

ECONOMIES OF SCOPE: A CRUCIAL CONCEPT IN MERGER ANALYSIS

It has long been recognized that it may be inconsistent to argue both that a merger will generate significant efficiencies in the development, production, or distribution of a product and to argue that the merger is not anticompetitive because there are low barriers to entry into the relevant market. The reason for the apparent inconsistency is that if the merger produces significant cost savings because of the realization of economies of scale, it is more likely that small-scale entry will not create a competitively significant supplier or be profitable. The Federal Trade Commission (FTC) staff has indicated that the efficiency evidence presented in the Staples/Office Depot merger confirmed the FTC's belief that entry by a new, cost-effective office supply superstore would require such a major investment that it was unlikely, particularly in the next few years. When a market is characterized by significant economies of scope, however, the presence of merger-specific efficiencies and low barriers to entry need not be inconsistent.

Economies of scale are present when the production cost of a particular product fall as the number of units produced increases. In contrast, economies of scope exist when an increase in the production of one product leads to a reduction in the production cost of another. For example, a railroad or airline may find it less costly to supply both passenger and freight transportation than to specialize in the provision of only one transportation service.

Economies of scope exist in production, product development, and distribution. Most discussions of economies of scope have focused on production processes. Manufacturers may be able to lower their costs by producing a variety of different products on the same equipment (*e.g.*, using plastic injection molding equipment to produce garbage cans and towel dispensers). The added volume not only spreads fixed costs, thus lowering average total costs, but it may allow the firm to employ different equipment that has lower variable costs.

Economies of scope in product development

have received less attention, but they may be significant. When common science, equipment, and know-how are used to develop two different products, both average variable costs and average fixed costs may be reduced by expanding the scope of research and development efforts. In particular, common "core competencies" that link products that are developed at different points in time may create economies of scope. A common science, for example, may link the development of pharmaceuticals that address different diseases. Similarly, in the defense industry, significant economies of scope are often associated with the use of specific high-technology know-how, such as laser technology, to develop defense systems that address different needs.

Economies of scope may also exist in distribution. A firm that has established a warehouse infrastructure to distribute one type of product may be able to reduce its distribution costs by expanding the types of products it carries in inventory. Similarly, a firm such as a supplier of grocery products with a sales force that calls on particular types of customers may be able to lower per-unit sales costs by adding products to its product line.

The existence of economies of scope may allow competitive discipline in a market in which a merger yields significant economies of scale. To the extent that economies of scope create well-positioned potential entrants, a post-merger price increase can

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be prevented. The merger of two leading producers of plastic trash cans, for example, may allow the producers to realize efficiencies by shutting down an older injection molding plant and increasing the capacity utilization at a more modern facility. Even if this merger were to raise concentration significantly, it would not lead to post-merger price increases if numerous firms could divert their modern injection molding capacity into the production of plastic trash cans. Under the Merger Guidelines, these alternative suppliers would be viewed as competitors in the "trash can market" if entry could be accomplished very quickly and with little incremental sunk expense. If their entry would take more time and incremental sunk investment, they would be viewed as potential entrants.

When significant economies of scope exist and the incremental costs associated with moving across product markets are low, a firm that does not currently produce a particular product may even exert more competitive pressure on the leading suppliers of a product than the "fringe" suppliers that already supply the relevant product. This could occur if the leading suppliers of related products have a cost structure that is more competitive than that of the existing

"competitive fringe." Of course, crossing markets may not be low cost, or fringe competitors may be able to serve the relevant market at comparable costs even though they are operating at a much smaller scale.

Mergers that are motivated by a desire to reap the benefits of economies of scale can occur in market contexts where barriers to entry are low. In particular, in markets where there are potential entrants who have "core competencies" and physical assets that make entry without significant incremental investment in sunk costs easy, merging firms may be able to benefit from the exploitation of economies of scale but still face potential competition from potential entrants that can exploit economies of scope. As a result, contrary to some "accepted wisdom," it may not be inconsistent to argue both that a merger enhances efficiencies and that entry into the relevant market is easy.

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CONSUMER BENEFITS OF ADVERTISING

Advertising is always under attack—by politicians, by so-called consumer advocates, by hostile academics and even by business leaders who want less competition. All argue that advertising has so much power that its natural tendency is to distort consumer choices and worsen markets, and that the solution is vigorous regulation or even ad bans.

These critics are mistaken. Three decades of research have shown that the starting point in understanding how advertising works is not the power of mass persuasion but the implacable skepticism of consumers. Ads represent the seller's self-interest; consumers know this, and sellers know that consumers know it. The most important effects of advertising are completely different from the dominant perceptions among politicians, activists, journalists and even the well-informed public. To a degree little appreciated outside the regulatory community, the new thinking about advertising has taken root in the staff of the Federal Trade Commission, and it is starting to spread to portions of the European Union.

Three broad findings from research on advertising

stand out. First, advertising's ability to improve consumer welfare is much greater than is generally realized. As a market-perfecting mechanism, advertising arises spontaneously to attack serious defects in the marketplace. Advertising is therefore an efficient and sometimes irreplaceable mechanism for bringing consumers information that would otherwise languish on the sidelines. This has been demonstrated over and over again. Advertising for eyeglasses generated lower prices without sacrificing quality; advertising for attorneys did the same. Health claims for foods brought better consumer information, wiser consumer choices, improved products and even new research on nutrition.

The second finding is that competitive advertising is fundamentally a self-correcting process. Much of the credit goes to two of advertising's most unjustly maligned features: the highly incomplete bits-and-pieces nature of the information in advertising, and "less-bad" advertising with its focus on what is wrong with the competition. These make for quick competitive attacks and rapid responses, all before

the watchful eyes of the skeptical consumer. The upshot is that competitive dynamics in advertising generate markets in which information is richer and more fundamentally balanced than can be achieved through detailed controls over advertising and information. One of the best-documented examples is the brutally competitive cigarette advertising of the 1950s that raced far ahead of government and public health authorities in alerting consumers to the dangers of smoking. Without intending to, advertising actually encouraged smokers to quit. It was a series of misguided regulatory interventions, not industry self-interest or conspiracy, that transformed cigarette advertising into the images of sweetness and light taken for granted today. Less spectacular episodes of self-correcting market dynamics occur every day as sellers try to build brand share by telling consumers what is wrong with other products.

Ad bans, on the other hand, utterly fail their ostensible purposes. Whether the topic is price claims, prescription drugs, health claims for foods, or ads directed at children, prohibitions on advertising have been relentlessly anti-consumer. Prices of just about everything are higher when price advertising is suppressed. Consumers know less about nutrition when food sellers cannot mention disease, and they know less about potent pharmaceuticals when advertising goes only to doctors. New toys are rarer and more expensive in Greece and Sweden, where advertising to children is banned.

Finally, research has shown that consumers have an enormous stake in the freedom to advertise. Competitive advertising is stacked in favor of the consumer's interest, and the regulatory system is

stacked against it. This is not because regulators, politicians and advocacy groups lack wisdom or goodwill. Over-regulation arises inevitably from the odd collision between advertising's indirect effects and the modern apparatus of the state. The evidence demonstrating a general condition of over-regulation is now overwhelming, and is particularly obvious when one compares consumer information and choices in nations with and without the more stringent forms of advertising regulation.

The modern regulatory state makes it nearly impossible for vigorous advertising to avoid offending political authorities, including authorities whose influence over a line of business is so direct that wise business executives will decline to challenge advertising restraints at all. Often, commercial speech evokes a potent political response normally reserved for disputes over political power. The parallels between advertising and political speech are surprisingly close. The only way to guarantee that public comment and advocacy will provide a political system eager to please citizens rather than rulers is to remove political speech from regulation altogether. The same lesson applies to advertising. An unmistakable and unassailable protection for reasonably construed, truthful advertising is a minimum condition for more efficient and more beneficial consumer markets.

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COMPETITIVE ISSUES IN ELECTRIC-GAS MERGERS

The most interesting of the competitive concerns that have been raised by convergence mergers between electric and gas companies, and the one that the Federal Energy Regulatory Commission (FERC) has recently evaluated in connection with several of these mergers, involves what has come to be called vertical market power. This concern focuses on the relationship between upstream markets for transportation of natural gas, which is used as a fuel to generate electric energy, and downstream markets for electric power.

Whether an electric-gas merger is likely to lead to vertical market power depends on how the merger

changes market shares and concentration for electric energy. An assessment of shares and concentration must take into account ownership of generating capacity and competitively significant control over the prices at which generating capacity owned by others would be dispatched. Concentration will tend to be higher when there are fewer owners of generating capacity. Likewise, concentration may be greater when there is common ownership of generating capacity and of gas pipeline capacity that serves competing generators.

More specifically, a vertical market power problem is more likely if, after acquiring a gas pipeline, an

electric utility would have the ability to increase the delivered price, or to influence adversely other supply conditions, for fuel to competing generators. A price increase is more likely if it is difficult for competing generators to connect to other pipelines with capacity to transport additional gas from competitively priced sources, or if the owners of alternative pipelines share the acquiring electric utility's incentive to raise delivered gas prices. Also, a price increase might be sustained if competing generators' costs would increase as a result of switching from gas to oil. The ability of the acquiring electric utility to influence fuel supply conditions for competing generators may be affected by regulation and existing contracts.

In its first two electric-gas merger decisions in 1997, FERC found that Enron/Portland General and Duke/PanEnergy would not have the ability to increase delivered fuel prices to competing generators, and hence the mergers did not raise vertical market power problems. FERC's finding in the Enron/Portland General case was based on Enron's pipelines being open access providers of transportation services with excess capacity, and on other pipelines in the market having excess capacity. In the Duke/PanEnergy case, FERC found no indication that the merged company would be able to raise delivered gas prices to competing generators because a sufficient number of alternative pipelines were capable of serving the merged company's current and future gas-fired competitors.

The magnitude of any vertical market power problem is also likely to increase with the extent of barriers to entry into generation and into pipeline transportation to electric generators. Entry conditions for upstream markets for gas transportation (or delivered gas) and downstream markets for electric energy provided one of the bases for FERC's adverse decision on the proposed merger of San Diego Gas & Electric (SDG&E) and SoCalGas. FERC found that the merged company could discourage entry by gas-fired generators by raising delivered gas prices and restricting access to delivered gas. FERC conditioned its approval of the merger on protections against discrimination and other affiliate abuses or, alternatively, divestiture of SDG&E's generating capacity.

FERC's decision on the SDG&E/SoCalGas merger is significant because it found a vertical market power problem and because it lays out a methodology for evaluating the competitive effects of electric-gas mergers. A conventional market share and HHI analysis for the relevant markets for electric energy can be adapted to analyze convergence mergers. Under the vertical competition theory, the

competitive significance of the acquiring electric utility in markets for electric energy can be measured by (i) its ownership of relevant generating capacity as well as its net intermediate and longer-term purchases of capacity and associated energy plus (ii) the capacity of competitors' plants, the variable costs of which the acquiring electric utility could increase by virtue of its ownership of the acquired gas pipeline. A similar "expanded" market share can be computed for other companies with both generation and pipeline assets. This methodology does not depend on an assumption that pipeline suppliers would have complete control over the generating plants they supply, or the same degree of control they would have if they owned the plants. Rather, the analysis addresses the ability and incentive to raise market prices for electric energy.

A refinement in FERC's methodology for assessing vertical market power is to consider the competitive alternatives for individual gas-fired generating units in the downstream market. Competitive conditions for different generating units may differ. Suppose generators in two markets for electric energy are supplied by six equal-sized gas transportation companies. In one market, each generating unit is located near a single pipeline controlled by one supplier. In the other, each generating unit is located near six independent gas pipelines. An electric-gas merger may have substantially different competitive effects in the two markets. In the first, a merger with a gas pipeline could give an electric generator competitively significant control over an additional one-sixth of the gas-fired generating capacity in the market. In the second, this probably would not be the case.

While the electric power industry is being transformed through changes in technology, regulation, and horizontal and vertical market structure, FERC has sought to increase the role of antitrust analysis in guiding the evolution of the industry. A year ago FERC adopted the Department of Justice and Federal Trade Commission Merger Guidelines as the approach it would take in evaluating the competitive effects of mergers. There have since been important changes in the way FERC has analyzed mergers, and further changes can be expected as FERC gains experience in applying antitrust analysis to this complex industry.

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