

- Some Key definitions for revenue:**
- **Total Revenue** = $P \times Q$
 - **Average revenue** = total revenue divided by quantity sold.
 - **AR = price** of a good or service. Price (AR) = Demand
 - **Marginal revenue** = the change in total revenue as a result of selling one additional unit

- Some big ideas:
1. Price taker
 2. Profit maximisation

4 'Windows' to explain and evaluate competitive firm and how they behave

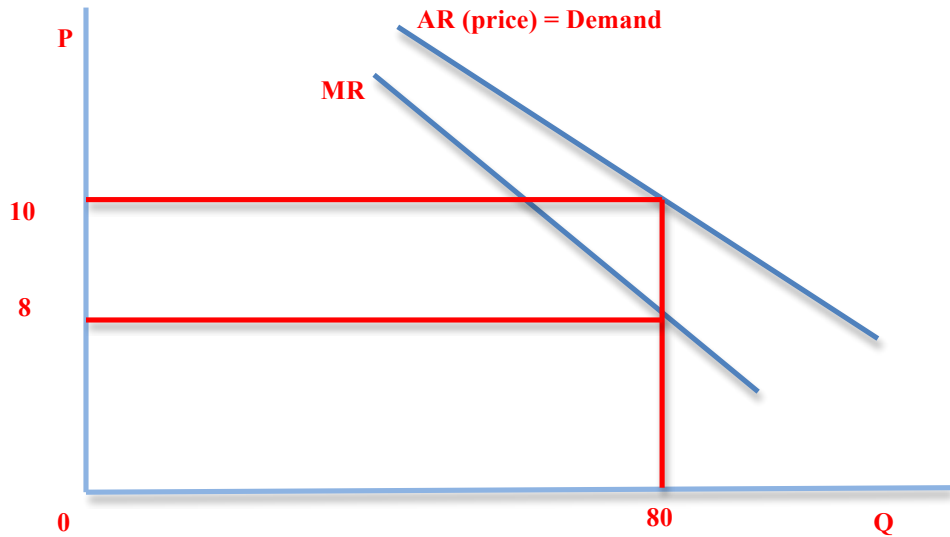
1. **Size: Price and output** of 4 models in the SR + LR
2. **Profit Maximisation:** 'profit finder' where $MR=MC$
Supernormal/abnormal profits?
3. **Efficiency (AC)** (lowest point)
4. **Barriers to Entry** (anti - competitive)

Others focus points include: economies of scale, non profit maximisation goals + price discrimination

Fig 1: Average revenue negatively sloped

Downward sloping revenue curves whereby additional units are sold at a lower price i.e. markets get bigger at lower prices. These are relevant for the following models of competition:

- **Monopolistic**
- **Oligopoly**
- **Monopoly**



Horizontal/perfectly elastic revenue curves relevant for the following models of competition:

- **Perfect competition** (each additional unit can be sold at the market price of 10)

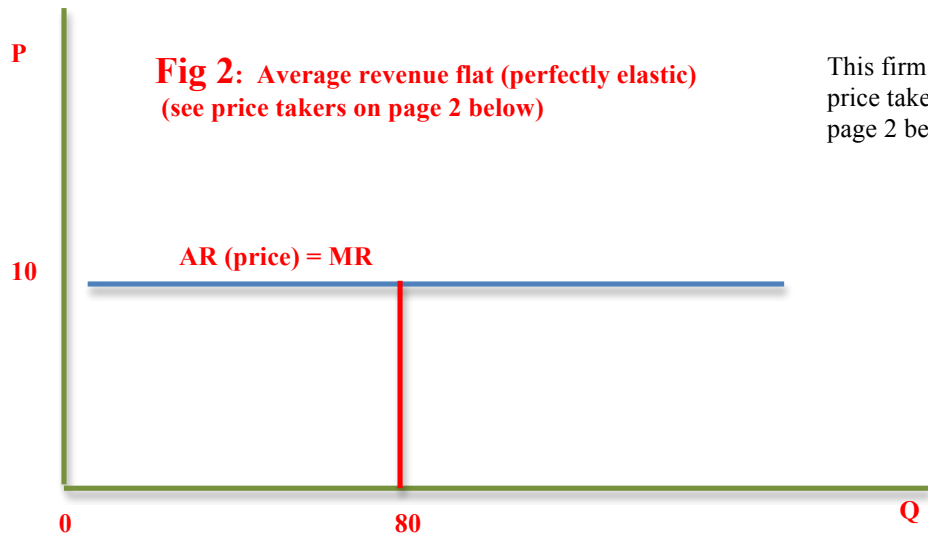
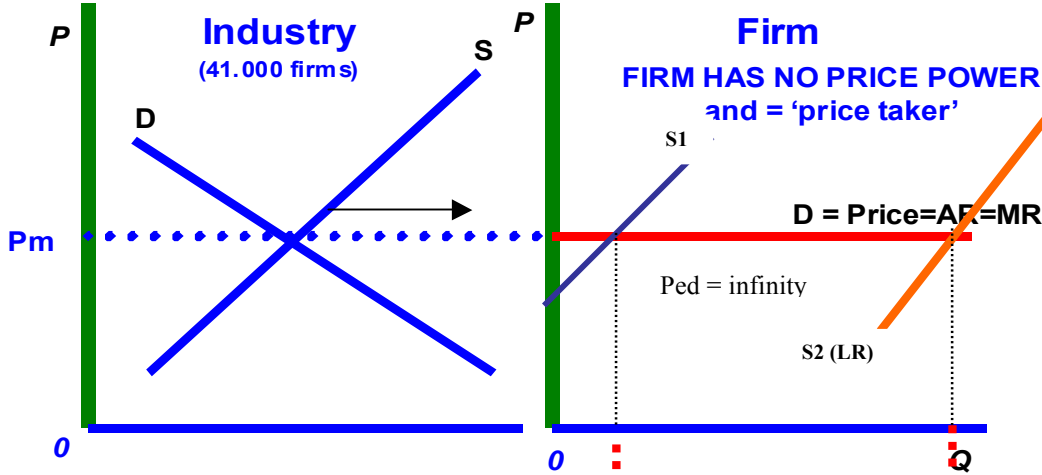


Fig 2: Average revenue flat (perfectly elastic)
 (see price takers on page 2 below)

This firm is a price taker. See page 2 below

Economics Models: Why are some firms price takers?

DIAGRAM A: Firm is a price taker



- Points to note:
1. Price power is similar to **producer sovereignty** or producer surplus (see webnote 105)
 2. Some industries are extremely competitive. See table below. Firms in this case are price takers and the market has **'consumer sovereignty'**

Estimates of Demand Elasticities Facing US Farmers
Source: Economic Review Vol 20 No.1 Sept. 2002

Crop	Number of Farms	Ped for individual farm's
Apples	41.187	- 8.649
Grapes	24.982	- 3.997
Tomatoes	17.290	- 2.766
Peaches	23.121	- 5.813
Pears	13.244	- 21.711

Ped = - 8.649
(-9%)

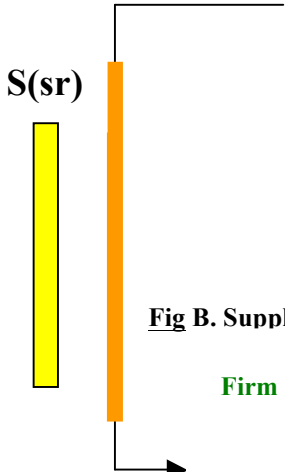
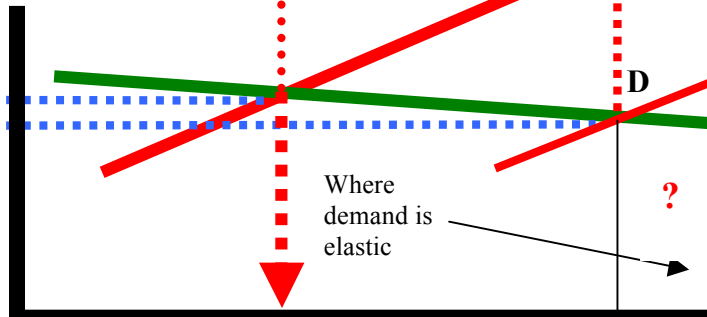


Fig B. Supply and demand of a small apple farmer

Firm raises price by (1%) p_m
 p lower



1000 Kilos **Quantity falls by 9%**

A farmer has no benefit in raising price or lowering price as all of his quantity is sold at a price of P_m . Output of firm/farmer is very small(1000 kilos).

- In the SR Farmer cannot benefit from a higher price/quantity.
- Does not have resources to take the potential revenue gain of a price fall because he can only produce 1000k. Supply is fixed in the short run.
- Since the price of P_m is fixed by the 49000 producers it makes no sense sell at a lower price i.e. firm does not makes "maximum profit".

Task: Shade in area of revenue loss if the farmer reduces his price to p lower

Possible revenue loss.
Firm is not likely to raise (or lower price): $P ?$ No.TR falls
 $P ?$ cannot supply 9000 kilos in short run.
Revenue maximised @ p_m and 1000 kilos

Is it realistic that a market price will remain constant as outlined in the price taker example above. Note that this price taker model is relevant for Perfect Competition.

Elasticity connection:

Elasticity to explain why a small firm in a very competitive market (e.g. 41.187 firms offering a substitute good e.g. apples) is a price taker. This is important for the study of competitive models and this is a similar situation similar to the conditions that exist in the theoretical model of Perfect Competition.

PED Calculation based on the US apple market: results are the same for a price rise and fall as an arc formula is used to calculate the average change based on a mid point formula (this formula is not in our syllabus).

Therefore:

$$\text{Price rise or fall: } \frac{-9\%}{+1\%} \quad \text{PED} = -9$$

Therefore the firm will not increase price as total revenue will fall. See table below. Can the firm therefore reduce price? The simple answer is 'yes' but why would a firm reduce its price when it can sell all output at a higher price?

As a result the price is not likely to change and will remain fixed in the market in the short run.

Webnote 120

3 P e D: key focus is Total Revenue (price x quantity). Will the firm win or lose from a price change?

PeD and TR: what you need to remember

1. **P e d Elastic: effect on TR (p x q)**

See webnote 122
price factor

Note: total revenue moves in opposite direction to price

4 elasticities-Big Ideas 8