

Education Income Tax Modeling Two Proposals

Income-Based Education Tax Study Committee

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Outline

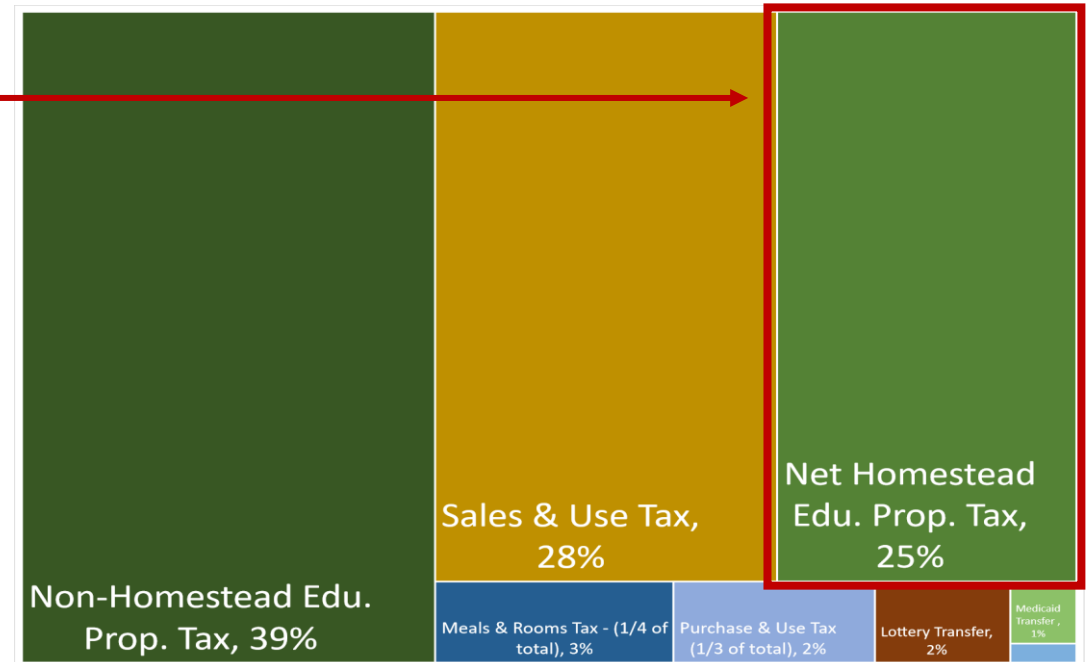
- A. General remarks and considerations
- B. Structures
- C. Tax incidences
- D. Modeling and considerations for households owning homesteads
- E. Modeling and considerations for people who do not own homesteads
- F. Cost containment considerations
- G. General considerations and takeaways



General remarks

- The structural options to be presented reflect requests from the committee's October 26th meeting
- The upcoming options are structured to replace the entire net homestead (HS) property tax
 - All other funding sources in the EF are assumed to remain the same
 - This is a policy decision
 - Modeling follows committee discussions from October 26th

Figure 1:
Vermont Education Fund Revenue Sources, FY2022



A note about considerations

As modeling is explored, there are two fundamental policy questions the committee must consider:

- I. Who should pay a direct education tax?
 - Should everyone in the state who makes income pay a direct education tax?
 - Should only property owners pay a direct education tax?

- II. Should some groups have more or less skin in the game?
 - How, and to what extent, should direct education taxes be connected to local spending decisions?

A note about modeling

- The structural options to be presented reflect requests from the committee's October 26th meeting
- Modeling was conducted by JFO and JFO consultant, Deb Brighton, using mismatched, imperfect datasets
 - JFO used Chainbridge Income Tax Model to estimate total income tax revenue and examine the effects of income tax on the entire population
 - Deb Brighton used rates modeled by JFO to analyze the impact on homeowners
 - This mismatch in datasets comes with caveats
 - AGI and Household income are not the same, so it is difficult to compare exactly effects of income taxes on homeowners, especially with lower-income groups
 - Data are from 2019 grown forward to 2022 for both datasets, by similar but not same growth functions



Section B:

Structures of Option 1 and Option 2



Structure of Option 1: Add statewide education income tax (EIT) and maintain minimal homestead property tax

- **Maintain a minimal homestead property tax** that is adjusted by local spending decisions
 - Homestead property tax would follow the same structure as current law
 - **Remove property tax credit (PTC) and Education Fund circuit breaker** from homestead property tax
 - Homestead property tax would need to raise much less than current law because of the EIT
 - Many non-homestead owning households and individuals would pay an income tax which would offset the amount needing to be raised by the homestead property tax
- **Add an Education Income Tax (EIT) to the Education Fund**
 - EIT would have progressive income brackets
 - EIT would be a tax on *resident* Adjusted Gross Income (AGI)
 - All individuals/households who file a personal income tax return would pay the EIT
 - EIT would offset the amount that needs to be raised by homestead property taxes
- All other revenue streams would stay the same
 - This includes nonhomestead property taxes

Note: This option falls within the structure of “Option B” from JFO’s October 12th testimony regarding [Potential Structural Options for an Education Income Tax](#)



Option 1a: Potential Rate Structure:

Raise ~\$400 million via EIT, and ~\$60M on min. HS rate

Potential EIT Brackets:

Table 1:

Married, HoH		Single, Separate		EIT Rate
AGI From	Up to	AGI From	Up to	
\$0	\$47,000	\$0	\$23,500	1.25%
\$47,001	\$90,000	\$23,501	\$45,000	1.50%
\$90,001	\$140,000	\$45,001	\$70,000	1.75%
\$140,001	\$250,000	\$70,001	\$125,000	2.00%
\$250,001	\$1,000,000	\$125,001	\$500,000	2.25%
\$1,000,001	Infinity	\$500,001	Infinity	2.50%

HS rates:

- *Minimum: \$0.13 / \$100 of HS property*
- *Average rate: \$0.18/\$100 of HS property*



Option 1b: Potential Rate Structure:

Raise ~\$390 million via EIT, and ~\$70M on min. HS rate

Potential EIT Brackets:

Table 2:

Married, HoH		Single, Separate		EIT Rate
AGI From	Up to	AGI From	Up to	
\$0	\$30,000	\$0	\$15,000	0.075%
\$30,001	\$60,000	\$15,001	\$30,000	1.45%
\$60,001	\$90,000	\$30,001	\$45,000	1.75%
\$90,001	\$225,000	\$45,001	\$112,500	1.95%
\$225,001	\$575,000	\$112,501	\$287,500	2.25%
\$575,001	Infinity	\$287,501	Infinity	2.75%

Potential HS rates:

- *Minimum: \$0.13 / \$100 of HS property*
- *Average rate: \$0.18/\$100 of HS property*

Note: Following modeling results from Option 1a., JFO found modeling results may not match committee's desired outcomes. As such, JFO redesigned the brackets for Option 1b. for the committee to examine both bracket structures.



Option 1: In Option 1, HS rate will be maintained as a flexible lever but will raise a significantly smaller portion of required revenues which will likely increase volatility in the Education Fund

To address potential increased volatility, there are two different options that may be used (and combined):

- a) Increase the size of the Education Fund reserve, or create an additional reserve
 - This reserve could be used as another flexible lever to adjust for potential surpluses and deficits
 - Expectations would need to be realigned about reserve needs and intended use as volatility may require its use more frequently than is current practice
- b) Maintain the Non-Homestead (NHS) property tax as a flexible lever
 - This would be the consistent with current law
 - If the NHS is the only flexible lever, it will be more volatile than it is currently



Structure of Option 2: Eliminate homestead property tax and replace with EIT

- Eliminate the homestead property tax (and associated income sensitivity)
- Add an Education Income Tax (EIT) to the Education Fund
 - EIT would have progressive income brackets and would be a tax on resident Adjusted Gross Income (AGI)
 - All residents who file a PIT return would pay the EIT
 - EIT rates would be adjusted by district based on locally voted education spending per equalized pupil (ES/EP)
 - Rates would be increased by the same percentage that locally voted ES/EP was greater than the statewide average ES/EP

Note: This option falls within the structure of “Option C” from JFO’s October 12th testimony regarding [Potential Structural Options for an Education Income Tax](#)



Option 2: Potential Rate Structure:

Raise ~\$465million via EIT

Potential Base EIT Brackets:

Table 3:

Married, HoH		Single, Separate		EIT Rate
AGI From	Up to	AGI From	Up to	
\$0	\$30,000	\$0	\$15,000	1.50%
\$30,001	\$60,000	\$15,001	\$30,000	1.75%
\$60,001	\$90,000	\$30,001	\$45,000	2.00%
\$90,001	\$225,000	\$45,001	\$112,500	2.25%
\$225,001	\$575,000	\$112,501	\$287,500	2.50%
\$575,001	Infinity	\$287,501	Infinity	2.65%



Option 2: Example of local increases in EIT

- Let's assume:
 - Statewide average ES/EP = 20,000¹
 - 2 lowest modeled income brackets:

Table 4:

Married filers	AGI (from	AGI up to	Education Income Tax Rate
Lowest bracket	\$0	\$30,000	1.50%
Second lowest bracket	\$30,001	\$60,000	1.75%

Adjustments of tax rate

Table 5:

District	ES/EP	Percentage ES/EP compared to Statewide Average	Adjustment to tax rates	Spending adjusted tax rates
District A	\$15,000	75%	Lowest bracket: $1.50\% \times 0.75 = 1.13\%$ Second lowest bracket: $1.75\% \times 0.75 = 1.31\%$	Lowest bracket: 1.13% Second lowest bracket: 1.31%
District B	\$20,000	100%	No adjustment	Lower bracket: 1.50% Upper bracket: 1.75%
District C	\$25,000	125%	Lowest bracket: $1.50\% \times 1.25 = 1.88\%$ Second lowest bracket: $1.75\% \times 1.25 = 2.19\%$	Lowest bracket: 1.88% Second lowest bracket: 2.19%

Notes:

1) In FY22, statewide average ES/EP was ~\$18,500



Option 2: Example of local increases in EIT

- Education spending decisions vary across the state
 - The following table shows some of the ratios that would have been applied if this was implemented for FY23

Table 6:

FY23 statewide ES/EP...	ES/EP	% of average ES/EP	Ratio to apply tax rate	Locally spending adjusted tax rate =
Average	\$18,524	100%	1	= Bracket rates * 1
Minimum	\$13,314	71.9%	0.719	= Bracket rates * 0.719
Median	\$18,721	101.1%	1.011	= Bracket rates * 1.011
Maximum	\$25,738	138.9%	1.389	= Bracket rates * 1.389
Mode	\$20,771	112.1%	1.121	= Bracket rates * 1.121



Option 2: In Option 2, the HS property tax will no longer be available as a flexible lever

- Recall that Vermont's Education Fund is different than other funds
 - Under the current system, education property tax rates are set to raise the required level of revenues to fund education
- With Option 2, revenues raised by the EIT will not directly match revenues required to fund education¹
 - Revenues may come in higher or lower than forecast
 - This is similar to the current construct of the General Fund
- Revenues may be harder to forecast than GF income taxes, as they will be adjusted by district spending decisions
 - Revenues could still be forecasted, but the process would differ from current forecasting exercises (like for the Personal Income Tax (PIT))

Note: 1) This issue is similar to other State funds.



Option 2: There are 3 potential options to use as flexible lever for Education Fund surpluses and deficits

- a) Increase the size of the Education Fund reserve, or create an additional reserve
 - This reserve could be added to in surplus years and drawn from in deficit years
 - Expectations would need to be realigned about reserve needs and intended use as volatility may require its use more frequently than is current practice
 - b) Maintain the Non-Homestead (NHS) property tax as a flexible lever
 - This would be the consistent with current law
 - If the NHS is the only flexible lever, it will be more volatile than it is currently
 - c) Adjust the EIT rates
 - If the revenues come in higher or lower than forecasted, rates could be adjusted uniformly up or down to account for the difference
- Or some combination of these three



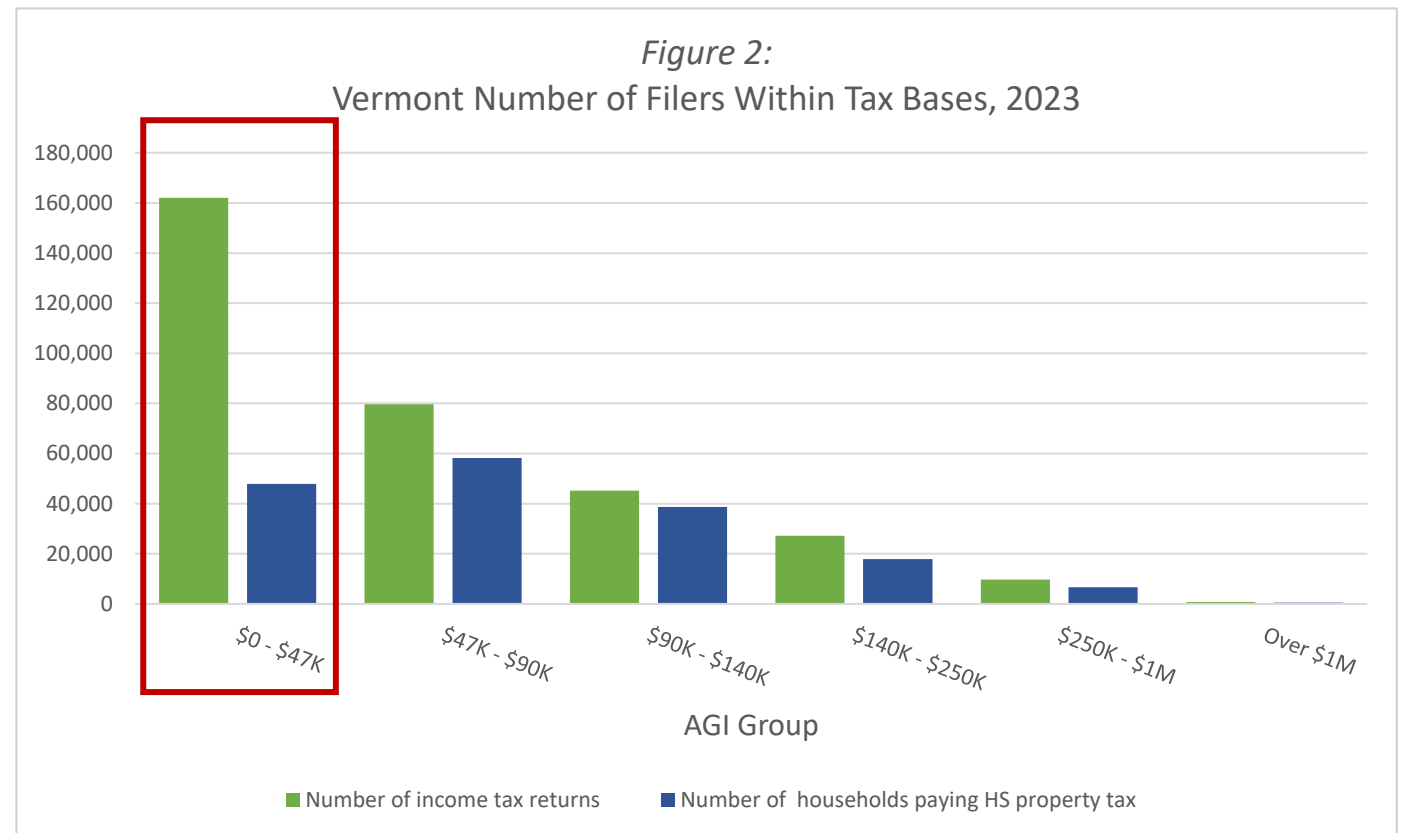
Section C:

Tax incidence of Option 1 and Option 2



An EIT for all resident income filers would significantly expand number (and groups) of people paying education tax

- Both Option 1 and Option 2 would expand the education tax to all resident income filers
- The number of resident income tax filers is approximately double the number of HS households
 - Approx. 170,000 HS households pay the HS property tax
 - Approx. 325,000 returns for the income tax
- This results in a difference of approximately 155,000 individuals/households
 - Almost 75% of the discrepancy is concentrated in the AGI group under \$47,000



Unpacking the difference between filers and homestead households

- The 155,000 difference in filers represents multiple different groups
 - Significant numbers of people would be newly responsible for an education tax as compared to current law
- The group of 155,000 filers includes a wide group of potential people:
 - All income filers who are not homestead owners
 - Biggest likely group: renters
 - People who are should be (but are not) filing a HS declaration
 - Multiple filers that may be combined within a single HS household
 - Married filing separate, live in the same home
 - Parents and working child live together, child is no longer a dependent and files a separate income return
 - Students and other young workers living in dorms/not paying rent



The less that is raised by one tax base, the more that needs to be raised by another

- All modeling assumes the same amount of revenues need to be raised that are currently being raised by the entire net homestead property tax
 - This reflects a zero-sum game – the less that is raised by one tax base, the more that needs to be raised by another
- Both Option 1 and Option 2 expand the education tax base and the number of payers meaning 2 different groups need to be analyzed:
 - People who own homestead property (and are currently taxed)
 - And people who do not own homestead property



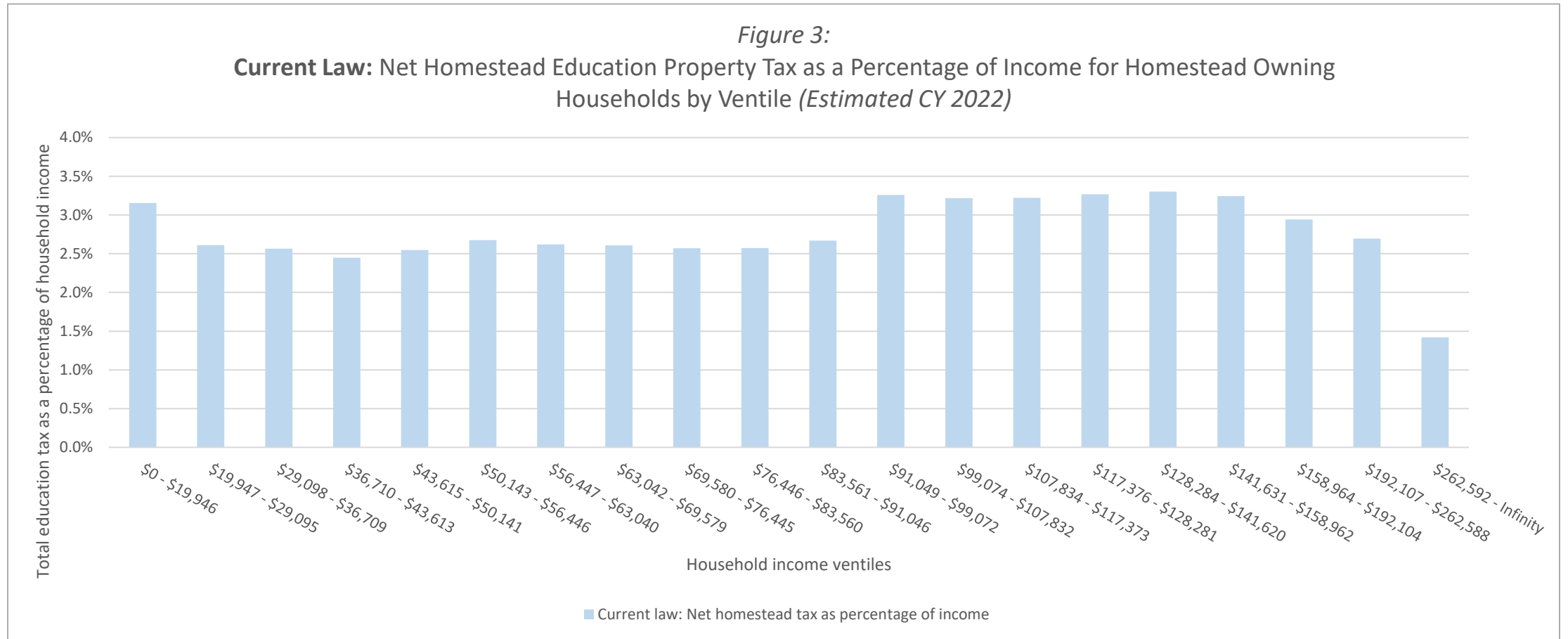
Section D:

Education taxes as a percentage of income for homestead owning households

Modeling and considerations for homestead owning households under Option 1
and Option 2



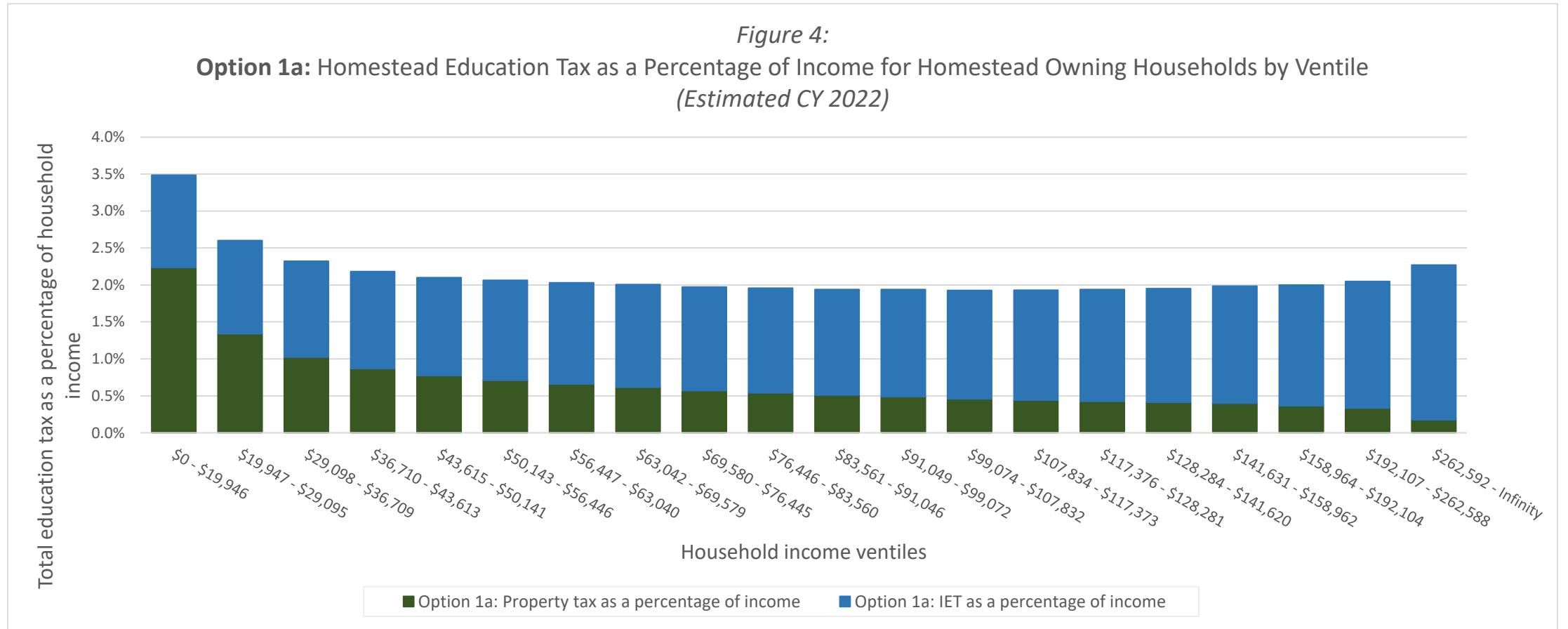
Current Law: Education taxes as a percentage of income for homestead owning households



Option 1a: Education taxes as a percentage of income for homestead owning households

Figure 4:

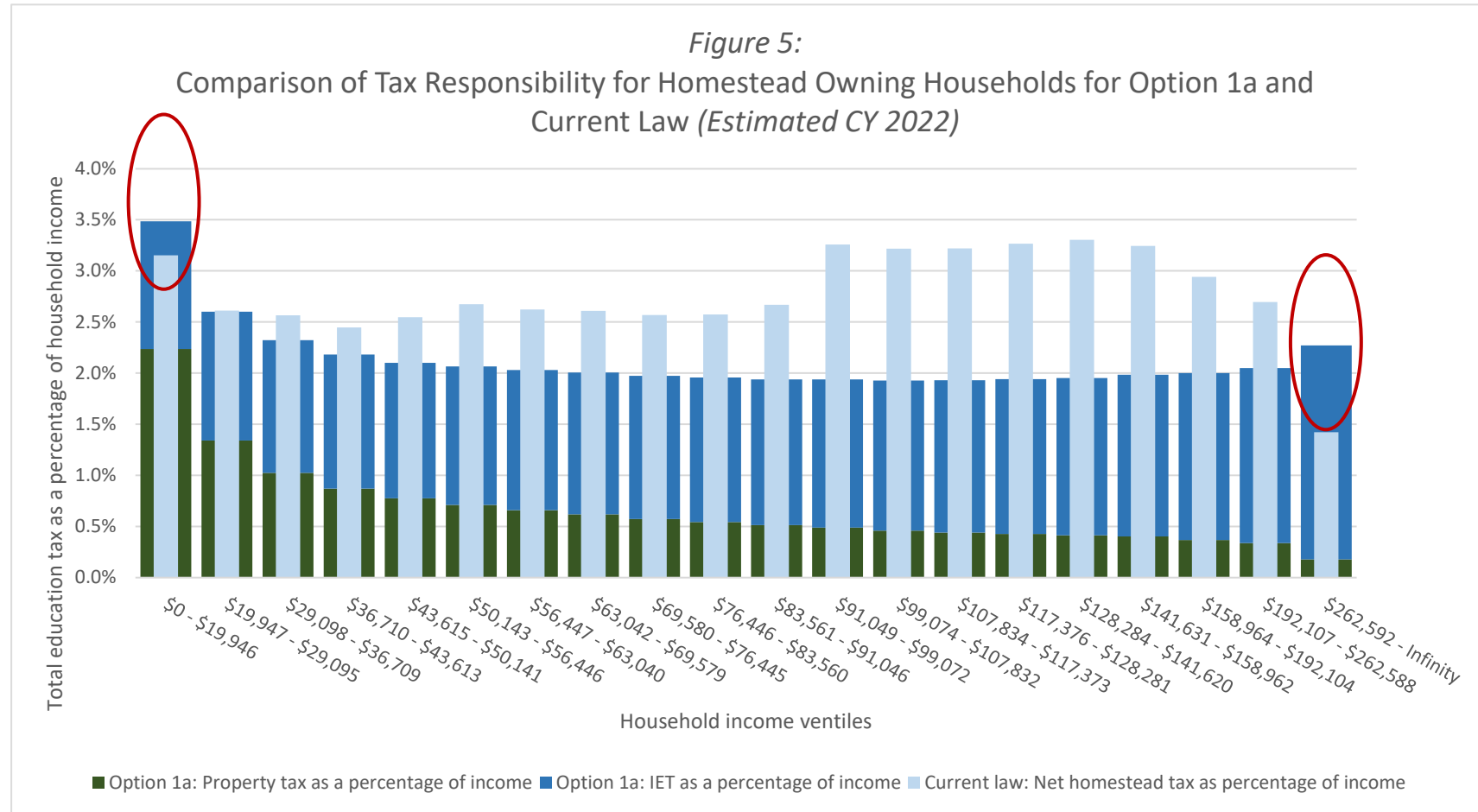
Option 1a: Homestead Education Tax as a Percentage of Income for Homestead Owning Households by Ventile
(Estimated CY 2022)



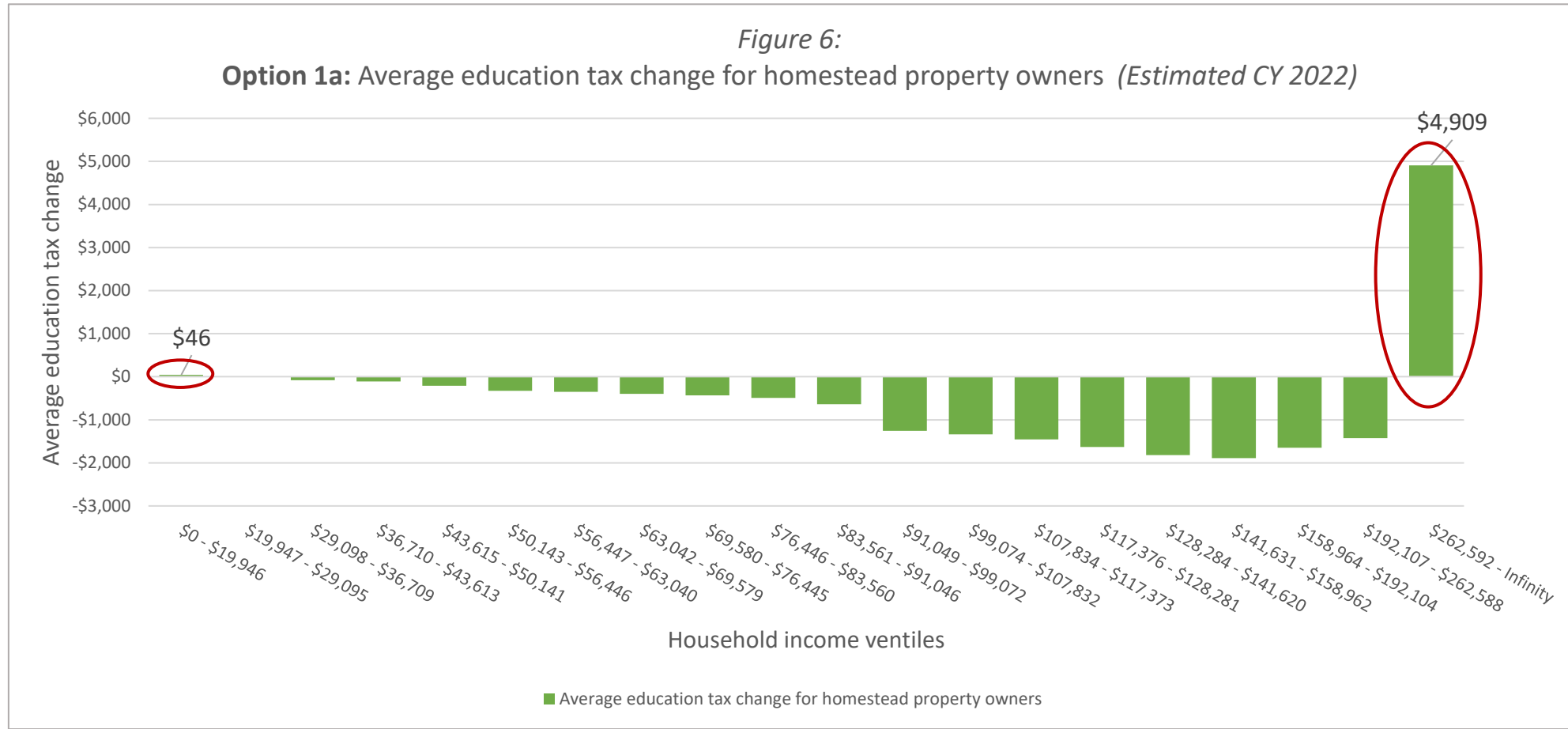
Option 1a: Comparison of Option 1a and Current Law for homestead owning households' education taxes as a percentage of income

Compared to current law, under Option 1a homestead owning households in the...

- Lowest ventile pays *more* in total education tax as percentage of income
 - This is because the PTC/circuit breaker limits this ventile to paying very little in the current system
- Middle 18 ventiles pay *less* in total education tax as percentage of income
- Top ventile pays *more* in total education tax as percentage of income



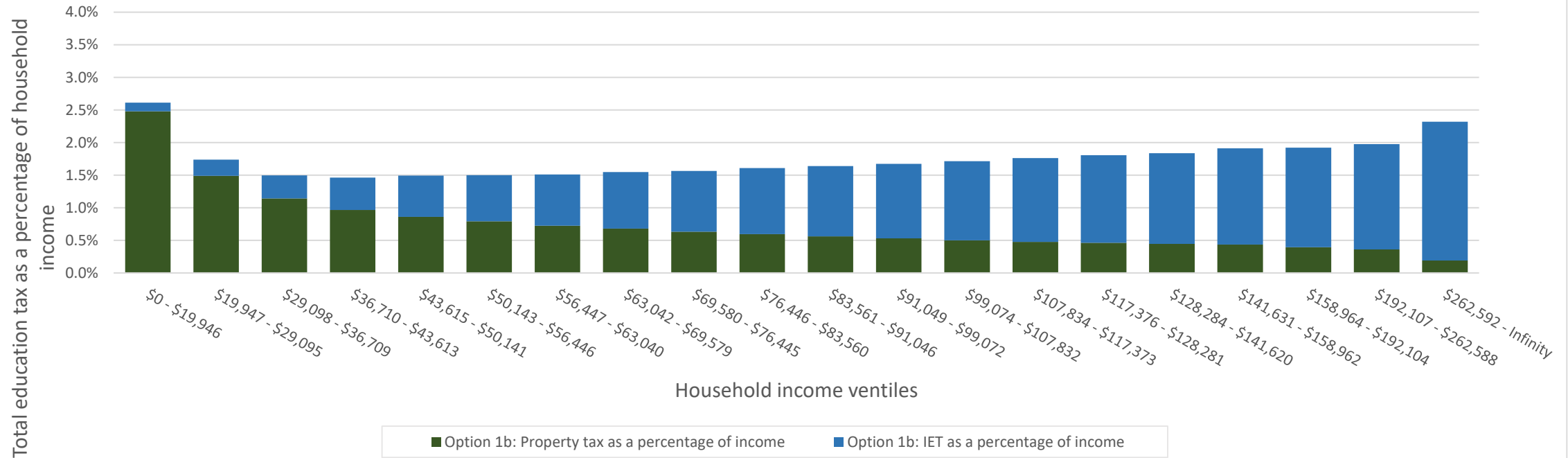
Option 1a: Average tax change for homestead owning households



Option 1b: Education taxes as a percentage of income for homestead owning households by ventile

Figure 7:

Option 1b: Homestead Education Tax as a Percentage of Income for Homestead Owning Households by Ventile (Estimated CY 2022)



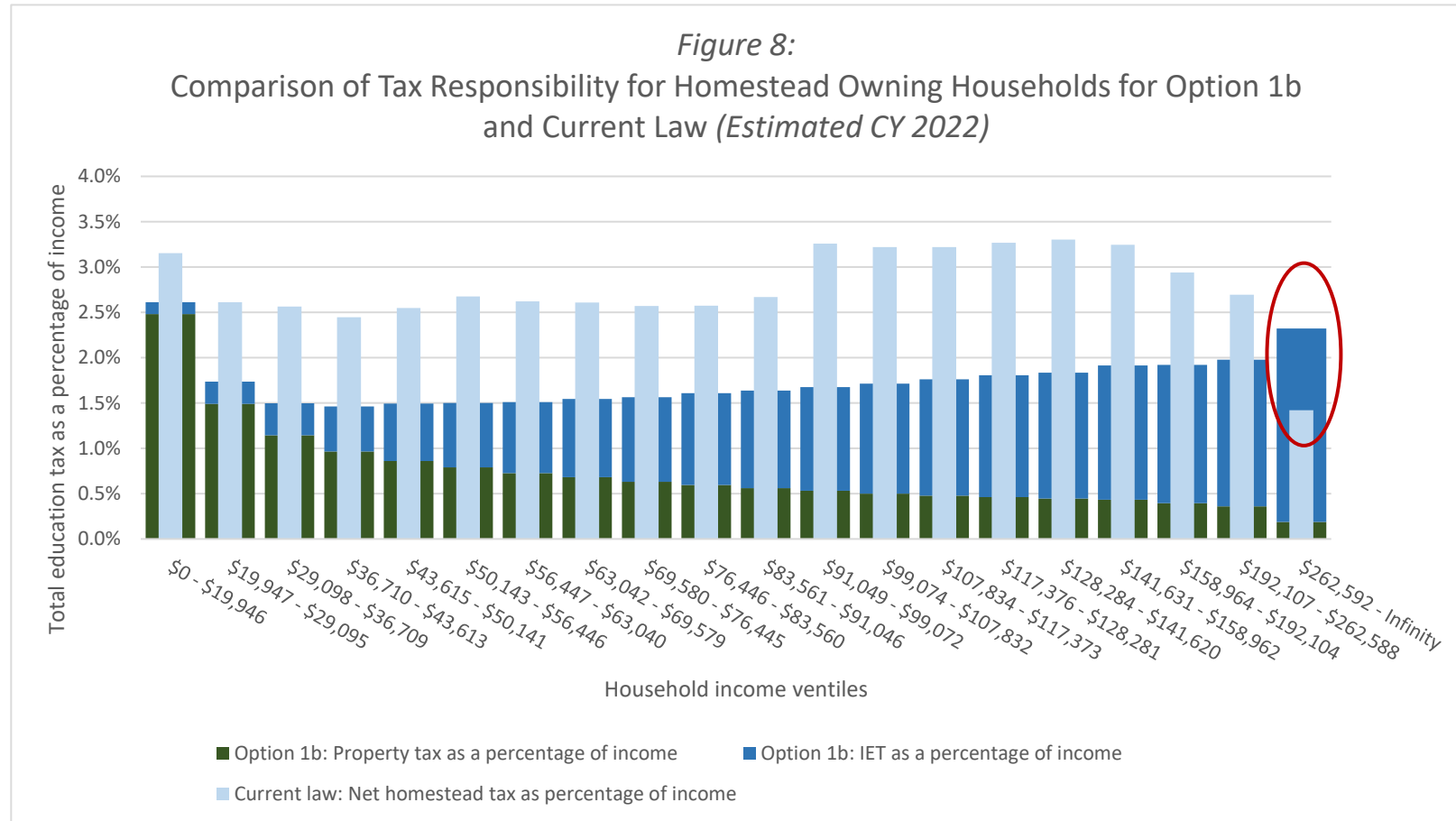
Note: Following modeling results from Option 1a., JFO found modeling results may not match committee’s desired outcomes. As such, JFO redesigned the brackets for Option 1b. so the lowest ventile would be less impacted.



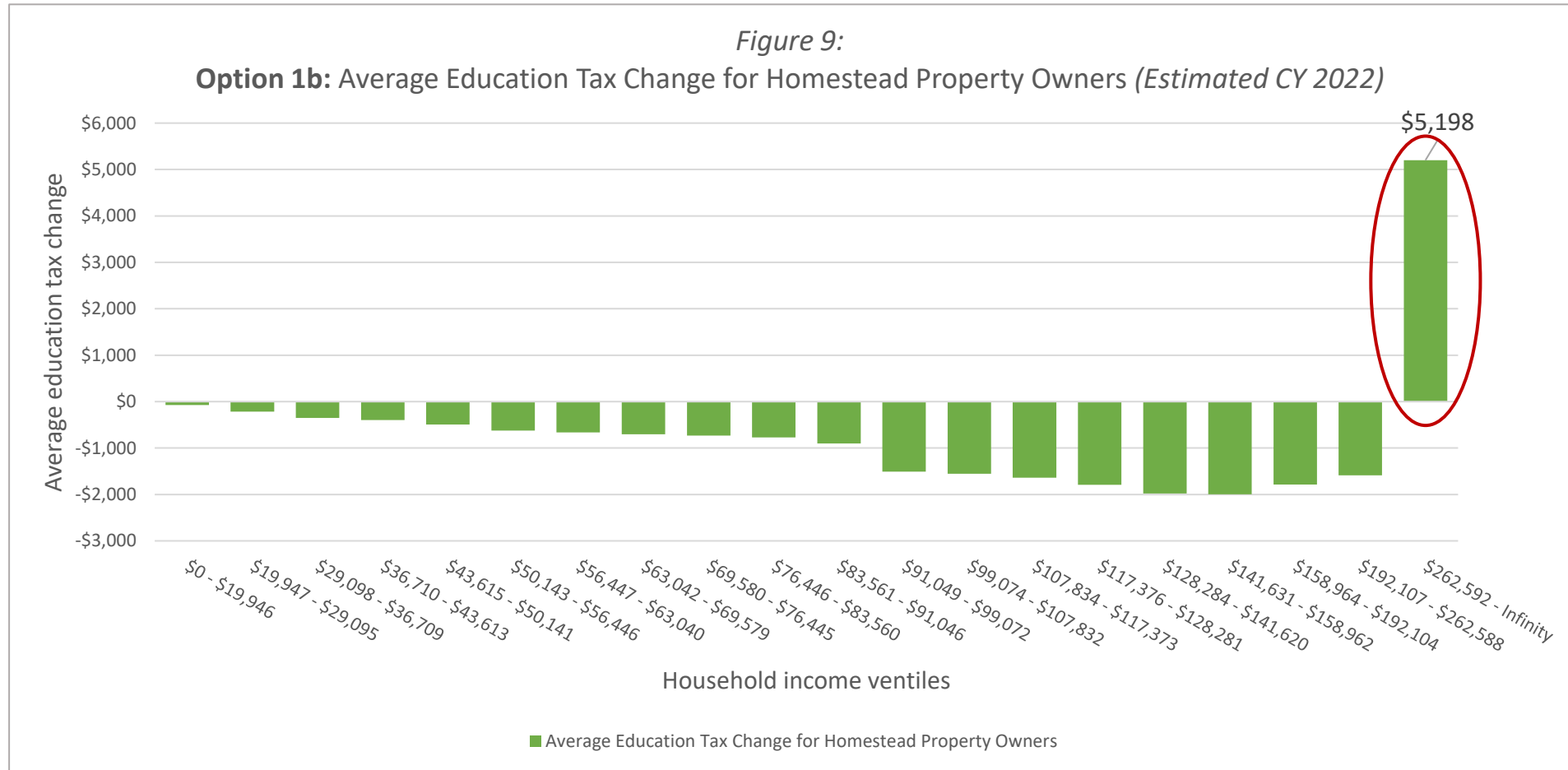
Option 1b: Comparison of Option 1b and Current Law for homestead owning households' education taxes as a percentage of income

Compared to current law, under Option 1b homestead owning households in the...

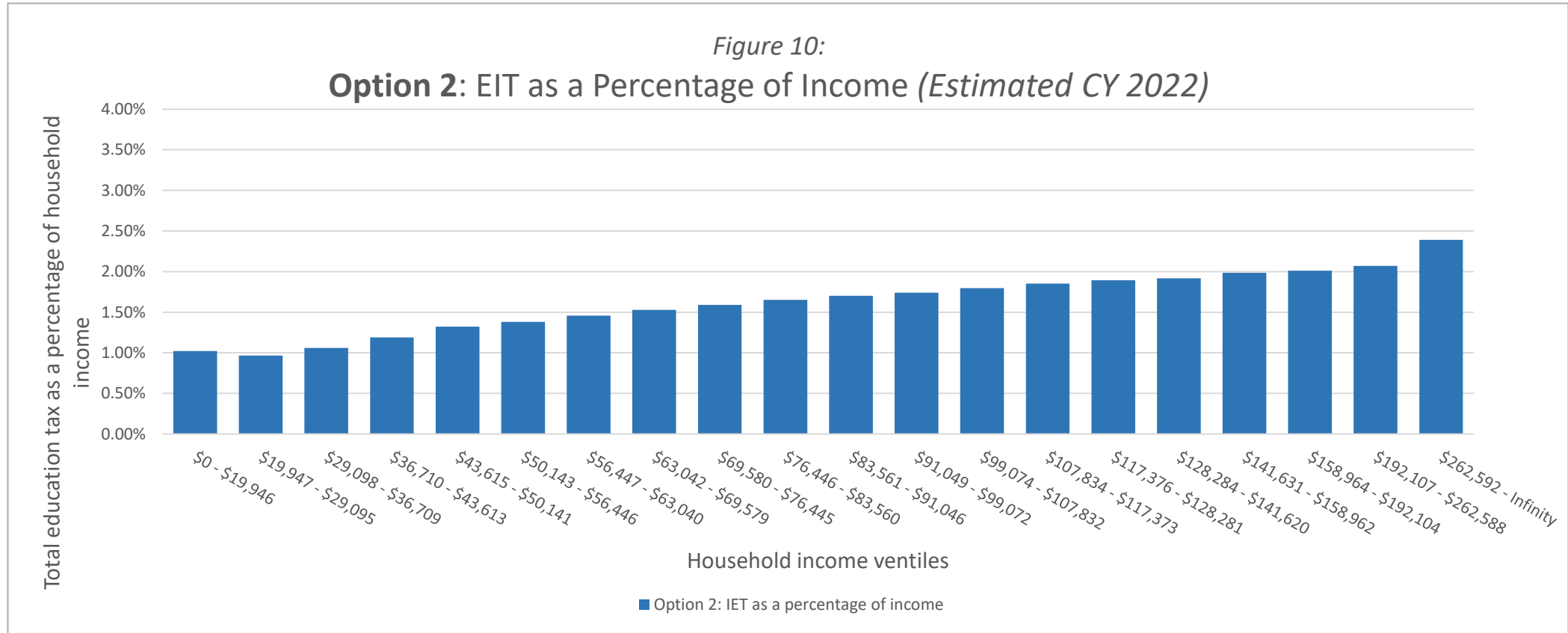
- Lowest 19 ventiles pay *less* in total education tax as percentage of income
- Top ventile pays *more* in total education tax as percentage of income
- BUT: it's still regressive for the bottom two ventiles because of the HS property tax



Option 1b.: Average tax change for homestead owning households



Option 2: Education taxes as a percentage of income for homestead owning households



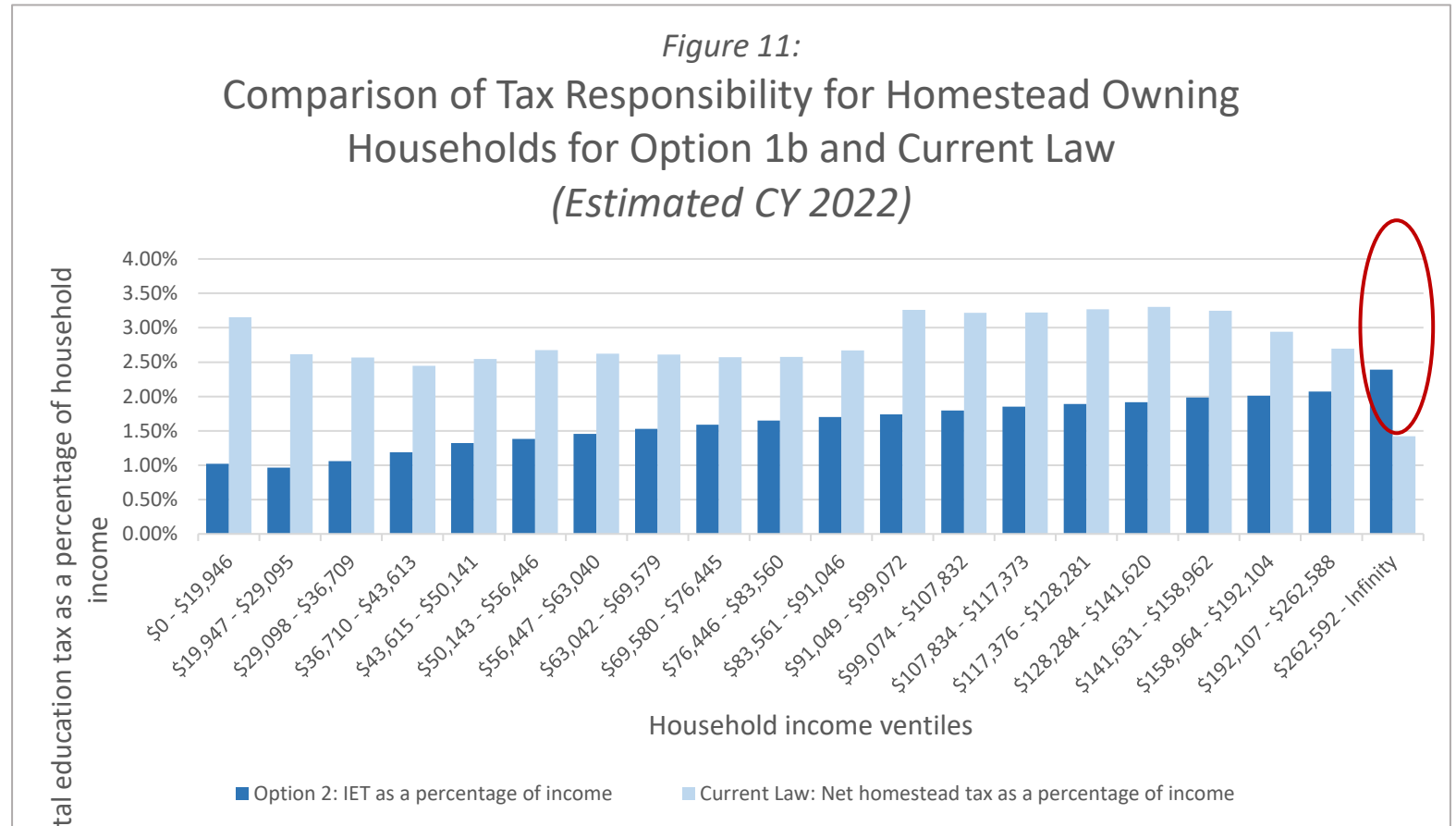
Note: The lowest ventile is higher because of the mismatch between household income and AGI. This ventile contains households where household income may be positive, but AGI is negative for individual members. Or alternatively, multiple people in the household have positive AGI with smaller household income



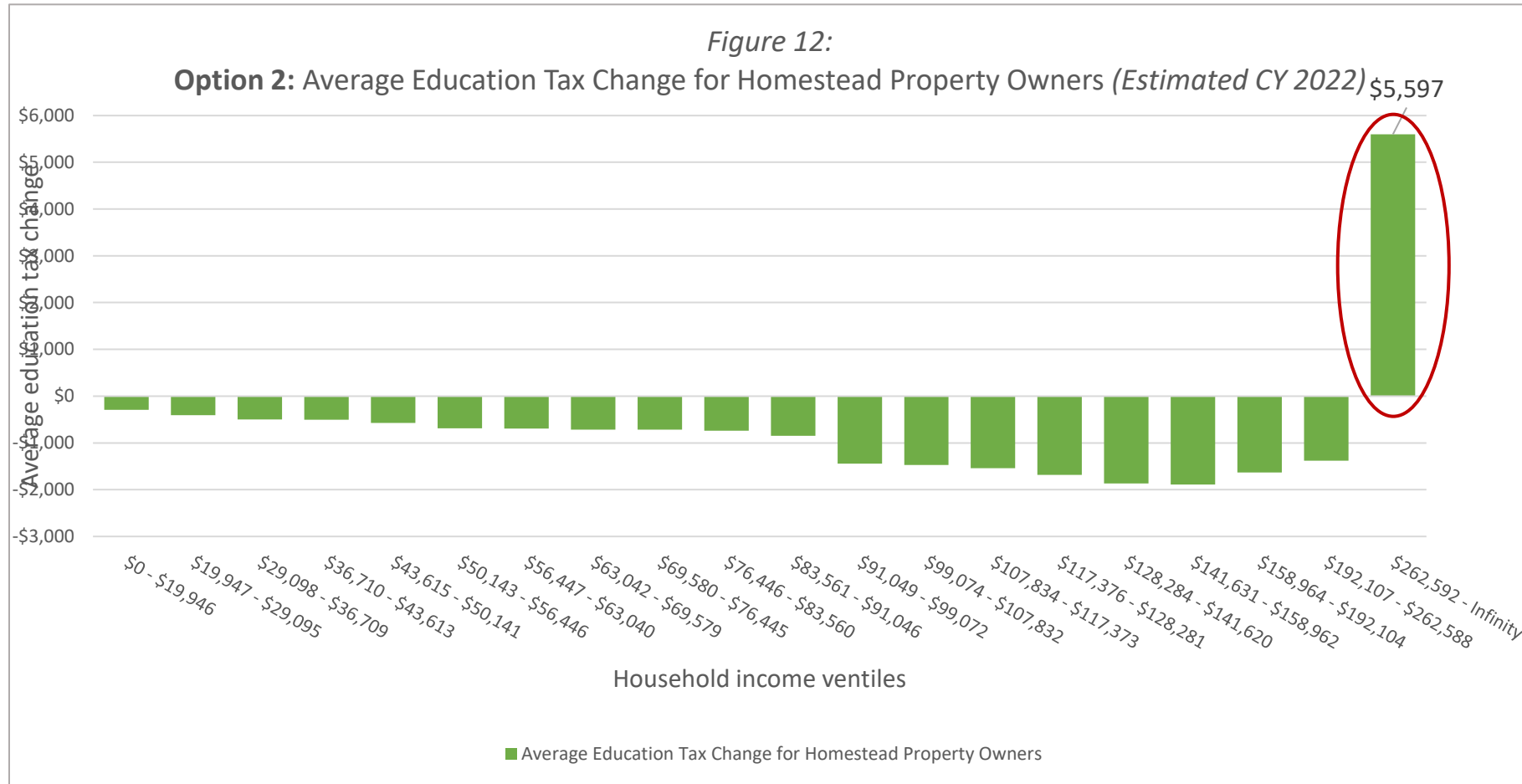
Option 2: Comparison of Option 2 and Current Law for homestead owning households' education taxes as a percentage of income

Compared to current law, under Option 1b homestead owning households in the...

- Lowest 19 ventiles pay *less* in total education tax as percentage of income
- Top ventile pays *more* in total education tax as percentage of income



Option 2: Average tax change for homestead owning households



Takeaways

- For most homeowners, the amount paid towards education will decrease because many more people who aren't homeowners will pay more
- Under both Option 1 and Option 2, the highest ventile will pay a larger percentage of income toward education
- It is very difficult to make the lowest ventiles pay less in tax/eliminate complete regressivity because the PTC/circuit breaker means those ventiles pay very little in the current system
- Option 2 allows for more flexibility to adjust the progressivity of the tax responsibility



Section D (cont.)

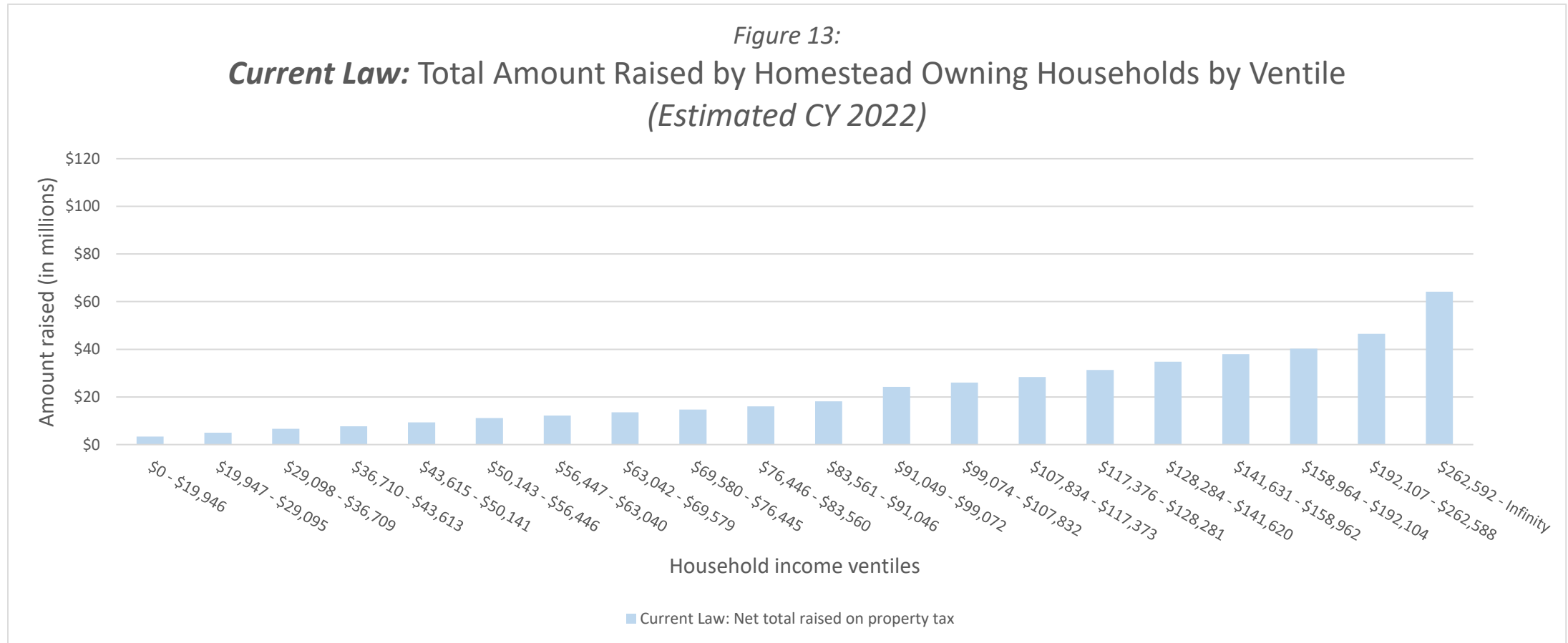
Total education taxes raised by homestead owning households

Modeling and considerations for homestead owning households under Option 1
and Option 2



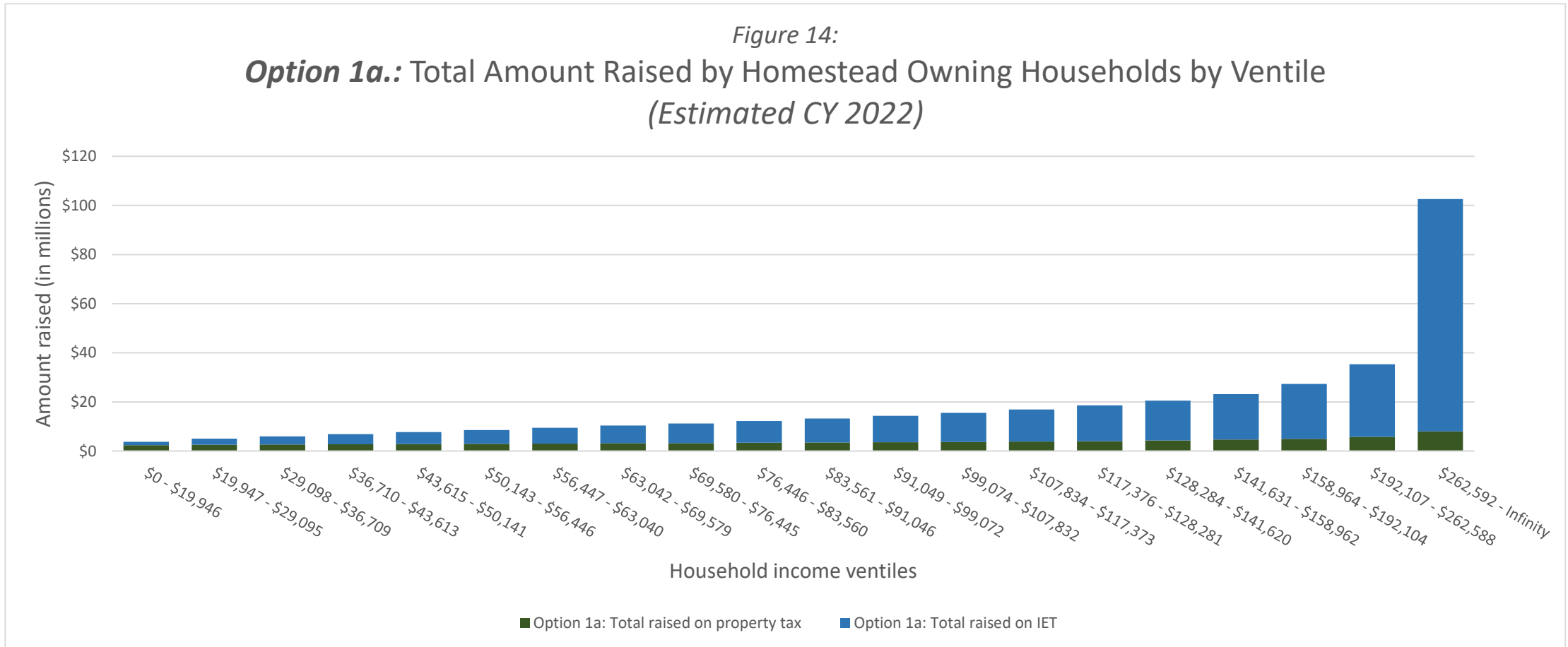
Current Law: Total education taxes raised by homestead owning households

Figure 13:
Current Law: Total Amount Raised by Homestead Owning Households by Ventile
 (Estimated CY 2022)



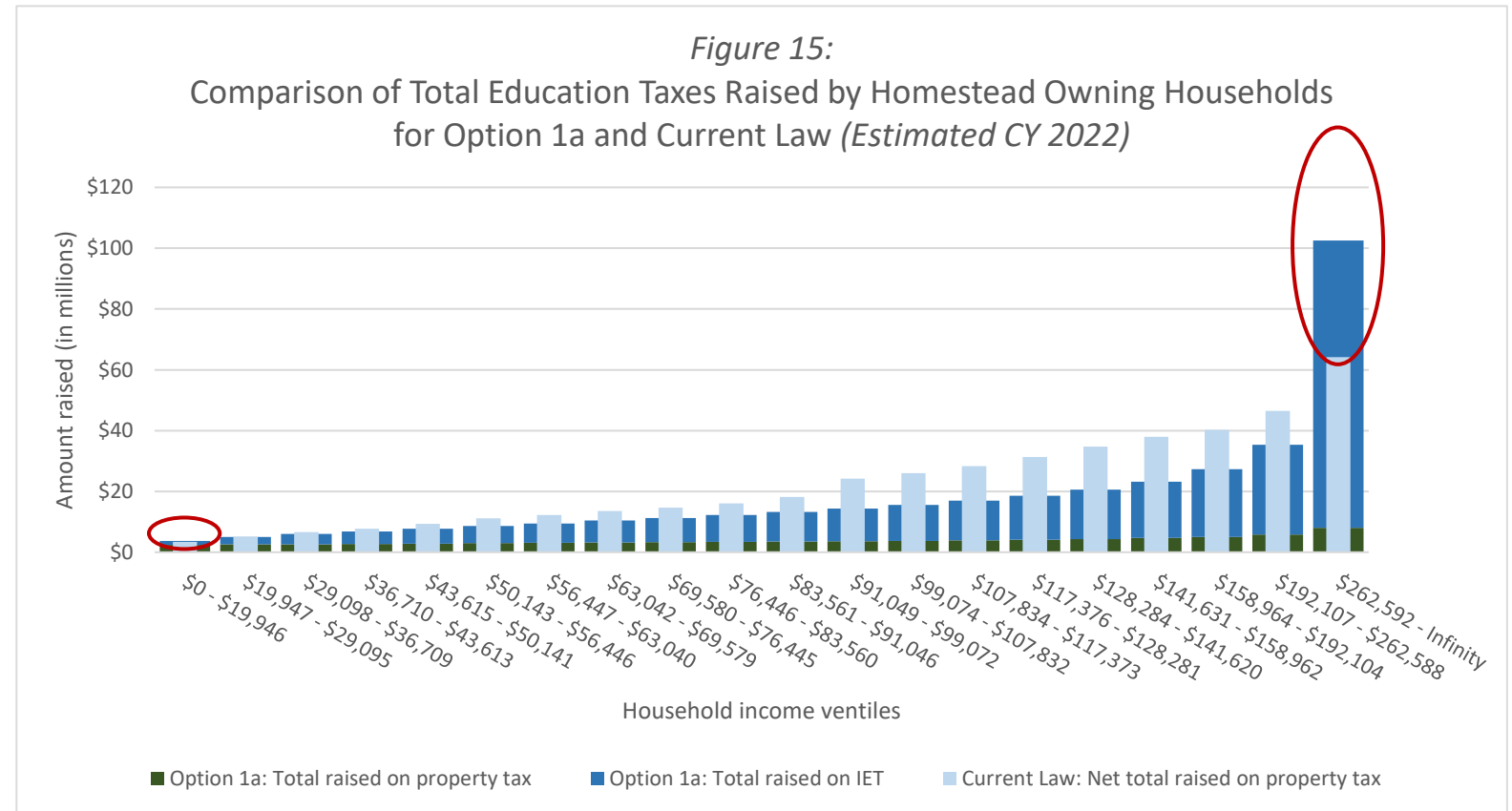
Option 1a: Total education taxes raised by homestead owning households

Figure 14:
Option 1a.: Total Amount Raised by Homestead Owning Households by Ventile
 (Estimated CY 2022)



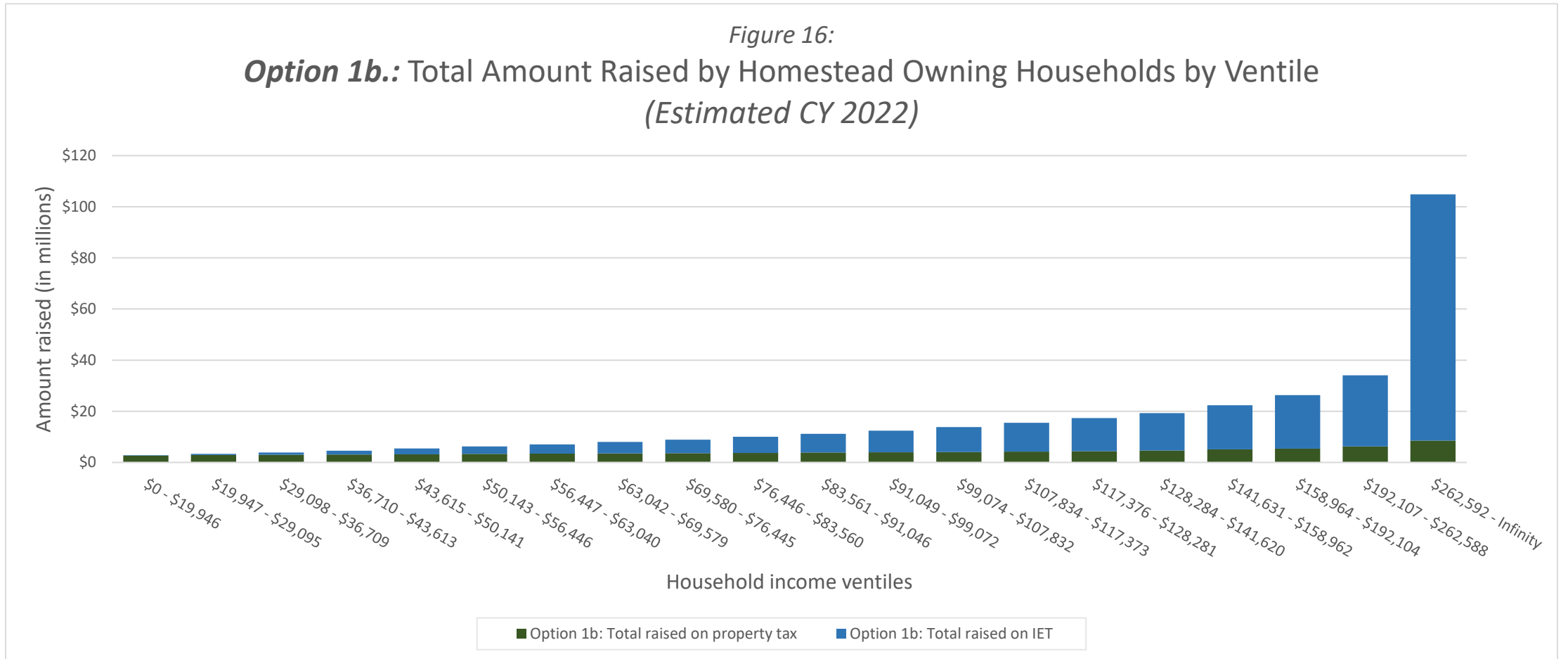
Option 1a: Comparison of Option 1a and Current Law for the total amount of education taxes raised by homestead owning households

- In Option 1a, **homestead owning households are raising \$91 million less than what they raise under current law**
- Compared to current law, under Option 1a all homestead owning households in the...
 - Lowest ventile pays *more* in total taxes to the education fund
 - Middle 18 ventiles pay significantly *less* in total taxes to the education fund
 - Highest ventile pays significantly *more* in total taxes to the education fund



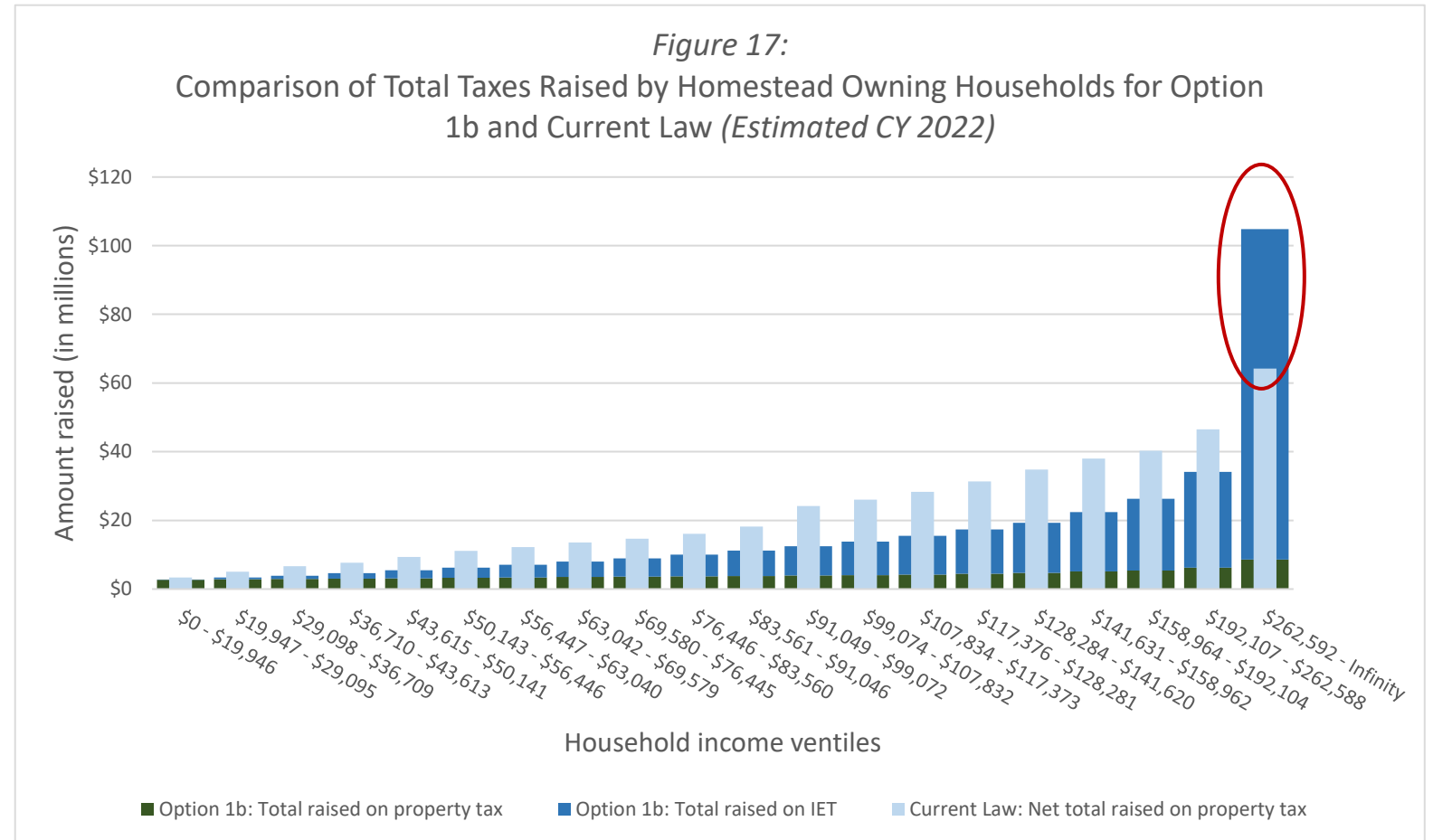
Option 1b: Total education taxes raised by homestead owning households

Figure 16:
Option 1b.: Total Amount Raised by Homestead Owning Households by Ventile
 (Estimated CY 2022)



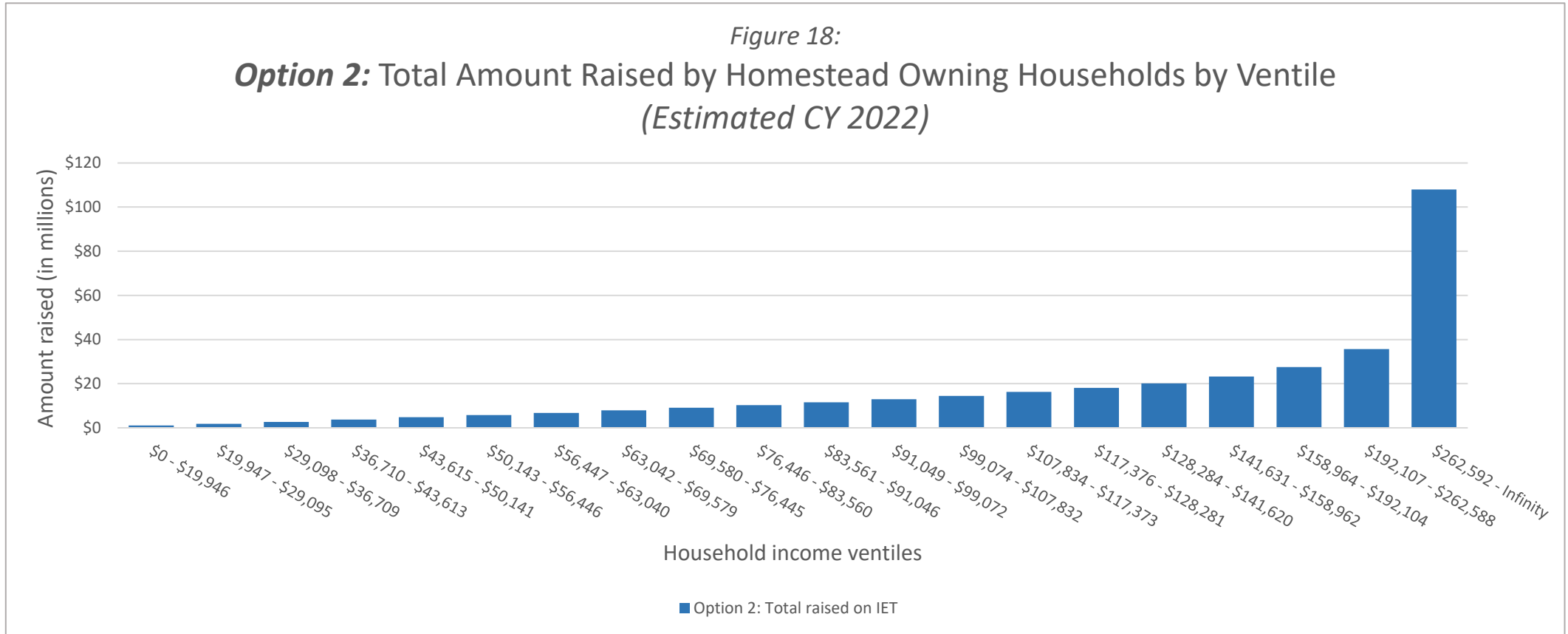
Option 1b: Comparison of Option 1b and Current Law for the total amount of education taxes raised by homestead owning households

- In Option 1b, **homestead owning households are raising \$122 million less than what they raise under current law**
- Compared to current law, under Option 1b all homestead owning households in the...
 - Lowest 19 ventiles pay *less* in total taxes to the education fund
 - Highest ventile pays significantly *more* in total taxes to the education fund



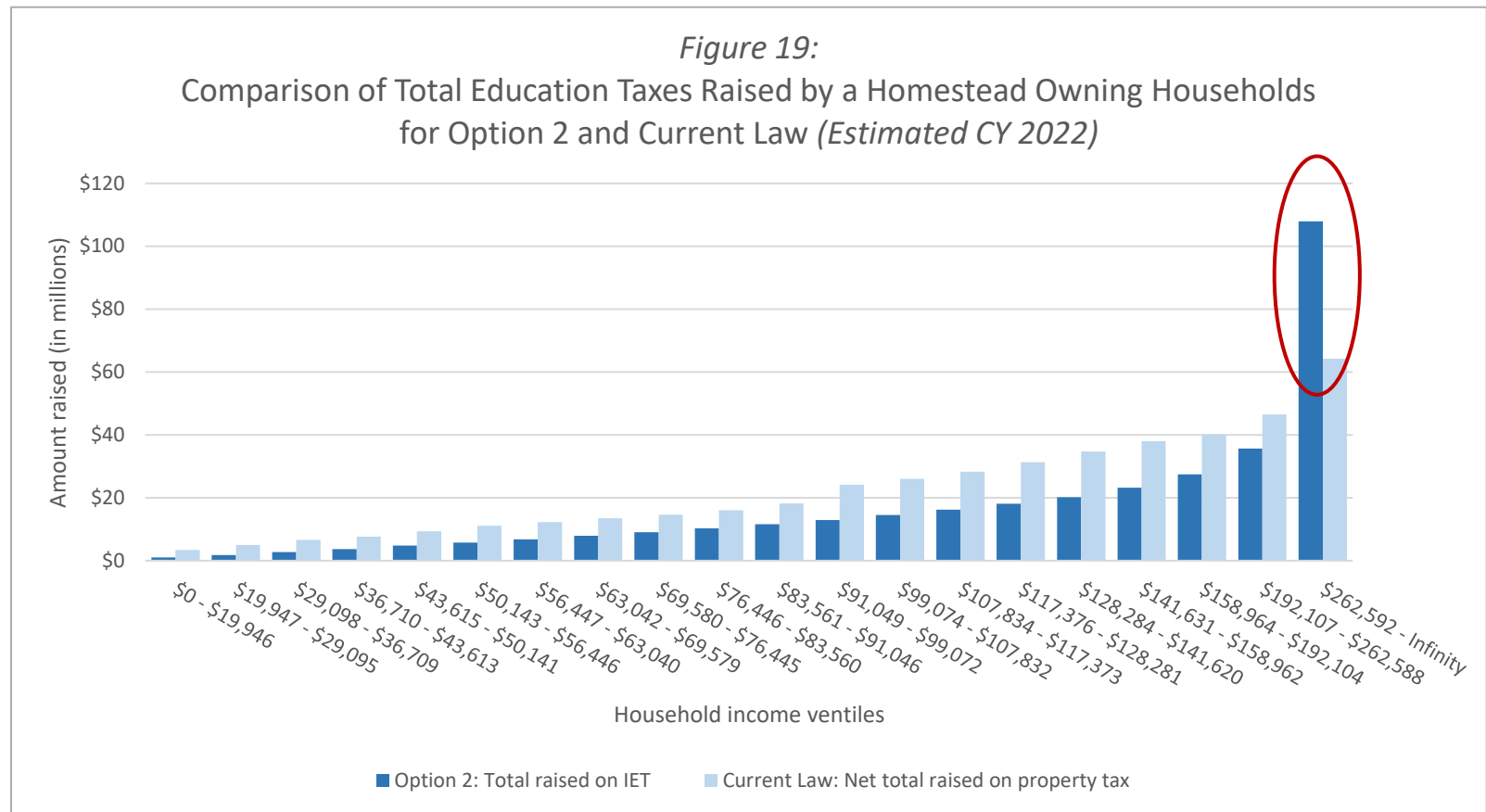
Option 2: Total education taxes raised by homestead owning households

Figure 18:
Option 2: Total Amount Raised by Homestead Owning Households by Ventile
(Estimated CY 2022)



Option 2: Comparison of Option 2 and Current Law for the total amount of education taxes raised by homestead owning households

- In Option 2, **homestead owning households are raising \$132 million less than what they raise under current law**
- Compared to current law, under Option 2 all homestead owning households in the...
 - Lowest 19 ventiles pay *less* in total taxes to the education fund
 - Highest ventile pays *more* in total taxes to the education fund



Takeaways

- Under both Option 1 and Option 2, the highest ventile will pay a significantly larger total share of education fund revenues
- The reduction in total share of education fund revenues from the lower ventiles is offset by 2 parts: the highest ventile's increase, *and* a new tax responsibility on people who do not own homestead property



Section E:

New education tax responsibility for people who do not own homesteads

Modeling and considerations for people who do not own homesteads under Option 1 and Option 2



Under both Option 1 and Option 2, some of the education tax responsibility would be shifted *from* property owners *to* non-property owners

- Both options expand the direct education tax responsibility *from* homestead property owning households *to* all resident income tax filers
- Under current law, homestead property owning households pay a net total of approx. \$460 million in direct education tax
- Under both options, homestead property households would pay less while other income resident filers would cover this difference with a new tax responsibility
 - Modeling results show:

Table 7:

Tax Base	Current Law	Option 1		Option 2 ¹
		Option 1a	Option 1b	
Homestead property owners	\$460 million	\$369 million	\$338 million	\$342 million
Other resident income filers (Do not own homestead property)	-	\$91 million	\$122 million	\$142 million

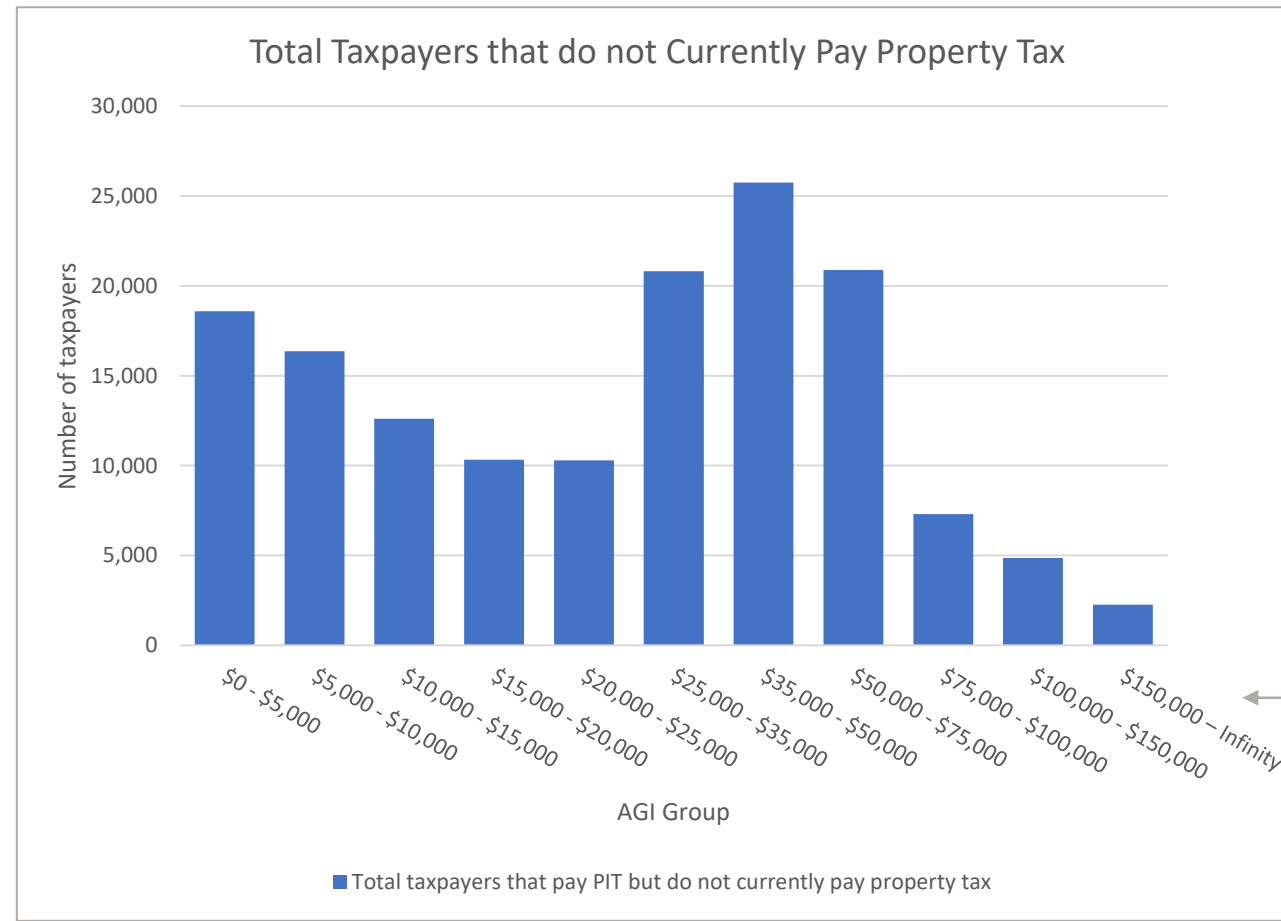
New tax responsibility for these filers

Note: 1) Tax revenues from homestead property owners and other resident income filers do not sum to \$460 million due to modeling complexities



Who would receive a new education tax responsibility?

- There are approximately 150,000 – 160,000 taxpayers who would have a new direct education tax responsibility
- The population of resident income filers is varied
 - Impacts are also varied
- **JFO is unable to model the average tax increase by new taxpayers**, insights that can be gained:
 - There are about 150,000 – 160,000 new payers
 - The income distribution of these people seems to be skewed to the lower end of AGI groups



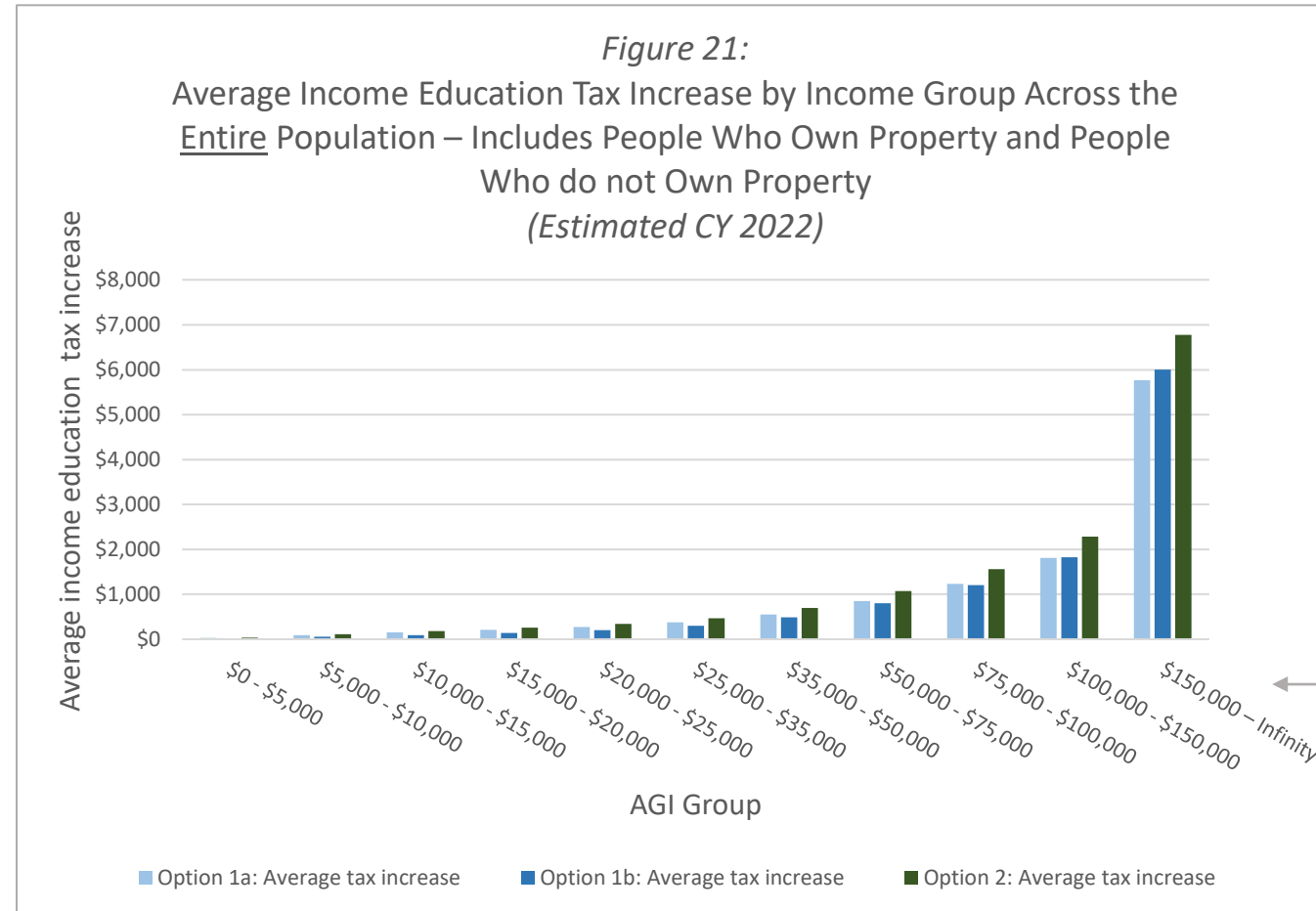
Note: **Scale differs from earlier figures.** Here, AGI Groups are from US Census analysis of renters by income

Source: Analysis by JFO, Data from Chainbridge Tax Model



Comparison of average tax change across the entire population Option 1a, Option 1b, and Option 2

- Because JFO is unable to model the average tax increase by new taxpayers, insight may be gained from examining the average tax increase across the entire population
- Average tax increase grows by AGI Group

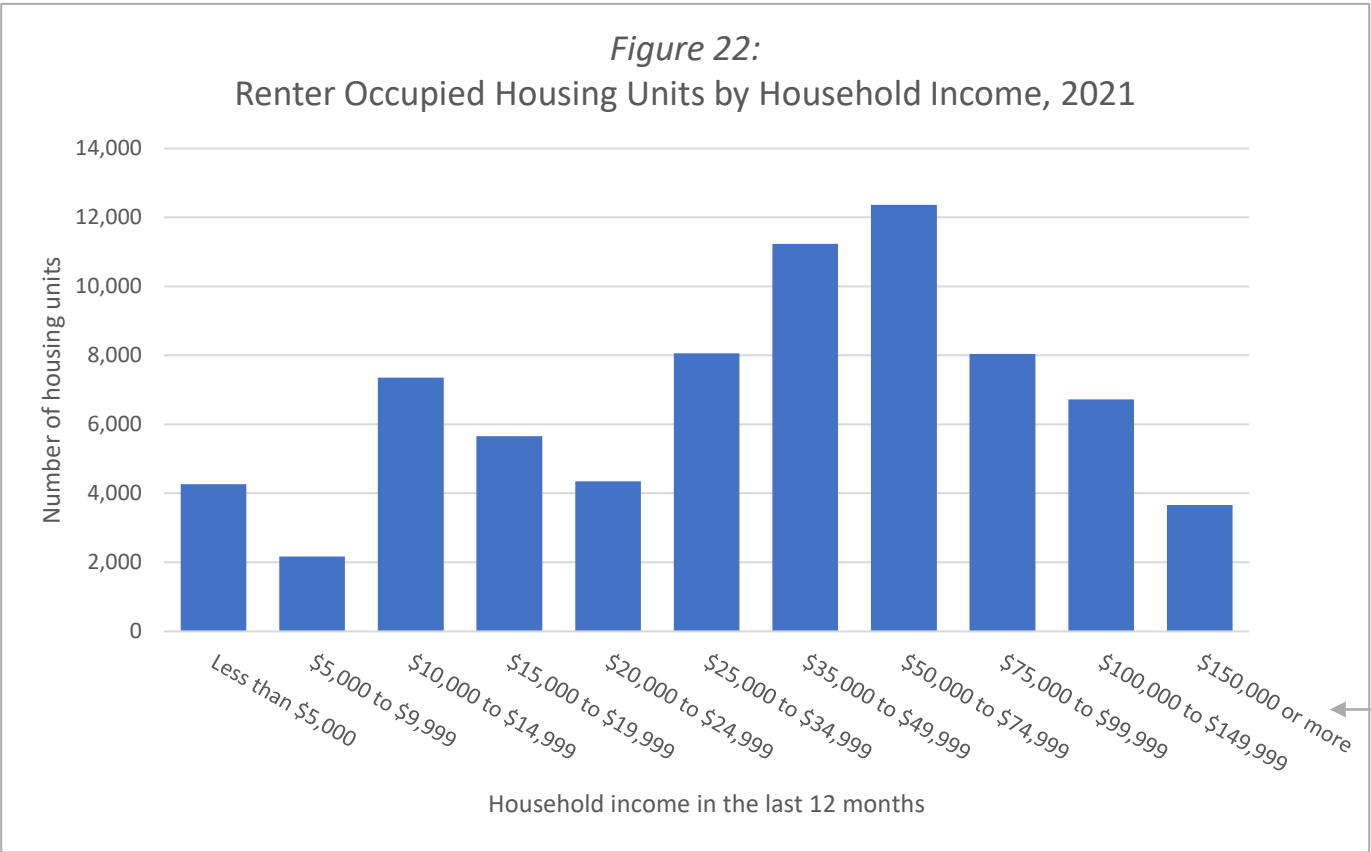


Note: Scale differs from earlier figures. Here, AGI Groups are from US Census analysis of renters by income



Estimating impacts on renters

- There are estimated ~74,000 renter households in Vermont¹
- There may be multiple filers living in a single renter household



Source: Analysis by JFO, Data from [Census 1-year estimates for 2021 ACS](#)

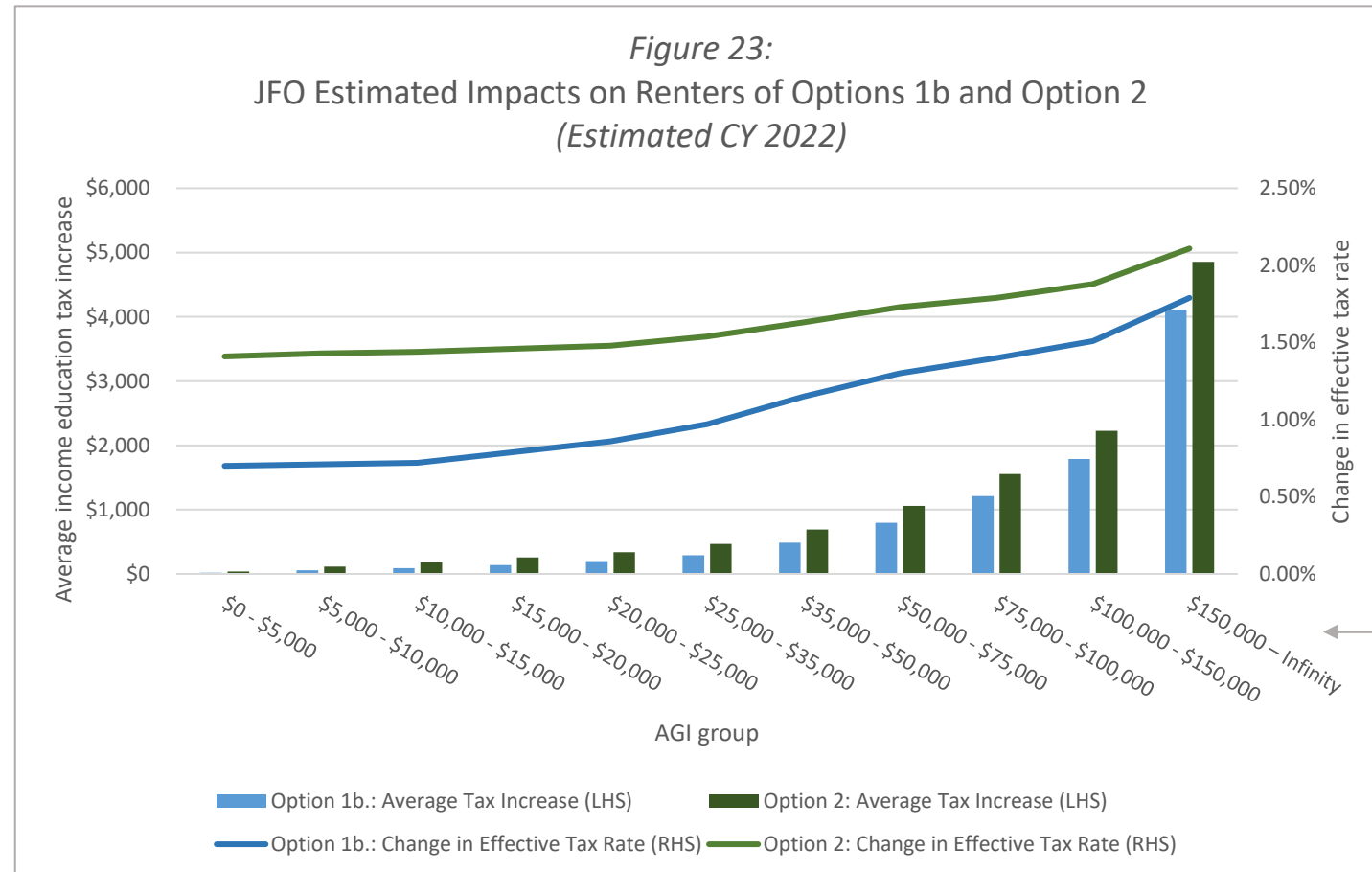
Note: Scale differs from earlier figures. Here, AGI Groups are from US Census analysis of renters by income



Note: 1) [Census 1-year estimates for 2021 ACS](#)

Under both options, a portion of the resident income filers that would see a new, direct education tax responsibility would be renters

- Under Option 1, JFO estimates that renters would bear about \$40-\$60 million in new tax responsibility
- Under Option 2, JFO estimates that renters would bear \$65-80 million in new tax responsibility
- The change in income EFT across AGI groups would vary depending on the bracket structure of the EIT income brackets



Note: Scale differs from earlier figures. Here, AGI Groups are from US Census analysis of renters by income



Note: 1) [Census 1-year estimates for 2021 ACS](#)

Takeaways

- Some of the education tax responsibility would shift from property owners to non-property owners
 - Depending on the structure of the tax, approximately 10% –30% of the current net homestead property tax responsibility would shift from homestead property owners to people who do not own homestead property
- An EIT for all resident income filers would significantly expand number (and groups) of people paying education tax



Section F:

Cost containment and local spending decisions under both options



Current Law: Calculating spending

- Under current law, all homestead property taxes (and corresponding income sensitivity) are adjusted by local spending decisions
 - For example, under current law example impacts of spending decisions in a large district would be:

Table 8:

Statewide ES/EP		Tax Rate	Gross HS eq. bill (<i>without income sensitivity</i>) for		
			\$200,000 HS	\$400,000 HS	\$600,000 HS
Minimum	\$14,335	\$1.077	\$2,154	\$4,308	\$6,462
Average	\$18,524	\$1.391	\$2,782	\$5,564	\$8,346
Maximum	\$25,738	\$1.933	\$3,866	\$7,732	\$11,598
Overall change moving from minimum to maximum in ES/EP		\$0.856	\$1,712	\$3,424	\$5,136

This means a school district increasing its ES/EP from the statewide *minimum* to the statewide *maximum* would be a total \$5,136 bill increase for homesteads valued at \$600,000 that do not receive any income sensitivity



Option 1: What is sufficient “skin in the game” to influence spending decisions?

- Under this option, the HS rate would be the only direct tie between locally voted education spending and the voters
- Modeled versions of Option 1 have a minimum HS property tax of \$0.13 and an average HS property tax of \$0.18
 - Under this scenario, example impacts of spending decisions in a large district would be:

Table 9:

Statewide ES/EP		Tax Rate	HS bill for		
			\$200,000 HS	\$400,000 HS	\$600,000 HS
Minimum	\$14,335	\$0.133	\$266	\$532	\$798
Average	\$18,524	\$0.172	\$344	\$688	\$1,032
Maximum	\$25,738	\$0.238	\$476	\$952	\$1,428
Overall change moving from minimum to maximum in ES/EP		\$0.105	\$210	\$420	\$630

This means a school district increasing its ES/EP from the statewide *minimum* to the statewide *maximum* would be a total \$630 bill increase for homesteads valued at \$600,000

- Is this enough to impact locally voted spending decisions?



Option 2: The effect of every dollar of school spending is felt equally across income levels as an increase in effective tax rate

- Adjusting the tax rates by the percentage spending above or below the average, results in significant adjustments in the tax paid by different income levels

Table 10:

Option 2: Hypothetical Effects of School Spending on Income Taxes Paid at Various Income Levels				
Adjusted Gross Income	\$35,000	\$65,000	\$125,000	\$300,000
State Average Per-Pupil Spending (\$18,524) <i>Increase in Effective Tax Rate</i>	\$538 1.54%	\$1,075 1.65%	\$2,363 1.89%	\$6,488 2.16%
State Minimum Per-Pupil Spending (\$14,335) <i>Increase in Effective Tax Rate</i>	\$417 1.19%	\$833 1.28%	\$1,831 1.46%	\$5,028 1.68%
State Maximum Per-Pupil Spending (\$25,738) <i>Increase in Effective Tax Rate</i>	\$747 2.13%	\$1,493 2.30%	\$3,282 2.63%	\$9,011 3.00%



Takeaways

- The current system shields lowest ventiles.
 - A 10% increase in EP/ES spending leads to almost no meaningful change for them.
 - Effectively, these groups face a maximum education tax rate capped by the circuit breaker dependent on their income
- Under Option 1, the HS rate would be the only direct tie between locally voted education spending and the voters
 - Because the HS rate is so minimal, Option 1's design means that spending decisions will have minimal impacts on tax bills
- Option 2's design means that the effect of every dollar of school spending is felt equally as an increase in effective tax rate
- Should some groups have more or less skin in the game?



Section G:

Final Takeaways/Considerations for Legislators

- All proposals presented today have large numbers of people with tax increases and those with tax decreases
 - For homeowners: within income ventiles or groups, whether someone pays more or less in tax is a function of both income and the value of their housesite.
 - Example: Two households, same income but one has a big house. The big house owner will receive a greater tax benefit.
- Who should bear the tax responsibility?
 - Should everyone in the state who makes income pay for education or just homeowners and business owners?
 - Should some groups have more or less skin in the game?
- To what extent should rates and bills be tied to local spending decisions?

