

THEORY OF THE FIRM

PRODUCTION AND COSTS

VERY QUICK DEFINITIONS

Firm	Organization/ enterprise formed by entrepreneurs who bring together FOP to produce goods/ services for sale
Plant	Physical location where FOP are gathered for the purpose of producing G/S
Industry	Comprises a group of firms that produce a single G/S or related G/S
Explicit Costs	Payments made to outside suppliers of inputs E.g. wages, raw materials, overhead costs, depreciation, sinking fund acc
Implicit Costs	Do not involve paying money to third party but involve sacrifice of alternative E.g. salary foregone by entrepreneurs, interest foregone on funds
Total Economic Cost	Explicit cost + Implicit cost
Supernormal profit	$TR > TC$, i.e. gains are made
Normal profit	$TR = TC$, The minimum amount of profit a firm requires to stay in an industry
Subnormal profit	$TR < TC$, i.e. losses are made

TRADITIONALLY, a firm is assumed to have the goal of profit maximization

NON-TRADITIONAL OBJECTIVES AND OTHER FACTORS

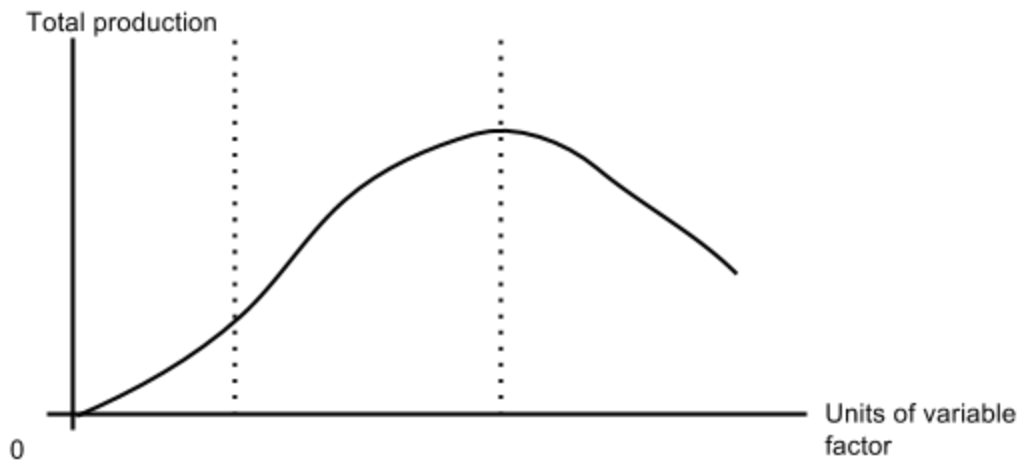
Managerial theories of firm behaviour	Divorce of ownership and management: principal agent problem Managers pursue their own interest -e.g. higher salary, control, fringe benefits
Satisficing behaviour	Complex group of stakeholders can strive to achieve conflicting objectives
Nationalized industries	Social and political objectives to consider P = MC : Maximize social welfare (allocative efficiency) P = AC : Sustainability without burdening government (for useful products)
Imperfect information	Difficult to calculate MC -firms tend to calculate AC and add profit margin
Social enterprises	Primary aim is to generate profit for furthering social/environmental goals E.g. MINDS Social Enterprise: employment for intellectually disabled

SHORT RUN COSTS

VERY QUICK DEFINITIONS

Short Run	That time period in which there is at least one fixed FOP
Fixed Costs	Those that do not vary with the quantity of output raised E.g. rent for a restaurant
Variable Costs	Those that do vary with the quantity of output produced

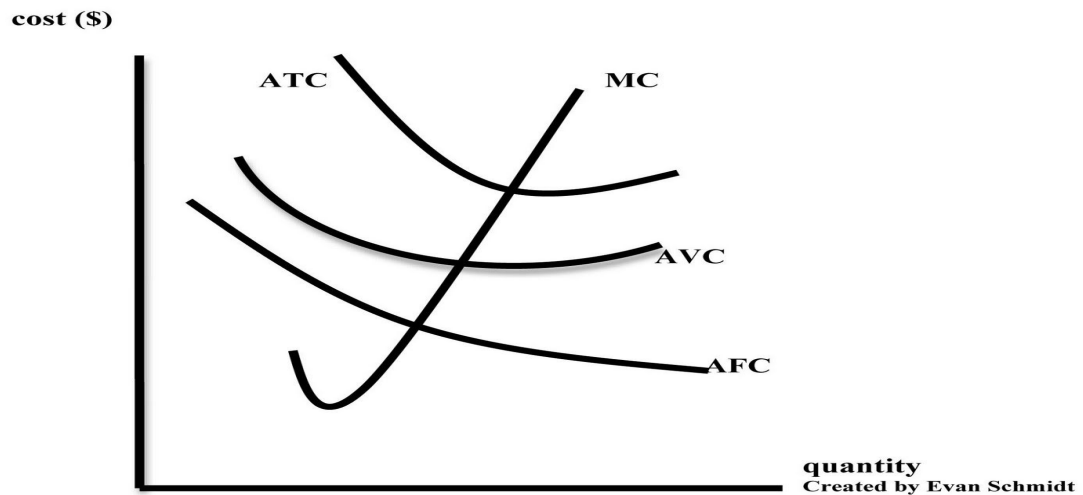
LAW OF DIMINISH MARGINAL RETURNS (OUTPUT)



Initially: More efficient labour-capital combination, division of labour, specialization of tasks

Afterwards: Overcrowding, fixed-factor over-utilised

THEORY OF COSTS IN THE SHORT RUN



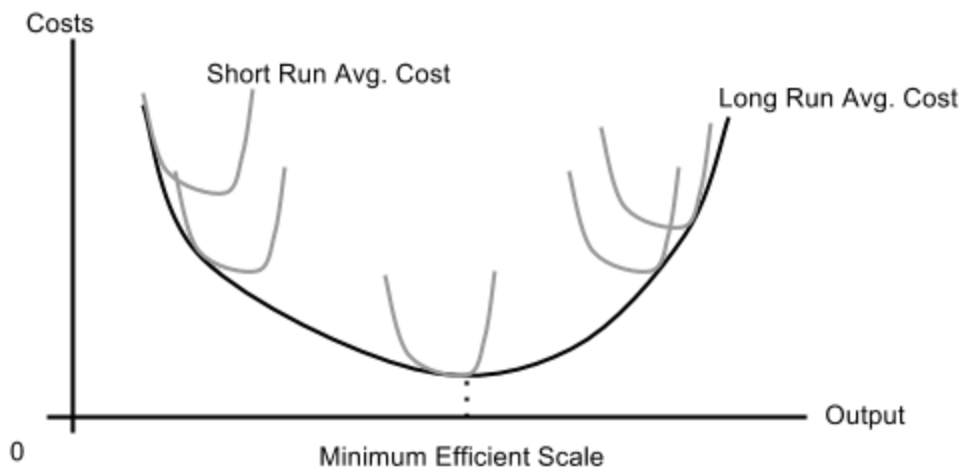
LONG RUN COSTS

VERY QUICK DEFINITIONS

Long run	That period of time in which all FOP are variable
Increasing returns to scale	Output increases more than proportionately to increase in inputs Fall in average costs due to technical economies of scale
Constant RTS	Output increases proportionately to increase in inputs
Decreasing RTS	Output increases less than proportionately to increase (technical DEoS)

THEORY OF COSTS IN THE LONG RUN

In the long run, firms use the LRAC (planning curves) to decide on scale of production



Minimum Efficient Scale: When LRAC is at its minimum, it has reached MES

Optimum plant size/ output level beyond which no significant additional EoS can be achieved

Lower MES in relation to market size = greater max. no. of firms

WHY NOT PRODUCE AT MES ALL THE TIME?

Sunrise industries	Firms may be experience diminishing returns in the SR but increasing returns in the LR -typical of young firms as they expand E.g. hydrogen fuel production
Sunset industries	Firms may be experiencing increasing returns in the SR but diminishing returns in the LR -spare capacity but would be better off reducing scale of operation E.g. analogue recording devices

INTERNAL ECONOMIES OF SCALE Savings in costs occurring to a firm as a result of the firm's expansion, and that were created by the firm's own policies and actions -costs per unit are falling

TECHNICAL EOS: LRAC falls as firm's size grows (having to do with technical/engineering factors)

Factor Indivisibility	Certain equipment cannot be used fully if output is small Larger scale of production maximizes efficiency E.g. agriculture (tractors, mills, etc), chemical production, drilling oil
Law of Increased Dimensions	Larger equipment/machines more efficient because of larger dimensions E.g. containers, trucks
Specialization and Division of Labour	Less training needed for workers Workers can be more efficient doing particular jobs -less time lost switching E.g. factory production line
Linked Process Economies/ Multi-Stage Production	Integration of multiple processes into one firm Saves time, transport costs and energy -Able to save per unit costs E.g. dairy farm, newspaper press (editing, printing in the same premise)
By-product Economies	Larger plants can make more economical use of materials Waste to a small plant can be used to manufacture by-products in larger plant E.g. Wilmar Sugar mill: molasses distilled into bioethanol, bagasse burnt for electricity, excess electricity sold to power grid
Other Internal Economies of Scale	
MANAGERIAL EOS	Specialization on a supervisory level: Specialists supervise production systems E.g. HR departments: Efficient and cost effective hiring and management of human capital
MARKETING/ COMMERCIAL ECONOMIES OF SCALE	Larger firms have bargaining power, can get preferential treatment - E.g. large seafood restaurants getting freshest, cheapest bc bulk Unit cost of transportation lower - I.e. More units to spread out cost of transportation over Bulk-advertising/ large scale promotion spread out over large number of sales - E.g. Courts, Giant, NTUC buying up entire newspaper spreads May have some ability to keep prices higher due to market power
FINANCIAL EOS	Easier and cheaper to raise funds/ negotiate finance deals Better credit ratings, more collateral: larger loans, lower interest rates Able to be more flexible about finance -share options, rights issues, etc. Public limited companies: can raise funds by issuing bonds to public Able to utilise skill of merchant banks to arrange finance
RISK BEARING EOS (STOCHASTIC)	Diversification -wide variety of products Markets across regions/countries to sell to/ obtain FOP from E.g. drought in one area less ruinous if other areas can be relied upon Large scale of production to spread uncertainty in COP over Spread the cost of R&D over a large scale of output
R&D EOS	R&D requires high capital outlay which big firms can afford Improvement in techniques could mean a fall in average costs

ECONOMIES OF SCOPE	Enjoyed as firms increase the <i>types</i> of products produced Overhead costs are shared E.g. distribution, costs, raw materials in bulk
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INTERNAL DISECONOMIES OF SCALE Increase in costs occurring to a firm

COMPLEXITY OF MANAGEMENT	Difficulty in organising/ co-ordinating large enterprises Divorce of management from ownership -principle agent problem Rigid organisational structure time lags in implementing decisions, decreased responsiveness to changes in Demand and Supply
STRAINED RELATIONSHIPS	Relationships become impersonal -workers lose personal loyalty and motivation Decrease in productivity E.g. loyalty of small tech start-ups -<i>but</i> Google? Starbucks?

EXTERNAL ECONOMIES OF SCALE savings in costs that occur to all firms as a result of the concentration of firms in a location or expansion of the industry (Causing LRAC to shift down)

ECONOMIES OF CONCENTRATION	
Availability of skilled labour	Large enough demand for specific skills to justify setting up special educational institutes Firms can collaborate to develop shared training facilities Reduced costs of training Can attract people with the relevant skills E.g. programmers flocking to silicon valley/ Google specifically
Well-developed infrastructure	Marketing organisations, better roads, railway lines, airports, public utilities, commercial facilities
Reputation	Builds up a name which consumers associate with quality Encourages brand loyalty and steady clientele
Other External Economies of Scale	
ECONOMIES OF DISINTEGRATION	Subsidiary industries develop to cater to needs of major industry Supporting firms can specialize in production of different outputs E.g. Japanese cars with parts manufactures in Korea Specialised firms can process waste products into useful ones -offset COP
ECONOMIES OF INFORMATION	Large size of industry justifies research/ expertise from government/ central research institutions

EXTERNAL DISECONOMIES OF SCALE

STRAIN ON INFRASTRUCTURE	E.g. traffic congestions leading to loss of time and increased fuel consumption
RISING FACTOR	Shortage of specific raw materials/ skilled labour

COSTS	Competition for such resources pushes prices up
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GROWTH OF FIRMS

MEASUREMENT OF THE SIZE OF FIRMS

- Quantity of output sold
- Total annual revenue
- Market share
- Capital stock - amount of real assets owned by a firm
- No. of employees

MOTIVES FOR GROWTH

- Exploit internal economies of scale -lower unit cost, ability to edge out rivals
- Gain market share and thus market power
- Increase market valuation
- Reduce risk of take-over by other firms

METHODS OF GROWTH

INTERNAL EXPANSION	Firm increases its size by producing more of existing product or extending the range of its product. This is financed by • Plough-back profits • Borrowing • Initial Public Offering: - Positions company for eventual expansion into national/intl markets - Easier access to new capital from new source - Alternative to relying on bank funding and frees businesses from fixed repayment commitment
FRANCHISING	Practice of the right to use a firm's successful business model and brand for a prescribed period of time. • Alternative to expansion or building "chain stores", which avoids investment and liability of the chain • Incentivised by significant share in profit • Eg McDonalds/ Subway
MERGER OR ACQUISITION	Vertical integration - when a merger takes place between firms engaged in different stages of a production process • Backward integration: E.g. oil refineries buying oil wells Allows for greater control over quality and quantity of raw materials Greater security wrt delivery Restriction of availability of supplies to competitor Absorption of intermediate profit margin • Forward integration: E.g. breweries buying pubs Allows for adequate number of market outlets, raising standards Reaping greater economies in production Accelerated development of new discoveries Horizontal integration - when a firm takes over a similar firm at the same

	stage of production • Allows for market domination, reduction in competition, possible increase in market power Joint production capacity -greater internal EoS Conglomeration - formation of groups of firms which are not directly related to one another • Allows for diversification of output Reduced risk of fluctuations in demand in certain markets, ensured long term growth
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SMALL FIRMS

EXISTENCE OF SMALL FIRMS

DEMAND-SIDE FACTORS - some firms remain small because large scale production is not justified by size of market. Total demand for the firm's output may be small because of:

NATURE OF THE PRODUCT	Perishables - require small and localised markets (E.g. fish, fruit) Preference for variety (E.g. accessories) Specialised products (E.g. highly specialised tools, products of religious significance)
PRESTIGE MARKETS	markets may be limited by price (E.g. yachts, expensive sports cars, jewellery)
PERSONALISED SERVICES	direct individual attention required, impossible to mass produce (E.g. repair services, hair dressing)
GEOGRAPHICAL LIMITATIONS	Esp when product has great bulk relative to value, i.e. transport costs high relative to total cost. Market likely to be localised (E.g. cement??)

SUPPLY-SIDE FACTORS - Firms may stay small/ there may be emergence of small firms because of:

MES	Reaching MES at low levels of output - optimum size is small (E.g. tailoring/ private clinics)
VERTICAL DISINTEGRATION	entire production process broken into a series of separate processes Small firms perform small, niche parts of the whole task
DIFFICULTY RAISING/ LACK OF CAPITAL	Inability to raise necessary capital for expansion Entrepreneurs may also prefer to be sole proprietors for control
UNWILLINGNESS TO TAKE RISKS	Larger firms involves large capital outlay - increased risk of investment Fear of future fall in price of final product due to surplus
BANDING	Independent businesses can band together - bulk buying/ advertising/ promoting
PROFIT CYCLES	At early stage of profit cycle, total demand tends to be low -firms take time to grow
NON-PROFIT MAX	Motivation comes from self-employment/ prestige Owners content/ value independence/ maintain control/ etc.

CO-EXISTENCE OF SMALL AND LARGE FIRMS

NATURE OF INDUSTRY'S LRAC CURVE	EoS exhausted at low output levels, followed by constant costs over a wide range of output Small and large firms can be equally cost-efficient (E.g. breweries)
MARKET CAN BE SEGMENTED	Industry can cater to diversified range of products and customers Large firms focus on mass production , small firms on niche markets E.g. auto-industry: Toyota & Honda vs Porsche & Ferrari Groceries: Supermarket chains vs small provision shops
JOINT VENTURES	Cooperation among smaller firms to protect interests Jointly owned enterprises - source for raw materials, obtaining EoS
TECHNOLOGICAL PROGRESS	Used to be capital intensive, favoring large firms Increasingly favoring small firms - Recent developments - new tech embedded in small scale equipment - Production process simplified - fewer and less bulky machines