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 firmâ€™s structure and conduct pose anticompetitive concernsâ€”yet it has escaped antitrust scrutiny.

This Note argues that the current framework in antitrustâ€”specifically its pegging competition to â€œconsumer welfare,â€• defined as short-term price effectsâ€”is unequipped to capture the architecture of market power in the modern economy. We cannot cognize the potential harms to competition posed by Amazonâ€™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 rationalâ€”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 Amazonâ€™s dominance. Doing so enables us to make sense of its business strategy, illuminates anticompetitive aspects of Amazonâ€™s structure and conduct, and underscores deficiencies in current doctrine. The Note closes by considering two potential regimes for addressing Amazonâ€™s power: restoring traditional antitrust and competition policy principles or applying common carrier obligations and duties.

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Introduction

â€œEven 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.â€•

â€”The New York Times

â€œ[O]ne of Mr. Rockefellerâ€™s most impressive characteristics is patience.â€•

â€”Ida Tarbell, A History of the Standard Oil Company

In Amazonâ€™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 quarterâ€™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, â€œAmazon: Ponzi Scheme or Wal-Mart of the Web?â€•

Sixteen years on, nobody seriously doubts that Amazon is anything but the titan of twenty-firstcentury commerce. In 2015, it earned $107 billion in revenue, and, as of 2013, it sold more than its next twelve online competitors combined. By some estimates, Amazon now captures 46% of online shopping, with its share growing faster than the sector as a whole. 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 growthâ€”reporting double-digit increases in net sales yearlyâ€”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. While it exits the red more regularly now, 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.

Despite the companyâ€™s history of thin returns, investors have zealously backed it: Amazonâ€™s shares trade at over 900 times diluted earnings, making it the most expensive stock in the Standard & Poorâ€™s 500. As one reporter marveled, â€œThe 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.â€• Another commented that Amazon is in

â€œa class of its own when it comes to valuation.â€•

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

In some ways, the story of Amazonâ€™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. Amazonâ€™s closest encounter with antitrust authorities was when the Justice Department sued other companies for teaming up against Amazon. It is as if Bezos charted the companyâ€™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 Amazonâ€™s power. In particular, it traces the sources of Amazonâ€™s growth and analyzes the potential effects of its dominance. Doing so enables us to make sense of the companyâ€™s business strategy and

illuminates anticompetitive aspects of its structure and conduct. This analysis reveals that the current framework in antitrustâ€”specifically its equating competition with â€œconsumer welfare,â€• typically measured through short-term effects on price and output â€”fails to capture the architecture of market power in the twenty-first century marketplace. In other words, the potential harms to competition posed by Amazonâ€™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 marketplaceâ€”especially in the case of online platformsâ€”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 companyâ€™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 companyâ€™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 exploringâ€”and challengingâ€”modern antitrust lawâ€™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 Amazonâ€™s strategy and conduct. Part III documents Amazonâ€™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 Amazonâ€™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. 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 dealsâ€”mergers combining two direct competitors operating in the same market or product lineâ€”that would have handed the new entity a large share of the market. In others, it involved rejecting vertical mergersâ€”deals joining companies that operated in different tiers of the same supply or production chainâ€—that would â€œforeclose competition.â€• Centrally, this approach involved policing not just for size but also for conflicts of interestâ€”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.

The Chicago School approach to antitrust, which gained mainstream prominence and credibility in the 1970s and 1980s, rejected this structuralist view. In the words of Richard Posner, the essence of the Chicago School position is that â€œthe proper lens for viewing antitrust problems is price theory.â€• 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: â€œ[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.â€•

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 outcomesâ€”including firm size, industry structure, and concentration levelsâ€”reflect the interplay of standalone market forces and the technical demands of production. 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, â€œ[w]hat exists is ultimately the best guide to what should exist.â€•

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. 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 â€œobjective technical demands of production and distribution.â€• With so many â€œentry barriers . . . discounted, all firms are subject to the threat of potential competition . . . regardless of the number of firms or levels of concentration.â€• On this view, market power is always fleetingâ€”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. Although Bork used â€œconsumer welfareâ€• to mean â€œallocative efficiency,â€• courts and antitrust authorities have largely measured it through effects on consumer prices. In 1979, the Supreme Court followed Borkâ€™s work and declared that â€œCongress designed the Sherman Act as a â€˜consumer welfare prescriptionâ€™â€• â€”a statement that is widely viewed as erroneous. Still, this philosophy wound its way into policy and doctrine. The 1982 merger guidelines issued by the Reagan Administrationâ€”a radical departure from the previous guidelines, written in 1968â€”reflected this newfound focus. While the 1968 guidelines had established that the â€œprimary roleâ€• of merger enforcement was â€œto preserve and promote market structures conducive to competition,â€• the 1982 guidelines said mergers â€œshould not be permitted to create or enhance â€˜market power,â€™â€• defined as the â€œability of one or more firms profitably to maintain prices above competitive levels.â€• Today, showing antitrust injury requires showing

harm to consumer welfare, generally in the form of price increases and output restrictions.

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. Notably, the Obama Administrationâ€™s opposition to one of the largest mergers proposed on its watchâ€”Comcast/TimeWarnerâ€”stemmed from a concern about market access, not prices. 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. Still, it is fair to say that a concern for innovation or non-price effects rarely animates or drives investigations or enforcement actionsâ€”especially outside of the merger context. Economic factors that are easier to measureâ€”such as impacts on price, output, or productive efficiency in narrowly defined marketsâ€”have become â€œdisproportionately important.â€•

Two areas of enforcement that this reorientation has affected dramatically are predatory pricing and vertical integration. The Chicago School claims that â€œpredatory pricing, vertical integration, and tying arrangements never or almost never reduce consumer welfare.â€• Both predatory pricing and vertical integration are highly relevant to analyzing Amazonâ€™s path to dominance and the source of its power. Below, I offer a brief overview of how the Chicago Schoolâ€™s influence has shaped predatory pricing doctrine and enforcersâ€™ 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 competitionâ€”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 â€œrecoupment test.â€•

The earliest predatory pricing case in America was the governmentâ€™s antitrust suit against Standard Oil, which reached the Supreme Court in 1911. As detailed in Ida Tarbellâ€™s exposÃ©, A History of the Standard Oil Company, Standard Oil routinely slashed prices in order to drive rivals from the market. Moreover, it cross-subsidized: Standard Oil charged monopoly prices in markets where it faced no competitors; in markets where rivals checked the

companyâ€™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 Oilâ€”including predatory pricingâ€”violated section 2 of the Sherman Act. The Supreme Court ruled for the government and ordered the break-up of the company. Subsequent courts cited the decision for establishing that in the quest for monopoly power, â€œprice cutting became perhaps the most effective weapon of the larger corporation.â€•

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 to strengthen the Sherman Act and included a provision to curb price discrimination and predatory pricing. 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 â€œwith the intent to destroy and make unprofitable the business of their competitorsâ€• and with the aim of â€œacquiring a monopoly in the particular locality or section in which the discriminating price is made.â€•

Congress also acted to protect state â€œfair tradeâ€• 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. When the Supreme Court targeted these â€œresale price maintenanceâ€• 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, Congress in 1937 carved out an exception for state fair trade laws through the Miller-Tydings Act. 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, Congress responded with a law making minimum prices enforceable against nonsigners too.

Another byproduct of the â€œfair tradeâ€• movement was the Robinson-Patman Act of 1936. This Act prohibited price discrimination by retailers among producers and by producers among retailers. 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. 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 â€œunreasonably low prices for the purpose of destroying competition or eliminating a competitor.â€• While predatory price cutting gave rise to civil liability and remedies under the Clayton Act, the Robinson-Patman Act attached criminal penalties as well.

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. However, not all instances of below-cost pricing were illegitimate. Liquidating excess or perishable goods, for example, was considered fair game. Only â€œsales made below cost without legitimate commercial objective and with specific intent to destroy competitionâ€• would clearly violate section 3. 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. The latter, the Court ruled, were illegitimate.

In Utah Pie Co. v. Continental Baking Co.,the Court further reinforced the illegitimacy of predatory pricing. 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 â€œdeclining price structureâ€• overall. Additionally, Continental had admitted to sending an industrial spy to Utah Pieâ€™s plant to gain information to sabotage Utahâ€™s business relations with retailers, a fact the Court used to establish â€œintent to injure.â€•

The decision was controversial. Continentalâ€™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 Continentalâ€™s practices, its share dropped to 45.3%. Penalizing conduct that had made a market more competitive as predatory seemed perverse. As Justice Stewart noted in the dissent, â€œI cannot hold that Utah Pieâ€™s monopolistic position was protected by the federal antitrust laws from effective price competition . . . .â€•

The case presented an opportunity for critics of predatory pricing laws to attack the doctrine as misguided. In an article labeling Utah Pie â€œthe most anticompetitive antitrust decision of the decade,â€• Ward Bowman, an economist at Yale Law School, argued that the premise of predatory pricing laws was wrong. He wrote, â€œThe 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.â€• Bork, meanwhile, said of the

decision, â€œThere 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.â€• He described predatory pricing generally as â€œa phenomenon that probably does not existâ€• and the Robinson-Patman Act as â€œthe misshapen progeny of intolerable draftsmanship coupled to wholly mistaken economic theory.â€• Other scholars, particularly those from the rising Chicago School, also weighed in to criticize Utah Pie.

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. 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 unappealingâ€”and therefore highly unlikelyâ€”strategy.

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. Under the Reagan Administration, the FTC all but entirely abandoned Robinson-Patman Act cases. Borkâ€™s appointment as Solicitor General, meanwhile, gave him a prime platform to influence the Supreme Court on antitrust issues and enabled him â€œto train and influence many of the attorneys who would argue before the Supreme Court for the next generation.â€•

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. 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. The Supreme Court granted certiorari to review whether the Third Circuit had applied the correct standard in reversing the district courtâ€™s grant of summary judgment to Matsushitaâ€”an inquiry that led the Court to assess the reasonableness of assuming the alleged predation.

Citing to Borkâ€™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. â€œAs [Borkâ€™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,â€• the Court wrote. â€œFor this reason, there is a consensus among commentators that predatory pricing schemes are rarely tried, and even more rarely successful.â€•

In addition to adopting Borkâ€™s cost-benefit framing, the Court echoed his concern that price competition could be mistaken for predation. In The Antitrust Paradox,Bork wrote, â€œThe 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.â€• Justice Powell, writing for the 5-4 majority in Matsushita, echoed Bork: â€œ[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.â€•

Although Matsushita focused on a narrow issueâ€"the summary judgment standard for claims brought under Section 1 of the Sherman Act, which targets coordinationamong parties â€"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. Subsequent courts applied Matsushitaâ€™s predatory pricing analysis to cases involving monopolization and unilateral anticompetitive conduct, shaping the jurisprudence of Section 2 of the Sherman Act. The lower courts seized on Matsushitaâ€™s central point: the idea that â€œpredatory pricing schemes are rarely tried, and even more rarely successful.â€• 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., the Supreme Court formalized this premise into a doctrinal test.The case involved cigarette manufacturing, an industry dominated by six firms. Liggett, one of the six, introduced a line of generic cigarettes, which it sold for about 30% less than the price of branded cigarettes. 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. Liggett sued, claiming that Brown & Williamsonâ€™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.

Importantly, Liggettâ€™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. â€œEvidence of below-cost pricing is not alone sufficient to permit an inference of probable recoupment and injury to competition,â€• Justice Kennedy wrote for the majority. Instead, the plaintiff â€œmust 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 itâ€• â€”a requirement now known as the â€œrecoupment test.â€•

In placing recoupment at the center of predatory pricing analysis, the Court presumed that direct profit maximization is the singular goal of predatory pricing. 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 Schoolâ€™s narrow conception of what constitutes this harm (higher prices) and how this harm comes aboutâ€”namely, through the alleged predator raising prices on the previously discounted good.

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. Despite the Courtâ€™s contentionâ€”that â€œpredatory pricing schemes are rarely tried and even more rarely successfulâ€•â€”a host of research shows that predatory pricing can be â€œan attractive anticompetitive strategyâ€• and has been used by dominant firms across sectors to squash or deter competition.

B. Vertical Integration

Analysis of vertical integration has similarly moved away from structural concerns. Vertical integration arises when â€œtwo or more successive stages of production and/or distribution of a product are combined under the same control.â€• 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 â€œsubstantially lessen competitionâ€• or constituted a â€œrestraint of tradeâ€• or an â€œunfair method[] of competition.â€• However, the Chicago Schoolâ€™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. 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.

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 â€œhorizontal power in one market or stage of production creates â€˜leverageâ€™ for the extension of the power to bar entry at another level,â€• vertical integration combined with horizontal market power â€œcan impair competition to a greater extent than could the exercise of horizontal power alone.â€• 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 bakersâ€”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 theoriesâ€”and, through the 1960s, courts largely accepted them. 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 â€œforeclos[e] competitionâ€• and â€œenhanc[e] Brownâ€™s competitive advantage over other producers, distributors and sellers of shoes.â€• The Court acknowledged that the Clayton Act did not â€œrender unlawful all . . . vertical arrangements,â€• but held that this merger would undermine competition by â€œforeclos[ing] . . . independent manufacturers from markets otherwise open to them.â€• In other words, the concern was thatâ€”once mergedâ€”the combined entity would forbid its retailing arm from stocking shoes made by competing independent manufacturers. Calling this form of foreclosure â€œthe primary vice of a vertical merger,â€• the Court noted it was also largely inevitable: â€œEvery 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.â€• In his partial concurrence, Justice Harlan observed that the deal would enable Brown to â€œturn an independent purchaser into a captive market for its shoes,â€• thereby â€œdiminish[ing] the available market for which shoe manufacturers compete.â€• The Court enjoined the merger.

Another reason courts cited for blocking these arrangements was that vertical deals eliminated potential rivalsâ€”a recognition of how a merger would reshape industry structure. Upholding the FTCâ€™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 â€œsoothing influenceâ€• over prices. An outside firm â€œmay someday go in and set the stage for noticeable deconcentration,â€• the Court wrote. â€œWhile it merely stays near the edge, it is a deterrent to current competitors.â€• In other words, the threat of potential entry by Fordâ€”the fact that, pre-merger, it could have internally expanded into equipment manufacturingâ€”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 â€œthe result of transmitting the rigidity of the oligopolistic structureâ€• of one industry to the other, â€œthus reducing the chances of future deconcentrationâ€• of the market. The Court required Ford to divest the manufacturer.

In the 1950sâ€”while Congress, enforcement agencies, and the courts recognized potential threats posed by vertical arrangementsâ€”Chicago School scholars began to cast doubt on the idea that vertical integration has anticompetitive effects. 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 firmâ€™s pricing and output policies, the primary metrics in their analysis. Under this framework, only horizontal mergers affect competition, as â€œ[h]orizontal mergers increase market share, but vertical mergers do not.â€•

Chicago School theory holds that concerns about both leverage and foreclosure are misguided. Under the â€œsingle monopoly profit theorem,â€• 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. Under this premise, not only does monopoly leveraging not pose any competitive concern, butâ€”since it can only be motivated by efficiencies, not profitsâ€”it is actually procompetitive when it does occur.

The traditional worries about foreclosure, Bork claimed, were unfounded, as â€œ[p]redation through vertical merger is extremely unlikely.â€• A manufacturer would not favor its retail subsidiary over others unless it was cheaper to do soâ€”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 â€œentrants who would arrive in

sky-darkening swarms for the profitable alternatives.â€• In other words, Borkâ€™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. In light of this, antitrust lawâ€™s aversion to vertical arrangements was, Bork argued, irrational. â€œThe law against vertical mergers is merely a law against the creation of efficiency.â€•

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. The 1984 version included guidelines specific to vertical deals. Part of a sweeping effort to overhaul antitrust enforcement, the new guidelines narrowed the circumstances in which the agencies would challenge vertical mergers. 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 Reaganâ€™s tenure.

Although subsequent administrations have continued reviewing vertical mergers, the Chicago Schoolâ€™s view that these deals generally do not pose threats to competition has remained dominant. Rejection of vertical tie-upsâ€”standard through the 1960s and 1970sâ€”is extremely rare today; in instances where agencies spot potential harm, they tend to impose conduct remedies or require divestitures rather than block the deal outright. 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 and warned that the tie-up would concentrate significant power in the hands of a single company, 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. 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 competitionâ€”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 â€œconsumer welfareâ€• 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 endsâ€”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 competitionâ€”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 outputâ€”while disregarding the market structure and competitive process that give rise to this market powerâ€”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 â€œin their incipiency.â€• But the

Chicago Schoolâ€™s hostility to false positivesâ€”and insistence that market power and high concentration both reflect and generate efficiency â€”has undermined this incipiency standard and enfeebled enforcement as a whole. Indeed, enforcers have largely abandoned section 2 monopolization claims, whichâ€”by virtue of assessing how a single company amasses and exercises its powerâ€”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, failing by its own metrics. It arguably has further contributed to a decline in new business growth, resulting in reduced opportunities for entrepreneurs and a stagnant economy. The long-term interests of consumers include product quality, variety, and innovationâ€”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 news ones. Even if we accept consumer welfare as the touchstone of antitrust, ensuring a competitive processâ€”by looking, in part, to how a market is structuredâ€”ought to be key. Empirical studies revealing that the consumer welfare frame has resulted in higher pricesâ€”failing even by its own termsâ€”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 â€œCongress designed the Sherman Act as a â€˜consumer welfare prescriptionâ€™â€• is wrong. 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 â€œguided by principles.â€• The law was â€œfor diversity and access to markets; it was against high concentration and abuses of power.â€•

More relevant than any single goal was this general vision. When Congress passed the Sherman Act in 1890, Senator John Sherman called it â€œa bill of rights, a charter of liberty,â€• and stressed its importance in political terms. 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.â€•

In other words, what was at stake in keeping markets openâ€”and keeping them free from industrial monarchsâ€”was freedom.

Animating this vision was the understanding that concentration of economic power also consolidates political power, â€œbreed[ing] antidemocratic political pressures.â€• 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 â€œprivate discretion by a few in the economic sphereâ€• to â€œcontrol[] the welfare of all,â€• undermining individual and business freedom. In the lead up to the passage of the Sherman Act, Senator George Hoar warned that monopolies were â€œa menace to republican institutions themselves.â€•

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. Senator Sherman, for example, described overcharges by monopolists as â€œextortion which makes the people poor,â€• while Senator Richard Coke referred to them as â€œrobbery.â€• Representative John Heard announced that trusts had â€œstolen millions from the people,â€• and Congressman Ezra Taylor noted that the beef trust â€œrobs the farmer on the one hand and the consumer on the other.â€• In the words of Senator James George, â€œ[t]hey aggregate to themselves great enormous wealth by extortion which makes the people poor.â€•

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. 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 playâ€”namely, that the public was â€œangered less by the reduction in their wealth than by the way in which the wealth was extracted.â€• In other words, though the harm was being registered through an economic effectâ€”a wealth transferâ€—the underlying source of the grievance was also political.

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 Congressâ€™s aim in passing the law was to keep markets open

to independent firms. When discussing the Sherman Act, Senator George lamented that if large-scale industry were allowed to grow unchecked, it would â€œcrush out all small men, all small capitalists, all small enterprises.â€•

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 â€œindustrial liberty.â€• 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. â€œPower that controls the economy should be in the hands of elected representatives of the people, not in the hands of an industrial oligarchy,â€• Justice William O. Douglas wrote. Decentralizing this power would ensure that â€œthe 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.â€•

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 liberalsâ€”including John Kenneth Galbraithâ€”ratified this idea, championing centralization. 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 Schoolâ€™s view. By orienting antitrust toward material rather than political ends, both the neoclassical school and its critics effectively embraced concentration over competition.

Focusing antitrust exclusively on consumer welfare is a mistake. 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 and economic control. Secondly, focusing on consumer welfare disregards the host of other ways that excessive concentration can harm usâ€”enabling firms to squeeze suppliers and producers, endangering system stability (for instance, by allowing companies to become too big to fail), or undermining media diversity, 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 Schoolâ€™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 â€œconsumer welfareâ€• disregards. Second, by adopting this new goal, the Chicago School shifted the analytical emphasis away from processâ€”the conditions necessary for competitionâ€”and toward an outcomeâ€”namely, consumer welfare. In other words, a concern about structure (is power sufficiently distributed to keep markets competitive?) was replaced by a calculation (did prices rise?). 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. 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.

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 outputâ€”again glossing over questions about the competitive process in favor of narrow calculations. 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. 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. 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 toâ€”even if not solely determined byâ€”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 controlâ€”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.

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. 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. 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 Amazonâ€™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 companyâ€™s strategy and illuminates anticompetitive aspects of its business.

III. Amazonâ€™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. These facets of its strategy are independently significant and closely interlinkedâ€”indeed, one way it has been able to expand into so many areas is through foregoing returns. This strategyâ€”pursuing market share at the expense of

short-term returnsâ€"defies the Chicago Schoolâ€™s assumption of rational, profit-seeking market actors. More significantly, Amazonâ€™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 firmâ€™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 companyâ€™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. Its North America retail business runs on much thinner margins, and its international retail business still runs at a loss. But for the vast majority of its twenty years in business, lossesâ€"not profitsâ€"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.

Amazonâ€™s Profits

Just as striking as Amazonâ€™s lack of interest in generating profit has been investorsâ€™ willingness to back the company. With the exception of a few quarters in 2014, Amazonâ€™s shareholders have poured money in despite the companyâ€™s penchant for losses. On a regular basis, Amazon would report losses, and its share price would soar. As one analyst told the New York Times, â€œAmazonâ€™s stock price doesnâ€™t seem to be correlated to its actual experience in any way.â€•

Analysts and reporters have spilled substantial ink seeking to understand the phenomenon. As one commentator joked in a widely circulated post, â€œAmazon, as best I can tell, is a charitable organization being run by elements of the investment community for the benefit of consumers.â€•

In some ways, the puzzlement is for naught: Amazonâ€™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.

In other words, the premise of Amazonâ€™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 consumersâ€™ one-stop-shop. This approach meant that Amazon â€œmay make decisions and weigh tradeoffs differently than some companies,â€• Bezos warned. â€œAt this stage, we choose to prioritize growth because we believe that scale is central to achieving the potential of our business model.â€•

The insistent emphasis on â€œmarket leadershipâ€• (Bezos relies on the term six times in the short letter) 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. Despite efforts by big-box competitors like Walmart, Sears, and Macyâ€™s to boost their online operations, no rival has succeeded in winning back market share.

One of the primary ways Amazon has built a huge edge is through Amazon Prime, the companyâ€™s loyalty program, in which Amazon has invested aggressively. Initiated in 2005, Amazon Prime began by offering consumers unlimited two-day shipping for $79. 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 retailerâ€™s single biggest driver of growth. Amazon does not disclose the exact number of Prime subscribers, but analysts believe the number of users has reached 63 millionâ€”19 million more than in 2015. Membership doubled between 2011 and 2013; analysts expect it to â€œeasily double again by 2017.â€• By 2020, it is estimated that half of U.S. households may be enrolled.

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 yearâ€”$55 in shipping, $35 in digital videoâ€”and that the company therefore took an $11 loss annually for each customer. One Amazon expert tallies that Amazon has been losing $1 billion to $2 billion a year on Prime memberships. 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 customersâ€”expenditures that regularly push it into the red.

Despite these lossesâ€”or perhaps because of themâ€”Prime is considered crucial to Amazonâ€™s growth as an online retailer. According to analysts, customers increase their purchases from Amazon by about 150% after they become Prime members. Prime members comprise 47% of Amazonâ€™s U.S. shoppers. Amazon Prime members also spend more on the companyâ€™s websiteâ€”an average of $1,500 annually, compared to $625 spent annually by non-Prime members. Business experts note that by making shipping free, Prime â€œsuccessfully strips out paying for . . . the leading consumer burden of online shopping.â€• Moreover, the annual fee drives customers to increase their Amazon purchases in order to maximize the return on their investment.

As a result, Amazon Prime users are both more likely to buy on its platform and less likely to shop elsewhere. â€œ[Sixty-three percent] of Amazon Prime members carry out a paid transaction on the site in the same visit,â€• compared to 13% of non-Prime members. For Walmart and Target, those figures are 5% and 2% respectively. 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. In the words of one former Amazon employee who worked on the Prime team, â€œIt was never about the $79. It was really about changing peopleâ€™s mentality so they wouldnâ€™t shop anywhere else.â€• In that regard, Amazon Prime seems to have proven successful.

In 2014, Amazon hiked its Prime membership fee to $99. The move prompted some consumer ire, but 95% of Prime members surveyed said they would either definitely or probably renew their membership regardless, 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 â€œjust one click away,â€• research drawing on behavioral tendencies shows that the â€œswitching costâ€• of changing web services can, in fact, be quite high.

No doubt, Amazonâ€™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 operationsâ€”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. In this way, Amazonâ€™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 Amazonâ€™s strategyâ€”and one partly enabled by its capacity to thrive despite posting lossesâ€—has been to expand aggressively into multiple business lines. 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. For the most part, Amazon has expanded into these areas by acquiring existing firms.

Involvement in multiple, related business lines means that, in many instances, Amazonâ€™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 Bezosâ€™s vision from the start. According to early Amazon employees, when the CEO founded the business, â€œhis underlying goals were not to build an online bookstore or an online retailer, but rather a â€˜utilityâ€™ that would become essential to commerce.â€• In other words, Bezosâ€™s target customer was not only end-consumers but also other businesses.

Amazon controls key critical infrastructure for the Internet economyâ€”in ways that are difficult for new entrants to replicate or compete against. This gives the company a key advantage over its rivals: Amazonâ€™s competitors have come to depend on it. Like its willingness to sustain losses, this feature of Amazonâ€™s power largely confounds contemporary antitrust analysis, which assumes that rational firms seek to drive their rivals out of business.

Amazonâ€™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 rivalsâ€”enabling it to further entrench its dominant position.

IV. Establishing Structural Dominance

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

These figures alone are daunting, but they do not capture the full extent of Amazonâ€™s role and power. Amazonâ€™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 Amazonâ€™s conduct that illustrate how the firm has established structural dominance. These examplesâ€”its handling of e-books and its battle with an independent online retailerâ€”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 Amazonâ€™s dominance for the foreseeable future. All four of these accounts raise concerns about contemporary antitrustâ€™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 Amazonâ€™s cost cutting as benign, focusing on the profitability of e-books in the aggregate and characterizing the companyâ€™s pricing of bestsellers as â€œloss leadingâ€• rather than predatory pricing. This failure to recognize Amazonâ€™s conduct as anticompetitive stems from a misunderstanding of online markets generally and of Amazonâ€™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. Before introducing the device, CEO Jeff Bezos had decided to price bestseller e-books at $9.99, significantly below the $12 to $30 that a new hardback typically costs. 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. Analysts estimate that Amazon sold the Kindle device below manufacturing cost too. Bezosâ€™s plan was to dominate the e-book selling business in the way that Apple had become the go-to platform for digital music. The strategy worked: through 2009, Amazon dominated the e-book retail market, selling around 90% of all e-books.

Publishers, fearing that Amazonâ€™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 â€œBig Sixâ€• publishers introduced agency pricing, whereby publishers would set the final retail price and Apple would get a 30% cut. After securing this deal, MacMillan, one of the â€œBig Six,â€• demanded that Amazon, too, adopt this pricing model. Though it initially refused and delisted MacMillanâ€™s books, Amazon ultimately relented, explaining to readers that â€œwe will have to capitulate and accept Macmillanâ€™s terms because Macmillan has a monopoly over their own titles.â€• Other publishers followed suit, halting Amazonâ€™s ability to price e-books at $9.99.

In 2012, the DOJ sued the publishers and Apple for colluding to raise e-book prices. In response to claims that the DOJ was going after the wrong actorâ€”given that it was Amazonâ€™s predatory tactics that drove the publishers and Apple to join forcesâ€”the DOJ investigated Amazonâ€™s pricing strategies and found â€œpersuasive evidence lackingâ€• to show that the company had engaged in predatory practices. According to the government, â€œfrom the time of its launch, Amazonâ€™s e-book distribution business has been consistently profitable, even when substantially discounting some newly released and bestselling titles.â€•

Judge Cote, who presided over the district court trial, refrained from affirming the governmentâ€™s conclusion. Still, the governmentâ€™s argument illustrates the dominant framework that courts and enforcers use to analyze predationâ€”and how it falls short. Specifically, the government erred by analyzing the profitability of Amazonâ€™s e-book business in the aggregate and by characterizing the conduct as â€œloss leadingâ€• rather than potentially predatory pricing. These missteps suggest a failure to appreciate two critical aspects of Amazonâ€™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,Amazonâ€™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-booksâ€”rather than as specific lines, like bestseller e-booksâ€”reflects a deeper mistake: the failure to recognize how the economics of platform-based products differ in crucial ways from non-platform goods. 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 Amazonâ€™s below-cost pricing as loss leading, rather than as predatory pricing. 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 Coteâ€™s use of â€œloss leadingâ€• revealed a view that â€œAmazonâ€™s below-cost pricing was (a) selective rather than pervasive, and (b) not intended to generate monopoly power.â€• On this view, Amazonâ€™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. In other words, because Amazonâ€™s alleged short-term aim was to sell more e-readers and e-booksâ€”rather than to harm its rivals and raise pricesâ€”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 Amazonâ€™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, andâ€”because you are

already thereâ€"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 Leeâ€™s Go Set a Watchman, and you purchase both a Kindle and the e-book. On Thursday, you would be inclined to revisit Amazonâ€"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 â€œdigital rights managementâ€• (DRM), which limits the types of devices that can read certain e-book formats. Compelling readers to purchase a Kindle through cheap e-books locks them into future e-book purchases from Amazon. Moreover, buyingâ€"or even browsingâ€"e-books on Amazonâ€™s platform hands the company information about your reading habits and preferences, data the company uses to tailor recommendations and future deals. Replicated across a few more purchases, Amazonâ€™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-commerceâ€"and specifically with digital products like e-booksâ€"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 Amazonâ€™s below-cost pricing. Though the immediate effect of Amazonâ€™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 â€œdynamic and evolvingâ€• and concluded that the â€œpresence and continued investment by technology giants, multinational book publishers, and national retailers in e-books businessesâ€• rendered an Amazon-dominated market unlikely. Yet Amazonâ€™s early lead has, in fact, translated to long-term dominance. It controls around 65% of the e-book market today, while its share of

the e-reader market hovers around 74%. 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. Barnes & Noble, meanwhile, has slashed funding for the Nook by 74%. The only real e-books competitor left standing is Apple.

Because the government deflected predatory pricing claims by looking at aggregate profitability, neither the government nor the court reached the question of recoupment. Given thatâ€”under current doctrineâ€”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, â€œ[i]t is difficult to comprehensively track the movement of prices on Amazon,â€• which means that any evidence of price trends is â€œanecdotal and fragmentary.â€• As Amazon customers can attest, Amazonâ€™s prices fluctuate rapidly and with no explanation.

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. Constant price fluctuations diminish our ability to discern pricing trends. By one account, Amazon changes prices more than 2.5 million times each day. 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, but online retailers generally are devoting significant resources to analyzing how to implement it. 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. 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.

If retailersâ€”including Amazonâ€”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. Discerning whether and by how much Amazon raises book prices will be more difficult than the Matsushita or Brooke Group Courts could have imagined.

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 accessâ€”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 engineâ€”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 storeâ€”precisely because the type of behavior that online firms can track is far more detailed and nuanced. And unlike brick-and-mortar storesâ€”where everyone at least sees a common price (even if they go on to receive discounts)â€”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 whichproduct market in which Amazon may choose to raise prices is also an open questionâ€”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 â€œtwo-tier system where some books are priced beyond an audienceâ€™s reach.â€• 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. 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.

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. Amazonâ€™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. In the words of one person close to the negotiations, Amazon â€œis very inventive about what weâ€™d call standard service. . . . Theyâ€™re teasing out all these layers and saying, â€˜If you want that service, youâ€™ll have to pay for it.â€™â€• By introducing fees on services that it previously offered for free, Amazon has created another source of revenue. Amazonâ€™s power to demand these feesâ€”and recoup some of the losses it sustained in below-cost pricingâ€”stems from dominance partly built through that same below-cost pricing. The fact that Amazon has itself vertically integrated into book publishingâ€”and hence can promote its own contentâ€”may give it additional leverage to hike fees. Any publisher that refuses could see Amazon favor its own books over the publisherâ€™s, reflecting a conflict of interest I discuss further in Section IV.D. It is not uncommon for half of the titles on Amazonâ€™s Kindle bestseller list to be its own.

While not captured by current antitrust doctrine, the pressure Amazon puts on publishers merits concern. For one, consolidation among book sellersâ€”partly spurred by Amazonâ€™s pricing tactics and demands for better terms from publishersâ€”has also spurred consolidation among publishers. Consolidation among publishers last reached its heyday in the 1990sâ€”as publishing houses sought to bulk up in response to the growing clout of Borders and Barnes & Nobleâ€”and by the early 2000s, the industry had settled into the â€œBig Six.â€• This trend has cost authors and readers alike, leaving writers with fewer paths to market and readers with a less diverse marketplace. Since Amazonâ€™s rise, the major publishers have merged furtherâ€”thinning down to five, with rumors of more consolidation to come.

Second, the increasing cost of doing business with Amazon is upending the publishersâ€™ 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. 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 Amazonâ€™s actions have â€œextract[ed] vital resources from the [book] industry in ways that lessen the diversity and quality of books.â€• The authors noted that publishers have responded to Amazonâ€™s fees by both publishing fewer titles and focusing largely on books by celebrities and bestselling authors. The authors also noted, â€œReaders 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 Americaâ€™s marketplace of ideas.â€•

Amazonâ€™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 Amazonâ€™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 disfavorsâ€”either to impose greater pressure on publishers or for other political reasonsâ€”raises concerns about media freedom. Given that antitrust authorities previously considered diversity of speech and ideas a factor in their analysis, Amazonâ€™s degree of control, too, should warrant concern.

Even within the narrower â€œconsumer welfareâ€• framework, Amazonâ€™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 captureoverlooks the full suite of harms that Amazonâ€™s actions may cause.

Amazonâ€™s below-cost pricing in the e-book marketâ€”which enabled it to capture 65% of that market, a sizable share by any measureâ€”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 Amazonâ€™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 lawâ€™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, Amazonâ€™s conduct suggests that psychological intimidation

can discourage new entry that would challenge a dominant playerâ€™s market power.

In 2008, Quidsi was one of the worldâ€™s fastest growing e-commerce companies. 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 companyâ€™s founders declined Amazonâ€™s offer.

Shortly after Quidsi rejected Amazonâ€™s overture, Amazon cut its prices for diapers and other baby products by up to 30%. By reconfiguring their prices, Quidsi executives saw that Amazonâ€™s pricing botsâ€”software â€œthat carefully monitors other companiesâ€™ prices and adjusts Amazonâ€™s to matchâ€•â€”were tracking Diapers.com and would immediately slash Amazonâ€™s prices in response to Quidsiâ€™s changes. In September 2010, Amazon rolled out Amazon Mom, a new service that offered a yearâ€™s worth of free two-day Prime shipping (which usually cost $79 a year). Customers could also secure an additional 30% discount on diapers by signing up for monthly deliveries as part of a service known as â€œSubscribe and Save.â€• Quidsi executives â€œcalculated that Amazon was on track to lose $100 million over three months in the diaper category alone.â€•

Eventually, Amazonâ€™s below-cost pricing started eating into Diapers.comâ€™s growth, and it â€œslowed under Amazonâ€™s pricing pressure.â€• Investors, meanwhile, â€œgrew wary of pouring more moneyâ€• into Quidsi, given the challenge from Amazon. Struggling to keep up with Amazonâ€™s pricing war, Quidsiâ€™s owners began talks with Walmart about potentially selling the business. Amazon intervened and made an aggressive counteroffer. Although Walmart offered a higher final bid, â€œthe Quidsi executives stuck with Amazon, largely out of fear.â€• The FTC reviewed the Amazon-Quidsi deal and decided that it did not trigger anticompetitive concerns. 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, losses that its investors have given it a free pass to incurâ€”and that a smaller and newer venture like Quidsi, by contrast, could not maintain.

After completing its buy-up of a key rivalâ€”and seemingly losing hundreds of millions of dollars in the processâ€”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. 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. 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 wipesâ€”one of the programâ€™s top-selling productsâ€”was cut to 5%. Summarizing the series of changes, one journalist observed, â€œThe Amazon Mom program has become much less generous than it was when it was introduced in 2010.â€• 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.comâ€”which, other users pointed out, was no longer possible. Through its strategy, Amazon now holds a strong position in the baby-product market.

Amazonâ€™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, â€œ[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 predatorâ€™s purpose, the merger must create a monopolyâ€• and law â€œwould preclude the attainment of the monopoly necessary to make predation profitable.â€• For sectors with low entry costs, Bork writes, this strategy is precluded by the constant possibility of reentry by other players. â€œA shoe retailer can be driven out rapidly, but reentry will be equally rapid.â€• 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, â€œ[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.â€•

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 companyâ€™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. Moreover, the high exit barriers that Bork assumes for railroadsâ€”namely, that they would have to be convinced their facilities were worth more as scrap than as a railroadâ€”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 competin

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