SEM IV
GE 4.1 Chg Microeconomics I
Chapter 2 Oligopoly

Economics of Oligopoly

Topic 3.3.9

Students should be able to:

- Understand the characteristics of this market structure with particular reference to the interdependence of firms
- Explain the behaviour of firms in this market structure
- Explain reasons for collusive and non-collusive behaviour
- Evaluate the reasons why firms may wish to pursue both overt and tacit collusion

Key Concepts – Oligopoly

Cartel	**Association of businesses or countries that collude to influence production levels and thus the market price**
Collusion	Takes place when rival companies cooperate for their mutual benefit
Kinked demand curve	Assumes that a business face a dual demand curve for its product based on the likely reactions of other firms
Price leadership	When one firm has a dominant position and firms with lower market shares follow the price changes of the leader
Prisoners’ dilemma	Problem in game theory that demonstrates why two people might not cooperate even if in their best interests

Basics of an Oligopoly

- An oligopoly is an imperfectly competitive industry where there is a high level of market concentration.
- Oligopoly is best defined by the actual conduct (or behaviour) of firms within a market
- The concentration ratio measures the extent to which a market or industry is dominated by a few leading firms.
- A rule of thumb is that an oligopoly exists when the top five firms in the market account for more than 60% of total market sales.

Characteristics of an Oligopoly

- Best defined by the actual behaviour of firms
- A market **dominated by a few large firms**
- High **market concentration ratio**
- Each firm supplies **branded products**
- **Barriers to entry and exit**
- **Interdependent strategic decisions by firms**

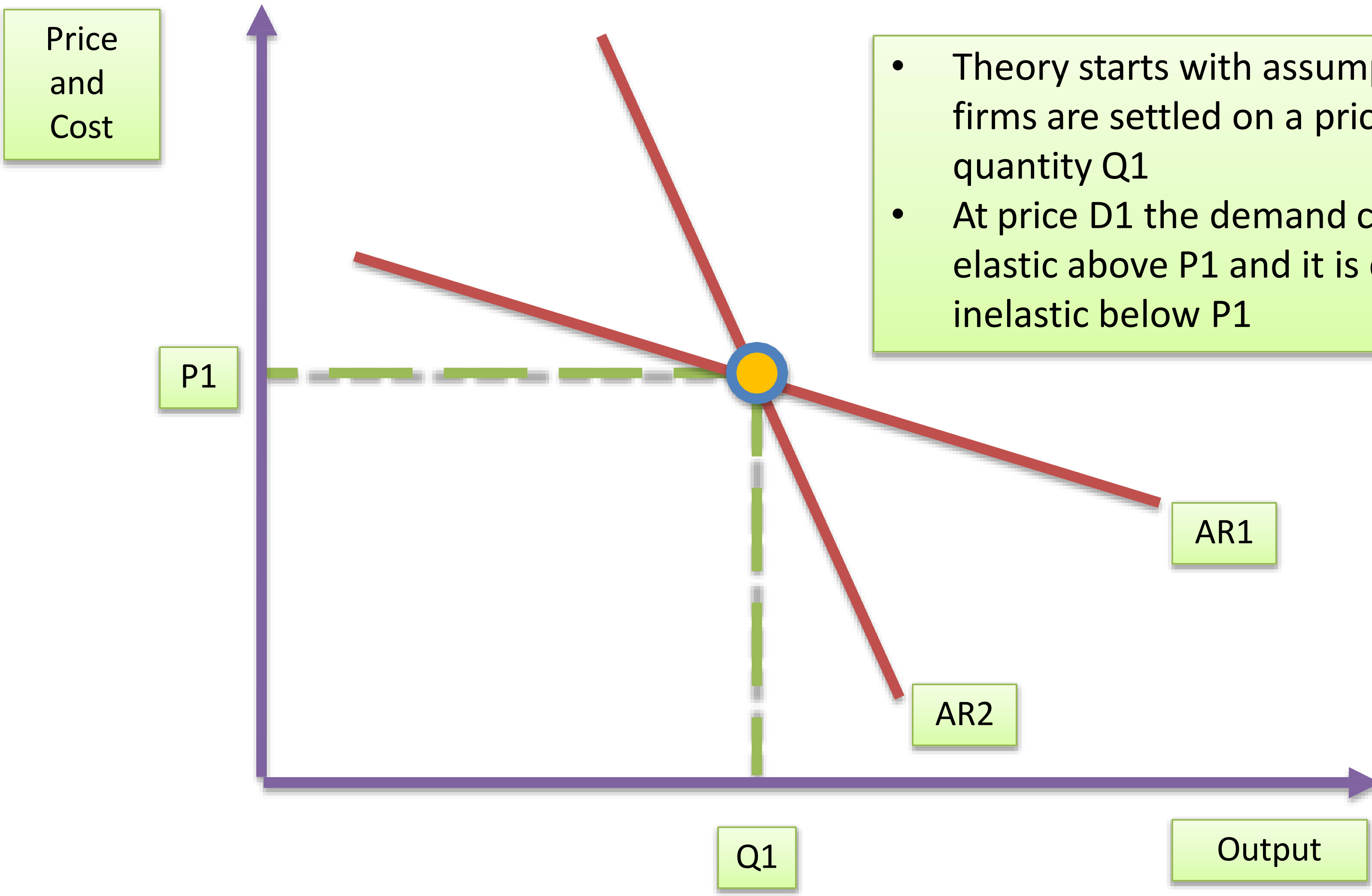
Meaning of Strategic Interdependence

- Strategic interdependence means that one firm's output and price decisions are influenced by the **likely behaviour of competitors**
- Because there are few sellers, each firm is likely to be aware of the actions of the others.
- Decisions of one firm influence, and are influenced by, the decisions of other firms
- This causes oligopolistic industries to be at high risk of **tacit or explicit collusion** which can lead to allegations of anti-competitive behaviour
- In oligopoly there is a **high level of uncertainty**

The Kinked Demand Curve

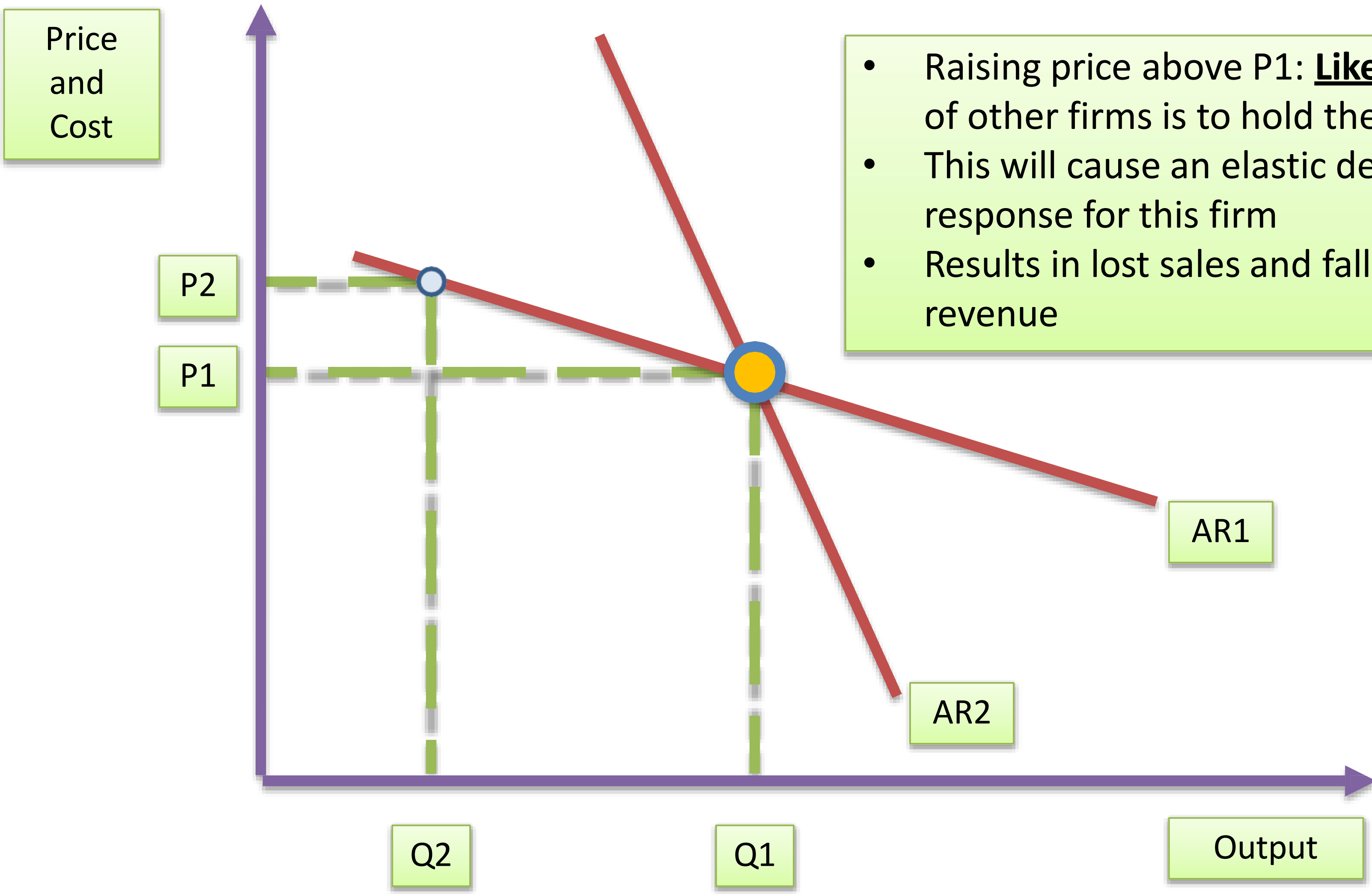
- A business in an oligopoly faces a downward sloping demand curve but the price elasticity of demand may depend on the **likely reaction of rivals** to changes in one firm's price and output
- (a) Rivals are assumed **not to follow a price increase** by one firm, so the acting firm will lose market share - therefore demand will be relatively elastic and a rise in price will lead to less revenue
- (b) Rivals are assumed to be **likely to match a price fall** by one firm to avoid a loss of market share. If this happens demand will be more inelastic and a fall in price will also lead to a fall in total revenue

The Kinked Demand Curve - Analysis



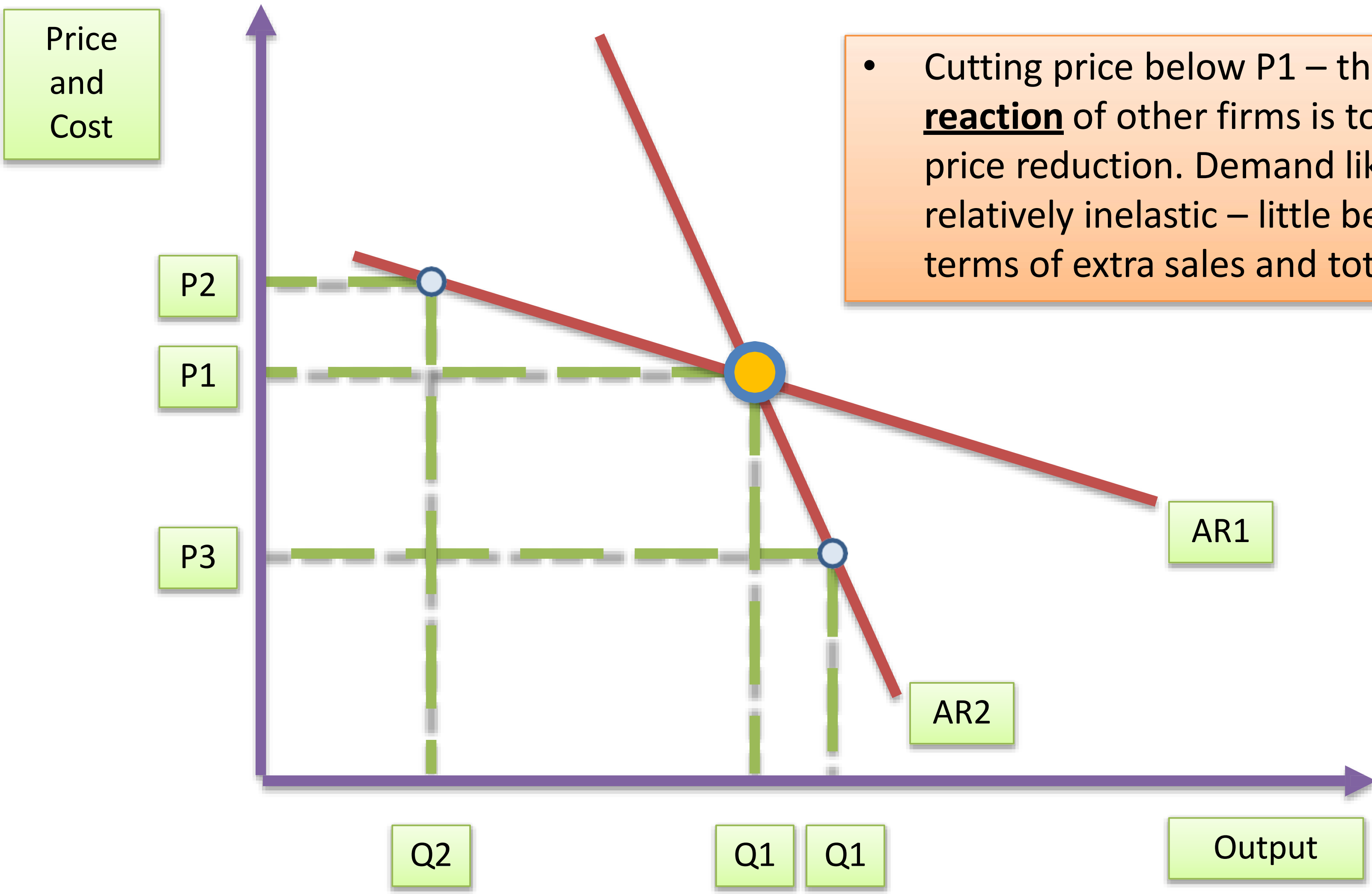
- Theory starts with assumption that firms are settled on a price P1 and quantity Q1
- At price D1 the demand curve is elastic above P1 and it is demand inelastic below P1

Kinked Demand Curve – Raising Price



- Raising price above P1: **<u>Likely reaction</u>** of other firms is to hold their prices
- This will cause an elastic demand response for this firm
- Results in lost sales and falling total revenue

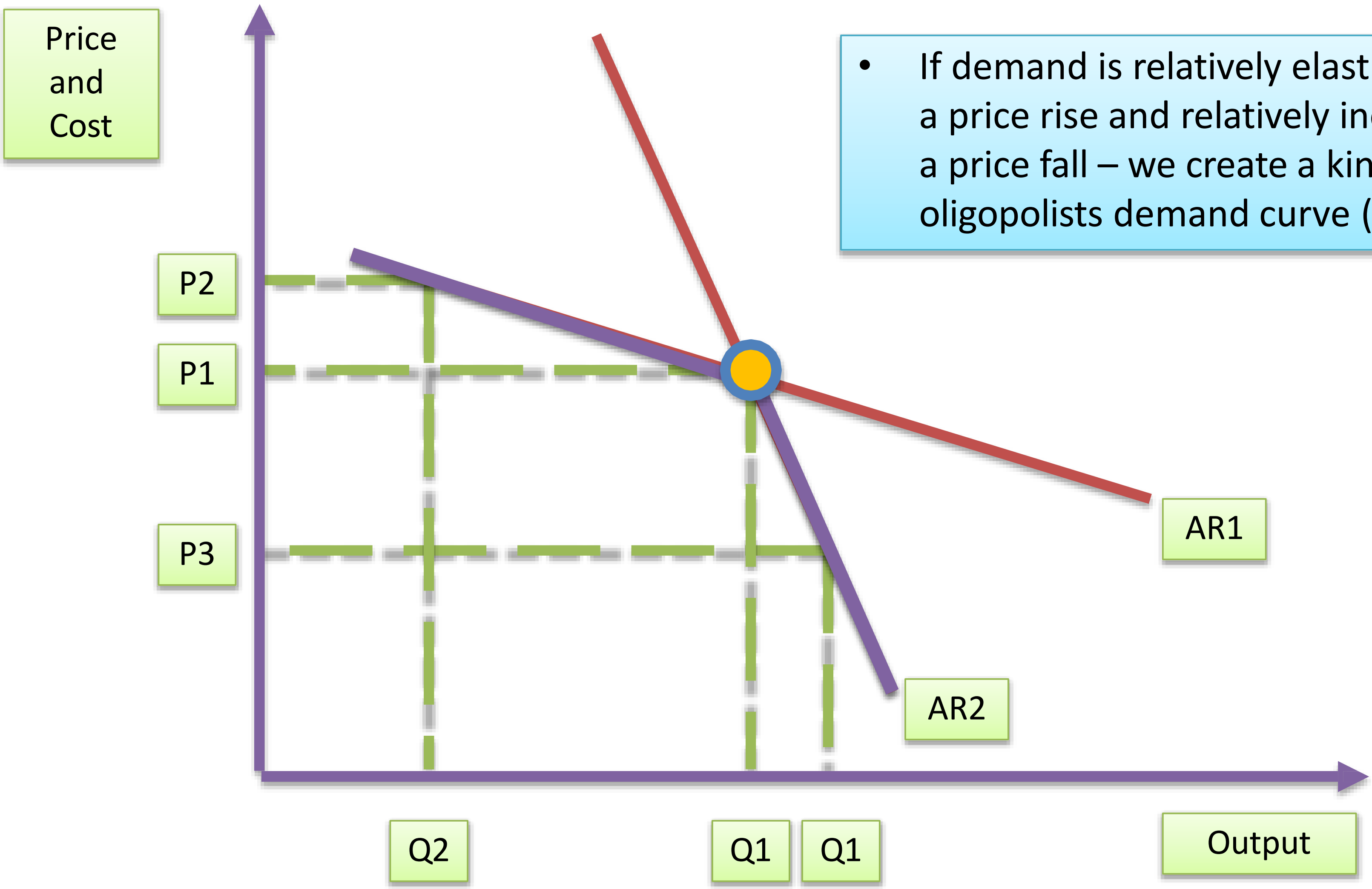
Kinked Demand Curve – Cutting Price



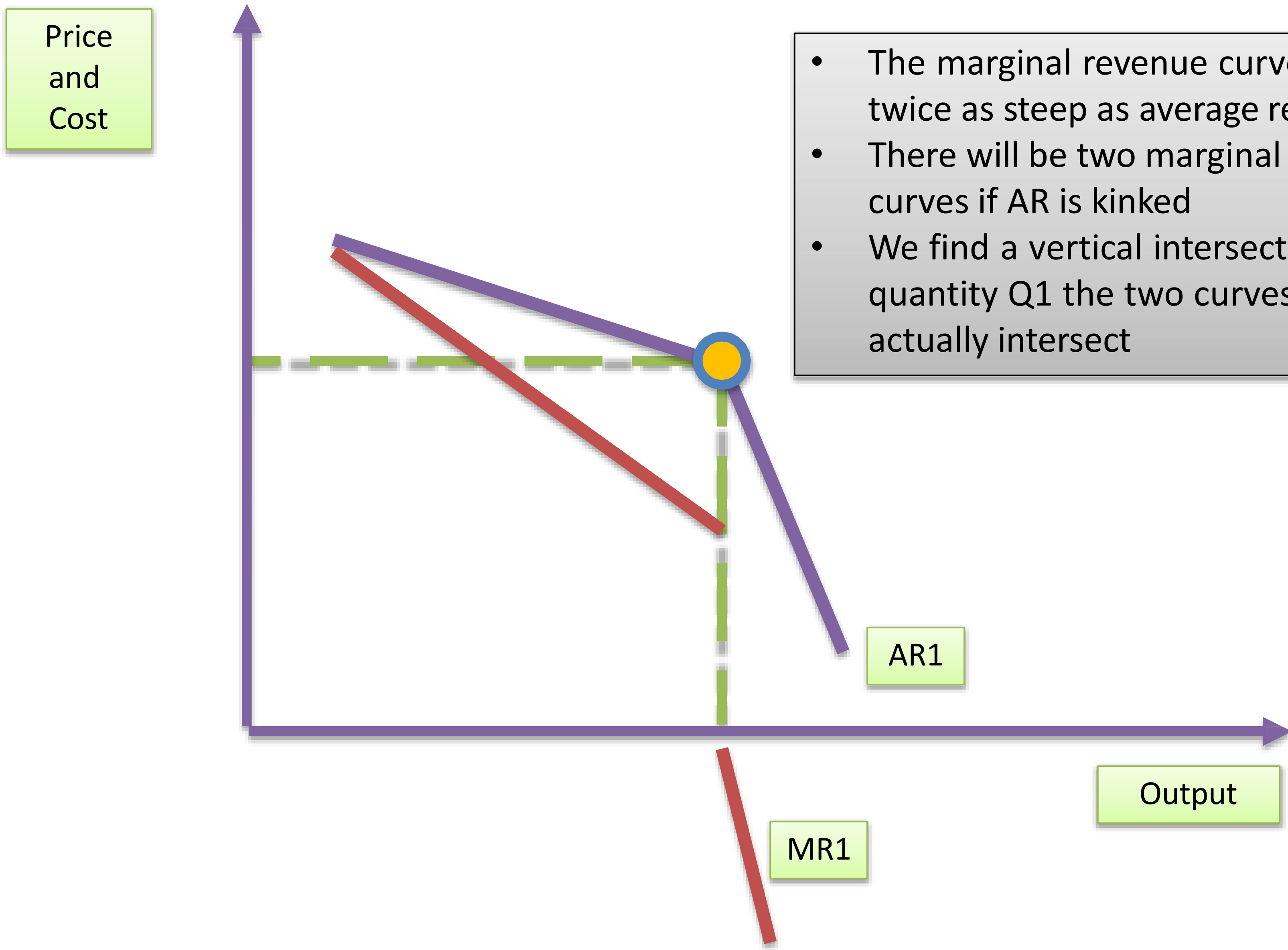
- Cutting price below P1 – the **<u>likely reaction</u>** of other firms is to follow the price reduction. Demand likely to be relatively inelastic – little benefit in terms of extra sales and total revenue

Kinked Demand Curve – The Kink!

- If demand is relatively elastic following a price rise and relatively inelastic after a price fall – we create a kink in the oligopolists demand curve (AR)

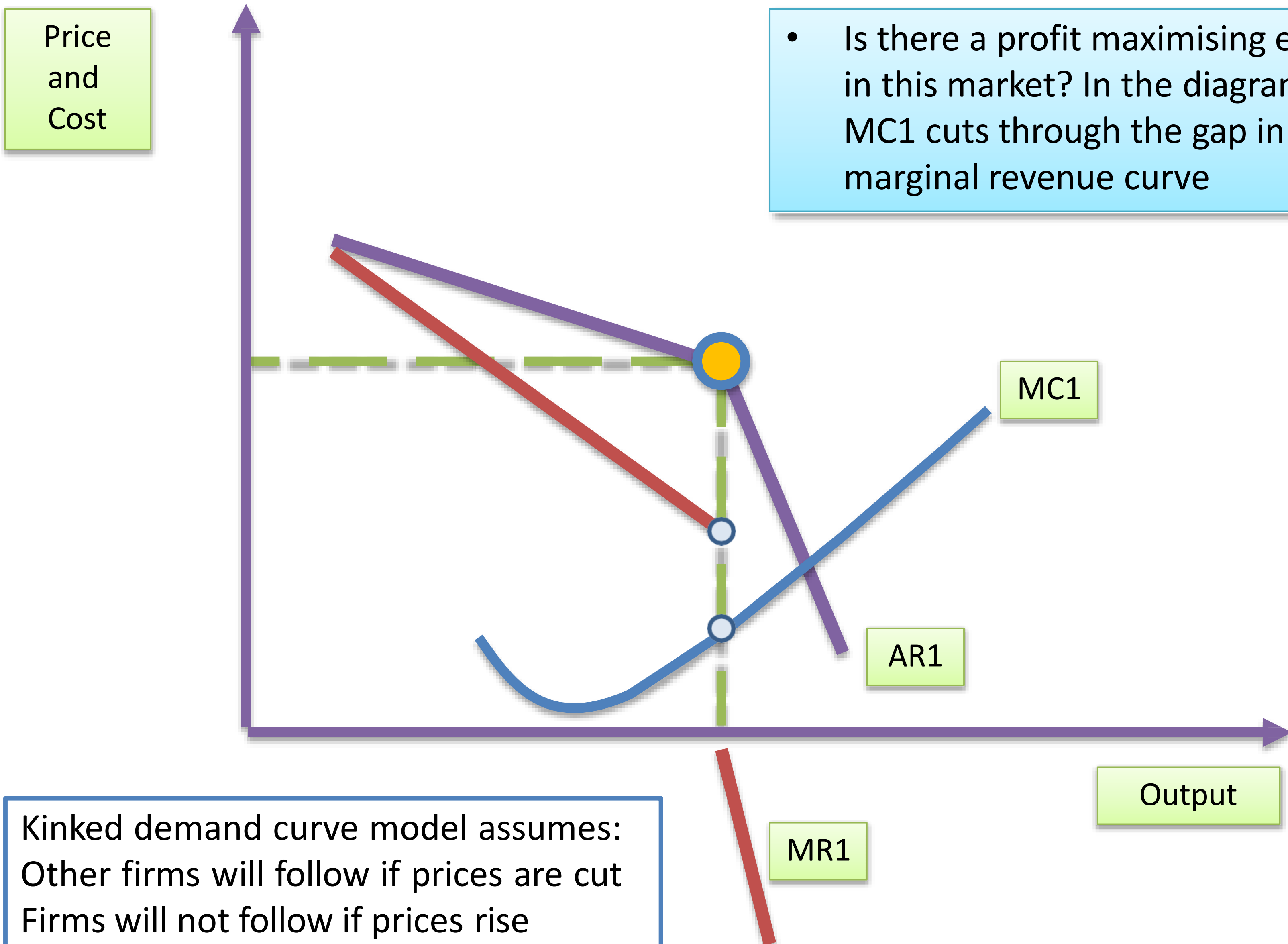


Kinked Demand Curve – The MR Curve



- The marginal revenue curve is always twice as steep as average revenue
- There will be two marginal revenues curves if AR is kinked
- We find a vertical intersection – at quantity Q1 the two curves do not actually intersect

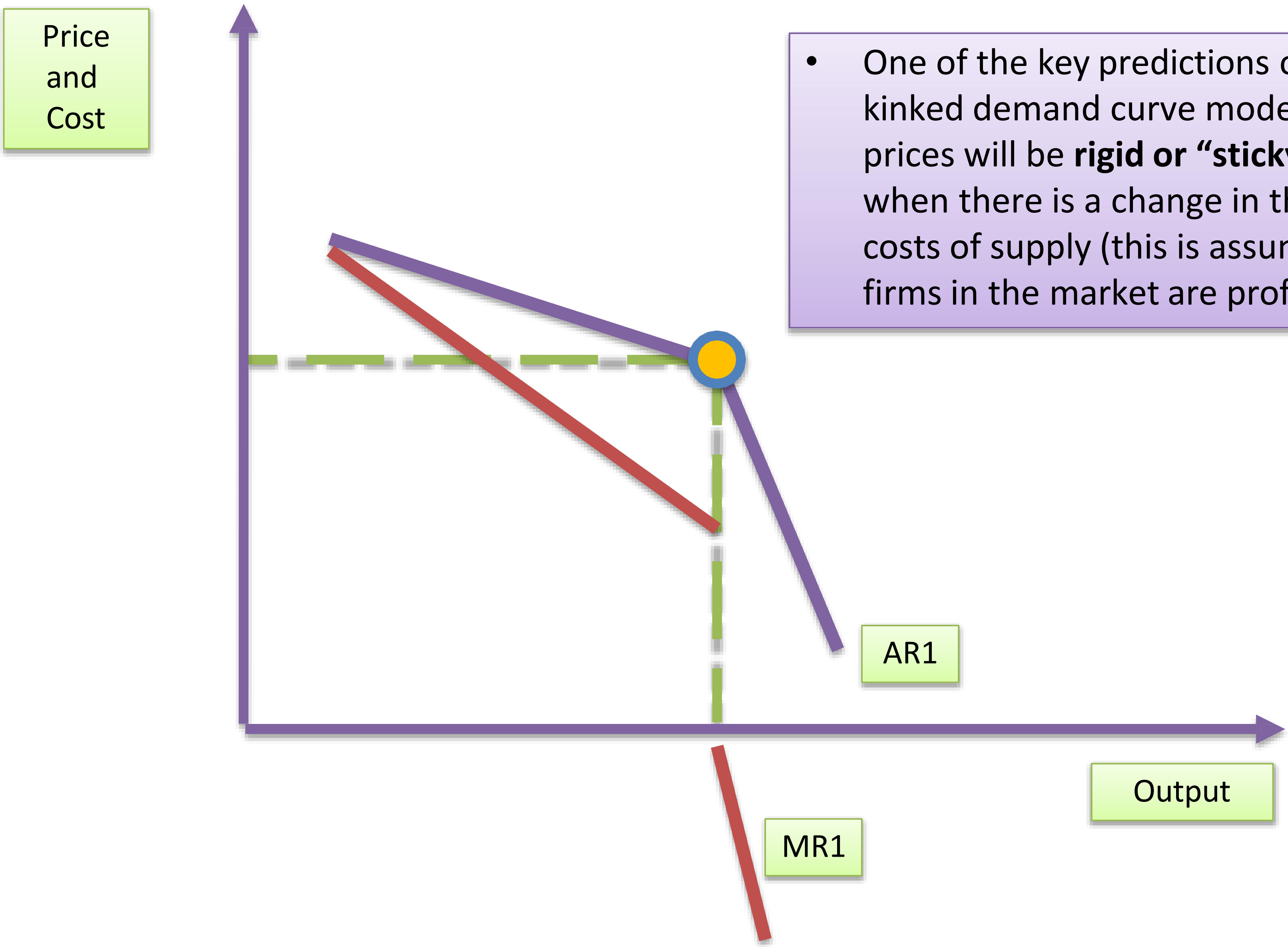
Kinked Demand Curve – Equilibrium?



- Is there a profit maximising equilibrium in this market? In the diagram here MC1 cuts through the gap in the marginal revenue curve

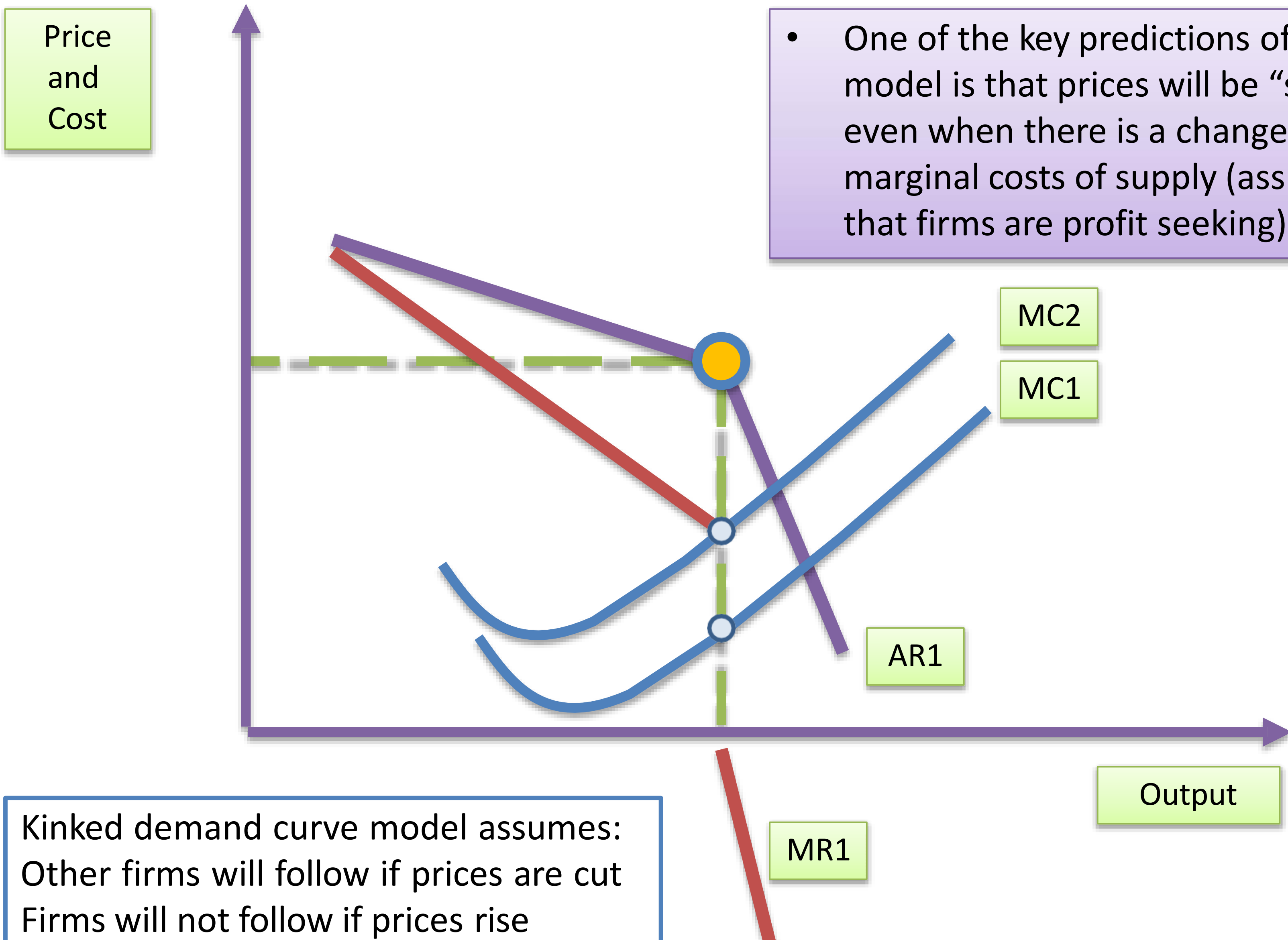
Kinked demand curve model assumes:
Other firms will follow if prices are cut
Firms will not follow if prices rise

Kinked Demand Curve – Price Rigidity



- One of the key predictions of the kinked demand curve model is that prices will be **rigid or "sticky"** even when there is a change in the marginal costs of supply (this is assuming that firms in the market are profit seeking)

Kinked Demand Curve – Price Rigidity



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Kinked Demand Curve – Overview

On oligopoly firms have price-setting power **but may be reluctant to use it**

Rivals unlikely to match a price rise and rivals likely to match a price fall

If a firm is settled on one price, there may e little point in changing it

Even if costs change we often see price rigidity / stability in an oligopoly

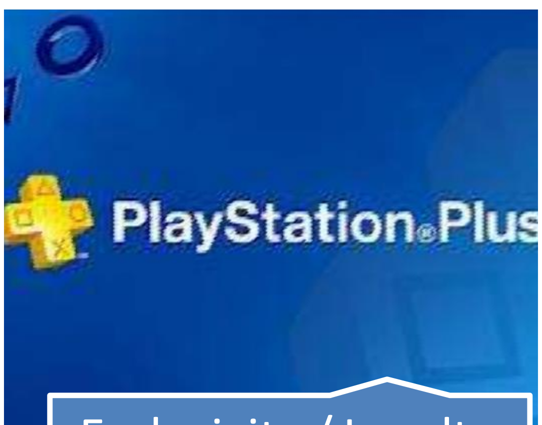
This increases the importance attached to non-price competition

Examples of Non-Price Competition

Innovation

Quality of service including after-sales

Free Upgrades to Products



Exclusivity / Loyalty Schemes

Branding

Sales Promotions

Real World Examples of Price Wars

Low cost airlines

Supermarket petrol

Mobile phone tariffs

Price wars and impact on suppliers

Supermarket price war squeezes small supplier profit margins by a third

A report published in November 2015 found that small suppliers with an annual turnover below £25m lack the negotiating power of big rivals and as a result, their profit margins have fallen in one year from 3.5% to 2.1%. By contrast, at the biggest food companies, whose turnover tops £1bn, margins increased from 5.2% to 5.4% last year

Who Wins and Loses from Price Wars?

Price wars may lead to short run increases in sales and revenues, but may not be in the long-term commercial interests of a business

Winners

- Regular consumers
- Managers – higher sales

Losers

- Shareholders - lower profits
- Suppliers – may get squeezed

Long Term Tendency towards Oligopoly

Economies of scale

- Large minimum efficient scale (high ratio of fixed to variable costs of production)

Mergers and takeovers

- Consolidation of industries through acquisitions e.g. horizontal integration between suppliers

Rise of dominant brands

- High rates of profits and barriers to entry & exit