Price Elasticity of Supply

Price elasticity of supply (Pes) measures the relationship between change in quantity supplied and a change in price.

- If supply is **elastic**, producers can increase output without a rise in cost or a time delay
- If supply is **inelastic**, firms find it hard to change production in a given time period.

The formula for price elasticity of supply is:

Percentage change in quantity supplied divided by the percentage change in price

1. When Pes > 1, then supply is price elastic
2. When Pes < 1, then supply is price inelastic
3. When Pes = 0, supply is perfectly inelastic
4. When Pes = infinity, supply is perfectly elastic following a change in demand

What factors affect the elasticity of supply?

(1) Spare production capacity: If there is plenty of **spare capacity** then a business can increase output without a rise in costs and supply will be elastic in response to a change in demand. The supply of goods and services is most elastic during a recession, when there is plenty of spare labour and capital resources.

(2) Stocks of finished products and components: If stocks of raw materials and finished products are at a high level then a firm is able to respond to a change in demand - supply will be elastic. Conversely when stocks are low, dwindling supplies force prices higher because of scarcity in the market.

(3) The ease and cost of factor substitution: If both capital and labour resources are **occupationally mobile** then the elasticity of supply for a product is higher than if capital and labour cannot easily be switched. A good example might be a printing press which can switch easily between printing magazines and greetings cards.

(4) Time period and production speed: Supply is more price elastic the longer the **time period** that a firm is allowed to adjust its production levels. In some agricultural markets the **momentary supply** is fixed and is determined mainly by planting decisions made months before, and also climatic conditions, which affect the production yield. In contrast the supply of milk is price elastic because of a short time span from cows producing milk and products reaching the market place.

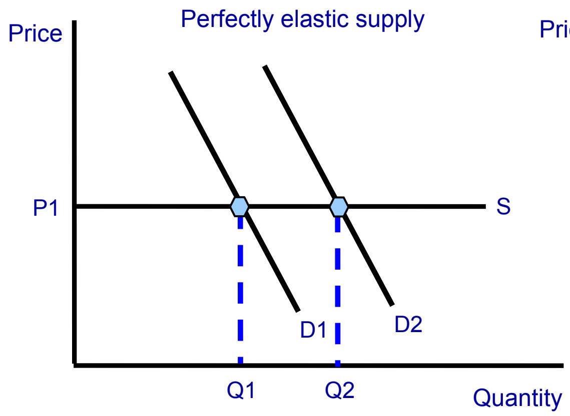
An empty restaurant – plenty of spare capacity to meet any rise in demand!

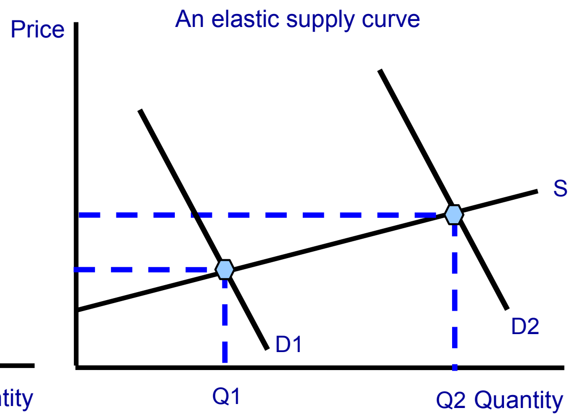
When networks get congested at peak times, elasticity of supply becomes low

Businesses with plentiful stocks can supply quickly and easily onto the market when demand changes

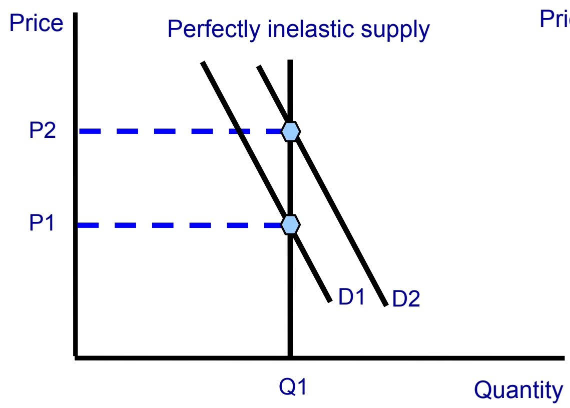
For many agricultural products, time lags in the production process means that elasticity of supply is low in the momentary time period

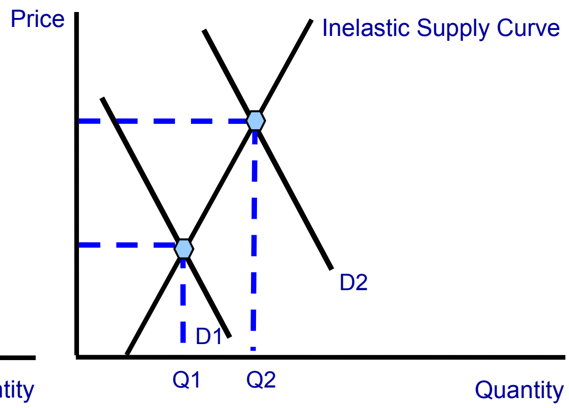
If Pes is inelastic: it will be difficult for suppliers to react swiftly to changes in price
If Pes is elastic – supply can react quickly to changes in price



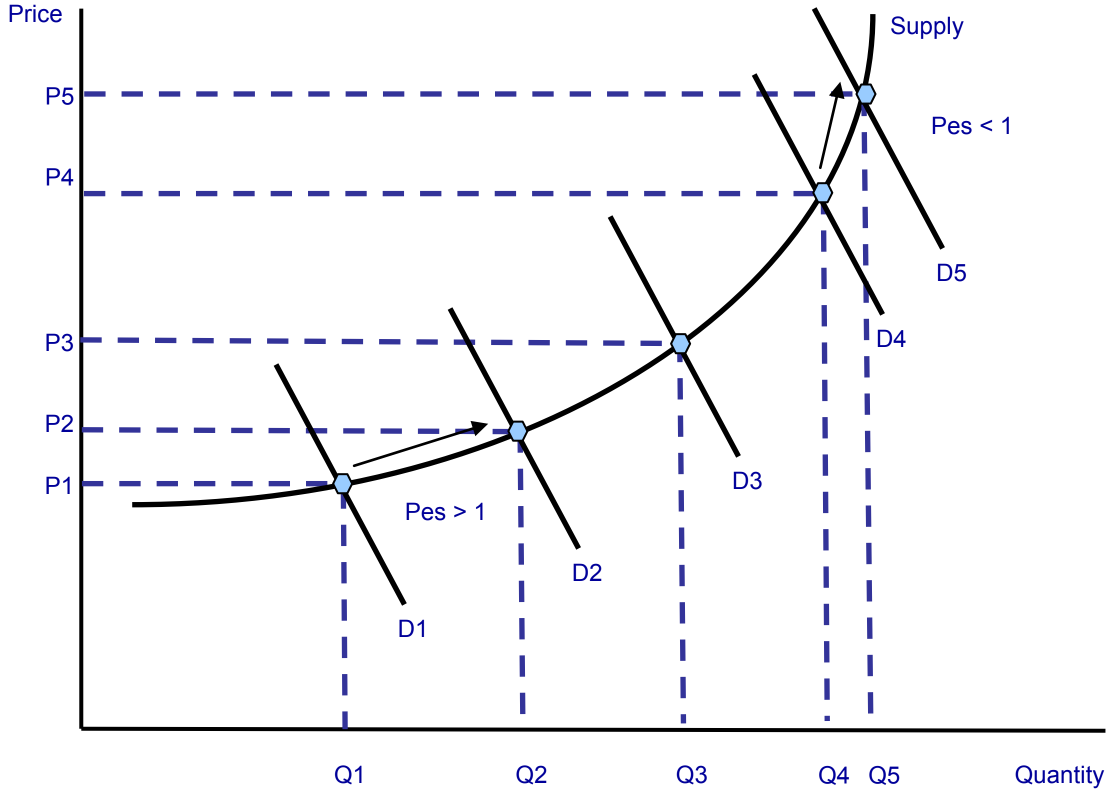


Perfectly inelastic supply: Pes = zero (supply cannot respond to a change in demand / price) – often associated with the momentary period with agricultural products





The non-linear supply curve



A good recent example of price elasticity of supply in action is the strong demand for Apple's new tablet device, the iPad. Over three million iPads were sold in the first few months of the product becoming available. But new supplies have been held up by a shortage of the flat panel LCD screens used in their manufacture from the Korean producers LG and Samsung.