

## APPLIED ECONOMICS

# Making Choices with Scarcity and Opportunity Cost

*Detailed practice, calculation, decision-making, and assessment*

|                                                                                                                                                                       |                           |                                      |                         |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------|--------------------------------------|-------------------------|
| <b>GRADES</b><br>9-12                                                                                                                                                 | <b>TIME</b><br>2 x 42 min | <b>GROUPING</b><br>I / pairs / whole | <b>PRODUCT</b><br>Brief |
| <b>YOUR CHALLENGE</b> Identify scarce resources, compare options, calculate efficiency measures, and recommend an allocation using opportunity and marginal analysis. |                           |                                      |                         |

## Economic Choices Require Evidence About Trade-Offs, Prices, and Purchasing Power

Scarcity means resources are limited compared with wants. Every choice creates a trade-off. The opportunity cost is the value of the next-best alternative given up, while marginal analysis asks whether one additional step adds more benefit than cost.

| Term                                                                                                                                                                                                               | Student-friendly meaning                                          |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------|
| Scarcity                                                                                                                                                                                                           | Condition in which available resources cannot satisfy every want. |
| Constraint                                                                                                                                                                                                         | Limit that a decision must respect.                               |
| Trade-off                                                                                                                                                                                                          | What is gained and given up among alternatives.                   |
| Opportunity cost                                                                                                                                                                                                   | Value of the next-best alternative not chosen.                    |
| Marginal cost                                                                                                                                                                                                      | Additional cost of one more unit or action.                       |
| Marginal benefit                                                                                                                                                                                                   | Additional benefit of one more unit or action.                    |
| <b>CLASSROOM USE</b> All people, employers, figures, brackets, and documents in this packet are fictional. Never place a real Social Security number, employer ID, bank number, or tax document in classroom work. |                                                                   |

## Part 1 - Identify Scarcity and Constraints

A school club has \$1,200, 30 volunteer hours, and one Saturday for a financial-literacy event.

| Resource/goal  | Available    | Wanted                  | Scarcity or constraint? |
|----------------|--------------|-------------------------|-------------------------|
| Money          | \$1,200      | \$1,650 of ideas        |                         |
| Volunteer time | 30 hours     | 44 hours                |                         |
| Event time     | One Saturday | Two full-day activities |                         |
| Audience seats | 80           | 120 expected            |                         |
| Goal           | Useful event | Serve every request     |                         |

Explain why scarcity exists even when resources are available.

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## Part 2 - Calculate Costs and Benefits

Choose among fictional options.

| Option              | Money cost | Volunteer hours | Students served | Expected learning score gain |
|---------------------|------------|-----------------|-----------------|------------------------------|
| Workshop stations   | \$700      | 24              | 80              | 18 points                    |
| Guest speaker       | \$500      | 10              | 70              | 10 points                    |
| Simulation fair     | \$900      | 28              | 60              | 22 points                    |
| Online resource kit | \$300      | 12              | 120             | 8 points                     |

Calculate cost per student and cost per expected point of total gain where total gain = students x points.

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### Part 3 - Identify Opportunity Cost

The club can choose only one main option and may add the \$300 kit if money and time allow.

| Choice              | Best next alternative | Opportunity cost | Why not every rejected option? |
|---------------------|-----------------------|------------------|--------------------------------|
| Workshop only       |                       |                  |                                |
| Guest speaker + kit |                       |                  |                                |
| Simulation only     |                       |                  |                                |
| Kit only            |                       |                  |                                |

Opportunity cost is the value of the next-best alternative, not the sum of everything rejected.

## Part 4 - Evaluate One More Unit

Workshop attendance may rise from 80 to 100 if the club spends an extra \$180 and 4 volunteer hours on outreach.

| Measure          | Current | With outreach | Marginal change |
|------------------|---------|---------------|-----------------|
| Money cost       | \$700   | \$880         |                 |
| Volunteer hours  | 24      | 28            |                 |
| Students served  | 80      | 100           |                 |
| Cost per student |         |               |                 |

Compare the marginal cost with the marginal benefit and remaining constraints.

Part 5 - Write an Allocation Recommendation

The club values reach, learning, affordability, and a workload that leaves at least 2 volunteer hours unused.

| Decision check           | My evidence |
|--------------------------|-------------|
| Scarce resources         |             |
| Feasible choices         |             |
| Cost per student         |             |
| Learning evidence        |             |
| Opportunity cost         |             |
| Marginal outreach        |             |
| Unused capacity          |             |
| Qualified recommendation |             |

Write 150-200 words using at least five figures and one explicit opportunity-cost statement.