Apartment Pricing in the Era of AI, Algorithms, and Big Data

Sean P. McQuade[*]

ABSTRACT: Home prices are at all-time highs while renters throughout the country are rent burdened. At the same time, big data, algorithms, and artificial intelligence enabled apartment owners and management companies to increase revenues with dynamic pricing, or "revenue management" software. As a result, landlords make more money, and renters pay higher rents. Renters, states, and the DOJ are claiming that RealPage, Inc.'s revenue management software violates section 1 of the Sherman Act because it uses non-public, competitively sensitive data to coordinate prices across the housing market, allowing competitor landlords to price like a monopoly. But the RealPage scheme does not fit nicely in the existing Sherman Act analysis. Whatever outcome the cases produce, legislative solutions are needed to set policy and provide clarity to consumers, businesses, and technology providers around what degree of data-sharing is acceptable in pricing algorithms. At the same time, policymakers must tread carefully to avoid stifling business innovation and the positive benefits of modern technology. This Note identifies the critical features of the RealPage scheme that should be targeted in future enforcement, regulation, and legislation with the goal of relieving the soaring cost of rent facing American renters.

[*] J.D. Candidate, The University of Iowa College of Law, 2026; B.A., Economics and Political Science, Northwestern University, 2015.

INTRODUCTION

Jimmy McMillan lost the 2010 race for governor of New York, but he caught the nation's attention when he declared the "[r]ent is too damn high."[1] He even made a music video with the phrase[2] and started a political party, fittingly named the Rent Is Too Damn High Party.[3] McMillan retired from politics in 2015, but his messages about rent and the cost of housing still dominate political discourse. According to the Department of Housing and Urban Development, nearly half of American renters (over twenty million households) are cost-burdened, meaning "they spend more than 30% of their income on rent, mortgage payments, and other housing costs."[4] One reason for this is the rise of algorithmic pricing in the apartment industry, largely driven by one provider: RealPage, Inc. ("RealPage").[5] Renters, states, and the Department of Justice ("DOJ") have sued RealPage, alleging antitrust violations due to RealPage's use of private, competitively sensitive data in its algorithm.[6]

This Note argues that although common law development of existing Sherman Act definitions is one potential solution to this issue, it is unsatisfactory. In addition to lawsuits that advocate for expanding antitrust law to big data, algorithms, and artificial intelligence ("AI"), state and federal legislatures must also pass laws that identify specific behaviors that violate antitrust laws. In the case of RealPage and algorithmic pricing, this Note proposes that lawmakers target the use of private data in a third-party algorithm. Furthermore, legislation must avoid overburdening the non-critical features of algorithms that allow algorithms to provide value for businesses and consumers.

---

1. Alexander Burns, *Jimmy McMillan, Rent Is Too Damn High Candidate, Is Retiring from Politics*, N.Y. TIMES (Dec. 9, 2015), https://www.nytimes.com/2015/12/10/nyregion/jimmy-mcmillan-rent-is-too-damn-high-candidate-is-retiring-from-politics.html (on file with the *Iowa Law Review*).

2. Animalnewyork, *Jimmy McMillan "Rent Is Too Damn High" Anthem*, YOUTUBE (Apr. 24, 2013), https://www.youtube.com/watch?v=rHEitsYJnmw [https://perma.cc/8NRA-5JNB].

3. Burns, *supra* note 1.

4. Press Release, U.S. Census Bureau, Nearly Half of Renter Households Are Cost-Burdened, Proportions Differ by Race (Sept. 12, 2024), https://www.census.gov/newsroom/press-releases/2024/renter-households-cost-burdened-race.html [https://perma.cc/WY8G-G9MK].

5. *See About Us*, REALPAGE (2025), https://www.realpage.com/company [https://perma.cc/263J-9FKU].

6. *See, e.g.*, United States v. RealPage, Inc., No. 24-cv-710 (M.D.N.C. filed Aug. 23, 2024).

Part I of this Note explores the rise of algorithmic pricing in the multifamily industry, explains how RealPage's algorithm works, and examines the litigation against RealPage in comparison to related antitrust cases. Part II analyzes how the RealPage scheme is not adequately addressed by current antitrust law and why further legislation is needed. Part III then identifies the critical and non-critical features that define the RealPage scheme and how those features could be targeted in new laws. Finally, Part IV discusses solutions that have been proposed and how they should be modified to target the critical features of such schemes without overburdening the non-critical features.

I. ALGORITHMIC PRICING IN MULTIFAMILY HOUSING

This Part explores the history and current status of algorithmic pricing and antitrust law in the multifamily housing industry. Section I.A explains the housing affordability crisis. Section I.B describes algorithmic pricing in rentals, which is known as "revenue management." Section I.C introduces the lawsuits against RealPage, while Section I.D describes analogous antitrust cases. Finally, Section I.E describes current commentary on how to combat antitrust concerns in algorithmic pricing.

A. THE HOUSING AFFORDABILITY CRISIS

In 2023, over twenty-one million American households—nearly half of American renter households—were rent-burdened, meaning they "spent more than 30% of their income on housing costs."[7] Home purchasing costs have also soared in recent years as supply fell behind demand and investors scooped up properties.[8] Additionally, high interest rates raised mortgage prices and reduced the supply of for-sale homes.[9] As home-buyers get locked out of the purchase market, they enter the rental market, which increases rental demand and prices.[10]

In response, housing advocates are fighting for—and cities and states are passing—zoning changes to promote more new home construction.[11] For example, Minneapolis ended single-family zoning, resulting in a twelve percent increase in the city's housing stock in just five years.[12] Over that time, rents rose only one percent in the city, compared to fourteen percent in Minnesota as a whole.[13] But because the rent remains stubbornly high for many

7. Press Release, U.S. Census Bureau, *supra* note 4.

8. Alvin Chang, *How Finding a Home in America Became So Absurdly Expensive*, GUARDIAN (May 10, 2023, 6:00 AM), https://www.theguardian.com/us-news/2023/may/10/us-housing-market-prices-increasing [https://perma.cc/P4EP-SDCT].

9. Nicole Narea, *If Interest Rates Go Down, Do Home Prices Go Down? Not Quite.*, VOX (Sept. 18, 2024, 1:19 PM), https://www.vox.com/economy/372384/interest-rate-home-price-real-estate-mortgage-fed-decision [https://perma.cc/N4XP-2GLZ].

10. Chang, *supra* note 8.

11. Laurel Wamsley, *The Hottest Trend in U.S. Cities? Changing Zoning Rules to Allow More Housing*, NPR (Feb. 17, 2024, 6:00 AM), https://www.npr.org/2024/02/17/1229867031/housing-shortage-zoning-reform-cities [https://perma.cc/2DMH-B8LE].

12. *Id.*

13. *Id.*

Americans, the cost of housing remains in the public discourse and even became a regular talking point for the 2024 presidential candidates.[14] President Joe Biden mentioned housing prices in his 2024 State of the Union Address, pledging to build 1.7 million units and "crack[] down on corporations that engage in price gouging or deceptive pricing."[15] After replacing Biden at the top of the Democratic ticket, Vice President Kamala Harris pledged to build three million homes to increase supply and lower prices.[16] Then-former President Donald Trump aimed to relieve pressure on housing prices by reducing illegal immigration and making federal lands available for home construction.[17] Pollsters found that housing prices were one of the top concerns for families, and that attacks on "greedy landlords" were a political winner.[18] On his first day in office, Trump issued a memorandum directing agencies to take action against the high cost of housing and low housing supply.[19]

Tenants, state attorneys general, and the DOJ have taken a different approach. They have targeted what they claim is one contributor to high rents in some markets: algorithmic pricing. In lawsuits filed by all three groups since 2022, the claim is essentially the same: RealPage coordinates an apartment cartel across the country and in certain markets by collecting data from landlords and generating price recommendations that allows competitor landlords to price like a monopoly and raise rents across the market—to the benefit of property owners and the detriment of renters.[20]

B. REVENUE MANAGEMENT IN MULTIFAMILY HOUSING

While housing prices became less affordable, large landlords in some cities turned to pricing software that helps them set prices to maximize

14. Suzanne Blake, *How Kamala Harris' Plan for Housing Market Compares to Donald Trump's*, NEWSWEEK (Sept. 4, 2024, 11:08 PM), https://www.newsweek.com/how-kamala-harris-plan-housing-market-compares-donald-trump-1948745 [https://perma.cc/52RD-6QXS].

15. Joe Biden, *Remarks of President Joe Biden—State of the Union Address as Prepared for Delivery*, WHITE HOUSE (Mar. 7, 2024), https://www.whitehouse.gov/briefing-room/speeches-remarks/2024/03/07/remarks-of-president-joe-biden-state-of-the-union-address-as-prepared-for-delivery-2 (on file with the *Iowa Law Review*).

16. Blake, *supra* note 14.

17. *Id.*

18. Rachel Siegel, Michael Scherer & Sabrina Rodriguez, *Kamala Harris Says America Needs More Homes. Here's Why That's Different*, WASH. POST (Oct. 8, 2024), https://www.washingtonpost.com/business/2024/10/08/kamala-harris-housing-plan-yimby (on file with the *Iowa Law Review*).

19. Memorandum from the White House on Delivering Emergency Price Relief for American Families and Defeating the Cost-of-Living Crisis (Jan. 20, 2025), https://www.whitehouse.gov/presidential-actions/2025/01/delivering-emergency-price-relief-for-american-families-and-defeating-the-cost-of-living-crisis [https://perma.cc/5QX7-AD4H]. But on the other hand, Trump's actions "on trade policy, immigration and the size of the federal government threaten to compound the strain on homeowners he has vowed to ease." Julia Mueller, *Trump Has Vowed to Bring Down Housing Costs. What Is His Administration Doing?*, HILL (Apr. 14, 2025, 5:55 AM), https://thehill.com/business/housing/5244326-trump-housing-crisis-policy-tariffs-immigration [https://perma.cc/Y8GP-TWQP].

20. *See, e.g.*, United States v. RealPage, Inc., No. 24-cv-710, 2024 WL 5186598, at *1 (M.D.N.C. Dec. 20, 2024).

revenue.[21] Anyone who has rented from a large building in a big market has probably seen revenue management software in action when they selected lease terms online before receiving a rent quote. Revenue management software is like hotel or airline pricing; it is dynamic and tailored to each purchaser's needs, rather than static and uniform.[22]

RealPage started in 1998[23] and now controls eighty percent of the revenue management market, according to the DOJ.[24] RealPage has sold several versions of its revenue management software, including YieldStar and AI Revenue Management,[25] but all revenue management systems do the same basic things: collect landlord data, run it through an algorithm, and provide pricing recommendations back to the landlords.[26] The system ingests data and provides pricing on a daily basis, so rents one day may not match rents the next day.[27] Landlords are not contractually obligated to accept the recommended rental rates, but they do so at a very high rate and can opt into an auto-accept feature.[28] Depending on the property's vacancy and market conditions, rents may go up or down, according to RealPage, but the DOJ alleges the prices increase more frequently than they decrease.[29] One reason for this is that the system uses competitor data to establish a "market floor" for each property.[30] The system then will not recommend prices below that floor.[31] Additionally, the relationship between RealPage and its client landlords incentivizes RealPage to increase rents rather than decrease.[32]

One problem, according to the various lawsuits against RealPage, is that the market floor, and unit prices more generally, are determined in part by using competitively sensitive data from each property's putative competitors.[33]

---

21. *See* Heather Vogell, *Rent Going Up? One Company's Algorithm Could Be Why.*, PROPUBLICA (Oct. 15, 2022, 5:00 AM), https://www.propublica.org/article/yieldstar-rent-increase-realpage-rent [https://perma.cc/7W39-JFAB].

22. *See* Kate Gibson, *Dynamic Pricing: What It Is & Why It's Important*, HARV. BUS. SCH. ONLINE (May 10, 2024), https://online.hbs.edu/blog/post/what-is-dynamic-pricing [https://perma.cc/3QVU-XUA3].

23. *See About Us*, *supra* note 5.

24. *See* Press Release, Off. of Pub. Affs., U.S. Dep't of Just., Justice Department Sues RealPage for Algorithmic Pricing Scheme that Harms Millions of American Renters (Aug. 23, 2024), https://www.justice.gov/opa/pr/justice-department-sues-realpage-algorithmic-pricing-scheme-harms-millions-american-renters [https://perma.cc/VZ52-MW9E].

25. *See* Vogell, *supra* note 21.

26. *See id.*

27. *See RealPage AI Revenue Management*, REALPAGE (2025), https://www.realpage.com/asset-optimization/revenue-management [https://perma.cc/B4QB-8UGG].

28. *See* Complaint at 23–26, United States v. RealPage, Inc., No. 24-cv-00710 (M.D.N.C. Aug. 23, 2024) [hereinafter DOJ Complaint].

29. *See* Emily Peck, *How One Company Transformed the Apartment Rental Market*, AXIOS (Aug. 29, 2024), https://www.axios.com/2024/08/29/realpage-doj-lawsuit [https://perma.cc/P2K3-BZVG]; *RealPage AI Revenue Management*, *supra* note 27; DOJ Complaint, *supra* note 28, at 49–52.

30. *See* DOJ Complaint, *supra* note 28, at 51.

31. *Id.*

32. *Infra* Part III.

33. *See generally* DOJ Complaint, *supra* note 28 (alleging that RealPage uses competitively sensitive data to illegally harm competition and maintain its own software monopoly).

The allegation is not that the properties share their data directly with each other. Rather, it is that they share their competitively sensitive data with RealPage, which then coordinates pricing across a given market.[34] The data each property sends is extensive and highly detailed.[35] In addition to their revenue management software, RealPage offers a suite of other property management software, including solutions for marketing, leasing, operations, and accounting.[36] Depending which solutions a property uses, RealPage collects data on activity at the property, including applications and leases.[37] More relevant for revenue management, RealPage has access to extremely detailed lease data, such as monthly rent, discounts, start dates, end dates, and renewals.[38] All this data is then used to calculate rents at one's own property. Landlords may conduct or purchase market surveys to learn about prevailing asking rates and discounts, but they do not typically share detailed transactional data with each other.[39] However, RealPage, which claims to serve over twenty-four million units worldwide,[40] has access to a treasure trove of that valuable transactional data, especially in markets where a large portion of units are managed using RealPage software. RealPage then uses that data to generate pricing recommendations.

Antitrust concerns do not enter the mix because of explicit collusion between properties to keep rent prices high. Rather, the concern is that the properties share their confidential data with RealPage, which then coordinates high prices across the market. "A rising tide lifts all boats," according to a housing executive promoting the benefits of revenue management in 2007.[41] RealPage controls eighty percent of the revenue management market,

---

34. *See id.* at 40–56.

35. *See id.* at 13–14.

36. *See About Us*, *supra* note 5 (listing products across property management, sales and marketing, applicant screening, revenue management, spend management, utility management, renters insurance, resident services, and contact center).

37. *See* DOJ Complaint, *supra* note 28, at 13–14 (discussing RealPage's access to granular data that "covers a broad[] array of business information" including actual lease transaction data, renewals, historic lease data, inquiries, and applications; "[t]he RealPage data covers millions of units from users of its revenue management software *and other products*" (emphasis added)); Vogell, *supra* note 21 ("[RealPage] quickly realized [it] required data – a lot of data – to get the algorithm working properly. [It] began building a 'master data warehouse' that pulled in client data from other RealPage applications, such as those for leasing managers.").

38. *See* DOJ Complaint, *supra* note 28, at 13–14 ("RealPage's data include, for each lease, the unit, floor plan, listed rent, final transacted lease price (including any discounts), and lease term.").

39. *See* Tim Blackwell, *Changing the Way Multifamily Thinks About Apartment Market Research with Lease Transaction Data*, REALPAGE (Sept. 21, 2020), https://web.archive.org/web/20250220051607/https://www.realpage.com/blog/changing-the-way-multifamily-thinks-about-apartment-market-research-with-lease-transaction-data [https://perma.cc/PRQ3-CX69] ("[T]raditional market surveys based on asking rents and occupancy do not provide complete insight into a market or submarket's true performance. . . . The actual behaviors of buyers, residents and competition must be taken into consideration to fully understand market performance, and that can only be identified by lease transaction data.").

40. *See About Us*, *supra* note 5.

41. *See* Wendy Broffman, *The Bottom Line on Revenue Management*, YIELD PRO (Apr. 1, 2007), https://yieldpro.com/2007/04/the-bottom-line-on-revenue-management [https://perma.cc/8D7S-MF4C].

according to the DOJ,[42] which means that, in areas where many landlords utilize revenue management, RealPage is most likely their provider—and their competitor's provider. RealPage possesses large revenue management market concentration in some cities. In one Seattle ZIP code, ten management firms controlled seventy percent of the units, and all ten firms used RealPage's software.[43] At one property, rents rose forty-two percent from 2012 to 2022.[44]

In sum, the rise of property management software has generated detailed transactional data. Revenue management companies like RealPage build algorithms to analyze that data and generate apartment pricing recommendations. However, the data and revenue management markets are highly concentrated, with RealPage commanding each, both nationally and in cities where large corporate landlords are more likely to use revenue management software. This concentration, along with rising prices, has prompted renters and regulators to push back.

C. ANTITRUST LAWSUITS AGAINST REALPAGE

Antitrust lawsuits against RealPage started in 2022 when tenants claimed that RealPage and participating landlords illegally colluded to increase rent prices.[45] In 2023, twenty-one actions across six states were consolidated in the U.S. District Court for the Middle District of Tennessee, where the consolidated case survived a motion to dismiss and remains in litigation.[46] Some defendant landlords have since settled, but the case against RealPage continues.[47] In 2024, the DOJ, joined by eight attorneys general, filed its own lawsuit against RealPage, alleging that landlords share non-public, competitively sensitive data with RealPage, and that RealPage uses the data to coordinate prices among ostensible competitors in a way that tends to increase prices for renters.[48]

More specifically, the DOJ alleges four antitrust violations. First, that RealPage violated section 1 of the Sherman Act by using non-public, competitively sensitive competitor data to generate price recommendations for each participating landlord.[49] Second, that RealPage violated Section 1 by

42. *See* DOJ Complaint, *supra* note 28, at 5.

43. Vogell, *supra* note 21.

44. *Id.*

45. *See, e.g.*, Complaint at 1, Bason v. RealPage, Inc., No. 22-cv-01611 (S.D. Cal. Oct. 18, 2022); *see also* Kevin T. White & Tammy W. Cowart, *Behind the Cloaking Device: Is There an Anti-Competitive Agreement Lurking Under the Use of Common Pricing Algorithms by Multifamily Landlords?*, 63 WASHBURN L.J. 287, 298 (2024) (describing the early history of consumer lawsuits targeting RealPage).

46. *See In re* RealPage, Inc., Rental Software Antitrust Litig. (No. II), 669 F. Supp. 3d 1372, 1374 (J.P.M.L. 2023) (consolidating cases); *In re* RealPage, Inc., Rental Software Antitrust Litig. (No. II), 709 F. Supp. 3d 544, 546 (M.D. Tenn. 2023) (denying motion to dismiss for failure to state a claim).

47. *See* Mike Scarcella, *First Settlements Reached in RealPage Rental Price-Fixing Lawsuits*, REUTERS (Feb. 5, 2024, 5:42 PM), https://www.reuters.com/legal/litigation/first-settlements-reached-realpage-rental-price-fixing-lawsuits-2024-02-05 [https://perma.cc/BA8F-AL7T].

48. Press Release, Off. of Pub. Affs., U.S. Dep't of Just., *supra* note 24; DOJ Complaint, *supra* note 28, at 7.

49. DOJ Complaint, *supra* note 28, at 81.

agreeing with landlords to set prices.[50] In other words, RealPage organized a hub-and-spoke cartel where each landlord agrees to share data with RealPage and accept RealPage's pricing recommendations knowing that RealPage's algorithm is "designed to 'raise the tide' for all landlords."[51]

Third, the DOJ alleges that RealPage violated section 2 of the Sherman Act by "monopoliz[ing] the commercial revenue management market."[52] Fourth, the complaint alleges, as an alternative to claim three, that RealPage violated Section 2 by attempting to monopolize the commercial revenue management market. [53] This Note focuses on the claims that allege RealPage violated Section 1 by coordinating pricing in the rental market.

D. ANTITRUST LAW IN RELATED CASES

Section 1 of the Sherman Antitrust Act, prohibits "[e]very contract, combination in the form of trust or otherwise, or conspiracy, in restraint of trade or commerce among the several States, or with foreign nations."[54] To succeed on a Section 1 claim, "a plaintiff must show (1) an agreement that (2) unreasonably restrains trade and (3) inflicts antitrust injury on the plaintiff."[55]

The critical element for a plaintiff to prove is the existence of an agreement to restrain trade.[56] An agreement can be explicit, inferred, or tacit.[57] Explicit agreements among competitors, known as horizontal agreements, are the "supreme evil of antitrust: collusion."[58] But many anticompetitive schemes do not involve explicit horizontal agreements, making the case harder to prove.[59] As a means to enforce antitrust violations against harder-to-detect agreements, courts recognize tacit agreements when there exists parallel conduct along with circumstantial evidence showing that the competitors worked in concert to restrain trade.[60]

One version of a tacit agreement is the "hub-and-spoke" conspiracy, where one firm (the "hub") facilitates collusion among other firms (the "spokes").[61] There may be communication between the spokes, but the cartel arrangement functions primarily through communication between the hub and each spoke individually.[62] At its core, a hub-and-spoke cartel is "an information exchange in which a firm (hub) collects and disseminates

50. *Id.* at 84.

51. *Id.*

52. *Id.* at 85.

53. *Id.* at 86.

54. Sherman Antitrust Act, 15 U.S.C. § 1 (2018).

55. White & Cowart, *supra* note 45, at 300.

56. *See id.* at 301 ("The 'crucial question' is whether there was an agreement—did the challenged anticompetitive conduct stem from independent decision or from an agreement?").

57. *See id.* at 302.

58. Verizon Commc'ns Inc. v. Law Offs. of Curtis V. Trinko, 540 U.S. 398, 408 (2004).

59. *See* White & Cowart, *supra* note 45, at 302.

60. *See id.*; Am. Tobacco Co. v. United States, 328 U.S. 781, 810 (1946).

61. *See* LUKE GARROD, JOSEPH E. HARRINGTON, JR. & MATTHEW OLCZAK, HUB-AND-SPOKE CARTELS: WHY THEY FORM, HOW THEY OPERATE, AND HOW TO PROSECUTE THEM 1–2 (2021).

62. *See id.*

information on price or supply intentions among its [spoke firms] for the purpose of restraining competition."[63] The agreements between each spoke firm and the hub may not be illegal in isolation.[64] What makes the scheme illegal is the existence of a "rim," or the horizontal agreement among the spoke firms to participate in the cartel.[65] Some courts have found Section 1 violations in the absence of a rim, but it is hard to prove because it requires a plaintiff to prove that each individual agreement between hub and spoke is an unreasonable restraint of trade.[66] As a result, most hub-and-spoke cases involve allegations of a rim agreement.[67] If the plaintiff can prove a horizontal agreement among spoke firms, then the scheme is a per se violation.[68]

To prove the horizontal agreement among spoke firms, a plaintiff must show "direct or circumstantial evidence that reasonably tends to prove . . . 'a conscious commitment to a common scheme designed to achieve an unlawful objective.'"[69] The plaintiff must show "evidence that tends to exclude the possibility that the [firms] were acting independently."[70] In *Matsushita Electric Industrial Co. v. Zenith Radio Corp.*, the Supreme Court asked whether the defendant had a "rational motive to conspire" and whether the defendant's conduct "was consistent with the defendant's independent interest."[71]

After *Bell Atlantic Corp. v. Twombly*, plaintiffs must show this evidence from the pleading stage to avoid a motion to dismiss.[72] In short, the bar is high for a plaintiff to bring sufficient evidence to prove a hub-and-spoke arrangement.

The Supreme Court has held that the Sherman Act does not literally prohibit "every" contract, combination, or conspiracy to restrain trade. Instead, it only prohibits agreements that unreasonably restrain trade.[73] This is known as the "rule of reason" standard.[74] There are two paths to finding an unreasonable restraint of trade. First, the agreement may be unlawful per se, meaning that the restraint is of a type that "always, or almost always, lessen[s] competition such that the only relevant analysis is determining whether the restraint exists."[75] The classic example of a per se unreasonable violation is a direct agreement among competitors to fix prices.[76] However, most cases are

63. *See id.* at 223.

64. *See id.* at 223–24.

65. *See id.*

66. *See* Bradley C. Weber, *Hub-and-Spoke Conspiracies: Can Big Data and Pricing Algorithms Form the Rim?*, 26 SMU SCI. & TECH. L. REV. 25, 37–38 (2023).

67. *See id.* at 38.

68. *See id.*

69. Monsanto Co. v. Spray-Rite Serv. Corp., 465 U.S. 752, 753 (1984) (quoting Edward J. Sweeney & Sons v. Mission Gas Oil Co., 637 F.2d 105, 111 (3d Cir. 1980)).

70. *Id.* at 764.

71. Matsushita Elec. Indus. Co. v. Zenith Radio Corp., 475 U.S. 574, 587, 597 (1986).

72. *See* Weber, *supra* note 66, at 40; Bell Atlantic Corp. v. Twombly, 550 U.S. 544, 556 (2007).

73. Standard Oil Co. of N.J. v. United States, 221 U.S. 1, 58 (1911).

74. *See* White & Cowart, *supra* note 45, at 300.

75. William H. Rooney, Timothy G. Fleming & Michelle A. Polizzano, *Tracing the Evolving Scope of the Rule of Reason and the Per Se Rule*, 2021 COLUM. BUS. L. REV. 1, 7.

76. *Id.*

not so obvious, and are subject to the rule of reason standard.[77] Under the rule of reason, "the court balances the anticompetitive results of a restraint against its procompetitive justifications."[78]

Cases in recent years have shown some similarities to the RealPage scheme and demonstrate both the potential to find violations under Section 1 and the difficulties of proving a Section 1 violation in the algorithmic pricing setting, at both the pleading and summary judgment stages. For example, in *Gibson v. MGM Resorts International*, a dynamic pricing system similar to RealPage's was alleged to violate Section 1.[79] The plaintiffs alleged that hotel operators in Las Vegas used the same dynamic pricing software in a hub-and-spoke conspiracy, with vertical agreements between hotels and the software company, and that there were tacit agreements between the hotels themselves.[80] The court granted the hotels' motion to dismiss, finding that the plaintiffs did not plausibly allege a tacit agreement between the hotels.[81] The court found that plaintiffs did not allege that the hotels shared non-public information with each other, and that there was no evidence offered of a tacit agreement beyond the parallelism of using the same pricing software.[82] "[M]erely using [the same software] without exchanging confidential information with your competitors is more suggestive of a 'lawful independent decision.'"[83] The court explicitly distinguished the RealPage cases that survived a motion to dismiss, because "[those] included allegations of the exchange of otherwise confidential information between competitors through the algorithm."[84]

Allegations of price fixing by exchange of private data have also appeared in the meat production industry. Since 2006, a company called Agri Stats has been at the center of hundreds of cases.[85] The claims generally focus on Agri Stats' collection of detailed information from meat producers and use of that information to build reports provided to the producers.[86] Plaintiffs allege that Agri Stats collects competitors' "competitively sensitive supply and pricing data and intentionally shared that information through detailed reports it

77. *See* White & Cowart, *supra* note 45, at 300; *see also Standard Oil Co. of N.J.*, 221 U.S. at 58.

78. Erin Garrity, Comment, *A New Chapter in Antitrust Law: The Second Circuit's Decision in* United States v. Apple *Determines Hub-and-Spoke Conspiracy Per Se Illegal*, 57 B.C. L. REV. E. SUPP. 84, 89 (2016); *see also* Geneva Pharm. Tech. Corp. v. Barr Lab'ys, Inc., 386 F.3d 485, 506–07 (2d Cir. 2004).

79. *See* Gibson v. MGM Resorts Int'l, No. 23-cv-00140, 2023 WL 7025996, at *2 (D. Nev. Oct. 24, 2023) (granting motion to dismiss with leave to amend); Gibson v. Cendyn Grp., LLC, No. 23-cv-00140, 2024 WL 2060260, at *1 (D. Nev. May 8, 2024) (granting motion to dismiss with prejudice).

80. *See Cendyn*, 2024 WL 2060260, at *2.

81. *Id.* at *3.

82. *Id.*

83. *Id.* at *7.

84. *Id.* at *4.

85. *See* Weber, *supra* note 66, at 57.

86. *See In re* Pork Antitrust Litig., 495 F. Supp. 3d 753, 765 (D. Minn 2020).

provided to the [competitor producers]."[87] Plaintiffs allege that the producers used the Agri Stats data in a conspiracy to fix prices in violation of Section 1.[88]

In the first case, *Wheeler v. Pilgrim's Pride Corp.*, the plaintiffs alleged that chicken producers conspired to suppress competition via reports compiled by Agri Stats.[89] The data in the reports was anonymized, but industry insiders could easily identify which data belonged to which competitors and could monitor how much competitors were paying growers.[90] Motions to dismiss in the Agri Stats cases have mostly been unsuccessful.[91] For example, in the more recent case *In re Pork Antitrust Litigation*, plaintiffs claimed that pork producers violated Section 1 by using Agri Stats reports to "fix, raise, maintain, and stabilize the price of pork."[92] Producers did so by easily deciphering the non-public Agri Stats reports to monitor competitor prices and volume.[93] Again, the court denied the defendants' motion to dismiss, finding that plaintiffs plausibly alleged a per se horizontal price fixing arrangement.[94]

In *Meyer v. Kalanick*, Uber riders sued Uber, alleging that Uber "orchestrated and facilitated an illegal price-fixing conspiracy [among Uber drivers] in violation of Section 1."[95] The plaintiff argues that Uber conspired with drivers to fix prices through the Uber mobile app and Uber's pricing algorithm.[96] Because all drivers received prices via the Uber app, price competition was stifled.[97] The court found that Meyer pleaded sufficient plausible facts to show a horizontal conspiracy among Uber drivers and a vertical agreement between drivers and Uber.[98] However, the case ended in arbitration, where the arbitrator found for Uber.[99]

In sum, Sherman Act claims of a hub-and-spoke cartel require proof of an agreement. Such an agreement is possible to prove without evidence of direct communication, but it is exceedingly difficult. Recent cases have demonstrated some promise in finding collusion in algorithmic pricing, but cases can drag on for many years and/or settle without providing a definitive answer to establish precedent. The difficulties in the court system have prompted calls to expand Sherman Act common law and to pass new legislation to address algorithmic collusion.

---

87. *Id.* at 766–67.

88. *See, e.g.*, *In re* Broiler Chicken Antitrust Litig., 290 F. Supp. 3d 772, 822 (N.D. Ill. 2017) (denying motion to dismiss); *In re Pork Antitrust Litig.*, 495 F. Supp. 3d at 771–72 (denying motion to dismiss for failure to state a Section 1 claim).

89. *See* Wheeler v. Pilgrim's Pride Corp., 246 F.R.D. 532, 536 (E.D. Tex. 2007); Weber, *supra* note 66, at 57.

90. *See* Weber, *supra* note 66, at 58.

91. *See id.* at 60.

92. *In re Pork Antitrust Litig.*, 495 F. Supp. 3d at 766.

93. *Id.* at 767.

94. *Id.* at 768.

95. Meyer v. Kalanick, 174 F. Supp. 3d 817, 819 (S.D.N.Y. 2016).

96. *Id.* at 820.

97. *Id.*

98. *Id.* at 828–29 (denying motion to dismiss).

99. *See* Meyer v. Kalanick, 477 F. Supp. 3d 52, 54 (S.D.N.Y. 2020) (denying motion to vacate arbitration award).

E. CURRENT COMMENTARY AND PROPOSALS

The lawsuits against RealPage should raise critical antitrust concerns for businesses that share data with third-party software providers and for the software providers themselves. Specifically, what activities are allowed and prohibited by antitrust law? How can a business protect itself from antitrust scrutiny when it shares data with a software provider that also serves the business's competitors? How can software providers utilize big data without running afoul of antitrust laws? How can legislators and regulators support consumer welfare without stifling the innovation and efficiencies of big data, algorithms, and AI?

Some commentators predict that the "growing digital complexity" of twenty-first century business means that regulators will need to increasingly rely on algorithms of their own to combat algorithmic antitrust violators.[100] Others acknowledge the increasing complexity and speed of business transactions, but argue that anticompetitive behavior remains the same at its core.[101] In 2017, former FTC Commissioner Maureen Ohlhausen proposed that we swap out "algorithm" for "a guy named Bob" when evaluating the legality of algorithms.[102]

> Is it ok for a guy named Bob to collect confidential price strategy information from all the participants in a market, and then tell everybody how they should price? If it isn't ok for a guy named Bob to do it, then it probably isn't ok for an algorithm to do it either.[103]

However, while this is a convenient theoretical approach to understand that algorithms *can* be illegal, it does not address *how* or *why* third-party algorithmic pricing arrangements *are* illegal under existing Section 1 standards.

It is insufficient to say that algorithmic pricing is illegal simply because it uses an algorithm. Algorithms can benefit the businesses that use them (why else would the businesses pay for the service?), but also the consumers who purchase goods and services priced by algorithms.[104] Instead of attacking the mechanism itself, antitrust advocates must identify the attributes of the scheme that make it anticompetitive. Is it the algorithm? The data fed into the algorithm? Or is it simply market concentration? If the legal community focuses on identifying such critical attributes, litigators could strengthen their arguments, regulators and legislators could more effectively address the issue, and businesses could continue utilizing beneficial technologies.

---

100. *See* Cary Coglianese & Alicia Lai, *Antitrust by Algorithm*, 2 STAN. COMPUTATIONAL ANTITRUST 1, 2 (2022).

101. *See* Maureen K. Ohlhausen, Former Comm'r, Fed. Trade Comm'n., Should We Fear the Things That Go Beep in the Night? Some Initial Thoughts on the Intersection of Antitrust Law and Algorithmic Pricing 10 (May 23, 2017), https://www.ftc.gov/news-events/news/speeches/should-we-fear-things-go-beep-night-some-initial-thoughts-intersection-antitrust-law-algorithmic [https://perma.cc/X29C-HYDR].

102. *Id.*

103. *Id.*

104. *See* Weber, *supra* note 66, at 30; Coglianese & Lai, *supra* note 100, at 4.

Some commentators agree with Ohlhausen that antitrust law is already prepared to find violations for "the use of nonpublic sensitive business information of firms to generate optimization recommendations for other firms."[105] Others argue that antitrust law needs re-tooling to address modern digital technologies that make tacit price-fixing agreements easier and more stable than in the past while requiring even less communication between participating firms.[106] As an example of effective re-tooling, courts should interpret Section 1's agreement requirement to be met if nonpublic data is shared among competitors and results in higher prices.[107] Such a re-tooling would overcome the difficulty of proving an agreement among competitors in a purely digital hub-and-spoke, even though the anticompetitive results are effectively the same.[108]

Senator Amy Klobuchar of Minnesota introduced a bill in 2024 that would address the issue of anticompetitive algorithmic pricing.[109] The bill targets "pricing algorithms that can facilitate collusion through the use of nonpublic competitor data"[110] by making it "unlawful for a person to use or distribute any pricing algorithm that uses, incorporates, or was trained with nonpublic competitor data."[111] Anyone who violates this rule would be presumed to have "entered into an agreement, contract, combination, or conspiracy in restraint of trade" for the purposes of section 1 of the Sherman Act.[112] The bill requires firms using pricing algorithms to disclose certain information to customers and to the Attorney General and the FTC upon request.[113] The federal audit component essentially provides a way for federal antitrust authorities to gain access to algorithm details prior to the pleading stage. This would allow regulators to build stronger cases that survive a motion to dismiss. Lastly, the bill requires the FTC to publish a study on the prevalence and impact—positive and negative—of pricing algorithms, presumably to guide future legislation.[114]

These proposed solutions attempt to address the antitrust concerns raised by the RealPage scheme by either bringing RealPage within the scope of existing law or by adding new legislation. As discussed in this Part, there is evidence that RealPage raises rent prices and does so using anticompetitive methods. The critical question for the legal community is whether to combat

105. *See* Barak Orbach, *Do Revenue Management Platforms Like RealPage Facilitate Illegal Algorithmic Collusion?*, PROMARKET (Apr. 18, 2024), https://www.promarket.org/2024/04/18/do-revenue-management-platforms-like-realpage-facilitate-illegal-algorithmic-collusion [https://perma.cc/TQU4-KFXR].

106. *See* Noelle Choi, Comment, *Retooling Federal Antitrust Laws to Address Modern Pricing Solutions: Pricing Algorithms and Dynamic Pricing*, 7 J.L. & INNOVATION 160, 163 (2024).

107. *See id.* at 179.

108. *See id.* at 176.

109. *See* Preventing Algorithmic Collusion Act of 2024, S. 3686, 118th Cong. (2024).

110. *Id.*

111. *Id.* § 4(a).

112. *Id.* § 5(a).

113. *Id.* § 6.

114. *Id.* § 7.

the anticompetitive behavior through litigation, new legislation, or a combination of both. The remainder of this Note argues that new legislation is needed.

II. REALPAGE AND EXISTING ANTITRUST LAW

A. REALPAGE IS A BAD FIT FOR CURRENT ANTITRUST LAW

While there is a strong argument that the RealPage scheme violates Section 1, the scheme does not fit neatly in the existing frameworks available for Section 1 challenges. For example, Section 1 challenges require proof of an agreement.[115] The key question in the RealPage cases is whether the scheme constitutes an "agreement" under Section 1.[116] But proving an agreement is exceedingly difficult in the context of third-party pricing algorithms.[117] When companies sign up to use the same pricing algorithm, are they agreeing, explicitly or implicitly, to collude on price? Professor Joseph Harrington argues that it is a misconception that "[a] third party's pricing algorithm that facilitates firms charging supracompetitive prices is akin to a hub-and-spoke cartel."[118] The RealPage case tests whether "marketing materials and resulting price increases constitute an unlawful agreement."[119]

Antitrust advocates could argue to expand Sherman Act definitions to incorporate the RealPage scheme, but that does not definitively answer the policy questions involved. For example, the Section 1 requirement to show an agreement could be expanded to include situations when there is "some knowledge among the competitors that others are also engaging the same dynamic pricing solution and understanding that sensitive, nonpublic information is being incorporated into universal pricing strategies."[120] But this is no more than a plea to lawyers and judges to expand the common law definition of a Section 1 agreement. Arguments to expand the Sherman Act through common law doctrinal development can and should be made; otherwise the law would never develop in response to new technologies. This is exactly what the DOJ is doing: arguing that the scheme constitutes an agreement to restrain trade under Section 1.[121] If they win, then they will establish

115. *See* Weber, *supra* note 66, at 28; Joseph E. Harrington, Jr., The Challenges of Third Party Pricing Algorithms for Competition Law 2–3 (July 2024) (unpublished manuscript), https://papers.ssrn.com/sol3/papers.cfm?abstract_id=4824953 [https://perma.cc/ZL6Y-4N3S].

116. *See* Christie Boyden, *Pricing Algorithms and Antitrust Enforcement: More Scrutiny?*, 38 ANTITRUST 49, 51 (2024) ("These *RealPage* cases will test whether purchasing and using pricing-algorithm software that includes market data from competitors is sufficient to constitute an 'agreement' under Sherman Act Section 1.").

117. Harrington, *supra* note 115, at 3; Choi, *supra* note 106, at 177 ("[T]here is a symbolic challenge to finding the existence of an agreement from the mere adoption of a dynamic pricing restraint.").

118. Harrington, *supra* note 115, at 22.

119. Boyden, *supra* note 116, at 51.

120. *See* Choi, *supra* note 106, at 179.

121. *See* DOJ Complaint, *supra* note 28, at 7. Notably, the DOJ in the new Trump Administration has continued aggressive litigation against algorithmic pricing. *See* Statement of Interest of the United States at 1, *In re* Multiplan Health Ins. Provider Litig., No. 24-cv-06795 (N.D. Ill. Mar. 27, 2025). "The United States . . . remains committed to enforcing the antitrust

precedent that will discourage similar algorithmic pricing schemes and thereby help consumers.

But there is no guarantee that judges will side with antitrust advocates, which is necessary because antitrust policy has largely been shaped by judges and regulators, not elected officials.[122] First, Sherman Act cases are heard in federal court, which is increasingly dominated by Republican-appointed, business-friendly judges, who may not be amenable to cracking down on collusive behavior.[123] Judges already reformed antitrust law in the latter half of the twentieth century to make it more difficult to find Sherman Act violations.[124] Conservative judges may even emphasize the positive contributions made by anticompetitive behavior.[125] And plaintiffs know which judges to seek out. The Third and Ninth Circuits are known for being open to antitrust challenges.[126] In 2023, 107 out of 250 antitrust complaints (42.8 percent) were filed in just four district courts: the Northern District of California (42 cases, Ninth Circuit), District of New Jersey (30, Third Circuit), Nothern District of Illinois (19), and Southern District of New York (16).[127]

Second, some judges are hesitant to interpret statutory text broadly beyond its plain meaning and the intent of the legislature.[128] Asking them to

---

laws against unlawful exchanges of competitively sensitive information that take place through and alongside new technologies . . . ." *Id.* The DOJ further argues:

> [S]haring information through an algorithm provider can create the same anti-competitive effects as a direct exchange between competitors because the algorithm provider has confidential price strategy information from multiple competitors, and it can program its algorithm to maximize industry-wide pricing even if the firms themselves don't directly share their pricing strategies.

Id. at 7 (alterations and citations omitted) (internal quotation marks omitted).

122. *See* Filippo Lancieri, Eric A. Posner & Luigi Zingales, *The Political Economy of the Decline of Antitrust Enforcement in the United States* 73 (Becker Friedman Inst., Univ. of Chi., Working Paper No. 2022-104, 2022) ("The decline of antitrust enforcement from the 1970s to the present was not achieved through legislative reform . . . . It was the result of decisions made mostly in the shadow by politically unaccountable officials—judges and regulators—whose views of antitrust at the time of their appointment were (in most cases) not publicly known or perhaps even clear in their own minds.").

123. *See* John Ehrett, *The Bork Paradox and the Conservative Legal Movement*, AM. AFFS. (2021), https://americanaffairsjournal.org/2021/08/the-bork-paradox-and-the-conservative-legal-movement [https://perma.cc/MX5D-9P5H]; *see also* Lee Epstein, William M. Landes & Richard A. Posner, *How Business Fares in the Supreme Court*, 97 MINN. L. REV. 1431, 1472 (2013).

124. *See* Zephyr Teachout, *Why Judges Let Monopolists Off the Hook*, ATLANTIC (Oct. 29, 2021), https://www.theatlantic.com/ideas/archive/2021/10/antitrust-facebook-congress-sherman-act/620539 (on file with the *Iowa Law Review*) ("[S]tarting in 1977, a wave of federal court cases radically reinterpreted antitrust laws . . . .").

125. *See* Marina Lao, *Ideology Matters in the Antitrust Debate*, 79 ANTITRUST L.J. 649, 674 (2014).

126. *See* Danielle Kaye, *DOJ's Apple Suit Filed in New Jersey for Friendly Third Circuit*, BLOOMBERG L. (Mar. 27, 2024, 4:15 AM), https://news.bloomberglaw.com/antitrust/dojs-apple-suit-filed-in-new-jersey-for-friendly-third-circuit (on file with the *Iowa Law Review*).

127. Daniel B. Asimow et al., *Developments in U.S. Antitrust Litigation – 2023 Year in Review*, ARNOLD & PORTER (Feb. 1, 2024), https://www.arnoldporter.com/en/perspectives/advisories/2024/02/developments-in-us-antitrust-litigation-2023 [https://perma.cc/E5RE-RTVQ].

128. *See* John F. Manning, *Justice Scalia and the Idea of Judicial Restraint*, 115 MICH. L. REV. 747, 748 (2017) (explaining that Justice Scalia "did not want the federal judiciary to make an end run around the democratic process by exercising common law discretion 'to *make* the law'").

find Section 1 violations in novel situations that do not align neatly with the statute or with precedent is a big ask. Yes, precedent controls, but "we are all textualists now,"[129] and the modern Supreme Court has shown its willingness to overturn precedent that is not clearly supported by the Constitution or federal statutes.[130] Therefore, absent congressional lawmaking to clarify how to apply antitrust law to digital technologies, federal courts will be left to their own devices, and the rest of us will be stuck with the consequences, good or bad.

Courts would not be remiss in passing on the policy questions involved in digital antitrust cases, where the facts are novel and the stakes are enormous. The Sherman Act was written in an era where business was done on paper and over the phone. Data took much longer to pass between hands, and much less data moved around. But in recent decades, technology has produced exponentially more data and moved that data around exponentially faster.[131] With real-time visibility into the entire market, a third-party hub can coordinate a cartel of more spoke firms than ever before, even without an agreement to collude.[132]

Yet, the language of the Sherman Act and judicial precedent make it difficult to find digital collusion absent an agreement.[133] Therefore, it is time for lawmakers to step in and update antitrust law to fit the digital age.

B. LEGISLATION IS NEEDED

Regardless of the outcomes of the cases against RealPage, the issue requires legislative solutions for two reasons: (1) rent relief for; and (2) clear guidance for businesses. Currently, renters are struggling with high costs.[134] Algorithmic pricing is not the only cause, but it is a contributing factor.[135] Congressional action would provide relief to renters and consumers in analogous pricing schemes without having to wait years for individual schemes to be litigated. Federal legislation would also eliminate the need for unelected judges to shape and expand the law. Instead, elected officials—Congress—

129. Harvard Law School, *The 2015 Scalia Lecture: A Dialogue with Justice Elena Kagan on the Reading of Statutes*, YOUTUBE (Nov. 25, 2015), https://www.youtube.com/watch?v=dpEtszFToTg [https://perma.cc/YDG3-FCWC].

130. *See, e.g.* Loper Bright Enters. v. Raimondo, 603 U.S. 369, 412 (2024) (overruling Chevron, U.S.A., Inc. v. Nat. Res. Def. Council, Inc., 467 U.S. 837 (1984)).

131. *See* Bernard Marr, *How Much Data Do We Create Every Day? The Mind-Blowing Stats Everyone Should Read*, FORBES (May 21, 2018, 12:42 AM), https://www.forbes.com/sites/bernardmarr/2018/05/21/how-much-data-do-we-create-every-day-the-mind-blowing-stats-everyone-should-read [https://perma.cc/C7BD-H6VF] ("Over the last two years alone 90 percent of the data in the world was generated.").

132. *See* ARIEL EZRACHI & MAURICE E. STUCKE, VIRTUAL COMPETITION: THE PROMISE AND PERILS OF THE ALGORITHM-DRIVEN ECONOMY 37, 71 (2016). Furthermore, the RealPage scheme is "sheltered from competition by the difficulty of building housing in big cities." Binyamin Applebaum, Opinion, *Shiny New Technology, Same Old Funny Business*, N.Y. TIMES (Sept. 3, 2024), https://www.nytimes.com/2024/09/03/opinion/realpage-antitrust-landlords.html (on file with the *Iowa Law Review*).

133. *See* Harrington, *supra* note 115, at 3.

134. *See* Press Release, U.S. Census Bureau, *supra* note 4.

135. *See* Vogell, *supra* note 21.

would determine public policy regarding which pricing behaviors the U.S. people as a whole deem acceptable or prohibited.

On the business side, clarity from Congress would allow businesses to invest in technologies without the risk of antitrust litigation. Businesses would have better guidance to evaluate the risks presented by third-party software providers. The providers themselves would be free to invest in new technologies with confidence that the law will not abruptly change, as it might under a common law approach to digital antitrust. There is no doubt that legislation has the potential to hurt profitability by blocking certain forms of algorithmic price collusion. But if algorithmic pricing schemes are going to be continually challenged or potentially be struck down in court, then businesses should want clear guidance to avoid unnecessary litigation costs.

Three outcomes are possible from the litigation against RealPage: (1) the DOJ wins; (2) RealPage wins; and (3) the parties reach a settlement. All three outcomes fall short of providing relief for consumers and clarity for businesses. First, if the DOJ wins, then RealPage and landlords will have to abandon the scheme and adjust their business to avoid violations. The cases would establish precedent that this scheme violates Section 1, thereby putting analogous arrangements on notice. But the relatively unique features of the RealPage scheme that make it a violation may not be present in other cases. For example, if the analogous market was far less concentrated than the housing market, a court may not find an agreement; therefore, no violation. Questions will remain as to what is acceptable. Answering those questions through the courts will take time and resources, while consumers will continue to suffer the consequences of collusive behavior until those questions are resolved.

If RealPage wins, it will establish precedent that digital collusion is acceptable if structured in a way that avoids the technical requirements of Sherman Act doctrine created by unelected courts, despite violating the purpose of the antitrust statutes, which were created by Congress. A RealPage win would give the green light to sharing non-public, competitively sensitive data with a third party to generate parallel pricing recommendations for ostensible competitors. Such an outcome is good for business, but it does not fix the issue for consumers. In other words, court precedent would make it harder for the Sherman Act, as written today, to serve its purpose in the digital age. Pressure would likely remain, either in the courts or Congress, to find ways to stop the behavior.

If the case settles, as is common in recent antitrust cases,[136] then the public would receive no answer as to whether the RealPage scheme is a violation.

136. *See, e.g.*, Mike Scarcella, *Tyson, Other Pork Producers to Pay $64 Million in New Price-Fixing Settlements*, REUTERS (Apr. 23, 2025, 4:03 PM), https://www.reuters.com/legal/litigation/tyson-other-pork-producers-pay-64-million-new-price-fixing-settlements-2025-04-23 [https://perma.cc/YF7R-5YKY] (describing price-fixing in the pork industry); Stephen Williams, *Judge Approves $284M Settlement with Plaintiffs for 10 of 17 Universities Sued for Alleged Price Fixing*, WHYY (July 23, 2024), https://whyy.org/articles/college-price-fixing-lawsuit-settlement-university-pennsylvania [https://perma.cc/LZ5J-4T65]; Elena Vardon & Helena Smolak, *Sandoz Agrees on $275 Million Settlement in U.S. Price-Fixing Case*, WALL ST. J. (Dec. 17, 2024, 7:14 AM), https://www.wsj.com/b

Settlement may include monetary costs to RealPage or an agreement to change business practices. But like a RealPage win, it would not stop future litigation challenging the scheme nor would it relieve the pressure on legislators to provide solutions. Landlords would remain on notice that this type of scheme is subject to antitrust scrutiny.

Every potential outcome of the case is unsatisfactory for consumers and landlords. Therefore, judicial resolution is only a partial solution. Congressional and state legislation, on the other hand, can provide more definitive long-term guidance on what business practices are anticompetitive. But at the same time, any legislation must be careful to avoid stifling innovation and the efficiencies that come from big data, algorithms, and AI. The legislative solution to RealPage, and algorithmic pricing more generally, must be cognizant of this risk. Therefore, the solution must only target the most critical features that push a business practice beyond mere innovation into collusion that harms consumers. Part III analyzes the features of the RealPage scheme, highlighting those that are mere innovation and those that may be red flags for antitrust law.

III. FEATURES OF THE REALPAGE SCHEME

A. PARTICIPANTS

This Note considers three participants in the RealPage scheme: (1) an individual landlord; (2) the competitors of the landlord; and (3) RealPage. When discussing markets more generally, this Note uses the terms business, competitors, and data aggregator, respectively. All competitors are businesses in their own right, so the business and competitors collectively are called "the businesses." The business and its competitors are all data providers to RealPage, the data aggregator. RealPage processes the ingested data through an algorithm and provides pricing recommendations to those same data providers.[137]

This Note assumes the landlords and their competitors do not have an express agreement to collude. If there was an express agreement that could be proven in court, then a Section 1 violation would be relatively easy to prosecute. However, businesses are sophisticated, and legal counsel likely advise businesses to avoid forming explicit arrangements with competitors. If such sophistication is the norm, then in most schemes an agreement is either nonexistent or will be exceedingly difficult to prove in court. This Note assumes the latter scenario because technology makes it easy for businesses to share data with a third-party aggregator and receive price recommendations without either ever talking to each other.

The key player in the scheme is RealPage, the data aggregator. In other settings, RealPage may be called a third-party service provider, a software provider, or the alleged hub in a hub and spoke conspiracy. RealPage is financially incentivized to increase rent prices for every landlord client,

usiness/sandoz-enters-275-million-settlement-deal-in-u-s-case-96457d35 (on file with the *Iowa Law Review*). These are just a sample of price-fixing cases settled in the last year.

137. *See supra* note 24 and accompanying text.

otherwise the landlords would have little reason to continue paying subscription fees to RealPage.[138] The goal of revenue management is to optimize revenue.[139] RealPage claims that "revenue optimization" is different from "revenue maximization," meaning that the software does not simply seek to raise rents, and will lower rents at times to prevent units from sitting vacant for too long.[140] However, basic business incentives to increase revenue and decrease expenses point to "revenue optimization" as a way of saying "keep revenue as high as possible."

RealPage and property owners can keep prices high because demand for housing is inelastic.[141] When a property experiences high vacancy, basic microeconomic theory would suggest for owners to lower the price of available apartments to generate demand, just like McDonald's might lower its prices to entice more customers to buy Big Macs. But demand in the housing market is inelastic, meaning demand is not very responsive to price changes.[142] Because it collects accurate price data from a large portion of the market, RealPage knows the price of the lowest rents in the area—the market floor.[143] With this knowledge, why would RealPage recommend for any client property to price below the floor when renters are likely to rent even at relatively high prices? This structure indicates that instead of generating value by lowering rents to generate demand, RealPage provides value greater than its cost by limiting rent decreases, thereby helping landlords make more money than they would without RealPage's assistance.

When a property is fully occupied, RealPage cannot make up for its licensing fees by increasing occupancy. Instead, it must increase rent revenue to provide any return on investment to the landlord. When there is a housing shortage, microeconomic theory says that prices will rise naturally due to low supply and high demand. Without RealPage's assistance, landlords could gradually increase rents over time to test the market's capacity for higher rates. Therefore, RealPage is incentivized to aggressively test the limits of the market for its clients, because if RealPage did not test higher rates, then the landlords would have little reason to pay for RealPage's services.

To illustrate this further, see Figures 1 and 2 below. Both assume a hypothetical property is fully occupied, meaning revenue cannot be increased by increasing occupancy; the only way to increase revenue is to increase rents.[144]

---

138. *See* Pat Garofalo, *Arizona's New Data Shows How Price-Fixing Software Raises Rent*, BOONDOGGLE (Mar. 7, 2024), https://boondoggle.substack.com/p/arizonas-new-data-shows-how-price (on file with the *Iowa Law Review*) ("There's been plenty of anecdotal evidence from RealPage executives themselves, as well as some vibes-based conclusions, that RealPage's coordination across the market must be raising prices — because otherwise what's the point?").

139. *RealPage AI Revenue Management*, *supra* note 27.

140. *Id.*

141. *See* Bruno Albuquerque, André Kallåk Anundsen & Knut Are Aastveit, *The Declining Elasticity of US Housing Supply*, VOXEU CEPR (Feb. 25, 2020), https://cepr.org/voxeu/columns/declining-elasticity-us-housing-supply [https://perma.cc/WDZ7-QC4J].

142. *See id.*

143. *See supra* Section I.B.

144. This is also assuming a very simplistic property with no features or revenue-generating opportunities other than the residential units that currently exist.

They also assume that if the property did not use revenue management software, the property would increase rents by two percent annually.[145] Lastly, they assume a one percent annual fee for RealPage.[146] In Figure 1, the landlord uses revenue management but continues charging what the landlord would charge anyway. The net revenue after RealPage's fee is less than what the landlord would earn if they did not use RealPage at all. In this situation, landlords could save money by managing rents without RealPage's help. Figure 2 shows the opposite scenario: When RealPage pushes rent increases beyond what the landlord would otherwise charge, RealPage covers its fee, and the landlord makes more net revenue. [147] Somewhere between the two figures and their associated rates exists an equilibrium where RealPage covers its fee and no more.

Figure 1. Revenue Management Does Not Cover Its Fee

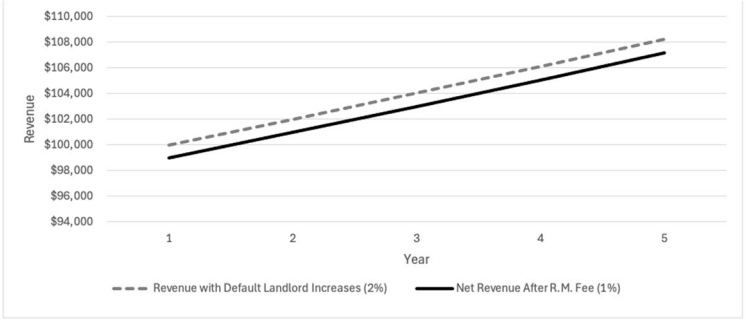
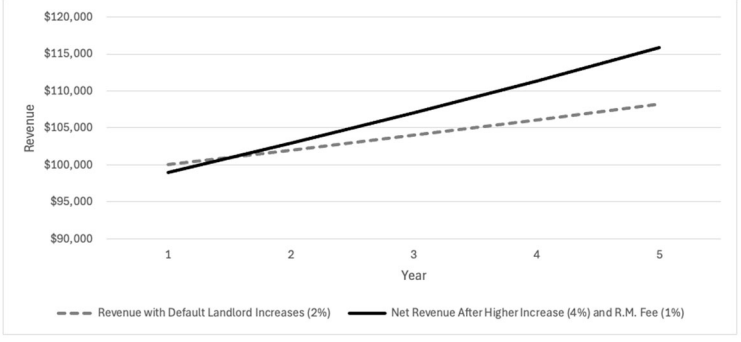


Figure 2. Revenue Management Covers Its Fee



145. I used two percent as a conservative estimate based on historic inflation. But the chosen rate is arbitrary for the hypothetical. It is simply an estimate of landlords' default behavior. The same incentives described here would exist if the default rate was 0.5%, 10%, or any other value.

146. I do not know the actual cost or fee structure of RealPage or other revenue management software. One percent is assumed for demonstrational purposes, but the actual cost does not affect the analysis. Different costs and default landlord increases would simply result in different breakeven points.

147. In this scenario, where the landlord would normally increase by two percent and RealPage charges a one percent fee, they must raise rents by at least three percent to cover the fee. *See infra* Figure 3.

Figure 3 shows the relationship between the increases landlords would charge and the corresponding rent increases that would be required to cover a range of revenue management fees.[148] Inflation in 2023 and 2024 has been roughly three percent,[149] so even if landlords increase rent just to keep up with inflation, any revenue management software would need to increase rents by at least four percent annually to cover the fee that is charged to use the software. Moreover, this price increase only allows landlords to break even. Landlords using revenue management software probably expect to do better than simply covering the cost of the product, which would lead to even higher rent increases. This analysis obviously depends on the fees that revenue management companies charge landlords, but the ultimate result is simple: In a high-occupancy environment, revenue management providers are incentivized to raise rents higher than landlords would otherwise.

Figure 3. Rent Increases Required to Cover Revenue Management Fee

	Landlord Default Rent Increase:										
	0.0%	1.0%	2.0%	3.0%	4.0%	5.0%	6.0%	7.0%	8.0%	9.0%	10.0%
Revenue Mgmt. Fee (% of gross rent)	Required Rent Increase to Break Even:										
1.0%	1.0%	2.0%	3.0%	4.0%	5.1%	6.1%	7.1%	8.1%	9.1%	10.1%	11.1%
2.0%	2.0%	3.1%	4.1%	5.1%	6.1%	7.1%	8.2%	9.2%	10.2%	11.2%	12.2%
3.0%	3.1%	4.1%	5.2%	6.2%	7.2%	8.2%	9.3%	10.3%	11.3%	12.4%	13.4%
4.0%	4.2%	5.2%	6.3%	7.3%	8.3%	9.4%	10.4%	11.5%	12.5%	13.5%	14.6%
5.0%	5.3%	6.3%	7.4%	8.4%	9.5%	10.5%	11.6%	12.6%	13.7%	14.7%	15.8%
6.0%	6.4%	7.4%	8.5%	9.6%	10.6%	11.7%	12.8%	13.8%	14.9%	16.0%	17.0%
7.0%	7.5%	8.6%	9.7%	10.8%	11.8%	12.9%	14.0%	15.1%	16.1%	17.2%	18.3%
8.0%	8.7%	9.8%	10.9%	12.0%	13.0%	14.1%	15.2%	16.3%	17.4%	18.5%	19.6%
9.0%	9.9%	11.0%	12.1%	13.2%	14.3%	15.4%	16.5%	17.6%	18.7%	19.8%	20.9%
10.0%	11.1%	12.2%	13.3%	14.4%	15.6%	16.7%	17.8%	18.9%	20.0%	21.1%	22.2%

B. MARKET FEATURES

Four market features distinguish the RealPage scheme from similar arrangements. These features are important for lawmakers to recognize when drafting legislation that attempts to stop price fixing in the rental housing market and in others. The four features are: (1) concentration in the housing and property management markets (the markets in which property owners and management companies participate); (2) concentration in the markets for management software, apartment data, and revenue management (the markets in which RealPage participates); (3) static supply of housing; and (4) inelastic demand for housing. These four market features combine to make rental housing a prime market for algorithmic price fixing, and they should be addressed by lawmakers individually and in conjunction with algorithmic pricing legislation.

148. The same model assumptions apply as before. Landlord's default increase rate = L. The revenue management fee rate = F. Revenue management increase rate = Y. Landlord's revenue without revenue management = 1(1+L). With revenue management, landlord's net revenue is 1*(1+Y) – [1*(1+Y)]*F. Setting the two equal to each other results in Y = (L+F)/(1-F).

149. *12-Month Percentage Change, Consumer Price Index, Selected Categories*, U.S. BUREAU LAB. STAT., https://www.bls.gov/charts/consumer-price-index/consumer-price-index-by-category-line-chart.htm [https://perma.cc/NKE6-JQVR] (filtering for all items).

First, concentration in the housing and property management markets make pricing coordination easier, either explicitly or implicitly. In recent decades, rental housing has shifted away from individual ownership to more corporate ownership.[150] In 1991, "individuals owned [ninety-two] percent of all rental properties."[151] By 2021, only seventy percent of rental properties were owned by individuals.[152] Now, individuals own only thirty-seven percent of rental units.[153] Corporate owners control more rental housing in both large and mid-sized properties.[154] Single-family home rentals have also been taken over by corporate consolidation. "In 2011, no U.S. investor owned more than 1,000 such homes . . . . [and] approximately one-third of the thirty-five largest owners were backed by private equity."[155] By 2022, Invitation Homes owned 82,500 single-family rentals and about half of the largest owners were backed by private equity.[156]

Concentration in the ownership market means that fewer landlords compete within the same market for the same renters. According to the DOJ, "[i]n 445 zip codes with at least 1,000 total multifamily units . . . five or fewer landlords manage more than 50% of the multifamily units."[157] Additionally, "[t]he same landlord often oversees nearby properties with different owners."[158] Higher concentration of ownership in fewer competitors makes traditional pricing coordination easier.[159] The addition of algorithmic pricing makes tacit collusion even easier.[160] Therefore, in a rental market with a small number of corporate landlords who have the volume and resources required to utilize and benefit from revenue management software, the risk of pricing coordination is elevated. To put it more simply, if there is only a handful of major landlords in a given market, then it takes only a handful of landlords to sign up to the RealPage system to effectively control pricing for a high portion of rental units in the market. Such a market is far more vulnerable to price collusion than one in which rental units are owned by a wide variety of owners of different sizes.

---

150. *See* Brandon Weiss, *Corporate Consolidation of Rental Housing & The Case for National Rent Stabilization*, 101 WASH. U. L. REV. 553, 560 (2023).

151. *Id.*

152. *See id.*

153. *See id.*

154. *See id.* at 560–61 ("[I]n 2021, individuals owned only 6 percent of properties with 50 or more units. . . . [B]etween 2001 and 2015 the percentage of mid-sized apartment properties owned by individuals decreased from approximately 67 percent to 40 percent."); Heather Vogell, *When Private Equity Becomes Your Landlord*, PROPUBLICA (Feb. 7, 2022, 10:25 AM), https://www.propublica.org/article/when-private-equity-becomes-your-landlord [https://perma.cc/8KYU-PV38] ("During the past decade, private equity-backed firms such as Greystar have stormed into the multifamily apartment market, snapping up rentals by the thousands and becoming major landlords in American cities.").

155. Weiss, *supra* note 150, at 561.

156. *Id.*

157. DOJ Complaint, *supra* note 28, at 30.

158. *Id.*

159. *See* Liza Lovdahl Gormsen, *Algorithmic Antitrust and Consumer Choice*, *in* ALGORITHMIC ANTITRUST 65, 76 (Aurelien Portuese ed., 2022).

160. *See id.*

This leads to the second market feature: Even if ownership is widely disbursed, concentration in the management software, apartment data, and revenue management markets make algorithmic collusion possible. In 2023, the top ten real estate software companies managed more than half of the market, with RealPage taking the largest share of 14.6 percent of the market.[161] Through its marketing, leasing, and residential management software programs, RealPage has access to highly detailed data on millions of rental units.[162] This trove of data is large, but it does not in itself show monopoly power over unit pricing. However, because RealPage is the market leader in software, it has access to the most data, which gives landlords a good reason to use RealPage for revenue management. And it appears landlords have followed the data, because RealPage controls over eighty percent of the revenue management market for multifamily rentals.[163] As a result, RealPage has the quantitative ability to coordinate pricing in a market with a relatively small number of corporate landlords who control a growing share of rental units.

The third market feature that characterizes the RealPage scheme is the static supply of housing. In a traditional commodity market, supply is variable. The OPEC cartel, for example, can reduce supply to boost the price of oil or increase supply to take advantage of market conditions that support higher prices.[164] But in the housing market, supply is static, at least in the short term.[165] For example, a property owner with a two hundred unit building cannot add more units and undercut the market the same way a widget manufacturer could boost production and charge less than its competitors. Instead, the building owner would have to go through a lengthy and expensive process to bring more units into the market.[166] Some properties may not be able to add any units even if they wanted to. For example, it is probably not practically or economically feasible for a forty-story high-rise that takes up a full city block in Chicago, New York, or Los Angeles to add even one more floor of units. When landlords cannot increase supply to increase revenue, their only hope to increase revenue is to increase price. This provides a strong incentive to join a system that optimizes rent prices, like RealPage's, even if

161. Albert Pang, Misho Markovski & Martin Zdravkovski, *Top 10 Real Estate Software Vendors, Market Size and Market Forecast 2023-2028*, APPS RUN THE WORLD (June 11, 2024), https://www.appsruntheworld.com/top-10-real-estate-software-vendors-market-size-and-market-forecast [https://perma.cc/39LA-4EFZ].

162. *About Us*, *supra* note 5.

163. DOJ Complaint, *supra* note 28, at 76.

164. Anshu Siripurapu & Andrew Chatzky, *OPEC in a Changing World*, COUNCIL ON FOREIGN RELS. (Mar. 9, 2022, 2:25 PM), https://www.cfr.org/backgrounder/opec-changing-world [https://perma.cc/SS5K-N27K] ("The Organization of the Petroleum Exporting Countries (OPEC) . . . . controls close to forty percent of world oil production. This dominant market position has at times allowed OPEC to act as a cartel, coordinating production levels among members to manipulate global oil prices.").

165. *See* Wamsley, *supra* note 11.

166. *See* Albuquerque, Kallåk Anundsen & Aastveit, *supra* note 141 (discussing how supply elasticity has declined as a result of regulation, increased market concentration in construction, scarce land, and financing requirements).

the system does not coordinate across competitors. But coordination can only help businesses by maintaining a price floor and driving rents to new levels.

Lastly, on the other side of the market, the demand for housing is inelastic. When the price of gas rises, consumers might drive less or put off that road trip to Disney World. But even gas is relatively inelastic; people need to get around.[167] When McDonald's raises the prices of Big Macs, customers may buy something else or choose a different restaurant; demand for specific brands of food is highly elastic.[168] However, in housing, demand is inelastic.[169] When prices rise, renters still need a place to live. When renters receive a large increase on their renewal offer, they might choose to stay rather than deal with the expense and hassle of moving to another apartment, not to mention the chance that a new lease price may be even higher than their renewal.[170] Additionally, renters typically are searching in a specific location and on a specific timeline for a home within their budget.[171] On that date, they need a place to live. So, it is difficult for renters to shop around and say no to unappealing rent prices in their market. Unlike the family trip that can be delayed indefinitely, housing decisions typically cannot wait for a day when prices are more favorable.

When viewed together, the market features in the RealPage scheme make it especially susceptible to price collusion that harms consumers. Concentrated housing ownership puts more units under the control of fewer landlords. Those landlords then choose between a small number of major players in the apartment software market. The largest software provider has the most data and an effective monopoly in the revenue management market. Pricing decisions are then imposed on a consumer base that is highly inelastic to price changes, meaning consumers are likely to accept increases. Algorithmic pricing is important and must be addressed by legislators, but bread and butter market consolidation concerns do not require new solutions. They simply require enforcement of existing competition law. Doing so would benefit renters regardless of any legislation or enforcement directed specifically at algorithmic

167. *See* Michael Gelman et al., *The Response of Consumer Spending to Changes in Gasoline Prices*, 15 AM. ECON. J. 129, 157 (2023).

168. *See* Tatiana Andreyeva, Michael W. Long & Kelly D. Brownell, *The Impact of Food Prices on Consumption: A Systematic Review of Research on the Price Elasticity of Demand for Food*, 100 AM. J. PUB. HEALTH 216, 218–20 (2010) (showing that the demand for "food away from home" is the most elastic of all food categories other than soft drinks).

169. *See* David Albouy, Gabriel Ehrlich & Yingyi Liu, *Housing Demand, Cost-of-Living Inequality, and the Affordability Crisis* 16 (Nat'l Bureau of Econ. Rsch., Working Paper No. 22816, 2016).

170. *See* Manny Garcia & Edward Berchick, *Renters: Results from the Zillow Consumer Housing Trends Report 2023*, ZILLOW (Nov. 10, 2023), https://www.zillow.com/research/renters-consumer-housing-trends-report-2023-33317 [https://perma.cc/X7MR-3RBG] ("When asked what encouraged them to stay at their current rentals, tenured renters were most likely to say that their rental costs were a good deal (72%), followed by not being able to afford to move somewhere else (66%).").

171. *See id.* (showing that most renters who moved stayed local and that most renters consider staying within budget their top characteristic when looking for a rental. "A near-unanimous share of renters (94%) said they consider staying within their initial budget as 'essential' – higher than any other characteristic we asked about.").

pricing. Lawmakers and regulators that focus their attention only on RealPage's pricing system are ignoring other critical antitrust concerns.

C. *DATA SHARING FROM BUSINESS TO AGGREGATOR*

Landlords share large quantities of detailed data with RealPage, but data sharing from the business to the aggregator is not in itself problematic, because that data does not *necessarily* get put to anticompetitive uses. For example, a landlord could hypothetically hire RealPage (or a similar software provider) to build a program to update prices daily based entirely on the business's own data.

Furthermore, businesses share sensitive data with aggregators all the time.[172] For example, lenders share detailed borrower transactional data with credit reporting agencies, who use the data to build credit reports.[173] Credit reporting, with only three major reporting agencies, raises its own antitrust concerns,[174] but the transfer of data from business to aggregator is generally accepted, even though it limits some consumers' borrowing options. Businesses also transfer vast quantities of data when they enter transactions in third-party

172. *See 82% of Companies Give Third Parties Access to All Cloud Data*, SECURITY (Jan. 26, 2021), https://www.securitymagazine.com/articles/94435-of-companies-give-third-parties-access-to-all-cloud-data [https://perma.cc/BT8K-VZLA] ("82% of companies provide 3rd party vendors highly privileged roles. . . . 76% of companies have 3d party roles that allow for full account takeover."); Felix Richter, *Amazon and Microsoft Stay Ahead in Global Could Market*, STATISTA (Feb. 27, 2025), https://www.statista.com/chart/18819/worldwide-market-share-of-leading-cloud-infrastructure-service-providers [https://perma.cc/Y743-98RN] (noting that, in 2024, "cloud infrastructure service revenues climbed to $330 billion"). The market for cloud data storage is massive, *id.*, but Amazon Web Services ("AWS") claims to not have access to customer data. *Data Protection & Privacy at AWS*, AMAZON, https://aws.amazon.com/compliance/data-protection [https://perma.cc/VV5A-2DFJ]. Regardless, the practice of sending data off-site to a third-party cloud provider is widespread. For a different example of businesses sharing data with third parties, see Kashmir Hill, *Automakers Are Sharing Consumers' Driving Behavior with Insurance Companies*, N.Y. TIMES (Mar. 13, 2024), https://www.nytimes.com/2024/03/11/technology/carmakers-driver-tracking-insurance.html (on file with the *Iowa Law Review*).

173. *See How Do Credit Reporting Companies Get My Information?*, CONSUMER FIN. PROT. BUREAU (June, 6, 2023, 8:29 AM), https://www.consumerfinance.gov/ask-cfpb/how-do-credit-reporting-companies-get-my-information-en-1263 [https://perma.cc/3M97-TQZ5] ("[Financial institutions] voluntarily send information to credit reporting companies."); Louis DeNicola, *What Are Credit Bureaus and How Do They Work?*, EXPERIAN (2025), https://www.experian.com/blogs/ask-experian/what-is-a-credit-bureau [https://perma.cc/7VTY-48UV] ("Most of the credit bureaus' information comes from other companies. . . . Data furnishers send information to the credit bureaus about their customers' accounts."). *See generally* Aniket Kesari & Mark Verstraete, *Stories, Statistics, and the Regultion of Alternative Data*, 111 IOWA L. REV. 253 (describing traditional and alternative credit data and credit scores). For more information on this practice, see generally Caleb I. Slater, Note, *The Document Speaks for Itself: Res Ipsa Loquitur in the Fair Credit Reporting Act*, 111 IOWA L. REV. (forthcoming Jan. 2026).

174. *See* Katie Arcieri, *Credit Reporting Companies Face Antitrust Suit Over Medical Debt*, BLOOMBERG L. (Aug. 22, 2023, 4:17 PM), https://news.bloomberglaw.com/antitrust/credit-reporting-companies-face-antitrust-suit-over-medical-debt (on file with the *Iowa Law Review*); Mike Scarcella, *Equifax Hit with Antitrust Class Action Over Work Verification Services*, REUTERS (May 29, 2024, 11:21 AM), https://www.reuters.com/legal/litigation/equifax-hit-with-antitrust-class-action-over-work-verification-services-2024-05-29 [https://perma.cc/S4MM-WKPR].

accounting programs.[175] Presumably, every transaction at the company is entered into the accounting software. Surely such detailed data could be put to anticompetitive uses, but sharing business data with third-party accounting software is generally acceptable. This indicates that the transfer of data—including competitively sensitive data—is not the critical behavior that needs to be targeted to stop algorithmic price fixing.

D. THE ALGORITHM ITSELF

Similarly, the use of an algorithm is not in itself anticompetitive because it can promote efficiency and provide consumer benefits. Businesses develop and use algorithms all the time using their own data, which is perfectly acceptable under Section 1, because an internal algorithm lacks an agreement between two or more parties. According to Merriam-Webster, an algorithm is simply "a step-by-step procedure for solving a problem or accomplishing some end."[176] For example, following a dance routine and cooking recipes are algorithms because they are a set of "logical steps that intake a defined set of inputs and produce a defined set of outputs."[177] In the real estate world, even an unsophisticated landlord could build an algorithm in Excel that uses current occupancy to adjust prices daily: If occupancy is below target, then decrease asking rent by $10. In fact, the landlord could probably run this algorithm in their head without any technology. This is an extraordinarily rudimentary example (and not necessarily a good business strategy), but it demonstrates that an algorithm is simply "a set of instructions that is designed to accomplish a task."[178]

A more advanced landlord with resources could theoretically build an extremely complicated algorithm like RealPage's, just without competitor data. The problem is that businesses do not have infinite resources and therefore must pick and choose what operations to take on internally and which to outsource.[179] This is why businesses often outsource functions like

175. *See Cloud Accounting Service Market Size, Share, Growth, and Industry Analysis*, BUS. RSCH. INSIGHTS (May 5, 2025), https://www.businessresearchinsights.com/market-reports/cloud-accounting-service-market-107979 [https://perma.cc/6U3P-9PDN] (showing how the global cloud accounting service market size was USD 6.17 billion in 2024. "'[C]loud accounting service' describes the use of online software to manage and store financial data, carry out accounting operations, and process financial transactions. Instead of relying on locally installed software, it enables organizations and individuals to access their accounting software and financial data from any location as long as they have an internet connection.").

176. *Algorithm*, MERRIAM-WEBSTER (2025), https://www.merriam-webster.com/dictionary/algorithm [https://perma.cc/633Z-SWQT].

177. *Examples of Algorithmic Thinking*, LCOM TEAM (Aug. 23, 2022), https://www.learning.com/blog/examples-of-algorithmic-thinking [https://perma.cc/DTB5-VQEU].

178. *Algorithm*, NAT'L LIBR. MED. (May 25, 2022), https://www.nnlm.gov/guides/data-glossary/algorithm [https://perma.cc/UR9E-FM5R].

179. *See* Alexandra Twin, *Outsourcing: How It Works in Business, with Examples*, INVESTOPEDIA (July 25, 2024), https://www.investopedia.com/terms/o/outsourcing.asp [https://perma.cc/DU5E-TJUH] (explaining that outsourcing is "a cost-cutting measure or a strategic management tool" that allows "companies to allocate resources where they are most effective").

accounting, marketing, and sales.[180] Similarly, apartment owners and management companies probably do not have the resources or expertise to develop advanced technologies. Their expertise is investing in and managing rental property. It is likely more efficient for them to pay someone else to build software. But that does not change the fact that the company *could* build an algorithm if it wanted to.

Moreover, algorithms can provide immense benefits to business and consumers. Big data allows firms "to reveal patterns, trends, and associations . . . . [and] [p]ossessing data can lead to significant innovations."[181] Algorithms allow businesses "to identify new trends and develop new products and services of particular relevance for users."[182] One potential benefit of algorithms is reduced "consumer annoyance" driven by non-targeted advertising.[183] Perhaps the most consumer-friendly contribution from big data and algorithms is the development of free consumer services.[184] Furthermore, algorithms can improve pricing efficiency, helping businesses get closer to perfect price discrimination, which saves some consumers money compared to what they would otherwise pay.[185] Algorithms even have some pro-competitive effects: They promote market entry reduce production costs and increase transparency for consumers.[186]

However, algorithms are not entirely risk-free. Ariel Ezrachi and Maurice E. Stucke identified collusion and price discrimination as two primary risks of algorithms.[187] Increased collusion is possible through the use of algorithms by improving communication among competitors and monitoring prices in a hub-and-spoke conspiracy.[188] However, algorithms also present new possibilities for collusion through what Ezrachi and Stucke call the "Predictable Agent" and "Digital Eye" scenarios.[189] In the Predictable Agent scenario, algorithms constantly "monitor and adjust to each other's" pricing decisions, leading to coordinated prices without any human involvement.[190] In the Digital Eye scenario, algorithms use AI to teach themselves how to maximize profits.[191]

---

180. Anita Campbell, *10 Small Business Functions That Can Be Easily Outsourced*, U.S. SMALL BUS. ADMIN. (Nov. 19, 2019), https://www.sba.gov/blog/10-small-business-functions-can-be-easily-outsourced [https://perma.cc/24GQ-4Y2W].

181. Gormsen, *supra* note 159, at 65.

182. *Id.* at 67.

183. *See id.*

184. *See id.*

185. *See* Aurelien Portuese, *Prologue: Algorithmic Antitrust—A Primer*, *in* ALGORITHMIC ANTITRUST 1, 10–11 (Aurelien Portuese ed., 2022). But note that in perfect price discrimination, some consumers will pay more than they otherwise would. *See Price Discrimination*, CORP. FIN. INST., https://corporatefinanceinstitute.com/resources/management/price-discrimination [https://perma.cc/VJ5R-YZHN].

186. *See* Portuese, *Prologue: Algorithmic Antitrust*, *in* ALGORITHMIC ANTITRUST, *supra* note 185, at 11.

187. *See* EZRACHI & STUCKE, *supra* note 132, at 32–33, 76–77.

188. *See id.* at 36, 48.

189. *See id.* at 36–37.

190. *See id.*

191. *See id.* at 37.

All firms using big data, AI, and algorithms have a "God-like view of the marketplace" and can adjust prices quickly, so competition between firms is reduced.[192] The algorithms can identify competitive risks and adjust quickly, undermining the incentive for any firm to try to compete in the first place.[193] Translated to the rental industry, this risk means that algorithms could lead to collusive pricing even without the explicit sharing of competitively sensitive data among competitors. Simply by using the same algorithm, the firms could reach collusive outcomes.

Additionally, algorithms help firms price closer to perfect price discrimination, which means some consumers will pay less, while other consumers will pay more than they otherwise would without algorithmic pricing.[194] In apartment pricing, the price discrimination risk can be demonstrated by consumers' willingness to pay slightly more for a particular amenity like a balcony or first-floor apartment. An algorithm could price specifically for every feature in every apartment, rather than setting all one-bedrooms at a flat rate. Algorithms, big data, and AI may also push consumers to purchase more by nudging buyers at the moment they are most likely to make a purchase.[195] The combination of near-perfect price discrimination and increased consumption results in an overall increase in business profits and reduction in consumer surplus.[196]

In sum, algorithms present incredibly valuable benefits in the form of increased efficiency and innovation. They also risk anti-competitive outcomes and perfect price discrimination. However, these are inadequate reasons for shutting down the use of algorithms, specifically algorithms that do not use private, competitively sensitive data. Algorithms that run on proprietary and public data simply make traditional business decisions faster and more precise. Legislators may decide that speed and precision provide corporations with too much of an advantage over consumers. But if the goal is to stop pricing collusion, then legislators must dig deeper than the use of algorithms, otherwise they risk blocking beneficial innovation.

E. INSIGHTS FROM AGGREGATOR TO BUSINESS

Using only business data is not an issue, for the same reasons discussed in Section III.C. A business could theoretically build its own algorithm that uses its own data to provide pricing recommendations. The fact that a business outsources that function to a third party does not inherently raise antitrust concerns. So, when the aggregator sends recommendations back to the business, that should not be a problem. It is no different from a business sending data to a cloud accounting software company who then sends reports back to the business. The separate entities send private, competitively sensitive data back and forth, but the business's data is confined to that business.

192. *See id.* at 37, 71.
193. *See id.* at 37, 72.
194. *See id.* at 85–86, 101–03.
195. *See id.* at 101.
196. *See id.* at 86–88.

By extension, using publicly available competitor data is generally not an issue.[197] Public competitor data, such as the rent competitors advertise online, is not competitively sensitive because anyone can access it. Consumers could access it if they wanted. Competing landlords can easily look at each other's website to see what rent the other is asking for one bedroom. An unsophisticated landlord could simply peg his price to his neighbor's. But they could also undercut each other. This is no different from what gas stations do when they look across the street to see what their rival is charging for unleaded gas. Likewise, if one landlord sees that their neighbor decreased the asking rent on a two-bedroom unit from $2,000 to $1,900, then that landlord may also drop their rent from $2,000 to $1,900 to prevent consumers from renting a unit across the street. This behavior is not anticompetitive; it is the hallmark of a competitive market where participants react to each other.[198]

However, the use of private, competitively sensitive competitor data is a critical issue that makes the RealPage scheme anticompetitive. This feature should be the primary target for regulators and legislators because it goes beyond algorithms' capacity to increase speed and efficiency. Instead, it gives landlords an advantage over consumers who do not have access to this information. At a minimum, RealPage has access to "actual lease transactions – giving it the true rents paid, instead of simply those a landlord advertised."[199] The DOJ alleges that RealPage collects detailed, historical transactional data on new leases, renewals, inquiries, and applications.[200] This means that RealPage can see real market prices adjusted for discounts and variable rates based on lease term.[201] Consumers, on the other hand, only see the asking rates that are posted publicly.

Additionally, because RealPage has detailed lease data from competing landlords, RealPage knows each landlord's occupancy and leasing activity, which means RealPage's algorithm can move rents in line with predicted supply and demand. Without private data, such a system would be limited to supply and demand at a single property. But RealPage can effectively see the whole market, so it is better able to predict supply and demand at all competing properties and adjust prices accordingly.

---

197. The Supreme Court has held that sharing publicly available information is not inherently illegal. *See* Maple Flooring Mfrs. Ass'n v. United States, 268 U.S. 563, 583–86 (1925). But more recently, the Court has held that information exchanges between competitors could be a Section 1 unreasonable restraint of trade under a rule of reason analysis. *See* United States v. U.S. Gypsum Co., 438 U.S. 422, 458–59 (1978). So it is possible that in some circumstances, such as a highly concentrated industry, sharing publicly available information could facilitate a Section 1 violation.

198. *See* Adam Hayes, *Perfect Competition: Examples and How It Works*, INVESTOPEDIA (May 31, 2025), https://www.investopedia.com/terms/p/perfectcompetition.asp [https://perma.cc/32S8-JFED] (identifying perfect information availability and a large, homogenous market as key features of a perfectly competitive market).

199. Vogell, *supra* note 21.

200. *See* DOJ Complaint, *supra* note 28, at 13–14.

201. For example, if a twelve-month lease goes for $1,000 per month, an eight-month lease may cost $1,200 per month and a sixteen-month lease may cost $950 per month. RealPage has access to the lease data, so RealPage can normalize the various rental rates to see the true market.

Lastly, RealPage can peg each competitor's price to the lowest price in the market for a given unit style. For example, if Landlord A's one-bedroom units cost $1,000, Landlords B and C would have little incentive to drop their rates below $1,000. Maintenance of a market floor for rents is one of the DOJ's main arguments that RealPage is coordinating a hub-and-spoke cartel.[202] First, the DOJ alleges that RealPage collects private, competitively sensitive data as described above.[203] Then, RealPage uses the data to generate a market minimum, or "hard floor" and "will not recommend a rent below the market minimum."[204] In other words, RealPage uses private, competitively sensitive data to coordinate a minimum price across a group of putative competitors. Absent the private transactional data, RealPage would not be able to coordinate a minimum price because it would not know the effective price of every landlord. Instead, it would have to rely on publicly listed rates, which vary from actual rental rates due to differences in discounts and lease terms.

As discussed, algorithmic pricing presents collusion risks even when the algorithm does not use private pricing data. But the private data makes price coordination far too easy and is low-hanging fruit for antitrust lawmakers. At least for now, private data is the critical feature in the RealPage scheme. It may be possible for big data, AI, and algorithms to reach collusive outcomes without explicitly using private data. Lawmakers should be skeptical of those algorithms, but as discussed above, the questions will be less about explicit collusion and data sharing and more about competitive advantages conferred on businesses because of speed and intelligence. For now, lawmakers would be well-justified in addressing the data-sharing component, as it is the most explicitly collusive feature of the scheme.

IV. MODERNIZING ANTITRUST LEGISLATION

Legislators should update antitrust law to prohibit the use of private, competitively sensitive data in third-party pricing algorithms. Section 1 of the Sherman Act is too broad for the digital age. The statute's language requires heavy use of the common law to define which business practices are prohibited. Instead, Congress should pass modern antitrust laws to define specific behaviors that violate the Sherman Act. For example, Congress could pass a law that says the use of private, competitively sensitive data in a common pricing algorithm qualifies as a combination or conspiracy in restraint of trade that is subject to Sherman Act remedies. Congress could also specify that sharing private data for use in a common pricing algorithm is sufficient proof of an agreement under the Sherman Act. Both paths would outlaw the RealPage scheme and similar versions in other industries without relying on slow, unpredictable common law developments. Furthermore, legislating these important twenty-first century issues means the people, via their elected representatives, would determine the bounds of lawful business behavior, rather than relying on unelected judges to set the rules.

202. *See* DOJ Complaint, *supra* note 28, at 37.
203. *See id.* at 13–14.
204. *See id.* at 17.

Lawmakers should not outlaw algorithms per se, data sharing with third parties in general, or third-party recommendations to businesses.[205] These features, while not risk-free, present opportunities to businesses, consumers, and society in general. Therefore, legislation should be targeted to address data sharing concerns without outlawing beneficial activities. Most of this Note has been about what Congress should prohibit, but Congress could also legislate that certain activities do *not* violate the Sherman Act. For example, Congress could provide that using a third-party pricing algorithm is not in itself proof of any Sherman Act violation. Such provisions defining acceptable behavior would protect businesses against unfavorable common law developments that might otherwise occur.

The Preventing Algorithmic Collusion Act of 2024, introduced by Senator Amy Klobuchar, aims to address algorithmic collusion concerns by making it "unlawful for a person to use or distribute any pricing algorithm that uses, incorporates, or was trained with nonpublic competitor data."[206] This language effectively targets the sharing of private data as proposed here. However, the bill also creates a presumption of a collusive agreement if a single provider distributes a pricing algorithm to multiple competitors.[207] The defendant can then rebut the presumption by showing that it did not use, or did not know the algorithm used, nonpublic competitor data.[208] Such a presumption would certainly help enforcement agencies bring Section 1 claims by sidestepping the difficult task of proving an agreement. However, the presumption may result in excessive litigation against pricing algorithms that do not use private data.

The bill also requires algorithmic pricing providers to disclose to consumers: (1) that the price was set by an algorithm; (2) whether the algorithm

---

205. San Francisco, for example, approved a law banning algorithmic apartment pricing entirely. *See* Tim Fang, *San Francisco Supervisors Approve Ban Targeting RealPage Software for Setting Rents*, CBS NEWS (July 30, 2024, 4:51 PM), https://www.cbsnews.com/sanfrancisco/news/sf-real page-yardi-supervisors-approve-ban-targeting-software-algorithms-setting-rents [https://perma.c c/UAB8-RW2P]. Blanket bans like this provide a quick fix but eliminate the potential benefits of the competitive use of pricing algorithms. Additionally, RealPage has understandably fought back against local bans. *See, e.g.*, Jim Dalrymple II, *RealPage Sues Berkeley, California, over Rental Algorithm Ban*, INMAN CONNECT (Apr. 2, 2025), https://www.inman.com/2025/04/02/realpage-sues-berk eley-california-over-rental-algorithm-ban (on file with the *Iowa Law Review*). Berkeley banned "rental companies from using artificial intelligence and pricing algorithms when setting rents." *Id.* In its lawsuit, RealPage argues that the ban is an unconstitutional ban on lawful speech. *Id.*; *see also RealPage Sues City of Berkeley to Stop Unconstitutional Ordinance Banning Lawful Speech*, REALPAGE (Apr. 2, 2025), https://www.realpage.com/news/realpage-sues-city-of-berkeley-to-sto p-unconstitutional-ordinance-banning-lawful-speech [https://perma.cc/9KTT-QA6K].

206. *See* Preventing Algorithmic Collusion Act of 2024, S. 3686, 118th Cong. § 4(a) (2024); *see also* Heather Vogell, *We Found That Landlords Could Be Using Algorithms to Fix Rent Prices. Now Lawmakers Want to Make the Practice Illegal.*, PROPUBLICA (Jan. 30, 2024, 1:15 PM), https://ww w.propublica.org/article/senators-introduce-legislation-stop-landlords-algorithm-price-fixing [h ttps://perma.cc/3TU9-KGNY] (quoting Senator Ron Wyden as saying: "Setting prices with an algorithm is no different from doing it over cigars and whiskey in a private club. . . . I want the law to be painfully clear that algorithmic price fixing of rents is a crime.").

207. *See* Preventing Algorithmic Collusion Act of 2024, § 5(a).

208. *Id.* § 5(b).

engages in price discrimination; and (3) the identity of the provider.[209] Disclosure may help consumers and regulators identify when algorithms are used, but it also imposes additional burdens on businesses with little value to consumers, as disclosure does nothing to prevent collusion. The bill defines "pricing algorithm" as "any computational process . . . that processes data to recommend or set a price or commercial term."[210] The disclosure requirement applies to "[a]ny person that has $5,000,000 or more in annual revenue that uses a pricing algorithm."[211] Under these definitions, even small businesses that use relatively simple algorithms would be required to disclose their "pricing algorithm." The disclosure requirement may help enforcement, but it imposes burdens on businesses and strays from addressing the critical feature of private data sharing for use in a common pricing algorithm. On the other hand, this bill is written to increase scrutiny on a wide variety of schemes, not just residential rent prices.

States have also considered algorithmic pricing legislation. For example, a bill introduced in the Colorado House would have prohibited the use of "nonpublic competitor data" in third-party algorithms used to set rent prices.[212] But it allows algorithms that use data "that is also made available to the general public in an aggregated and anonymous manner at no more than a reasonable charge."[213] This bill effectively targets the critical feature of using private data in rent pricing algorithms without imposing unnecessary burdens on other features that drive innovation and efficiency. However, the Colorado bill is specific to residential rents, meaning it does not prevent similar behavior in other industries. A comprehensive bill would apply the same principles to all industries, not just apartments.

Together, the Preventing Algorithmic Collusion Act of 2024 and the Colorado House bill provide a laudable framework for addressing collusion via algorithmic pricing. However, further refinement is required to target the sharing of private data, limit burdens on beneficial uses of algorithms, and apply the rules in markets beyond just rental housing. Additionally, enforcement and development of antitrust law is only one piece in the puzzle to solving the housing affordability crisis. Lawmakers and enforcement agencies must also address underlying market features that make the RealPage scheme effective: concentration in the rental housing market, lack of rental supply, and concentration in the software and data markets. These features can be addressed under existing law or new law.

First, policymakers can promote housing market competition by promoting the construction of new homes.[214] Building new homes would directly relieve

209. *Id.* § 6.

210. *Id.* § 2(9).

211. *Id.* § 6(a).

212. H.B. 24-1057, 75th Gen. Assemb., 1st Reg. Sess. (Colo. 2024).

213. *Id.* § 2(3).

214. *See, e.g.*, Alexander D. Lewis, Note, *Fix Housing to Fix America: Unlocking Housing Abundance with Land-Use Reform*, 50 J. CORP. L. 775, 801–05 (2025) (discussing policies to promote housing development).

housing prices by increasing supply.[215] Furthermore, new homes could indirectly relieve prices by promoting a more diverse ownership base. Policies should support the construction of smaller buildings that are feasible for smaller operators (who are less likely to use real estate software and revenue management) to build and hold apartments. With more owners in the mix, RealPage's ability to coordinate pricing would diminish.

Secondly, lawmakers and regulators should address concentration in the apartment management software and revenue management markets. RealPage's power to coordinate prices stems largely from its leading position in both. Enforcement agencies should use existing antitrust laws to promote competition in the apartment software market, which would prevent any one provider from having access to a majority of the market. But more urgent action is needed in the revenue management market, where RealPage controls an eighty percent share. More competition in the revenue management market would mean that landlords use different solutions to compete in luring potential renters, rather than landlords using a single provider that observes and maintains a market floor.

The current populist moment may be ripe for updated antitrust legislation. The Biden Administration took steps to address anticompetitive behavior in the housing market, as shown by the DOJ lawsuits against RealPage. Democrats such as Senators Klobuchar and Wyden have proposed bills to update the antitrust laws. Moreover, some Republicans have also expressed support for modernizing antitrust.[216] Some younger Republicans supported Lina Khan's aggressive approach toward big business, earning the moniker "Khanservative."[217] Both Democratic and Republican voters support antitrust laws by large margins.[218]

In the 2024 election, President Donald Trump campaigned on lowering prices, and within days of taking office, he issued an executive order for

---

215. *See, e.g.*, Conor Dougherty, *Why America Should Sprawl*, N.Y. TIMES (Apr. 10, 2025), https://www.nytimes.com/2025/04/10/magazine/suburban-sprawl-texas.html (on file with the *Iowa Law Review*) (advocating for state and local governments to allow outward expansion to build more homes). "After two decades of underbuilding, economists estimate the country's housing shortage at somewhere between four million and eight million units. . . . [A] quarter of tenants now spend more than half their income on rent and utilities; and the most recent homeless count, at about 770,000, was up nearly 20 percent from the previous year." *Id.*

216. *See, e.g.*, Press Release, Sen. Mike Lee, Republican Senators Urge House Republicans to Support Antitrust Reform Package (Sept. 26, 2022), https://www.lee.senate.gov/2022/9/republican-senators-urge-house-republicans-to-support-antitrust-reform-package [https://perma.cc/GV6T-FV8G] ("This package [of new antitrust bills] represents a strong, bipartisan consensus approach to strengthening enforcement of the federal antitrust laws, against both Big Tech and other bad actors.").

217. Molly Ball & Brody Mullins, *Biden's Trustbuster Draws Unlikely Fans: 'Khanservative' Republicans*, WALL ST. J. (Mar. 25, 2024, 5:00 AM), https://www.wsj.com/politics/policy/lina-khan-ftc-antitrust-khanservatives-a6852a8f (on file with the *Iowa Law Review*) ("The 'Khanservatives,' as they call themselves, tend to be younger and Trumpier, part of the growing ranks of Republicans who question unfettered markets and see big corporations as an adversary to their constituents.").

218. *See* Taylor Orth, *Most Americans Oppose Monopolies and Support Antitrust Laws*, YOUGOV (Nov. 6, 2023, 11:13 AM), https://today.yougov.com/economy/articles/47798-most-americans-oppose-monopolies-and-support-antitrust-laws [https://perma.cc/4XFV-HLE7] (showing that 83% of Democrats and 62% of Republicans strongly or somewhat support antitrust laws).

agencies to take action.[219] Prior to taking office, Trump signaled that he was open to continuing some of Biden's antitrust enforcement policies.[220] After taking office, his new Administration continued to pursue aggressive antitrust litigation against Amazon, Apple, Facebook, and Google that was started during Trump's first term and advanced by the Biden Administration.[221] The DOJ has emphasized that it will continue to pursue antitrust actions against algorithmic pricing.[222]

But at the same time, Trump's focus on big tech may lead the Administration to ignore other antitrust issues.[223] Additionally, Republicans in recent years have resisted funding for the DOJ's antitrust division[224] and have not joined the bipartisan antitrust push when it comes to oil and gas.[225] So while the fledgling bipartisan consensus is yet to be proven, there is clearly support for antitrust modernization on both sides of the aisle. Whether the support will overcome congressional polarization and deadlock is another question.

CONCLUSION

Ultimately, the issue is that RealPage enables a group of competitors to price like a monopoly. Features of the markets involved in the RealPage scheme make monopoly pricing easier to manage than in other markets. Technology also makes monopoly pricing easier. But the use of private data is the key. A firewall is needed between the different businesses that use the same pricing software. RealPage should be allowed to ingest private, competitively sensitive landlord data, but it should not be able to use that data to help the landlord's competitors. Public data, such as listing prices, and non-competitively sensitive data, such as utility usage, could be permissible in a shared algorithm. However, actual rents are data of a type that is too competitively sensitive to allow data aggregators to exploit it.

Big data, AI, and algorithms demand modern policy decisions. Developments can be made in the courts, by trying to squeeze new technologies

219. Aimee Picchi, *Trump Ordered the U.S. Government to Lower Prices for Americans. Can He Deliver?*, CBS NEWS (Jan. 22, 2025, 8:38 AM), https://www.cbsnews.com/news/trump-inflation-executive-orders-cost-of-living [https://perma.cc/73VE-A4DX].

220. Marcia Brown, *Trump's Unexpected Antitrust Approach*, POLITICO (Jan. 15, 2025, 7:05 PM), https://www.politico.com/newsletters/politico-nightly/2025/01/15/trumps-unexpected-antitrust-approach-00198532 [https://perma.cc/LSV2-KS7Y].

221. *See* David McCabe, *What to Know About Trump's Antitrust Efforts Against Tech Giants*, N.Y. TIMES (Apr. 21, 2025), https://www.nytimes.com/2025/04/13/technology/trump-tech-antitrust-cases.html (on file with the *Iowa Law Review*) ("Trump's appointees have promised to continue much of the scrutiny of the biggest tech companies [that Trump started and Biden continued], despite the industry's hopes.").

222. *See* Statement of Interest of the United States, *supra* note 121, at 1.

223. *See* McCabe, *supra* note 221.

224. *See* Press Release, Am. Econ. Liberties Project, House Republicans Want Monopolists to Win (June 25, 2024), https://www.economicliberties.us/press-release/house-republicans-want-monopolists-to-win [https://perma.cc/J744-R5ZU].

225. *See* Dan Primack, *Antitrust Enforcement Gets Bipartisan Love – Except for Oil Deals*, AXIOS (Apr. 2, 2024), https://www.axios.com/2024/04/02/ftc-republicans-exxon-chevron-oil-mcconnell-cruz [https://perma.cc/MC2C-C2VD].

into old legal frameworks. Or policy can be made in legislatures, where lawmakers debate and settle the public policy as representatives of the people. What level of algorithmic pricing and data sharing will society tolerate? This is an important question that must be addressed one way or another, because big data, algorithms, and AI are no longer on the horizon; they are already here.