Market power in antitrust analysis

Eric Emch
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Agenda

• Definitions
• Structural indicators of “market power”
• Direct indicators of “market power”
• Summary
“Market power” vs. “monopoly power”

- **Market power:** Technically, the ability to price above short-run cost in some market. Most firms have *some* market power, often due to some differentiation from competitors.
  - Economists would define “short-run cost” as marginal cost.

- **Monopoly power:** “Substantial and durable” market power. Ability to price substantially above cost for an extended period of time. Usually implies some form of entry barrier.
The “Lerner index” of market power

• Price markups are a function of “elasticity of demand” – roughly the responsiveness of quantity demanded to price changes
  – “inelastic” = little responsiveness, ability to raise price with little penalty in lost sales
  – “elastic” = greater responsiveness of quantity to price

• “Lerner index”

\[
\frac{p - MC}{p} = -\frac{1}{\varepsilon}
\]
“Dominance”

• EU and other jurisdictions use yet another term to capture the concept of market power: “dominance”

• The EU uses the following definition from the EC courts:
  “a position of economic strength enjoyed by an undertaking which enables it to prevent effective competition being maintained on the relevant market by affording it the power to behave to an appreciable extent independently of its competitors, its customers, and ultimately of the consumers.”
  –Case 27/76 United Brands v. Commission [1978]

• This definition is confusing to an economist
  – For instance, what does it mean to act “independently” of customers? Even a monopolist will price and develop products in response to customer preferences.
  – Constraints on a firm are a matter of degree, rather than a simple 0-1 of “independent” or not
Harmonization of definitions

- In practice, dominance is often defined similarly to monopoly power, and both share the following characteristics
  - Weak competitive constraints = ability to price significantly above cost
  - Durable position

- From the DOJ Single Firm Conduct Guidance (now rescinded):
  “Precisely where market power becomes so great as to constitute what the law deems to be monopoly power is largely a matter of degree rather than one of kind. Clearly, however, monopoly power requires, at a minimum, a substantial degree of market power.”

- From the EC’s 2009 guidance on abusive exclusionary conduct:
  “The notion of independence is related to the level of competitive constraint exerted on the undertaking(s) in question. Dominance entails that these competitive constraints are not sufficiently effective and hence that the undertaking in question enjoys substantial market power over a period of time.”
A final note on definitions

• In what follows, I will treat substantial market power and monopoly power and dominance as equivalent
  – Note that legal briefs and decisions sometimes use the term “market power” to describe what an economist would call substantial and durable market power

• Note that all of these definitions are in reference to a particular market, not a firm. A firm may have market power in some markets but not others.
What is wrong with monopoly power?

- Possession of monopoly power not an offense
  - "the possession of monopoly power will not be found unlawful unless it is accompanied by an element of anticompetitive conduct." US Supreme Court in *Trinko*
  - Generally, a firm with monopoly power prices substantially above cost, to the detriment of consumers.
    - Pricing high by itself is not an antitrust offense in the US
    - In EU and other jurisdictions, it may be viewed as an "abuse of dominance," but still fairly rare

- Acquiring or maintaining monopoly power may be illegal
  - Merger that leads to monopoly power (Clayton Section 7)
  - Firm with monopoly power using it to thwart competition (Sherman Section 2)
Structural vs. direct evidence of monopoly power

- **Structural Evidence**: Assessing objective, structural characteristics of the market that provide *indirect* evidence of substantial market power.

- **Direct Evidence**: Looking more directly at ability of firm to price significantly above cost or exclude competitors.

- In practice, competition authorities assess both structural and direct evidence of market power.
  - Particular structural measures may be important for legal reasons.
  - Economically, probably the most important single factor is barriers to entry/expansion.
STRUCTURAL EVIDENCE
Structural indicators

1. **High, durable market share** (as a proxy for lack of competitive constraints from within the market)
   Problems: may be difficult to delineate market: “cellophane fallacy”; must be clear on what market shares really mean

2. **Barriers to entry/expansion** (a lack of competitive constraints from outside the market)
   Problems: important to understand structural source of barrier; if “barrier” is a result of strategic actions, need to understand the underlying source of market power that makes strategic barrier possible

3. **Lack of buyer power** (lack of competitive constraint from the buyer side)
Market share: why do we care?

- Measure of competition *within* the market
  - A proxy for lack of competitive constraints from existing competitors

- Perhaps says something about difficulty of entry as well?
  - High, durable shares over time may imply entry barriers

- But the dominant strain of thinking in global antitrust in recent years has been that one should not focus *exclusively* on share, and should directly examine competitive constraints on a firm
Cellophane fallacy

• Market shares are an output of market definition
  – Market definition a function of hypothetical monopolist test
    • But suppose we have an actual monopolist?
    • Cellophane fallacy:
      – Even a firm with monopoly power will be constrained by some other goods at some price level
      – Traditional HMT says that these outside goods should therefore be included in the market, which might lower share dramatically and make it appear the firm does not have monopoly power, even if it is already a monopolist

• Alternatives to traditional HMT
  – Competitive benchmark price
  – Effect of price decrease

• But may be more of a problem in theory than in practice: e.g., Dentsply, Microsoft did not raise serious issues
Market share: indicative but not definitive

“Market shares may not fully reflect the competitive significance of firms in the market or the impact of a merger. They are used in conjunction with other evidence of competitive effects”

--Horizontal Merger Guidelines, Section 5.3

High market shares are not – on their own – sufficient to conclude that a dominant position exists. Market share presumptions can result in an excessive focus on establishing the exact market shares of the various market participants. A pure market share focus risks failing to take proper account of the degree to which competitors can constrain the behaviour of the allegedly dominant company. This is not to say that market shares have no significance. They may provide an indication of dominance – and sometimes a very strong indication – but in the end a full economic analysis of the overall situation is necessary.” (italics added)

--Neelie Kroes, European Commissioner for Competition, September 2005

• As a practical matter, in legal proceedings, market share can play an important role, but academic economists tend to downplay the role of market definition and market shares in favor of more direct analysis of competitive constraints
Use of share thresholds

• Various competition authorities set different market share thresholds for either a presumption of monopoly power/dominance or lack thereof

  – US Department of Justice report on single-firm conduct (revoked in 2009) established a presumption of monopoly power with a durable 66% market share, and found it unlikely with a share below 50%.

  – EU guidance: dominance “not likely” with share under 40%
Barriers to entry/expansion

• How are entry barriers defined?
  – Several different definitions have been advanced over the years by economists but there is no consensus “correct definition.”
    • (Stigler): Costs borne by entrants but not by incumbents
    • (Fisher): Anything that prevents entry when entry would be socially beneficial
    • “Any feature of a market that places an efficient competitive entrant at a significant disadvantage compared with incumbent firms.” (Aust. MG)

• For competition enforcers, an entry barrier might be seen as any factor that prevents firms from outside the market from defeating an exercise of market power inside the market.
  – Whether or not the cost was incurred by the incumbent might be important, separately, for determining whether we are unwisely interfering with dynamic incentives.
  – Entry barriers not bad in themselves, May be necessary to create appropriate dynamic incentives
Barriers to entry/expansion

• The kinds of structural factors that have been identified by competition authorities as entry barriers:
  • Sunk costs
  • Regulatory barriers
  • Network effects
  • Customer loyalty and reputation effects
  • Economies of scale and scope
  • Barriers to exit
  • Vertical integration
  • High capital costs
Buyer power

• What do competition authorities mean by buyer power? Two main answers:

1. Buyers can easily turn to alternatives to discipline price increases
2. Buyers are able to sponsor entry or are themselves potential entrants

• On the first, note that this is essentially a statement about elasticity of demand and the existence of alternatives generally
• On the second, this is just an analysis of entry/expansion
• What does analysis of “buyer power” add then? Maybe just that we should be especially aware of the role of large customers in the competitive analysis
Structural factors in Microsoft (US)

• Court’s assessment of monopoly power in PC OS (1999):
  – **High, stable market share:** Microsoft’s share of the market was large and stable. For the prior decade, every year the Microsoft’s share was above 90%, the last couple of years getting to 95%, and projections were that it would increase
  – **Barriers to entry/expansion:**
    • “Applications barrier to entry” for new operating systems
      – Economies of scale in applications development means that developers don’t support smaller operating systems. Indirect network effects in operating systems means that users tend to gravitate toward the operating system with the larger applications base.
    – **Lack of buyer power:** Absence of realistic alternatives for computer manufacturers
Structural Factors in Microsoft (EC)

• EC re: Microsoft dominance in client operating system (2004) structural factors
  – “Microsoft’s dominance relies on very high market shares and significant barriers to entry”
  • “Very large market shares, of over 50%, are considered in themselves, and but for exceptional circumstances, evidence of a dominant position...Microsoft, with its market shares of over 90%, occupies almost the whole market – it …can be said to hold an overwhelmingly dominant position.”
  • “Microsoft has held very high market shares in the client PC operating system market for many years.”
  • Entry barriers derive from network effects/ “applications barrier to entry.”
  – Lack of buyer power: “Windows appears as a must-carry product for a client PC vendor,” give example of IBM not being able to forego windows even though it made its own PC OS
Structural Factors in American Airlines Case

• Identifies the following structural factors as evidence of American’s substantial market power:
  – **High market share** (70%) on city-pair markets for non-stop flights from Dallas (connecting in separate market)
  – **Entry barriers** created by the nature of hubs
    • Hub carriers provide flight options that new entrants can’t match
    • Hub carriers contract with local businesses to tie up their business
    • Non-hub carriers need to make substantial infrastructure investments at airports to compete
    • Hubs provide significant economies of scale and scope for their operators
  – Didn’t speak explicitly about **buyer power** but as customers are diffuse
DIRECT EVIDENCE
Direct evidence

• Evidence of anticompetitive effects/ability to exclude competition
  – Ability to impact competition significantly = market power?
  – But what are exact criteria? Is this reasoning circular?

• “High prices” relative to cost
  – Central to most economic definitions of market power, but as a practical matter what cost measure do we use? What about dynamic considerations?

• Profitability of firm or industry
  – But what constitutes “excess” profits? How do we calculate profits in a particular market from general accounting statements? Economic profit may not be the same as accounting profit

In theory, these are all useful indicators, but may be more difficult to implement in practice than structural indicators.
Assessing anticompetitive conduct

• In certain cases (particularly a Section 2 claim), the conduct of a firm and the effects of that conduct may also be used as evidence that a firm has substantial market power.

• Some have argued that this should be the focus: if substantial anticompetitive effects can be shown, then an initial separate inquiry into whether a firm has monopoly power should not be required.
  – In practice, the argument, at least in Section 2 cases, tends to proceed in two steps: first monopoly power, then effects.
When does conduct “prove” monopoly power?

- It is tempting to say that if a firm can “force” customers or competitors to do something via a “bad act,” then it must have substantial market power
  - “Force” is a tough word for economists
  - Most seemingly exclusionary conduct has an alternative pro-competitive explanation that must be explored

- Price increases can result from anticompetitive acts but also higher quality or other improvements, so seeing a price increase from a “bad act” doesn’t necessarily prove anything either about effects or monopoly power
Assessing price levels

• When is price “high enough” to indicate substantial market power? With cost data, one could directly compare a firm’s price to cost. This directly addresses the economic definition of market power.
  – Problem: very difficult to get good cost data. Even with good data, it can be difficult to translate accounting measures of cost into economic notions of cost
  – Also: a snapshot of prices does not indicate much about levels of market power; need to assess price levels over time

• Alternative: use competitive geographic markets as control

• Another alternative: consider how prices are set rather than levels (i.e., does pricing take into account competitors?)
Assessing profitability

• Another way of directly assessing the exercise of substantial market power is to look at a firm’s profits in the market at issue. Must use caution here because there are a number of possible pitfalls. Among them:

  – Need to separate profit data by product line according to antitrust markets; can be difficult with data available.

  – Accounting profits and economic profits are not equivalent. For instance, economic profits might be higher than accounting profits if a firm with little competition awards managers high salaries, nice offices, etc. Accounting profits may be higher than economic profits if they don’t include a cost of capital or opportunity costs of resources consumed.

• In addition, there are dynamic issues to consider. Profits at a snapshot in time don’t mean much. High profits now may be a result of investments in a previous period, and may look high even if, over an extended period of time, the firm is only returning a normal return on its earlier investment.
Assessing profitability (2)

• Other dynamic issues to consider: any risky investment will earn above normal profits in some states of the world. Even if, risk-adjusted, the firm earned a normal return, it may look to be earning above-normal profits if its bet paid off. This indicates good foresight, possibly, but not *ex ante* market power.

• All of this is to say that any evidence related to profitability must be used with caution. There is the possibility of both false positives and false negatives: high reported profits that actually do not indicate market power or low reported profits that mask actual market power.
Direct evidence in Dentsply

• US DOJ Section 2 suit against artificial teeth manufacturer (1999) accusing it of anticompetitive monopoly maintenance via its exclusionary contracts with dealers

• DOJ argued for the following direct evidence of monopoly power (emphasis added):

  – “Dentsply’s monopoly power is evident from its ability to exclude competitors from the dealers necessary to compete effectively.
  – “Dentsply has been a price leader...has not set its own prices by referencing prices of competitors.”
  – “Dentsply’s margins are consistent with a finding of monopoly power...Dentsply’s tooth business is a “cash cow,” with high profits that have funded corporate activities outside the tooth market.
Direct evidence in Microsoft (US)

From Court decision:

• Microsoft’s **pricing behavior** proves its monopoly power
  – Microsoft did not consider the prices of other vendors’ Intel-compatible PC operating systems when setting the price of Windows 98
  – It raised the price it charged OEMs for Windows 95 to the same level it charged for Windows 98 just prior to releasing the newer product. This is contrary to the conduct in a competitive market were an older product’s price should either stay the same or decrease
  – Microsoft felt it had substantial discretion in setting the price of its Windows 98.

• “Microsoft’s monopoly power is also evidenced by the fact that, of the course of several years, **Microsoft took actions that could only have been advantageous** if they operated to reinforce monopoly power.”
Direct evidence in Microsoft (EC)

• EC re: Microsoft dominance in client OS (2004),
  (emphasis added)
  – “Microsoft’s financial performance is consistent with its near-monopoly position in the client PC operating system market.” Cites 81% profit margin for client OS software
  – Linux is free, “no significant difference in ease of use,” yet has not impacted Microsoft’s financial performance.
  – IBM, though it has its own operating system, is “obliged to offer its own PCs equipped with the operating system of its direct competitor.”
Summary

• A number of structural and direct factors can be used to assess market power
  – There is not a rigid formula for weighing these, but of the factors discussed, understanding the nature, strength and durability of entry barriers is probably the most important

• Market shares are important but not dispositive

• Market power evidence and competitive effects evidence are intertwined, though in practice often argued in two separate steps