Monopoly Power

Antitrust
Eric E. Johnson
ericejohnson.com

Monopolization elements

Re-run

"The offense of monopol[ization] under § 2 of the Sherman Act has two elements: (1) the possession of monopoly power in [a] relevant market and (2) the willful acquisition or maintenance of that power as distinguished from growth or development as a consequence of a superior product, business acumen, or historic accident."

United States v. Grinnell Corp., 384 U.S. 563, 570–71 (1966)

Monopolization elements

Re-run

(1) monopoly power in a relevant market

1. What's a relevant market?
    a) product market
    b) geographic market
2. What constitutes monopoly power in that market?

(2) exclusionary conduct

Monopoly power

Monopoly power is "the power to control prices or exclude competition."

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IMPORTANT NOTE: **What U.S. antitrust law means by "monopoly power" is different from what economists mean by that term (including as presented in our econ slides)!**

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  - But how much more, we can’t say.
- Theoretically, monopoly power can be proved by direct evidence.
  - But this is rarely available, so ...
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Monopoly-level market share

The law doesn't say exactly what market share constitutes monopoly power (MP), but some flags have been planted by various courts:

- 90% is enough for MP (L. Hand, J., in *Alcoa*)
- 87% "leaves no doubt" that MP exists
- 80-95% is enough for ∏ to survive sum. j'ment on MP
- 75% means MP "may be assumed"
- min. 70-80% is what lower courts "generally require"
- >66% might be MP
- 60-64% is doubtful for MP (L. Hand, J., in *Alcoa*)
- 50% is the bare minimum for MP for many lower courts
- 30% is insufficient even for § 1 market power

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But if we are going to use market share to determine the existence of monopoly power, then we are going to need to know what the market is!

(from p.21 of DOJ'08 report; p. 226 of Elhauge, 3d ed.)

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Product market definition

"In considering what is the relevant market for determining the control of price and competition, no more definite rule can be declared than that commodities reasonably interchangeable by consumers for the same purposes make up that 'part of the trade or commerce', monopolization of which may be illegal."

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The following are re-run slides …

Elasticity

- Elasticity can be read as “responsiveness” or “sensitivity” to change.
- If it’s “relatively elastic,” then it’s pretty responsive.
- If it’s “relatively inelastic,” then it’s pretty unreponsive.
- Price elasticity of demand is how responsive demand is to changes in price.

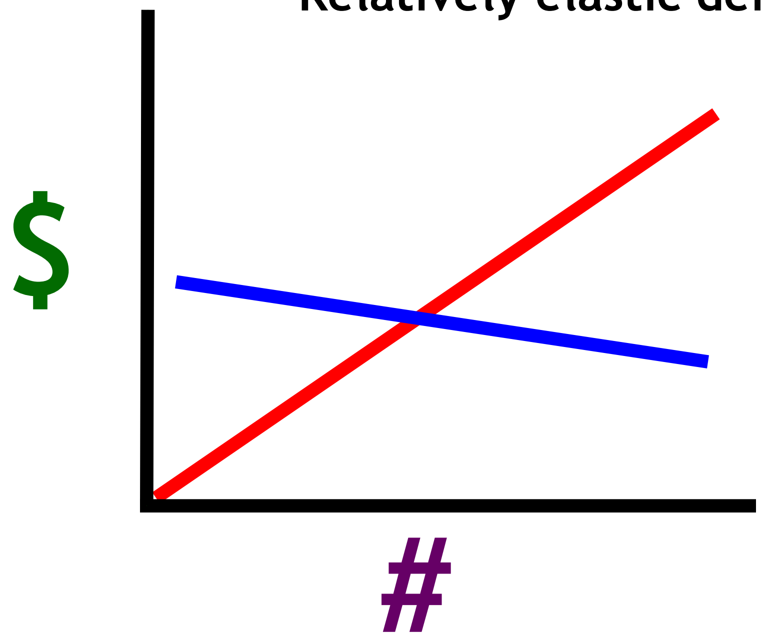
Substitution Effect

- The more prices go up, the more consumers will tend to avoid those goods by purchasing substitutes.
- The closer the substitutes, the greater the tendency for prices to make people jump ship and buy the substitutes instead.

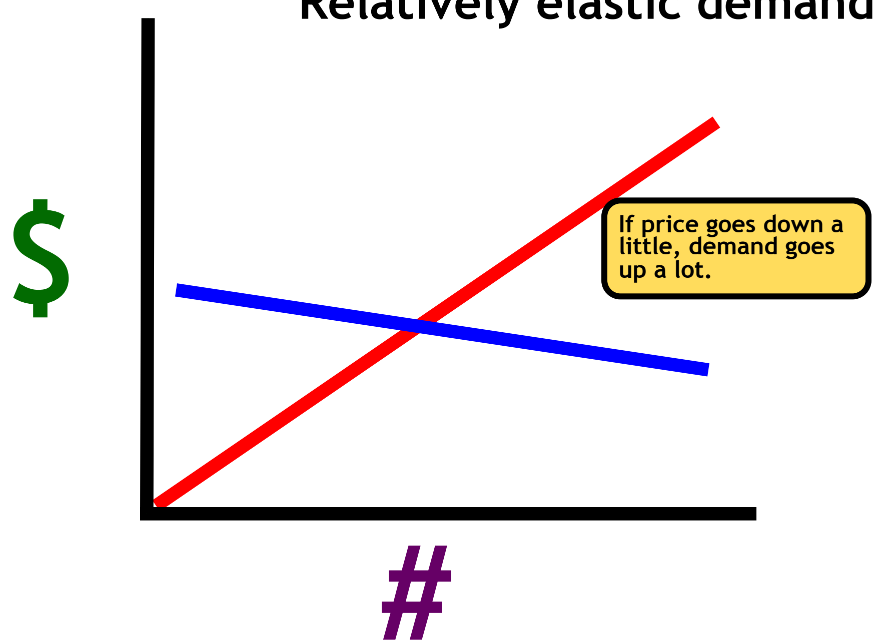
Price Elasticity of Demand

- Price elasticity of demand is how responsive demand is to changes in price, so ...
- If consumers will buy almost as much when the price goes up, that means demand doesn't change much with price, which is a situation where price elasticity of demand is relatively inelastic.
  - Examples: gasoline, insulin
- If consumers will rapidly cut how much they buy when the price goes up, that means demand changes a lot with price, which is a situation where price elasticity of demand is relatively elastic.
  - Examples: particular kinds of food

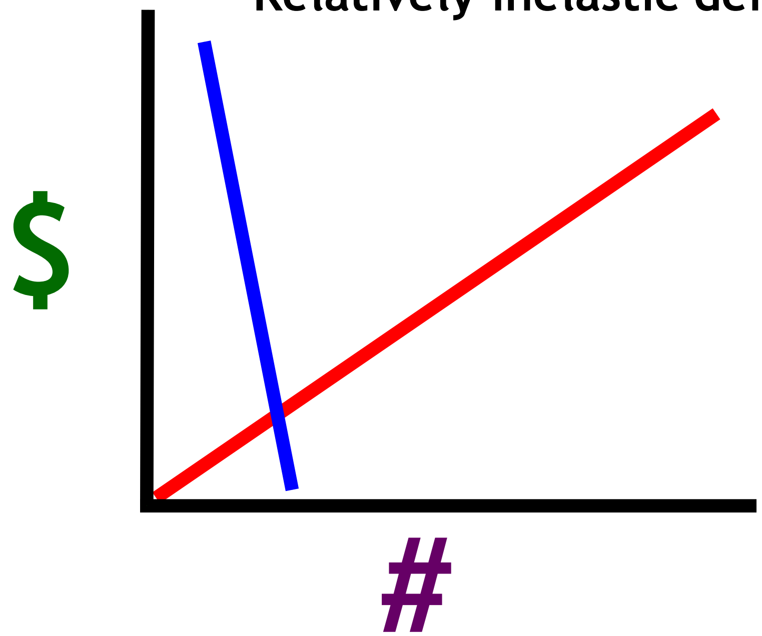
Relatively elastic demand



Relatively elastic demand



Relatively inelastic demand



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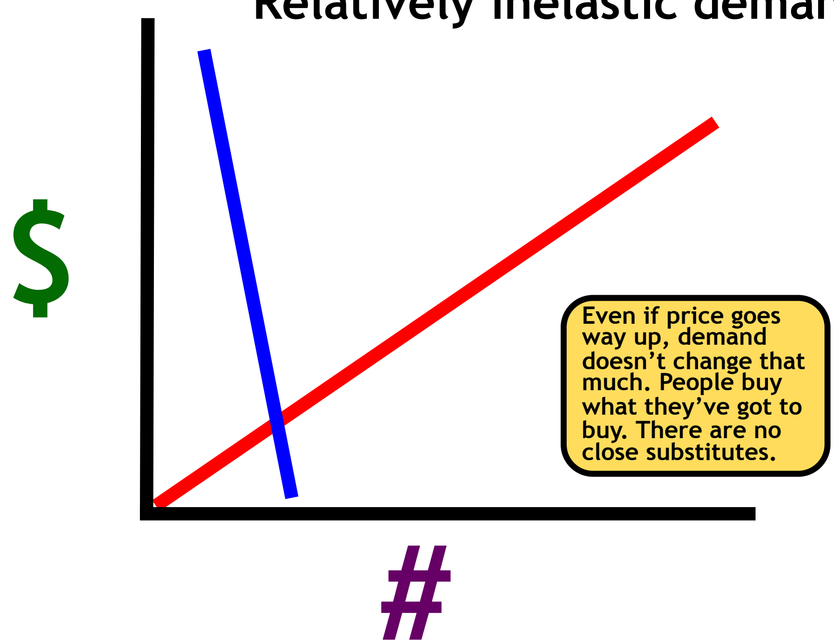

Tending toward elasticity

- The goods are luxuries.
- Close substitutes exist.
- The time horizon is long.

Tending toward inelasticity

- The goods are necessities.
- Nothing's easily substitutable.
- The time horizon is short.

Extreme cases of elasticity

Perfectly Inelastic is vertical, like the letter "I"

Perfectly Elastic is horizontal,

like the cross bars of the "E"

Cross-Price Elasticity of Demand

- Cross-price elasticity of demand brings into consideration <u>two different goods</u>.
- Cross-price elasticity of demand is how responsive demand for one good is to changes in the price of another good.
- If the price of blueberries goes way up, then probably the demand for strawberries will increase.

Consider a town with two gas stations:

- If the price of Shell gasoline goes way up, then the demand for Sinclair gasoline is going to go way up.

That's the end of the re-run slides.

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Consid …

- If the … goes way up, then the demand for Sinclair gasoline is going to go way up.

Note: “cross-price elasticity of demand” and “cross-elasticity of demand” are the same thing.

Cross-Price Elasticity of Demand

Formula:

CPED = (%Δ Qd of B)/(%Δ P of A)

CPED = cross-price elasticity of demand
%Δ = percent change
Qd = quantity demanded
B = product B
A = product A
P = price

Cross-Price Elasticity of Demand

CPED = (%Δ Qd of B)/(%Δ P of A)

If the price of 8-foot redwood 2x4 decking timbers goes up from $10 to $50, then the demand for boxes of decking screws goes down 75%. What is the CPED?

CPED = (-75%)/(400%) = -0.18

A <u>negative</u> CPED means the goods are complementary goods.

Cross-Price Elasticity of Demand

CPED = (%Δ Qd of B)/(%Δ P of A)

If the price of a jumbo roll of cellophane goes from $100 to $110, then the quantity demanded of glassine goes up 50%. What is the CPED?

Cross-Price Elasticity of Demand

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If the price of a jumbo roll of cellophane goes from $100 to $110, then the quantity demanded of glassine goes up 50%. What is the CPED?

CPED = (50%)/(10%) = 5

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A <u>positive</u> CPED means the goods are substitute goods.

Cross-Price Elasticity of Demand

The Cellophane Case says high cross-elasticity of demand suggests the two goods are part of the same product market.

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But what magnitude of CPED is legally significant? It's hard to say …

A positive

substitute


DU PONT
Cellophane
Dennison
handy wrap roll
Cellophane
100 feet
long
convenient
metal
cutter edge
box


DU PONT
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DU PONT Cellophane
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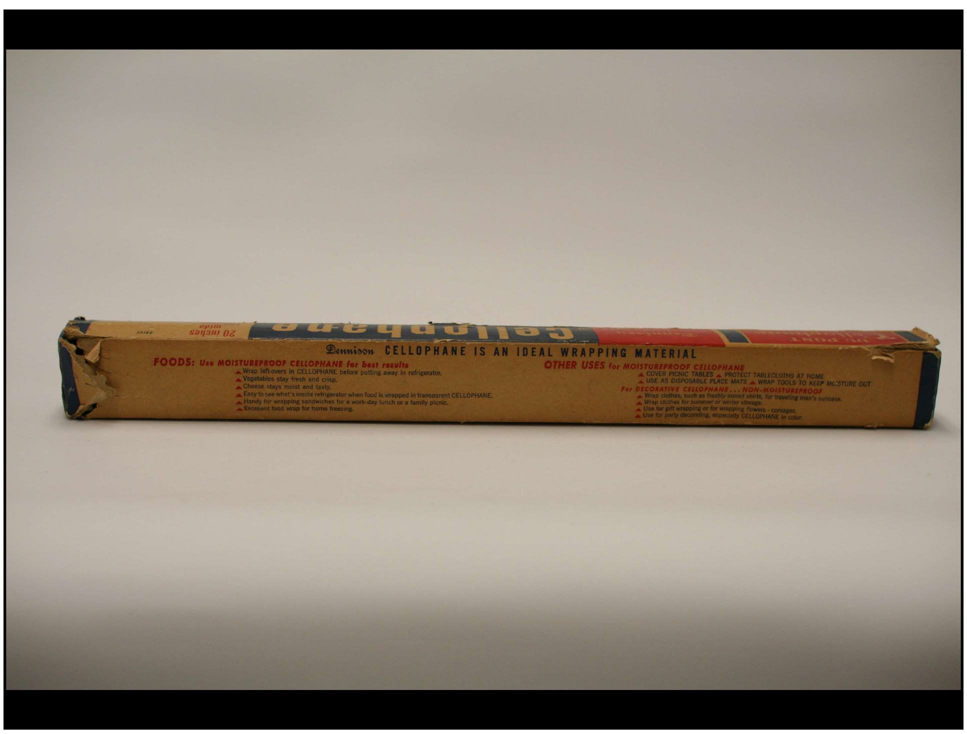
Dennison CELLOPHANE IS AN IDEAL WRAPPING MATERIAL
FOODS: Use MOISTUREPROOF CELLOPHANE for best results
Wrap left-overs in CELLOPHANE before putting away in refrigerator.
Vegetables stay fresh and crisp.
Cheese stays moist and tasty.
Easy to see what's inside refrigerator when food is wrapped in transparent CELLOPHANE.
Handy for wrapping sandwiches for a work-day lunch or a family picnic.
Excellent food wrap for home freezing.
OTHER USES for MOISTUREPROOF CELLOPHANE
COVER PICNIC TABLES PROTECT TABLECLOTHS AT HOME
USE AS DISPOSABLE PLACE MATS WRAP TOOLS TO KEEP MOISTURE OUT
For DECORATIVE CELLOPHANE ... NON-MOISTUREPROOF
Wrap clothes, such as freshly-ironed shirts, for traveling man's suitcase.
Wrap clothes for summer or winter storage.
Use for gift wrapping or for wrapping flowers - corsages.
Use for party decorating, especially CELLOPHANE in color.
20 inches wide

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DU PONT
Cellophane
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handy wrap roll
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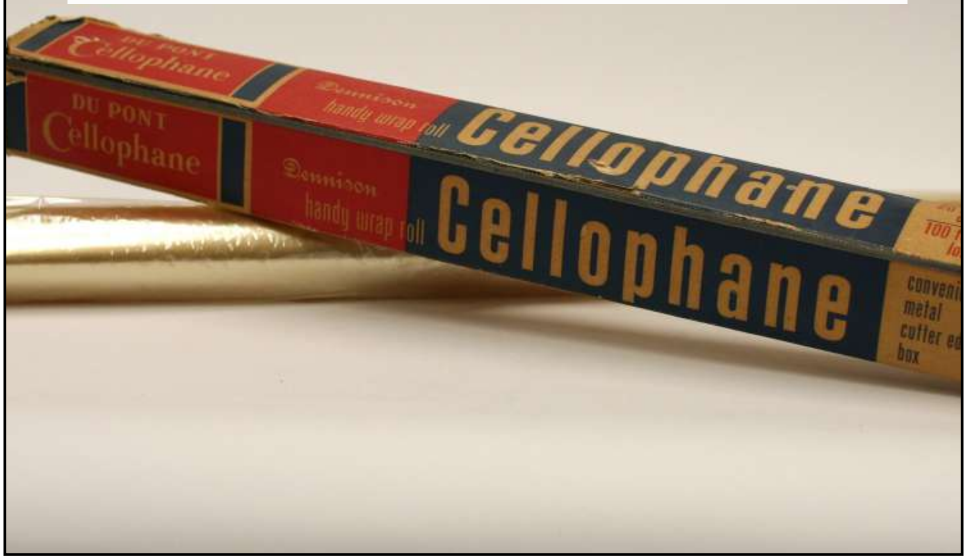
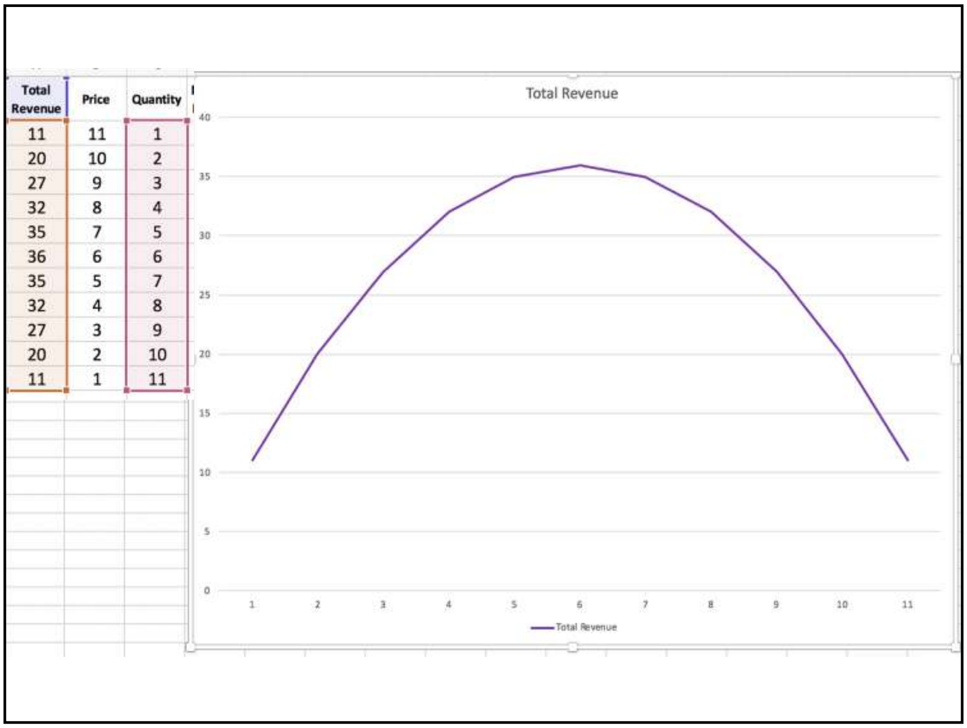
The Cellophane Fallacy

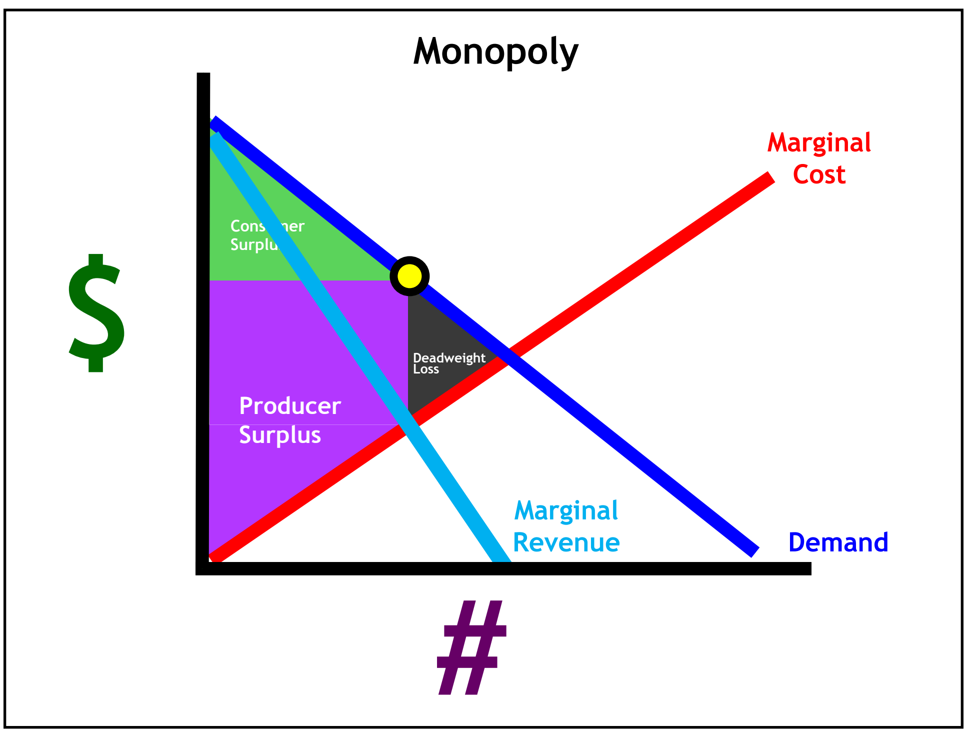


The Cellophane Fallacy

- a/k/a “the Cellophane Trap”
- If raising prices by the would-be monopolist causes buyers to flee to substitutes, that doesn’t mean the would-be monopolist isn’t a monopolist. It may just mean that the monopolist is already at the profit-maximizing output level.



Total Revenue	Price	Quantity
11	11	1
20	10	2
27	9	3
32	8	4
35	7	5
36	6	6
35	5	7
32	4	8
27	3	9
20	2	10
11	1	11



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  - But buyer-substitution rates in a competitive market aren't observable in a non-competitive market, where market power is already being brought to bear.
- You can conclude from low cross-price elasticities of demand that there are separate markets (whether the current market is competitive or not).

Cross-Price Elasticity of Demand

CPED = (%Δ Qd of B)/(%Δ P of A)

If the price of light bulbs goes from $1 to $2, then the quantity demanded of candles goes up 0.000000001%. What is the CPED?

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This low CPED implies that light bulbs and candles are not substitute goods and therefore should not be considered to be in the same market. (This implication applies whether the current market is competitive or not.)

Determining a relevant product market

There is widespread agreement that whether a given market counts as a relevant market ultimately depends on

whether the rate of buyer substitution to other items would constrain a monopolist in the posited market from significantly raising prices above competitive levels

(from Elhauge 3d ed., p. 240)

FTC/DOJ merger guidelines' Hypothetical Monopolist Test

A "relevant product market" is one where, if one firm was the only seller of that product, they would be able to impose a small but significant and non-transitory increase in price (SSNIP). "Small but significant" is quantified at at least 5%.

Consider:

- All paper manufactured from trees felled on a Tuesday in Klamath County, Oregon.
- All wine manufactured from grapes grown in Napa County, California.
- All blueberries never exposed to chemical herbicides and insecticides and therefore certifiable as "organic."

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Geographic market

A geographical market is the geographical area in which customers are willing to go to find substitutes in response to an increase in price and where suppliers are willing to come in response to an increase in price.

Geographic market

Consider:

- Every gas station within a three block radius of the law school raises prices by 5% over rivals outside that zone.

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Consider:

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- Every gas station in Norman raises prices by 5% over rivals outside the city.
- Every gas station in Oklahoma raises prices by 5% over rivals outside the state.

Geographic market

Consider:

- All carpet cleaning services in Norman raise their prices by 5% over rivals outside the city.

Geographic market

Consider:

- All carpet cleaning services in Norman raise their prices by 5% over rivals outside the city.
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Monopoly power

It's mostly about market share ...

But also relevant are:

- barriers to entry
- future capacity constraints
- changing consumer demand
- demand elasticity

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Barriers to entry

Barriers to entry are things that stop market entrants. If there are no barriers to entry, then it is easy for competitors to spring up.

Barriers to entry

Key point: Even if a firm has 100% market share, there will be no monopoly power if there are no barriers to entry – meaning it is very easy for competitors to jump into the market.

Barriers to entry

Barriers to entry are things that stop market entrants. If there are no barriers to entry, then it is easy for competitors to spring up.

Examples of barriers to entry:

- huge fixed costs, start-up costs
- government regulations
- patents, other IP rights
- lack of access to needed inputs or essential resources
- network effects

Barriers to entry

Barriers to entry are things that stop market entrants … to entry, then it … spring up.

But note: The Chicago School, which is very influential in the courts, says huge fixed costs / start-up costs don't count if the alleged monopolist has the same costs.

Examples of barr…

- huge fixed costs, start-up costs
- government regulations
- patents, other IP rights
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Monopoly power

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But also relevant are:

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- future capacity constraints
- changing consumer demand
- demand elasticity

Monopoly power: future capacity constraints, changing consumer demand, demand elasticity

future capacity constraints

- If an alleged monopolist won't be able to produce in the future, then it may have no monopoly power, such as a coal company that is out of coal reserves.

changing consumer demand

- If consumers no longer want the alleged monopolist's product going forward, than past dominant market share may not be probative.

demand elasticity

- Even with overwhelming market share, if consumers can very easily do without the product, then an alleged monopolist may not have monopoly power.

Monopolization analysis to-do list

(1) monopoly power in a relevant market

1. figure out a relevant product market
2. figure out a relevant geographical market
3. look at the market share
4. consider barriers to entry
5. consider whether future capacity constraints, changing consumer demand, or demand elasticity might let an alleged monopolist off the hook

(2) exclusionary conduct

[for this analysis, you'll use what we cover next ...]

Hypotheticals …

Landers Lawn Care

Hypo: In Verdant Valley, a town of 50,000 people that is a three-hour drive from any other town, there is only one provider of lawn mowing services: Landers, which has 238 customers. The closest there is to other firms providing such a service are arborists that trim trees. ***Does Landers have monopoly power?***

Landers Lawn Care

Does Landers have monopoly power?

Almost certainly not. The relevant product market appears to be lawn mowing services. Arborists are a separate market, because tree trimming is not reasonably substitutable for lawn mowing. The relevant geographical market appears to be Verdant Valley, because you can't take your lawn out of town to be mowed, and probably no one is going to drive six hours round-trip to mow your lawn. The market share in this market is 100%. That's more than sufficient for monopoly power just in terms of market share, but there are essentially zero barriers to entry. Anyone can get a lawn mower and start mowing people's lawns.

Gundattan Media Group

Hypo: Measured by ad revenues, Gundattan Media Group owns 90% of the radio station market in Grand Gables, 10% of billboards, and 46% of radio + billboards. Billboard sites are subject to permits and radio spectrum is allocated by the FCC. Both are maxed out in Grand Gables. When radio advertising goes up 50% in price, demand for billboards goes up by 1%. ***Does Gundattan have monopoly power in a relevant market?***

Gundattan Media Group

Does Gundattan have monopoly power in a relevant market?

$$\text{CPED} = (\%\Delta \text{ Qd of B})/(\%\Delta \text{ P of A})$$

$$\text{CPED} = 1\%/50\% = 0.02$$

This seems pretty low, suggesting radio is a relevant market by itself. And 90% is monopoly territory market share. Plus barriers to entry seem insurmountable.

Yes, GMG seems to have monopoly power.

Facebook

Hypo: Let's stipulate that the relevant product market is social-networking services that allow friends to post, view others' posts, make comments and register likes – with integrated messenger functions, and that the relevant geographic market is the world. Let's suppose Facebook's share of this market is 93%. ***Does Facebook have monopoly power?***

(This is for discussion in class … There's no pre-prepared answer slide.)

Vayatom

Hypo: Suppose Vayatom builds nuclear power plants for electric utilities, and suppose it costs $4 billion to build a staff of engineers and to design and test a new nuclear reactor and plant facility that can be marketed. Vayatom has:

- 85% of the new nuclear plant market worldwide
- 100% of the new nuclear plant market in the USA
- 7% of the new power plant market in the world
- 1% of the new power plant market in the USA

  Does Vayatom have monopoly power?

(This is for discussion in class … There's no pre-prepared answer slide.)

Crates Ahoy

Hypo: Crates Ahoy provides 85% of corrugated cardboard boxes on the island of San Nicholas. Almost everything on San Nicholas is more expensive, but currently, Crates Ahoy, a family owned business, prices its boxes at 25% less than competitive market prices on the mainland. Qualified economists estimate Crates Ahoy could, however, raise prices 25% above competitive levels and would be able to sustain this price for a number of years. ***Does Crates Ahoy have monopoly power in a relevant market?***

(This is for discussion in class … There's no pre-prepared answer slide.)