

WSTC Public Outreach Program

RDD Telephone Survey

Voice Of Washington State (VOWS)

Panel Assessment

Conducted by:

Research Assurance and Abt SRBI

Presentation to:

Washington State Transportation Commission

January 2017



BACKGROUND AND INTRODUCTION

- **The Overall Purpose Of The VOWS Program:** To provide the Commission, Governor and State Legislature with an understanding of Washington State citizen's attitudes and opinions on transportation policy & funding issues, investment priorities, and funding alternatives.
- **Panel Started In 2010:** Currently 29,868 panel members with 26,654 having done 1 or more surveys. Done over 10 VOWS surveys with most having 7,000+ responses.
- **Conducted Two Probability Studies:** Address Base Sample of 5,518 in 2010 and RDD Phone Sample of 1,000 done in 2017.
- **VOWS Members Join the Panel Via:**
 - 50% Of The Random Address Based Sample Signed Up For The VOWS Panel
 - Emailed VOWS Invite To Registered & Active Washington State Voters & General Washington State Citizens
 - WSTC and WSDOT Website Links To VOWS Signup Page
 - Various Local Newspaper Articles With Links To VOWS Signup Page
 - "Recruit A Friend" Emails Sent By VOWS Members To Encourage Sign-up
- **Studies in 2017:** *Statewide Attitudes Towards Key Transportation Issue via RDD Phone and VOWS Panel.*

- **Who:** 7,327 VOWS Panelists and 1,000 Washington State adults conducted by random telephone calls (50% from cell phone lists and 50% from landline lists).
- **What:** Survey on transportation priorities, policies, and funding measures.
- **Where:** VOWS panel; telephone interviews conducted from Abt SRBI call center.
- **Why:** Give decision makers information on the strengths and weaknesses of both data collection methods and to determine VOWS panel bias and level of general population representation.
- **When:** The surveys were conducted from January 6 – 21, 2017
- **How:** VOWS panelists were invited to take the survey via an email indicating the survey's topical areas (Transportation); telephone respondents were told the survey was about "important policy issues."

There are hurdles with each approach to surveying:

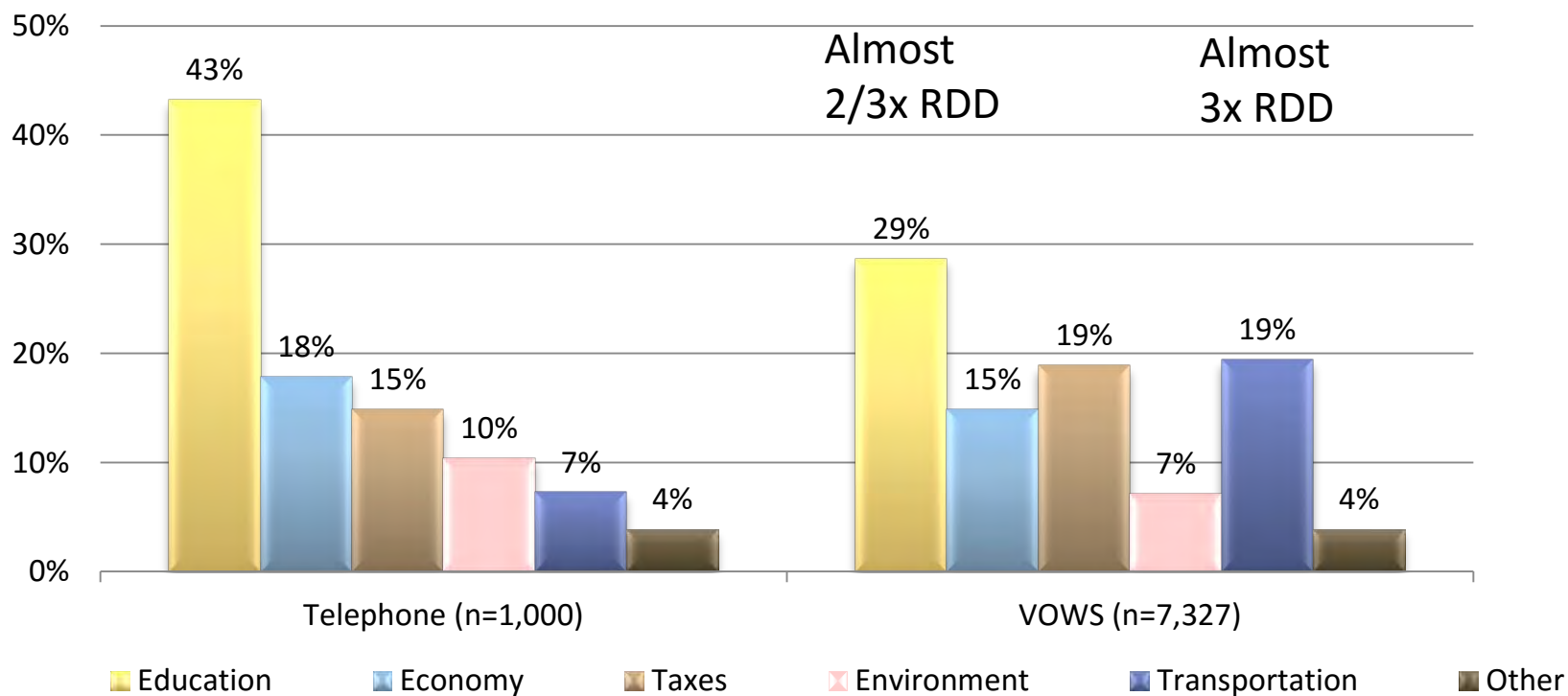
- Surveying by the mail can be expensive due to the need for (recommended) upfront incentives and high printing costs for multiple mailings;
- Surveying over the telephone can be challenging because many people use Caller ID and may not answer when they don't recognize the number;
- Web panels *usually* don't have random recruitment, and statistical procedures don't apply. There is no universe of email addresses to sample from, and people have multiple email addresses. In addition, sending out unwelcome emails can get you blocked as a spammer.
- For all survey methods, to make generalizations and projections from survey findings, survey respondents need to be representative of **all segments** of the broader population via random sampling.

- Some researchers have made an effort to overcome the lack of randomness in most web panels. Two are GFK/ Knowledge Networks and the Pew Research Center. (Disclosure: Pew is a client of Abt SRBI; Abt SRBI developed their panel and maintains its.)
- Each used tried-and-true probabilistic sampling to recruit for the panel. Probabilistic sampling allows the researchers to calculate margins of errors and make inferences about the broader population.
 - Knowledge Networks used multiple methods to contact its recruits, and sent those without internet access, web consoles for use on their television.
 - The Pew American Trends panel was an off-shoot from a preexisting research survey, and uses telephone to survey those who cannot participate online.
 - These efforts require a significant investment to carry out.

METHODOLOGICAL FINDINGS

- Like most web panels, VOWS has **demographic skews** and it needs to be reweighted in order for its demographic profile to align with Washington State. The raw VOWS results typically have too few ...
 - Females
 - People under age 35
 - African Americans
 - Asian/Pacific Islander
 - Less educated / Low income
- There may also be behavioral and **attitudinal skews** towards transportation which are difficult to assess due to a lack of Census data – and thus impossible to weight, as the “ideal” is unknown. There could be other unknown skews as well.

Most Important Issue in Current Legislative Session



F2. Of just the following five areas, which of those do you feel is the most important issue facing the current legislature?

- Weighting has an impact on every type of survey's margin of error. The more that weighting is used to correct imbalances, the less precise are the estimates.
 - Over 7,000 VOWS panelists responded to the email invitation to participate in a survey on transportation (7,327 completed the survey). **IF** they were a random group and needed no weighting, it would have a margin of error of $\pm 1.1\%$.
 - But due to the need for weighting, if this were a randomly recruited sample, the 7,327 interviews would offer the same precision as a random sample of 637 with a margin of error of $\pm 3.9\%$.

- Many did not answer their phones when we reached out to them. In addition to the 1,000 completed interviews,
 - Calls to over 7,000 numbers never got past voicemail;
 - Calls to about 5,500 numbers were answered, but we were asked to call back (to no avail)
 - About 1,900 refused to speak to the interviewer;
 - About 270 began the interview and stopped midway.
- Programming the phones so a number with a “425” area code would be displayed helped some, but the problem persisted.
- This is not unusual for a telephone survey.

- The sample was designed to achieve minimum quotas in low population RTPOs – at the cost of undersampling PSRC. The weighting to correct for this factor alone reduced the sample’s 1,000 margin of error down to that of a 329 size sample.
- Further weighting was necessary to align with WA demographics. For example, as with VOWS, there aren’t enough 18-34, only 16% (vs. 31% in WA as seen in the census counts).
 - Weighting factors were age; gender; race/ethnicity; household size; education; landline/cellphone usage. (VOWS was weighted on the same factors.)
- After all weighting was finished, the 1,000 interviews had the same statistical precision as a sample of 146. Similar to VOWS, about half of the total weighted sample is accounted for by 6% of those interviewed.
- Instead of a margin of error of $\pm 3\%$ at the 95% confidence level, the telephone sample has a margin of error of $\pm 8.1\%$.

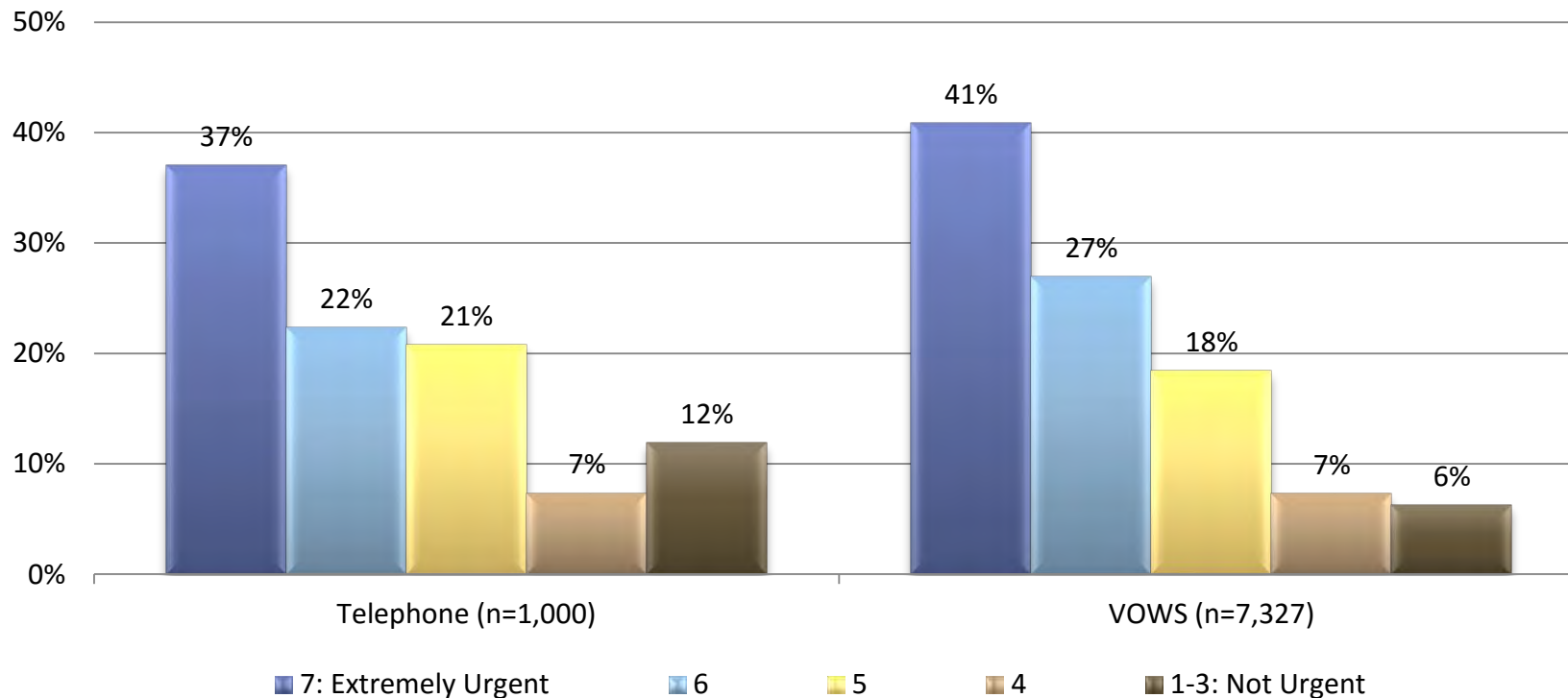
ADDITIONAL CONSIDERATIONS

- Online surveys let respondents participate at their convenience, rather than “normal telephone interviewing hours.”
 - People who work nights and weekends have an opportunity to participate – they can also interrupt a survey in progress and return when they wish.
- Questions can be more complex in an online survey than on the telephone.
 - Web surveys can show an entire list at once, rather than “layering” questions as we had to do on the telephone
 - Web displays also make it easier for questions such as those that ask respondents to apportion their trips across six transportation modes
- Descriptions can also be more complex on the web, and charts and visuals can be used.

- Geographically targeting cell phone sample is difficult due to mobility and associations with billing centers rather than residence zip code; consequently it needs careful management. Land line is less challenging.
- A telephone interviewer can play an important role in the process.
 - When respondents want to abandon a survey, an interviewer can encourage them to continue (“just a couple more minutes”) to some extent.
 - Answers to open-end questions can be richer on the telephone due to interviewer probing. Online, it takes effort for the respondent to type, and there is no probing.
- There is also the potential of interviewer mistakes. An example: some recorded “Whatcom” vs. “Wahkiakum” – we had to instruct them to ask the respondent to spell their county if it began with a “W.” (On the web it would be on a list for the respondent to click.)

SURVEY FINDINGS

Making Sure Transportation System Works Effectively

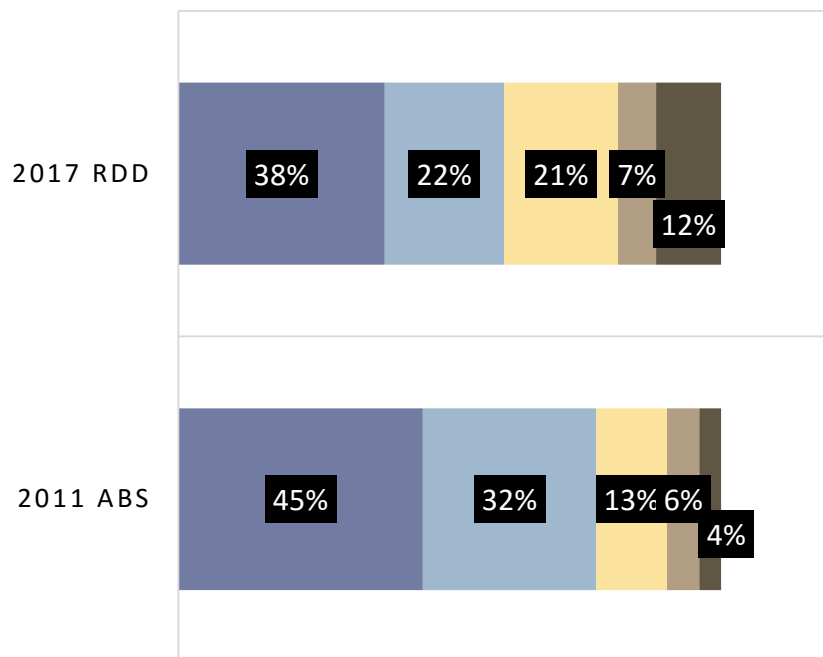


T1. How urgent do you feel it is to make sure Washington's transportation system WORKS EFFECTIVELY today and into the future?

Making Sure Transportation System Works Effectively

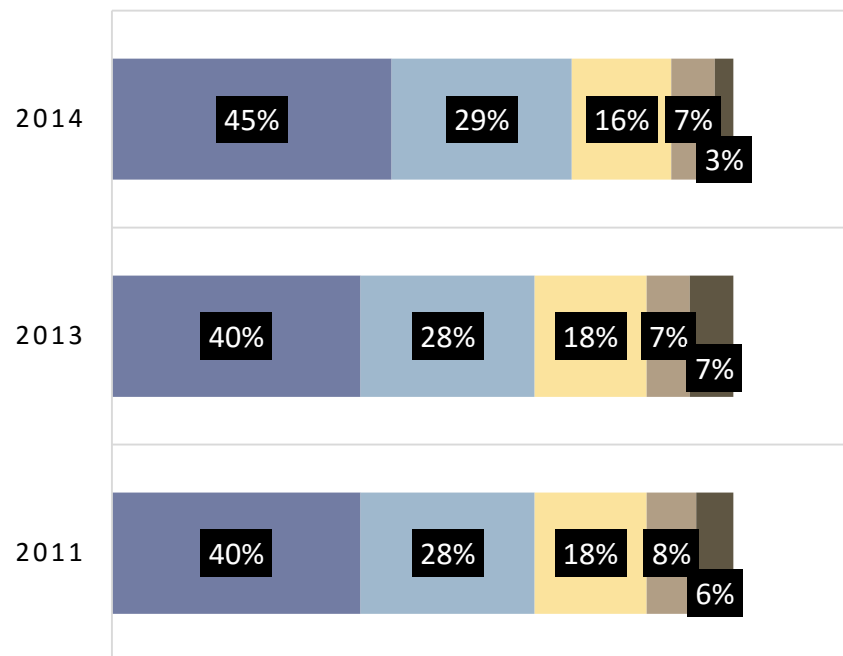
RANDOM STUDIES

■ 7:Ext Urgent ■ 6 ■ 5 ■ 4 ■ 3-1: Not Urgent



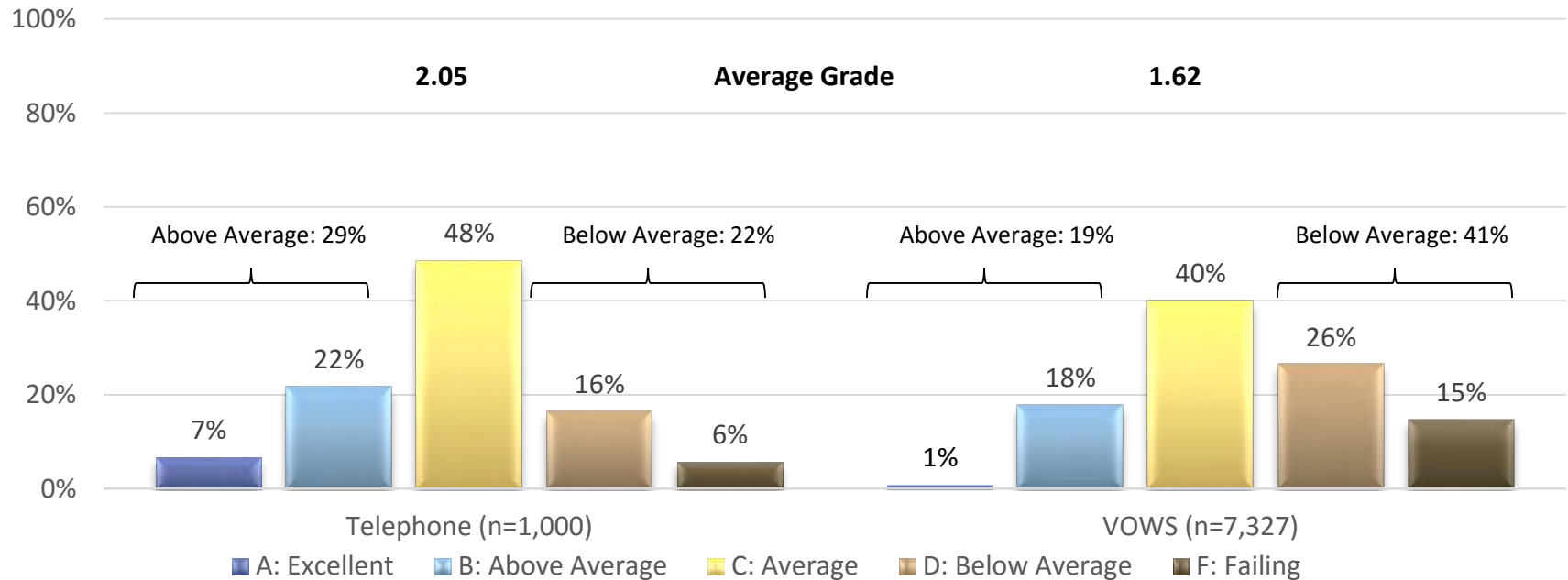
PANEL STUDIES

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T1. How urgent do you feel it is to make sure Washington's transportation system WORKS EFFECTIVELY today and into the future?

Overall Washington Transportation Grade

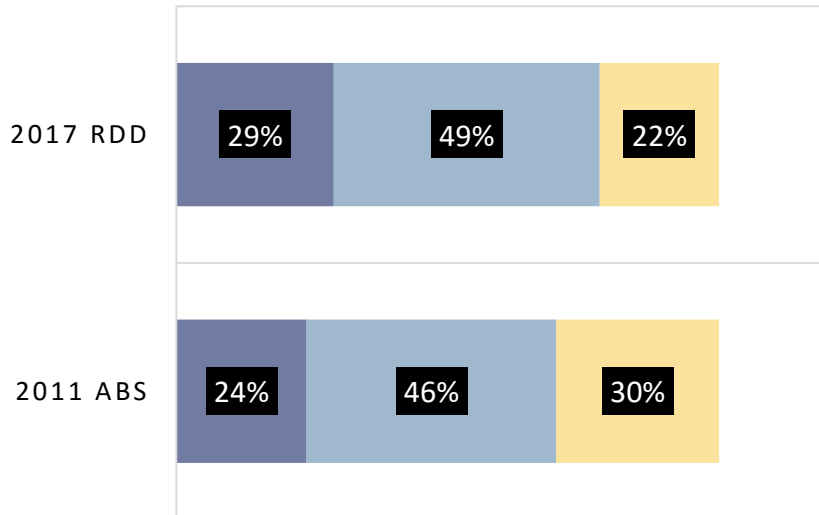


T2. Using a school grading scale where A equals Excellent, B equals Above Average, C equals Average, D equals Below Average and F equals Failing, how would you rate Washington's transportation system OVERALL on an A to F scale?

Overall Washington Transportation Grade

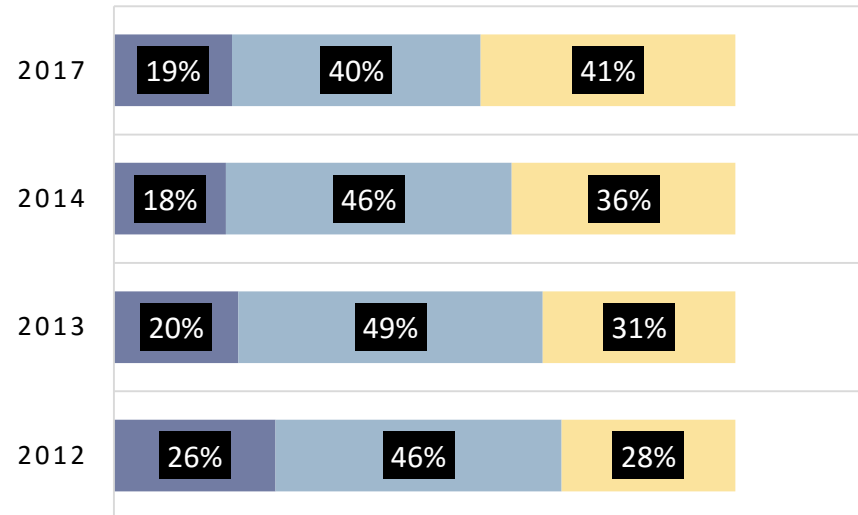
RANDOM STUDIES

■ Above ■ Average ■ Below



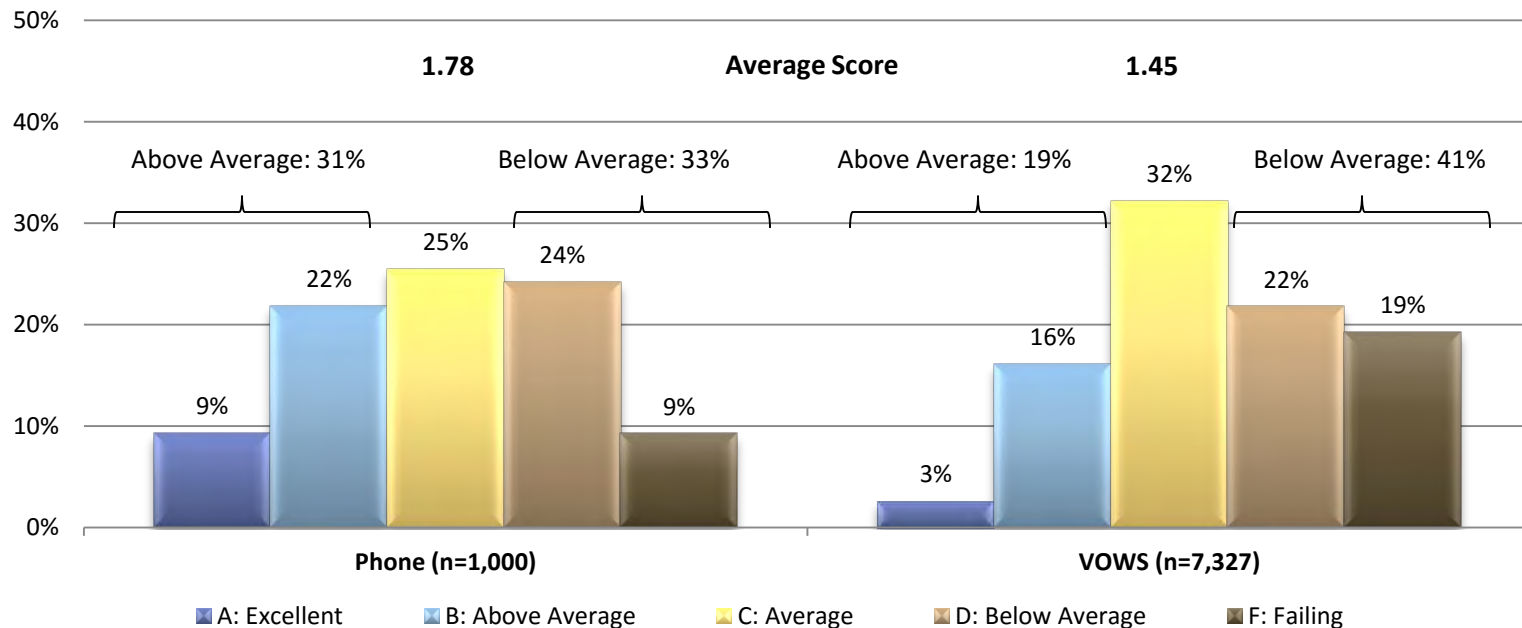
PANEL STUDIES

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T2. Using a school grading scale where A equals Excellent, B equals Above Average, C equals Average, D equals Below Average and F equals Failing, how would you rate Washington's transportation system OVERALL on an A to F scale?

Fair Share of Funding

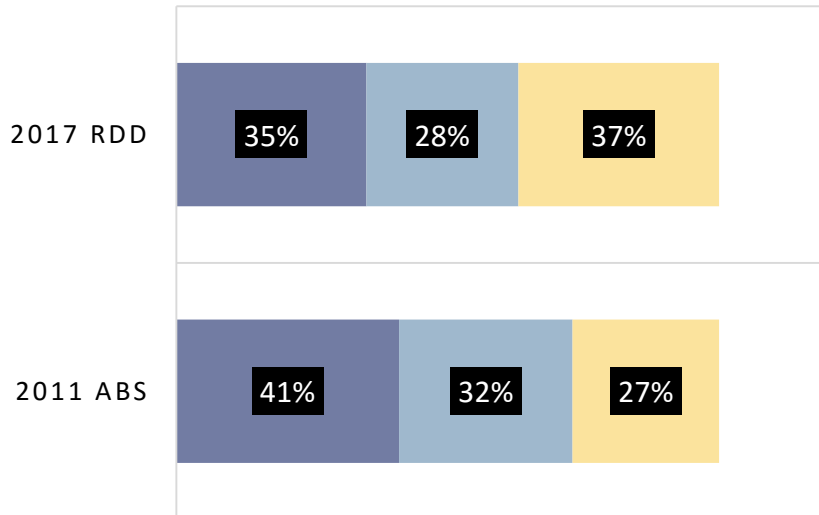


T3. Again, using an A through F grading scale, what grade would you give the state for making sure your area of the state gets a fair share of transportation funding?

Fair Share of Funding

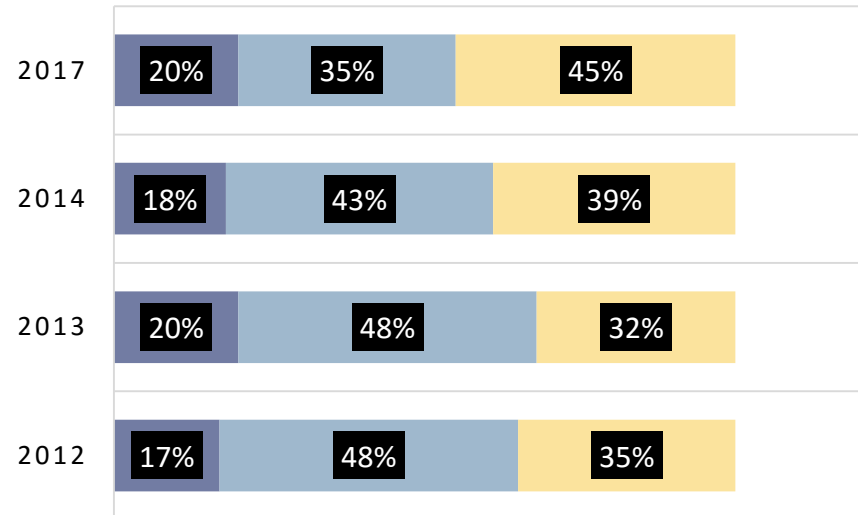
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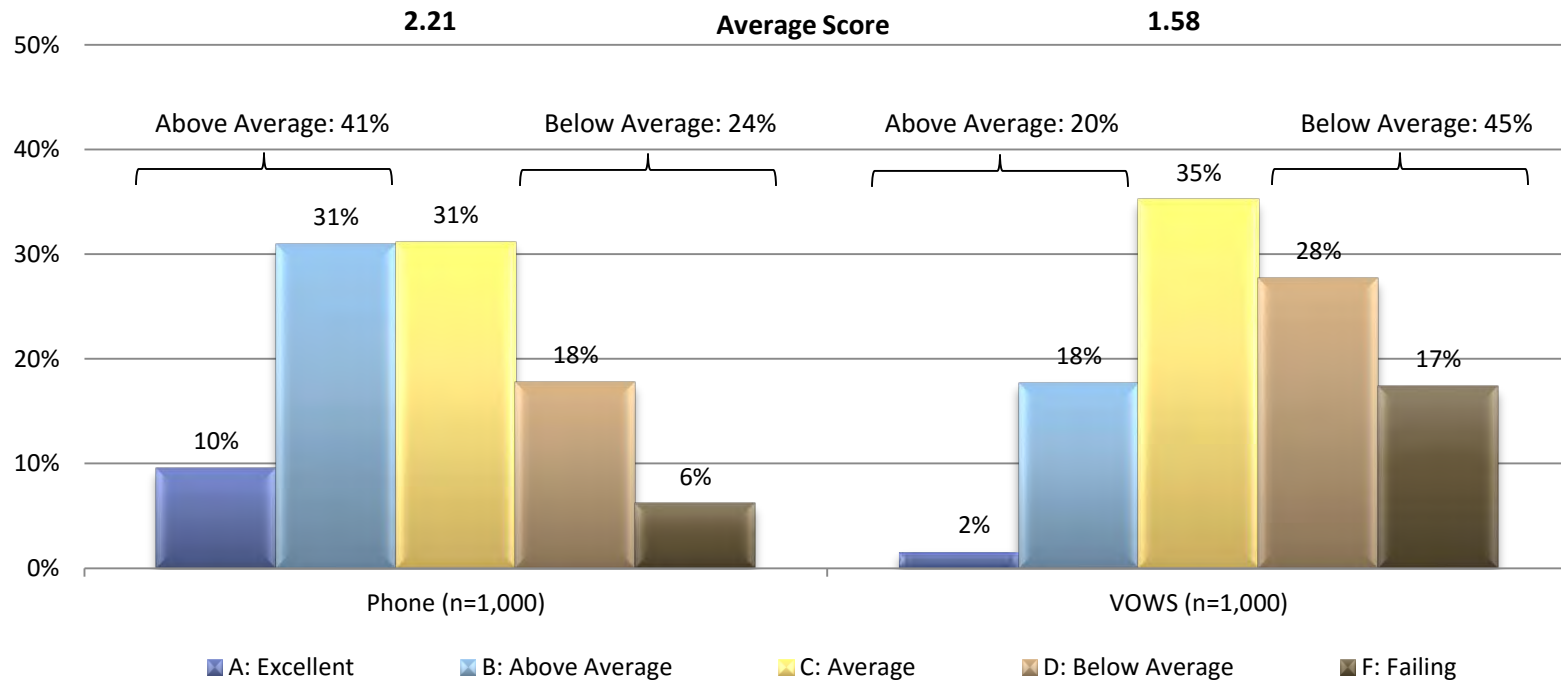
PANEL STUDIES

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T3. Again, using an A through F grading scale, what grade would you give the state for making sure your area of the state gets a fair share of transportation funding?

Local Transportation System Grade

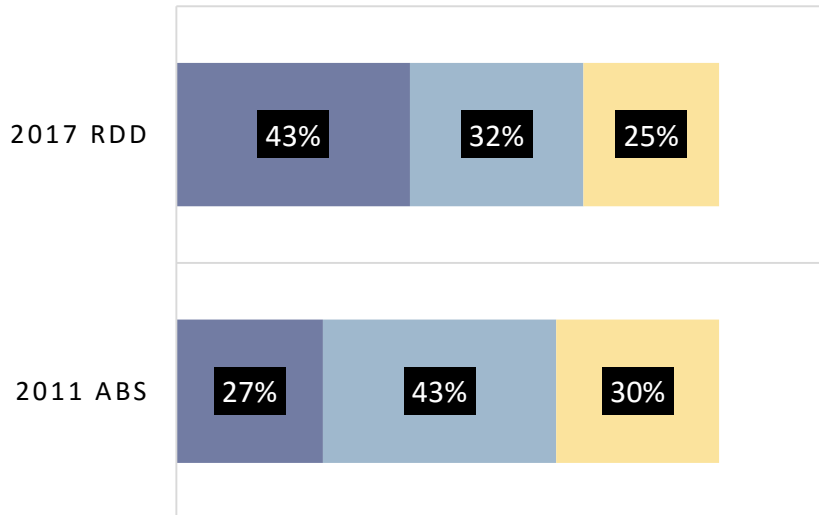


T4. Using the same A through F grading scale, what grade would you give the transportation system in your local area - that is in your city or town and the areas immediately surrounding it?

Local Transportation System Grade

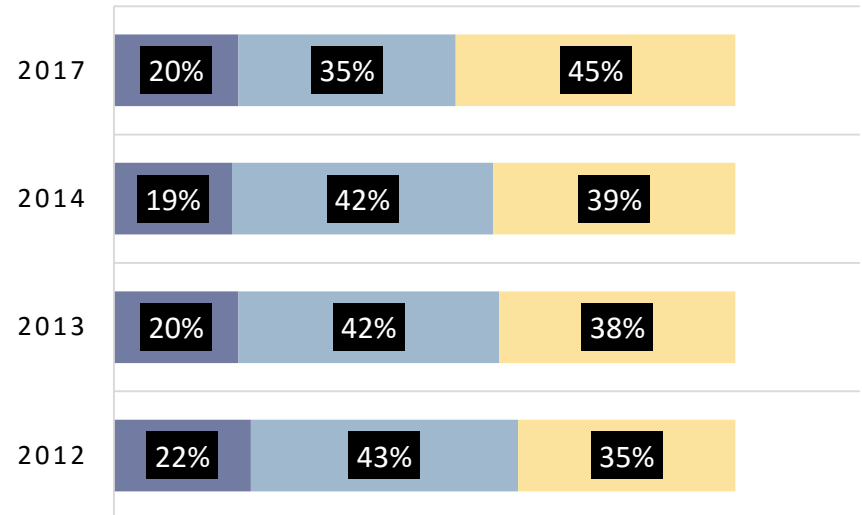
RANDOM STUDIES

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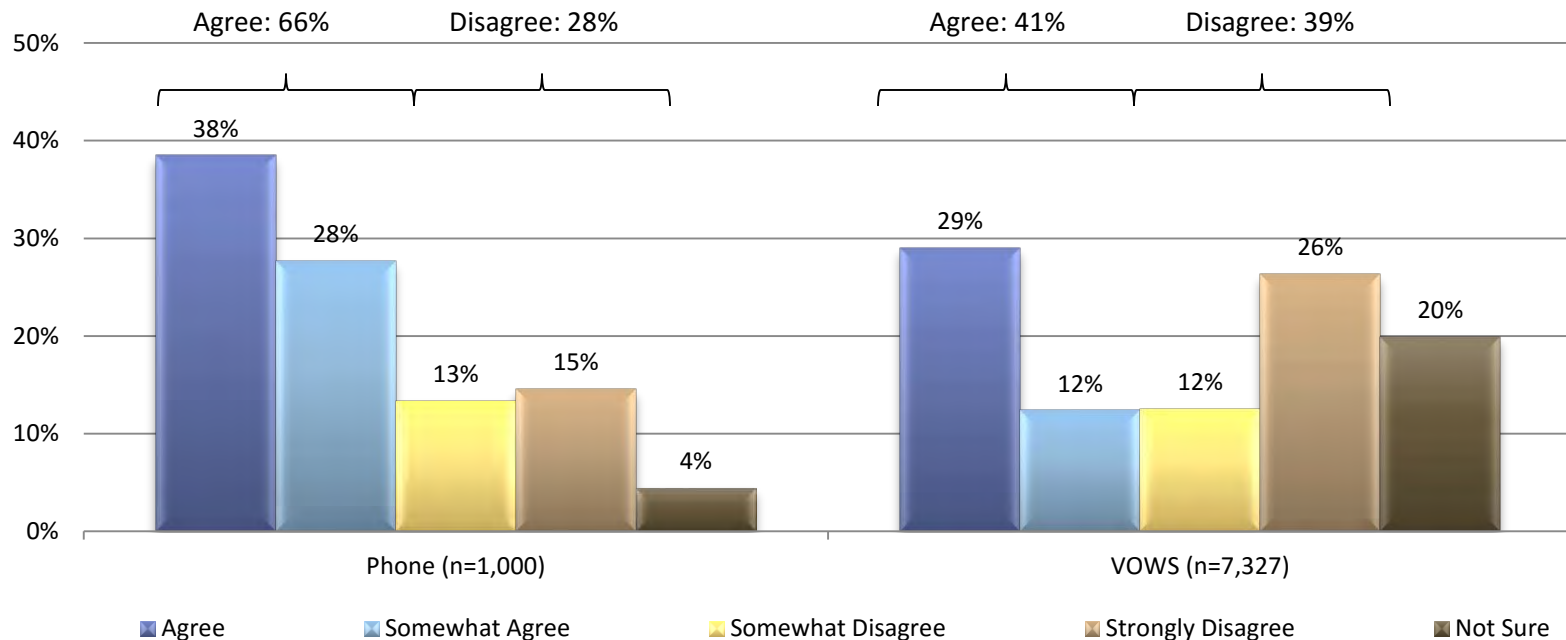
PANEL STUDIES

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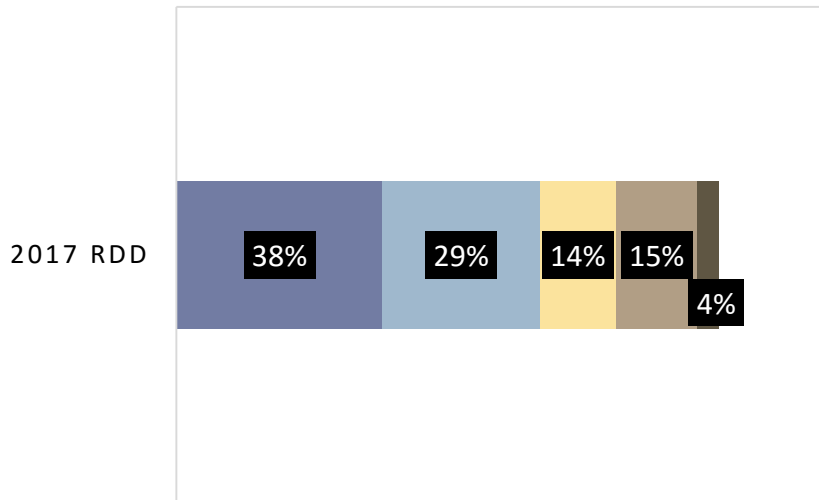
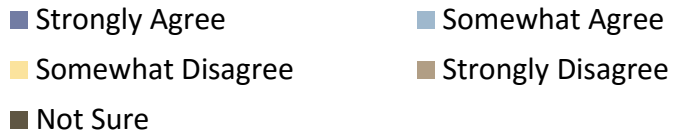
Washington State Needs Additional Revenue



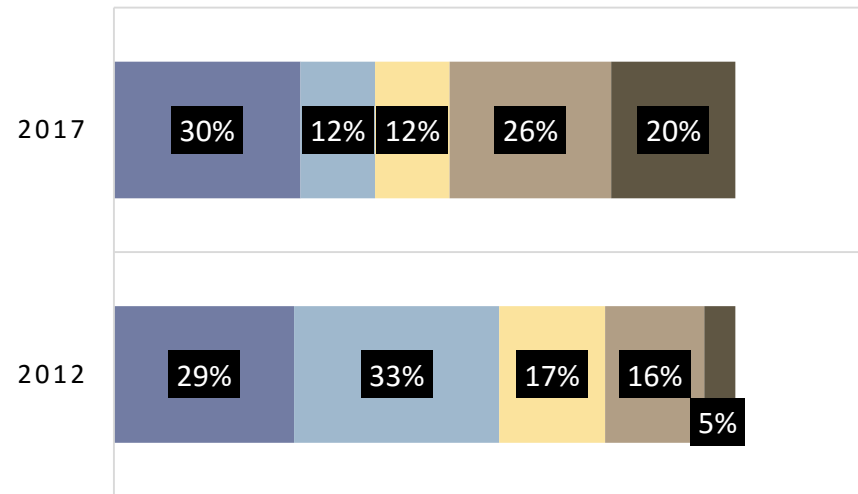
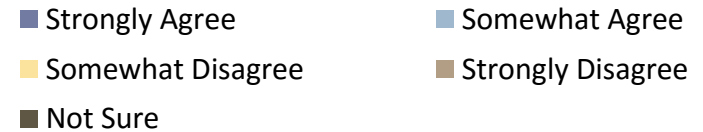
T5. Do you agree or disagree with the following statement: Washington State needs additional revenue to keep our transportation system safe, effective and properly maintained?

Washington State Needs Additional Revenue

RANDOM STUDIES

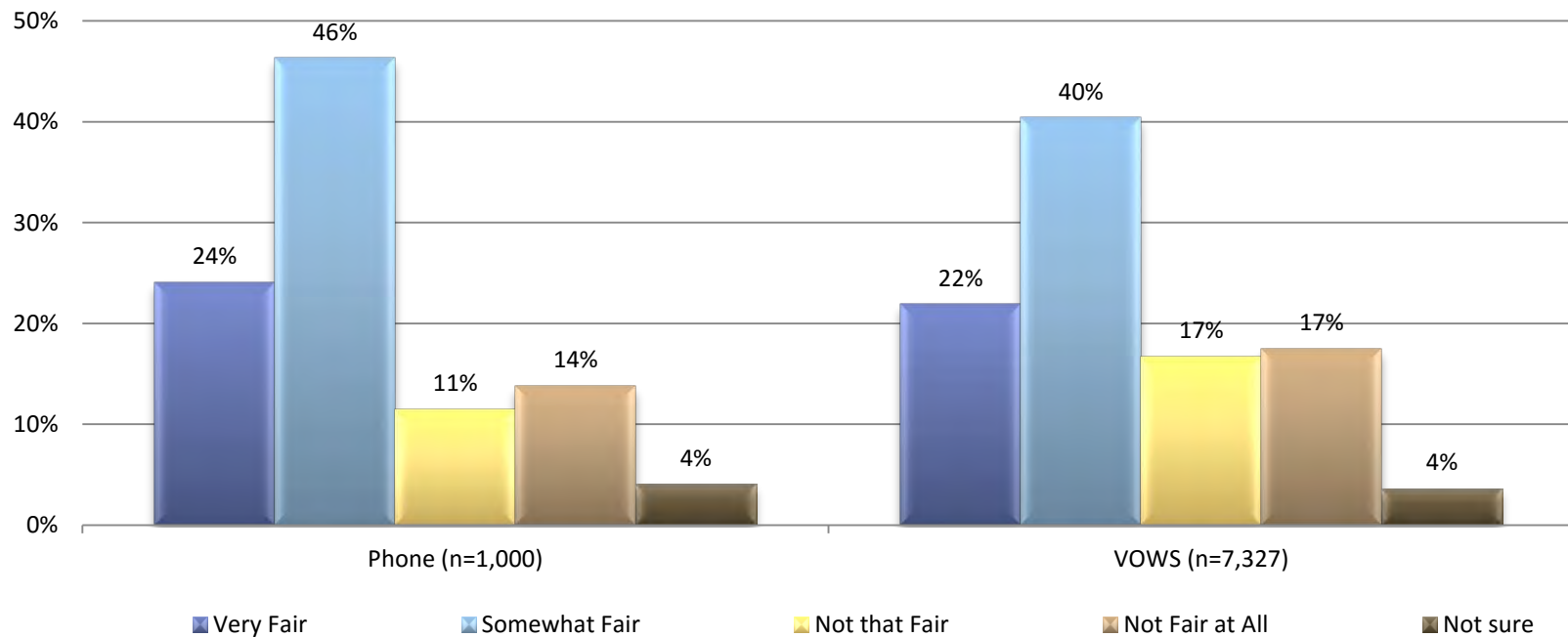


PANEL STUDIES



T5. Do you agree or disagree with the following statement: Washington State needs additional revenue to keep our transportation system safe, effective and properly maintained?

Gas Tax Fairness

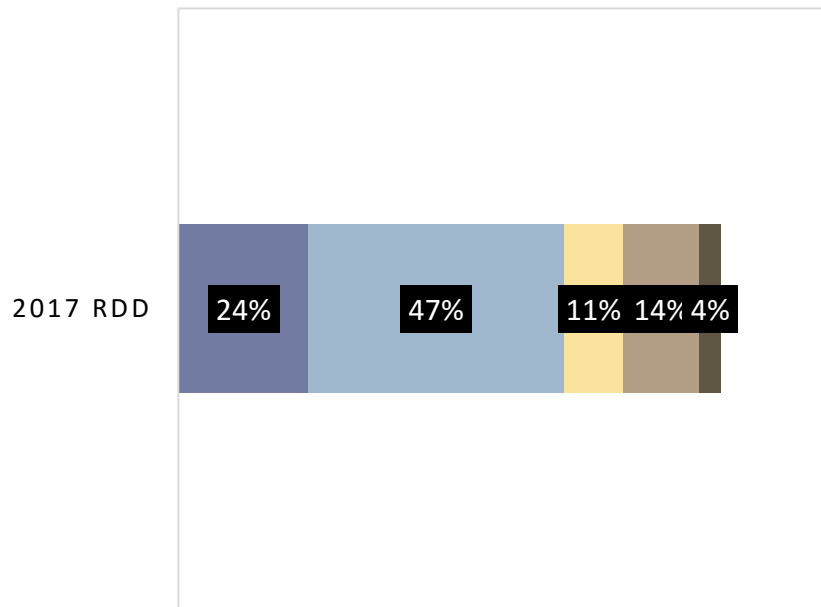


T6. Currently the transportation system is funded by a per gallon gas tax. Would you say using the gas tax to fund transportation is...

Gas Tax Fairness

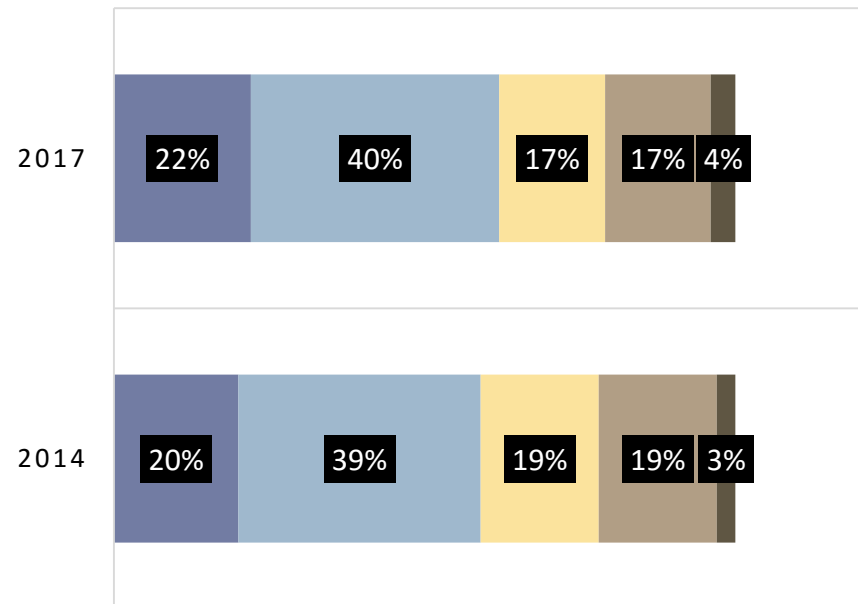
RANDOM STUDIES

- Very Fair
- Somewhat Fair
- Not that Fair
- Not Fair At All
- Not Sure



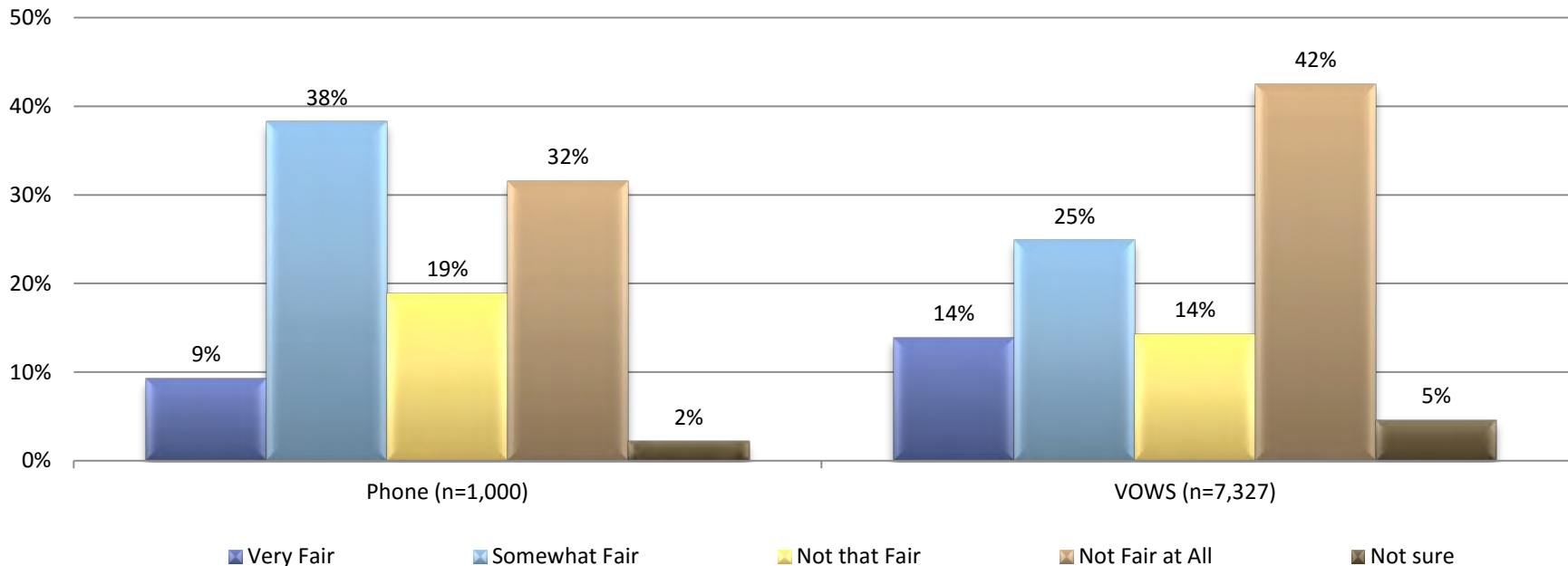
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T6. Currently the transportation system is funded by a per gallon gas tax. Would you say using the gas tax to fund transportation is...

Road Usage Charge Fairness

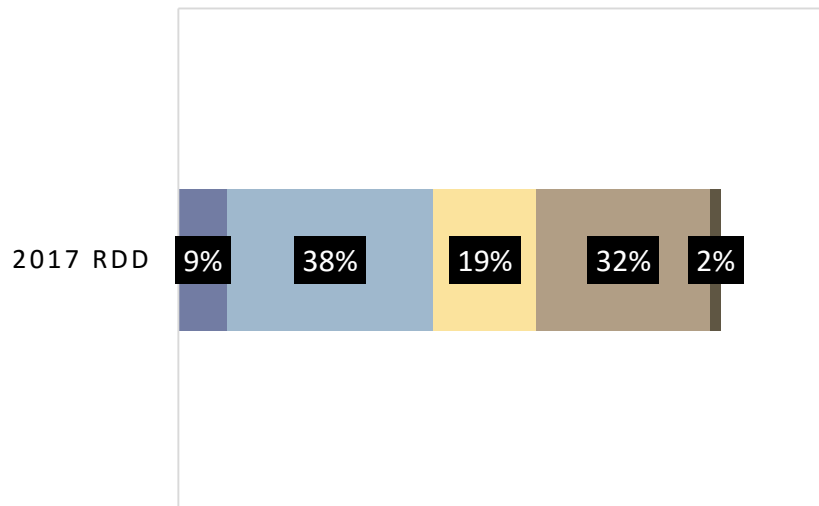


T7. A road usage charge is a different way to fund transportation. It would replace the gas tax and charge drivers by the miles driven instead of by the gallons used, resulting in all drivers paying the same amount per mile for their use of the road, regardless of their vehicle's Miles Per Gallon

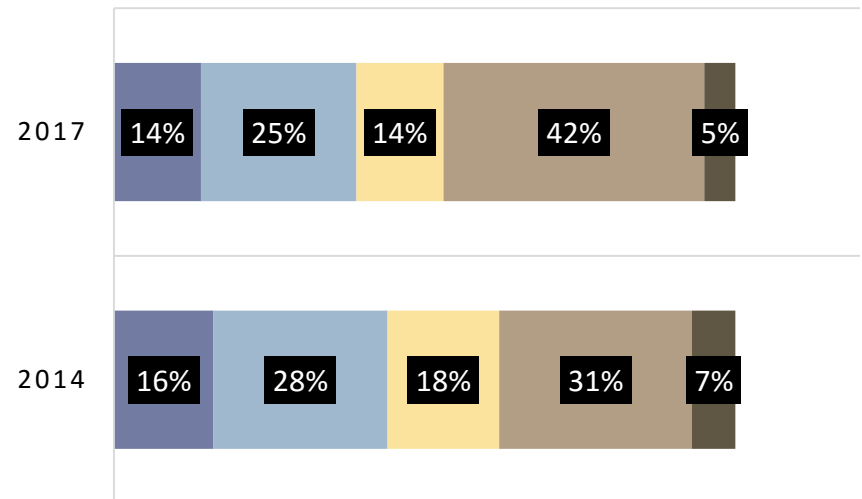
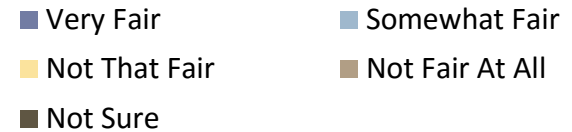
Knowing this, would you say road usage charge is ...

Road Usage Charge Fairness

RANDOM STUDIES



PANEL STUDIES

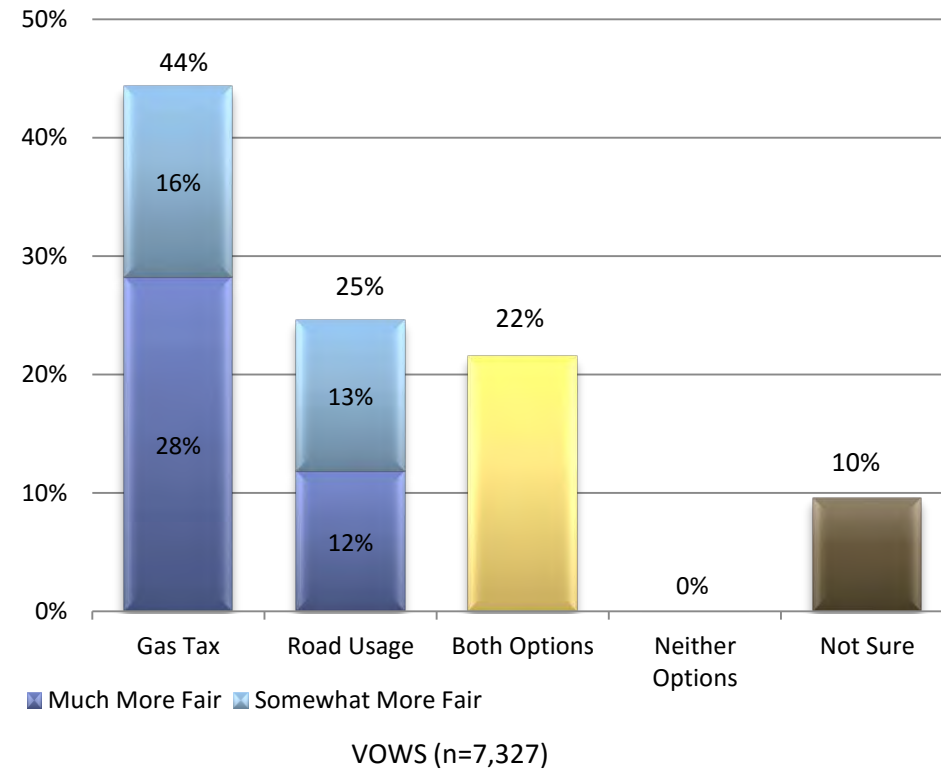
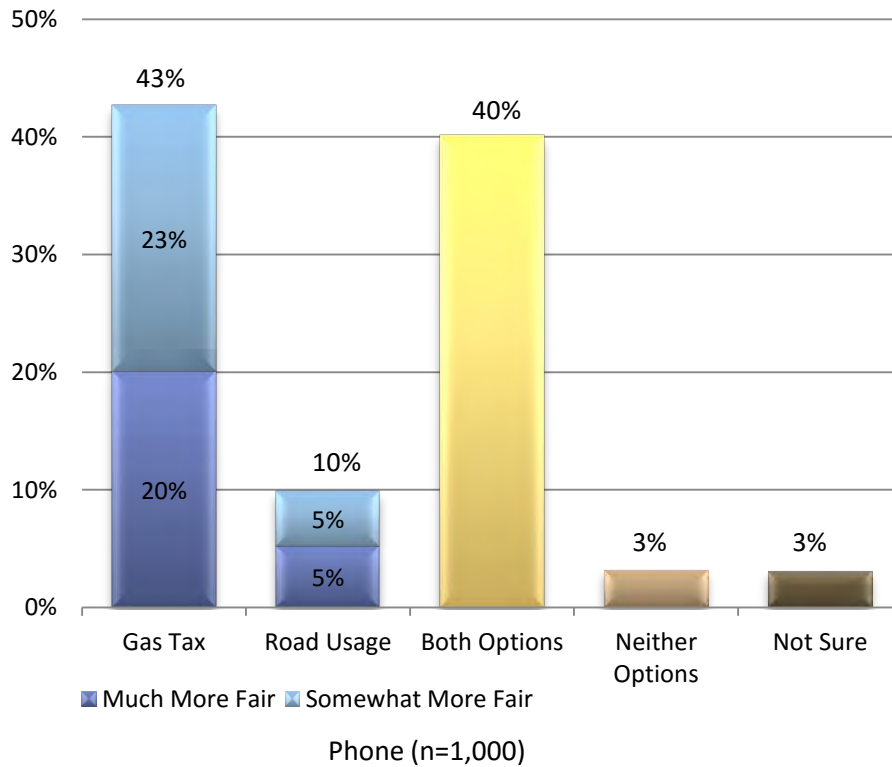


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Knowing this, would you say road usage charge is ...

Gas Tax vs. Road Usage Charge

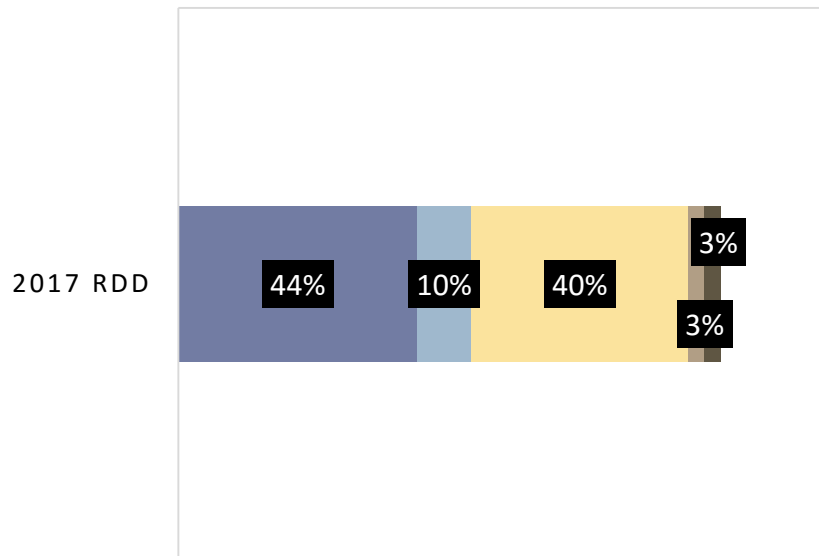
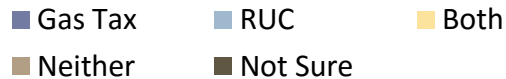
Gas Tax vs. Road Usage Charge



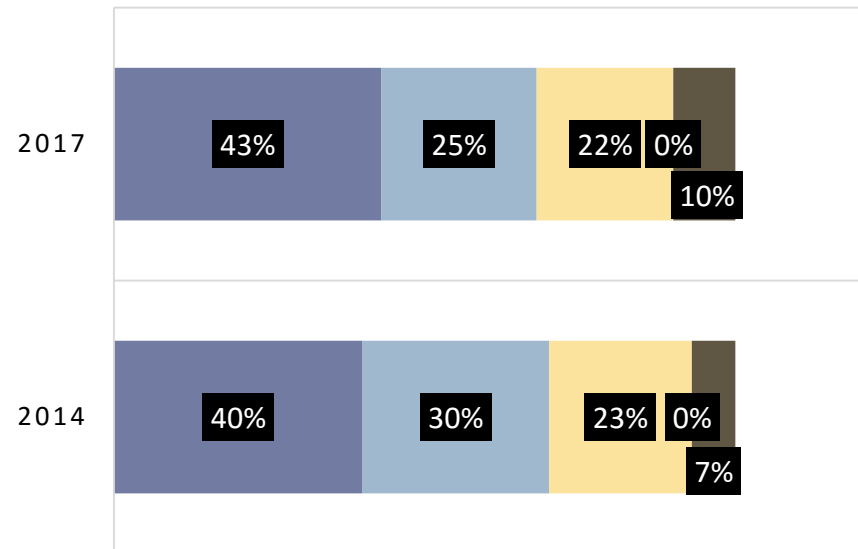
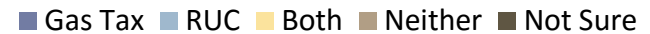
T8. Which transportation funding approach do you think is more fair?

Which Is More Fairness

RANDOM STUDIES

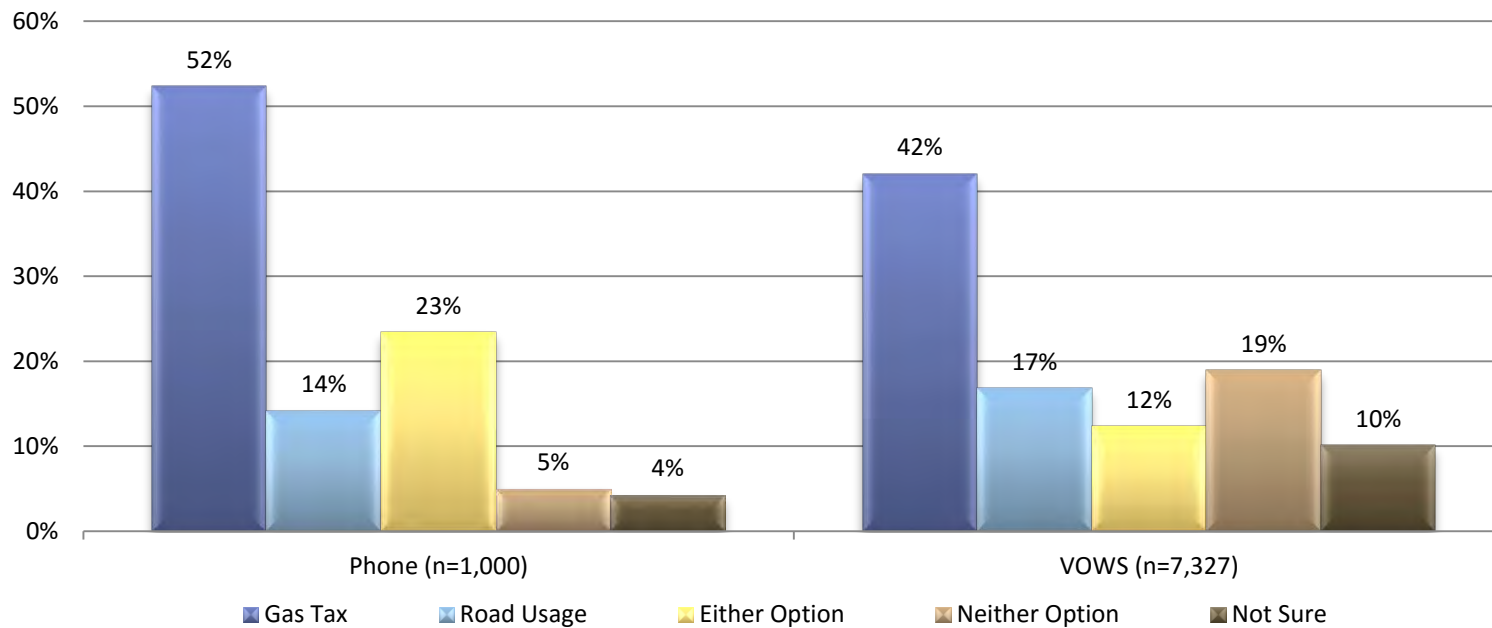


PANEL STUDIES



T8. Which transportation funding approach do you think is more fair?

Gas Tax vs. Road Usage Charge Preference



T9. Fairness aside, to fund transportation would you prefer ?

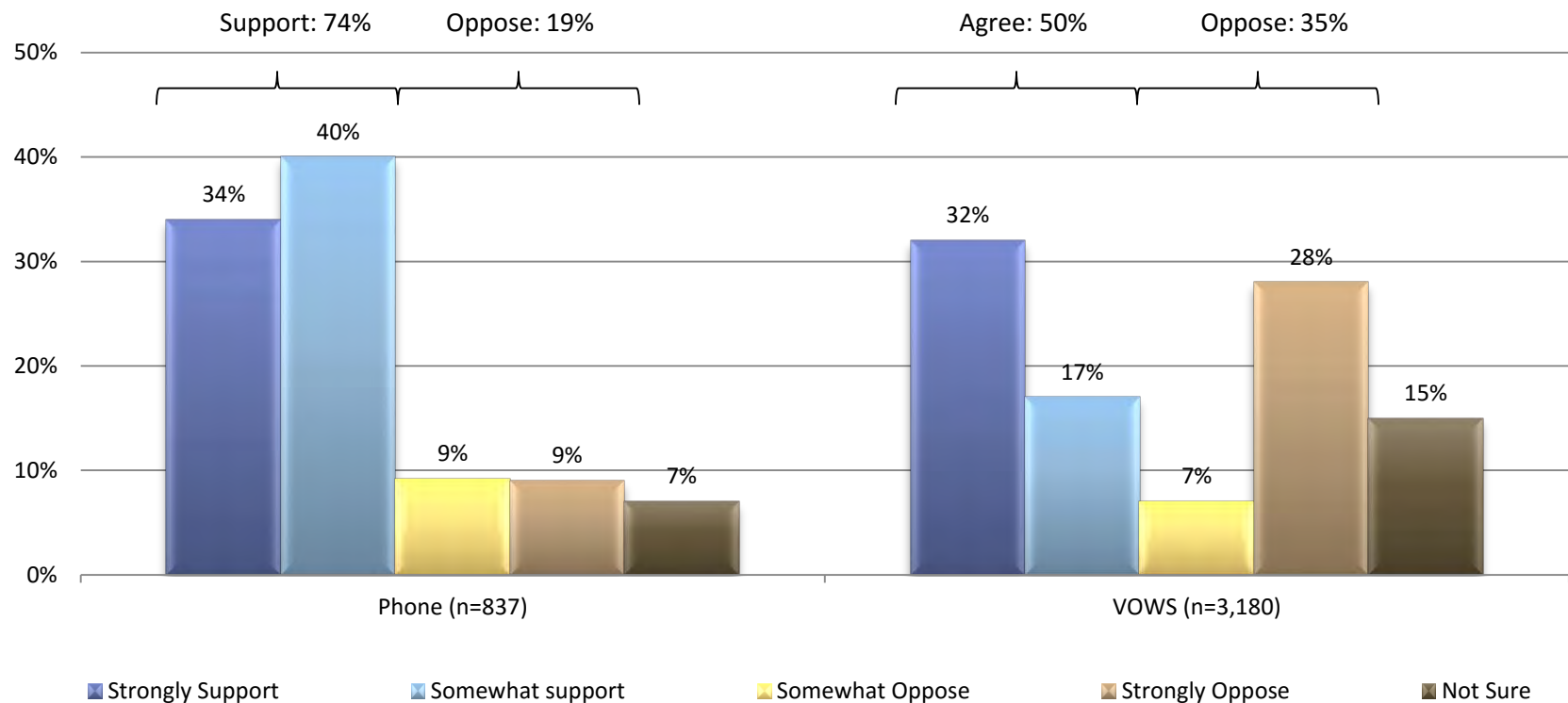
How Important Is...

Statement	2017 Phone (n=1,000)	2011 ABD (n=5,518)	2017 VOWS (n=7,327)	2013 VOWS (n=5,673)
Maintaining and Repairing Existing Roads, Highways ,and Bridges	83%	85%	89%	84%
Making Sure Rural and Mountain Roads Remain Open Year-Round	61%	44%	44%	34%
Expanding Public Transit Services (Vanpools, Dial-a-Ride)	58%	51%	55%	49%
Operating and Maintaining Washington's Ferry System	56%	46%	43%	40%
Increasing Law Enforcement and Public Safety Efforts on WA Highways	54%	38%	40%	29%
Widening and Building More Roads and Highways	51%	51%	51%	40%
Building or Improving Sidewalks	49%	37%	40%	27%
Improving Regional Airports	40%	23%	23%	13%
Building Bike Lanes	38%	30%	25%	23%

T10-18. Next, I want to read you several short statements and please let me know how important each is to you on a five-point scale, where 1 is not at all important and 5 is extremely important. On a 1 to 5 scale, how important is...

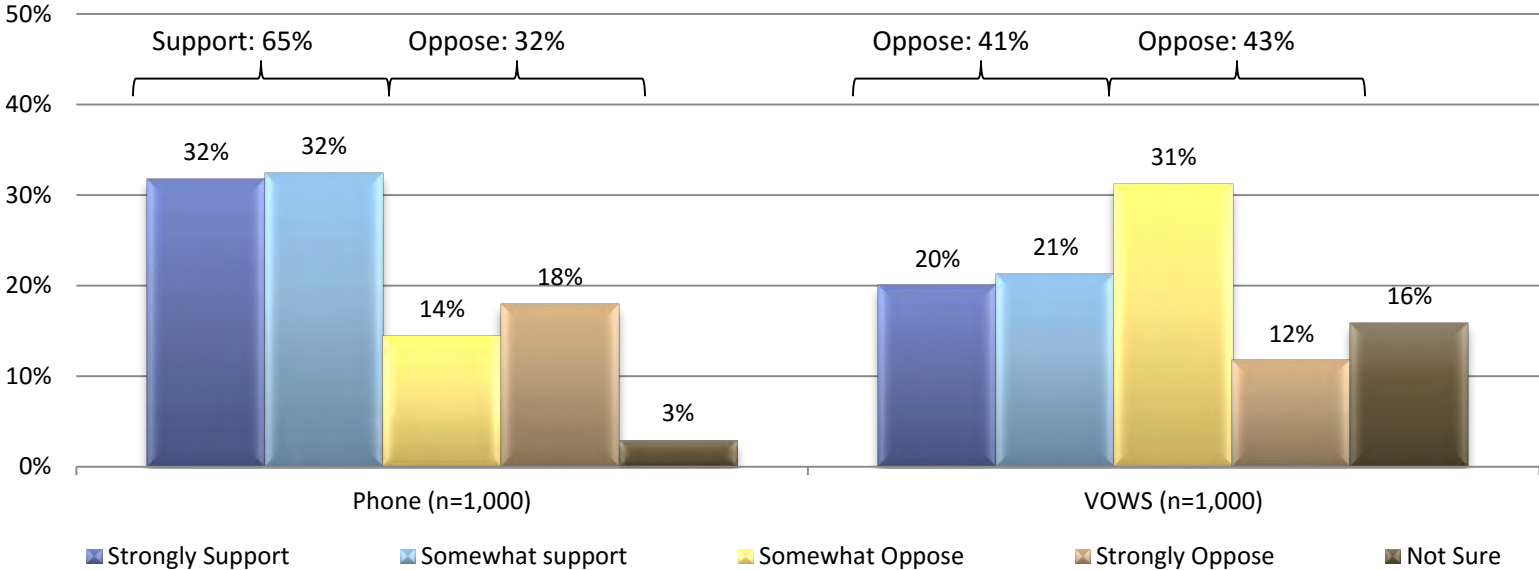
Public Transit Funding Support

Support for More Funding for Public Transit



T19. Currently, **public transit** operations are funded with federal and local tax dollars but not with State gas taxes. Knowing this, do you support or oppose Washington State providing more state transportation funding to help fund public transit services?

Support for Using Gas Tax to Fund Washington’s Ferry System

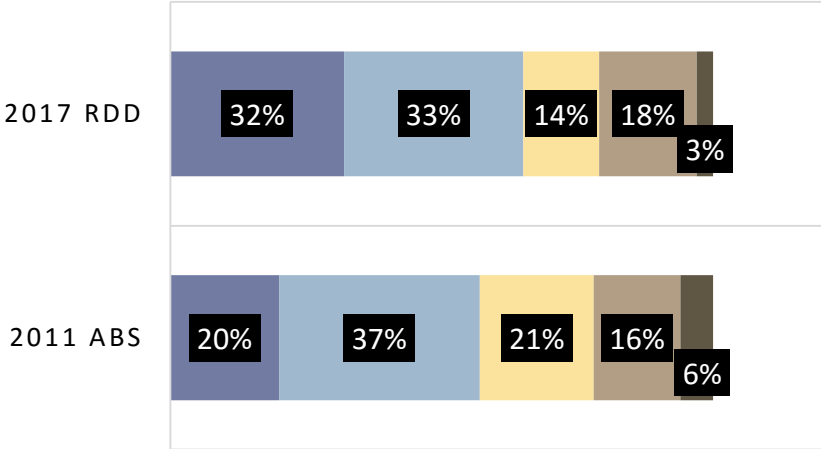


T20. Currently, about 70% of the daily operational costs of the Washington State Ferries are covered by fares paid by the riders. The remaining 30% is covered by gas tax revenues. Gas tax revenues also cover the costs of ferry boats and terminals. Knowing this, do you support or oppose using state gas tax revenues to fund the Washington State Ferry System?

Support for Using Gas Tax to Fund Washington’s Ferry System

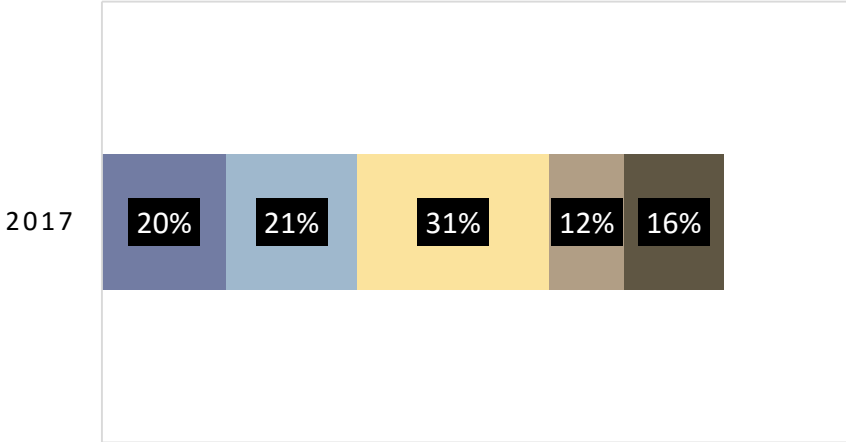
RANDOM STUDIES

- Strongly Support
- Somewhat Support
- Somewhat Oppose
- Strongly Oppose
- Not Sure



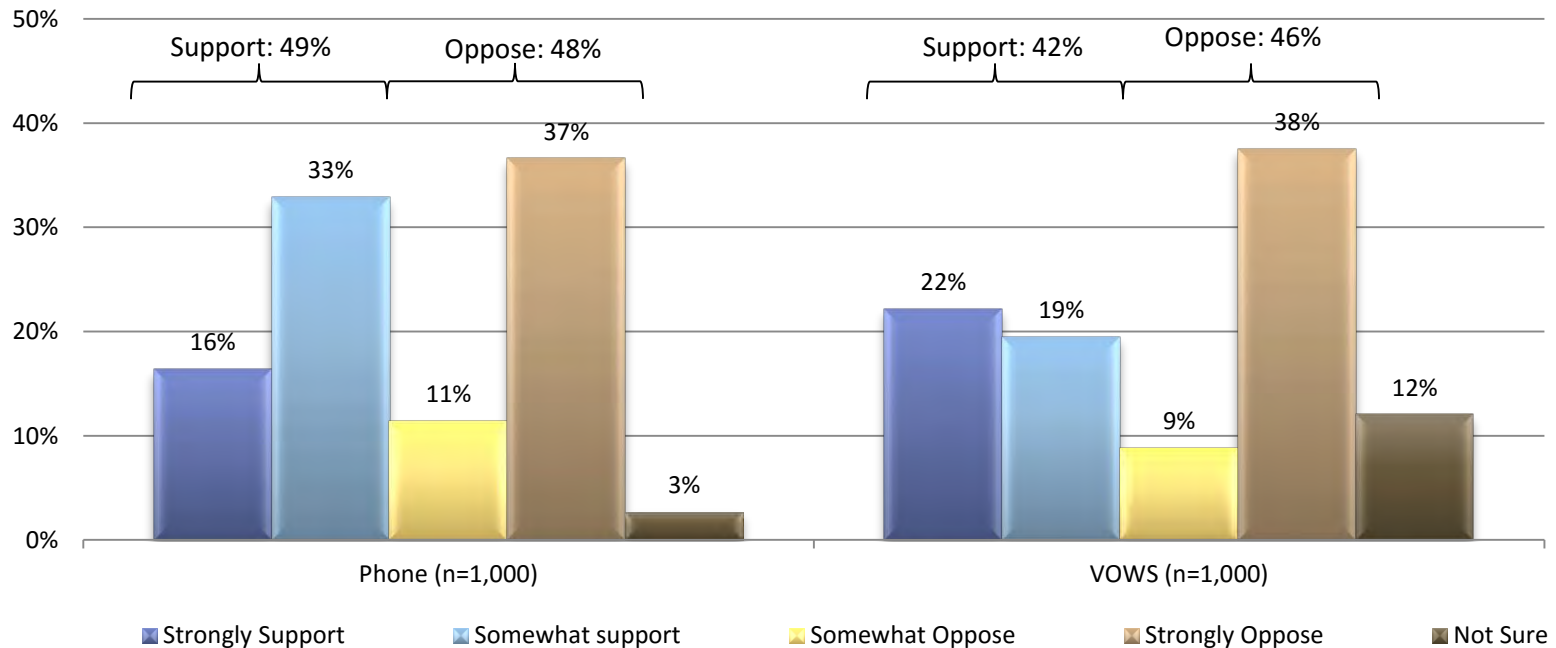
PANEL STUDIES

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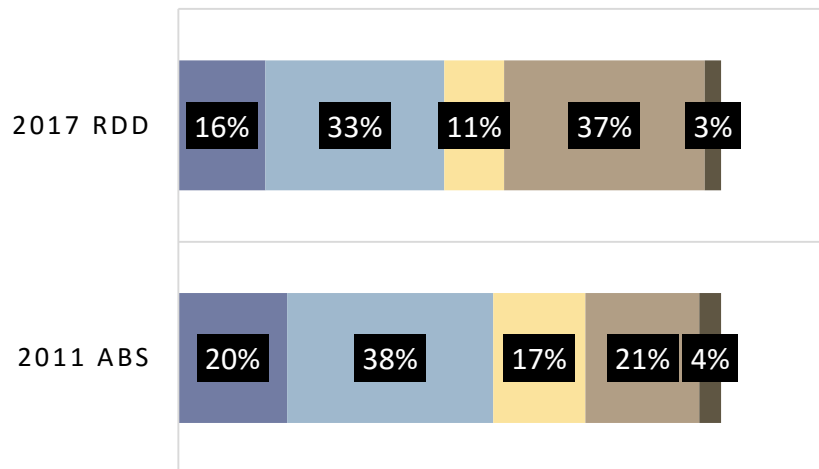
Support for Tolling



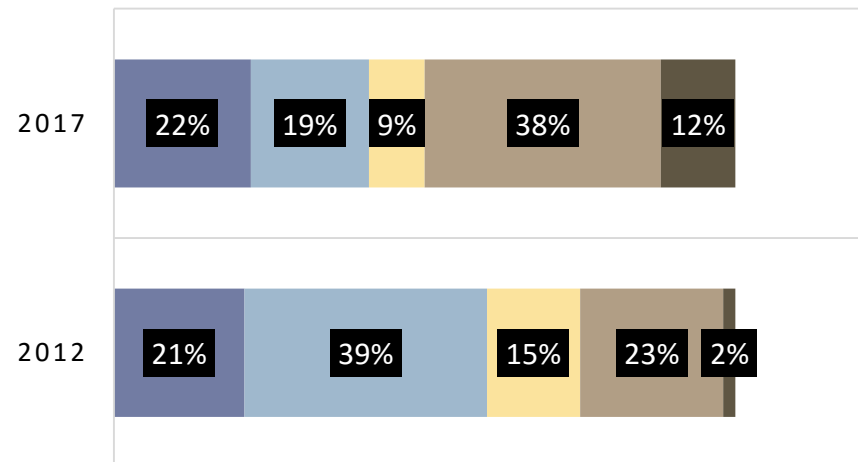
T21. The next couple of questions are about tolling, that is, charging drivers a fee on some major highways and bridges. In general, do you support or oppose tolling as a way to help pay for new state transportation projects?

Support for Tolling

RANDOM STUDIES

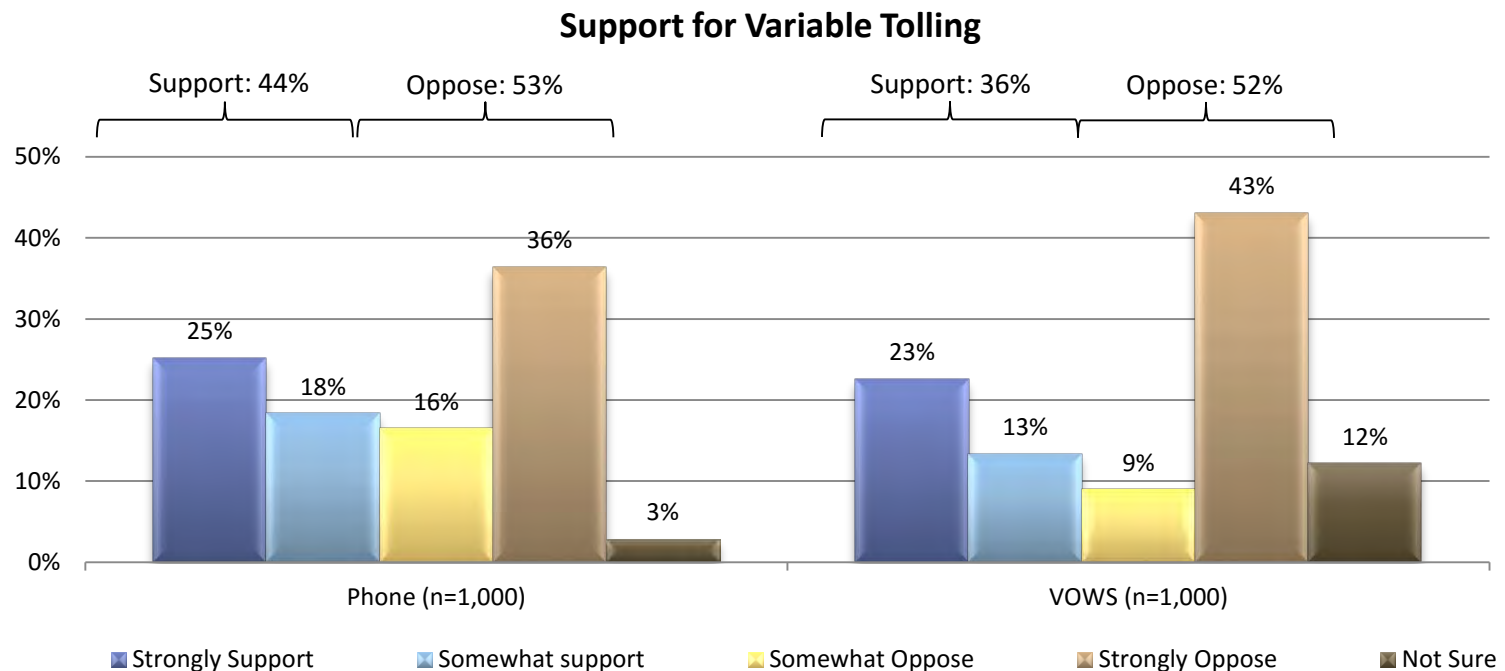


PANEL STUDIES



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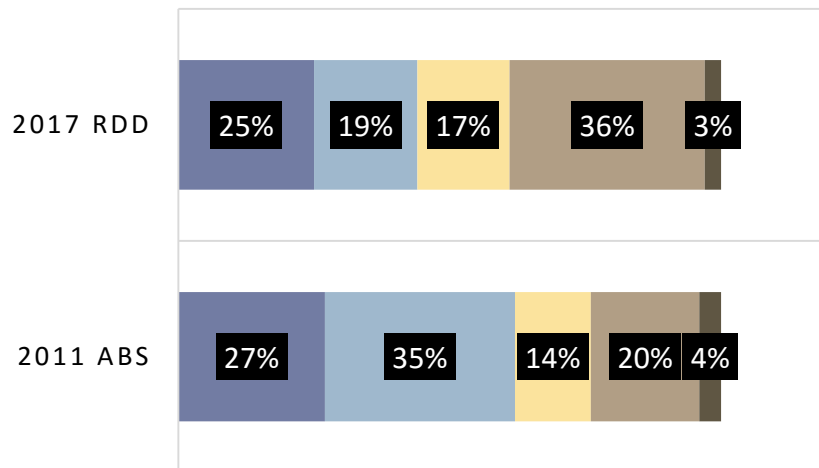
Support for Variable Tolling



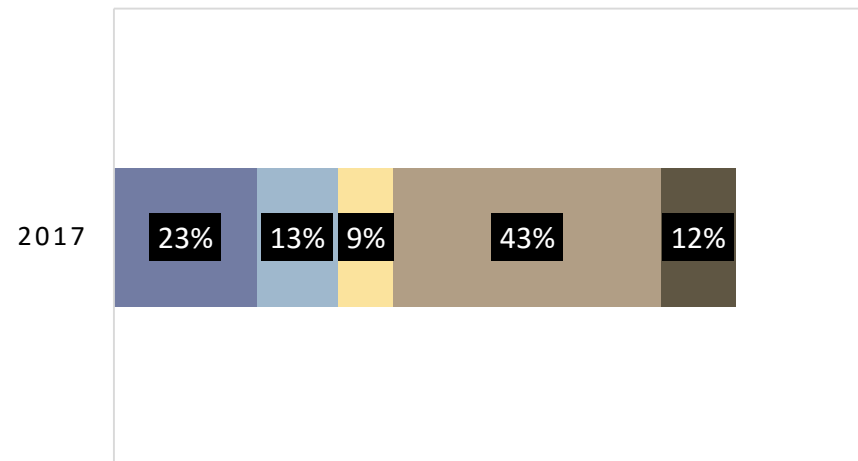
T22. Toll rates that change based on time of day are known as variable tolls. This approach to tolling helps reduce congestion by charging a higher toll during the busiest hours and a lower toll during less-busy hours. In general, do you support or oppose the concept of variable tolling on major state highways in heavily congested areas?

Support for Variable Tolling

RANDOM STUDIES

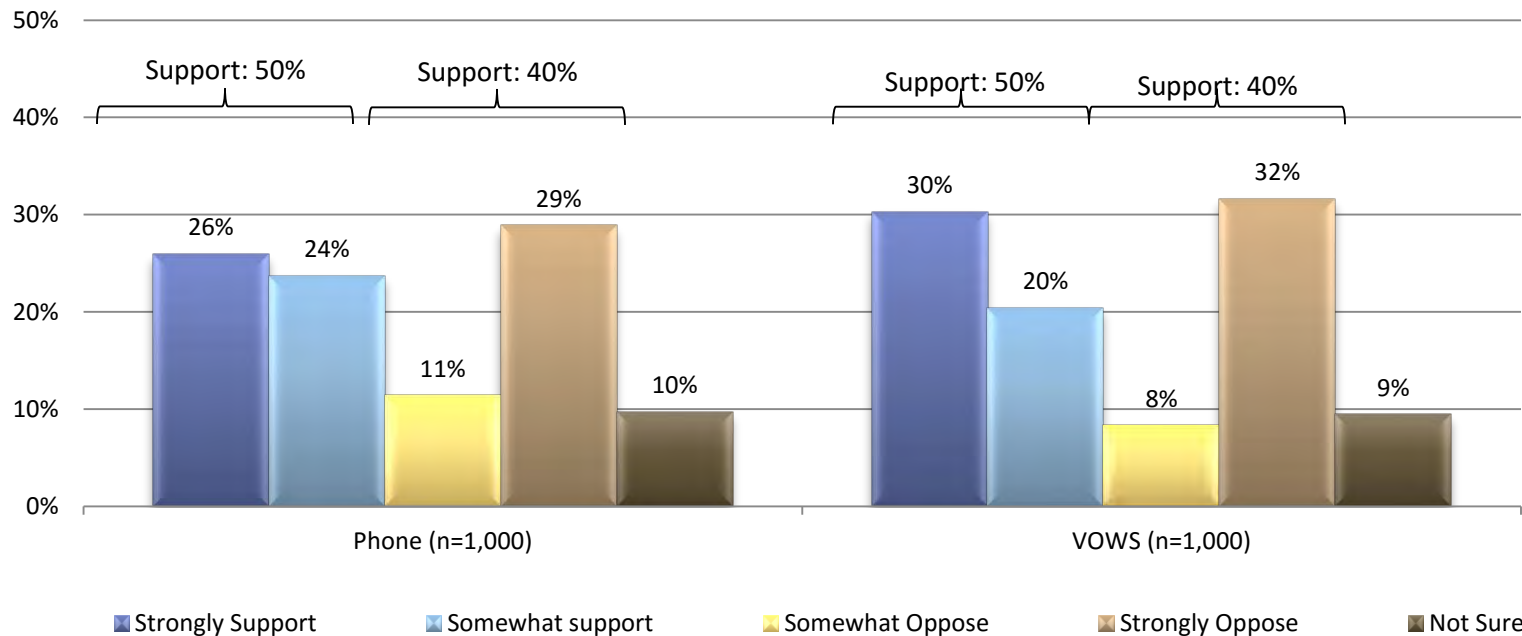


PANEL STUDIES



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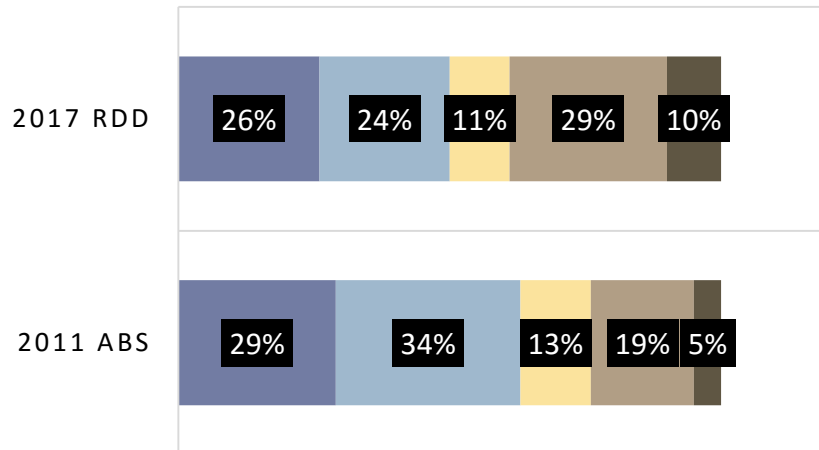
Support for Express Toll Lanes



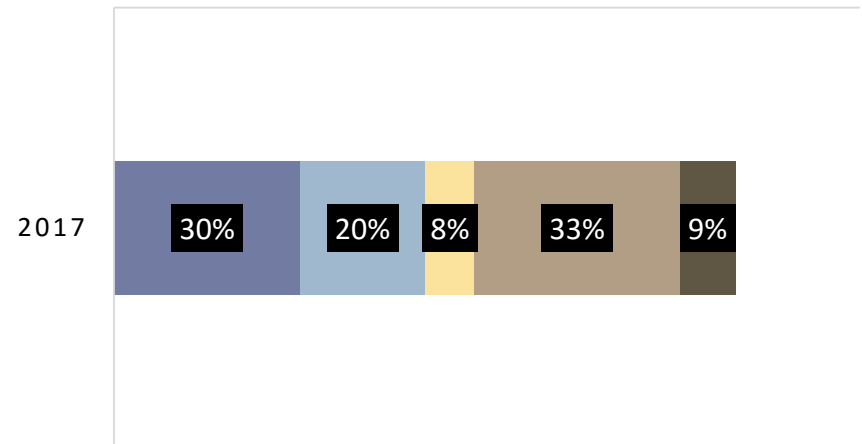
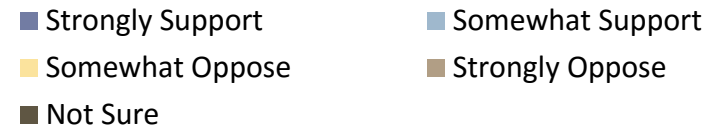
T23. Express Toll Lanes allow people traveling alone to pay a toll to use the High Occupancy Vehicle (HOV) lanes. The express toll amount changes based on traffic speeds – slower speeds cause the toll to increase and faster speeds keep the toll low. In general, do you support or oppose allowing people traveling alone to pay an express toll to use the HOV lanes on major state highways in heavily congested areas?

Support for Express Toll Lanes

RANDOM STUDIES



PANEL STUDIES



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Share of Trips Using Various Modes

	Phone (n=1,000)	VOWS (n=7,327)
Driving alone	62%	61%
Carpooling	21%	15%
Walking	8%	8%
Public transit	7%	10%
Bicycle	2%	3%
Motorcycle	1%	3%

T24-T29. Please think about all the trips you personally made from home during a typical week last year such as going to work, running errands, or going to appointments. Approximately what percentage of those trips per week are done by...

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

- VOWS is of significant value to the state, but it is challenged.
 - Because it is not a random collection of Washingtonians, generalizations should not be drawn to Washington as a whole.
 - Significant demographic skews exist, requiring weighting in order to align it with the demographics of Washington.
 - These weights mean that a small proportion of people in the panel account for almost half of the total column.

- The RDD telephone methodology is also challenged.
 - The effort to ensure quantities from low population areas adds to the weighting burden prior to analysis. Like VOWS, a small proportion of the sample accounts for about half of the total column.
 - A telephone survey has limitations in terms of the complexity of the questions which can be asked.
 - There are also cost implications to telephone data collection, and longer surveys can cost more.
- However, even with these limitations, the random selection allows for statistical inference.

- Regarding VOWS and telephone data collection, both methods have challenges and opportunities for improvement.
- The phone survey margin of error was hampered by geographic stratification which severely undercut the representation of heavily populated areas to allow for more interviews elsewhere.
- VOWS, like many web panels, faces hurdles due to the comprehensiveness of its recruiting efforts.
 - VOWS has worked hard to include a wide swath of Washington, and the jury is out whether the full VOWS panel is comparable to Washington at large.
- The ability to generalize from any survey is dependent on rigorous sampling procedures. VOWS is hampered by the way its panel was developed.
 - VOWS can be improved by taking steps to increase its diversity: bringing more young people in, minorities, low income, less educated, and those not interested in transportation issues.

- We also found that telephone respondents had a lot to say about Washington government and local issues: so much that we couldn't afford to ask open-ended questions.
 - Yet it is an important outlet to provide
- Telephone data collection restricts complexity, and sometimes requires “layering” of questions: e.g., 1st determining whether respondent agrees or disagrees, then a follow-up to find degree of agreement/disagreement.
- Some types of questions are more difficult to administer on the telephone. Example: splitting trips across several modes to add to 100%.

- A “VOWS 2.0” could involve randomly recruiting participants to a panel, and using multiple methods to ensure comprehensive sampling. This could require:
 - An address based sample, using mail, with multiple mail flights (a letter recruiting to web with an incentive enclosed; followed by a reminder postcard; and eventually a second letter for those who had yet to reply);
 - Follow-up telephone calls to those who still hadn’t replied, as not everyone has internet access;
 - Incentives for participating in actual surveys, with higher incentives to groups who are less likely to participate (this helps limit the need to weight).
 - Broadening the participation to issues other than transportation (particularly education).

- While this would require further investment to create a VOWS 2.0 panel, there may be ways to soften the financial impact of it.
 - A concern about VOWS is that it has a transportation focus; a more general panel may be of interest to other agencies, who might be willing to contribute funding.
- As for further research using the telephone, the greatest improvement over what was just done would be to change the sample structure by increasing the sample state so that it is not so heavily skewed away from PSRC to one more completely proportional to population. This would increase the precision of the estimates significantly.
 - If smaller RTPOs need larger numbers for profiling, it might be appropriate for them to share more of the costs of the research. This happens on the Federal level: the National Household Travel Survey has a random sample, but some states provided additional funding for more interviews in their states.

Thank you!

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