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## MONOPOLIES IN THE COMPUTER ERA

I wrote a paper in my law and economics class in College on Monopoly law in the Computer Era. The illuminati took that paper and hid it away and made me forget about it. 20 years later, Iran was able to get the paper published through one of their agents Linda Kahn. Since it's publication, Linda's version of my paper and analysis has shaken up the entire antitrust area of law and made antitrust exciting in a way not seen since the Trust buster days. I want to quote from the whole paper here and in a separate article, I'll go into my own analysis of the issues. Here's Linda's paper in full:

**Abstract.** Amazon is the titan of twenty-first century commerce. In addition to being a retailer, it is now a marketing platform, a delivery and logistics network, a payment service, a credit lender, an auction house, a major book publisher, a producer of television and films, a fashion designer, a hardware manufacturer, and a leading host of cloud server space. Although Amazon has clocked staggering growth, it generates meager profits, choosing to price below-cost and expand widely instead. Through this strategy, the company has positioned itself at the center of e-commerce and now serves as essential infrastructure for a host of other businesses that depend upon it. Elements of the firm's structure and conduct pose anticompetitive concerns—yet it has escaped antitrust scrutiny.

This Note argues that the current framework in antitrust—specifically its pegging competition to “consumer welfare,” defined as short-term price effects—is unequipped to capture the architecture of market power in the modern economy. We cannot cognize the potential harms to competition posed by Amazon's dominance if we measure competition primarily through price and output. Specifically, current doctrine underappreciates the risk of predatory pricing and how integration across distinct business lines may prove anticompetitive. These concerns are heightened in the context of online platforms for two reasons. First, the economics of platform markets create incentives for a company to pursue growth over profits, a strategy that investors have rewarded. Under these conditions, predatory pricing becomes highly rational—even as existing doctrine treats it as irrational and therefore implausible. Second, because online platforms serve as critical intermediaries, integrating across business lines positions these platforms to control the essential infrastructure on which their rivals depend. This dual role also enables a platform to exploit information collected on companies using its services to undermine them as competitors.

This Note maps out facets of Amazon's dominance. Doing so enables us to make sense of its business strategy, illuminates anticompetitive aspects of Amazon's structure and conduct, and underscores deficiencies in current doctrine. The Note closes by considering two potential regimes for addressing Amazon's power: restoring traditional antitrust and competition policy principles or applying common carrier obligations and duties.

### Introduction

“Even as Amazon became one of the largest retailers in the country, it never seemed interested in charging enough to make a profit. Customers celebrated and the competition languished.”

—The New York Times<sup>1</sup>

“[O]ne of Mr. Rockefeller's most impressive characteristics is patience.”

—Ida Tarbell, A History of the Standard Oil Company<sup>2</sup>

In Amazon's early years, a running joke among Wall Street analysts was that CEO Jeff Bezos was building a house of cards. Entering its sixth year in 2000, the company had yet to crack a profit and was mounting millions of dollars in continuous losses, each quarter's larger than the last. Nevertheless, a segment of shareholders believed that by dumping money into advertising and steep discounts, Amazon was making a sound investment that would yield returns once e-commerce took off. Each quarter the company would report losses, and its stock price would rise. One news site captured the split sentiment by asking, “Amazon: Ponzi Scheme or Wal-Mart of the Web?”<sup>3</sup>

Sixteen years on, nobody seriously doubts that Amazon is anything but the titan of twenty-first-century commerce. In 2015, it earned \$107 billion in revenue,<sup>4</sup> and, as of 2013, it sold more than its next twelve online competitors combined.<sup>5</sup> By some estimates, Amazon now captures 46% of online shopping, with its share growing faster than the sector as a whole.<sup>6</sup> In addition to being a retailer, it is a marketing platform, a delivery and logistics network, a payment service, a credit lender, an auction house, a major book publisher, a producer of television and films, a fashion designer, a hardware manufacturer, and a leading provider of cloud server space and computing power. Although Amazon has clocked staggering growth—reporting double-digit increases in net sales yearly—it reports meager profits, choosing to invest aggressively instead. The company listed consistent losses for the first seven years it was in business, with debts of \$2 billion.<sup>7</sup> While it exits the red more regularly now,<sup>8</sup> negative returns are still common. The company reported losses in two of the last five years, for example, and its highest yearly net income was still less than 1% of its net sales.<sup>9</sup>

Despite the company's history of thin returns, investors have zealously backed it: Amazon's shares trade at over 900 times diluted earnings, making it the most expensive stock in the Standard & Poor's 500.<sup>10</sup> As one reporter marveled, “The company barely ekes out a profit, spends a fortune on expansion and free shipping and is famously opaque about its business operations. Yet investors . . . pour into the stock.”<sup>11</sup> Another commented that Amazon is in “a class of its own when it comes to valuation.”<sup>12</sup>

Reporters and financial analysts continue to speculate about when and how Amazon's deep investments and steep losses will pay off.<sup>13</sup> Customers, meanwhile, universally seem to love the company. Close to half of all online buyers go directly to Amazon first to search for products,<sup>14</sup> and in 2016, the Reputation Institute named the firm the “most reputable company in America” for the third year running.<sup>15</sup> In recent years, journalists have exposed the aggressive business tactics Amazon employs. For instance Amazon named one campaign “The Gazelle Project,” a strategy whereby Amazon would approach small publishers “the way a cheetah would a sickly gazelle.”<sup>16</sup> This, as well as other reporting,<sup>17</sup> drew widespread attention,<sup>18</sup> perhaps because it offered a glimpse at the potential social costs of Amazon's dominance. The firm's highly public dispute with Hachette in 2014—in which Amazon delisted the publisher's books from its website during business negotiations—similarly generated extensive press scrutiny and dialogue.<sup>19</sup> More generally, there is growing public awareness that Amazon has established itself as an essential part of the internet economy,<sup>20</sup> and a gnawing sense that its dominance—its sheer scale and breadth—may pose hazards.<sup>21</sup> But when pressed on why, critics often fumble to explain how a company that has so clearly delivered enormous benefits to consumers—not to mention revolutionized e-commerce in general—could, at the end of the day, threaten our markets. Trying to make sense of the contradiction, one journalist noted that the critics' argument seems to be that “even though Amazon's activities tend to reduce book prices, which is considered good for consumers, they ultimately hurt consumers.”<sup>22</sup>

In some ways, the story of Amazon's sustained and growing dominance is also the story of changes in our antitrust laws. Due to a change in legal thinking and practice in the 1970s and 1980s, antitrust law now assesses competition largely with an eye to the short-term interests of consumers, not producers or the health of the market as a whole; antitrust doctrine views low consumer prices, alone, to be evidence of sound competition. By this measure, Amazon has excelled; it has evaded government scrutiny in part through fervently devoting its business strategy and rhetoric to reducing prices for consumers. Amazon's closest encounter with antitrust authorities was when the Justice Department sued other companies for teaming up against Amazon.<sup>23</sup> It is as if Bezos charted the company's growth by first drawing a map of antitrust laws, and then devising routes to smoothly bypass them. With its missionary zeal for consumers, Amazon has marched toward monopoly by singing the tune of contemporary antitrust.

This Note maps out facets of Amazon's power. In particular, it traces the sources of Amazon's growth and analyzes the potential effects of its dominance. Doing so enables us to make sense of the company's business strategy and illuminates anticompetitive aspects of its structure and conduct. This analysis reveals that the current framework in antitrust—specifically its equating competition with “consumer welfare,” typically measured through short-term effects on price and output<sup>24</sup>—fails to capture the architecture of market power in the twenty-first century marketplace. In other words, the potential harms to competition posed by Amazon's dominance are not cognizable if we assess competition primarily through price and output. Focusing on these metrics instead blinds us to the potential hazards.

My argument is that gauging real competition in the twenty-first century marketplace—especially in the case of online platforms—requires

analyzing the underlying structure and dynamics of markets. Rather than pegging competition to a narrow set of outcomes, this approach would examine the competitive process itself. Animating this framework is the idea that a company's power and the potential anticompetitive nature of that power cannot be fully understood without looking to the structure of a business and the structural role it plays in markets. Applying this idea involves, for example, assessing whether a company's structure creates certain anticompetitive conflicts of interest; whether it can cross-leverage market advantages across distinct lines of business; and whether the structure of the market incentivizes and permits predatory conduct.

This is the approach I adopt in this Note. I begin by exploring—and challenging—modern antitrust law's treatment of market structure. Part I gives an overview of the shift in antitrust away from economic structuralism in favor of price theory and identifies how this departure has played out in two areas of enforcement: predatory pricing and vertical integration. Part II questions this narrow focus on consumer welfare as largely measured by prices, arguing that assessing structure is vital to protect important antitrust values. The Note then uses the lens of market structure to reveal anticompetitive aspects of Amazon's strategy and conduct. Part III documents Amazon's history of aggressive investing and loss leading, its company strategy, and its integration across many lines of business. Part IV identifies two instances in which Amazon has built elements of its business through sustained losses, crippling its rivals, and two instances in which Amazon's activity across multiple business lines poses anticompetitive threats in ways that the current framework fails to register. The Note then assesses how antitrust law can address the challenges raised by online platforms like Amazon. Part V considers what capital markets suggest about the economics of Amazon and other internet platforms. Part VI offers two approaches for addressing the power of dominant platforms: (1) limiting their dominance through restoring traditional antitrust and competition policy principles and (2) regulating their dominance by applying common carrier obligations and duties. I. the chicago school revolution: the shift away from competitive process and market structure

One of the most significant changes in antitrust law and interpretation over the last century has been the move away from economic structuralism. In this Part, I trace this history by sketching out how a structure-based view of competition has been replaced by price theory and exploring how this shift has played out through changes in doctrine and enforcement.

Broadly, economic structuralism rests on the idea that concentrated market structures promote anticompetitive forms of conduct.<sup>25</sup> This view holds that a market dominated by a very small number of large companies is likely to be less competitive than a market populated with many small- and medium-sized companies. This is because: (1) monopolistic and oligopolistic market structures enable dominant actors to coordinate with greater ease and subtlety, facilitating conduct like price-fixing, market division, and tacit collusion; (2) monopolistic and oligopolistic firms can use their existing dominance to block new entrants; and (3) monopolistic and oligopolistic firms have greater bargaining power against consumers, suppliers, and workers, which enables them to hike prices and degrade service and quality while maintaining profits.

This market structure-based understanding of competition was a foundation of antitrust thought and policy through the 1960s. Subscribing to this view, courts blocked mergers that they determined would lead to anticompetitive market structures. In some instances, this meant halting horizontal deals—mergers combining two direct competitors operating in the same market or product line—that would have handed the new entity a large share of the market.<sup>26</sup> In others, it involved rejecting vertical mergers—deals joining companies that operated in different tiers of the same supply or production chain—that would “foreclose competition.”<sup>27</sup> Centrally, this approach involved policing not just for size but also for conflicts of interest—like whether allowing a dominant shoe manufacturer to extend into shoe retailing would create an incentive for the manufacturer to disadvantage or discriminate against competing retailers.<sup>28</sup>

The Chicago School approach to antitrust, which gained mainstream prominence and credibility in the 1970s and 1980s, rejected this structuralist view.<sup>29</sup> In the words of Richard Posner, the essence of the Chicago School position is that “the proper lens for viewing antitrust problems is price theory.”<sup>30</sup> Foundational to this view is a faith in the efficiency of markets, propelled by profit-maximizing actors. The Chicago School approach bases its vision of industrial organization on a simple theoretical premise: “[R]ational economic actors working within the confines of the market seek to maximize profits by combining inputs in the most efficient manner. A failure to act in this fashion will be punished by the competitive forces of the market.”<sup>31</sup>

While economic structuralists believe that industrial structure predisposes firms toward certain forms of behavior that then steer market outcomes, the Chicago School presumes that market outcomes—including firm size, industry structure, and concentration levels—reflect the interplay of standalone market forces and the technical demands of production.<sup>32</sup> In other words, economic structuralists take industry structure as an entryway for understanding market dynamics, while the Chicago School holds that industry structure merely reflects such dynamics. For the Chicago School, “[w]hat exists is ultimately the best guide to what should exist.”<sup>33</sup>

Practically, the shift from structuralism to price theory had two major ramifications for antitrust analysis. First, it led to a significant narrowing of the concept of entry barriers. An entry barrier is a cost that must be borne by a firm seeking to enter an industry but is not carried by firms already in the industry.<sup>34</sup> According to the Chicago School, advantages that incumbents enjoy from economies of scale, capital requirements, and product differentiation do not constitute entry barriers, as these factors are considered to reflect no more than the “objective technical demands of production and distribution.”<sup>35</sup> With so many “entry barriers . . . discounted, all firms are subject to the threat of potential competition . . . regardless of the number of firms or levels of concentration.”<sup>36</sup> On this view, market power is always fleeting—and hence antitrust enforcement rarely needed.

The second consequence of the shift away from structuralism was that consumer prices became the dominant metric for assessing competition. In his highly influential work, *The Antitrust Paradox*, Robert Bork asserted that the sole normative objective of antitrust should be to maximize consumer welfare, best pursued through promoting economic efficiency.<sup>37</sup> Although Bork used “consumer welfare” to mean “allocative efficiency,”<sup>38</sup> courts and antitrust authorities have largely measured it through effects on consumer prices. In 1979, the Supreme Court followed Bork's work and declared that “Congress designed the Sherman Act as a ‘consumer welfare prescription’”<sup>39</sup>—a statement that is widely viewed as erroneous.<sup>40</sup> Still, this philosophy wound its way into policy and doctrine. The 1982 merger guidelines issued by the Reagan Administration—a radical departure from the previous guidelines, written in 1968—reflected this newfound focus. While the 1968 guidelines had established that the “primary role” of merger enforcement was “to preserve and promote market structures conducive to competition,”<sup>41</sup> the 1982 guidelines said mergers “should not be permitted to create or enhance ‘market power,’” defined as the “ability of one or more firms profitably to maintain prices above competitive levels.”<sup>42</sup> Today, showing antitrust injury requires showing harm to consumer welfare, generally in the form of price increases and output restrictions.<sup>43</sup>

It is true that antitrust authorities do not ignore non-price effects entirely. The 2010 Horizontal Merger Guidelines, for example, acknowledge that enhanced market power can manifest as non-price harms, including in the form of reduced product quality, reduced product variety, reduced service, or diminished innovation.<sup>44</sup> Notably, the Obama Administration's opposition to one of the largest mergers proposed on its watch—Comcast/TimeWarner—stemmed from a concern about market access, not prices.<sup>45</sup> And by some measures, the Federal Trade Commission (FTC) has alleged potential harm to innovation in roughly one-third of merger enforcement actions in the last decade.<sup>46</sup> Still, it is fair to say that a concern for innovation or non-price effects rarely animates or drives investigations or enforcement actions—especially outside of the merger context.<sup>47</sup> Economic factors that are easier to measure—such as impacts on price, output, or productive efficiency in narrowly defined markets—have become “disproportionately important.”<sup>48</sup>

Two areas of enforcement that this reorientation has affected dramatically are predatory pricing and vertical integration. The Chicago School claims that “predatory pricing, vertical integration, and tying arrangements never or almost never reduce consumer welfare.”<sup>49</sup> Both predatory pricing and vertical integration are highly relevant to analyzing Amazon's path to dominance and the source of its power. Below, I offer a brief overview of how the Chicago School's influence has shaped predatory pricing doctrine and enforcers' views of vertical integration.

#### A. Predatory Pricing

Through the mid-twentieth century, Congress repeatedly enacted legislation targeting predatory pricing. Congress, as well as state legislatures, viewed predatory pricing as a tactic used by highly capitalized firms to bankrupt rivals and destroy competition—in other words, as a tool to concentrate control. Laws prohibiting predatory pricing were part of a larger arrangement of pricing laws that sought to distribute power and opportunity. However, a controversial Supreme Court decision in the 1960s created an opening for critics to attack the regime. This intellectual backlash wound its way into Supreme Court doctrine by the early 1990s in the form of the restrictive “recoupment test.”

The earliest predatory pricing case in America was the government's antitrust suit against Standard Oil, which reached the Supreme Court in 1911.<sup>50</sup> As detailed in Ida Tarbell's exposé, *A History of the Standard Oil Company*, Standard Oil routinely slashed prices in order to drive rivals from the market.<sup>51</sup> Moreover, it cross-subsidized: Standard Oil charged monopoly prices<sup>52</sup> in markets where it faced no competitors; in markets where rivals checked the company's dominance, it drastically lowered prices in an effort to push them out. In its antitrust case against the company, the government argued that a suite of practices by Standard Oil—including predatory pricing—violated section 2 of the Sherman Act. The Supreme Court ruled for the government and ordered the break-up of the company.<sup>53</sup> Subsequent courts cited the decision for establishing that in the quest for monopoly power, “price cutting became perhaps the most effective weapon of

the larger corporation."<sup>54</sup>

Recognizing the threat of predatory pricing executed by Standard Oil, Congress passed a series of laws prohibiting such conduct. In 1914 Congress enacted the Clayton Act<sup>55</sup> to strengthen the Sherman Act and included a provision to curb price discrimination and predatory pricing.<sup>56</sup> The House Report stated that section 2 of the Clayton Act was expressly designed to prohibit large corporations from slashing prices below the cost of production "with the intent to destroy and make unprofitable the business of their competitors" and with the aim of "acquiring a monopoly in the particular locality or section in which the discriminating price is made."<sup>57</sup>

Congress also acted to protect state "fair trade" laws that further safeguarded against predatory pricing. Fair trade legislation granted producers the right to set the final retail price of their goods, limiting the ability of chain stores to discount.<sup>58</sup> When the Supreme Court targeted these "resale price maintenance" efforts, Congress stepped up to defend them. After the Supreme Court in 1911 struck down the form of resale price maintenance enabled by fair trade laws,<sup>59</sup> Congress in 1937 carved out an exception for state fair trade laws through the Miller-Tydings Act.<sup>60</sup> When the Supreme Court in 1951 ruled that producers could enforce minimum prices only against those retailers that had signed contracts agreeing to do so,<sup>61</sup> Congress responded with a law making minimum prices enforceable against nonsigners too.<sup>62</sup>

Another byproduct of the "fair trade" movement was the Robinson-Patman Act of 1936. This Act prohibited price discrimination by retailers among producers and by producers among retailers.<sup>63</sup> Its aim was to prevent conglomerates and large companies from using their buyer power to extract crippling discounts from smaller entities, and to keep large manufacturers and retailers from teaming up against rivals.<sup>64</sup> Like laws banning predatory pricing, the prohibition against price discrimination effectively curbed the power of size. Section 3 of the Act addressed predatory pricing directly by making it a crime to sell goods at "unreasonably low prices for the purpose of destroying competition or eliminating a competitor."<sup>65</sup> While predatory price cutting gave rise to civil liability and remedies under the Clayton Act, the Robinson-Patman Act attached criminal penalties as well.<sup>66</sup>

This series of antitrust laws demonstrates that Congress saw predatory pricing as a serious threat to competitive markets. By the mid-twentieth century, the Supreme Court recognized and gave effect to this congressional intent. The Court upheld the Robinson-Patman Act numerous times, holding that the relevant factors were whether a retailer intended to destroy competition through its pricing practices and whether its conduct furthered that purpose.<sup>67</sup> However, not all instances of below-cost pricing were illegitimate. Liquidating excess or perishable goods, for example, was considered fair game.<sup>68</sup> Only "sales made below cost without legitimate commercial objective and with specific intent to destroy competition" would clearly violate section 3.<sup>69</sup> In other cases, the Court distinguished between competitive advantages drawn from superior skill and production, and those drawn from the brute power of size and capital.<sup>70</sup> The latter, the Court ruled, were illegitimate.<sup>71</sup>

In *Utah Pie Co. v. Continental Baking Co.*,<sup>72</sup> the Court further reinforced the illegitimacy of predatory pricing.<sup>72</sup> *Utah Pie* and Continental Baking were competing manufacturers of frozen dessert pies. A locational advantage gave *Utah Pie* cheaper access to the Salt Lake City market, which it used to price goods below those sold by competitors. Other frozen pie manufacturers, including Continental, began selling at below-cost prices in the Salt Lake City market, while keeping prices in other regions at or above cost. *Utah Pie* brought a predatory pricing case against Continental. The Supreme Court ruled for *Utah Pie*, noting that the pricing strategies of its competitors had diverted business from *Utah Pie* and compelled the company to further lower its prices, leading to a "declining price structure" overall.<sup>73</sup> Additionally, Continental had admitted to sending an industrial spy to *Utah Pie*'s plant to gain information to sabotage *Utah Pie*'s business relations with retailers, a fact the Court used to establish "intent to injure."<sup>74</sup>

The decision was controversial. Continental's conduct had loosened the grip of a quasi-monopolist. Prior to the alleged predation, *Utah Pie* had controlled 66.5% of the Salt Lake City market, but following Continental's practices, its share dropped to 45.3%.<sup>75</sup> Penalizing conduct that had made a market more competitive as predatory seemed perverse. As Justice Stewart noted in the dissent, "I cannot hold that *Utah Pie*'s monopolistic position was protected by the federal antitrust laws from effective price competition . . ."<sup>76</sup>

The case presented an opportunity for critics of predatory pricing laws to attack the doctrine as misguided. In an article labeling *Utah Pie* "the most anticompetitive antitrust decision of the decade," Ward Bowman, an economist at Yale Law School, argued that the premise of predatory pricing laws was wrong.<sup>77</sup> He wrote, "The Robinson-Patman Act rests upon a presumption that price discrimination can or might be used as a monopolizing technique. This, as more recent economic literature confirms, is at best a highly dubious presumption."<sup>78</sup> Bork, meanwhile, said of the decision, "There is no economic theory worthy of the name that could find an injury to competition on the facts of the case. Defendants were convicted not of injuring competition but, quite simply, of competing."<sup>79</sup> He described predatory pricing generally as "a phenomenon that probably does not exist" and the Robinson-Patman Act as "the misshapen progeny of intolerable draftsmanship coupled to wholly mistaken economic theory."<sup>80</sup> Other scholars, particularly those from the rising Chicago School, also weighed in to criticize *Utah Pie*.<sup>81</sup>

As the writings of Bowman and Bork suggest, the Chicago School critique of predatory pricing doctrine rests on the idea that below-cost pricing is irrational and hence rarely occurs.<sup>82</sup> For one, the critics argue, there was no guarantee that reducing prices below cost would either drive a competitor out or otherwise induce the rival to stop competing. Second, even if a competitor were to drop out, the predator would need to sustain monopoly pricing for long enough to recoup the initial losses and successfully thwart entry by potential competitors, who would be lured by the monopoly pricing. The uncertainty of its success, coupled with its guarantee of costs, made predatory pricing an unappealing—and therefore highly unlikely—strategy.<sup>83</sup>

As the influence and credibility of these scholars grew, their thinking shaped government enforcement. During the 1970s, for example, the number of Robinson-Patman Act cases that the FTC brought dropped dramatically, reflecting the belief that these cases were of little economic concern.<sup>84</sup> Under the Reagan Administration, the FTC all but entirely abandoned Robinson-Patman Act cases.<sup>85</sup> Bork's appointment as Solicitor General, meanwhile, gave him a prime platform to influence the Supreme Court on antitrust issues and enabled him "to train and influence many of the attorneys who would argue before the Supreme Court for the next generation."<sup>86</sup>

The Chicago School critique came to shape Supreme Court doctrine on predatory pricing. The depth and degree of this influence became apparent in *Matsushita Electric Industrial Co. v. Zenith Radio Corp.*<sup>87</sup> *Zenith*, an American manufacturer of consumer electronics, brought a Sherman Act section 1 case accusing Japanese firms of conspiring to charge predatorily low prices in the U.S. market in order to drive American companies out of business.<sup>88</sup> The Supreme Court granted certiorari to review whether the Third Circuit had applied the correct standard in reversing the district court's grant of summary judgment to *Matsushita*—an inquiry that led the Court to assess the reasonableness of assuming the alleged predation.<sup>89</sup>

Citing to Bork's *The Antitrust Paradox*, the Court concluded that predatory pricing schemes were implausible and therefore could not justify a reasonable assumption in favor of *Zenith*. "As [Bork's work] shows, the success of such schemes is inherently uncertain: the short-run loss is definite, but the long-run gain depends on successfully neutralizing the competition," the Court wrote.<sup>90</sup> "For this reason, there is a consensus among commentators that predatory pricing schemes are rarely tried, and even more rarely successful."<sup>91</sup>

In addition to adopting Bork's cost-benefit framing, the Court echoed his concern that price competition could be mistaken for predation. In *The Antitrust Paradox*, Bork wrote, "The real danger for the law is less that predation will be missed than that normal competitive behavior will be wrongly classified as predatory and suppressed."<sup>92</sup> Justice Powell, writing for the 5-4 majority in *Matsushita*, echoed Bork: "[C]utting prices in order to increase business often is the very essence of competition. Thus mistaken inferences in cases such as this one are especially costly, because they chill the very conduct the antitrust laws are designed to protect."<sup>93</sup>

Although *Matsushita* focused on a narrow issue—the summary judgment standard for claims brought under Section 1 of the Sherman Act, which targets coordination among parties<sup>94</sup>—it has been widely influential in monopolization cases, which fall under Section 2. In other words, reasoning that originated in one context has wound up in jurisprudence applying to totally distinct circumstances, even as the underlying violations differ vastly.<sup>95</sup> Subsequent courts applied *Matsushita*'s predatory pricing analysis to cases involving monopolization and unilateral anticompetitive conduct, shaping the jurisprudence of Section 2 of the Sherman Act.<sup>96</sup> The lower courts seized on *Matsushita*'s central point: the idea that "predatory pricing schemes are rarely tried, and even more rarely successful."<sup>97</sup> The phrase became a talisman against the existence of predatory pricing, routinely invoked by courts in favor of defendants.

In *Brooke Group Ltd. v. Brown & Williamson Tobacco Corp.*,<sup>98</sup> the Supreme Court formalized this premise into a doctrinal test. The case involved cigarette manufacturing, an industry dominated by six firms.<sup>99</sup> Liggett, one of the six, introduced a line of generic cigarettes, which it sold for about 30% less than the price of branded cigarettes.<sup>100</sup> Liggett alleged that when it became clear that its generics were diverting business from branded cigarettes, Brown & Williamson, a competing manufacturer, began selling its own generics at a loss.<sup>101</sup> Liggett sued, claiming that Brown & Williamson's tactic was designed to pressure Liggett to raise prices on its generics, thus enabling Brown & Williamson to maintain high profits on branded cigarettes. A jury returned a verdict in favor of Liggett, but the district court judge decided that Brown & Williamson was entitled to judgment as a matter of law.<sup>102</sup>

Importantly, Liggett's accusation was that Brown & Williamson would recoup its losses through raising prices on branded cigarettes, not the

generics cigarettes it was steeply discounting. Building on the analysis introduced in *Matsushita*, the Court held that *Liggett* had failed to show that Brown & Williamson would be able to execute the scheme successfully by recouping its losses through supracompetitive pricing. "Evidence of below-cost pricing is not alone sufficient to permit an inference of probable recoupment and injury to competition," Justice Kennedy wrote for the majority.<sup>103</sup> Instead, the plaintiff "must demonstrate that there is a likelihood that the predatory scheme alleged would cause a rise in prices above a competitive level that would be sufficient to compensate for the amounts expended on the predation, including the time value of the money invested in it"<sup>104</sup>—a requirement now known as the "recoupment test."

In placing recoupment at the center of predatory pricing analysis, the Court presumed that direct profit maximization is the singular goal of predatory pricing.<sup>105</sup> Furthermore, by establishing that harm occurs only when predatory pricing results in higher prices, the Court collapsed the rich set of concerns that had animated earlier critics of predation, including an aversion to large firms that exploit their size and a desire to preserve local control. Instead, the Court adopted the Chicago School's narrow conception of what constitutes this harm (higher prices) and how this harm comes about—namely, through the alleged predator raising prices on the previously discounted good.<sup>106</sup>

Today, succeeding on a predatory pricing claim requires a plaintiff to meet the Brooke Group recoupment test by showing that the defendant would be able to recoup its losses through sustaining supracompetitive prices. Since the Court introduced this recoupment requirement, the number of cases brought and won by plaintiffs has dropped dramatically.<sup>107</sup> Despite the Court's contention—that "predatory pricing schemes are rarely tried and even more rarely successful"—a host of research shows that predatory pricing can be "an attractive anticompetitive strategy" and has been used by dominant firms across sectors to squash or deter competition.<sup>108</sup>

## B. Vertical Integration

Analysis of vertical integration has similarly moved away from structural concerns. Vertical integration arises when "two or more successive stages of production and/or distribution of a product are combined under the same control."<sup>109</sup> For most of the last century, enforcers reviewed vertical integration under the same standards as horizontal mergers, as set out in the Sherman Act, the Clayton Act, and the Federal Trade Commission Act. Vertical integration was banned whenever it threatened to "substantially lessen competition" <sup>110</sup> or constituted a "restraint of trade"<sup>111</sup> or an "unfair method[] of competition."<sup>112</sup> However, the Chicago School's view that vertical mergers are generally pro-competitive has led enforcement in this area to significantly drop.

Serious concern about vertical integration took hold in the wake of the Great Depression, when both the law and economic theory became sharply critical of the phenomenon.<sup>113</sup> Thurman Arnold, the Assistant Attorney General in the 1930s, targeted vertical ownership achieved through both mergers and contractual provisions, and by the 1950s courts and antitrust authorities generally viewed vertical integration as anticompetitive. Partly because it believed that the Supreme Court had failed to use existing law to block vertical integration through acquisitions, Congress in 1950 amended section 7 of the Clayton Act to make it applicable to vertical mergers.<sup>114</sup>

Critics of vertical integration primarily focused on two theories of potential harm: leverage and foreclosure. Leverage reflects the idea that a firm can use its dominance in one line of business to establish dominance in another. Because "horizontal power in one market or stage of production creates 'leverage' for the extension of the power to bar entry at another level," vertical integration combined with horizontal market power "can impair competition to a greater extent than could the exercise of horizontal power alone."<sup>115</sup> Foreclosure, meanwhile, occurs when a firm uses one line of business to disadvantage rivals in another line. A flourmill that also owned a bakery could hike prices or degrade quality when selling to rival bakers—or refuse to do business with them entirely. In this view, even if an integrated firm did not directly resort to exclusionary tactics, the arrangement would still increase barriers to entry by requiring would-be entrants to compete at two levels.

When seeking to block vertical combinations or arrangements, the government frequently built its case on one of these theories—and, through the 1960s, courts largely accepted them.<sup>116</sup> In *Brown Shoe v. United States*, for example, the government sought to block a merger between a leading manufacturer and a leading retailer of shoes on the grounds that the tie-up would "foreclose[ ] competition" and "enhanc[e] Brown's competitive advantage over other producers, distributors and sellers of shoes."<sup>117</sup> The Court acknowledged that the Clayton Act did not "render unlawful all . . . vertical arrangements," but held that this merger would undermine competition by "foreclos[ing] . . . independent manufacturers from markets otherwise open to them."<sup>118</sup> In other words, the concern was that—once merged—the combined entity would forbid its retailing arm from stocking shoes made by competing independent manufacturers. Calling this form of foreclosure "the primary vice of a vertical merger,"<sup>119</sup> the Court noted it was also largely inevitable: "Every extended vertical arrangement by its very nature, for at least a time, denies to competitors of the supplier the opportunity to compete for part or all of the trade of the customer-party to the vertical arrangement."<sup>120</sup> In his partial concurrence, Justice Harlan observed that the deal would enable Brown to "turn an independent purchaser into a captive market for its shoes," thereby "diminish[ing] the available market for which shoe manufacturers compete."<sup>121</sup> The Court enjoined the merger.<sup>122</sup>

Another reason courts cited for blocking these arrangements was that vertical deals eliminated potential rivals—a recognition of how a merger would reshape industry structure. Upholding the FTC's challenge of Ford purchasing an equipment manufacturer, the Court noted that before the acquisition, Ford had helped check the power of the manufacturers and had a "soothing influence" over prices.<sup>123</sup> An outside firm "may someday go in and set the stage for noticeable deconcentration," the Court wrote.<sup>124</sup> "While it merely stays near the edge, it is a deterrent to current competitors."<sup>125</sup> In other words, the threat of potential entry by Ford—the fact that, pre-merger, it could have internally expanded into equipment manufacturing—had played an important disciplining role. Relatedly, the Court observed that when a company in a competitive market integrates with a firm in an oligopolistic one, the merger can have "the result of transmitting the rigidity of the oligopolistic structure" of one industry to the other, "thus reducing the chances of future deconcentration" of the market.<sup>126</sup> The Court required Ford to divest the manufacturer.<sup>127</sup>

In the 1950s—while Congress, enforcement agencies, and the courts recognized potential threats posed by vertical arrangements—Chicago School scholars began to cast doubt on the idea that vertical integration has anticompetitive effects.<sup>128</sup> By replacing market transactions with administrative decisions within the firm, they argued, vertical arrangements generated efficiencies that antitrust law should promote. And if integration failed to yield efficiencies, then the integrated firm would have no cost advantages over unintegrated rivals, therefore posing no risk of impeding entry. They further argued that vertical deals would not affect a firm's pricing and output policies, the primary metrics in their analysis. Under this framework, only horizontal mergers affect competition, as "[h]orizontal mergers increase market share, but vertical mergers do not."<sup>129</sup>

Chicago School theory holds that concerns about both leverage and foreclosure are misguided. Under the "single monopoly profit theorem," the amount of profit that a firm can extract from one market is fixed and cannot be expanded through extending into an adjacent market if the two products are used in fixed proportions.<sup>130</sup> Under this premise, not only does monopoly leveraging not pose any competitive concern, but—since it can only be motivated by efficiencies, not profits—it is actually procompetitive when it does occur.

The traditional worries about foreclosure, Bork claimed, were unfounded, as "[p]redation through vertical merger is extremely unlikely."<sup>131</sup> A manufacturer would not favor its retail subsidiary over others unless it was cheaper to do so—in which case, Bork argued, discriminating would yield efficiencies that the firm would pass on to consumers. Additionally, any manufacturer that sought to privilege its own retailer would face "entrants who would arrive in sky-darkening swarms for the profitable alternatives."<sup>132</sup> In other words, Bork's take was that vertical integration generally would not create forms of market power that firms could use to hike prices or constrain output. In the rare case that vertical integration did create this form of market power, he believed that it would be disciplined by actual or potential entry by competitors.<sup>133</sup> In light of this, antitrust law's aversion to vertical arrangements was, Bork argued, irrational. "The law against vertical mergers is merely a law against the creation of efficiency."<sup>134</sup>

With the election of President Reagan, this view of vertical integration became national policy. In 1982 and 1984, the Department of Justice (DOJ) and the FTC issued new merger guidelines outlining the framework that officials would use when reviewing horizontal deals.<sup>135</sup> The 1984 version included guidelines specific to vertical deals.<sup>136</sup> Part of a sweeping effort to overhaul antitrust enforcement, the new guidelines narrowed the circumstances in which the agencies would challenge vertical mergers.<sup>137</sup> Although the guidelines acknowledged that vertical mergers could sometimes give rise to competitive concerns, in practice the change constituted a *de facto* approval of vertical deals. The DOJ and FTC did not challenge even one vertical merger during President Reagan's tenure.<sup>138</sup>

Although subsequent administrations have continued reviewing vertical mergers, the Chicago School's view that these deals generally do not pose threats to competition has remained dominant.<sup>139</sup> Rejection of vertical tie-ups—standard through the 1960s and 1970s—is extremely rare today;<sup>140</sup> in instances where agencies spot potential harm, they tend to impose conduct remedies or require divestitures rather than block the deal outright.<sup>141</sup> The Obama Administration took this approach with two of the largest vertical deals of the last decade: Comcast/NBC and Ticketmaster/LiveNation. In each case, consumer advocates opposed the deal<sup>142</sup> and warned that the tie-up would concentrate significant power in the hands of a single company,<sup>143</sup> which it could use to engage in exclusionary practices, hike prices for consumers, and dock payments to content producers, such as TV screenwriters and musicians. Nonetheless, the DOJ attached certain behavioral conditions and required a minor divestiture, ultimately approving both deals.<sup>144</sup> The district court held the consent decrees to be in the public interest.

## II. Why competitive process and structure matter

The current framework in antitrust fails to register certain forms of anticompetitive harm and therefore is unequipped to promote real competition—a shortcoming that is illuminated and amplified in the context of online platforms and data-driven markets. This failure stems both from assumptions embedded in the Chicago School framework and from the way this framework assesses competition.

Notably, the present approach fails even if one believes that antitrust should promote only consumer interests. Critically, consumer interests include not only cost but also product quality, variety, and innovation. Protecting these long-term interests requires a much thicker conception of “consumer welfare” than what guides the current approach. But more importantly, the undue focus on consumer welfare is misguided. It betrays legislative history, which reveals that Congress passed antitrust laws to promote a host of political economic ends—including our interests as workers, producers, entrepreneurs, and citizens. It also mistakenly supplants a concern about process and structure (i.e., whether power is sufficiently distributed to keep markets competitive) with a calculation regarding outcome (i.e., whether consumers are materially better off).

Antitrust law and competition policy should promote not welfare but competitive markets. By refocusing attention back on process and structure, this approach would be faithful to the legislative history of major antitrust laws. It would also promote actual competition—unlike the present framework, which is overseeing concentrations of power that risk precluding real competition.

### A. Price and Output Do Not Cover the Full Range of Threats to Consumer Welfare

As discussed in Part I, modern doctrine assumes that advancing consumer welfare is the sole purpose of antitrust. But the consumer welfare approach to antitrust is unduly narrow and betrays congressional intent, as evident from legislative history and as documented by a vast body of scholarship. I argue in this Note that the rise of dominant internet platforms freshly reveals the shortcomings of the consumer welfare framework and that it should be abandoned.

Strikingly, the current approach fails even if one believes that consumer interests should remain paramount. Focusing primarily on price and output undermines effective antitrust enforcement by delaying intervention until market power is being actively exercised, and largely ignoring whether and how it is being acquired. In other words, pegging anticompetitive harm to high prices and/or lower output—while disregarding the market structure and competitive process that give rise to this market power—restricts intervention to the moment when a company has already acquired sufficient dominance to distort competition.

This approach is misguided because it is much easier to promote competition at the point when a market risks becoming less competitive than it is at the point when a market is no longer competitive. The antitrust laws reflect this recognition, requiring that enforcers arrest potential restraints to competition “in their incipency.”<sup>145</sup> But the Chicago School’s hostility to false positives—and insistence that market power and high concentration both reflect and generate efficiency<sup>146</sup>—has undermined this incipency standard and enfeebled enforcement as a whole. Indeed, enforcers have largely abandoned section 2 monopolization claims,<sup>147</sup> which—by virtue of assessing how a single company amasses and exercises its power—traditionally involved an inquiry into structure. By instead relying primarily on price and output effects as metrics of competition, enforcers risk overlooking the structural weakening of competition until it becomes difficult to address effectively, an approach that undermines consumer welfare.

Indeed, growing evidence shows that the consumer welfare frame has led to higher prices and few efficiencies, falling by its own metrics.<sup>148</sup> It arguably has further contributed to a decline in new business growth, resulting in reduced opportunities for entrepreneurs and a stagnant economy.<sup>149</sup> The long-term interests of consumers include product quality, variety, and innovation—factors best promoted through both a robust competitive process and open markets. By contrast, allowing a highly concentrated market structure to persist endangers these long-term interests, since firms in uncompetitive markets need not compete to improve old products or tinker to create new ones. Even if we accept consumer welfare as the touchstone of antitrust, ensuring a competitive process—by looking, in part, to how a market is structured—ought to be key. Empirical studies revealing that the consumer welfare frame has resulted in higher prices—falling even by its own terms—support the need for a different approach.

### B. Antitrust Laws Promote Competition To Serve a Variety of Interests

Legislative history reveals that the idea that “Congress designed the Sherman Act as a ‘consumer welfare prescription’”<sup>150</sup> is wrong.<sup>151</sup> Congress enacted antitrust laws to rein in the power of industrial trusts, the large business organizations that had emerged in the late nineteenth century. Responding to a fear of concentrated power, antitrust sought to distribute it. In this sense, antitrust was “guided by principles.”<sup>152</sup> The law was “for diversity and access to markets; it was against high concentration and abuses of power.”<sup>153</sup>

More relevant than any single goal was this general vision. When Congress passed the Sherman Act in 1890, Senator John Sherman called it “a bill of rights, a charter of liberty,” and stressed its importance in political terms.<sup>154</sup> On the floor of the Senate he declared,

If we will not endure a king as a political power, we should not endure a king over the production, transportation, and sale of any of the necessities of life. If we would not submit to an emperor, we should not submit to an autocrat of trade, with power to prevent competition and to fix the price of any commodity.<sup>155</sup>

In other words, what was at stake in keeping markets open—and keeping them free from industrial monarchs—was freedom.

Animating this vision was the understanding that concentration of economic power also consolidates political power, “breed[ing] antidemocratic political pressures.”<sup>156</sup> This would occur through enabling a small minority to amass outsized wealth, which they could then use to influence government. But it would also occur by permitting “private discretion by a few in the economic sphere” to “control[] the welfare of all,” undermining individual and business freedom.<sup>157</sup> In the lead up to the passage of the Sherman Act, Senator George Hoar warned that monopolies were “a menace to republican institutions themselves.”<sup>158</sup>

This vision encompassed a variety of ends. For one, competition policy would prevent large firms from extracting wealth from producers and consumers in the form of monopoly profits.<sup>159</sup> Senator Sherman, for example, described overcharges by monopolists as “extortion which makes the people poor,”<sup>160</sup> while Senator Richard Coke referred to them as “robbery.”<sup>161</sup> Representative John Heard announced that trusts had “stolen millions from the people,”<sup>162</sup> and Congressman Ezra Taylor noted that the beef trust “robs the farmer on the one hand and the consumer on the other.”<sup>163</sup> In the words of Senator James George, “[t]hey aggregate to themselves great enormous wealth by extortion which makes the people poor.”<sup>164</sup>

Notably, this focus on wealth transfers was not solely economic. Leading up to the passage of the Sherman Act, price levels in the United States were stable or slowly decreasing.<sup>165</sup> If the exclusive concern had been higher prices, then Congress could have focused on those industries where prices were, indeed, high or still rising. The fact that Congress chose to denounce unjust redistribution suggests that something else was at play—namely, that the public was “angered less by the reduction in their wealth than by the way in which the wealth was extracted.”<sup>166</sup> In other words, though the harm was being registered through an economic effect—a wealth transfer—the underlying source of the grievance was also political.<sup>167</sup>

Another distinct goal was to preserve open markets, in order to ensure that new businesses and entrepreneurs had a fair shot at entry. Several Congressmen advocated for the Federal Trade Commission Act because it would help promote small business. Senator James Reed expressly noted that Congress’s aim in passing the law was to keep markets open to independent firms.<sup>168</sup> When discussing the Sherman Act, Senator George lamented that if large-scale industry were allowed to grow unchecked, it would “crush out all small men, all small capitalists, all small enterprises.”<sup>169</sup>

Through the 1950s, courts and enforcers applied antitrust laws to promote this variety of aims. While the vigor and tenor of enforcement varied, there was an overarching understanding that antitrust served to protect what Justice Louis Brandeis called “industrial liberty.”<sup>170</sup> Key to this vision was the recognition that excessive concentrations of private power posed a public threat, empowering the interests of a few to steer collective outcomes. “Power that controls the economy should be in the hands of elected representatives of the people, not in the hands of an industrial oligarchy,” Justice William O. Douglas wrote.<sup>171</sup> Decentralizing this power would ensure that “the fortunes of the people will not be dependent on the whim or caprice, the political prejudice, the emotional stability of a few self-appointed men.”<sup>172</sup>

As described in Part I, Chicago School scholars upended this traditional approach, concluding that the only legitimate goal of antitrust is consumer welfare, best promoted through enhancing economic efficiency. Notably, some prominent liberals—including John Kenneth Galbraith—ratified this idea, championing centralization.<sup>173</sup> In the wake of high inflation in the 1970s, Ralph Nader and other consumer advocates also came to support an antitrust regime centered on lower prices, according with the Chicago School’s view.<sup>174</sup> By orienting antitrust toward material rather than political ends, both the neoclassical school and its critics effectively embraced concentration over competition.<sup>175</sup>

Focusing antitrust exclusively on consumer welfare is a mistake.<sup>176</sup> For one, it betrays legislative intent, which makes clear that Congress passed antitrust laws to safeguard against excessive concentrations of economic power. This vision promotes a variety of aims, including the preservation of open markets, the protection of producers and consumers from monopoly abuse, and the dispersion of political<sup>177</sup> and economic control.<sup>178</sup> Secondly, focusing on consumer welfare disregards the host of other ways that excessive concentration can harm us—enabling firms to squeeze suppliers and producers, endangering system stability (for instance, by allowing companies to become too big to fail),<sup>179</sup> or undermining media diversity,<sup>180</sup> to name a few. Protecting this range of interests requires an approach to antitrust that focuses on the neutrality of the competitive process and the openness of market structures.

### C. Promoting Competition Requires Analysis of Process and Structure

The Chicago School's embrace of consumer welfare as the sole goal of antitrust is problematic for at least two reasons. First, as described in Section II.B, this idea contravenes legislative history, which shows that Congress passed antitrust laws to safeguard against excessive concentrations of private power. It recognized, in turn, that this vision would protect a host of interests, which the sole focus on "consumer welfare" disregards. Second, by adopting this new goal, the Chicago School shifted the analytical emphasis away from process—the conditions necessary for competition—and toward an outcome—namely, consumer welfare.<sup>181</sup> In other words, a concern about structure (is power sufficiently distributed to keep markets competitive?) was replaced by a calculation (did prices rise?).<sup>182</sup> This approach is inadequate to promote real competition, a failure that is amplified in the case of dominant online platforms.

Antitrust doctrine has evolved to reflect this redefinition. The recoupment requirement in predatory pricing, for example, reflects the idea that competition is harmed only if the predator can ultimately charge consumers supracompetitive prices.<sup>183</sup> This logic is agnostic about process and structure; it measures the health of competition primarily through effects on price and output. The same is true in the case of vertical integration. The modern view of integration largely assumes away barriers to entry, an element of structure, presuming that any advantages enjoyed by the integrated firm trace back to efficiencies.<sup>184</sup>

More generally, modern doctrine assumes that market power is not inherently harmful and instead may result from and generate efficiencies. In practice, this presumes that market power is benign unless it leads to higher prices or reduced output—again glossing over questions about the competitive process in favor of narrow calculations.<sup>185</sup> In other words, this approach equates harm entirely with whether a firm chooses to exercise its market power through price-based levers, while disregarding whether a firm has developed this power, distorting the competitive process in some other way.<sup>186</sup> But allowing firms to amass market power makes it more difficult to meaningfully check that power when it is eventually exercised. Companies may exploit their market power in a host of competition-distorting ways that do not directly lead to short-term price and output effects.

I propose that a better way to understand competition is by focusing on competitive process and market structure.<sup>187</sup> By arguing for a focus on market structure, I am not advocating a strict return to the structure-conduct-performance paradigm. Instead, I claim that seeking to assess competition without acknowledging the role of structure is misguided. This is because the best guardian of competition is a competitive process, and whether a market is competitive is inextricably linked to—even if not solely determined by—how that market is structured. In other words, an analysis of the competitive process and market structure will offer better insight into the state of competition than do measures of welfare.

Moreover, this approach would better protect the range of interests that Congress sought to promote through preserving competitive markets, as described in Section II.B. Foundational to these interests is the distribution of ownership and control—inescapably a question of structure. Promoting a competitive process also minimizes the need for regulatory involvement. A focus on process assigns government the task of creating background conditions, rather than intervening to manufacture or interfere with outcomes.<sup>188</sup>

In practice, adopting this approach would involve assessing a range of factors that give insight into the neutrality of the competitive process and the openness of the market. These factors include: (1) entry barriers, (2) conflicts of interest, (3) the emergence of gatekeepers or bottlenecks, (4) the use of and control over data, and (5) the dynamics of bargaining power. An approach that took these factors seriously would involve an assessment of how a market is structured and whether a single firm had acquired sufficient power to distort competitive outcomes.<sup>189</sup> Key questions involving these factors would be: What lines of business is a firm involved in and how do these lines of business interact? Does the structure of the market create or reflect dependencies? Has a dominant player emerged as a gatekeeper so as to risk distorting competition?

Attention to structural concerns and the competitive process are especially important in the context of online platforms, where price-based measures of competition are inadequate to capture market dynamics, particularly given the role and use of data.<sup>190</sup> As internet platforms mediate a growing share of both communications and commercial activity, ensuring that our framework fits how competition actually works in these markets is vital. Below I document facets of Amazon's power, trace the source of its growth, and analyze the effects of its dominance. Doing so through the lens of structure and process enables us to make sense of the company's strategy and illuminates anticompetitive aspects of its business.

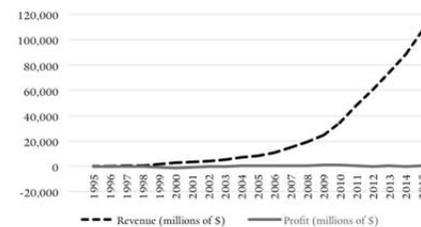
### III. Amazon's Business Strategy

Amazon has established dominance as an online platform thanks to two elements of its business strategy: a willingness to sustain losses and invest aggressively at the expense of profits, and integration across multiple business lines.<sup>191</sup> These facets of its strategy are independently significant and closely interlinked—indeed, one way it has been able to expand into so many areas is through foregoing returns. This strategy—pursuing market share at the expense of short-term returns—defies the Chicago School's assumption of rational, profit-seeking market actors. More significantly, Amazon's choice to pursue heavy losses while also integrating across sectors suggests that in order to fully understand the company and the structural power it is amassing, we must view it as an integrated entity. Seeking to gauge the firm's market role by isolating a particular line of business and assessing prices in that segment fails to capture both (1) the true shape of the company's dominance and (2) the ways in which it is able to leverage advantages gained in one sector to boost its business in another.

#### A. Willingness To Forego Profits To Establish Dominance

Recently, Amazon has started reporting consistent profits, largely due to the success of Amazon Web Services, its cloud computing business.<sup>192</sup> Its North America retail business runs on much thinner margins, and its international retail business still runs at a loss.<sup>193</sup> But for the vast majority of its twenty years in business, losses—not profits—were the norm. Through 2013, Amazon had generated a positive net income in just over half of its financial reporting quarters. Even in quarters in which it did enter the black, its margins were razor-thin, despite astounding growth. The graph below captures the general trend.

Figure 1. Amazon's Profits:



Just as striking as Amazon's lack of interest in generating profit has been investors' willingness to back the company.<sup>195</sup> With the exception of a few quarters in 2014, Amazon's shareholders have poured money in despite the company's penchant for losses. On a regular basis, Amazon would report losses, and its share price would soar.<sup>196</sup> As one analyst told the New York Times, "Amazon's stock price doesn't seem to be correlated to its actual experience in any way."<sup>197</sup>

Analysts and reporters have spilled substantial ink seeking to understand the phenomenon. As one commentator joked in a widely circulated post, "Amazon, as best I can tell, is a charitable organization being run by elements of the investment community for the benefit of consumers."<sup>198</sup>

In some ways, the puzzlement is for naught: Amazon's trajectory reflects the business philosophy that Bezos outlined from the start. In his first letter to shareholders, Bezos wrote:

We believe that a fundamental measure of our success will be the shareholder value we create over the long term. This value will be a direct result of our ability to extend and solidify our current market leadership position . . . . We first measure ourselves in terms of the metrics most indicative of our market leadership: customer and revenue growth, the degree to which our customers continue to purchase from us on a repeat basis, and the strength of our brand. We have invested and will continue to invest aggressively to expand and leverage our customer base, brand, and infrastructure as we move to establish an enduring franchise.<sup>199</sup>

In other words, the premise of Amazon's business model was to establish scale. To achieve scale, the company prioritized growth. Under this approach, aggressive investing would be key, even if that involved slashing prices or spending billions on expanding capacity, in order to become consumers' one-stop-shop. This approach meant that Amazon "may make decisions and weigh tradeoffs differently than some companies," Bezos warned.<sup>200</sup> "At this stage, we choose to prioritize growth because we believe that scale is central to achieving the potential of our business model."<sup>201</sup>

The insistent emphasis on "market leadership" (Bezos relies on the term six times in the short letter)<sup>202</sup> signaled that Amazon intended to dominate. And, by many measures, Amazon has succeeded. Its year-on-year revenue growth far outpaces that of other online retailers.<sup>203</sup> Despite efforts by big-box competitors like Walmart, Sears, and Macy's to boost their online operations, no rival has succeeded in winning back market share.<sup>204</sup>

One of the primary ways Amazon has built a huge edge is through Amazon Prime, the company's loyalty program, in which Amazon has invested aggressively. Initiated in 2005, Amazon Prime began by offering consumers unlimited two-day shipping for \$79.<sup>205</sup> In the years since, Amazon has bundled in other deals and perks, like renting e-books and streaming music and video, as well as one-hour or same-day delivery. The program has arguably been the retailer's single biggest driver of growth.<sup>206</sup> Amazon does not disclose the exact number of Prime subscribers, but analysts believe the number of users has reached 63 million—19 million more than in 2015.<sup>207</sup> Membership doubled between 2011 and 2013; analysts expect it to "easily double again by 2017."<sup>208</sup> By 2020, it is estimated that half of U.S. households may be enrolled.<sup>209</sup>

As with its other ventures, Amazon lost money on Prime to gain buy-in. In 2011 it was estimated that each Prime subscriber cost Amazon at least \$90 a year—\$55 in shipping, \$35 in digital video—and that the company therefore took an \$11 loss annually for each customer.<sup>210</sup> One Amazon expert tallies that Amazon has been losing \$1 billion to \$2 billion a year on Prime memberships.<sup>211</sup> The full cost of Amazon Prime is steeper yet, given that the company has been investing heavily in warehouses, delivery facilities, and trucks, as part of its plan to speed up delivery for Prime customers—expenditures that regularly push it into the red.<sup>212</sup>

Despite these losses—or perhaps because of them—Prime is considered crucial to Amazon's growth as an online retailer. According to analysts, customers increase their purchases from Amazon by about 150% after they become Prime members.<sup>213</sup> Prime members comprise 47% of Amazon's U.S. shoppers.<sup>214</sup> Amazon Prime members also spend more on the company's website—an average of \$1,500 annually, compared to \$625 spent annually by non-Prime members.<sup>215</sup> Business experts note that by making shipping free, Prime "successfully strips out paying for . . . the leading consumer burden of online shopping."<sup>216</sup> Moreover, the annual fee drives customers to increase their Amazon purchases in order to maximize the return on their investment.<sup>217</sup>

As a result, Amazon Prime users are both more likely to buy on its platform and less likely to shop elsewhere. "[Sixty-three percent] of Amazon Prime members carry out a paid transaction on the site in the same visit," compared to 13% of non-Prime members.<sup>218</sup> For Walmart and Target, those figures are 5% and 2% respectively.<sup>219</sup> One study found that less than 1% of Amazon Prime members are likely to consider competitor retail sites in the same shopping session. Non-Prime members, meanwhile, are eight times more likely than Prime members to shop between both Amazon and Target in the same session.<sup>220</sup> In the words of one former Amazon employee who worked on the Prime team, "It was never about the \$79. It was really about changing people's mentality so they wouldn't shop anywhere else."<sup>221</sup> In that regard, Amazon Prime seems to have proven successful.<sup>222</sup>

In 2014, Amazon hiked its Prime membership fee to \$99.<sup>223</sup> The move prompted some consumer ire, but 95% of Prime members surveyed said they would either definitely or probably renew their membership regardless,<sup>224</sup> suggesting that Amazon has created significant buy-in and that no competitor is currently offering a comparably valuable service at a lower price. It may, however, also reveal the general stickiness of online shopping patterns. Although competition for online services may seem to be "just one click away," research drawing on behavioral tendencies shows that the "switching cost" of changing web services can, in fact, be quite high.<sup>225</sup>

No doubt, Amazon's dominance stems in part from its first-mover advantage as a pioneer of large-scale online commerce. But in several key ways, Amazon has achieved its position through deeply cutting prices and investing heavily in growing its operations—both at the expense of profits. The fact that Amazon has been willing to forego profits for growth undercuts a central premise of contemporary predatory pricing doctrine, which assumes that predation is irrational precisely because firms prioritize profits over growth.<sup>226</sup> In this way, Amazon's strategy has enabled it to use predatory pricing tactics without triggering the scrutiny of predatory pricing laws.

#### **B. Expansion into Multiple Business Lines**

Another key element of Amazon's strategy—and one partly enabled by its capacity to thrive despite posting losses—has been to expand aggressively into multiple business lines.<sup>227</sup> In addition to being a retailer, Amazon is a marketing platform, a delivery and logistics network, a payment service, a credit lender, an auction house, a major book publisher, a producer of television and films, a fashion designer, a hardware manufacturer, and a leading provider of cloud server space and computing power.<sup>228</sup> For the most part, Amazon has expanded into these areas by acquiring existing firms.<sup>229</sup>

Involvement in multiple, related business lines means that, in many instances, Amazon's rivals are also its customers. The retailers that compete with it to sell goods may also use its delivery services, for example, and the media companies that compete with it to produce or market content may also use its platform or cloud infrastructure. At a basic level this arrangement creates conflicts of interest, given that Amazon is positioned to favor its own products over those of its competitors.

Critically, not only has Amazon integrated across select lines of business, but it has also emerged as central infrastructure for the internet economy. Reports suggest this was part of Bezos's vision from the start. According to early Amazon employees, when the CEO founded the business, "his underlying goals were not to build an online bookstore or an online retailer, but rather a 'utility' that would become essential to commerce."<sup>230</sup> In other words, Bezos's target customer was not only end-consumers but also other businesses.

Amazon controls key critical infrastructure for the Internet economy—in ways that are difficult for new entrants to replicate or compete against. This gives the company a key advantage over its rivals: Amazon's competitors have come to depend on it. Like its willingness to sustain losses, this feature of Amazon's power largely confounds contemporary antitrust analysis, which assumes that rational firms seek to drive their rivals out of business. Amazon's game is more sophisticated. By making itself indispensable to e-commerce, Amazon enjoys receiving business from its rivals, even as it competes with them. Moreover, Amazon gleans information from these competitors as a service provider that it may use to gain a further advantage over them as rivals—enabling it to further entrench its dominant position.

#### **IV. Establishing Structural Dominance**

Amazon now controls 46% of all e-commerce in the United States.<sup>231</sup> Not only is it the fastest-growing major retailer, but it is also growing faster than e-commerce as a whole.<sup>232</sup> In 2010, it employed 33,700 workers; by June 2016, it had 268,900.<sup>233</sup> It is enjoying rapid success even in sectors that it only recently entered. For example, the company "is expected to triple its share of the U.S. apparel market over the next five years."<sup>234</sup> Its clothing sales recently rose by \$1.1 billion—even as online sales at the six largest U.S. department stores fell by over \$500 million.<sup>235</sup>

These figures alone are daunting, but they do not capture the full extent of Amazon's role and power. Amazon's willingness to sustain losses and invest aggressively at the expense of profits, coupled with its integration across sectors, has enabled it to establish a dominant structural role in the market.

In the Sections that follow, I describe several examples of Amazon's conduct that illustrate how the firm has established structural dominance.<sup>236</sup> These examples—its handling of e-books and its battle with an independent online retailer—focus on predatory pricing practices. These cases suggest ways in which Amazon may benefit from predatory pricing even if the company does not raise the price of the goods on which it lost money. The other examples, Fulfillment-by-Amazon and Amazon Marketplace, demonstrate how Amazon has become an infrastructure company, both for physical delivery and e-commerce, and how this vertical integration implicates market competition. These cases highlight how Amazon can use its role as an infrastructure provider to benefit its other lines of business. These examples also demonstrate how high barriers to entry may make it difficult for potential competitors to enter these spheres, locking in

Amazon's dominance for the foreseeable future. All four of these accounts raise concerns about contemporary antitrust's ability to register and address the anticompetitive threat posed by Amazon and other dominant online platforms.

#### A. Below-Cost Pricing of Bestseller E-Books and the Limits of Modern Recoupment Analysis

Amazon entered the e-book market by pricing bestsellers below cost. Although this strategic pricing helped Amazon to establish dominance in the e-book market, the government perceived Amazon's cost cutting as benign, focusing on the profitability of e-books in the aggregate and characterizing the company's pricing of bestsellers as "loss leading" rather than predatory pricing. This failure to recognize Amazon's conduct as anticompetitive stems from a misunderstanding of online markets generally and of Amazon's strategy specifically. Additionally, analyzing the issues raised in this case suggests that Amazon could recoup its losses through means not captured by current antitrust analysis.

In late 2007, Amazon rolled out the Kindle, its e-reading device, and launched a new e-book library.<sup>237</sup> Before introducing the device, CEO Jeff Bezos had decided to price bestseller e-books at \$9.99, 238 significantly below the \$12 to \$30 that a new hardback typically costs.<sup>239</sup> Critically, the wholesale price at which Amazon was buying books from publishers had not dropped; it was instead choosing to price e-books below cost.<sup>240</sup> Analysts estimate that Amazon sold the Kindle device below manufacturing cost too.<sup>241</sup> Bezos's plan was to dominate the e-book selling business in the way that Apple had become the go-to platform for digital music.<sup>242</sup> The strategy worked: through 2009, Amazon dominated the e-book retail market, selling around 90% of all e-books.<sup>243</sup>

Publishers, fearing that Amazon's \$9.99 price point for e-books would permanently drive down the price that consumers were willing to pay for all books, sought to wrest back some control. When the opportunity came to partner with Apple to sell e-books through the iBookstore store, five of the "Big Six" publishers introduced agency pricing, whereby publishers would set the final retail price and Apple would get a 30% cut.<sup>244</sup> After securing this deal, MacMillan, one of the "Big Six," demanded that Amazon, too, adopt this pricing model.<sup>245</sup> Though it initially refused and delisted MacMillan's books,<sup>246</sup> Amazon ultimately relented, explaining to readers that "we will have to capitulate and accept Macmillan's terms because Macmillan has a monopoly over their own titles."<sup>247</sup> Other publishers followed suit, halting Amazon's ability to price e-books at \$9.99.<sup>248</sup>

In 2012, the DOJ sued the publishers and Apple for colluding to raise e-book prices.<sup>249</sup> In response to claims that the DOJ was going after the wrong actor—given that it was Amazon's predatory tactics that drove the publishers and Apple to join forces—the DOJ investigated Amazon's pricing strategies and found "persuasive evidence lacking" to show that the company had engaged in predatory practices.<sup>250</sup> According to the government, "from the time of its launch, Amazon's e-book distribution business has been consistently profitable, even when substantially discounting some newly released and bestselling titles."<sup>251</sup>

Judge Cote, who presided over the district court trial, refrained from affirming the government's conclusion.<sup>252</sup> Still, the government's argument illustrates the dominant framework that courts and enforcers use to analyze predation—and how it falls short. Specifically, the government erred by analyzing the profitability of Amazon's e-book business in the aggregate and by characterizing the conduct as "loss leading" rather than potentially predatory pricing.<sup>253</sup> These missteps suggest a failure to appreciate two critical aspects of Amazon's practices: (1) how steep discounting by a firm on a platform-based product creates a higher risk that the firm will generate monopoly power than discounting on non-platform goods and (2) the multiple ways Amazon could recoup losses in ways other than raising the price of the same e-books that it discounted.

On the first point, the government argued that Amazon was not engaging in predation because in the aggregate, Amazon's e-books business was profitable. This perspective overlooks how heavy losses on particular lines of e-books (bestsellers, for example, or new releases) may have thwarted competition, even if the e-books business as a whole was profitable. That the DOJ chose to define the relevant market as e-books—rather than as specific lines, like bestseller e-books—reflects a deeper mistake: the failure to recognize how the economics of platform-based products differ in crucial ways from non-platform goods. <sup>254</sup> As a result, the DOJ analyzed the e-book market as it would the market for physical books.

One indication of this failure to appreciate the difference between physical books and e-books is that the government and Judge Cote treated Amazon's below-cost pricing as loss leading,<sup>255</sup> rather than as predatory pricing.<sup>256</sup> The difference between loss leading and predatory pricing is not spelled out in law, but the distinction turns on the nature of the below-cost pricing, specifically its intensity and the intent motivating it. Judge Cote's use of "loss leading" revealed a view that "Amazon's below-cost pricing was (a) selective rather than pervasive, and (b) not intended to generate monopoly power."<sup>257</sup> On this view, Amazon's aim was to trigger additional sales of other products sold by Amazon, rather than to drive out competing e-book sellers and acquire the power to increase e-book prices.<sup>258</sup> In other words, because Amazon's alleged short-term aim was to sell more e-readers and e-books—rather than to harm its rivals and raise prices—its conduct is considered loss leading rather than predatory pricing. What both the DOJ and the district court missed, however, is the way in which below-cost pricing in this instance entrenched and reinforced Amazon's dominance in ways that loss leading by physical retailers does not.

Unlike with online shopping, each trip to a brick-and-mortar store is discrete. If, on Monday, Walmart heavily discounts the price of socks and you are looking to buy socks, you might visit, buy socks, and—because you are already there—also buy milk. On Thursday, the fact that Walmart had discounted socks on Monday does not necessarily exert any tug; you may return to Walmart because you now know that Walmart often has good bargains, but the fact that you purchased socks from Walmart on Monday is not, in itself, a reason to return.

Internet retail is different. Say on Monday, Amazon steeply discounts the e-book version of Harper Lee's *Go Set a Watchman*, and you purchase both a Kindle and the e-book. On Thursday, you would be inclined to revisit Amazon—and not simply because you know it has good bargains. Several factors extend the tug. For one, Amazon, like other e-book sellers, has used a scheme known as "digital rights management" (DRM), which limits the types of devices that can read certain e-book formats.<sup>259</sup> Compelling readers to purchase a Kindle through cheap e-books locks them into future e-book purchases from Amazon.<sup>260</sup> Moreover, buying—or even browsing—e-books on Amazon's platform hands the company information about your reading habits and preferences, data the company uses to tailor recommendations and future deals.<sup>261</sup> Replicated across a few more purchases, Amazon's lock-in becomes strong. It becomes unlikely that a reader will then purchase a Nook and switch to buying e-books through Barnes & Noble, even if that company is slashing prices.

Put differently, loss leading pays higher returns with platform-based e-commerce—and specifically with digital products like e-books—than it does with brick-and-mortar stores. The marginal value of the first sale and early sales in general is much higher for e-books than for print books because there are lock-in effects at play, due both to technical design and the possibilities for and value of personalization.

By treating e-commerce and digital goods the same as physical stores and goods, both the government and Judge Cote missed the anticompetitive implications of Amazon's below-cost pricing. Though the immediate effect of Amazon's pricing of bestseller e-books may have been to sell more e-books generally, that tactic has also positioned Amazon to dominate the market in a way that sets it up to raise future prices. In this context, the traditional distinction between loss leading and predatory pricing is strained.

Instead of recognizing that the economics of platforms meant that below-cost pricing on a platform-hosted good would tend to facilitate long-term dominance, the government took comfort that the industry was "dynamic and evolving" and concluded that the "presence and continued investment by technology giants, multinational book publishers, and national retailers in e-books businesses" rendered an Amazon-dominated market unlikely.<sup>262</sup> Yet Amazon's early lead has, in fact, translated to long-term dominance. It controls around 65% of the e-book market today,<sup>263</sup> while its share of the e-reader market hovers around 74%.<sup>264</sup> Players that appeared up-and-coming even a few years ago are now retreating from the market. Sony closed its U.S. Reader store and is no longer introducing new e-readers to the U.S. market.<sup>265</sup> Barnes & Noble, meanwhile, has slashed funding for the Nook by 74%.<sup>266</sup> The only real e-books competitor left standing is Apple.<sup>267</sup>

Because the government deflected predatory pricing claims by looking at aggregate profitability, neither the government nor the court reached the question of recoupment. Given that—under current doctrine—whether below-cost pricing is predatory or not turns on whether a firm recoups its losses, we should examine how Amazon could use its dominance to recoup its losses in ways that are more sophisticated than what courts generally consider or are able to assess.

Most obviously, Amazon could earn back the losses it generated on bestseller e-books by raising prices of either particular lines of e-books or e-books as a whole. This intra-product market form of recoupment is what courts look for. However, it remains unclear whether Amazon has hiked e-book prices because, as the *New York Times* noted, "[i]t is difficult to comprehensively track the movement of prices on Amazon," which means that any evidence of price trends is "anecdotal and fragmentary."<sup>268</sup> As Amazon customers can attest, Amazon's prices fluctuate rapidly and with no explanation.<sup>269</sup>

This underscores a basic challenge of conducting recoupment analysis with Amazon: it may not be apparent when and by how much Amazon raises prices. Online commerce enables Amazon to obscure price hikes in at least two ways: rapid, constant price fluctuations and personalized pricing.<sup>270</sup> Constant price fluctuations diminish our ability to discern pricing trends. By one account, Amazon changes prices

more than 2.5 million times each day.<sup>271</sup> Amazon is also able to tailor prices to individual consumers, known as first-degree price discrimination. There is no public evidence that Amazon is currently engaging in personalized pricing,<sup>272</sup> but online retailers generally are devoting significant resources to analyzing how to implement it.<sup>273</sup> A major topic of discussion at the 2014 National Retail Federation annual convention, for example, was how to introduce discriminatory pricing without triggering consumer backlash.<sup>274</sup> One mechanism discussed was highly personalized coupons sent at the point of sale, which would avoid the need to show consumers different prices but would still achieve discriminatory pricing.<sup>275</sup>

If retailers—including Amazon—implement discriminatory pricing on a wide scale, each individual would be subject to his or her own personal price trajectory, eliminating the notion of a single pricing trend. It is not clear how we would measure price hikes for the purpose of recoupment analysis in that scenario. There would be no obvious conclusions if some consumers faced higher prices while others enjoyed lower ones. But given the magnitude and accuracy of data that Amazon has collected on millions of users, tailored pricing is not simply a hypothetical power.<sup>276</sup> Discerning whether and by how much Amazon raises book prices will be more difficult than the Matsushita or Brooke Group Courts could have imagined.<sup>277</sup>

It is true that brick-and-mortar stores also collect data on customer purchasing habits and send personalized coupons. But the types of consumer behavior that internet firms can access—how long you hover your mouse on a particular item, how many days an item sits in your shopping basket before you purchase it, or the fashion blogs you visit before looking for those same items through a search engine—is uncharted ground. The degree to which a firm can tailor and personalize an online shopping experience is different in kind from the methods available to a brick-and-mortar store—precisely because the type of behavior that online firms can track is far more detailed and nuanced. And unlike brick-and-mortar stores—where everyone at least sees a common price (even if they go on to receive discounts)—internet retail enables firms to entirely personalize consumer experiences, which eliminates any collective baseline from which to gauge price increases or decreases.

The decision of which product market in which Amazon may choose to raise prices is also an open question—and one that current predatory pricing doctrine ignores. Courts generally assume that a firm will recoup by increasing prices on the same goods on which it previously lost money. But recoupment across markets is also available as a strategy, especially for firms as diversified across products and services as Amazon. Reporting suggests the company did just this in 2013, by hiking prices on scholarly and small-press books and creating the risk of a “two-tier system where some books are priced beyond an audience’s reach.”<sup>278</sup> Although Amazon may be recouping its initial losses in e-books through markups on physical books, this cross-market recoupment is not a scenario that enforcers or judges generally consider.<sup>279</sup> One possible reason for this neglect is that Chicago School scholarship, which assumes recoupment in single-product markets is unlikely, also holds recoupment in multi-product scenarios to be implausible.<sup>280</sup>

Although current predatory pricing doctrine focuses only on recoupment through raising prices for consumers, Amazon could also recoup its losses by imposing higher fees on publishers. Large book retailer chains like Barnes & Noble have long used their market dominance to charge publishers for favorable product placement, such as displays in a storefront window or on a prominent table.<sup>281</sup> Amazon’s dominance in the e-book market has enabled it to demand similar fees for even the most basic of services. For example, when renewing its contract with Hachette last year, Amazon demanded payments for services including the pre-order button, personalized recommendations, and an Amazon employee assigned to the publisher.<sup>282</sup> In the words of one person close to the negotiations, Amazon “is very inventive about what we’d call standard service. . . . They’re teasing out all these layers and saying, ‘If you want that service, you’ll have to pay for it.’”<sup>283</sup> By introducing fees on services that it previously offered for free, Amazon has created another source of revenue. Amazon’s power to demand these fees—and recoup some of the losses it sustained in below-cost pricing—stems from dominance partly built through that same below-cost pricing. The fact that Amazon has itself vertically integrated into book publishing—and hence can promote its own content—may give it additional leverage to hike fees. Any publisher that refuses could see Amazon favor its own books over the publisher’s, reflecting a conflict of interest I discuss further in Section IV.D. It is not uncommon for half of the titles on Amazon’s Kindle bestseller list to be its own.<sup>284</sup>

While not captured by current antitrust doctrine, the pressure Amazon puts on publishers merits concern.<sup>285</sup> For one, consolidation among book sellers—partly spurred by Amazon’s pricing tactics and demands for better terms from publishers—has also spurred consolidation among publishers. Consolidation among publishers last reached its heyday in the 1990s—as publishing houses sought to bulk up in response to the growing clout of Borders and Barnes & Noble—and by the early 2000s, the industry had settled into the “Big Six.”<sup>286</sup> This trend has cost authors and readers alike, leaving writers with fewer paths to market and readers with a less diverse marketplace. Since Amazon’s rise, the major publishers have merged further—thinning down to five, with rumors of more consolidation to come.<sup>287</sup>

Second, the increasing cost of doing business with Amazon is upending the publishers’ business model in ways that further risk sapping diversity. Traditionally, publishing houses used a cross-subsidization model whereby they would use their best sellers to subsidize weightier and riskier books requiring greater upfront investment.<sup>288</sup> In the face of higher fees imposed by Amazon, publishers say they are less able to invest in a range of books. In a recent letter to DOJ, a group of authors wrote that Amazon’s actions have “extract[ed] vital resources from the [book] industry in ways that lessen the diversity and quality of books.”<sup>289</sup> The authors noted that publishers have responded to Amazon’s fees by both publishing fewer titles and focusing largely on books by celebrities and bestselling authors.<sup>290</sup> The authors also noted, “Readers are presented with fewer books that espouse unusual, quirky, offbeat, or politically risky ideas, as well as books from new and unproven authors. This impoverishes America’s marketplace of ideas.”<sup>291</sup>

Amazon’s conduct would be readily cognizable as a threat under the pre-Chicago School view that predatory pricing laws specifically and antitrust generally promoted a broad set of values. Under the predatory pricing jurisprudence of the early and mid-twentieth century, harm to the diversity and vibrancy of ideas in the book market may have been a primary basis for government intervention. The political risks associated with Amazon’s market dominance also implicate some of the major concerns that animate antitrust laws. For instance, the risk that Amazon may retaliate against books that it disfavors—either to impose greater pressure on publishers or for other political reasons—raises concerns about media freedom. Given that antitrust authorities previously considered diversity of speech and ideas a factor in their analysis, Amazon’s degree of control, too, should warrant concern.

Even within the narrower “consumer welfare” framework, Amazon’s attempts to recoup losses through fees on publishers should be understood as harmful. A market with less choice and diversity for readers amounts to a form of consumer injury. That DOJ ignored this concern in its suit against Apple and the publishers suggests that its conception of predatory pricing fails to capture/overlooks the full suite of harms that Amazon’s actions may cause.<sup>292</sup>

Amazon’s below-cost pricing in the e-book market—which enabled it to capture 65% of that market,<sup>293</sup> a sizable share by any measure—strains predatory pricing doctrine in several ways. First, Amazon is positioned to recoup its losses by raising prices on less popular or obscure e-books, or by raising prices on print books. In either case, Amazon would be recouping outside the original market where it sustained losses (bestseller e-books), so courts are unlikely to look for or consider these scenarios. Additionally, constant fluctuations in prices and the ability to price discriminate enable Amazon to raise prices with little chance of detection. Lastly, Amazon could recoup its losses by extracting more from publishers, who are dependent on its platform to market both e-books and print books. This may diminish the quality and breadth of the works that are published, but since this is most directly a supplier-side rather than buyer-side harm, it is less likely that a modern court would consider it closely. The current predatory pricing framework fails to capture the harm posed to the book market by Amazon’s tactics.

## **B. Acquisition of Quidsi and Flawed Assumptions About Entry and Exit Barriers**

In addition to using below-cost pricing to establish a dominant position in e-books, Amazon has also used this practice to put pressure on and ultimately acquire a chief rival. This history challenges contemporary antitrust law’s assumption that predatory pricing cannot be used to establish dominance. While theory may predict that entry barriers for online retail are low, this account shows that in practice significant investment is needed to establish a successful platform that will attract traffic. Finally, Amazon’s conduct suggests that psychological intimidation can discourage new entry that would challenge a dominant player’s market power.

In 2008, Quidsi was one of the world’s fastest growing e-commerce companies.<sup>294</sup> It oversaw several subsidiaries: Diapers.com (focused on baby care), Soap.com (focused on household essentials), and BeautyBar.com (focused on beauty products). Amazon expressed interest in acquiring Quidsi in 2009, but the company’s founders declined Amazon’s offer.<sup>295</sup>

Shortly after Quidsi rejected Amazon’s overture, Amazon cut its prices for diapers and other baby products by up to 30%.<sup>296</sup> By reconfiguring their prices, Quidsi executives saw that Amazon’s pricing bots—software “that carefully monitors other companies’ prices and adjusts Amazon’s to match”—were tracking Diapers.com and would immediately slash Amazon’s prices in response to Quidsi’s changes.<sup>297</sup> In September 2010, Amazon rolled out Amazon Mom, a new service that offered a year’s worth of free two-day Prime shipping (which usually cost \$79 a year).<sup>298</sup> Customers could also secure an additional 30% discount on diapers by signing up for monthly deliveries as part of a service known as “Subscribe and Save.”<sup>299</sup> Quidsi executives “calculated that Amazon was on track to lose \$100 million over three months in the diaper category alone.”<sup>300</sup>

Eventually, Amazon's below-cost pricing started eating into Diapers.com's growth, and it "slowed under Amazon's pricing pressure."<sup>301</sup> Investors, meanwhile, "grew wary of pouring more money" into Quidsi, given the challenge from Amazon.<sup>302</sup> Struggling to keep up with Amazon's pricing war, Quidsi's owners began talks with Walmart about potentially selling the business. Amazon intervened and made an aggressive counteroffer.<sup>303</sup> Although Walmart offered a higher final bid, "the Quidsi executives stuck with Amazon, largely out of fear."<sup>304</sup> The FTC reviewed the Amazon-Quidsi deal and decided that it did not trigger anticompetitive concerns.<sup>305</sup> Through its purchase of Quidsi, Amazon eliminated a leading competitor in the online sale of baby products. Amazon achieved this by slashing prices and bleeding money,<sup>306</sup> losses that its investors have given it a free pass to incur—and that a smaller and newer venture like Quidsi, by contrast, could not maintain.

After completing its buy-up of a key rival—and seemingly losing hundreds of millions of dollars in the process—Amazon went on to raise prices. In November 2011, a year after buying out Quidsi, Amazon shut down new memberships in its Amazon Mom program.<sup>307</sup> Though the company has since reopened the program, it has continued to scale back the discounts and generous shopping terms of the original offer. As of February 2012, discounts that had previously been 30% were reduced to 20%, and the one year of free Prime membership was cut to three months.<sup>308</sup> In November 2014, the company hiked prices further: members purchasing more than four items in a month would no longer receive the general 20% discount, and the 20% discount on baby wipes—one of the program's top-selling products—was cut to 5%.<sup>309</sup> Summarizing the series of changes, one journalist observed, "The Amazon Mom program has become much less generous than it was when it was introduced in 2010."<sup>310</sup> In online forums where consumers expressed frustrations with the changes, several users said they would be taking their business from Amazon and returning to Diapers.com—which, other users pointed out, was no longer possible.<sup>311</sup> Through its strategy, Amazon now holds a strong position in the baby-product market.<sup>312</sup>

Amazon's conduct runs counter to contemporary predatory pricing thinking, which contends that predation is no path to buying up a competitor. In *The Antitrust Paradox*, Bork wrote, "[T]he modern law of horizontal mergers makes it all but impossible for the predator to bring the war to an end by purchasing his victim. To accomplish the predator's purpose, the merger must create a monopoly" and law "would preclude the attainment of the monopoly necessary to make predation profitable."<sup>313</sup> For sectors with low entry costs, Bork writes, this strategy is precluded by the constant possibility of reentry by other players. "A shoe retailer can be driven out rapidly, but reentry will be equally rapid."<sup>314</sup> In fields in which entry costs are high, Bork argued that exit by competitors is unlikely because management would need to believe that the predation had rendered the value of their facilities negligible. For instance, "[r]ailroading, which involves specialized facilities, is difficult to enter, but the potential victim of predation would be difficult to drive out precisely because railroad facilities are not useful in other industries."<sup>315</sup>

Does online retailing of baby products resemble shoe retailing or railroading? Given the absence of formal barriers, entry should be easy: unlike railroading, selling baby products online requires no heavy investment or fixed costs. However, the economics of online retailing are not quite like traditional shoe retailing. Given that attracting traffic and generating sales as an independent online retailer involves steep search costs, the vast majority of online commerce is conducted on platforms, central marketplaces that connect buyers and sellers. Thus, in practice, successful entry by a potential diaper retailer carries with it the cost of attempting to build a new online platform, or of creating a brand strong enough to draw traffic from an existing company's platform. As several commentators have observed, the practical barriers to successful and sustained entry as an online platform are very high, given the huge first-mover advantages stemming from data collection and network effects.<sup>316</sup> Moreover, the high exit barriers that Bork assumes for railroads—namely, that they would have to be convinced their facilities were worth more as scrap than as a railroad—do not apply to online platforms. Investment in online platforms lies not in physical infrastructure that might be repurposed, but in intangibles like brand recognition. These intangibles can be absorbed by a rival platform or retailer with greater ease than a railroad could take over a competing line.<sup>317</sup> In other words, online retailers like Quidsi face the high entry barriers of a railroad coupled with the relatively low exit costs typical of brick-and-mortar retailers—a combination that Bork, and the courts, failed to consider.

Courts also tend to discount that predators can use psychological intimidation to keep out the competition.<sup>318</sup> Amazon's history with Quidsi has sent a clear message to potential competitors—namely that, unless upstarts have deep pockets that allow them to bleed money in a head-to-head fight with Amazon, it may not be worth entering the market. Even as Amazon has raised the price of the Amazon Mom program, no newcomers have recently sought to challenge it in this sector, supporting the idea that intimidation may also serve as a practical barrier.<sup>319</sup>

As the world's largest online retailer, Amazon serves as a default starting point for many online shoppers: one study estimates that 44% of U.S. consumers "go[] directly to Amazon first to search for products."<sup>320</sup> Moreover, the swaths of data that Amazon has collected on consumers' browsing and searching histories can create the same problem that Google's would-be competitors encounter: "an insurmountable barrier to entry for new competition."<sup>321</sup> Though at least one venture opened shop with an eye to challenging Amazon,<sup>322</sup> its founders recently sold the firm to Walmart<sup>323</sup>—a move that suggests that the only players positioned to challenge Amazon are the existing giants. However, even this strategy has skeptics.<sup>324</sup> While established brick-and-mortar retailers like Target have tried to lure online consumers through discounts and low delivery costs,<sup>325</sup> Amazon remains the major online seller of baby products.<sup>326</sup> Although Amazon established its dominance in this market through aggressive price cutting and selling steeply at a loss, its actions have not triggered predatory pricing claims. In part, this is because prevailing theory assumes—per Bork's analysis—that market entry is easy enough for new rivals to emerge any time a dominant firm starts charging monopoly prices.

In this case, Amazon raised prices by cutting back discounts and (at least temporarily) refusing to expand the program. Even if a firm viewed the unmet demand as an invitation to enter, several factors would prove discouraging in ways that the existing doctrine does not consider. In theory, online retailing itself has low entry costs since anyone can set up shop online, without significant fixed costs. But in practice, successful entry in online markets is a challenge, requiring significant upfront investment. It requires either building up strong brand recognition to draw users to an independent site, or using an existing platform, such as Amazon or eBay, which can present other anticompetitive challenges.<sup>327</sup> Indeed, most independent retailers choose to sell through Amazon<sup>328</sup>—even when the business relationship risks undermining their business. The fact that no real rival has emerged, even after Amazon raised prices, undercuts the assumption embedded in current antitrust doctrine.

### C. Amazon Delivery and Leveraging Dominance Across Sectors

As its history with Quidsi shows, Amazon's willingness to sustain losses has allowed it to engage in below-cost pricing in order to establish dominance as an online retailer. Amazon has translated its dominance as an online retailer into significant bargaining power in the delivery sector, using it to secure favorable conditions from third-party delivery companies. This in turn has enabled Amazon to extend its dominance over other retailers by creating the Fulfillment-by-Amazon service and establishing its own physical delivery capacity. This illustrates how a company can leverage its dominant platform to successfully integrate into other sectors, creating anticompetitive dynamics. Retail competitors are left with two undesirable choices: either try to compete with Amazon at a disadvantage or become reliant on a competitor to handle delivery and logistics.

As Amazon expanded its share of e-commerce—and enlarged the e-commerce sector as a whole—it started comprising a greater share of delivery companies' business. For example, in 2015, UPS derived \$1 billion worth of business from Amazon alone.<sup>329</sup> The fact that it accounted for a growing share of these firms' businesses gave Amazon bargaining power to negotiate for lower rates.<sup>330</sup> By some estimates, Amazon enjoyed a 70% discount over regular delivery prices.<sup>331</sup> Delivery companies sought to make up for the discounts they gave to Amazon by raising the prices they charged to independent sellers,<sup>332</sup> a phenomenon recently termed the "waterbed effect."<sup>333</sup> As scholars have described,

[T]he presence of a waterbed effect can further distort competition by giving a powerful buyer now a two-fold advantage, namely, through more advantageous terms for itself and through higher purchasing costs for its rivals. What then becomes a virtuous circle for the strong buyer ends up as a vicious circle for its weaker competitors.<sup>334</sup>

To this two-fold advantage Amazon added a third perk: harnessing the weakness of its rivals into a business opportunity. In 2006, Amazon introduced Fulfillment-by-Amazon (FBA), a logistics and delivery service for independent sellers.<sup>335</sup> Merchants who sign up for FBA store their products in Amazon's warehouses, and Amazon packs, ships, and provides customer service on any orders. Products sold through FBA are eligible for service through Amazon Prime—namely, free two-day shipping and/or free regular shipping, depending on the order.<sup>336</sup> Since many merchants selling on Amazon are competing with Amazon's own retail operation and its Amazon Prime service, using FBA offers sellers the opportunity to compete at less of a disadvantage.

Notably, it is partly because independent sellers faced higher rates from UPS and FedEx—a result of Amazon's dominance—that Amazon succeeded in directing sellers to its new business venture.<sup>337</sup> In many instances, orders routed through FBA were still being shipped and delivered by UPS and FedEx, since Amazon relied on these firms.<sup>338</sup> But because Amazon had secured discounts unavailable to other sellers, it was cheaper for those sellers to go through Amazon than to use UPS and FedEx directly. Amazon had used its dominance in the retail sector to create and boost a new venture in the delivery sector, inserting itself into the business of its competitors.

Amazon has followed up on this initial foray into fulfillment services by creating a logistics empire. Building out physical capacity lets

Amazon further reduce its delivery times, raising the bar for entry yet higher. Moreover it is the firm's capacity for aggressive investing that has enabled it to rapidly establish an extensive network of physical infrastructure. Since 2010, Amazon has spent \$13.9 billion building warehouses, 339 and it spent \$11.5 billion on shipping in 2015 alone.<sup>340</sup> Amazon has opened more than 180 warehouses, 341 28 sorting centers, 59 delivery stations that feed packages to local couriers, and more than 65 Prime Now hubs.<sup>342</sup> Analysts estimate that the locations of Amazon's fulfillment centers bring it within twenty miles of 31% of the population and within twenty miles of 60% of its core same-day base.<sup>343</sup> This sprawling network of fulfillment centers—each placed in or near a major metropolitan area—equips Amazon to offer one-hour delivery in some locations and same-day in others (a service it offers free to members of Amazon Prime).<sup>344</sup> While several rivals initially entered the delivery market to compete with Prime shipping, some are now retreating.<sup>345</sup> As one analyst noted, "Prime has proven exceedingly difficult for rivals to copy."<sup>346</sup>

Most recently, Amazon has also expanded into trucking. Last December, it announced it plans to roll out thousands of branded semi-trucks, a move that will give it yet more control over delivery, as it seeks to speed up how quickly it can transport goods to customers.<sup>347</sup> Amazon now owns four thousand truck trailers and has also signed contracts for container ships, planes,<sup>348</sup> and drones.<sup>349</sup> As of October 2016, Amazon had leased at least forty jets.<sup>350</sup> Former employees say Amazon's long-term goal is to circumvent UPS and FedEx altogether, though the company itself has said it is looking only to supplement its reliance on these firms, not supplant them.<sup>351</sup>

The way that Amazon has leveraged its dominance as an online retailer to vertically integrate into delivery is instructive on several fronts. First, it is a textbook example of how the company can use its dominance in one sphere to advantage a separate line of business. To be sure, this dynamic is not intrinsically anticompetitive. What should prompt concern in Amazon's case, however, is that Amazon achieved these cross-sector advantages in part due to its bargaining power. Because Amazon was able to demand heavy discounts from FedEx and UPS, other sellers faced price hikes from these companies—which positioned Amazon to capture them as clients for its new business. By overlooking structural factors like bargaining power, modern antitrust doctrine fails to address this type of threat to competitive markets.

Second, Amazon is positioned to use its dominance across online retail and delivery in ways that involve tying, are exclusionary, and create entry barriers.<sup>352</sup> That is, Amazon's distortion of the delivery sector in turn creates anticompetitive challenges in the retail sector. For example, sellers who use FBA have a better chance of being listed higher in Amazon search results than those who do not, which means Amazon is tying the outcomes it generates for sellers using its retail platform to whether they also use its delivery business.<sup>353</sup> Amazon is also positioned to use its logistics infrastructure to deliver its own retail goods faster than those of independent sellers that use its platform and fulfillment service—a form of discrimination that exemplifies traditional concerns about vertical integration. And Amazon's capacity for losses and expansive logistics capacities mean that it could privilege its own goods while still offering independent sellers the ability to ship goods more cheaply and quickly than they could by using UPS and FedEx directly.

Relatedly, Amazon's expansion into the delivery sector also raises questions about the Chicago School's limited conception of entry barriers. The company's capacity for losses—the permission it has won from investors to show negative profits—has been key in enabling Amazon to achieve outsized growth in delivery and logistics. Matching Amazon's network would require a rival to invest heavily and—in order to viably compete—offer free or otherwise below-cost shipping. In interviews with reporters, venture capitalists say there is no appetite to fund firms looking to compete with Amazon on physical delivery.<sup>354</sup> In this way, Amazon's ability to sustain losses creates an entry barrier for any firm that does not enjoy the same privilege.

Third, Amazon's use of Prime and FBA exemplifies how the company has structurally placed itself at the center of e-commerce. Already 44% of American online shoppers begin their online shopping on Amazon's platform.<sup>355</sup> Given the traffic, it is becoming increasingly clear that in order to succeed in e-commerce, an independent merchant will need to use Amazon's infrastructure. The fact that Amazon competes with many of the businesses that are coming to depend on it creates a host of conflicts of interest that the company can exploit to privilege its own products.

The dominant framework in antitrust today fails to recognize the risk that Amazon's dominance poses for discrimination and barriers to new entry. In part, this is because—as with the framework's view of predatory pricing—the primary harm that registers within the "consumer welfare" frame is higher consumer prices. On the Chicago School's account, Amazon's vertical integration would only be harmful if and when it chooses to use its dominance in delivery and retail to hike fees to consumers. Amazon has already raised Prime prices.<sup>356</sup> But antitrust enforcers should be equally concerned about the fact that Amazon increasingly controls the infrastructure of online commerce—and the ways in which it is harnessing this dominance to expand and advantage its new business ventures. The conflicts of interest that arise from Amazon both competing with merchants and delivering their wares pose a hazard to competition, particularly in light of Amazon's entrenched position as an online platform. Amazon's conflicts of interest tarnish the neutrality of the competitive process. The thousands of retailers and independent businesses that must ride Amazon's rails to reach market are increasingly dependent on their biggest competitor.

#### D. Amazon Marketplace and Exploiting Data

As described above, vertical integration in retail and physical delivery may enable Amazon to leverage cross-sector advantages in ways that are potentially anticompetitive but not understood as such under current antitrust doctrine. Analogous dynamics are at play with Amazon's dominance in the provision of online infrastructure, in particular its Marketplace for third-party sellers. Because information about Amazon's practices in this area is limited, this Section necessarily will be brief. But to capture fully the anticompetitive features of Amazon's business strategy, it is vital to analyze how vertical integration across internet businesses introduces more sophisticated—and potentially more troubling—opportunities to abuse cross-market advantages and foreclose rivals.

The clearest example of how the company leverages its power across online businesses is Amazon Marketplace, where third-party retailers sell their wares. Since Amazon commands a large share of e-commerce traffic, many smaller merchants find it necessary to use its site to draw buyers.<sup>357</sup> These sellers list their goods on Amazon's platform and the company collects fees ranging from 6% to 50% of their sales from them.<sup>358</sup> More than two million third-party sellers used Amazon's platform as of 2015, an increase from the roughly one million that used the platform in 2006.<sup>359</sup> The revenue that Amazon generates through Marketplace has been a major source of its growth: third-party sellers' share of total items sold on Amazon rose from 36% in 2011 to 36% in 2011 to over 50% in 2015.<sup>361</sup>

Third-party sellers using Marketplace recognize that using the platform puts them in a bind. As one merchant observed, "You can't really be a high-volume seller online without being on Amazon, but sellers are very aware of the fact that Amazon is also their primary competitor."<sup>362</sup> Evidence suggests that their unease is well founded. Amazon seems to use its Marketplace "as a vast laboratory to spot new products to sell, test sales of potential new goods, and exert more control over pricing."<sup>363</sup> Specifically, reporting suggests that "Amazon uses sales data from outside merchants to make purchasing decisions in order to undercut them on price" and give its own items "featured placement under a given search."<sup>364</sup> Take the example of Pillow Pets, "stuffed-animal pillows modeled after NFL mascots" that a third-party merchant sold through Amazon's site.<sup>365</sup> For several months, the merchant sold up to one hundred pillows per day.<sup>366</sup> According to one account, "just ahead of the holiday season, [the merchant] noticed Amazon had itself beg[un] offering the same Pillow Pets for the same price while giving [its own] products featured placement on the site."<sup>367</sup> The merchant's own sales dropped to twenty per day.<sup>368</sup> Amazon has gone head-to-head with independent merchants on price, vigorously matching and even undercutting them on products that they had originally introduced. By going directly to the manufacturer, Amazon seeks to cut out the independent sellers.

In other instances, Amazon has responded to popular third-party products by producing them itself. Last year, a manufacturer that had been selling an aluminum laptop stand on Marketplace for more than a decade saw a similar stand appear at half the price. The manufacturer learned that the brand was AmazonBasics, the private line that Amazon has been developing since 2009.<sup>369</sup> As one news site describes it, initially, AmazonBasics focused on generic goods like batteries and blank DVDs. "Then, for several years, the house brand 'slept quietly as it retained data about other sellers' successes."<sup>370</sup> As it now rolls out more AmazonBasics products, it is clear that the company has used "insights gleaned from its vast Web store to build a private-label juggernaut that now includes more than 3,000 products."<sup>371</sup> One study found that in the case of women's clothing, Amazon "began selling 25 percent of the top items first sold through marketplace vendors."<sup>372</sup>

It is true that brick-and-mortar retailers sometimes also introduce private labels and may use other brands' sales records to decide what to produce. The difference with Amazon is the scale and sophistication of the data it collects. Whereas brick-and-mortar stores are generally only able to collect information on actual sales, Amazon tracks what shoppers are searching for but cannot find, as well as which products they repeatedly return to, what they keep in their shopping basket, and what their mouse hovers over on the screen.<sup>373</sup>

In using its Marketplace this way, Amazon increases sales while shedding risk. It is third-party sellers who bear the initial costs and uncertainties when introducing new products; by merely spotting them, Amazon gets to sell products only once their success has been tested. The anticompetitive implications here seem clear: Amazon is exploiting the fact that some of its customers are also its rivals. The source of this power is: (1) its dominance as a platform, which effectively necessitates that independent merchants use its site; (2) its vertical integration—namely, the fact that it both sells goods as a retailer and hosts sales by others as a marketplace; and (3) its ability to amass swaths of data, by virtue of being an internet company. Notably, it is this last factor—its control over data—that heightens the anticompetitive potential of the first two.

Evidence suggests that Amazon is keenly aware of and interested in exploiting these opportunities. For example, the company has reportedly used insights gleaned from its cloud computing service to inform its investment decisions.<sup>374</sup> By observing which start-ups are expanding their usage of Amazon Web Services, Amazon can make early assessments of the potential success of upcoming firms. Amazon has used this “unique window into the technology startup world” to invest in several start-ups that were also customers of its cloud business.<sup>375</sup>

How Amazon has cross-leveraged its advantages across distinct lines of business suggests that the law fails to appreciate when vertical integration may prove anticompetitive. This shortcoming is underscored with online platforms, which both serve as infrastructure for other companies and collect swaths of data that they can then use to build up other lines of business. In this way, the current antitrust regime has yet to reckon with the fact that firms with concentrated control over data can systematically tilt a market in their favor, dramatically reshaping the sector.<sup>376</sup>

#### **V. How Platform Economics and Capital Markets May Facilitate Anticompetitive Conduct and Structures**

As Part IV mapped out, aspects of Amazon’s conduct and structure may threaten competition yet fail to trigger scrutiny under the analytical framework presently used in antitrust. In part this reflects the “consumer welfare” orientation of current antitrust laws, as critiqued in Part II. But it also reflects a failure to update antitrust for the internet age. This Part examines how online platforms defy and complicate assumptions embedded in current doctrine. Specifically, it considers how the economics and business dynamics of online platforms create incentives for companies to pursue growth at the expense of profits, and how online markets and control over data may enable new forms of anticompetitive activity.

Economists have analyzed extensively how platform markets may pose unique challenges for antitrust analysis.<sup>377</sup> Specifically, they stress that analysis applicable to firms in single-sided markets may break down when applied to two-sided markets, given the distinct pricing structures and network externalities.<sup>378</sup> These studies often focus on the challenge that two-sided platforms face in attracting both sides—the classic coordination problem of having to attract buyers without an established line of sellers, and vice versa.<sup>379</sup> Economists tend to conclude that—given the particular challenges of two-sided markets<sup>380</sup>—antitrust should be forgiving of conduct that might otherwise be characterized as anticompetitive.<sup>381</sup>

Legal analysis of online platforms is comparatively undertheorized. The Justice Department’s case against Microsoft under Section 2 of the Sherman Act, initiated in the 1990s, remains the government’s most significant case involving two-sided markets—even as platforms have emerged as central arteries in our modern economy. Starting in 2011, the FTC pursued an investigation into Google, partly in response to allegations that the company uses its dominance as a search engine to cement its advantage and exclude rivals in other lines of business. While the FTC closed the investigation without bringing any charges, leaks later revealed that FTC staff had concluded that Google abused its power on three separate counts.<sup>382</sup> The European Union has brought charges against Google for violating antitrust laws.<sup>383</sup>

For the purpose of competition policy, one of the most relevant factors of online platform markets is that they are winner-take-all. This is due largely to network effects and control over data, both of which mean that early advantages become self-reinforcing. The result is that technology platform markets will yield to dominance by a small number of firms. Walmart’s recent purchase of the one start-up that had sought to challenge Amazon in online retail—Jet.com—illustrates this reality.<sup>384</sup>

Network effects arise when a user’s utility from a product increases as others use the product. Since popularity compounds and is reinforcing, markets with network effects often tip towards oligopoly or monopoly.<sup>385</sup> Amazon’s user reviews, for example, serve as a form of network effect: the more users that have purchased and reviewed items on the platform, the more useful information other users can glean from the site.<sup>386</sup> As the Fourth Circuit has noted, “[O]nce dominance is achieved, threats come largely from outside the dominated market, because the degree of dominance of such a market tends to become so extreme.”<sup>387</sup> In this way, network effects act as a form of entry barrier.

A platform’s control over data, meanwhile, can also entrench its position.<sup>388</sup> Access to consumer data enables platforms to better tailor services and gauge demand. Involvement across markets, meanwhile, may permit a company to use data gleaned from one market to benefit another business line.<sup>389</sup> Amazon’s use of Marketplace data to advantage its retail sales, as described in Section IV.D, is an example of this dynamic. Control over data may also make it easier for dominant platforms to enter new markets with greater ease. For example, reports now suggest that Amazon may dramatically expand its footprint in the ad business, “leveraging its rich supply of shopping data culled from years of operating a massive e-commerce business.”<sup>390</sup> In other words, control over data, too, acts as an entry barrier.

Given that online platforms operate in markets where network effects and control over data solidify early dominance, a company looking to compete in these markets must seek to capture them. The most effective way is to chase market share and drive out one’s rivals—even if doing so comes at the expense of short-term profits, since the best guarantee of long-term profits is immediate growth. Due to this dynamic, striving to maximize market share at the expense of one’s rivals makes predation highly rational; indeed, it would be irrational for a business not to frontload losses in order to capture the market. Recognizing that enduring early losses while aggressively expanding can lock up a monopoly, investors seem willing to back this strategy.

As the Introduction and Part III describe, Amazon has charted immense growth while investing aggressively—both by expanding provision of physical and online infrastructure and by pricing goods below cost. Amazon’s stock price has soared despite a history of razor-thin—or even negative—margins. In essence, investors have given Amazon a free pass to grow without any pressure to show profits. The firm has used this edge to expand wildly and dominate online commerce.

The idea that investors are willing to fund predatory growth in winner-take-all markets also holds in the case of Uber. Although the dynamics of the online retail market are distinct from those of ride-sharing, Uber’s growth trajectory is worth analyzing for general insight into how investors enable platform dominance. In 2015, news reports revealed that Uber had an operating loss of \$470 million on \$415 million in revenue, confirming suspicions that the company has been bleeding money for the sake of achieving steep growth and acquiring market share.<sup>391</sup> In China, the company has lost more than \$1 billion a year.<sup>392</sup> The strategy of aggressive price competition and brazen leadership coupled with soaring growth prompted immediate comparisons to Amazon.<sup>393</sup> Like Amazon, Uber has drawn immense interest from investors. As of July 2015, its valuation hit nearly \$51 billion, equaling the record set by Facebook in 2012.<sup>394</sup> It recently secured an additional \$3.5 billion in investment, bringing its total funds to \$13.5 billion—a figure “far greater than most companies raise even during an initial public offering,” which Uber has avoided.<sup>395</sup>

One might dismiss this phenomenon as irrational investor exuberance. But another way to read it is at face value: the reason investors value Amazon and Uber so highly is because they believe these platforms will, eventually, generate huge returns. As one venture capitalist recently remarked, if he had to “put his entire capital in a single company and hold it for the next 10 years,” he would choose Amazon. “I don’t see any cleaner monopoly available to buy in the public markets right now.”<sup>396</sup> In other words, that these platform companies are undertaking consistent, steep losses and still generating strong investor backing suggests that the markets expect Amazon and Uber to recoup these losses.

While investors have unambiguously endorsed and funded online platforms’ quest to bleed money in their race to draw users, antitrust doctrine fails to acknowledge this strategy. In the past, the Supreme Court’s analysis has embraced the Efficient Market Hypothesis (EMH), the idea that market prices reflect all available information.<sup>397</sup> The Justice Department also acknowledges that market information—for example, the financial terms of an acquisition—may “be informative regarding competitive effects.”<sup>398</sup> Applying EMH in this instance overwhelmingly suggests that these platforms are positioned to recoup their losses. Yet bringing a predatory pricing suit against an online platform would be almost impossible to win in light of the recoupment requirement. Strikingly, the market is reflecting a reality that our current laws are unable to detect.<sup>399</sup>

In addition to overlooking why online platform dynamics make predation especially rational, current doctrine also fails to appreciate how a platform might recoup losses. For one, investor support allows Amazon to strategize and operate on a time horizon far longer than what the Brooke Group or Matsushita Courts confronted. Raising prices in a third year after enduring losses for two is different from engaging in a decade-long quest to become the dominant online retailer and provider of internet infrastructure. That longer timeline, meanwhile, makes available more recoupment mechanisms. Not only has Amazon inaugurated an entire generation into online shopping through its platform, but it has expanded into a suite of additional businesses and amassed significant troves of data on users. This data enables it both to extend its tug over customers through highly tailored personal shopping experiences, and, potentially, to institute forms of price discrimination, as described in Section IV.A. Both the latitude granted by investors and control over data equip an incumbent platform to recoup losses in ways less obviously connected to the initial form of below-cost pricing.

These recoupment mechanisms may also be more sophisticated than what a judge or even rivals would be able to spot. This last point becomes even more apparent in the context of Uber, whose dynamic pricing has conditioned users not to expect a stable or regular price. While Uber claims that its algorithms set prices to reflect real-time supply and demand, initial research has found that the company manipulates the availability of both.<sup>400</sup> Moreover, it routinely gives away discount coupons to select users, effectively charging users

different prices, even for the same service at the same time.<sup>401</sup>

Although platforms form the backbone of the internet economy, the way that platform economics implicates existing laws is relatively undertheorized.<sup>402</sup> Amazon's conduct suggests that predatory pricing and integration across related business lines are emerging as key paths to establishing dominance—aided by the control over data that dominant platforms enjoy. But because current predatory pricing doctrine defines recoupment in overly narrow terms, competitors generally have not been able to make an effective legal case. Similarly, because current doctrine largely discounts entry barriers, the anticompetitive effects of vertical integration are difficult to cognize under the existing framework. Roadblocks to these claims persist even as Amazon's valuation and share price point to a strong market expectation of recoupment and profits.

There are signs that enforcers are becoming more attuned to the special factors that may render current antitrust analysis inadequate to promote competition in internet platform markets. For example, in 2014 the United States successfully challenged a merger between two leading providers of online ratings and reviews platforms. In its complaint, DOJ acknowledged that data-driven industries can be characterized by network effects, which increase switching costs and entry barriers.<sup>403</sup> Recent comments by FTC Commissioner Terrell McSweeney—noting that data can act as a barrier to entry and that “competition enforcers can and should assess the competitive implications of data”—also suggest that top officials are assessing how to revise their tools and framework for gauging competition in platform markets.<sup>404</sup>

While this burgeoning recognition is heartening, the unique features of platform markets require a more thorough evaluation of how antitrust is applied. Because scale is both vital to platforms' business model and helps entrench their dominant position, antitrust should reckon with the fact that pursuing growth at the expense of returns is—contra to current doctrine—highly rational. An approach more attuned to the realities of online platform markets would also recognize the variety of mechanisms that businesses may use to recoup losses, the longer time horizon on which recoupment might occur, and the ways that vertical integration and concentrated control over data may enable new forms of anticompetitive conduct. Revising antitrust to reflect the dynamics of online platforms is vital, especially as these companies come to mediate a growing share of communications and commerce.

## VI. Two Models for Addressing Platform Power

If it is true that the economics of platform markets may encourage anticompetitive market structures, there are at least two approaches we can take. Key is deciding whether we want to govern online platform markets through competition, or want to accept that they are inherently monopolistic or oligopolistic and regulate them instead. If we take the former approach, we should reform antitrust law to prevent this dominance from emerging or to limit its scope. If we take the latter approach, we should adopt regulations to take advantage of these economies of scale while neutering the firm's ability to exploit its dominance.

### A. Governing Online Platform Markets Through Competition

Reforming antitrust to address the anticompetitive nature of platform markets could involve making the law against predatory pricing more robust and strictly policing forms of vertical integration that firms can use for anticompetitive ends. Importantly, each of these doctrinal areas should be reformulated so that it is sensitive to preserving the competitive process and limiting conflicts of interest that may incentivize anticompetitive conduct.

#### 1. Predatory Pricing

While predatory pricing technically remains illegal, it is extremely difficult to win predatory pricing claims because courts now require proof that the alleged predator would be able to raise prices and recoup its losses.<sup>405</sup> Revising predatory pricing doctrine to reflect the economics of platform markets, where firms can sink money for years given unlimited investor backing, would require abandoning the recoupment requirement in cases of below-cost pricing by dominant platforms. And given that platforms are uniquely positioned to fund predation, a competition-based approach might also consider introducing a presumption of predation for dominant platforms found to be pricing products below cost.

Several reasons militate in favor of a presumption of predation in such cases. First, firms may raise prices years after the original predation, or raise prices on unrelated goods, in ways difficult to prove at trial. Second, firms may raise prices through personalized pricing or price discrimination, in ways not easily detectable. Third, predation can lead to a host of market harms even if the firm does not raise consumer prices. Within a consumer welfare framework, these harms include degradation of product quality and sapping diversity of choice.<sup>406</sup> Such harms may arise if Amazon uses its bargaining power to extract better terms from producers and suppliers, who, in turn, slash investments to meet its demands. Within a broader framework—which seeks to protect the full range of interests that antitrust laws were enacted to safeguard—the potential harms include lower income and wages for employees, lower rates of new business creation, lower rates of local ownership, and outsized political and economic control in the hands of a few.<sup>407</sup>

Introducing a presumption of predation would involve identifying when a price is below cost, a subject of much debate. The Supreme Court has not addressed the issue, but most appellate courts have said that average variable cost is the right metric.<sup>408</sup> This Note does not advocate the adoption of one particular measure over others. Admittedly, “below cost” is an imperfect filter, especially since what constitutes the relevant cost may vary depending on the industry or cost structure. And the specific definition of “costs” that courts and enforcers adopt may ultimately be less significant if the test for predatory pricing also permits a business justification defense, which would help screen against false positives.<sup>409</sup> A business justification defense could cover compensating a buyer for taking the risk of buying a new product, expanding demand to a level which will allow the entrant to achieve scale economies, keeping prices at competitive levels while expecting costs to decline, and matching competition.<sup>410</sup>

Whether a platform is dominant enough to trigger the presumption could be assessed through its market share: those holding greater than, say, 40% of the market in any given line of service (e.g., cloud computing, ride sharing) might be designated “dominant.” Rather than measuring this market share nationally, enforcers would look to levels of local control; a ride-sharing platform that held only 35% of the national market but 75% of the Nashville market would still be considered dominant for the purpose of price-cutting in Nashville.

#### 2. Vertical Integration

The current approach to antitrust does not sufficiently account for how vertical integration may give rise to anticompetitive conflicts of interest, nor does it adequately address the way a dominant firm may use its dominance in one sector to advance another line of business. This concern is heightened in the context of vertically integrated platforms, which can use insights generated through data acquired in one sector to undermine rivals in another. Potential ways to address this deficiency include scrutinizing mergers that would enable a firm to acquire valuable data and cross-leverage it, or introducing a prophylactic ban on mergers that would give rise to conflicts of interest.

One way to address the concern about a firm's capacity to cross-leverage data is to expressly include it in merger review.<sup>411</sup> Under the current approach, only mergers over a particular monetary threshold require agency review<sup>412</sup>—yet the monetary value of a deal may not be a good proxy for the scope and scale of data at stake. Thus, it could make sense for the agencies to automatically review any deal that involves exchange of certain forms (or a certain quantity) of data. Data that gave a player deep and direct insight into a competitor's business operations, for example, might trigger review. Under this regime, Facebook's purchases of WhatsApp and Instagram,<sup>413</sup> for instance, would have received greater scrutiny from the antitrust agencies, in recognition of how acquiring data can deeply implicate competition. International transactions granting foreign corporations access to data on U.S. users would also require close review. Uber's decision to sell its China operations to Didi Chuxing, China's dominant ride-sharing service—a deal through which Uber will also gain partial ownership over its main U.S. rival, Lyft<sup>414</sup>—is one deal that would prompt scrutiny under this regime.<sup>415</sup>

A stricter approach would place prophylactic limits on vertical integration by platforms that have reached a certain level of dominance. This would recognize that a platform's involvement across multiple related lines of business can give rise to conflicts of interest by creating circumstances in which a platform has an incentive to privilege its own business and disadvantage other companies.<sup>416</sup> Seeking to prevent the industry structures that create these conflicts of interest may prove more effective than policing these conflicts. Adopting this prophylactic approach would mean banning a dominant firm from entering any market that it already serves as a platform—in other words, from competing directly with the businesses that depend on it.<sup>417</sup> In the case of Amazon, for example, this prophylactic approach would prohibit the company from running both a dominant retail platform and a dominant platform for third-party sellers. These two businesses would have to be separated into different entities, in part to prevent Amazon from using insights from its role as a third-party host to benefit its retail business, as it reportedly does now.<sup>418</sup>

This form of prophylactic ban has a long history in banking law.<sup>419</sup> A core principle of banking law is the separation of banking and commerce.<sup>420</sup> “U.S. commercial banks generally are not permitted to conduct any activities that do not fall within . . . the statutory concept of ‘the business of banking.’”<sup>421</sup> More specifically, the Bank Holding Company Act of 1956 forbids firms that own or control a U.S. bank from engaging in business activities other than banking or managing banks.<sup>422</sup> The main exception is that a bank that qualifies as a

"financial holding company" "may conduct broader activities that are 'financial in nature,' including securities dealing and insurance underwriting."<sup>423</sup>

The policy goals of this regime are worth reviewing because they have analogues in antitrust and competition policy. The main justifications for preserving the separation between banking and commerce have "included the needs to preserve the safety and soundness of insured depository institutions, to ensure a fair and efficient flow of credit to productive [businesses], and to prevent excessive concentration of financial and economic power in the financial sector."<sup>424</sup> All three concerns are linked to the fact that banks serve as critical intermediaries in our economy. The "safety and soundness" concern traces to the idea that our banking system is too vital to be subject to the risks of other business activities.<sup>425</sup> The concern about fairness and efficiency centers on the idea that allowing banks to be affiliated with commercial companies may encourage banks to issue credit on the basis of how those lending decisions will affect their commercial affiliates, thereby distorting competition. The practices this may trigger—"price discrimination, unfair restriction of access to credit, and other anticompetitive banking practices"—would both "hurt the individual commercial companies not affiliated with banks" and undermine national "productivity and growth."<sup>426</sup> Lastly, seeking "the prevention of excessive concentration of economic . . . power" among "large financial-industrial conglomerates" recognizes that this market power tends to concentrate political power<sup>427</sup> while also creating systemic dangers of "too-big-to-fail" conglomerates.<sup>428</sup>

Like bank holding companies, Amazon—along with a few other dominant platforms—now play a crucial role in intermediating swaths of economic activity. Amazon itself effectively controls the infrastructure of the internet economy. This level of concentrated control creates hazards analogous to those recognized in banking law. In light of this control, the conflicts of interest created through Amazon's expansion into distinct lines of business are especially troubling. As in banking, enabling an essential intermediating entity to compete with the companies that depend on it creates bad incentives. Allowing a vertically integrated dominant platform to pick and choose to whom it makes its services available, and on what terms, has the potential to distort fair competition and the economy as a whole.

The other two concerns—safety and soundness, and excessive economic and political power—are also worth considering. It is true that Amazon (and other dominant platforms like Uber and Google) have extended directly into financial services.<sup>429</sup> But its level of involvement in these businesses, at least at the current scale, is unlikely to concentrate financial risk in ways that warrant concern. Rather, the systemic risks created by concentration among platforms are of a different kind. One involves concentration of data. That a huge share of consumer retail data may be concentrated within a single company makes hacks of or technical failures by that company all the more disruptive. The 2013 hack into Target's system—as a result of which up to 110 million consumers had personal information stolen<sup>430</sup>—could have been orders of magnitude more disruptive had the hacked entity been Amazon. A few instances where Amazon Web Services crashed led to disruptions for scores of other businesses, including Netflix.<sup>431</sup>

Lastly, there is sound reason to ask whether permitting Amazon to leverage its platform to integrate across business lines hands it undue economic and political power.<sup>432</sup> While this subject invites much deeper consideration than what this Note will provide, studies interviewing the host of businesses that now depend on Amazon—retailers, manufacturers, publishers, to name a few—reveal that the power it wields is acute.<sup>433</sup> History suggests that allowing a single actor to set the terms of the marketplace, largely unchecked, can pose serious hazards. Limiting Amazon's reach through prophylactic bans on vertical integration—and thereby forcing it to split up its retail and Marketplace operation, for example—would help mitigate this concern.

## B. Governing Dominant Platforms as Monopolies Through Regulation

As described above, one option is to govern dominant platforms through promoting competition, thereby limiting the power that any one actor accrues. The other is to accept dominant online platforms as natural monopolies or oligopolies, seeking to regulate their power instead. In this Section, I sketch out two models for this second approach, traditionally undertaken in the form of public utility regulations and common carrier duties. Industries that historically have been regulated as utilities include commodities (water, electric power, gas), transportation (railroads, ferries), and communications (telegraphy, telephones).<sup>434</sup> Critically, a public utility regime aims at eliminating competition: it accepts the benefits of monopoly and chooses instead to limit how a monopoly may use its power.<sup>435</sup>

Although largely out of fashion today, public utility regulations were widely adopted in the early 1900s, as a way of regulating the technologies of the industrial age. Animating public utility regulations was the idea that essential network industries—such as railroads and electric power—should be made available to the public in the form of universal service provided at just and reasonable rates. The Progressive movement of the early twentieth century embraced public utility as a way to use government to steer private enterprise toward public ends. It was precisely because essential network industries often required scale that unregulated private control over these sectors often led to abuse of monopoly power. Famously, the Interstate Commerce Commission—which instituted a form of common carriage for railroads—was created partly in response to the abusive conduct of railroads, whose control over an essential facility enabled them to pick winners and losers among farmers.<sup>436</sup>

In the United States, the first case applying public utility regulations to a private business was *Munn v. Illinois*, in which the Supreme Court upheld state legislation establishing maximum rates that companies could charge for the storage and transportation of grain.<sup>437</sup> When one "devotes his property to a use in which the public has an interest, he, in effect, grants to the public an interest in that use, and must submit to be controlled by the public for the common good," Chief Justice Waite wrote.<sup>438</sup> "[W]hen private property is devoted to a public use, it is subject to public regulation."<sup>439</sup> While the decision ushered into doctrine the principle of common carriers, the question of when a business was truly "affected with the public interest" was highly contested.<sup>440</sup>

Most importantly, "public utility was seen as a common, collective enterprise aimed at managing a series of vital network industries that were too important to be left exclusively to market forces."<sup>441</sup> At the level of policy, public utility regulations also enabled "utilities to secure capital at lower cost and to channel it into very large technological systems," and thus was a way to "socialize the costs of building and operating" a centralized system while "protecting consumers from the potential abuses associated with natural monopoly."<sup>442</sup>

Given that Amazon increasingly serves as essential infrastructure across the internet economy, applying elements of public utility regulations to its business is worth considering.<sup>443</sup> The most common public utility policies are (1) requiring nondiscrimination in price and service, (2) setting limits on rate-setting, and (3) imposing capitalization and investment requirements. Of these three traditional policies, nondiscrimination would make the most sense, while rate-setting and investment requirements would be trickier to implement and, perhaps, would less obviously address an outstanding deficiency.

A nondiscrimination policy that prohibited Amazon from privileging its own goods and from discriminating among producers and consumers would be significant. Given that many of the most notable anticompetitive concerns around Amazon's business structure arise from its vertical integration and the resulting conflicts of interest, applying a nondiscrimination scheme would curb the anticompetitive risk. This approach would permit the company to maintain its involvement across multiple lines of business and permit it to enjoy the benefits of scale while mitigating the concern that Amazon could unfairly advantage its own business or unfairly discriminate among platform users to gain leverage or market power.<sup>444</sup> Coupling nondiscrimination with common carrier obligations—requiring platforms to ensure open and fair access to other businesses—would further limit Amazon's power to use its dominance in anticompetitive ways.

Rate setting would be trickier. This would involve setting a ceiling on the prices that Amazon can charge to both producers and consumers. Traditionally, governments used rate setting by identifying a "fair return" that a company deserved for its investment, and then calculated consumer or producer prices accordingly.<sup>445</sup> But calculating "fair return" may prove more challenging in the online platform context than it did with traditional public utilities. One potential source of difficulty is that Amazon has invested so widely across such a range of projects that it is not clear which the government should peg to "rate of return." Another complicating factor is that part of Amazon's investment in these platforms, so far, has involved losing money through below-cost pricing.

Lastly, it is not clear that imposing capitalization and investment requirements would be necessary. A traditional reason for these policies has been that the economics of creating and running a utility can be unfavorable, occasionally leading private companies to scrimp on investing and upkeep. In Amazon's case, the company is choosing to expand at a speed and scale that is pushing it into the red—but it is not clear that the activity is intrinsically loss generating. That said, a public utility regime could also be justified on the basis that succeeding as an online platform requires incurring heavy losses—a model that Amazon and Uber have pursued. This approach would treat market-share chasing losses as a capital investment,<sup>446</sup> suggesting the public utility domain may be appropriate.

Practically, ushering in a public utility regime may prove challenging. Public utility regulations suffered an intellectual and policy attack around mid-century. For one, critics challenged the theory of natural monopoly as an ongoing rationale for regulation, arguing that rapid economic and technological change would render monopolies temporary problems. Second, critics portrayed public utility as a form of corruption, a system in which private industry executives colluded with public officials to enable rent seeking. Ultimately these lines of criticism substantially thinned the very concept of public utility.<sup>447</sup> The trend was part of a broader effort to idealize competitive markets and assume that nonintervention was almost always superior to interference. Although the concept of public utility regulation remains somewhat maligned today, there are signs that a robust movement to apply utility-like regulations to services that widely register as public—such as the internet—can catch wind. The core of the net neutrality debates, for example, involved foundational discussions about

how to regulate the communication infrastructure of the twenty-first century.<sup>448</sup> The net neutrality regime ultimately adopted falls squarely in the common carrier tradition.

Given Amazon's growing share of e-commerce as a whole, and the vast number of independent sellers and producers that now depend on it, applying some form of public utility regulation could make sense. Nondiscrimination principles seem especially apt, given that conflicts of interest are a primary hazard of Amazon's vertical power. One approach would apply public utility regulations to all of Amazon's businesses that serve other businesses. Another would require breaking up parts of Amazon and applying nondiscrimination principles separately; so, for example, to Amazon Marketplace and Amazon Web Services as distinct entities. That said, given the political challenges of ushering in such a regime, strengthening and reinforcing traditional antitrust principles may—in the short run—prove most feasible.

A lighter version of the regulatory approach would be to apply the essential facilities doctrine. This doctrine imposes sharing requirements on a natural monopoly asset that serves as a necessary input in another market. As Sandeep Vaheesan explains:

This doctrine rests on two basic premises: first, a natural monopolist in one market should not be permitted to deny access to the critical facility to foreclose rivals in adjacent markets; second, the more radical remedy of dividing the facility among multiple owners, while mitigating the threat of monopoly leveraging, could sacrifice important efficiencies.<sup>449</sup>

Unlike the prophylactic ban on integration, the essential facilities route accepts consolidated ownership. But recognizing that a vertically integrated monopolist may deny access to a rival in an adjacent market, the doctrine requires the monopolist controlling the essential facility to grant competitors easy access. This duty has traditionally been enforced through regulatory oversight.

While the essential facilities doctrine has not been precisely defined, the four-factor test enumerated by the Seventh Circuit in *MCI Communications Corp. v. American Telephone & Telegraph Co.* forms the basis of an essential facility claim today.<sup>450</sup> Under that test, a facility is essential and must be shared if four conditions are met: (1) a monopolist controls the essential facility; (2) a competitor is unable practically or reasonably to duplicate the essential facility; (3) the monopolist is denying use of the facility to a competitor; and (4) providing the facility is feasible.<sup>451</sup> The MCI court also held that, in order to be deemed essential, the facility must be a "necessary input in a distinct, vertically related market."<sup>452</sup>

While the Supreme Court has never recognized nor articulated a standard for "essential facility," three Supreme Court rulings "are seen as having established the functional foundation" for the doctrine.<sup>453</sup> In 2004, however, the Court disavowed the essential facilities doctrine in *dicta*,<sup>454</sup> leading several commentators to wonder whether it is a dead letter. This decision by the Court to effectively reject its prior case law on essential facilities followed challenges on other fronts: notably from Congress, enforcement agencies, and academic scholars, all of whom have critiqued the idea of requiring dominant firms to share their property.<sup>455</sup>

Treating aspects of Amazon's business as "essential facilities" seems appropriate, given that factors two, three, and four of the MCI test are likely to hold for at least one line of business. The first factor—whether Amazon is a "monopolist"—is subject to the risk that doctrine takes an excessively narrow view of what constitutes a "monopolist," a definition that may be especially out of touch with dominance in the internet age.

Essential facilities doctrine has traditionally been applied to infrastructure such as bridges, highways, ports, electrical power grids, and telephone networks.<sup>456</sup> Given that Amazon controls key infrastructure for e-commerce, imposing a duty to allow access to its infrastructure on a nondiscriminatory basis make sense. And in light of the company's current trajectory, we can imagine at least three aspects of its business could eventually raise "essential facilities"-like concerns: (1) its fulfillment services in physical delivery; (2) its Marketplace platform; and (3) Amazon Web Services. While the essential facilities doctrine has not yet been applied to the internet economy, some proposals have started exploring what this might look like.<sup>457</sup> Pursuing this regime for online platforms could maintain the benefits of scale while preventing dominant players from abusing their power.

#### CONCLUSION:

Internet platforms mediate a large and growing share of our commerce and communications. Yet evidence shows that competition in platform markets is flagging, with sectors coalescing around one or two giants.<sup>458</sup> The titan in e-commerce is Amazon—a company that has built its dominance through aggressively pursuing growth at the expense of profits and that has integrated across many related lines of business. As a result, the company has positioned itself at the center of internet commerce and serves as essential infrastructure for a host of other businesses that now depend on it. This Note argues that Amazon's business strategies and current market dominance pose anticompetitive concerns that the consumer welfare framework in antitrust fails to recognize.

In particular, current law underappreciates the risk of predatory pricing and how integration across distinct business lines may prove anticompetitive. These concerns are heightened in the context of online platforms for two reasons. First, the economics of platform markets incentivize the pursuit of growth over profits, a strategy that investors have rewarded. Under these conditions predatory pricing becomes highly rational—even as existing doctrine treats it as irrational. Second, because online platforms serve as critical intermediaries, integrating across business lines positions these platforms to control the essential infrastructure on which their rivals depend. This dual role also enables a platform to exploit information collected on companies using its services to undermine them as competitors.

In order to capture these anticompetitive concerns, we should replace the consumer welfare framework with an approach oriented around preserving a competitive process and market structure. Applying this idea involves, for example, assessing whether a company's structure creates anticompetitive conflicts of interest; whether it can cross-leverage market advantages across distinct lines of business; and whether the economics of online platform markets incentivizes predatory conduct and capital markets permit it. More specifically, restoring traditional antitrust principles to create a presumption of predation and to ban vertical integration by dominant platforms could help maintain competition in these markets. If, instead, we accept dominant online platforms as natural monopolies or oligopolies, then applying elements of a public utility regime or essential facilities obligations would maintain the benefits of scale while limiting the ability of dominant platforms to abuse the power that comes with it.

My argument is part of a larger recent debate about whether the current paradigm in antitrust has failed. Though relegated to technocrats for decades, antitrust and competition policy have once again become topics of public concern.<sup>459</sup> Last year, the *Wall Street Journal* reported that "[a] growing number of industries in the U.S. are dominated by a shrinking number of companies."<sup>460</sup> In March 2016, the *Economist* declared, "Profits are too high. America needs a dose of competition."<sup>461</sup> Policy elites, too, have weighed in, issuing policy papers and hosting conferences documenting the decline of competition across the U.S. economy and assessing the resulting harms, including a drop in start-up growth and widening economic inequality.<sup>462</sup> Antitrust even made it into the 2016 presidential campaign: Democrats included competition policy in their party platform for the first time since 1988, and in October of the same year, presidential candidate Hillary Clinton released a detailed antitrust platform, highlighting not only a need for more vigorous enforcement but for an enforcement philosophy that takes into account market structure.<sup>463</sup>

Animating these critiques is not a concern about harms to consumer welfare,<sup>464</sup> but the broader set of ills and hazards that a lack of competition breeds. As Amazon continues both to deepen its existing control over key infrastructure and to reach into new lines of business, its dominance demands the same scrutiny. To revise antitrust law and competition policy for platform markets, we should be guided by two questions. First, does our legal framework capture the realities of how dominant firms acquire and exercise power in the internet economy? And second, what forms and degrees of power should the law identify as a threat to competition? Without considering these questions, we risk permitting the growth of powers that we oppose but fail to recognize.