

# THE ECONOMICS OF WELFARE STANDARDS IN ANTITRUST

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## Abstract

There has been considerable debate concerning whether consumer surplus or total surplus should be the welfare standard for antitrust. This debate misses two critical issues. First, antitrust is not straightforwardly welfarist—it does not maximize but protects, and it does not forbid all actions that seem likely to lower some welfare measure. Rather, antitrust enforcement has both process and consequence components: “anticompetitive” actions that harm consumers are illegal but other actions that harm consumers are not. Second, the enforcement process involves multiple steps and multiple decision makers. Mergers, for instance, are proposed by the merging parties, reviewed and perhaps challenged by antitrust agencies, and reviewed by courts. Hence, a full discussion of what standard is or should be applied must specify by whom and how it fits in the overall process. We conclude that, while some popular arguments for a consumer surplus standard are weak, other arguments have some merit.

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## I. INTRODUCTION

What standard should antitrust analysis use to evaluate alternative outcomes?

Economists often state that total surplus—the sum of producer surplus and consumer surplus—is the most sensible objective and that consumer surplus is used only because lawyers so interpret the relevant statutes.<sup>1</sup> In this paper, we conclude that the economic issues are much more subtle and less resolved than is generally understood. In large part, these issues are poorly understood because most participants in the debate have been trying to answer the wrong question. Asking what welfare standard should be applied in antitrust enforcement conflates two separate questions. First, what should be antitrust policy’s ultimate goal? Second, what objectives should specific agents (notably the antitrust agencies and the courts) within the antitrust enforcement system apply in their enforcement decisions?

We will argue that total surplus is an appropriate ultimate goal for antitrust enforcement, but that the case for basing enforcement decisions on analysis of total surplus is much less clear. We believe that total surplus is an appropriate ultimate objective because, as others have argued, there is a natural division of labor between efficiency-oriented policies and policies aimed at improving the distribution of income, and antitrust policy fits much better into the first category.

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<sup>1</sup> Consumer surplus is, in turn, defined as the difference between what a consumer is willing to pay for a good or service and what he or she actually pays. Producer surplus is defined as the amount of income a producer receives in excess of what it would require in order to supply a given number of units of a good or service. Intuitively, producer surplus can be thought of as economic profits. Another way of thinking about total surplus is that it is consumption benefits measured in dollars minus the costs of production.

For discussion of some technical issues concerning the use of the measures in the presence of income effects and multiple commodities, see Andreu Mas-Colell, Michael D. Whinston, and Jerry R. Green, *Microeconomic Theory*, New York, NY: Oxford University Press, 1995, Section 10.C, and Jean Tirole, *The Theory of Industrial Organization*, Cambridge, MA: The MIT Press, 1993, at 7-12. See also R.D. Willig, *Consumer Surplus without Apology*, and J. Hausman, *Exact Measures of Consumer Surplus*.

Thus, we conclude that a sensible final goal of antitrust policy is to maximize total surplus without regard to distributional considerations.

It does not follow that antitrust agencies or courts should adopt a decision rule of the form: challenge or block behavior if and only if that behavior looks likely to lower total surplus. The antitrust enforcement process involves multiple steps and multiple decision makers. Mergers, for instance, are proposed by the merging parties, reviewed and perhaps challenged by antitrust agencies, and reviewed by courts. Hence, a full discussion of what standard is or should be applied must specify by whom and how it fits in the overall process. For several reasons, which we discuss below, it may be optimal to have specific agents within the broader system act to maximize a different objective (*e.g.*, consumer surplus) even when the ultimate goal of antitrust policy is to maximize total surplus.

## **II. WHAT DID CONGRESS INTEND AND WHAT DO ENFORCERS DO?**

We begin by summarizing the debate regarding whether the total surplus effects or consumer surplus effects are the basis for determining the legality of firm conduct under United States antitrust policy. We argue that the standard currently applied is neither, because whether antitrust law allows particular conduct depends not just on the consequences of that conduct but also on characteristics of the conduct itself.

The major antitrust statutes are remarkably brief and vague, spawning widespread disagreement regarding antitrust goals and standards. Although one might imagine a wide variety of goals, almost all the debate features two or three contending criteria: consumer

surplus, total surplus, and (unfashionably) the welfare of competitors.<sup>2</sup> These goals all are welfarist objectives in that each is a function only of economic agents' utility levels, not of the process by which those utilities are obtained or of other aspects of the outcome (e.g., whether consumers' behavior was legal or whether they consume cigars or tofu).

Robert Bork argued that Congress intended a total surplus standard, which he confusingly called a "consumer welfare" standard.<sup>3</sup> Others, including Robert Lande, have argued that Congress intended a true consumer welfare standard under which the Sherman Act would facilitate wealth transfers from producers to consumers.<sup>4</sup> Steven Salop argues that the current standard is a consumer surplus standard, basing his argument, in part, on the claim that efficiencies play little role in the actual practice of merger policy.<sup>5</sup>

Although those contributions contrast the consumer surplus and total surplus welfare standards,<sup>6</sup> others argue that they are nearly equivalent in a long-run perspective because short-

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<sup>2</sup> We focus on the Sherman Act and Section 7 of the Clayton Act. There appears to be consensus that the Robinson-Patman Act sought to protect competitors in a way that today is widely discredited. Arguably the recent *Volvo* decision seeks to move Robinson-Patman away from that standard. (*Volvo Trucks North America Inc. v. Reeder-Simco GMC Inc.*, U.S. No. 04-905, January 10, 2006.)

<sup>3</sup> See, for example, Robert H. Bork, *Legislative Intent and the Policy of the Sherman Act*, 9 J. OF LAW AND ECON., 7-48 (1966). In a recent submission to the Antitrust Modernization Commission, Charles "Rick" Rule repeats this confusing usage.

<sup>4</sup> Robert H. Lande, *Wealth Transfers as the Original and Primary Concern of Antitrust: The Efficiency Interpretation Challenged*, 34 HASTINGS L.J., 65-151, (1982). See also Robert H. Lande, *Proving the Obvious: The Antitrust Laws Were Passed to Protect Consumers (not Just to Increase Efficiency)*, 50 HASTINGS L.R. 959, 963-66 (1999).

<sup>5</sup> Steven C. Salop, "Question: What is the Real and Proper Antitrust Welfare Standard? Answer: The True Consumer Welfare Standard," Statement before the Antitrust Modernization Commission, November 4, 2005, available at [http://www.amc.gov/public\\_studies\\_fr28902/exclus\\_conduct\\_pdf/051104\\_Salop\\_Mergers.pdf](http://www.amc.gov/public_studies_fr28902/exclus_conduct_pdf/051104_Salop_Mergers.pdf), §II.A. See, however, William Kolasky and Andrew Dick, *The Merger Guidelines and the Integration of Efficiencies into Antitrust Review of Horizontal Mergers*, 71 ANTITRUST LAW JOURNAL (2003) 207-251 (arguing that efficiencies are important in the process).

<sup>6</sup> In a classic paper, Williamson argued that the use of a total surplus standard could make a very big difference in evaluating mergers that give rise to production efficiencies. (O. Williamson, *Economies as an antitrust defense: the welfare trade-offs*, AM. ECON. REV., 58, 1968, at 18.)

run profits spur firms to serve consumers' long-run interests.<sup>7</sup> Indeed, as noted above, Bork thought it proper to dub a total surplus standard a “consumer surplus” standard.

This attempt to defuse the debate fails, however, because even if changes in consumer and total surplus approximately coincide in the very long run, antitrust probably cannot—and surely does not—conduct a very-long-run analysis to evaluate a specific case. An analysis with a shorter time horizon (in practice, often two years) may well predict that consumer and total surplus will move in opposing directions. For instance, in the Canadian *Propane* case, the court apparently believed that the merger should be approved under a total standard and blocked under a consumer surplus standard.<sup>8</sup>

Christopher Grandy departs from this consumer surplus – total surplus debate in two ways. First, he argues that Congress meant the Sherman Act to protect competitors rather than consumers. Second, he argues that this protection was meant only against acts that could naturally be called anti-competitive.<sup>9</sup>

This second departure is important. Those who claim that U.S. antitrust policy imposes a consumer or total welfare (or any welfarist) standard are omitting a crucial element of antitrust: that it examines not only consequences (the change in consumer or total welfare) but also the

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<sup>7</sup> See, for example, Steven C. Salop, “Efficiencies in Dynamic Merger Analysis,” Statement before the Federal Trade Commission Hearings on Global and Innovation-Based Competition, November 2, 1995, available at <http://www.ftc.gov/opp/global/saloptst.htm>, who argues that taking a dynamic perspective reduces the tension between total surplus and consumer surplus standards. Recently, however, Professor Salop appears to have backed away from this view. See Salop (2005, *op. cit.*), §III.A.1.

<sup>8</sup> *Commissioner of Competition v. Superior Propane, Inc.*, (2003) 3 F. C. 529 (Fed. Ct. App.). See Thomas Ross and Ralph Winter, *The Efficiency Defense in Merger Law: Economic Foundations and Recent Canadian Developments*, 72 ANTITRUST LAW JOURNAL (2005) 471-503. Ross and Winter argue that the court may have misapplied the total surplus standard as a matter of economics: they conclude that the incremental deadweight loss due to the predicted price increase was drastically underestimated by being calculated as if the pre-merger price were at marginal cost.

<sup>9</sup> Christopher Grandy, *Original Intent and the Sherman Antitrust Act: A Re-examination of the Consumer-Welfare Hypothesis*, J. OF ECON. HISTORY, 359-379 (1993).

process (the nature of the acts) that generates the consequences. Specifically, antitrust prohibits firms from harming consumers and/or efficiency *through anticompetitive actions*.

For example, entry into an oligopolistic market by an inefficient producer or in an industry with large economies of scale may well reduce total surplus, at least as predicted by the kinds of models of medium-term effects that antitrust economists tend to use. But we would be surprised if any court ruled that stand-alone entry harmed competition.<sup>10</sup> Similarly, a claim of excessive competition is unlikely to be a winning defense of price fixing. Indeed, in *Professional Engineers*, the Supreme Court stated that “the Rule of Reason does not support a defense based on the assumption that competition itself is unreasonable.”<sup>11</sup> Evidently, either we don’t trust those (relatively robust and well-accepted) models, or we don’t believe in a total surplus standard in that sense.

One response is that such entry plainly “increases competition” in a layman’s sense of the term. To a lawyer, that might be the end of the story—an end that proves that antitrust is not purely welfarist. A sympathetic economist might be more apt to say that the models are informative but not conclusive concerning the effect of entry on surplus, and must be weighed against the well-established view that competition generally promotes efficiency. In other words, even in relatively simple problems such as stand-alone entry into an oligopolistic industry, our specific analyses inevitably omit much, and their conclusions must be taken with a certain amount of judgment. Here, a not unreasonable judgment might be that entry typically promotes

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<sup>10</sup> That said, the antitrust treatment of exclusive dealing does allow for the possibility that monopoly is preferable to competition in some circumstances within a vertical relationship.

<sup>11</sup> *National Society of Professional Engineers v. United States*, 435 U.S. 679, 696.

total welfare in the long run more than the models capture.<sup>12</sup> This sophisticated view is compatible with subtle versions of the welfarist position that antitrust seeks to promote total surplus in the end, but it is incompatible with the strong form of the welfarist position that antitrust enforcement decisions should be based on an industry-specific, fact-intensive, detailed prediction of the effects that the conduct under examination has on total surplus.<sup>13</sup>

Alternatively, one might observe that, even if it reduces total surplus, entry into oligopoly (both in theory and practice) generally benefits consumers; thus consensus approval of such entry might reveal that the implicit welfare standard is consumer surplus rather than total surplus.<sup>14</sup> But this argument, too, is weak. Antitrust proudly eschews plenty of opportunities to promote consumer surplus, at least in the short run. In particular, monopoly pricing is not itself illegal in the United States. Indeed, in its recent *Trinko* decision, the Supreme Court opined that “The mere possession of monopoly power, and the concomitant charging of monopoly prices, is not only not unlawful; it is an important element of the free-market system,” and that “to safeguard the incentive to innovate, the possession of monopoly power will not be found unlawful unless it

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<sup>12</sup> Elsewhere, one of us has applied somewhat analogous reasoning to the economics of payment-card fee structures and interchange. Joseph Farrell, *Efficiency and Competition Among Payment Instruments*, 5 REVIEW OF NETWORK ECONOMICS (March 2006) 26-44 (suggesting that competition policy might wisely promote privately optimal—rather than socially optimal as estimated in models—choice by customers).

<sup>13</sup> One can argue that merger policy also reflects a view that enforcement decisions should not be based solely on detailed, case-specific predictions of welfare effects. Specifically, horizontal mergers are typically allowed if it can be shown that there would be small competitive effects—without any formal assessment of efficiencies—represents what has been called a “standard deduction” for merger efficiencies. See Michael Salinger, Director of the FTC Bureau of Economics, “Four Questions About Horizontal Merger Enforcement,” (available at <http://www.ftc.gov/speeches/salinger.htm>). Kolasky and Dick, *op. cit.*, describe the “Chicago School” view that agencies and courts are unlikely to be good at evaluating claims of efficiencies, which might imply advantages of a standard deduction over requiring or even allowing firms to itemize.

<sup>14</sup> Steven Salop (2005, *op. cit.*, at 10 and 11) appears to hold this view. While we could imagine someone coming to a general judgment that total surplus is in the long run best promoted by putting zero weight on the profits of disappointed competitors while otherwise relying on an antitrust-style medium-run analysis, it is certainly not what would naturally be meant by “applying a total-surplus standard.”

is accompanied by an element of anticompetitive *conduct*.”<sup>15</sup> The Court is apparently reasoning that this rule promotes total or consumer surplus in the long run, so the policy is consistent with having a welfarist standard in the top-level sense. But the rule is not one that would emerge if agencies were to pursue total surplus or consumer surplus as estimated by available facts and economic models in particular cases.

Thus, in antitrust as it is practiced both consequences and process count: it never answers only the question “does this practice reduce some measure of surplus?” It is incomplete and potentially misleading to say that antitrust protects consumer surplus, total surplus, or rivals’ profits. Rather, conduct can violate the antitrust laws only if it harms “competition.” As many have noted, the concept of harming competition is often hard to interpret, and too naïve an interpretation would prohibit many beneficial agreements. Thus, the law has evolved toward prohibiting only acts that *both* (a) hurt competition in an ordinary (if sometimes vague) sense *and* (b) hurt efficiency and/or consumer surplus. The debate over “the standard” is the debate over the standard applied in the second prong. We think that the debate is clarified by keeping this two-pronged criterion explicit, and not seeking to have the second prong redefine the word “competition” or claiming that antitrust is straightforwardly welfarist.<sup>16</sup>

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<sup>15</sup> [emphasis in original] *Verizon Communications Inc. v. Law Offices of Curtis V. Trinko, LLP*, 540 U.S. 398, 407 (2004); see also R. Hewitt Pate, Assistant Attorney General, *Competition and Intellectual Property in the U.S.*, speech, June 3, 2005: “if a monopoly is lawfully obtained...we do not even object to setting a monopoly price.”

<sup>16</sup> See Joseph Farrell, *Complexity, Diversity and Antitrust*, ANTITRUST BULLETIN (Spring 2006) (arguing that it is a mistake to try to collapse these two components into a redefinition of the word “competition” to (almost) mean a surplus standard).

Some economists promote welfarism as a *sine qua non* of reasoned policy analysis. For instance, Ross and Winter, *op. cit.*, write (at 474) that “welfarism...may appear so obvious that it must be satisfied in any serious discussion of merger analysis. [...The view] that competition policy is about ‘protecting competition’ [...] is without economic foundation.” Although we agree that total surplus is the appropriate ultimate objective of antitrust enforcement, this view does not imply that day-to-day antitrust enforcement should be based on seeking in the instance to evaluate a welfarist measure. Because it is impossible to

Merger policy—the bulk of agency antitrust practice—might appear to contradict our claim that there are two prongs, because merger enforcement focuses purely on consequences (*i.e.*, competitive effects and efficiencies). But we would argue that this focus is consistent with our interpretation because almost all horizontal mergers satisfy prong (a); that is, they “reduce competition” in a natural sense. Hence, merger analysis can focus on whether a transaction satisfies prong (b). And even here, the process is not truly welfarist. In particular, with minor exceptions, even merger policy does not *seek to maximize* a welfare measure, but only tries to ensure that such a measure *does not fall* as a result of a merger.<sup>17</sup>

Having established that there are two prongs to the analysis, we will spend the rest of this essay considering the relative merits of consumer surplus and total surplus as welfare standards.

### **III. DO DISTRIBUTIONAL CONCERNS JUSTIFY USE OF A CONSUMER SURPLUS STANDARD?**

Perhaps the leading philosophical claim made in favor of a consumer surplus standard is that it better reflects society’s judgments about the appropriate distribution of economic welfare than does a total surplus standard. The use of total surplus implicitly assumes that the distribution of income is socially optimal, so that taking a dollar away from one member of society and giving it to another member would not affect social welfare. As one textbook put it,

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predict long-run effects with certainty, it could easily be consistent with a long-run welfarist view to adhere to well-chosen non-welfarist principles (*e.g.*, “protect competition”). Kolasky and Dick (*op. cit.*) write (at 207) that “it is efficiency, not competition, that is the ultimate goal of antitrust...`efficiency is the goal, competition is the process’.”

Implicit in our use of total surplus is the claim that society is best off when the total surplus is maximized. But you might be worried that there is some kind of value judgment behind that claim. If you are, you are correct; there is. The value judgment is that a dollar to each person is given the same weight, whether that person is a consumer or a producer, rich or poor.”<sup>18</sup>

It is, however, a widely held view that a dollar is worth more to society in the hands of a poor person than those of a rich one. This view underlies the support for a variety of redistributive policies, including progressive income taxation and the provision of government-subsidized health insurance for low-income families.

There are at least three rationales for antitrust enforcement’s use of total surplus as a measure of social welfare even in the presence of such distributional concerns. The first is to view the use of total surplus as a response to uncertainty about distributional effects. For instance, Mathewson and Winter (2000) quote the Canadian *Merger Enforcement Guidelines* (footnote 57): “[w]hen a dollar is transferred from a buyer to a seller, it cannot be determined *a priori* who is more deserving, or in whose hands it has a greater value”. If enforcers do not, or cannot, undertake a case-by-case determination of relative deservingness, then it may be best simply to assume that all affected parties are equally deserving.

A second rationale is the following. If outcome *A* yields greater total surplus than outcome *B*, then in principle it is possible to design a system of wealth transfers, starting from *A*,

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<sup>17</sup> With fairly limited exceptions, antitrust does not ask whether an alternative merger would yield higher welfare: the *Merger Guidelines* (§ 5.1) contain provisions for checking whether a failing firm is being sold to the best acquirer from a welfare perspective, and in evaluating efficiencies, the *Merger Guidelines* (§ 4) discuss examining whether an alternative deal would achieve the efficiencies without the adverse competitive effects. However, it generally is not the case that a merger can be successfully challenged on the grounds that a different merger would yield higher consumer or total surplus. Similarly, when an exclusive dealing contract is challenged, there is not a full-blown investigation to determine the best possible vertical contract from the perspective of social welfare.

<sup>18</sup> Michael L. Katz and Harvey S. Rosen. *Microeconomics, Third Edition*, Boston, MA: Irwin McGraw-Hill, 1998, at 362.

such that at least one person ends better off than in  $B$  and no one is worse off. This idea is known as the Kaldor-Hicks criterion.<sup>19</sup>

If the redistribution is actually done, then  $A$  is preferred by all parties to  $B$ . In practice, however, such compensation often is impossible given the limited available information about effects of  $A$  versus  $B$  on individual consumers and producers. And, when compensation is not paid, some parties typically will prefer  $B$  to  $A$ . Hence, the use of a total surplus standard imposes particular value judgments. The rationale in this case can loosely be stated as adopting a principle of maximizing total surplus and then counting on one of two mechanisms to ensure a fair distribution of economic benefits. One builds on the uncertainty idea above. Suppose that enforcement decisions are always made to maximize total surplus. Then, *on average*, everyone will be as well off as possible. Nonetheless, any particular individual or firm may be better or worse off than if different decisions were made.

The lack of a guarantee leads to the third rationale for use of total surplus as antitrust's measure of social welfare even in the presence of such distributional concerns. This rationale is a division of labor among public policies: if antitrust enforcement and some other public policies focus on total surplus, other public policies can redistribute that surplus in accord with notions of fairness.<sup>20</sup> A number of reasons suggest that antitrust policy is poorly suited as a redistribution

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<sup>19</sup> See J. de V. Graaf, *THEORETICAL WELFARE ECONOMICS*, Cambridge University Press (1963) at 82-90. There are also technical conditions regarding the size of income effects that may come into play.

<sup>20</sup> Steven Salop (*op. cit.*, at 17) recently argued against this rationale on the grounds that the tax authorities do not compensate members of society for the wealth transfers induced by specific mergers or anticompetitive firm conduct on a case-by-case basis and that, if authorities did so, the transactions costs would be enormous. This criticism misses the point that, in the face of transactions costs, it is desirable to implement policies that work well on average (rather than exactly case by case) even when one has strong distributional preferences. Instead, taxes and various social subsidy programs are intended to equalize the marginal social value of income across consumers, subject to informational constraints and the need to take transactions costs into account.

vehicle in comparison with various tax and subsidy schemes.<sup>21</sup> Its principal shortcoming is that antitrust enforcement does not, and—without a fundamental change in the nature of analysis—cannot take a comprehensive view of distribution. It would become necessary to examine the relative income distributions among consumers, workers, and firm owners. In many instances, data would be lacking.

To illustrate this shortcoming, consider how a consumer surplus standard handles distributional issues. Consumer surplus can provide a very a poor approximation to a welfare measure that weights impacts using ordinary notions of distributional preferences. One reason is that rich and poor consumers may be differentially affected by an antitrust decision; distributional concerns would suggest weighting the impact on the poor more heavily, but a consumer surplus standard insists that they count equally. If a central goal of antitrust enforcement is to redistribute income, then why treat rich and poor consumers alike? Another problem with using consumer surplus to embody a preference for wealth redistribution from rich to poor is that the owners and workers of firms are people too. Use of a consumer surplus standard entails treating all consumers as equally deserving at the margin, yet treating the same people unequally in their roles as workers and capital owners. The merger of makers of expensive fountain pens illustrates how a consumer surplus standard can go wrong in this regard.<sup>22</sup> Lastly, when the market is not a final-goods market, the direct “consumers.” A consumer surplus standard favors buying firms

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<sup>21</sup> Not all commentators might agree. Lande (1982, *op. cit.*), for instance, has argued that Congress intended antitrust largely as a strategy for wealth redistribution.

<sup>22</sup> *United States v. Gillette Company and Parker Pen Holdings, Ltd.*

over selling firms.<sup>23</sup> We are aware of no evidence that the wealth distribution of shareholders varies systematically according to a firm's place in the value chain.

A different argument for use of a consumer surplus standard is based on imperfections in corporate governance. There is evidence that part of free cash flow coming into widely held corporations is dissipated by management serving their own interests rather than the owners'. Although such expenditures promote managerial welfare, they are likely to be inefficient because managers are constrained in how they can spend these funds without running afoul of corporate governance. This observation might justify under-weighting increases in profits (before dissipation) relative to changes in consumer surplus. But as the quote from *Trinko* above notes, profits also can induce efficient investment, so this argument does not provide strong support for use of a consumer surplus standard.

In summary, we believe that antitrust is not a good policy tool for redistributing income, and even if it were, we doubt that distributional concerns provide a sound basis for preferring a consumer surplus standard over a total surplus standard.

#### **IV. A SYSTEM-LEVEL PERSPECTIVE: DECISION RULES VERSUS OBJECTIVES**

Most antitrust economics literature assumes policy optimization by a single decision-maker. In fact, antitrust enforcement involves multiple layers of decision makers. In a multi-layered decision process, one should not presume that each participant is or should be tasked with maximizing the overall objective.

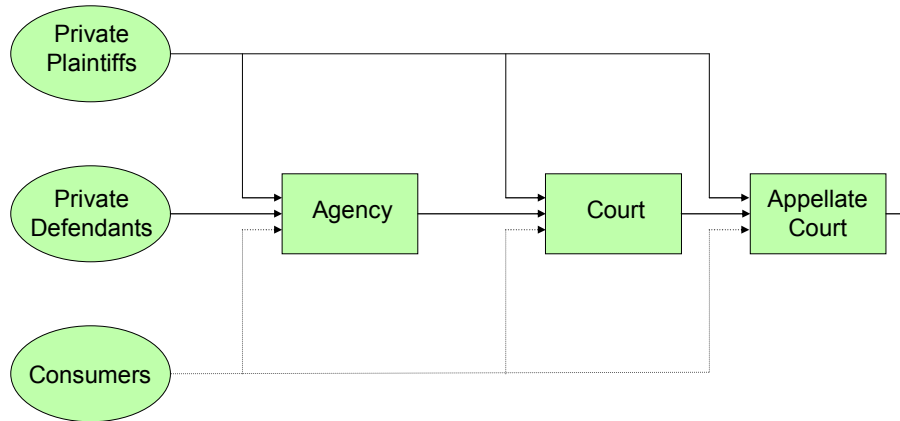
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<sup>23</sup> Here we assume that the analysis focuses on the immediate impact on direct buyers. When direct buyers are not final consumers, subtle economic issues arise regarding pass-through. For a discussion of how this was debated in the context of the proposed merger between Heinz and BeechNut, see e.g. Jonathan Baker, *Heinz Proposes to Acquire BeechNut*, in John Kwoka and Lawrence White, eds, *THE ANTITRUST REVOLUTION*, 4<sup>th</sup> edition, Oxford University Press (2004).

Two important examples illustrate this point. First, in our advocacy legal system, although parties' lawyers are officers of the court, legal ethics charges them primarily to be their clients' advocates, even though the final goal is justice. Second, suppliers in competitive markets pursue profits, yet act to maximize total surplus; as Adam Smith noted, "it is not from the baker's benevolence that we expect our bread." As these examples make clear, commentators should not simply jump from "welfare measure  $W$  is the appropriate final goal" to "the agencies ought to base their challenges on estimating a merger's effects on  $W$ ." The ultimate goal of antitrust policy could well differ from the rules that particular decision makers within the overall system should use.

Both internal and external considerations might affect what standard the agencies and agency staff should use. Internal considerations concern the motivation and compensation of agency staff and management. External issues include: accounting for self-selection by firms triggering investigations (*e.g.*, choosing to merge in the light of their predictions of how the proposed transaction will be treated); the generally weak participation in the process by final consumers; and the passive or reactive role of the courts as adjudicating agency challenges but not themselves initiating challenges. Figure 1 provides one schematic and simplified overview of the process. The lines indicate points at which various parties may first enter the system. We use dotted lines to represent the fact that—because they are typically numerous, unorganized, and have small individual stakes in the outcome—consumers often play a more limited role in the proceedings than do other parties. Among the diagram's simplifications, it does not illustrate the various components of decision making within the agency, and there may be one or more additional rounds of appeal.

**Figure 1: An agency or court is one component of a complex system**



Internal issues would arise even if the agency were a dictator; external considerations arise because it is not. That said, the issues overlap. Just as the overall enforcement system comprises several decision makers playing different roles, so does a single agency's decision-making structure. For instance, staff members typically investigate firm conduct and then make recommendations to management personnel who serve as gatekeepers. We proceed by very briefly discussing internal considerations and then discussing several external considerations in turn.

### **A. Internal Considerations**

Antitrust agencies are not unitary decision makers. Instead, they are organizations (with important elements of hierarchy) in which many different people participate in decisions. To illustrate some of the issues, consider a stylized simple agency with only two members. The staff member collects information, analyzes it, and makes a recommendation to the agency manager.

In our experience, such recommendations recite some, but not all, of the underlying information collected. Based on the information forwarded to him or her, the manager decides whether to proceed to litigation. If there is litigation, the staff member argues the case in court.

The decisions made by the staff member and manager will depend on their personal preferences and the nature of their compensation. Presumably success or failure in litigation will affect the staff member's compensation, at least in the long run. Thus, a rational staff member will take into account the probability of winning the case when making a recommendation to the manager. There may also be selection issues: economists and lawyers who choose to work in the government are unlikely to be a random sample of all economists and lawyers (for instance, they might be expected to favor intervention more often than average). This self selection can matter because antitrust enforcement clearly entails important elements of judgment. In the presence of these internal considerations, it is not clear what are the optimal standards to ask the staff and management to pursue.

## **B. Selection by the Parties**

Antitrust enforcement arises in response to actions taken by firms. If two firms do not wish to merge, antitrust never requires them to do so. Similarly, if a manufacturer enters into exclusive contracts with its distributors, the agencies may investigate and challenge that practice, but they do not proactively force the firm to adopt a specific contractual regime. The fact that antitrust enforcement is reactive gives firms important influence over antitrust outcomes.

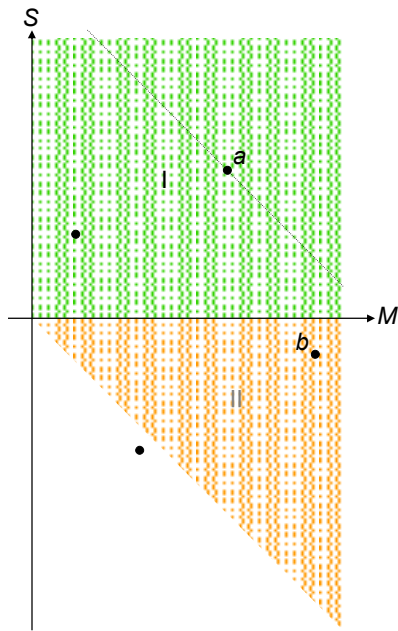
Two recent papers on merger analysis investigate implications of the fact that firms choose which mergers are proposed and, thus, receive antitrust scrutiny. These models treat the antitrust enforcement agency and the court as a single entity. Firms predict that entity's enforcement behavior, and that prediction affects what mergers are proposed. The private

parties' choices of which mergers to propose and the enforcement entity's choices of which proposed mergers to *allow* interact to determine which mergers are consummated. In each of these models, total surplus may be better served if antitrust agencies protect consumer surplus than if they protect total surplus.

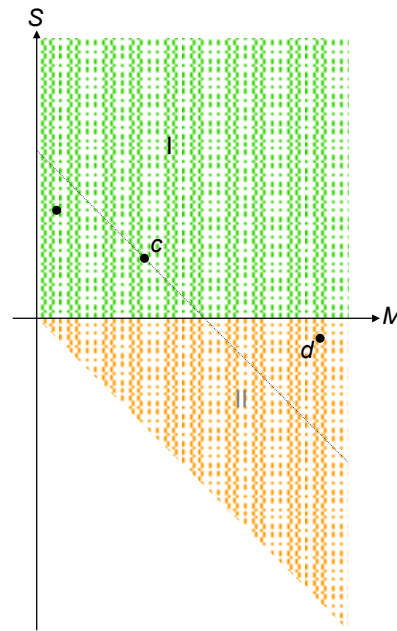
Let  $M$ ,  $R$ , and  $S$  denote the merger-induced *changes* in the profits of the merging parties, the profits of other suppliers, and level of consumer surplus, respectively. Although we use the mnemonic  $R$  for "rival," the other suppliers could also be suppliers of complementary goods and services. The associated change in total surplus is  $W = M + R + S$ .

Bruce Lyons argues that antitrust enforcement should account for self-selection by firms. Specifically, firms choose the most profitable of permissible mergers, knowing that some profitable mergers would be blocked by antitrust enforcement.<sup>24</sup> Figure 2.A illustrates the logic of this model. For simplicity, assume that  $R \equiv 0$  for all possible mergers. The black dots in Figure 2.A represent mutually exclusive possible mergers or merger strategies (for the moment ignoring antitrust constraints), where each merger is characterized by its effects on the merging parties' profits,  $M$ , and consumer welfare,  $S$ . Because rational firms will never propose mergers for which  $M < 0$ , the figure displays only profitable mergers. If antitrust enforces a consumer surplus standard, only mergers in green shaded region I would be allowed; if antitrust enforces a total surplus standard, then mergers falling in either the green shaded region I or orange shaded region II would be allowed.

**Figure 2.A: A consumer surplus standard promotes total surplus**



**Figure 2.B: A consumer surplus standard reduces total surplus**



Assume that all involved can perfectly predict the profit and consumer welfare consequences of any proposed merger, which also implies that the parties can perfectly predict which mergers would be allowed under any given antitrust standard. Profit-maximizing firms will choose the merger with the highest value of  $M$  (the most profitable merger) that will not be blocked by antitrust.<sup>25</sup> Hence, in Figure 2.A, under a consumer surplus standard the firms would propose merger  $a$ , while under a total surplus standard they would propose merger  $b$ , which is more profitable but harms consumers. All points on the line with a slope of -1 running through

<sup>24</sup> Bruce R. Lyons, *COULD POLITICIANS BE MORE RIGHT THAN ECONOMISTS? A THEORY OF MERGER STANDARDS* (University of East Anglia Centre for Competition & Regulation Working Paper CCR 02-1, revised, May 2002). For a similar analysis, see Sven-Olof Fridolfsson, *A Consumer Surplus Defense in Merger Control*, in *ESSAYS ON ENDOGENOUS MERGER THEORY*, doctoral dissertation in Economics 20001:1, Stockholm University.

<sup>25</sup> A number of issues arise regarding the order in which various firms choose to propose what would be incompatible mergers. For a fully specified model that addresses these issues, see Lyons.

point  $a$  involve the same total surplus. As shown, a consumer surplus standard induces a higher level of total surplus than does a total surplus standard!

This logic illustrates that the standard adopted by antitrust enforcers is not the full story about what happens: even if in the end we want to maximize total surplus, in some circumstances antitrust authorities should challenge a different set of mergers than the set of all mergers that lower total surplus.

Examples, however, can tell us little about whether such circumstances hold in practice, or about whether the allowed set should be related to consumer surplus specifically. Figure 2.B illustrates the case in which a consumer surplus standard would induce merger  $c$ , yielding lower total surplus than merger  $d$ , which would be induced by a total surplus standard. Which case, Panel A or Panel B, is more likely? If the most profitable merger is fueled by efficiencies, so that it would also be good for consumers, then it will be allowed under either standard. If there are profitable mergers that benefit consumers, but others that achieve similar productive efficiencies but also increase market power, so that the most profitable mergers inefficiently hurt consumers, then enforcing a consumer surplus standard will improve efficiency.

At this stage, Lyons' model cannot show whether consumer surplus is likely to be the better standard, but we take two lessons from it. First, as we have noted, it is important to consider the whole process. Second, Lyons' model suggests the intuition that (a) the outcome reflects both what firms push for and what antitrust pushes for, and (b) if we want to maximize northeasterly movement (gains in total surplus as shown in Figure 2) and firms always push eastwards, there is something to be said for someone adding a northerly force.

David Besanko and Daniel Spulber offer a different model in which selection by the potentially merging parties affects the optimal welfare screen to apply in approving or blocking

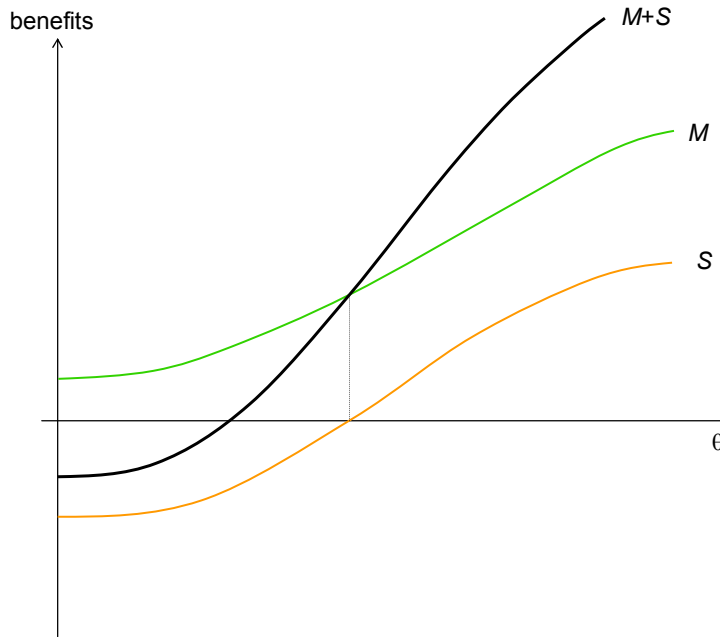
mergers.<sup>26</sup> In their model, time-consistency concerns can make it optimal for the legislature to impose something like a consumer surplus standard on the agencies and courts.

In Besanko and Spulber's model, unlike Lyons', private parties do not choose among mutually exclusive mergers to propose. Instead, private parties consider each member of a set of mergers and choose whether to propose it; there is no linkage across mergers. Thus, the two models differently simplify the complex reality that if firms  $A$  and  $B$  merge it may affect whether  $A/B$  and  $C$  are allowed to do so, and whether  $D$  and  $E$  are allowed to. For each possible merger in the Besanko and Spulber model, the parties have private information about a parameter,  $\theta$ , that affects both the change in the merging parties' profits,  $M(\theta)$ , and the change in consumer surplus,  $S(\theta)$ . Again for simplicity, assume that  $R \equiv 0$ . Besanko and Spulber assume that both profits and consumer surplus are increasing in  $\theta$ . This pattern would arise, for example, if the merger's principal effect were a reduction, measured by  $\theta$ , in variable costs of production. Figure 3 illustrates.

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<sup>26</sup> D. Besanko & D.F. Spulber, *Contested Mergers and Equilibrium Antitrust Policy*, J. of LAW, ECON., & ORG., April 1993, at 1.

**Figure 3: A simple merger selection process.**



Although the merging parties know the value of  $\theta$ , antitrust enforcers know only the population distribution and have no other relevant merger-specific information. Thus, enforcers can pick only a single probability,  $\rho$ , with which to reject any proposed merger. The model realistically assumes that it is costly to propose a merger that is blocked. These costs include legal and administrative costs, as well as costs that arise from the disruption an enterprise suffers when its future structure is uncertain. Formally, if a proposed merger is rejected, the would-be merging firms are worse off by  $T$  than they would have been had they not proposed it. Therefore, given policy  $\rho$ , firms will propose a merger if and only if  $\rho M(\theta) - (1 - \rho)T \geq 0$ , or

$$M(\theta) \geq \frac{1 - \rho}{\rho} T .$$

Hence, for any policy  $\rho$ , precisely those mergers with large enough values of  $\theta$  will be proposed.

The optimal policy in this setting is to set  $\rho$  at the value that solves

$$M(\theta^*) = \frac{1-\rho}{\rho} T ,$$

where  $\theta^*$  is the value, illustrated in Figure 3, such that  $M(\theta) + S(\theta) \geq 0$  if and only if  $\theta \geq \theta^*$ .

Label the solution as  $\rho^*$ .<sup>27</sup>

At this point, self-selection and time-consistency issues arise. If firms believed that any proposed merger would be blocked with probability  $\rho^*$ , then firms would propose exactly those mergers that improve welfare. Indeed, this is how  $\rho^*$  was calculated. If the agency recognizes this fact and seeks to maximize total surplus, then it should allow *all* proposed mergers. But if firms foresee what the agency will do, then they will propose inefficient mergers as well as efficient ones. In short,  $\rho^*$  is not time consistent (*i.e.*, is not part of a Bayesian perfect equilibrium) when the enforcer acts to maximize total surplus.

Now suppose that Congress directed the enforcer to approve mergers based on a consumer surplus standard. Observe that—because only mergers that yield positive profits to the merging parties are proposed—the level of consumer surplus from a merger is always lower than the level of total surplus. Moreover, mergers with low values of  $\theta$  harm consumers. If enough mergers that increase total surplus are bad for consumers, enforcers might then reject all mergers conditional on knowing only that  $\theta \geq \theta^*$ . Although that outcome would generally be neither an equilibrium nor efficient, it does open the way to one that would be. In particular, if the expected value of consumer surplus is negative conditional on  $\theta \geq \theta^*$ , then there exists a weight,  $\omega$ , such that the expected value of the weighted sum of total surplus and consumer surplus,  $\omega(M + S) +$

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<sup>27</sup> Simple algebra yields  $\rho^* = \frac{T}{T + M(\theta^*)}$ .

$(1-\omega)S$  is equal to zero conditional on  $\theta \geq \theta^*$ . Hence, an agency with the objective of maximizing this particular weighted sum of total and consumer surplus will find it optimal to block  $\rho^*$  of those merger that it reviews even when it knows that only mergers for which  $\theta \geq \theta^*$  are proposed. In other words, the threat to block  $\rho^*$  of the proposed mergers will be credible, and the optimal challenge probability is a Bayesian perfect equilibrium.

This model thus confirms the idea that merger challenge rules should be evaluated in the context of the system as a whole. We are reluctant to take more than that from the model, however, for several reasons. First, it does not ring true in terms of institutional behavior. The agencies do not view themselves as making merging more costly in order to induce firms to propose only the most profitable ones. Second, allowing all proposed mergers after payment of a well calibrated tax would be a better policy in the model; the cost to firms would be the same, but the government would collect the revenues rather than simply have economic value dissipated through unproductive activities. Third, the model assumes that the legislature can commit to a rule but the antitrust agency cannot—even though private parties have frequent observations of agency decisions and, thus, one would expect the agency to form a reputation. Fourth, and finally, the model relies on the strong assumption that, across a set of potential mergers, the most profitable mergers also generate the greatest increase in consumer surplus. This pattern may hold for variable cost reductions, but one would expect the opposite pattern to hold for competitive effects: increased market power would raise profits and—due to deadweight loss—lower consumer surplus by more, thus reducing total surplus. In this setting, any form of a merger tax (including random rejection of merger proposals) would result in mergers less favorable to consumer and total surplus unless it deterred all mergers. Hence, optimal enforcement policy

would either block all mergers or allow all mergers, depending on the average effects of a merger on total surplus.

### C. The Agencies as Agents

Another strand of the literature examines the implications of lobbying. Suppose that exposure to the parties tends to tip the agencies toward a relatively sympathetic view of the parties' position. Consumers do not usually engage in lobbying or in other ways participate in the process.<sup>28</sup> Hence, building a pro-consumer bias (relative to a total surplus standard) into the agency's objective function may counteract the bias that can arise from asymmetric lobbying.

Neven and Röller offer a model that makes this point.<sup>29</sup> In their model, the merging parties and other business enterprises affected by the merger engage in lobbying, but consumers do not. The agency is influenced by lobbying but faces a threat of punishment if it fails to apply the statutorily mandated welfare standard. Specifically, the agency chooses the enforcement action (*e.g.*, approving or challenging a merger) that maximizes  $I + \alpha(B_M + B_R) \geq 0$ , where  $I$  is the welfare standard the agency has been instructed to apply and  $B_M$  and  $B_R$  are lobbying expenditures by the merging parties and rivals, respectively. The fact that monitoring of the agency is imperfect tends to raise  $\alpha$ , while limitations on lobbying (what Neven and Röller call "transparency") reduce the effectiveness of bribes, tending to lower  $\alpha$ .

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<sup>28</sup> If consumers are end-users (individuals), this assumption is natural because each consumer has relatively little at stake and may not be well informed. (One might ask whether "consumer groups" such as Consumers Union help to resolve this problem.) When direct buyers are not final consumers, intervention by direct buyers is more likely, but intervention by final consumers may be even less likely.

<sup>29</sup> D.J. Neven & L.-H. Röller, *Consumer surplus vs. welfare standard in a political economy model of merger control*, INTL. J. IND. ORG., 2005.

The lobbying expenditures,  $B_M$  and  $B_R$ , are equal to the difference between what the relevant firms are willing to spend to have the merger approved in comparison with what they are willing to spend to have it blocked. The merging parties are willing to spend up to  $M$  to get the merger approved, while the rivals are willing to pay up to  $R$ .<sup>30</sup> Observe that  $B_R$  is negative if rivals are harmed by the proposed merger. Given these bidding (bribing) rules, a merger will be approved under a consumer surplus standard if and only if

$$S + \alpha(M + R) \geq 0 ,$$

and it will be approved under a total surplus standard if and only if

$$S + (1 + \alpha)(M + R) \geq 0$$

Neven and Röller compare the resulting levels of total surplus when the agency is instructed to apply a consumer surplus standard and a total surplus standard. They find that neither standard dominates the other. Intuitively, instructing the agency to apply a consumer welfare standard compensates for the lack of consumer lobbying. Suppose, for example, that oversight of agency decision making and private lobbying activities leads to  $\alpha = 1$ , so that the agency maximizes the sum of consumer surplus and the bribes. Then, because firms are willing to bid up to the value of the merger, the agency will approve the merger if and only if

$S + M + R \geq 0$ , which maximizes total surplus. Thus, a consumer surplus standard leads to the first-best in this setting.<sup>31</sup>

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<sup>30</sup> We are presenting a greatly simplified summary of the analysis. See Neven and Röller for details of the lobbying game and the equilibrium expenditure levels.

<sup>31</sup> One may have to treat  $\alpha = 1$  as a limiting case in their model: at several points, the paper presents results that implicitly or explicitly assume  $\alpha < 1$ .

In other cases, however, a total surplus standard may yield superior performance. Clearly, if legislators or some other oversight body can perfectly monitor and control the agency (*i.e.*, if  $\alpha = 0$ ), then a total surplus welfare standard will lead to the first best, while a consumer surplus standard would reject some efficiency-enhancing mergers for which  $S < 0 < S + M + R$ . For values of  $\alpha$  between 0 and 1, both standards give rise to biases, and for specific parameters either can yield a superior decision.

As in the Lyons analysis, a central issue is whether one can say more than “anything is possible.” A sympathetic view is that it is a different form of the same intuition: the merging parties and affected rivals push the outcome in their preferred directions, and if consumers pushed equally hard then the outcome would tend to be efficient. Because consumers seldom do so, the gap can be filled by weighting the agency’s objective function more towards consumer interests and less towards those interests that are otherwise well represented in the forces that combine towards the overall outcome. More succinctly, non-consumer interests are represented and, hence, consumer interests should be too.

#### **D. The Role of the Courts**

Antitrust agencies do not make decisions in isolation: they are subject to judicial review. For instance, the Antitrust Division of the U.S. Department of Justice cannot block a merger or a business practice, but can only challenge it in federal district court.

This distinction would not matter if courts gave the agency extreme deference, so that the decision to challenge would be tantamount to blocking. Perhaps at one time it was a reasonable approximation in some areas of antitrust that “the only consistency...is that the government

always wins.”<sup>32</sup> If that was ever the case, it clearly no longer is, either in the US or in Europe, as demonstrates by the *Sungard*, *Oracle*, *TetraLaval*, and *AirTours* decisions.<sup>33</sup> Thus the distinction does matter for how the agency should decide what to challenge. As a general principle, the agency and the court each should take into account that its decision only matters if the other condemns the practice.<sup>34</sup> Consider, for instance, the extreme case in which the court always reaches the correct finding, the agency occasionally errs in its own assessment, and there are no litigation costs. In this case, the agency should challenge everything, ignoring its own estimates of the effects on consumer surplus, total surplus, or any other welfare measure—a challenge is costless and leads to the optimal decision. In the other direction, suppose the courts have less information than do the agencies, and the courts trust the agencies to pursue the right objective.<sup>35</sup> In this case, the courts should give the agencies extreme deference and, anticipating deference, the agencies should challenge cases if and only if they believe that the conduct under investigation would lower the relevant social welfare measure—a wholly deferential court plays

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<sup>32</sup> Justice Stewart’s dissent in *US v. Von’s Grocery*, 384 US 270, 301 (1966).

<sup>33</sup> *United States v. SunGard Data Systems, Inc. and Comdisco, Inc.*, Civil Action No. 01-2196 (ESH) (D.C. 2001). *United States v. Oracle Corp.*, No. C04-0807-VRW (N.D. Cal. 2004). Judgment of the Court (Grand Chamber) of 15 February 2005, *Commission of the European Communities v Tetra Laval BV*, Appeal - Competition - Regulation (EEC) No 4064/89 - Case C-13/03 P, European Court reports 2005 Page I-01113. Judgment of the Court of First Instance (Fifth Chamber, extended composition) of 6 June 2002, *Airtours plc v Commission of the European Communities*, Case T-342/99, European Court reports 2002 Page II-02585.

Judicial oversight is not complete. Litigation is costly for the parties, and these costs can be a source of agency bargaining power (although the converse also holds). Thus, given the high costs of delay faced by the partners in an unconsummated merger, an agency decision to challenge a merger often leads the parties to abandon the merger rather than defend it in court. There are, however, parties that prevail in litigation and are allowed to merge despite the agency’s objections, so judicial oversight is meaningful.

<sup>34</sup> For a discussion of multi-party decision making when each party has veto power, see Raaj Sah and Joseph Stiglitz, *The Architecture of Economic Systems: Hierarchies and Polyarchies*, 76 AMERICAN ECONOMIC REVIEW (1986) 716-727.

<sup>35</sup> By less information, we mean that the agency’s information in any given case is a sufficient statistic for the court’s.

no screening role. Once again, the decision calculus of an antitrust enforcer should account for that enforcer's role in the overall system.<sup>36</sup>

#### **E. Does a System-Level Perspective Support a Consumer Surplus Standard?**

The analyses discussed above show that, even if the overall objective of antitrust policy is to maximize total surplus, it may be optimal for enforcement agencies to use decision rules that apply a different standard. A central shortcoming of these analyses as a basis of policymaking is that each identifies possibilities but offers little guidance as to how often a consumer surplus standard is likely to lead to a higher level of total surplus than would a total surplus standard, or whether some third standard might be best. This is not a criticism of earlier authors; it simply means that much work remains to be done in this area. Clearly, the foundations for a total surplus rule, in the practical sense in which it would be actually used, are a good deal shakier than most economists have understood, but it is not yet time to abandon the edifice.

### **V. BARGAINING AND REMEDIES**

The agencies often negotiate settlements with private parties and courts may impose remedies. What objective should agencies and courts pursue in negotiating and designing these conditions? A sensible candidate might be to turn a profitable, yet welfare-reducing, merger into a somewhat less profitable but welfare-enhancing or at least welfare-neutral one.<sup>37</sup> Here, too, the interaction of different parties affects the optimal welfare standard.

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<sup>36</sup> These issues could be explored further in the hierarchical decision framework we sketched above in our discussion of internal decision-making structure within an agency. Here, the court would be the relatively passive final decision maker, while the agency would play the role of collecting information and proposing a decision.

<sup>37</sup> Analysis of agency negotiations highlights the issue of whether the agency's objective is to maximize some welfare measure or see that it does not fall.

In the context of merger remedies, Farrell considers a model that also expresses this general idea of countervailing influence.<sup>38</sup> He argues that merger remedies are best modeled not as *imposed* by the agency but as *negotiated* between the agency and the parties. Without explicitly modeling the negotiation process, he suggests that one can expect its outcome to reflect a degree of compromise between the parties' goal (maximize  $M$ ) and the agency's goal, which might be set by high-level policy to involve maximizing some weighted sum  $kM + S$ . Whenever the parties have any bargaining power, it is optimal to set  $k < 1$  as a counterweight; if  $k = 1$ , then  $M$  would be over-weighted relative to  $S$  in the resultant. Indeed, if the parties have enough bargaining power, it is entirely possible that total welfare is best served by making  $k \leq 0$ . Here  $k = 0$  would correspond to making the agency pursue consumer welfare and ignore the parties' profits, while  $k < 0$  would correspond to a consumer focus with an actual hostility to profits.

Discussions of objectives often assume that participants can accurately evaluate the effects of mergers and of potential remedies. A complementary perspective on merger remedies is informational. To illustrate, consider a proposed merger that will affect only the profits of the merging parties,  $M$ , and consumer surplus  $S$ . Suppose for simplicity that the court can perfectly gauge  $S$ . While the court may have a good estimate of  $M$ , the merging firms are likely to have a better one. This matters if, for instance, a court is applying a total-surplus standard, finds that  $S < 0$ , and is uncertain whether  $M + S \geq 0$ . Under a total surplus standard, the firms have an incentive to claim that  $M$  is large.<sup>39</sup>

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<sup>38</sup> Joseph Farrell, *Negotiation and Merger Remedies: Some Problems*, in Francois Leveque and Howard Shelanski, eds., *MERGER REMEDIES IN AMERICAN AND EUROPEAN COMPETITION LAW*, Edward Elgar (2003) 95-105.

<sup>39</sup> Recall that we are assuming the court knows the value of  $S$  and, thus, does not revise its projection of  $S$  in response to claims about the size of  $M$ .

One resolution takes advantage of the same market mechanism that, in the market for a competitively supplied good, ensures that consumers only consume the good if their consumption value exceeds the marginal cost of production. Namely, make the parties pay a price for their conduct that is equal to the social cost of that conduct. If those who gain must compensate those who lose, this provides a market-like test of what must otherwise be imperfectly judged: that the merger's gain in efficiency outweighs the pre-remedy harm to consumers.

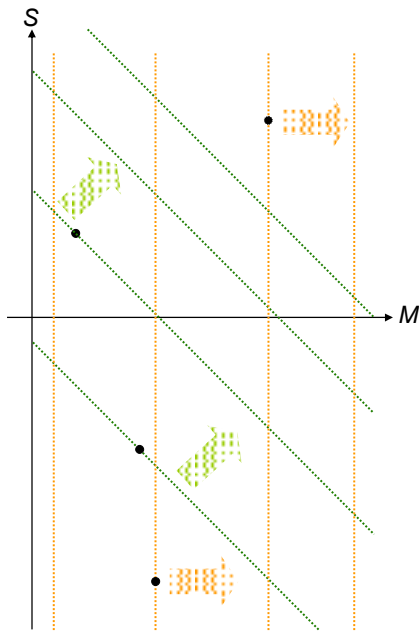
In this view, the point is not that there are benefits when compensation is actually paid. (That is, we are not suddenly concluding that distribution is important after all.) Rather, requiring actual payment might be the strongest available proof that compensation could be paid. Requiring actual compensation might also motivate firms *ex ante* to seek out socially desirable mergers, rather than less-efficient but more-profitable ones. Overall, then, compensation might promote efficiency even if, *ex post*, it is just a transfer or is even inefficient (that is, costs the firms more to provide than the benefits it gives consumers).

Another possibility is that an agency or court cannot perfectly predict the merger's effect on consumer welfare but can obtain a commitment from the merging parties (*e.g.*, on price) that guarantees that  $S$  is positive. With such a commitment, the court can be sure that  $W = M + S$  is positive if rational firms want to proceed with their merger.

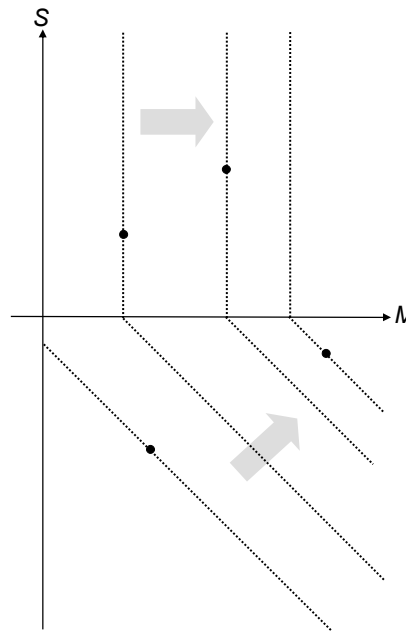
Intuitively, such a requirement induces the active players—the merging firms—to take welfare effects into account. Graphically, the intuition is that requiring compensation makes the merging firms' indifference curves over  $M$  and  $S$  more like the social indifference curves. Without such a requirement, the firms' indifference curves are simply vertical lines, some of which are illustrated in orange in Figure 4.A. In contrast, the social indifference curves (drawn in green) are straight lines with slope minus one. Figure 4.B illustrates how the firms' indifference

curves become more like the social indifference curves when compensation is required—when consumers are harmed, the firms’ profits net of compensation vary with the level of total surplus. Simple algebra demonstrates that, when compensation can be paid without transactions or agency costs, requiring compensation may raise total surplus and never lowers it.<sup>40</sup> The importance of this finding, however, is tempered by the reality that transfers are often costly, particularly if targeted at affected consumers, who may number many millions.

**Figure 4.A: Social and private indifference curves absent compensation**



**Figure 4.B: Private indifference curves under the compensation scheme**



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To see why, consider two possible mergers, 1 and 2, for which  $M_1 + S_1 > M_2 + S_2$  and  $M_1 > M_2$ . Absent a compensation requirement, the merging parties would choose merger 1, which maximizes both profits and total surplus. Suppose, counterfactually, that the compensation system induced the merging parties to choose the less socially desirable merger:  $M_1 + \min \{0, S_1\} < M_2 + \min \{0, S_2\}$ . This condition can hold only if  $S_1 < 0$ . There are now two cases to consider. If  $S_2 \geq 0$ , then  $M_2 + S_2 \geq M_2$ , and  $M_1 + S_1 > M_2 + S_2$  implies  $M_1 + \min \{0, S_1\} = M_1 + S_1 > M_2 = M_2 + \min \{0, S_2\}$ , a contradiction. If  $S_2 < 0$ , then  $M_1 + \min \{0, S_1\} = M_1 + S_1$  and  $M_2 + \min \{0, S_2\} = M_2 + S_2$ . Hence it cannot be the case that  $M_1 + S_1 > M_2 + S_2$  and  $M_1 + \min \{0, S_1\} < M_2 + \min \{0, S_2\}$ .

Intriguingly, it is not obvious why the compensation must be paid in a coin at all related to the competitive effects. For example, the merging firms might simply “pay off” buyers if there is no efficient remedy available to undo an increase in market power that is outweighed (in its effect on total surplus) by fixed-cost efficiencies. While this is not conventional antitrust thinking, and (for instance) the Federal Communications Commission has been strongly criticized for allegedly seeking merger conditions that are not clearly aligned with competitive harms from the merger, compensation in a different coin is the heart of a market economy. A consumer can legally remove a DVD player from a electronics retailer only if he or she compensates the retailer. It would not be enough for the consumer to prove by expert testimony that he or she valued the player more than the retailer does. Nor is it regarded as “fishy” that he or she would compensate the retailer in a currency that bears no resemblance to the DVD player. This analogy raises interesting questions regarding why public policy treats a firm’s obtaining the right to reduce competition so differently than a consumer’s obtaining a good or service. One possibility is that it is harder for the agency to evaluate reliably—and harder for courts to judge whether the agency has evaluated responsibly—whether a “distant” remedy properly compensates consumers than whether a “closely tailored” one does so. An important, related consideration is that allowing an agency to cut deals that involve unrelated conduct can permit the agency to engage in wide-ranging policy making without judicial review and contrary to the wishes of the legislature. For example, an agency might approve a merger conditional on the parties’ agreeing to cease certain marketing practices that the agency finds distasteful but believes could not be successfully challenged in court.

## VI. CONCLUSION

We distinguished three layers of policy objective. At the highest level is the broad objective of governmental intervention in the economy and society. In the middle lies antitrust policy's objective within that overall policy framework. Lastly, there are the objectives of specific decision makers within the antitrust enforcement system.

We argued that distributional concerns, however legitimate (or established) at the highest level of policy concern, should not be pursued through antitrust policy. In particular, arguments based on distributional concerns do not make a good case for the use of a consumer surplus standard in antitrust. However, analysis of the overall antitrust decision-making system suggests that, in some circumstances, a consumer surplus standard (or consumer surplus standard with a process component) can perform better than a total surplus standard, even if the ultimate goal is to maximize total surplus. Some of those arguments unsatisfyingly prove only possibilities. But several economic analyses have explored how outcomes may generally come closer to maximizing total surplus if someone, such as antitrust agencies, contributes a pro-consumer counterweight to firms' representation of their interests by choice of conduct and during lobbying, litigation and bargaining. That argument, however, has not yet been thoroughly explored.

Where does this leave us? We believe that there is a strong case for using total surplus, together with appropriate non-welfarist "process" criteria, as the overall objective of antitrust policy—and arguably even the process element earns its place through the view that competition promotes total surplus. The case for instructing the agencies and courts to use total surplus (with or without process elements) as their standard is weaker, and economists should not smugly state that total surplus clearly is the right prosecutorial and judicial criterion. But we are a long way

from being able to conclude that a consumer surplus standard, presumably alongside an anticompetitive behavior prong, is better.