

Oligopoly Notes

The distinguishing features of oligopoly are:

- Natural or legal barriers that prevent entry of new firms
- A small number of firms compete

Small Number of Firms

Because an oligopoly market has a small number of firms, the firms are interdependent and face a temptation to cooperate.

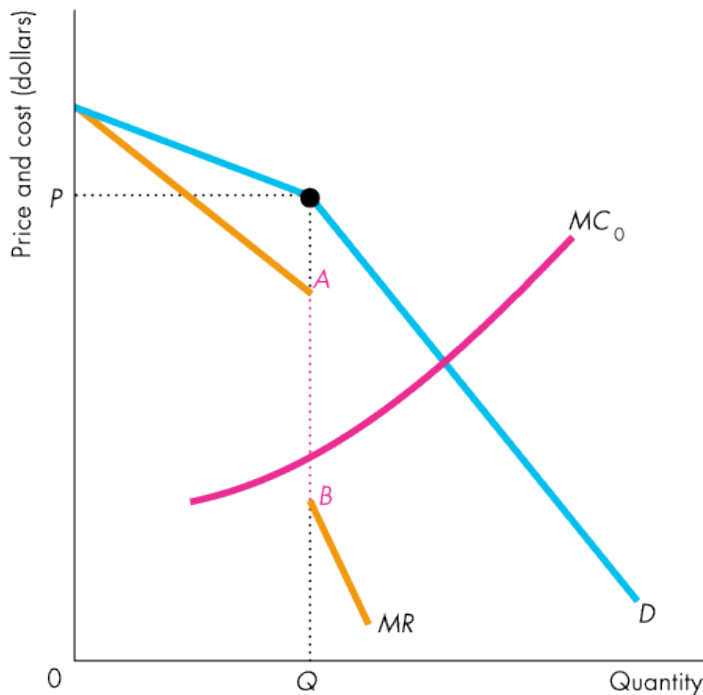
Interdependence: With a small number of firms, each firm's profit depends on every firm's actions.

Cartel: an illegal group of firms acting together to limit output, raise price, and increase profit.

Firms in oligopoly face the temptation to form a cartel, but aside from being illegal, cartels often break down.

The Kinked Demand Curve Model

In the kinked demand curve model of oligopoly, each firm believes that if it raises its price, its competitors will not follow, but if it lowers its price all of its competitors will follow.



Above the kink, demand is relatively elastic because all other firm's prices remain unchanged.

Below the kink, demand is relatively inelastic because all other firm's prices change in line with the price of the firm shown in the figure.

The kink in the demand curve means that the *MR* curve is discontinuous at the current quantity—shown by that gap *AB* in the figure.

Fluctuations in *MC* that remain within the discontinuous portion of the *MR* curve leave the profit-maximizing quantity and price unchanged.

For example, if costs increased so that the *MC* curve shifted upward from *MC*₀ to *MC*₁, the profit maximizing price and quantity would not change.

The beliefs that generate the kinked demand curve are not always correct and firms can figure out this fact

If *MC* increases enough, all firms raise their prices and the kink vanishes.

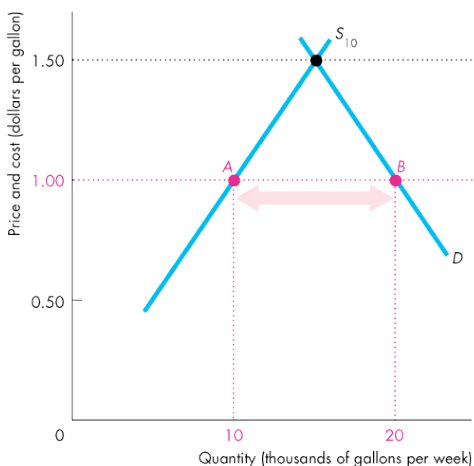
A firm that bases its actions on wrong beliefs doesn't maximize profit.

Dominant Firm Oligopoly

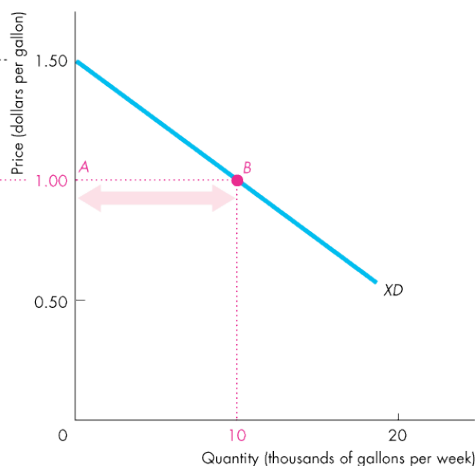
In a dominant firm oligopoly, there is one large firm that has a significant cost advantage over the competitive fringe (the many other smaller competing firms).

The large firm operates as a monopoly, setting its price and output to maximize its profit.

The small firms act as perfect competitors, taking as given the market price set by the dominant firm. To construct the demand curve of the dominant firm:

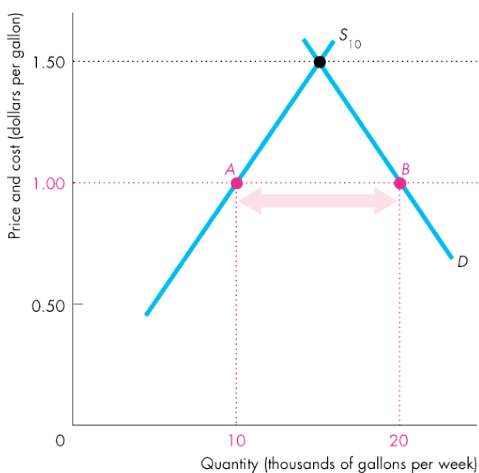


(a) Ten small firms and market demand

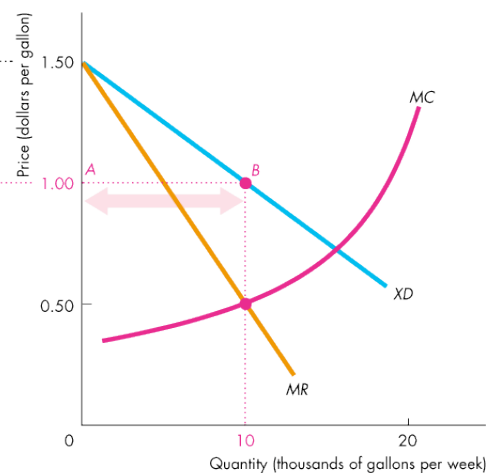


(b) Big-G's price and output decision

- The market supply and demand is the same as the supply and demand of the competitive fringe.
- At the equilibrium at a price of 1.50 the competitive fringe is willing to supply all of the quantity demanded therefore the demand for the dominant firm is 0.
- At a price of 1.00, the competitive fringe is willing to supply 10 units and the quantity demanded is 20 units therefore the dominant firm supplies 10 units to meet the demand of the market.



(a) Ten small firms and market demand



(b) Big-G's price and output decision

The dominant firm maximizes profit by setting $MR = MC$. Let's suppose that the marginal cost curve is MC in the figure.

The dominant firm sets the price equal to one dollar (the price setter) and the competitive fringe is the price takers.

The dominant firm produces 10 to 20 in the market (the excess of the competitive fringe) and the competitive fringe supplies 0 to 10 units in the market.