Instructions for the Local Public Good Game

Suppose you live in a dorm that’s deciding how much money to raise for a collective fund that will be spent on parties and social events for your dorm. Your dorm is voting on the amount of money that each resident will equally contribute to the fund for the current school year.

Your room, board, and tuition are already paid for, and you have a spending allowance of $1000 at the beginning of each year that you may use freely for entertainment, books, etc.

The dorm will decide on a level of per-capita taxation, $T$, between $0$ and $100$, which will be paid out of your $1000$ spending account. The level of taxation will represent the number of dollars in taxes that you and everyone else in your dorm must each pay. These taxes will be used to sponsor social events in your dorm. Residents of your hypothetical dorm enjoy these social events differently. As a result, you have each been assigned a personal value multiplier. You cannot change the assigned multiplier.

*Your personal value multiplier is 0.*

To calculate the value you derive from your dorm’s parties and social events, take your personal value multiplier times $T$. In your case, the value you derive would be $(0 \times T)$. As other people may have different values, we ask that you keep your value private.

In addition to these instructions, you have received a record sheet. You will be using this sheet to record the level of taxes, $T$, imposed by the dorm, as well as the value that you receive from the parties that are funded by these taxes. You will also calculate your after-tax welfare: that is, the value of your spending account ($1000), minus the taxes you pay, plus your own personal value of the social events. Here’s the way your record sheet will look:

<table>
<thead>
<tr>
<th>Level of taxation chosen ($T$):</th>
<th>______</th>
</tr>
</thead>
<tbody>
<tr>
<td>Your spending account</td>
<td>$1,000</td>
</tr>
<tr>
<td>PLUS</td>
<td></td>
</tr>
<tr>
<td>Your value of the social events ($= 0 \times T$)</td>
<td>______</td>
</tr>
<tr>
<td>MINUS</td>
<td></td>
</tr>
<tr>
<td>Your tax payment for the social events ($= T$)</td>
<td>______</td>
</tr>
<tr>
<td>EQUALS</td>
<td></td>
</tr>
<tr>
<td>Your after-tax welfare</td>
<td>______</td>
</tr>
</tbody>
</table>

To determine the taxation level, the dorm’s governing committee will survey its residents. They will ask which of three possible taxation levels you prefer: $0$, $50$, or $100$. They will then calculate the average of your choices and impose that average as the taxation level.

Are there any questions so far?
Let’s work through an example.

Imagine that there are 10 residents in your dorm, and that 2 of them vote for a level of $0 taxes, none vote for $50, and 8 vote for $100. The average choice is then

\[
\frac{(2 \times 0) + (0 \times 50) + (8 \times 100)}{10} = 80,
\]

so the taxation level will be $80 for everyone in the dorm. We have used this information to calculate your after-tax welfare on the following practice worksheet:

Level of taxation chosen \( (T) \): \$80

Your spending account \$1,000

PLUS

Your value of the social events \( (= 0 \times T) \) \$0

MINUS

Your tax payment for the social events \( (= T) \) \$80

EQUALS

Your after-tax welfare \$920

Are there any final questions before we begin?

Your local government will now conduct its first survey. Take a moment to think about which of the following three options you prefer:

- Taxation of $0
- Taxation of $50
- Taxation of $100

After the vote is taken, we will announce the results and will then proceed to the next year.

At the beginning of each year, you will be given verbal instructions related to that particular year. Please listen carefully and do not hesitate to ask questions if you have them.
Year 1  
Level of taxation chosen \((T)\): ______

Your spending account $1,000

PLUS
Your value of the social events \((= 0 \times T)\) ______

MINUS
Your tax payment for the social events \((= T)\) ______

EQUALS
Your after-tax welfare ______

Year 2  
Level of taxation chosen \((T)\): ______

Your spending account $1,000

PLUS
Your value of the social events \((= 0 \times T)\) ______

MINUS
Your tax payment for the social events \((= T)\) ______

EQUALS
Your after-tax welfare ______

Year 3  
Level of taxation chosen \((T)\): ______

Your spending account $1,000

PLUS
Your value of the social events \((= 0 \times T)\) ______

MINUS
Your tax payment for the social events \((= T)\) ______

EQUALS
Your after-tax welfare ______

Year 4  
Level of taxation chosen \((T)\): ______

Your spending account $1,000

PLUS
Your value of the social events \((= 0 \times T)\) ______

MINUS
Your tax payment for the social events \((= T)\) ______

EQUALS
Your after-tax welfare ______
Instructions for the Local Public Good Game

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Your personal value multiplier is 2.

To calculate the value you derive from your dorm’s parties and social events, take your personal value multiplier times $T$. In your case, the value you derive would be $(2 \times T)$. As other people may have different values, we ask that you keep your value private.

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</tr>
</thead>
<tbody>
<tr>
<td>Your spending account     $1,000</td>
</tr>
</tbody>
</table>
| PLUS
| Your value of the social events (= $2 \times T$) ______ |
| MINUS
| Your tax payment for the social events (= $T$) ______ |
| EQUALS
| Your after-tax welfare ______ |

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$$\frac{2 \times 0 + 0 \times 50 + 8 \times 100}{10} = 80,$$

so the taxation level will be $80 for everyone in the dorm. We have used this information to calculate your after-tax welfare on the following practice worksheet:

<table>
<thead>
<tr>
<th>Level of taxation chosen ($T$): $80</th>
</tr>
</thead>
<tbody>
<tr>
<td>Your spending account</td>
</tr>
<tr>
<td>PLUS</td>
</tr>
<tr>
<td>Your value of the social events ($= 2 \times T$)</td>
</tr>
<tr>
<td>MINUS</td>
</tr>
<tr>
<td>Your tax payment for the social events ($= T$)</td>
</tr>
<tr>
<td>EQUALS</td>
</tr>
<tr>
<td>Your after-tax welfare</td>
</tr>
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After the vote is taken, we will announce the results and will then proceed to the next year.

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Year 1

Level of taxation chosen \((T)\): ______

Your spending account $1,000

PLUS

Your value of the social events \((= 2 \times T)\) ______

MINUS

Your tax payment for the social events \((= T)\) ______

EQUALS

Your after-tax welfare ______

Year 2

Level of taxation chosen \((T)\): ______

Your spending account $1,000

PLUS

Your value of the social events \((= 2 \times T)\) ______

MINUS

Your tax payment for the social events \((= T)\) ______

EQUALS

Your after-tax welfare ______

Year 3

Level of taxation chosen \((T)\): ______

Your spending account $1,000

PLUS

Your value of the social events \((= 2 \times T)\) ______

MINUS

Your tax payment for the social events \((= T)\) ______

EQUALS

Your after-tax welfare ______

Year 4

Level of taxation chosen \((T)\): ______

Your spending account $1,000

PLUS

Your value of the social events \((= 2 \times T)\) ______

MINUS

Your tax payment for the social events \((= T)\) ______

EQUALS

Your after-tax welfare ______