

MICROECONOMICS 101

Chapter 1: Introduction to Economics

Course alignment: ECON1001 — equivalent to first-year microeconomics courses across Australian universities

Prerequisites: None. No prior economics knowledge required.

Chapter covers: What economics studies, scarcity and choice, opportunity cost, production possibilities, positive vs normative statements, and why incentives matter

1. What Economics Studies

Economics as the Study of Choice Under Scarcity

Economics is the social science that examines how individuals and societies make choices when faced with limited resources and unlimited wants. It focuses on how people allocate scarce resources among competing uses, and on the consequences of those choices for living standards, markets, and public policy.

Key features of this definition:

- **Social science:** economics studies human behaviour and interactions, not physical phenomena.
- **Choices:** decisions about consumption, production, saving, working, and investing when not everything can be had at once.
- **Scarce resources:** time, labour, land, capital, and technology are limited relative to the desires for goods and services.

The Three Basic Economic Questions

Because of scarcity, every economy must answer three fundamental questions:

1. What goods and services should be produced?
2. How should these goods and services be produced — which technologies, which inputs?
3. For whom should they be produced — how will income and output be distributed?

Different economic systems — markets, mixed economies, and planned economies — answer these questions in different ways, but the underlying problem is the same: scarce resources must be allocated among competing uses.

Economic System	How the Three Questions Are Answered
Market economy	Prices and profit signals guide what is produced, how, and for whom
Planned economy	Central authority (government) makes all allocation decisions
Mixed economy	Combination: markets operate within a framework of government rules and intervention

2. Scarcity, Choice, and Opportunity Cost

Scarcity

Scarcity is the condition of having to choose among alternatives because resources are limited relative to wants. If resources were unlimited, there would be no need for economics since all desires could be satisfied simultaneously.

Examples of scarce resources:

- Time: there are only 24 hours in a day.
- Money: individual and government budgets are finite.
- Natural resources: land, water, energy, and raw materials.
- Human resources: labour, skills, and entrepreneurial ability.

Important clarification: scarcity does not mean "rare." It means that at a zero price, demand would exceed what is available.

Choice

Because of scarcity, people and societies must make choices about which wants to satisfy and which to postpone or abandon. Every choice involves selecting one alternative and rejecting others.

Examples:

- A student chooses to spend two hours studying economics instead of working an extra shift.
- A government chooses between spending on health care, defence, or infrastructure given a limited budget.
- A firm chooses which project to fund with its limited investment capital.

Opportunity Cost

Opportunity Cost — Definition

The opportunity cost of a choice is the value of the best alternative forgone when that choice is made.

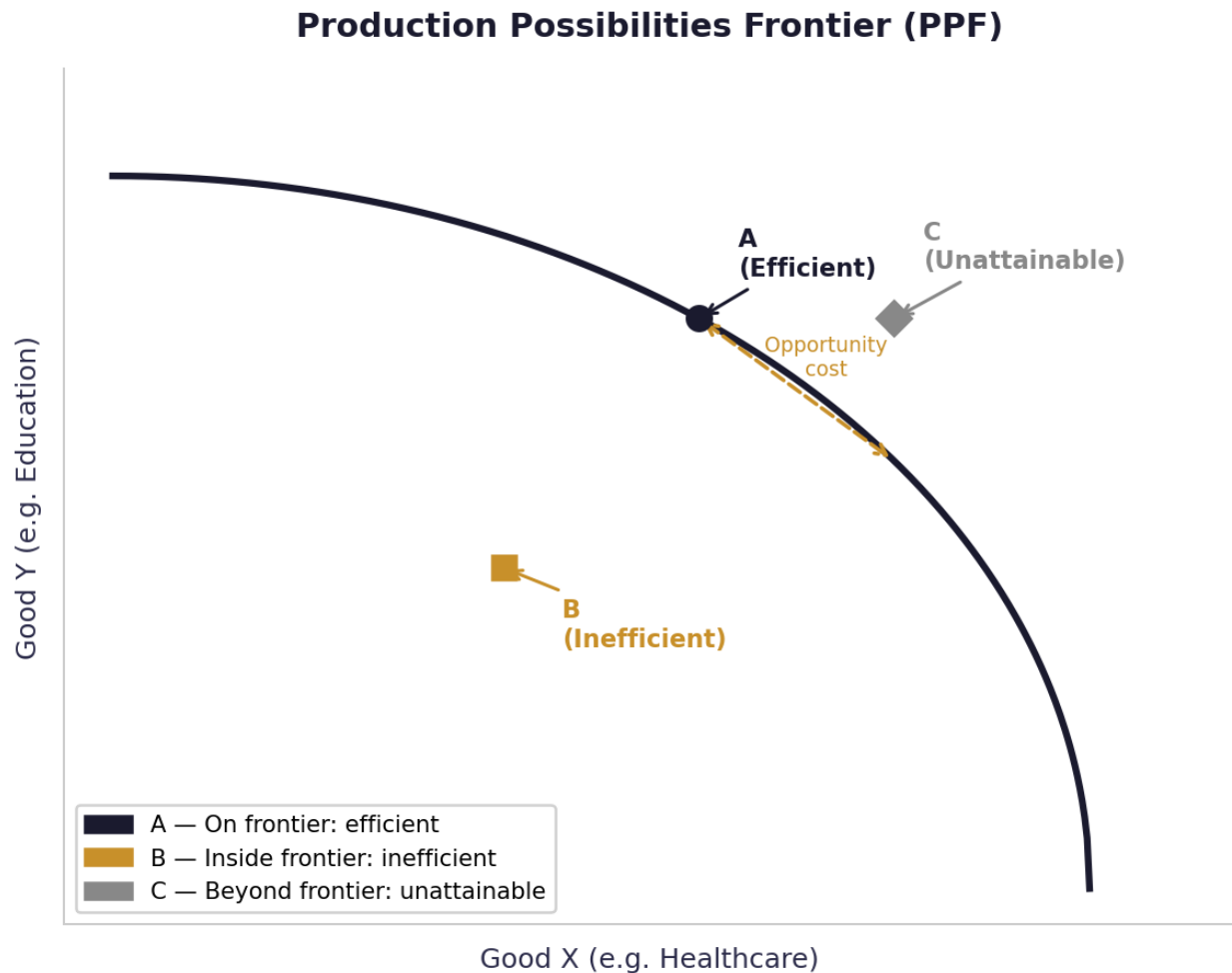
Opportunity cost emphasises that the true cost of an action is not just its money cost but also the value of the next-best thing that could have been done with the same time, money, or resources.

Examples:

- A student spends an evening studying economics instead of working for pay: the opportunity cost is the wage income forgone plus any enjoyment from leisure.
- A government spends an extra billion dollars on transport infrastructure: the opportunity cost may be fewer resources for hospitals, schools, or tax cuts.
- A firm invests in developing one product: the opportunity cost is forgoing an alternative project with different risk and return characteristics.

3. Production Possibilities and Trade-offs

Scarcity and opportunity cost are illustrated using a Production Possibilities Frontier (PPF) — a curve showing the maximum combinations of two goods an economy can produce with its available resources and technology.



Reading the diagram:

- Point A — on the frontier: the economy is productively efficient. All resources are fully and best used.
- Point B — inside the frontier: inefficient. Resources are wasted or idle (e.g. unemployment).
- Point C — beyond the frontier: currently unattainable with existing resources and technology.

Moving along the frontier shows the opportunity cost of more of one good in terms of less of the other. The bowed-out shape reflects increasing opportunity cost: as production of one good rises, progressively larger amounts of the other must be sacrificed, because resources are not equally suited to all uses.

Economic Growth and the PPF

The PPF shifts outward when productive capacity increases — through technological advances, labour force growth, or capital accumulation. An outward shift means more of both goods can be produced, representing economic growth.

4. Positive vs Normative Statements

Positive Economics

Positive economics describes and explains economic phenomena as they are, using statements that can, in principle, be tested against data.

Positive Statement

An objective claim about how the world is, was, or will be. It can be evaluated as true or false by comparing it with empirical evidence.

Normative Economics

Normative economics involves value judgements about what ought to happen or which policies are desirable.

Normative Statement

A subjective claim about how the world should be. It cannot be proven right or wrong using data alone because it depends on ethical views, political preferences, and notions of fairness.

Positive vs Normative: Examples

Positive Statement	Normative Statement
An increase in the minimum wage reduces employment among low-skilled workers (testable against data).	The government should increase the minimum wage (depends on values).
Inflation was 3 percent last year.	Reducing inequality is more important than maximising economic growth.
A congestion charge reduces peak-hour traffic by 15 percent.	The government ought to invest more in public transport.

Why the Distinction Matters

Good economic analysis requires being clear when a statement is positive (descriptive) and when it is normative (prescriptive).

- Positive economics can show the likely consequences of a policy — its effect on prices, employment, or tax revenue.
- Normative economics is needed to decide whether those consequences are acceptable or desirable.

Signal words: statements with "is", "was", or specific numbers tend to be positive. Statements with "should", "ought", "fair", or "better" are usually normative.

5. Why Incentives Matter

Definition

An incentive is something that motivates a person or organisation to act in a particular way. Incentives can be intrinsic (personal satisfaction) or extrinsic (rewards or punishments), and may be material, moral, or social.

The Incentive Principle

Incentive Principle

When incentives change, people's behaviour tends to change in predictable ways. Policies that ignore incentives often produce unintended consequences.

Incentives in Practice

Incentive	Who Responds	Behaviour Change
Interest rates on savings rise	Households	Save more, borrow less
Congestion charge introduced	Commuters	Switch to public transport or change travel time
Scholarship for high performance	Students	Increase study effort
Commission-based pay	Sales staff	Increase sales activity
Benefits fall sharply when taking a job	Welfare recipients	Reduced incentive to enter workforce

Unintended Consequences

Poorly designed incentives can backfire:

- A welfare programme that cuts benefits sharply when someone takes a job may reduce the incentive to enter the workforce — the effective marginal tax rate on earnings becomes very high.
- Paying doctors per procedure rather than per patient may encourage more tests and treatments than are medically necessary, increasing costs without improving outcomes.

Incentives and Marginal Analysis

Decision-makers respond to incentives at the margin: they compare marginal benefits with marginal costs and act when marginal benefit is at least as large as marginal cost.

- A consumer buys another slice of pizza if the extra satisfaction (marginal benefit) exceeds its price (marginal cost).
- A firm hires an additional worker if the extra revenue from that worker's output exceeds the wage.

Real-world behaviour is also shaped by limited information, bounded rationality, and behavioural biases — but the incentives framework remains a powerful first approximation for predicting responses to price changes, taxes, subsidies, and regulations.

6. Key Propositions

Students should be able to state and apply the following core propositions:

Proposition	Statement	Implication
Scarcity	Resources are limited and wants are unlimited, so every choice involves trade-offs.	There is no free lunch — more of one thing means less of another.
Opportunity Cost	The opportunity cost of any choice is the value of the best alternative forgone.	The true cost includes what you give up, not just what you pay.
Positive–Normative Distinction	Positive economics describes how the world is; normative makes value judgements about how it should be.	Policy debates mix both — separating them improves clarity.
Incentive Principle	When incentives change, behaviour changes in predictable ways.	Policies that ignore incentives often produce unintended consequences.

7. Common Student Difficulties

Typical misunderstandings at this stage:

- Confusing scarcity with poverty. Scarcity is about limited resources relative to wants — even wealthy individuals and governments face scarcity.
- Thinking opportunity cost is "any" cost rather than specifically the best alternative forgone. Only one alternative counts.
- Failing to distinguish positive statements (testable) from normative statements (value-based), especially when policy debates mix both types.
- Underestimating how strongly incentives shape behaviour, or assuming only financial incentives matter. Social, moral, and non-monetary incentives are also economically significant.