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Law and Surplus: Opportunities Missed

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Abstract

Surplus is a ubiquitous feature of economic activity. The ubiquity of surplus challenges us to find fair and efficient ways to share resources. This is the surplus problem. This Article documents the miscues and mistaken assumptions that have left research on how legal rules can address the surplus problem woefully underexplored.

Three missed opportunities are particularly noteworthy. First, scholars studying "rent-seeking" mistakenly limit their investigation of links between surplus and wasteful competition to situations involving grants of government privilege. Second, law and economics scholars incorrectly assume that a laissez-faire approach is presumptively the best way to address the surplus problem. Finally, consumer law scholars fail to recognize how central solving the surplus problem is to providing a sound economic justification for consumer protection law.

Collectively, these case studies illustrate how law's role in addressing the surplus problem has been shunted to the periphery of legal scholarship rather than placed at the center of legal discourse where it rightly belongs.

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INTRODUCTION

Surplus is a ubiquitous feature of economic activity.[1] There is a surplus, for example, whenever one party's gain from a trade exceeds the other party's cost. The graph of a downward-sloping demand curve intersecting an upward-sloping supply curve is a staple of microeconomics textbooks.[2] This graph offers a simple way to visualize the surplus that arises from market transactions. The area below the demand curve and above the supply curve is the amount of surplus in a particular marketplace, as illustrated in Figure 1.[3]

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[1] For a discussion of the surplus terminology, including how and why it is used throughout this Article, see *infra* note 79.

[2] *See, e.g.*, ROBERT FRANK, MICROECONOMICS AND BEHAVIOR 320 (2010); ANDREU MAS-COLELL ET AL., MICROECONOMICS THEORY 320 (1995); ROBERT S. PINDYCK & DANIEL RUBINFELD, MICROECONOMICS 25 (8th ed. 2013); HAL R. VARIAN, MICROECONOMICS ANALYSIS AND BEHAVIOR 320 (3d ed. 1992). *See also* JONATHAN GRUBER, PUBLIC FINANCE AND PUBLIC POLICY 48 (3d ed. 2013); RICHARD A. POSNER, ECONOMIC ANALYSIS OF LAW 11 (8th ed. 2011).

[3] The relationship between a graph of supply and demand and the amount of surplus in a market may not be exact depending upon whether the supply and demand curves reflect wealth effects caused by price changes for the product under consideration. *See* VARIAN, *supra* note 2, at 161; Jerry A. Hausman*, Exact Consumer's Surplus and Deadweight Loss,* 71 AM. ECON. REV. 662 (1981). It is also true that this simplification ignores well-known differences between willingness to pay and willingness to accept. *See, e.g.*, Jonathan Chapman et al., *Econographics* 4 (Nat'l Bureau of Econ. Research, Working Paper No. 24931, 2018).

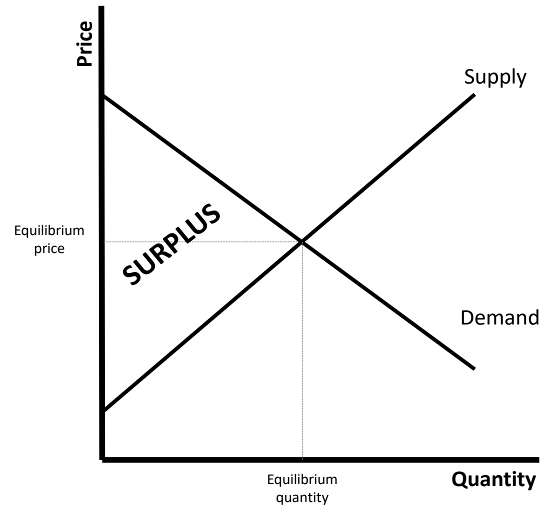

Figure 1

It is not difficult to find real world examples suggesting that markets are teeming with surplus. A wealthy person can purchase a copy of "Hillbilly Elegy: A Memoir of a Family and Culture in Crisis" for only $17 on Amazon even if she is willing to pay $50 for a copy of the book.[4] There is at least a $33 surplus in this transaction because this particular purchaser values the book so much more than the marginal purchaser does.[5]

Likewise, pharmaceutical companies are able to charge phenomenally high prices for life-saving drugs, even if the actual cost of the particular treatment is minimal. For example, Gilead Science charges $100,000 for a twelve-week course of treatment with the drug Harvoni, a drug that can cure Hepatitis C. Gilead would still profit mightily if it were to sell Harvoni for half that price.[6]

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[4] J.D. VANCE, HILLBILLY ELEGY: A MEMOIR OF A FAMILY AND CULTURE IN CRISIS (2016). The price on Amazon for a hardcopy print version of this book was $16.79 on Feb. 4, 2019. *See Hillbilly Elegy: A Memoir of a Family and Culture in Crisis,* AMAZON.COM, https://www.amazon.com/Hillbilly-Elegy-Memoir-Family-Culture/dp/0062300547 (last visited Feb. 4, 2019).

[5] Amazon might also realize a gain from this transaction, increasing the resulting surplus.

[6] In its 2016 fiscal year, Gilead had an astoundingly high gross profit margin of 86% and a net profit margin of 44%. For a thorough and comprehensive discussion of Harvoni pricing that shows, among other things, how 28 U.S.C. §1498 might be used to make this drug more widely available, see Hannah Brennan et al., *A Prescription for Excessive Drug Pricing: Leveraging Government Patent Use for Health*, 18 YALE J.L. & TECH. 275 (2016). In September of 2018 Gilead announced plans to sell a generic version of the same drug at

The goal when sharing a surplus should be to do so in as fair and efficient a manner as possible. Determining how to achieve this result requires solving what I coin here as the "surplus problem." The insight that legal rules can help to address the surplus problem is an old one. King Solomon's proposal to divide a baby evenly between the two women who claim to be the baby's mother is one famous example.[7]

Philosophers studying distributive justice have grappled with the question of what constitutes a fair and efficient sharing of surplus. Robert Nozick and John Rawls, for example, take diametrically opposed positions. While Nozick argues that the rule should essentially be "finders keepers," Rawls recommends surplus be pooled and distributed to those most in need.[8] How to divide surplus fairly and efficiently is a burgeoning area of research in a number of disciplines.[9]

One would expect there also to be a rich body of legal scholarship analyzing how legal rules can address the surplus problem. Yet, very little such scholarship

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a list price of $24,000. *Gilead to Sell Authorized Versions of Hep C Treatment*, PHARMACY TIMES, Sept. 25, 2018.

The observation that there can be a substantial surplus when life-saving drugs cost relatively little to produce, and that the current regime often grants much of that surplus value to the pharmaceutical company does not, of course, address many issues raised by this particular policy. It may be that awarding the surplus to pharmaceutical companies in this context is desirable from a social welfare perspective, because doing so spurs efficient levels of research and investment. *See infra* Section I.C.

[7] STEVEN J. BRAMS & ALAN D. TAYLOR, FAIR DIVISION: FROM CAKE-CUTTING TO DISPUTE RESOLUTION 6–7 (1996) (discussing King Solomon's proposal as the first written record of a fair division of surplus). My apologies if it seems a bit crass to call a baby a "surplus," and, of course, King Solomon's proposed solution of actually splitting the baby into two parts did have potential flaws.

[8] DAVID GAUTHIER, MORALS BY AGREEMENT 276 (1986) ("Nozick would treat the right to [surplus] as a component of liberty, [while] John Rawls would not only demand its confiscation, but its redistribution so that, in effect, the surplus . . . would be enjoyed by those lacking.").

[9] *See, e.g.*, BRAMS & TAYLOR, *supra* note 7 (providing an overview of the contest literature); KAI A. KONRAD, STRATEGY AND DYNAMICS IN CONTESTS 1–21 (2009) (surveying the contest literature); Dirk Bergemann & Juuso Valimaki, *Dynamic Mechanism Design: An Introduction*, J. ECON. LITERATURE (forthcoming 2019) (providing a review of scholarship on dynamic mechanism design); Subhasish M. Chowdhury & David A. Malueg, *Introduction to the Symposium – Contests: Theory and Evidence,* 56 ECON. INQUIRY 1445 (2018) (introducing a symposium on how to apply contest theory to more practical problems); Luis C. Corchón, *The Theory of Contests,* 11 REV. ECON. DESIGN 69 (2007) (defining contests as situations where agents fight over property rights and providing an overview of different modeling approaches and applications). In economics, the study of when and why workers rather than producers capture surplus is going through a Renaissance. *See, e.g.,* David Autor et al., *Concentrating on the Falling Labor Share*, 107 AM. ECON. REV. 180 (2017) (reviewing potential links between the rise of superstar firms and the decline in labor's share of GDP).

exists.[10] A few legal scholars who have considered how laws can reduce wasteful competition for surplus in specific contexts, such as when negotiating a merger or deciding how to share attorneys' fees.[11] Various law reviews articles written over the past fifty years might be reconceptualized as inchoate efforts to identify and analyze legal solutions to the surplus problem.[12] Finally, Robert Hale, a Columbia Law School professor, whose research spanned from 1918 through 1953, considered many of the issues involved in finding legal solutions to the surplus problem.[13]

However, for the most part, legal scholars have shown little interest in exploring how to use the law to allocate surplus in a fair and efficient manner. This Article details how such a significant oversight has come to pass. The story of legal scholarship's failure to address fully this relationship is one of missed opportunities. Three different areas of legal research should have naturally proceeded to a careful examination of the ways in which legal rules can facilitate the fair and efficient sharing of a surplus. All three have failed to do so.

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[10] A full intellectual history of the ways in which previous legal scholars have engaged with legal solutions to the surplus problem is beyond the scope of this Article.

[11] *See, e.g.*, Steven J. Brams & Joshua Mitts, *Law and Mechanism Design: Procedures to Induce Honest Bargaining*, 68 NYU ANN. SURV. AM. L. 729 (2013); Amy Farmer & Paul Pecorino, *Legal Expenditure as a Rent-Seeking Game*, 100 PUB. CHOICE 271 (1999); and Edward K. Cheng et al., *Fair Division of Attorneys' Fees* (Vanderbilt Univ. Law Sch., Working Paper No. 18-51, 2018).

[12] *See, e.g.*, Bruce Ackerman, *Regulating Slum Housing Markets on Behalf of the Poor: Of Housing Codes, Housing Subsidies and Income Redistribution Policy*, 80 YALE L.J. 1093 (1971) (exploring conditions under which increased housing code enforcement will benefit the needy); Matthew A. Edwards, *Price and Prejudice: The Case Against Consumer Equality in the Information Age,* 10 LEWIS & CLARK L. REV. 559 (2006) (describing efforts to capture consumer surplus by use of dynamic, differential, and personalized pricing, and considering the social costs and benefits of these practices); Robert Hockett, *Putting Distribution First*, 18 THEORETICAL INQUIRIES L. 157 (2017) (explaining how efforts to maximize efficiency require making assumptions about distribution and equalization); Duncan Kennedy, *Distributive and Paternalistic Motives in Contract and Tort Law, With Special Reference to Compulsory Terms and Unequal Bargaining Power*, 41 MD. L. REV. 563 (1982) (identifying distributive and paternalistic motives in the law of agreements, and justifying the application of paternalistic motives in this context); Michael J. Meurer, *Copyright Law and Price Discrimination,* 23 CARDOZO L. REV. 55 (2001) (discussing the social welfare costs and benefits of price discrimination in the context of copyright law) [hereinafter Meurer, *Copyright Law*]; Michael J. Meurer, *Fair Division*, 47 BUFFALO L. REV. 937 (1999) (considering how economic analysis of fairness might have relevance to legal scholarship); and Liam Murphy & Thomas Nagel, *Taxes, Redistribution, and Public Provision,* 30 PHIL. & PUB. AFF. 53 (2001) (distinguishing between spending on government run programs and using taxes to promote distributive justice).

[13] *See, e.g.*, BARBARA H. FRIED, THE PROGRESSIVE ASSAULT ON LAISSEZ FAIRE: ROBERT HALE AND THE FIRST LAW AND ECONOMICS MOVEMENT 7, 25–27, 108–59, 213–14 (1998) (describing Hale's scholarship as "progressive rent theory").

The first group of scholars, who approached but then surprisingly veered away from a thorough consideration of the relationships between law and surplus, are those who initiated research into "rent-seeking."[14] These scholars study "the resource-wasting activities of individuals in seeking transfers of wealth through the aegis of the state."[15] They observe that competition for government-created monopoly rights is both hard to avoid and inherently wasteful. However, their central insight—that the fight for surplus is both hard to prevent and inherently wasteful—should be applied to situations other than just those involving the fight for government-created monopoly rights.

Rent-seeking scholars offer several justifications for limiting their research to situations involving "transfers of wealth through the aegis of the state." One justification they offer is that the fight for surplus in the broader economy is a minor and transitory phenomenon. This is incorrect. Surplus is economically significant and enduring.[16] Moreover, the fight for surplus is an increasingly important economic phenomenon as big data technologies energize the shift toward personalized pricing.[17] The fight for surplus is not a minor phenomenon in the broader economy.

Another justification rent-seeking scholars offer for restricting the scope of their investigation is their belief that leaving the surplus problem unregulated will encourage desirable levels of investment and innovation.[18] Again, this is incorrect. As scholars studying intellectual property know well, leaving the fight for surplus unregulated can create beneficial incentives for investment and innovation, but it can also lead to a socially wasteful race to capture surplus.[19] Rent-seeking scholars erred when they limited research on legal solutions to the surplus problem to the study of the wasteful competition for government-created monopoly rights.

The second group of scholars I consider are those who work within the law and economics tradition.[20] These scholars have developed the skills and tools that would be quite helpful in evaluating how legal rules might be used to share surplus in ways that are both fair and efficient. On rare occasions, these scholars do, in fact, engage in this type of analysis.[21] A nice example comes from Richard Posner's discussion of the rule of salvage in admiralty law.[22] Posner observes that limiting the rewards provided to those who carry out a rescue at sea prevents sailors from investing too many resources in a socially wasteful race to be the first ship to carry out the rescue. This type of direct engagement with the surplus

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[14] *See infra* Part I.

[15] JAMES M. BUCHANAN ET AL., TOWARD A THEORY OF THE RENT-SEEKING SOCIETY ix (1980).

[16] *See infra* Subsections I.B.1. and I.B.2.

[17] *See infra* Subsection I.B.3.

[18] *See infra* Section I.C.

[19] As an example of this insight, as presented in intellectual property scholarship, see Meurer, *Copyright Law*, *supra* note 12, at 66 n.37.

[20] *See infra* Part II.

[21] *See infra* Section II.A.

[22] *See infra* notes 145 to 147 and accompanying text.

problem by law and economics scholars is rare.

However, unlike scholars who study rent-seeking, law and economics scholars do not offer explicit justifications for failing to address the surplus problem more systematically. Fortunately, one can discern four assumptions that appear to have led law and economics scholars to avoid this topic. These assumptions are: (1) that private parties will negotiate around legal interventions designed to alter surplus sharing arrangements;[23] (2) that it is unethical to use legal rules to alter surplus sharing arrangements mutually agreed upon by private actors;[24] (3) that mixed findings about the social welfare effects of price discrimination (the practice of charging customers different prices for reasons other than cost) show that it is a hopeless exercise to devise rules to allocate surplus fairly and efficiently;[25] and (4) that it is a mistake to include fairness concerns when considering legal solutions to the surplus problem, because tax policy is superior to legal rules as a way to address fairness concerns and because firms will address customer preferences for "fair" pricing practices without legal intervention.[26]

All four assumptions are flawed. First, while there may be situations where changing legal rules will not alter how a surplus is ultimately shared, there is no reason to believe that laws altering surplus sharing arrangements will inevitably fall into this category.[27] Second, moral objections to regulating market activity, because doing so would require altering terms agreed upon by private parties, is unlikely to provide most law and economics scholars an adequate justification for ignoring benefits from legal solutions to the surplus problem.[28] Third, scholarship on price discrimination has too many shortcomings to be relied upon to justify avoiding careful study of the law's role in addressing the surplus problem.[29] Fourth, arguments relied upon in the law and economics scholarship to justify setting aside fairness considerations are not germane when evaluating legal rules designed to address the surplus problem for two reasons. First, the claim that tax policy is superior to legal rules as a way to redistribute wealth is inapposite when considering legal solutions to the surplus problem.[30] Second, an argument that one can rely on market incentives to ensure firms adopt "fair" pricing practices fails to recognize that profiting from "unfair" pricing practices often involves transfers of surplus that provide private, not social, welfare gains.[31] Law and economics scholars have avoided questions involving law and surplus because of their reliance on a number of assumptions that all prove faulty.

[23] *See infra* Subsection II.B.1.
[24] *See infra* Subsection II.B.2.
[25] *See infra* Subsection II.B.3.
[26] *See infra* Subsection II.B.4.
[27] *See infra* notes 175 to 179 and accompanying text.
[28] *See infra* note 187 and accompanying text.
[29] *See infra* notes 198 to 199 and accompanying text.
[30] *See infra* notes 202 to 206 and accompanying text.
[31] *See infra* note 216 and accompanying text.

The third group of scholars whose work I consider are those who study laws designed to protect consumers.[32] These scholars should be among those most interested in exploring how legal rules can work to ensure that economic surplus is shared in a fair and efficient manner, but they also fail to do so.

More specifically, economically-oriented consumer law scholars instead rely on more "traditional" market failure arguments, such as a lemons market failure argument or an argument based on the problem of behavioral exploitation, to justify implementing laws designed to protect consumers. The lemons market failure arises when it is difficult to ascertain product quality at the time of purchase.[33] One result of this difficulty is that poorer quality products can force those selling higher quality products to exit the market.[34] Another market failure on which economically-oriented consumer law scholars have focused their attention is the failure of consumers to recognize imperfections and biases in their own decision-making processes.[35] One consequence of this failing is that pernicious sellers are able to profit by selling goods that consumers either do not want or would have chosen to pay much less for in the absence of these exploitative practices.

The lemons market failure and behavioral exploitation are certainly problems worthy of careful investigation. However, the surplus problem should also be of immediate concern to economically-oriented consumer law scholars. Both the waste associated with resources spent to take surplus from consumers and the potentially regressive effects of these efforts are significant. These effects provide a powerful justification for protecting consumers from unscrupulous business practices that is distinct from the market failure concerns economically-oriented consumer law scholars choose to focus on.

Three different areas of legal scholarship should have proceeded to a careful examination of the ways in which legal rules can facilitate the fair and efficient sharing of a surplus. All three failed to do so. Rent-seeking scholars emphasize the wasteful nature of competition for surplus, but then ignore the broader ramifications of this important insight. Law and economics scholars develop a rich set of analytical tools but rarely apply them to the surplus problem. Economically-oriented consumer law scholars ignore the battle for surplus that consumers predictably lose unless the consumer's loss is caused by a "traditional" market failure. Before proceeding to a more detailed analysis of these failings, a larger question needs to be answered. Why has the study of law's role in addressing the surplus problem been shunted to the periphery of legal scholarship by so many legal scholars?

The most likely explanation is that most legal scholars who study markets have unwittingly but systematically fallen into a familiar trap. These scholars have

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32 *See infra* Part III.

33 George A. Akerlof, *The Market for "Lemons": Quality Uncertainty and the Market*, 3 Q.J. ECON. 488, 488 (1970) (explaining the lemons market failure is a species of the more general class of market failures associated with information asymmetries).

34 *See infra* Section III.A.

35 *See infra* Section III.B.

failed to recognize that markets do not work equally well at addressing two related but quite distinct challenges. The first challenge involves efficiently allocating scarce resources. At the price where supply equals demand, wonderful properties abound: the much-heralded workings of Adam Smith's "invisible hand" are revealed,[36] and, in the simplest case, assets are efficiently allocated throughout society.[37] When relying on markets to allocate resources efficiently, legal rules have a well-defined role. Legal rules address market failures, such as information asymmetries, the presence of externalities, or the abuse of monopoly power.[38] Then, if the legal rules work, the market does its magic.

The second challenge that arises in a market economy involves figuring out how best to share a surplus. The goal in sharing a surplus is to do so in a fair and efficient manner. In addressing this second challenge, the "invisible hand" is as likely to destroy value as it is to create value. The defining feature of the surplus problem is that one party's gain is the other party's loss. In this context, there is no social gain from competition. As A. C. Pigou observed a century ago, "intelligence and resources devoted to [bargaining], whether on one side or on the other, and whether successful or unsuccessful, yield no net product to the community as a whole . . . . These activities are wasted. They contribute to private, but not to social net product."[39]

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[36] ADAM SMITH, THE WEALTH OF NATIONS, Book IV, Chapter II, paragraph IX (1776).

[37] This result is known as the First Fundamental Theorem of Welfare Economics. FRANK, *supra* note 2, at 346 ("One of the most attractive features of competitive markets is the fact that they result in allocative efficiency, which means that they fully exploit the possibilities for mutual gains through exchange.") (emphasis removed); GRUBER, *supra* note 2, at 50 ("The First Fundamental Theorem of Welfare Economics [is that] the competitive equilibrium, where supply equals demand, maximizes social efficiency.") (emphasis removed).

[38] *See, e.g.*, RICHARD MUSGRAVE, THE THEORY OF PUBLIC FINANCE 7–15 (1959).

[39] Pigou used as an example "competitive advertisement directed to the sole purpose of transferring the demand for a given commodity from one source of supply to another." ARTHUR C. PIGOU, THE ECONOMICS OF WELFARE 196 (1920) (citation omitted). Pigou observed that in this scenario "all units of resources expended by either producer in building up goodwill as against the other shall have a social net product equal to zero." *Id.* at 199.

Unlike situations where the so-called "Pigouvian tax" provides a relatively simple way to ensure that firms internalize externalities, Pigou saw no simple way to avoid this form of waste. Pigou recognized that an "absolute prohibition of bargaining is hardly feasible except where prices and conditions of sale are imposed upon private industry by some organ of State authority." *Id.* at 199.

Leaving the fight for surplus to private parties must rest on different analytical foundations than does a choice to rely on markets to allocate resources efficiently. Failing to realize that the role of law in sharing a surplus is different from the role of law in facilitating allocative efficiency can lead to the mistaken presumption that a laissez-faire approach to the distribution of surplus is usually preferable. Legal scholars have missed this subtle but important distinction. A major area of potential scholarly endeavor and insight remains virtually unexplored.[40]

I. SURPLUS, WASTE, AND RENT-SEEKING

This Part reviews research on the phenomenon known as "rent-seeking." Scholars studying rent-seeking define the topic as involving the study of "the resource-wasting activities of individuals in seeking transfers of wealth through the aegis of the state."[41]

This Part begins with a survey of rent-seeking scholarship and the insights this scholarship offers into the link between surplus and waste. The discussion then reviews the justifications these scholars offer for limiting analysis of the link between surplus and waste to situations involving government-created monopoly rights. The two main arguments offered by these scholars for limiting their research agenda in this manner are: (1) that surplus in the broader economy is a minor and transitory phenomenon; and (2) that markets allocate surplus in ways that encourage desirable levels of investment and innovation.

The discussion in this Part then challenges these arguments. First, contrary to the assumptions of the rent-seeking scholars, surplus is shown to be a large, ubiquitous, and increasingly important phenomenon throughout the economy.[42] Second, the discussion explains why it is a mistake to assume, as most rent-seeking scholars do, that leaving the allocation of surplus to market forces will lead to desirable levels of investment and innovation.[43]

In summary, the analysis in this Part shows rent-seeking scholars made a mistake when they limited research on their important insight about the link between surplus and waste to the study of government-created monopoly rights.

A. Rent-Seeking Scholarship

One of the foundational insights from Adam Smith's work on economics is that pursuit of self-interest in market transactions can benefit all. Smith famously observed: "It is not from the benevolence of the butcher, the brewer, or the baker that we expect our dinner, but from their regard to their own interest."[44]

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[40] For exceptions, see *supra* notes 11 to 13 and accompanying text, and *infra* Section II.A.

[41] BUCHANAN ET AL., *supra* note 15, at ix.

[42] *See infra* Section I.B.

[43] *See infra* Section I.C.

[44] SMITH, *supra* note 36, at Book 1, Chapter II.

Subsequent research suggested that various refinements had to be added to Smith's basic insight. For example, if activities impose costs or provide benefits that are not included in the prices for goods and services (externalities), then private incentives will not align with social welfare.[45] Other well-recognized ways in which markets can fail to enhance social welfare if left unregulated, include problems that arise: when firms accumulate too much market power, in attempting to provide for the production of an optimal amount of a public good, and when attempting to achieve a socially desirable distribution of wealth.[46]

In 1967, Gordon Tullock published an article titled "The Welfare Costs of Tariffs, Monopolies, and Theft" that identified a previously underappreciated, but quite important, additional situation where permitting market competition to go unfettered would be wasteful rather than socially beneficial: when competition involves the fight for a surplus.[47] The specific goal of Tullock's article was more limited. He wanted to address findings by economists published in the 1950s and 1960s suggesting that monopoly practices resulted in relatively small costs to society.[48] Tullock argued that these findings underestimated the true cost of monopoly practices, because these findings did not include any measure of the resources invested to gain control of monopoly profits.[49]

Tullock offered money spent to encourage governments to impose tariffs on foreign goods as the quintessential example of wasteful competition for surplus. He writes:

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45 *See generally* PIGOU, *supra* note 39, at 172–203. The mismatch between private incentives and social welfare can be addressed in a variety of ways, including by imposing a tax that moves private party prices closer to true social costs (a Pigouvian tax), *see* PIGOU, *supra* note 39, at 192, by setting output at a socially optimal level, *see, e.g.*, Martin L. Weitzman, *Prices vs. Quantities*, 41 REV. ECON. STUD. 477, 479 (1974), or by selecting laws that encourage negotiation between the parties affected, *see, e.g.*, Ian Ayres & Robert Gertner, *Filling Gaps in Incomplete Contracts: An Economic Theory of Default Rules*, 99 YALE L.J. 87, 87–88 (1989).

46 *See, e.g.*, MUSGRAVE, *supra* 38, at 7–15.

47 Gordon Tullock, *The Welfare Costs of Tariffs, Monopolies, and Theft*, 5 WESTERN ECON. J. 224, 228 (1967) [hereinafter Tullock, *Welfare Costs*]. This article is the wellspring for research into the phenomenon that came to be known as "rent-seeking." One could argue that the rent-seeking scholarship merely extends the traditional externality analysis to a situation in which profits realized by one party impose a negative externality on the competitor who must lose at least the equivalent amount of profits. *See, e.g.,* KONRAD, *supra* note 9, at 19 ("A contest [which is the formal name for the situation Tullock identified] is a game with strong mutual externalities: a contestant who expends more effort increases his likelihood of winning the prize. But, at the same time, this increase in winning probability must imply that other contestants have a reduced probability of winning. This is the fundamental externality that is at work in contests.").

48 Gordon Tullock, *The Origin Rent-Seeking Concept*, 2 INT'L J. BUS. & ECON. 1, 3 (2003) [hereinafter Tullock, *Origin*].

49 Tullock, *Welfare Costs*, *supra* note 47, at 231 ("Surely we would expect that with a prize of this size dangling before our eyes, potential monopolists would be willing to invest large resources in the activity of monopolizing.").

> One would anticipate that the domestic producers would invest resources in lobbying for the tariff until the marginal return on the last dollar so spent was equal to its likely return producing the transfer . . . . These expenditures, which may simply offset each other to some extent, are purely wasteful from the standpoint of society as a whole; they are spent not on increasing wealth, but in attempts to transfer or resist transfer of wealth.[50]

However, the choice of these scholars to adopt terms like "rent-seeking"[51] and "rent dissipation"[52] to describe costly efforts to gain control of government-created monopoly rights is puzzling. Economists generally use the term "rent" to refer to amounts earned in excess of costs, following the pioneering work of David Ricardo.[53] The use of the "rent" terminology by scholars following Tullock does not match up well with the use of the term introduced by Ricardo. Ricardo used the term rent to describe a ubiquitous economic phenomenon that occurs whenever the market price exceeds cost for a particular seller. Scholars using the term rent-seeking focus on a much narrower swath of economic activity in their analysis of the waste associated with competition for surplus.[54] This disconnect raises the question as to why those studying rent-seeking cabin their analysis to situations involving government-created monopoly rights, rather than consider costs from the fight for surplus arising in the broader context of rents described by Ricardo.

There are two possible explanations as to why scholars studying rent-seeking limit their analysis in this manner. First, these scholars may simply have failed to realize that the phenomenon they focus on involves only one small component of rent as the concept is generally understood by economists. Second, these scholars may have limited their study of rent-seeking because they viewed government-created monopoly rights as the only context in which the contest for surplus is problematic.[55]

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[50] *Id.* at 228.

[51] Anne Krueger in a 1974 article "The Political Economy of the Rent-Seeking Society" coined the term "rent-seeking" to describe the wasteful efforts described by Tullock "aimed at obtaining special government privilege." Anne O. Krueger, *The Political Economy of the Rent-Seeking Society*, 64 AM. ECON. REV. 291, 291 (1974).

[52] *See, e.g.*, Mark F. Grady & Jay I. Alexander, *Patent Law and Rent Dissipation*, 78 VA. L. REV. 305, 307 (1992); Dean Lueck, *The Rule of First Possession and the Design of the Law*, 38 J.L. & ECON. 393, 395 (1995).

[53] *See* DAVID RICARDO, THE PRINCIPLES OF POLITICAL ECONOMY AND TAXATION 67–84 (1817). For a more detailed discussion of "Ricardian rents," see *infra* notes 89, 90, and accompanying text. For an explanation as to why the term used throughout this Article is surplus rather than rent, see *infra* note 79.

[54] *But see* Jagdish N. Bhagwati, *Directly Unproductive, Profit-seeking (DUP) Activities*, 90 J. POL. ECON. 988, 991 (1982) ("What I argue in this paper can be simply extended to private activities, therefore, even though virtually all examples chosen below concern governmental policy-related DUP activities exclusively.").

[55] Tullock in subsequent writings offers a third possible justification for primarily

A careful reading of the rent-seeking scholarship suggests this second rationale—the belief that the fight for rents outside of the government-created monopoly rights context is not especially problematic—explains why these scholars focus on waste arising from the fight for government-created monopoly rights. Perhaps the best evidence of reliance on this second rationale comes from a book chapter titled "Rent Seeking and Profit Seeking" written by James Buchanan.[56] Buchanan begins this book chapter with a definition of rent-seeking that echoes the broader definition of rent used by economists more generally.[57] Buchanan writes that the term rent-seeking derives from the "standard textbook . . . economic theory" definition of rent as:

> . . . that part of the payment to an owner of resources over and above that which those resources could command in any alternative use. Rent is receipt in excess of opportunity cost. In one sense, it is an allocatively unnecessary payment not required to attract the resources to the particular employment.[58]

Buchanan next acknowledges that one implication of this broad definition of rent is that those engaged in the study of rent-seeking would appear to be engaged in the study of a broad swath of economic activity. He observes that "[s]o long as owners of resources prefer more to less, they are likely to be engaged in rent seeking, which is simply another word for profit seeking."[59] Thus far, Buchanan's discussion suggests those studying a phenomenon labeled rent-seeking should not focus exclusively on rent dissipation in situations where the aegis of government is involved.

Buchanan then explains why he believes those studying rent-seeking can safely restrict the scope of their investigation. He writes that rent-seeking outside of "transfers of wealth through the aegis of the state" can be excluded from the analysis because, where there is no government intervention, problems from rent

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focusing on the waste arising from resources spent to capture monopoly profits created by government activity. Tullock appears to have believed that industrial organization economists had adequately addressed the costs of competition for monopoly profits in other domains. Tullock writes that: "In the industrial organization literature, economists had already recognized that firms would invest in building barriers to entry. A good example is advertising. However, the focus of my article – and the part that was to be most important in the development of the concept of rent-seeking – was investment in the activity of securing protection *from the government*." Tullock, *Origin, supra* note 48, at 4 (citation omitted).

[56] James M. Buchanan, *Rent Seeking and Profit Seeking*, *in* JAMES M. BUCHANAN ET AL., TOWARD A THEORY OF THE RENT-SEEKING SOCIETY 3–15 (1980).

[57] With respect to economists' definition of what constitutes rent generally, see, e.g., GRUBER, *supra* note 2, at G-9 (defining rents as "payments to resource deliverers that exceed those necessary to employ the resource"). *See also* POSNER, *supra* note 2, at 11–12 (defining rents as including both consumer surplus and producer surplus).

[58] Buchanan, *supra* note 56, at 3.

[59] *Id.*

dissipation will not arise.[60] He contrasts rent-seeking with what he defines as rent-creation and concludes "[t]he entrepreneurial activity of *rent creation* is functionally quite different from that of *rent seeking*."[61]

The reasoning Buchanan offers in support of his claim that those studying rent-seeking need not be concerned with the social costs of such activities in the broader market context is unpersuasive. His argument begins with a reference to Adam Smith and Smith's claim that only with the pursuit of self-interest "do markets work in getting resources allocated efficiently among competing uses."[62] Relying on the efficacy of markets as a tool for allocative efficiency to justify relying on markets to share surplus fairly and efficiently repeats a similar confusion among legal scholars discussed in the Introduction.[63] If the question is how to facilitate the sharing of a rent or a surplus in a fair and efficient manner, then insights from Smith about how markets allocate assets efficiently through the price mechanism are not germane.

Buchanan then offers an alternative and slightly more refined justification for limiting investigation of the costs of rent-seeking to situations involving the competition for special government privilege. He argues that "the social marginal product of profit seeking exceeds private marginal product"[64] outside of the government-created monopoly rights context. By this, he appears to mean that the benefits to the economy from rent-seeking activities outweigh the costs in situations other than the contest for government-created monopoly rights. However, Buchanan provides no evidence to support this assertion.

Buchanan makes a similar assertion later in the same chapter when he offers a modified definition of rent seeking as the study of "behavior in institutional settings where individual efforts to maximize value generate social waste rather than social surplus."[65] For Buchanan the relevant institutional setting in which such activity is problematic is only in "the near chaos of direct political allocation."[66] Again, no evidence is offered to support the assertion. The argument appears to be that evidence that competition for government-created monopoly rights is *more* wasteful than other rent-seeking activities shows that all other rent-seeking activities are not problematic. The flaw in this logic is obvious. Another argument Buchanan offers is that costs arising from the competition for rents in an "ordered market structure" can be ignored, because these costs are transitory. Buchanan writes that "in market systems, all economic rent tends to be eroded or dissipated as adjustments take place through time."[67]

A final line of argument Buchanan advances for limiting investigation of the costs of rent-seeking to situations involving the competition for special

[60] *Id.*
[61] *Id.* at 7.
[62] *Id.* at 4.
[63] *See supra* notes 36 to 39 and accompanying text.
[64] Buchanan, *supra* note 56, at 4.
[65] *Id.*
[66] *Id*.
[67] *Id*.

government privilege is that competition for surplus in market transactions provides socially desirable incentives for firms to invest and innovate. Buchanan writes that in "an ordered market structure, the potential attractiveness of economic rents offers the motivation to resource owners and to entrepreneurs who combine resources into production."[68] Buchanan makes this claim without offering any supporting evidence.

Many of Buchanan's rationales for ignoring the costs of rent-seeking in the broader economy are echoed by Tullock. Tullock acknowledges that unfettered competition can be wasteful, observing: "This illustrates a very old point in economics. Competition is not always a good thing."[69] However, like Buchanan, Tullock views the wasteful nature of competition as only problematic in a poorly-organized market, writing: "In a well-organized market, the individuals aiming solely at benefiting themselves end up benefiting other people. In a sufficiently badly organized market . . . they simply generate waste."[70] Tullock also justifies ignoring the costs of competition for surplus outside of the government-created monopoly rights context by arguing that the stakes involved in these other venues are small. He writes that: "Private businessmen do a good deal of rent seeking and rent avoidance, too, but *it is a relatively minor factor*."[71] However, as with Buchanan, Tullock does not offer any evidence to support the conclusion that rent-seeking is not wasteful in the broader market context.

Edward Rice and Thomas Ulen acknowledge that earlier scholars studying rent-seeking had assumed without proof that rent-seeking activities broadly defined were not problematic.[72] Unfortunately, Rice and Ulen's efforts to address this shortcoming are unsatisfying. Rice and Ulen argue that when the socially desirable benefits from incentives to innovate provided by rent-capturing opportunities are included in the analysis, the static costs of competition for rent identified by Tullock overstate the true costs of rent-seeking. Moreover, according to Rice and Ulen, these benefits are more prevalent when the competition for rent does not involve government activities. They conclude that this countervailing benefit justifies the distinction Tullock draws "between monopoly rights which are guaranteed and enforced by the state and those which are not."[73]

However, Rice and Ulen provide no evidence to support the conclusion that when investment incentives are included competition for rent is welfare enhancing. Nor do they consider in their analysis alternatives to unfettered competition for surplus. Rice and Ulen simply cite Joseph Schumpeter to justify their conclusion that "unfettered competition for monopoly rent is, as Schumpeter noted long ago, the essence of the competitive process. Although there may be some social costs

[68] *Id.* at 5.

[69] Gordon Tullock, *Rent Seeking as a Negative Sum Game*, *in* JAMES M. BUCHANAN ET AL., TOWARD A THEORY OF THE RENT-SEEKING SOCIETY 31 (1980).

[70] *Id.*

[71] *Id.* at 33 (emphasis added).

[72] Edward M. Rice & Thomas S. Ulen, *Rent-Seeking and Welfare Loss*, *in* 3 RESEARCH IN LAW AND ECONOMICS 53 (1981).

[73] *Id.* at 54.

associated with competitive rent-seeking, the social benefit, such as cost-reducing innovation and improved products, are likely far greater . . . ."[74] For Rice and Ulen the choice is bimodal: accept the costs of unfettered competition, or lose the social benefits provided by the competition for surplus. Based on this dichotomy, Rice and Ulen conclude that the waste associated with competition for surplus is a necessary and desirable feature of a market economy.

In summary, scholars studying rent-seeking take an important first step to help better understand how legal rules can help to share surplus fairly and efficiently. Their research highlights why unfettered competition for a surplus can be wasteful. However, these scholars fail to investigate further how legal rules can mitigate these costs, primarily because of their reliance on two faulty assumptions.[75] First, these scholars wrongly assume that the surplus problem is of minimal importance in well-functioning markets.[76] Second, these scholars wrongly assume that allowing market forces to dictate surplus sharing arrangements leads to desirable levels of investment and innovation.[77] Both of these assumptions are faulty for the reasons detailed below.

B. Surplus Throughout the Economy

Those who study rent-seeking recognize that competition for surplus invites waste. However, these scholars limit their study of this dynamic to situations involving competition for government-created monopoly rights. The two reasons these scholars cabin their research in this manner were detailed above.[78] The discussion below shows why neither of these justifications withstands careful scrutiny. First, contrary to suggestions from Buchanan and other rent-seeking scholars, surplus and the ensuing competition for surplus in market economies is neither ephemeral nor modest in size. Second, there is not a convincing argument that leaving the fight for surplus to market participants offers the best method to achieve desirable levels of investment or innovation.

1. Sources

Before addressing the claim that surplus is an ephemeral and minor phenomenon in our economy, it is helpful to define the term surplus more precisely and to identify the various sources of surplus.

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[74] *Id*. at 63.

[75] This failing is not complete. Most notably, work by Richard Posner on the admiralty law rule of salvage considers how legal rules can mitigate costs arising from wasteful competition for surplus. *See infra* notes 145 to 150 and accompanying text.

[76] *See supra* notes 67, 71, and accompanying text.

[77] *See supra* notes 68, 74, and accompanying text.

[78] *See supra* Section I.A.

There are two ways to define what constitutes a surplus.[79] One approach is to define an amount as a surplus when there is more of a good available than anybody could possibly want. Definitions suggesting this meaning of surplus include "the amount that remains when use or need is satisfied,"[80] or, similarly, the amount that is "left over when requirements have been met."[81] This meaning is not particularly helpful for analytical purposes, because of the ambiguity inherent in determining when needs are fully satisfied or requirements sufficiently met for a surplus to exist.

More helpful is a definition of surplus that refers to benefits in excess of costs. Examples of definitions based on this meaning include "the amount of receipts over disbursements"[82] or "an excess of supply or production over demand."[83] This Article will rely on this more measurable meaning of what constitutes a surplus. In application, this definition means here that, at a minimum, a surplus exists whenever a gain can be realized by trade.[84] The amount of the surplus in such a

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[79] This footnote explains the choice to use the term "surplus" to describe the economic phenomenon discussed throughout this Article. Economists going back to Alfred Marshall use the term "surplus" to describe the area below the demand curve and above the supply curve. ALFRED MARSHALL, PRINCIPLES OF ECONOMICS 78, 241, 272 (1890). Another term used in various contexts to refer to the area between willingness to pay and willingness to sell is 'rent.' I choose to use the term surplus rather than rent for at least two reasons. First, the popular meaning of the word 'rent' – amounts paid to a landlord – is quite different from the intended meaning here. Second, David Ricardo originally used the term rent to describe amounts earned by landowners as a result of owning higher quality land. RICARDO, *supra* note 53, at 67–84. Ricardo thus uses the term rent in a narrower sense than the term surplus is used here in two respects. First, what Ricardo describes as rent would only include what economists now describe as producer surplus. Producer surplus represents the extent to which some producers receive benefits in excess of costs when selling goods at the market price. The term surplus as used here includes not just producer surplus but consumer surplus as well. Consumer surplus refers to the difference between the price someone is willing to pay and the price they actually pay. Second, Ricardo only discusses the producer surplus that arises from owning land, but producer surplus can arise in many contexts other than land ownership.

[80] *Surplus*, WEBSTER'S NEW COLLEGIATE DICTIONARY (1973).

[81] *Surplus Definition*, GOOGLE, https://www.google.com/search?q=surplus+definition &ie=utf-8&oe=utf-8&client=firefox-b-1 [https://perma.cc/XH44-PAB4].

[82] *Surplus*, *supra* note 80.

[83] *Surplus Definition*, *supra* note 81.

[84] Surplus as defined above can also arise from the process by which goods and services are produced, because combining various inputs in a particular manner can create an output of greater value than the costs of the inputs. One might call the resulting gains in such a situation "production surplus." Production surplus so defined has received some amount of attention from both economists and legal scholars. Most notably, Armen Alchian and Harold Demsetz show how difficulties in measuring the relative contributions of various components to the value of a good manufactured by a team could explain why firms are used to organize productive activities. Armen A. Alchian & Harold Demsetz, *Production, Information Costs, and Economic Organization*, 62 AM. ECON. REV. 777 (1972). Alchian and Demsetz do not, however, use the word surplus to describe this

trade is the difference between the value of the good to the person who receives the good and the value of the good to the person who is parting with the good.[85]

The examples of surplus provided in the Introduction can be used to illustrate how this calculation might work. If someone can purchase a copy of "Hillbilly Elegy" for only $17 on Amazon even if she would have paid $50 for a copy of the book, there is at least a $33 surplus in this transaction.[86] Likewise, when Gilead Science charges $100,000 for a twelve-week course of treatment with the drug Harvoni that only cost Gilead $25,000 to develop and prepare, there is at least a $75,000 surplus.[87]

A logical follow-on question is: where does all of this surplus come from? One source of surplus is heterogeneity (or differences) both between and among buyers and sellers in a particular market.[88] Ricardo recognized that heterogeneity was the source of the surplus he famously identified as rent.[89] In the second chapter of *The Principles of Political Economy and Taxation*, Ricardo observed that it "is only, then, because land is not unlimited in quantity and uniform in quality, . . .

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phenomenon. For refinements of the Alchian and Demsetz model, see Bengt Holmström, *Moral Hazard in Teams*, 13 BELL J. ECON. 324 (1982) and Raghuram G. Rajan & Luigi Zingales, *Power in the Theory of a Firm*, 114 Q.J. ECON. 387 (1998).

Margaret Blair and Lynn Stout build upon the Alchian and Demsetz insight to argue that corporate Boards of Directors "exist not to protect shareholders *per se*, but to protect the enterprise-specific investments of *all* the members of the corporate 'team,' including shareholders, managers, rank and file employees, and possibly other groups, such as creditors." Margaret M. Blair & Lynn A. Stout, *A Team Production Theory of Corporate Law*, 85 VA. L. REV. 247, 253 (1999). Blair and Stout do use the term surplus to describe some part of the team output and note that "serious problems can arise in determining how any economic surpluses generated by team production – any 'rents' – should be divided." *Id.* at 249.

The problem of how to share a surplus fairly and efficiently that arises in the team production context is different from the surplus problem that arises in market transactions. Team production involves the creation of value by cooperative endeavor, whereas the surplus problem in markets involves a situation in which it may be difficult for those on each side of the transaction to cooperate in order to minimize waste. I do not include a discussion in this Article of the distinct problems that arise out of production surplus.

[85] For simplicity throughout this Article, I refer to transactions as involving goods, although the transaction could involve any kind of market exchange.

[86] *See supra* note 4 and accompanying text.

[87] *See supra* note 6 and accompanying text.

[88] For illustrative research discussing the role of heterogeneity in the creation of surplus in the context of fisheries, see Ronald N. Johnson & Gary D. Libecap*, Contracting Problems and Regulation: The Case of the Fishery,* 72 AM. ECON. REV. 1005 (1982).

[89] Ricardo might rightly be identified as the father of surplus analysis. The only qualification is that there is some evidence that Ricardo's ideas about rent originated with his friend, Thomas Malthus. *See, e.g.*, THOMAS ROBERT MALTHUS, AN INQUIRY INTO THE NATURE AND PROGRESS OF RENT AND THE PRINCIPLES BY WHICH IT IS REGULATED 7–8 (1815) ("And the inequality of soils occasions, even at an early period of society, a comparative scarcity of the best lands; and so far is undoubtedly one of the causes of rent properly called.").

that rent is ever paid for the use of it . . . . The amount of that rent will depend on the *difference* in the quality of these two portions of land."[90] The person who owns higher quality land is able to rent her land for more than it cost, because the fecundity of her land exceeds that of the marginal land farmed, and the market price is determined by the productivity of the marginal land.

Contrary to the assumptions relied upon by rent-seeking scholars to justify limiting the scope of their research, this source of surplus, differences between and among buyers and sellers, is likely to be sustained and pronounced.[91] The rents described by Ricardo illustrate why surplus is likely to be an ongoing rather than ephemeral feature of a market economy.[92] The relative fecundity of one piece of land as compared to another can persist even in a well-functioning economy. The persistence of "Ricardian rents"[93] also helps to illustrate the difference between surplus and profit. Ricardian rents are determined by differences between the productivity of one particular landholder's land and the productivity of the marginal piece of land. The skill or effort of the landowner does not determine how much rent the landowner will receive. As Ricardo correctly observes, "the laws which regulate the progress of rent are widely different from those which regulate the progress of profits."[94]

Differences between the wealth of buyers are also an important and ongoing source of heterogeneity and, therefore, surplus in a market economy.[95] Consider the following hypothetical example. A rich person is willing to pay $10 for an ice cream cone while a poor person is only willing to pay $1 for the same ice cream cone, even if both would enjoy the cone equally. Despite identical preferences between the rich and poor purchaser, their difference in wealth creates a surplus if we assume the price they have to pay is roughly equal. Significant inequality in wealth in our society has received increasing attention as of late.[96] An increase in

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[90] RICARDO, *supra* note 53, at 70 (emphasis added).

[91] Many of these differences may, however, be difficult to observe. Jerry A. Hausman & Whiney K. Newey, *Individual Heterogeneity and Average Welfare*, 84 ECONOMETRICA 1225, 1225 (2016) ("Unobserved individual heterogeneity is thought to be a large source of variation in empirical demand equations.").

[92] The possibility of extrapolating from Ricardo's work and concluding that there are sustained surpluses throughout the economy was an idea explored over a century ago by Sidney Webb and the Fabians. A. M. MCBRIAR, FABIAN SOCIALISM & ENGLISH POLITICS: 1884–1918, at 35–41 (1962). For a critique of this extension of Ricardo's theory of rent by the Fabians, see George J. Stigler, *Sidney Webb, and the Theory of Fabian Socialism,* 103 PROC. AM. PHIL. SOC'Y 469, 472–75 (1959).

[93] The term 'Ricardian rents' is used here to refer to the surplus resulting from owning higher quality land.

[94] *Id.* at 68. A related observation that Ricardo makes is that the amount of rent received does not affect price. *Id.* at 78 ("[R]ent is not a component part of the price of commodities.").

[95] This was implicit in the example above involving the purchase of a book at market price on Amazon by someone who is wealthy. *See supra* note 4 and accompanying text.

[96] For a discussion of wealth inequality in our society, see, e.g., Thomas Piketty & Emmanuel Saez, *Income Inequality in the United States: 1913–1998*, 118 Q.J. ECON. 1

the amount of surplus in the economy is one potential consequence of this development.

Differences in willingness to pay among purchasers that arise out of wealth inequality are not only a source of surplus, but also a source of surplus that is almost certainly distributed in a regressive manner. As Liam Murphy and Thomas Nagel observe, a "competitive market in private goods therefore automatically creates a large surplus—the difference between actual price and reserve price—for people who have lots of money."[97] The ice cream cone hypothetical introduced in the paragraph above can provide a concrete example of this regressive effect. If the ice cream cone were to sell for $1, then the poor person purchasing the cone gains no surplus from the transaction whereas the rich person gets to keep a $9 surplus.

The discussion above highlights how differences between buyers (perhaps because of wealth differences) and sellers (perhaps because of differences in the quality of the land they hold) can create a significant amount of surplus even in an efficiently functioning economy. The implications about the ubiquity and large amount of surplus in markets that can be inferred from supply and demand curves, as drawn in introductory microeconomics textbooks, appear to be correct.[98]

2. Estimated Magnitude

The discussion above clarifies why surplus is a ubiquitous and persistent market phenomenon. The reason is that there are often differences between the value of a good to a buyer and the value of that same good to the seller. The next question to address is how large the amounts involved might be. It is a challenge beyond the scope of this Article to estimate with precision the amount of surplus in the United States economy at any given point in time. However, preliminary estimates offered below suggest that the amounts involved are quite large.

There are several ways to estimate the amount of surplus in the economy. One approach is to look at corporate profitability generally and then estimate what share of this profitability arises from the ability of firms to capture surplus as opposed to other potential sources of profitability. The goal of this approach would be to separate out "corporate surplus" from the firms' "ordinary profits," and then to infer from the amount of this "corporate surplus" a lower bound on the amount of surplus in the economy.[99] A second approach is to infer how large the surplus

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(2003) (using income data to document a sharp rise in the share of income going to the very top of the distribution in the United States); *but see* Bruce D. Meyer & James X. Sullivan, *Consumption and Income Inequality in the U.S. since the 1960s* 32 (Nat'l Bureau Economic Research, Working Paper 23655, 2017) (finding "evidence of only a modest rise in consumption inequality over the past five decades").

[97] Liam Murphy & Thomas Nagel, *Taxes, Redistribution, and Public Provision,* 30 PHIL. & PUB. AFF. 53, 60 (2001).

[98] *See supra* notes 2, 3, and accompanying text.

[99] This approach, even if carried out with precision, would underestimate the amount of surplus in the economy, because surplus captured by other actors in the economy, such as consumers, would be ignored.

might be based on the amounts spent to capture surplus. The assumption underlying this approach would be that firms should be willing to spend up to, but not more than, the amount of the underlying surplus available for capture.[100] A third approach is to estimate the amount of surplus in the economy by extrapolating from evidence of surplus in specific markets.[101]

I use the first and second approaches here to generate preliminary estimates of the amount of surplus in the economy. The immediate challenge facing the first approach—using corporate surplus to estimate overall surplus—is the problem of how to separate out a firm's gains from capturing surplus from the firm's "ordinary profits." Changes in corporate profitability over the past forty years provide some insight into how to accomplish this daunting task, as suggested in research by economists Jan De Loecker and Jan Eeckhout.[102] De Loecker and Eeckhout investigate the extent to which public companies in the United States have increased their ability to charge customers prices in excess of cost. Based on balance sheet data from public companies, De Loecker and Eeckhout estimate that markups above cost have more than tripled since the 1980s, rising from approximately 18% of cost in 1980 to 67% above cost currently.[103] One

[100] For an analysis that challenges this intuition about the likely relationship between available surplus and expenditures made to capture that surplus, see Gordon Tullock, *Efficient Rent Seeking*, *in* JAMES M. BUCHANAN ET AL., TOWARD A THEORY OF THE RENT-SEEKING SOCIETY 95–112 (1980).

[101] Rory Van Loo uses this third type of analysis to reach the conclusion that the preliminary data indicates that there is over a trillion dollars of "consumer overcharge across the economy." Rory Van Loo, Consumer Law as Tax Alternative (unpublished manuscript) (on file with author) [hereinafter Van Loo, Consumer Law]; *see also*, Rory Van Loo, *Helping Buyers Beware: The Need for Supervision of Big Retail*, 163 U. PA. L. REV. 1311, 1355 (2015) (observing that in the retail goods sector alone the leading study would imply overcharge for a family earning $50,000 annually is between $600 and $1,200 annually).

Much of what Van Loo describes as overcharge would be characterized as a component of surplus in the analytical framework developed here. Van Loo is, however, calculating an amount that differs from the amount under investigation here in several ways. First, Van Loo is interested in identifying the amount of surplus consumers lose to sellers, whereas the analysis here is concerned with the total amount of surplus in the economy regardless of whether purchasers are consumers or businesses. Second, the surplus under consideration here includes the amount traditionally labeled producer surplus, which is the amount sellers receive in excess of their reservation price. Van Loo does not include producer surplus in his calculation. Third, Van Loo includes in his estimate amounts that consumers pay in excess of their true "willingness to pay" as a result of either "behavioral overcharge" or deceptive practices. My goal in estimating surplus is to exclude these amounts, because they represent something other than an unambiguous economic surplus.

[102] Jan De Loecker & Jan Eeckhout, *The Rise of Market Power and the Macroeconomics Implications* 3 (Nat'l Bureau of Econ. Research, Working Paper No. 23687, 2017).

[103] *Id*. at 16.

explanation for this change is that these firms are able to capture more surplus than they were forty years ago.[104]

If the higher markups De Loecker and Eeckhout observe result from an increase in the ability of public firms to capture surplus, then increases in firm profitability in the overall economy during this period might help to estimate the aggregate amount of surplus in the economy. According to an analysis by the Federal Reserve Bank (the "FED"), corporate after tax profits in the United States increased from $1.4 trillion in 1986 to more than $6.7 trillion in 2016.[105] The increase in markups observed among public firms by De Loecker and Eeckhout likely explains some amount of the dramatic increase in the profitability of United States corporations observed by the FED over the same period.[106] Even using conservative assumptions, this increase in corporate profits since the 1980s suggests that the aggregate amount of surplus in the United States economy in a given year is at least $2.5 trillion.[107]

A second way to estimate the amount of surplus in the economy is to consider the amount of money spent to capture surplus. Presumably, the amount spent to capture surplus may approach but will not exceed the actual amount of surplus.[108] One possible indication of the amount spent to capture surplus is spending on media advertising, because media advertising is one way firms can differentiate their products and avoid selling their goods at the market-clearing price. Over $200

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[104] De Loecker and Eeckhout consider but reject reasons other than increased market power to explain why markups have increased so dramatically since 1980. *Id*. at 14–16. *But see* TAD LIPSKY ET AL., GLOBAL ANTITRUST INSTITUTE, ANTONIN SCALIA LAW SCHOOL, GEORGE MASON UNIVERSITY LAW & ECONOMICS RESEARCH PAPER SERIES 18-25, THE UNITED STATES FEDERAL TRADE COMMISSION HEARINGS ON COMPETITION AND CONSUMER PROTECTION IN THE 21ST CENTURY, HEARING ON CONCENTRATION AND COMPETITIVENESS IN THE U.S. ECONOMY (2018).

[105] *Corporate Profits After Tax (without IVA and CCAdj)*, ECON. RES., FED. RES. BANK ST. LOUIS (Sept. 20, 2017), https://fred.stlouisfed.org/series/CP [https://perma.cc/N7V8-4HBG]. The 1986 dollar amount reported above ($1.4 trillion) is adjusted for inflation and stated in 2016 dollars. The use of United States firm profitability data to estimate United States surplus may be problematic to the extent that these profits arise from transactions that take place outside of the United States.

[106] De Loecker and Eeckhout only analyze public firms because those are the only firms for which the relevant financial data is available, but public firms in the United States control a substantial share of the country's economic activity (for example, over 40% of firm sales). De Loecker & Eeckhout, *supra* note 102; John A. Asker et al., *Corporate Investment and Stock Market Listing: A Puzzle?*, 28 REV. FIN. STUD. 342, 345 (2014).

[107] I assume half (50%) of the roughly $5 trillion increase in after-tax profits is attributable to the increased ability of firms to capture surplus observed by De Loecker and Eeckhout during this period, that there is no surplus in the economy prior to this period or arising from any other sources, and that tax rates are zero (the FED only reports after tax profits).

[108] *See supra* note 100 and accompanying text.

billion is spent annually on media advertising in the United States.[109] A speculative extrapolation from these annual expenditures suggests that surplus in the United States economy is at least $2.0 trillion annually.[110]

Two methods for generating preliminary estimates of the magnitude of surplus in the United States economy on an annual basis suggest that the minimum amounts involved are at least $2.0 trillion or $2.5 trillion. Further work will need to be done to refine these estimates, but this preliminary work shows that the surplus in our economy is quite likely a large economic phenomenon.

One reason rent-seeking scholars offer for limiting their concerns about the relationship between waste and surplus to government-created monopoly rights is the assumption that surplus is not a particularly significant phenomenon in markets generally.[111] The estimates provided above show that this assumption does not provide a sound justification for ignoring costs incurred in the fight for surplus throughout the economy.

3. *Growing Importance*

The discussion above suggests that surplus in the United States economy is a ubiquitous and economically significant phenomenon. A related and important observation is that the battle for this surplus is entering a new and more competitive phase.

More than a century ago, with the increased use of price tags, a truce in the battle for surplus emerged between retail buyers and sellers.[112] The practice of

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[109] This estimate is provided by Statista, an online statistics aggregating site. *Media Advertising Spending in the United States from 2015 to 2022 (in Billion U.S. Dollars)*, STATISTA, https://www.statista.com/statistics/272314/advertising-spending-in-the-us/ [https://perma.cc/UD9G-RM6F]. Another data point comes from Akerlof and Shiller, who estimate funds spent on advertising at $280 billion in 2007. GEORGE A. AKERLOF & ROBERT J. SHILLER, PHISHING FOR PHOOLS: THE ECONOMICS OF MANIPULATION AND DECEPTION 195 (2015).

[110] If perhaps fifty percent (50%) of this annual amount of $200 billion is directed toward capturing surplus, this would translate into $100 billion in annual media spending to capture surplus. To extrapolate from the annual amount of media spending to the amount of surplus in the economy, a multiple of between five and fifty times the annual expenditure could take into account the fact that the observed expenditures are likely to only marginally influence the amount of market surplus captured, and represent only one avenue of spending used to capture surplus. If we use a multiple of twenty times the amount of media expenditures spent and assume there are no other sources of surplus in the economy, the implied surplus value is $2.0 trillion.

[111] *See supra* notes 67, 71, and accompanying text.

[112] French sociologist Gabriel Tarde is credited with describing the practice of posting prices as akin to a "military truce" between buyers and sellers. *See, e.g.*, HERMANN SIMON, CONFESSIONS OF THE PRICING MAN 25 (2015). In some circumstances, such as when the amount of each individual transaction is comparatively large—for example, when you purchase a car—the term truce only applies loosely. Anita Ramasastry, *Web Sites Change Prices Based on Customers' Habits*, CNN (June 24, 2005), http://www.cnn.com/2005/LA

posting prices at retail outlets became widespread as part of a revolution in retail practices engineered by entrepreneurs, such as Rowland Macy and John Wanamaker.[113] These entrepreneurs realized that displaying prices would limit their ability to charge higher prices to customers who were willing to pay more. However, they recognized that posting prices would also provide significant cost savings. One commentator observes:

> Merchants saw the practical benefits of Macy's and Wanamaker's prix fixe policies. As they staffed up their new department stores, it was expensive to train hundreds of clerks in the art of haggling. Fixed prices offered a measure of predictability to bookkeeping, sped up the sales process, and made possible the proliferation of printed retail ads highlighting a given price for a given good.[114]

Customers also appear to prefer not to have to haggle over price.[115] These pioneering retailers realized that, given the economies of the day, it was worth sacrificing the opportunity to capture additional surplus because of the benefits in terms of selling efficiencies, reduced marketing costs, and enhanced customer goodwill provided by posting prices.

However, this historic truce between retail buyers and sellers, in place for more than a century, is breaking down. With the advent of online markets and "big data," companies are moving toward personalized pricing and other sophisticated pricing techniques.[116] New technologies now allow firms to modify prices almost instantaneously and based on who the purchaser is. These technologies therefore enable sellers to capture a greater share of the surplus then when prices were more costly to change.[117] Consumers are fighting back with price comparison

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W/06/24/ramasastry.website.prices/ [https://perma.cc/2694-6BPV] ("And everyone knows that the 'sticker' price on a car is not the typical purchase price. It serves, rather, as a starting point for further negotiation.").

[113] Jerry Useem, *How Online Shopping Makes Suckers of Us All*, ATLANTIC, May 2017. The credo at Wanamaker's store, for example, was "One price to all; no favoritism." *Id*.

[114] *Id.*

[115] *See* Saul Levmore & Frank Fagan, *The End of Bargaining in the Digital Age*, 103 CORNELL L. REV. 1469, 1479 (2018) ("In modern times, it is a process that many amateurs seek to avoid, even if it means forgoing bargains, because they recognize that a reluctant or inept participant is sure to pay too high a price . . . .").

[116] As Oren Bar-Gill explains, "we are approaching a world[] where each consumer will be charged a personalized price for a personalized product or service." Oren Bar-Gill, *Algorithmic Price Discrimination: When Demand Is a Function of Both Preferences and (Mis)perceptions*, U. CHI. L. REV. (forthcoming 2019) (manuscript at i).

[117] *See supra* note 113; Adam Tanner, *Different Customers, Different Prices, Thanks to Big Data,* FORBES (Apr. 14, 2014), https://www.forbes.com/sites/adamtanner/2014/03/26/different-customers-different-prices-thanks-to-big-data/#2a3d0d905730 [https://perma.cc/5N67-MMS5]. One study applying "big data" techniques found that using an individual's browsing history to personalize prices could increase profits by over 12%. Benjamin Reed

technologies.[118] The result of these developments is that the battle between consumers and retailers for surplus is escalating anew.

One reason rent-seeking scholars did not extend their powerful insight about the relationship between surplus and waste to market transactions was their belief that surplus was a minor and ephemeral feature of a well-functioning market.[119] The analysis above shows why such a view is mistaken. Surplus is a ubiquitous, large, and increasingly important phenomenon even in "well-ordered" markets.

C. Surplus, Investment, and Innovation

Another assumption rent-seeking scholars offer for ignoring the ramifications of their insight about the relationship between waste and surplus to the broader economy is their assumption that unfettered markets are likely to distribute surplus in a way that leads to desirable levels of investment and innovation.[120] This section shows that the relationship between unregulated competition for surplus and socially desirable levels of investment or innovation is more complex and ambiguous than this simplifying assumption implies.

To illustrate why unregulated markets may or may not be the best way to distribute surplus—if the goal is to achieve efficient levels of investment or innovation—it is helpful to consider several possible scenarios. Considering these scenarios makes clear that there is no reason to believe a priori that relying on markets will result in desirable levels of investment or innovation. The flaw with this reliance is that market forces cannot distinguish between situations in which capturing surplus offers an appropriate reward for welfare-enhancing investments and situations in which the opportunity to capture surplus triggers investment in a wasteful arms race.[121]

The first scenarios to consider are those in which the method used to distribute a surplus, whether by market competition or otherwise, will have no effect on the level of investment or innovation. For example, if there are a multitude of viable competitors in an industry and entry and exit into that industry is relatively easy, then the relationship between marginal costs and the price at which goods are sold will determine incentives to invest. Investment decisions in

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Shiller, First-Degree Price Discrimination Using Big Data (Apr. 9, 2014) (unpublished manuscript) (on file with the author).

[118] Sites such as www.pricegrabber.com and www.shopzilla.com empower consumers by reducing search costs.

[119] *See supra* notes 67, 71, and accompanying text.

[120] *See supra* notes 68, 74, and accompanying text.

[121] For a similar observation in the context of evaluating the social welfare effects of copyright law, see Meurer, *Copyright Law*, *supra* note 12, at 66 ("The critical issue is whether the extra profit from price discrimination stimulates excessive investment or ameliorates an inadequate productive incentive."). For a similar observation in the context of evaluating the social welfare effects of information gathering activities, see Jack Hirshleifer, *The Private and Social Value of Information and the Reward to Inventive Activity*, 61 AM. ECON. REV. 561 (1971).

this scenario will not be affected by how surplus is distributed, because who does or does not receive surplus will not affect how the marginal firm's investment decision is made.[122] This is the industry structure foreseen by Ricardo when he observes that the lands to be used for farming and the market price will not vary even if one changes who receives rent from the land. As Ricardo concludes about such a scenario, if "landlords should forgo the whole of their rent . . . [s]uch a measure would only enable some farmers to live like gentlemen, but would not diminish the quantity of labor necessary to raise raw produce on the least productive land in cultivation."[123]

Another situation in which the way a surplus is allocated will not affect investment decisions is when the surplus arises out of an unexpected windfall. As Eric Kades observes, "[s]ocietal capture of windfalls, by definition, does not affect incentives to engage in productive activity and therefore does not discourage effort or exercise."[124] Finally, if the setting is one in which no long term investments are made, then the impact on investment levels of alternative surplus sharing arrangements can be ignored. These various scenarios illustrate situations wherein the way in which surplus is allocated will not affect the amount of investment or innovation in the economy.

However, in other situations, the way in which surplus is allocated will affect the amount of investment or innovation in the economy. The question that proves to be more difficult to answer than rent-seeking scholars assume is whether these effects, if left unregulated, are predictably more or less likely to increase social welfare. To facilitate the analysis, the effects of unregulated surplus allocation on investment levels are considered first, followed by a discussion of the effects of unregulated surplus allocation on innovation.

1. Investment

Two closely related scenarios involving the construction of a movie theater in a small town illustrate how difficult it is to know a priori how surplus should be allocated, if the goal is to achieve desirable investment levels.

In the first of this pair of scenarios, let us assume that a decision is about to be made as to whether to build a movie theater in a small, remote town. Further, assume that this is a one-movie-theater town. This means in this context that the social welfare gains from building the movie theater just exceed the costs of building and running the theater. If a firm considers building a movie theater in this one-movie-theater town, but that firm will not be able to capture much of the surplus this investment will create—perhaps because regulations require charging

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[122] PINDYCK & RUBINFELD, *supra* note 2, at 301 ("[T]he long-run output of a profit-maximizing competitive firm is the point at which long-run marginal cost equals the [market] price.") (emphasis omitted).

[123] RICARDO, *supra* note 53, at 75. Ricardo is referring to a redistribution proposal Malthus considers wherein "the landlords were to give the whole of their rents to their tenants." MALTHUS, *supra* note 89, at 57.

[124] Eric Kades, *Windfalls*, 108 YALE L.J. 1489, 1492 (1999).

the same price for every ticket—it might not build a movie theater even though doing so would have increased aggregate social welfare.

If, however, this same firm is able to capture more of the value the new movie theater creates—perhaps by implementing the types of price discrimination practices typically employed in the movie theater industry, such as reducing prices for senior citizens or offering lower prices at matinee times—the movie theater would be built.[125] In this one-movie-theater town scenario, market dynamics that allow the seller to capture more of the surplus would lead to the socially optimal investment decision.

It is this type of scenario, where prohibiting price discrimination will cause underinvestment, that leads many scholars to conclude that a prohibition on surplus-capturing practices such as price discrimination is unwise.[126] This is not a new insight. Pigou, for example, noted the possibility of a beneficial relationship between price discrimination and investment. He wrote:

> Finally, it should be observed that, when conditions of decreasing supply prevail, monopoly plus discrimination of the first degree may increase the size of the national dividend in a more special way. It may bring about a considerable amount of socially desirable investment in an industry, in which, under a regime of simple competition, it would not have been in anybody's interest to make an investment at all.[127]

However, a second scenario that is quite similar to the scenario just described above would lead to the opposite conclusion. In this second scenario, we alter our one-movie-theater town example from above slightly so that there is now sufficient surplus available to entice not one, but two companies to open a movie theater in the same small town.[128] We also assume that from a social welfare perspective the preferred outcome would be to build just one theater because with the opening of a second theater the surplus provided by opening the first theater would be fully dissipated.[129]

In this second scenario, where there is sufficient surplus to entice two companies to enter the movie-theater market in this small town, prohibiting price discrimination would provide better long-term incentives than would permitting price discrimination to proceed unfettered. This is opposite of the policy

[125] For a more detailed discussion of price discrimination, see *infra* Subsection II.B.3.

[126] *See, e.g.*, William J. Baumol & Daniel G. Swanson, *The New Economy and Ubiquitous Competitive Price Discrimination: Identifying Defensible Criteria of Market Power*, 70 ANTITRUST L.J. 661, 680 (2003); Edwards, *supra* note 12, at 586.

[127] PIGOU, *supra* note 39, at 283 (emphasis omitted).

[128] To keep comparability between the situations where there is one versus two theaters in this small town, it makes sense to assume that each movie theater is a multiplex that can show an unlimited selection of movies.

[129] In this second scenario, building the second theater destroys value just as in Posner's description of a situation where too many ships from a social welfare perspective chase after salvage opportunities. *See infra* note 146 and accompanying text.

prescription with respect to price discrimination in the first scenario considered above.[130] Comparing these two small town movie-theater scenarios illustrates that allowing firms to capture surplus might provide appropriate incentives for investments, or that doing so might encourage wasteful competition for surplus. There is no way to know a priori which scenario is more realistic.

In summary, permitting unfettered competition for surplus need not lead to socially desirable levels of investment. In some circumstances, allowing market participants to fight for and capture surplus will provide the needed incentive to invest wisely. In other circumstances, limiting the extent to which sellers can fight for and capture surplus will lead to optimal investment levels. There are also situations, such as when markets are competitive or when surplus constitutes an unexpected windfall, where investment levels are unaffected by how surplus is divvied up among market participants.[131] It is a mistake, as scholars studying rent-seeking do, to limit investigation of the relationship between surplus and waste to competition for government-created monopoly rights, because of faith in the magical power of well-functioning markets to settle upon arrangements that lead to an optimal level of investment without regulatory intervention.

2. *Innovation*

Innovation is the process by which new technology is developed,[132] and it represents an important source of economic growth.[133] However, as with the effects of differing market conditions on whether unfettered competition leads to socially desirable investment levels, the effects of unfettered competition on incentives to innovate are context-specific and hard to predict a priori. It is, therefore, again, a mistake to assume, as scholars who study rent-seeking do, that a laissez-faire approach to surplus allocation will lead to optimal levels of innovation.

On the one hand, market conditions and legal rules that allow an innovator to capture the entire amount of the surplus created by an innovation will encourage more investment in innovation.[134] However, the possibility also exists that

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[130] *See supra* notes 125 to 127 and accompanying text.

[131] *See supra* notes 122 to 124 and accompanying text.

[132] *See, e.g.*, Dan Usher, *The Welfare Economics of Invention,* 31 ECONOMICA 279 (1964).

[133] Michael A. Carrier, *Resolving the Patent-Antitrust Paradox Through Tripartite Innovation*, 56 VAND. L. REV. 1047, 1060–61 & nn.63–67 (2003) (citing sources showing that "innovative efficiencies dwarf those derived from maximizing allocative efficiency and that innovation is the most important factor in the growth of the economy"); Heidi L. Williams, *How Do Patents Affect Research Investment?* ANN. REV. ECON. 441, 442 (2017) ("Technological change is widely perceived to be a key driver of improved standards of living.").

[134] Based on the logic that rewards from innovation should go as much as possible to the innovator, Joseph Schumpeter famously argued that monopoly was the ideal structure for spurring innovation, because the monopolist could capture more of the gains from

investments in innovation can generate private but not social gains. As Professor Glenn Loury explains:

> if entry is again costless and occurs until no firm expects positive profit in equilibrium, more firms will enter the innovation race than is socially optimal. In any market structure, competing firms invest more in R&D than would be optimal because they do not take account of the parallel nature of their efforts.[135]

The difficulty in determining how to share surplus in order to optimize investments in innovation is similar to challenges faced in attempting to design an optimal patent system. The primary justification for the patent system and the grant of temporary monopoly power it provides to innovators is that protection from competition enhances returns to innovation. In theory, these protections can "bring the private returns captured by inventors closer to the social value of their inventions."[136] However, these monopoly grants also create a prize that many would-be innovators chase after without regard to the waste associated with the competition for surplus. Just as it is difficult to know with any certainty if the patent system is properly calibrated, it is implausible that one could conclude without careful investigation that leaving the distribution of surplus to markets will lead to an optimal level of innovation.[137]

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innovation. JOSEPH A. SCHUMPETER, CAPITALISM, SOCIALISM AND DEMOCRACY 106 (1942).

Schumpeter's conjecture was challenged by Kenneth Arrow who argued that only in a competitive market would companies have a sufficient incentive to innovate and replace existing products. Kenneth Arrow, *Economic Welfare and the Allocation of Resources for Invention, in* THE RATE AND DIRECTION OF INVENTIVE ACTIVITY 619 (R.R. Nelson ed., 1962). *But see* J. Gregory Sidak & David J. Teece, *Dynamic Competition in Antitrust Law*, 5 J. COMPETITION L. & ECON. 581, 589 (2009) ("In fact, it is important to note that despite how Arrow's article is usually interpreted (to claim that competition spurs innovation), his general position in his writings is, much like Schumpeter's, that competitive markets provide inadequate incentives for firms to innovate.").

A significant amount of investigation by economists has failed to resolve the debate between Schumpeter and Arrow about the optimal conditions for spurring innovation. For a review of this debate, see Michael A. Carrier, *Two Puzzles Resolved: Of the Schumpeter-Arrow Stalemate and Pharmaceutical Innovation Markets*, 93 IOWA L. REV. 393, 403–10 (2008). For a conclusion as to who won the debate, see Sidak & Teece, *supra*, at 586 ("Indeed, we believe that the debate over whether to favor competition over monopoly (as the market structure most likely to advance innovation) was won long ago in favor of some form of rivalry or competition.").

[135] Glenn C. Loury, *Market Structure and Innovation,* 93 Q.J. ECON. 397, 408–09 (1979).

[136] Williams, *supra* note 133, at 442.

[137] *See, e.g.*, *id.* at 464–65 ("[G]iven the limitations of the existing literature, we still have essentially no credible empirical evidence on the seemingly simple question of whether stronger patent rights . . . encourage research investment into developing new

Rent-seeking scholars did not explore the implications of their insight that surplus invites waste to the broader economy. Their justifications for restricting investigation of the link between surplus and waste to the competition for government-created monopoly rights are: (1) that surplus is a minor and ephemeral economic phenomenon;[138] and (2) that a laissez-faire approach to surplus sharing will provide incentives for socially efficient levels of investment and innovation.[139]

These justifications for limiting their investigation are ill-founded. Surplus in markets is a ubiquitous, economically significant, and increasingly important phenomenon. Nor is there good reason to assume, without further investigation, that a laissez-faire approach to surplus sharing is the best way to provide incentives for investment or innovation. Rent-seeking scholars missed an opportunity to explore and expand our understanding of the links between law, markets, and surplus.

II. SURPLUS PROBLEM DENIAL IN LAW AND ECONOMICS SCHOLARSHIP

This Part investigates the failure of law and economics scholars to address fully the role legal rules can play in ameliorating the surplus problem. Unlike the scholars who study rent-seeking, law and economics scholars do not offer explicit justifications for avoidance of this topic. However, it is possible to discern four assumptions that have led law and economics scholars to allow this oversight to persist.

A. Fragmented Exploration of Law and Surplus

Before examining in detail the reasons why law and economics scholars have failed to investigate fully legal solutions to the surplus problem, it is helpful to consider briefly some of the ways legal rules might offer some assistance.[140] Such a review suggests how intriguing the unexplored questions might be, an

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technologies.").

One effort to take into account both the positive externalities that result from private expenditures on research and development as well as social costs from overinvestment does conclude that there is "under-investment in R&D, with socially optimal level being over twice as high as the level of observed R&D." Nicholas Bloom et al., *Identifying Technology Spillovers and Product Market Rivalry,* 81 ECONOMETRICA 1347, 1349 (2013).

[138] *See supra* notes 67, 71, and accompanying text.

[139] *See supra* notes 68, 74, and accompanying text.

[140] Other research that addresses the question of optimal surplus sharing in legal scholarship not discussed in the text below includes: (1) research on litigation expenses, *see, e.g.*, Farmer & Pecorino, *supra* note 9; (2) research on the costs of haggling, *see, e.g.*, Levmore & Fagan, *supra* note 115; and (3) research on the behavior of managers of public companies, *see, e.g.*, LUCIAN BEBCHUK & JESSE FRIED, PAY WITHOUT PERFORMANCE: THE UNFILLED PROMISE OF EXECUTIVE COMPENSATION 62 (2004); Aaron S. Edlin & Joseph E. Stiglitz, *Discouraging Rivals: Managerial Rent-Seeking and Economic Inefficiencies*, 85 AM. ECON. REV. 1301 (1995).

observation that is especially important given the ubiquity, magnitude, and growing importance of surplus outlined above.[141] Such a review also provides an opportunity to highlight those rare instances where law and economics scholars have grappled with how legal rules can address the surplus problem.

Legal rules already do address the surplus problem in a number of ways. Some examples come from property law. Certain property rules appear to be specifically designed to allocate found property in ways that reduce wasteful competition for surplus.[142] The rule of salvage in admiralty law is one example. The rule of salvage dictates how to allocate goods rescued by a salver, and dates back to antiquity.[143] This rule provides that "persons by whose voluntary assistance a ship at sea or her cargo or both have been saved in whole or in part from impending sea peril, or in recovering such property from actual peril or loss, as in cases of shipwreck" receives if, and only if, the rescue is successful, an amount somewhat greater than the cost of rescue.[144] If there is additional surplus remaining after the salver is compensated, that surplus goes to the original owner of the property.

Richard Posner offers the following simple and powerful numeric example to illustrate how the rule of salvage addresses the potential for wasteful competition to be the first ship to carry out a rescue at sea.[145] Posner writes:

> Suppose the sunken treasure is worth $1 million and it will cost $250,000 to hire a team of divers to raise it. Because the expected profit of the venture is so high, someone else may decide to hire his own team to try and beat the first team to it. A third and even a fourth team may try, too, for if each one has the same chance (25 percent) of reaching the treasure first, the expected value of the venture to each one ($1 million x .25) will still cover the expected cost of each. If all four try, however, the cost of

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[141] *See supra* Sections I.B. and I.C.

[142] *See generally* Terry L. Anderson & Peter J. Hill, *The Race for Property Rights*, 33 J.L. & ECON. 177 (1990) (considering aspects of property law that can be understood as efforts to minimize the waste that might otherwise arise from competition for surplus). Andersson and Hill conclude in a subsequent article that there is not one simple rule that can mitigate this potential source of waste. Terry L. Anderson & Peter J. Hill, *Cowboys and Contracts*, 31 J. LEGAL STUD. 489, 490 (2002) ("Some law and economics scholars contend that the rent dissipation resulting from open access can be mitigated by common-law rules of first possession such as those that apply to abandoned property, adverse possession, oil and gas, and the spoils of way. The race to be first, however, also consumes valuable resources and can diminish the gain from privatization and possibly dissipate it completely." (citations omitted)). *See also* Lueck, *supra* note 52 (explaining how different types of first possession rules can help to minimize rent dissipation).

[143] 3A BENEDICT ON ADMIRALTY §§ 2 (Martin J. Norris ed., 7th ed. 1997) (citations omitted); GRANT GILMORE & CHARLES L. BLACK, JR., THE LAW OF ADMIRALTY 559–74 (2d ed. 1975). For a discussion of the precedents in antiquity for this rule see 3A BENEDICT ON ADMIRALTY, *supra*, at § 1.

[144] 3A BENEDICT ON ADMIRALTY, *supra* note 143, at §§ 2, 235–44.

[145] POSNER, *supra* note 2, at 45.

> obtaining the treasure, $1 million, will be four times what it would have been had only one tried.[146]

With this example, Posner shows how a legal rule granting the total value of the find to the salver, instead of the admiralty law rule of salvage, would cause "an expected gain to be translated into costs through competitive efforts."[147]

However, Posner does little more with this important insight about how well-designed legal rules can address the surplus problem. Posner observes that the "trend in the common law is to expand the escheat principle of treasure trove *into other areas of found property* and thus give the finder a reward rather than the property itself; this makes economic sense."[148] This is not a particularly ambitious application of this important insight.

The one exception to Posner's limited application of his insight about law, surplus, and waste, comes in his discussion of the race to patent an invention. Posner writes that "[n]othing might seem more remote from sunken treasure than patented inventions, and yet the economic problem created by patents is remarkably like that of abandoned property. Ideas are in a sense created but in another sense found."[149] Posner acknowledges this parallel, but does not offer a legal rule to address the potential for wasteful overinvestment in the race to be the first to patent an invention.[150]

Laws that restrict pricing practices, such as restrictions on price discrimination, provide another example of a way in which legal rules can address the surplus problem.[151] One example of such a law is the Robinson-Patman Act.[152] The Robinson-Patman Act "prohibits price discrimination between the purchasers of commodities of like grade or quality that are likely to result in substantial injury

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[146] *Id.* (footnote omitted). As for the likelihood this hypothetical would occur in practice, the particular conditions under which this type of value dissipation will occur is a complex issue for which there is no easy resolution. *See, e.g.*, JEAN TIROLE, THE THEORY OF INDUSTRIAL ORGANIZATION 77–78 (1988) ("One cannot *a priori* measure rent dissipation without going into the microfoundations of the particular situation. . . . Only a carful description of the rent-seeking game can allow us to give an order of magnitude for this [dissipation].") (footnote omitted).

[147] POSNER, *supra* note 2, at 45 n.4. Another solution to this problem suggested by an economist is to require the rescuer to pay "other contestants for the lost values of the prospect"; Dale T. Mortensen, *Property Rights and Efficiency in Mating, Racing, and Related Games*, 72 AM. ECON. REV. 968, 969 (1982).

[148] POSNER, *supra* note 2, at 45 (emphasis added).

[149] *Id.* at 47. Others had previously modeled a similar dynamic that arose in efforts to innovate. *See, e.g.*, Yoram Barzel, *Optimal Timing of Innovations*, 50 REV. ECON. & STAT. 348, 348 (1968) (showing how "the excessive use of resources takes the form of their premature application" in the innovation domain).

[150] In contrast, Mark Grady and Jay Alexander do explore trade-offs and potential solutions to the surplus problem in the patent law context in some detail. *See* Grady & Alexander, *supra* note 52, at 310–316 (1992).

[151] For a more in-depth discussion of price discrimination, see *infra* Subsection II.B.3.

[152] 15 U.S.C. §13 2(a) (2018).

to competition."[153] It should be noted that the Robinson-Patman Act is legislation that most antitrust scholars abhor.[154] However, the Robinson-Patman Act does illustrate how legal rules can be used to engage directly with how surplus is allocated in certain market transactions by restricting pricing practices, such as price discrimination.

Other laws affect surplus allocation through the regulation of pricing practices, but do so less directly than the Robinson-Patman Act. For example, the ability to capture surplus by means of price discrimination is significantly constrained when sellers are required to display prices prominently.[155] A number of consumer protection laws require this type of pricing disclosure. One example is a law in California that requires gasoline stations to display prominently and in large type how much they charge for a gallon of gas.[156] Someone driving into a gas station in California in a Mercedes can purchase gas for the same price as someone

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[153] *Id*. *Cf.* D. Daniel Sokol, *Analyzing Robinson-Patman*, 83 GEO. WASH. L. REV. 2064, 2065 (2015) ("The Robinson-Patman Act bans price discrimination, or more precisely, differential pricing."). The effective reach of the Robinson-Patman prohibition on price discrimination is quite limited in practice, because the prohibition only applies to transactions that involve "the price the manufacturer sets for wholesale sales to its dealers," and only when the transaction involves the sale of "commodities" that are "of like grade and quality." PHILLIP E. AREEDA & HERBERT HOVENKAMP, FUNDAMENTALS OF ANTITRUST LAW 5, 48 (4th ed. 2011) (footnote omitted).

[154] *See, e.g.*, Thomas W. Ross, *Winners and Losers Under the Robinson-Patman Act*, 27 J.L. & ECON. 243, 243 (1984) ("The Robinson-Patman (R-P) Act has the distinction of being almost universally unpopular among antitrust scholars."). These scholars point to, among other things, the fact that the Robinson-Patman Act was an effort to protect an industry – small local retailers – from competition. Daniel J. Gifford, *How Do the Social Benefits and Cots of the Patent System Stack Up in Pharmaceuticals?*, 12 J. INTELL. PROP. L. 75, 113 (2004) ("Later, in 1936, Congress expanded Section Two in the Robinson-Patman Act in order to protect small retailers from aggressive price-cutting by chain stores who were able to secure their supplies at discriminatorily-favorable prices."); Sokol, *supra* note 153, at 2069–70 (noting that the original title of the Robinson-Patman Act was the "Wholesale Grocer's Protection Act.").

[155] Of course, public disclosure eliminates price discrimination only to the extent that the disclosed prices are not contingent on product or customer differences. One example of publicly disclosed prices that still allow for price discrimination are railroad carrying charges that specify different charges for different types of goods, even when the costs of carrying those goods are comparable. Andrew Odlyzko, *The Evolution of Price Discrimination and Its Implications for the Internet*, 3 REV. NETWORK ECON. 323, 334–35 (2004).

[156] CAL. BUS. & PROF. § 13531–32 (West 2018) (requiring that each numeral in the price be "no less than six inches in height and of uniform size and color" and that the price information "be clearly visible from each street of the intersection."). This regulation does not, of course, prevent price discrimination by selling different grades of gasoline at the same station or by charging different prices at different gas stations, a practice which oil companies appear to have perfected. *See* Alexei Barrionuevo, *Secret Formulas Set Prices for Gasoline,* WALL ST. J. (Mar. 20, 2000, 12:30 AM), https://www.wsj.com/articles/SB953506880961584494 [https://perma.cc/QV7Z-FMHV].

driving into that same station driving a Kia.[157] If gas stations were not required to prominently post prices, the result might be different.

Taxes are another approach that can be used to reduce wasteful competition for surplus. For example, a tax could be imposed on transactions that are more likely to involve competition for surplus than welfare-enhancing exchange to discourage wasteful competition. This is presumably the rationale for the long-gestating proposal that a small tax be imposed on securities markets transactions.[158]

These examples, from property law,[159] the rule of salvage in admiralty law,[160] direct and indirect restrictions on price discrimination,[161] and certain tax proposals,[162] suggest various ways legal rules can address the surplus problem. This review also covers some of the limited steps law and economics scholars have taken to understand better law's role in sharing surplus fairly and efficiently, such as Posner's analysis of the rule of salvage.[163] A full exploration of how legal rules can address the surplus problem is beyond the scope of this Article. The limited aim of the discussion above is to show both that there are interesting legal issues raised by the ubiquity of surplus in the economy, and to highlight the limited degree to which law and economics scholars have engaged with these issues.

B. Justifications for Law and Surplus Avoidance and Their Shortcomings

Discerning why law and economics scholars have avoided questions related to law and surplus is more difficult than in the case of the rent-seeking scholars. Rent-seeking scholars were explicit about why they chose to limit the scope of their investigation into the links between surplus and waste.[164] Law and economics scholars do not offer a comparable justification for carrying out such a limited investigation into how legal rules can address the surplus problem.

In lieu of an explicit justification, one might guess as to what the underlying implicit assumptions are that these scholars rely on to justify limiting their investigation into how legal rules can address the surplus problem. There appear to be four assumptions that have led law and economics scholars to avoid this topic. These assumptions are: (1) that private parties will negotiate around legal interventions designed to alter surplus sharing arrangements;[165] (2) that it is unethical to use legal rules to alter surplus sharing arrangements mutually agreed

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[157] Assuming both drivers purchase the same grade of gasoline.

[158] *See, e.g.*, Jared Bernstein, *The Case for a Tax on Financial Transactions,* N.Y. TIMES (July 22, 2015), https://www.nytimes.com/2015/07/22/opinion/the-case-for-a-tax-on-financial-transactions.html [https://perma.cc/2DNG-22GT].

[159] *See supra* note 142 and accompanying text.

[160] *See supra* notes 143 through 148 and accompanying text.

[161] *See supra* notes 151 through 157 and accompanying text.

[162] *See supra* note 158 and accompanying text.

[163] *See supra* notes 145 to 147 and accompanying text.

[164] *See supra* notes 55 through 74 and accompanying text.

[165] *See infra* Subsection II.B.1.

upon by private actors;[166] (3) that mixed findings about the social welfare effects of price discrimination show that it is a hopeless exercise to devise rules to allocate surplus fairly and efficiently;[167] and (4) that it is a mistake to include fairness concerns when considering legal solutions to the surplus problem.[168]

Each of these assumptions and why they are unconvincing is discussed next.

1. Uselessness of Legal Intervention

One reason legal scholars, including law and economics scholars, might show little interest in the relationship between law and surplus could be that these scholars assume that legal rules designed to alter how surplus is divvied up will be ineffectual. If legal rules will not affect the allocation of surplus, then there is less reason to study the subject in detail. One can construct both a general argument and a specific argument as to why legal rules might prove to be ineffectual when it comes to determining how private parties ultimately allocate surplus.

The all-important Coase Theorem provides the starting point for a general argument about why legal rules might not have a significant effect on surplus sharing arrangements. The Coase Theorem holds that when transaction costs are sufficiently low, assets will be utilized in an efficient manner regardless of how legal entitlements are initially distributed.[169] One implication of the Coase Theorem is that, at least with respect to how assets are utilized, legal rules are largely irrelevant in certain circumstances. A general argument about law's irrelevance to surplus sharing arrangements could be constructed as a corollary to the Coase Theorem. The claim would be that legal rules do not alter how surplus is shared just as they do not alter how assets are utilized in many circumstances.

However, there are several reasons why a rule akin to the Coase Theorem would not apply when legal rules are used to address the surplus problem. For the Coase Theorem to apply two preconditions need to be met. First, transaction costs must be sufficiently low that parties can bargain to reach an efficient use of resources regardless of legal entitlements. Second, the situation needs to be one in which the distributional effects of altering legal entitlements can be ignored. Neither of these preconditions are likely to be met when legal rules are implemented to share surplus in a more fair and efficient manner.

First, transaction costs are rarely minimal when attempting to share surplus. Not only are one party's interests diametrically opposed to the other in the fight for surplus, but also there are few easily accessible mechanisms to reconcile these competing interests. For example, competitors who want to cooperate to share surplus might face antitrust problems as well as other challenges inherent in competing in what is truly a zero-sum game. One of the surprising but robust results from research on auctions and negotiations is that even in the best of

[166] *See infra* Subsection II.B.2.
[167] *See infra* Subsection II.B.3.
[168] *See infra* Subsection II.B.4.
[169] Ronald Coase, *The Problem of Social Cost*, 3 J.L. & ECON. 1, 15 (1960).

circumstances there is no guaranteed way to assure that trade will occur simply because mutual gains would be realized by trade.[170]

The second precondition for acceptance of the Coase Theorem claim about law's irrelevance—that the distributional consequences of changes in legal entitlements can be ignored—also does not hold in the law and surplus context. In the context of figuring out how to divvy up a surplus, distributional effects are likely to be paramount.[171] Rawls, for example, argues that any surplus arising out of market transactions should be distributed to those who are least well off.[172] A corollary to the Coase Theorem arguing that legal rules are irrelevant is unlikely to apply to legal rules addressing the surplus problem both because the surplus problem involves situations where transaction costs are high and because distributional effects are central to the analysis.

A presumption that legal rules are generally irrelevant when it comes to divvying up a surplus might also be based on more practical considerations. The claim might be made that while, in theory, law can have an impact on how surplus is shared, in practice law will never have a salutatory effect. The intuition behind this more practical claim would be that so long as the relative bargaining power of the parties involved is not altered, the more powerful party would find a way to negotiate around whatever legal requirements are put in place to shift surplus sharing arrangements.[173] Omri Ben-Shahar makes essentially this argument in his critique of recommendations to require the inclusion of consumer-friendly provisions in standard form contracts. Ben-Shahar writes that "[a]t best, the distributive intervention is irrelevant. At worst, it imposes excess transaction costs and forces an inefficient redesign of the transaction. As long as one party's market power is maintained, it is used to dictate the distribution of surplus."[174] This might be coined the "bargaining power supremacy" hypothesis: what matters in

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[170] One scholar observes, a "main message of the current research on multi-unit auctions is that it is very hard to achieve efficient outcomes." Paul Klemperer, *Auction Theory: A Guide to the Literature,* 13 J. ECON. SURV. 227, 243 (1999). With respect to the meaning of efficiency in this context, see TIMOTHY P. HUBBARD & HARRY J. PAARSCH, AUCTIONS 73 (2015) ("Auction researchers consider efficiency in a simple way: did the participant who valued the object the most end up with the object at the conclusion of the auction?"). For surveys of the auction literature, see, e.g., HUBBARD & PAARSCH, *supra*; Klemperer, *supra*; R. Preston McAfee & John McMillion, *Auctions and Bidding,* 25 J. ECON. LITERATURE 699 (1987); Paul Milgrom, *Auctions and Bidding: A Primer*, 3 J. ECON. PERSP. 3 (1989); Roger B. Myerson & Mark A. Satterthwaite, *Efficient Mechanisms for Bilateral Trading*, 29 J. ECON. THEORY 265 (1983).

[171] For differing views as to what is a fair method to share a surplus, see *supra* note 8 and accompanying text. For further discussion of the claim that distributional effects should be included when considering legal solutions to the surplus problem, see *infra* Subsection II.B.4.

[172] JOHN RAWLS, A THEORY OF JUSTICE 101–02 (1971).

[173] For a discussion of the nature of bargaining power, see Albert Choi & George Triantis, *The Effect of Bargaining Power on Contract Design*, 98 VA. L. REV. 1665, 1674–77 (2012).

[174] Omri Ben-Shahar, *Fixing Unfair Contracts*, 63 STAN. L. REV. 869, 898 (2011).

determining surplus allocation in a transaction is the relative power of the parties involved and not the legal regime.

As an example of what a proponent of the bargaining power supremacy hypothesis might argue, imagine if a law were enacted that required all surplus in certain transactions be awarded to the party who is less well off. The motivation behind such a law would be to increase social welfare by redistributing wealth from the rich to the poor.[175] If the bargaining power supremacy hypothesis is correct, then the party with the superior bargaining power would find a way to ensure that they continue to receive their desired share of the surplus. As a result, based on the bargaining power supremacy hypothesis, this "Robin Hood" rule, despite its good intentions, would not provide redistributional benefits.

The bargaining power supremacy hypothesis is an empirical claim. It is certainly possible that legal rules will prove irrelevant to the way in which surplus is ultimately shared in many or most transactions. However, while this is an interesting hypothesis, it is impossible to know a priori that such a failure of legal intervention is inevitable.

In fact, evidence about the effects of the Credit Card Accountability Responsibility and Disclosure Act ("CARD Act") suggests that the bargaining power supremacy hypothesis does not hold in at least one important context. The CARD Act, enacted in 2009, limited "banks' ability to levy credit card penalty fees and hike interest rates."[176] The CARD Act was passed in an effort to benefit consumers; however, the financial services industry argued that the costs of the CARD Act would ultimately be borne by consumers and not lenders.[177] If the bargaining power supremacy hypothesis were correct then the financial services industry's argument would probably prove true.

Findings from a study by Sumit Agarwal and colleagues on the effects of the CARD Act do not support the bargaining power supremacy hypothesis in this setting.[178] Agarwal and colleagues find that the CARD Act did, in fact, reduce borrowing costs for consumers without triggering an offsetting reduction in the volume of credit.[179] In other words, these findings suggest the CARD Act shifted

[175] Such a rule could have a positive social welfare effect if it is low cost, and we accept a social welfare function under which each dollar received is of incrementally less value as the wealth of the recipient increases. As Kaplow and Shavell explain, "redistributing income from the rich to the poor will tend to raise social welfare, assuming that the marginal utility of income is greater for the poor than for the rich." Louis Kaplow & Steven Shavell, *Fairness Versus Welfare*, 114 HARV. L. REV. 961, 991 (2001). In fact, a declining marginal utility of consumption is widely-assumed in economics, although there are problems with taking this assumption for granted. Zachary D. Liscow, *Is Efficiency Biased?*, 85 U. CHI. L. REV. 1649, 1682–83 (2018).

[176] Natasha Sarin, *Making Consumer Finance Work,* 119 COLUM. L. REV. (forthcoming 2019) (manuscript at 2).

[177] *Id*.

[178] Sumit Agarwal et al., *Regulating Consumer Financial Products: Evidence from Credit Cards*, 130 Q.J. ECON. 111 (2015).

[179] *Id*.

the allocation of surplus toward consumers without offsetting costs. To dismiss consideration of how law might facilitate fair and efficient sharing of surplus based on the presumption that all such efforts are doomed to fail shortchanges the investigation necessary to reach a meaningful conclusion.

In certain situations, legal rules are unlikely to have a significant impact on how parties behave or on what each party ultimately receives. Law and economics scholars may have assumed law's role in sharing surplus is largely irrelevant for either the theoretical or practical reasons discussed above. To dismiss further investigation based on this reasoning would be a mistake.

2. Libertarian Concerns

A related presumption might also explain avoidance of the surplus problem by law and economics scholars. Perhaps these scholars believe state intervention in privately negotiated transactions, even if potentially efficacious, is not appropriate if the only stakes involved are the fairness and efficiency of surplus distribution. Such a view might be held by those who believe that protecting the personal liberty to enter into private transactions as one wishes is of paramount importance.

There is a long-standing tradition in the United States that parties should be allowed to arrange many of their private affairs without state intervention. The Declaration of Independence, for example, describes liberty as an inalienable right.[180] Scholars such as Richard Epstein,[181] John Locke,[182] John Stuart Mill,[183] and Nozik[184] argue that the need to protect citizens' liberty should place significant constraints on state action. Some of these scholars view implementing legal rules that override a laissez-faire approach to market transactions as generally unacceptable, even if intervention would lead to less waste and more equitable distribution.[185] There is little more that can be said here to such scholars, except to

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[180] THE DECLARATION OF INDEPENDENCE para. 1 (U.S. 1776) ("We hold these truths to be self-evident, that all men are created equal, that they are endowed by their Creator with certain unalienable Rights, that among these are Life, Liberty and the pursuit of Happiness."); *see also* U.S. CONST. amend. XIV § 1 ("[N]or shall any State deprive any person of life, liberty, or property, without due process of law . . . .").

[181] RICHARD A. EPSTEIN, TAKINGS: PRIVATE PROPERTY AND THE POWER OF EMINENT DOMAIN (1985).

[182] JOHN LOCKE, TWO TREATISES OF GOVERNMENT AND A LETTER CONCERNING TOLERATION 124 (Ian Shapiro ed., Mockingbird Press 2014) (1690) ("[F]or liberty is to be free from restraint and violence from others; . . . [and] a liberty to dispose and order freely as he lists his person, actions, possessions, and his whole property within the allowance of those laws under which he is, and therein not to be subject to the arbitrary will of another, but freely follow his own.").

[183] JOHN STUART MILL, ON LIBERTY (The Floating Press 2009) (1859).

[184] ROBERT NOZIK, ANARCHY, STATE, AND UTOPIA (1974).

[185] That said, scholars who hold these views of liberty rights might want to address the question as to why existing property distributions should be treated as creating such immutable rights. *See, e.g.*, William W. Fisher & Talha Syed, *Global Justice in Healthcare: Developing Drugs for the Developing World,* 40 U.C. DAVIS L. REV. 581, 602

observe that giving such strong priority to liberty interests would require abandoning many current regulatory programs. As Liam Murphy writes in a similar context, "it must be acknowledged that the discussion that follows will be beside the point for committed and consistent libertarians."[186]

For others who also value freedom in private affairs and prefer a laissez faire approach to market transactions, their position may not be so absolute as to reject legal solutions to the surplus problem even when such an intervention enhances efficiency or promotes equity or both.[187] For those who have a preference for private ordering not as a matter of philosophical imperative but based on a strong presumption that state action will ultimately prove less effective than a non-interventionist approach, the resistance should not be to investigating the potential for legal rules to help share surplus more fairly and efficiently, but to reaching unrealistic conclusions about the efficacy of legal intervention.

In fact, there are aspects of legal solutions to the surplus problem that should make application of legal rules to private transactions in this context less problematic from a libertarian perspective than other types of economic policy. For some libertarians a right to be free from state intervention may be linked to private property rights. The claim that private property rights include the unconstrained right to any surplus that might arise out of a market transaction may be weaker than other entitlements perceived to be granted by dint of ownership.

Perhaps law and economics scholars have shied away from exploring how law can address the surplus problem because of a concern that this would involve unacceptable legal intervention into private affairs. Such concerns are unlikely to provide most law and economics scholars a compelling justification for ignoring issues related to law and surplus.

3. Reliance on Price Discrimination Scholarship

Misplaced reliance on research by economists on the social welfare effects of price discrimination is another reason law and economics scholars may have mistakenly assumed that laissez-faire solutions to the surplus problem should be preferred without further analysis.

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n.40 (2006) ("[T]aking as given existing distributions of wealth, income, and legal entitlements [] is indefensibly conservative . . . .").

186 Liam Murphy, *Beneficence, Law, and Liberty: The Case of Required Rescue*, 89 GEO. L.J. 605, 642 (2001). "Here, freedom from coercion is not understood as a value, much less an instrumental value in the service of positive liberty, but rather, simply as a natural right. . . . The idea is simply that a special wrong is done when people coerce other people." *Id.* at 637.

187 I would put conservative law and economics scholars such as Douglas Ginsburg and Joshua Wright in this less absolutist category. For example, they co-authored an article in which they identify as important, but not inalienable, "the economic welfare and liberty value of allowing individuals the freedom to err." Joshua D. Wright & Douglas H. Ginsburg, *Behavioral Law and Economics: Its Origins, Fatal Flaws, and Implications for Liberty,* 106 NW. L. REV. 1033, 1036 (2012).

Price discrimination is the practice of charging customers different prices for reasons other than cost differences.[188] One example of a surplus provided in the Introduction can be used to illustrate how price discrimination works. In that example, someone who is willing to pay $50 for a copy of "Hillbilly Elegy" only has to pay $17 for the book on Amazon.[189] If Amazon is able to identify this person and this person chooses not to shop around for the cheapest price, then Amazon could potentially charge this person $35 for the book and make an additional $18 in profit.

One economic effect of price discrimination, evident from this example, is to shift surplus, here $18, from the buyer to seller. Because price discrimination directly shifts surplus from buyer to seller, price discrimination might reasonably be described as a frontal assault in the battle for surplus.

Economists have analyzed the social welfare effects of price discrimination extensively and have generally concluded that price discrimination is rarely problematic from a social welfare perspective. Pigou, for example, described several scenarios under which allowing firms to price discriminate would actually increase efficiency.[190] Pigou reaches this conclusion by assuming that sellers choose between price discrimination and implementing a monopoly-pricing scheme. Monopoly pricing involves restricting supply to drive up price. One consequence of monopoly pricing is that certain welfare-enhancing transactions do not occur, namely those where willingness to pay is greater than cost but less than the price established by the monopoly seller. If the seller instead chooses to implement a price discrimination strategy, these lower margin transactions can take place, increasing social welfare as compared to what happens if the monopoly-pricing scheme is implemented.

Much work has refined Pigou's analysis, but most of this subsequent work reaches a similar conclusion about the social welfare effects of price discrimination.[191] One caveat introduced by subsequent scholarship is recognition

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[188] In 1920 Professor Arthur C. Pigou provided a comprehensive analysis of price discrimination practices. PIGOU, *supra* note 39, at 275–89. Pigou did not, however, use the term "price discrimination." For usage of the term "price discrimination," see, e.g., Daniel J. Gifford & Robert T. Kudrle, *The Law and Economics of Price Discrimination in Modern Economics: Time for Reconciliation?* 43 U.C. DAVIS L. REV. 1235, 1237 (2010) (defining price discrimination as "[t]he practice of selling the same good at different prices").

It should be noted that the discrimination terminology is a bit misleading. "Discrimination" in this context is not driven by the kind of prejudice or malice typically associated with discrimination, but rather by the desire to maximize profits by taking advantage of differences between customers in terms of their willingness to pay and sensitivity to price changes.

[189] *See supra* note 4 and accompanying text.

[190] PIGOU, *supra* note 39, at 275–89.

[191] For surveys of the price discrimination literature, see Lars A. Stole, *Price Discrimination and Competition*, *in* HANDBOOK OF INDUSTRIAL ORGANIZATION VOL. 3, 2225–27 (M. Armstrong & R. Porter eds., 2007); Hal R. Varian, *Price Discrimination*, *in* HANDBOOK OF INDUSTRIAL ORGANIZATION VOL. 1, 598 (R. Schmalensee & R. D. Willig eds., 1989). For textbook discussions of price discrimination, see FRANK, *supra* note 2, at

that it may be incorrect to compare outcomes under price discrimination with what would happen if monopoly-pricing policies were implemented instead. Scholars writing after Pigou recognized that many firms, in fact, most firms, are able to price discriminate, whereas far fewer have enough market power to implement a monopoly-pricing scheme.[192] When the assumption that firms are choosing between price discrimination and monopoly pricing is relaxed, it becomes more difficult to reach general conclusions about the social welfare effects of price discrimination. As a result, economists are now only comfortable predicting the social welfare effects of price discrimination in a few special and rather unrealistic scenarios.[193]

To some degree at least, law and economics scholars appear to rely on research suggesting the welfare effects of price discrimination are largely indeterminate to dismiss the need for further investigation of law and the surplus problem. For example, Oren Bar-Gill in "Algorithmic Price Discrimination: When Demand is a Function of Both Preferences and (Mis)perceptions," appears to justify skipping over a consideration of the relationship between law and surplus for this reason. Bar-Gill reviews the "standard" economic analysis of price discrimination and concludes from this review that the practice of price

389–98; PINDYCK & RUBINFELD, *supra* note 2, at 401–10; VARIAN, *supra* note 2, at 241–53.

[192] Einer Elhauge observes that "the price discrimination normally taken to evidence market power is so ubiquitous that it would indicate market power exists everywhere." Einer Elhauge, *Defining Better Monopolization Standards*, 56 STAN. L. REV. 253, 258 (2003). *See also* AREEDA & HOVENKAMP, *supra* note 153, at 15 ("[T]he amount of power implied by price discrimination can be very small, and may indicate no more than a competitive market that contains a differentiated product that some customers value at more than cost."); Benjamin Klein & John Shepard Wiley Jr., *Competitive Price Discrimination as an Antitrust Justification for Intellectual Property Refusals to Deal*, 70 ANTITRUST L.J. 599, 610 (2003) ("Because product differentiation is normal and pervasive in real-world markets, price discrimination can be expected to be normal and pervasive as well."); Varian, *supra* note 191, at 598 ("Price discrimination is one of the most prevalent forms of marketing practices.").

The reason price discrimination is so ubiquitous is that the conditions necessary to carry out price discrimination are not particularly demanding. It is generally agreed that three conditions must exist for a firm to be able to price discriminate: "(i) firms [must] have short-run market power, (ii) consumers can be segmented either directly or indirectly, and (iii) arbitrage across differently priced goods is infeasible." Stole, *supra* note 191; *see also* Varian, *supra* note 191, at 599.

[193] *See, e.g.*, AREEDA & HOVENKAMP, *supra* note 153, at 13–14; Gifford & Kudrle, *supra* note 188, at 1252 ("The academic literature establishes definite welfare results for price discrimination only for a small set of well-defined cases that, in general, would be hard to identify in the real world.") (footnote omitted); Penelope Papandropoulos, *How Should Price Discrimination Be Dealt With By Competition Authorities?*, 3 DROIT & ÉCONOMIE: CONCURRENCES 34, 37 (2007) ("[T]he effects of price discrimination are multiple, complex and highly dependent on the competitive environment in which firms operate.").

discrimination "harms consumers but increases efficiency."[194] In his article, Bar-Gill relies on this conclusion to shift his analysis away from the social welfare effects of price discrimination and toward situations in which sellers take advantage of consumer misperceptions in order to convince consumers to purchase goods they would not have otherwise purchased.[195]

Joshua Wright, an economist, legal scholar, and former Federal Trade Commissioner, has an even more sanguine view as to the implications of price discrimination scholarship for the need to study regulating this particular form of surplus capture.[196] Wright writes that:

> In sum, while economics provides no single universal welfare theorem for all arrangements involving price discrimination, . . . price discrimination is nothing to fear from a competition and efficiency perspective. When one accounts for both static and dynamic welfare effects, competitive price discrimination is likely to result in lower prices, higher output, and increased innovation.[197]

If Wright is right that the unregulated effects of price discrimination are generally positive, then there would be less reason for further investigation into how law might address the surplus problem, particularly in the context of regulating price discrimination.

However, it is a mistake to rely on findings by economists about the mixed social welfare effects of price discrimination to avoid careful study of the ways in which legal rules can ameliorate the surplus problem. There are too many inapposite assumptions in the price discrimination scholarship to justify extrapolating from this research to questions of law and surplus. Most problematic is the assumption in almost all of the price discrimination scholarship that no costs are incurred when carrying out price discrimination.[198] This assumption is

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[194] Bar-Gill, *supra* note 116, at 2. Bar-Gill recognizes that he reaches this simple conclusion about the social welfare effects of price discrimination, because he chooses to "focus on the extreme, monopoly case for ease of exposition." *Id.* at 13.

[195] *Id.* at 2 ("When price discrimination targets misperceptions, specifically demand-inflating misperceptions, it hurts consumers even more and might also reduce efficiency."). For a broader discussion of consumer law scholars' avoidance of the surplus problem, see *infra* Part III.

[196] For biographical information on Professor Wright, see *Biographical Sketch: Joshua Wright*, GEORGE MASON UNIV. ANTONIN SCALIA LAW SCH., https://www.law.gmu.edu/faculty/directory/fulltime/wright_joshua [https://perma.cc/ZX6N-SUBZ].

[197] Joshua Wright, *Price Discrimination Is Good, Part I, in* TRUTH ON THE MARKET 2 (2008). Wright also argues that the welfare effects of price discrimination are generally going to be progressive rather than regressive. ("To the extent that it is true that the lower income groups are the price-sensitive group, price discrimination generally benefits the lower income group at the expense of the higher income group."). *Id.*

[198] *But see* Yochai Benkler, *An Unhurried View of Private Ordering in Information Transactions*, 53 VAND. L. REV. 2063, 2072 (2000) ("Implementing price discrimination is

obviously false. Carrying out price discrimination is inevitably a costly endeavor. This insight follows naturally from the discussion above of the link between surplus and wasteful competition identified by those studying rent-seeking, and the difficulty in avoiding these costs even outside of the context of competition for government granted monopoly rights.[199]

It is a mistake to dismiss consideration of how law can facilitate the fair and efficient sharing of surplus based on the economic analysis of the social welfare effects of price discrimination. Such a presumption ignores one of the central challenges of the surplus problem: how to reduce the wasteful competition that the existence of a surplus tends to invite.

4. Fairness Considerations Inapposite

Finally, there may be law and economics scholars who would welcome the idea of more carefully exploring efficiency considerations that arise when considering how legal rules might be used to allocate surplus, but would reject the notion that considerations of fairness or distributive justice should also be included in the analysis.

There are three different arguments that could be made to justify excluding fairness considerations from law and surplus analysis. First, one could argue that fairness consideration is inapposite because tax policy is superior to legal policy as an instrument to achieve redistributive goals. Second, scholars might be concerned that introducing fairness considerations into the analysis of surplus sharing arrangements would raise insurmountable analytical challenges. Third, some might argue that firms acting on their own will modify pricing policies to address consumer fairness concerns, and so regulatory interventions designed to address these concerns are unnecessary. Each of these three rationales for dismissing fairness considerations when evaluating legal solutions to the surplus problem, and where these rationales fall short, is discussed next.

First, many law and economics scholars presume that tax policy is superior to other legal interventions if the goal is to achieve a fair distribution of resources.[200]

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costly."); Peter T. Leeson & Russell S. Sobel, *Costly Price Discrimination*, 99 ECON. LETTERS 206, 208 (2008) (noting how even "under plausible conditions price searchers are led to pursue 'too much' perfect price discrimination, generating welfare losses even when perfect price discrimination is used.").

Nor is there any effort made to estimate the costs of regulating price discrimination. But see prescient observations made by Richard Posner in *The Social Costs of Monopoly and Regulation*, *in* JAMES M. BUCHANAN ET AL., TOWARD A THEORY OF THE RENT-SEEKING SOCIETY 88–89 (1980) ("Even when price discrimination is perfect, so that the deadweight loss of monopoly is zero, the total social costs of a discriminating monopoly are greater" because of "the costs of administering the price-discrimination scheme . . . ."). Posner then goes on to observe that for the analysis to be complete one must also include the potential "costs of administering anti-discrimination rules." *Id.*

[199] *See supra* Part I.

[200] *See, e.g.*, Louis Kaplow & Steven Shavell, *Why the Legal System Is Less Efficient*

Kyle Logue and Ronen Avraham go so far as to speculate that "it is a safe bet that a majority of legal economists hold the following view: Whatever amount of redistribution is deemed appropriate or desirable, the *exclusive* policy tool for redistribution to reduce income or wealth inequality should always be the tax-and-transfer system."[201]

Scholars colloquially refer to the argument that tax policy is the preferable instrument when the goal is wealth redistribution as the "double distortion" argument. The logic of the double distortion argument is as follows. Favoring certain legal rules over others because they have a desirable effect on the distribution of wealth causes two distortions. First, rules adopted for this reason will be less efficient than the more efficient alternative, because the proposal under consideration involves choosing a rule other than the most efficient rule. Second, there will be a loss of efficiency from adopting such a rule because it will create a disincentive to gather wealth. This second effect is the same disincentive that results from implementing redistributive tax policies: implementing a

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than the Income Tax in Redistributing Income, 23 J. LEGIS. STUD. 667 (1994); Steven Shavell, *A Note on Efficiency vs. Distributional Equity in Legal Rulemaking: Should Distributional Equity Matter Given Optimal Income Taxation?*, 71 AM. ECON. REV. 414 (1981); Van Loo, Consumer Law, *supra* note 101, at 3 (reviewing "the longstanding scholarly paradigm that taxes are the best mechanism for redistribution because they are the less inefficient option") (footnote omitted). More recently, Kaplow shows conditions under which this presumption holds even when firms have varying amounts of market power. Louis Kaplow, *Market Power and Income Taxation* (Nat'l Bureau of Econ. Research, Working Paper No. 25578, 2019). This general line of argument is foreshadowed in MUSGRAVE, *supra* note 38, at 18.

201 Kyle Logue & Ronen Avraham, *Redistributing Optimally: Of Tax Rules, Legal Rules, and Insurance*, 56 TAX L. REV. 157, 158 (2003) (emphasis added).

It should be noted that the argument for disregarding distributional effects when evaluating law and policy alternatives is now under attack by a number of scholars. *See, e.g.*, David Blankfein-Tabachnick & Kevin A. Kordana, *Kaplow and Shavell and the Priority of Income Taxation and Transfer*, 69 HASTINGS L. REV. 1, 27 (2017) (arguing that alterations in the initial assignment of property rights are sometimes better than income taxation as a way to achieve distributive or egalitarian goals); Lee Anne Fennell & Richard H. McAdams, *The Distributive Deficit in Law and Economics*, 100 MINN. L. REV. 1051, 1053 (2016) (arguing that relative political action costs justify using legal rules rather than tax policy to achieve redistributive goals in certain circumstances); Zachary Liscow, *Reducing Inequality on the Cheap: When Legal Rule Design Should Incorporate Equity as Well as Efficiency*, 123 YALE L.J. 2478, 2483 (2014) (identifying benefits of using the legal system rather than tax policy to redistribute wealth in situations when allocating legal entitlements to the poor or based on non-income factors, because the tax system is poorly equipped to achieve redistribution in these contexts); Chris Sanchirico, *Deconstructing the New Efficiency Rationale*, 86 CORNELL L. REV. 1003, 1008–09 (2001) (presenting several challenges to the "double-distortion" argument for focusing exclusively on the efficiency effects of private law rules); Matthew Dimmick, *The Law and Economics of Redistribution* 1 (Nov. 21, 2017) (unpublished manuscript), https://ssrn.com/abstract=3072678 [https://perma.cc/3QFX-F5J2] (reviewing the debate about whether to include redistributive effects when evaluating legal rules).

redistributive tax or enacting a redistributive law creates a subsidy for leisure, because leisure is not taxed.

The two distortions identified by the double distortion argument are thus: (1) such a rule will be less efficient than the optimal rule; and (2) such a rule will discourage labor and encourage leisure. The preferable alternative, according to this line of argument, is to adopt the most efficient legal rules and then implement the most efficient tax policy. In adopting this preferred approach, there will be only one distortion, that from discouraging labor and encouraging leisure, rather than two distortions.

However, the double distortion argument does not justify ignoring redistributive benefits when evaluating alternative legal solutions to the surplus problem.[202] One of the assumptions that triggers application of the double distortion rationale for ignoring the distributional effects of legal rules is that an optimal legal rule can be identified based on considerations other than distributional effects.[203] However, in making the determination as to what the optimal rule for addressing the surplus problem would be, it makes perfect sense to consider distributional effects. More generally, if a particular law can facilitate wealth redistribution at a lower cost than tax policy, a plausible assumption in at least some situations, it makes sense to include consideration of these distributional effects in selecting the optimal rule.[204] Determining how to allocate a surplus is often likely to be such a situation.

A simple numerical example may be helpful here. Let us again go back to the individual who wants to purchase a copy of "Hillbilly Elegy" and is willing to pay up to $50 for the book.[205] Except now the reason our purchaser is willing to pay so much for the book has nothing to do with her wealth. In fact, she is quite poor, but the book is about her hometown and, therefore, owning a copy is of immense value to her despite her poverty. If we put in place a law that prohibits Amazon from using price discrimination to charge her more than Amazon's cost, we would presumably be redistributing wealth in a desirable way without creating any allocative inefficiency. This example is similar to Ricardo's example of what would happen if rents were transferred from landowners to farmers.[206] This example is not meant to champion a plausible policy recommendation, but rather

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[202] It is beyond the scope of this Article to provide an analytically rigorous defense of this claim.

[203] More specifically, the model in Kaplow and Shavell assumes a rule that is designed to encourage parties to take an efficient level of care when undertaking activities. Kaplow & Shavell, *supra* note 200, at 677–78.

[204] *See, e.g.*, Nathaniel Hendren, Efficient Welfare Weights (Nat'l Bureau of Econ. Research, Working Paper No. 20351, 2017) (developing a method to evaluate project efficiency that takes into account the distortionary cost of redistributive taxation); Liscow, *supra* note 175, at 1653 (expressing a similar idea in a more general context) (footnote omitted).

[205] *See supra* note 4 and accompanying text.

[206] *See supra* note 123 and accompanying text.

to illustrate that the double distortion analysis does not apply with the same force when evaluating how laws might be used to divvy up surplus.

A second objection to including considerations of fairness when evaluating whether to use legal rules to divvy up surplus might be a concern that carrying out the necessary evaluation presents legal scholars with insurmountable analytical challenges. Balancing fairness considerations with efficiency considerations might appear to require trading off incommensurate benefits. However, this is a familiar problem that can be overcome. There is a well-established analytical framework for balancing the efficiency and fairness effects of a given policy. That framework is based on the use of a social welfare function.[207] In fact, much policy analysis is based on a social welfare function analytic framework.[208] The challenge of weighing fairness concerns against efficiency costs is not unique to analysis of how law can improve surplus sharing arrangements.

A third argument that may underpin a claim that analysis of the relationship between law and surplus should not include fairness concerns is a more subtle one. To explain this argument, it is helpful to begin with a naïve justification for including fairness considerations when evaluating legal intervention into the process by which surplus is allocated among participants in market transactions.

This naïve argument would proceed as follows: we need legal rules to regulate how surplus is allocated among participants in market transactions because people have strongly held views about their right to equal treatment in market transactions. Scholars have done research showing that people do, in fact, have strongly held views about such a right.[209] In one well-known experiment, Daniel Kahneman, Jack Knetsch, and Richard Thaler found that consumers viewed price increases as fair, only if the price increases were the result of cost increases, and otherwise viewed price increases as unfair.[210] Consistent with this finding,

[207] *See* MAS-COLELL ET AL., *supra* note 2, at 117 ("The idea behind a social welfare function is that it accurately expresses society's judgments on how individual utilities have to be compared to produce an ordering of possible social outcomes."); *see also* MATTHEW D. ADLER, WELL-BEING AND FAIR DISTRIBUTION: BEYOND COST-BENEFIT ANALYSIS (2012).

A social welfare function first "conceptualizes the status quo and each policy alternative as a pattern of well-being across the population of concern." Matthew D. Adler, *A Better Calculus for Regulators: From Cost-Benefit Analysis to the Social Welfare Function* 2 (Duke Univ. Philosophy & Public Policy, Working Paper, 2017). These patterns of "well-being across the population of concern" are then converted into aggregate well-being levels based on an agreed-upon social welfare function. *Id.*

[208] Liscow, *supra* note 175, at 1653 n.17 (describing welfare economics).

[209] A large body of the research in the field of experimental economics provides ample evidence that people are willing to spend resources to achieve what they view as fairer outcomes. *See, e.g.*, Ernst Fehr & Simon Gachter, *Cooperation and Punishment in Public Goods Experiments*, 90 AM. ECON. REV. 980 (2000).

[210] Daniel Kahneman et al., *Fairness as a Constraint on Profit Seeking: Entitlements in the Market,* 76 AM. ECON. REV. 728 (1986); *see also* Kelly L. Haws & William O. Bearden, *Dynamic Pricing and Consumer Fairness Perceptions*, 33 J. CONSUMER RES. 304 (2006); Julio J. Rotemberg, *Fair Pricing*, 9 J. EUR. ECON. ASS'N 952 (2011); Lan Xia et al.,

price discrimination, which by definition involves increasing prices for reasons other than cost, is perceived as unfair by the vast majority of consumers.[211] A survey of 1,500 adults in the United States found that a large majority of the population (87%) thought it was unfair for an online store to charge people different prices for the same products during the same hour.[212]

Continuing with the naïve argument linking a taste for fair pricing to legal intervention, it is, moreover, entirely appropriate to treat this widely held preference for "fair" treatment in market transactions as legitimate. Attitudes about a right to fair treatment in the marketplace are similar to other tastes that policy analysts include in their analysis without regard for where those tastes come from. Louis Kaplow and Steven Shavell endorse this view in their book "Fairness versus Welfare."[213] Kaplow and Shavell explain "that individuals have a taste for a notion of fairness, just as they may have a taste for art, nature, or fine wine . . . . In such cases, satisfying the principle of fairness enhances the individual's well-being, just as would satisfying his preference for wine."[214]

A logical and powerful response to this naïve justification for legal intervention designed to address customers' fairness concerns is that legal intervention is unnecessary in this situation. The idea behind this response is that firms will modify pricing policies to address consumer fairness concerns without the need for legal intervention. There is, in fact, evidence that firms do take tastes for fairness in pricing into account when deciding upon their pricing policies.[215] For example, firms sometimes shelter consumers from cost increases out of fear that consumers will believe the firm is trying to raise prices unfairly.[216]

The Price Is Unfair! A Conceptual Framework of Price Fairness Perceptions, 68 J. MARKETING 1, 1 (2004) ("[R]esearchers have developed and adapted various theories to obtain an understanding of when and how buyers form price fairness judgments.").

[211] Papandropoulos, *supra* note 193, at 37 ("[P]rice discrimination carries a highly negative stigma. . . ."). For a review of the relevant research, see ARIEL EZRACHI & MAURICE STUCKE, VIRTUAL COMPETITION: THE PROMISE AND PERIL OF THE ALGORITHM-DRIVEN ECONOMY 123–24 (2016).

[212] JOSEPH TUROW ET AL., OPEN TO EXPLOITATION: AMERICAS SHOPPERS ONLINE AND OFFLINE (2005), http://repository.upenn.edu/cgi/viewcontent.cgi?article=1035&context=asc_papers [https://perma.cc/9EE7-92KL].

[213] LOUIS KAPLOW & STEVEN SHAVELL, FAIRNESS VERSUS WELFARE (2002).

[214] *Id*. at 21. Such an approach does leave the resulting analysis open to the challenge that it incorporates tastes that may be hard to justify normatively, that may be difficult to predict, and that may prove to be unprincipled.

[215] *See, e.g.*, Brian T. McCann & George A. Shinkle, *Attention to Fairness Versus Profits: The Determinants of Satisficing Pricing*, 54 J. MGMT. STUD. 583 (2017).

[216] *See, e.g.*, Neal Irwin, *Why Surge Prices Make Us So Mad,* N.Y. TIMES, Oct. 14, 2017, at BU1 ("There is no surge pricing at Home Depot stores after a disaster, in both a longstanding corporate policy and a matter of law in many states. But the company doesn't stop with that. All those logistics people and other staffers are there to ensure that the surge in demand after a disaster is matched with a higher supply of the goods people need."); Erik Eyster et al., *Pricing When Customers Care About Fairness But Misinfer Markups*, 6–11 (Nat'l. Bureau of Econ. Research, Working Paper No. 23778, 2017) (reviewing

There is some validity in this criticism of the naïve argument for legal intervention as a way to address consumer preference for fair pricing practices. Firms are aware of customer preferences for fair pricing, and so, in the absence of some other market failure, firms should incorporate these customer tastes into their pricing policy to an appropriate degree. The problem with this solution is the problem endemic to the fight for surplus. A firm's gains from aggressive pricing practices likely deviate significantly from the social welfare gains from such pricing practices. Gains from aggressive pricing practices will often simply consist of transfers of surplus from consumers to sellers. Thus, firms are balancing a taste for fairness, a valid social welfare consideration, against a gain from aggressive pricing practices, a policy that is much less likely to provide true social welfare gains. As is often the case when dealing with the surplus problem, one party's gains are simply another party's losses, and do not increase social welfare.

Law and economics scholars have ignored, for the most part, the question of how law can help to share a surplus in a fair and efficient manner.[217] However, the implicit assumptions upon which they appear to rely to justify avoiding this topic are flawed. First, while there may be situations where legal rules are ineffectual, there is little evidence to suggest that laws altering how surplus is shared will universally fall into this category. Second, libertarian objections to regulating market activity are unlikely to provide most law and economics scholars an adequate justification for ignoring how legal rules can address the surplus problem. Third, analyses of the social welfare effects of price discrimination developed by economists fail to consider costs from precisely the type of wasteful competition for surplus that are central to the study of law and surplus. Finally, dismissing the importance of engaging with fairness concerns when considering how legal rules can address the surplus problem fails to recognize that this is the type of legal intervention where legal solutions are not inferior to tax policy as a way to redistribute wealth. Law and economics scholarship has mistakenly avoided an important way in which legal rules can enhance social welfare.

III. CONSUMER LAW, MARKET FAILURES, AND SURPLUS

The question of how legal rules can and should be used to protect consumers from malevolent business practices is a broad area of research.[218] It would be

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evidence of seller sensitivity to perceptions of fairness). Recognition that firms take into account customer tastes for fair pricing goes back to Pigou. Pigou observed that "since a hostile public opinion might lead to legislative intervention, [the monopolist's] choice must not be such as to outrage the popular sense of justice." PIGOU, *supra* note 39, at 162.

[217] *But see supra* Section II.A.

[218] *See, e.g.*, KATHERINE PORTER, MODERN CONSUMER LAW (2016) (problem-based casebook introducing law students to the ways in which legal rules regulate consumer transactions); DEE PRIDGEN & RICHARD M. ALDERMAN, CONSUMER CREDIT AND THE LAW (2018) (discussing a wide range of topics like obtaining credit, Truth-in-Lending disclosures, regulation of the price of credit, debt collection, and the credit consumer's remedies for various problems); Richard Hynes & Eric A. Posner, *The Law and Economics*

natural to expect that scholars studying the role laws play in protecting consumers in market transactions to be among those most intent on investigating how legal rules can help to divvy up surplus fairly and efficiently. On first reading, one might even get the impression that legal scholars studying consumer protection have directed their research at precisely this question.

However, a more careful reading of scholarship on consumer law reveals that these scholars, particularly those who are oriented toward using the tools of economic analysis, have avoided considering issues related to law and surplus.[219] For the most part, economically-oriented consumer law scholars have chosen, instead, to turn to more familiar market failure arguments to justify consumer law protections. One consequence of this choice is that questions about the links between the surplus problem and consumer law are woefully underexplored, despite the natural relationship between these two areas of scholarship. This represents another significant missed opportunity for legal scholarship.

A simple numerical example can illuminate how central questions of law and surplus should be to protecting consumers in market transactions. Consider again the example in the Introduction of an individual who is willing to pay $50 to purchase a copy of "Hillbilly Elegy" while the market price for the book on Amazon is $17.[220] Given these starting assumptions, there are certain circumstances under which most would agree that malevolent behavior by the seller would cause a social welfare loss. For example, suppose the seller falsely claims that the copy for sale was originally owned by the author and then sells the book to our would-be purchaser for $60 based on this false premise. In this situation, the purchaser is paying $10 more than she would have if she were not deceived.[221]

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of Consumer Finance, 4 AM. L. & ECON. REV. 168 (2002) (reviewing regulations that specifically apply to consumer financing transactions).

[219] One reason for the dearth of law and surplus analysis by these scholars may be the links between the types of questions raised by law and surplus analysis and questions related to the apparent unfairness of certain business practices. In the 1960s and 1970s the FTC began to adopt policies aimed at addressing fairness concerns, but this led to a backlash against relying on fairness considerations to justify consumer protection law. For discussions of the backlash against FTC policy based on forays into reliance on fairness concerns, see, e.g., William MacLeod et al., *Three Rules and a Constitution: Consumer Protection Finds Its Limits in Competition Policy*, 72 ANTITRUST L.J. 943, 945 (2005) (describing the "Commission's effort to rescue its unfairness authority from the hostile forces unleashed by the Children's Advertising rulemaking"); J. Howard Beals, *The FTC's Use of Unfairness Authority: Its Rise, Fall, and Resurrection*, FED. TRADE COMMISSION (May 30, 2003), https://www.ftc.gov/public-statements/2003/05/ftcs-use-unfairness-authority-its-rise-fall-and-resurrection [https://perma.cc/MR5X-VALS].

[220] *See supra* note 4 and accompanying text.

[221] As Tullock explained, actual calculation of the social harm in this situation is complex, because, on the one hand, the $10 is a transfer, and social harm from the transfer may not be the full $10. On the other hand, the possibility of deception may launch an arms race between would be deceivers and those who do not wish to be deceived. *See* Tullock, *Welfare Costs*, *supra* note 47.

However, the extent of the social welfare loss is less clear if the seller is able to convince the buyer to purchase the book for $50, based on the same falsehood, rather than $60. In this scenario, the buyer is now paying no more than she would be willing to pay, even if the author did not originally own the copy of the book she purchased. The insight here is that the consequence of the deception in this scenario is simply a transfer of surplus from buyer to seller. If we choose to ignore surplus transfers then an important facet of the cost of this deception is not included in the computation.

The analysis of whether and to what extent there is a social welfare loss when selling practices shift surplus from buyer to seller becomes even more uncertain if the seller does not act in a deceptive manner. For example, what is the harm if the seller takes advantage of an astute ability to determine various buyers' willingness to pay and uses this ability to charge our buyer $50? What if the seller instead uses sophisticated algorithms that take advantage of behavioral failings of the buyer, but the purchase price remains at or below the buyer's "true" reservation price of $50? Does legal intervention only make sense when the purchase price exceeds a buyer's reservation price regardless of the inefficiencies and regressive nature of other transactions?

One would expect those studying consumer law to grapple with the more subtle and complex scenarios discussed above, as well as the simpler one where consumers enter into transactions they otherwise would not, and the harm to consumers is more self-evident. Addressing these more nuanced scenarios would involve considering how legal rules can and should address the surplus problem. However, as detailed below, consumer law scholars instead have relied on more familiar market failure arguments to analyze the propriety of consumer law.

A. Lemons Market Failure

Much reliance is placed by economically-oriented consumer law scholars on market failures arising from the lemons market failure described by George Akerlof.[222] Akerlof observed that in markets where it is difficult to ascertain product quality, the availability of poor quality products can force those selling higher quality products to exit the market.

The dynamic Akerlof describes proceeds as follows. First, there must be some degree of information asymmetry.[223] This means there are features of the product about which purchasers cannot freely acquire information at the time of purchase. The prototypical example comes from the used car market where it is assumed that certain cars are predisposed to fail (the "lemons").[224] Sellers know when their car

[222] *See* Akerlof, *supra* note 33.
[223] *Id*. at 490–91.
[224] *Id*. at 489–90.

is a lemon but it is difficult for the buyer to discern if a car for sale is a lemon. A dynamic ensues wherein the buyer logically assumes the only car the seller will sell is a lemon, and the belief becomes self-fulfilling.[225]

There are numerous examples of consumer law scholars relying on the lemons market failure to justify regulatory intervention. Perhaps the most significant is "Making Credit Safer" by Oren Bar-Gill and Elizabeth Warren, because this article provided analytical support for creation of the Consumer Financial Protection Bureau.[226] In their article, Bar-Gill and Warren draw an analogy between the need for laws that protect consumers from dangerous physical products and the need for laws to protect consumers from dangerous financial products. The implication is that both markets are likely to suffer from the same kinds of problems in the absence of regulatory intervention.

Bar-Gill and Warren are not explicit about which particular market failure allows sellers to profit by selling unsafe physical products and unsafe financial products, but their discussion suggests that at least part of the underlying problem is a lemons market failure. Bar-Gill and Warren write:

> Theory predicts and data confirm that markets for credit products are failing . . . . Regulation assured that no manufacturer had to compete with another manufacturer who was willing to produce unsafe products for less money. But regulation has not built the same floor under financial products. To restore efficiency to consumer credit markets, the same kind of basic safety regulation is needed.[227]

The logic of the Bar-Gill and Warren argument appears to be that features of both physical and financial products may be difficult to discern at the time of purchase, so cost competition will leave firms seeking to remain profitable with no choice but to sell both unsafe physical products and unsafe financial products.

The lemons market failure is, of course, different than the surplus problem. The lemons market failure arises if there is some amount of information asymmetry with respect to product quality between buyer and seller, whereas the surplus problem can be present even when buyer and seller share the same information about product quality. The costly and often regressive fight for surplus does not arise only where a lemons market failure exists. As a result, solutions to

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[225] There is no reason to sell a car that is not a lemon for the going market price, which is based on the presumption that all cars for sale are lemons. *Id.* at 490.

[226] Oren Bar-Gill & Elizabeth Warren, *Making Credit Safer*, 157 U. PENN. L. REV. 1 (2008).

[227] *Id.* at 69. Bar-Gill and Warren observe in a similar vein that: "Today, consumers can enter the market to buy physical products, confident that they will not be deceived into buying exploding toasters and other unreasonably dangerous products. . . . Consumers entering the market to buy financial products should enjoy the same benefits." *Id.* at 7.

the lemons market failure, such as mandating a minimum level of quality or developing a reliable mechanism for issuing valid warranties, do not provide insight into how to solve the surplus problem in the consumer law context.[228]

If we rely on the lemons market failure without also considering the surplus problem to justify protecting consumers from unsafe financial products the scope of the analysis will be incomplete. What if, for example, the economic result of selling "unsafe" financial products is only to extract surplus from consumers rather than lead consumers to consummate transactions that they would not otherwise have entered into? What if, in other words, untoward conduct leads the would-be purchaser to pay more than she might otherwise have preferred but still less than her willingness-to-pay.[229] Focusing on a lemons market failure cannot address this question.

B. Behavioral Exploitation

Another set of market failures that economically-oriented consumer law scholars rely on to justify legal intervention into consumer transactions are those that arise from predictable imperfections in consumer decision-making. Pernicious sellers may be able to take advantage of these failings because most consumers (but not the sellers) are generally unaware of or unable to correct these fallings at a low cost.[230] One term used to describe how pernicious sellers take advantage of predictable shortcomings in consumer decision-making is behavioral exploitation.[231]

[228] *See* Akerlof, *supra* note 33, at 499–500; *see also* Richard Craswell, *Passing on the Costs of Legal Rules: Efficiency and Distribution in Buyer-Seller Relationships*, 43 STAN. L. REV. 361 (1991) (describing conditions under which laws governing transactions, such as mandating warranties, will affect the efficiency and equity between transacting parties, and observing that a divergence between equity and efficiency goals arises only from the presence of inframarginal buyers or sellers).

[229] *See supra* notes 220, 221, and accompanying text.

[230] Bar-Gill observes, for example, "when consumers are imperfectly rational, sellers compete by designing pricing schemes that create an appearance of a lower price." Oren Bar-Gill, *Consumer Transactions*, *in* BEHAVIORAL ECONOMICS AND THE LAW 469 (Eyal Zamir & Doron Teichman eds., 2014). This market failure is not necessarily independent of the lemons market failure. Bar-Gill, for example, observes how the lemons market failure can interact with this market failure to effectively force all firms to either take advantage of behavioral exploitation opportunities or exit the market. OREN BAR-GILL, SEDUCTION BY CONTRACT 2 (2012) ("[C]ompetition forces sellers to exploit the biases and misperceptions of their customers.").

[231] Martin Brenncke, *The Legal Framework for Financial Advertising: Curbing Behavioural Exploitation*, 3 EUR. BUS. ORG. L. REV. 1 (2018). Rory Van Loo uses the term behavioral overcharge to describe a similar phenomenon. Van Loo defines "behavioral overcharge" as a situation where there are "higher prices paid as a result of information asymmetries and behavioral biases." Van Loo, Consumer Law, *supra* note 101, at 1 and 13. The term behavioral contract theory is also used to describe the study of what is here labeled behavioral exploitation. *See, e.g.*, Botond Kőszegi, *Behavioral Contract Theory*, 52

The prototypical example of behavioral exploitation occurs when a seller is able to charge a higher price than that seller otherwise might by taking advantage of differences between a buyer's "decision utility," which determines the choices people make, and that same buyer's "experienced utility," which reflects the actual benefits received.[232] There is now a substantial and growing body of research into seller efforts to take advantage of these and other kinds of consumer decision-making shortcomings. Bar-Gill, for example, has authored or co-authored several articles and a book that document situations where firms increase profits by taking advantage of these kinds of consumer mistakes.[233]

Consumer law scholars connect behavioral exploitation to the potential benefits of legal intervention in the following way. Behavioral exploitation may have an effect on the overall allocative efficiency of the economy, because without legal intervention the demand for goods will be based on their anticipated utility at the time the consumer makes the purchase decision rather the utility the consumer actually experiences. As a result, consumers will purchase more or different goods than they would had they made the purchase decision based on their experienced utility, reducing allocative efficiency.

Analyzing these distortions from behavioral exploitation allows consumer law scholars to reach policy conclusions about how to reduce social harms from behavioral exploitation. One recommendation is to impose disclosure requirements that can help close the gap between decision utility and experienced utility.[234] However, once again, a more complete analysis would evaluate the social welfare costs and benefits when a purchaser is "tricked" by a behavioral manipulation, but this trickery does not lead the buyer to purchase at a price that exceeds her reservation price.[235] If the consummation of a transaction is not altered, but the allocation of surplus is altered, the economic consequences are real but the policy questions raised are beyond the scope of the analysis of the costs of behavioral exploitation as currently framed.

J. ECON. LITERATURE 1075, 1075 (2014) (summarizing research that "studies contracts designed primarily to take advantage of agent mistakes").

[232] *See, e.g.*, Daniel Kahneman et al., *Back to Bentham? Explorations of Experienced Utility,* 112 Q.J. ECON. 375 (1997) (expounding on the existence and importance of two different meanings of utility, namely experienced utility as distinct from decision utility); Sendhil Mullainathan et al., *A Reduced-Form Approach to Behavioral Public Finance*, 4 ANN. REV. ECON. 511, 516 (2012).

[233] *See, e.g.*, BAR-GILL, *supra* note 230; Oren Bar-Gill, *The Behavioral Economics of Consumer Contracts,* 92 MINN. L. REV. 749 (2008); Oren Bar-Gill, *Seduction by Plastic,* 98 NW. UNIV. L. REV. 749 (2004); Oren Bar-Gill & Omri Ben-Shahar, *Optimal Defaults in Consumer Markets,* 45 J. LEGAL STUD. 137 (2016); Oren Bar-Gill & Kevin E. Davis, *(Mis)perceptions of Law in Consumer Markets,* 19 AM. L. & ECON. REV. 245 (2017); Oren Bar-Gill & Rebecca Stone, *Pricing Misperceptions: Explaining Pricing Structure in the Cell Phone Service Market,* 9 J. EMPIRICAL LEGAL STUD. 430 (2012); *see also* Jon D. Hanson & Douglas A. Kysar, *Taking Behavioralism Seriously: The Problem of Market Manipulation*, 74 N.Y.U. L. REV. 630 (1999).

[234] *See, e.g.*, BAR-GILL, *supra* note 230, at 32–43.

[235] *See supra* notes 220, 221, and accompanying text.

Consumer law scholars in relying on the lemons market failure and behavioral exploitation to justify regulatory intervention into consumer financial regulation ignore many of the transactions that consumers find problematic. Failing to include questions related to law and surplus in the consumer law context is an opportunity missed.

CONCLUSION

Surplus is an important and ubiquitous feature of market economies. The dollar amounts involved are almost certainly in the trillions of dollars. This surplus presents society with both opportunities and challenges. The opportunities come from the significant dollar amounts involved. The challenges come from the likelihood of a socially wasteful competition for all that surplus. How laws can seize on these opportunities and mitigate these challenges should be a rich area of legal research. As detailed above, this is an area of research that legal scholars have failed to address adequately, even when their research would naturally appear to require addressing precisely these questions.

However, identifying shortcomings in previous scholarship only begins the process of bringing the problems involving law and surplus to mainstream legal analysis where it rightly belongs. This Article is a call for action, an awakening. The time is now to explore how law can best play this important role in bringing more fairness and efficiency to economic activity throughout our society.