UNIT 3 ECONOMICS: MICROECONOMICS Part 1: Business Economics

Chapter 2: Introduction to Business Economics

The theory of the firm refers to a set of theories and principles which explain how firms work and operate.

Production Theory

Production is a process or set of processes that converts inputs into outputs. Production theory divides into short-run and long-run theory. The key concept of short-run production theory is the law of diminishing returns (or the law of diminishing marginal productivity). The key concept of long-run production theory is returns to scale: Increasing returns to scale refers to a situation in which output increases faster than the increase in inputs (factors of production) – this therefore encourages a firm to grow and earn more money as they do so since they can produce more output with less input per every unit of good.

Cost Theory

There is a strong link between the law of diminishing returns and short-run cost theory; and returns to scale and long-run cost theory. It is very easy to confuse cost theory with production theory - production theory refers purely to inputs and outputs and makes not mention of money, whilst cost theory refers to the costs of changing production levels.

The law of diminishing returns leads to an increase in a firm's short-run marginal costs of production. Increasing returns to scale leads to economies of scale in the long-run, whilst decreasing returns of scale leads to diseconomies of scale.

Revenue Theory

The word 'Returns' refers to the units of output produced. **Revenue** refers to the money a firm earns in selling its output. The nature of a firm's sales revenue is determined by the market structure it is in-order which incorporates perfect competition, monopoly or oligopoly.

 Objectives of Firms

 (See chapter 8: aspects of the growth of firms)

[~() The ability for a firm to make any t depends on the competitiveness of the market it is in. Perfectly competitive firms world find. Flarder to make on the due to a lack of significant barriers to entry. This means that profiles succained in perfectly cooperative markets act as incentives for other firms to join the market. Contrastingly, in monopoly markets, barriers to entry make it difficult for other firms to enter the market meaning the sole seller in the market are effectively price-setters.

Evaluation of different market structures

When evaluating different market structures, we do so based on the markets efficiency and on welfare. Based on efficiency, this can refer to productive efficiency, allocative efficiency, static efficiency and dynamic efficiency.

Based on welfare, this can refer to the two types of measuring welfare: consumer surplus and producer surplus.

Industrial Policv

Industrial policy refers to the Government's microeconomic policy. This refers to their policy on monopolies, oligopolies, legislation ensuring fair trading, nationalisation, privatisation and regulation. This is done by Governments to ensure fair trading and competition.

What is a firm?

Firms are companies that must earn revenue to cover the costs it produces.

Firms can be enterprises in the **public sector** (owned by the state) or in the **private sector** (owned by other shareholders). However there are some blurred lines between categorising a firm as one of these, since a firm can be partly owned by the Government and partly by its shareholders.

Within the private sector, firms can be categorised as:

Unincorporated enterprises (sole traders and partnerships) Shares cannot be purchased.



To answer questions:

• Equilibrium (1): The monopoly firm produces at $Q\pi$, price P.

• **Equilibrium (2):** The firm is earning abnormal profit at PRST because AR>AC. AC shifts:

• **Shift:** The average cost curve shifts down as the firm invests abnormal profit into research and development, thereby being productively efficient.

• **Equilibrium (1):** This has extended the level of abnormal profit earnt by the firm, which is now PRUV.

Chapter 6: Evaluating Perfect Competition and Monopoly

There are two main ways of evaluating perfect competition

and monopoly: In terms of economic efficiency (of which there are three types), and in terms of welfare criteria (consumer surplus and producer surplus).

Efficiency

Productive efficiency occurs when the average costs of production are minimised, or in other words when a firm operates at the bottom of its average cost curve.

Allocative efficiency occurs when overall economic welfare is maximised via the most effective distribution of resources. For one firm/market to be allocatively efficient, P=MC.

Dynamic efficiency occurs when technical and productive efficiency increases over time. This can be due to a number of things, for example better technology would increase productivity, as would marketing and innovation (research and development).

FYI, **static efficiency** is any type of efficiency that is measured at *one point* in time efficiency and allocative). Dynamic efficiency measures efficiency *over* time.

| <u>Efficiency</u> | Perfect Competition | <u>Monopoly</u> |
|-------------------|--|---|
| Productive | YES – The firm operates at he bottom of the AC turve | NO – The find's costs are above the average cost curve (However, firms' costs of production are lower due o economies of scale). |
| Allocative | See amount a marker produces is wholly determined by the supply and demand of the product – which is determined by the consumers. This leads to the most equitable allocation of resources. | NO – P>MC (However, many consumers may prefer investment in innovation, technology, branded goods and Veblen goods over allocative efficiency). |
| Dynamic | Perhaps – Depends on the firm. There is a lower incentive to be dynamically efficient as the other firms will eventually free-ride the benefits due to perfect competition. However, there is still an incentive to make abnormal profit in the short-run, and this incentive is larger if the time-period it takes to adopt the new improvement (whether it be a technological improvement, a piece of machinery/capital, or a new production technique), this would mean abnormal profit is earnt for a longer period of time. | Possibly more likely than PC – The abnormal profit earnt by monopolies, which are protected by barriers to entry, means they can invest in research and development. In perfect competition, perfect knowledge allows other firms to free-ride the advantages of low costs. There may be no incentive to lower average costs as the monopoly firm already earns abnormal profit of PRST and doesn't need to lower average costs further. E.g. Blackberry. However, companies are profit maximisers, and thus have the incentive to increase their abnormal profit wherever possible. E.g. Apple. Whether they invest or not will depend on the nature of shareholders and whether they're long-term or short-term investors. Short-term investors want profits shared in dividends more quickly; while long-term investors prefer firms to invest and be dynamically |

Colluding oligopoly is when rival firms within the market work together for their own benefit. An example of this is the formation of cartels.

Cartels are often formed as a result of uncertainty within the market. In such cartel arrangements or price rings, prices are fixed to a high price. This benefits the least efficient firm which is allowed to survive in the market as with lower prices it would have otherwise been priced out of the market; whilst also benefitting the most efficient firms as they can extend their abnormal profit. This is extremely undesirable for consumers as it leads to high prices, whilst also preventing the benefits monopolies can bring such as economies of scale and improvements in dynamic efficiency. These are usually illegal.

Concentration ratios measure the market share of the biggest firm in the market. E.g. the five-firm concentration ratio is the percentage of output in an industry produced by the five largest firms in the industry.

Behaviour of oligopolistic firms

For many economists, oligopolistic markets are not defined by the number of firms within it, but by the market conduct of the firms, meaning the way in which they behave. In oligopolistic markets, firms have the power to control its own price and output, which in turns affects its rivals' profits. Similarly, however, the behaviour and actions of the rival firm/s will have an impact on the firm's profits. Oligopolistic firms must work in a market of interdependence and uncertainty. Theories to suggest and explain the behaviour of firms within such markets include kinked demand theory and game theory.

Kinked Demand Theory:

Kinked demand theory aims to explain how a competitive oligopolist may be affected by its rivals' reaction to its price and output decisions; it also explains alleged price stickiness or rigidity in oligopolistic markets.

- Firms in an oligopolistic market produce at P¹Q¹. •
- When a firm increases its price from P¹ to P², the oligopolist expects the rival firm to rold their prices steady in order to gain more market share and a profit. This means that deprand is expected to be relatively price elastic as people will buy the cheaper product, and compared experiences a more than proportionate fall from Q^1 to Q^2 .
- However, when a firm lowers its price from P¹ to P² the origopolistic firm expects rivals to act in a different way: to lower prices themselves. This is in order to avoid losing market share, and thus profits as people will shift their demand to the cheapest product. Although overall demand should increase as some people ne willing to buy the orductia, this price, but not at the previous price, demand is expected to be relatively prior i clastic, as demand experiences a less than propolation to proceed from Q1 0 03 9 Given these beliefs, both oligopolistic firms believe a raise or fall in price would lead to falls in profit,
- and therefore the best policy would be to leave price unchanged leading to price stickiness/rigidity.

However, there is no explanation as to why a firm choses to produce at point x in the first place. Additionally, evidence of pricing decisions by real world firms largely contradicts the theory.

Game Theory:

Game theory is a mathematical approach to the study of decision-making which treats such conflicts as games with set tactics and strategies with rational players.

The best example of the game is the prisoner's dilemma, where someone has two choices - the result of both of which depends upon the decision made by the other person. The rational person therefore determines his decisions based on the outcomes of his decisions. In one example, two prisoners are held in separate rooms with no means of communication, and two choices: To confess to a crime committed, or to keep guiet. Different situations lead to different sentences for both prisoners illustrated by this matrix:

It is in the best interest of both prisoners to confess in order to avoid getting 30 years in prison. This is the **dominant strategy**. Similarly, the uncertainty of other firms' decisions within an oligopolistic market influences a firm's behaviour in it.



Sentence in years

competition, however this is quite expensive. Also, Government doesn't know perfect size of the subsidies. Also, some question whether firms will be dynamically efficient when they become private firms – BT led innovation eventually developing fibre optics following privatisation; however, British Gas has failed to spark innovative moves within the industry.

Economic liberalisation

Privatisation has come to be known in a much wider sense than simply the transferal of a firm from state to private ownership. It can extend to cover:

- Contractualisation: When public services are contracted out to private firms. E.g. ASOS to assess
 incapacity benefits claimants.
- **Marketisation:** When services are shifted from the state sector to the private sector (but not a whole firm).
- **Deregulation:** The removal of rules, controls and constraints on the freedom of economic activity. This promotes competition and productivity.

