The Model of Perfect Competition
Key issues

• The meaning of perfect competition
• Characteristics of perfect competition
• Price and output under competition
• Competition and economic efficiency
• Wider benefits of competition in markets
Assumptions Behind a Perfectly Competitive Market

• Many suppliers each with an insignificant share of market
• Each firm is too small to affect price via a change in market supply – each individual firm is a price taker
• Identical output produced by each firm – homogeneous products that are perfect substitutes for each other
• Consumers have complete information about prices
• Transactions are costless - Buyers and sellers incur no costs in making an exchange
• All firms (industry participants and new entrants) have equal access to resources (e.g. technology)
• No barriers to entry & exit of firms in long run – the market is open to competition from new suppliers
• No externalities in production and consumption
Examples of Perfectly Competitive Markets?

• It is rare to find a pure example of perfect competition
• But there are some close approximations:
  – Foreign exchange dealing
    • Homogeneous product - US dollar or the Euro
    • Many buyers & sellers
    • Usually each trader is small relative to total market and has to take price as given
    • Sometimes, traders can move currency markets
  – Agricultural markets
    • Pig farming, cattle
    • Farmers markets for apples, tomatoes
    • Wholesale markets for fresh vegetables, fish, flowers
    • Street food markets in developing countries
Approximations to perfect competition
Price taking firms

• Competitive firms have little direct influence on the ruling market price

• Examples of price-taking behaviour:
  – Local farmers selling to large supermarkets
  – RJB Mining selling coal to electricity generators
  – A local steel firm selling as much as it can at the ruling international price of steel

• When most firms in a market are price takers, there is only a small percentage difference in the prices of selected products within the market

• The law of one price may hold true – most of the existing firms sell at the prevailing price
Short run price and output

Price

Output

P1

AC1

MS

MC

AR=MR

MR=MC

Maximum Profits

AC

MD

Q1

Output

Price

P1
Showing short run profits

Profits = \((P_1 - AC_1) \times Q_1\)

Price

Output

MD

MS

P1

P1

AC1

Q1

Output

AR = MR

MC

AC
A rise in market demand

New level of supernormal profits
What is a Long Run Equilibrium?

• The usual interpretation of a long run equilibrium is as follows:
  • (1) The quantity of the product supplied in the market equals the quantity demanded by all consumers
  • (2) Each firm in the market maximizes its profit, given the prevailing market price
  • (3) Each firm in the market earns zero economic profit (i.e. normal profit) so there is no incentive for other firms to enter the market

You Tube video on perfect competition
Long run equilibrium price

Price vs. Output

MS and MD intersect at P1

AR = MR at P1

Output vs. Q2

MC and AC intersect at Q2

AR = MR at Q2
Long run equilibrium price

AR = MR

MC

MS

MS2

P1

P1

P2

MD

Output

Price

AC

AR = MR

AR2 = MR2

Q2

Output
In the long run equilibrium, normal profits are made i.e. price = average cost
Competition and Economic Efficiency

- **Economic efficiency** has several meanings:

- **Productive efficiency**
  - when output is produced at the lowest feasible average cost (either in the short run or the long run)

- **Allocative efficiency**
  - achieved when the price of output reflects the true marginal cost of production
  - (i.e. price=marginal cost)
Allocative Efficiency

Price

Consumer Surplus

Market Supply

P1

Output

Market Demand

Q1

Producer Surplus
Competition and Economic Efficiency

- **Technological efficiency**
  - where maximum output is produced from given inputs

- **Dynamic Efficiency**
  - Refers to the range of choice and quality of service
  - Also considers the pace of technological change and innovation in a market
Allocative efficiency

- Allocative efficiency
  - achieved when it is impossible to make someone better off without making someone else worse off
- Also called **Pareto Optimality**
- No trades are left that would make one person better off without hurting someone else
- Occurs when price = marginal costs of production
- This occurs in the long run under perfect competition
Importance of a Competitive Environment

• The standard view is that competition drives an improvement in welfare and efficiency
• Competition forces under-performing firms out of the market and shifts market share to more efficient firms in the long run
• Competition encourages firms to innovate and adopt best-practise techniques
How useful is model of perfect competition?

- Assumptions are not meant to reflect real world markets where most assumptions are not satisfied
  - Pure competition is largely devoid of what most people would call real competitive behaviour by businesses!
  - The model provides a theoretical benchmark against which we compare and contrast imperfectly competitive markets
  - Consider perfect competition as a point of reference
- Useful when considering
  - The effects of monopoly or other forms of imperfect competition
  - The case for free international trade
Real world – imperfect competition!

- Some suppliers have a degree of control over market supply
- Some consumers have monopsony power against suppliers because they purchase a significant percentage of total demand
- Most markets have heterogeneous products due to product differentiation.
- Consumers nearly always have imperfect information and their preferences and choices can be influenced by the effects of persuasive marketing and advertising
- The real world is one in which negative and positive externalities from both production and consumption are numerous
- Finally there may be imperfect competition in related markets such as the market for essential raw materials, labour and capital goods.
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