

BEHIND THE SCENES OF AMAZON.DE

AN ANALYSIS OF THE MECHANISMS
OF THE AMAZON MARKETPLACE

Survey with quantitative enquiry

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Behind the Scenes of Amazon.de

An analysis of the mechanisms of the Amazon marketplace

I Summary

Amazon became a pandemic giant. In Austria, the platform is the undisputed number one among online shops and marketplaces. For years, the success of the company was accompanied by accusations of a breach of competition law, complaints regarding their employment terms, and consumer protection concerns.

The present study contributes to the debate with an in-depth and databased analysis of the marketplace. For this purpose, software simulated the search process of an Amazon Prime customer and an anonymous user from Austria. A total of **668 search terms** were used. This led to the collection of **520.000 product and price data** and **a million data points on retailers**. The data was collected from December 2020 to April 2021. The data allows insight into the structure and the dynamics of the marketplace and highlights problematic practices.

Amazon operates and competes with third-party sellers on its marketplace. Third-party sellers account for the largest part of sellers with 79%. Among the top search results (first 100 search results, around 2 pages of search results), only 21% of the products are sold by Amazon. In some product groups, the proportion of third-party sellers is above 90%.

More than half of the third-party sellers use Amazon's logistics, especially when it comes to small products: Their goods are stored in Amazon's warehouses, and the platform oversees the entire shipping management. Also, many third-party sellers are within the Prime model - this is Amazon's customer loyalty program with advantages such as free delivery or delivery in one day.

Prime products make up a large proportion of search results and are systematically ranked better than others. In the first 100 search results, i.e. the top-ranked products, up to 70% of the search results are prime products for a range of product categories. Products sold by Amazon are systematically better ranked in some product categories: For toys, Amazon, as a retailer, achieves almost half of the top-ranked search results. Amazon's brands are also ranked better, but their share is very low overall.

Chinese sellers are the number one among the third-party sellers - they are the default seller for almost every second product. The default seller is listed first in the buy box. Winning this spot is crucial, as users hardly make use of their option to change the seller. The share of Chinese retailers is 46.5%, their biggest competitors are German retailers with a share of 35.3%. This competitive

relationship is interesting: Although Chinese companies make up almost half of all Amazon sellers, German companies are well represented among all retailers of top-ranked products with a share of 60%. In other words, they systematically lose the run for the first rank within the buy-box.

The share of other countries is below five percent. The United Kingdom follows at a great distance as the next country with 3.3%. Also, Austrian traders have a share of 1.8%. Most Austrian sellers operate within the product categories spirits (10%), televisions (6.5%), and winter sports (5.1%).

Although the name of the company selling a product is listed on the product detail page, it is not visible where this company is located. Also, name endings such as DE are used by e.g. Chinese retailers suggesting their location to be in Germany.

The filtering of search results is limited and does not allow to restrict a search to retailers from Austria or the European Union. A newly introduced section, the „Amazon Small Businesses“, allows customers to search for products from Austrian SMEs. However, this page is well hidden and the default search bar on Amazon does not yet offer this as a filter option.

The “Amazon’s Choice” label is a recommendation for the “best product” that is determined algorithmically. For small products, such as personal hygiene, cables, and mobile phones, almost half of all search hits have this label. **Overall, more than every fourth Amazon’s Choice product is sold by Amazon.** In the first hundred search results, the share of Amazon is higher, with 31%. There are some product categories in which more than every second Amazon’s Choice product is sold by Amazon, e.g. toys and data carriers. These results are all the more relevant as these products are offered for orders via voice assistants.

The analysis of promotions and discounts such as coupons and time-limited discounts shows possible problems with non-transparent default settings, especially regarding subscriptions (Spar-Abos).

Amazon is an advertising platform. Up to every third search result is sponsored. Since sponsored content is mainly placed at the front, the effect is even higher for mobile devices with small screens. The advertised content also includes partnerships with German publishers, among others, who generate additional income with product comparisons and tests. In this context, it can be discussed whether consumers may discern these marketing efforts from journalistic work.

The price is an important factor in the competition on the Amazon marketplace. The study inquired how often the default seller in the buy box is not the cheapest offer. For every tenth product, consumers would benefit from comparing the sellers’ prices within Amazon. The sums are usually small, but some large savings were found. In one case, a comparison of sellers of barbells would have resulted in savings of 70.3%. With FFP2-masks savings of half the price could be measured in one case.

The present study has its limitations. It does not encompass an analysis of personalized results and mobile results. Mobile online shopping is central, and a random check already finds major differences in search results. Also, Amazon's customer service intercepts a lot and few problems are registered by consumer protection agencies. Therefore, the perspective on consumer problems focuses on cases of account freezes and fraud. The study leaves open further questions, such as the perspective of retailers on the competitive situation with Amazon and third-party retailers from European and non-European countries.

2 Scope of the Study

This report is based on one of the largest and most comprehensive data-based surveys on Amazon in the DACH region¹. The data was collected between December 2020 and April 2021 with the help of software. Examining Amazon.de quantitatively was a challenge. In the course of this study over 520,000 data points on prices and products as well as over one million data points on merchants on Amazon. de were automatically collected.

This study aims to, on the one hand, provide more insight into the functioning of Amazon on the other hand and identify possible problem areas with the help of automated data collection. It poses questions of economic and consumer policy, which are intended to make the inner workings of Amazon more understandable.

Researched Topics

The data analysis focused on the following issues, selected as examples:

Structure of search results

- Relation of organic and sponsored results,
- Differences in results between users with and without prime account,
- Positioning and share of Amazon's labels, non-available products, prime-products, bestseller labelled products and amazon's choice labelled products,
- Patterns in the algorithmic recommendation of products.

Analysis of the Amazon marketplace

- Recognizable patterns in the ranking of merchants,
- The proportion of merchants from Austria and the EU compared to the Asian region,
- Price differences between the best-ranked and other sellers,
- Positioning and share of promotions and products with reduced price,

Amazon as a bubble

- Description and data-based analysis of the Prime model, such as the proportion and the share of Prime products in search results,
- Description of the customer service and those who are expelled from the Amazon system (account suspensions) or fall victim to fraudulent merchants.

¹ Germany, Austria, and Switzerland.

Method

In this study, two search processes were automatically imitated. In other words: all data were collected twice with the help of two virtual personas. Once as an anonymous user (unknown to Amazon, no cookies accepted) and once as an Amazon customer with a Prime account. The survey imitated the following two scenarios:

Scenario 1: User A has a Prime account and needs a refrigerator. The user enters this search term on Amazon.de and scrolls through the many search results.

Scenario 2: User B does not have a Prime account and performs the same search on Amazon.de. The aim is to find out how the results differ from each other when searching for the same products.

On average, Amazon.de produces around seven pages of results with around 60 products each (which corresponds to ~400 items) for every search action. However, some searches produce more than 20 pages of search results. All search results were extracted, including the number of products, pages, and their ranking. Considering that most users only look at the first search result page, the analysis focused on the top-ranked products. These were defined as the first 100 search results, which corresponds roughly to the first two search results pages in a desktop browser.

3 Press Release & Results

The opacity of Amazons inner workings poses problems for consumers

If you buy on Amazon, you mostly buy from third-party sellers – half of the companies offering products on the marketplace are from China. Consumers need better protection of their rights and more transparency on online platforms.

Anyone looking for products online will inevitably come across Amazon: The platform offers an immense catalogue of products, quick delivery, and sophisticated customer service. Everything seems to be going smoothly. *“This is not due to the exemplary behavior of the platform, but rather to the fact that nobody looks behind the scenes,”* says AK-consumer advocate Daniela Zimmer. The AK wanted to critically inquire about the mechanisms of the Amazon.de marketplace and commissioned a study from the Austrian Institute for Applied Telecommunications (ÖIAT) and the Center for Digital Safety and Security (AIT).

The results show: Anyone who buys from Amazon usually buys from a third party. Almost every second seller is from China. Consumers don't know where they are buying from. A Chinese company may be even behind a company name with the ending DE (for Germany). If Amazon is the retailer of a product, it is usually in the pole position of the buy box. And since Amazon is an advertising platform, around every third search result among the frontrunners is sponsored. Besides the default ranking of products, consumers do not have many options: they look long or in vain for other ranking criteria, such as providers from Austria or quality seals. Zimmer warns, *“If the ordered soundbar comes from China and is defective, Amazon will manage the return process. However, if the device breaks six months later, the platform can refer to its mere intermediary role and the Chinese seller. That means: the consumer’s issue remains despite warranty claims.”*

Study author Louise Beltzung from the ÖIAT summarizes, *“Amazon is untransparent for consumers. The complex structures, the ranking mechanisms, and the design contribute to this lack of transparency. From the consumer's point of view, the clean image is hardly crumbling. Account suspensions and cases of fraud do happen, but Amazon's customer service intercepts a lot and little leaks out.”*

Zimmer, *“The market-dominant online platforms like Amazon have to take more responsibility. Consumers need better protection. Two legal frameworks in the EU – the Digital Services Act and the Digital Market Act – and a modernization directive will be implemented this year. Still, they don't go far enough. Consumers must no longer be deceived or manipulated by the rankings of products, customer ratings, etc., and more legal certainty is needed because of fake sellers on the platform.”*

Helmut Gahleitner from the economic policy department, *“The regulation of the large Internet platforms - such as Amazon - is the order of the day in order to limit their market power. On the one hand, Amazon regulates access to the platform for hundreds of thousands of third-party retailers, and on the other hand, Amazon influences the purchase decision of consumers and ultimately the success of third-party retailers through product rankings, customer ratings, etc. But more is needed: Another building block for restricting the market power of Internet platforms is the control of company takeovers.”*

Amazon profits from the pandemic

Amazon is considered the winner of the Corona crisis - at the end of April 2021, the group reported an increase in sales of 44 percent to 89.5 billion euros in the first quarter. Amazon's profit tripled to a record 6.8 billion euros. The operation of the Amazon AWS cloud service and the business with online advertising are among the central business areas of the group, but the supremacy in e-commerce was also expanded.

All paths lead to Amazon

In German-speaking online retail, Amazon is the first point of contact when consumers are looking for products on the Internet. For many, it is already synonymous with online trading itself. With a turnover of 834 million euros in 2019, Amazon.de is by far the top-selling online shop in Austria. There is an immense selection of products, fast deliveries, and sophisticated customer service. The consumer protection agency AK took it upon itself to take a critical look behind the scenes of the platform. Is everything in order, at least from the consumer's point of view? The AK recently presented a study on the exploitative working conditions of Amazon parcel deliverers. Amazon's labor protection and competition policy practices have long been a bone of contention.

A study commissioned by the AK by the Austrian Institute for Applied Telecommunications (ÖIAT) and the Center for Digital Safety and Security (AIT) therefore focused on the (in)transparency of the online marketplace from the consumer's point of view.

Who wins the buy box?

Why, for example, is retailer X in the first place in the strongly highlighted buy box and not retailer Y, who seems to be offering the same product for the same conditions? Maybe he has better customer ratings, maybe there is a rotation among equal sellers, or can the pole position be bought? To look behind the scenes of Amazon, which presents itself as a black box, the search process of an Amazon Prime customer and an anonymous user from Austria was simulated. A total of 668 search terms were explored. In the process, 520,000 samples of product and price data and one million data points on retailers were collected and analyzed using specifically developed software.

Superficially, the impression arises that everything is in order. Compared to the large numbers of orders, there are few consumer complaints in the counseling facilities. Account bans and cases of fraud do happen. However, Amazon's customer service intercepts a lot, and little gets out. But a look behind the scenes paints the following picture.

Two-thirds of all sellers are not Amazon itself, but external ones: Anyone who buys on Amazon is buying from third parties. Although Amazon is a retailer in its marketplace, other sellers dominate. A fifth of the products in the top-ranked search results (first 100 search results, around two pages) are sold by Amazon itself. Other salespeople make up the largest part at 79 percent. In some product groups, third-party retailers even dominate with over 90 percent.

More than half of these so-called third-party traders use Amazon's logistics: The consumers' impression that they buy on Amazon from Amazon is not deceptive. The goods are in the Amazon warehouses – platform takes over the entire shipping management. Amazon, therefore, works closely with third-party retailers from all over the world and handles the ordering process for many via the rapidly growing logistics network and close-knit customer service.

Gahleitner states, *"Amazon's dynamic growth is increasingly attributed to third-party retailers. Amazon itself is increasingly developing into a service provider and logistician for third-party retailers. Amazon gets commissions and earns on all sales. The trend is towards "Fulfillment by Amazon", which means that the retailer only sends his goods to Amazon and Amazon takes care of the entire logistics - from storage, shipping, and returns management"*.

Many third-party retailers use the Prime model: Prime products make up a large proportion of the search results and systematically rank better than others. The Prime model is Amazon's customer loyalty program with numerous advantages such as free delivery, delivery in one day, etc. In some categories, six out of ten products in the top hundred search results also have the Prime label. In top-ranked products (first 100 search results, around two pages), up to almost 70 percent of the search results are also prime products.

Products sold by Amazon itself rank better: When it comes to toys, Amazon as a retailer achieves almost half of the top-ranked search results. Amazon's brands are also ranked better, but their share is very low overall.

Chinese retailers make up almost half of all sellers: In this survey, the search for products led to a purchase from a seller based in China in almost every second case. Therefore, China is the number one third-party trader. If someone wants to buy a product, Amazon determines one company as the

default seller – the others are listed separately as other suppliers. It is crucial to winning this first place, as users hardly make use of other possible seller options, due to lack of knowledge.

Chinese traders increasingly dominate: Not only are there many Chinese traders (46.5 percent), but they also assert themselves well against their competitors. Their main competitors are retailers from Germany (35.3 percent) - who are not as successful as their Chinese competitors in the struggle to become the default seller.

Austrian sellers are few: In this survey, the proportion of companies based in Austria is less than two percent (1.8 percent) among all search results. Most Austrian sellers were found when searching for spirits (10 percent), televisions (6.5 percent), and winter sports products (5.1 percent).

Consumers do not know where they buy from: At first glance, it is not clear in which country a seller is based. For example, name endings with DE, used by companies based in China, suggest a headquarters in Germany. The option to filter according to location is missing in the main search. Consumers can search for prime categories, customer reviews, brands, prices, conditions, and availability alone.

Every third product recommended algorithmically by Amazon itself: The “Amazon’s Choice” label is a recommendation for the “best product” that is determined algorithmically. Almost half of all search hits are provided with this label, especially for small products in the categories personal care, cables (like USB and chargers), and mobile telephony. Overall, more than every fourth Amazon’s Choice product is sold by Amazon itself. In some product categories, more than every second Amazon’s Choice product is sold by Amazon, such as toys and data carriers. The question of the share of Amazon products in Amazon’s Choice is an explosive one because these products are prioritized when orders are placed via language assistants like Alexa.

Amazon is an advertising platform: About every third search result is sponsored. Since sponsored content is primarily placed at the front of the search results, at first glance only advertising can be seen on mobile phones and desktops. If consumers search via mobile phone, they sometimes get purely sponsored results on the first glance.

Opaque publishing partnerships: The advertised content also includes partnerships with German publishers who generate additional income through product comparisons and tests. These agencies have set up comparison portals on which comprehensive reviews of products are created that are optimized for search engines. And that’s how it happened that a German daily newspaper recorded clicks and purchases when searching for batteries. From AK’s point of view, references to “publishing

partnerships" are not enough: *"Consumers hardly realize that it is not a matter of journalistic work when batteries and prams are recommended by newspaper publishers,"* says Zimmer.

Looking for cheaper sellers is worth it: Among the millions of sellers on the marketplace, it is important to attract attention at all costs. Consumers would often save money if they looked at other sellers of the same product on the marketplace. When searching for barbells, a different offer around 70 percent cheaper would have been available, however, not as the default seller price. In the survey, FFP2 masks were available for half the price in one case. Consumers must be made aware, that the default seller may not always offer the cheapest price. *"You could also look elsewhere for the products as they can be cheaper,"* advises Beltzung.

More transparency & fairness needed on platforms - laws need more bite

The EU is trying to enforce more transparency and fairness on platforms like Amazon. From AK's point of view, more needs to be done. At the moment, two laws (Digital Markets Act and Digital Services Act) and one directive (Modernization Directive) are in the running to improve protection for consumers on online platforms and to ensure more transparency. In summary, Zimmer says, *"The legislative proposals need to be improved - more clarity, for example with the advertising practices of online platforms."*

+ Constant technical supervision required: According to the EU draft of a "Digital Market Law" (DMA), rankings must be based on fair, non-discriminatory conditions. Products distributed by the platform itself may not be given preference over similar third-party products when ranking.

Gahleitner criticizes, *"Without ongoing, technically adept supervision of the constantly changing platforms, unfair tricks will be difficult to recognize and will hardly be punished."*

+ Consumer protection is too weak – lack of legal certainty in the event of platform errors: According to the EU draft for a "Digital Services Act" (DSA), third-party retailers must be "traceable". This means that Amazon would have to check third-party seller information (name, address or contact details) before activation.

"The protection is full of holes," criticizes Zimmer. *"Consumers must not trust that information about third-party providers that has been checked on the platform is always correct. There are no precise liability rules for careless platforms. As a result, there is still a lack of legal certainty as to when platforms have to take responsibility for their own mistakes and those of third-party providers."*

Zimmer emphasizes, *"It is important that 'dark patterns', i.e. psychological tricks to control the behavior of users, are prohibited in platform design. The draft law on the Digital Services Act mentions, for example, standard settings that are difficult to change or deception in order to urge users to make transactions. In any*

case, providers must not design their online marketplace in such a way that consumers are deceived or manipulated by impairing their autonomy, freedom of choice or options.”

+ Modernization directive must go further – put a stop to fake customer ratings: The EU modernization directive will come into effect in May 2022. Platforms must then disclose the essential criteria of their rankings of search results and their weighting. *“That’s not enough for us,” says Zimmer. “When platforms state the number of previous purchases, customer ratings, etc., that doesn’t help consumers much. First of all, customer ratings do not have to be checked by the platforms and can be fake.”*

From May 2022, platforms only must inform whether and, if so, how the platform ensures that ratings come from consumers who have actually purchased or used the products. In addition, meaningful information continues to stand in the way of trade secrets. A noticeable added value would be for consumers if they could determine the search criteria themselves: for example, origin or distribution in Austria, according to meaningful quality or environmental seals. To avoid deception, supervisory authorities and consumer protection organizations should be involved.

Gahleitner adds, *“The regulation of the large Internet platforms is the order of the day in order to limit their market power. The importance of ex-ante regulation is shown, for example, by the case of Amazon: On the one hand, the Amazon marketplace, as a classic “gatekeeper”, regulates access to the platform for hundreds of thousands of third-party retailers, on the other hand, Amazon influences the purchasing decision of consumers and ultimately the Third Party Success. Ex-ante regulation creates clear legal rules that are set in advance, such as the ban on self-preference, non-discrimination, or transparency rules. But more is needed: Another building block for restricting the market power of Internet platforms is the control of company takeovers. It is important to prevent so-called “killing mergers”, i.e., to prevent large platforms from buying up potential competitors in order to choke off possible competition (e.g., takeover of WhatsApp by Facebook). And finally, in the event of repeated abuse of market power, the unbundling of digital platforms must not be taboo.”*



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