

Quiz #1 (answer key)
ECNS 432
Spring 2021

Name _____

1.) Social choice rules

Suppose we have a small inhabited island with three residents and a volcano that generates air pollution. Two people live upwind of the volcano and one person lives downwind. For \$21,000 we can clean up the volcano with a patented “smoke guzzler.” The two upwind people would pay \$1,000 each to get rid of the smoke whereas the downwind person would be willing to pay \$15,000. Consider two plans to finance the “smoke guzzler.” Plan A calls for a tax of \$7,000 per person. Plan B calls for the affected part (the downwind person) to pay \$21,000 and everyone else nothing. Compare each plan to the status quo and indicate society’s choice using (a) the Pareto criterion; (b) majority rule; (c) the compensation principle.

Summary of answers

	PLAN A	PLAN B
Does plan pass under the following choice mechanisms?		
Pareto Criterion	No	No
Majority Rule	No	Yes
Compensation Principle	No	No

2.) WTP in Cost-Benefit Analysis

List two issues related to using WTP as the measure of benefits in CBA that we discussed in class.

- a. Limitations of WTP as a basis for social ordering.
 - Ranking policies in terms of net benefits does not guarantee a transitive social ordering of the policies
- b. Dependence of WTP on distribution of wealth
- c. Dependence of net benefits on assumptions about who is given standing

3.) Government intervention

When is it possible for the government to enhance social surplus?

Only in the presence of a market failure (e.g., monopoly, externality, public goods problem, asymmetric information, etc.)