Elements of Microeconomics

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Week 13?

Notes About the Final

- 7 pick 6 will be the format. One extra question but, you should still have ample time.
- The final is in **REMSEN 1** which is the lecture hall downstairs from the usual lecture hall.
- Final is the last day of finals the 21st from 2-5pm.

Back to Monopolistic Competition

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  1. **Many sellers**: There are many firms copmeting for the same group of customers.
  2. **Product Differentiation**: Each firm produces a product that is at least *slightly* different from those other firms.
  3. **Free Entry and Exit**: Firms can enter or exit without restriction.

Onwards and Upwards

- Let us take the first characteristic of monopolistic competition that we discussed earlier: **many sellers**.
- Again from prior study we know that have many sellers mean that each frim has less moarket power than a pure monopoly but, more than a perfectly competitive frim.
- Tie this in to the fact that there is **free entry and exit** and we should begin to build a picture of the long run behavior of this market.

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- Let us see this graphically.

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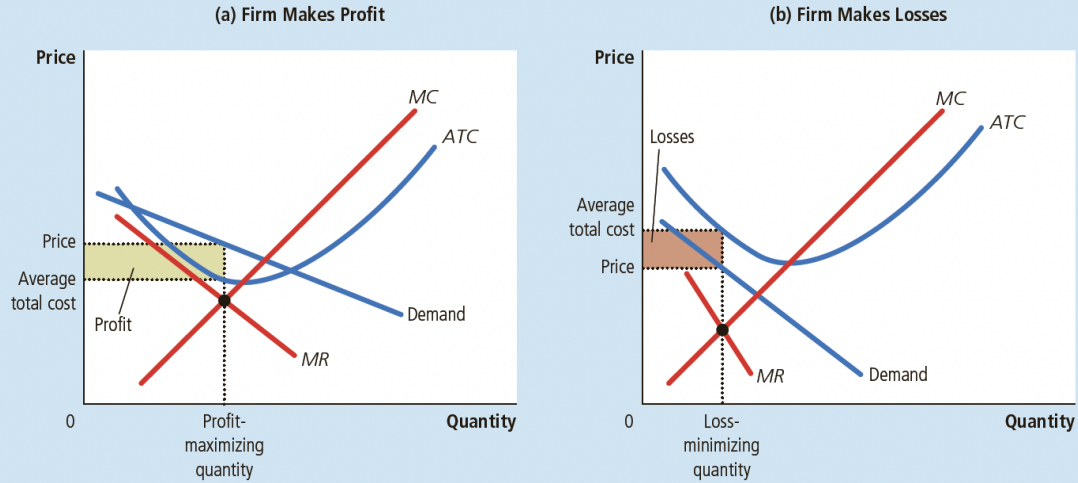
- What might that mean for profit?
  - If you guessed (or paid attention in lecture or maybe you did the reading) that there is 0 economic profit in the long run, you'd be correct!
- Let us see this graphically.

Two Cases


(a) Firm Makes Profit
Price
MC
ATC
Price
Average total cost
Profit
Demand
MR
0
Profit-maximizing quantity
Quantity
(b) Firm Makes Losses
Price
MC
ATC
Losses
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Price
MR
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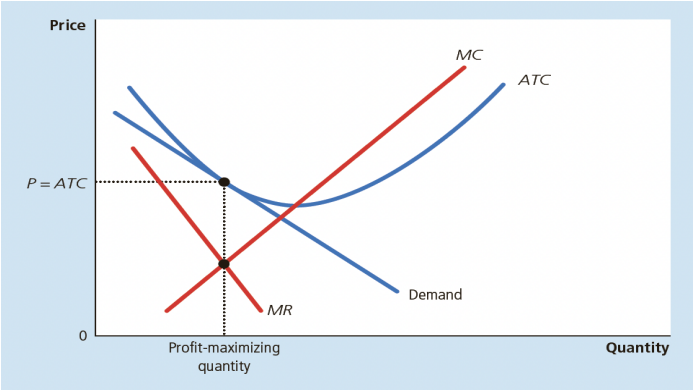
0
Loss-minimizing quantity
Quantity

The Lonnnnnnnnnggggg Run

- The two cases from the prior slide tell us something. There exist situations that monopolisticly competitive firms make profit and others where profit is negative.
- Couple that with the characteristic of free entry and exit and we have the following result...



Some Observations of the Long Run

- Anyone notice somthing about price and average total cost?

- The point at which ATC is minimized is known as the *efficient scale*, perfectly competitive firms produce at this point.
- The difference between the efficient scale and the monopoly/monopolistic competition quantities is known as **excess capacity**.

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Some Observations of the Long Run

- Anyone notice somthing about price and average total cost?
- Just as in perfect competition $P = ATC$, this falls in line with the conclusion that there is no economic profit in the long run.
- Also notice that P does **not** intersect ATC at it's minimum in monopolistic competition.
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Practice Problem

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Consider a monopolistically competitive market withN firms. Each firm's business opportunities aredescribed by the following equations:
Demand: $Q = \frac{100}{N} - P$
Marginal Revenue: $MR = \frac{100}{N} - 2Q$
Total Cost: $TC = 50 + Q^2$
Marginal Cost: $MC = 2Q$

- How does N, the number of firms in the market, affect each firm's demand curve? Why?
- How many units does each firm produce?
- What price does each firm charge?
- How much profit does each firm make?
- In the long run, how many firms will exist in this market?

Another Market Structure: Oligopoly

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- As with the prior structures oligopoly has a special mix of these three.
- **oligopoly**: a market structure in which only a few sellers offer similar or identical products.
- We will use some unique terminology to describe oligopoly and their behaviors:
  - **collusion**: an agreement among firms in a market about quantities to produce or prices to change.
  - **cartel**: a group of firms acting in unison.

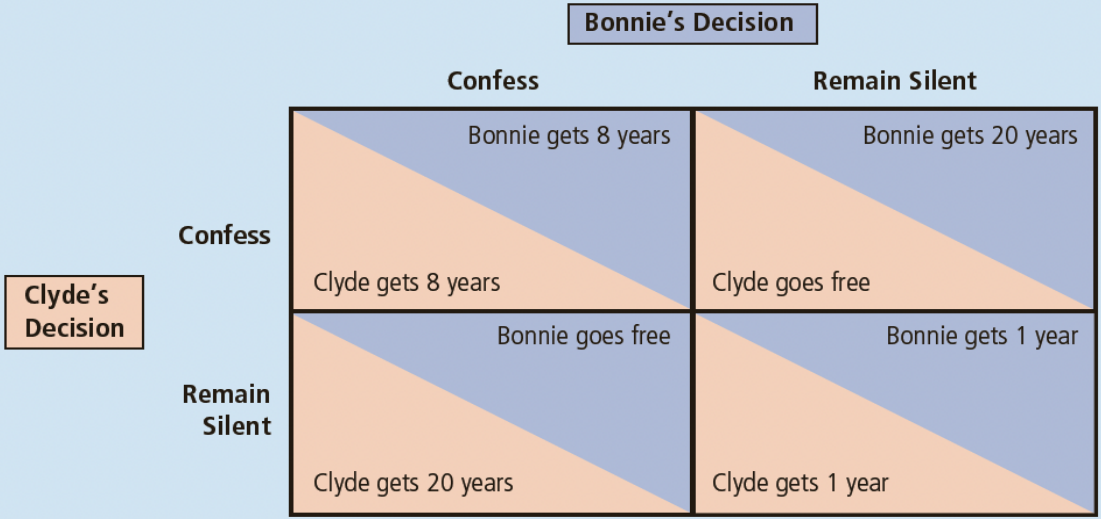
Equilibrium of Oligopoly

- We have seen in our prior academic endavours of evaluating market structures that we have always come to some sort of quantification of equilibrium.
- Oligopoly is no different however, we will introduce a new idea.
- In comes the **Nash Equilibrium**. The Nash Equilibrium gives us a way to describe the strategic decisions of two actors (for the purposed of this class)

Nash Equilibrium

a situation in which economic actors interacting with one another each choose their **best strategy given the strategies that all the other actors have chosen.**

A Brief Interlude Into Nash Equilibrium



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- What does this mean for markets?
- Think back to our practice problem. Eventually we found the numebr of firms.
- Now imagine an oligoply. What happens when it grows? When one firm gets added to the cool kid club?
- Well as we saw everyone is cheating a tad, it is in their best interest (if you ain't cheatin' you ain't trying, expect in academia then you get theown out so no cheating). Eventually you get something that resembles the perfect competition outcome because firms cheat on price and quantityt and end up close to the socially welfare maximizing point.