

# Cason Konzer ECN 370 Homework #5, Fall 2022

Saturday, November 12, 2022 8:24 AM



## ECN 370 Homework 5

Due: Thursday, November 17<sup>th</sup> by the end of the day

**Directions:** Please complete this homework on a separate piece of paper and email your answers to me at [ccdougla@umich.edu](mailto:ccdougla@umich.edu).

1. West Virginia and California both have U.S. Senators who are members of the Democratic party. Senator Joe Manchin represents West Virginia while Senator Diane Feinstein represents California. However, West Virginia is a “red state” that voted for President Trump by a 69% - 29% margin. California is a “blue state” that voted for President Biden by a 63% - 34% margin. Use the median voter theorem and Downsian electoral competition to explain why you think that Senators Manchin and Feinstein will have the same or different views on various issues, despite being members of the same political party.

- ① The Democratic party is assumed here to be blue. Thus  
\* WV: Red State, votes Blue & \* CA: Blue State, votes Blue  
As Both Senators Are Blue, We Can Use the Median Voter Theorem to show that Senator Joe Manchin representing Red State WV has more conservative views, as with otherwise blue views he would lose the election. Diane Feinstein needs no support from the red voters

2. It is the year 2043 and the Robocop program is financially in the hole, as the City of Detroit has given \$100 million to the Omni Consumer Products (OCP) to develop a working prototype. However, OCP has completely failed to deliver a working prototype. Suppose the population of Detroit is 10 million people in 2043. Clearly the Robocop program is not passing a cost-benefit test and should be eliminated. Using the concept of a “Type C” project we discussed in Lecture #16, explain why it is unlikely the program will be eliminated. You can think of eliminating a wasteful program as a “Type C” project, like we discussed in that class. Also, you can assume that the cost of hiring a lobbyist to lobby in favor of eliminating the program will be \$100,000, like it was in the NPR Planet Money podcast episode we discussed.

- $\$100 \text{ M} / 10 \text{ M person} = \$10 / \text{person}$

The Costs of Removing this program hits OCP the hardest, thus they will be willing to lobby such that the costs of lobbying is less than their Revenue. As the Benefit per person is low,



most are unlikely to know about this bill.

•  $\$100,000 \div \frac{\$10}{\text{person}} = 10,000 \text{ person}$

⇒ It would take 10,000 person to hire only 1 lobbyist when they pay the same to lobby as the tax itself!

3. Suppose there are three wealthy individuals in three different congressional districts who are looking to get a special interest favor. Needless to say, the person representing their districts in congress are thus in favor of these special interest projects too.

- In District **A**, Scrooge McDuck just bought a new superjumbo jet to use as a cargo plane, but the **runway and hanger at the Duckberg airport need to be upgraded** to accommodate it.
- In District **B**, Billy Madison wants an **indoor water park to be built** in a particular city to increase demand for hotel rooms at Madison Hotels.
- In District **C**, Shooter McGavin recently bought a country club after retiring from professional golf. Shooter wants the **country club upgraded to be able to host a professional golf event there.**
- Suppose there are two other districts: **D** and **E** where they are **getting no special interest project but must pay a cost** towards the ones that are given.

Obviously, these special interests would prefer to have taxpayers pay for these things, rather than pay for them themselves. **Suppose each project gives \$15 in benefit but costs the congressional district not receiving them \$5 in cost.**

District	Project	Airport	Water Park	Country Club	Σ
A		$+15 - 5 = +10$	$+0 - 5 = -5$	$+0 - 5 = -5$	0
B		$+0 - 5 = -5$	$+15 - 5 = +10$	$+0 - 5 = -5$	0
C		$+0 - 5 = -5$	$+0 - 5 = -5$	$+15 - 5 = +10$	0
D		$+0 - 5 = -5$	$+0 - 5 = -5$	$+0 - 5 = -5$	-15
E		$+0 - 5 = -5$	$+0 - 5 = -5$	$+0 - 5 = -5$	-15
Σ		-10	-10	-10	-30

a. Is any project economically efficient to do (e.g., passes a cost-benefit test)?

No! All projects have  $\text{Costs} > \text{Benefits}$ .

This holds even if the district getting the project doesn't have to pay!

⇒ it was assumed they had to pay above...

b. If each project was voted on separately, would each pass, assuming the congressman voting on it was only concerned about his districts own costs and benefits and not thinking about logrolling, future political support for his/her own special interest projects, etc.?

None of the projects would pass, as only the District of the project has any Benefit... eg. all votes would be 1-4!

c. Suppose all these projects were logrolled into one bill for one up-or-down vote. Would the bill pass?

yes! The 3 districts with the project break even if they have to pay, e.g. costs=benefits, or otherwise win out, e.g. benefits > costs, if they do not have to pay. Thus the vote passes 3-2!

d. Suppose each congressional district was taxed in proportion to the benefits received from each special project. What would the vote total be if each project was voted on individually? As one bill? Suppose each project costs \$20.

	AP	WP	CC
A	15-20=-5	0	0
B	0	15-20=-5	0
C	0	0	15-20=-5
D	0	0	0
E	0	0	0

For individual votes each project would pass 4-1, as 4 districts see no direct cost/benefit, and they like things being upgraded. For a Combined Vote, it would fail 3-2 as each individual district in which the project takes place has Costs > Benefits...