

Exercise walk-through

1.5

Cost-Benefit Analysis

AP Microeconomics

Cost-benefit analysis & sunk costs

Cost-benefit analysis : act only when benefit $\geq$ cost – and the real cost is the **opportunity cost**, not just money spent.

The sunk-cost fallacy

You paid \$50 for a concert ticket (a **sunk cost**). That night you feel ill and would rather stay home.

The \$50 is gone **either way**, so ignore it – choose what you now prefer. Going just “to get your money’s worth” is the **sunk-cost fallacy** .

Exam tips

- Opportunity cost is the next-best alternative given up; **ignore sunk costs** in any decision.
- Comparative advantage (lower opportunity cost) determines specialisation and the gains from trade.
- Apply marginal analysis: keep doing an activity while **$MB > MC$** , checking where net benefit is greatest.
- Maximise utility by equalising the **marginal utility per dollar** across goods.
- Read opportunity cost from the magnitude of the PPC slope; a bowed curve shows increasing cost.

Check yourself

- 1 Why does the PPC bow outward?
- 2 Absolute or comparative advantage: which drives trade?
- 3 Should a sunk cost affect your next decision?
- 4 What rule does marginal analysis give?

Answers 1. resources are not equally suited to both goods 2. comparative 3. no – it is already spent 4. compare MB and MC; maximize feasible net benefit

Exercises 2.1-2.3

2.1 State the rule for deciding whether an action is worthwhile.

[1]

2.2 State the difference between explicit and implicit costs.

[2]

2.3 Explain why sunk costs should be ignored in decisions.

[2]

Exercises 2.1-2.3

2.1 State the rule for deciding whether an action is worthwhile. [1]

2.1

- proceed only if the total benefit is at least as large as the total cost
-

2.2 State the difference between explicit and implicit costs. [2]

2.2

- explicit costs are out-of-pocket payments; implicit costs are the opportunity cost of resources you already own
-

2.3 Explain why sunk costs should be ignored in decisions. [2]

2.3

- they are already spent and cannot be recovered, so they do not change the future benefits or costs of the decision

Exercises 3.1-3.2

3.1 A sunk cost is one that

[1]

☐

A can be recovered

B cannot be recovered

C is always small

D is really a benefit

3.2 The implicit cost of running your own business includes

[1]

☐

A the rent you pay

B the wages you could have earned elsewhere

C your electricity bills

D the materials you buy

Exercises 3.1-3.2

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- A can be recovered
- B cannot be recovered
- C is always small
- D is really a benefit

3.1 B

- cannot be recovered.

3.2 The implicit cost of running your own business includes

[1]

☐

- A the rent you pay
- B the wages you could have earned elsewhere
- C your electricity bills
- D the materials you buy

3.2 B

- the wages you could have earned elsewhere.

Exercise 3.3 (a)

3.3 A firm has already spent \$10 000 on a project (unrecoverable). Finishing it costs \$3000 more and earns \$4000.

(a) State whether it should finish the project.

[1]

Exercise 3.3 (a)

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(a) State whether it should finish the project. [1]

(a)

- yes, it should finish

Exercise 3.3 (b)

3.3 A firm has already spent \$10 000 on a project (unrecoverable). Finishing it costs \$3000 more and earns \$4000.

(b) Explain, correctly ignoring the sunk cost.

[2]

Exercise 3.3 (b)

3.3 A firm has already spent \$10 000 on a project (unrecoverable). Finishing it costs \$3000 more and earns \$4000.

(b) Explain, correctly ignoring the sunk cost.

[2]

(b)

- the \$10 000 is sunk and irrelevant; the extra benefit (\$4000) exceeds the extra cost (\$3000), so finishing adds \$1000 of net benefit