

ECO 150, Fall 2022, Required Homework Assignment #2
Due by Friday, October 7

This assignment asks you to apply the recent material from class to the concept of “sin taxes.” It also asks you to do some more introductory data work. Note that this assignment also asks you to find your own sources more than the first homework.

Start by reading [this article](#) from *Knowledge at Wharton*.

Instructions: Answer all questions. In most cases, one or two concise paragraphs are sufficient and you should avoid the temptation to write more.

1. What is a sin tax and how does it differ from other taxes (*e.g.* income taxes, payroll taxes, etc.)?
2. Why might the decision to impose a sin tax depend on whether consumers fully understand the risks associated with the use of the product potentially being taxed?
3. Using a model of supply and demand, explain how the burden of a sin tax depends on the price elasticity of demand.
4. What are the elasticities for some goods or services that have been subjected to sin taxes? Make sure to provide a proper reference(s).
5. Consider a specific sin tax of your choosing (*e.g.* alcohol, tobacco, etc). What are the benefits to enacting/raising the tax?
6. From #5, what are the costs to enacting/raising the tax?
7. Do you think the policy from #5 is worthwhile?
8. What, if any, hypothetical evidence would falsify your opinion from #7?
9. Using our model of supply and demand, explain how a sin tax could, by design or accident, potentially correct a negative externality.
10. In a spreadsheet collect data for cigarette taxes and smoking rates for at least 20 U.S. states. Include a screenshot of your data in your writeup.
11. Report the average and standard deviation of smoking rates and cigarette taxes in your data.
12. Create a [scatterplot graph](#) of smoking rates and cigarette taxes by state.

13. Compute and report the **correlation** between smoking rates and cigarette taxes.

14. What, if anything, does your answer to #13 tell you about whether higher cigarette taxes lead to less smoking?