

An aerial photograph of Seattle, Washington, showing the city skyline, waterfront, and surrounding areas. The image is in grayscale and serves as a background for the text overlay.

Seattle's Sweetened Beverage Tax Evaluation: Impact on Prices 6-month results

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SBT IMPACT ON BEVERAGE PRICES

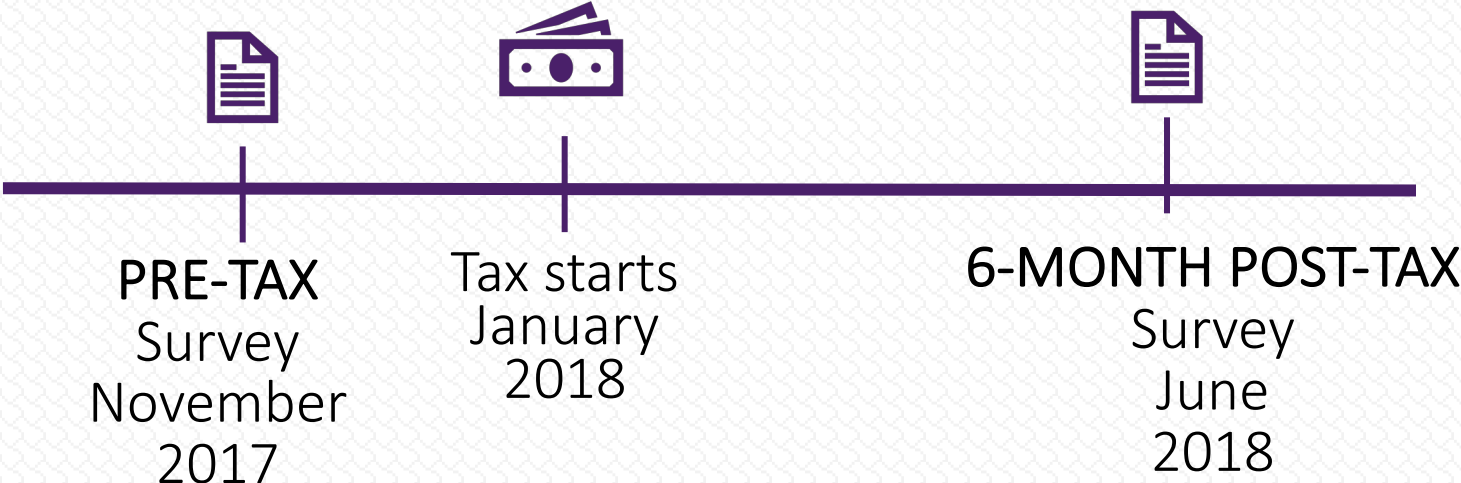
THE GOAL

To estimate the impact of the tax on the price of beverages subject to the tax.

THE BASICS

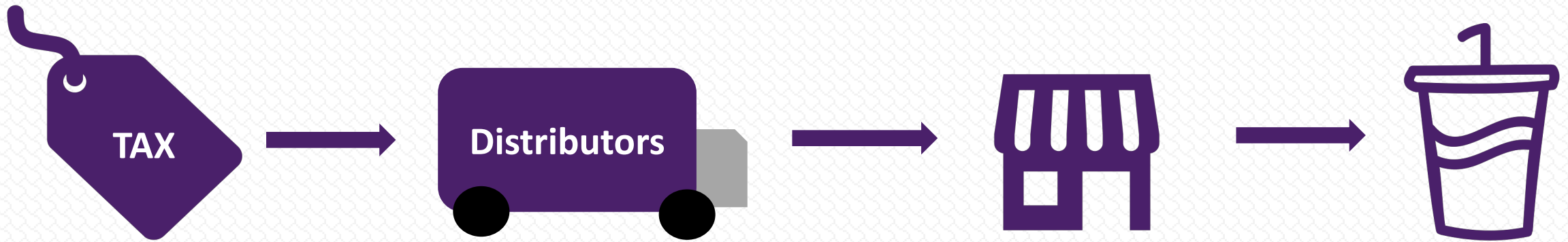
A RETAIL AUDIT PRE and POST TAX IMPLEMENTATION:

In-person surveys of beverage prices stores in **Seattle and Comparison Area** (Kent, Auburn, Federal Way) before and after tax:



SBT PRICE IMPACT PRICE PASS-THROUGH

TAX IS LEVIED ON DISTRIBUTORS, UNCLEAR WHETHER DISTRIBUTORS WOULD PASS ON THE COST OF THE TAX TO THE CONSUMER.



Methods & Results

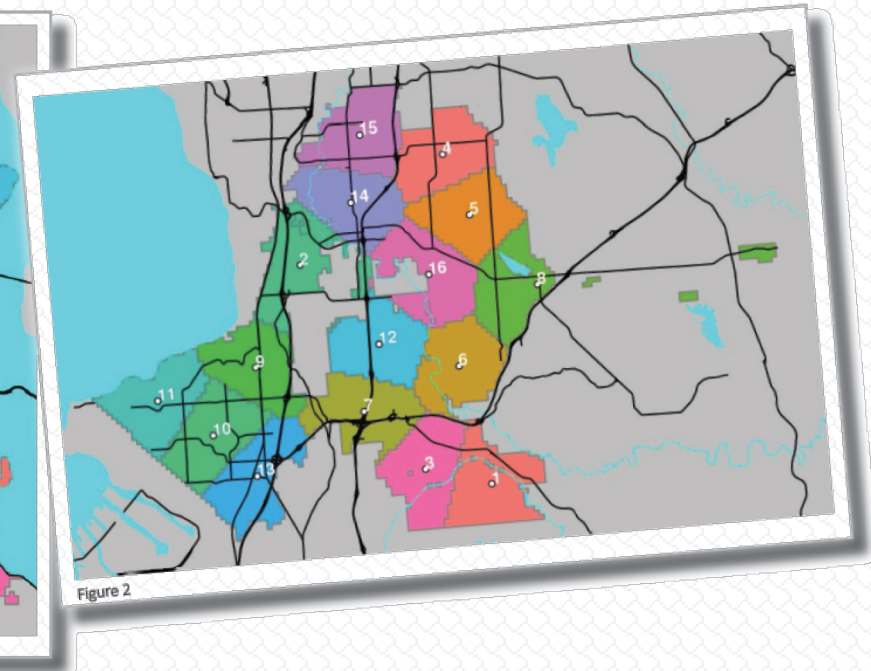
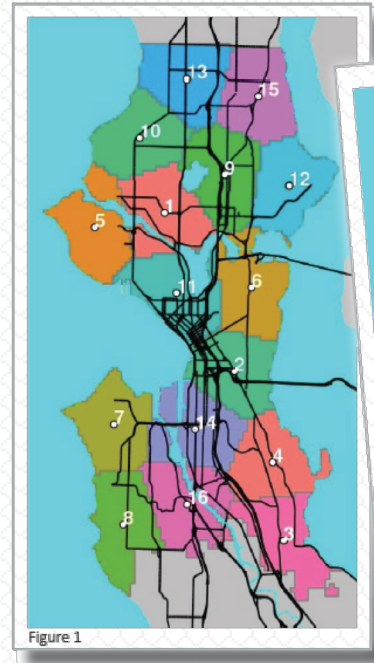
SBT PRICE IMPACT DATA COLLECTION



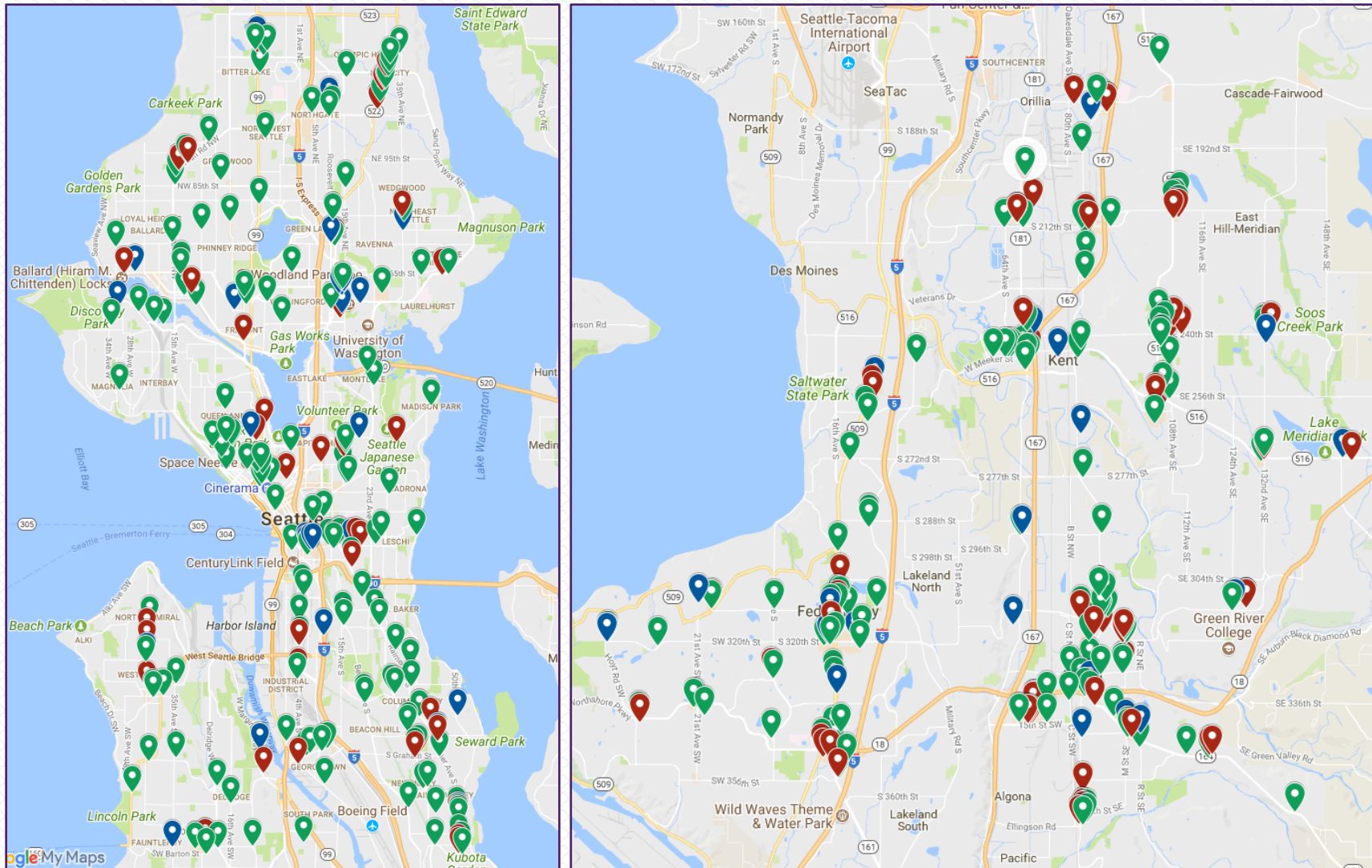
In-person surveys of stores in **Seattle and Comparison Area** (Kent, Auburn, Federal Way)



Geographically balanced sample with quota from different store types



SBT PRICE IMPACT STORE SAMPLE



SBT PRICE IMPACT DATA COLLECTION

Supermarkets &
superstores



Grocery &
drug stores



Small
stores



Warehouses



Quick-service
restaurants



Beverage
shops



SBT PRICE IMPACT STORE SAMPLE

Seattle

Fall 2017

229

Summer 2018

204

89%
re-survey rate

Comparison Area

Fall 2017

223

Summer 2018

209

90%
re-survey rate

SBT PRICE IMPACT BEVERAGE CATEGORIES



BEVERAGE TAX CATEGORIES



BEVERAGE TYPE

Taxed

- 7 beverage types
- Soda
- juice drink
- sports drink
- energy drink
- bottled tea
- prepared tea
- bottled coffee
- sugary flavor shot

Non-taxed sugar-free

- 10 beverage types:
- diet soda
 - 100% juice
 - diet sports drink
 - diet energy drink
 - water
 - Milk
 - powdered sugar-free drink mix
 - bottled unsweetened tea
 - prepared coffees
 - sugar-free flavor shot

Non-taxed sugar-sweetened

- 3 beverage types:
- chocolate milk
 - powdered drinks
 - prepared sweetened coffee

SBT PRICE IMPACT KEY VARIABLES



BEVERAGE PRICE

The primary outcome, in **CENTS PER OUNCE**, using the lowest price available on the day the store was surveyed.

SBT PRICE IMPACT STATISTICAL ANALYSES

THE GOAL

To estimate the impact of the tax on the price of beverages subject to the tax.

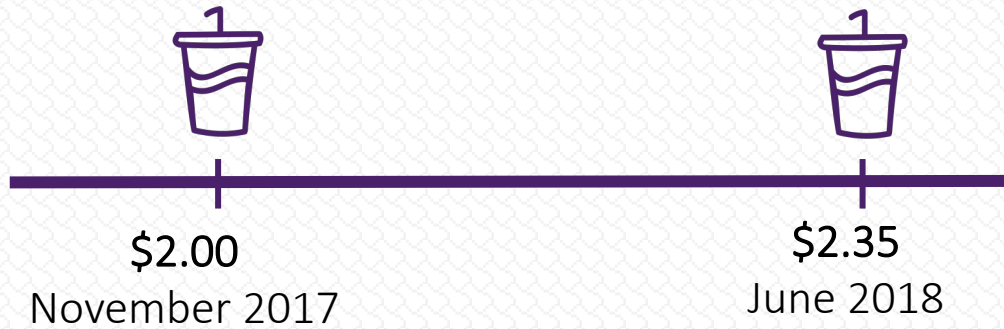
THE MODEL

We use a regression-based **difference-in-difference model** to estimate the degree to which the price of beverages in Seattle changed above and beyond price changes for the same beverages in the comparison area from baseline to six-months post-tax.

RETAIL AUDIT TAX IMPACT ANALYSES

HYPOTHETICAL EXAMPLE: HOW THE DIFFERENCE-IN-DIFFERENCE MODEL WORKS

Seattle



= \$0.35

DIFFERENCE IN SEATTLE

Comparison Area



= \$0.05

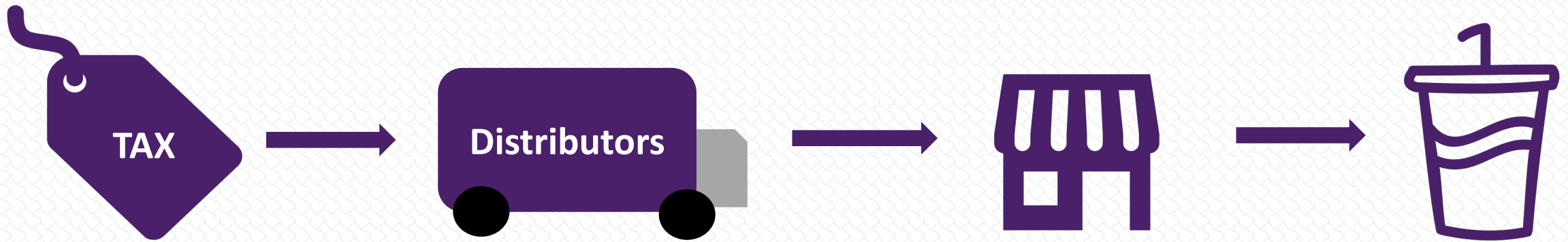
DIFFERENCE IN COMPARISON

\$0.30

DIFFERENCE-IN-DIFFERENCE

SBT PRICE IMPACT PRICE PASS-THROUGH

THE AMOUNT OF TAXED PASSED ON TO CONSUMERS



1.75¢/OZ = 100%
PASS THROUGH

SBT PRICE IMPACT RESULTS

OVERALL AVERAGE SEATTLE PRICE PASS-THROUGH RESULTS

1.70¢

The price of taxed beverages in Seattle increased by **1.70 cents per ounce** on average, over and above increases in the comparison area.

97%

97% of the tax on average was passed through to Seattle consumers.

THE AVERAGE MASKS IMPORTANT DIFFERENCES BY STORE TYPE AND BEVERAGE TYPE

SBT PRICE IMPACT RESULTS

AVERAGE PRICE PASS-THROUGH BY BEVERAGE TYPE

1.78¢
102%

Pass-through for Seattle
soda

1.47¢
84%

Pass-through for Seattle
sugar-sweetened teas
& sports drinks.

1.11¢
63%

Pass-through for Seattle
juice drinks.

1.09¢
62%

Pass-through for Seattle
sugar-sweetened
bottled coffee drinks.

SBT PRICE IMPACT RESULTS

AVERAGE TAXED BEVERAGE PRICE PASS-THROUGH BY STORE TYPE

1.51¢
86%

Pass-through in Seattle
supermarkets &
superstores

1.82¢
104%

Pass-through in Seattle
grocery stores
& drug stores

1.80¢
103%

Pass-through in Seattle
small stores

1.43¢
82%

Pass-through in Seattle
quick-service
restaurants

SBT PRICE IMPACT RESULTS

AVERAGE NON-TAXED BEVERAGE PRICE PASS-THROUGH BY STORE TYPE

0.0¢
0%

Pass-through in Seattle
supermarkets &
superstores.

0.47¢
27%

Pass-through in Seattle
grocery stores & drug
stores.

0.77¢
44%

Pass-through in Seattle
small stores.

*Increase in price in small stores driven by increased price of diet soda, diet energy drinks, and bottled tea

SBT PRICE IMPACT RESULTS

OVERALL SEATTLE PRICE RESULTS

Applying the average 1.70 cents per ounce increase to

20 oz sugar-sweetened drink



\$1.99

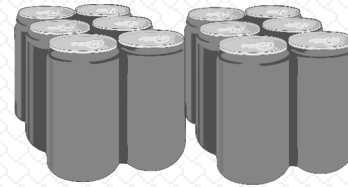
Pre-tax



\$2.33

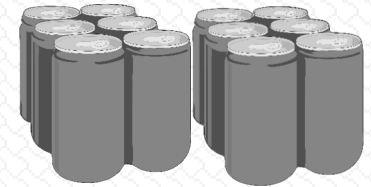
Post-tax

12-pack of sugar-sweetened drinks



\$3.15

Pre-tax



\$5.59

Post-tax

SBT PRICE IMPACT KEY TAKEAWAYS



Tax on sugary beverages is being passed through to consumers via higher retail prices of these beverages.



Prices increased statistically significantly for nearly all beverages types subject to the tax.



Price increases differed by beverage type, with the largest increases for sodas and energy drinks.



Price increases differed by store type. Increased across store types, but largest increases in smaller grocery stores, small stores, and drug stores

SBT PRICE IMPACT LIMITATIONS



Although we surveyed a large sample of beverages of various sizes, we **did not** measure all beverages.



We have *only a sample* of stores rather than a census of all stores.



We **did not include some popular stores** such as Whole Foods, Trader Joe's, and PCC because these stores devote relatively little shelf space to sugary beverages.

The image features a central purple rectangular overlay on a background of a city skyline. The skyline is shown in a light, desaturated tone, with various skyscrapers and buildings visible. The purple overlay is semi-transparent, allowing the cityscape to be seen through it. The text "THANK YOU" is centered within this purple area in a white, bold, sans-serif font. The overall composition is clean and modern, with a focus on the central message.

THANK YOU