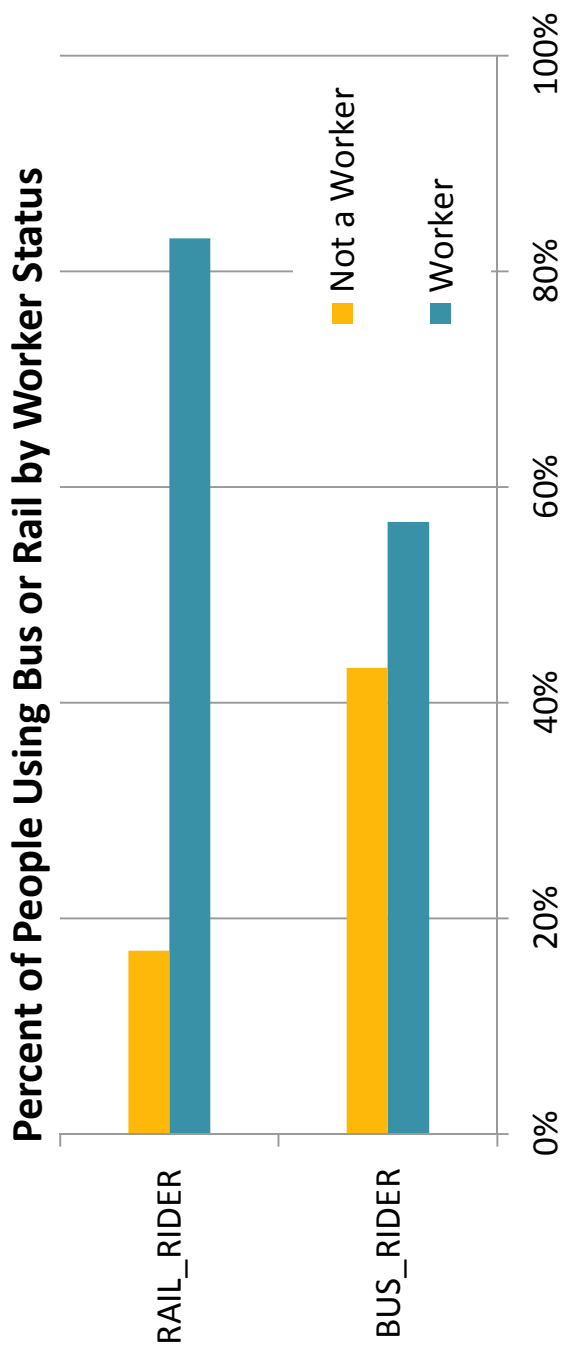


OVERVIEW

- ⊙ When decisions are made to fund new light rail, the effects on bus service should be considered
- ⊙ Bus riders are more likely to be non-workers, non-drivers (captive), and to make shorter trips
- ⊙ Rail riders are more likely to be workers, drivers (choice), and to make longer trips
- ⊙ Bus riders have significantly lower income than rail riders, according to the 2009 NHTS

TRANSIT RIDERS BY WORKER STATUS

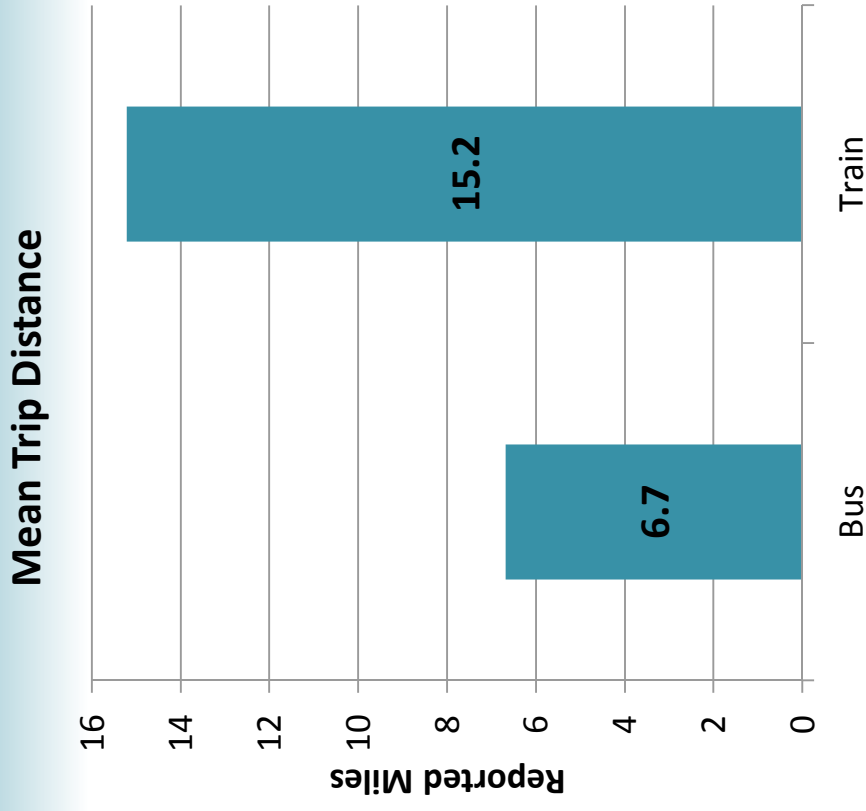
The NHTS data series, along with many research studies, show that bus riders are much more likely to be poor, minority, and female while rail riders are much more likely to be wealthy, white, and male.



Source: Author's analysis of NHTS 2009
Transit Codes: Bus=09, Local Bus/Train= 16, Commuter Train; 17, Subway; and 18, Light Rail

TRIP LENGTH BY MODE

There is a growing literature that which suggests that both spending on rail over bus, and the ways in which bus services are delivered, may not serve the needs of many disadvantaged travelers

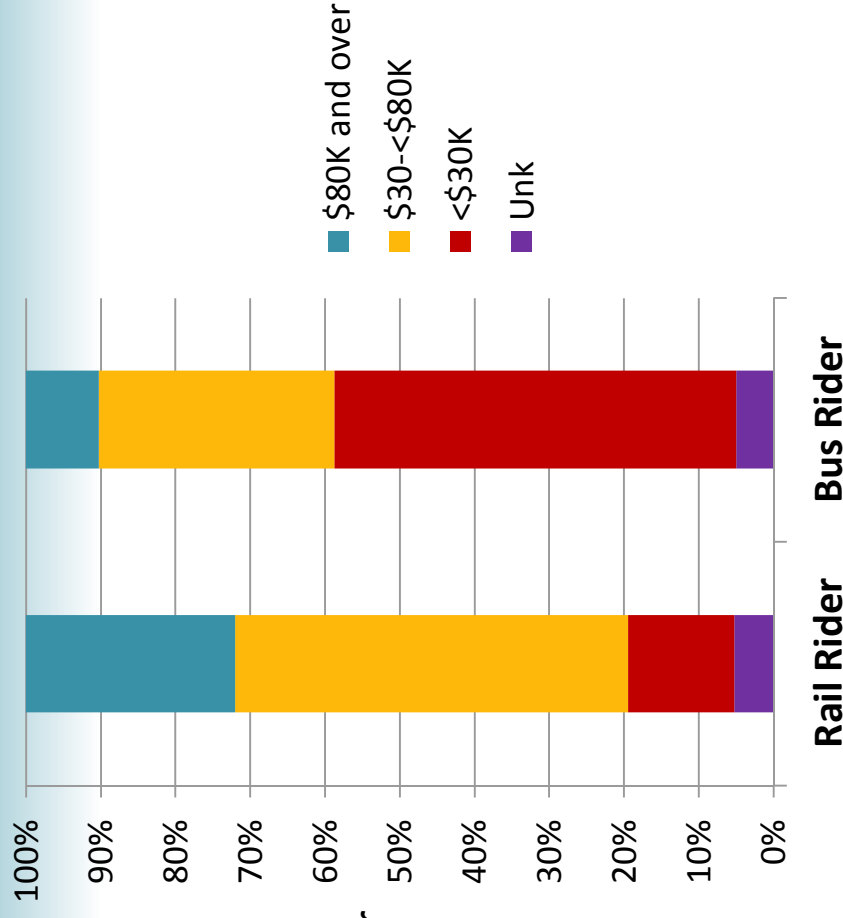


Source: Author's analysis of NHTS 2009

Transit Codes: Bus=09, Local Bus/Train= 16, Commuter Train; 17, Subway; and 18, Light Rail

PROPORTION OF RIDERS BY INCOME

Many people, in fact, assume that all funds spent on public transit are good for poor or disadvantaged people and likely to meet social equity goals.



Source: Author's analysis of NHTS 2009

Transit Codes: Bus=09, Local Bus/Train= 16, Commuter Train; 17, Subway; and 18, Light Rail

PROPORTION OF RIDERS BY DRIVER STATUS

Proportion of riders who are Non-Drivers

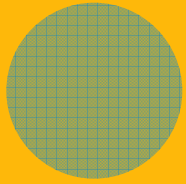
■ Percent of Bus Riders ■ Percent Of Train Riders



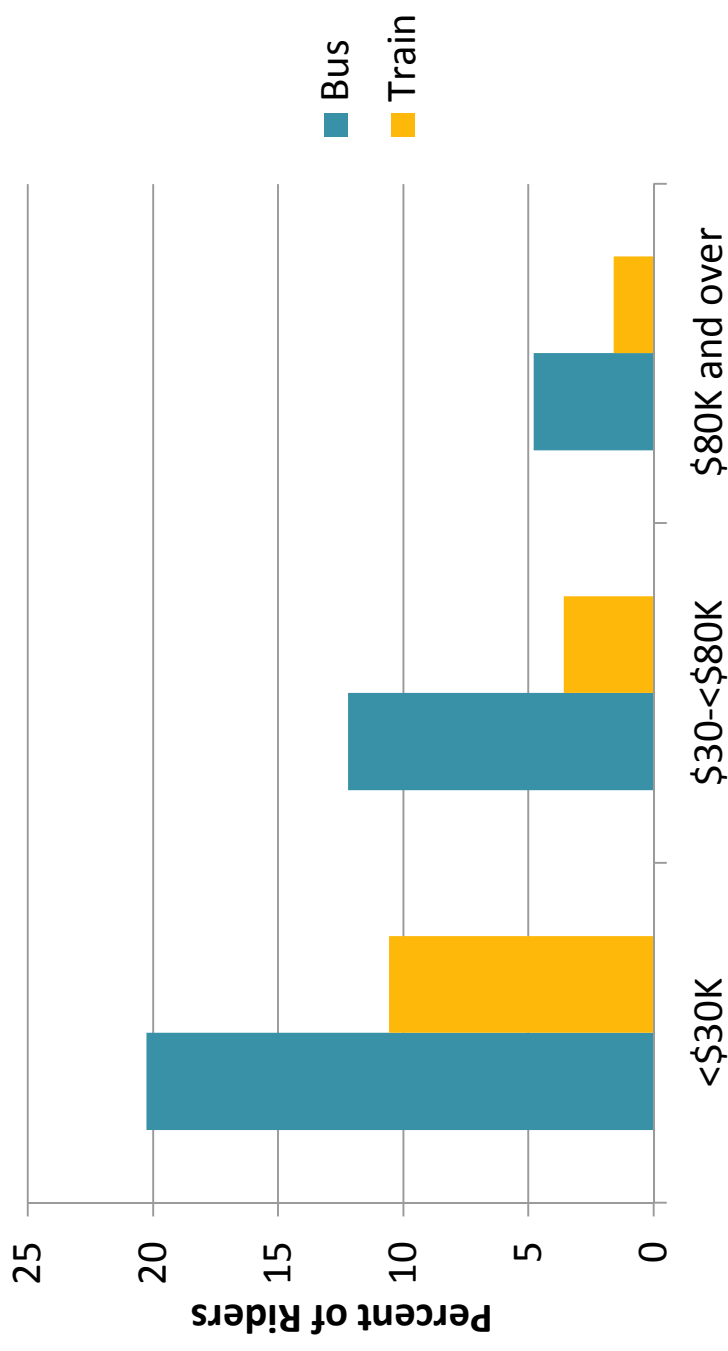
Source: Author's analysis of NHTS 2009

Transit Codes: Bus=09, Local Bus/Train= 16, Commuter Train; 17, Subway; and 18, Light Rail

20% OF BUS TRIPS ARE BY LOW-INCOME NON-DRIVERS



Non-Drivers by Income

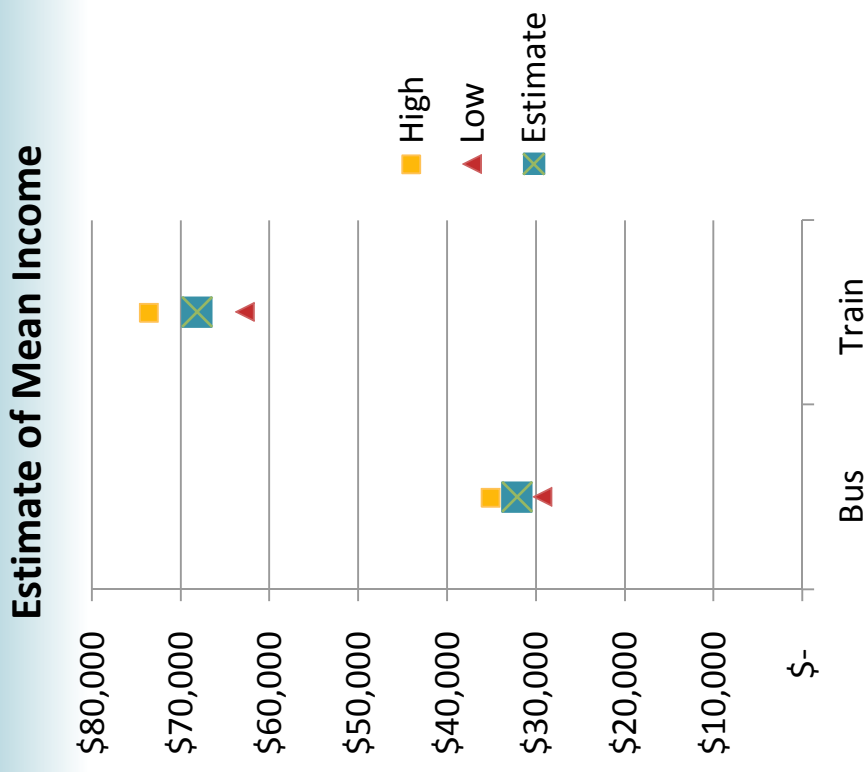


Source: Author's analysis of NHTS 2009

Transit Codes: Bus=09, Local Bus/Train= 16, Commuter Train; 17, Subway; and 18, Light Rail

MEAN INCOME OF BUS AND RAIL RIDERS WITH MARGIN OF ERROR

The average subsidy to a rail passenger is substantially higher than the average subsidy to a bus passenger, sometimes by many orders of magnitude (due largely to the higher capital costs)...

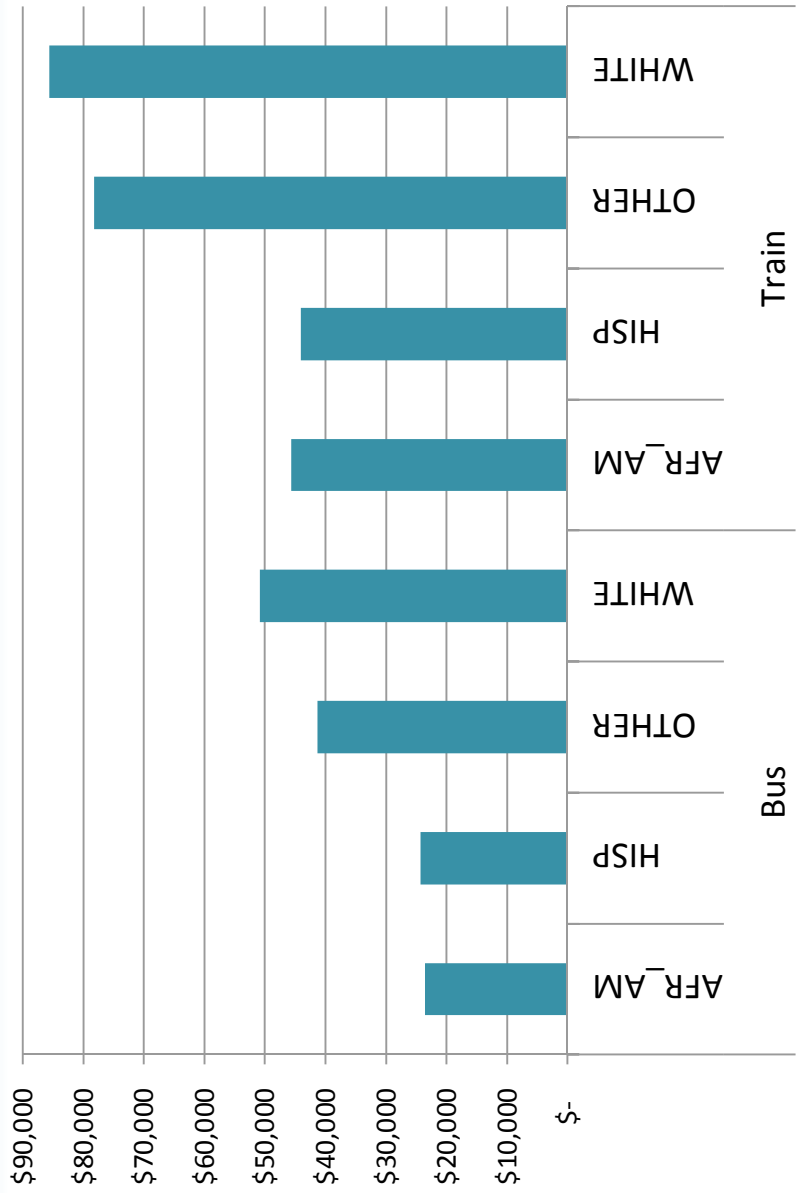


Source: Author's analysis of NHTS 2009

Transit Codes: Bus=09, Local Bus/Train= 16, Commuter Train; 17, Subway; and 18, Light Rail

MEAN INCOME OF BUS AND RAIL RIDERS BY RACE

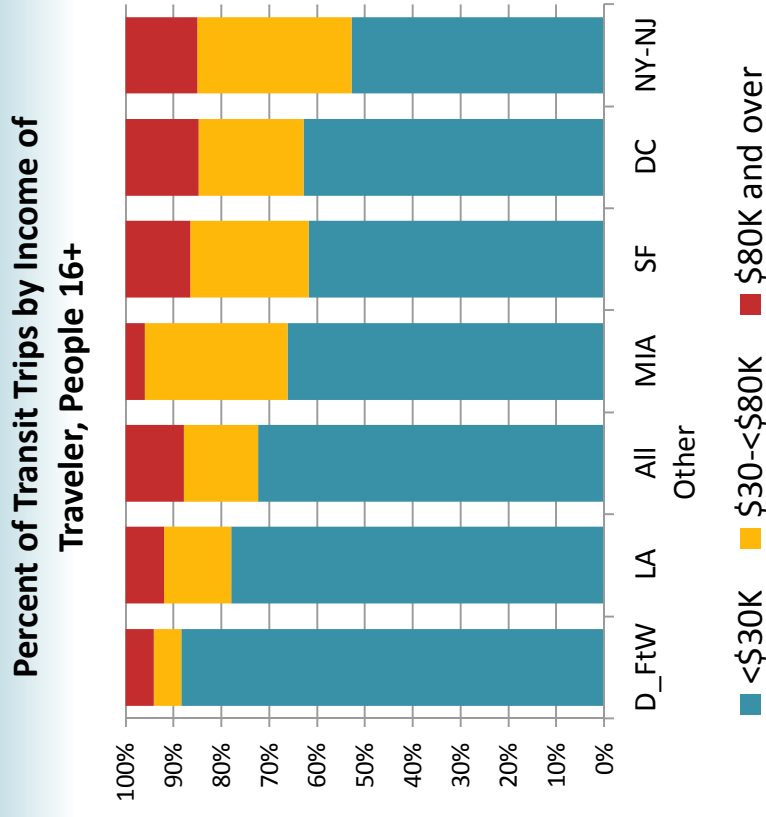
Mean Income of People Using Bus or Rail



Source: Author's analysis of NHTS 2009, Race is reported race of Household Respondent
 Transit Codes: Bus=09, Local Bus/Train= 16, Commuter Train; 17, Subway; and 18, Light Rail

PROPORTION OF TRANSIT TRIPS BY INCOME OF THE TRAVELER IN SELECTED METRO AREAS

- It is immediately clear that looking at individual metropolitan areas shows the same patterns as seen in the national data—there is a very large income gap between bus and rail riders.



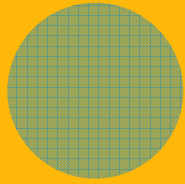
Source: Author's analysis of NHTS 2009
Transit Codes: Bus=09, Local Bus/Train= 16, Commuter Train; 17, Subway; and 18, Light Rail

MEAN INCOME OF BUS AND RAIL RIDERS BY SELECTED METRO AREAS

Metro Area	Bus Riders	Rail Riders	Rail Rider Income as a Percent of Bus Rider Income
Dallas - Ft. Worth	\$ 19,145	\$ 41,101	215%
Los Angeles	\$ 25,754	\$ 48,888	190%
Miami	\$ 30,624	\$ 46,416	152%
New York- New Jersey	\$ 35,463	\$ 69,854	197%
San Francisco	\$ 39,053	\$ 84,247	216%
Washington, DC	\$ 44,299	\$ 77,748	176%
All Other Metro	\$ 29,770	\$ 61,533	207%

Source: Author's analysis of NHTS 2009

Transit Codes: Bus=09, Local Bus/Train= 16, Commuter Train; 17, Subway; and 18, Light Rail



SUMMARY

- ⊙ Poor travelers make up higher share of bus riders, while higher income folks make up larger share of rail
- ⊙ If one dollar is taken from bus and given to rail, then the cost/benefit analysis must take this 'lost opportunity' cost (to further fund bus) into account
- ⊙ That should make the 'proof' of environmental or economic benefits more rigorous or demand greater (more widely shared?) benefits to the community
- ⊙ Policy-makers should be aware of the equity issue and design remedies, new service, etc. to offset them
- ⊙ 'Transit' expenditures to offset regressive highway financing techniques should be carefully allocated with these equity issues in mind