



CENTER FOR
TRANSPORTATION
RESEARCH

Vehicle Miles Travelled Fee- Who Pays?

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Think of the year 2050





FUEL



FEES



FAIR



FUEL



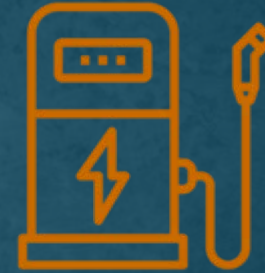
Fuel: Impacts to HTF



Inflation



**Aging
Infrastructure**



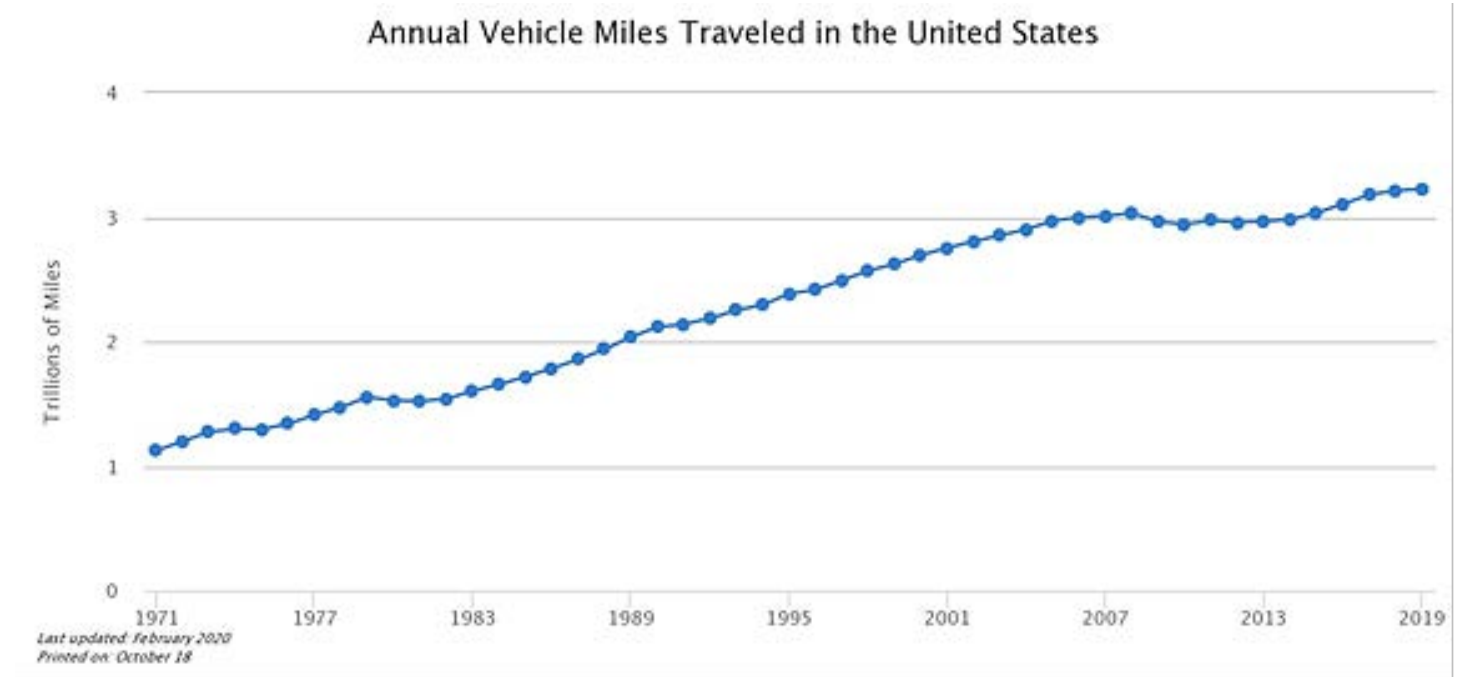
**Increased Fuel Economy
and Alternative Fueled
Vehicles**



**Automated
Vehicles**

Fuel

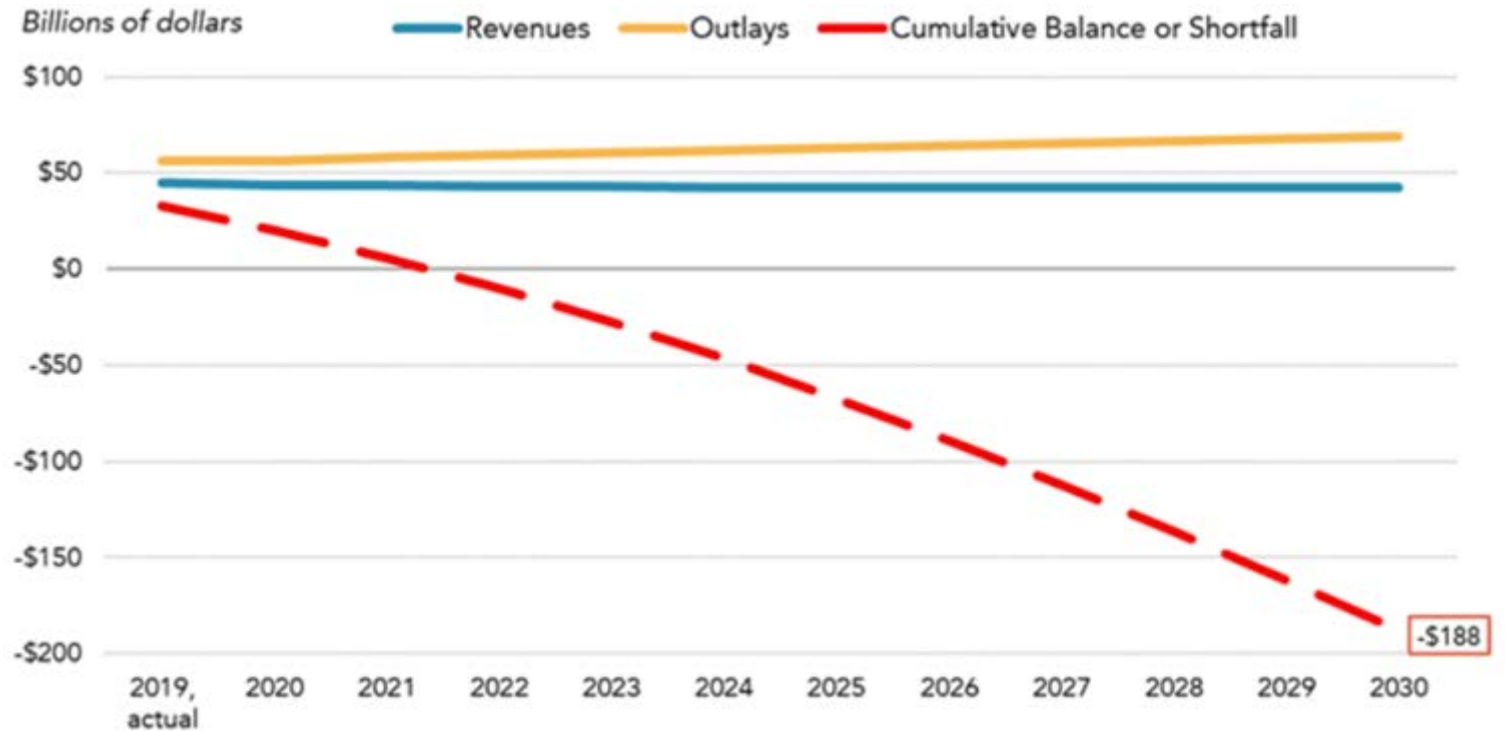
- 97% Increase from 1980 to 2008
- Drop during pandemic
- Levels back to pre-pandemic miles



Fuel

- Spending outpacing revenue generation
- Continued transfer from general fund to cover outlays
- Cost of construction up 170% since 1993 federal gas tax increase

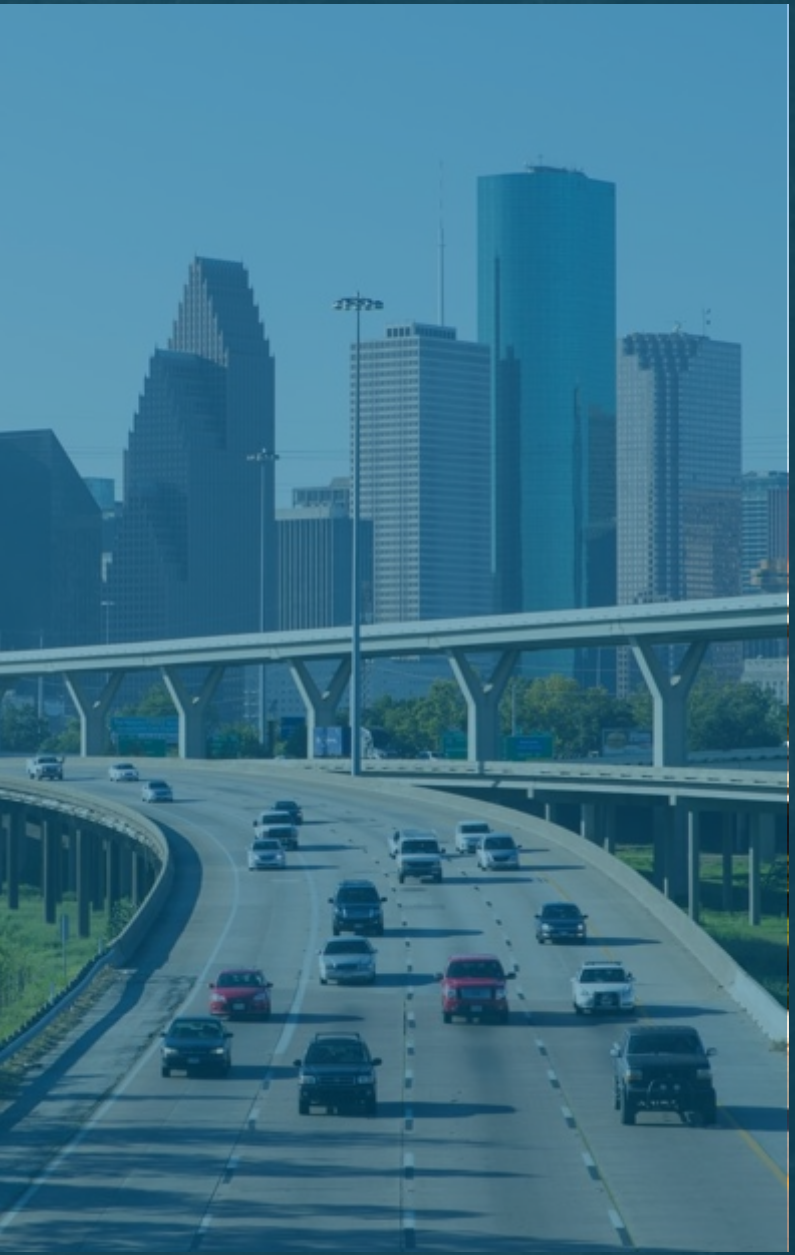
Highway Trust Fund Revenue Projections



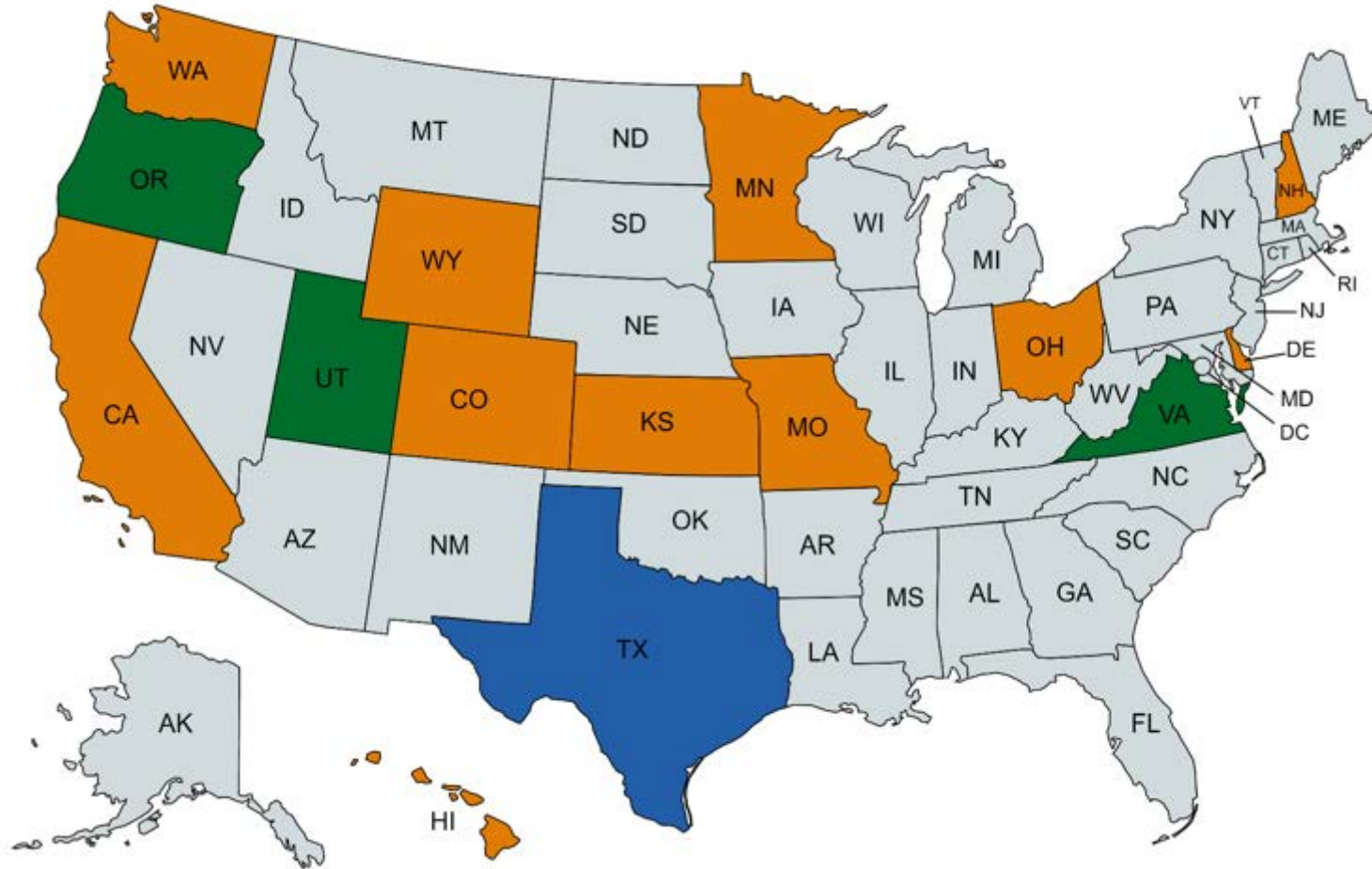
Source: Tax Policy Center, 2020



FEES



Fees



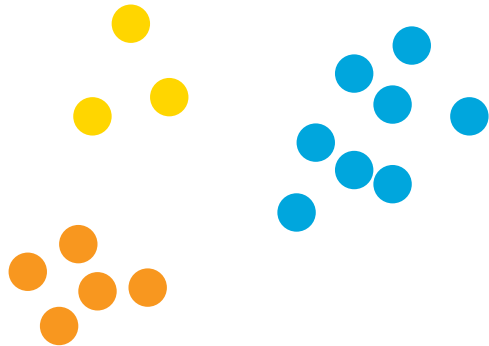
Fees

What are the impacts to revenue generation and fairness of a vehicle mile travelled fee?

Fees: Methodology

1. Data Collection

Socioeconomics | Mobility | Health



2. Cluster Analysis

Which groups are using the roadways?

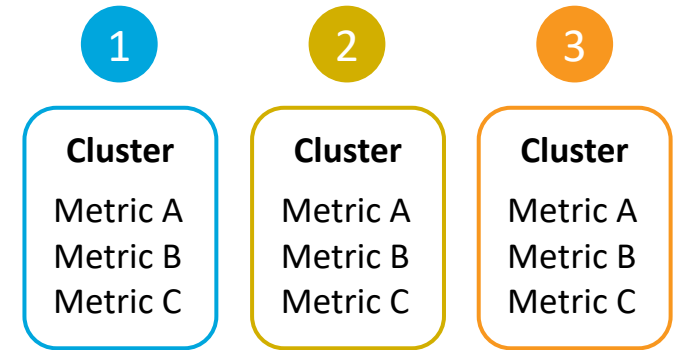
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3. Gas Tax and VMT Fee Development

How does the revenue generation change with a VMT fee?

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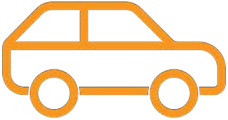


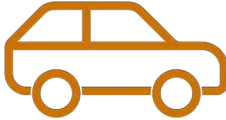



4. Equity Consideration

Who is impacted the most from a change in tax structure?

Fees: Results

Five Clusters

	 Local Commuters (w/ children)	 Short Trippers (long activities)	 Short Trippers (quick errands)	 Local Commuters (w/o children)	 Long Distance Trekkers
Person Trips	2	4	7	2	2
Activity Duration	573	238	54	254	420
Trip Distance	9.1	6.3	4.2	9.1	212.35
Trips by Car	79%	84%	84%	88%	94%
Trips by School Bus	10%	4%	1%	3%	0%

Fees: Results

	Cluster					
	1 (n=8236)	2 (n=7428)	3 (n=16862)	4 (n=4129)	5 (n=151)	All (n=36806)
Gas Tax	53.047	68.022	94.786	51.243	1392.536	75.508
VMT Fee	54.358	71.269	99.437	51.556	1398.860	78.657
Revenue Difference	\$ (1.310)	\$ (3.247)	\$ (4.651)	\$ (0.314)	\$ (6.325)	\$ (3.149)
Percent Difference	-2.4	-4.7	-4.8	-0.6	-0.5	-4.1



FAIR

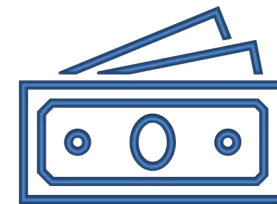
Fair



Race



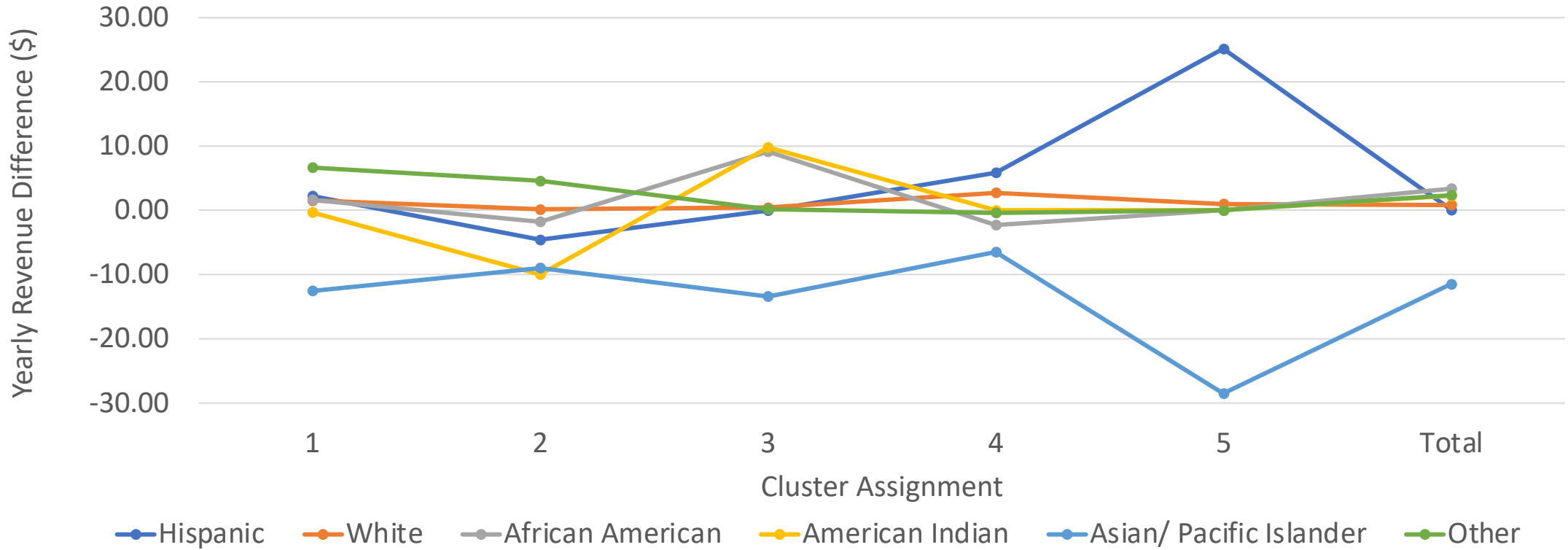
Survey Region



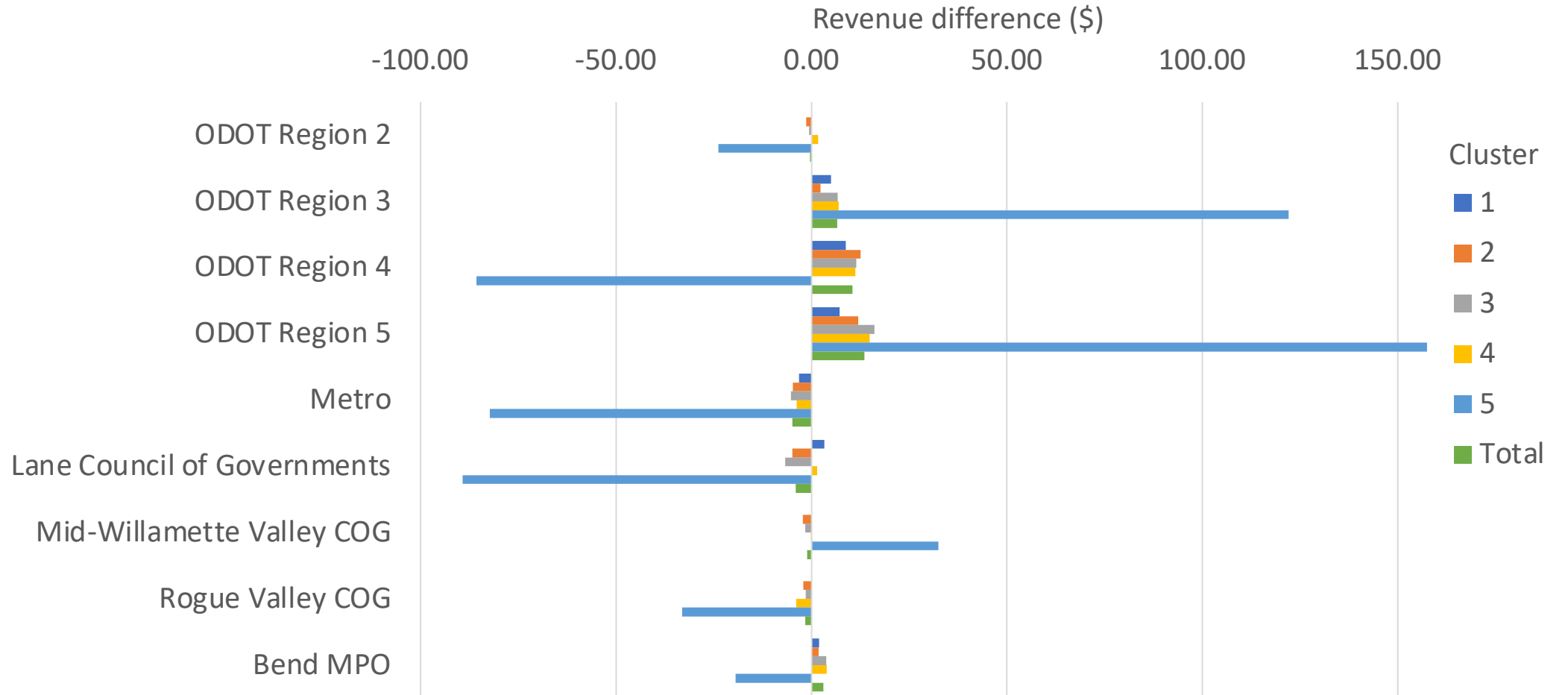
Income

Fair

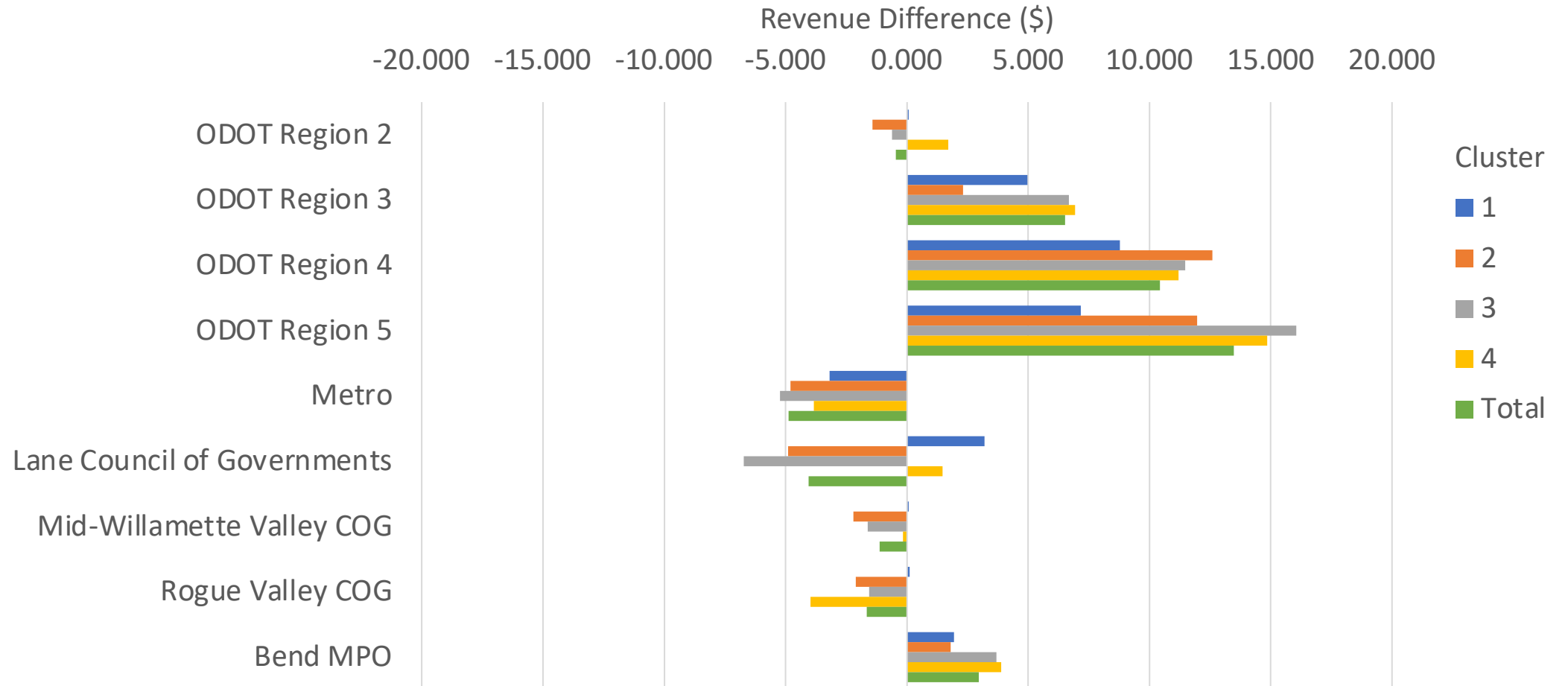
Equity Analysis: Breakdown by Race



Fair

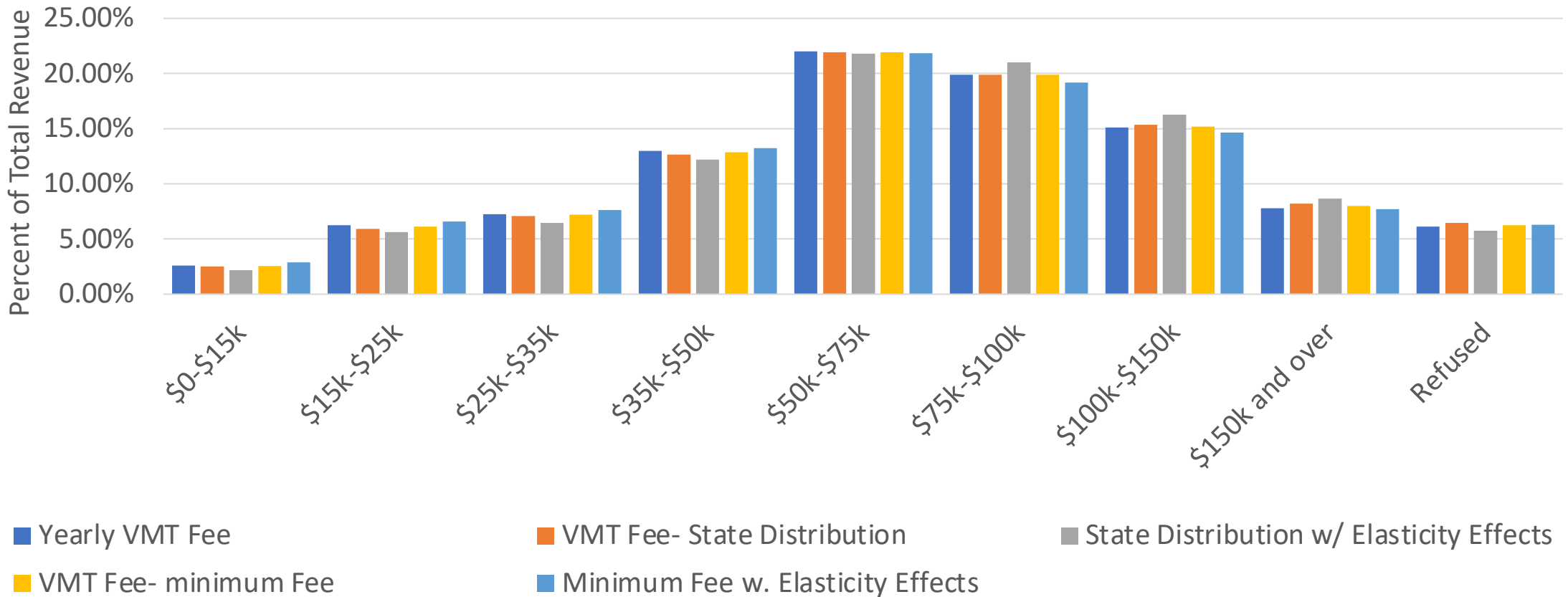


Fair



Fair

Equity Analysis: Breakdown by Income



Conclusions

- **Minimal changes to revenue generation from Gas tax to VMT fee**
- **Revenue distribution should be considered**
- **Policy Goals and Fee Structures should work in cooperation**

Thank You!

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Questions?