

Stacy Jones' Assignment (Note: Stacy is a Carleton Graduate--Philosophy 89)

Taxed out of State? Econ 260 Case Study 1

Background

The sales tax rate in Washington State is currently among the highest in the nation. As a result, Washington has one of the nation's most regressive tax systems. Low income households pay a large share of their incomes in taxes, via the sales tax, while high income households face a much lighter tax burden relative to their incomes. In addition, some businesses in Washington are hurt by "cross-border shopping," as consumers drive to Oregon or order products over the internet to avoid paying state taxes. A state tax commission, chaired by William Gates Sr., released a report recommending that the sales tax be reduced, with the revenue to be replaced by an income tax. The report also discusses the possibility of extending the sales tax to groceries in order to make state tax revenue more stable.

You have been commissioned by your state representative to write a report that places Washington's sales tax in a national perspective. Is Washington's sales tax excessive when compared to that imposed by other states? How important is the sales tax in Washington's tax structure as compared to other states? You will use data on sales tax rates imposed by each of the 50 states to answer this question.

Statistical Analysis

- 1) Find the mean, median, standard deviation, minimum and maximum of the sales tax rates posed by the 50 states. Use the base state tax rate, not the maximum state+local rate.
- 2) Identify states whose sales tax rates lie more than one standard deviation below or above the mean: low tax and high tax states.
- 3) Present a frequency distribution of sales tax rates nationwide.
- 4) Calculate the 20th, 40th, 60th, and 80th percentiles of sales tax rates. In which quintile does Washington's rate fall?
- 5) Provide a ranking of states in terms of the sales tax rate they impose.
- 6) Present a frequency distribution of the share of state income provided by the sales tax nationwide.
- 7) Provide a ranking of states in terms of the share of state income provided by the sales tax.
- 8) Create a scatterplot of sales tax rates versus the share of state income provided by the sales tax.

Data

The data for this case study are found on the angel website, angel.seattleu.edu, in the file [salestax.xls](#).

Additional data on state tax rates can be found at the following site:

http://www.taxadmin.org/fta/rate/tax_stru.html

The report of the Washington State Tax Structure Study can be found at:

http://dor.wa.gov/content/statistics/WAtaxstudy/Final_Report.htm

Report

Based on your analysis, write a brief (600 word maximum) report for your senators. Place Washington's sales tax situation in a national perspective. Characterize Washington's position in the distribution of sales taxes nationwide without resorting to technical language or statistical terms. Address the problems for consumers and businesses that are associated with a high sales tax. Here you may want to pay special attention to Washington's neighbors, candidates for cross-border shopping. In the light of these problems, do you agree with the Gates Commission's recommendation that the sales tax be partially replaced by another form of state tax? Or do you recommend that the state keep its sales tax rather than introduce a new form of taxation? If more (or more stable) revenue is needed, should the state extend the set of goods that are taxed—e.g. to groceries?

Due Dates

Your statistical analysis is due **Monday April 16**. You may work with other students on the analysis, but each of you must prepare separate analyses. Anticipate that writing the report will take at least as much time as analyzing the data; plan accordingly. Written reports are due on **Monday April 23**. A hard copy must be turned in at the beginning of class on this day to receive full credit.