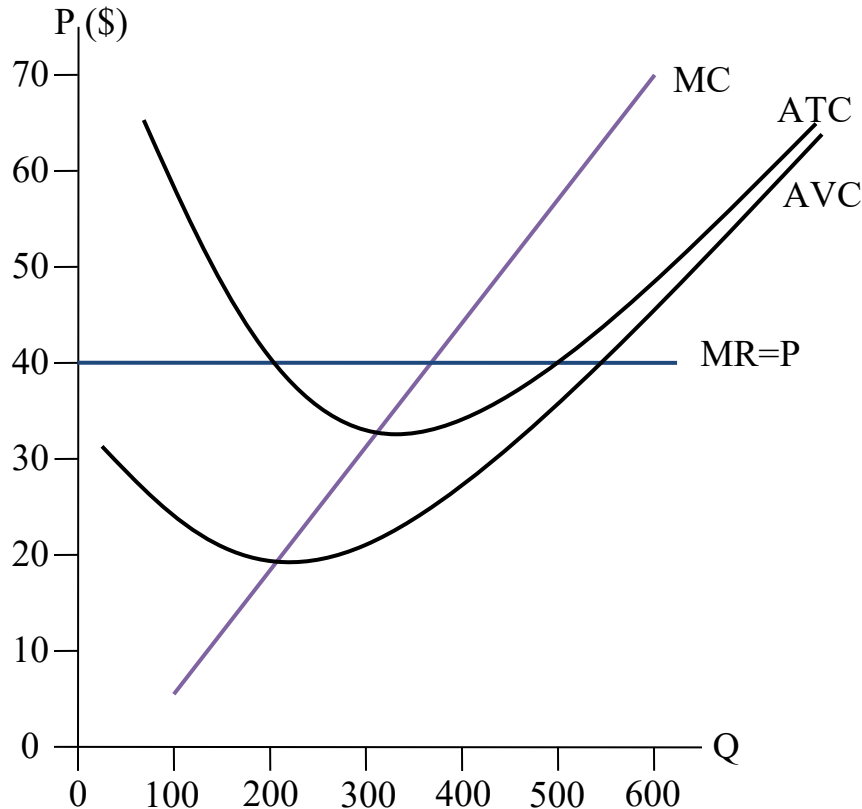


## TOPIC 19: COMPETITION II

### I. Shutdown points

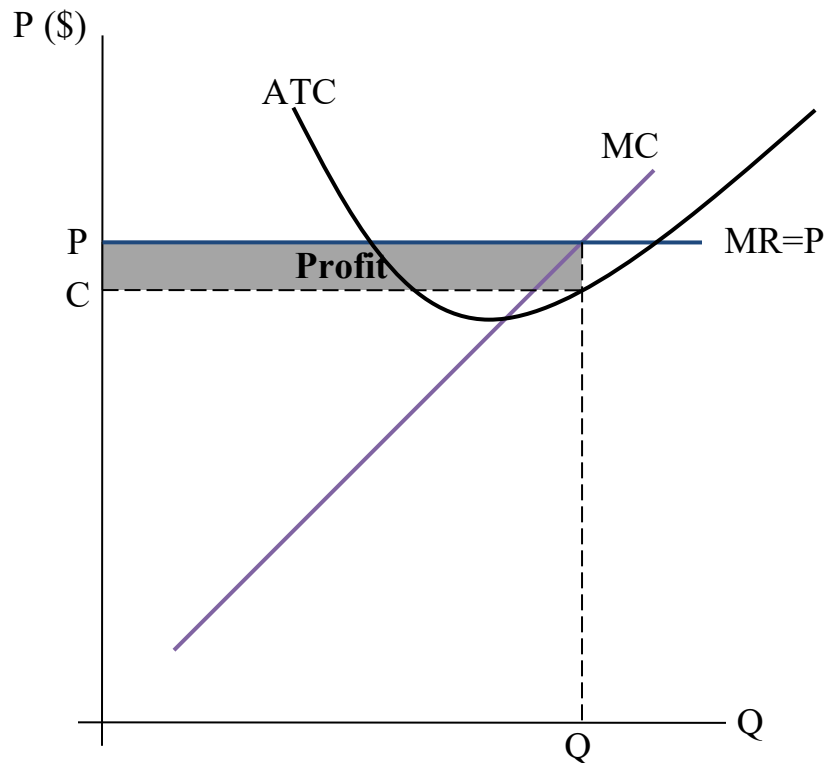
- a. Why do ice cream stores stay open during the winter?
- b. Recall that  $ATC = AFC + AVC$ . Let's add AVC to a generic diagram.



- i. Note that AVC looks just like ATC except it gets closer to ATC. This is because AFC is always decreasing so, as quantity increases, the difference between ATC and AVC shrinks.
- c. If price drops below ATC, we might claim the firm goes out of business. And, in the long-run, it will. But the short-run is a different matter.
- d. Consider the ice cream store.
  - i. If the price is below ATC, but above AVC, the firm is covering their variable costs (like labor and ingredients), even if it's not covering its fixed costs (like rent or loan payments).

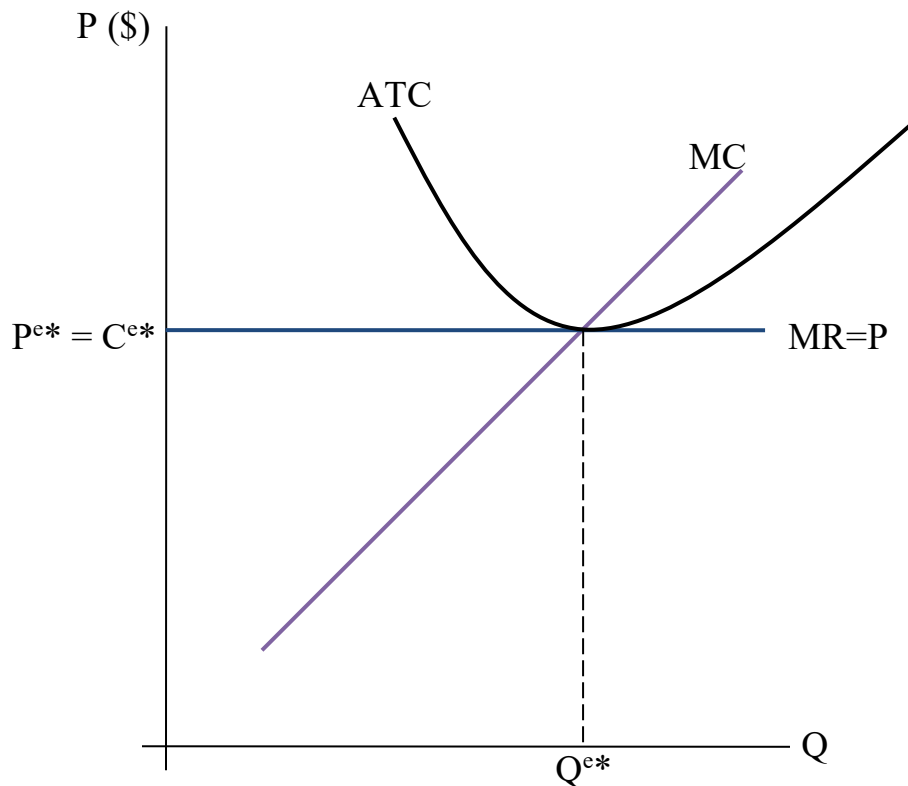
- ii. If the firm closed, like an ice cream store during the winter, it would still have to pay all of its fixed costs without making any revenue.
- iii. If the firm stayed opened, it would be making enough to cover its variables and cover *some* of its fixed costs. It couldn't do this forever, but it loses less by staying open during the winter.
- iv. If the price fell below AVC, it couldn't even pay for workers; it would lose more by staying open during the winter.
- e. The low point of ATC represents the *long-run shut-down point*. It's the lowest the price can be and the firm still stays open over the long-run. It might lose money day-to-day or even quarter-to-quarter (like retail stores) but not so much it can't even cover the variable costs.
- f. The low point of AVC represents the *short-run shut-down point*. It's the lowest the price can be and the firm still stays open over the short-run.

## II. Entry and Exit



- a. In the example from last class, our producer is making a lot of profit by selling used clothes. Other people have used clothes as well; what would you expect people to do?
- b. As people enter the market, that entry will bid prices down which reduces profits.

- c. This encourages entry into the market: people with similar costs will start looking for clothes to sell. What does this do to the market for used clothes?
- d. This continues until each producer makes *zero economic profits*—or normal profits: when  $P = ATC$ . The producer is covering all the operation and opportunity costs.
  - i. Recall economic profit from when we covered the Broken Window Fallacy.
  - ii. While our hypothetical person will be selling fewer clothes at that lower price (about 4.3 boxes), the market as a whole will be providing more used clothes. Remember, the graph here is about one person/firm but the supply and demand graph is about *everybody*.



- e. In sum, we have the *elimination principle*—above normal profits are eliminated by entry and below normal profits are eliminated by exit.
  - i. In equilibrium this causes all industries to balance: no industry is strictly more profitable than another.
- f. Note that this is a complex point as there's a lot that goes into "profitability." For example, businesses have a standard decision of

the kind of trade-off they want to make when they sell their product: high volume or high profit margin.

		<b>Volume</b>	
		<i>High</i>	<i>Low</i>
<b>Profit Margin</b>	<i>High</i>	Unsustainable Due to Entry	Sustainable
	<i>Low</i>	Sustainable	Unsustainable Due to Exit

- i. It's important to remember that this table is a simplification. Riskier businesses should earn more profits.
- ii. And some businesses are very volatile. They have very good years and very bad years; oil companies are like this because their profits are dependent on the price of oil which can change radically.
- iii. And industries are constantly changing. Some industries adapt well and others don't. Some are in decline and others are booming.
- iv. Thus even with industries of similar volume, you might not see similar profit margins. A lot is going on so it's hard to isolate this effect.