# Topic Coverage: The Economy by *CoreEcon*

## Utility Maximization

Textbook Chapter: Chapter 3

MobLab Game: Consumer Choice Cobb Douglas

Key Teaching Points:

- When allocating a fixed budget, sequentially choosing the item offering the highest marginal utility per leads to the utility-maximizing budget allocation.
- Students will gain familiarity with some of the implications of the Cobb Douglas utility function.

## Game Theory

Textbook Chapter: Chapter 4

MobLab Game: Prisoner's Dilemma / Prisoners Dilemma Push Pull

Key Teaching Points:

- Key features of games: payoff matrices, best responses and dominant strategies.
- Identification of the Nash equilibrium.
- The (sometimes) conflicting incentives of cooperation and self-interest.
- Repeated play may lead to more cooperative outcomes.

## Fairness and Social Preferences

Textbook Chapter: Chapter 4

MobLab Games: Ultimatum

- Demonstrates how social norms such as fairness and altruism may result in behaviors that deviate from game theoretic predictions.
- In conjunction with the Dictator Game, helps distinguish between strategic and non-strategic altruism

MobLab Game: Ultimatum: Strategy Method

- The successful bargainer accounts for a wide variation in others' preferences for fairness.
- Many players make offers that they themselves would not accept, which may be evidence of a lack of strategic thought.

*Additional MobLab Games: Dictator and Trust Game*

## Public Goods

Textbook Chapter: Chapter 4

MobLab Game: Linear Public Goods

Key Teaching Points:

- Highlights the features of public goods: non-rival and non-excludable.
- Demonstrates the distinction between private and social benefits of public goods.
- Shows how individual profit maximization leads to the free-rider problem.

MobLab Game: Public Goods Rewards and Punishment

- This environment highlights the distinction between individual incentives and collective interests.
- As an individual bases their provision of a public good on their private benefit, relying on voluntary contributions will result in an inefficiently low level of provision.
- The existence of reward and punishment opportunities may increase voluntary contributions to public goods.

## Labor Markets

Textbook Chapter: Chapters 6 & 9
MobLab Game: Simple Labor Market
Key Teaching Points:

- When a perfectly competitive market determines wages, the equilibrium wage (per unit of labor) is equal to the value of the marginal product of labor of the last worker hired.

MobLab Game: Principal Agent
Key Teaching Points:

- The optimal contract offered to the worker depends on the information environment (full information v. asymmetric information)
- The magnitude of different contract features (flat-fee and bonus) depend on worker outside option and cost of effort.
- The presence of asymmetric information leads to a decline in economic welfare as more profitable projects are not undertaken.

## Gains from Trade

Textbook Chapter: Chapters 7 & 18
MobLab Game: Comparative Advantage
Key Teaching Points:

- The distinction between absolute and comparative advantage.
- Experience first-hand the gains from specialization and trade.
- Differences in opportunity costs lead to mutually beneficial trade.

## Price Setting and Competition

Textbook Chapter: 7
MobLab Game: Cournot
Key Teaching Points:

- The underlying logic of the Cournot model: how market price is determined by aggregate output.
- The equilibrium outcomes of Cournot competition.
- Repeat interaction may lead to collusive behavior.

## Supply and Demand in a Competitive Market
Textbook Chapter: Chapter 8
MobLab Game: Competitive Market
Key Teaching Points:
- The "invisible hand" of the market: how individual profit maximization leads to competitive market equilibrium.
- Price discovery: the equilibrium market-clearing price results from the valuations of different buyers and costs of different sellers.
- Gains from trade (i.e., consumer and producer surplus).
- Shifts in either supply or demand change equilibrium outcomes.

## Government Interventions in Competitive Markets
Textbook Chapter: Chapter 8
MobLab Game: Competitive Market
Key Teaching Points:
- Government interventions (per-unit taxes, subsidies, price ceilings and floors) alter equilibrium outcomes.
- Equilibrium outcomes do not depend on whether buyers or sellers pay the tax.
- The difference between tax incidence and who pays the tax.
- Relative elasticities determine incidence of a tax or subsidy.
- Excess supply (price floors) and excess demand (price ceilings).
- The efficiency implications of government interventions.

## Long Run Equilibrium
Textbook Chapter: Chapter 8
MobLab Game: Production, Entry & Exit
Key Teaching Points:
- Short-run profit maximization involves thinking at the margin.
- Show how firm entry and exit decisions are affected by the decisions in the previous round, and if the market entrants earned a profit or not.
- In the long-run equilibrium of a competitive market with identical firms, all firms earn zero economic profits.

## Money & Banking
Textbook Chapter: Chapter 10
MobLab Game: Bank Run
Key Teaching Points:
- Highlights the underlying concept of fractional banking.
- Demonstrates the trade-off between profit and risk and shows how bank runs may arise.
- Policy interventions, such as deposit insurance, can reduce the possibility of bank runs.

## Asset Markets

Textbook Chapter: Chapter 11
MobLab Game: Bubbles and Crashes
Key Teaching Points:

- Highlights the determinants of an asset's value: income generated and resale value.
- Shows how asset bubbles may develop even with complete information.

## Common-Pool Resources

Textbook Chapter: Chapters 12 & 20
MobLab Game: Commons: Fishery
Key Teaching Points:

- Individual profit maximization leads to overuse of a common-pool resource.
- Communication and repeat-play may lead to better outcomes than predicted on standard theory.

## Asymmetric Information

Textbook Chapter: Chapter 12
MobLab Games: Market for Lemons / Insurance Market
Key Teaching Points:

- Experience in a market with asymmetric information.
- Asymmetric information may lead to adverse selection and market failure.

## Loan Market

Textbook Chapter: Chapter 12
MobLab Games: Interest Rates and Inflation
Key Teaching Points:

- Supply and demand determine the equilibrium interest rate. Absent investment-return uncertainty, those with the lowest opportunity cost lend to those with the highest real return on investment.
- With nominal repayment amount fixed, higher than expected inflation reduces the real value of the loan repayment, harming lenders and benefiting borrowers. With lower than expected inflation, the higher than anticipated real value of the repayment harms borrowers and benefits lenders.

## Externalities

Textbook Chapter: Chapter 21
MobLab Game: Externalities with Policy Intervention
Key Teaching Points:

- Show a divergence between market price and quantity and the socially optimal price and quantity for an externality-generating good.
- Explore interventions like tax, subsidy, and tradable permits for externality generating goods.