

Public Economics (ECON 131)

Section #9: Voting, Tiebout Model, and Local Public Finance

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1 Key Concepts

- Lindahl pricing
- Majority voting
- When is the **aggregation mechanism to be consistent**? Dominance, transitivity, and independence of irrelevant alternatives. Does majority voting satisfy these conditions?
- Arrow's Impossibility Theorem
- Median Voter Theory
- Fiscal Equalization
- What is the **Tiebout Model**?
- What are the main assumptions of the Tiebout model?
- Tools of redistribution:
 - Matching grants
 - block grants
 - conditional block grants.

2 Practice Problems

2.1 Gruber, Ch.9, Q.12

Carrboro has three equal-sized groups of people: (1) type A people consistently prefer more police protection to less; (2) type B people prefer high levels of police protection to low levels and they prefer low levels to medium levels; (3) type C people prefer medium levels to low levels, which they in turn prefer by a modest amount to high levels.

(a) *Which types of people have single-peaked preferences? Which have multi-peaked preferences?*

(b) *Will majority voting generate consistent outcomes in this case? Why or why not?*

2.2 Gruber, Ch.10, Q.3

Some have argued that diversity in communities and schools leads to positive externalities. What implications does this view have for the efficiency of a Tiebout equilibrium? What implications does it have for government policy?

2.3 Local Public Good

Increased use of electronics has led to an increased need to dispose of the electronics properly. Towns have increased their spending on trash collection to deal with disposing of electronics. You are an economic advisor to the Governor who is considering whether to provide low income communities with state funds to increase their trash removal budgets so that they don't have to cut back on other trash collections in the face of electronic trash increases.

- (a) *The lobbyist who opposes giving low-income communities state funds to increase trash collection budgets argues that trash collection is a public good financed by local property taxes. The lobbyist goes on to note that everyone knows from public finance class that in the standard Tiebout model, we should not care if trash collection varies across communities. Brief the Governor on two assumptions of the Tiebout model that may fail in this example, creating room for government intervention. [Note: do not simply list two assumptions, explain why they may be violated in this instance.]*
- (b) *The following options are under consideration by the Governor. Assume community preferences over trash removal (T) and all other local public goods (P) are $U(T, G) = 2T^{\frac{1}{2}} + 4G^{\frac{1}{2}}$. Trash removal costs \$1. Assume that the price of all other goods is \$1. For each proposal described below graph the budget constraint and solve for the amount of spending on trash collection and other public goods. The budget of each town is \$5 million. Finally, which proposal gives you the most "bang for the buck" (i.e. the biggest increase in trash removal per state dollar spent). Why?*
- (i) *The baseline case: No state grant.*
 - (ii) *A \$1 million grant (i.e. it can be used for anything the community wants)*
 - (iii) *A \$1 million grant that can only be spent on trash collection.*
 - (iv) *\$1 for \$1 matching grant on trash collection (i.e. the state government gives the town \$1 for every \$1 the town spends on its own).*

(c) *The Governor says he can't commit the state to a new financial obligation without public support and that he will put a proposal on the November ballot. However, he doesn't want to confuse the voters with too many options so he directs you to pick the proposal (from the 4 options in part b) that will give the "biggest bang for the buck" and will pass. You are also given the following information about voters and communities in the state:*

- Voters will only vote for a ballot initiative that brings money to the community they live in and there are 50 communities of equal size in the state.

Type	Number of Communities	Each Community's Total Budget
Low Income	25	\$5 million
High Income	25	\$40 million

Which policy satisfies the Governor's criteria? How does your "bang for the buck" compare to the one calculated in part (b)? Why?

(d) *The Governor likes your ideas, but notes that the state budget is already stretched very thin and he will therefore have to raise the money for your proposal through taxes. He is considering taxing communities 5% of every dollar that they spend above the state average amount of trash collection (assume that there are some wealthy communities with budgets well above \$40 million). Explain what is likely to happen to trash collection in the state if the Governor goes forward with this tax plan. Why?*