Oligopoly

EE 382

Oligopoly

A market structure that is **dominated by a few large producers** and as such it lies towards the uncompetitive extreme of the spectrum of competition

Definition and model

- Few sellers, many buyers
- Barriers to entry are significant
- Non price competition
- Product differentiation
- Tacit collusion

Few sellers, many buyers

- When making market conduct decisions such as the pricing of fares or the level of service to provide, firms will take into account rivals' likely reactions to their market conduct

Barriers to entry are significant

- Firms within the industry have a degree of protection from new entrants

Non price competition

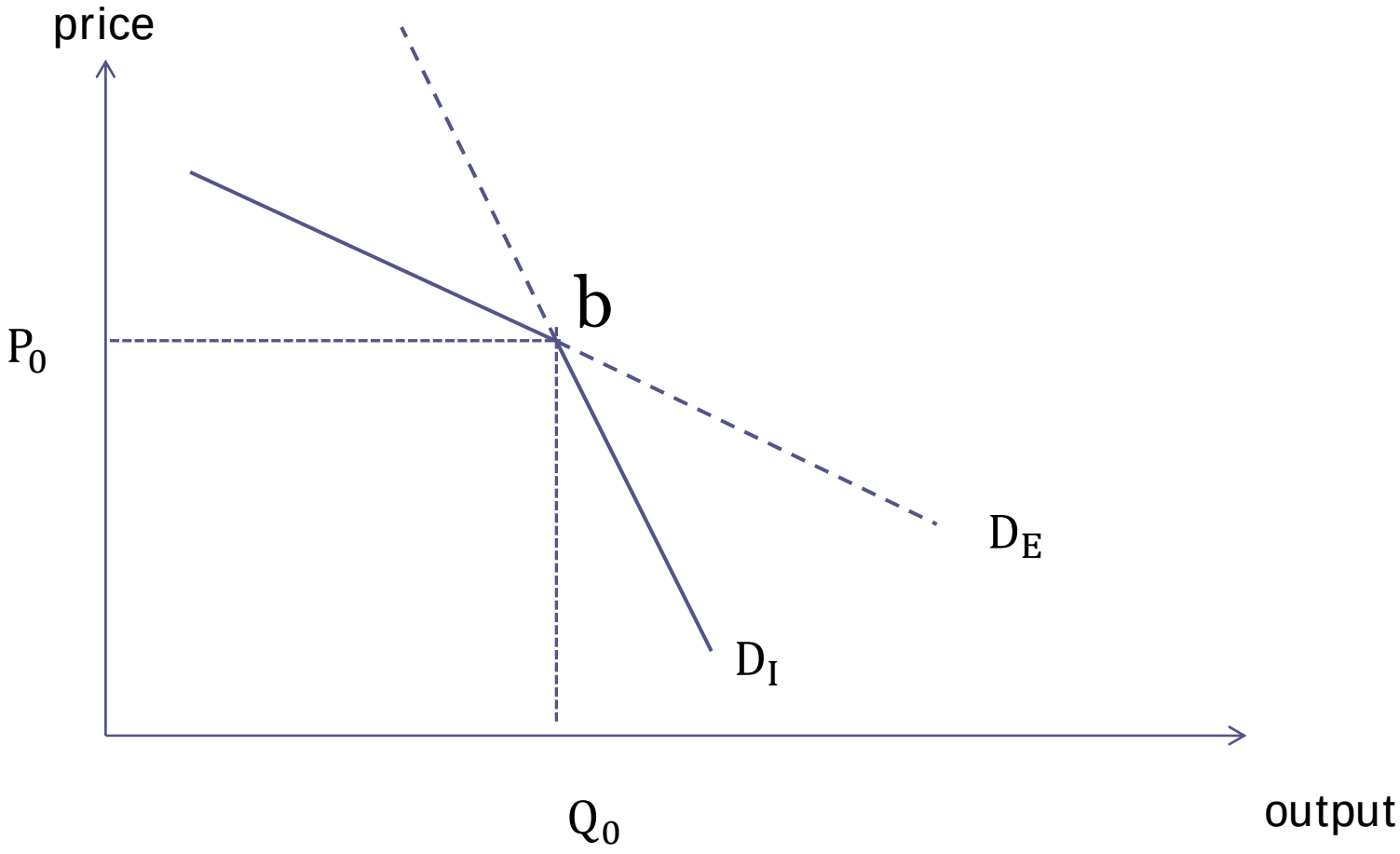
- Very few sellers – price wars tend to damage all firms in the industry and benefit none
- At the market price P_0 the firm's demand curve is kinked at point b (the intersection point of two different demand curves)
- This represents different reactions from rivals to a firm's change in price

Kinked demand curve model of oligopoly

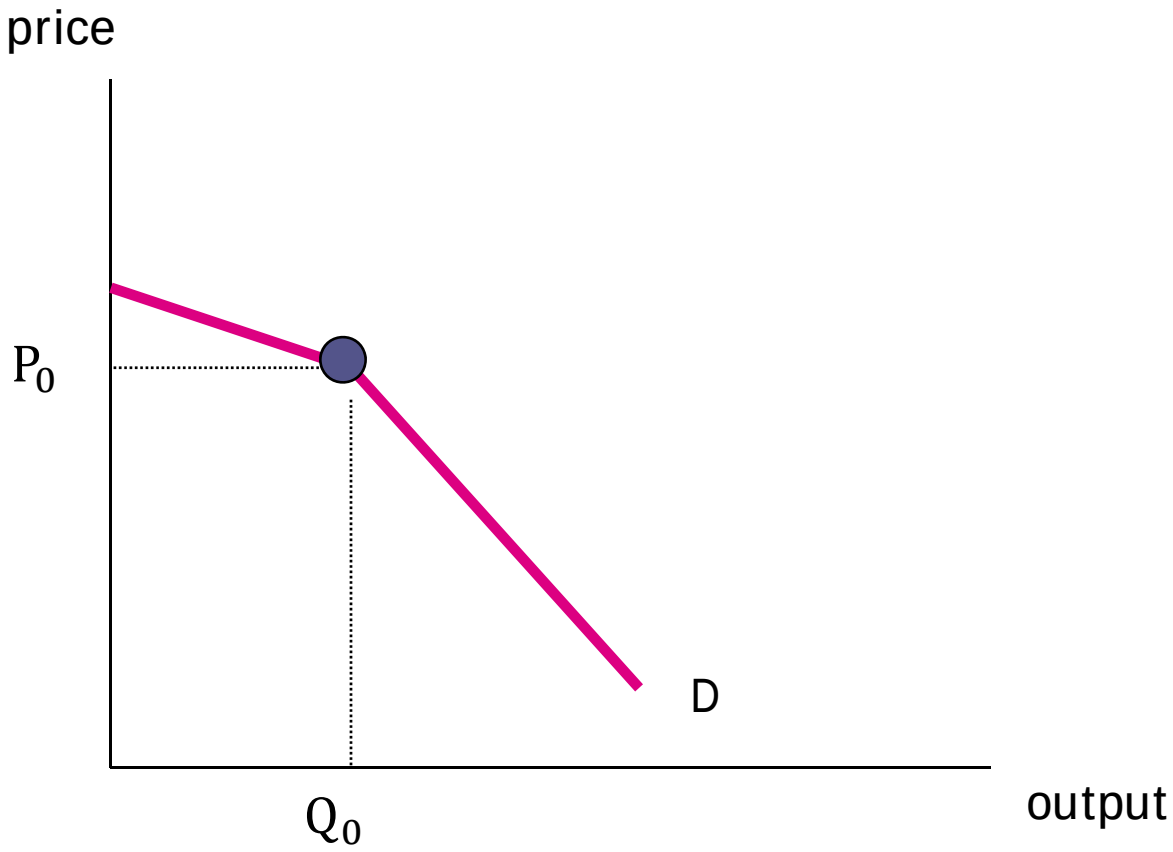
Assumptions:

1. If a firm raises prices, other firms won't follow and the firm loses a lot of business.
   So demand is very responsive or elastic to price increases.
2. If a firm lowers prices, other firms follow and the firm doesn't gain much business.
   So demand is fairly unresponsive or inelastic to price decreases.

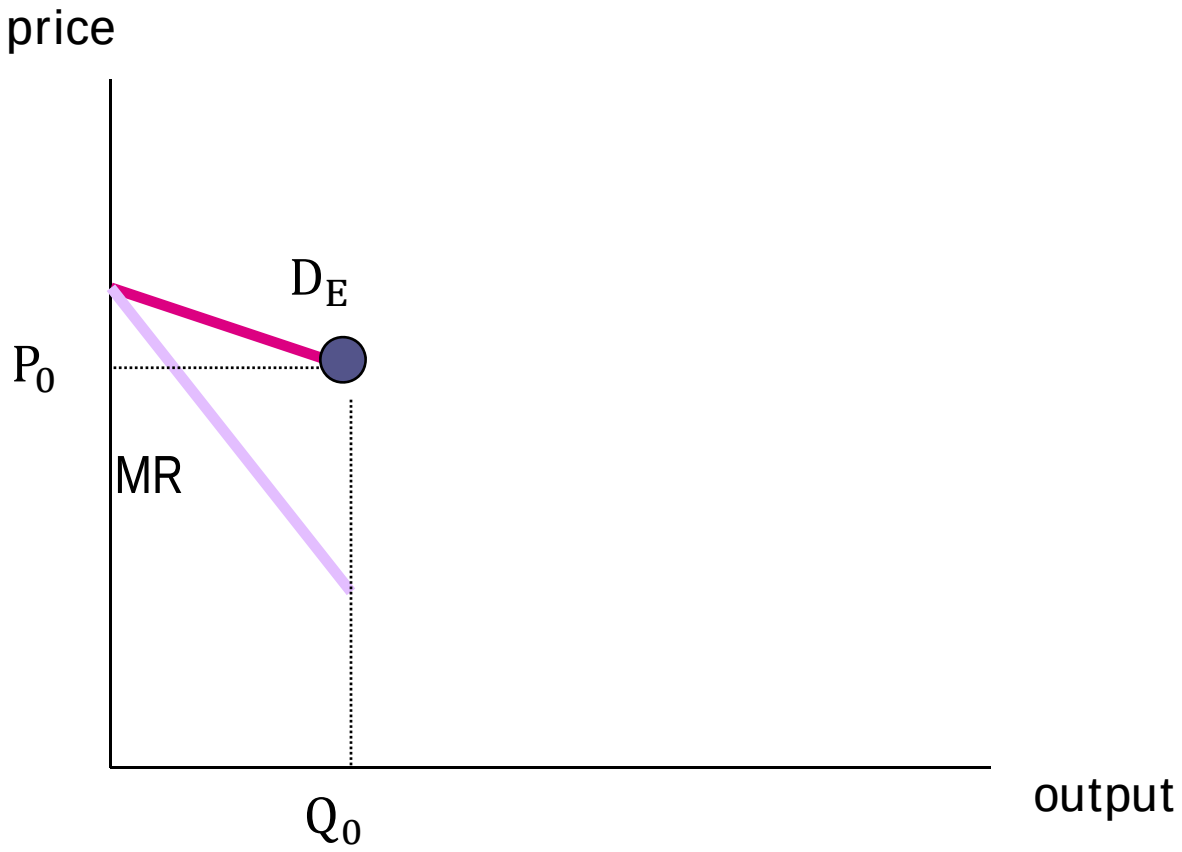
The kinked demand curve



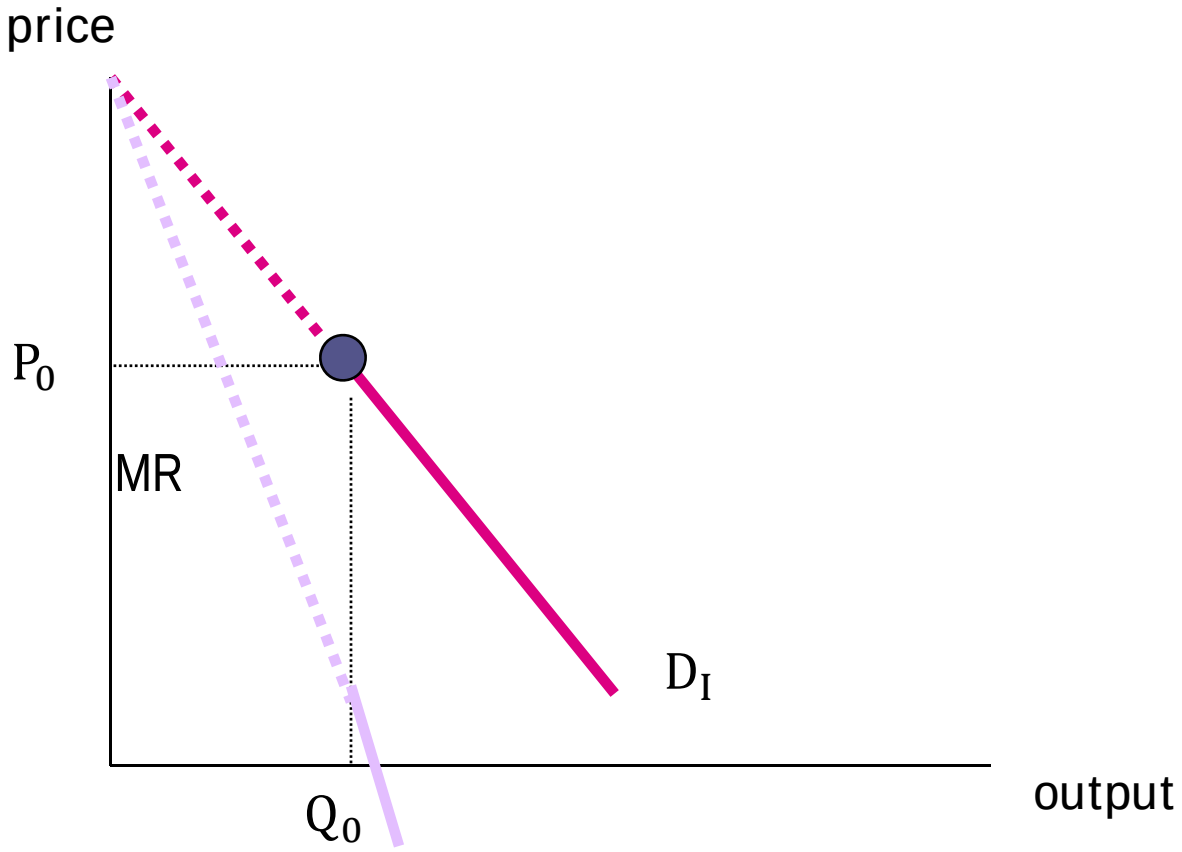
The Kinked Demand Curve



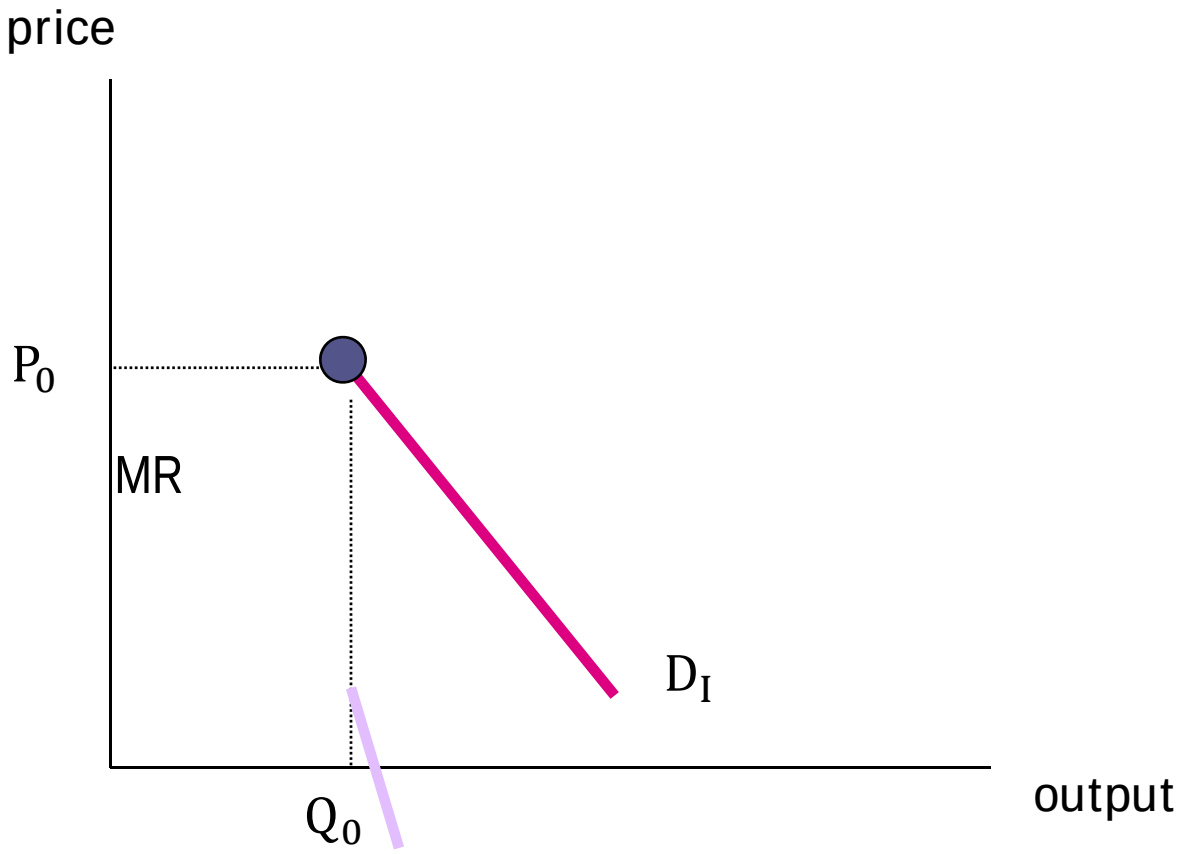
MR Curve for the top part of the Demand Curve



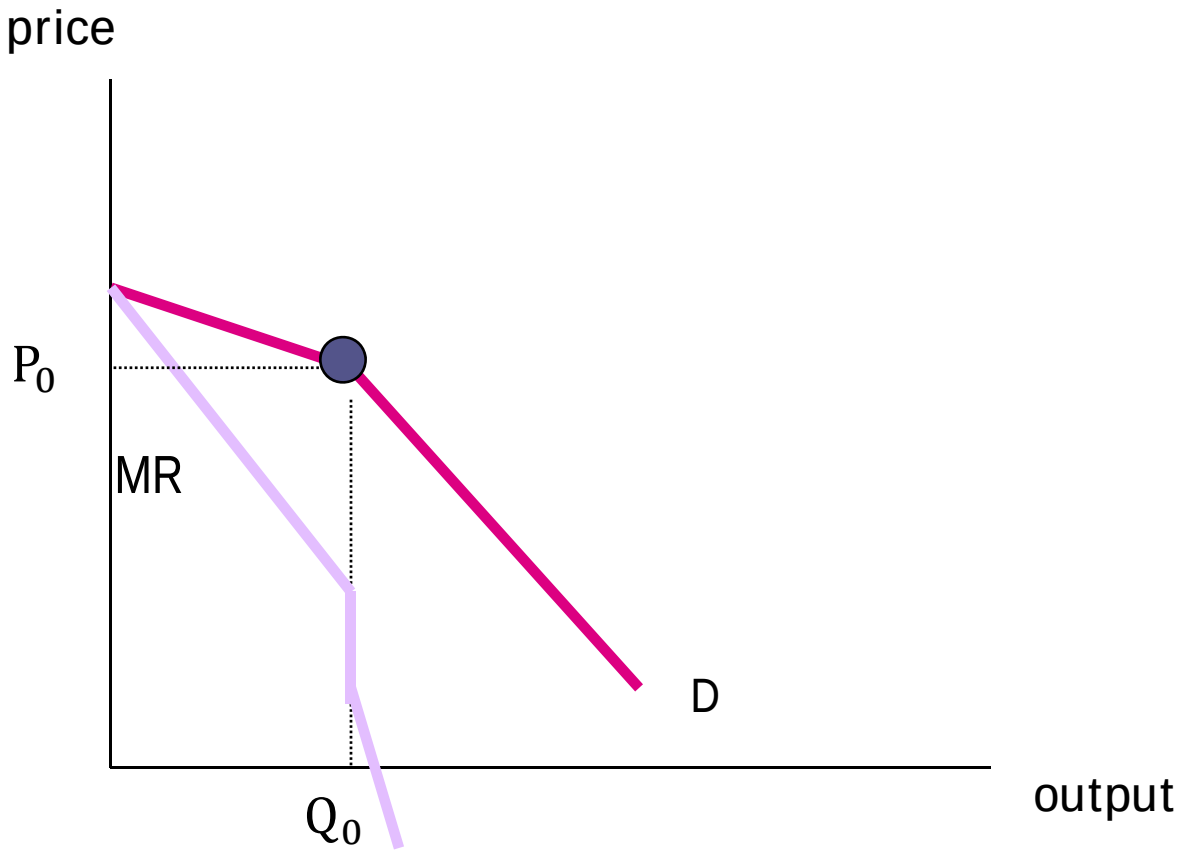
Drawing MR Curve for the bottom part of the Demand Curve



MR Curve for the bottom part of the Demand Curve



The Kinked Demand Curve and the MR Curve



- The demand curve D_E represents relatively more elastic demand

- The demand curve D_I represents relatively more inelastic demand

- If a firm was to increase its price from P_0, demand would follow the path of D_E - This is because it is assumed that no other firm will follow suit in increasing prices, hence the firm will be alone and experience a substantial drop in quantity demanded

- As demand is relatively elastic, then any increase in price will actually lead to a decrease in total revenue, hence there is little incentive to take such action

- If the firm was to cut its price, the theory is that other firms will follow suit for fear of losing market share

- Demand would therefore follow the demand curve D_I

- Although the lower price will encourage more consumers to purchase the product, because other firms have matched any price reductions these 'new' consumers will be the only increase in the quantity demanded for the individual firm's product

- The conclusion of the theory of the kinked demand is that all firms will charge the same price and thus not compete on the basis of price

- What the kinked demand curve does not explain however is how the price come to be at that level in the first place

- This is normally assumed to be set by some form of price leader, which would be a company that either has an ultimately cost advantage or one that has a very large market presence

- Under such a scenario, the market leader sets the price and all other firms follow suit

Product differentiation

- A degree if product differentiation

- Differentiation can take the form of differences in the frequency of service patterns, the flexibility of the tickets sold, the role of special offers and even the company's market position

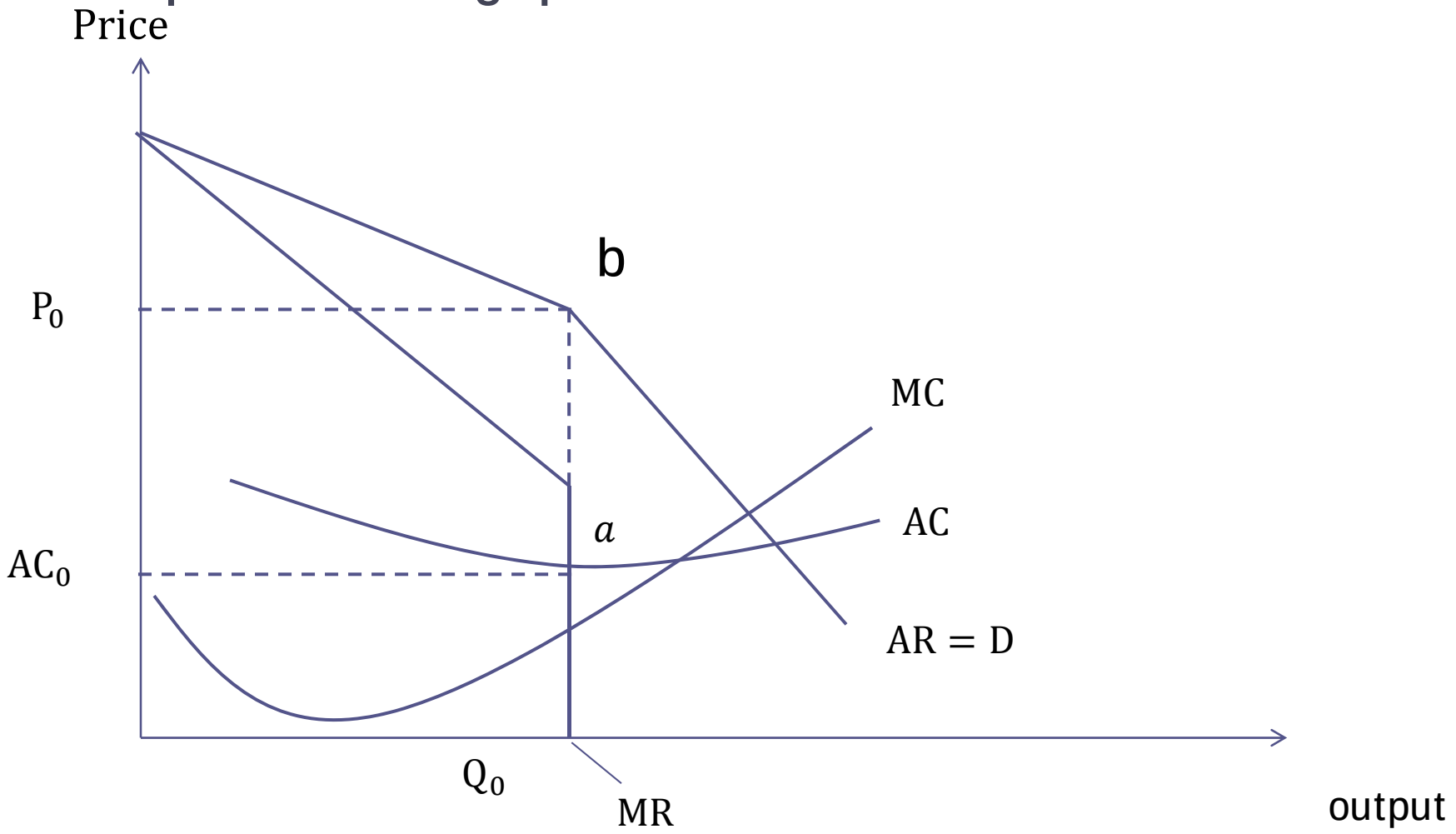
Tacit collusion

- A hidden degree of co-operation
  - This doesn't mean hidden from regulatory authorities, etc, but rather that under such a market structure there is a strong incentive for firms to co-operate rather than compete with each other

The market position of the oligopoly firm

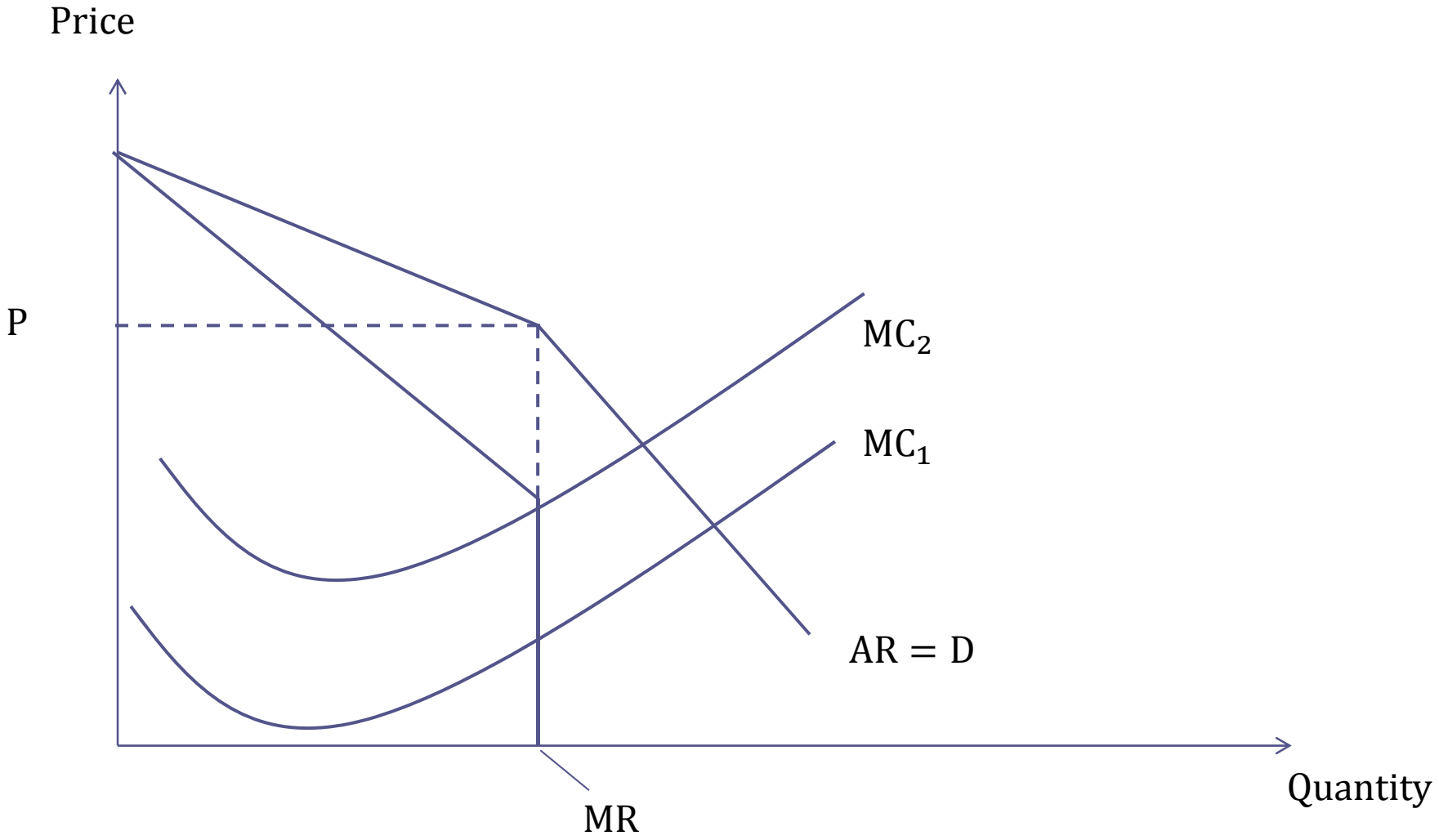
- Under oligopoly , there is a degree of consumer loyalty, the firm faces a downward sloping demand curve however, there is a kinked at the market price, being more inelastic below the market price than above

Profit maximization position of the non price competition oligopolistic firm



- Produces at the level where MC=MR
- At this level of output the firm is not only making abnormal profits but also is not producing at the lowest point on the average cost curve
- This will be the long run position- have significant barrier to entry which prevent new firm entering the market and competing away abnormal profit

The Oligopolistic kinked demand curve diagram



- The average revenue curve is kinked – causes there to be a vertical section in the MR

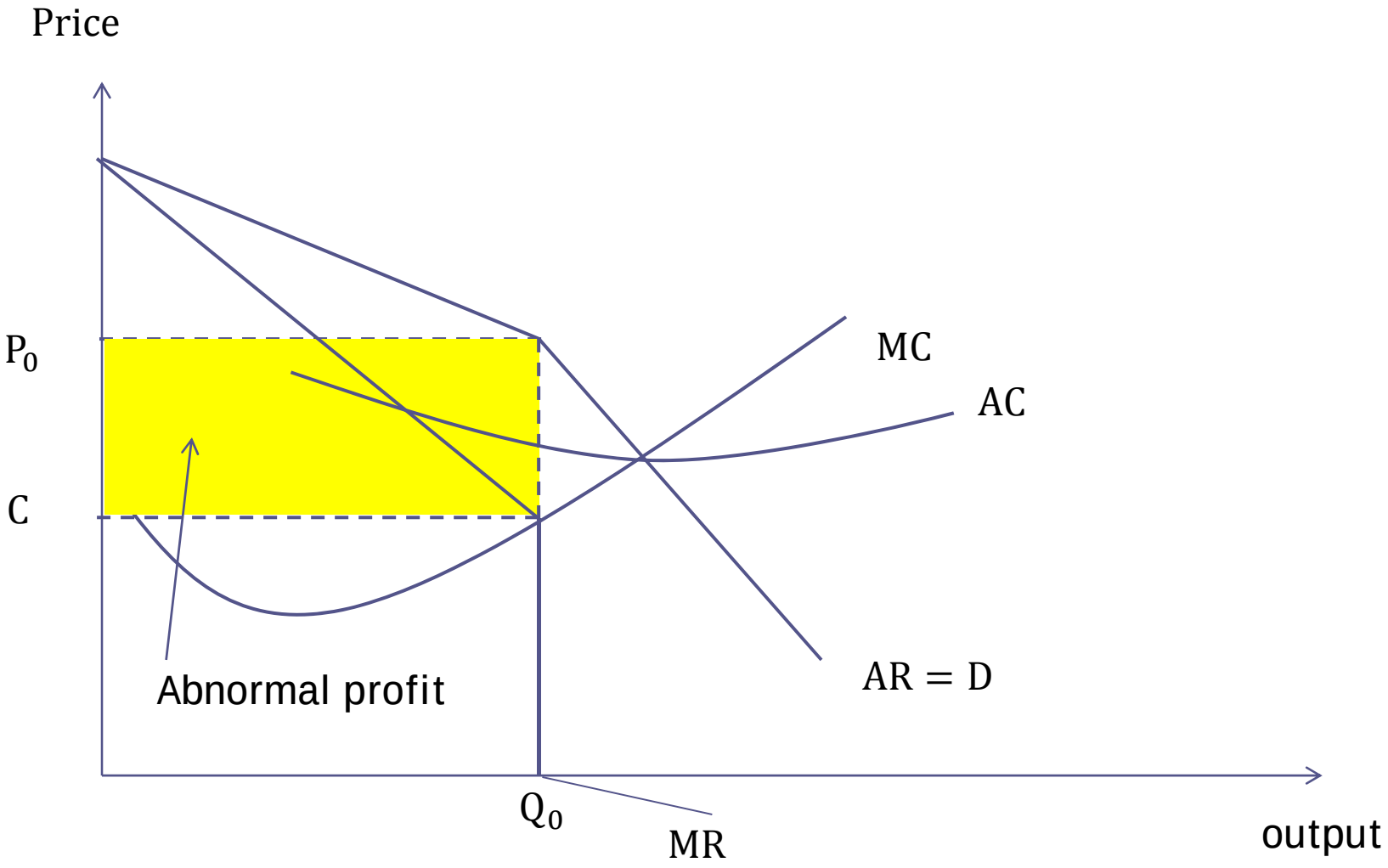
- If it is assumed that the MC curve intersects the MR curve along this vertical section then the MC curve is about to shift without it leading to a change in price

  - The profit-maximizing producer will maintain a price of P as that corresponds to the level of output at which MC =MR

- Assume that there is a single MC curve and to then add the corresponding AR curve

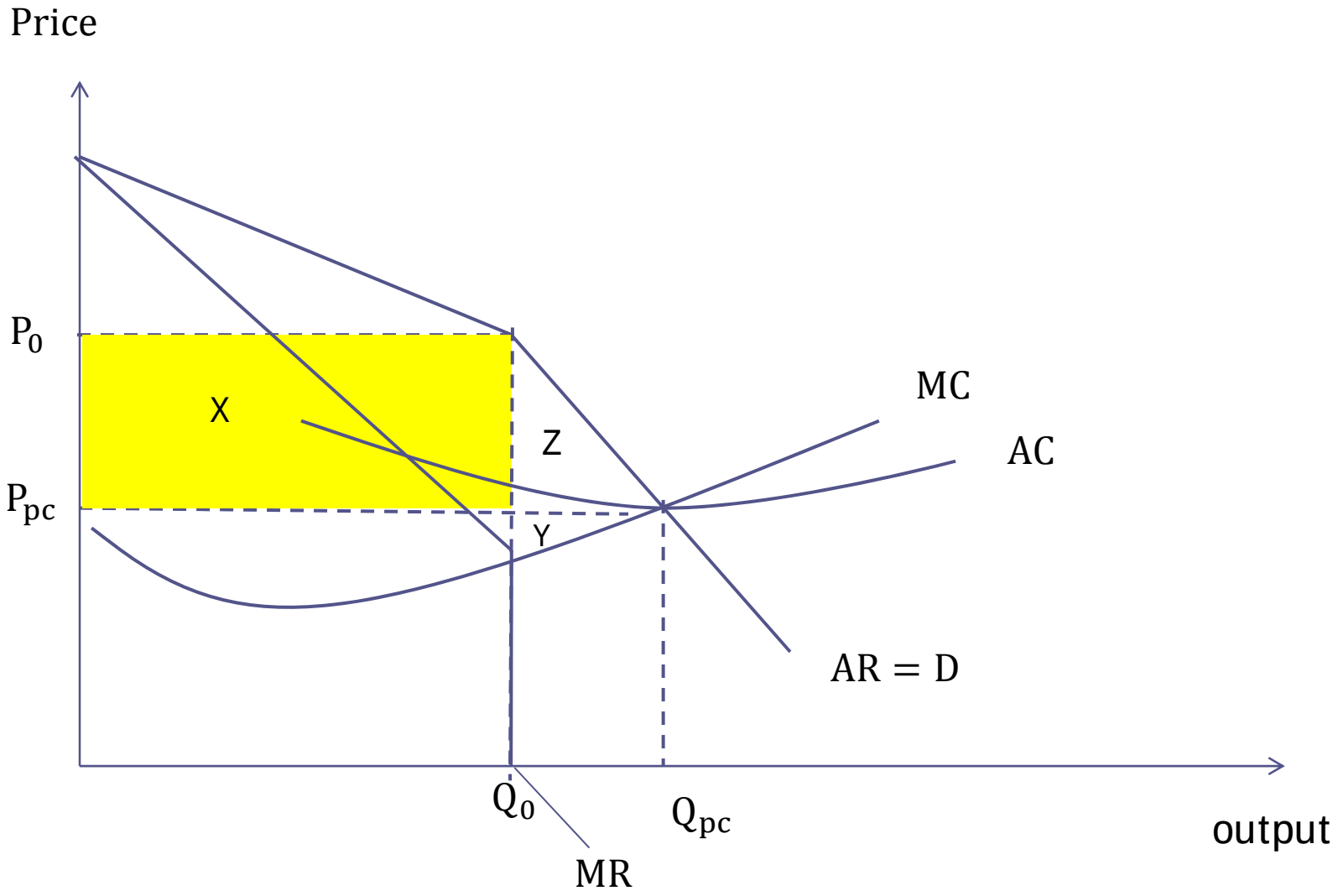
- As such the price in an oligopoly is likely to be higher than the average costs that the producers have to pay and so they earn abnormal profit which is then protected in the long run by the barriers to entry that exist

Abnormal profit under oligopoly



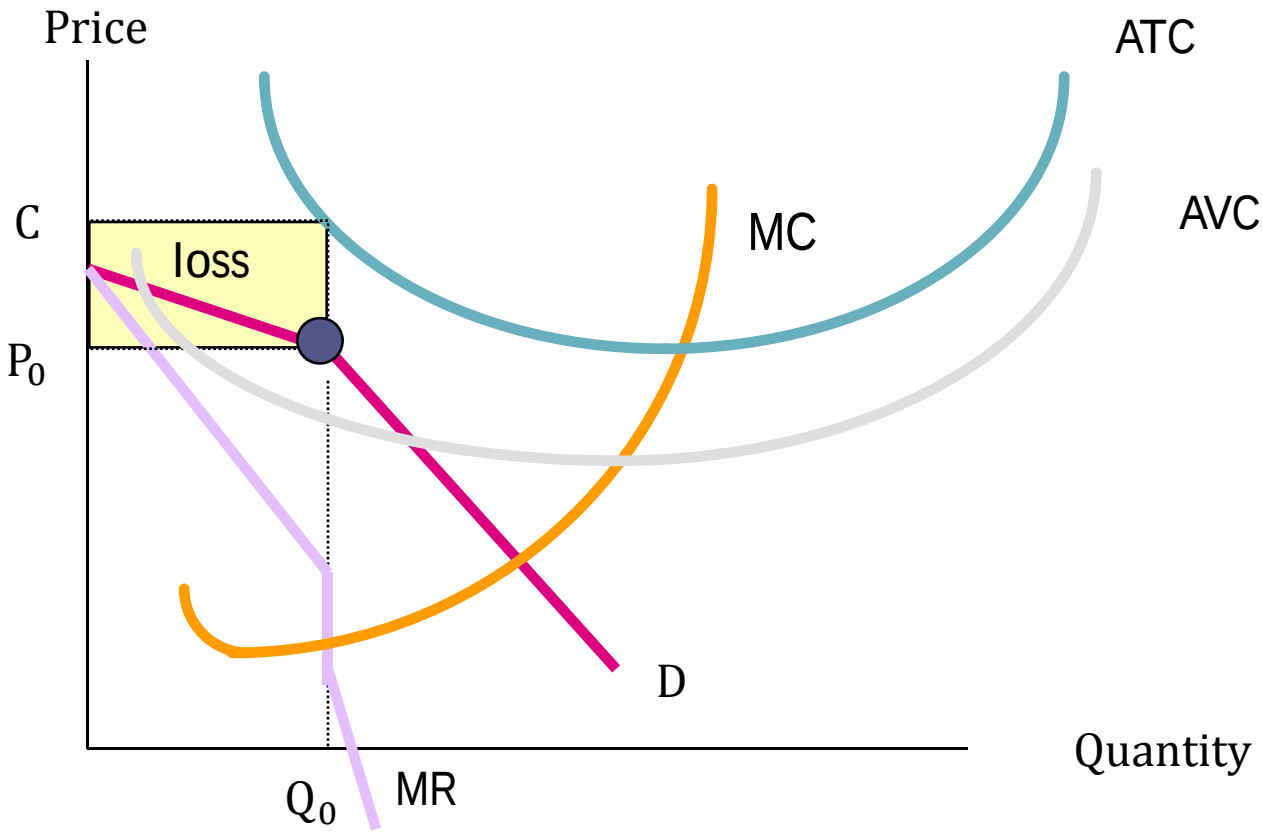
- The next figure shows the lack of efficiency within an oligopoly
- Fail to produce the level of output at which is AC are minimized and so it is failing to be productivity efficient
- The oligopoly price is higher than the MC at its level of output Q_0
- An oligopoly fails to be Pareto efficient

The efficiency under oligopoly

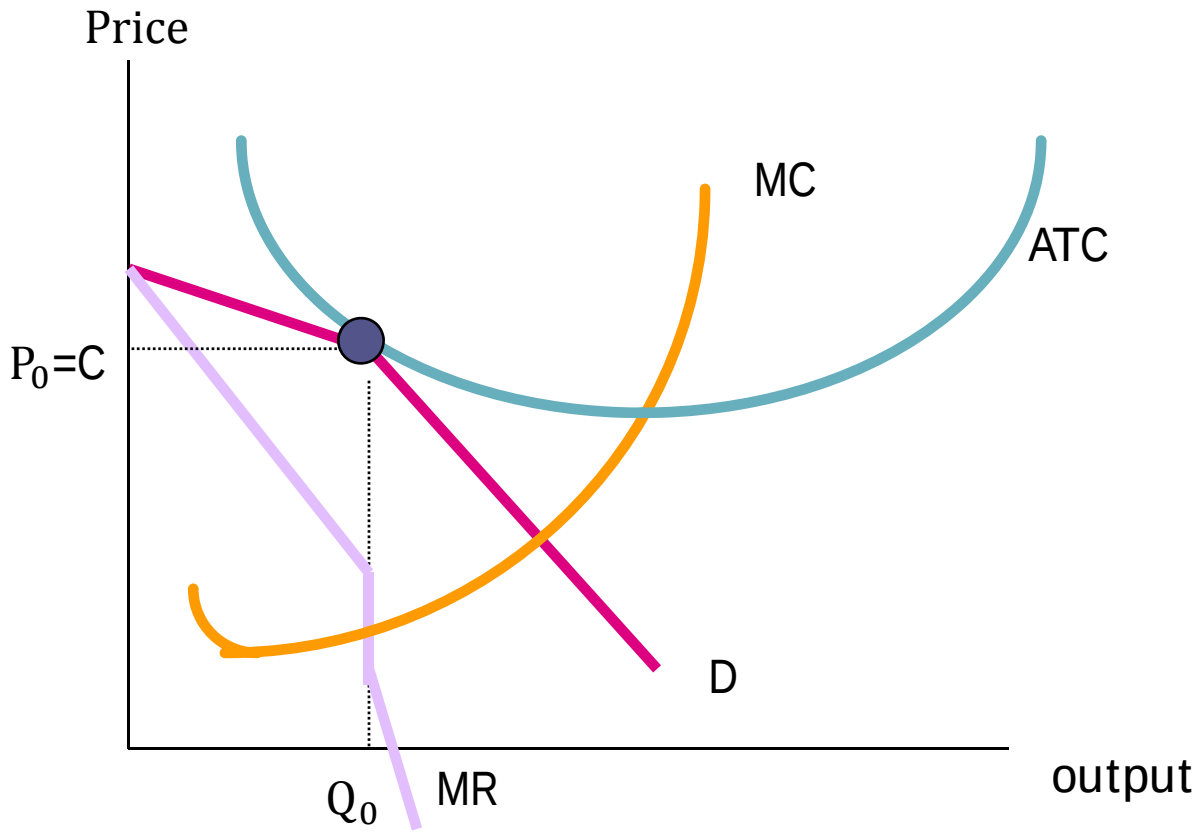


- The consumer also lose area z from their surplus, which along with area y form the deadweight welfare loss
- The overall welfare under oligopoly is less than that under perfect competition
- It is possible to make one of the parties better off without making the other worse off simply by eliminating this welfare loss

To show a firm with a loss, the ATC curve must be entirely above the demand curve



To show a firm breaking even, the ATC curve must be tangent to the demand curve at the kink.



Profit Possibilities for the Oligopolist

short run:

positive profits, losses, or breaking even.

long run:

positive profits, or breaking even.

Case study

The European air industry

The European air industry

- The structure of the market
- The economics of the low-cost airlines
- Competition in the European air industry
- The pricing and booking strategies in the airlines

The structure of the market

- Scheduled flights
- Chartered flights

The economics of the low-cost airlines

- The first low cost airline in the world was Southwest Airlines (1971)
- The idea was pioneered in Europe by Richard Branson's Virgin Atlantic

- The strategy of the low cost airlines is to reduce its fares by reducing costs
- To maximize the utilization of the aircraft – keeping the aircraft in the air as much as possible by reducing the turnaround time at airports
  - Dispensing with pre-assigned seats
  - Using smaller airports
  - Linking as many of its airports as possible to each other the craft can be operated on different routes facilitating greater utilization

Costs have been lowered by the following ways

- Maximizing the efficient employment of resources
- Reducing the frills
- Using the internet
- Aggressive marketing strategies
- Adopting the policy of no refunds

Competition in the European air industry

- Fare reduction
- Use of legal authorities
- Marketing
- Acquisitions
- Expansion

The pricing and booking strategies in the airlines

Pricing strategy

- Penetration pricing
  - A business try to establish itself in a new market, sets its price beneath those of the incumbents in order to attract and capture customers
- Loss-leader pricing
  - Different to penetration pricing as it is where a business which has interests in multiple markets,
  - Sets a price in one market purposefully beneath that necessary to cover costs in order to attract customers, not just in the loss-making market, but in more profitable markets
- Predatory or destructive pricing
  - A business reduces its prices in order to capture the customers of its competitors

Booking

- Flight amalgamation
  - The practice of combining two or more flights, each of which is only partly loaded
- Overbooking
  - Based on the premise that some passengers will fail to actually use their booking and so by booking more than the capacity of the aircraft the airline can ensure higher loading
- Callable
  - Passengers are offered the option of surrendering their seats for a refund plus an additional payment

Reference

- Mallard G., and Glaister S. (2008). Transport Economics: Theory, Application and Policy. Palgrave Macmillan.

- Cowie J. (2010). The Economics of Transport. Routledge.