Self-Preferencing in Retail Digital Marketplaces: Evidence from Transaction Data

Gabriela Antonie, Mariella Gonzales, Sophie Shao

Antitrust authorities have raised concerns that digital marketplaces favor themselves and their products relative to how they treat other third-parties, a concept known as self-preferencing.

As we discuss in this article, the concept of self-preferencing is broad and encompasses a range of practices, and it is neither new nor novel. Self-preferencing has been a recurring issue in both traditional retail and digital marketplaces and, for decades, traditional retail stores have faced similar claims regarding their private-label products.[1] While self-preferencing in traditional retail has historically been viewed as a standard and often procompetitive practice, digital marketplaces have faced intense scrutiny with arguments pointing to potential unique characteristics, such as network effects, data advantages, and marketplace dominance. These practices have led to increased antitrust scrutiny regarding self-preferencing practices in the European Union (EU) and the U.S.

In this article, we analyze a large sample of retail transaction data from Numerator and show that the share of private-label sales for digital marketplaces is still behind that of other retailers that have a strong traditional brick-and-mortar channel. This evidence is consistent with the fact that, on average, digital markets do not seem to do a better job at redirecting customers to their private-label products. While our analysis is descriptive and does not establish causality, we discuss correlations from Numerator survey and transaction data that align with existing literature. Specifically, we find a positive association between private-label purchases and consumer perceptions of private label's high value and quality. We also observe a correlation between customers purchasing a retailer's private-label products and higher spending to that retailer. We recognize, however, that this observed association does not imply causation and does not preclude other explanations.

Increased antitrust scrutiny over concerns of self-preferencing in digital marketplaces

Digital marketplaces sell their own products (i.e., private label products in retail) as well as host and enable third-party sellers to sell products to consumers within the same marketplace. Some examples include Amazon, Target, and Walmart, as well as Apple's App Store and Nintendo's Game Store, which sell their own mobile apps or games as well as third-party apps and games on their marketplaces.[2]

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[1] For a historical perspective see Trelysa Long, *History Shows How Private Labels and Self-Preferencing Help Consumers, Information Technology and Innovation Foundation. Dostupno na:* https://itif.org/publications/2022/11/30/history-shows-how-private-labels-and-self-preferencing-help-consumers/. *2022;28:2023.* and Jean-Pierre Dubé, *Amazon Private Brands: Self-Preferencing Versus Traditional Retailing*, 86 Antitrust L. J. 115, 116 (2024)

[2] Andrei Hagiu, Tat-How Teh & Julian Wright, *Should Platforms Be Allowed to Sell on Their Own Marketplaces?*, 53 RAND J. Econ. 297, 297 (2022) ("An increasing number of e-commerce players such as Amazon, JD.com, Target, and Walmart, are acting both as marketplaces, that is, enabling third party sellers to sell to consumers, and as sellers, that is, selling products under their own name. Similarly, Apple's App Store, Amazon's AWS Marketplace, Google's Chrome Web Store, Cloud Marketplace and Play Store, Intuit's Quickbooks App Store, Microsoft's Azure Marketplace, Windows Games Store and Xbox Games, Nintendo's Game Store, Salesforce's AppExchange, Shopify's App Store, and Sony's PlayStation Store, all sell their own apps/games alongside third-party apps/games on their marketplaces.").

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Self-preferencing is a broad term that encompasses a range of potential practices including, among others, digital marketplaces using third-party data to inform decisions, favoring their own products in online search results, and charging higher marketplace fees on third-party sellers' products.[3] In digital retail, regulators have expressed concerns that, under certain assumptions, self-preferencing practices might provide an "unfair advantage" for digital marketplaces to sell private-label products. Such an advantage is posited to distort competition, which may in turn harm consumers through reduced choice or higher prices, although the ultimate effect on consumer welfare remains a subject of debate.[4] These concerns include:[5]

- **Concerns over advantaging a marketplace's own products in search results and recommendations.** By prioritizing their own products in search rankings and key promotional features, marketplaces can limit the visibility of third-party sellers. Some studies suggest this could particularly harm smaller businesses that rely on the marketplace to reach customers,[6] while others argue this ranking reflects legitimate consumer preferences for cheaper or faster shipping options.[7] It has been argued that this practice may also reinforce a marketplace's dominant position,[8] limit consumer choice, and discourage third-party sellers from innovating if their products are less visible.[9]

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[3] Juliette Caminade, Juan Carvajal & Christopher R. Knittel, *An Economic Analysis of the Self-Preferencing Debate*, 32 Competition 30, 31 (2022) ("In the context of digital platforms, allegations of self-preferencing take multiple forms."); Herbert Hovenkamp, *Antitrust and Self-Preferencing*, 38 Antitrust 5, 5 (2023) ("Self-preferencing can come in many varieties, ranging from outright exclusion of competing alternatives to simple favored placement or promotion of the seller's own version.").

[4] See for example Hagiu et al. *supra* note 2. The paper models the various incentives and outcomes, showing that a ban on self-preferencing is not always beneficial for consumers. And Long *supra* note 1.

[5] Jean-Pierre Dubé, *Amazon Private Brands: Self-Preferencing Versus Traditional Retailing*, 86 Antitrust L. J. 115, 116 (2024) ("Specifically, competition authorities have expressed concerns that Amazon has access to consumer behavior data, including data on users' web browsing and purchases of national brands (NBs). This data allegedly gives Amazon an unfair advantage in developing and selling PL products that compete with third-party brands. Since Amazon also manages the digital retail platform, its marketing of PLs is perceived as a form of self-preferencing.").

[6] Fei Long & Wilfred Amaldoss, *Self-Preferencing in E-Commerce Marketplaces: The Role of Sponsored Advertising and Private Labels*, 43 Mktg. Sci. 925, 926 (2024) ("Consequently, when Amazon places its private label in the first sponsored ad slot, it is making the most visible ad slot unavailable for third-party sellers. This significantly affects the visibility of third-party sellers on mobile devices, where only one sponsored product placement shows up followed by a list of organic results (Kaziukenas 2020).").

[7] *Id.* at 927 ("As discussed earlier, self-preferencing the private label in product listings has drawn the attention of regulators. The fear is that it hurts third-party sellers in particular and consumers in general. Amazon disputes the charge by arguing that the private label is often offered at a lower price, implying it causes no harm to consumers (Creswell 2018, Iain and Jessica 2020)."); Caminade et al., *supra* note 3, at 36 ("There are several legitimate reasons that may cause algorithms to rank the platform's products higher than those of competitors: they can be cheaper, have features that consumers value such as priority shipping, or simply be preferred by consumers.").

[8] *The Digital Markets Act: Ensuring Fair and Open Digital Markets*, Eur. Comm'n, https://commission.europa.eu/strategy-and-policy/priorities-2019-2024/europe-fit-digital-age/digital-markets-act-ensuring-fair-and-open-digital-markets_en ("Gatekeepers are large digital platforms providing any of a pre-defined set of digital services ('core platform services'), such as online search engines, app stores, and messenger services. These companies have: a strong economic position, significant impact on the internal market and are active in multiple EU countries; a strong intermediation position, meaning that they link a large user base to a large number of businesses; an entrenched and durable position in the market, meaning that their position has been stable over time.… Gatekeepers will keep all opportunities to innovate and offer new services. They will simply not be allowed to use unfair practices towards the business users and customers that depend on them, in order to gain an undue advantage.").

[9] Hagiu et al., *supra* note 2, at 298 ("One is that the platform obtains proprietary information on the third-party sellers' products (e.g., detailed demand and pricing data, data on users' search behavior, what items they return and their reasons for doing so) via its marketplace, and then uses that opportunistically to decide whether to copy and compete on the more successful offerings, potentially leading to reduced incentives for third-party sellers to invest or innovate."); Massimo Motta, Self-Preferencing and Foreclosure in Digital Markets: Theories of Harm for Abuse Cases, 90 INT'L J. INDUS. ORG. 1, 1, 3 (2023) ("Instead, launching its copycat version of the app may increase the platform's profits.").

- **Concerns over the use of non-public data from third-party sellers** (e.g., third-party seller's sales, pricing, consumer trends) to develop and promote a marketplace's own products. Some academic work discusses how this data access could give platforms a competitive advantage and lead to reduced incentives for third-party sellers to invest or innovate.[10] For example, Hagiu et al. (2022) argue that marketplaces could use third-party data "opportunistically to decide whether to copy and compete on the more successful offerings."[11] Others argue this practice mirrors traditional retailers' use of sales data, which is often seen as a procompetitive way to optimize offerings for consumer benefit.[12]
- **Concerns over creating third-party seller dependency.** By controlling access to critical tools like advertising, logistics, and fulfillment services, a marketplace could potentially pressure sellers into accepting unfavorable terms. The EU's DMA prohibits designated gatekeepers from using self-preferencing to impose unfair conditions.[13] The U.S. House Antitrust Subcommittee's 2020 report discusses how control over visibility and essential services could compel sellers to align with the marketplace's interests.[14] This dynamic arguably parallels how powerful traditional retailers have long used their gatekeeper control over physical shelf space to negotiate favorable terms and concessions from suppliers.[15]

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[10] Caminade et al., *supra* note 3, at 31 ("Self-preferencing data use. One common set of self-preferencing allegations is that digital platforms introduce new products that compete with third-party sellers, identified and/or designed based on marketplace data surrounding competitor products."); Hagiu et al., *supra* note 2, at 298 ("One is that the platform obtains proprietary information on the third-party sellers' products (e.g., detailed demand and pricing data, data on users' search behavior, what items they return and their reasons for doing so) via its marketplace, and then uses that opportunistically to decide whether to copy and compete on the more successful offerings, potentially leading to reduced incentives for third-party sellers to invest or innovate.").

[11] Hagiu et al., *supra* note 2, at 298 ("One is that the platform obtains proprietary information on the third-party sellers' products (e.g., detailed demand and pricing data, data on users' search behavior, what items they return and their reasons for doing so) via its marketplace, and then uses that opportunistically to decide whether to copy and compete on the more successful offerings, potentially leading to reduced incentives for third-party sellers to invest or innovate.").

[12] Long *supra* note 1 ("Although there are concerns that online marketplaces are using data on third-party sellers to price products and adjust product offerings—a form of self-preferencing—this practice is not new. Brick-and-mortar shops also collect 'sales data to shape their product offering,' often benefitting consumers through 'lower prices and an increase in the variety of products available.'").

[13] *The Digital Markets Act: Ensuring Fair and Open Digital Markets*, Eur. Comm'n, https://commission.europa.eu/strategy-and-policy/priorities-2019-2024/europe-fit-digital-age/digital-markets-act-ensuring-fair-and-open-digital-markets_en ("Gatekeeper platforms may no longer … treat services and products offered by the gatekeeper itself more favourably in ranking than similar services or products offered by third parties on the gatekeeper's platform.").

[14] U.S. House of Representatives, Subcommittee on Antitrust, Commercial, and Administrative Law, Investigation of Competition in Digital Markets (2022) ("Due to a lack of alternatives, third-party sellers have no choice but to purchase fulfillment services from Amazon. More than 73% of all Marketplace sellers worldwide reportedly rely on FBA services. Numerous third-party sellers told the Subcommittee that they feel they have no choice but to pay for FBA to maintain a favorable search result position, to reach Amazon's more than 112 million Prime members, and to win the Buy Box—through which the vast majority of Amazon sales are made.").

[15] Paul Bloom & Vanessa G. Perry, *Retailer Power and Supplier Welfare: The Case of Wal-Mart*, 77 J. Retailing 379, (2001) ("There has been considerable debate in the trade press and academic literature over whether a significant shift has taken place in the relative power of retailers and manufacturers of consumer products. In general, the trade press has suggested that retailers are increasing their relative power, using it to extract concessions from manufacturers such as merchandising support, trade deals, and slotting allowances. . . . The title of a recent trade press article poses the question: 'Should you just say no to Wal-Mart?' (Bowman, 1997) According to this article, many suppliers are reportedly feeling squeezed and pressured by giant retailers into taking expensive actions such as lowering prices, accelerating delivery times, offering special allowances, or carrying extra inventory. Our research seeks to help consumer goods suppliers find an answer to the article's title question.").

Self-preferencing is not a new concept in retail, and it is not specific to digital marketplaces

The antitrust concerns raised on self-preferencing practices are neither new nor specific to digital platforms.[16] In fact, brick-and-mortar stores often offer their own products as well as products sold by competitors and have faced similar allegations in the past.[17]

Self-preferencing in traditional retail similarly refers to retailers favoring their own private-label or store-brand products over third-party brands through practices like preferential shelf placement, pricing, or promotions. Historically, allegations of self-preferencing in traditional retail have been less prominent than in digital marketplaces, as these practices are often seen as standard competitive behavior. However, concerns have arisen when such actions were perceived to harm competition or consumers.

Chain Stores and Private Labels (1920s–1930s): The rise of chain stores like A&P in the early twentieth century introduced private-label products, which competed with local retailers and national brands.[18] These stores often gave preferential treatment to their own brands through prominent shelf placement or lower pricing, challenging smaller retailers and suppliers.[19]

Critics argued that chain stores' self-preferencing undermined small businesses and local economies.[20] They claimed that by prioritizing private labels, chains created unfair competition, threatening the viability of independent retailers and suppliers.[21] Despite initial backlash, chain stores' private labels became accepted as procompetitive, offering consumers lower prices and

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[16] Caminade et al., *supra* note 3, at 33 ("A noteworthy aspect of the debate around the antitrust concerns surrounding self-preferencing is that such behaviors are neither new nor specific to digital platforms").

[17] Caminade et al., *supra* note 3, at 34 ("These private label products can be, and have been, designed and introduced based on data collected from other sales, as well as preferentially placed and priced. For instance, in the U.S., Costco has promoted its own private label, Kirkland, favoring it over third parties, including by replacing national brands across several product lines. Other large retailers, such as Walmart and Kroger, have also replaced certain national brands and decided to feature their own products and labels instead.").

[18] Aurelien Portuese, *"Please, Help Yourself": Toward a Taxonomy of Self-Preferencing*, Info. Tech. & Innovation Found., Oct. 25, 2021, https://itif.org/publications/2021/10/25/please-help-yourself-toward-taxonomy-self-preferencing/.

[19] *Id.* ("Private brands emerged in the first part of the last century with the rise of supermarkets and chain stores such as A&P, which competed aggressively against local small retailers for the benefit of consumers."); *Id.* ("A distributor/platform favoring its private labels over third-party products (i.e., 'prominent placement'). For instance, Amazon promotes Amazon Basics products over third-party sellers' products, much like supermarkets promote their own private-label products."); *Id.* ("For over 150 years, large retailers have used self-preferencing strategies with their own private labels, resulting in lower prices for their products and putting price pressure on branded products."); Hovenkamp, *supra* note 3, at 10 ("For example, a firm will give prominent shelf space to items that sell quickly.").

[20] *Id.* ("Private brands emerged in the first part of the last century with the rise of supermarkets and chain stores such as A&P, which competed aggressively against local small retailers for the benefit of consumers…. A&P, the nation's largest retail chain, was demonized by populists in the 1920s and 1930s in the same way that Walmart and other 'big box' stores were vilified by populist in the 1990s and 2000s for putting out of business 'Main Street' stores.").

[21] *Id.* ("Antitrust populists, in their desire to reduce the size of large companies and protect competitors—especially small businesses—rather than consumers, argue that Internet platforms should not be allowed to promote their own products and services."); *Id.* ("Private brands emerged in the first part of the last century with the rise of supermarkets and chain stores such as A&P, which competed aggressively against local small retailers for the benefit of consumers. Like today, populists vehemently criticized the allegedly cutthroat competition chain stores generated for the benefit of consumers because they sided with small-business interests (and in many cases were funded by those interests)."); Hovenkamp, *supra* note 3, at 10 ("For example, a firm will give prominent shelf space to items that sell quickly.").

fostering innovation.[22] Allegations of anticompetitive self-preferencing faded as these practices became normalized.

Supermarkets and Private Brands (Post-WWII Era): Post-World War II, supermarkets expanded private-label offerings, with retailers like Kroger and Safeway using their own brands to compete with national brands.[23] These products were often placed at eye level or given prominent display space, while third-party brands were relegated to less visible shelves.[24]

The literature discussed supermarkets' practices such as slotting fees stifled competition by limiting market access for third-party brands.[25] For example, preferential placement was seen as a barrier to entry for smaller manufacturers reliant on shelf space to reach consumers.[26]

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[22] *Id.* ("For over 150 years, large retailers have used self-preferencing strategies with their own private labels, resulting in lower prices for their products and putting price pressure on branded products."). For a discussion on why "common business practices" constitutes normal competition and thus cannot be anticompetitive practice, see Konstantinos Stylianou, *"Can Common Business Practices Ever Be Anti-competitive? Redefining Monopolization,"* American Business Law Journal, Vol57(1): 169–221, https://eprints.whiterose.ac.uk/151534/7/ablj.12157.pdf (arguing at 197 that "incorporating the commonness element as a precheck to business justifications and efficiencies enhances the inquiry of which practices should constitute normal competition and can therefore escape monopolization liability."); As self-preferencing can derive from tying, see also David S. Evans, *"Tying. The Poster Child for Antitrust Modernization"* (2005), https://www.justice.gov/atr/tying-poster-child-antitrust-modernization (writing that "tying is utterly common business practice in competitive markets."). See also Ezrachi, A., & Ahuja, K. (2008). *"Private Labels, Brands and Competition Law Enforcement."* University of Oxford, Centre for Competition Law and Policy, Working Paper CCLP(L)9 and Long *supra* note 1.

[23] Caminade et al., *supra* note 3, at 33 ("Overall, private labels are usually successful with consumers: in 2020, they accounted for around 18% of product sales in U.S. supermarkets. Large retailers, including Walmart and Target, have expanded private label options recently, offering a wide range of goods. For example, Kroger's Simple Truth product line, primarily focused on edible products and household consumables, accounts for 30% of the company's overall sales volume.").

[24] Hovenkamp, *supra* note 3, at 7 ("Existing law does not ordinarily reach forms of self-preferencing that are limited to mere display or convenience. For example, a retailer might place a preferred brand at eye level or at the front of the store, while relegating others to less visible space."); Guillaume Duquesne et al., *What Constitutes Self-Preferencing and Its Proliferation in Digital Markets*, Glob. Comp. Rev., Oct. 2, 2024, https://globalcompetitionreview.com/guide/digital-markets-guide/fourth-edition/article/what-constitutes-self-preferencing-and-its-proliferation-in-digital-markets ("For example, supermarkets and department stores must decide how to allocate shelf space and often place their own-brand or private label products in preferential locations compared with manufacturers' rival brands. In the digital world, we can view demoting third parties' products and services to the second or third page of search results as an analogous form of self-preferential product placement.").

[25] Jesse Newman & Annie Gasparro, *"Stress on Shelves"—The Battle for Space in Store Aisles*, Wall St. J., Aug. 14, 2024 ("'So you have the same amount of shelf space basically, but you have private label that's growing its share in that space,' Tarlowe said. 'Just by virtue of that dynamic, you're going to have more competition.'"); Benjamin Klein & Joshua D. Wright, *The Economics of Slotting Contracts*, 50 J. L. & Econ. 421, 422 (2007) ("The primary competitive concern with slotting arrangements is the claim that they may be used by manufacturers to foreclose or otherwise disadvantage rivals, raising the costs of entry and consequently increasing prices. . . . It is now well-established in both economics and antitrust law that the possibility of this type of anticompetitive effect depends on whether a dominant manufacturer can control a sufficient amount of distribution, so that rivals are effectively prevented from reaching minimum efficient scale.").

[26] For example, when describing Costco's introduction of private label diapers under its Kirkland Signature brand, Costco cofounder Jim Sinegal explicitly noted that after the introduction "we weren't going to carry both Huggies and Pampers. We were [going to] carry one brand and a Kirkland Signature." Nikki Walker & Sarah Nassauer, *How Costco's Kirkland Signature Brand Became a Powerhouse*, Wall St. J., Mar. 30, 2025. *See also How Supermarket Suppliers Are Being Cheated by Major Grocery Chains*, Buy Australian Mag. (Sept. 24, 2024), https://buyausmag.com.au/how-supermarket-suppliers-are-being-cheated-by-major-grocery-chains/ ("The threat of delisting is particularly harmful to small suppliers who rely heavily on supermarket contracts for their revenue."). *See also* Olbrich Rainer, Hundt Michael & Jansen Hans, *Proliferation of Private Labels in Food Retailing: A Literature Overview*, 6 Int'l J. Mktg. Stud. 63, 63 (2016) ("Private labels improve the power of retailers in relation to the branded goods industry and strengthen their negotiating positions (Olbrich & Buhr, 2005a; Olbrich & Grewe, 2009; Olbrich & Grewe, 2013). In the past, retailers were simply the purchasers and distributors of goods. Today, they are also the owners and marketers of their own private labels and sometimes even run the production process. As a result, they have become competitors to their business partners, the branded goods industry—referred to as the 'double-agent' approach (Olbrich & Buhr, 2005b; Timmor, 2007). Because retail shelf space is limited and fully controlled by retailers, their power as 'gatekeepers' is significant (Nordås, 2008).").

U.S. antitrust law generally viewed these practices as lawful unless they involved explicit exclusionary conduct, such as tying or exclusive dealing. Economists argued that private labels enhanced competition by constraining branded products' pricing power and offering expanded consumer choice.

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Allegations rarely led to significant enforcement actions, as courts and regulators saw self-preferencing as a standard retail strategy with procompetitive benefits, such as lower prices and innovation.[29]

Big-Box Retailers (1980s–2000s): Walmart introduced its first private label, a dog food brand, in 1983.[30] Today, several brick-and-mortar stores sell private-label products to customers (e.g., Kirkland from Costco, Simple Truth from Kroger, and Great Value from Walmart).[31] Retailers like Walmart and Target scaled up private-label programs, with brands like Walmart's "Great Value" gaining significant market share.[32]

Retailers like Walgreens, CVS, and Mariano's used data from third-party sales to inform private-label strategies and often gave their brands preferential treatment in pricing, placement, or promotions.[33] As early as the 1980s, retailers have used data from point-of-sale scanner technology to enhance customer loyalty and target coupons.[34] For example, in the 2000s, ShopperTrak

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[27] Hovenkamp, *supra* note 3, at 7 ("Existing law does not ordinarily reach forms of self-preferencing that are limited to mere display or convenience. For example, a retailer might place a preferred brand at eye level or at the front of the store, while relegating others to less visible space.").

[28] Portuese, *supra* note 18 ("For over 150 years, large retailers have used self-preferencing strategies with their own private labels, resulting in lower prices for their products and putting price pressure on branded products."); *Id.* ("It also increases consumer choice and can create competitive pressures on other providers to increase quality or reduce prices.").

[29] *Id.* ("For example, private labels offer lower prices, increase consumer loyalty, and spur innovation by imitation."); *Id.* ("Antitrust policy has traditionally treated private brands positively, given their procompetitive effects."); Guillaume Duquesne et al., *What Constitutes Self-Preferencing and Its Proliferation in Digital Markets*, Glob. Comp. Rev., Oct. 2, 2024, https://globalcompetitionreview.com/guide/digital-markets-guide/fourth-edition/article/what-constitutes-self-preferencing-and-its-proliferation-in-digital-markets ("Although self-preferencing exists in the brick and mortar world, it has not triggered actions by regulatory authorities and lawmakers to the level seen in digital markets. The reason for this may be that the scope for harmful brick and mortar self-preferencing is limited by competition between retailers) i.e., competition upstream.").

[30] *Id.* at 126 ("Walmart, launched its first PL brand—dog food brand 'Ol' Roy'—in 1983").

[31] Caminade et al., *supra* note 3, at 33 ("Many large supermarket chains sell their own products under 'private labels.' Examples abound, including Costco with Kirkland, Kroger with Simple Truth, and Walmart with Great Value in the U.S.").

[32] Dubé, *supra* note 4, at 129-30 ("Target's PL campaign grew 18% in 2021, generating $30 billion in sales, rivaling 'the size of some Fortune 100 companies' and accounting for 28% of sales. Walmart sells over 29,000 PL products, representing about one-third of total sales at approximately $186 billion. Eighteen of Walmart's PL brands generate over $1 billion annually each, with its Great Value brand alone generating over $27 billion.").

[33] *Id.* at 131-34 ("For instance, Walgreens sells its copycat brands at much lower prices, using side-by-side shelf displays in stores and a dedicated webpage online to demonstrate savings (the 'compare and save' offers). . . . Walgreens also uses electronic in-store displays, electronic displays showing the 'deal of the week,' in-store shelf talkers, and heavy promotion via circulars. . . . CVS uses a similar preferential treatment for its PL analgesics on its digital platform . . . '[Retailers] typically give more prominent display to their own brands and make sure they are well stocked.' So, for instance, Chicago-area supermarket chain Mariano's routinely offers free samples of its PL products at the entrance to the stores."); *Id.* at 136-37 ("However, established retail chains have been using granular consumer-level data and analytics for decades, long before the launch of Amazon or its subsequent PL programs. . . . A recent McKinsey report views the application of machine learning and big data analytics 'to crunch the vast quantities of customer data that retailers already accumulate' as a key element of modern brick-and-mortar retailing strategy.").

[34] *Id.* at 137 ("Retailers have been using data analytics to enhance customer loyalty to their stores since at least since the early 1980s with the advent of Catalina's point-of-sale scanner technology and ability to target coupons based on the items in a basket.").

enabled traffic, monitoring, conversion in physical stores, and analyzed "video images without relying on human eyes' where 'nearly all of its videotaping is done without the knowledge of the people being taped.'"[35] Similarly, in 2013, Consumer Reports reported that retailers track highly detailed customer actions using video analytics and high-resolution cameras both inside and outside the store to monitor all customer actions. Regarding preferential ranking, the literature discusses how, since the 1980s, brick-and-mortar stores have used coupons and loyalty card programs to potentially advantage their private-label products.[36]

Critics alleged that big-box retailers' self-preferencing harmed third-party suppliers by reducing their visibility and sales opportunities. For instance, Walmart's aggressive promotion of private labels can be seen as pressuring suppliers to lower prices or risk losing shelf space.[37] Critical narratives compared this to earlier chain store criticisms, claiming harm to "Main Street" businesses.[38]

Unlike digital marketplaces, traditional retailers faced limited antitrust scrutiny for self-preferencing. Practices like slotting allowances (payments for shelf space) or conditional discounts were occasionally challenged under the Sherman Act or Robinson-Patman Act.[39]

Private labels in traditional retail grew to represent about 20 percent of retail sales across ten major product sectors, on average, highlighting their acceptance in traditional retail.[40] Allegations of harm in traditional retail were overshadowed by evidence of consumer benefits, such as lower prices and increased choice.[41]

Perception remains that digital retailers are better at advantaging a marketplace's own products in search results and recommendations. What do the data say? The perception remains that, compared to traditional retail, online channels may be more effective at advantaging a marketplace's own products in search results and recommendations. Studies acknowledge that, in traditional brick-and-mortar settings, "retailers often place their products

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[35] *Id.* at 138 ("During the early 2000s, companies like ShopperTrak enabled 'video mining' capabilities to 'analyze video images without relying on human eyes' where 'nearly all of its videotaping is done without the knowledge of the people being taped.' Such data allow retailers to monitor total traffic and conversion in their physical stores while also identifying traits such as 'adult shopper' and tracking browsing behavior. ShopperTrak included such clients as Gap, Banana Republic, Limited Brands, Victoria's Secret, Payless Shoes, American Eagle Outfitters and Children's Place.").

[36] Dubé, *supra* note 4, at 136 ("Retailers like Kroger use advertising tactics similar to those used for NBs, such as loyalty cards, consumer coupons, and special deals on PLs. Safeway uses 'in-store merchandising and . . . all its assets from stores to its weekly ad circulars to its Web site for promoting private-label sales.'"); *Id.* at 137 ("Retailers have been using data analytics to enhance customer loyalty to their stores since at least since the early 1980s with the advent of Catalina's point-of-sale scanner technology and ability to target coupons based on the items in a basket. By the 1990s, retailers developed targeting capabilities through loyalty-card programs to collect individual consumer transaction histories, a concept pioneered by the partnership between UK retail giant Tesco and Dunnhumby").

[37] Elizabeth Crawford, *Walmart Mulls Lowering Center-Store Grocery Prices*, Food Navigator USA, Dec. 8, 2022, https://www.foodnavigator-usa.com/Article/2022/12/08/walmart-mulls-lowering-center-store-grocery-prices/ ("'We will allocate space to private brands and tertiary brands to the degree that we need to, to help make this work for families' and to maintain Walmart's current price gaps compared to other retailers, with which the retailer is currently happy, [Walmart CEO Doug] McMilion said.").

[38] Portuese, *supra* note 18 ("A&P, the nation's largest retail chain, was demonized by populists in the 1920s and 1930s in the same way that Walmart and other 'big box' stores were vilified by populist in the 1990s and 2000s for putting out of business 'Main Street' stores."). A "Main Street" store refers to a small business.

[39] Klein & Wright, *supra* note 26, at n. 4.

[40] *Private Label Trends*, Numerator, https://www.numerator.com/private-label-trends/ ("Private label products accounted for nearly a quarter of unit volume (24%) across ten major product sectors in the past 12 months.").

[41] Dubé, *supra note* 7, at 117-18 ("[T]he growth of PLs ultimately benefits consumers by offering them parity products at lower prices9 and, in recent years, genuinely innovative new products.").

on favorable, eye-level shelves next to comparable branded products to facilitate product comparison and encourage private-label purchases,"[42] and that grocery stores often position their private-label products in more prominent positions and allocate additional shelving space to their own branded products.[43] Indeed, this expression of self-preferencing has largely been expected of retailers and accepted by antitrust authority without much scrutiny.[44] Long and Amaldoss (2024) contend, however, that self-preferencing is more prominent and potent in online shopping, which they attribute partly to different customer behavior: when shopping in brick-and-mortar stores, customers "can easily navigate competing products even if the offline retailer features its private label in a premium shelf space."[45]

Conversely, in online channels and on mobile devices, the literature puts forth that consumers rarely consider products beyond the top few search results. For instance, when digital marketplaces place private-label products in the first sponsored ad slot, the literature discusses that, this, in effect, "[s]ignificantly affects the visibility of third-party sellers on mobile devices."[46] Long and Amaldoss (2024) further discuss how advertising on digital platforms can be more targeted and personalized compared to brick-and-mortar stores.[47] This includes the ability to personalize consumers' search rankings and offer targeted ads based on customers' characteristics. Relatedly, Farronato et al. (2023) state that search results "are the most important channel for product discovery," and the authors claim that this allots more power to online retailers in determining which products appear at the top in search rankings.[48]

To understand whether online channels are indeed better equipped at self-preferencing, we study purchases of private labels between July 2022 and June 2023 using Numerator consumer data covering about 900 million transactions during this period. Numerator data, derived from a digital panel of over one million U.S. consumers, provides insights into consumer purchasing

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[42] Trelysa Long, *History Shows How Private Labels and Self-Preferencing Help Consumers*, Info. Tech. & Innovation Found., Nov. 30, 2022, https://itif.org/publications/2022/11/30/history-shows-how-private-labels-and-self-preferencing-help-consumers/.

[43] David George, *Trends in Retail Competition: Private Labels, Brands and Competition Policy*, Inst. Eur. & Compar. L. (June 3, 2011) at 10, https://www.law.ox.ac.uk/sites/default/files/migrated/symposium_report_2011.pdf ("Grocery stores frequently position their PL products in more prominent positions and allocate more shelving space to these products than the PL products' market share warrants.").

[44] Trelysa Long, *History Shows How Private Labels and Self-Preferencing Help Consumers*, Info. Tech. & Innovation Found., Nov. 30, 2022, https://itif.org/publications/2022/11/30/history-shows-how-private-labels-and-self-preferencing-help-consumers/ ("This positioning of private labels in brick-and-mortar stores constitutes a form of self-preferencing that has generally been expected of retailers and accepted by antitrust authorities without question.").

[45] Long & Amaldoss, *supra* note 5, at 925.

[46] Long & Amaldoss, *supra* note 5.

[47] *Id.* at 926 ("At the same time, advertising on e-commerce platforms (also called 'retail media') is keyword targeted unlike in traditional brick-and-mortar stores, and is a significant source of revenue for platforms, generating $32 billion in 2022.").

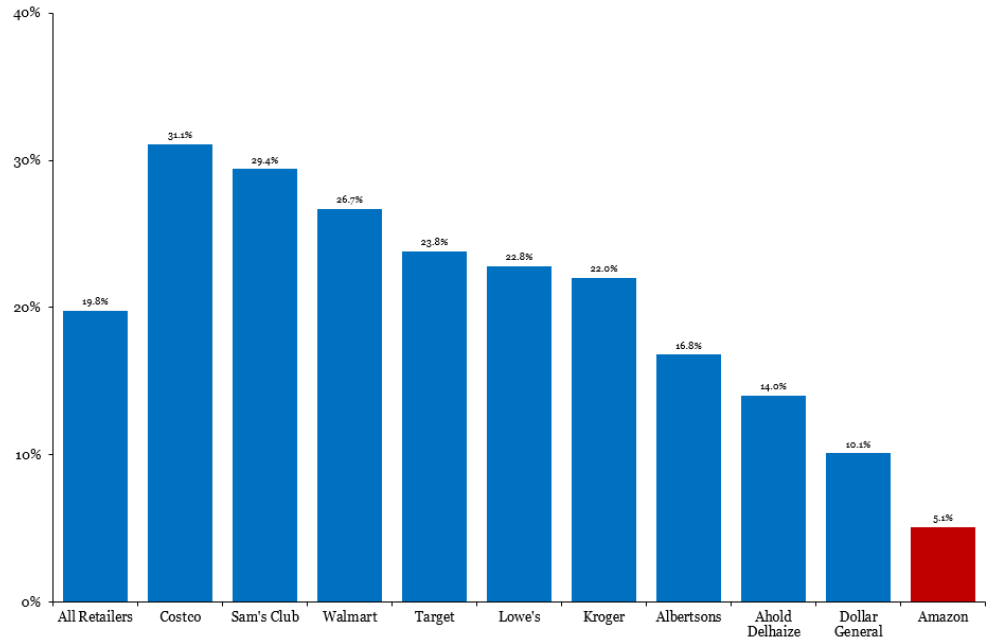
[48] Chiara Farronato, Andrey Fradkin & Alexander MacKay, *Self-Preferencing at Amazon: Evidence from Search Rankings*, 113 AEA Papers and Proc. 239 (2023), https://www.aeaweb.org/articles/pdf/doi/10.1257/pandp.20231068.

behavior across online and in-store channels, covering fast-moving consumer goods, electronics, and more, and is designed to be representative of the U.S. population.[49]

Exhibit 1 reports the private-label share for the brick-and-mortar channel of top retailers such as Walmart, Kroger, Target, Costco, Sam's Club, Ahold Delhaize, Dollar General, Albertsons, and Lowe's. For Amazon, we calculate its private-label share using only its online sales. Using Numerator data on consumer transactions from July 2022 to June 2023, we consider in-store sales from all retailers in the Numerator data (first bar), and present separately the top ten retailers as determined by total sales. Exhibit 1 shows the share of a retailer's total sales that are from its private-label products. We find that the share of customers' spending on private-label products on Amazon's online sales channel is still far behind all the other retailers' brick-and-mortar channel sales. Amazon's private-label share of sales was 5.1 percent, while the average across all retailers was 19.8 percent in their brick-and-mortar channel.

Exhibit 1

Private-Label Share for Top Retailers' Brick-and-Mortar Channels and Amazon's Online Channel, July 2022 – June 2023

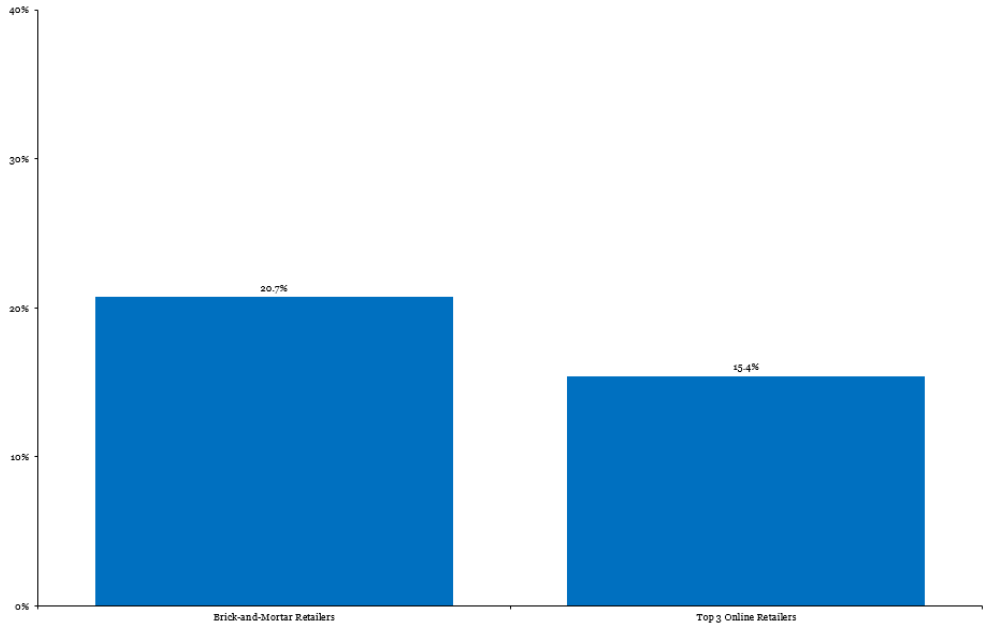


[49] *Company*, NUMERATOR, https://www.numerator.com/company/ ("Numerator helps companies understand their customers and identify growth opportunities. We provide more visibility into more consumers across more channels—unlocking more growth. . . . We blend proprietary data, including a digital panel of over one million U.S. consumers, with advanced technology to create unique insights—for an industry that has been slow to change."). A FEDS note provides details on how Numerator collects data and surveys consumers. See Hacıoğlu Hoke, Sinem, Leo Feler, and Jack Chylak (2024). "A Better Way of Understanding the US Consumer: Decomposing Retail Sales by Household Income," FEDS Notes. Washington: Board of Governors of the Federal Reserve System, October 11, 2024. The Numerator panel data contain 200,000 users who self-identify as the primary shopper of the household and whose transactions are continuous and complete for a period of at least 12 months. Numerator selects these 200,000 users from over 1 million users in a way that is demographically and nationally representative. Numerator then weights and balances households to ensure a match with Census demographic data and to ensure households' detailed purchases, when summed by retailer or by manufacturer, align with quarterly earnings reports of major retailers and consumer packaged goods manufacturers. Numerator collects data from households in several ways. Using a mobile phone app called "Receipt Hog", consumers can (1) snap and upload a picture of their paper receipts, (2) allow Numerator to scrape their emails for digital receipts, and (3) link loyalty and membership accounts (such as Amazon, UberEats, Walmart, and Home Depot accounts), which Numerator then scrapes for transaction information. Panelists are rewarded with coins redeemable for Amazon or Visa gift cards or for cash through PayPal. On average, Numerator rewards panelists approximately $10 per month for providing their purchase information and completing surveys. The Numerator data also include demographic information collected through surveys on household income, age, education, zip code, household size, race/ethnicity, and various other measures. In addition to ongoing surveys designed to capture household demographic characteristics, Numerator runs periodic surveys to understand consumer sentiment and panelist behaviors. Numerator data does not capture spending on majority of services or housing.

A similar result occurs when we focus on some digital marketplaces. Exhibit 2 differentiates between (1) the online channels for sales of three digital marketplaces that host third-party sellers: Target, Amazon, and Walmart; and (2) the traditional brick-and-mortar channel for all retailers. Using Numerator data from July 2022 to June 2023, we calculate the share of total sales that come from these retailers' private-label products. We find that these results are consistent with our previous findings. According to Exhibit 2, the share of private-label sales for the traditional brick-and-mortar channel for all retailers (first bar) was 20.7 percent, whereas for the online channel for some marketplaces, Amazon, Target, and Walmart, (second bar) it was lower, at 15.4 percent.[50]

Exhibit 2

Private-Label Share for All Retailer's Brick-and-Mortar Channel and Amazon, Target, and Walmart's Online Channel, July 2022 – June 2023



Note: The top 3 online retailers are comprised of all onlines sales from Amazon, Walmart, and Target. Brick-and-Mortar Retailers represent all in-store sales from all retailers.

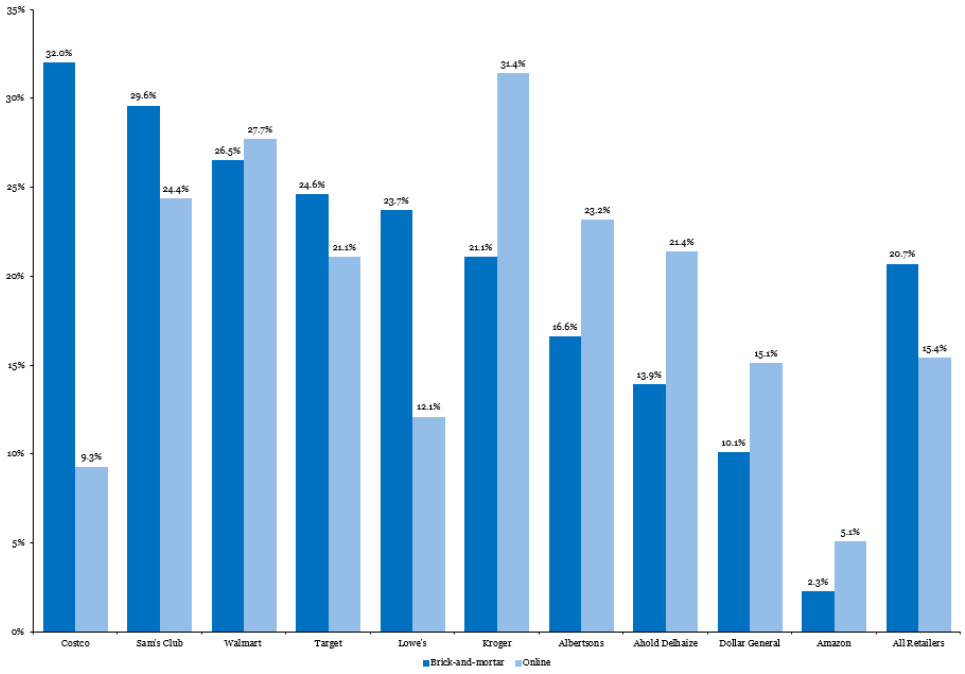
While these results may suggest that the online channel might be less effective at steering customers toward private-label products than traditional brick-and-mortar stores, this gap, however, might highlight other advantages that physical retailers possess in the private-label space. For example, many brick-and-mortar chains have spent decades building consumer trust and familiarity with their store brands—an established foundation that newer online private-label programs may lack although Walmart, Target and Amazon, the retailers included in our analysis above, are also well established brands. The physical retail environment allows consumers to see, touch, and evaluate a new product before buying, which might reduce the perceived risk of trying an unfamiliar private label for certain customers. Therefore, the lower private-label share observed online may not reflect the ineffectiveness of digital strategies but rather advantages of the brick-and-mortar model. That too however raises the question of why the added scrutiny on digital marketplaces.

[50] In Exhibit 2, we calculate the share of total sales from Amazon, Walmart, and Target's online channel that come from private-label products. In addition, we calculate the share of total sales from all retailers' brick-and-mortar channel that come from private-label products.

To analyze how specific retailers' self-preferencing practices differ across sales channels, we compare the private-label sales share for each of the top ten retailers in their brick-and-mortar stores versus their online stores (see Exhibit 3). By analyzing each retailer individually, we control for firm-specific confounding factors. On average, retailers' efforts to promote their own brands are more effective in the brick-and-mortar channel, as reflected in the higher aggregate private-label share. This holds true for major retailers like Costco, Sam's Club, Walmart, Target, and Lowe's. In contrast, some retailers—such as Kroger, Albertsons, and Dollar General—are more effective at self-preferencing online. This divergence suggests that the relative success of self-preferencing in a given channel is specific to each retailer, and it is not necessary attributable to online channels or digital marketplaces.

Exhibit 3

Private-Label Share by Sales Channel for Top Ten Retailers, July 2022 – June 2023



While our descriptive data does not speak directly to the effectiveness of specific self-preferencing tactics, it is noteworthy, however, that other recent research focusing on mechanisms like algorithmic search ranking suggests that such practices might be less common than previously thought or, when present, may not significantly alter consumer purchasing behavior.

For example, Caminade et al. (2022) note that, in algorithmic ranking of products, retailers can have "legitimate reasons" to rank their own products higher.[51] For instance, a marketplace could rank its own products higher because they are cheaper, have features that consumers value (e.g., priority shipping), or simply because consumers prefer them. The authors discuss how digital marketplaces may want to prioritize showing the best product to consumers.[52] Jürgensmeier and Skiera (2024) conclude that, after accounting for "unprotected attributes," there was not a statistically

[51] Caminade et al., *supra* note 3, at 36.

[52] *Id.* ("There are several legitimate reasons that may cause algorithms to rank the platform's products higher than those of competitors: they can be cheaper, have features that consumers value such as priority shipping, or simply be preferred by consumers. . . . [T]he platform must maintain its value to users by showing them the best products.").

Shifting to empirical evidence, two consumer studies by Jürgensmeier and Skiera in 2024 found that most customers would not significantly alter their purchasing behavior on Amazon if an investigation revealed self-preferencing.

significant association between search visibility of the product and the identity of the product supplier (Amazon versus third-party suppliers).[53] In fact, the authors find that Amazon Basics products (Amazon's private-label brand) are "significantly less visible in organic search than comparable close third-party competitors."[54] Therefore, even if Amazon products were ranked higher than others, the prominence of its private-label products was explained by factors such as price and product quality.

A separate line of literature discusses how the pre-existing reputation of national brands acts as a natural counterbalance to self-preferencing, complicating efforts to nudge customers toward private labels. This represents a fundamental challenge for private-label products in any retail setting, whether online or in-store. Aaker (1991) argues that strong brand equity, built on trust, drives repeat purchases and can make consumers skeptical of unfamiliar products.[55] This is supported by established behavioral economics principles, such as switching costs and status quo bias, which describe consumers' resistance to alternatives and preference for familiar products.[56] The prominence of user reviews on digital marketplaces can also reinforce the perceived safety and reliability of established national brands, making it harder for a new or unknown private label to break through.[57] In highly competitive markets where consumers can easily access trusted brands across multiple retailers, the effectiveness of nudging strategies like self-preferencing may be further diminished. [58]

Shifting to empirical evidence, two consumer studies by Jürgensmeier and Skiera in 2024 found that most customers would not significantly alter their purchasing behavior on Amazon if an investigation revealed self-preferencing. In fact, only two percent of consumers said they would "very much" decrease their Amazon purchases, with another 13 percent reporting they would decrease them "slightly." The authors conclude that self-preferencing "might not affect consumers' actual purchase behavior in most cases."[59] Such survey findings, by themselves, represent a snapshot

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[53] Lukas Jürgensmeier & Bernd Skiera, *Measuring Self-Preferencing on Digital Platforms* 6 (Working Paper, 2024) ("In both studies, we find almost no evidence of self-preferencing after accounting for a set of attributes—referred to as 'unprotected attributes'—that legitimately influence a recommendation.").

[54] *Id.* (emphasis removed).

[55] David A. Aaker, Managing Brand Equity: Capitalizing on the Value of a Brand Name (1991).

[56] Repeat purchases foster habits and switching costs, driven by consumers' desire for compatibility between their current purchase and a previous investment, making consumers resistant to alternatives, as shown by Klemperer (1995), who models how loyalty reduces responsiveness to new offerings. *See* Paul Klemperer, *Competition When Consumers Have Switching Costs: An Overview with Applications to Industrial Organization*, 43 J. Indus. Econ. 515, 517-19 (1995). See also William Samuelson & Richard Zeckhauser, *Status Quo Bias in Decision Making*, 1 J. Risk & Uncertainty 7, 35-36 (1998)]] ("Taking the status quo as the reference point, the individual weighs potential losses from switching as larger than potential gains. Because of loss aversion, the individual is biased in favor of the status quo.").

[57] J. Yannis Bakos, *Reducing Buyer Search Costs: Implications for Electronic Marketplaces*, 43 Mgmt. Sci. 1676, 1690 (1997) ("The analysis in [Section] 3 suggests that electronic marketplaces will increase price competition and reduce seller monopoly power, and will also result in more demanding customers who are less willing to compromise on their preferred product.").

[58] Porter (1980) argues that in competitive markets with multiple firms, consumers have greater choice, and firms must align offerings with consumer preferences to maintain market share. When competition is intense, persuasive tactics like product prioritization face pressure, as consumers can switch to rivals offering preferred products. *See* Michael E. Porter, Competitive Strategy: Techniques for Analyzing Industries and Competitors (1980). Shugan (1989) demonstrates that in competitive markets with multiple retailers, consumers compare product assortments across firms, favoring those offering preferred brands. Persuasive tactics, such as emphasizing certain products, are less effective when consumers can access alternatives that better match their preferences. For instance, a consumer may bypass a store-brand product if a trusted brand like Nike is offered by a rival retailer. *See* Steven M. Shugan, *Product Assortment in a Triopoly*, 16 J. Consumer Rsch. 304 (1989).

[59] Jürgensmeier & Skiera, *supra* note 5555, at 14.

in time and may not distinguish whether these practices have already shaped consumer preferences, or if Amazon's rankings simply predict what customers are most likely to purchase. However, other lines of research we discuss above documents how self-preferencing might be less common than expected: after accounting for "unprotected attributes," there was not a statistically significant association between search visibility of the product and the identity of the product supplier (Amazon versus third-party suppliers).

While self-preferencing may influence a consumer's choice, that influence must be weighed against the primary purchasing drivers.

Price and Quality as Primary Drivers of Private-Label Purchases?

To properly evaluate the potential impact of self-preferencing, it is important to first understand the baseline factors that drive consumers to purchase private-label products. While self-preferencing may influence a consumer's choice, that influence must be weighed against the primary purchasing drivers. Both the intuition and the evidence from both survey and transaction data suggest that consumers' purchases of private-label products are motivated by the value and quality of such products. Understanding the strength of these core drivers provides crucial context for assessing how much a factor like preferential placement, can "move the needle" in practice.

Evidence from the Numerator data is consistent with quality and price being the main reasons why customers choose private-label products. The Numerator platform enables surveys, which are conducted through a digital panel of over one million U.S. consumers, and aims to provide insights into consumer behavior that are broadly representative of the U.S. population, capturing diverse shopping patterns across multiple retail channels.[60] Numerator survey data on attributes collected in June 2023 gauge consumer sentiment related to private-label attributes, asking consumers to indicate how they value private label on a scale of very poor to excellent.[61] In addition, the survey captures private-label quality perception on a scale of very poor to excellent.

Exhibit 4 shows that 29 percent of consumers selected "excellent" and 27 percent selected "above average" to characterize the value of private-label products. Similarly, 23 percent of consumers selected "excellent" and 31 percent selected "above average" in describing the quality of private-label products.

Although the survey clearly reflects consumer attitudes, it leaves a crucial question unanswered: do shoppers genuinely prefer private labels on their own merits, or is their perception shaped by self-preferencing tactics like prominent placement that make these products more prominent?

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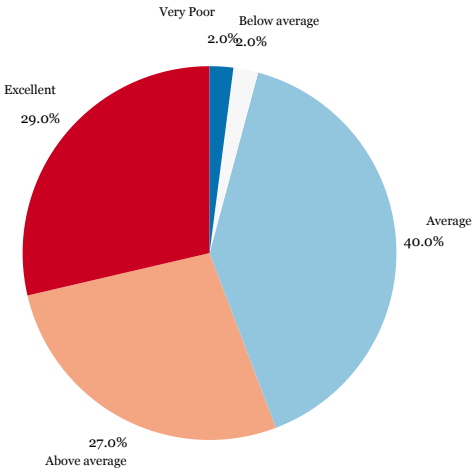
[60] *Company*, Numerator, https://www.numerator.com/company/ ("Numerator helps companies understand their customers and identify growth opportunities. We provide more visibility into more consumers across more channels—unlocking more growth. . . . We blend proprietary data, including a digital panel of over one million U.S. consumers, with advanced technology to create unique insights—for an industry that has been slow to change.").

[61] Numerator identifies products, including private labels, primarily through UPC codes scanned from consumer receipts or scraped from linked online retail accounts. While this method is comprehensive for most consumer packaged goods, coverage may be limited for products without standard barcodes or from retailers not fully integrated into their data collection systems.

Exhibit 4

Private-Label Perception Survey Responses on Value and Quality

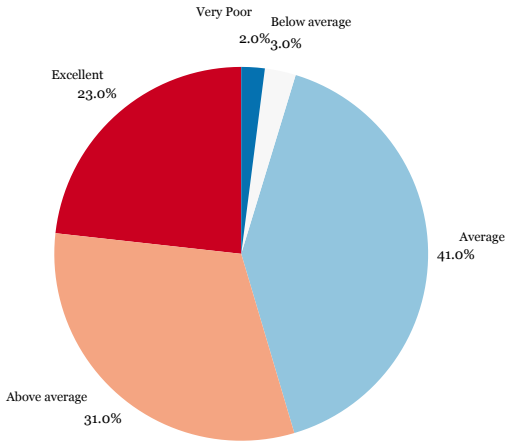
Private Label Value Perception



Source: Numerator Survey Data

Notes: This survey question was administered to 42771 respondents between 1/1/19 to 6/14/23.

Private Label Quality Perception



Source: Numerator Survey Data

Notes: This survey question was administered to 42602 respondents between 1/1/19 to 6/14/23.

Surveys conducted in the academic literature also point out that customers purchase private label due to attributes such as price and quality. The Jürgensmeier and Skiera (2024) survey found that the majority of surveyed Amazon customers consider attributes such as price, Prime status, and seller reviews as the prominent drivers in their purchase decisions. About 86 percent of consumers reported that price was a prominent driver in their purchase decisions, 80 percent reported product reviews, 58 percent reported the Prime status of the product, while 54 percent reported seller reviews as an important attribute in their purchase decisions.[62] Only 9 percent of consumers stated that the seller's identity influenced their product choice, and 9 percent stated that a product being Amazon's private-label brand affected their decision.[63]

Further, Farronato (2025) finds that individuals list price and value for money as the most important factors when shopping online.[64] Relatedly, a 2020 survey found that 20 percent of all shoppers increased their private-label purchases due to lower prices during the COVID-19 crisis compared to prior to COVID-19;[65] over 85 percent of shoppers perceived that private-label products are equal or better quality than national brands.[66] Dubé (2024) also discussed a recent study finding

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[62] In addition, their survey found that 28 percent of respondents reported brand, 26 percent reported how well the product sold in the past, and 11 percent reported a product's in-stock percentage as a prominent driver in their purchase decision. *See* Jürgensmeier & Skiera, *supra* note 5555, at 13.

[63] *Id.*

[64] Farronato et al., *supra* note 50, at 19 ("To finish, we asked individuals to list the three most important factors when shopping online. Figure 3 displays the distribution of responses. Price and value for money were the most important, with more than 50% of respondents listing them as a top factor. Delivery speed, quality, and ratings were chosen by almost 40% of respondents, which corroborates the results on willingness to pay between Amazon and non-Amazon brands described above.").

[65] Steven Begley and Angus McOuat, *Turning private labels into powerhouse brands,* Mckinsey, Oct. 30, 2020, https://www.mckinsey.com/industries/retail/our-insights/turning-private-labels-into-powerhouse-brands ("In a mid-September survey of more than 2,000 US grocery shoppers, nearly one in five said they've bought more private-label products during the COVID-19 crisis than they did precrisis.").

[66] Caminade et al., *supra* note 3, at 33.

that "90% of U.S. adults who switched to a [private label] did so due to 'quality for price.'"[67] While the specific methodology of the underlying study is not detailed, this finding again underscores the perceived importance of the value proposition for private-label brands. Of course, the same caveat regarding perception-based responses that was highlighted above apply.

For example, it is possible that customers who are already loyal to a retailer for other reasons unrelated to price-quality of private-labels are more willing to trust and purchase its private-label products, rather than the private-label purchase causing the loyalty.

Why do retailers offer private label?

The literature discusses many reasons why retailers offer private labels, including imitating national brands at lower prices, ensuring quality, offering various options, and building customer loyalty.[68] Relatedly, the literature documents that spending on private-label products in a particular chain might be associated with customer loyalty to that chain. Using a survey on Dutch families in the Netherlands, Ailawadi et al. (2008) found that the household's private-label share at a retail chain increases its loyalty to that chain to a certain point.[69] The loyalty measures analyzed by the authors include the percentage of the household's total spending in that chain, the share of items purchased, and the share of shopping trips to that chain.[70]

Our own analysis of Numerator data finds a positive correlation between purchasing a retailer's private-label products and a higher share of spending for that retailer. Specifically, we compared the simple average share of spending for two groups of customers at Amazon, Costco, and Walmart between July 2022 and June 2023: (1) customers who purchased the retailer's private-label products (e.g., Amazon Basics, Kirkland Signature, Great Value) and (2) customers who did not.

We find a consistent pattern across all three retailers. For customers who purchased Amazon's private-label products, Amazon captured 48.1 percent of their total spending, compared to only 42.1 percent for customers who did not buy Amazon's private label. A similar correlation was observed for Costco and Walmart. Customers who purchased private-label brands from Costco and Walmart allocated 53.3 percent and 42.8 percent of their total spending to those retailers, respectively. In contrast, customers who did not purchase private labels from those retailers allocated a smaller share of their wallet, at 42.9 percent for Costco and 32.4 percent for Walmart.

While this analysis shows a positive correlation, it does not establish causation. For example, it is possible that customers who are already loyal to a retailer for other reasons unrelated to price-quality of private-labels are more willing to trust and purchase its private-label products, rather than the private-label purchase causing the loyalty.

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[67] Dubé, *supra* note 4, at 146; Suzy Davidkhanian, *Private Label Brands 2022: How Store Brands Fill Product Voids and Boost Margins*, eMarketer, Apr. 5, 2022, www.insiderintelligence.com/content/spotlight-private-label-brands-2022.

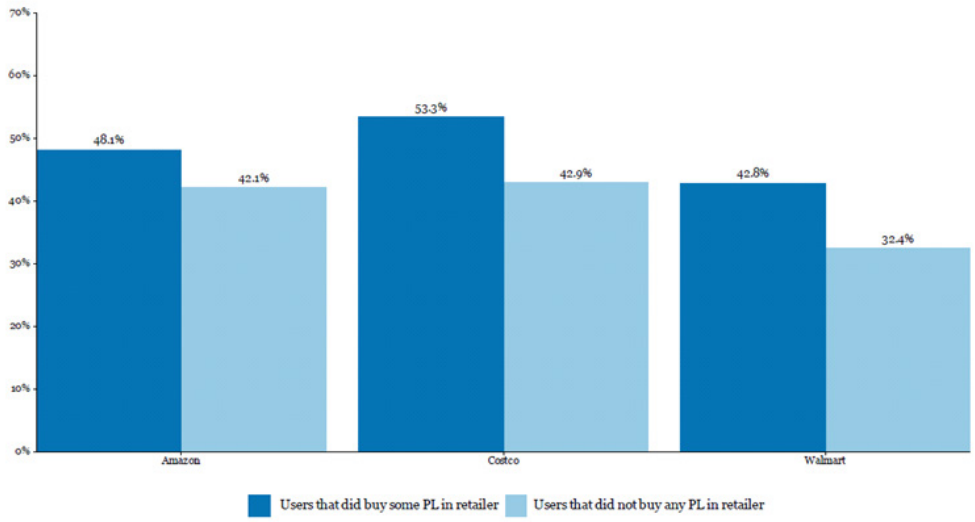
[68] Farronato et al., *supra* note 50, at 73.

[69] Kusum L. Ailawadi, Koen Pauwels & Jan-Benedict E.M. Steenkamp, *Private-Label Use and Store Loyalty*, 72 J. Mktg. 19, 20 (2008) ("We define PL share as the household's PL spending (in dollars or, in our empirical study, in euros) at the chain as a percentage of its total spending (in euros) in that chain on categories in which the chain offers a PL product."); *Id.* at 26 ("These effects are strong but nonmonotonic for the service chain whose PL is well differentiated and has high penetration. We find that SOW [Share of Wallet] initially increases strongly with PL share, but beyond PL share of approximately 40%, it begins to decrease. Similarly, PL share also increases strongly with SOW but only to a certain point, beyond which PL share begins to decrease. For the value chain with a less differentiated PL program, PL share has a positive effect on SOW but not at low levels of PL share.").

[70] *Id.*77 at 19 ("They find that PL share significantly affects all three measures of behavioral loyalty in the study: share of wallet, share of items purchased, and share of shopping trips. In addition, behavioral loyalty has a significant effect on PL share.").

Exhibit 5

Average Customer Spending Share for all Channels by Retailer With or Without Purchasing Private Label, July 2022 – June 2023



Conclusion

Digital marketplaces confront allegations of self-preferencing that leverage their dominance, triggering landmark cases and new regulations like the EU's DMA. Self-preferencing in traditional retail has historically been accepted as a procompetitive practice, with private labels bringing forth lower prices and innovation. Allegations—which have targeted chain stores and big-box retailers alike—have rarely led to significant enforcement due to fragmented markets as well as consumer benefits within the framework of U.S. antitrust laws. In contrast, digital marketplaces face intense scrutiny due to allegations of platforms' gatekeeper roles, data advantages, and potential to foreclose competition. Finally, our descriptive analysis highlights an association between private-label purchases and consumer loyalty, an observation that echoes the broader literature on how large retailers use high-value products to build a strong brand reputation. ●