11. Horizontal Mergers

Antitrust Law

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Topics

- Refresher: Anticompetitive effect under Section 7
- The *PNB* presumption
- Coordinated effects
- Unilateral effects
- Eliminating “mavericks”
- Defenses
  - Entry
  - Efficiencies
  - Failing firm

Refresher:
Anticompetitive Effect under Section 7

Section 7 of the Clayton Act

- Section 7 supplies the antitrust standard to test acquisitions:

> No person engaged in commerce or in any activity affecting commerce shall acquire, directly or indirectly, the whole or any part of the stock or other share capital and no person subject to the jurisdiction of the Federal Trade Commission shall acquire the whole or any part of the assets of another person engaged also in commerce or in any activity affecting commerce, where in any line of commerce or in any activity affecting commerce in any section of the country, *the effect of such acquisition may be substantially to lessen competition, or to tend to create a monopoly.*[1]

- Test of anticompetitive effect under Section 7
  - Whether "the effect of such acquisition may be substantially to lessen competition, or to tend to create a monopoly"
  - *Incipiency standard*: The Supreme Court has interpreted the "may be" and "tend to" language in the anticompetitive effects test to:
    - Require proof only of a reasonable probability that the proscribed anticompetitive effect will occur as a result of the challenged acquisition
    - Not require proof that an actual anticompetitive effect will occur

[1] 15 U.S.C. § 18.

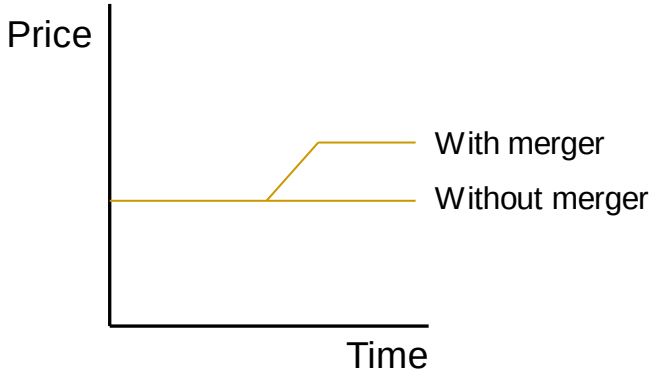
"May be to substantially lessen competition"

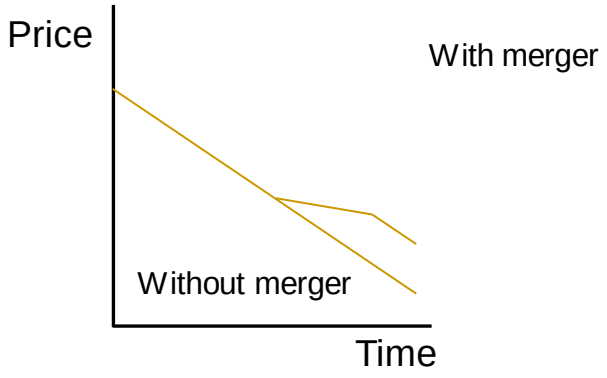
- No operational content in the statutory language itself
  - What does in mean to "substantially lessen competition"?
  - Judicial interpretation has varied enormously over the years
- *Modern view*:[1] Transaction threatens—with a reasonable probability—to harm an identifiable set of customers through:
  - Increased prices
  - Reduced product or service quality
  - Reduced rate of technological innovation or product improvement
  - (Maybe) reduced product diversity[2]
    - Recognized as a dimension of anticompetitive effect in the 2010 DOJ/FTC Merger Guidelines.
    - But can be difficult to ascertain in many cases whether a reduction in product diversity (which is typically accompanied by a reduction in costs) is harmful to consumers
    - Although there can be easy cases as well

[1] The modern view dates from the late 1980s or early 1990s, after the agencies and the courts assimilated the 1982 DOJ Merger Guidelines.

"May be to substantially lessen competition"

- *Key focus*: Price increases
  - Anticompetitive effect occurs whenever prices, *going forward*, likely would be higher with the transaction than without it[1]
    - A decrease in the rate of a price decline is regarded as a price increase, even if price levels continue to decline





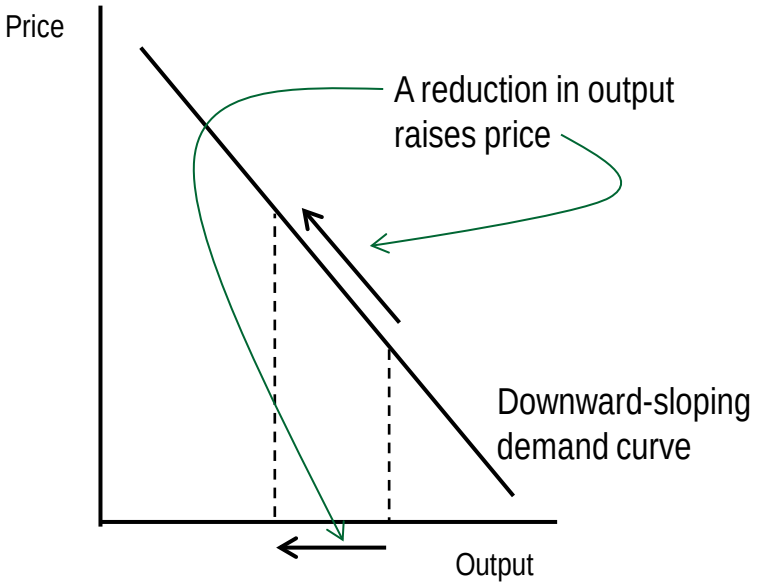
    - *Note*: The agencies consider a reduction in market output to be effectively a price increase

[1] "Likely" in the Section 7 context means "reasonably probable." *See* United States v. E.I. duPont de Nemours & Co., 353 U.S. 586, 589 (1957).

"May be to substantially lessen competition"

- Output reductions
  - The agencies consider a reduction in market output to be effectively a price increase

A Reduction in Output Implies a Price Increase



  - The idea is that when supply becomes limited the customers who value the product the most bid up the prices

"May be to substantially lessen competition"

- Other dimensions of possible anticompetitive effect
  - Historically, there have not been challenges on other dimensions (quality, rate of technological innovation, or product diversity) when there is no alleged price effect
    - Economic theory not well-developed in predicting—
      - Consequences of transaction for nonprice market variables
      - Consequences of changes in nonprice market variables for consumer welfare
    - But adverse effect on other dimensions is sometimes mentioned in complaints that also allege an anticompetitive price effect
  - *Implication*: Agencies will demand strong direct evidence to proceed on a theory other than a price increase—Most likely will require:
    1. An "admission against interest" by the acquiring company that:
       - The merging companies compete significantly in product quality or innovation,
       - This competition is costly and is materially reducing profits, and
       - A benefit of the transaction will be to eliminate this competition and increase profits by saving costs;
    2. Evidence that the merging companies are uniquely situated to compete in the nonprice dimension and that other companies will not the nonprice competition lost due to the merger; *and*
    3. Evidence that customers will be significantly harmed by the loss of this nonprice competition

Theories of anticompetitive harm

- Horizontal transactions
  - Coordinated effects
    - Merger of significant competitors where customers have few realistic alternatives
    - Anticompetitive effects depends on an enhanced anticompetitive oligopolistic response by other firms in the market
  - Unilateral effects
    - Merger of close competitors[1]
      - The 1992 DOJ/FTC Horizontal Merger Guidelines required that the merging parties were each other's closest competitors. This requirement was dropped in the 2010 revision.
    - Anticompetitive effect depends only on the elimination of "local" competition between the merging firms
    - Assumes other firms in the market continue to behave as they did premerger
  - Elimination of a "maverick" firm
    - Acquisition of firm that has increased competition in the market by being disruptive to oligopoly pricing (usually through aggressively low prices)
    - Acquisition of maverick firm by a competitor eliminates disruption and allows market to price more oligopolistically

Baker Hughes burden shifting

- *Baker Hughes* (1990)[1]
  - Created a three-step burden shifting procedure in horizontal merger cases
    1. Plaintiff bears burden of proof in market definition and in market shares and market concentration within the relevant market sufficient to trigger the *PNB* presumption
    2. Burden of production then shifts to defendant to adduce evidence sufficient to rebut *PNB* presumption
    3. Burden of persuasion returns to plaintiff to prove in light of all of the evidence in the record that the merger is reasonably probable to have an anticompetitive effect in the relevant market
  - Widely adopted today
    - The law of the circuit in the District of Columbia, where the DOJ and FTC bring most of their merger antitrust cases
    - Also adopted by the FTC in its administrative adjudications
    - Helps that the author and one other member of the *Baker Hughes* panel are now Supreme Court justices (Thomas and Ginsburg)

[1] United States v. Baker Hughes, Inc., 908 F.2d 981 (D.C. Cir. 1990).

Baker Hughes burden shifting

- General approach
  1. Initial plaintiff's burden in proving a prima facie case
     - Prove boundaries of relevant product and geographic markets
     - Determine market shares and market concentration
     - Predicate the *PNB* presumption with market shares and market concentration

     Successful proof of all three elements proves prima facie case
  2. Burden of production shifts to defendants to produce evidence that rebuts the *PNB* presumption—Some arguments:
     - No likelihood of anticompetitive effect in the relevant market through coordinated interaction*
     - No likelihood of anticompetitive effect in the relevant market through unilateral effects*
     - Ease of entry/repositioning ensures postmerger competition
     - Merger-specific efficiencies ensure no harm to customers
     - Failing company
  3. Burden of persuasion returns to plaintiff to prove reasonable likelihood of an anticompetitive effect in relevant market on the basis of all of the evidence in the record (plaintiff may adduce additional evidence)

* Although the Merger Guidelines include demonstration of a theory of anticompetitive harm as something the staff must show in order to justify a decision to challenge, the *HRB/TaxACT* court reframed this as a negative defense for which the defendants had the burden of production once the plaintiff had demonstrated its prima facie case through the *PNB* presumption.

The *PNB* Presumption

The *PNB* presumption

- *Philadelphia National Bank*:

> Specifically, we think that a merger which produces a firm controlling an undue percentage of the relevant market, and results in a significant increase in the concentration of firms in that market, is so inherently likely to lessen competition substantially that it must be enjoined in the absence of evidence clearly showing that the merger is not likely to have such anticompetitive effects.[1]

  - Created in 1963 as the Court was becoming increasingly restrictive on business
    - Next merger antitrust case after *Brown Shoe*
  - Originally created as a *rebuttable* presumption of the requisite anticompetitive effect where the combined firm passed some (undefined) thresholds of
    - Combined market share, and
    - The increase in market concentration caused by the transaction
  - But soon treated by lower courts as a *conclusive* presumption—essentially no defenses
  - Returned to a rebuttable presumption by the Supreme Court in *General Dynamics*[2] in 1974

[1] United States v. Philadelphia National Bank, 374 U.S. 321, 363 (1963).
[2] United States v. General Dynamics Corp., 415 U.S. 486 (1974).

The *PNB* presumption

- Two ways to think about the *PNB* presumption
  1. As a presumption grounded in industrial organization economics
     - The citations to the economic literature in *PNB* itself indicate that the majority thought it was grounding the presumption in economics
     - The idea is that as firms become larger and the market becomes more concentrated, there is an increasingly likelihood that the market will exhibit more successful oligopolistic interdependence and higher resulting prices
       - This is sometimes called the *price-concentration hypothesis* or the *profit-concentration hypothesis*
       - This hypothesis was popular among the structure-conduct-performance adherents in the 1950s and 1960s
     - Queries:
       - Is there meaningful support for the price/profit-concentration hypothesis?
       - If so, at what levels of combined share and increased market concentration does oligopolistic interdependence become significantly more successful?
  2. As a burden-shifting device in litigation
     - If the presumption is triggered, it shifts the burden of proof of showing that the presumption is not reliable in the circumstances of the case to the defendants
     - Presumably, the likelihood that the defendants will fail to discharge their burden increases as the case becomes a closer call
     - The effect of the burden shift then is to accept overinclusiveness errors over underinclusiveness errors in close cases

The *PNB* presumption

- Bottom line
  - However viewed, the *PNB* presumption remains the point of departure in the litigation of horizontal mergers in the analysis of competitive effects
  - Curiously, the thresholds for triggering the *PNB* presumption have not been litigated
    - Since the early 1980s, the DOJ and FTC—regardless of administration—have only brought actions where the alleged combined market shares and market concentration have been very high.[1]
    - However, conventional wisdom holds that the market shares and market concentration shown in *Rome (Alcoa)/Von's/Pabst* are much too low today to trigger the *PNB* presumption
    - Of course, these shares and market concentration depend on the definition of the relevant market, and the agencies have not always been successful in proving their alleged markets to the satisfaction of the courts

[1] For a partial illustration of this, see the spreadsheet in the reading materials on Mergers Found Unlawful in Litigated Merger Cases on the Merits with the U.S. Government, 1993-2013.

The 2010 Merger Guidelines

- "HHI thresholds"
  - Not really *PNB* thresholds, but courts tend to use them that way[1]

Postmerger HHI	ΔHHI	Guidelines
	< 100	"unlikely to have adverse competitive consequences and ordinarily require no further analysis"
< 1500	--	"unlikely to have adverse competitive consequences and ordinarily require no further analysis"
Between 1500 and 2500	≥ 100	"potentially raise significant competitive concerns and often warrant scrutiny"
> 2500	100-200	"potentially raise significant competitive concerns and often warrant scrutiny"
	≥ 200	"will be presumed to be likely to enhance market power. The presumption may be rebutted by persuasive evidence showing that the merger is unlikely to enhance market power."

[1] "The purpose of these thresholds is not to provide a rigid screen to separate competitively benign mergers from anticompetitive ones, although high levels of concentration do raise concerns. Rather, they provide one way to identify some mergers unlikely to raise competitive concerns and some others for which it is particularly important to examine whether other competitive factors confirm, reinforce, or counteract the potentially harmful effects of increased concentration." 2010 Merger Guidelines § 5.3.

The 2010 Merger Guidelines

- *Application*: H&R Block/TaxACT

	Premerger Shares	HHI Contribution	
Intuit	62.2%	3869	The square of the firm's market share
HRB	15.6%	243	
TaxACT	12.8%	164	
Others (6)	9.4%	15	Residual share (9.4%) divided by 6 firms and added six times
	100.0%	4291	The sum of the squared shares of all of the firms in the market
Combined share	28.4%		
Premerger HHI		4291	
Delta		400	2 × HRB share × Intuit share
Postmerger HHI		4691	

"Violates" the 2010 Guidelines:
Postmerger HHI exceeds 2500 and delta exceeds 200

Note: Court appears to have assumed that six equal-sized firms are in the "other" category

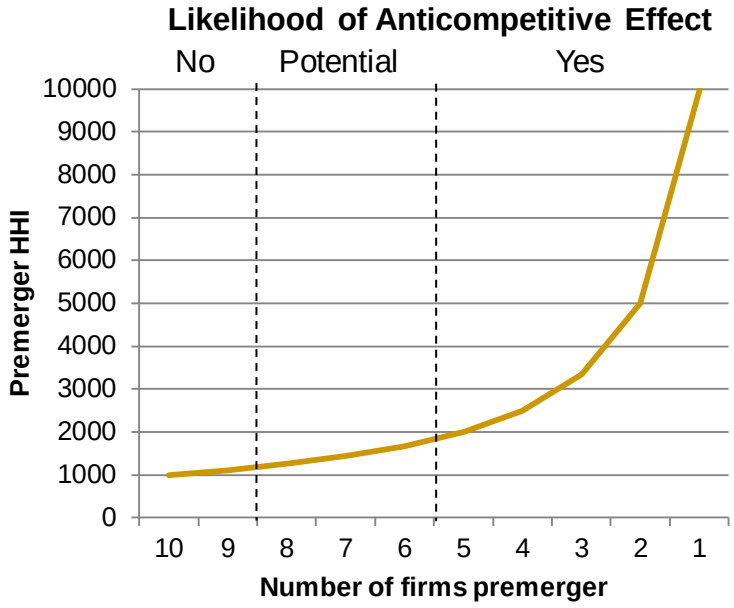
The 2010 Merger Guidelines

- Math notes
  - Calculation of the HHI with *n* firms in the market, with firm *i* having a market share of s_i:

$$HHI = \sum_{i=1}^{n} s_i^2$$

  - Shares and HHIs in symmetrical markets with *n* identical firms

n	S_i	Premerger HHI	Delta	Postmerger HHI	Exceeds 2010 Guidelines
10	10.0	1000	200	1200	No
9	11.1	1111	247	1358	No
8	12.5	1250	313	1563	Potential
7	14.3	1429	408	1837	Potential
6	16.7	1667	556	2222	Potential
5	20.0	2000	800	2800	Yes
4	25.0	2500	1250	3750	Yes
3	33.3	3333	2222	5556	Yes
2	50.0	5000	5000	10000	Yes
1	100.0	10000			



The 2010 Merger Guidelines

- Math notes
  - Calculating the delta

Premerger contribution: $a^2 + b^2$

Postmerger contribution: $(a+b)^2 = a^2 + 2ab + b^2$

Difference: $2ab$

  - HHI contribution of *n* equal-sized firms in the "other" category (Other = s% share)

Share of each "other" firm: $\frac{s}{n}$

Each "other" firm's HHI contribution: $\left(\frac{s}{n}\right)^2$

Total HHI contribution of all *n* firms: $n\left(\frac{s}{n}\right)^2 = \frac{s^2}{n}$

HHIs in Successful DOJ/FTC Challenges

- The DOJ and FTC have not brought "close" cases
  - At least within their alleged markets

Agency	Year	Defendant	Combined share	PreHHI	PostHHI	Delta	Deal Status
DOJ	2014	Bazaarvoice	68	2674	3915	1241	Consummated
FTC	2012	OSF Healthcare	59	3422	5179	1767	Preclosing
FTC	2012	ProMedica	58	3313	4391	1078	Preclosing
DOJ	2011	H&R Block	28	4291	4691	400	Preclosing
FTC	2010	Polypore	100	8367	10000	1633	Consummated
FTC	2009	CCC	65	4900	5460	545	Preclosing
FTC	2008	Whole Foods	100*		10000		Preclosing
FTC	2007	Evanston	35	2355	2739	384	Consummated
FTC	2005	Chicago Bridge	73	3210	5845	2635	Consummated
DOJ	2003	UPM-Kemmene	20	2800	2990	190	Preclosing
FTC	2002	Libbey	79	5251	6241	990	Preclosing
FTC	2001	Heinz	33	4775	5285	510	Preclosing
FTC	2000	Swedish Match	60	3219	4733	1514	Preclosing
DOJ	2000	Franklin Electric	100	5200	10000	4800	Preclosing

* In some local geographic markets, this was a merger to monopoly in the FTC's alleged product market of premium, natural, and organic supermarkets.

Coordinated Effects

Introduction

- Definition
  - Coordinated effects (or coordinated interaction) is a theory of anticompetitive harm that depends on the merger making oligopolistic interdependence more effective

> Merger law "rests upon the theory that, where rivals are few, firms will be able to coordinate their behavior, either by overt collusion or implicit understanding in order to restrict output and achieve profits above competitive levels."[1]

    - Remember, oligopolistic behavior becomes stronger and more effective the more firms in the market *accommodate* each other
      - That is, the more they are willing to pull their short-term competitive punches against each other, say by not undercutting a competitor's price in order to win market share or not invading a competitor's territory to win its customers
    - Viewed in a one-shot prisoner's dilemma game, coordinated interaction means that the firms are deviating from the noncooperative solution of competition in the direction of the cooperative solution of accommodation
      - NB: This does *not* mean that the firms are colluding in a Section 1 sense.
      - Rather, recognizing their interdependence in a multi-period game and their ability to earn higher profits in the long run, they forego increasing their short-run profits by simply not competing as aggressively with one another as they might otherwise

[1] FTC v. CCC Holdings Inc., 605 F. Supp. 2d 26, 60 (D.D.C. 2009); *accord* United States v. H&R Block, Inc., 833 F. Supp. 2d 36, 77 (D.D.C. 2011).

Introduction

- Application in horizontal merger analysis
  - *Foundation proposition*: Increasing firm size and market concentration results in more effective oligopolistic interdependence and poorer market performance (i.e., more market power being exercised)
    - As noted above, this is sometimes called the price-concentration hypothesis or the profit-concentration hypothesis
  - Three stages of development
    1. The *PNB* presumption and the structure-conduct-performance paradigm
       - Relied on the structure-conduct-performance paradigm in industrial organization economics for support
       - Assume price-concentration relationship was invariant across industries ("one size fits all")
       - *Principal question*: What are the right thresholds to trigger the presumption?
       - Adopted implicitly in the 1968 and 1982 DOJ Merger Guidelines
    2. The 1992 Guidelines refinements
       - Recognized that the relationship between market performance and structure varied widely across industries
       - Sought to reduce overinclusivess errors by requiring a showing that:
         - Certain market share and concentration thresholds were passed (i.e., creating "safe harbors"), and
         - Certain conditions in the market are present that make the market conducive to oligopolistic interdependence
    3. The 2010 Guidelines refinements

Structure-conduct-performance hypothesis

- Introduction
  - Posits a stable causal relationship between the structure of an industry, firm conduct, and market performance
  - *Fundamental proposition*: Increasing firm size and market concentration results in more effective oligopolistic interdependence and poorer market performance (i.e., more market power being exercised)
    - In homogeneous markets, the exercise of market power in the market can be measured by the Lerner index λ:

$$\lambda = \frac{p - c}{p}$$

    - As the market becomes more differentiated, firms face downward-sloping residual demand curves, so that λ will be positive even in the absence of any meaningful exercise of market power. But the difference in the Lerner index pre- and postmerger still can give an indication of whether the merger is likely to raise prices and hence be anticompetitive
    - That said, there are serious practical difficulties in measuring economic marginal cost (as opposed to accounting incremental costs) that make use of the Lerner index impractical in empirical analysis
  - Apparent support for structure-conduct-performance hypothesis
    - Consistent with intuition
    - Theoretical models
    - Empirical studies

Structure-conduct-performance hypothesis

- Theory: A simple Cournot model
  - Assume that there are *n* firms producing a homogeneous product. Each firm *i* maximizes its profit π_i by choosing an output level q_i:

$$\text{Max } \pi_i = p(Q)q_i - c_i(q_i)$$

where $p = p(Q)$ and $Q = q_1 + q_2 + \ldots + q_n$ (that is, p is a function of the total quantity Q produced in the market by all n firms), and c_i is the cost function for firm i. The profit-maximizing condition for each firm is marginal revenue equals marginal cost (or equivalently, marginal revenue minus marginal cost equals zero):

$$mr - mc = p + q_i \frac{\partial p}{\partial Q}\frac{\partial Q}{\partial q_i} - \frac{\partial c_i}{\partial q_i} = 0$$

Note: this equals 1

Rearranging, dividing by each by p and multiplying by Q/Q yields:

$$\frac{p - c_i'}{p} = q_i \frac{\partial p}{\partial Q} = \left[\frac{Q}{p}\frac{\partial p}{\partial Q}\right]\frac{q_i}{Q} \text{ where } c_i' \equiv \frac{dc_i}{dq} \text{ (marginal cost)}$$

[1] Remember, in Cournot models firms compete in their choice of outputs. In Bertrand models, they compete in their choice of prices. Typically, Cournot models are used when the products are homogeneous; Bertrand models are used when products are differentiated.

Structure-conduct-performance hypothesis

- Theory: A simple Cournot model (con't)

  Recall that market elasticity ε is equal to:

$$\varepsilon = \frac{\frac{\Delta Q}{Q}}{\frac{\Delta p}{p}} = \frac{\Delta Q}{\Delta p}\frac{p}{Q}$$

Just rearranging

So the term in brackets on the previous slide is just $1/\varepsilon$. Moreover, q_i/Q is the market share s_i of firm i. So the equation at the bottom of the previous slide reduces to:

$$\frac{p - c_i'}{p} = \frac{s_i}{\varepsilon}$$

This is the Lerner index λ_i for firm i, a measure of market power in the market

This equation has independent significance. It says that in a Cournot model firm i's Lerner index is its market share divided by the market elasticity

Structure-conduct-performance hypothesis

- Theory: A simple Cournot model (con't)

  Multiplying both sides by s_i and summing over all firms i:

$$\sum_{i=1}^{n} \frac{p - c_i'}{p} s_i = \frac{1}{\varepsilon} \sum_{i=1}^{n} s_i^2 = \frac{HHI}{\varepsilon}$$

  This is the HHI

  or

$$\lambda^M = \frac{HHI}{\varepsilon}$$

  where λ^M is the Lerner index for the market, that is, the sum of the individual firm indices weighted by their market share.

  This result implies that the exercise of market power in the market (as measured by the Lerner index) increases with increases in concentration (as measured by the HHI) and decreases with greater market elasticity.

Structure-conduct-performance hypothesis

- Theory: A simple Cournot model (con't)—Criticisms
  - This simple mode contains some very restrictive assumptions (e.g., homogeneous product, Cournot behavior with a Nash-Cournot equilibrium, constant marginal costs across firms)
  - This model reflects the realities of few if any industries
  - Other models produce quite different results
    - For example, a two-firm market of homogeneous products with a Bertrand equilibrium would yield a perfectly competitive equilibrium

Bottom line: Very little support in theoretical models for the structure-conduct performance hypothesis

Structure-conduct-performance hypothesis

- Empirical studies
  - Typical study
    - Obtain data across many industries and regress a measure of performance (e.g., profits, margins, ROI) against various measures of industry structure (e.g., concentration, barriers to entry)
  - Assumptions
    - Industry structure is exogenous (i.e., structure affects performance but structure is determined independently of performance)
    - Changes in the structural variables have the same average effect on performance measures in all markets
  - Many studies purported to find a consistent relationship between increasing concentration and higher prices and/or profits

Structure-conduct-performance hypothesis

- Empirical studies—Some criticisms
  - Data problems
    - Inter-industry econometric comparisons are unable to capture many of the important differences between industries
    - Performance measures (profit, margins, ROI) may be artifacts of accounting techniques and not reflective of true economic measures
  - Weak results
    - Weiss' 1974 review of the literature prior to 1970s: Most studies found a positive relationship, but the effect is small (10% increase in 4-FCR resulted in 1.21% increase in price-cost margins)[1]
    - Schmalensee's 1989 review of the literature after Weiss: Cast doubt on the sign and whether the effect is statistically significant[2]
  - Demsetz critique[3]
    - Studies assume that market structure (concentration) is exogenous
    - But largest producers are likely to be superior in producing and marketing their products, which enables these firms to earn above-normal profits[1]

[1] Leonard Weiss, *The Concentration-Profits Relationship and Antitrust*, *in* Industrial Concentration: The New Learning (H. Goldschmid, H.M. Mann & J.F. Weston eds. 1974).
[2] Richard Schmalensee, *Inter-Industry Studies of Structure and Performance*, *in* 2 Handbook of Industrial Organization ch. 16 (Richard Schmalensee & Robert D. Willig eds. 1989).
[3] *See* Harold Demsetz, *Industry Structure, Market Rivalry, and Public Policy*, 16 J.L. & Econ. 1 (1974).

Structure-conduct-performance hypothesis

- *Bottom line*:
  - Most antitrust economists do not believe that there is a simple, consistent relationship between the level of concentration in a market and its performance
  - Too many other factors to consider

Seriously undermines the *PNB* presumption as an economic proposition

  - *Query*: Are there additional showings that can be added to high combined share and high market concentration that can better tailor the *PNB* presumption to reduce overinclusiveness errors?
    - This is what the 1992 Guidelines attempted to do by requiring both that:
      - The HHI thresholds must be crossed, *and*
      - There must be an explicit theory of anticompetitive harm supported by evidence apart from mere reliance on increased concentration in the market

The 1992 refinements

- 1992 DOJ/FTC Merger Guidelines
  - Changed surpassing the market share and HHI thresholds to a *necessary* but not *sufficient* condition for concluding that a horizontal merger is anticompetitive (in the Section 7 sense)
  - Required an explanation (supported with evidence) that the relevant market was conducive to the exercise of market power through oligopolistic interdependence

> Other things being equal, market concentration affects the likelihood that one firm, or a small group of firms, could successfully exercise market power. The smaller the percentage of total supply that a firm controls, the more severely it must restrict its own output in order to produce a given price increase, and the less likely it is that an output restriction will be profitable. If collective action is necessary for the exercise of market power, as the number of firms necessary to control a given percentage of total supply decreases, the difficulties and costs of reaching and enforcing an understanding with respect to the control of that supply might be reduced. However, market share and concentration data provide only the starting point for analyzing the competitive impact of a merger. Before determining whether to challenge a merger, the Agency also will assess the other market factors that pertain to competitive effects, as well as entry, efficiencies and failure.[1]

    - The idea for imposing this requirement is to distinguish between high market share/ high concentration markets that are conducive to coordination interaction and those that are not

[1] U.S. Dep't of Justice & Fed. Trade Comm'n, Horizontal Merger Guidelines § 2.0 (rev. 1992) (superseded by the 2010 Merger Guidelines)

The 1992 refinements

- The Stigler requirements[1]
  - The 1992 guidelines included two showings in addition to surpassing the market share and concentration thresholds in order to make out a case of coordinated interaction:
    1. Market conditions are conducive to reaching terms of coordination
    2. Market conditions are conducive to detecting and punishing deviations

> Successful coordinated interaction entails reaching terms of coordination that are profitable to the firms involved and an ability to detect and punish deviations that would undermine the coordinated interaction. Detection and punishment of deviations ensure that coordinating firms will find it more profitable to adhere to the terms of coordination than to pursue short-term profits from deviating, given the costs of reprisal. In this phase of the analysis, the Agency will examine the extent to which post-merger market conditions are conducive to reaching terms of coordination, detecting deviations from those terms, and punishing such deviations. Depending upon the circumstances, the following market factors, among others, may be relevant: the availability of key information concerning market conditions, transactions and individual competitors; the extent of firm and product heterogeneity; pricing or marketing practices typically employed by firms in the market; the characteristics of buyers and sellers; and the characteristics of typical transactions.[2]

[1] George J. Stigler, *A Theory of Oligopoly*, 72 J. Pol. Econ. 44 (1964).
[2] 1992 Merger Guidelines § 2.1.

The 1992 refinements

- The Stigler requirements
  1. Market conditions are conducive to reaching terms of coordination

> Market conditions may be conducive to or hinder reaching terms of coordination. For example, reaching terms of coordination may be facilitated by product or firm homogeneity and by existing practices among firms, practices not necessarily themselves antitrust violations, such as standardization of pricing or product variables on which firms could compete. Key information about rival firms and the market may also facilitate reaching terms of coordination. Conversely, reaching terms of coordination may be limited or impeded by product heterogeneity or by firms having substantially incomplete information about the conditions and prospects of their rivals' businesses, perhaps because of important differences among their current business operations. In addition, reaching terms of coordination may be limited or impeded by firm heterogeneity, for example, differences in vertical integration or the production of another product that tends to be used together with the relevant product.[1]

[1] 1992 Merger Guidelines at § 2.11.

The 1992 refinements

- The Stigler requirements
  2. Market conditions are conducive to detecting and punishing deviations

> Where detection and punishment likely would be rapid, incentives to deviate are diminished and coordination is likely to be successful. The detection and punishment of deviations may be facilitated by existing practices among firms, themselves not necessarily antitrust violations, and by the characteristics of typical transactions. For example, if key information about specific transactions or individual price or output levels is available routinely to competitors, it may be difficult for a firm to deviate secretly. If orders for the relevant product are frequent, regular and small relative to the total output of firm in a market, it may be difficult for the firm to deviate in a substantial way without the knowledge of rivals and without the opportunity for rivals to react. If demand or cost fluctuations are relatively infrequent and small, deviations may be relatively easy to deter.
>
> By contrast, where detection or punishment is likely to be slow, incentives to deviate are enhanced and coordinated interaction is unlikely to be successful. If demand or cost fluctuations are relatively frequent and large, deviations may be relatively difficult to distinguish from these other sources of market price fluctuations, and, in consequence, deviations may be relatively difficult to deter.[1]

[1] 1992 Merger Guidelines at § 2.12.

The 1992 refinements

- Practical implications
  - The conditions for proving a theory of coordinated interaction under the 1992 DOJ/FTC Merger Guidelines were hard to prove
    - Proof that the market was conducive to punishment was especially problematic, since it appeared difficult to prove that firms could tacitly coordinated on any punishment strategy[1]
  - Moreover, defendants would defend on the basis that
    - premerger the market did not exhibit any indications of oligopolistic coordination, and
    - the structural changes entailed by the merger were not enough to flip a nonoligopolistically performing market into an oligopolistically performing one
  - Finally, since the agencies were challenging only high market share transactions, a unilateral effects theory would almost always be available in any transaction to which a coordinated effects theory might apply

[1] Subsequent theoretical work showed that a simple and sufficient punishment was the "grim reaper" strategy: once one firm deviates, all firms cease attempting to oligopolistically coordinate and begin to price competitively. But as we saw in *Beaver*, some firms will continue to try to coordinate (albeit there explicitly and not oligopolisitically) even in the face of substantial repeated deviations.

The 1992 refinements

- Bottom line
  - In agency prosecutorial decision making coordinated interaction quickly ceased to be a meaningful theory in prosecutorial decision-making
    - Rarely addressed in any detail by staff or parties in merger investigations
- In agency litigation
  - Agencies prefer to tell a unilateral effects story in litigation as long as they can also rely on the *PNB* presumption to satisfy their initial burden under *Baker Hughes*
  - Coordinated effects as a formal theory becomes central to the litigation only when—
    - the defense is successful in undermining a unilateral effects theory by expanding the market and increasing the number and/or significance of non-merging parties as close competitors to the merging firms (e.g., *Arch Coal*[1] or *Oracle/PeopleSoft*[2]); or
    - The court rejected the unilateral effects theory on some other grounds but still wants a story told beyond the *PNB* presumption (e.g., *CCC/Mitchell* [3])

[1] FTC v. Arch Coal, Inc., 329 F. Supp. 2d 109 (D.D.C. 2004), appeal voluntarily dismissed, Nos. 04-5291, 04-7120, 2004 WL 2066879 (D.C. Cir. Sept. 15, 2004).
[2] United States v. Oracle Corp., 331 F. Supp. 2d 1098 (N.D. Ca. 2004).
[3] FTC v. CCC Holdings Inc., 605 F. Supp. 2d 26 (D.D.C. 2009).

The 2010 refinements

- 2010 changes
  - The 2010 guidelines softened the language to eliminate Stigler requirements on detection and punishment and focused more on market characteristics:

> A market typically is more vulnerable to coordinated conduct if each competitively important firm's significant competitive initiatives can be promptly and confidently observed by that firm's rivals. This is more likely to be the case if the terms offered to customers are relatively transparent. Price transparency can be greater for relatively homogeneous products. Even if terms of dealing are not transparent, transparency regarding the identities of the firms serving particular customers can give rise to coordination, e.g., through customer or territorial allocation. Regular monitoring by suppliers of one another's prices or customers can indicate that the terms offered to customers are relatively transparent.
>
> A market typically is more vulnerable to coordinated conduct if a firm's prospective competitive reward from attracting customers away from its rivals will be significantly diminished by likely responses of those rivals. This is more likely to be the case, the stronger and faster are the responses the firm anticipates from its rivals. The firm is more likely to anticipate strong responses if there are few significant competitors, if products in the relevant market are relatively homogeneous, if customers find it relatively easy to switch between suppliers, or if suppliers use meeting-competition clauses.
>
> (continued on next slide)

The 2010 refinements

- 2010 changes

A firm is more likely to be deterred from making competitive initiatives by whatever responses occur if sales are small and frequent rather than via occasional large and long-term contracts or if relatively few customers will switch to it before rivals are able to respond. A firm is less likely to be deterred by whatever responses occur if the firm has little stake in the status quo. For example, a firm with a small market share that can quickly and dramatically expand, constrained neither by limits on production nor by customer reluctance to switch providers or to entrust business to a historically small provider, is unlikely to be deterred. Firms are also less likely to be deterred by whatever responses occur if competition in the relevant market is marked by leapfrogging technological innovation, so that responses by competitors leave the gains from successful innovation largely intact.

A market is more apt to be vulnerable to coordinated conduct if the firm initiating a price increase will lose relatively few customers after rivals respond to the increase. Similarly, a market is more apt to be vulnerable to coordinated conduct if a firm that first offers a lower price or improved product to customers will retain relatively few customers thus attracted away from its rivals after those rivals respond.
The Agencies regard coordinated interaction as more likely, the more the participants stand to gain from successful coordination. Coordination generally is more profitable, the lower is the market elasticity of demand.[1]

[1] 2010 Merger Guidelines at § 7.2.

Concluding thoughts

- DOJ/FTC merger investigations
  - As a practical matter, even after the 2010 revisions to the Merger Guidelines coordinated effects is essentially dead as a independent theory of competitive harm in horizontal merger investigations.
    - Since the early 1980s, with very rare exceptions the agencies have only challenged high market shares deals (or at least high in the markets the agencies define)
    - Within these highly concentrated markets, a unilateral theory of anticompetitive effect will necessarily apply, so that a coordinated effects theory is superfluous
    - As a result, prosecutorial decision making depends on the unilateral effects theory
      - Although the agencies will plead a coordinated effects theory as a matter of course in any complaint

Concluding thoughts

- Merger litigation
  - Coordinated interaction, as implemented through the *PNB* presumption, remains (along with market definition) an absolutely critical part of judicial horizontal merger analysis
  - So far, even the DOJ and FTC had not brought a test case that does not depend on the *PNB* presumption
  - As far as I know, every horizontal merger case decided by the courts in favor of the plaintiff has found the requisite anticompetitive effect through the *PNB* presumption
- Coordinated effects as a negative defense
  - In *H&R Block*, the court reframed coordinated effects as a *negative defense*:

> Since the government has established its prima facie case [using the *PNB* presumption], the burden is on the defendants to produce evidence of "structural market barriers to collusion" specific to this industry that would defeat the "ordinary presumption of collusion" that attaches to a merger in a highly concentrated market.[1]

    - Merging parties bear burden of production, not burden of persuasion

[1] United States v. H&R Block, Inc., 833 F. Supp. 2d 36, 77 (D.D.C. 2011).

Unilateral Effects

Introduction

- Definition
  - Unilateral effects is a theory of anticompetitive harm that on the elimination of significant “local” competition between the merging firms, so that the merged firm can raise prices independently of how other incumbent firms react.

> A merger is likely to have unilateral anticompetitive effect if the acquiring firm will have the incentive to raise prices or reduce quality after the acquisition, independent of competitive responses from other firms.[1]

[1] United States v. H&R Block, Inc., 833 F. Supp. 2d 36, 81 (D.D.C. 2011).

Introduction

- Example: Nestlé-Dreyer's[1]
  - Nestlé to acquire Dreyer's for $2.8 billion
  - Both companies make regular and super-premium ice cream
    - Nestlé makes Häagen Dazs
    - Dreyer's makes Dreamery, Godiva and Starbucks
    - Unilever distributes Ben & Jerry's
  - Two approaches
    - *Unilateral effects as originally conceived*: Allege an all-ice cream market and apply unilateral effects theory to Nestlé and Dreyer's in their super-premium products
      - PNB presumption not triggered in this market
    - *PNB approach*: Narrow relevant to a three-firm super-premium ice cream relevant market in order to invoke PNB presumption

The consistent agency approach has been to narrow the markets in order to take advantage of the *PNB* presumption

[1] *In re* Nestlé Holdings, Inc., 136 F.T.C. 791 (2003) (settled by consent decree).

Introduction

- Example
  - Nestlé-Dreyer's in the super-premium segment of an all ice cream market

Super-Premium Ice Cream (1)
(all channels)

	Sales	Share	HHI
Ben & Jerry's	$254.40	42.4%	1797.76
Nestlé	$219.00	36.5%	1332.25
Dreyer's	$114.60	19.1%	364.81
Others	$12.00	2.0%	4
	$600.00	100.0%	3498.82
Combined share		55.6%	
Premerger HHI			3,501
Delta			1,396
Postmerger HHI			4,897

All Ice Cream (2)
(supermarket sales in 2002)

	Sales	Share	HHI
Store brands (10)	$997.2	23.0%	53
Dreyer's	$795.4	18.4%	339
Breyer's	$686.8	15.9%	253
Blue Bell	$253.4	5.8%	34
Ben & Jerry's	$199.8	4.6%	21
Nestle	$192.7	4.4%	19
Wells Diary	$136.9	3.2%	10
Armour Swift	$106.7	2.5%	6
Turkey Hill	$105.2	2.4%	6
Marigold Foods	$88.2	2.0%	4
Others (10)	$769.1	17.8%	32
	$4,331.4	100.0%	776
Combined share		22.8%	
Premerger HHI			776
Delta			162
Post-merger			938

[1] Complaint, *In re* Nestlé Holdings, Inc., 136 F.T.C. 791 (2003) (settled by consent decree).
[2] Sherri Day, *Nestlé and Dreyer's to Merge in $2.4 Billion Deal, Creating Top U.S. Ice Cream Seller*, N.Y. Times, June 18, 2002.

Requirements

- General requirements
  - The products of the merging parties are close substitutes for one another
    - That is, they have high cross-elasticities of demand with one another
  - The products of (most) other firms are much more distant substitutes
    - That is, they have low cross-elasticities of demand with the products of the merging firms
  - Repositioning into the product of the merging firms is difficult
    - That is, other firms in the market cannot easily change their product's attributes or introduce a new product that would be a close substitute to the products of the merging firm
    - This is closely related to barriers to entry and expansion that arise in the ease of entry defense (see below)—and pose similar high hurdles for defendants in showing that repositioning is easy
- Specific Guidelines requirements
  - 1992: Merging companies had to be each other's closest competitors and the combined firm had to have a market share of at least 35%
    - *Problem*: Some cabining was necessary, since otherwise the unilateral effects theory applies too broadly to any merger where the combining firms have positive cross-elasticity with one another and a positive margin and the market exhibits barriers to entry and repositioning
  - 2010: Eliminated both the closest substitute and 35% share requirements

Theory

- The simple calculus (in a Cournot setting)
  - Consider the profit-maximization problem for each of the two merging firms premerger:

$$\max_{q_i} \pi_i = p_i q_i - c q_i$$

  - So at a profit-maximizing level of output q_i, the first-order condition is:

$$0 = \frac{\partial \pi_i}{\partial q_i} = p_i + q_i \frac{\partial p_i}{\partial q_i} - c$$

Marginal revenue

Marginal cost

  - This simply requires marginal revenue to be equal to marginal cost
    - The standard requirement for any profit-maximizing firm in a neoclassical model
  - The second-order condition for a profit-maximum is:

$$\frac{\partial^2 \pi_i}{\partial q_i^2} = \frac{\partial}{\partial x}\left[p_i + q_i \frac{\partial p_i}{\partial q_i} - c \right] < 0$$

This assures that we are at the "top of hill" of the profit function rather than the bottom (that is, profits decrease if we either increase quantity or decrease quantity)

Theory

- The simple calculus (in a Cournot setting)
  - Now consider the profit maximization problem for the combined firm:

$$\max \pi = (p_1 q_1 - c q_1) + (p_2 q_2 - c q_2)$$

where the combined firm is choosing both q_1 and q_2.

  - As before, there are two first order conditions for this problem. Consider the FOC with respect to q_1:

$$0 = \frac{\partial \pi}{\partial q_1} = p_1 + q_1 \frac{\partial p_1}{\partial q_1} - c + p_2 \frac{\partial q_2}{\partial q_1} - c \frac{\partial q_2}{\partial q_1}$$

  - or

$$\left[p_1 + q_1 \frac{\partial p_1}{\partial q_1} + \frac{\partial q_2}{\partial q_1}(p_2 - c) \right] = c$$

Marginal revenue

Marginal cost

which is postmerger marginal revenue (including lost margin on diverted sales) is equal to postmerger marginal cost

Theory

- The simple calculus (in a Cournot setting)
  - Let's look at the marginal cost term (in brackets) more closely:

$$\left[p_1 + q_1 \frac{\partial p_1}{\partial q_1} + \frac{\partial q_2}{\partial q_1}(p_2 - c) \right] = c$$

Negative number (since demand curve is downward-sloping)

Intuitively, this means that Firm 1's postmerger marginal revenue is equal to:

$p_1 =$ The revenue received from the sale of an additional unit of Product 1 adjusted for:

$+q_1 \frac{\partial p_1}{\partial q_1} =$ The loss in revenue resulting from the decrease in p_1 necessary to clear the market with an added unit of output (a negative number)

$+\frac{\partial q_2}{\partial q_1}(p_2 - c) =$ The loss in revenue of Firm 2 entailed by a diversion in sales from Product 2 to Product 1 resulting from the decrease in p_1 (a negative number)

Negative number (since products are substitutes)

But when evaluated at premerger prices and quantities, marginal revenue is *less* than marginal cost (because of the recognition of Firm 2's lost margin on reduced sales). When marginal revenue is less than marginal cost, the profit-maximizing solution is to reduce output in order to re-equilibrate marginal revenue and marginal cost (which in turn increases prices).

Theory

- Another way to look at this (still in a Cournot setting)
  - We just derived the first-order condition for the combined firm to price Product 1 by differentiating profits with respect to an *increase* in output $\left(\partial\pi/\partial q_1\right)$. Given a downward-sloping demand curve, the increase in output requires price to *decrease*, which in turn diverts sales from Product 2 to Product 1.
  - Now consider the first-order condition for the combined firm to price Product 1 by differentiating profits with respect to a *decrease* in output $\left(\partial\pi/\partial(-q_1)\right)$, which causes p_1 to increase, which in turn diverts sales from Product 1 to Product 2.

$$\left[-p_1 - q_1\frac{\partial p_1}{\partial q_1} - \frac{\partial q_2}{\partial q_1}(p_2 - c)\right] = -c$$

Here,

$p_1 =$ The revenue lost by reducing output by one unit

$-q_1\frac{\partial p_1}{\partial q_1} =$ The gain in revenue resulting from the increase in p_1 necessary to clear the market with one less unit of output (a positive number)

$-\frac{\partial q_2}{\partial q_1}(p_2 - c) =$ The gain in revenue of Firm 2 entailed by a diversion in sales from Product 1 to Product 2 resulting from the increase in p_1 (a positive number number). This is the *recapture of profits* in the standard unilateral effects story.

An example

Firm 1
(producing Product 1)

Assume linear demand (p = price intercept minus quantity)

Price intercept	300	
Marginal cost	20	(constant)
Margin	140	

(price minus marginal cost at premerger profit-maximizing price)

Recapture of Products from Diverted Sales to Firm 2

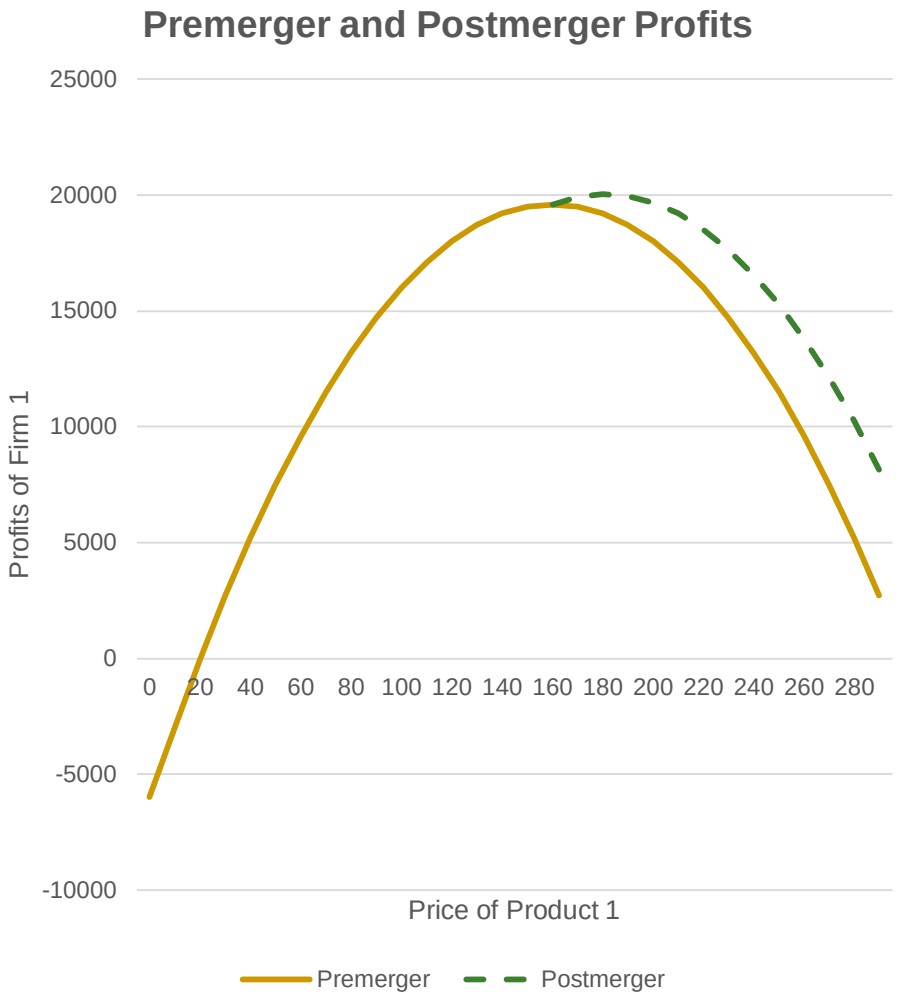
Diversion ratio	0.3	
Firm 2 margin	140	(assume the same as Firm 1 at premerger price)

PREMERGER

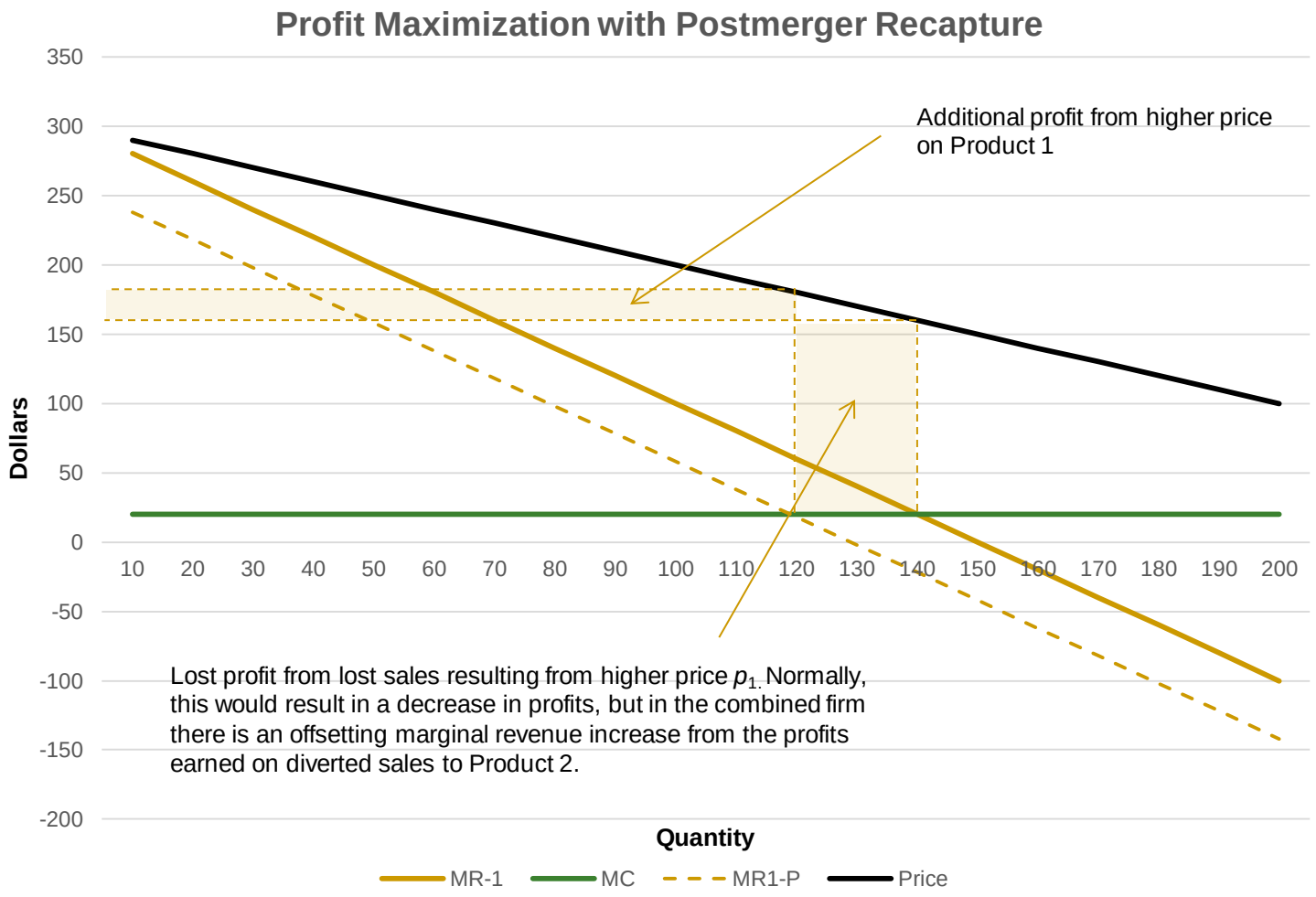
POSTMERGER RECAPTURE
(holding Firm 2's price constant at the premerger level)

Price	Quantity	Revenue	MR	Cost	MC	Profit	Margin (p - mc)	Firm 1 Lost units	Firm 1 Lost profits	Diversion to Firm 2	Profit Recapture	Post-merger Profit	Difference
0	300	0	-300	6000	20	-6000	-20						
10	290	2900	-280	5800	20	-2900	-10						
20	280	5600	-260	5600	20	0	0						
30	270	8100	-240	5400	20	2700	10						
40	260	10400	-220	5200	20	5200	20						
50	250	12500	-200	5000	20	7500	30						
60	240	14400	-180	4800	20	9600	40						
70	230	16100	-160	4600	20	11500	50						
80	220	17600	-140	4400	20	13200	60						
90	210	18900	-120	4200	20	14700	70						
100	200	20000	-100	4000	20	16000	80						
110	190	20900	-80	3800	20	17100	90						
120	180	21600	-60	3600	20	18000	100						
130	170	22100	-40	3400	20	18700	110						
140	160	22400	-20	3200	20	19200	120						
150	150	22500	0	3000	20	19500	130						
160	140	22400	20	2800	20	19600	140	0	0	0	0	19600	0
170	130	22100	40	2600	20	19500	150	10	100	3	420	19920	320
180	120	21600	60	2400	20	19200	160	20	400	6	840	20040	440
190	110	20900	80	2200	20	18700	170	30	900	9	1260	19960	360
200	100	20000	100	2000	20	18000	180	40	1600	12	1680	19680	80
210	90	18900	120	1800	20	17100	190	50	2500	15	2100	19200	-400
220	80	17600	140	1600	20	16000	200	60	3600	18	2520	18520	-1080
230	70	16100	160	1400	20	14700	210	70	4900	21	2940	17640	-1960
240	60	14400	180	1200	20	13200	220	80	6400	24	3360	16560	-3040
250	50	12500	200	1000	20	11500	230	90	8100	27	3780	15280	-4320
260	40	10400	220	800	20	9600	240	100	10000	30	4200	13800	-5800
270	30	8100	240	600	20	7500	250	110	12100	33	4620	12120	-7480
280	20	5600	260	400	20	5200	260	120	14400	36	5040	10240	-9360
290	10	2900	280	200	20	2700	270	130	16900	39	5460	8160	-11440

An example


Premerger and Postmerger Profits
25000
20000
15000
10000
5000
0
-5000
-10000
Profits of Firm 1
0 20 40 60 80 100 120 140 160 180 200 220 240 260 280
Price of Product 1
Premerger
Postmerger

An example


Profit Maximization with Postmerger Recapture
Additional profit from higher price on Product 1
Lost profit from lost sales resulting from higher price p_1. Normally, this would result in a decrease in profits, but in the combined firm there is an offsetting marginal revenue increase from the profits earned on diverted sales to Product 2.
Dollars
Quantity
350
300
250
200
150
100
50
0
-50
-100
-150
-200
10 20 30 40 50 60 70 80 90 100 110 120 130 140 150 160 170 180 190 200
MR-1
MC
MR1-P
Price

Theory

- One final look (this time in a Bertrand setting)
  - Consider the profit maximization problem for each of the two merging firms premerger:

$$\max_{p_i} \pi_i = p_i q_i - c_i q_i$$

$$\frac{\partial \pi_i}{\partial p_i} = q_i + p_i \frac{\partial q_i}{\partial p_i} - c_i \frac{\partial q_i}{\partial p_i} = q_i + (p_i - c_i)\frac{\partial q_i}{\partial p_i} = 0$$

  - Divide both sides of the first order condition by $p_i\left(\frac{\partial q_i}{\partial p_i}\right)$ and recall that $\varepsilon_i = -\left(\frac{p_i}{q_i}\right)\left(\frac{\partial q_i}{\partial p_i}\right)$ is the own elasticity of product *i*'s demand:

$$L_i \equiv \frac{p_i - c_i}{p_i} = \frac{1}{\varepsilon_i}$$

    which is the equation we already have seen for the Lerner index L_i.

Theory

- One final look (this time in a Bertrand setting) (con't)
  - Now consider the profit maximization problem for the combined firm:

$$\max_{p_1,p_2} \pi_c = p_1 q_1 - c_1 q_1 + p_2 q_2 - c_2 q_2$$

$$\frac{\partial \pi_c}{\partial p_1} = q_1 + (p_1 - c_1)\frac{\partial q_1}{\partial p_1} + (p_2 - c_2)\frac{\partial q_2}{\partial p_1} = 0$$

There is an analogous FOC with respect to product 2

  - Dividing both sides by $p_1\left(\frac{\partial q_1}{\partial p_1}\right)$ as we did before yields:

$$L_1 \equiv \frac{p_1 - c_1}{p_1} = \frac{1}{\varepsilon_i} - \frac{p_2 - c_2}{p_1}\left(\frac{\partial q_2}{\partial p_1}\right)\left(\frac{\partial p_1}{\partial q_1}\right) = \frac{1}{\varepsilon_i} + \frac{p_2 - c_2}{p_1}\left(-\frac{\partial q_2}{\partial q_1}\right)$$

Extra term introduced by merger

Gross margin

Diversion ratio

  - The right-hand side of this equation has an extra term at the end compared to the premerger case. Note that this term is the margin times the diversion ratio
    - If the merging firms produce *substitutes*, then the diversion ratio is positive, so that p_1 and the Lerner index must *increase* postmerger
    - If the merging firms produce *complements*, then the diversion ratio is negative, so that p_1 and the Lerner index must *decrease* postmerger

Note: Since the equation for L_2 is symmetrical with the equation for L_1, the same results hold for product 2

Elimination of a "Maverick"

Mavericks

- General idea
  - A "maverick" is a competitor that disrupts coordinated interaction among the other, more accommodating competitors that would occur in the absence of the maverick
  - When an accommodating competitor acquires a maverick, the maverick's disruptive conduct is suppressed and the market performs less competitively to the harm of consumers:

> The Agencies consider whether a merger may lessen competition by eliminating a "maverick" firm, i.e., a firm that plays a disruptive role in the market to the benefit of customers. For example, if one of the merging firms has a strong incumbency position and the other merging firm threatens to disrupt market conditions with a new technology or business model, their merger can involve the loss of actual or potential competition. Likewise, one of the merging firms may have the incentive to take the lead in price cutting or other competitive conduct or to resist increases in industry prices. A firm that may discipline prices based on its ability and incentive to expand production rapidly using available capacity also can be a maverick, as can a firm that has often resisted otherwise prevailing industry norms to cooperate on price setting or other terms of competition.[1]

  - As a result, the acquisition of a maverick by an accommodating competitor is a special case of coordination interaction
    - Typically used to challenge deals where the target has a sufficiently small market share that the transaction would not otherwise raise major concern

[1] 2010 Merger Guidelines at § 2.1.5.

Mavericks

- Example: DOJ challenge to ABI/Grupo Modelo
  - Background
    - ABInbev (ABI)
      - #1 firm in the U.S. beer market with a 39% share
      - Budweiser, Busch, Michelob, Natural Light, Stella Artois, Goose Island, and Beck's
    - MillerCoors (joint venture between SAB Miller and MolsonCoors)
      - #2 firm with a 26% share
      - Coors, Coors Light, Miller Genuine Draft, Miller High Life, Miller Lite, Extra Gold Lager, Hamm's
    - Grupo Modelo
      - #3 firm with a 7% share
      - Corona Extra, Corona Light, Modelo Especial, Pacifico, Negra Modelo and Victoria
    - Other 28%
      - Heineken, Sam Adams, Yuengling, craft beers, others—all relatively small
  - DOJ allegations
    - ABI and MillerCoors, the mass beer producers, are accommodating firms, with MillerCoors and the other brewers willing to follow ABI's price leadership
    - Grupo Modelo is a maverick
      - Unwilling to follow ABI's price leadership
      - Has caused ABI to price lower that it would have otherwise
    - ABI's acquisition of Grupo Modelo would violate Section 7
      - Settled by consent decree requiring divestiture of Modelo operations in the United States

Mavericks

- Policy question
  - Mavericks have that Potter Stewart "I know it when I see it" quality[1]
    - In *H&R Block/TaxACT*, the district court observed:

> The parties have spilled substantial ink debating TaxACT's maverick status. The arguments over whether TaxACT is or is not a "maverick"—or whether perhaps it once was a maverick but has not been a maverick recently—have not been particularly helpful to the Court's analysis. . . . Here, the record is clear that while TaxACT has been an aggressive and innovative competitor in the market, as defendants admit, TaxACT is not unique in this role. Other competitors, including HRB and Intuit, have also been aggressive and innovative in forcing companies in the DDIY market to respond to new product offerings to the benefit of consumers.
>
> The government has not set out a clear standard, based on functional or economic considerations, to distinguish a maverick from any other aggressive competitor. At times, the government has emphasized TaxACT's low pricing as evidence of its maverick status, while, at other times, the government seems to suggest that almost any competitive activity on TaxACT's part is a "disruptive" indicator of a maverick. For example, the government claims that "[m]ost recently, TaxACT continued to disrupt the Digital DIY market by entering the boxed retail software segment of the market, which had belonged solely to HRB and [Intuit]." . . . .[2]

[1] *See* Jacobellis v. Ohio, 378 U.S. 184, 197 (1964) (Stewart, J., concurring) (describe his threshold test for obscenity).
[2] United States v. H & R Block, Inc., 833 F. Supp. 2d 36, 79-80 (D.D.C. 2011).

Mavericks

- Policy question
  - Why are "mavericks" mavericks, and should it matter in antitrust law?
    - The most likely reason is idiosyncratic: the particular management of the firm simply believes in being disruptive
      - This may be the case when the management—
        - Refuses to pursue a more industry price-accommodating strategy[1]
        - Pursues a long-run strategy of disruptive new product development or new marketing innovations[2]
      - Should a merger be prohibited simply because the current management—perhaps even just the current CEO—believes in being disruptive?
    - Another possible reason is that something inherent in the firm's structure that makes it in the profit-maximizing interest of the firm to be disruptive regardless of the predilections of its management
      - This may be the case if the firm is a small but materially lower-cost producer than the larger, more established firms. In this case, the firm may wish to take advantage of its lower-cost structure to discount prices and gain market share.[3]

[1] *See, e.g.*, Complaint, United States v. Anheuser-Busch InBev SA/NV, No. 1:13-cv-00127 (D.D.C. filed Jan. 31, 2013) (settled by consent decree).
[2] *See, e.g.*, Complaint, United States v. AT&T Inc., No. 1:11-cv-1560 (D.D.C. filed Aug. 31, 2011) (challenging AT&T's pending acquisition of T-Mobile; complaint voluntarily dismissed when transaction was terminated).
[3] *See, e.g.*, United States v. H&R Block, Inc., 833 F. Supp. 2d 36 (D.D.C. 2011) (noting government argument that TaxACT was a "maverick" because, among other things, it was a low-cost competitor that pursued an aggressive pricing policy).

Mavericks

- Policy question
  - Why are “mavericks” mavericks, and should it matter in antitrust law?
    - *Query*: While it makes sense to pay special attention to the acquisition of a “structural” maverick—that is, a firm that has been and is likely to continue to be disruptive of coordinated interaction in the absent of the acquisition—does it also make sense to give the same attention to an “idiosyncratic” maverick, whose behavior is likely to change with a change in management?
  - In any event—
    - As *H&R Block/TaxACT* suggests, the following requirements should be imposed on a theory of anticompetitive harm based on eliminating a maverick:
      1. The market is conducive to a materially higher degree of coordinated interaction than it exhibits premerger;
      2. The disruptive conduct of the merger target is a material contributor to the inability of the market to achieve this higher degree of coordinated interaction;
      3. The acquisition of the merger target is likely to result in the discontinuance of the disruptive conduct; and

         NB: Sometimes the target management will become the management of the combined company, which raises the question of whether the disruptive activity will be discontinued.
      4. The discontinuance of the merger target’s disruptive activity is likely to result in a materially higher degree of coordinated interaction in the market to the harm of consumers
         - This requires that the target be unique or especially effective in its disruptive conduct

Defenses

Defenses generally

- Entry
- Efficiencies
- Failing firm

Entry/Expansion

- The story
  - When entry is sufficiency easy, either the threat of entry or actual entry will ensure that the merger will be anticompetitive
    - The *threat* of entry may deter incumbent firms from acting less competitively for fear of inducing new competition
    - If the market performs less competitively postmerger, the market's higher margins will attract *actual* entry, which will then compete the margins down to premerger levels
    - Entry includes expansion by incumbent competitors
  - The Guidelines
    - 1982 and 1992: Depended largely on actual entry having a significant impact within two years of the merger
      - This allows for a short-run anticompetitive effect
    - 2010: Requires entry to "deter or counteract" any anticompetitive effects "so the merger will not substantially harm customers"
      - Does not allow any grace period
  - Guidelines requirements—Entry must be:
    - Timely
    - Likely
    - Sufficient
  - Courts have adopted these requirements

Entry/Expansion

- Burden of proof/likelihood of a successful defense
  - On merging parties
  - Almost impossible to make out in an agency investigation
    - The agency starts by insisting that the potential entrants be identified by name
    - It then calls them and asks: "Would you entry this market if prices increased by 5% to 10%?"
    - The answer is almost always "no"
      - Can be a kneejerk reaction—Firm has not considered entry and does not know what it would do
      - Can be a "go away staff" reaction—Firm may appreciate that if it answer "yes" the staff will then begin a much more detailed investigation of the firm to determine whether the firm is in fact likely to enter. This will not be pleasant for the firm.
      - Can be an informed "no": If the firm has not already entered or is not actively considering entry, the likelihood is that a relatively small increase in margin will not cause it to enter, especially since its entry is likely to increase postmerger competition and decrease postmerger margins below the SSNIP
        - *Note*: As a general rule, firms do not enter existing markets just for margin. They almost always require some nonprice competitive advantage against incumbent firms to cause them to entry
  - Barriers to entry: Examples

Capital requirements	Patents/other IP	Skilled employees
Development time	Reputation	Skilled sales reps
Regulatory barriers	Skilled management	

Entry/Expansion

- Burden of proof/likelihood of a successful defense
  - When is the defense successful?
    - When the market is operating premerger close of competitively and a significant firm is already planning on entering
    - When there has been a significant history of entry and the market has continued to operate competitively even with variations in concentration levels

Efficiencies

- Types
  - Cost efficiencies (fixed and marginal cost)
  - Others (e.g., R&D)
- Cost efficiencies
  - Most common in merger defenses
  - Consider the firm's profit maximization problem:

$$\pi = pq(p) - (F + mq)$$

where F is fixed cost and m is constant marginal cost.

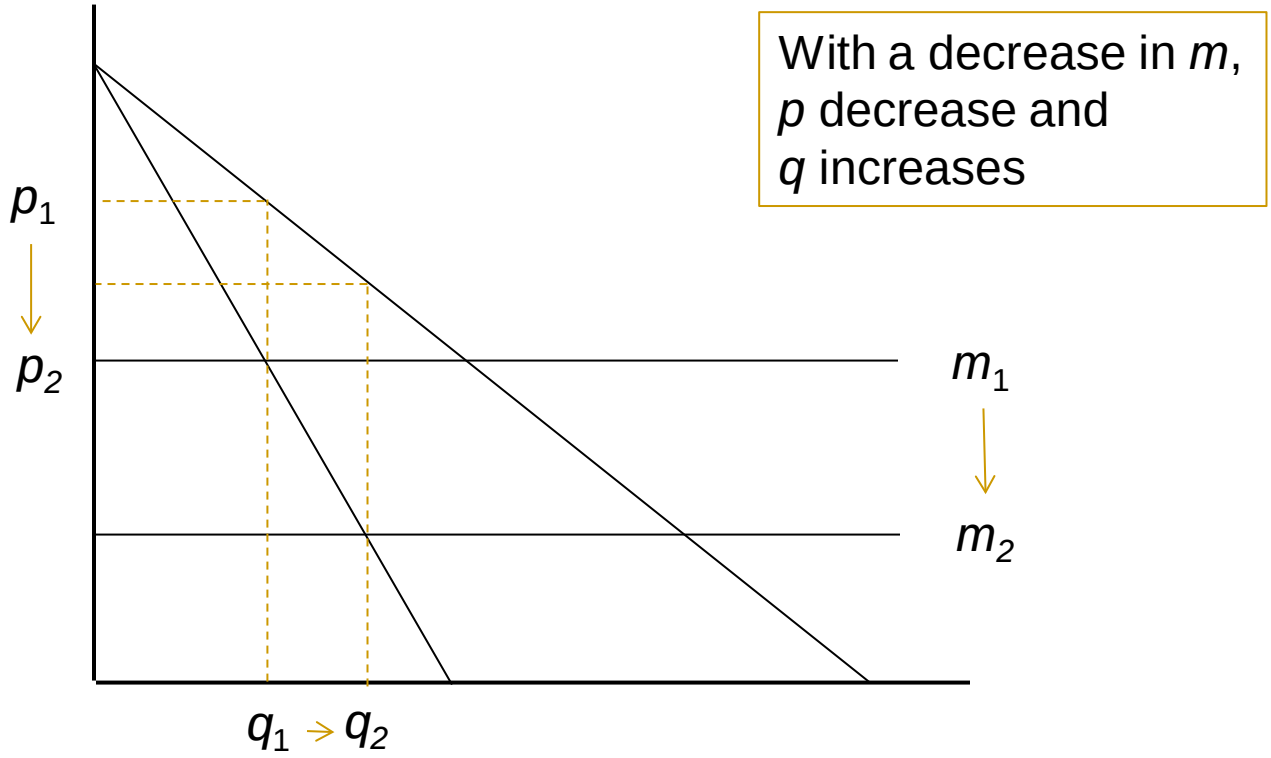
The first order conditions for a profit maximum is:

$$\frac{\partial \pi}{\partial q} = p + q\frac{\partial p}{\partial q} - m = 0$$

that is, marginal revenue equals marginal cost. Note that in this model changes in *F* have no effect on the first order condition and therefore no effect on postmerger prices. Only changes in the marginal cost *m* can affect prices.

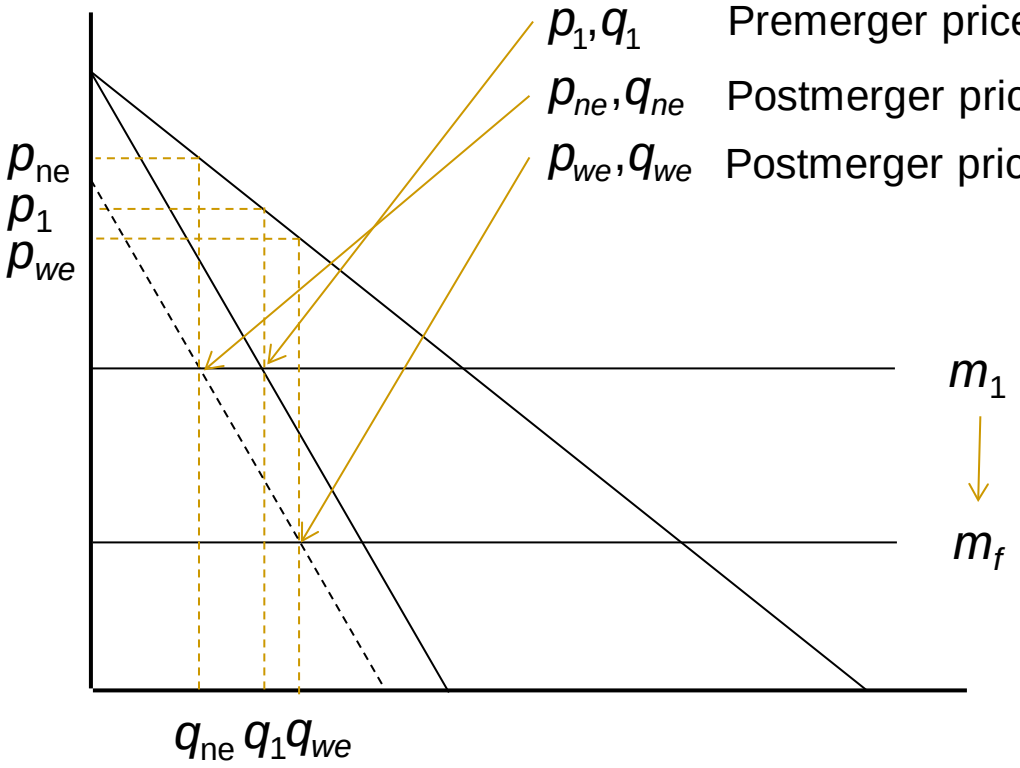
Efficiencies

- But changes in *m* can affect prices. A reduction in marginal cost will even cause a profit-maximizing monopolist to lower price.



Unilateral effects with offsetting efficiencies

- Unilateral effects shifts Firm 1's marginal revenue curve to the left
- Marginal cost efficiencies shifts supply curve down from m_1 to m_f



$$p_{ne} > p_1 > p_{we}$$
$$q_{ne} < q_1 < q_{we}$$

So this illustrates a merger with a gross unilateral anticompetitive effect that is more than offset by marginal cost efficiencies

Efficiencies

- Cost efficiencies as a merger defense
  - Are the alleged efficiencies *merger specific*?
    - *Could* they be achieved in the absence of the transaction?
    - Is this the right question? Or is the right question "Would they be achieved in the absence of the transaction"?
    - The agencies strongly (and to an extent the courts) ask only the first question
  - Are the alleged efficiencies *verifiable*?
    - Have they been rigorously derived the parties?
    - Can they be objectively ascertained by a third party?
      - The agencies usually regard this "third party" as an accountant or an economist, that is, someone without expertise in the industry in question—causes them to reject efficiencies that depend on expert industry judgment
      - Courts are trending this way as well
  - Are the alleged efficiencies *timely and sufficient*?
    - Will they occur in time and with sufficient magnitude to offset the anticompetitive effects of the merger that would be likely to occur in the absence of the efficiencies?