WHEN DO INTRABRAND NON-PRICE VERTICAL RESTRAINTS BECOME UNREASONABLE?

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ABSTRACT

Intrabrand non-price vertical restraints emerge from agreements between upstream and downstream firms and impose conditions on the downstream firm's resale of products. They are prevalent in the economy, especially in consumer-facing industries. Following the Supreme Court's 1977 decision in *Sylvania,* these restrictions have been subject to the rule of reason. In *Sylvania*, the Court noted that these restraints incentivize downstream firms to invest in product launches and brand promotion. Yet, if one of the main objectives of these restraints is to facilitate brand building and product introduction, a question arises as to whether they should be revisited at some point in the product's lifecycle. This paper argues that intrabrand non-price vertical restraints should be limited in duration. The initial phase of exclusivity incentivizes downstream firms to invest in new products and brands. But once these products gain recognition and firms recoup their investment, exclusivity starts maintaining prices above competitive levels without offering any countervailing competitive benefits. At this point, these restraints should be found unreasonable. To substantiate this framework, this paper presents both a novel economic model and a new empirical study of the exclusive territory provisions in the ready-to-drink beverage industry. It shows that when third-party distributors violate exclusive territories, prices of both affected and rival products decrease. Additionally, product sales in the affected territories either experience an increase or remain stable, suggesting a lack of significant decline in product quality. However, the breach of the exclusive territories leads to a reduction in product variety, underscoring the significance of these restraints for downstream investment in new products.

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I. Introduction

Intrabrand non-price vertical restraints are agreements between upstream and downstream firms that impose a constraint on either distribution or resale, limiting competition among the distributors of the same brand's products. For example, exclusive territory provisions prohibit each distributor from selling the manufacturer's goods outside of its designated region. Other examples include customer restraints—limits on the group of customers to which the distributor can sell the manufacturer's products.

In the United States, intrabrand non-price vertical restraints can be traced back to the franchises of the mid-1800s.[1] Singer Sewing Machine Company set precedent in 1851 as the first American brand to offer franchise agreements with exclusive territory clauses.[2] Since Isaac Singer lacked the necessary funds to mass-produce and distribute his sewing machines, he offered licenses to traveling independent salesmen. In return for a fee, they were permitted to sell Singer sewing machines in designated areas.[3] Coca-Cola adopted a similar business model in 1899, when it issued its first franchise, sixteen years after the launch of its first beverage.[4] The first franchised Coca-Cola bottler still operates as the Chattanooga Coca-Cola Bottling Company.[5] The brand's franchising agreements designated exclusive territories to bottlers since its inception. Around the same time, in 1898 General Motors granted its first franchise in Detroit, and Henry Ford provided franchise agreements to dealers for his Model T.[6] In 1924, Allen and White started a franchised food service chain named after their initials, A&W, which featured a unique root beer syrup.[7]

Franchising continued to be adopted by different businesses and gained momentum in the 1950s.[8] During this period, over 900 firms had franchised ventures with approximately 200,000

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[1] Franchising is a business model when an individual or entity (the "franchisee") operates a business using the branding, products, services, and support of an established company (the "franchisor"). The franchisee typically pays an initial or ongoing fee to the franchisor for these rights.

[2] AM. BAR ASS'N, THE HISTORY OF FRANCHISING 7, https://www.americanbar.org/content/dam/aba-cms-dotorg/products/inv/book/215742/Chapter%201.pdf.

[3] Adam Bannister, *From Singer to Subway: The History of Franchising*, ELITE FRANCHISE (Sept. 18, 2012), http://elitefranchisemagazine.co.uk/analysis/item/from-singer-to-subway-the-history-of-franchising.

[4] *The Birth of a Refreshing Idea*, COCA-COLA COMPANY, https://www.coca-colacompany.com/about-us/history/the-birth-of-a-refreshing-idea.

[5] Ned L. Irwin, *Coca-Cola Bottling Company*, TENNESSEE ENCYCLOPEDIA, https://tennesseeencyclopedia.net/entries/coca-cola-bottling-company/.

[6] AM. BAR ASS'N, *supra* note 2 at 8.

[7] *Id.* at 9.

[8] *A Brief History of Franchising*, FRANCHISE LAW, https://www.franchise-law.com/franchise-law-overview/a-brief-history-of-franchising.shtml.

franchisee outlets.[9] These years were also marked by the launch of Dairy Queen and McDonald's, both of which adopted franchising agreements with designated territory provisions. From its inception, Dairy Queen had "territory operators."[10] In 1961, McDonald's created the "Hamburger University" to train its franchisees, and when the company went public in 1965, there were 710 McDonald's restaurants in 44 states with $171 million in annual sales.[11] Franchising persisted as a vertical business model throughout the late 20th and early 21st century. In 2017, there were around 500,000 franchises in nearly 300 industries, and franchises constituted approximately 11% of all businesses in the United States.[12] In 2021, there were approximately 190,000 fast-food and 35,041 hotel and motel franchise establishments, and the number of new car dealership franchises stood at 17,600 in 2023.[13] Many of the franchise agreements continue to feature intrabrand non-price vertical restraints, such as exclusive territory provisions.[14] Moreover, the use of these restraints extends beyond franchise agreements. As evident from the diverse range of brands and products involved in lawsuits, intrabrand non-price vertical restraints are also used in agreements between independent upstream and downstream firms.[15]

With the Supreme Court's *Sylvania* decision in 1977, intrabrand non-price vertical restraints have become subject to the rule of reason, according to which courts and agencies weigh the agreements' procompetitive effects against their anticompetitive harm. *Sylvania* recognized these restraints' potential to incentivize investment in the promotion of new products and in the improvement of existing ones, as well as to induce the delivery of desired services. Notably, Sylvania Inc. had a mere 1 to 2% market share in the television sets market where market shares of some of its competitors reached 60% to 70%. The company said that it adopted vertical

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[9] *Id*.
[10] AM. BAR ASS'N, *supra* note 2 at 10.
[11] *McDonalds*, BRITANNICA (Aug. 23. 2023) https://www.britannica.com/topic/McDonalds; AM. BAR ASS'N, *supra* note 2 at 8.
[12] Bárbara Zamora-Appel & Nidaal Jubran. *Nearly 300 Industries Offer Franchise Opportunities*, U.S. CENSUS BURAU, https://www.census.gov/library/stories/2021/12/franchising-is-more-than-just-fast-food.html.
[13] CHRISTINA NU, 2022 FRANCHISING ECONOMIC OUTLOOK (Int'l Franchise Ass'n), https://www.franchise.org/sites/default/files/2022-02/2022%20Franchising%20Economic%20Outlook.pdf: *New Car Dealers in the U.S.*, IBIS WORLD, https://www.ibisworld.com/industry-statistics/number-of-businesses/new-car-dealers-united-states/.
[14] Kate Legg, *Franchise Territories Are Not Always as Exclusive as You May Think*, ELITE FRANCHISE (Dec. 4, 2018), http://elitefranchisemagazine.co.uk/legal/item/franchise-territories-are-not-always-as-exclusive-as-you-may-think.
[15] *See* White Motor Co. v. United States, 372 U.S. 253 (1963); United States v. Arnold, Schwinn & Co., 388 U.S. 365 (1967); Cont'l T.V. Inc. v. GTE Sylvania Inc., 433 U.S. 36, 38 (1977); Graphic Prod. Distrib., Inc. v. Itek Corp., 717 F.2d 1560 (11th Cir. 1983); Eiberger v. Sony Corp. of Am., 622 F.2d 1068 (1980).

distribution restraints in an effort to enter this highly concentrated market and increase its sales.[16] Scholars in the economics literature further highlighted the importance of advertising during the product introduction phase. For instance, the seminal paper by Milgrom and Roberts (1986) focus on a firm's choice of advertising for new products.[17]

In *Sylvania*, the Court also prioritized interbrand competition—competition between different brands—over intrabrand competition—competition between the distributors of the same brand. If one of the main purposes of these restraints is to get the brand or product off the ground, the question arises as to whether they should be revisited once the brand or the product is established. In other words, do intrabrand non-price vertical restraints become unreasonable, and if so, then when?

This paper argues for imposing a duration limit on intrabrand non-price vertical restraints, after which they become unreasonable. By providing distributors with temporary monopoly rights, the exclusivity period prevents free-riding and encourages investment in capital, product introduction and brand promotion, echoing the incentives highlighted in *Sylvania*. The introduction of new products to the market augments variety and enhances interbrand competition, increasing consumer welfare. Once the distributors have earned enough profits to offset their initial investments, intrabrand non-price vertical restraints become unreasonable. This marks the end of the exclusivity period, leading to a more competitive market. Such a shift further strengthens interbrand competition, as established products from different brands compete in price. With this framework, consumers benefit from the opportunity to both access new products and purchase established ones at competitive prices.

This framework is validated through both a novel economic model and empirical analysis of exclusive territory provisions. The model features four types of agents. There are two distinct competing brands which vend to distributors. Distributors then sell to retailers, who subsequently offer the products to consumers. With exclusive territory provisions in vertical agreements, each brand's distributor has the geographic market allocated solely to itself. In contrast, without

[16] Cont'l T.V. Inc. v. GTE Sylvania Inc., 433 U.S. 36, 38 (1977).
[17] Paul Milgrom & John Roberts, *Price and Advertising Signals of Product Quality*, 49 J. POL. ECON. 796 (1986). *See also* Dan Horsky & Leonard S. Simon, *Advertising and the Diffusion of New Products*, 2 MKTG. SCI. 1 (1983) ("…the optimal advertising policy is to advertise heavily when the product is introduced and to the level of advertising as sales increase and the product moves through its lifecycle.").

exclusive territories, one of the brands has multiple distributors in the same geographic market.[18] Under the latter scenario, the retailers hold a procurement scoring auction to pick one of the distributors from that brand. Each retailer carries the products of both brands, and consumers also have the option of not making a purchase. The first distributor of each brand needs to make an initial investment to enter the market. This investment aids in the regional promotion of the brand and its products. *Ex ante*, distributors enter the market if and only if the present value of their future profits exceeds their initial investment. The model sheds light on the mechanisms that give rise to the intrabrand and interbrand competitive effects and harms of exclusive territory provisions. Specifically, it shows the presence of an optimal duration for the exclusivity period that maximizes consumer welfare. At this threshold, downstream companies enter the market, but they do not maintain a prolonged monopoly on the distribution of the brands' products.

The empirical section studies the effects of exclusive territory provisions on prices, sales and product variety in ready-to-drink (RTD) beverages. These provisions are prevalent in the contracts between RTD beverage suppliers and distributors. The most important threat to these agreements is "transshipment"—unauthorized encroachments into the exclusive territories of distributors. Using a staggered difference-in-difference identification method, I estimate the competitive effects of six distinct litigated transshipment instances affecting alcoholic and non-alcoholic beverages between 2007 and 2018. I find that when intrabrand competition is introduced to the downstream market through transshipment, prices of both the affected and rival brands' established products fall while sales rise. The increase in sales suggests that product quality is not significantly affected despite the absence of vertical restraints, as such an uptick in sales would not be seen otherwise. The decrease in the prices of rival products signifies that the competitive pressure arising in the intrabrand market can also lower prices in the interbrand market. My results imply that exclusive territory provisions can keep the prices of established products high, surpassing competitive levels. However, areas subjected to transshipment experience a reduction in variety of products from the transshipped brands. This finding corroborates the notion that intrabrand non-price vertical restraints spur distributor investment in promotion, cultivating consumer demand for new products. The differential effect of exclusive territory provisions on existing and new products

[18] I hold the market for the incumbent brand's distributors fixed to differentiate between the effects of non-price vertical restraints on intrabrand and interbrand competition.

reinforces the idea of limiting the duration of intrabrand non-price vertical restraints according to the product's lifecycle.

This paper focuses on upfront investment by downstream firms. This initial downstream investment can easily necessitate the use of intrabrand non-price vertical restraints as it tends to be non-contractible for a number of reasons. First, the absence of these restraints would require a detailed and costly contract for upfront investment by downstream firms, along with the challenge of anticipating the prospects of a young business. Second, this investment happens at a time when the manufacturer is liquidity constrained and the distributor possesses sensitive local information crucial for the product's success. Consequently, intrabrand non-price restraints may more efficiently guarantee the initial downstream investment compared to direct contracts. I defer the discussion of ongoing investment to future work. This decision is driven by the fact that a major challenge businesses encounter is launching a brand or a product, and ongoing investment may be more readily addressed through contracts.[19] Nevertheless, in cases where ongoing investment is the primary concern and cannot be adequately addressed through less restrictive means, such as direct contracts or provision by established manufacturers, longer exclusivities than those recommended in this paper may prove to be efficient.

This paper contributes to the law and economics literature on intrabrand non-price vertical restraints by providing an administrable doctrinal framework, a novel economic model and original empirical study. The post-Sylvania legal landscape lacks a robust approach to applying the rule of reason to these restraints. Highlighting this issue, Gavil et al. (2017) make the following assessment: "The most critical unanswered question of Sylvania was 'how would the rule of reason apply to Sylvania-type restraints?' ... What would make vertical intrabrand non-price restraints 'unreasonable'?"[20] Similarly, Areeda and Hovenkamp (2023) note that, "while the Sylvania decision is now more than 30 years old, the courts have yet to develop a clear methodology for analyzing nonprice vertical restraints under the rule of reason."[21] Tirole (1988) observes, "[i]t seems important for economic theorists to develop a careful classification and operative criteria to

[19] According to JP Morgan Chase & Co., based on data for businesses started in 2010, "roughly a third of new businesses exit within their first two years, and half exit within their first five years." *Research: Longevity*, JPMORGAN CHASE & CO., https://www.jpmorganchase.com/institute/research/small-business/small-business-dashboard/longevity.

[20] ANDREW I. GAVIL ET AL., ANTITRUST LAW IN PERSPECTIVE 919 (3rd ed. 2017).

[21] PHILIP E. AREEDA & HERBERT HOVENKAMP, ANTITRUST LAW §§1620, 1645 (2023).

determine in which environments certain vertical restraints are likely to lower social welfare."[22] In light of these remarks, this paper provides guidance and a structured methodology to assess the reasonableness of intrabrand non-price vertical restraints when the predominant justification for their use is upfront investment by downstream firms.

Unlike the majority of the theory literature in economics, this paper studies both the interbrand and intrabrand effects of non-price vertical restraints in the presence of investment. Existing studies in this field predominantly examine markets either where the manufacturer operates as a monopoly and the retailer invests in ongoing services, or where the upstream market is a duopoly but neither manufacturers nor retailers invest in services.[23] Within the former category of papers is Mathewson and Winter (1983, 1984), modeling the use of vertical restraints by a monopolistic manufacturer in a spatial retail market. They identify sets of vertical restraints that mitigate a number of externalities hindering the vertical structure from attaining the highest combined manufacturer and retailer profits.[24] Mathewson and Winter (1985) study the use of intrabrand restraints when the manufacturer invests in national advertising, the retailer invests in additional quality, and there is uncertainty in local demand.[25] Rey and Tirole (1986) illustrate that different forms of vertical restraints may not be equivalent in the presence of cost or demand uncertainty. They also show that these restraints may or may not be privately desirable, and even if they are privately desirable, they may not be socially desirable.[26] Klein and Murphy (1988) describe how manufacturers can use vertical restraints to privately oversee dealer performance.[27] Winter (1993) introduces a spatial model of retailers, wherein he suggests that retail services, facilitated by vertical restraints, reduce consumers' opportunity costs of purchasing the product.[28] Mathewson and Winter (1994) study the right to add more franchisees in vertical contracts, and show that

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[22] JEAN TIROLE, THE THEORY OF INDUSTRIAL ORGANIZATION 186 (1988).
[23] *See id.* 169-186; see *also* M. Lawrence Katz, *Vertical Contractual Relation, in* 1 HANDBOOK OF INDUSTRIAL ORGANIZATION, at 661, 709 (1989) ("Unfortunately, while the existence of game-playing agents has been obvious to those studying vertical restraints, these authors have, for the most part, chosen to ignore formal analysis of such problems, relying instead on unwarranted extrapolation from models in which there is a single principal with one or more agents … An approach to welfare analysis taken by much of the literature is to focus on a specific practice and construct a list of reasons why it may raise or lower welfare.").
[24] G. Frank Mathewson & Ralph Winter, *An Economic Theory of Vertical Restraints*, 15 RAND J. ECON. 27 (1984).
[25] G. Frank Mathewson & Ralph Winter, *The Economics of Franchise Contracts*, 28 J. L. & ECON. 503 (1985).
[26] Patrick Rey & Jean Tirole, *The Logic of Vertical Restraints*, 76 AM. ECON. REV. 921 (1986).
[27] Benjamin Klein & Kevin M. Murphy, *Vertical Restraints as Contract Enforcement Mechanisms*, 31 J. L. & ECON. 265 (1988).
[28] Ralph A. Winter, *Vertical Control and Price versus Nonprice Competition*, 108 Q. J. ECON. 61 (1993).

exclusivity provisions increase profits if franchisee efforts significantly contribute to the demand for the product.[29]

In the latter category of papers, Bonanno and Vickers (1988) illustrate how the manufacturer can induce a rival's collaboration by selling its product through an independent retailer rather than selling directly to consumers.[30] Similarly, Rey and Stiglitz (1995) show the potential for exclusive territories to have significant anticompetitive effects on interbrand competition, such as harm to price competition.[31] Asker and Bar-Isaac (2014) find that when the downstream entity needs to accommodate a new upstream firm, the incumbent upstream firm can use intrabrand vertical restraints to share its rents with the distributor, thereby deterring entry.[32]

Few papers empirically investigate the competitive effects of intrabrand non-price vertical restraints. Notable examples are Rojas (2012) and Burgdorf (2019), both of which study the competitive effects following a state's decision to mandate exclusive territories within the beer sector.[33] A consensus between these papers on the impact of exclusive territories fails to emerge, as these studies have revealed both increases and decreases in prices and quantities subsequent to changes in the statutes. Additionally, studying the state law mandates of exclusive territories does not allow for the observation of the prior market structure. While the new statutes require the use of exclusive territories, the old statutes did not prohibit such contractual provisions. In fact, old statutes either permitted the use of exclusive territories or were silent on the issue. For this reason, it is likely that exclusive territories were in place prior to the statutory change. Consequently, the ramifications of these mandates might not align perfectly with the competitive effects of exclusive territories. These papers also compare affected states to control states, and this study design might capture the effects of changes in the treated beer markets that are contemporaneous with the new statutes. In contrast, the quasi-experiment I present uses unexpected and idiosyncratic instances of transshipment that affect only a single brand in a unique region and time, thereby allowing the assessment of both interbrand and intrabrand effects of these restraints. This quasi-experiment

[29] G. Frank Mathewson & Ralph Winter, *Territorial Restrictions in Franchise Contracts*, 32 ECON. INQUIRY 181 (1994).
[30] Giacomo Bonnano & John Vickers, *Vertical Separation*, 36 J. INDUS. ECON. 257 (1988).
[31] Patrick Rey & Joseph Stiglitz, *Vertical Restraints and Producers' Competition*, 32 EUROPEAN ECON. REV. 561 (1988).
[32] John Asker & Heski Bar-Isaac, *Raising Retailers' Profits: On Vertical Practices and Exclusion of Rivals*, 104 AM. ECON. REV. 672 (2014).
[33] Christian Rojas, *The Effect of Mandated Exclusive Territories in the US Brewing Industry*, 12 B.E. J. ECON. ANALYSIS 1 (2012); Jacob Burgdorf, *Impact of Mandated Exclusive Territories in the US Brewing Industry: Evidence from Scanner Level Data*, 63 INT'L J. INDUS. ORG. 376 (2019).

describes a complete regime shift from exclusive to non-exclusive territories, and mitigates the effect of potential confounding factors that might be contemporaneously present in the affected markets.

In the legal literature, the pioneering article by Telser (1960) on intrabrand price vertical restraints asserts that manufacturers enforce these restraints to secure optimal downstream investment from their dealers.[34] Comanor (1968) highlights the use of intrabrand vertical restraints to achieve anticompetitive product differentiation by means of unwarranted service provision.[35] Bork (1977) argues for allowing vertical price and non-price restraints.[36] Posner (1977) proposes focusing on the intention to cartelize distribution as a means of identifying anticompetitive restraints.[37] Pitofsky (1978) advocates the selective application of per-se treatment to some categories of vertical restrictions after *Sylvania*.[38] In contrast, Posner (1981) supports the per se legality of certain vertical restraints, including resale price maintenance, exclusive territories, and customer restrictions.[39] Comanor (1987) summarizes the arguments supporting and opposing vertical arrangements. He also challenges the notion that the interests of manufacturers seamlessly align with those of consumers.[40] Ginsburg (1991) provides a summary of how courts of appeals have applied the rule of reason to vertical nonprice restraints after *Sylvania*, and concludes that these restraints have effectively became legal.[41] He reviews all published circuit court decisions that cite *Sylvania*, and observes that defendants prevailed in over 90 percent of the cases.[42] In those cases where the plaintiff won, a key factor influencing the outcome was the defendant's high market share.[43] In those cases where the defendants won, the court adopted one of the four approaches to the rule of reason: using manufacturer market power as a screen, holding that intrabrand vertical restraints generally enhance interbrand competition, focusing only on whether

[34] Lester Telser, *Why Should Manufacturers Want Fair Trade?* 3 J. L. & ECON. 86 (1960).
[35] William Comanor, *Vertical Territorial and Customer Restrictions: White Motor and Its Aftermath*, 81 HARV. L. REV. 1419 (1968).
[36] Robert H. Bork, *Vertical Restraints: Schwinn Overruled*, 1977 SUP. CT. REV. 171 (1977).
[37] Richard A. Posner, *The Rule of Reason and the Economic Approach: Reflections on the Sylvania Decision*, 45 U. CHI. L. REV. 1 (1977).
[38] Robert Pitofsky, *The* Sylvania *Case: Antitrust Analysis of Non-Price Vertical Restrictions,* 78 COLUM. L. REV. 1 (1978).
[39] Richard Posner, *The Next Step in the Antitrust Treatment of Restricted Distribution: Per se Legality*, 48 U. CHI. L. REV. 6 (1981).
[40] William S. Comanor, *Vertical Agreements and Antitrust Analysis*, 62 N.Y.U. L. REV. 1153 (1987).
[41] Douglas H. Ginsburg, *Vertical Restraints: De Facto Legality under the Rule of Reason*, 60 ANTITRUST L. J. 67 (1991).
[42] *Id.* at 70.
[43] *Id.* at 71.

the restraint posed a threat to interbrand competition, or attempting to weigh the efficiencies of the restraint against its potential harm.[44] Sokol (2013) studies Robert Bork's pivotal role in shaping antitrust law on three key vertical restraints: maximum resale price maintenance, territorial restrictions, and Robinson-Patman Act violations.[45]

The paper is organized as follows. Section II describes antitrust laws on intrabrand non-price vertical restraints. Section III provides a brief background on the RTD beverage industry, overviewing its history, the vertical contracts between manufacturers and distributors, the exclusive territory provisions of these contracts and the transshipment phenomenon. Section IV details the economic model, and Section V presents the empirical results. Section VI describes the paper's primary policy suggestion, proposing limited-duration intrabrand non-price vertical restraints. This proposal borrows both from the rule of reason's common law origins and from patent law.[46] Section VII concludes.

II. Antitrust Law on Intrabrand Non-Price Vertical Restraints

In the 1800s, the growing market power of major corporations like Standard Oil and the American Railway Union was met with public disapproval and viewed as unjust monopolization of important industries. In response, Congress passed the Sherman Antitrust Act of 1890 to promote competition. Section 1, one of the key provisions of the Act, reads,

> Every contract, combination in the form of trust or otherwise, or conspiracy, in restraint of trade or commerce among the several States, or with foreign nations, is declared to be illegal. Every person who shall make any contract or engage in any combination or conspiracy hereby declared to be illegal shall be deemed guilty of a felony.[47]

Most commonly, Section 1 applies to cartels or cartel-like arrangements. However, as non-vertical price restraints almost always emerge from agreements between upstream and downstream firms, they also fall under the purview of Section 1.[48]

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[44] *Id.* at 74-75.

[45] D. Daniel Sokol, *The Transformation of Vertical Restraints: Per Se Illegality, The Rule of Reason, and Per Se Legality*, 79 ANTITRUST L. J. 1003 (2014).

[46] For a proposal to enhance the efficiency of the patent system without harming innovation incentives, *see* Ian Ayres & Paul Klemperer, *Limiting Patentees Market Power Without Reducing Innovation Incentives: The Perverse Benefits of Uncertainty and Non-Injunctive Remedies*, 97 MICH. L. REV. 985 (1999).

[47] 5 U.S.C. §1 (2018).

[48] Under certain circumstances, non-price vertical restraints can also be exclusionary and fall within the scope of Section 2. Section 2 of the Sherman Act prohibits any person to "monopolize, or attempt to monopolize, or combine

Although intrabrand non-price vertical restraints have been subject to the same statute for the past century, the judicial outlook on this category of conduct has evolved significantly. The United States Supreme Court addressed intrabrand non-price vertical restraints for the first time in *White Motor Co. v. United States*.[49] The case involved White Motor's manufacturer-dealer contracts with exclusive territory provisions and customer restriction clauses preventing sales to government purchasers.[50] The government sued White Motor, arguing that the territorial and customer restrictions White Motor placed on its dealers and distributors were per se unreasonable under Section 1 of the Sherman Act. The Court noted its limited experience with non-price vertical restraints. Consequently, it decided against making intrabrand non-price vertical restraints *per se illegal*, a designation that would have made such agreements unlawful without any consideration of their procompetitive effects:

> We do not know enough of the economic and business stuff out of which these arrangements emerge to be certain . . . . We need to know more than we do about the actual impact of these arrangements on competition to decide whether they have such a "pernicious effect on competition and lack . . . any redeeming virtue" . . . and therefore should be classified as per se violations of the Sherman Act.[51]

Only four years after issuing *White Motor*, the Supreme Court reversed it. In *United States v. Arnold Schwinn & Co.*, the territorial and customer restrictions that Arnold Schwinn placed on the distributors and retailers of its bicycles came under scrutiny. The Supreme Court held the restrictions in the resale agreements *per se illegal*, but carved out agency and consignment arrangements, continuing to subject them to the rule of reason.[52]

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or conspire with any other person or persons, to monopolize any part of the trade or commerce among the several States, or with foreign nations . . ."15 U.S.C. §2 (2018). However, as a Section 1 violation is easier to prove, Section 2 is rarely invoked in practice.

[49] White Motor Co. v. United States, 372 U.S. 253, 261 (1963) ("This is the first case involving a territorial restriction in a vertical arrangement; and we know too little of the actual impact of both that restriction and the one respecting customers to reach a conclusion on the bare bones of the documentary evidence before us.").

[50] The exclusive territory provision reads,

> Distributor is hereby granted the exclusive right . . . to sell during the life of this agreement in the territory described below .... Distributor agrees to develop the aforementioned territory to the satisfaction of the Company, . . . and not to sell such trucks except to individuals, firms, or corporations having a place of business and/or purchasing headquarters in said territory.

Id. at 255-56.

The customer restriction provision reads, "Distributor further agrees not to sell nor to authorize his dealers to sell such trucks to any Federal or State government or any department or political subdivision thereof ..." *Id.*

[51] *Id.* at 263 (1963).

[52] In *Schwinn*, the Court said,

> Once the manufacturer has parted with title and risk, he has parted with dominion over the product, and his effort thereafter to restrict territory or persons to whom the product may be transferred—

The Court's focus on the common law distinction between resale and consignment, rather than on the economic implications of the contracts, drew criticism.[53] The contemporary rise of the Chicago School in the 1960s and 1970s further popularized the use of economic analysis in antitrust law.[54] So, ten years after *Schwinn*, the Court once again revisited and reversed its position in *Continental T.V. Inc. v. GTE Sylvania*.[55] Since 1977, *Sylvania* has governed intrabrand non-price vertical restraints.

In *Sylvania*, the Court examined franchise contracts that limited the number of retailers in each region and confined them to sales within a designated territory. Criticizing the rationale behind *Schwinn*, the Court said that antitrust law "must be based upon demonstrable economic effect, rather than ... formalistic line drawing."[56] The Court decided that the economic effects of intrabrand non-price vertical restraints warranted the rule of reason rather than the standard of *per se illegality*.[57]

The Court cited two "redeeming virtues" of intrabrand non-price vertical restraints that made the standard of *per se illegality* inapplicable under *Northern Pacific*, which had previously characterized per se violations of the Sherman Act.[58] First, "new manufacturers and manufacturers

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> whether by explicit agreement or by silent combination or understanding with his vendee—is a per se violation of § 1 of the Sherman Act.

United States v. Arnold, Schwinn & Co., 388 U.S. 365, 382 (1967).

> [In the unilateral adoption by a single manufacturer of an agency or consignment pattern], the vertically imposed distribution restraints—absent price fixing and in the presence of adequate sources of alternative products to meet the needs of the unfranchised—may not be held to be per se violations of the Sherman Act.

Id. at 381.

[53] "Since its announcement, Schwinn has been the subject of continuing controversy and confusion, both in the scholarly journals and in the federal courts. The great weight of scholarly opinion has been critical of the decision, and a number of the federal courts confronted with analogous vertical restrictions have sought to limit its reach." Cont'l T.V. v. GTE Sylvania, 433 U.S. 36, 48 (1977).

[54] The Chicago School refers to the neoclassical school of economic thought associated with the University of Chicago. Briefly stated, this school supports the efficiency of free markets and the application of economic principles to antitrust. Unsurprisingly, the Supreme Court cited prominent members of the Chicago School, including Robert Bork and Richard Posner, in *Sylvania*.

> Economists also have argued that manufacturers have an economic interest in maintaining as much intrabrand competition as is consistent with the efficient distribution of their products. Bork, The Rule of Reason and the Per Se Concept: Price Fixing and Market Division [II], 75 Yale L. J. 373, 403 (1966); Posner, supra, n. 13, at 283, 287-288.

Id. at 56.

[55] *Id.*

[56] *Id.* at 47.

[57] *Id.* at 57.

[58] *Id.* at 54; Northern Pac. Ry. Co. v. United States, 356 U.S. 1, 5 (1958) ([T]here are certain agreements or practices which because of their pernicious effect on competition and lack of any redeeming virtue are conclusively presumed to be unreasonable and therefore illegal without elaborate inquiry as to the precise harm they have caused or the business excuse for their use.)

entering new markets can use the restrictions in order to induce competent and aggressive retailers to make the kind of investment of capital and labor that is often required in the distribution of products unknown to the consumer."[59] Second, they could incentivize "retailers to engage in promotional activities or to provide service and repair facilities."[60] The Court noted that these expenditures might not be undertaken in competitive markets, as the possibility of "free-riding" would decrease the incentives to invest.[61]

The ultimate goal of each of these virtues was to intensify interbrand competition. The Court held that, even if intrabrand non-price vertical restraints limited competition among distributors of the same brand, they might boost competition between different brands. The primary focus of antitrust law, the Court stressed, was interbrand competition.[62] The Court further noted, "when interbrand competition exists … it provides a significant check on the exploitation of intrabrand market power."[63]

After *Sylvania*, few cases resulted in successful challenges to intrabrand non-price vertical restraints, and lower courts had few opportunities to decide how to apply the rule of reason in these instances.[64] In *Graphic Products*, the 11th Circuit looked at the defendant's market power, product differentiation, and the conduct's effects on consumer welfare and interbrand market.[65] In *Eiberger v. Sony Corp. of Am.*, the Court held the defendant's intrabrand non-price vertical restraints illegal because it did not observe any of the procompetitive purposes that *Sylvania* mentioned.[66] However, the scarcity of cases is not representative of the frequency with which these restraints are currently employed. In fact, they feature in many economically important industries. Below, I study these restraints within the RTD beverage industry.

[59] Sylvania, 433 U.S. at 54-55.
[60] *Id.*
[61] *See id.*
[62] *Id.* at n.19.
[63] *Id.*
[64] ANDREW I. GAVIL ET AL., ANTITRUST LAW IN PERSPECTIVE: CASES, CONCEPTS AND PROBLEMS IN COMPETITION POLICY 918 (3rd ed. 2016).
[65] Graphic Prod. Distrib., Inc. v. Itek Corp., 717 F.2d 1560 (11th Cir. 1983).
[66] Eiberger v. Sony Corp. of Am., 622 F.2d 1068 (1980).

III. Institutional Details

This section describes the ready-to-drink (RTD) beverage industry. I provide a brief overview of this industry's history, its vertical market structure, and its employment of exclusive territory provisions.

A. History

Many of today's popular RTD beverage brands originated in the late 1800s.[67] These beverages became household staples soon after their initial launches and their sales gained significant momentum in their early years.[68] Today, these brands are among the most recognizable in the world, and firms that market them have market capitalizations and sales in billions of dollars.

The production of RTD beverages, whether they are water, sodas, beer, energy drinks, sports drinks, or iced tea, follows a standard process. First, a signature ingredient, which is often protected as a trade secret, is produced. For carbonated beverages, this involves making the concentrates and the syrups that give the beverage its unique flavor. When crafting water, energy drinks or sports drinks, this first step entails mixing caffeine, vitamins, herbs and sugar. For iced tea, this step includes harvesting and drying the tea leaves. In beer production, this setup involves malting and milling the grains. The ingredients produced in this initial step are typically lightweight and compact, making their transportation both easy and inexpensive. Then, water, which makes up most of the weight and volume of the final beverage, is added. For example, syrups, concentrates, caffeine, and sugar are mixed with water, and tea leaves are brewed. In beer production, this step entails mixing the malt with hot water, cooling the mixture, fermenting, and then cellaring it.

Despite constituting most of the final beverage, water is not valuable per pound or per unit of volume, and it is costly to ship. Due to the widespread availability of water in the country, it is more efficient and cost-effective to mix water with other ingredients locally. Hence, to become a

[67] Many of today's well-known soda brands were first introduced in 1880s, while some of the popular beer brands date back to the 1850s.

[68] *How the Soda Industry was Transformed into a Trillion Dollar Business*, RC COLA INTERNATIONAL, (2020), https://l.rccolainternational.com/blog/soda-industry-transformed-into-a-trillion-dollar-business-how-the-soda-industry-was-transformed-trillion-dollar-business (By the 1800s, flavored syrup was being sold in gallons. By 1904, that figure had risen to one million gallons sold annually.").

national brand, RTD beverage companies need local plants in various regions to cater to each geographic market.

Setting up a national production system in-house demands a substantial investment. Such an investment can be daunting, especially in the early years of a brand when the company is liquidity constrained. As a result, many brands have opted for vertical agreements with local downstream entities to reduce transportation costs.

B. Vertical Contracts

As early as the 1900s, upstream firms started forming vertical contracts with local bottlers, breweries, and distributors (hereinafter collectively referred to as "distributors") to reduce production and distribution costs.[69] Under this market structure, upstream firms granted local entities the authority to produce and distribute their beverages. However, the upstream firms retained ownership of the unique recipe for their drinks and manufactured the key ingredient, thereby preventing distributors from producing the same or similar beverages autonomously. These contracts also included guarantees regarding the bottler's productive capacity and quality control. Additionally, they contained provisions related to the utilization of trademarked brands, the transfer of bottling rights, and remedies for any contract violations.

During the 1970s, there existed more than 50 syrup companies marketing 150 beverages through 7,500 agreements with local bottlers.[70] Many of these vertical contracts were perpetual, and a high number of them have survived.[71] Today, as shipping water across the U.S. remains costly, beverage companies continue to work with local firms to manufacture and distribute their products, and these relationships continue to be governed by vertical contracts.[72]

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[69] *Id.* ("In 1899, the business took off. The first bottling agreement was made, which involved three different American businessmen who came to a decision that involved their working in separate, clearly delineated regions. They sold bottling rights to local firms. Their activities were successful and further accelerated the growth of the industry.")

[70] Soft Drink Interbrand Competition Act, Hearing Before the Subcomm. on Monopolies and Commercial Law, Comm. on the Judiciary, 96 Congress 91 (1979).

[71] Independent bottlers that currently manufacture non-alcoholic beverages for major brands have been operating under these contracts since as early as the 1800s. Many of these agreements did not contain express terms of duration. *See* Coca-Cola Co. et al., 91 F.T.C. 517, 521 (1978), https://www.ftc.gov/sites/default/files/documents/commission_decision_volumes/volume-91/ftc_volume_decision_91_january_-_june_1978pages_504-679.pdf.

[72] One exception to this phenomenon is vertically integrated beverage firms. These firms manage the manufacturing and distribution of their products in-house.

C. Exclusive Territory Provisions

Exclusive territory provisions commonly feature in vertical contracts in the RTD beverage sector. Under these provisions, the downstream firm is designated as the sole and exclusive bottler or distributor of the beverage for a particular geographic area, while the upstream firm commits to not appointing any others to that same region.[73] These provisions create downstream monopolies in each region, incentivizing local businessmen to make the initial investment in capital and advertisement.[74] Historically, the boundaries of territories were set at a distance a horse and a driver could cover in one day.[75] Over time, territories were expanded according to the transportation capabilities of motor vehicles. Today, these provisions often divide the entire country into mutually exclusive regions, each of which is assigned to a single bottler or distributor.

Exclusive territory provisions in beverage contracts are allowed and sometimes even required by federal and state laws.[76] For instance, the Soft Drink Interbrand Competition Act of 1980 makes these provisions legal in licensing agreements for the manufacture, distribution or sale of non-alcoholic beverages, as long as there exists substantial interbrand competition.[77] In the beer

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[73] For instance, a representative contract of a non-alcoholic beverage manufacturer and a bottler has the following provision:

> The Company appoints the Bottler as its sole and exclusive purchaser of the Concentrates and Syrups for the purpose of manufacture, packaging and distribution of the Beverages under the Trademarks in Authorized containers for sale in the Territory" and the "Bottler agrees not to distribute or sell any Beverage outside the Territory … The Company, agrees not to authorize any other party whatsoever to use the Trademarks on Beverages [...] for purposes of resale in the Territory" and the Company "extends to the Bottler [...] an exclusive license to use the Trademarks solely in connection with the manufacture, packaging, distribution and sale of the Beverages in Authorized Containers in the Territory

Master Bottle Contract,
https://www.sec.gov/Archives/edgar/data/317540/000095012310104682/g25163exv10w1.htm.

[74] For example, the bottling contract of a major non-alcoholic beverage brand reads, "The continuing responsibility to develop and stimulate and satisfy fully the demand for the Beverages [...] within the Territory rests upon the Bottler [...] The parties agree that to develop and stimulate demand for the Beverages [...] advertising and other forms of marketing activities are required. Therefore, the Bottler will spend such funds in advertising and marketing the Beverages as may be reasonably required to stimulate, as well as maintain, demand for the Beverages [...] in the Territory." *Id.*

[75] Coca-Cola Co., 91 F.T.C. 517, 585 (1975),
https://www.ftc.gov/sites/default/files/documents/commission_decision_volumes/volume-91/ftc_volume_decision_91_january_-_june_1978pages_504-679.pdf.

[76] However, exclusive territory provisions in the beverage industry have been contested by agencies and private parties. For instance, the Federal Trade Commission challenged many of the major non-alcoholic beverage brands' exclusive bottling agreements in the 1970s. The FTC dismissed complaints against all major non-alcoholic beverage companies when Congress passed the Soft Drink Act in 1980. *See* 46 Fed. Reg. 51243 (1981), https://www.govinfo.gov/content/pkg/FR-1981-10-19/pdf/FR-1981-10-19.pdf

[77] 15 U.S.C. § 3501-03. Although the Act does not define "'substantial and effective" interbrand competition, the Senate report lists various factors that would help a court determine whether such competition exits: "The number of brands, types, and flavors of competing products available [...]; persistence of long-run monopoly profits; the number

industry, all states allow the grant of exclusive sales territories to distributors. In fact, most state statutes require beer distributors to have exclusive territories as a condition for license grants.[78]

D. Transshipment

The primary concern for downstream firms with exclusive territories is the infringement on their exclusivity rights. Third parties purchase the products in other markets more cheaply, and resell them in the distributor's exclusive territory at lower prices. In the beverage industry, this practice is commonly referred to as "transshipment." These third parties introduce competition into the intrabrand market, thereby disrupting the monopoly that was established through the exclusive territory provisions. They capitalize on the brand's pre-established reputation, free-riding off the incumbent's sunk investment. Given the prevalence of exclusive territory clauses in the beverage industry, this product market is particularly susceptible to these practices. Indeed, there have been many reported instances of transshipment in this industry, some of which are central to the empirical study detailed in Section V.

IV. Model

In this section, I present a generic model of a vertical market structure with four tiers: manufacturers, distributors, retailers, and consumers. For the purposes of the RTD beverage industry, manufacturers refer to the upstream companies that produce the proprietary ingredients and hold the brand rights. Distributors refer to bottlers and brewers who acquire the key ingredient from the manufacturer, add water, and produce the finished product. Retailers are entities like grocery, convenience, and drug stores that sell the beverages directly to the end consumers.

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of retail price options available to consumers;[...] the degree of service competition among vendors; ease of entry into the market; the failure of output levels to respond to consumer demands; the number and strength of competing products in the territory." S. Rep. No. 645, 96th Cong., 2d Sess. 10-11 (1980).

[78] *E.g. see* Ala. Code §§ 28-8-1 to 28-9-11; Ark. Code Ann. §§ 3-5-1101 to 3-5-1111 and § 3-5-1416; Colo. Rev. Stat. §§ 12-47-405 to 12-47-406.3; Fla. Stat. §§ 563.021 to 563.022; Ga. Code Ann. §§ 3-5-29 to 3-5-34; Ga. Comp. R. & Regs. 560-2- 5.10; Iowa Code §§ 123A.1 to 123A.12; Kan. Stat. Ann. § 41-410; Ky. Rev. Stat. Ann. §§ 244.585; 244.602 to 244.606; La. Rev. Stat. Ann. §§ 26:801 to 812; Mich. Comp. Laws §§ 436.1401; 436.1403; Miss. Code Ann. §§ 67-7-1 to 67-7-23; N.J. Rev. Stat. §§ 33:1-93.12 to 33:1-93.20; Vt. Stat. Ann. tit. 7, §§ 701 to 710; Va. Code Ann. §§ 4.1-500 to 4.1-517; Utah Code Ann. §§ 32B-1-102; 32B-11-201; 32B-11-503; 32B-14-101 through 32B-14-402. *See also* Barry Kurtz & Bryan H. Clements, *The Yin and Yang of Beer Distribution Law and Franchising*, THE PRACTICAL LAWYER (2014), https://www.jdsupra.com/legalnews/the-yin-and-yang-of-beer-distribution-la-76067/.

In the first layer, manufacturers produce the protected ingredient. I abstract away from strategic decisions made at the top level of the vertical chain and these firms sell the ingredients at fixed prices.

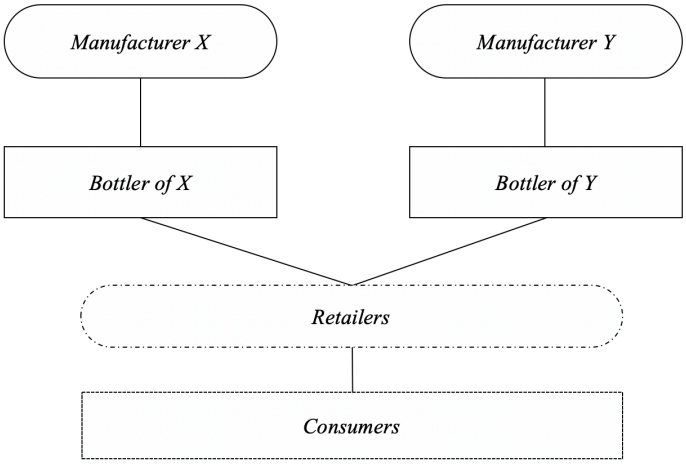
In the second layer, the relationship between manufacturers and distributors can be governed by exclusive territory contracts, wherein each manufacturer designates its distributor with exclusive distribution rights for the product within a specific geographic region. Distributors sell the product of a single manufacturer, and they must make an initial investment to enter the market to promote the brand within the distributor's designated operational area. In the presence of exclusive territories, the sole distributor reaping the rewards of this investment is the pioneer. This investment enhances the likelihood that consumers will choose the brand exclusively sold by a single downstream firm. However, in the absence of exclusive territories, other distributors producing the same brand can free-ride on the designated distributor's investment without incurring the cost. They enter a market in which the demand for their brand has already been generated by the pioneer's investment.

In the third layer, retailers buy the finished products from distributors. Under exclusive territories, retailers transact with the sole distributor of the brand in their region. In the absence of exclusive territories, each retailer holds a procurement scoring auction to select one of the distributors for the brand. Retailers then buy the product from the winning distributor and subsequently sell it to consumers. Consumers have the option of choosing one of the brands or not making a purchase.

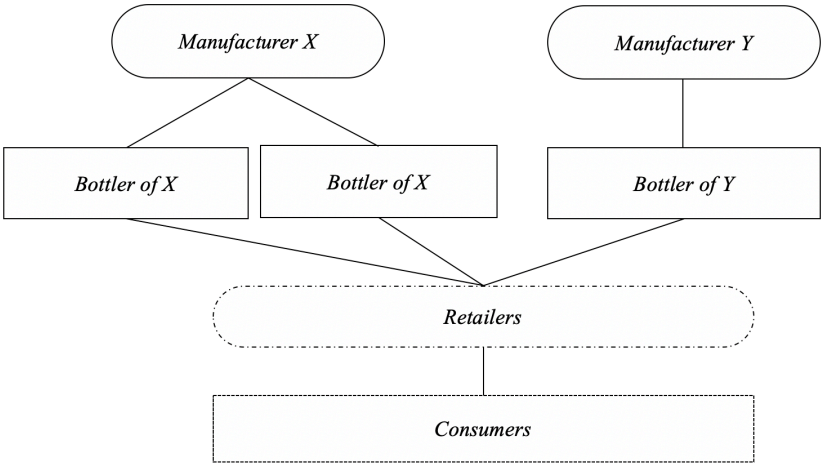
For simplicity, I will study two generic industry structures. In Figure 1, Panel A corresponds to the vertical market structure with exclusive territories and two distinct competitor brands. The manufacturer of X sells to a single distributor, who then sells to the retailer. Panel B corresponds to a vertical market structure with non-exclusive territories. Manufacturer X sells to two distributors, who then compete in the retailers' procurement scoring auctions to supply Brand X. The competition between parties is described in the following subsections. To facilitate the presentation, I describe the model in reverse order, starting with consumer demand.

Figure 1.
VERTICAL MARKET STRUCTURE

Panel A. Vertical Market Structure with Exclusive Territories



Panel B. Vertical Market Structure with Non-Exclusive Territories for Brand X



A. Consumer Demand

When consumers arrive at the retail store, they choose between purchasing Brand X, Brand Y or an outside option (i.e., no purchase at all). Consumers do not differentiate between distributors if the product originates from the same brand. Formally, brands are indexed by f, consumers by i, and distributors by j. Consumer i derives the following indirect utility when they select brand f's product distributed by j:

$$u_{ij} = \lambda_{f(j)} - \alpha p_j + \xi_{f(j)} + \epsilon_{if(j)} . \quad (1)$$

Consumer utility is comprised of four components. $\lambda_{f(j)}$ reflects the average preference for brand f across consumers. p_j denotes the price of brand f's product distributed by j. α scales price and reflects the degree to which consumers dislike prices. Together, αp_j quantifies the magnitude of disutility a consumer bears from paying for the product. $\xi_{f(j)}$ measures quality or characteristics of brand f that are unobserved by the econometrician but known to the consumer. It has a standard normal distribution. The term $\epsilon_{if(j)}$ is the independent and identically distributed (i.i.d.) disturbance unique to each consumer-brand pairing, and has a Type I extreme value distribution. As common in the literature, I assume that distributors know $\xi_{f(j)}$ but not $\epsilon_{if(j)}$ when setting prices. Per standard practice, the mean payoff assigned to the outside option is normalized to zero, $\nu_{i0} = \epsilon_{i0}$.[79]

Under this specification, the expected consumer surplus takes the standard logit form.[80] The logit specification also yields a closed form solution for brand f's market share when it is distributed by j, denoted by s_j.[81]

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[79] This normalization is without loss of generality, as consumers rank alternatives.

[80] Expected consumer surplus takes the form $\frac{1}{\alpha} \ln \left(\sum_j \exp \left(\lambda_{f(j)} - \alpha p_j + \xi_{f(j)} \right) \right) + C$,
where C is a constant of integration and can be dropped without loss of generality when ranking the consumer welfare effects of different policies. *See* H.C.W.L. Williams, *On the Formation of Travel Demand Models and Economic Evaluation Measures of User Benefit*, 9 ENV'T & PLANNING, 285 (1977); Kenneth A. Small & Harvey S. Rosen, *Applied Welfare Economics with Discrete Choice Models*, 49 ECONOMETRICA 105 (1981).

[81] $s_j = \frac{exp(\lambda_{f(j)} - \alpha p_j + \xi_{f(j)})}{1 + \sum_f exp(\lambda_{f(j)} - \alpha p_j + \xi_{f(j)})}$.
The market share of the outside good is obtained by replacing the numerator with 1. *See* Daniel McFadden, *Conditional Logit Analysis of Qualitative Choice Behavior*, FRONTIERS IN ECONOMETRICS, 105 (1974).

B. Retailer Intermediation

In the presence of exclusive territory contracts, retailers are constrained to source Brand X exclusively from the sole distributor designated to their specific geographic region. Conversely, in the absence of such exclusivity arrangements, retailers are afforded the choice to acquire Brand X from either of two distributors. In the case of two distributors, each retailer holds a procurement scoring auction, whereby distributors compete to secure the role of supplying Brand X to the retailer. This takes the form of a scoring auction, as the retailer's selection of a distributor hinges on both the distributor's proposed price and other distinguishing attributes. The distributor increases its chances of winning the auction by submitting a lower price for the sale of the product to the retailer. The distributor also increases its chances of winning the auction if, due to non-price factors that are either observed or unobserved by the distributor at the pricing stage, the retailer favors it over its rival. An example of such a factor could be the proximity of the distributor's facilities to the retailer's stores. Brand Y invariably has only one designated distributor, since the exclusive territory of its distributor is not breached.

Under these assumptions, the procurement scoring auction can be treated as a nested logit demand system.[82] Formally, retailers are indexed by r and distributors by j. Retailer r's payoff from choosing distributor j is given by

$$v_{rj} = \gamma_j - \theta p_j + \varepsilon_{rj} \,. \tag{2}$$

Retailer r's payoff consists of three components. γ_j quantifies the average popularity of distributor j among retailers. θ captures the payoff loss when the retailer pays the price, denoted as p_j, for brand f's product to distributor j. Together, θp_j quantifies the payoff loss that the retailer bears when it purchases brand f's product from distributor j. As the model abstracts away from retailer competition, the retailer does not markup product prices and instead passes on the distributor's price directly to consumers.[83] This leads to both Equation 1 and Equation 2 sharing the same price,

[82] Liran Einav *A Note on the Analogies Between Empirical Models of Auctions and of Differentiated Product Markets* (Technical Report, August 2003); Nathan H. Miller, *Modeling the Effects of Mergers in Procurement*, 37 INT'L J. IND. ORG., 201 (2014); Nathan Miller and Gloria Sheu, *Quantitative Methods for Evaluating the Unilateral Effects of Mergers*, 58 REV. OF IND. ORG. 143 (2021); Amanda Starc & Thomas Wollmann, *Does Entry Remedy Collusion? Evidence from the Generic Prescription Drug Cartel* (Nat'l Bureau of Econ. Rsch., Working Paper No. 29886, 2022).

[83] In the RTD beverage industry, it is common for retailers to charge a fixed 5% markup. While this fixed percentage markup would alter computed prices, the structure of the model would remain unchanged and the math would still go

denoted by p_j. ε_{jr} is the distributor-retailer specific independently and identically distributed (i.i.d.) shock with Type 1 extreme value distribution. It is unobserved both by the distributor during price determination and by the econometrician.

Under to this specification, the probability that distributor j wins a procurement auction takes the standard logit form and is denoted by φ_j.[84]

C. Distributor Prices and Production

Each distributor sets a price to maximize its profits, whose specification depends on the existence of exclusive territories. The following two subsections provide distributors' profit functions with and without exclusivity provisions.

Prices and Production with Exclusive Territories

With exclusive territories in place, only one distributor is designated to provide Brand X. As a result, the retailer does not hold a procurement scoring auction. This can also be interpreted as the sole distributor for Brand X winning the procurement scoring auction with probability 1. Under these circumstances, a distributor's profit function becomes the product of its price-cost margin, and the market share of the brand among consumers. Formally, distributor's profits are given by

$$\pi_j = (p_j - w_{f(j)})\, s_j. \tag{3}$$

I abstract away from strategic decisions made at the upstream market. As a result, the upstream firm of brand f sells inputs to distributors at a fixed price, denoted by $w_{f(j)}$. p_j represents the price set by distributor j. s_j corresponds to the market share of brand f among consumers when the products are sold to retailers by distributor j.

Prices and Production without Exclusive Territories

through. Moreover, the model assumes that all retailer is fixed, meaning that there are no per unit costs of retail besides the product's price.

[84] $\varphi_j = \frac{exp(\gamma_j - \theta\, p_j)}{\Sigma_{f(j)=X}\, exp(\gamma_j - \theta\, p_j)}$.

In the absence of exclusive territory provisions, distributors producing Brand X must compete in the retailer's procurement scoring auction. As a result, the profits of each Brand X distributor are contingent on the probability that it wins the auction. These profits are given by

$$\pi_j = \left(p_j - w_{f(j)} \right) s_j \varphi_j. \tag{4}$$

This equation consists of Equation 3 multiplied by the probability that distributor j wins a procurement scoring auction, denoted by φ_j.

In the presence of two distributors for Brand X, profits earned by Brand Y's distributor are contingent on the outcome of the procurement scoring auctions. Specifically, the profits of the distributor for Y are a weighted sum of its gains from competing against each distributor for Brand X, where the weights correspond to the respective probabilities that each Brand X distributor wins the auction. Formally, the profits of the distributor for Y are given by

$$\pi_C = (p_C - w_Y)(s_{C|A}\, \varphi_A + s_{C|B}\, \varphi_B) \tag{5}$$

where $\varphi_A = 1 - \varphi_B$. In this equation, distributors associated with X are represented by A and B, while distributor for Y is indexed by C. p_C denotes the price that the distributor for Y charges. $(p_C - w_Y)$ represents the profit that the distributor for Y earns from selling one product. With probability φ_A, the distributor for Y competes against the first distributor of X. In this case, it has a market share equal to $s_{C|A}$. Thus, multiplying $s_{C|A}$, φ_A, and the per unit profit gives the profits of the distributor for Y when it is competing against the first distributor for Brand X. Replicating the same exercise for the second distributor of X provides the second term in the equation. Specifically, with probability φ_B, the distributor for Y competes against the second distributor of Brand X and has a market share denoted by $s_{C|B}$. Profits of the distributor for Y when it is competing against the second distributor for Brand X are found by multiplying the markup, φ_B, and $s_{C|B}$. The final profits of the distributor for Brand Y are obtained by summing these two terms.

Each distributor sets a price that maximizes its profits, taking other prices as given. This decision is formally made by setting equal to zero the first derivative of distributor j's profits with respect to its price, and is given by

$$\frac{d\pi_j}{dp_j}\bigg|_{p=p^*} = 0 \tag{6}$$

where p_j^* denotes the price that maximizes distributor j's profits.

D. Distributor Investment

To enter the market, the first distributor of each brand must invest in local advertising for the brand. This investment is a one-time capital expenditure made at the time of market entry. As this investment targets brand recognition, other distributors producing the same brand within the same local market also reap its benefits. Specifically, subsequent distributors can enter the market without making a similar investment as the pioneering distributor's investment creates the necessary demand for the product in the market.

The first distributor will enter the market only if it can subsequently recoup its initial investment by generating profits from its sales. Formally, market entry occurs only if the present value of the distributor's future profits equals or surpasses its investment. When the distributor has the territory exclusively to itself for T periods, the present value of future profits from this exclusivity period is obtained by discounting the profits in Equation 3 every period and summing the per period profits. Formally, it is given by,

$$V_j = \Sigma_{t=1}^{T} \delta^t \left(p_{jt} - w_{f(j)}\right) s_{jt} \tag{7}$$

where δ denotes the discount factor, and $(p_{jt} - w_{f(j)t})\, s_{jt}$ is the per period profit. If the exclusive territory provision is perpetual, $t = 1$ and $T = \infty$. Consequently, the sum can be computed using the perpetuity formula.[85]

[85] $V_j = \Sigma_{t_0}^{\infty} \delta^t \left(p_{jt} - w_{f(j)t}\right) s_{jt} = \frac{\delta \left(p_j - w_{f(j)}\right) s_j}{1-\delta}$.

When the distributor does not have the territory exclusively to itself, the present value of future profits is obtained by discounting the profits in Equation 4 every period and summing the per period profits. Formally, it is given by,

$$V_j = \Sigma_{t=1}^{T} \delta^t \, (p_{jt} - w_{f(j)t}) \, s_{jt} \, \varphi_{jt} \tag{8}$$

where δ denotes the discount factor, and $(p_{jt} - w_{f(j)t}) \, s_{jt} \, \varphi_{jt}$ is the per period profit.

If the exclusive territory provision remains in effect for T periods, subsequent to which the distributor competes with another producing the same brand, the present value of the distributor's future profits is obtained by adding the profits from the exclusivity period and those from the competitive phase with the second distributor, while adjusting the time subscripts accordingly:

$$V_j = \Sigma_{t=1}^{T} \delta^t \left(p_{jt} - w_{f(j)t}\right) s_{jt} + \Sigma_{T+1}^{\infty} \delta^t \, (p_{jt} - w_{f(j)t}) \, s_{jt} \, \varphi_{jt} \, . \tag{9}$$

The distributor makes the initial investment k and enters the market if and only if it at least breaks even. Formally, for market entry, the present value of future profits must be equal to or greater than the investment:

$$V_j = \Sigma_{t=1}^{T} \delta^t \left(p_{jt} - w_{f(j)t}\right) s_{jt} + \Sigma_{T+1}^{\infty} \delta^t \left(p_{jt} - w_{f(j)t}\right) s_{jt} \varphi_{jt} \geq k. \tag{10}$$

E. Model Simulation

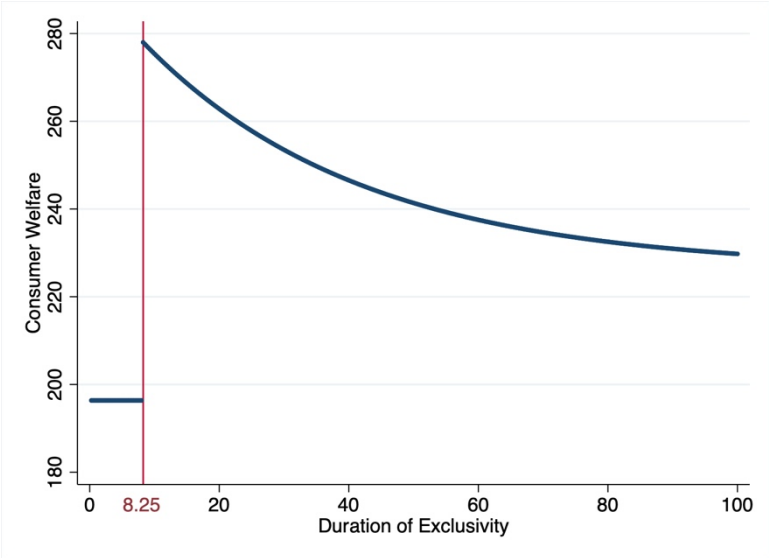
This subsection presents the outcomes from the simulation of the economic model, which show how consumer welfare changes according to the duration of the intrabrand non-price vertical restraint.

Economists who have employed structural models for the estimation of RTD beverage demand have found the magnitude of price coefficient to be between 0.45 and 6.[86] In light of these findings, I take α to be 5. Since retailers only act as intermediaries between the distributors and consumers, I assume that their aversion to prices mirrors that of the consumers, and take θ to be 5. I further

[86] Nathan Miller & Matthew C. Weinberg, *Mergers Facilitate Tacit Collusion: Empirical Evidence from the U.S. Brewing Industry*, 23 (2015); John Asker, *Diagnosing Foreclosure Due to Exclusive Dealing*, 64 J. IND. ECON. 375, 399 (2016).

assume the necessary investment for market entry is $10, and the discount rate is 3%.[87] Under these assumptions, a distributor would require exclusive territory rights for a minimum of 8.25 years to offset its initial investment.

Figure 2.
THE EFFECT OF EXCLUSIVITY PERIOD DURATION ON CONSUMER WELFARE



Notes: Duration of the intrabrand non-price vertical restraint, measured in years, is on the horizontal axis. Consumer welfare, measured in dollars, is on the vertical axis. The red vertical line represents an exclusivity period of 8.25 years, which is the cutoff duration at which the distributor recoups its initial investment. Consumer surplus is presented in blue.

Figure 2 illustrates the change in consumer welfare as a function of the duration of the intrabrand non-price vertical restraint. On the vertical axis is the consumer surplus measured in dollars, and on the horizontal axis is the duration of the intrabrand non-price vertical restraint measured in years. The red vertical line marks an exclusivity period of 8.25 years. Should Brand X's distributor be granted exclusivity for a period shorter than 8.25 years, it does not enter the market. This is attributed to the fact that the present value of its future profits falls short of its initial investment expenditure, making market entry unprofitable. In this case, Brand Y becomes the only manufacturer in the market, making it a monopoly. Thus, consumers are left with the choice of either buying Brand Y products or refraining from buying. When these two are the only

[87] The values for other parameters can be found in the online appendix. The qualitative results are robust to the choice of parameters.

options, the present value of consumer surplus is approximately $196, as shown to the left of the red vertical line.

When the distributor of Brand X is granted an exclusivity period of 8.25 years, it enters the market. This entry leads to a noticeable surge in consumer surplus, as indicated by the spike at the red line. The rise in consumer surplus upon Brand X's market entry can be attributed to two primary factors. First, consumers benefit from reduced prices for Brand Y products since Brand Y no longer has a monopoly. Second, consumers have a greater variety of options, as they can choose between Brand X, Brand Y and not making any purchase.

The grant of an exclusivity period for 8.25 years allows consumers to enjoy both a greater product variety and competitive prices at the conclusion of this period. As the period of exclusivity extends beyond 8.25 years, the advantages to consumers diminish due to the prolonged exposure to supracompetitive prices for Brand X products. This diminishing benefit can be observed by the decline in consumer surplus seen to the right of the red line.

V. Empirical Analysis

A. Overview

In this section, I estimate the effects of exclusive territory restrictions on relevant equilibrium outcomes in the RTD beverage industry. In order to study the effects of exclusive territories on intrabrand and interbrand competition, I need quasi-experimental variation in these restraints that does not change other fundamentals of the market. To this end, I look at abrupt and exogenous changes in the downstream market created by incidents of transshipment, which I observe through lawsuits.

First, I find that intrabrand competition, arising from breaches of exclusive territories, leads to a reduction in prices. This reduction in prices could discourage downstream firms from maintaining product quality. To assess this, I study the effect of transshipment on the quantity of products sold by the affected brands, and find that sales increase. Third, I estimate the effect of transshipment on the products of rival brands to evaluate how exclusive territories impact interbrand competition. I find that prices of rival products also fall, and sales are unaffected. Finally, I assess the effect of these restraints on downstream investment in new products, as

suggested by the Supreme Court in *Sylvania*. I find that a breach of exclusive territories results in a reduction in product variety.

This section is organized as follows. Subsection B describes the dataset that I use for this empirical study. In Subsection C, I introduce the staggered difference-in-difference research design. In Subsections D through F, I show the impact of introducing a new firm into a formerly monopolized downstream market, specifically addressing its effects on intrabrand competition, interbrand competition, and product variety.

B. Data

My data come from several sources. Instances of transshipment events are identified using lawsuits, which provide information on affected brands, products, distributors, and geographic regions.[88] The commencement of transshipment is determined using the facts of the cases. When a case refers to a cease and desist letter rather than the initial transshipment date, the event's start is taken as one year before the date of the letter. This assumption aligns with the details from one of the cases, where transshipment was discovered approximately one year after its initiation. Data on exclusive territories are further supplemented using annual industry publications, which detail exclusive territories of various distributors associated with different brands.[89]

The empirical analysis encompasses six transshipment instances between 2007 and 2018 that involve both non-alcoholic and alcoholic beverages. Each transshipment instance pertains to a distinct brand-geographic market combination. Furthermore, in each transshipment instance, the exclusive territory assigned to a bottler or distributor was infringed upon by a third party, which resulted in a lawsuit by the bottler/distributor. The caselaw in this area also contains episodes of transshipment by the upstream firm, rather than a third party. However, since instances involving the upstream firm result in the elimination of double marginalization in addition to the elimination of the exclusive territory, the competitive effects of the latter could be confounded by the former. Due to this identification problem, the paper omits lawsuits involving the upstream firm. As a

[88] The data usage agreement with Nielsen prohibits disclosing names of the affected parties in this paper. All information about the cases including the dates, parties, products are included in the online data appendix. Per the agreement, the code used in the empirical analysis is deidentified, but information can be ascertained by reading the cases.

[89] Annual industry publications include Beverage Digest Historical System Books. *See* BEVERAGE DIGEST, https://www.beverage-digest.com/products/category/81-system-book-archive.

result, the findings of this empirical investigation offer insights into the price, quantity, and investment effects of exclusive territories in the downstream market.

The retail scanner data from Nielsen provide weekly beverage price and sales volume at the store level across the United States between 2006 and 2020. The scanner data encompass around 40,000 establishments, which range from grocery and drug stores to mass merchandisers, and span 90 participating retail chains. For each store, the dataset includes the 3-digit zip code and parent retail chain identifier.[90] Products are identified by their Universal Product Code (UPC), a unique 12-digit number. The dataset also includes product characteristics, such as size, brand, packaging details, and flavor descriptions.

Throughout the study, the unit of observation is at the product-store-quarter level. In other words, a data point represents sales of a distinct product at a specific store during a particular quarter, providing information on both total sales volume and average price of the product at that store in that quarter. A product is defined by a combination of brand, flavor, and size, except for the subsection studying product variety. In this subsection, a product is defined as a brand and flavor combination, omitting size distinctions. This modification is made to identify genuinely new beverages entering the market and to recognize the phasing out of existing ones.

Transshipment regions refer to geographic markets where a third party breaches the exclusive territory of a bottler, and their definition is contingent on the specific beverage type. For example, transshipment regions for alcoholic beverages differs from those for non-alcoholic beverages, and this classification is based on case-specific details. The transshipment regions are consistently omitted from the control group throughout entire panel for that particular beverage type.

Control groups are likewise established based on the beverage type. Specifically, regions where the upstream and downstream firms are vertically integrated constitute controls for non-alcoholic drinks. Two key reasons make transshipment less likely in vertically integrated areas. The elimination of double marginalization through vertical integration typically results in lower prices than those set by an independent downstream enterprise. As a result, third-party incentives to transship products into the exclusive territories of vertically integrated firms are attenuated. Vertical integration also gives the integrated firm a robust ability to prevent transshipment, as it can cease supplying its products to transshippers. As a result, vertically integrated regions become

[90] One retail chain is excluded from the dataset because it is present in the data just for one year, and another is omitted because it enters the dataset concurrently with the beginning of a transshipment incident.

strong candidates for controls.[91] For alcoholic beverages, the control group consists of counties in the same state as the affected region, but without transshipment incidents. This choice is due to the state-specific statutes regulating the vertical supply chain of alcoholic beverages.

Table 1 summarizes the data on established products.[92] Price and quantity observations from brands subject to transshipment and those of their competitors are weighed using the total sales of the affected brand one year before transshipment in the affected regions. These same weights are also used in the regressions. There are 15,411,719 observations at the product-store-quarter level spread over 61 different distinct products, 39,007 stores, and 2,667 counties between 2006 and 2020. 3.53% of stores, 2.85% of counties, and 16.08% percent of distinct products experience transshipment. 79,591 observations belong to product-county combinations that are affected by transshipment, and 428,859 observations belong to competitor brand products that are sold in geographic markets impacted by transshipment.

The weighted average product price in the whole sample is $2.56 and the weighted average quarterly sales in a store is 659.93 units. The weighted average product price in the treated and control counties are $2.58 and $2.56, respectively. The weighted average quarterly sales in a store in treated and control counties are 647.52 and 660.13 units, respectively.

[91] Although vertically integrated firms face different optimization problems than the independent firms, their optimization problem is not affected by an exogenous shock in the sample period, or any shocks that affect their optimization decision are orthogonal to the transshipment instances studied in this paper. Hence, these regions are chosen as the control group. In one of the transshipment cases involving a nonalcoholic beverage, I take the rest of the country as my control region, since the upstream firm is not vertically integrated with its downstream distributors anywhere in the country. Nonetheless, no instances of transshipment are recorded for this brand anywhere else in the country.

[92] This set of summary statistics does not include new or discontinued products that are examined only in the section on product variety.

Table 1.
SUMMARY STATISTICS

	Overall	*Transshipment Regions*	*Control Regions*
Price ($)	2.56	2.58	2.56
Sales (Units)	659.93	647.52	660.13
Observations	15,411,719	508,450	14,903,269
Stores	39,007	1,375	37,632
Counties	2,667	76	2,655

Notes: A unit of observation is a product-store-quarter. Each product is defined using the flavor-brand-size combination.

C. Staggered Difference-in-Difference Design

To assess the competitive effects of exclusive territory provisions, I exploit variation provided by transshipment events in certain regions of the country, which introduce intrabrand competition to the downstream markets for a subset of products. I employ staggered difference-in-difference design as my identification strategy. In my setting, a difference-in-difference design compares the outcomes of the treated and control groups before and after transshipment. Staggered difference-in-difference design allows the study of transshipment when it is introduced in various regions at different times. The identification assumption is that the outcome variables of products exposed to transshipment would have followed the same trend as those of the products not exposed to transshipment had transshipment not occurred.

First, I assess the effects of exclusive territory provisions on competition between the distributors of the same brand. In this analysis, the treatment group comprises products distributed by a bottler whose exclusive territory is breached.[93] The control group is made up of identical products retailed in areas without any recorded transshipment cases.

Second, I assess the effects of exclusive territory provisions on competition across brands. In this analysis, the treatment group comprises products that are in competition with the transshipped brands in areas impacted by transshipment. Thus, while competitor products are not directly subjected to transshipment, they are marketed in areas where another brand's distributor faces

[93] This group also includes products sold by a transhipper, although I do not observe the name of the distributor associated with each product. I observe the names of the products, counties and quarters that are affected by transshipment.

transshipment. The control group consists of competitor brands' products sold in areas without any documented instances of transshipment.[94]

The staggered difference-in-difference estimating equation is given by

$$\log(y_{jst}) = \Sigma_{\tau=-8}^{8} \beta_{\tau}^{z,v} I_{jst}^{\tau} + \eta_{js} + \varphi_{jt} + \omega_{jq(t)w(s)} + \epsilon_{jst}. \qquad (11)$$

In this specification, j denotes products, τ is the event time measured in quarters, and t is calendar time measured in quarters. The quarter when transshipment begins in a region is normalized to $\tau = 0$. Prior quarters are represented by negative and subsequent quarters are represented by positive integers. I restrict attention to $\tau \in [-8, 8]$, and set $\beta_{-1} = 0$ to facilitate comparisons to the period just prior to transshipment. y_{jst} denotes the outcome— price, quantity or number of products— for product j at time t and store s. To examine product variety, I use the level rather than the log of the number of products. I_{jst}^{τ} is equal to 1 if product j sold at store s in quarter t is located in a transshipment area and t is τ periods from transshipment. η_{js} represents product-store and φ_{jt} denotes the product-quarter fixed effects. These fixed effects control for persistent differences in local tastes and national shocks at the product level. $\omega_{jq(t)w(s)}$ is the product-season-state fixed effect to control for potential cyclicality in demand due to seasonality. ϵ_{jst} is an error term two-way clustered at county and quarter levels.

The coefficients of interest in Equation 11 are $\beta_{\tau}^{z,v}$. z denotes the type of competition that is being examined, namely intrabrand or interbrand competition. v details the type of the outcome variable— price, quantity or number of products. Hence these coefficients measure the impact of exclusive territory provisions on prices, quantities and product variety of affected and competitor brands relative to their respective control groups.[95] These coefficients are event time specific and show the quarterly patterns in competitive outcomes before and after the transshipment. The results from this specification are illustrated using graphs and presented in the subsequent three sections.

[94] Control regions in intrabrand competition analysis are the same control areas used in interbrand competition analysis.

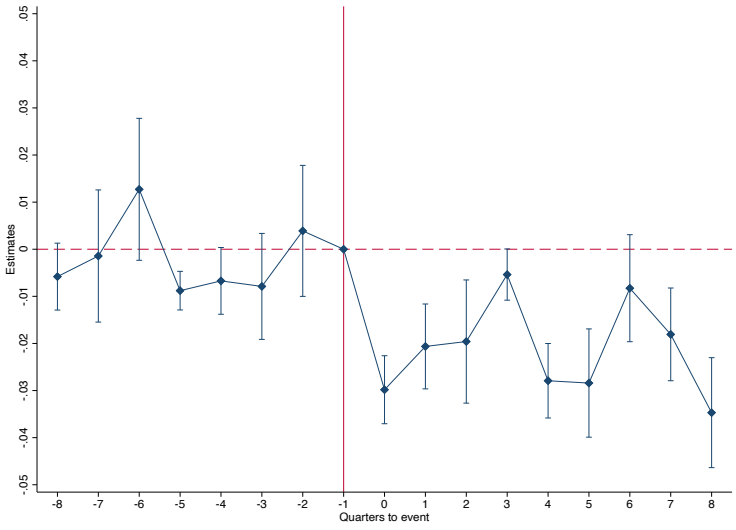
[95] Product introductions of competitor brands are not studied, as product introductions proxy for the investment incentive created by the exclusive territory provisions.

D. Intrabrand Estimates

In all transshipment incidents studied in this paper, a third party enters the exclusive territory of a distributor and starts selling the products of the same brand. Figures 3 and 4 show how prices and sales of the affected brands' products change when the exclusive territories of their distributors are breached. These products experience an approximately 3% decrease in prices and a 5% increase in sales when the third party enters the downstream market. The decrease in prices and increase in sales persist for the two years following the beginning of transshipment.

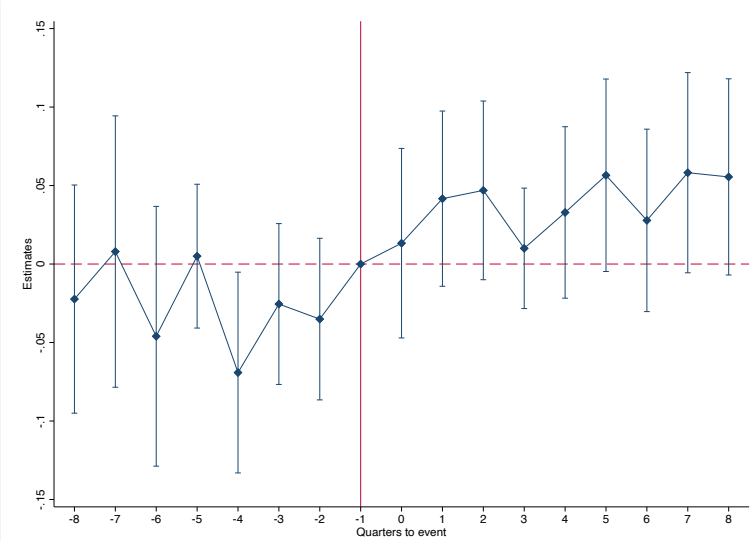
Consumer welfare would have decreased if the decrease in prices led to the deterioration of product quality. If the quality of affected products had decreased once transshipment started, sales would have fallen. In contrast, as Figure 4 shows, sales of the affected products increase after the transshipment. This finding implies that the product quality does not significantly change with the breach of exclusive territories, or if it does, the change is outweighed by the price reduction.

Figure 3.
INTRABRAND PRICE ESTIMATES



Notes: In this figure, we plot estimates of β_τ, which are derived from Equation 11, against τ, which represents event time in quarters. A unit of observation is the natural logarithm of the average price of a product at the store-quarter level. Errors are two-way clustered at the county interacted with product and quarter levels.

Figure 4.
INTRABRAND QUANTITY ESTIMATES



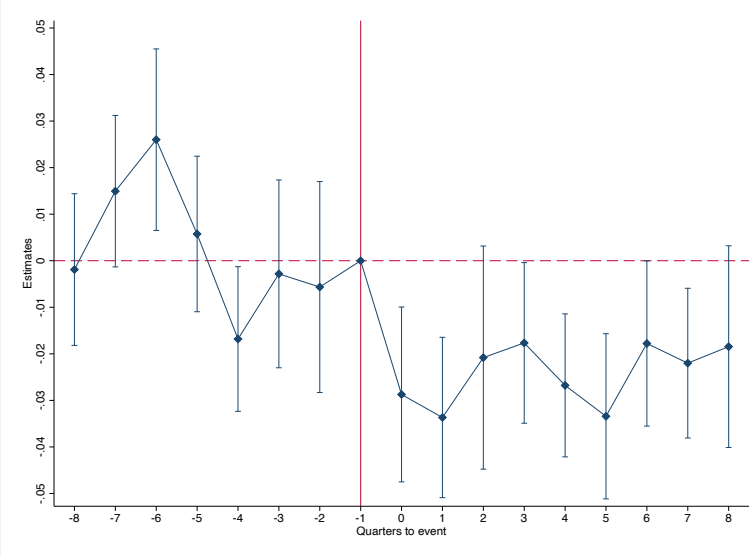
Notes: In this figure, we plot estimates of β_τ, which are derived from Equation 11, against τ, which represents event time in quarters. A unit of observation is the natural logarithm of the average price of a product at the store-quarter level. Errors are two-way clustered at the county interacted with product and quarter levels.

E. Interbrand Estimates

The Supreme Court prioritized interbrand competition over intrabrand competition, and said that non-price vertical restraints could enhance the former. To test this idea in my setting, I assess the effects of transshipment on the prices and quantities of those products that belong to the competitor brands. These products are not directly affected by transshipment, as their distributors have the same market power as they had prior to transshipment. Instead, any price and quantity effects these products experience come from the breach of the exclusive territory of a rival brand's distributor.

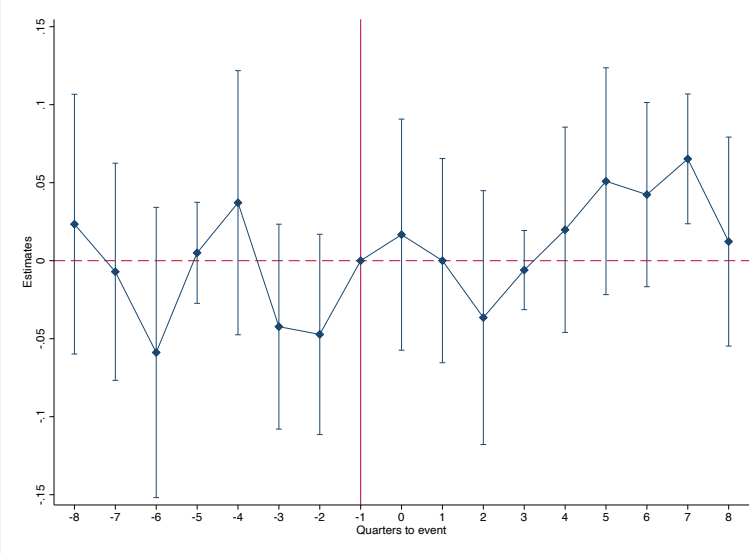
Figures 5 and 6 provide the price and quantity estimates for rival products. Transshipment results in a 3% decrease in prices and approximately no change in sold quantities of rival products. These findings suggest that the price competition between the distributors of affected brands also puts competitive pressure on the rival brands, resulting in a reduction in prices across the market. The quality of products does not appear to deteriorate, as there is no observed reduction in sales.

Figure 5.
INTERBRAND PRICE ESTIMATES



Notes: In this figure, we plot estimates of β_τ, which are derived from Equation 11, against I^τ, which represents event time in quarters. A unit of observation is the natural logarithm of the average price of a product at the store-quarter level. Errors are two-way clustered at the county interacted with product and quarter levels.

Figure 6.
INTERBRAND QUANTITY ESTIMATES

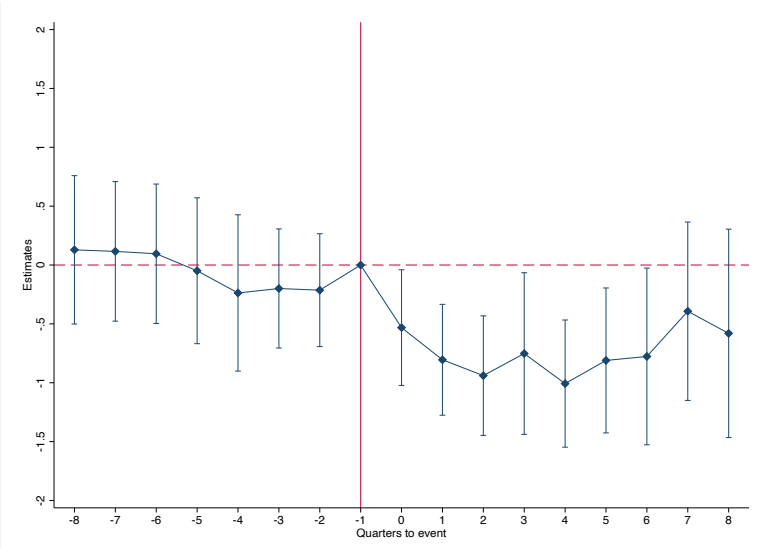


Notes: In this figure, we plot estimates of β_τ, which are derived from Equation 11, against τ, which represents event time in quarters. A unit of observation is the natural logarithm of the average price of a product at the store-quarter level. Errors are two-way clustered at the county interacted with product and quarter levels.

F. Product Variety Estimates

Intrabrand non-price vertical restraints such as exclusive territory provisions can facilitate the introduction of new products and brands by incentivizing downstream firms to undertake the necessary investment in promotion. In light of this understanding, this subsection demonstrates how exclusive territories influence product launches and discontinuations in the RTD beverage industry. Figure 7 presents the staggered difference-in-difference estimates from Equation 11. The dependent variable is the number of products of an affected brand that a store offers in a quarter. A product is defined by the flavor-brand combination. As Figure 7 shows, product variety decreased by 1 product type a quarter after the beginning of transshipment. The negative impact of transshipment on product variety persists, as the affected regions continue to have fewer types of products of the affected brands two years after transshipment. This finding highlights the positive impact intrabrand non-price vertical restraints have on downstream firms' decision to introduce new products to the market.

Figure 7.
PRODUCT VARIETY OFFERED BY TRANSSHIPPED BRANDS



Notes: In this figure, we plot estimates of β_τ, which are derived from Equation 11, against τ, which represents event time in quarters. A unit of observation is the natural logarithm of the average price of a product at the store-quarter level. Errors are two-way clustered at the county interacted with product and quarter levels.

VI. Policy Recommendation

Following *Sylvania* in 1977, the legality of intrabrand non-price vertical restraints has been subject to the rule of reason.[96] *Chicago Board of Trade* provided the classic definition of this rule:

> The true test of legality is whether the restraint imposed is such as merely regulates, and perhaps thereby promotes competition, or whether it is such as may suppress or even destroy competition. To determine that question, the court must ordinarily consider the facts peculiar to the business to which the restraint is applied, its condition before and after the restraint was imposed, the nature of the restraint, and its effect, actual or probable.[97]

As this formulation illustrates, rule of reason analysis can be open ended and even vague with respect to many economically significant agreements, making it difficult to discern its exact requirements. One leading treatise says that "[although] the rule of reason has long been part of Sherman Act jurisprudence, the precise analysis … remains somewhat indistinct."[98] This ambiguity also arises in the assessment of intrabrand non-price vertical restraints, which could explain the observed judicial leniency toward them. The Court in *Sylvania* notes that these restraints facilitate the introduction of new products and brands by creating the necessary incentives for downstream investment. Yet, if these restraints aim to facilitate new product launches and promotion, the question arises as to whether they should be revisited once that objective is accomplished.

The empirical evidence presented in prior sections shows that infringement upon exclusive territories decreases the prices and increases the sales of affected products. This finding suggests that the monopolies afforded by exclusive territory clauses push prices of established products above competitive levels. The increase in sales implies that product quality remains largely unchanged once the exclusivity ceases to exist, despite the price reduction. The adverse effect of non-price vertical restraints on intrabrand price competition has been acknowledged, at least, since *Sylvania*. However, this paper further shows through empirical analysis that infringing on the exclusive territories of a brand's distributor reduces prices of the rival brands' products. Consequently, exclusive territories do not appear to enhance interbrand competition throughout a

[96] The Supreme Court, thirty years later, would start applying the rule of reason also to vertical price restraints, such as the minimum resale price maintenance clauses. Leegin Creative Leather Products, Inc. v. PSKS, Inc., 551 U.S. 877 (2007).
[97] Chicago Board of Trade v. United States, 246 U.S. 231, 238 (1918).
[98] Am. Bar. Assn., *Antitrust Law Developments* (Sixth) 56 (6th ed. 2007).

product's lifecycle. Despite revealing supracompetitive prices and lower sales for established products under exclusive territory schemes, the empirical analysis highlights the importance of such monopoly rights for product introductions. Specifically, the breach of exclusive territories leads to a decrease in the range of products offered by the affected brands. This reduction is attributed to the fact that certain products, which are present in the control group, become unavailable in the affected territories once transshipment begins. Hence, monopolies granted by these intrabrand non-price vertical restraints appear to facilitate the creation of demand for new products. These findings are corroborated by a theory model showing the market channels that lead to supracompetitive prices, reduced sales and higher product introductions under an exclusive territory regime.

In light of these empirical results and economic analysis, intrabrand non-price vertical restraints should be considered reasonable for only a limited duration if the primary justification for their use is to encourage upfront investment by downstream firms. This limited period of exclusivity allows firms to recoup their initial investments in capital, brand, and product promotion without the threat of free-riders. After this period terminates, these restraints become unreasonable, and the market should return to a competitive status, which prevents perpetual supracompetitive profits and enables lower prices. The period should be calculated using the initial investment a new entrant needs to expend to enter the market and the time necessary for the firm to earn back this sum, as detailed in Section IV.

As Chief Justice White stated in *Standard Oil*, a conduct's reasonableness is evaluated in light of the objectives of the antitrust laws, and the Supreme Court in *Reiter v. Sonotone* said that "Congress designed the Sherman Act as a 'consumer welfare prescription.'"[99] Enhancing consumer welfare continues to be the main objective of the modern antitrust law.[100] Under the

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[99] The merely generic enumeration which the statute makes of the acts to which it refers and the absence of any definition of restraint of trade as used in the statute leaves room for but one conclusion, which is, that it was expressly designed not to unduly limit the application of the act by precise definition, but while clearly fixing a standard, that is, by defining the ulterior boundaries which could not be transgressed with impunity, to leave it to be determined by the light of reason, guided by the principles of law and the duty to apply and enforce the public policy embodied in the statute, in every given case whether any particular act or contract was within the contemplation of the statute.

Standard Oil Co. v. United States, 221 U.S. 1, 63-64 (1911); Reiter v. Sonotone Corp., 442 U.S. 330, 343 (1979).

[100] *See* National Collegiate Athletic Ass'n v. Board of Regents, 468 U.S. 85, 104 (1984) ("Price is higher and output lower than they would otherwise be, and both are unresponsive to consumer preference. This latter point is perhaps the most significant, since "Congress designed the Sherman Act as a 'consumer welfare prescription'."); Brooke Group v. Brown & Williamson Tobacco Corp., 509 U.S. 209, 113

consumer welfare standard, a practice that harms consumers in any relevant market is seen as unreasonable. A practice tends to harm consumer welfare if it increases prices, decreases output, reduces quality or compromises investment in innovation and/or product improvement.

Limiting the duration of intrabrand non-price vertical restraints improves consumer welfare through two channels, thereby achieving the main goal of the modern antitrust laws. First, providing monopoly rights in a territory for a set period ensures investment in brand promotion and product introduction, as it prevents the emergence of free-riders. As these are the same incentives to invest that *Sylvania* aimed to protect, the framework proposed by this paper also stays true to the spirit of Supreme Court precedent. This period of exclusivity helps new products to situate themselves in the market and enhances interbrand competition. Second, this framework yields competitive prices and increased sales once these products gain recognition and territorial exclusivities expire. Overall, consumers benefit as they are endowed with opportunities to both access new products and purchase established ones at competitive prices.

The proposal of limited term intrabrand non-price vertical restraints borrows both from the rule of reason's common law origins and from patent law. The Supreme Court in *Standard Oil* not only recognized the rule as the main antitrust principle, but also noted its common law foundations:

> There can be no doubt that the sole subject with which the first section [of the Sherman Act] deals is restraint of trade as therein contemplated, and that the attempt to monopolize and monopolization is the subject with which the second section is concerned. It is certain that those terms, at least in their rudimentary meaning, took their origin in the common law, and were also familiar in the law of this country prior to and at the time of the adoption of the act in question.[101]

The decision traces the Sherman Act's prohibition of agreements that unreasonably restrain trade to the common law doctrine that deems void a contract restraining competition, raising prices and tending to a monopoly. Contracts in restraint of trade were valid if and only if the restraint was

(1993) ("Utah Pie … has been criticized on the ground that such low standards of competitive injury are at odds with the antitrust laws' traditional concern for consumer welfare and price competition."); Leegin Creative Leather Products, Inc. v. PSKS, Inc., 551 U.S. 877, 127 (2007) ("The rationales for [state fair trade laws] are foreign to the Sherman Act. Divorced from competition and consumer welfare, they were designed to save inefficient small retailers from their inability to compete. The purpose of the antitrust laws, by contrast, is 'the protection of competition not competitors.'"); NCAA v. Alston, 141 S. Ct. 2131, 201 (2021) ("Judges must remain aware that markets are often more effective than the heavy hand of judicial power when it comes to enhancing consumer welfare."). Similarly, the Department of Justice assesses the effect of a horizontal merger on consumer welfare as part of its review process. *See* U.S. Dep't of Justice & Fed. Trade Comm'n, Horizontal Merger Guidelines (2010), ftc.gov/os/2010/08/100819hmg.pdf.

[101] Standard Oil Co., 221 U.S. at 50.

mainly ancillary to the main purpose of a lawful contract and suitably limited in scope.[102] Besides laying the groundwork for Sections 1 and 2 of the Sherman Act, this common law principle gave rise to the law on non-compete clauses in employment contracts.[103]

In an early version of this common law doctrine, courts considered the period of time and geographic area over which the restraint extended. The Supreme Court illustrated this approach in 1873 with *Oregon Steam Nav. Co. v. Winsor*. The case marked the first time a contract in restraint of trade was brought before the Court, and preceded the Sherman Act of 1890. [104] According to the facts of the case, California Navigation Company, possessing nearly monopolistic control over waterborne transportation in California, sold one of its steamers to Oregon Steam Navigation Company. The sale stipulated that the vessel could not be used in the California waters for a period of ten years, and a subsequent purchaser of the vessel from Oregon Navigation challenged this restriction.[105] The Supreme Court found the restraint reasonable, saying that since the restraint was limited in time, it facilitated commerce without hurting the public.[106]

The framework proposed by this paper similarly finds intrabrand non-price restraints reasonable for a limited duration. This period of exclusivity safeguards the incentives to invest in capital, new brands and products. The introduction of new offerings into the market increases product variety and competition, both of which enhance consumer welfare. The exclusivity period and the reasonableness of restraints terminate once the predominant effect of the downstream monopoly rights shifts towards sustaining prices above competitive levels.

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[102] United States v. Addyston Pipe & Steel Co., 85 F. 271, 282 (6th Cir. 1898). *See also* United States v. The Trans Missouri Freight Ass'n, 166 U.S. 290 (1897); Mitchell v. Reynolds, 10 Mod. 27, 88 Eng. Rep. 610 (1712), *reargued,* 10 Mod. 85, 88 Eng. Rep. 637, *reargued,* 10 Mod. 130, 88 Eng. Rep. 660 (Q.B. 1713).

[103] The Federal Trade Commission recently proposed a rule prohibiting noncompete clauses in employment agreements under Section 5 of the FTC Act, asserting that they hurt workers and harm competition. *See* Fed. Trade Comm'n, *FTC Proposes Rule to Ban Noncompete Clauses, Which Hurt Workers and Harm Competition* (Jan. 5, 2023), https://www.ftc.gov/news-events/news/press-releases/2023/01/ftc-proposes-rule-ban-noncompete-clauses-which-hurt-workers-harm-competition.

[104] Oregon Steam Nav. Co. v. Winsor, 87 U.S. (20 Wall.) 64 (1873). *See also* Donald Dewey, *Common Law Background of Antitrust*, 41 VA. L. REV. 759, 783 (1955).

[105] *Id*.

[106] The Supreme Court illustrated this approach in 1873 with *Oregon Steam Nav. Co. v. Winsor*. The case marked the first time a contract in restraint of trade was brought before the Court, and preceded the Sherman Act of 1890. According to the facts of the case, California Navigation Company, possessing nearly monopolistic control over waterborne transportation in California, sold one of its steamers to Oregon Steam Navigation Company. The sale stipulated that the vessel could not be used in the California waters for a period of ten years, and a subsequent purchaser of the vessel from Oregon Navigation challenged this restriction. The Supreme Court found the restraint reasonable, saying that since the restraint was limited in time, it facilitated commerce without hurting the public. Oregon Steam Nav. Co. v. Winsor, 87 U.S. (20 Wall.) 64 (1873). *See also* Donald Dewey, *Common Law Background of Antitrust*, 41 VA. L. REV. 759, 783 (1955).

The proposed time constraint on intrabrand non-price vertical restraints also bears a resemblance to the temporary monopolies or property rights awarded to inventors under patent law. The federal government offers inventors temporary exclusivity rights—lasting twenty years from the application filing date—under patent law. Absent these monopoly or property rights, there is a high likelihood of free-riding, since ideas and inventions are non-excludable and non-rivalrous.[107] The threat of such free-riders can deter innovation, leading to the underproduction of new technologies. Patent law turns groundbreaking ideas into excludable and rivalrous assets, and averts free-riding. Consequently, it motivates inventors to dedicate time and resources to new technological developments.

The investment that yields an invention or innovation is sunk—it is irretrievably expended before the new idea comes to fruition, at a time when the invention's success is uncertain. As economists Scherer and Ross point out, "[t]o warrant making such investments, an individual inventor or corporation must expect that once commercialization occurs, product prices can be held above post-invention production and marketing costs long enough so that the *discounted present value of the profits … will exceed the value of the front-end investment*."[108]

The benefit-cost calculation proposed by Scherer and Ross mirrors the market-entry decision of the distributors outlined in Section IV. Recall that under the model, distributors make the front-end investment in brand promotion and start manufacturing beverages if the present value of their future profits exceeds their investment expenditure. The limited duration intrabrand non-price vertical restraints allow distributors to charge prices above competitive levels for a while, allowing them to recoup their initial investments.

More broadly, both this paper's framework and patent law allow for time-bound monopoly or property rights to advance welfare, specifically through the development of new products and technologies, respectively. They create similar incentive schemes for individuals or entities to invest in non-excludable and non-rivalrous goods: limited duration non-price vertical restraints for investment in brands, and patents for investment in inventions. In the absence of these exclusivity

[107] A non-excludable good is a type of good that, once provided, cannot be limited to only those who have paid for it. A non-rivalrous good is a type of good for which one person's use or consumption does not reduce its availability for others. Information is a canonical example of a non-excludable, non-rivalrous good.

[108] F.M. SCHERER & DAVID ROSS, INDUSTRIAL MARKET STRUCTURE AND ECONOMIC PERFORMANCE 622 (3rd ed. 1990) (emphasis added).

arrangements, distributors and innovators might abstain from investing, as they would risk free-riders capitalizing on their brands and inventions, respectively.

The public nature of patent law and the private nature of non-price vertical restraints distinguish between these two frameworks. While patents represent rights granted by the government, non-price vertical restraints stem from private agreements among parties. Private party incentives could provide the necessary enforcement mechanism for the framework proposed in this paper. A new downstream firm could challenge intrabrand non-price vertical restraints under Section 1 if its future profits from entering the market were higher than the cost of entry, which would include the cost of litigation. When asked to decide upon the reasonability of these restraints, courts could employ the framework proposed in this paper, thereby promoting consumer welfare through private party litigation. Conversely, the absence of a private party challenge could signal the lack of nascent competitors, in which case the downstream market would likely be monopolistic regardless of any exclusivity provisions.[109] On the other hand, antitrust authorities could also use the proposed framework to challenge these restraints. Much like their approach to mergers, the Federal Trade Commission or the Antitrust Division of the Department of Justice could opt to challenge those restraints that pose a significant threat to consumer welfare. The significance of the threat could be assessed using various measures, including the restraint's duration, the brand's market share, the distributor's market share, or the prevalence of these restraints among the brands or distributors in the market.

VII. Conclusion

As the Court highlighted in S*ylvania*, intrabrand non-price vertical restraints, such as exclusive territory provisions can facilitate the launch of new brands and products. Yet, when a brand or product gains recognition, these restraints can potentially keep prices at supracompetitive levels. This paper advocates for a time-bound approach to such restraints. Limiting the duration of intrabrand non-price vertical restraints can benefit consumers in two distinct ways. First, by granting downstream entities an exclusivity period, it encourages investment in product development, resulting in a wider array of product choices for consumers. Second, by ending this

[109] High litigation costs might prevent private party challenges to these restraints even when free market entry would be profitable to new firms. In order for a new distributor to challenge the restraint and enter the market, the expected future profits must not only cover the initial investment expenses but also the expenses associated with litigation.

exclusivity once the investment is recovered and the product has gained traction, it ensures that consumers can then access products at competitive prices.