

Problem Set 3 Answers:

The purpose of this exercise was to see how altering grant formulas can lead to some surprising results with a variety of challenging implications as well as how difficult it is to divide public resources with a number of objectives and constraints.

Students' answers to this problem set could have been quite varied. What was key was to understand how to connect the implications of the quantitative analysis to the issues we covered in class about decentralization. Problem set submissions were assessed by whether they did the following or hit the following key points. Your ultimate numbers, indicators for analysis, and recommendations could have varied.

1) Four spreadsheets – total points possible 7 points

1 pt. if student presented 4 spreadsheets

1 pt. if analyzed the right combination of objectives and budget constraints (although the numbers could be different)

Points for generally getting the empirical results in the right direction:

1 pt: option a) negative aid for highest income group

1 pt: option b) all groups get positive aid, budget is very large

1 pt: option b) aid amount is significantly larger than the expenditure/student for lowest income group!

1 pt: option d) all groups get positive aid, budget similar, but two highest income groups get very little aid.

1 pt. if student presents some reasonable indicator for assessing different options, such as:

- Aid as % of Total Student Expenditures
- % of Total aid budget by towns
- % hh Y spent on education

extra credit points were possible

2) Writeup: total points possible 10 points

1 pt. a memo that discusses each of the four different options

1 pt. for advocating their recommended option

1 pt. student discuss their indicators in distinguishing between 4 options

1 pt. budget increases enormously in option b), how to finance this?

1 pt. mentions the perversity of the grant formula in option b: aid amount is larger than the expenditure/student

1 pt. indicates what more information they need to do further assessment
1 pt. administrative difficulty for implementing change, cross-subsidization
1 pt. political difficulty in a wide disparity in aid dispersal
1 pt. discussion comparing progressivity, equity of the options
1 pt. spatial effects: households relocate, town off-load education provision to geographic neighbors.

Some students got partial credit for addressing the above points either superficially, without citing numerical examples, or for partially hitting the point.

Extra credit points were possible