California Antitrust Law and Mergers

This study paper discusses the major policy issues raised by mergers and the implications for merger enforcement by the State of California. The discussion distinguishes horizontal and non-horizontal mergers and includes a section specifically devoted to the question of innovation. We note that at present the Cartwright Act, the key antitrust statute for the State of California, lacks a specific merger provision, although the state Attorney General's office has exercised enforcement powers under the Clayton Act both on national mergers as well as on mergers of state and local importance.

1. Background for Merger Enforcement

Federal antitrust policy with respect to mergers dates back to the Clayton Act of 1914, as amended by the 1950 Cellar-Kefauver Act. Section 7 of that Act prohibits mergers and acquisitions whose effect "may be substantially to lessen competition, or to tend to create a monopoly." Federal enforcement of Section 7 was initially concentrated in the Antitrust Division of the Department of Justice (DOJ), but the Federal Trade Commission (FTC), created in 1914, soon interpreted its mandate to prevent "unfair methods of competition" as granting it jurisdiction over mergers as well. At present both agencies enforce this statute, with specific investigations and cases decided on the basis of relevant expertise and available resources.

The other significant federal antitrust legislation has been the Hart-Scott-Rodino Act of 1976. This act established a mandatory prenotification process for mergers and acquisitions over a certain size (currently $111 million), a 30-day minimum waiting period before parties can consummate a notified merger, and a mandatory filing fee. Based on this threshold, in the most recent reporting period, more than 3500 mergers were notified to the federal agencies, although more typically the number has been closer to 2000. The 30-day waiting period is extended when the agency issues a document request and is paused until the parties' submission is judged complete. Until recently, the filing fees have been nominal, but with the passage of the Merger Filing Fee Modernization Act in 2022, the fee is now $2.25 million for mergers valued over $5 billion.

Many states in the U.S. are also active in merger enforcement. Most states have their own statutes that authorize their attorneys general to challenge business practices and mergers that may adversely affect competition or consumers in their jurisdictions. Many of these statutes mirror, or at least are based on, the federal antitrust laws. States can also challenge mergers under the Clayton Act. The extent of state level merger enforcement varies widely according to

statutory authority and available resources, among other factors.[1] Finally, there is the possibility of private merger enforcement.2

The operation and effect of the Clayton Act hinge on the interpretation of its key phrase: mergers that "may substantially [] lessen competition." The term "may" reflects the fact that most merger analysis is prospective in nature and therefore a matter of prediction. Certainty about effects is unattainable, and so the law requires only a lesser degree of probability.

On the other hand, the modifier "substantial" makes clear that not every lessening of competition warrants agency action. Indeed, the vast majority of mergers raise no competitive concerns and are allowed to proceed. Of the 2000 or so mergers typically notified to the agencies in recent years, the agencies conduct about 45 to 50 investigations. Of those, 40 percent are typically cleared and most of the remaining cases are resolved by agency consent orders or are simply abandoned or restructured by the companies in the face of agency opposition.[3]

To prevail in a Clayton Act case, a plaintiff must typically first establish a prima facie case that the merger is likely to substantially lessen competition. If the plaintiff can make such a showing, then the burden shifts to the defendant to rebut the prima facie case by showing that it inaccurately predicts the merger's probable effect on competition. [4] The stronger the prima facie case, the stronger the rebuttal evidence the defendant must present. [5] If the defendant meets its burden, then the burden shifts back to the plaintiff and merges with the plaintiff's ultimate burden of proof. In the decades after the 1950 amendments to the Clayton Act, the plaintiff's prima facie case was usually decisive, but since the 1980s courts have given defendants more opportunities to successfully present rebuttal evidence.

The precise purposes of the merger statutes have long been a matter of debate. The legislative histories of the Clayton and Cellar-Kefauver Acts make clear that one purpose involves the straightforward economic benefits of competition, such as consumer choice, business opportunities, and innovation. But the Congressional debate that preceded these statutes suggests that Congress also intended the antitrust laws to assist in protecting democracy, opportunity, and societal values from the threat perceived from the unchecked growth of trusts and by mergers that create dominant firms and monopolies.

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[1] For a recent discussion of the expanding role and capabilities of state enforcers, see Gwendolyn Cooley, "A Force to be Reckoned With: Developments in the Multistate Task Force," *CPI Antitrust Chronicle* (August 2023).

2 Private merger enforcement, unlike private conduct enforcement, is rare. The incentives for public and private merger enforcement are not always the same. Further, the Supreme Court addressed standing for private merger enforcement in Cargill, Inc. v. Monfort of Colorado, Inc., 479 U.S. 104 (1986) focusing on the need for antitrust injury.

[3] These data come primarily from John Kwoka, *Mergers, Merger Control, and Remedies: A Retrospective Analysis of U.S. Policy*, MIT Press (2015). Some data have been updated.

[4] *U.S. v. Baker Hughes* (D.C. Cir. 1990).

[5] *Id.*

Some of these broader purposes initially led to very aggressive enforcement of the statutes, even against mergers of modest size and economic significance. Many of these cases came to be viewed as excessive and even counterproductive, and in recent decades, the courts have focused on more specific economic harms from mergers and business conduct. This narrowing of enforcement has coincided with substantial increases in market concentration, the rise of dominant firms, and unusually high profit rates in the economy.

These changes have resurrected the debate over the purposes of antitrust and the effectiveness of merger policy. At present, there are three general camps of thinking. A free-market (Chicago) viewpoint argues that mergers are typically efficiency enhancing and therefore not problematic. It therefore cautions against aggressive enforcement. A centrist camp is more suspicious about the effects of mergers, expressing concern for both false positives and false negatives and undertakes an approach that finds more scope for intervention. A third, or "neo-Brandeisian," approach urges a more holistic view that expressly recognizes the political and social consequences of large firms and advocates a tougher merger policy that reflects all of these objectives. In many ways this "neo-Brandeisian" view has some points of intersection with antitrust as it was originally understood in the early decades after the New Deal, as noted above.

One important method for articulating policy and facilitating changes in policy over time has been the Merger Guidelines issued by the Justice Department and the Federal Trade Commission. The first set of guidelines was issued in 1968, then updated substantially in 1982, 1992, and 2010. The stated purpose of the guidelines has been to explain the analytical process and substantive standards used by the agencies to evaluate horizontal mergers. Accordingly, each iteration of the guidelines has retained some elements of its predecessor but also included new substantive or procedural factors.

Most recently, concern that the 2010 Merger Guidelines might be inadequate prompted the FTC and Justice Department to undertake a revision. That process has resulted in the issuance of new guidelines that differ from the preceding version in a number of important ways. For example, they address several issues neglected in past guidelines, such as platform mergers, mergers eliminating potential competition, and mergers that adversely affect worker wages. They generally strive to strengthen the standards for evaluating mergers that increase concentration and limit claimed benefits that generally do not manifest themselves. And they broaden their reach to include vertical and other mergers as well as the horizontal mergers that were the sole focus of earlier versions. Notably, the new guidelines rely more on the theme of "lessening competition" than on the language in the 1982, 1992, and 2010 guidelines, which emphasized market power and its exercise.

The Merger Guidelines are not regulations, much less legislation. They influence policy through their ability to explain to businesses, the public, and most importantly the judiciary, the application of sound analytical techniques and appropriate standards for assessing the competitive effects of mergers. By this metric, they have been reasonably successful since

mergers are generally viewed through the lens of the guidelines. That said, there are not infrequent and sometimes quite important divergences in interpretation and application of the guidelines. It remains to be seen how courts might respond to the new draft guidelines given their greater emphasis on market concentration.

We now turn to some issues specific to horizontal mergers, non-horizontal mergers (including vertical), and innovation, in that order.

2. Horizontal Mergers

Broadly speaking, horizontal mergers combine companies that operate in the same market. As a consequence, such a merger eliminates one independent company, increases measured concentration, and may under some circumstance substantially lessen market competition. Horizontal mergers are very common in the United States,[6] but most of these mergers occur in sufficiently competitive markets so that they do not by themselves pose a significant risk of diminishing competition. The fact that some might do so, however, has prompted longstanding efforts to identify and prohibit competitively problematic consolidations.

A horizontal merger can harm consumers and competition in several ways. Perhaps most obviously, by reducing the number of significant competitors in a market, such a merger can increase the likelihood of coordination among the remaining firms. Competitor numbers matter since arriving at and adhering to an agreement is easier when there are fewer firms that need to be on board. Coordination, with resulting harm to consumers or businesses, might occur with respect to price, service, capacity, innovation or any other dimension on which firms in a particular market vie for customers. Coordination might be explicit, such as in an actual cartel, or it may be subtle and indirect (tacit), reducing the strength of competition in various ways. From an enforcement point of view, one challenge is to be able to identify what merger or what number of firms represents the critical value as which competition is likely impaired.

In addition to facilitating coordination, horizontal mergers can have other anticompetitive effects. A second recognized theory of harm involves so-called unilateral effects. These typically arise in cases of differentiated products, where the acquisition of the producer or seller of a substitute good permits the acquiring company to recover some of the sales (and profits) that it would otherwise lose to that competitor by simply raising its own price. The possibility of recoupment sales and profits in this manner enhances the value—and therefore the likelihood—of the merged firm raising price or reducing quality or effort directed to innovation. This scenario is called unilateral effects because the price rise does not require cooperation from any

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[6] Ten years ago, it was estimated that there were nearly 10,000 mergers annually in the U.S. with valuations in excess of one million dollars and undoubtedly many more below that threshold (Thomson Reuters Mergers and Acquisitions, 2014). The largest mergers have always been far in excess of that size, most recently exceeding $100 billion.

second firm: the mere fact of consolidation alters incentives in a way that makes the increase in price predictable.

Harmful effects from horizontal mergers can take other forms as well. Some mergers can have the effect of raising barriers to new entry or to expansion by smaller rivals. They may do so by consolidating control over some important asset (including data), by raising the amount of financial capital required for entry, or by tying and bundling goods and services in ways that create impediments to entry. Some such mergers may extend the market power of the acquiring firm into related markets. Some of these scenarios will be discussed in the next section on non-horizontal mergers.

While these are the principal mechanisms of harm, horizontal mergers often arise in settings that require distinct methods of analysis. One important example concerns mergers that eliminate a potential entrant into a market. These can relax a constraint on incumbent firms or prevent future de-concentration of a market. Mergers that eliminate a potential competitor are quite important but can present difficult enforcement challenges due to the inherent uncertainty about future evolution of the market.[7]

A second scenario involves mergers that create monopsony power, that is, buyer power that reduces the price paid to sellers of inputs below the competitive level. Important examples of this are the prices paid to labor services and agricultural products by large, merged buyers. Concern over wages and working conditions that may be adversely affected by a merger is analogous to the possibility of price increases but requires distinct analytical methods.

A further case includes platform mergers, mergers involving two-sided markets, zero-price products, and mergers for data acquisition. These raise distinctive and often difficult issues beginning with market definition and extending through identification of the exact competitive harm, but they have taken on greater importance in the modern digital economy.

The new merger guidelines also highlight serial mergers that affect an entire industry even though no single merger triggers substantial concern, mergers that enhance a trend toward concentration in an industry, mergers that are "diagonal" as described below, and mergers that involve partial ownership or minority interests. These are intended to ensure that the new guidelines cover gaps that have emerged in prior enforcement. However, economic evidence on the effects of these types of transactions can be more difficult to obtain compared to evidence for traditional horizontal mergers.

As described in the Merger Guidelines, the enforcement agencies employ various means of determining whether a particular merger in fact raises any of these concerns. Since most merger

[7] Uncertainty can be less of an obstacle to enforcement in industries such as pharmaceuticals and agricultural chemicals for which entry requires demonstrations of safety and effectiveness, which, having been established, make entry more likely.

reviews are prospective in nature, these inevitably involve some degree of uncertainty and the possibility of inaccuracy in their predictions. In practice, the agencies rely heavily on documents, data, depositions, economic models, empirical testing, and comparable experiences to arrive at their conclusions about a particular merger. In some cases where there is good evidence of a general effect, the agencies may apply presumptions based on that evidence to arrive at well-founded conclusions applicable to specific cases.

Mergers and acquisitions can also result in efficiencies and other competitive benefits. Companies can sometimes better achieve economies of scale or scope or be able to offer a better quality product as a result of a merger or acquisition. Consolidations that lower costs (especially marginal costs) or increase demand (e.g., due to improved quality) are viewed as having potentially offsetting benefits that need to be assessed in merger review. In yet other circumstances, merger can facilitate learning by doing and knowledge transfers, mitigate the concern that rivals might copy innovations without compensation, allow parties to lower inventory costs by coordinating purchasing decisions, promote investment coordination, or enable R&D synergies. There is considerable debate about the likelihood and magnitude of these benefits. Some evidence suggests efficiencies are much less often realized ex post than claimed ex ante, while others point to examples where they have in fact materialized.

Agencies attempt to resolve these competing factors by setting out criteria for efficiencies that deserve consideration. In addition to being narrowly tailored, efficiencies must be (1) merger-specific, that is, not achievable by less anticompetitive means such as contracting, (2) verifiable by some recognized and objective methodology, and (3) passed through to consumers and not just to increases in firm profits.

Two other factors may offset concern over competitive harm from horizontal mergers. One is the possibility of entry that might occur and thereby constrain the merged firm. Much as with efficiencies, merging parties often makes such claims in order to absolve their merger of competitive concern. Here, too, the agencies have set out criteria for any claim of easy entry to be considered. They are that the claimed entry must be sufficiently rapid (within one year), sufficiently likely based on post-entry profitability, and sufficiently large, strong, and durable to replace the otherwise lost competitor.

The final mitigating circumstance is the unusual case in which the target firm of an acquisition is viewed as failing and therefore in danger of exit without rescue by the acquiring firm. A corollary scenario is when the firm is "flailing" but perhaps not yet quite failing. These scenarios require careful evaluation of the firm's financial condition.

In the past the agencies have often resorted to remedies in an effort to resolve their concerns with the competitive effects of a merger without having to litigate. A common example would be a merger of two companies, each of which operates numerous divisions with distinct products. If the competitive concerns involve only one or a few such products, the companies could be required to divest one of their overlapping product operations but then be permitted to

consummate the rest of their merger. This could in principle preserve the same number of independent producers of that one product and thereby resolve the competitive issue, but only if the appropriate assets are divested and to a competent buyer, among other conditions.

A different type of remedy would permit the entire merger but then impose conditions on the merged firm's behavior. These conditions might involve be requirements to continue to supply independent producers of now-competing products, or prohibitions on certain conduct, such as conditioning access to a necessary input on purchase of another. These behavioral type remedies have been widely criticized since they require companies to act against their own interests and assist firms that are now direct competitors. It is often difficult to write rules that are effective and enforceable in the face of such incentives.[8]

Based on experience and evidence, both the Federal Trade Commission and the Justice Department have recently announced that they will seek to avoid relying on behavioral remedies and use divestitures only in limited circumstances.

3. Non-Horizontal Mergers

Non-horizontal mergers involve firms in adjacent or unrelated markets. We distinguish three principal types of mergers that are non-horizontal:

1. Vertical mergers. The traditional vertical merger is one between a downstream firm which produces some final good and an upstream firm which supplies some input necessary to the production of the downstream good. A PC manufacturer might merge with a chip manufacturer.

2. Mergers of complements. Two firms that produce complementary goods—goods that often go together in useful ways to customers—might merge and then offer that combination to customers. For example, a bagel producer might acquire a cream cheese company.

3. Diagonal mergers, like vertical mergers, combine firms at different stages of production, but in this case the firms are in the production chain of competing firms. One example might be a laptop manufacturer purchasing a supplier of an input into mobile phones.

This variety of types of mergers—all non-horizontal—is matched by the variety of types of pro and anticompetitive effects, as we shall now describe. We begin with a discussion of these effects in the case of a conventional vertical merger.

[8] J. Kwoka, *Controlling Mergers and Market Power*, 2020.

A. Potential Impacts of Vertical Mergers

There are two categories of efficiencies from vertical mergers that are commonly cited. Perhaps the more frequent is termed the elimination of double marginalization (EDM), and its ultimate effect can be, under some circumstances, to lower the final good's market price even as it raises the merged firm's profits. EDM is present in the classic examples involving a merger between one upstream and one downstream firm, each with market power. Assume that each firm uses a fixed proportion production technology (that is, one-to-one, as with a retailer of an item sold to it by a manufacturer) and further assume that the price of the intermediate good is sold as a single price (that is, no lump sum or other non-linear prices). Contrast the cases when the two firms are independent vs. when they are integrated.

When the firms operate independently, each seeks to maximize its own profit and raises price above its cost. But that implies that when the manufacturer charges consumers a price above its cost, it is marking up not only the true economic cost of the input but also the initial markup imposed by the monopoly input supplier. This phenomenon is known as double marginalization. If the firms were to merge, the input is no longer actually "supplied" by an upstream monopolist at an elevated price. Rather the downstream manufacturer—now integrated with the supplier—treats the input as an ordinary input acquired at its lower economic cost. That lower cost provides an incentive for the integrated firm to produce more output, thereby lowering final product price even as the firm itself benefits from greater profit.

It should be noted that this win-win scenario, however appealing, is attenuated or even absent in more common cases involving non-monopolists, or when it is possible to substitute away from the input in question, or when nonlinear prices can be used, or when there are multiple products by the downstream manufacturer, or when there are limitations on pass-through. In addition, to the extent that the parties can achieve much the same result simply by a contractual arrangement, the argument regarding EDM carries little policy weight.[9] It is as a result difficult to draw general conclusions about the frequency and significance of EDM.

A second important source of economic efficiency from vertical integration is the avoidance of the natural friction that occurs when independent firms must coordinate their operations in some fashion to produce and deliver their goods to market. This phenomenon occurs in many forms, but some of the more common examples include intra-firm communication, resource planning, and product development. Integrating such related firms can be an effective solution to reducing these sorts of frictions.

Consider, for instance, two firms which produce products that must be used in combination for a final product valued by their consumers, e.g., eyeglass frames and lenses. Suppose also that each company must at the outset independently determine and commit to its production levels well in advance. Without perfect coordination and since their products are of no value without the

[9] J. Kwoka and M. Slade, "Second Thoughts on Double Marginalization," *Antitrust*, 2020

other's, the firms may inadvertently produce different quantities, resulting in excess inventory and costs at one of the stages. A merger then between two such firms would help coordinate production, offering one remedy to this problem. To be sure, this can also be achieved through contracting between the companies.

Contracting is less likely to be effective in certain other cases. In conventional steel-making for example, the transfer of molten steel from one stage to another cannot realistically be managed through contracting and so integration is common. Indeed, most manufacturing processes can be thought of as efficient linking of successive stages into internal organizations that are more efficient than reliance on market transactions.[10]

In other cases, vertical mergers may be a superior alternative because they can avoid holdup that can occur in market contracting when parties make investments that are specific to a relationship, with resulting adverse incentive effects for investment.[11]

However, vertical mergers also can be inferior to reliance on market contracting because they create frictions from internal bureaucracy and the parties to the merger can have misaligned objectives or incompatible capabilities. An example of the latter is the merger of AT&T and Time Warner, which unraveled at a substantial loss three years after it won court approval.

On the other hand, vertical mergers have the potential for anticompetitive effects in addition to their possible efficiencies. Their anticompetitive effects stem from the fact that vertical mergers can be a mechanism for gaining and exercising horizontal market power. Here we discuss the principal ways in which they can do so.

Under certain circumstances a vertical merger can provide the integrated firm with opportunity to raise its rivals' costs (RRC), the direct outcome of which would be an increase in the market price of their goods. This phenomenon occurs when by integration the merged firm gains control over an input required by a competing non-integrated rival. Control over that input allows the integrated firm to raise its price or degrade the input required by its rival. The rival's operation is thereby compromised, and its competitive effect diminished. This in turn allows the integrated firm to raise the price of its own product or reduce its quality and harm consumers as well as the targeted firm, of course.

Two variations on RRC are noteworthy. First, while the above example focused on access to a needed input, it is equally possible that a firm at one stage handicaps an upstream firm by denying it access to needed downstream assets. Examples might be an upstream firm that needs a distribution system or other means of accessing customers themselves. Second, an extreme

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[10] Ronald Coase, *The Nature of the Firm*, 4 Economica 386 (1937); Oliver Williamson, Markets and Hierarchies: Analysis and Antitrust Implications (1975).
[11] Williamson, ibid; Oliver Hart & John Moore, *Property Rights and the Nature of the Firm*, 98 J. Pol. Econ. 1119 (1990).

version of RRC is outright foreclosure. This occurs when the integrated firm ceases to supply at any price the needed input (or downstream service), and thereby fully eliminates the rival. While this is less frequent, the term "foreclosure" is often used to describe RRC as well.

Vertical mergers can pose additional competitive concerns. Merging with a firm in a related stage of production can provide the newly integrated firm access to data and other information about its rivals that it would otherwise not have. For example, by merging Ticketmaster gained access to customer information about venues that gave Live Nation operations a competitive advantage. A vertical merger also can pose an increased barrier to entry at either stage of production. This may result from the simple fact that a potential entrant might now have to enter both stages of production in order to be able to offer customers a fully competitive alternative product or service.

As with vertical integration efficiencies, the magnitude or even the presence of these anticompetitive effects depends on many factors, including competition that might exist at different levels of the supply chain, the availability of substitutes, and the use of nonlinear pricing.

Which of these pro or anticompetitive effects from a vertical merger dominate is not often immediately apparent. Empirical literature finds that the balance very much depends on the context of a given merger, rendering strong presumptions difficult.[12] The new Merger Guidelines have nonetheless articulated some broad criteria.

B. Other Non-Horizontal Mergers

We conclude this section with a few comments about two other types of non-horizontal mergers, namely, complementary and diagonal mergers. These have attracted greater attention as a result of the acquisition activities of large firms like Alphabet (Google), Amazon, Apple, Meta (Facebook), and Microsoft, which have collectively acquired more than 900 companies in a wide variety of businesses that include such types of mergers.

Complementary mergers involve acquisitions of products or services that customers value when supplied as a bundle.[13] Customers often view such bundles as superior to having to assemble (e.g.,) audio systems part by part. Similarly, seamless integration of software provides customers with ease of startup and use.

At the same time, mergers with complementary products and the resulting integration can serve to exclude independent sellers, such as suppliers of audio components or software in the above

[12] Francine Lafontaine and Margaret Slade, Presumptions in vertical Mergers: The Role of Evidence," *Review of Industrial Organization,* 2021.

[13] The bundle could be separate products, such as shampoo and conditioner, or integrated, such as a browser that is embedded with an operating system. Technically, two products are complements if an increase in the price of one of the products reduces the demand for the other product. Conversely, products are substitutes if an increase in the price of one of the products increases the demand for the other product.

examples. Such integration can also serve to ensure the dominant market position of a core product or service, as alleged in the current DOJ case against Google's payments to Apple and other companies for default installation of its search engine. In the case of Apple, the complementary services are the iOS mobile operating system and the search engine. These tying and bundling practices are coming under greater scrutiny, especially when undertaken by the major tech companies. They raise challenging issues in economics and the antitrust law.

The term "diagonal merger" is sometimes applied to what was just termed a complementary relationship, for example, when a manufacturer acquires a company that services its product. The two companies operate at different stages of production, but one is not a necessary input into the other (though, as with complementary products, customers may view them as useful together). More insidious is the case where a company acquires a business important to its direct rival but not useful to its own. For example, if a glass bottle manufacturer were to acquire an aluminum fabrication plant key to producing aluminum cans that clearly compete with glass bottles, that would raise obvious competition concerns.

4. Innovation

Innovation occupies an increasingly important place in the U.S. economy, and a correspondingly important place in antitrust policy. Antitrust authorities routinely allege that mergers in high-technology markets would harm innovation by combining firms that are likely innovators.[14] However, antitrust authorities have been slow to describe innovation concerns in their merger guidelines. In this section we provide an overview of the special role of innovation in merger enforcement.

A. Mergers and Innovation

There are several ways in which a horizontal merger (or acquisition) might harm innovation by reducing incentives to innovate. The surviving company might choose to abandon one of the parties' R&D programs. Eliminating one would-be innovator would reduce the number of innovation rivals. That might itself lower the probability that someone will succeed or at least prolong the period until someone succeeds, and it might reduce the competitive incentive that the other firms would otherwise have to innovate.

For several reasons a merger also could suppress innovation incentives even if it did not eliminate an R&D program. First, post-merger each division of the merged company has a lower incentive to innovate because successful innovation by one division reduces the expected value of R&D for the other division. Second, conditional on no innovation by a rival, the merger lowers each division's incentive to innovate because doing so would take sales from the other

[14] See Richard J. Gilbert & Hillary Greene, Merging Innovation into Antitrust Agency Enforcement of the Clayton Act, 83 GEORGE WASHINGTON L. R. 1919 (2015) (antitrust authorities allege harm to innovation in over 90 percent of challenges to mergers in high-technology industries).

division. Third, a merger would lower each division's incentive to innovate as a consequence of the Arrow replacement effect[15] if the merger increases the profits from existing products that are at risk from innovation.

There are, of course, potential counter-acting merger effects. A merger can increase the ability of the combined firms to innovate by combining complementary factors of production. (A merger also can increase the profit from innovation, and thus the incentive to innovate, by reducing post-innovation competition, but agencies are unlikely to credit this effect as a merger benefit.) A merger also can increase the incentive to innovate if the merged firm can benefit from technological spillovers. Technological spillovers allow a division of a merged firm to profit by exploiting an innovation by a different division, thereby increasing the payoff from the innovation. Technological spillovers also can allow each division of the merged to benefit from knowledge acquired by the other division.[16] Furthermore, with imperfect intellectual property rights, a merger might increase R&D investment incentives by reducing the number of rivals that can copy successful innovation or otherwise access valuable intellectual property without compensation. Moreover, under some conditions, market power increases the incentive to innovate if, by doing so, a firm can defeat the threat of rivalry and maintain its market power.[17]

In recent years, both US antitrust agencies have regularly included allegations of harm to innovation in mergers in high-tech industries along with more traditional allegations of price effects[18], but innovation has been central to outcomes or remedies in only a few of these cases.[19] By contrast, the European Commission has recently challenged transactions or pursued remedies based primarily on innovation concerns. Prominent examples include the proposed merger of Dow and DuPont in 2017 and the merger of Bayer and Monsanto in 2018.

A vertical merger can also raise innovation concerns by foreclosing access to or raising the cost of important products or services. The products or services that are foreclosed or whose cost are increased might be inputs to the activity of R&D, markets for the sale of products or services that result from the R&D, or services such as distribution networks that facilitate access to downstream markets. A vertical merger can reduce the ability of competitors of the merged firm to innovate if it restricts the competitors' access to or increases the costs of needed R&D assets. A merger that limits the market available to potential innovators of complements for the

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[15] The economist Kenneth Arrow observed that a monopolist's incentives to innovate are diminished because innovation will take away from its existing profits.
[16] For a comprehensive discussion of possible merger benefits for innovation, see Pierre Régibeau & Katharine E. Rockett, Mergers and Innovation, 64 ANTITRUST BULLETIN 31 (2019).
[17] Richard Gilbert & David Newbery, Preemptive Patenting and the Persistence of Monopoly, 72 AMER. ECON. REV. 514 (1982); but see Jennifer Reinganum, Uncertain Innovation and the Persistence of Monopoly: Comment, 73 AMER. ECON. REV. 741 (1983) for analysis of the effects of uncertainty on incentives for preemptive patenting.
[18] See Gilbert & Greene, note 11 *supra*.
[19] See Richard J. Gilbert & Willard K. Tom, Is Innovation King at the Antitrust Agencies: The Intellectual Property Guidelines Five Years Later, 69 ANTITRUST L. J. 43 (2001).

foreclosed products or services can reduce rivals' incentives to innovate because scale is an important determinant of the value of an innovation.

A vertical merger also has potential benefits for innovation. The merger might promote innovation incentives for investments that are complements. This is similar to the output-expanding effect when a merger of complements eliminates double-marginalization in price-setting. Moreover, a vertical merger might increase the merged firm's ability to innovate by, for example, facilitating the merged firm's detailed knowledge about the product market. Furthermore, as with horizontal mergers, a vertical merger can internalize technological spillovers and might increase the ability of the merged firm to appropriate the fruits of its innovation and thus its incentive to innovate.

US antitrust enforcers have challenged several proposed vertical mergers based at least in part on concerns about adverse effects for innovation. More recently, the FTC challenged the proposed merger of Illumina and Grail.[20] Illumina is the dominant manufacturer of advanced gene sequencing tools. Grail and others are developing tests that would use Illumina's gene sequencing tool to screen blood samples for early detection of multiple cancers. The FTC alleged that the merger would diminish innovation and potentially increase prices and reduce the choice and quality of multi-cancer early detection tests. An Administrative Law Judge rejected the FTC complaint, but that decision was reversed by the full FTC whose decision was upheld by the Fifth Circuit. The companies have abandoned their transaction.

B. Innovation and the Merger Guidelines

As noted, for decades merger policy evolved with little mention of possible effects of mergers on innovation incentives.[21] It was not until the 1992 revision of the Merger Guidelines, nearly eighty years after the Clayton Act was enacted, that the guidelines first mentioned harm to innovation as a potential consequence of a merger. The antitrust agencies finally gave prominent attention to innovation concerns in their 2010 revision of the *Horizontal Merger Guidelines*. Those Guidelines begin a section entitled "Innovation and Product Variety" with the statement that:[22]

> Competition often spurs firms to innovate. The Agencies may consider whether a merger is likely to diminish innovation competition by encouraging the merged firm to curtail its innovative efforts below the level that would prevail in the absence of the merger. That curtailment of innovation could take the form of reduced incentive to continue with an existing product-development effort or reduced incentive to initiate development of new products.

[20] U.S. Federal Trade Commission, In the Matter of Illumina, Inc. and Grail, Inc., Docket No. 9410, Complaint (March 30, 2021).

[21] See, generally, Richard J. Gilbert & Hillary Greene, Merging Innovation into Antitrust Agency Enforcement of the Clayton Act, 83 GEORGE WASHINGTON L. R. 1919 (2015).

[22] U.S. DEP'T OF JUSTICE & FED. TRADE COMM'N, HORIZONTAL MERGER GUIDELINES (2010) at §6.4.

The 2010 Guidelines describe an analytical methodology to evaluate innovation incentives that parallels their analysis of unilateral price effects. Specifically, they note that "The Agencies evaluate the extent to which successful innovation by one merging firm is likely to take sales from the other"[23]; i.e., the diversion of sales between the merging parties from innovation. The 2010 Guidelines also recognize the potential for efficiency benefits from combining R&D programs.

The new Merger Guidelines recently issued by the Agencies make frequent reference to the potential for mergers to harm competition by suppressing innovation. An appendix that deals with evaluating competition between firms includes a separate section that expands on the unilateral effects analysis of innovation in the 2010 Merger Guidelines. It also describes a possible product market focused on new products that might result from future innovation. The draft does not, however, specifically describe an R&D or innovation market focused on innovation capabilities such as that described in earlier Intellectual Property Guidelines published jointly by the DOJ and the FTC.

C. Concluding Remarks

An innovation theory of harm is not necessary in order to challenge mergers that would otherwise violate the antitrust laws. However, in many situations, an innovation theory of harm would be an important complement to more traditional antitrust concerns and, in a few cases, might be the central determinant of antitrust liability. This is especially likely where more traditional theories of harm are problematic or where transactions pose an acute harm to innovation. That might be the case where, for example, products in the relevant market are sold for a zero monetary price and even quality-adjusted price effects are difficult to show or if the merger would give the merging parties a monopoly or near monopoly over relevant R&D capabilities.

4. Merger Enforcement at the State Level

The states have long been involved in antitrust matters, even predating the federal role. Almost all states now have statutes that specifically authorize their Attorneys General to address anticompetitive business practices and consolidations. The Antitrust Task Force of the National Association of Attorneys General coordinates individual state activities on matters of common interest. The states, individually or in ad hoc groupings, engage with the FTC and DOJ on matters that might originate with either, but are of concern to both the states and federal agencies.

[23] Id.

The comparative advantage of the states lies in several areas. The states often have superior information about mergers and practices that affect commerce in their jurisdiction simply by virtue of their natural field of vision. Their knowledge of local businesses, their practices, and key individuals is often better than the FTC or DOJ, and indeed, the federal agencies not infrequently request information and assistance from the state agencies. The states may also assess issues -- or their stake in the issues -- differently, and as a result choose to expend resources to be sure these are conveyed to the federal agencies.[24]

A further source of state advantage may arise with resources. The resource constraints impinging on the FTC and DOJ may result in some matters that do not get the full inquiry they deserve without assistance from the states. This rationale can overlap with the states' comparative advantage in terms of local information or friendliness of home state courts that might otherwise be less open to a federal only led case. A final rationale for state involvement is purely mechanical: The federal HSR filing thresholds are sufficiently high that smaller mergers with significant local implications may not be notified to the FTC and DOJ, and as a result may not get much or any attention.

Several states have notification statutes for certain types of mergers -- notably, in the health care sector. Their local contacts, their receptivity to affected parties, and their generally better information all serve to help identify matters that might escape federal attention. The states have been quite active in specific areas that reflect these considerations.[25] These areas include health care (hospital mergers, physician-hospital consolidations, etc.) and local retailing (department stores, supermarkets, etc.), as well as national mergers with substantial local implications (airlines, wireless carriers). Some states have developed considerable expertise in areas of special local importance, such as agriculture or oil and gas production and distribution. Looking ahead, one might anticipate greater state involvement in the local labor market implications of hospital, retailing, and other mergers.[26]

The precise role of the states is nonetheless a matter of on-going discussion. Among the long-debated issues is the concern that state authority together with federal authority over mergers can impose excessive burdens on companies. The dual enforcement layers, any differences in investigational and analytical approaches, and standards that are possibly not entirely consistent all may lead to unnecessary costs and complexity.[27] This is of course a logical possibility and there are undoubtedly examples that fit and do not fit this description.

[24] This has notably been the case with several airline mergers, Ticketmaster-LiveNation, and any number of hospital and health care sector mergers.
[25] For a fuller description, see Elizabeth Odette, Recent Legislative Developments in State Antitrust Enforcement, *CPI Chronicle* (2023).
[26] This would not be entirely new since California and possibly other states have for some time investigated local labor market issues.
[27] See, for example, Sarah Melanson and Megan Yeates, "The Risks of Requiring California-Specific Merger Approvals."

On the other hand, the states and federal agencies have sought to address this concern. Both the FTC and DOJ have senior staff with relevant state experience serving as liaison with the states. The states and federal agencies also have established a formal Protocol for Coordination in Merger Investigations[28] covering a range of issues that arise in the course of joint investigations. These include the confidentiality of documents and engagement with the merging parties, as well as the conduct of joint investigations and settlement discussions.

A second issue that has prompted discussion concerns the coverage and specificity of state statutes. This applies in the case of California which finds itself without explicit statutory basis for challenging mergers using state law.[29] The Cartwright Act's prohibition on "trusts" has been held not to cover mergers, since a merger creates a single consolidated entity rather than multiple "trusts" or firms of any kind. The Unfair Competition Act's ban on "any unlawful, unfair, or fraudulent business act or practice" has been used to challenge mergers primarily in instances where there has been an unfair business practice. Most state actions against mergers in California have arisen in the context of specific industries such as utilities, insurance companies, and the health care sector generally, where state regulations form the predicate for possible actions.

The lack of a specific state merger statute does not prevent state attorneys general from challenging mergers relying on the Clayton Act. They do so, sometimes in conjunction with the federal agencies (as already noted) but sometimes independently. Adding language to, say, the Cartwright Act specifically directed at merger enforcement would permit any resulting challenge to be heard in state court, rather than federal court. A state court might bring superior information and perspective to some matters, and this venue might give the state added credibility. On the other hand, state-based merger challenges might raise issues of costs as well as consistency with federal standards.[30]

An additional matter under discussion is the recommendation of the Uniform Law Commission for a uniform state Antitrust Pre-Merger Notification Act.[31] This would standardize state notification requirements, which at present (and in some proposals) have different timelines and filing thresholds. It would also provide that merging parties filing federal HSR forms must also simultaneously provide those initial filings to the states, subject to the same confidentiality provisions where applicable. This act would improve state information about matters potentially affecting them, with little added expense to parties but potentially triggering the need for states to at least briefly review a large number of filings.

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[28] FTC, https://www.ftc.gov/advice-guidance/competition-guidance/protocol-coordination-merger-investigations.

[29] See Robert McNary, "Merger Enforcement," in Symposium on The California Difference, *Competition: The Journal of the Antitrust and Unfair Competition Law Section of the State Bar of California*, (2013). Also, ACPI Talks with California Attorney General Robert Bonta, *CPI Chronicle* (2023).

[30] At present the California Attorney General's office reviews only about five mergers per year, most of them in conjunction with the relevant federal agency.

[31] "Antitrust Pre-Merger Notification Act," draft, Uniform Law Commission, 2023.

5. Advantages and Disadvantages of Possible Reforms

There are several alternative policy measures that the CLRC might consider to address mergers and acquisitions, including, of course, the option of the *status quo*. As noted, one option is to amend California antitrust law to specifically address mergers and acquisitions. It is arguable whether such amendment is necessary given that California antitrust authorities can challenge mergers under the Clayton Act. On the other hand, such an amendment would allow antitrust cases to proceed in state courts and allow California judges to develop legal standards that differ from the federal standards.

A policy option noted above concerns notification requirements. There are conflicting objectives to harmonize requirements across state and federal jurisdiction and to require notification of transactions that fall below the current Hart-Scott-Rodino threshold of $111 million. Mergers and acquisitions below this threshold can pose significant harm to competition, but they are likely to avoid antitrust review if they are not notified. However, also as already noted, a lower reporting threshold could impose a large administrative burden on California's antitrust authorities. One alternative is for California law to impose a notification threshold that is significantly below the current H-S-R threshold but apply the obligation only to mergers and acquisitions that primarily affect commerce in California (such as a merger of physician practices or other health services).

Other policy recommendations would have broader, and consequently more speculative, impacts. Federal legislation has been proposed (but not enacted) that would amend the Clayton Act to replace the phrase "substantially to lessen competition" with alternative language that would raise the bar for potentially anticompetitive mergers and acquisitions. For example, the proposed Consolidation Prevention and Competition Promotion Act (CPCA) would amend the Clayton Act by substituting the language "to create an appreciable risk of materially lessening competition,'' which the Act defines as more than a *de minimis* amount. The Act also inserts "or a monopsony" after every instance of "monopoly" to emphasize that the Clayton Act governs mergers and acquisitions that create buyer as well as seller market power, but that distinction does not require new legislation because existing antitrust law is applicable to mergers that create buyer market power.

The CPCA also would require the government to conduct and update studies on the impact of mergers and acquisitions on wages, employment, innovation, and new business formation and would establish the Office of Competition Advocate with subpoena power to collect post-merger data. These obligations can allow antitrust authorities to improve their predictions of merger effects to avoid enforcement errors.

The CPCA would arguably return the legal standard to the one prevailing in the decades after the 1950 amendments to the Clayton Act. Merger cases are largely prospective, so the party with the burden of proof is at a substantial disadvantage. Under the test articulated in *U.S. v. Philadelphia*

National Bank (U.S. 1963) "a merger which produces a firm controlling an undue percentage share 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." In other words, if a plaintiff makes its initial showing, then the defendant not only bears the burden of proving that the merger will not be anticompetitive, they must do so with clear and convincing evidence, which is beyond the usual preponderance standard for an affirmative defense in a civil case. This legal framework for assessing a merger was known as the structural presumption because of the almost decisive role it accorded to market concentration.

Since at least the 1980s, the federal courts have not accorded such weight to the plaintiff's initial showing, despite the fact that *Philadelphia Bank* has never been formally overruled. The erosion of *Philadelphia Bank* was motivated by the concern that a strong presumption in the plaintiff's favor would result in too many false positives, that is, mergers would be found illegal despite a lack of anticompetitive effects. On the other hand, defenders of *Philadelphia Bank* would argue that if a merger leads to a substantial increase in concentration, then the burden should be on the defendant to prove that the merger will not be anticompetitive. The Post-Chicago School has identified a number of distinct anticompetitive possibilities in mergers as well as empirical methods to prove anticompetitive effects. But it has largely accepted the prevailing legal view that plaintiffs bear the burden of proving anticompetitive effects with evidence beyond market concentrations.

California cannot, as a practical matter, enact a merger statute that is more lenient than the federal standard. It can enact a statute that would find mergers illegal under state law that may not be illegal under federal law. Federal merger law is more or less what the federal courts say it is. With the passive acquiescence of the Supreme Court—which has not taken any merger appeals for decades—the federal courts have reversed the Philadelphia Bank "structural presumption." The current Merger Guidelines reflect Post-Chicago thinking on the anticompetitive possibilities of mergers, but the Guidelines have no independent force of law and are routinely ignored by federal judges who adopt a high standard of proof for plaintiffs. The high win rate for the federal government in merger cases could well reflect enforcer's view that only cases with overwhelming evidence can be reliably won in front of the federal judiciary. This may have left many mergers—and aspects of the law—unexamined by the courts.

Given the importance of the courts, much of merger policy takes place through appointments to the federal judiciary. The composition of the California state court is different than the federal judiciary and California courts would produce different merger decisions, even with an identically-worded statute. California could even consider constituting a specialized court that would hear merger or other antitrust cases or a specialized administrative agency that would enact rules governing merger policy. There would be costs and benefits to the divergence from federal law that this would create. Businesses would bear the costs of another set of merger laws.

Procompetitive mergers could be blocked if the California standard is too stringent. On the other hand, anticompetitive mergers could be successfully challenged if federal law is in fact too lenient as applied by the federal courts. If California lawmakers believe the harms from mergers extend beyond the antitrust injuries of exclusion and collusion, they can develop state law in this direction as long as they can articulate legal standards that can be reliably interpreted by courts.

Other proposed (but not enacted) federal legislation would specifically address mergers and acquisitions in the digital economy. The Platform Competition and Opportunity Act (PCOA) would prohibit any acquisition by a covered platform unless the platform operator demonstrates by clear and convincing evidence that the acquisition would not eliminate an actual or potential competitor or enhance the platform's market position. The Act defines a covered platform as an online service that has a large number of users, is owned by a company with a market capitalization that exceeds $600 billion, and is perceived as critical trading partner for any product or service offered on the platform.

Industry-targeted legislation such as the PCOA eschews the principle that antitrust enforcement applies in similar ways across all sectors of the economy. Of course, different industries present different regulatory challenges, such as the protection of privacy, health or safety. These challenges should be addressed, but a merit of antitrust enforcement is that it applies to all industries, and doing so reduces the risk that enforcement would be dominated by special interests. Moreover, the definition of a covered platform in the PCOA does not follow traditional antitrust concepts for the measurement of market power. On the other hand, to the extent that the digital economy presents novel features not well addressed by laws designed for a bricks-and-mortar world—such as network effects, two-sided markets, and zero pricing—additional legislative authority may be necessary.[32] Indeed, this has been a consensus view of other countries.

The Uniform Law Commission has begun a process of drafting state level pre-merger notification filing requirements through a committee. The Commission suggests a joint filing for federal and state antitrust enforcers (subject to confidentiality protection) that balances the need for state level information for potential enforcement actions with the potential burdens of to the merging parties. Specifically, the drafting committee will address issues such as substantial nexus to the transaction; the scope of the information required to be provided to the state, timing, confidentiality, and fees that would make state antitrust enforcement unreasonable.

There is evidence that antitrust authorities have failed to prevent mergers or acquisitions that have had anticompetitive effects.[33] Reforms that would replace the Clayton Act standard with

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[32] Indeed, many states have statutes specific to certain industries such as health care that are viewed as raising distinctive issues.

[33] See John Kwoka, *Mergers, Merger Control, and Remedies: A Retrospective Analysis of U.S. Policy*, MIT Press (2015). However, recent merger retrospectives suggest a wide range of merger outcomes. See John Asker, John William & Volker Nocke, Collusion, Mergers, and Related Antitrust Issues (August 2021), NBER Working Paper No. w29175, available at SSRN: https://ssrn.com/abstract=3909620.

weaker language, impose structural presumptions, or weaken efficiency defenses would obviously make it easier to prevent anticompetitive mergers, although this might also heighten the risk of blocking some pro-competitive mergers.. Moreover, as noted, California law for mergers and acquisitions that is not aligned with federal law could impose significant burdens on California antitrust authorities.

The Clayton Act does not impose a rigid standard for merger enforcement, notwithstanding the language "to substantially lessen competition" in the Act. The degree to which antitrust authorities have successfully opposed mergers has changed over time with no change in the language of the Act. An explanation for the variable winds of antitrust enforcement is that courts have responded to developments in law, economics, and politics, such as the Chicago School of antitrust enforcement. More recent scholarship has exposed flaws in the premises that underlie the Chicago School and has demonstrated many ways that mergers and acquisitions can harm consumers and businesses. Just as courts adopted the teachings of the Chicago School, they can adopt this new learning and adjust their tolerance for mergers and acquisitions, with no change in the relevant antitrust statutes. The significant majority of antitrust litigated cases in the past 20 years have resulted in government victories to enjoin mergers, so courts may be open to such new learning.