MGT 388: Finance and Law for Engineers

Pricing Decisions

Lecture Outline

Economic Theory

Cost plus pricing – Absorption costing
– Variable costing

Target pricing

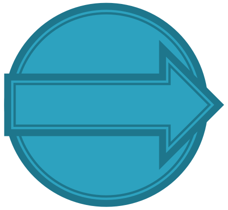
Life Cycle Analysis

Discounting

Economic Theory

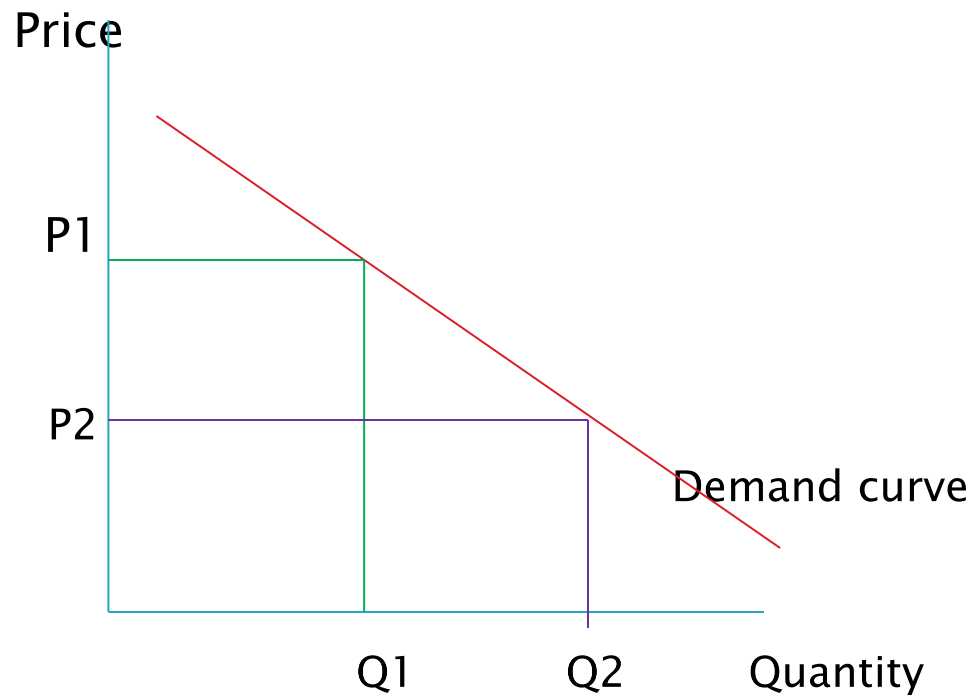
The price of a good or service is determined in the market.

Demand is dependant on price.



For most goods and services if price goes down demand will increase.

Demand Curve



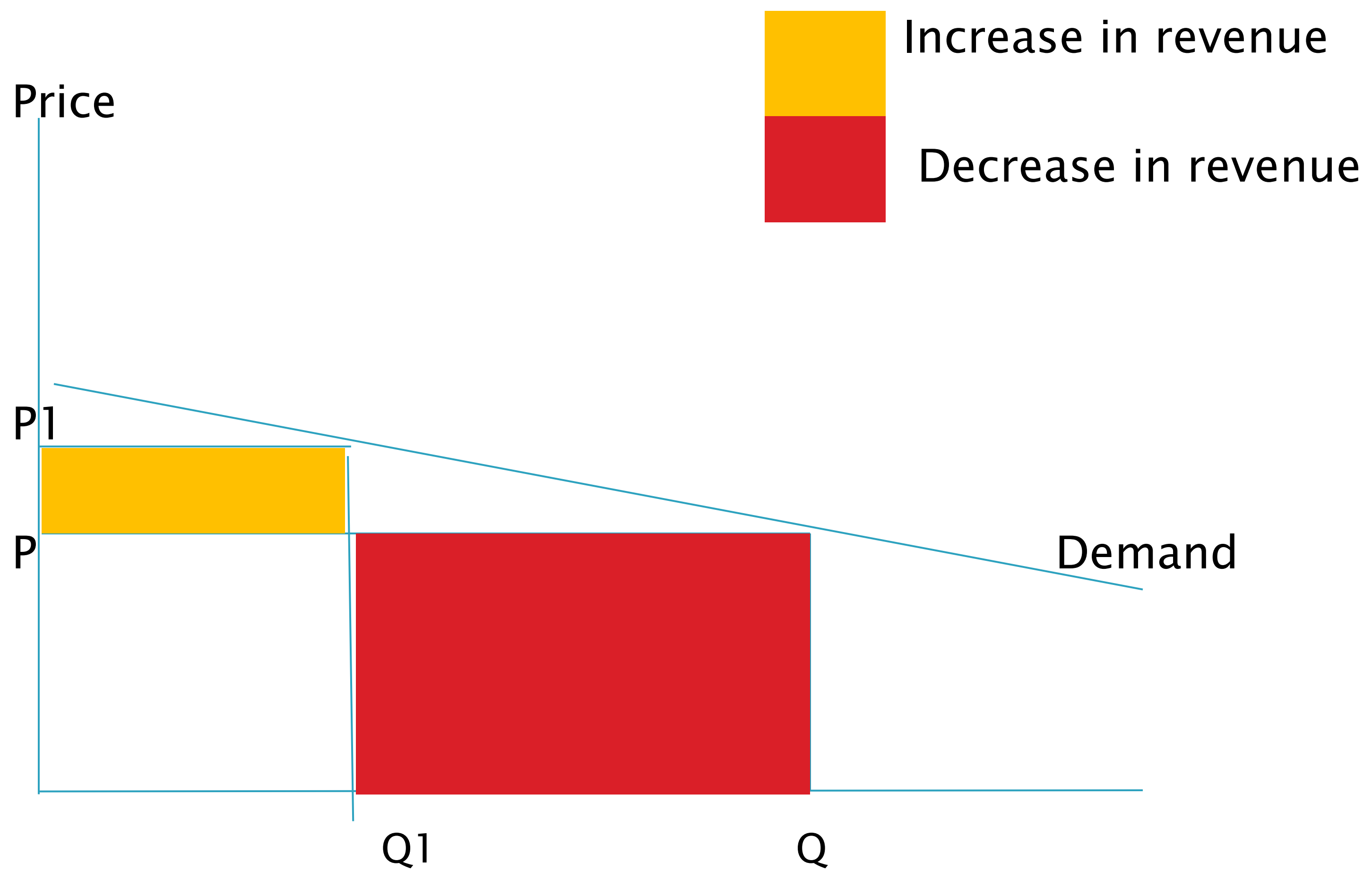
Elasticity of demand

The shape of the demand curve depends on elasticity.

If a change in price leads to a more than proportionate change in quantity demanded then demand is said to be elastic.

Products which can swapped/substituted for a similar product have elastic demand.

Elastic demand curve



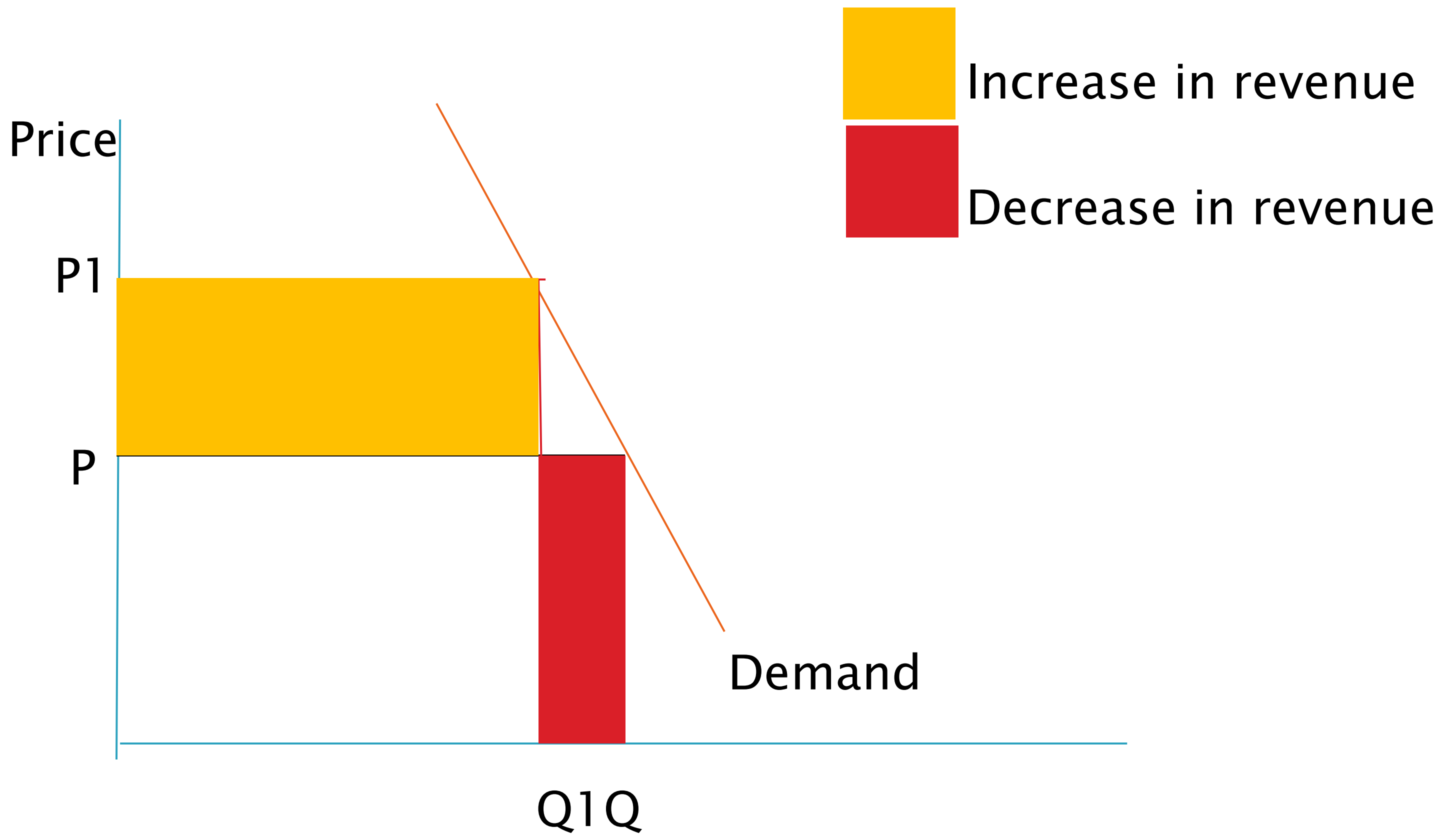
Elasticity of Demand

If a change in price leads to a less than proportionate change in quantity demanded then demand is said to be inelastic.

Product that have inelastic demand are often premium or luxury products.

Aston Martin

Inelastic Demand Curve

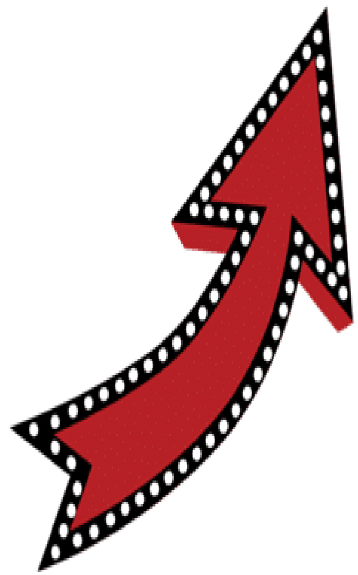


Case Study– Starbucks

Elasticity of demand and Starbucks

Coffee elastic demand??

2009 US economy was in recession and consumers were cutting back or switching to cheaper outlets



8%

Elasticity of demand and Starbucks

Some customers were price sensitive.
A reduction in price would not be enough to attract back these customers, They had changed their consumption habits.

The customers who remained were not price sensitive (inelastic demand).
When the price increased these customers stayed loyal and total profits were maintained despite the recession.

Elasticity of demand and Starbucks

Starbucks continues with value based pricing

Increase profits by increasing prices on selected products – small coffees

Inform customers of limited price increase –due to labour and commodity costs.

Inelastic demand curve few customers went elsewhere, some switched product to large which had better margins.

So profitability improved.

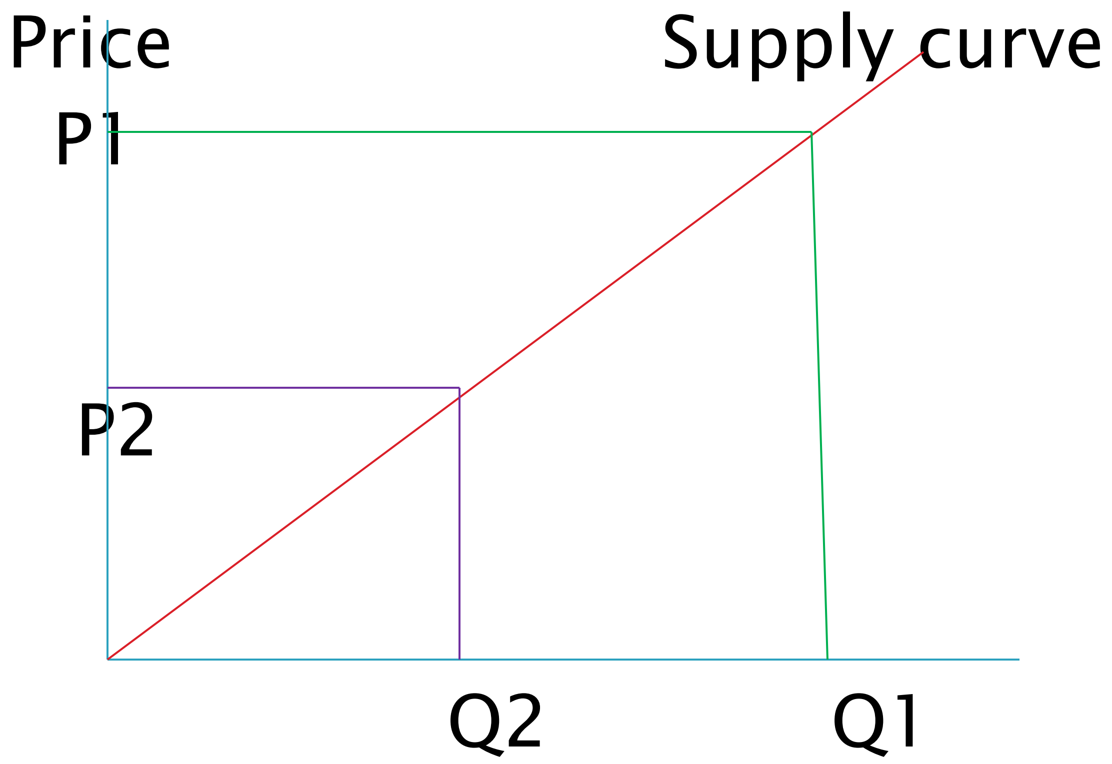
Economic Theory

Supply of a good or service is dependant on price.

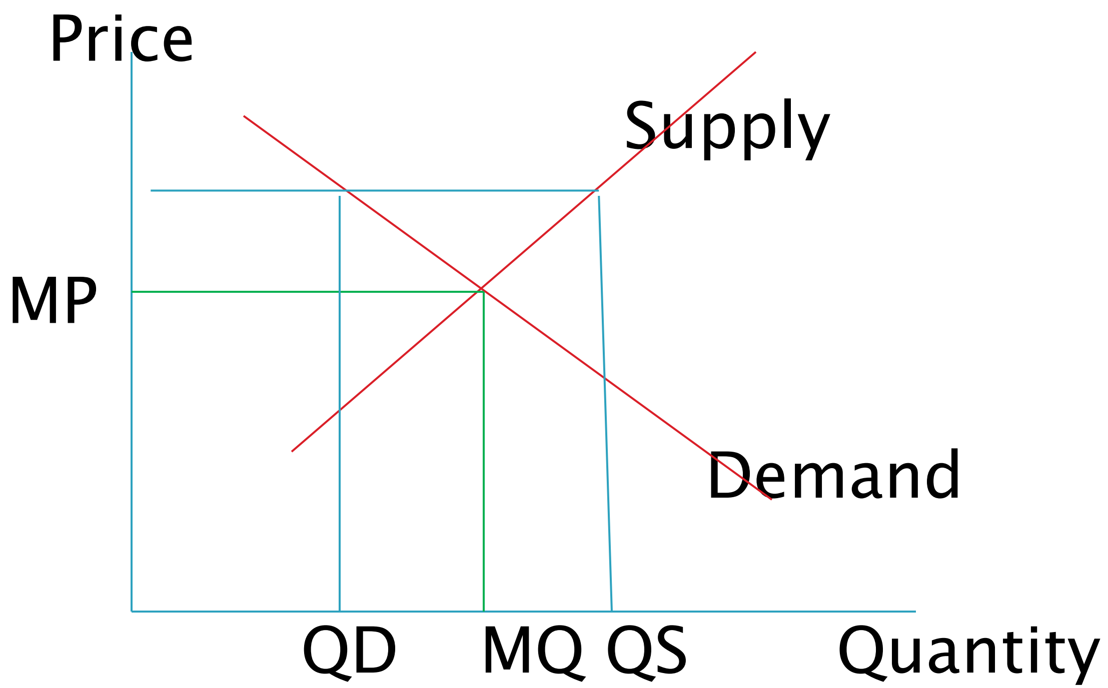
For most goods and services the higher the price the greater the supply.

Current suppliers seek to produce more and new suppliers enter the market.

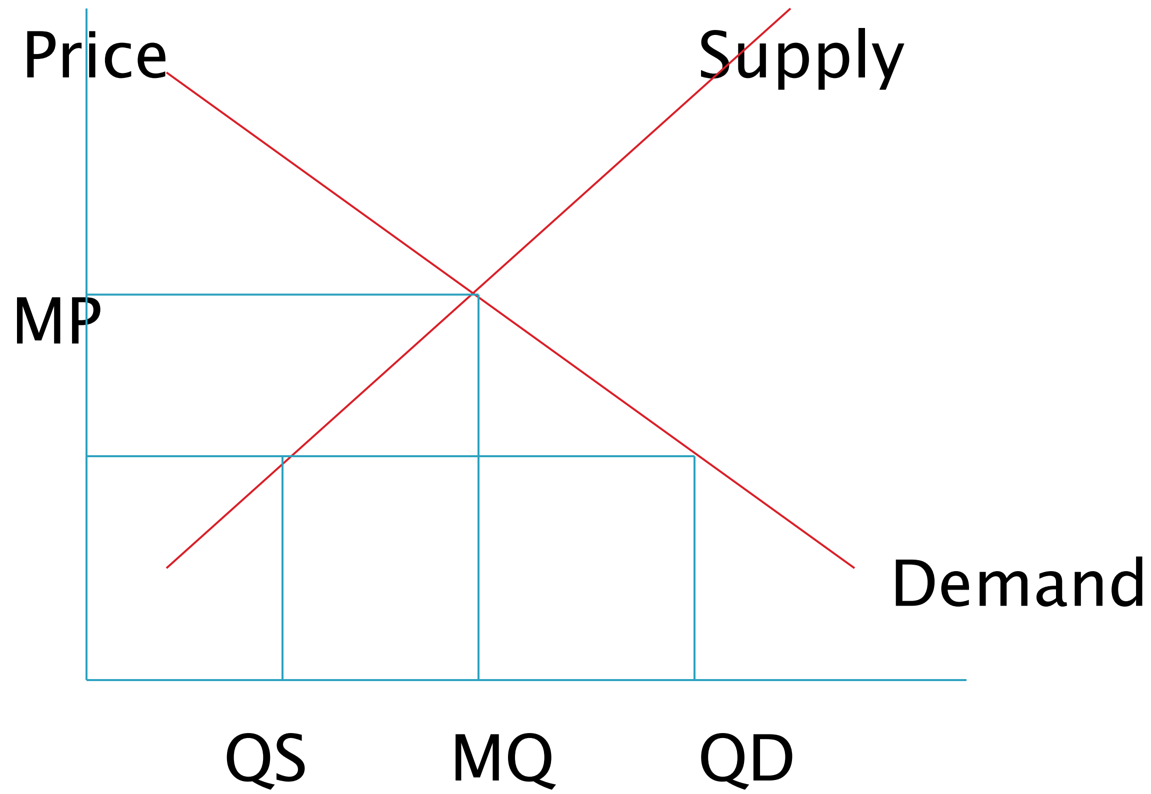
Supply Curve



Market Price – Equilibrium Price



Market Price – Equilibrium Price



Do You Have To Accept Market Price

Competitive market with
a large number of buyers and seller
with similar products – Yes

Luxury item/premium product
No

Few competitors or monopoly
No

Brand –reputation
No

Cost Based Pricing- Absorption Costing

Absorption costing is used to calculate a product cost.

A method of pricing would be to add a mark-up to the product cost to account for non-manufacturing overheads and the return that the business wants.

Cost Based Pricing– Absorption Costing

Production overheads have been allocated to products via an arbitrary process.

If the allocation of overheads has led to some products being over costed and others under costed the price may be out of line with the market.

Incorrect pricing may lead to surplus inventory or the business achieving a lower return than required.

Cost Based Pricing– Marginal costing

Marginal costing – calculate the direct cost of a product and apply a suitable mark.

The mark-up should cover all overheads and allow for a profit.

Beware the mark-up needs to be realistic if the price is to be competitive.

In the short term it is financially viable to price a product just to cover direct costs.

Case Study Brompton Bikes

Brompton Bikes

Brompton Bikes operates a cost plus approach to pricing

Between 2005-10 costs had increased and margins fallen

Between 2010-13 significant price rises to recover margins

Since 2013 prices increased but not as sharply

Brompton Bikes

The company does not expect brand loyalty or operate premium pricing

Price rises are due to new features and technical improvements, which have led to increased costs.

(Hard to operate consistently at less than 40% gross profit margin)

Target Pricing

The market for a product is analysed and a price is established.

An acceptable profit margin is determined and then the cost for which the product must be produced calculated.

Target Pricing

BUT what if the price established is lower than the current cost to produce/supply

Cost reduction programmes

Re-engineering a product

Increasing volume (reduce unit cost)

Lower quality or reduced specification

Target pricing: Car Industry

References:
Target Pricing a marketing tool for pricing new cars. Omar 1997

Brand name effects, segment differences and product characteristics. Baltas et al 2009

Target Pricing Car Industry

In 70’s full costing techniques led to unrealistic overhead allocation.

Increased competition came from regions with a lower cost base as technical differentiation became more difficult.

Price reduction led to lower margins with insufficient returns for investors.

Target pricing – Car Industry

The answer set price first work back to cost:

To arrive at price use segmental analysis and branding.

Market mapping – look at the future dimension of market place, look at customer segments and target most attractive.

Look at quality and functionality/specification, volumes, design and position of brand in market

Target Pricing– Car Industry

Mainstream segments
The price will determine the specification, horsepower, engine capacity, speed and safety features

High end segments premium pricing.
A premium price for a brand can be obtained if:

- Awareness of brand both for the make such as BMW but also model mini
- Perceived quality of product
- Uniqueness of product the launch of BMW Z8 came after release of James Bond World is not enough
- Social Image – Volkswagen
- Corporate social responsibility

Nissan & Renault

Connected cars

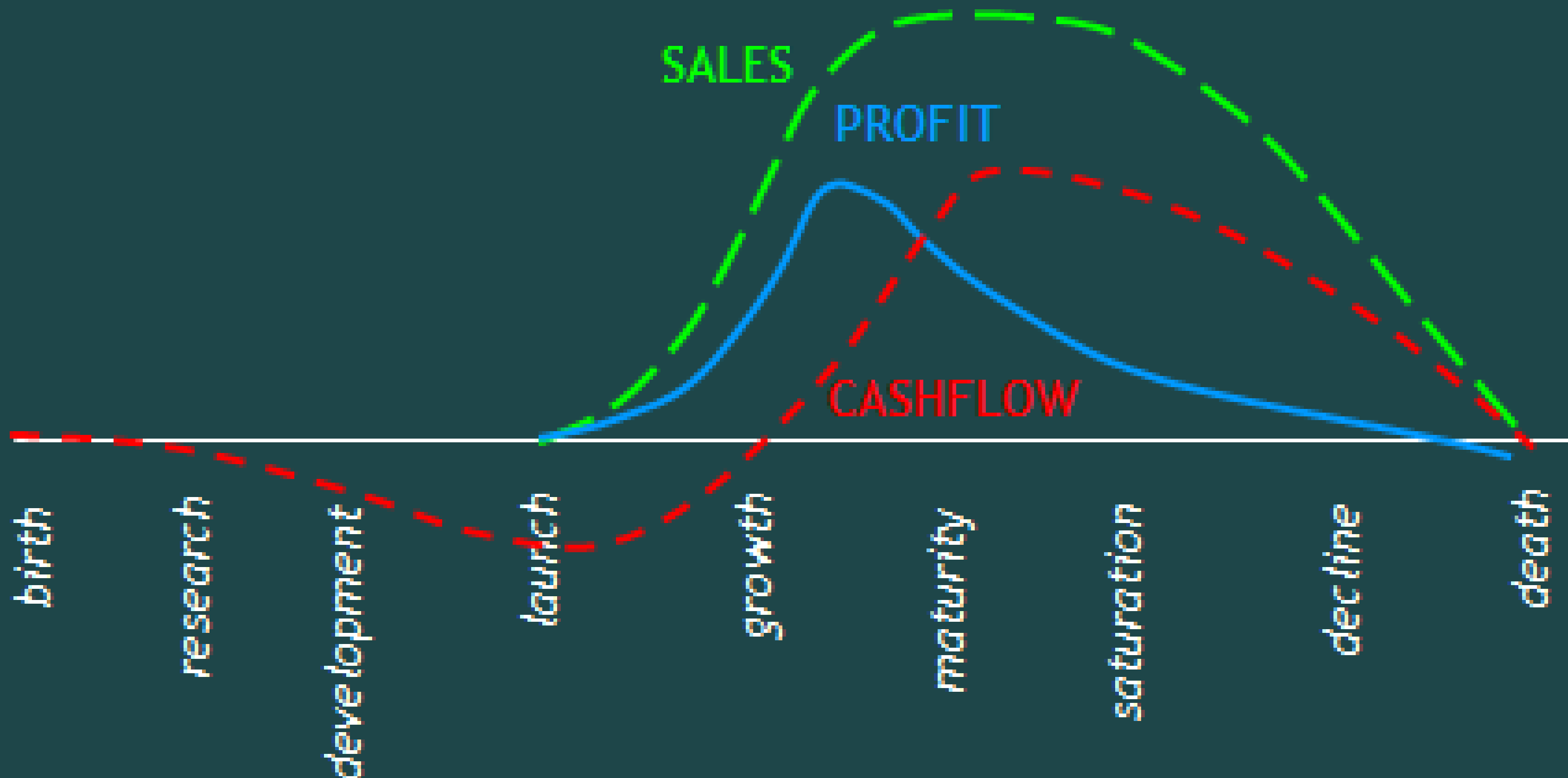
Smart cars with the ability to learn and predict driving habits.

Need to find the right balance between providing enough benefit to the consumer and justifying investment

Consultancy firm PWC looking at how much consumers will pay. ($10,000 up front rather than subscription)

Life Cycle analysis

A life cycle is the duration of a project's, product's, or company's existence



Life cycle analysis

For products with a dynamic environment cost plus pricing is not relevant.

Money will have been invested in research and development before a product is launched and these costs as well as costs of production need to be recouped.

Initial production costs per unit will be high, staff training, new methods of manufacture, new processes. Advertising and marketing costs will also be high.

These unit costs should fall further into life cycle of product.

Life cycle analysis

The sales price will initially be high. New product to market, no competition.

If market price is high competitors will enter the market unless the process or product can be protected.

As more of the product is supplied or similar products are supplied the price will fall.

Eventually the innovation will be overtaken.

Pricing in this type of environment need careful consideration will accurate forecasts of sales and cost over the life of the product.

Personalised Pricing

Uber Personalised Pricing

Uber operates via a smart phone app.

The business has developed a surge pricing algorithm so that the fare a customer pays depends on demand and supply at that point.

When demand is high and inelastic a higher fare is charged which should encourage more drivers to operate.

Uber Personalised Pricing

Pricing algorithm can be used for more than surge pricing.

Higher prices can be charged from taking someone to expensive areas or to expensive destinations.

Discounting & Introductory Offers

A business may discount prices either at the beginning of a sales period to attract initial custom or at the end to ensure all products sold.

Rail fares (Earlier booking cheaper tickets)

Introductory offers –banks, energy companies