Firms, costs, growth and competition

Edexcel IAL Economics WEC13 sections 3.3.1-3.3.3 full package

Topic 5 at a glance

> Firms grow, set objectives, face costs, and compete in a structure.

- WEC13 spec sections 3.3.1 to 3.3.3.
- One demand model: AR is $P = 70 - Q/2$.

Four ways to integrate

Integration	Buys	Example
forward vertical	a customer stage	a brewer buys pubs
backward vertical	a supplier stage	the brewer buys a hop farm
horizontal	a rival	two brewers merge
conglomerate	an unrelated firm	a brewer buys an airline

Why some firms stay small

Small markets, thin finance, owner control and rules hold growth back.

- Growth affects workers and consumers too.
- Demergers split failing conglomerates.

Objectives on one demand curve

Profit max is MR = MC; revenue max is MR = 0, here (70, 35).

- Satisficing: a satisfactory result.
- Principal-agent: managers vs shareholders.

Worked: the cost table

1. **Fixed cost** TFC $= 12$
2. **TVC, Q = 1 to 9** 5, 9, 12, 14, 17, 21, 26, 32, 39
3. **MC = ΔTVC** 5, 4, 3, 2, 3, 4, 5, 6, 7

Decision

MC falls with specialisation, then rises with diminishing returns.

The cost curves, drawn

AVC bottoms at 3.4, ATC at 5.43: the two critical prices.

- MC cuts AVC and ATC at their minimums.
- **Normal profit** is inside ATC.

Shut down or carry on?

Short run

shut down if $P < 3.4$

P between 3.4 and 5.43:

trade at a loss

Long run

exit if $P < 5.43$

$P = 5.43$: **normal profit**

break-even

Long-run average cost

> Economies push LRAC down to the MES; diseconomies push it up.

- MES: smallest output at lowest cost.
- All factors vary in the long run.

Economies and diseconomies

Kind	**Examples**
internal economies	financial, technical, managerial
	marketing, purchasing, risk-bearing
external economies	skilled labour, transport, knowledge
diseconomies	communication, coordination, X-inefficiency

Four kinds of efficiency

Efficiency	**Condition**
allocative	$P = MC$
productive	output at minimum ATC
dynamic	innovation funded by profit
X-inefficiency	costs above the floor

The concentration ratio

> The top four firms hold 90%: a concentrated market.

- CR4 $= 40 + 25 + 15 + 10 = 90\%$.
- It misses imports and **contestability**.

Four market structures

Structure	Firms and product	Long run
perfect competition	many; identical	$P = \min ATC$
monopolistic comp.	many; differentiated	**normal profit**, $P > MC$
oligopoly	few; interdependent	barriers keep profit
monopoly	one; barriers	supernormal profit

The prisoners' dilemma

	B colludes	**B defects**
A colludes	(4, 4)	(1, 5)
A defects	(5, 1)	(2, 2) Nash

Monopoly, drawn

MR = MC at 40: price 50, profit 800, deadweight loss 200.

- $70 - Q = 10 + Q/2$ gives $Q = 40$.
- Competitive benchmark: $Q = 60$, $P = 40$.

Price discrimination and natural monopoly

Third-degree

market power

groups with different PEDs

no resale

Natural monopoly

AC falls across the market

one network is cheapest

regulate it

Monopsony and contestability

Monopsony

one buyer

pushes input price down

workers lose

Contestable market

cheap entry and exit

hit-and-run threat

profit near normal

Data response: Microsoft and Activision

1. **Shares** 45, 30, 20, others 5
2. **CR3** $45 + 30 + 20 = 95\%$
3. **Structure** a highly concentrated **oligopoly**

Decision

CR3 $= 95\%$: three firms supply nearly the whole market.

Data response: was approval right?

For approval	Against
remedy hit the cloud risk	promises hard to enforce
structural rights sale	agreements expire
scale, investment	more concentration

Check yourself

Question	**Answer**
Revenue maximised where?	MR = 0: Q 70, P 35
Short-run shutdown price?	below 3.4 (min AVC)
CR4 for 40, 25, 15, 10, 10?	90%
Monopoly Q, P, profit?	40, 50, 800
Nash equilibrium?	(2, 2): both defect