

Opportunities for self-preferencing in international online marketplaces

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Abstract

Purpose – Large digital platforms face intense scrutiny over self-preferencing, which involves a platform provider favoring its own offers over those of competitors. In online marketplaces, also called retail or e-commerce platforms, much of the academic and regulatory debate focuses on determining whether the marketplace provider gives preference to its own private labels, such as “Amazon Basics” or Walmart’s “Great Value” products. However, we outline, both conceptually and empirically, that self-preferencing can also occur through other dimensions of vertical integration – namely, retailing and fulfillment.

Design/methodology/approach – This article contributes by conceptualizing three dimensions of vertical integration in online marketplaces – private labels, retailing and fulfillment. Then, two studies empirically assess (1) which of the 20 most-visited global online marketplaces vertically integrates which dimension and (2) which share of 600 m available offers is vertically integrated to which degree in eleven international Amazon marketplaces.

Findings – The majority of the leading marketplaces vertically integrate all three dimensions, implying ample opportunities for self-preferencing. Across international Amazon marketplaces, only 0.02% of available offers consist of an Amazon private-label product. However, Amazon is a retailer for around 31% and fulfills around 38% of all available offers in its marketplaces. Hence, self-preferencing on Amazon can occur most frequently through retailing and fulfillment but comparatively infrequently through private-label offers. Still, these shares differ substantially by country – every second offer is vertically integrated in the USA, but only one in ten in India.

Originality/value – Most of the self-preferencing debate often focuses on private-label products. Instead, we present large-scale empirical results showing that self-preferencing on Amazon could occur most often through retailing and fulfillment because these channels affect much larger shares of offers. We also measure the variation of these shares across countries and relate them to regulatory environments.

Keywords Self-preferencing, Online marketplaces, International business, Marketing, Electronic commerce, Private label, Regulation, Platform economics

Paper type Research paper



Introduction

Consumers use omnipresent digital platforms in many areas of their lives, including communication, information, and commerce. Online marketplaces, also called e-commerce or retail platforms, are globally ubiquitous digital platforms that match consumers' demand for products with sellers' supply (e.g. [Chu et al., 2020](#); [Li et al., 2021](#)). Prominent examples of online marketplaces include Amazon (e.g. in the United States, India, Japan, and Western Europe), Rakuten (in Japan), Mercado Libre (in Latin America), Flipkart (in India), and Taobao and [JD.com](#) (in China). Those platforms make up a significant share of the global economy: [Statista Market Insights \(2024\)](#) estimates the global revenue of online marketplaces in 2024 at US\$ 3.2 trillion, which is approximately 3% of that year's estimated global Gross Domestic Product (GDP), and larger than the individual nominal GDP of all but the six largest economies ([IMF, 2023](#)).

Because the number of available offers in online marketplaces can be enormous, recommending specific offers to consumers is an important feature of such platforms. For example, marketplace providers recommend offers in a particular order through the ranking of search results or designate certain offers with labels, such as the "marketplace's choice." Because those recommendations influence the likelihood of consumer purchases, they influence the commercial success of the various offers (e.g. [Ghose et al., 2014](#); [Jürgensmeier and Skiera, 2024](#)).

However, many marketplace providers play additional roles beyond providing the infrastructure for e-commerce and recommending offers—that is, those marketplace providers have vertically integrated several parts of an offer's value chain. This article contributes by conceptualizing three offer-related dimensions of vertical integration: *private labels*, *retailing*, and *fulfillment*. We refer to the combination of these features as an "offer." For each offer and each of the three dimensions, a marketplace provider can (1) decide to either let third-party sellers provide this dimension exclusively or (2) decide to compete with third parties by vertically integrating the respective part of an offer's value chain. Online marketplaces can supply their own products through private labels (e.g. "Amazon Basics" or Walmart's "Great Value"), act as retailers by selling products themselves (instead of involving third-party sellers), provide fulfillment services that organize everything related to getting the product to the consumer (e.g. "Fulfillment by Amazon") and sometimes even back from the consumer—or provide an offer comprising any combination of those three dimensions. These combinations yield different degrees of vertical integration, resulting in $2 \times 2 \times 2 = 8$ offer types, which we describe in this article.

Whenever a marketplace provider takes on at least one of the three dimensions, the provider competes with third parties who also offer this part of the offer's value chain. Because marketplace providers decide how prominent an offer is on the platform, this dual role can create a conflict of interest: A marketplace provider might want to sell more offers for which they can capture a larger share of the value chain ([Khan, 2019](#)). Thus, platforms might engage in *self-preferencing* by favoring marketplace-affiliated offers over competing third-party offers ([Ibáñez Colomo, 2020](#)).

Regulators and press reports allege that self-preferencing has occurred on Amazon ([Federal Trade Commission, 2023](#); [Mattioli, 2019](#)) and close to 80% of consumers expect self-preferencing on Amazon, the largest international marketplace ([Jürgensmeier and Skiera, 2024](#)). Self-preferencing in online marketplaces is a global concern, as reflected by actions from lawmakers and regulators. For example, the Digital Markets Act in the European Union bans self-preferencing for large, so-called gatekeeper platforms, including Amazon ([European Parliament, 2022](#)). In India, the current Foreign Direct Investment Policy bans online marketplaces from acting as retailers on their own platforms ([Government of India, 2020](#), see section 5.2.15.2.4, paragraph v). As a result, the online marketplace provider Amazon only "hold[s] indirect minority interests" ([Amazon.com, Inc. 2022](#), p. 7) in third-party retailers that sell on Amazon's Indian marketplace. Additionally, United States regulators have initiated a lawsuit against the company, alleging that Amazon abused a monopoly by self-preferencing its offers in the search engine ([Federal Trade Commission, 2023](#)).

Simultaneously to the legislative and regulatory attention, academic research has started to develop approaches for identifying self-preferencing in online marketplaces. For example, recent articles have assessed whether Amazon self-preferences Amazon-published books in its Kindle daily deals list (Reimers and Waldfoegel, 2023) or favors its own private-label products through the search results (Farronato *et al.*, 2023). In addition to measuring self-preferencing through private-label products, Jürgensmeier and Skiera (2024) also examine whether self-preferencing occurs through national brands sold by Amazon (i.e. Amazon Retail). However, these studies focus on the identification of self-preferencing without considering how the underlying prevalence of vertically integrated offers differs internationally.

Although the extant literature explores why offline retailers' private-label products are more or less successful in different countries (e.g. Sebri and Zaccour, 2017) and how to measure whether self-preferencing occurs (see above), we know surprisingly little about how frequently self-preferencing can occur in online marketplaces. The reason for this relative dearth of knowledge is that we (1) lack an overview of which online marketplaces engage in which types of vertical integration and (2) do not know how many offers are vertically integrated in which vertical integration dimensions. Consequently, we do not know how these shares of vertical integration differ internationally and how they relate to the prevailing regulations in the respective countries.

Knowing this information is crucial for regulators who wish to make informed decisions and marketplace actors, such as sellers, who must decide whether or how intensively they operate on such platforms. Therefore, we add the prevalence of self-preferencing opportunities across international marketplaces to the debate. To illustrate, even if self-preferencing of a marketplace provider took place, it would not necessarily mean that it is a highly prevalent occurrence because it might only have affected a very small number of offers. Thus, the relevance of self-preferencing represents a combination of *whether* it occurs and, if so, *how* prevalent it is. Ignoring the prevalence might lead to the examination of self-preferences in less relevant areas.

Hence, this article also shows empirically how prevalent the three dimensions of vertical integration (*private labels, retailing, and fulfillment*) are in global online marketplaces. Stated differently, we show how frequently the marketplace provider has the opportunity to self-preference. Our first study, Study A, compares the 20 most-visited online marketplaces globally and analyzes which marketplaces engage in vertical integration and in which dimension. The results show that the majority of the most-visited online marketplaces have ample opportunity for self-preferencing because 60% have vertically integrated all three described dimensions, and 75% have vertically integrated at least one dimension.

Study B then focuses on the largest global online marketplace, Amazon, and analyzes around 600 million products from eleven international Amazon marketplaces. This study shows that Amazon vertically integrates all three dimensions: private-label products, retailing, and fulfillment. However, despite regulatory and academic scrutiny being largely focused on private-label products, we show that there is much more opportunity for self-preferencing through retailing and fulfillment. About one in 5,000 available products is an Amazon private-label brand. At the same time, Amazon directly sells 31% of the 600 million offers as a retailer and fulfills 38% of those offers through "Fulfillment by Amazon."

Furthermore, we show that Amazon has heterogeneous degrees of vertical integration across its international marketplaces. Across all considered international marketplaces, Amazon has vertically integrated at least one dimension for 38% of all available offers. However, these shares vary substantially between countries, partly owing to differences in regulation. In the absence of regulation directly governing vertical integration in online marketplaces, the share of vertically integrated offers is highest in the United States, where one out of every two offers is vertically integrated to some degree. On the contrary, in the

presence of restrictive regulation, only one out of every ten offers is vertically integrated in the Indian marketplace.

While our work focuses primarily on private label and self-preferencing research, it also relates to the international marketing literature that discusses the characteristics of global online marketplaces. For example, [Bei and Gielens \(2020\)](#) have shown that online marketplaces that enable third-party selling in China provide manufacturers with opportunities to overcome institutional and infrastructure barriers when reaching Chinese consumers. In the context of exporters using the platform [Alibaba.com](#), [Jean et al. \(2021\)](#) show that using such a platform helps exporters establish contacts with foreign buyers, thereby increasing sales. Furthermore, [Li et al. \(2019\)](#) discuss the role of ecosystems that marketplaces build to generate value in new international markets. More broadly, our paper contributes to the call for international marketing literature to more strongly consider the international dimension of internet-based commerce in general and the role of digital platforms in particular (e.g. [Samiee, 2020](#); [Sinkovics and Sinkovics, 2020](#)).

Dimensions of vertical integration in online marketplaces

The key role of an online marketplace is to provide the infrastructure for buying and selling products. Hence, every online marketplace is a platform provider. The supply chain of offers in online marketplaces encompasses all the steps required to satisfy consumer needs. While the specific steps of the supply chain vary among different types of businesses, textbooks typically describe the supply chain as starting with the consumer and continuing with the retailer, distributor, manufacturer, and raw material supplier (e.g. [Chopra and Meindl, 2013](#), p. 14).

While all online marketplaces provide the infrastructure for commerce, they often take on additional roles encompassing other parts of the offer's supply chain. By doing so, marketplace providers vertically integrate the supply chain with the potential to increase profitability—for example, by substantially decreasing fulfillment costs through vertical integration of an offer's fulfillment ([Houde et al., 2023](#)).

If online marketplaces choose to vertically integrate a part of the supply chain, the marketplace provider will directly compete with third parties who also provide this part. In the following, we derive the three main *vertical integration dimensions* that characterize an offer in an online marketplace. For these dimensions, we consider parts of the supply chain where the first party—the online marketplace provider—can compete with third parties.

Main vertical integration dimensions

Private labels: The first vertical integration dimension is whether an online marketplace offers private-label products. A private-label product bears a brand that the retailer owns and markets exclusively ([Gielens et al., 2021](#)), in contrast to third-party owned and marketed national brands. Prominent examples in online marketplaces include “Amazon Basics” or Walmart’s “Great Value” products.

The concept and consequences of retailers offering their own private-label products have received considerable attention in the marketing literature. For example, [Steenkamp et al. \(2010\)](#) analyze the differences in consumers’ willingness to pay between private-label and national brands. [Ailawadi et al. \(2008\)](#) model how the share of private-label products within a household’s total purchases relates to its store loyalty, and [Meza and Sudhir \(2010\)](#) show that retailers can increase their bargaining power over national brands by offering private-label products.

Retailing: Second, an offer’s retailer can be either the online marketplace itself or a third-party retailer. According to [Gielens and Roggeveen \(2023, p. 169\)](#), “retailing reflects any activity or function in the passage of goods from the manufacturer or supplier to the consumer or end-user.” While the retailer in brick-and-mortar stores is typically the

storeowner, first- and third-party retailers can compete in online marketplaces. Hence, we can characterize the degree of vertical integration through the retailing function by observing whether the online marketplace sells the offer itself or through a third-party retailer.

Fulfillment: Third, we consider the fulfillment of products to be the third vertical integration dimension. In a definition adopted from Croxton (2003), we refer to fulfillment in online marketplaces as the process and infrastructure ensuring the product’s transfer from the retailer’s warehouse to the consumer, triggered by the order. Thus, fulfillment includes storing, packaging, and delivering the product to the consumer. Online marketplaces can vertically integrate this part of the supply chain by operating fulfillment centers, delivery services, or both. In this scenario, online marketplaces directly compete with third parties that fulfill products themselves. While the previous definition of retailing technically includes this process, we consider fulfillment a separate dimension of vertical integration because retailers can use either the marketplace provider’s fulfillment services or their own. For example, on Amazon, sellers can choose to fulfill the orders themselves or use “Fulfillment by Amazon” (FBA). If sellers choose the latter option, the marketplace provider will vertically integrate this part of the offer so that self-preferencing can occur.

Online marketplaces can vertically integrate additional dimensions of the value chain beyond the three main dimensions. For example, they can vertically integrate the payment function by offering their own payment systems, as eBay did after acquiring PayPal (and before separating again). In this article, however, we focus on the three dimensions of private labels, retailing, and fulfillment because those describe an offer and are readily observable. By contrast, choosing a particular payment option (which might be vertically integrated) is a separate consumer choice independent of the offer characteristics.

Using vertical integration dimensions to categorize offer types

The following categorization of vertical integration degrees aims to outline the extent to which a marketplace provider can engage in self-preferencing for different offer types. We consider an offer as the combination of a product’s private label, retailer, and fulfillment status—each entailing whether the online marketplace occupies that role. Thus, for every offer on a marketplace, either the first party (i.e. the online marketplace) or a third party occupies each of the three dimensions, characterizing the degree of an offer’s vertical integration with the marketplace provider. Table 1 characterizes the offer types and all

No.	Offer type Description	Vertical integration of the marketplace provider		
		Private labels	Retailing	Fulfillment
1	Full first-party offer	✓	✓	✓
2	Third-party product with first-party fulfillment and retailing		✓	✓
3	First-party product and fulfillment with third-party retailing	✓		✓
4	Third-party product and retailing with first-party fulfillment			✓
5	First-party product and retailing with third-party fulfillment	✓	✓	
6	Third-party product and fulfillment with first-party retailing		✓	
7	First-party product with third-party retailing and fulfillment	✓		
8	Full third-party offer			

Table 1. Categorization of offer types depending on vertical integration

Note(s): All cells containing a checkmark indicate that the first party (= marketplace provider) occupies this part of the value chain. All cells without a checkmark indicate that a third party (≠ marketplace provider) occupies the role

Source(s): Authors’ own creation

possible combinations of whether the first party (= marketplace provider) or a third party (\neq marketplace provider) occupies the roles.

We derive $2 \times 2 \times 2 = 8$ possible offer types from the three dimensions, which vary by the degree of vertical integration. At one end of the spectrum, there are full first-party offers—i.e. a marketplace provider's private-label product, which the online marketplace also retails and fulfills. At the other end, we have a full third-party offer, i.e. an offer consisting of a third-party brand, third-party retailing, and third-party fulfillment.

Only for the latter extreme—a full third-party offer—does the marketplace provider not vertically integrate any of the three dimensions, so it cannot self-preference in this case. For all other offer types, the online marketplace has vertically integrated at least one dimension of private-label products, retailing, or fulfillment. Thus, an online marketplace could self-preference the vertically integrated offers for each of the remaining seven offer types.

After conceptualizing the three dimensions of vertical integration in online marketplaces and the resulting eight offer types, we proceed by empirically analyzing the prevalence of vertical integration in international online marketplaces through two empirical studies.

Study A: opportunities for self-preferencing in the most-visited international marketplaces

Because diverse online marketplaces across the globe serve different markets and pursue different business models, we use this first study to characterize the 20 most-visited online marketplaces globally. Specifically, we investigate whether each of those marketplaces' providers has vertically integrated offers on the marketplace in the three dimensions—private labels, retailing, and fulfillment. Hence, this analysis provides insights into which major online marketplaces are in a position to self-preference in which dimensions.

Description of methodology and data

The key result of this first study is determining whether each of the 20 most-visited online marketplaces globally has vertically integrated offers in each of the three dimensions. To obtain this result, we first identify the 20 most-visited online marketplaces in March 2023 through website visit estimates, as reported by [Pool \(2024\)](#). Those underlying website visit estimates stem from Similarweb, a firm specializing in web analytics.

Second, we determine for each of the identified online marketplaces which (if any) of our three vertical integration dimensions have been vertically integrated by the marketplace provider, i.e. whether the marketplace provider competes through its own private-label brands, by retailing, or by providing its own fulfillment services. We obtain this information by using the search engines of the respective marketplaces to assess offers' vertical integration status. This first step is often sufficient for determining whether there are vertically integrated offers in the marketplace. For example, searching for "Amazon" in that marketplace's search bar yields "Amazon Basics" products, one of Amazon's private-label brands. Thus, we see that Amazon carries its own private-label brands in the marketplace. Similarly, we can identify from a simple look at the detail pages of offers on Amazon that the marketplace provider also engages in retailing (as identified through "Sold by: Amazon") and fulfillment ("Ships from: Amazon").

On other online marketplaces, however, this distinction is not as straightforward. Hence, if a look at the website does not provide conclusive evidence, we assess the marketplace provider's annual reports and press articles for references to vertical integration in each of the three dimensions. For marketplaces only available in languages the authors are unfamiliar with, we enlisted the help of three Ph.D. students (listed in the acknowledgments) who are native speakers of the respective languages.

While this approach reliably identifies whether a marketplace provider has vertically integrated a particular dimension, it does not provide conclusive evidence of the absence of vertical integration.

Description of results

[Table 2](#) summarizes the results of Study A by showing whether each of the 20 most-visited international online marketplaces has vertically integrated each of the three considered dimensions. Additionally, [Table 2](#) provides information on the marketplace's ownership and where it operates.

First, [Table 2](#) shows that online marketplaces are a global phenomenon. While Amazon and eBay, as the two most-visited marketplaces worldwide, have a global presence, other marketplaces focus on particular regions—Rakuten in Japan; Shopee in Southeast Asia and

Marketplace	Visits Monthly, in millions	Vertical integration dimension			Ownership	Regional focus
		Private labels	Retailing	Fulfillment		
Amazon	4,790	✓	✓	✓	Amazon	Global
eBay*	1,210				eBay	Global
Rakuten	563			✓	Rakuten	Japan
Shopee	660	✓	✓	✓	Sea Group	Southeast Asia, Latin America
AliExpress	525				Alibaba	Global (except China)
Etsy	447				Etsy	Global
Walmart	408	✓	✓	✓	Walmart	North America
Mercado	363	✓	✓	✓	Mercado	Latin America
Libre					Libre	
Wildberries	343	✓	✓	✓	Wildberries	Russia
Ozon	316	✓	✓	✓	Ozon	Russia
Taobao**	303				Alibaba Holdings	China
Pinduoduo	228		✓		PDD Holdings	China
Lazada	212		✓	✓	Alibaba	Southeast Asia
Allegro	199	✓	✓	✓	Allegro	Poland
Flipkart	161	✓	✓	✓	Walmart	India
Target	158	✓	✓	✓	Target	USA, Australia
Zalando	149	✓	✓	✓	Zalando	Europe
JD.com	143	✓	✓	✓	JD.com	China
Trendyol	138	✓	✓	✓	Alibaba	Turkey
Mercari	126				Mercari	Japan, USA

Note(s): This table contains the 20 most-visited retail platforms in March 2023, according to Similarweb data reported by [Pool \(2024\)](#). For cells containing a checkmark, we verified that vertically integrated offers exist in this dimension by looking at the websites, through the platform owner's annual report, or press articles. We could not find evidence for vertical integration in that dimension for all empty cells

*eBay supports domestic sellers by offering international shipping services through the "International Shipping Hub." However, eBay does not fulfill domestic orders, which is the focus of this analysis. Hence, we do not tick this cell for eBay

**Consumers searching for offers on Taobao can see offers from Tmall, which is the 25th-most visited online marketplace and is also owned by Alibaba. In contrast to Taobao, Tmall has vertically integrated offers in all three dimensions

Source(s): Authors' own creation based on Similarweb data reported by [Pool \(2024\)](#)

Table 2.
Opportunities for self-
preferencing in most-
visited online
marketplaces globally

Latin America; Wildberries and Ozon in Russia; and Taobao, Pinduoduo, and [JD.com](#) in China.

Our analysis shows that in 75% of the 20 most-visited global online marketplaces, self-preferencing has the potential to occur in at least one dimension because the marketplace has vertically integrated offers in at least one dimension. In 60% of the considered marketplaces, self-preferencing has the potential to occur in all three dimensions. This analysis shows that vertical integration is a global phenomenon; consequently, self-preferencing could also occur globally.

Only five marketplaces—eBay, AliExpress, Etsy, Taobao, [1] and Mercari—concentrate solely on providing a platform without having their own private-label brands, engaging in retailing, or providing fulfillment services. Self-preferencing is not a concern for these marketplaces because the marketplace provider does not compete with third parties in these dimensions.

Study B: degrees of vertical integration across international Amazon marketplaces

While the previous study provided an overview of whether the 20 most-visited online marketplaces carry vertically integrated offers *at all*, such analysis fails to reveal *how* prevalent vertical integration is. Thus, Study B aims to analyze how many offers, as a share of all available offers, feature which degree of vertical integration. For this analysis, we focus on Amazon as the most-visited online marketplace. Because Amazon operates marketplaces globally, we can compare the degree of vertical integration across international marketplaces and relate it to country-specific regulatory requirements.

Description of methodology

We analyze the degree of vertical integration by deriving the shares of vertically integrated offers over the total number of available offers. For every single offer in a marketplace, we measure three binary variables corresponding to the three vertical integration dimensions: *private labels*, *retailing*, and *fulfillment*. The combination of the three variables' binary values (being vertically integrated or not) classifies each offer into one of eight offer types, as outlined in [Table 1](#). Finally, we conduct this analysis for different international marketplaces to compare the degrees of vertical integration across countries.

Description of data

For this approach, we require detailed data on available offers in a marketplace. First, we need the total number of available offers in a marketplace. Second, for each of those offers, we need to measure three variables: whether the product is an online marketplace's own private-label product, whether the marketplace provider sells the product as a retailer, and whether the marketplace fulfills it through its own fulfillment service. Third, we require this data for several international marketplaces to compare the degrees of vertical integration across countries.

We obtain Amazon data satisfying those conditions through the third-party Amazon tracker [Keepa.com](#). Keepa is a data provider tracking Amazon products, and several academic studies have used such data (e.g. [Jürgensmeier and Skiera, 2024](#); [Reimers and Waldfogel, 2021](#)). We refer to those studies for further details.

Through Keepa's API, we obtain the number of offers on eleven Amazon marketplaces on January 19, 2024. The data encompasses all eleven available marketplaces on Keepa, i.e. marketplaces from Europe (United Kingdom: Amazon.co.uk, Germany: Amazon.de, Spain: Amazon.es, France: Amazon.fr, Italy: Amazon.it), North America (Canada: Amazon.ca,

United States: [Amazon.com](https://www.amazon.com), Mexico: [Amazon.com.mx](https://www.amazon.com.mx), South America (Brazil: [Amazon.com.br](https://www.amazon.com.br)), and Asia (Japan: [Amazon.co.jp](https://www.amazon.co.jp), India: [Amazon.in](https://www.amazon.in)).

We only consider new (i.e. not used), physical (i.e. non-digital), currently available offers (i.e. having an active buy box seller), and only include a single variation for each product (e.g. a single color for fashion products). On January 19, 2024, these conditions resulted in a sample size of 599,446,341 offers across the eleven marketplaces. [Figure 1](#) presents the number of offers in our sample of each international marketplace. It shows that while the United States marketplace has the highest number of offers satisfying our criteria, the Indian, French, German, Spanish, Japanese, and United Kingdom marketplaces also feature more than 50 million available offers.

Amazon private label status. First, we identify whether the offer is a product from an Amazon private-label brand. While some of Amazon’s private-label brands are trivial to identify because they include the marketplace’s name in the title (e.g. “Amazon Basics” or “Amazon’s Essentials”), Amazon carries other private-label brands that do not contain an obvious reference to Amazon. Hence, we identify Amazon private-label brands using a two-step procedure. We build upon [Fries’ \(2021\)](#) list of 140 Amazon private-label brands. Because not all of these brands are confirmed Amazon brands, and Amazon has discontinued several of them in the meantime ([Mattioli, 2023](#)), we only consider a product as being from an Amazon private-label brand if it either features “Amazon” in the product title or is labeled as an “Amazon brand” in the search results. Amazon voluntarily labels its private-label products as Amazon-affiliated ([Pankratz, 2020](#)). So, we count the number of products in each marketplace-specific Keepa database that contain those brand names.

Amazon retail status. Second, we identify the retailer of a given offer in the Amazon marketplace by checking whether the buy box seller (i.e. the retailer) is Amazon. Because Amazon lists every product only once and multiple sellers can compete to sell this product, Amazon recommends a particular seller through the buy box, and most consumers purchase the product through the recommended seller ([Jürgensmeier and Skiera, 2024](#)). Hence, we consider the current buy box seller as the offer’s retailer.

Amazon fulfillment status. Finally, we identify whether Amazon fulfills a product by measuring the number of offers using “Fulfilled by Amazon” (FBA), a service through which third-party retailers on Amazon can choose to fulfill their products. Similar to the current buy box seller, consumers can see whether the third-party retailer or Amazon fulfills a given product. We use this information to count the number of offers in each marketplace for which either Amazon or a third party fulfills the current buy box seller’s product.

Description of results

We present Study B’s results in two parts. First, [Table 3](#) displays the share of offers that are vertically integrated (1) through at least one dimension and (2) for each of the three

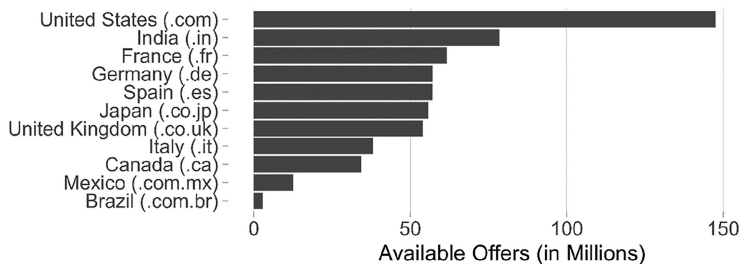


Figure 1.
Number of available offers in each international Amazon marketplace in our data set

Source(s): Authors’ own creation

Table 3.
Shares of vertical
integration dimension
across Amazon
marketplaces

	Any vertical integration Share of all available products on the respective marketplace (in %)	Private labels	Retailing	Fulfillment
Mean (<i>weighted by the number of offers</i>)	38.25	0.02	30.66	38.24
United States (.com)	51.55	0.01	44.43	51.55
Canada (.ca)	48.33	0.03	33.52	48.33
United Kingdom (.co.uk)	47.04	0.01	41.53	47.03
Germany (.de)	43.99	0.01	38.13	43.99
Italy (.it)	41.07	0.02	32.82	41.07
France (.fr)	35.97	0.01	30.51	35.97
Spain (.es)	35.34	0.01	29.71	35.33
Mexico (.com.mx)	28.86	0.09	3.36	28.81
Japan (.co.jp)	27.67	<0.01	23.84	27.67
Brazil (.com.br)	25.66	<0.01	18.58	25.66
India (.in)	10.59	0.07	–	10.54

Source(s): Authors' own creation

dimensions. Second, [Table 4](#) displays this information in more detail by presenting the shares of available products that fall into each of the eight offer types from [Table 1](#). While both tables initially present these results for all 600 million offers, they also contain the shares for each of the eleven international Amazon marketplaces.

Offer shares with any Amazon involvement. The first row of [Table 3](#) shows that Amazon has vertically integrated at least one dimension for 38.25% of all available offers. Hence, self-preferencing can occur for around 230 million offers. Conversely, 61.75% of all available offers do not feature any vertical integration by Amazon. For those offers, Amazon's sole role

Vertical integration through Amazon ...	<i>high</i> ←		Degree of vertical integration					→ <i>low</i>	
	1	2	3	4	5	6	7 ^a	8	
Fulfilling	✓	✓	✓	✓					
Retailing	✓	✓			✓	✓			
Private labels	✓		✓		✓		✓		
<i>Offer type no (see Table 1)</i>									
<i>Amazon marketplace</i>	<i>Share of all available products in the respective marketplace (in %)</i>								
United States (.com)	0.01	44.43	<0.01	7.12	–	<0.01	<0.01	48.45	
Canada (.ca)	0.03	33.49	–	14.80	–	<0.01	<0.01	51.67	
United Kingdom (.co.uk)	0.01	41.51	<0.01	5.51	–	<0.01	<0.01	52.96	
Germany (.de)	0.01	38.12	<0.01	5.86	–	<0.01	<0.01	56.01	
Italy (.it)	0.02	32.81	<0.01	8.24	–	<0.01	<0.01	58.93	
France (.fr)	0.01	30.50	<0.01	5.46	–	<0.01	<0.01	64.03	
Spain (.es)	0.01	29.70	<0.01	5.63	–	<0.01	<0.01	64.66	
Mexico (.com.mx)	0.04	3.32	<0.01	25.45	–	<0.01	0.05	71.14	
Japan (.co.jp)	–	23.84	<0.01	3.82	–	–	<0.01	72.33	
Brazil (.com.br)	–	18.58	–	7.08	–	<0.01	<0.01	74.34	
India (.in)	–	–	0.02	10.52	–	–	0.05	89.41	
<i>Mean (weighted by the number of offers)</i>	<i>0.01</i>	<i>30.65</i>	<i>< 0.01</i>	<i>7.57</i>	<i>–</i>	<i><0.01</i>	<i>0.01</i>	<i>61.75</i>	

Note(s): A checkmark indicates that Amazon vertically integrates the offer's respective dimension. Rows may not add up to exactly 100% due to rounding. Cells without values indicate that such an offer type does not exist in the respective marketplace. ^aFor offer type 7, the non-zero values for all but the Indian marketplace stem from Amazon private-label products sold by Amazon sellers other than the domestic Amazon seller. For example, in Mexico, [Amazon.com](#) (instead of [Amazon.com.mx](#)) sells an Amazon Basics product. The only exception is India, where regulations ban Amazon from selling its private-label products. Hence, only the value of the Indian marketplace implies a "true" third-party fulfilled and retailed offer

Table 4.
Shares of offer types by
vertical integration
degree and Amazon
marketplace

is to provide the platform. However, the shares of offers having at least one dimension vertically integrated vary substantially between countries, with 51.55% in the United States and 10.59% in India. India's comparatively low degree of vertical integration is likely due to the country's Foreign Direct Investment Policy. This policy forbids foreign online marketplace providers, such as Amazon's Indian marketplace (Amazon.in) and Walmart-owned Flipkart, to act as a retailer of their own private-label brands (Government of India, 2020). Our data shows that Amazon complies with this policy because, contrary to marketplaces in other countries, there is not a single offer on the Indian marketplace for which Amazon is the retailer itself.

Offer shares by vertical integration dimension. Furthermore, the results from Table 3 suggest that Amazon's private-label products comprise a small minority of all offers. Only 0.02% of all offers, or about one in 5,000, feature an Amazon private-label product. While Amazon's private-label products encompass a wide range of categories, our data shows that the most-sold private-label products are often low-involvement products such as batteries, trash bags, toilet paper, and printer paper. These characteristics appear similar across international marketplaces.

While Table 3 highlights the very low share of Amazon's private-label products, it shows that vertical integration through retailing and fulfillment is far more prevalent, comprising 30.66 and 38.24% of all available offers, respectively.

Comparing the values in Table 3's four columns, we can see that the three vertical integration dimensions are not mutually exclusive: Adding up the percentages of all dimensions yields a higher percentage than that shown in the first column. Hence, offers have varying degrees of vertical integration by being vertically integrated in zero, one, two, or all three dimensions. Depending on the degree of vertical integration, a marketplace provider has more or less opportunity for self-preferencing.

Offer shares by offer type. Table 4 displays the shares of offer types, corresponding to one of the eight offer types resulting from each possible combination of the three vertical integration dimensions. Table 4's columns list the eight offer types from Table 1, starting with a fully integrated first-party offer (Amazon private-label product, retailed and fulfilled by Amazon) and ending with a full third-party offer. For each row in the table's lower part, we present which share of offers in each international Amazon marketplace falls into each of the eight offer types.

The main result of this analysis is that offers in the eleven international Amazon marketplaces mostly fall into three offer types, with a few notable country-specific exceptions. First, representing 61.75% of all available offers, the most prevalent offer type is a full third-party offer (type 8). Amazon only provides the marketplace for such offers and is not involved in the offer's brand, retailing, or fulfillment. Hence, these offers cannot benefit from the practice of self-preferencing but, on the contrary, might suffer as a result. While the shares vary across marketplaces—from slightly less than half of all products in the United States to nearly 90% in India—full third-party offers are the most prevalent offer type in all eleven marketplaces.

Offer type 2 occurs second-most often, with 30.65% of all available offers. This offer type is a third-party brand (e.g. a national brand or a third-party private label) retailed and fulfilled by Amazon. Hence, Amazon vertically integrates fully—except for the product's brand—for nearly one-third of all available offers. Because of this relatively high prevalence across Amazon marketplaces and the opportunity to self-preference through the two dimensions of *retailing* and *fulfillment*, self-preferencing has the potential to occur most often—in terms of the number of affected offers—in these dimensions. While the United States Amazon marketplace exhibits the lowest share of full third-party offers, it consequently features the highest share of highly integrated offers of type 2: At 44.43%, Amazon itself retails and fulfills more than 65 million of the nearly 148 million available offers on this marketplace.

Most other international marketplaces also feature substantial shares of offer type 2. However, India is the glaring exception to this trend: No single offer on the Indian Amazon marketplace is simultaneously fulfilled and retailed by Amazon.

The third-most frequent type of offer, representing 7.57% of all available offers on the considered Amazon marketplaces, is that of third-party-branded products retailed by a third party but fulfilled through Amazon (offer type 4). For these offers, Amazon has vertically integrated one of the three dimensions. Thus, these offers could, on the one hand, benefit from self-preferencing if Amazon favored offers using their fulfillment services. On the other hand, these offers could suffer from self-preferencing if Amazon preferred their own private-label brands, offers retailed by Amazon, or both.

Beyond these three most frequent offer types, [Table 4](#) additionally shows which offer types occur infrequently or not at all. The first column of [Table 4](#) shows that only 0.01% of all available products are full first-party offers, i.e. offers for which Amazon takes on each of the three vertical integration dimensions. Furthermore, across the eleven marketplaces, we could not identify any Amazon private-label product retailed by Amazon but shipped through a third party (offer type 5). This non-existence seems plausible because Amazon retail likely prefers using its own fulfillment services (i.e. “Fulfillment by Amazon”) rather than contracting with a third party, e.g. due to the cost advantage ([Houde et al., 2023](#)).

In ten of eleven marketplaces, less than 0.01% of all available offers are of type 3—Amazon’s private-label offers, fulfilled by Amazon but retailed by a third party. The notable exception is the Indian marketplace, where approximately one of every 5,000 offers falls into this category. Again, the likely reason is that Indian regulations ban Amazon from retailing in its own marketplace. Hence, even for its private-label products, Amazon has to outsource the retailing function to a third party.

A similar pattern repeats for offer type 7, i.e. an Amazon private-label product retailed and fulfilled by a third party. Less than 0.01% of all offers fall into this type on all but the Indian and Mexican marketplaces, where this type occurs more frequently, with 0.05% each. While the likely reason for this higher-than-average share in India is the Foreign Direct Investment Policy banning Amazon from acting as a retailer on their platform, the comparatively high share in Mexico likely has a different reason. For most of the offers falling into this category in Mexico, the respective offer is retailed and fulfilled from a foreign Amazon marketplace—in this case, Amazon United States instead of Amazon Mexico. Because Keepa’s classification only considers the domestic Amazon retailer and fulfillment services as “Amazon-related,” these shares are non-zero, even though they could be considered a full first-party offer. Only the Indian marketplace represents a genuine exception by featuring Amazon’s private-label products retailed and fulfilled by actual third parties instead of foreign Amazon retailers.

Summary, conclusions, and implications

Self-preferencing can only occur if an online marketplace has vertically integrated at least parts of an offer’s value chain beyond merely providing the marketplace. If an online marketplace does not engage in vertical integration—like eBay, AliExpress, Etsy, Taobao, and Mercari— self-preferencing is not a concern because the marketplace provider is structurally separate from the offers. Thus, probably the most effective, though drastic, approach to avoiding self-preferencing is to structurally separate the online marketplace provider from the offers, as suggested by [Khan \(2019\)](#). In such cases, the marketplace provider cannot self-preference because it lacks vertically integrated offers.

However, our analysis in Study A showed that 75% of the 20 most-visited online marketplaces vertically integrate at least one of the three dimensions: private label, retailing, or fulfillment. 60% of these marketplaces vertically integrate all three dimensions. Thus, self-preferencing is possible in most major online marketplaces across the globe.

Study B's analysis of nearly 600 million currently available offers on eleven international Amazon marketplaces highlighted that vertical integration is most prevalent through first-party retailing and fulfillment rather than private-label products. Amazon acts as the retailer for 31% and fulfills 38% of all available offers. Contrary to the focus of the self-preferencing debate on private labels, only one in 5,000 offers is an Amazon private-label product. Thus, private-label products are present in only a small minority of offers for which Amazon could self-preference. Indeed, vertical integration, the necessary condition for self-preferencing, occurs much more frequently through retailing and fulfillment. If a regulator sought to avoid self-preferencing for as many offers as possible, they could, at least in the case of Amazon, focus on analyzing whether self-preferencing occurs for the online marketplace's own retailing and fulfillment, in addition to private-label offers.

Our analysis of differences among the eleven international Amazon marketplaces shows that regulation can greatly affect the degree of vertical integration. While Amazon has vertically integrated at least one dimension for more than half of all available offers in its United States marketplace, which currently faces no substantial restrictions on vertical integration, regulation greatly affects Amazon's business model in India. There, the Foreign Direct Investment Policy bans online marketplaces such as Amazon and Flipkart from simultaneously providing a marketplace and acting as a retailer. Our data shows that Amazon seems to comply with this ban—we cannot find a single offer in the Indian marketplace for which Amazon serves as the retailer itself. However, this ban appears not to impede the degree of vertical integration through private-label products, which remain available, albeit retailed through third parties. These findings imply that online marketplaces need to monitor the regulatory environment carefully because changes in individual international markets can require substantial changes to the local business model.

Thus, marketplace providers need to adapt depending on the jurisdiction. On the one hand, the Digital Markets Act prohibits “gatekeeper” online marketplaces from engaging in self-preferencing in the European Union, while there are no explicit restrictions on vertical integration. On the other hand, although India does not prohibit self-preferencing, the country has effectively created conditions through which the opportunities to self-preference are much rarer than in other international marketplaces. Hence, among the eleven countries in our sample, India is the only one that follows the suggestion of Khan (2019) to structurally separate online marketplace providers from retailing operations.

While a ban on vertical integration is likely the most effective way to preclude self-preferencing by depriving marketplace providers of the opportunity to engage in the practice, it is also the most drastic measure, with potentially adverse welfare consequences stemming from restricted competition. While our research has laid the descriptive foundation for when and where self-preferencing is possible, we encourage further research into the detection and the economic consequences of self-preferencing in international marketplaces.

Notes

1. Consumers searching for offers on Taobao, a consumer-to-consumer marketplace, can see offers from Tmall, a business-to-consumer online marketplace also owned by Alibaba. In contrast to Taobao, Tmall has vertically integrated offers in all three dimensions.

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