ANTITRUST AND THE INFINITE, CIRCULAR SUPPLY CHAIN

BY RAMSI A. WOODCOCK[1]

1 Assistant Professor, University of Kentucky Rosenberg College of Law, Secondary Appointment, Department of Management, University of Kentucky Gatton College of Business & Economics.

CPI ANTITRUST CHRONICLE APRIL 2022

ANTITRUST AND COMPETITION LAW IN GLOBAL SUPPLY CHAINS: RECENT DEVELOPMENTS AND BEST PRACTICES
By Adam L. Hudes, Catherine Medvene & Kathryn Lloyd

INSIGHTS FROM SUPPLY CHAIN MANAGEMENT: IMPLICATIONS FOR COMPETITION POLICY AND ANTIRUST LAW
By Gregory T. Gundlach & Riley T. Krotz

ANTITRUST AND THE INFINITE, CIRCULAR SUPPLY CHAIN
By Ramsi A. Woodcock

DUAL DISTRIBUTION IN THE DIGITAL AGE: THE EUROPEAN COMMISSION DRAFTS NEW COMPETITION RULES
By Charlotte Breuvart & Henry de la Barre

ANTITRUST ENFORCEMENT: LEVERAGING SUPPLY CHAIN INCENTIVES
By Nitish Jain & Serguei Netessine

TETHERING VERTICAL MERGER ANALYSIS
By Daniel P. O'Brien

CONTRACTING AROUND THE ANTITRUST LAWS: THE AUTOMOTIVE SUPPLY CHAIN EXAMPLE
By Sheldon Klein

FORESHADOWING ANTITRUST LIABILITY FOR COLLUSIVE SUPPLY RESTRICTIONS AMID PANDEMIC-RELATED SUPPLY CHAIN DISRUPTIONS
By Zach Terwilliger, Craig Seebald & Evan Seeder

Visit www.competitionpolicyinternational.com for access to these articles and more!

www.competitionpolicyinternational.com
Competition Policy International, Inc. 2022© Copying, reprinting, or distributing this article is forbidden by anyone other than the publisher or author.

ANTITRUST AND THE INFINITE, CIRCULAR SUPPLY CHAIN

By Ramsi A. Woodcock

Supply chains are fundamental to antitrust because no firm can exclude competitors without denying them access to inputs. But this does not mean that antitrust policy can reduce inflation caused by supply chain disruption or effectively redistribute wealth between different levels of a supply chain. Competitive markets do not eliminate profits — or price increases — that are due to scarcity rather than monopoly. In any case, it is impossible to introduce competitive pricing into every link in a supply chain, because supply chains are, technically, infinite. Every atom or fraction of an atom can be defined as a separate component. A firm's decision not to source each atom or fraction thereof separately shuts down markets for the separate components, impoverishing those who would otherwise supply them. But requiring firms to source each atom or fraction thereof separately would cause production to grind to a halt. Antimonopolists would instead do well to turn to price controls and taxation to address scarcity-driven inflation and wealth inequality.

Scan to Stay Connected!
Scan or click here to sign up for CPI's **FREE** daily newsletter.

I. INTRODUCTION

The concept of the supply chain is central to what antitrust does, but antitrust can neither tame inflation attributable to supply chain disruption, as the Biden Administration wishes antitrust could, nor equalize the wealth of participants at different levels of the supply chain, as antimonopolists wish antitrust could.[2] The concept of abuse of power by a monopolist is coherent only in the context of a supply chain. A monopolist can harm competitors only if the monopolist can deny something to them that they need, otherwise competitors are unaffected by the monopolist's actions. That thing is, by definition, an input into competitors' production processes — otherwise competitors would not need it to remain in the market. It follows that a monopolist can exclude competitors only by participating in two rungs on a supply chain at the same time: an input market that the firm must control, and the downstream market in which the firm harms competition.[3]

The same is true of a monopsonist. The monopsonist's product is effectively a vehicle that upstream suppliers to the monopsonist need in order to put their own products into the hands of downstream consumers. When a monopsonist refuses to purchase an upstream supplier's products, the monopsonist is denies the supplier an input that the supplier needs to remain in the market. Indeed, like a monopolist, a monopsonist can exclude competitors in upstream supply markets only by participating in two rungs of a supply chain at the same time. In the case of monopsony, those rungs are the input market monopsonized by the monopsonist, and the upstream supply market in which the monopsonist harms competition.

Even the archetypical raising of prices by a retail monopolist — which, at first glance, appears to have nothing to do with supply chains — represents exploitation of supply-chain-based power. Supply chains are always circles — or, at least, spirals — because consumers are also workers. Even if they do not work on the particular products that they buy, their labor is an input into the production of other goods and services. A monopoly can raise prices only by denying access to its output to those who are not willing to pay higher prices. In so doing, the monopoly denies an input — food, clothing, or whatever else the monopolist retails — to producers of labor services. The relationship to supply chains of a monopsonist's archetypical lowering of wages to workers or prices to suppliers is easier to discern. A monopsonist is able to reduce the wages it pays to workers or the prices it pays to suppliers only by refusing to buy from those who are not willing to sell at lower prices, denying an input — namely, the monopsonist's product as vehicle by which workers and suppliers reach downstream consumers.

Despite having a fundamental connection with supply chains, antitrust can neither tame inflation attributable to supply chain disruption nor equalize the wealth of participants at different levels of supply chains.[4] For antitrust is a poor method of regulating prices or redistributing wealth.[5] Competitive prices are not necessarily low, at-cost prices. Even in competitive markets, some firms become rich and others do not because some firms have access to scarce resources that enable them to produce at lower cost than others.[6] Moreover, it is impossible to bring competition to every link in a supply chain because the number of links in any supply chain is always infinite, or nearly so.[7] A pencil is, technically, a near-infinite agglomeration of atoms, each of which can be classified as a separate component. A firm that does not open each atom up to separate sourcing destroys competition in the markets to supply those atoms, harming those who would have participated in those markets. But it would be impossible for firms to produce at all if they were to source components on an atom-by-atom basis. As a result, many — indeed, given the infinite divisibility of products (why stop at atoms?), an infinite number of — markets must be monopolized in any given supply chain, enriching the monopolist or monopsonist and impoverishing others. Price controls and taxation are more effective ways of taming inflation and redistributing wealth.

2 *See* Jim Tankersley & Alan Rappeport, *As Prices Rise, Biden Turns to Antitrust Enforcers*, N.Y. Times (Dec. 25, 2021), https://www.nytimes.com/2021/12/25/business/biden-inflation.html [https://perma.cc/G7LD-YTF9]; Phillip Longman, *The Case for Small-Business Cooperation*, November/December 2018 Wash. Monthly (Oct. 28, 2018), https://washingtonmonthly.com/magazine/november-december-2018/the-case-for-small-business-collusion/ [https://perma.cc/D48Q-C3KS]. This essay draws heavily upon, and indeed borrows from, three working papers: Ramsi A. Woodcock, *Antimonopolism as a Symptom of American Political Dysfunction* (2021), https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3864585 [https://perma.cc/3HPD-G393]; Ramsi A. Woodcock, *The Contrasting Approaches to Power of the Modern State and the Antitrust Laws: Lessons for Platform Regulation* (2020), https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3704450 [https://perma.cc/8NTC-TWBZ]; Ramsi A. Woodcock, *How Antitrust Really Works: A Theory of Input Control and Discriminatory Supply* (2021), https://papers.ssrn.com/abstract=3794816 [https://perma.cc/4UFS-V9R2].

3 It is an unfortunate quirk of American antitrust law that enforcers test for monopoly power in the downstream market in which competition is harmed rather than in the input market. For without control over an input — which is to say, monopoly power in the input market — a firm has no power to harm competition in the downstream market. Moreover, collusion or merger aside, a firm cannot maintain monopoly power in the downstream market for long unless the firm monopolizes an upstream input to a sufficient extent to permit the firm to use it to exclude downstream competitors. See Ramsi A. Woodcock, *How Antitrust Really Works*, supra note 2.

4 See Tankersley & Rappeport, supra note 2; Longman, supra note 2.

5 Ramsi A. Woodcock, Antitrust Can't Tame Inequality, Let Alone Inflation, TheHill (Jan. 28, 2022), https://thehill.com/opinion/finance/591609-antitrust-legislation-cant-tame-inequality-let-alone-inflation [https://perma.cc/Q94L-AJMZ]; Ramsi A. Woodcock, Antimonopolism as a Symptom of American Political Dysfunction, supra note 2.

6 See Ramsi A. Woodcock, Antimonopolism as a Symptom of American Political Dysfunction, supra note 2.

7 See Ramsi A. Woodcock, *How Antitrust Really Works*, supra note 2; Ramsi A. Woodcock, To Produce Is to Self-Preference, What am I missing?, https://zephyranth.pw/2021/11/19/the-buy-or-make-or-market-decision/ [https://perma.cc/8H4N-C99C].

II. ANTITRUST, INFLATION, AND PRICE CONTROLS

The Biden Administration's interest in using the antitrust laws to tame inflation attributable to supply chain disruption reflects a misunderstanding of antitrust's means and ends.[8] It is a common misconception that antitrust's end is to reduce prices — or stop their increase.[9] If that were antitrust's end, then one would expect a monopolist's charging of high prices to violate the antitrust laws. But it does not.[10] Indeed, the price charged by a monopolist — or a cartel — is not an element of any antitrust offense, save predatory pricing, for which it is low prices, not high prices, that can lead to liability.[11]

It is true that lower prices are sometimes a byproduct of antitrust action, for antitrust promotes competition and competition can lead to lower prices. But lower prices are no more than a byproduct. Competition can also lead to higher prices — the entry of smartphones into mobile phone markets drove mobile phone prices up, for example, because consumers were willing to pay more for a more sophisticated product.[12] Moreover, even were lower prices to be antitrust's end, antitrust's means are very poorly suited to achieving it, for even when competition drives prices down, it is anyone's guess how far they will fall, or precisely how much of a reduction in price any particular antitrust remedy, such as breaking up a company, will bring about.[13] But getting prices right is important. Above-cost prices redistribute wealth from poor consumers to rich shareholders.[14] Below-cost prices destroy markets. Too little competition can leave prices too high. But too much competition — ruinous competition — can drive them too love.[15]

Antitrust is concerned not with using competition to get prices down but with using competition to improve products.[16] It is for this reason that antitrust does not condemn the firm that acquires a monopoly by developing a better product, even when that firm raises prices.[17] Apple undoubtedly charges high, above-cost prices for iPhones — surely, some part of the $170 billion in cash and marketable securities that the company carries on its books is not needed by Apple to maintain its operations or reward investors — but no court will break the company up on that ground.[18] Antitrust condemns only the firm that acquires a monopoly by degrading the products sold by competitors instead of improving its own, because that reduces the overall quality of goods delivered by the market to consumers.

Observers sometimes mistake antitrust's consumer welfare standard for a focus on price. After all, higher prices do sometimes harm consumers. But a consumer's welfare is the difference between the value a consumer places on a product — which is a function of product quality — and the price the consumer pays for the product. So consumer welfare is determined by product quality as well as price. Antitrust's consumer welfare standard implies a focus on the former — product quality — rather than the latter, because economists agree that product quality is the more important determinant of the two.[19] There is a floor below which prices cannot fall, limiting consumer gains from lower prices, but no ceiling on the gains to consumers from improvements in product quality — especially when product quality is understood to include the introduction of new and innovative products.[20]

---

8 See Tankersley & Rappeport, supra note 2.

9 *See, e.g.* Herbert Hovenkamp, Federal Antitrust Policy: The Law of Competition and Its Practice 387 (6th ed. 2020) (describing antitrust as "a market alternative to price regulation") (emphasis omitted).

10 See *ibid.* at 356–58.

11 See *ibid.* at 444–46.

12 *See* Matthew Miller, *Ten Reasons to Still Consider a Basic Flip Phone in Today's Smartphone World*, ZDNet, https://www.zdnet.com/article/ten-reasons-to-still-consider-a-basic-flip-phone-in-todays-smartphone-world/ [https://perma.cc/U3QQ-P2MQ].

13 *See* Ramsi A. Woodcock, *Using Price Regulation Instead of Competition to Reduce Prices after Patents Expire* (2021), https://papers.ssrn.com/abstract=3466473 [https://perma.cc/3366-FM2J].

14 See Jonathan B. Baker & Steven C. Salop, Antitrust, Competition Policy, and Inequality, 104 Geo. L.J. Online 1, 11–12 (2015).

15 *See* Alfred E Kahn, The Economics of Regulation: Principles and Institutions II: 173-78 (1971) (MIT Press 1988).

16 See Ramsi A. Woodcock, *How Antitrust Really Works*, supra note 2.

17 *See* Daniel J Gifford & Robert T Kudrle, The Atlantic Divide in Antitrust an Examination of US and EU Competition Policy 28 (2015).

18 Apple, Inc., Annual Report (Form 10-K) 24 (2021), https://s2.q4cdn.com/470004039/files/doc_financials/2021/q4/_10-K-2021-(As-Filed).pdf [https://perma.cc/CL4Q-ZZ3P]; Rule 52 Order after Trial on the Merits at 1, Epics Games v. Apple, No. 4:20-cv-05640-YGR (N.D. Cal. Sept. 10, 2021) ("Success is not illegal.").

19 *See, e.g.* Kenneth J. Arrow, Workshop on the Economy as an Evolving Complex System: Summary, in The Economy as an Evolving Complex System 275, 281 (Philip W. Anderson et al. eds., 1988).

20 This assumes, of course, that innovative monopolists never obtain the power to charge prices so high that consumers cannot share in the gains from product improvement. So far, at least, that has been the case.

Antitrust does not focus on reducing prices charged by monopolists because there is a much more reliable way to reduce prices: price controls. Both a price regulator and an antitrust enforcer faces the challenge of identifying the costs faced by firms, so as to avoid driving prices too low. But the price regulator does not face the additional problem, faced by antitrust enforcers, of determining what effects antitrust remedies, such as breakup, are likely to have on prices.[21] The price regulator simply dictates the regulator's preferred price directly to the market.

Price controls are not only a more reliable method of reducing prices than antitrust, but price regulators can also apply price controls to reduce above-cost prices that are due to scarcity rather than monopoly, which the antitrust laws cannot do.[22] The power of a monopolist to raise prices is due to *artificial* scarcity. The monopolist could choose to increase output and drive prices down, but does not do so. By contrast, much above-cost pricing is due to *natural* scarcity — the fact that some firms are able to produce better-quality products than others, but only in limited quantities.[23] In the case of natural scarcity, the resources or technical capacity to produce more output simply do not exist. Because more cannot be produced, competition cannot drive scarcity-inflated prices down, and so no antitrust remedy — all of which are directed at promoting competition — can reduce scarcity-inflated prices. But price controls can. A firm must obey a price regulator's order to reduce prices, whether the firm's power to charge above-cost prices is due to artificial or natural scarcity.

To the extent that the present inflation is driven by supply chain disruption, the source of firms' power to raise prices is natural scarcity, not the artificial scarcity punished by the antitrust laws.[24] Supply chain disruptions occur when access to inputs — which are what supply chains deliver — is limited. The limited supply of inputs in turn forces firms to restrict output — or fail to grow output as fast as usual — leading to involuntary (i.e., natural) scarcity and the power to increase prices that comes with it. It follows that only price controls can tame the present inflation.[25]

Antitrust enforcers could attempt to offset natural-scarcity-based inflation by condemning firms that charge high prices due to artificial scarcity (i.e., monopoly) rather than supply-chain disruption.[26] These firms might have used their monopoly power to raise prices long before the start of the present inflation. Or they might have held off on exercising their power before the inflation for fear of alienating consumers.[27] Now that there is a general inflation, consumers are no longer able to distinguish natural-scarcity-based from artificial-scarcity-based price increases, and so these firms can raise prices without attracting consumer ire.[28] Antitrust enforcement against these firms would put some downward pressure on prices.[29] But this approach is less potent than price controls, which, as already observed, can reduce prices due to natural scarcity as well as those due to artificial scarcity.

III. ANTITRUST AS SUPPLY CHAIN REGULATION

Antitrust may not be the solution to inflation attributable to supply chain disruption, but supply chains are central to antitrust. Indeed, they are constitutive of antitrust's basic conception of abuse of power: we cannot conceive of abuse of power other than in the context of a supply chain.[30]

---

21 See Ramsi A. Woodcock, Using Price Regulation Instead of Competition to Reduce Prices after Patents Expire, supra note 13; Ramsi A. Woodcock, Antitrust as Price Regulation by Least Efficient Means, What am I missing?, https://zephyranth.pw/2020/09/21/antitrust-as-price-regulation-by-least-efficient-means/ [https://perma.cc/76Q2-WUFP].

22 See Ramsi A. Woodcock, Antimonopolism as a Symptom of American Political Dysfunction, supra note 2.

23 See *ibid.*

24 See Woodcock, supra note 5.

25 *See* James K. Galbraith, *The Case for Strategic Price Policies*, Project Syndicate (Jan. 21, 2022), https://www.project-syndicate.org/commentary/strategic-price-controls-warranted-to-fight-inflation-by-james-k-galbraith-2022-01 [https://perma.cc/9QKX-VNZL]. For an argument for why the charging of higher prices during shortages is not necessary to stimulate output, see Ramsi A. Woodcock, The Efficient Queue and the Case against Surge Pricing, (2021), https://osf.io/preprints/socarxiv/g8tym/ [https://perma.cc/ZJ8W-JJ5W].

26 *See* Paul Krugman, *Why Are Progressives Hating on Antitrust?*, N.Y. Times (Jan. 18, 2022), https://www.nytimes.com/2022/01/18/opinion/biden-inflation-monopoly-antitrust.html [https://perma.cc/T7F2-NVJ9].

27 See *ibid.*

28 See *ibid.*

29 Cf. *ibid.* I have argued elsewhere that antitrust could also be used to offset price increases brought about by the spread of personalized pricing. *See* Ramsi A. Woodcock, *Big Data, Price Discrimination, and Antitrust*, 68 Hastings L.J. 1371, 1372–80 (2017).

30 See Ramsi A. Woodcock, *How Antitrust Really Works*, supra note 2.

The antitrust laws support two basic kinds of claims, which map roughly onto Sections 1 and 2 of the Sherman act.[31] The first is a claim against the centralization of control over resources, otherwise known as collusion and merger.[32] The most famous example is the per se rule against price-fixing.[33] Firms that fix prices agree collectively to withhold access to a good unless buyers pay the fixed price.[34] Thus, a group of independent firms comes to act as one.[35] A collective mind has centralized control over their output.[36]

The second is a claim against abuse of power, understood to mean the unreasonable denial of access to a good by an entity that has centralized control over the good.[37] The classic example here is the refusal to deal or essential facilities claim.[38] A firm that owns an essential input — some infrastructure, say — and also competes in a market that uses that input, denies access to the input to competitors and the courts condemn the denial of access. The courts have condemned, for example, the refusal of an owner of the only power transmission lines in a particular region to allow a competitor in the power generation market to deliver power to customers through the transmission lines.[39]

Refusal to deal and essential facilities claims are only the most obvious examples of antitrust's input-denial-based conception of abuse of power. All abuse of power claims in fact have the form of an input denial.[40] Another abuse of power claim — exclusive dealing — attacks the use of contractual obligations to prevent an input controller from supplying inputs to a competitor.[41] I have argued that tying, which antitrust also condemns as an abuse of power, is no more than a refusal to supply the tying product to firms competing in the market to sell the (tying-plus-tied-product) bundle.[42]

The connection between antitrust's conception of abuse of power and input denial is unavoidable because the general concept of power — political as well as economic — is itself bound up with input denial.[43] In the archetypical exercise of power, one person uses the threat of violence to force another person to do something. We are not used to seeing this as a denial of access to an essential input, but it is.[44] Security is an essential input into all human activity.[45] Without it, we die violently. A person who uses the threat of violence to compel another to act uses the threat of denial of access to security to exercise power.[46] All political power is then, ultimately derived from monopolization of the security input.[47] Public law — including, notably, constitutional law — regulates denial of the security input by the government.[48] Antitrust law regulates denial of all other inputs by firms. Public law regulates political power; antitrust regulates economic power. But the underlying logic of power as input denial is the same.[49]

The input denial paradigm applies even to the archetypical act of a monopolist of raising prices, something that at first glance does not appear to have anything to do with inputs and supply chains. A monopolist does not simply raise prices. A monopolist delivers a threat to its

---

31 *See* 15 U.S.C. §§ 1, 2.

32 See Ramsi A. Woodcock, *How Antitrust Really Works*, supra note 2.

33 See Hovenkamp, supra note 9, at 247–48.

34 See Ramsi A. Woodcock, *How Antitrust Really Works*, supra note 2.

35 See *ibid.*

36 See *ibid.*

37 See *ibid.*

38 See *ibid.*

39 *See Otter Tail Power Co. v. United States*, 410 U.S. 366, 368–83 (1973).

40 See Ramsi A. Woodcock, *How Antitrust Really Works*, supra note 2.

41 See *ibid.*

42 See *ibid.*

43 See Ramsi A. Woodcock, The Contrasting Approaches to Power of the Modern State and the Antitrust Laws: Lessons for Platform Regulation, supra note 2.

44 See *ibid.*

45 See *ibid.*

46 See *ibid.*

47 See *ibid.*

48 See *ibid.*

49 See *ibid.*

customers: pay the higher price or I will not deliver my product to you.[50] That is a threat of denial of access to an input — and, typically, some customers cannot afford to pay and are cut off. The input might be a good that we typically classify as a consumption item, such as ice cream, rather than as an input. But all products, even consumption items, are, in fact, inputs, because economists describe economies as circles.[51] Firms produce products that they sell to consumers, who in turn provide labor services to firms. In introductory economics textbooks, an arrow connects firms to households and another arrow connects households back to firms.[52] What consumers buy and consume can be considered inputs into the production of labor, which in turn is an input into the production of goods and services, including consumption items. If you are not rewarded with a BMW, you will not be able to work for a corporate law firm — your mental health will not allow it. But the law firm enables transactions that permit BMWs — or other consumption goods — to be produced. Thus, even when a monopolist retailer raises prices to consumers, the mechanism through which this takes place is denial of access to an input.

The reason we do not typically think of a monopolist's price increase as input denial is that, in addition to failing to see consumers as laborers securing inputs necessary for them to work, antitrust contains a broad exemption from liability for a monopolist's unilateral price increases, as already mentioned in Part II.[53] If this exemption did not exist, however, the monopolist's price increase would violate the antitrust laws, for it could well drive more innovative consumer-workers from labor markets, and innovation — or, rather, the improvement in product quality to which innovation gives rise — is the criterion according to which antitrust distinguishes reasonable from unreasonable abuses of power.[54]

Indeed, the guiding principle in antitrust's regulation of supply chains is product improvement.[55] The question antitrust always asks, albeit often implicitly, is: does the denial of access to the input improve the downstream product that requires the input?[56] More generally, the basic paradigm, applied implicitly in every antitrust case involving the abuse of power, is this. Antitrust identifies a centralization of control over a particular input and then asks whether the manner in which the controlling firm allocates access to the input to downstream firms — the manner in which the controlling firm denies the input to some, provides it to others, and on what terms — reduces the quality of the products offered by the downstream firms.[57] If it does, then antitrust condemns the input controller's behavior.[58] If not, and particularly if the input denial improves the quality of products offered by downstream firms, antitrust does not condemn the controller's behavior.

Firms that control inputs sometimes use input denial to influence the extent and direction of innovation in downstream markets.[59] Innovation increases demand for downstream products, and that in turn increases the size of the profits generated by downstream firms. An input controller can extract those profits through the prices it charges for inputs, so input controllers have an incentive to drive downstream markets in innovative directions.[60] Often, input controllers use input denial to favor innovative firms as part of a plan for the allocation of scarce resources. The inputs are naturally scarce and so the input controller must decide to which downstream firms to allocate them. The input controller chooses the most innovative firms. A railroad line can only run so many trains in a given period of time, so it must decide which train operator to permit to use its tracks. The railroad will choose the company that offers the highest-quality service because that company will have more profits to share with the railroad line. The railroad denies access to other train operators because there is no more room available on the track. This sort of discriminatory allocation of naturally scarce resources does not implicate the antitrust laws.

But sometimes an input controller seeks to promote downstream innovation by refusing to supply inputs to less-innovative downstream firms even when the input controller has the capacity to supply the less-innovative firms. In this case, the input controller creates artificial scarcity and the antitrust laws are implicated. But although the antitrust laws are implicated, they do not prohibit this sort of input denial, so long as the

---

50 See Ramsi A. Woodcock, *How Antitrust Really Works*, supra note 2.

51 *See, e.g.* Paul A. Samuelson & William D. Nordhaus, Macroeconomics 26 (15th ed. 1995).

52 *See, e.g. ibid.*

53 See Hovenkamp, supra note 9, at 356–58.

54 See Ramsi A. Woodcock, *How Antitrust Really Works*, supra note 2.

55 See *ibid.*

56 See *ibid.*

57 See *ibid.*

58 See *ibid.*

59 See *ibid.*

60 See *ibid.*

effect is to promote downstream innovation.[61] The only local supplier of restaurant equipment — grills, tables, and the like — might choose not to supply equipment to restaurants that earn low hygiene scores from the municipal health department. The input denial drives unclean restaurants out of business and enables cleaner restaurants to replace them. The supplier stands to benefit because cleaner restaurants attract more diners and earn greater profits, allowing the equipment supplier to raise equipment prices. Under the doctrine of the rule of reason — what I call "innovation primacy" — antitrust does not condemn this sort of product-improving discrimination in input supply.[62]

A firm that controls an input can also use input denial to reduce downstream product quality.[63] If artificial restrictions in supply of the input are involved, then the input denial constitutes an abuse of power in violation of the antitrust laws. An input controller might, for example, starve downstream firms that the controller believes may one day grow to challenge the firm's control over the input.[64] Those downstream firms might be the most innovative in the downstream market, so the input controller's intervention would reduce product quality in the downstream market, violating the rule of reason. Or an input controller might starve downstream firms that make it difficult for the controller to determine how much profit the firms have to share with the controller.[65] This criterion for denying access does not take the innovativeness of the downstream firms into account, and so innovative firms may be destroyed and the overall level of quality in the repair market reduced. That, too, would violate the rule of reason. For example, a maker of photocopy machines might refuse to supply spare parts to independent service organizations that do not share data on their revenues, because without that data the manufacturer cannot tailor the prices it charges for the parts to each independent servicer in order to extract the largest possible share of profits from the independent servicers.[66] But the independent servicers that fail to share data might do a better job of servicing photocopiers than those that do share data. Antitrust would condemn the manufacturer's actions.

The foregoing examples all involve input controllers that do not compete directly in the downstream market in which they influence competition. But the analysis applies, if anything, with greater force to the more archetypical case of input controllers that manipulate competition in downstream markets in which they formally compete.[67] The railroad that directs scarce track to the more innovative trains that the railroad itself operates does not violate the antitrust laws, because, as before, the railroad allocates a naturally scarce resource. The restaurant supplier that supplies only its own, cleaner restaurants does not violate the antitrust laws because it offers a better-quality product. But the manufacturer that cuts off independent service organizations that refuse to share profit data in favor of its own in-house repair shop, with respect to which the manufacturer of course has complete data access, does violate the antitrust laws.[68] Because an input controller can use the prices it charges for its input to extract profits from downstream firms that the controller favors, the input controller is always in a sense integrated with the downstream firms it favors, and so is always engaged in manipulating competition in markets in which it competes, whether it formally owns a downstream firm or not.[69]

The foundation of a firm's ability to abuse power is the possession of power itself. If a firm does not control an input, its threats to deny access ring hollow. Downstream firms can obtain the input from other sources. Thus, the centralization of control over inputs — which, as already noted, antitrust also regulates — is a necessary condition for abuse of power.[70] If antitrust could prohibit all centralizations of control over inputs — that is, if antitrust could prohibit all supply chain bottlenecks — there would be no need to prohibit abuse of power, as there would be no power.[71] But antitrust cannot prohibit all centralizations of control.[72] Many are necessary for production to occur. If John Deere alone has the

---

61 See *ibid.*

62 See *ibid.*; Ramsi A. Woodcock, The Obsolescence of Advertising in the Information Age, 127 Yale L.J. 2270, 2213–14 (2018). Why might the equipment supplier wish to drive out unclean restaurants when consumers can be expected to do that anyway, by patronizing only restaurants with high health grades? The answer is that consumers might not behave as expected, or act in their own best interests. Consumers might, for example, continue to patronize a dirty restaurant from force of habit, enabling the restaurant to remain in the market, even though consumers would be happier, and dine out more often, were the restaurant to be replaced by a cleaner one.

63 See Ramsi A. Woodcock, *How Antitrust Really Works*, supra note 2.

64 See *ibid.*

65 See *ibid.*

66 *Cf. Eastman Kodak Co. v. Image Technical Services, Inc.*, 504 U.S. 451, 458 (1992).

67 See Ramsi A. Woodcock, *How Antitrust Really Works*, supra note 2. Courts do not always recognize this equivalence, however.

68 *See* Andrew I. Gavil et al., Antitrust Law in Perspective: Cases, Concepts and Problems in Competition Policy 524 (3d ed. 2017) (discussing the price discrimination theory of why Kodak wished to raise aftermarket prices).

69 See Ramsi A. Woodcock, *How Antitrust Really Works*, supra note 2.

70 See *ibid.*

71 See *ibid.*

72 See *ibid.*

technological ability to produce a tractor, then John Deere will necessarily have centralized control over the tractor input into farming. If antitrust were to prohibit such control — and a unitary, indivisible John Deere alone can make tractors — then there would be no tractor, which is not a good result.

The antitrust laws avoid this problem by applying the product improvement criterion here, too, to distinguish reasonable from unreasonable centralizations of control.[73] Centralizations that are conducive to product improvement are legal; all others, including those that degrade products, are illegal.[74] In particular, antitrust never challenges centralizations due to organic growth — creation of the input by a firm.[75] If John Deere controls all the tractors because only John Deere makes them, then there is no antitrust violation. Antitrust assumes that only those centralizations carried out by agreements — including merger agreements — between competing input owners can lack a product improvement rationale.[76] They are condemned when they fail to improve the product.[77] Naked price-fixing, which is defined as an agreement to raise price that is not "ancillary" to some other purpose, is an exception. It is *per se* illegal because it has no end other than to increase profits.[78]

IV. ANTITRUST AND SUPPLY CHAIN FAIRNESS

Antimonopolists argue that antitrust should abandon its consumer welfare standard because the standard prevents antitrust from defending workers and small suppliers against monopsony buyers.[79] In response, the antitrust mainstream has pointed out that the consumer welfare standard is really a "trading partner welfare" standard that protects workers and small suppliers in addition to consumers.[80] They are right. But the distributive framing of the debate by both sides misses the singular unsuitability of the antitrust laws to resolving problems of wealth distribution between different levels of the supply chain.[81]

As already observed, a great deal of inequality is due to natural scarcity, not monopoly (i.e., not to artificial scarcity).[82] Thus, even were prices in all buyside and sellside markets competitive, the trading partners that control naturally scarce resources would become rich and those that do not would not.[83] That is why progressives have long struggled against attempts to tie the distribution of wealth to competitive market outcomes and why progressives' current romance with antimonopolism is perplexing.[84] As we saw in Part II, only price regulation — or taxation — can redistribute profits due to natural scarcity.[85]

Even were competitive markets associated with wealth equality, antitrust would not be able to make all markets competitive, because, as we have already seen, antitrust does not prohibit centralizations of control over inputs or abuses of power that make products better.[86] In particular, the product improvement criterion for distinguishing good from bad abuses of power applies with as much force to the monopsonies that wield power against workers and suppliers as it applies to monopolies. We can think of a monopsony's refusal to buy from a particular supplier or to hire a particular worker as equivalent to a denial of an input to that worker or supplier. The monopsony's product is a vehicle that workers and suppliers need for their labor or supplies to reach downstream consumers. The monopsonist's refusal to buy is, then, equivalent to a denial of access to that vehicle. We can, for example, think of an Apple employee or supplier as selling, ultimately, to iPhone buyers rather than to Apple,

73 See *ibid.*

74 See *ibid.*

75 See *ibid.*

76 See *ibid.*

77 See *ibid.*

78 See Hovenkamp, supra note 9, at 247–48.

79 See Longman, supra note 2.

80 *See* C. Scott Hemphill & Nancy L. Rose, *Mergers That Harm Sellers Collection: Unlocking Antitrust Enforcement*, 127 Yale L.J. 2078, 2080 (2017–2018).

81 See Ramsi A. Woodcock, Antimonopolism as a Symptom of American Political Dysfunction, supra note 2.

82 See *ibid.*

83 See *ibid.*

84 See *ibid.*

85 See *ibid.*

86 We have also seen that antitrust does not prohibit the charging of supracompetitive prices by a monopolist. This exemption also applies to the infracompetitive prices charged by monopsonists.

using the iPhone as a vehicle to bring the employee's labor or the supplier's supplies to consumers. When Apple terminates an employee or supplier, the employee or supplier loses an input that the employee or supplier needs to reach the market. Thus, for purposes of antitrust prohibitions on abuse of power, monopsony and monopoly can be considered under the same input denial rubric. Consistent with the antitrust treatment of monopoly, a monopsony is, then, to be preserved under the antitrust laws if the monopsony makes input denial decisions that improve the products that reach downstream consumers.[87] If a monopsonist terminates suppliers of poor-quality inputs, there is no antitrust violation.

Even were antitrust to jettison its commitment to product quality and work instead to promote competition at every link in the supply chain, antitrust would run up against another problem: making every link in a supply chain truly competitive is impossible.[88] The only way to prevent a monopsonist from favoring some suppliers or workers over others is to require that the monopsonist buy from all workers or suppliers on nondiscriminatory terms.[89] To make John Deere treat its suppliers well, for example, antitrust enforcers must insist that John Deere purchase tractor parts on nondiscriminatory terms from all suppliers willing to offer them. But every purchase of a whole good or service by the monopsonist represents a decision to exclude sellers of parts of the good or service in favor of sellers of the whole good or service, so discrimination in the sourcing of inputs is pervasive.

It is also unavoidable because products cannot be assembled from an infinity of separately sourced parts. If John Deere purchases whole wheels from suppliers, then John Deere discriminates against potential suppliers of half wheels (i.e., of semicircular wheels), denying them access to the John Deere tractor qua means of bringing their products to downstream consumers. Half wheels are, in fact, a link in the supply chain, but one that is submerged because John Deere's discrimination against sellers that specialize only in half wheels is so absolute — John Deere never buys from them. An antitrust interested in promoting competition in *all* links in the supply chain would be compelled to surface this link by requiring John Deere to purchase separate half wheels rather than whole wheels. And what is true for half wheels would be equally true for quarter wheels — in not buying quarter wheels, John Deere suppresses the market for quarter wheels — and eighth-wheels and so on, ad infinitum. What is true of half wheels would also be true for every component of a tractor, not just wheels. To fully liberate every link of the supply chain, John Deere would need to purchase each atom of its tractors separately and in nondiscriminatory fashion. Indeed, the purchasing would need to extend beyond that to the subatomic level.

That would, of course, be impractical. To accommodate semicircular wheels, for example, John Deere would need to require that the semicircular wheels the company purchases be designed to lock together to form whole wheels, otherwise its tractors would not run. But the locking systems would make the wheels more expensive to produce and less reliable. Every new link in the supply chain would further increase design complexity and production costs until tractors would become so expensive that no one would buy them. And each new integrating component of the design — such as the lock mechanism required to attach two semicircular wheels — would add an infinity of additional components to the design, each of which would itself need to be sourced separately and accommodated. The supply chain would be atomized, and production would grind to a halt.[90]

Antitrust, as presently constituted, would not punish firms for avoiding this infinite regress. To the extent that adding links to the supply chain would make the product unworkable — to the extent that the tractor cannot run at all on wheels composed of semicircular components — a firm's refusal to add a link would be due to artificial scarcity in available product designs and so would fall outside of the ambit of the antitrust laws. The monopsonist would simply have too few products available to enable all possible suppliers to use them as vehicles to deliver their supplies to downstream buyers. But to the extent that adding links to the supply chain would not make the product unworkable, just less useful or more expensive, the antitrust laws would apply, because it would be possible for the monopsony to introduce additional, atomized designs.[91] Output could increase, and a monopsony's refusal to increase it, by not sourcing components separately, would represent the creation of artificial scarcity. But, as presently constituted, the antitrust laws would not punish firms for refusing to add the links, because such refusals lead to better products, or at least avoid the creation of less useful or more expensive products. An antitrust that is bent upon promoting competition at all levels of the supply chain, regardless of the effect on product quality, would, however, be compelled to intervene, regardless of whether natural or artificial scarcity were involved. For every decision not to source products separately precludes competition in a supply market and impoverishes the firms excluded from it.

87 See Ramsi A. Woodcock, *How Antitrust Really Works*, supra note 2.

88 See *ibibid.*

89 See *ibibid.*

90 See *ibid.*

91 In fact, there is no hard distinction between a design that is unworkable and one that merely reduces the quality of the product or makes it more expensive. The non-applicability of the antitrust laws to cases of natural scarcity is merely an extension to extreme cases of product improvement of the rule that conduct that improves products is exempt from antitrust liability.

The anti-self-preferencing legislation currently making its way through Congress suffers from this problem of infinite regress.[92] The legislation prohibits input denial by firms that compete in the downstream market in which competition is harmed, but, unlike current law, it is not limited to cases in which the input denial degrades products.[93] To avoid the problem of infinite regress, proponents of the legislation have been forced to use other means to limit the legislation's scope, such as making it applicable only to very large firms and only to a carefully defined "platform" input.[94]

Rather than stamp out all exercises of power, antitrust enforcers could seek to break the monopsonist's control over the input that is the source of the monopsonist's power. But this provides less of a resolution to the problem than one might expect. For it is likely that, no matter how many firms produce a particular input, they will discriminate between suppliers in ways similar to a monopsonist, particularly where the discrimination improves the product and so increases the firms' profits. Break John Deere into two firms and both will still likely choose to purchase whole wheels. Only once the market has walked far down the path toward hosting an infinitude of producers will it be possible to find in the market a firm that assembles its wheels from half wheels. And even then, that is unlikely. Decentralization of control over inputs does not, in other words, guarantee that the market will engage in nondiscriminatory sourcing at every link of the supply chain. But for every link at which discriminatory sourcing takes place, there are suppliers who are excluded from the market and made poorer as a result.[95] The fact that deconcentrated input markets can still produce the sort of discrimination in which a monopsonist engages shows how fundamental the logic of product improvement — and the need for limits on competition — is. Wealth cannot be redistributed effectively through the promotion of competition.

V. CONCLUSION

Antitrust, as presently constituted, regulates the creation and abuse of power in supply chains. The guiding principle of this regulation is the improvement of products, not lower prices or the equitable distribution of wealth. Antitrust permits firms to centralize control over inputs, use the resulting power to harm downstream competition, and appropriate riches for themselves through higher prices, so long as doing so improves the quality of the products sold to downstream consumers. Antitrust, as presently constituted, therefore will be of limited use in taming inflation or distributing wealth equitably between different levels of supply chains. More suitable policies are price controls and taxation. Antitrust can be made more suitable only if, as I have proposed elsewhere, price controls are grafted onto it.[96]

92 American Innovation and Choice Online Act, S. 2992, 117th Cong. (2022).

93 *See ibid.* §§ 3(a)(1), 3(a)(2).

94 *See ibid.* § 2(a)(5).

95 See *ibid.*

96 *See* Ramsi A. Woodcock, The Antitrust Duty to Charge Low Prices, 39 Cardozo L. Rev. 1741 (2018); Ramsi A. Woodcock, The Efficient Queue and the Case against Surge Pricing, supra note 25; Ramsi A. Woodcock, Personalized Pricing as Monopolization, 51 Conn. L. Rev. 311 (2019); Ramsi A. Woodcock, *Personalizing Prices to Redistribute Wealth in Antitrust and Public Utility Rate Regulation* (2022), https://papers.ssrn.com/abstract=3378864 [https://perma.cc/G8X8-RQB2].

CPI COMPETITION POLICY™ INTERNATIONAL

CPI Subscriptions

CPI reaches more than 35,000 readers in over 150 countries every day. Our online library houses over 23,000 papers, articles and interviews.

Visit competitionpolicyinternational.com today to see our available plans and join CPI's global community of antitrust experts.