

A stylized graphic of a road with a dashed yellow center line and solid blue outer lines, curving upwards and to the right against a light green background.

# WASHINGTON STATE ROAD USAGE CHARGE

Equity Spotlight Briefing | May 27, 2021



**Washington State  
Transportation Commission**

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# Equity Analysis

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“Identify and measure potential disparate impacts of a road usage charge on designated populations, including communities of color, low-income households, vulnerable populations, and displaced communities.”

# Overview

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- **Specific analysis within broader conversation about transportation equity.**
- Key question:
  - **Would households in different income brackets pay more or less under a potential road usage charge, compared with the gas tax?**

# Broader Transportation Equity Questions

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- **Broader discussion around transportation equity includes questions such as:**
  - How much of transportation funding is paid by whom?
  - Where and on what are transportation revenues invested?
  - How do the locations, modes, and types of transportation investments correspond to who and where revenues are collected from?
- **These are beyond the scope of this current analysis.**

# Definitions and assumptions

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# Definitions: What is equity?

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Some dimensions of equity in relation to taxation and transportation:

- **Horizontal equity:** everyone is taxed the same for the same usage
- **Vertical equity:** considers ability to pay and relative burden
- **Vehicle weight equity:** considers impacts of different vehicles
- **Geographic equity:** considers impacts on urban and rural areas
- **Cross-generational equity:** considers impacts on future generations
- **Systems equity/operational equity:** ability to interact with/comply with system
- **Process equity:** ability to participate in/shape policy

# Assumptions and data

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- Focus on equity implications of transitioning from current road funding mechanism to a potential RUC.
- Assume RUC rate would be “**revenue-neutral**”: equivalent to what a driver of an average fuel efficiency light duty vehicle in Washington currently pays  
 $(49.4 \text{ cents per gallon}) / (20.5 \text{ MPG}) = 2.4 \text{ cents per mile}$
- Assume vehicle owners paying a RUC would no longer pay the gas tax.

# Assumptions and data

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- **Federal Highway Administration**
  - 2017 National Household Travel Survey (NHTS)
  - Highway Performance Monitoring System
  - Highway Statistics Series
- **US Census Bureau American Community Survey**



# Findings: Who is low income?

# Definitions: Who is low income?

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- In Washington State, there is **no comprehensive measure** to define whether an individual or household is “low-income.”
- Commonly used measures include the **Federal Poverty Guidelines** (FPL) and **HUD Income Limits**.
- Other measures include proxies for Washington State **Minimum Wage** and United Way’s **ALICE measure**.
- Measures may consider household size, geography, or both.

# Low-income threshold summary

Household Size	135% FPL	300% FPL	HUD Low-Income (80% of MFI)	ALICE	225% FPL (equivalent to Minimum Wage for 1 person)
1 Person	\$17,388	\$38,640	\$51,300	\$22,524	\$28,980
2 Person	\$23,517	\$52,260	\$58,600	\$33,828 - \$42,254	\$39,195
3 Person	\$29,646	\$65,880	\$65,950	\$45,132 - \$61,984	\$49,410
4 Person	\$35,775	\$79,500	\$73,300	\$56,436 - \$81,714	\$59,625
5 Person	\$41,904	\$93,120	\$79,150	\$67,740 - \$101,444	\$69,840
6 Person	\$48,033	\$106,740	\$85,000	\$79,044 - \$121,174	\$80,055
7 Person	\$54,162	\$120,360	\$90,850	\$90,348 - \$140,904	\$90,270
8 Person	\$60,291	\$133,980	\$96,750	\$101,652 - \$160,634	\$100,485

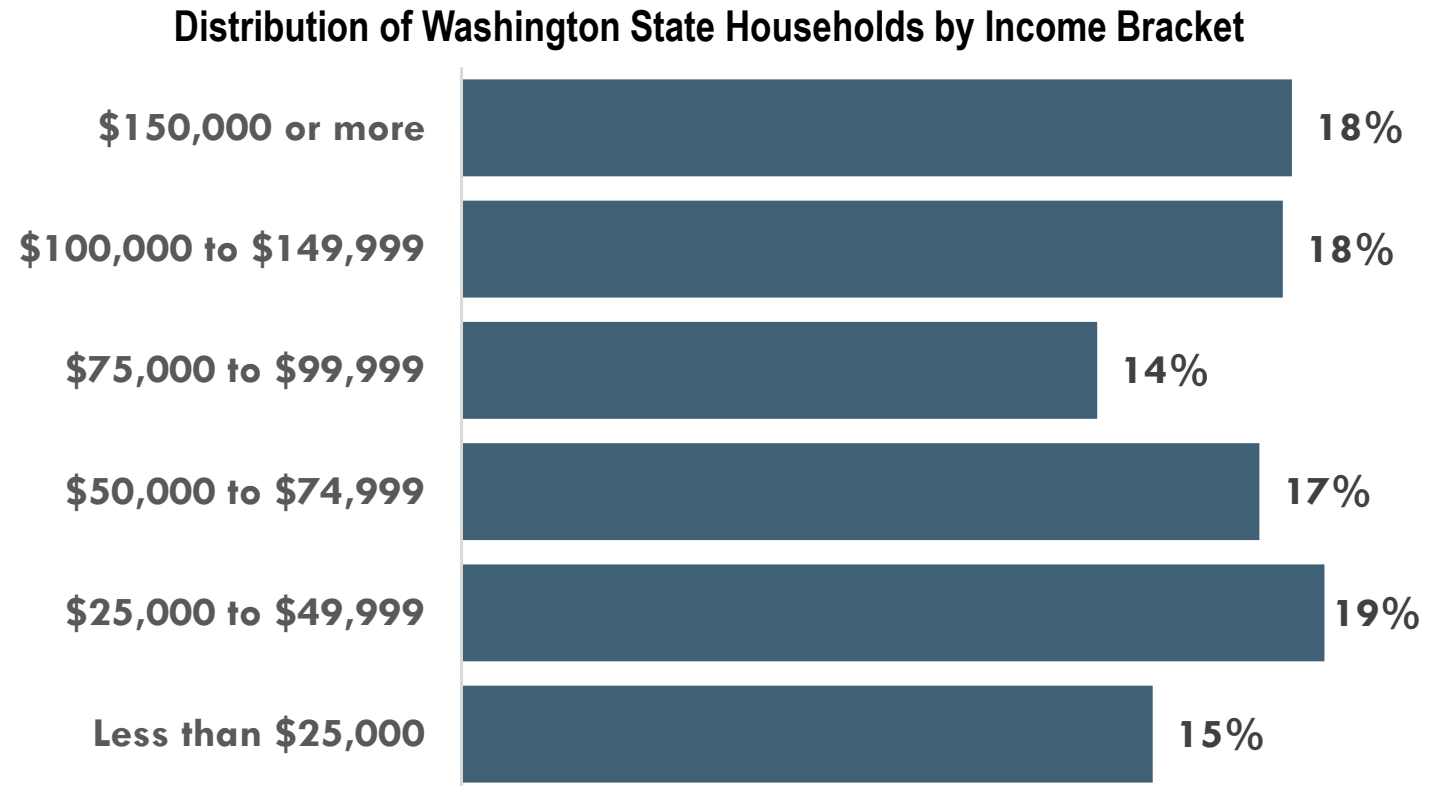
Note: HUD and ALICE thresholds are based on Washington State level thresholds

Sources: HHS; 2021; HUD, 2021; United Ways of the Pacific Northwest, 2020; BERK, 2021.

# How many people fall into each income bracket?

**15% of Washington households have incomes under \$25,000.**

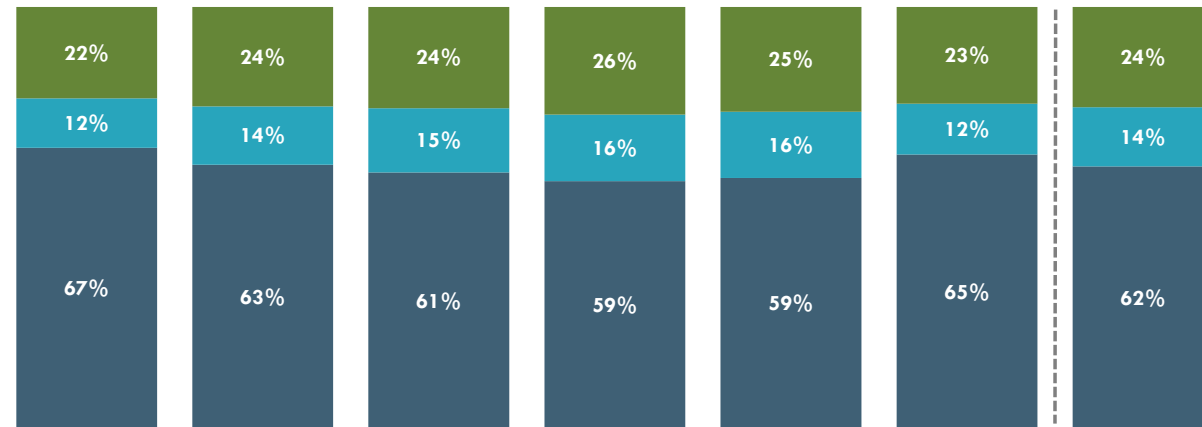
**34% of households have incomes under \$50,000.**



*Source: American Community Survey 5-Year Estimates, 2019; BERK, 2021.*

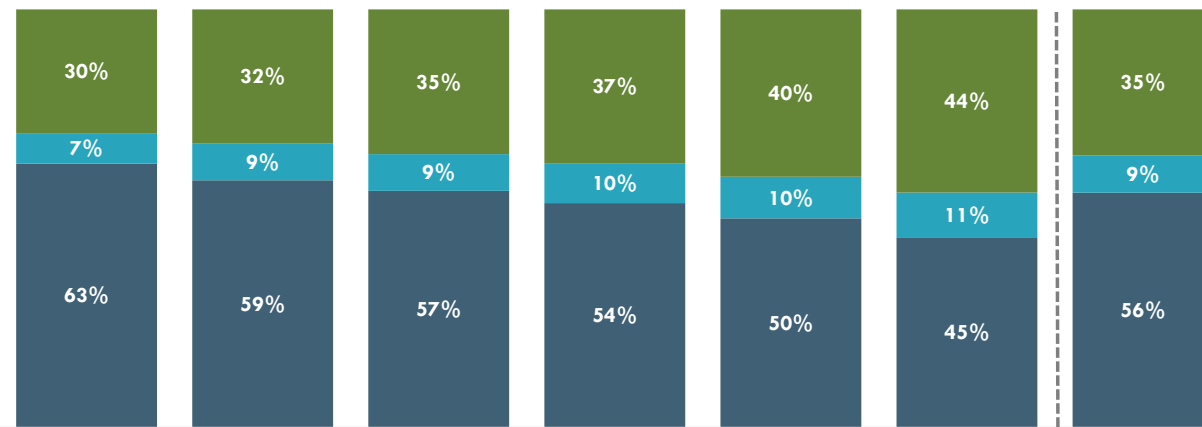
# Income distributions in Washington

Households by Income Bracket and Geographic Category: West



**In Western Washington, urban and rural households are evenly distributed across income brackets.**

Households by Income Bracket and Geographic Category: East



**In Eastern Washington, there are larger shares of rural households among higher incomes groups.**

**Note: costs of living across different areas may differ.**

Less than \$25,000 \$25,000 to \$49,999 \$50,000-\$74,999 \$75,000-\$99,999 \$100,000-\$149,999 \$150,000 or more All Income Brackets

■ Urban Incorporated ■ UGA ■ Rural

Source: American Community Survey 5-Year Estimates, 2019; BERK, 2021.

# How do incomes correspond with race and ethnicity?

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- **Distribution across income groups varies by race and ethnicity.**
- **Evenly distributed across income spectrum:** White households, multiracial households.
- **Overrepresented among lower income groups:** Black households, American Indian and Alaska Native (AIAN) households.
- **Underrepresented among lower income groups:** Asian American households.
- **Bell curve distribution:** Hispanic/Latino households, households of another race.

# Findings: Costs paid under gas tax vs. RUC

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# Would households in different income brackets pay more or less under a potential RUC, compared with the gas tax?

There is no statistically significant difference in costs paid under gas tax vs. RUC within each income group.

Estimated Average Gas Tax vs. RUC Paid by Income Bracket, Washington Households



Sources: Federal Highway Administration National Household Travel Survey, 2017; BERK, 2021.



# Vehicle fuel efficiency

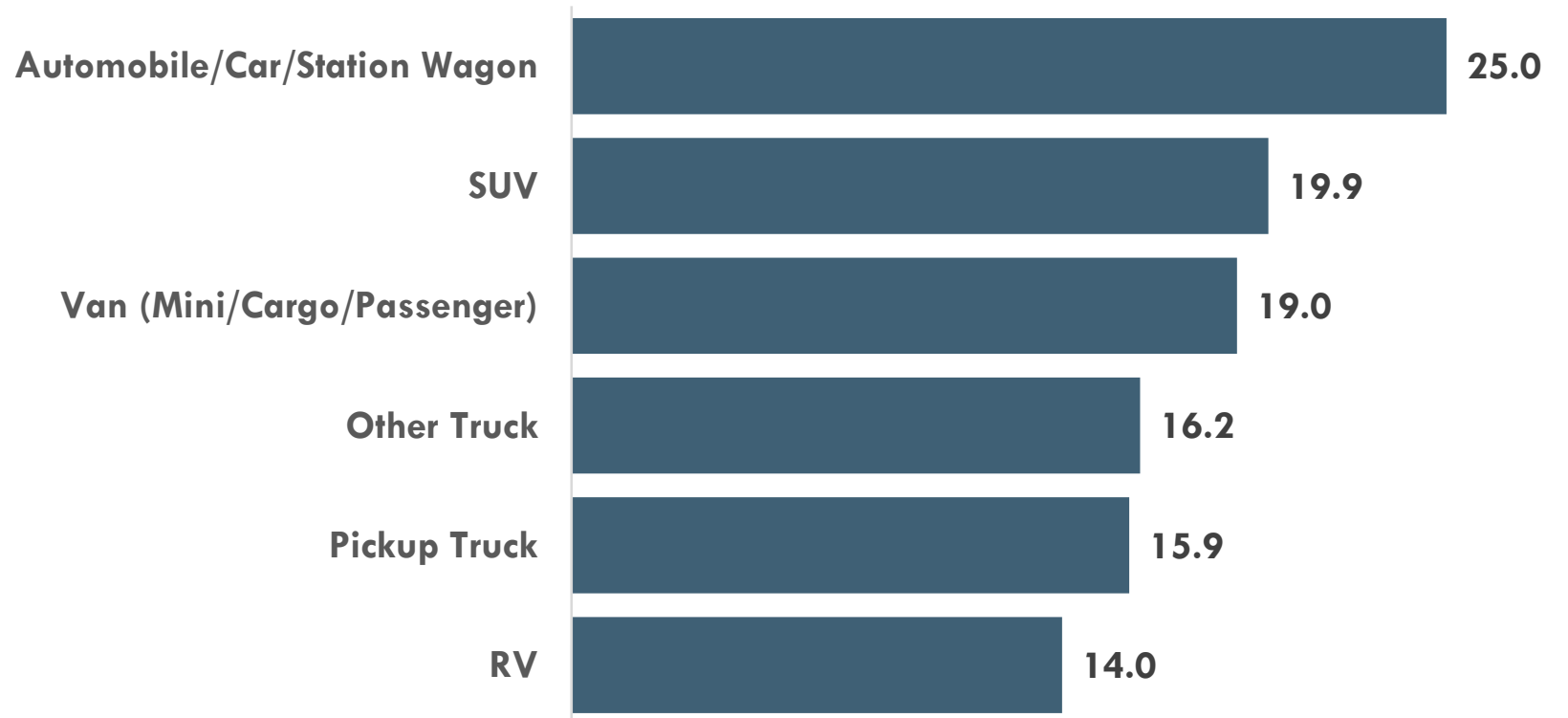
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# What types of vehicles have lower fuel economy?

**Automobiles, cars, and station wagons have an average fuel economy of 25.0 MPG.**

**SUVs have an average fuel economy of 19.9 MPG.**

Average Fuel Economy by Vehicle Category, 2017, US

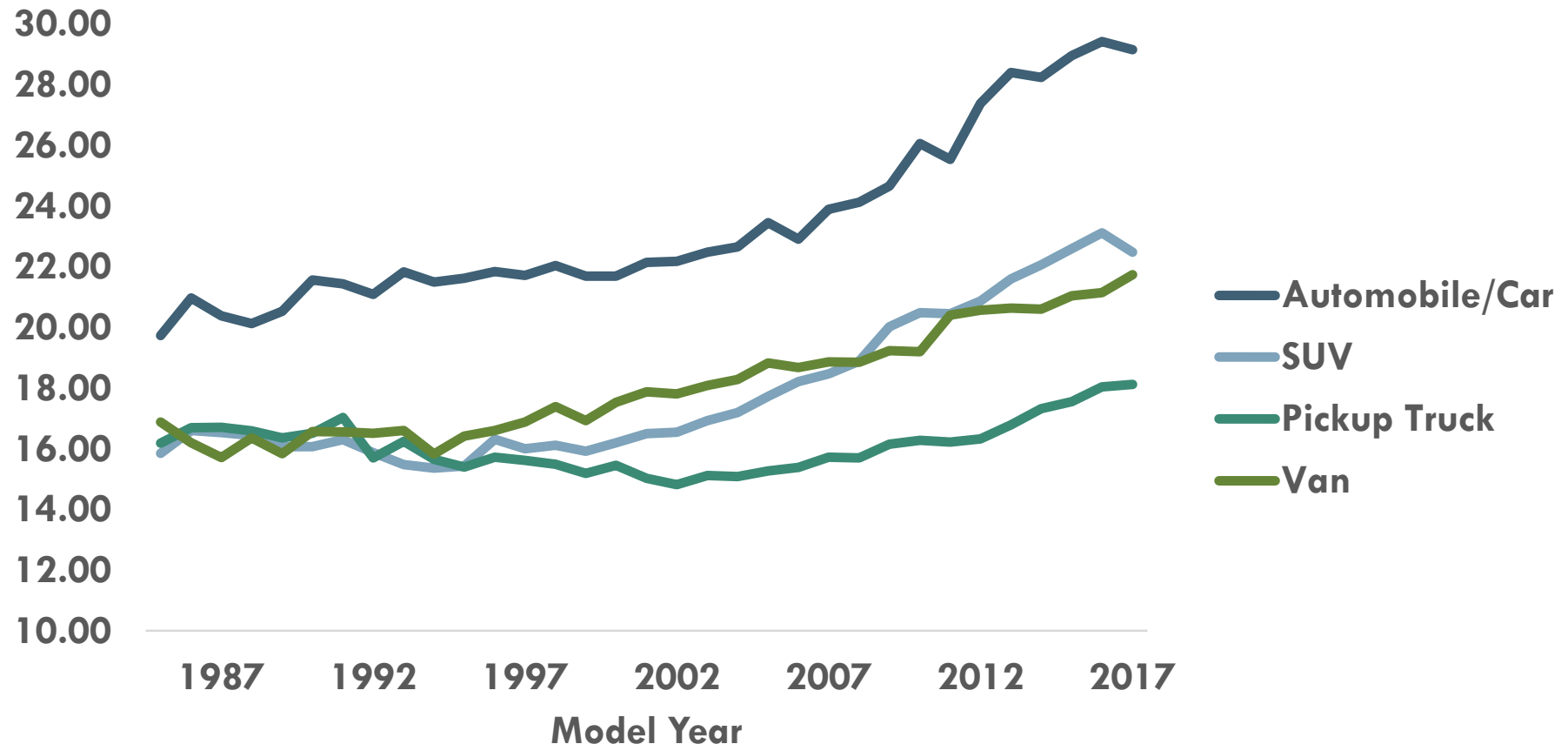


Sources: Federal Highway Administration National Household Travel Survey, 2017; BERK, 2021.

# How does fuel economy vary by vehicle age?

Newer automobiles/cars, SUVs, pickup trucks, and vans tend to be more fuel efficient than older vehicles.

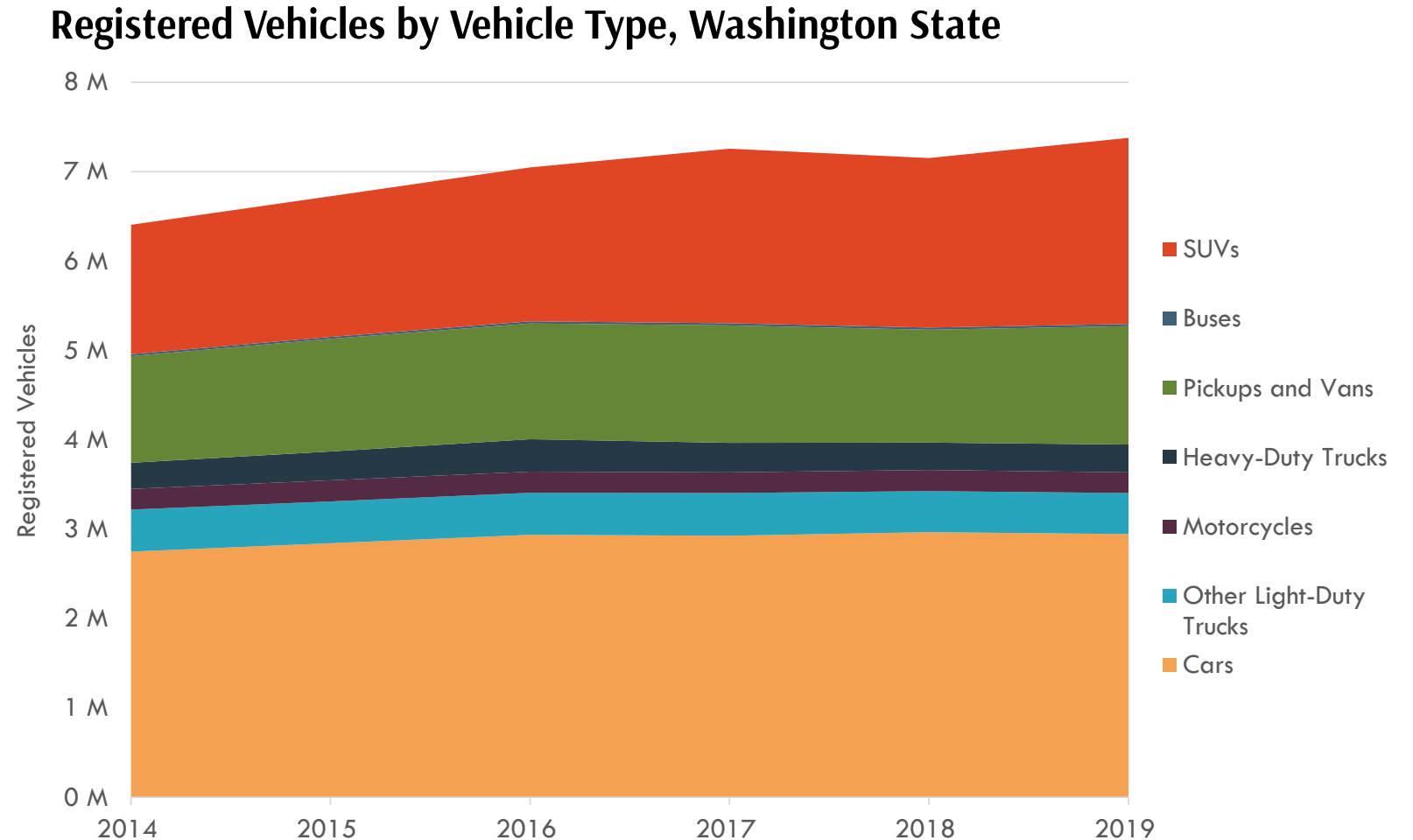
Average Vehicle Fuel Efficiency by Vehicle Model Year, US



Sources: Federal Highway Administration National Household Travel Survey, 2017; BERK, 2021.

# What are the trends in Washington vehicles?

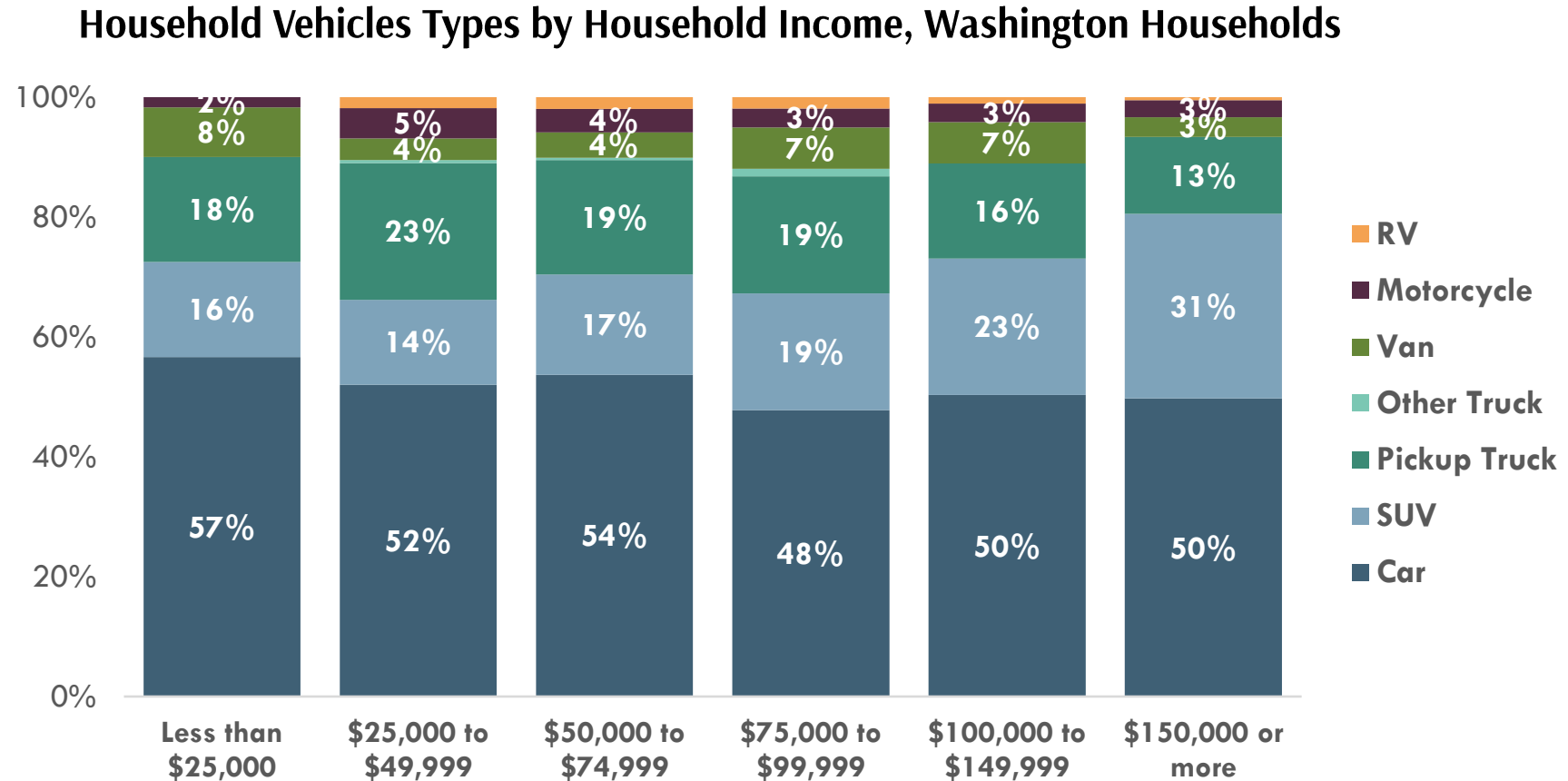
**SUVs have seen the largest growth by vehicle type between 2014 to 2019, while growth in car registrations has remained relatively stable**



Sources: FHWA Highway Statistics, 2019; BERK, 2021.

# How do household vehicles vary based on income?

Lower income Washington respondent households own a higher proportion of cars and pickup trucks and a lower proportion of SUVs relative to higher income households.

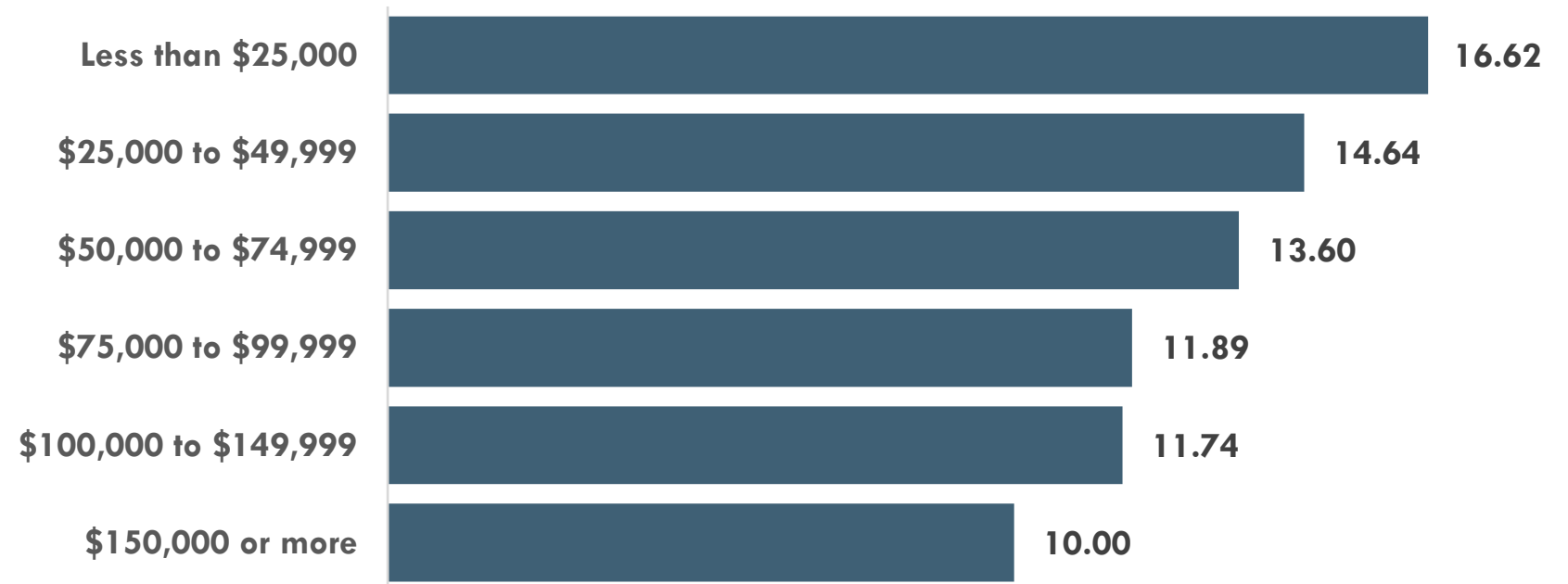


Sources: Federal Highway Administration National Household Travel Survey, 2017; BERK, 2021.

# How does vehicle age vary by household income?

**On average, lower income Washington respondent households tend to drive older vehicles than higher income respondent households.**

**Average Age of Personal Vehicle by Household Income, Vehicles in Washington Households**



Sources: Federal Highway Administration National Household Travel Survey, 2017; BERK, 2021.

# How does vehicle fuel efficiency vary by household income?

Among Washington respondent households, there is no clear trend between household incomes and household vehicle fuel efficiency.

Average Fuel Efficiency of All Household Personal Vehicles by Household Income, Washington Households



Sources: Federal Highway Administration National Household Travel Survey, 2017; BERK, 2021.

# Vehicle miles traveled

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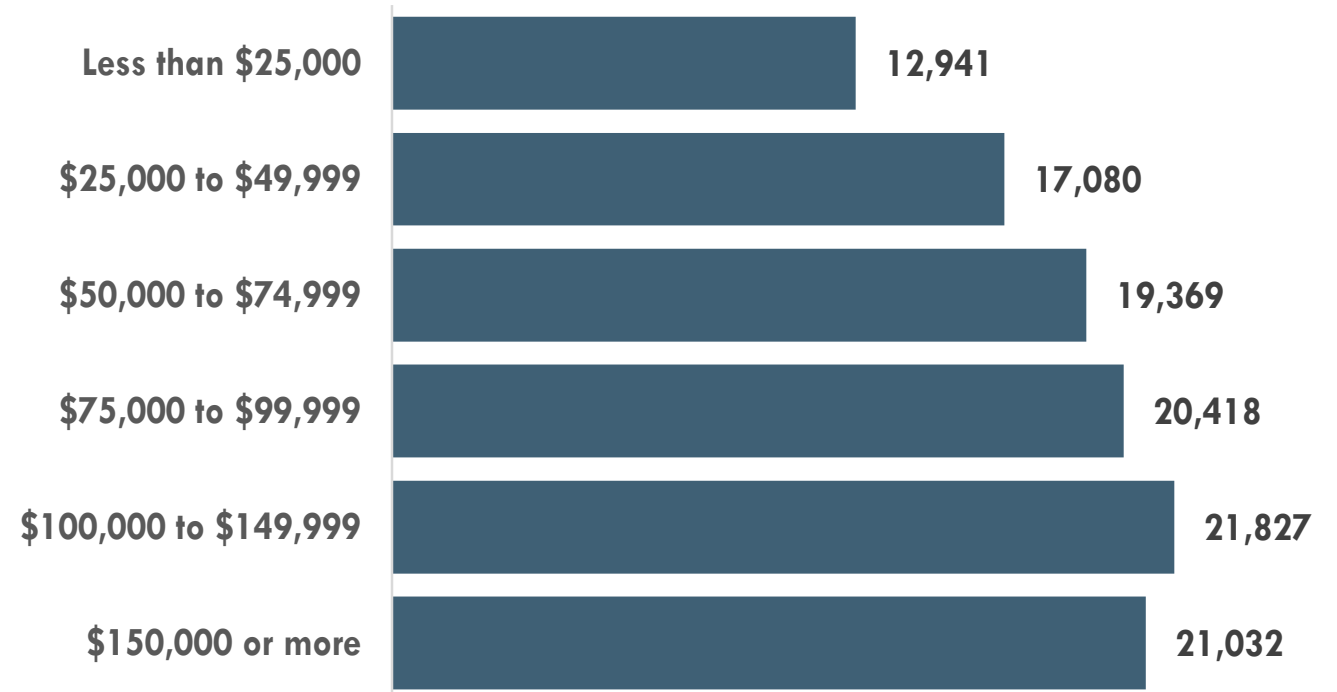
# How many miles do Washington drivers and households tend to drive per year?

Washington drivers are **driving fewer miles** than US drivers in general.

Higher income households **tend to drive more miles** than lower income households.

Lower income households **tend to own fewer vehicles**.

Average Vehicle Miles Traveled by Income, Washington State Households



Sources: Federal Highway Administration National Household Travel Survey, 2017; BERK, 2021.

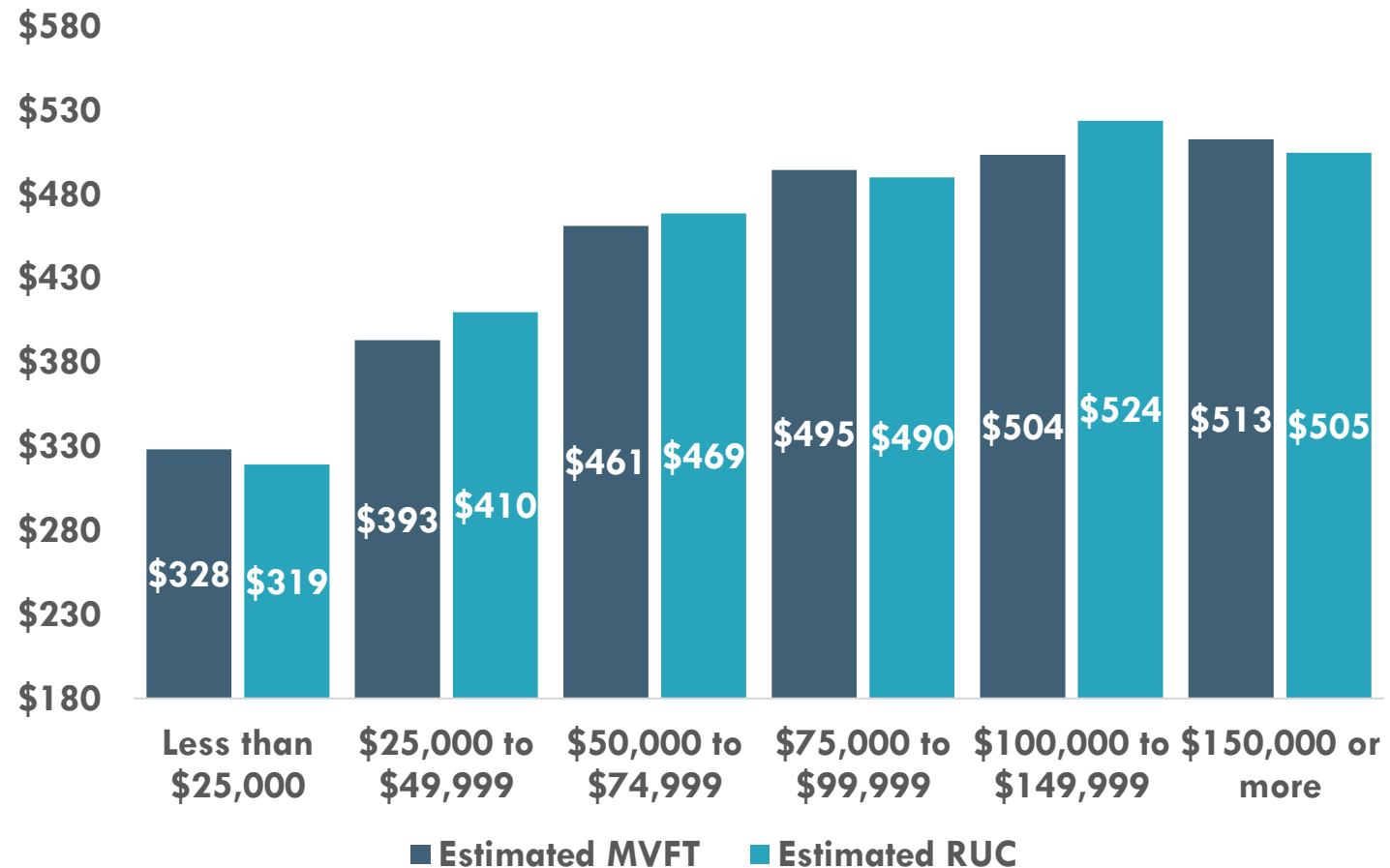
# Will lower income households pay more under a RUC compared with a gas tax?

There is no statistically significant difference in costs paid under the gas tax vs. RUC within each income group.

*Why?*

VMT has a stronger influence than fuel efficiency on gas tax costs.

Estimated Average Gas Tax vs. RUC Paid by Income Bracket, Washington Households

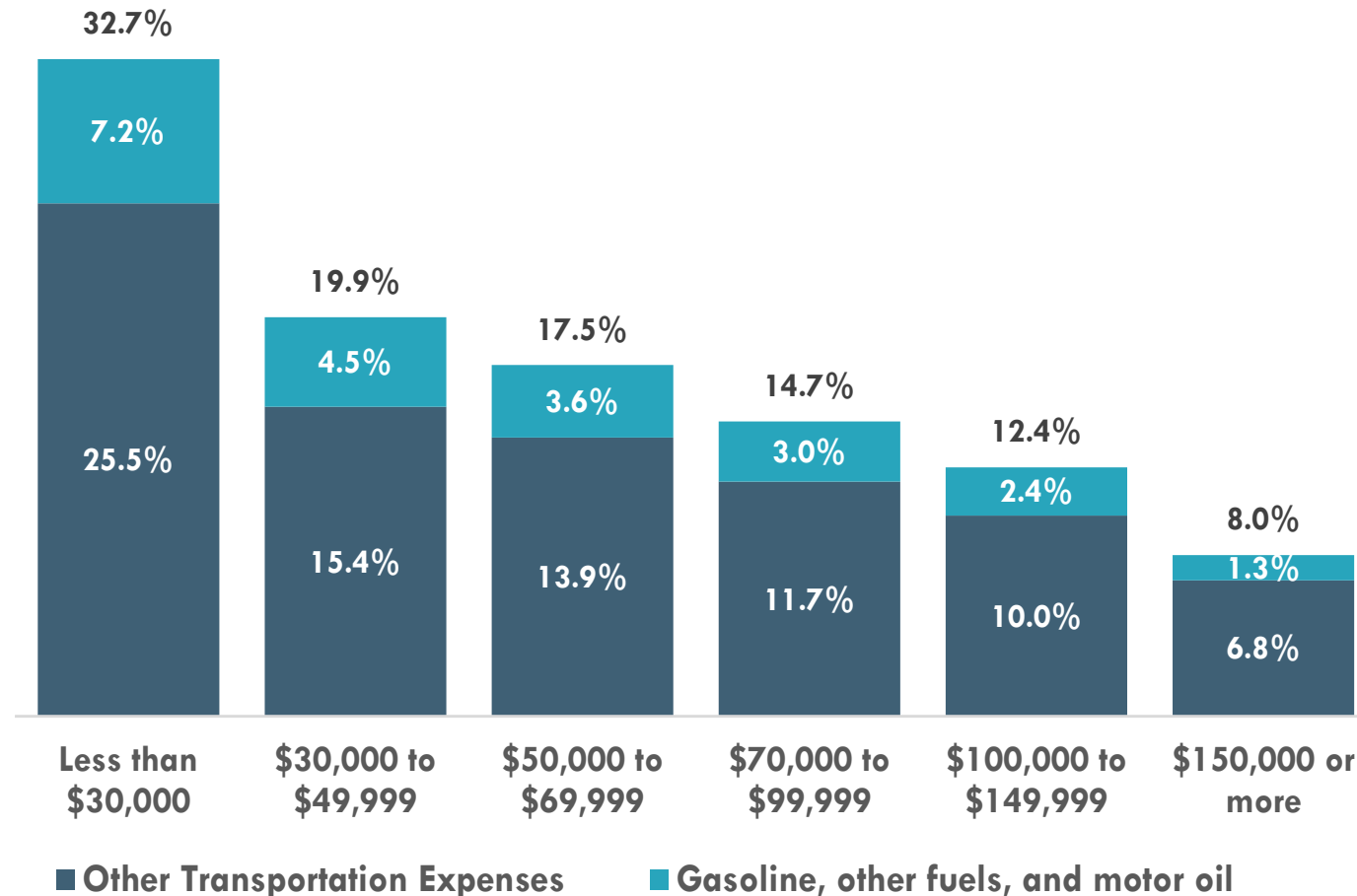


Sources: Federal Highway Administration National Household Travel Survey, 2017; BERK, 2021.

# What percentage of household income is spent on transportation costs?

This analysis is part of a broader conversation about transportation equity.

Percentage of Household Income Spent on Transportation by Income, 2019, US Households



Sources: Bureau of Labor Statistics Consumer Expenditure Survey, 2019; BERK, 2021.

# Equity Outreach

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# RUC Equity Analysis

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**Mandate:** “Identify and measure potential disparate impacts of RUC to communities of color, low-income households, displaced communities and vulnerable populations through targeted outreach and engagement.”

**Method:** Series of focus groups, surveys and one-on-one interviews using a pre-determined set of questions.

# Interested Groups (as of May 12)

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- El Centro De La Raza
- Kent Black Action Commission
- Refugee Women's Alliance
- One America
- Disability Rights WA
- CIRCC (Coalition of Immigrants & Refugees & Communities of Color)
- The Filipino Chamber of the Northwest

# Reactions to Date from Organizations

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- “What do I currently pay for the roads?”
- “How and when will the road usage charge change?”
- “Why conduct focus groups now when here is no known timeline to change how roads are funded?”
- “How will you make it fair for those who can’t work from home?”
- “We travel further for everything in Eastern Washington.”
- “Will my opinion matter?”
- “The usage road charge might hurt small, minority businesses.”

Some people expressed confusion and surprise that they are being asked their opinion and inputs

# Criteria for Equity Analysis

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- Ethnic balance
- Geographic balance (statewide, including urban and rural areas)
- Include persons with disabilities
- Include refugee and immigrant populations
- Include professional driver communities
- Focus groups from 8 to 12 individuals



# Informational Meetings

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- Some groups are asking for meetings to explain why we are requesting they be engaged in this effort
- So far, we have conducted 3 informational meetings and are anticipating more including:
  - Bremerton NAACP
  - Coalition of Immigrants Refugees and Communities of Color (CIRCC)
  - India Association of Western Washington
  - Sikh Centre of Seattle
  - CIRCC Coronavirus Action Committee

# Statewide Outreach Efforts

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Organizations in the following portions of the state have been contacted initially and we will follow-up:

- Tribes (26)
- Several statewide groups
- Bellevue
- Bothell
- Bremerton
- Kent
- Skagit County
- Snohomish County
- Spokane
- Tacoma
- Tri-Cities
- Vancouver
- Wenatchee
- Yakima



# Discussion

- Any specific questions you think we should explore in outreach?
- Any recommendations related to outreach?
- What's on your mind with respect to equity and a transition from a gas tax to a road usage charge?
- What questions or thoughts do you have?



# Upcoming Spotlight Sessions

- June 1, 10:00 am - Innovation
- June 4, 1:30 pm - Cost Reduction

# Appendix

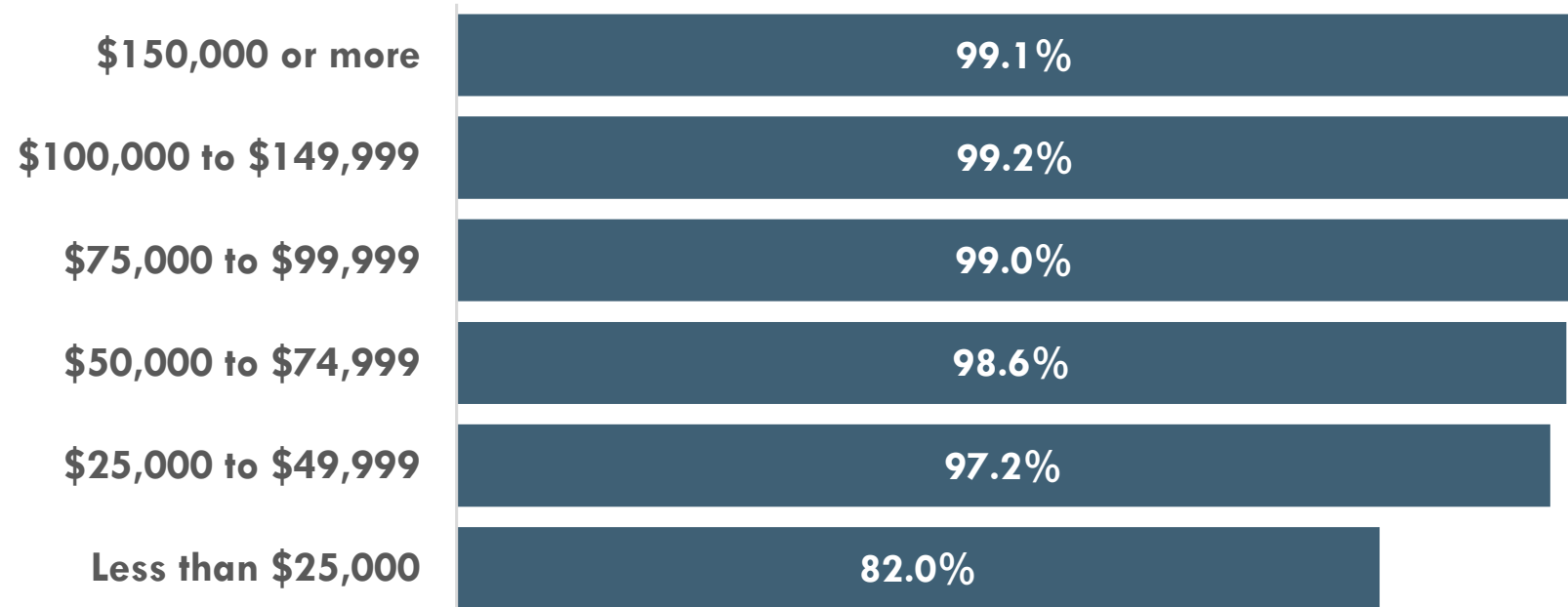
# Who owns a vehicle? How does vehicle ownership correspond with income levels?

~ 99% of households with incomes of \$50,000 and above own a vehicle.

~ 97% of households with incomes \$25,000 - \$49,999 have own a vehicle.

EVs are disproportionately purchased and owned by high income customers.

Percentage of Vehicle Ownership by Income, 2017, US Households



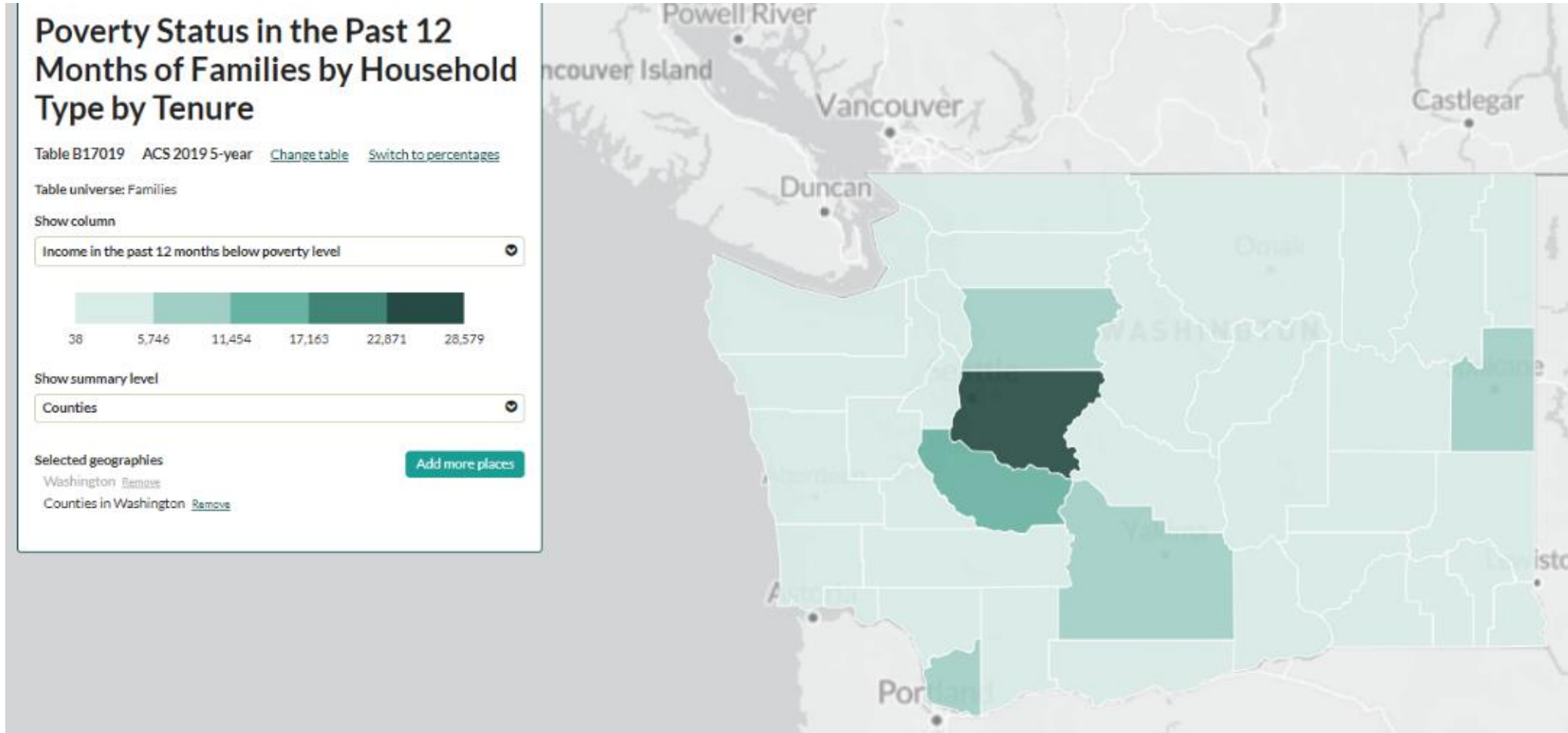
Sources: Federal Highway Administration National Household Travel Survey, 2017; BERK, 2021.

# Statistical analysis

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- We conducted paired, two-sample t-tests (two-tailed) of annual household gas tax costs vs. RUC costs within each of the six income groups.
- For both the Washington State and US samples, **none of the differences in RUC vs. gas tax costs were statistically significant** (at the 0.05 level) for any of the income groups.
- We also conducted regression analyses to evaluate the impact of VMT vs. fuel efficiency on gas tax costs.
  - 86% (Washington State sample) to 88% (US sample) of the variation in gas tax costs is driven by the variation in VMT.
  - Just 3% (both Washington and US samples) of the variation in gas tax costs is driven by the variation in vehicle fuel efficiency.

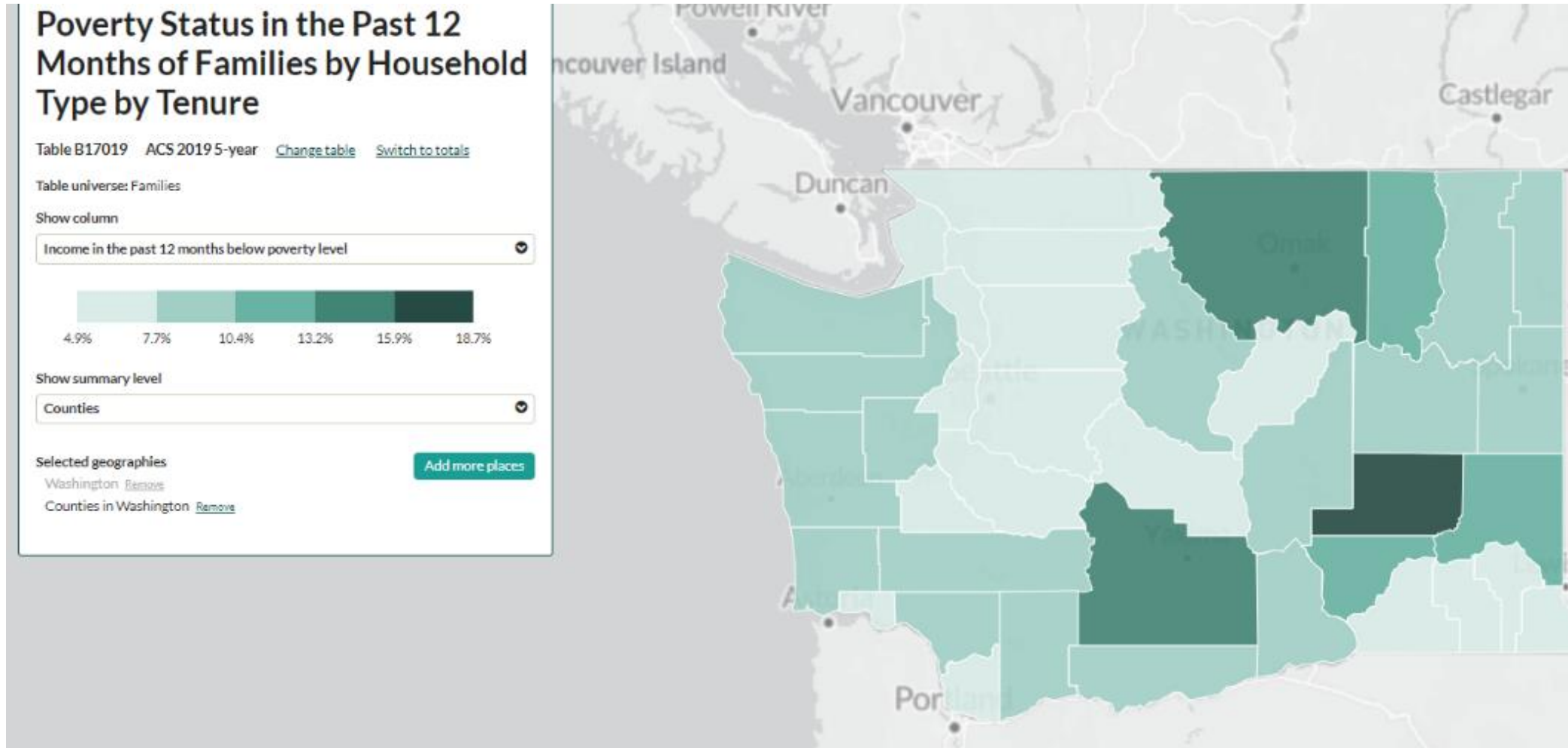
# Poverty Status in Washington (as total number)



Sources: Census Reporter; US Census, 2021.



# Poverty Status in Washington (as percentage)



Sources: Census Reporter; US Census, 2021.