The Fundamental Economic Problem is how to make the best decisions about the allocation of scarce resources (FOPs have Scarcity meaning they are limited in supply) amongst competing uses and unlimited wants and needs to maximise and improve economic welfare. Which results in an opportunity cost

Productive Possibility Frontier (PPF) = Shows the maximum combination of goods and services that can be produced in a given time with the available resources being used efficiency

PPF = Economic Model = Shows the maximum productive potential within an economy

Below PPF = Resources are economically inefficient and or unemployed resources. (Pareto inefficient) use of resources however in the long run if the resources are moved towards more efficient usage it can get to the point of on the PPF without an opportunity cost as resources are being used more efficiently and reducing unemployed resources. Better usage due to the underside shifts the point from below the PPF. [INEFFICIENT USAGE OF FACTOR INPUTS]

On PPF = Resources are being used economically efficiently and or fully employed (Pareto efficient). Need more FoPs to increase production. Moving along the curve means there is a reallocation of resources which often results in an increase in welfare by meeting consumers' needs more precisely there is no need to change the amount of resources however there still is an opportunity cost.

Above PPF = Currently Unobtainable or not feasible however in the long run it can be achieved if more capital goods are produced sacrificing consumer goods now (opp cost). Reduces consumption of the short run and this leads to economic growth and more consumer goods in the long run. Therefore this will make resources more obtainable in the long run boosting standards of living and economic welfare.

PPF is concave to the origin because as you move along the curve you'll have less capital goods (Y axis). This can be explained by the Law of Diminishing Returns once the optimal level of capacity has been reached, adding extra factor inputs will result in smaller increases of output. Not all factor inputs are equally suited to producing items leading to lower productivity. And increasing marginal opportunity costs because some fops are specialised and can't be adapted for other uses the opp costs increase.

Constant trade offs between capital goods and consumer goods = Taken to extremes for poor nations or individuals this may lead to the choice between food or healthcare == PAPER 3

Pareto Efficiency = Is when it is not possible to make some people better off without making some people worse off

Productive Efficiency = Means the firm or economy is making best use of their resources, when it's impossible to produce more of one good without producing less of another = On the PPF = Minimizes average costs while maximising outputs from available inputs

Indirect Taxation = A charge levied by the government on goods and services which increases the producers cost of production and shifts the supply curve to the left (inward)

Specific/Unit Tax = A tax set by the government on goods/services that is set at a constant amount per item (Alcohol Tax) (Fixed Tax) = Parallel Shift because tax per unit Is the same no matter the price

Ad Valorem (In Order of Value) = A tax set by the government on goods/services set as a percentage of the price of the good (VAT) (%Tax) = Pivotal Shift because as price rises so does the tax per unit rise which means there's a large gap between curves

IT = Increases a firm CoPs which increases supply cost so that less is supplied at each and every price level shown via the vertical distance between the curves in the diagram. A contraction in demand due to the tax and a contraction in supply. Indirect Tax can be used to alter consumers behaviour for example stop smoking or raise revenue to the government/education = Usually levied on a demerit good

Firms wish to pass as much of the tax burden onto the consumer so they do not have to pay for it and max profits.
Consumers want firms to pay most of the tax so they can maximise their utility and save money.
(Assuming Rationality) = Depends on Elasticity

EV

- **Reduction in QD to QD2 = May be significant enough lay of workers**
- **Tax = Effectiveness depends on Elasticity**
- **Difficult to set the right level of tax**
- **Unintended consequences**
- **Depends on the revenue generated and how its used**
- **Loss of jobs, competitiveness**
- **More losers than winners and has a regressive effect on low incomes**

PED = Negative (-) due to the demand curve and the inverse relationship between QD and P

GREATER THAN -1 = ELASTIC
LESS THAN -1 = INELASTIC

Perfectly Price Inelastic Demand = Where there is no change in quantity demanded following a change in price (Demand doesn't change when price changes PED = 0)

Perfectly Price Elastic Demand = where there is an infinite change in quantity demanded following a change in price = (Theoretical Extremely sensitive to price change PED = infinity)

Price Inelastic Demand = Where there is a less than proportionate response in Quantity Demanded to a change in Price. [QD change smaller than Price change = Not sensitive to price change = [PED = 0 - (-1)]

Price Elastic Demand = Where there is a more than proportionate change in Quantity Demanded to a change in price = [Sensitive to price change PED = > (-1) -1.1etc]

Unitary Price Elasticity of Demand = Where the response in QD is exactly proportional to a change in price PED = -1

Determinants of PED:

1. Substitutes = More close substitutes = More Elastic Less/None = Inelastic
2. Percentage of income spent = More spent = Elastic Less = Inelastic
3. Luxury VS Necessity = Luxury = Elastic because you do need it Necessity = Inelastic because you need it
4. Addictive Nature/Habitual Consumption = Habits,addicts,**brand loyalty,persuasive adverts** = More Inelastic because they purchase anyways even with an increase in price
5. Time = More time = More Elastic Less time = More Inelastic, less time to consider all the options
6. Width Of The Market = Wide market definition = Inelastic less close Substitutes Narrow market Definition = Elastic due to close Substitutes in that particular market

SPLAT = Sub, Proportion of income, Lux or Necessity, Addiction, Time

Total Revenue = Full amount of the total sales of a good/service = TR = Price × Quantity

PED = Inelastic = Total Revenue increases if price increases and decrease if price Decreases = Raise price make more profit

PED = Elastic = Total revenue increases as price decrease and Decreases If price increases = Sell more at a lower Price increases TR

PED = Perfectly Inelastic = Increase in price = Increase in total revenue = Consumers are willing to pay any price for the product = Price rises without any contraction in QD demand is counter cyclical to the macroeconomic cycle so its inverse = Recession mean demand increases = Economic growth = demand decreases

Normal Goods = Positive YED below +1 greater than zero
Luxury Goods = Positive YED Greater than +1
Necessities = Greater than 0 but less than +1
Inferior Goods = Negative YED = Income goes up QD Decreases

Normal Necessities = Income Inelastic so there's a low but positive YED = 0 - +1
Normal Luxury = Income Elastic = High Positive YED = Contextual = More than +1 = Quantity increases by more % terms than income

Benefits:

- Allow firms to **maintain sales and profits in econ growth and recession**
- Recession = firms provide more inferior goods
- Growth = luxury goods

Cross Price Elasticity of Demand (XED) = Measures the responsiveness of quantity demanded for good X following a change in price of a related good Y

%ChangeInQD(goodx)/%ChangeInPrice(goody)

XED help calculate the relationships between products that are in competitive demand (Substitutes) or joint demand (Compliments) - Useful in Oligopolies

Substitutes:
Increase in price of 1 good increases DEMAND for the other (assuming Ceteris Paribus)
Value of XED = Always **positive** for substitutes == As price increases demand decreases

- Close substitutes = have a strongly positive XED a small change in price causes a large switch in consumer demand
- Weak Substitutes = A large rise in price leads to a small switch in consumer demand I.e. +0.5would be weak sub

Compliments:
Fall in price of one increases the DEMAND for the other
Compliment = **Negative XED** as price decrease demand increase

- Close Compliments = A small fall in price causes a large rise in demand for the Compliment = Highly negative XED
- Weak Compliments = A large drop in price causes a small rise in demand

Unrelated products = 0 Cross Price Elasticity as it is irrelevant and they do not affect each other in any way.

Importance of XED:

- Helps find out the impact of a rival's pricing strategies on demand for their own products.

people of all income levels can access them so the provision is based on the society's needs and not individual agents ability to pay. Also government provision can ensure sustainability in the usage of public goods through laws and acts.

EV:
Should the government provide public goods?
- Some economic agents **overstate their demand and end up overconsuming a public good putting pressure on public finances and creating excess demand.** = Overstated demand is bad fiscally
- Putting a price on a public good is difficult as how does the government decide what price to pay?
- Should it reflect **marginal benefit gained?**
- It's difficult for the government to decide and if they put a price that is too high it **could lead to eventual government failure.** Also should **consumers contribute** to the provision of public goods if so **how much?**
- **Opp costs = tax, gov Spending, borrowing**
- **The government has imperfect information dealing with industries they don't understand**

The non rival nature of consumption provides a strong case for the government to provide and pay for public goods.

Many public goods are provided free at the point the point use and funded by taxation

State provision = Where the government provide goods for society net social rate of return

Benefit of State Provision:
- Government provision provides **economies of scale** benefits
- Government provision Helps **rectify inequalities** in income and increases affordability and access to important services for low income households

Drawbacks
- However if the government provides they may risk becoming the sole provider which leads to **monopoly power held by the government.** The government holding that power can lead to **inefficiency** arising from the lack of competition and could lead to complacency and higher prices when the government needs revenue.
- **Lack of choice if the government provides**
- Information failure and Asymmetric info, **the government doesn't have expertise in that field = inefficient.**
- The government lacks the knowledge and expertise to Provides for anything technical

EV: Public private partnerships can be a middle ground compromise where there is a joint venture between the government and public sector firms.

Information Failure = Occurs when people have inaccurate or incomplete data and so potentially make incorrect economic choices/decisions. Sometimes people have too much

- **Controls the price of a good/service for the benefit of the consumer which results in a greater consumer surplus**
- **Lowers the price of key services like utilities and accommodation**
- **Prevents consumer exploitation especially when there's a lack of competition**
- **Price caps imposed on local Monopolies stops excessive price increases**

Disadvantages of Max Prices:
- **Leads to <u>shortages on the market</u> so even though prices are lower there is less availability for consumers, some suppliers take their product off the market due to max prices**
- **Fall in revenue for producers as they have to charge lower prices which could impact their profits and lead to liquidation**
- **If PED/PES are Inelastic this means that max prices have little impact due to habitual consumption.**
- **Also if max prices are set too high it may not have any impact at all**
- **Leads to secondary markets and shadow markets where people will pay above the max price to guarantee the receiving of the good undermining the entire system imposed by the government. = arbitrage**
- **Very interventionist**
- **Just promote contestability rather than distorting market signals**

Price floors/Minimum Legal Prices = A price set by the government which a good/service can not fall below. Minimum Legal Prices can distort markets by creating excess supply. (Increases Price)

Prices pushed up from equilibrium

Used in commodities which are prone to fluctuations this leads to market failure and can be resolved by governments by guaranteeing a min price and buying up the excess supply. Min prices used on alcohol to *reduce* alcohol consumption and their external costs by increasing the price of cheap alcohol which leads to people being less antisocial and pissed.

Expansion in supply and contractions in demand lead to an excess of supply. For example alcohol prices rise due to a min price which contracts demand as less people can afford it and expands supply as there is more profit incentive to supply and max profits. The contraction In demand reduces the alcohol consumption and the costs that come with them. But this leaves a surplus due to the reduction in demand.

If demand or supply is Inelastic an increase in minimum price has less impact on quantity demanded and supplied. This means the impact of excess supply and Government spending is reduced as PED and PES become more Inelastic.

Advantages of Min Prices:
- Solves market failures in Unstable highly <u>*volatile*</u> commodities and **<u>producers have certainty to invest</u>** in the commodity. Also <u>stabilised producers' incomes</u> for commodities.
- **Easier for consumers to plan and budget**

- 6 = The law of Unintended Consequences = Intervention doesn't always work they way it should or how models and theories predict == The government intervenes and then innovation and dynamic efficiency Stops, prices increase, Customer service deteriorates, Quality cuts

- GOVERNMENTS INTERVENING AND USURPING OUR FREEDOM AND LIBERTY, IT'S A SMALL FAILURE