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Exploring the role of the Amazon effect on customer expectations: An analysis of user-generated content in consumer electronics retailing

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Abstract

While Amazon's disruption of the retail market has been associated with significant changes in consumer behavior, empirical studies on how interacting with Amazon has changed customers' expectations toward other offline/online retailers remain scarce. Such Amazon-driven perceptions of service attributes are sometimes referred to as the 'Amazon effect'. After clarifying the meaning of the Amazon effect and reviewing the studies on consumer complaints online, this paper aims to identify key triggers for the Amazon effect from consumer comments on social media. Based on natural language processing techniques, a content and sentiment analysis of users' comments drawn from the Facebook pages of three leading consumer electronics retailers in Italy over a two-year span (2016–2018) was used to evaluate the dissatisfaction toward these retailers associated to Amazon-related service attributes. The findings show that there is a wide diffusion of consumer comments and service complaints related to the Amazon effect on consumer electronics retailers, especially regarding price, customer service, in-store staff, and post-purchase support. Compared with corresponding evaluations on the Italian Amazon website, the negative sentiments revealed in consumers' comments on Facebook suggest that the Amazon's service standards have raised consumer expectations and have made consumers less satisfied when they interact with other retailers. We argue the need for further research to better clarify Amazonification in terms of customer impatience and dissatisfaction in general, also going beyond price and logistics issues, which are usually considered as the main constitutive factors.

1 | INTRODUCTION

The digital revolution has changed the ways firms operate, thus significantly transforming manufacturing with flexible and personalized forms of production (Mourtzis & Doukas, 2014) as well as service industries by dematerializing all the stages of the consumer buying process (Nylén & Holmström, 2015).

Increasingly more consumers worldwide in fact are buying online. Across the globe, e-commerce sales approached nearly $3500 trillion in 2019 (with an increase of over 20%), which represents about 15% of total retail sales (eMarketer, 2019). The Covid−19 pandemic has probably accelerated this process, as shown by the increase in 32.4% in ecommerce sales in 2020 (eMarketer, 2020). Currently, Amazon accounts for nearly 40% of all US e-commerce purchases and has driven half of all retail growth in the last 5 years.

As online shopping becomes more and more popular, the retail landscape is changing rapidly. In several cases, the gains for e-

commerce retailers are at the expenses of "traditional" brick-and-mortar shops, which have to quickly change their models and formats (Hagberg et al., 2016), thus differentiating themselves from pure e-commerce players. Just in the United States, in 2017 there were 5321 store closures, up 218% year-over-year (Fung Global Retail & Technology, 2017). The Covid-19 pandemic has worsened these devastating effects on brick-and-mortar retailers: most stores selling non-essential items were ordered to close during lockdowns in several parts of the world, and market analysts forecast more than 15,000 store closures in 2020 in the United States alone (Thomas, 2020). On the other hand, e-commerce sales have been boosted during the epidemic, with Amazon taking the lion's share by tripling its profits in 2020 with a 37% increase in sales revenues and 39.1% increase in e-commerce ads year-over-year, which represents 75.7% of the overall e-commerce ad spending (eMarketer, 2020).

"Death by Amazon" (Solon & Wong, 2018) is the most common expression used to identify the decline in sales in (or even closing of) physical stores affected directly or indirectly by the e-commerce leader (Blitz, 2016). This effect is usually explained by the perceived customer benefits attributed to Amazon (low pricing, huge product selection, excellent customer service, efficient shipping and return policy) combined with the company's "customer obsession" based on the analysis of customer-based metrics (Denning, 2019). This makes Amazon (and similar e-commerce big players) able to anticipate customer needs and fulfill them more effectively than any competitor in almost any industry.

The innovation brought about by Amazon has also shaped the way consumers interact with other retailers. Self-Service Technology (SST), such as Amazon Alexa or Amazon Dash Button, have disrupted the "traditional" consumer journey, by enabling customers to order products online by simply talking or pressing a button (Farah & Ramadan, 2017). Beyond impulsive purchasing behavior, these innovative tools have generated other effects (e.g., lock-in mechanisms), thus enabling Amazon to sustain their customers' satisfaction and loyalty (Ramaseshan et al., 2015). The impact of all these changes is likely to be reflected in higher customer expectations and modified shopping patterns both online and offline, in terms of reducing consumer search and selection processes (Priporas, 2020), thus enabling consumers to save time and effort (Alreck et al., 2009; Jiang et al., 2013). Within the field of consumer behavior, the Amazon effect can be primarily defined as the impact that Amazon has on the rise in customer expectations regarding both online, offline and omnichannel retailers.

Heightened consumer expectations increase online manifestations of dissatisfaction with products/services and generate consumer complaints in the form of negative comments on social media (Istanbulluoglu, 2017; Weitzl & Einwiller, 2020), especially on Facebook (Kawaf & Istanbulluoglu, 2019; Rosenmayer et al., 2018). While previous research has explored different aspects of online complaints, such as the antecedents and consequences of electronic word-of-mouth (Hennig-Thurau et al., 2004; Nam et al., 2020), the volume and value of online reviews (Purnawirawan et al., 2015), this paper contributes to this discussion by identifying which triggers of

consumer comments and complaints on social media are key to the Amazon effect.

Although this "Amazon effect" has been (and continues to be) in the spotlight, research related to consumers is almost non-existent. To the best of our knowledge, no study has analyzed exactly how Amazonification works in concrete terms. Using natural language processing (NLP) techniques, the present paper aims to fill this gap by analyzing consumer conversations, in terms of expectations and post-purchase satisfaction, on three Facebook pages of retailers in the consumer electronics retail industry in Italy.

The study extends the extant research on customer expectations and complaints in the online context by providing the first evidence of increasing Amazon-related expectations in consumer electronics retailing and identifying the link with a decline in consumer satisfaction. From a practical standpoint, the paper provides insights for omnichannel retailers in consumer electronics by examining the interplay of the different factors that have led to Amazon's success.

The paper is structured as follows. Section 2 clarifies the meaning of the Amazon effect in various fields of study and specifies the scope of our research. Section 3 reviews the debate on customer expectations, by discussing consumer shopping patterns in online stores, customer complaints in the form of reviews and comments on social media, and related potential changes in customer satisfaction. The method and research context (Section 4) are then outlined, by detailing the sampling choices, and the computational linguistics and sentiment procedures used to analyze the user-generated content related to three leading consumer electronics retailers in Italy. The results are then reported (Section 5) and discussed (Section 6). Finally, implications, limitations, and potential avenues for future research are addressed (Section 7).

2 | WHAT IS THE AMAZON EFFECT?

In the retail industry, the Amazon effect (or Amazonification) has been used to indicate the progressive transformation of e-commerce websites and physical retailers to being "more like Amazon" but, by extension, it also denotes the massive change in consumer expectations and habits (Jelodari Mamaghani & Davari, 2020), especially from the customer-centric perspective of the supply chain (Melnyk & Stanton, 2017).

The "Amazon effect" is generally associated with logistics, where the implementation of same-day delivery services (such as Prime Now) and the 30-day return policy have increased "customer impatience" (Daugherty et al., 2019). This customer impatience, framed as the "Amazon effect," has also been cited in Nature with regard to researchers that are "often more interested in how quickly reagents can be delivered than in searching for antibodies with appropriate validation data" [...] It is the Amazon effect: they want it in 2 or 3 days, with free shipping" (Baker, 2015, p. 275). To reach Amazon standards of efficiency in terms of logistics, some of the biggest US retailers (i.e. Macy's and Office Depot) in fact integrate their delivery system with parameters including population density and proximity of goods

to customers, aimed at offering same-day delivery from the nearest point when the customer places her/his order (Inbound Logistics, 2017).

In cultural studies, the Amazon effect has been linked to the "filter bubble" (Pariser, 2011). This indicates a state of intellectual isolation, in which information and content (e.g. recommendations on e-commerce websites) are shown on the basis of search histories and past online behaviors, and are the result of a collaborative filtering algorithm, as in the case of Amazon (Linden et al., 2003). This process makes user searches and queries more personalized and effective, but at the same time tends to make people unaware of conflicting or different viewpoints, products, and so forth, thus isolating them in their own "cultural bubbles." Similar remarks have also been made in design studies to indicate a gradual homogenization towards the features of the Amazon website (Porter, 2008) and the associated changes in consumer behavior in online settings.

Showrooming is another example of consumers' shifting behaviors (Basak et al., 2017). This is when consumers use brick-and-mortar stores to assess product characteristics before buying the product online, especially for price reasons. Amazon usually varies product prices by leveraging dynamic pricing algorithms (Chen et al., 2016), thus adapting them in real time on the basis of demand, competitors, time of day, and customer buying patterns. In macroeconomic terms, such pricing strategies have been studied to analyze the potential pressure on the price discounts of retailers and on inflation rates (Charbonneau et al., 2017).

In the context of our study, the Amazon effect is intended as the increase in customer expectations regarding all the attributes of retailing and the consequent decrease in customer satisfaction in relation to retailers. We assume that these effects are due to the heightened service standards dictated by Amazon and to the fact that customers constantly consider Amazon as a benchmark when dealing with both online and offline (or omnichannel) retailers. While there seems to be a relationship between higher service standards (in terms of shipping, customer service, price, etc.) and customer expectations, and between customer expectations and customer satisfaction, no study has investigated these links with regard to Amazon. Our study aims to explore the Amazon effect by analyzing the way consumers manifest their complaints about retailers on the Internet, and in particular on social media. The increasing use of social media, which provide an immediate and interactive complaint channel for customers, has already changed the way consumers share their product- and service-related experiences with others (Istanbulluoglu, 2017; Mei et al., 2019). Consumers in fact frequently voice service failures of omnichannel retailers (e.g. inconsistent prices, quality issues, poor customer service support, delivery problems, etc.) via online reviews and comments on social media (Rosenmayer et al., 2018).

Our study provides an initial step to substantiating the Amazon effect, by focusing on the consumer electronics retailing industry, where the players suffer from their reliance on business models that are still focused on physical stores, while consumers exhibit increasing expectations related to their online buying journey.

3 | CUSTOMER EXPECTATIONS IN AN OMNICHANNEL ENVIRONMENT

3.1 | Consumer expectations and shopping patterns in online stores

Online stores have consolidated their market share compared to traditional retailers (Sopadjieva et al., 2017). Several studies show that in digital settings, both the characteristics of the purchase environment and the post-purchase logistic services play a key role in determining customer satisfaction (Cao et al., 2018; Kim et al., 2011). There is a general agreement that customer satisfaction derives from the alignment between customer expectations before accessing a service and the post-purchase experience (Gao & Lai, 2015; Hult et al., 2019; Oliver, 1980; Terblanche, 2018). Beyond "traditional" satisfaction attributes such as product quality and pricing, e-retailers must compete in relation to product availability, breadth of the product offering, timeliness, along with shipping and return services (Jain et al., 2017; Rosenmayer et al., 2018). These attributes have been analyzed in terms of shopping (or, more generally, service) convenience (Beauchamp & Ponder, 2010; Colwell et al., 2008; Grant & Philipp, 2014). Jiang et al. (2013) identify five dimensions that affect shopping patterns in online stores, namely: (1) access (such as time/space flexibility, availability of products and brands); (2) search (centered on the user-friendly aspects of websites, i.e., website speed, variety and accuracy of search options); (3) evaluation (i.e., product information, categorization); (4) transaction, focusing on ease of check-out, range of payment methods and price inconsistency; (5) possession/post-purchase, such as on-time delivery and product return policies.

There is probably no other e-retailer in the market that epitomizes excellence in relation to all these aspects as does Amazon (Nisar & Prabhakar, 2017; Soschner, 2020). Amazon has set high standards of retailing and logistics services as well as pricing strategies, building increasingly higher entry barriers for new players (Yip, 1982). In fact, several studies have accused Amazon of predatory pricing and unfairly monopolizing markets (Budzinski & Köhler, 2015). More importantly for our purposes, is the fact that about 74% of late adopters to e-commerce, prompted by the Covid-19 pandemic, started their e-commerce experience with Amazon (Culey, 2021). It is thus likely that these new customers, along with those people who were already well-versed in online shopping, base their expectations on Amazon standards, thus making a broader selection of products, faster service and superior customer service the "new normality" for all types of retailers. Amazon's performance is benchmarked against not only by competitors, but also by consumers themselves, who, given their past experiences with Amazon, form beliefs about what kind of service standard they should expect also from other e-retailing operators. In other words, Amazon-related attributes generate higher consumer expectations that are also reflected when they interact with other retailers.

3.2 | Assessing consumer expectations and (dis)satisfaction via consumer complaints on social media

A major problem concerning the conceptualization of customer satisfaction is the dimensionality of the construct (Yi, 1990). While

customer satisfaction is universally recognized as a latent factor (i.e., measured through observable proxies), there is little agreement regarding the factor structure, and defenders can be found of both its unidimensionality and multidimensionality (Büschken et al., 2013; Santos & Boote, 2003). On the one hand, it has been argued that satisfaction is essentially a one-factor construct, ranging between the two opposites of dissatisfaction and satisfaction on a single bipolar continuum. On the other hand, according to the second view, customer satisfaction is most often conceptualized as a two-factor construct, since satisfaction and dissatisfaction are thought of as two different and independent dimensions. In other words, customers' prior and post-consumption beliefs are formed about both categories of the product/service attributes and, depending on which type of attribute is disconfirmed, satisfaction or dissatisfaction (or both) is generated.

Traditional methods use surveys to ask consumers/customers to retrospectively rate products/services in terms of individual attributes or on an overall basis (Oliver, 2010). However, such strategies suffer from various methodological issues, and particularly instrument reactivity, that is getting responses distorted by the instrument itself (Yi, 1990).

The alternative to direct surveying is the measurement of alleged proxies, such as customer complaints and praise of products/services (Oliver, 2010), which may be associated respectively with dissatisfaction and satisfaction. The advantage of focusing on complaints instead of dissatisfaction, for example, is that the former is an overt behavior (and may be revealed unobtrusively), while the latter is not. However, researchers need to be cautious in considering one (i.e. complaints) as an equivalent of the other (i.e., dissatisfaction), since consumers who are less "vocal" may still be dissatisfied. In a similar vein, complaints might be motivated by the consumer's willingness to provide feedback or to offer the retailer a chance to improve (Mei et al., 2019; Oliver, 2010; Reynolds & Harris, 2005).

However, the internet has made multiple channels available to customers and to firms to express their opinions about products (Bitter & Grabner-Kräuter, 2016). Social media has become the most common channel for consumers to voice their complaints regarding retailers (Kawaf & Istanbulluoglu, 2019). Several authors have also suggested that consumers prefer to complain via Facebook due to the fact that this social media platform is "emotionally charged" (Presi et al., 2014; Rosenmayer et al., 2018). Due to negative e-WOM mechanisms and the global reach of Facebook, consumer comments and complaints have the potential to strongly affect the retailer's image and reputation (Balaji et al., 2015; Hennig-Thurau et al., 2004). In terms of assessing consumer expectations and (dis)satisfaction, researchers can therefore draw from a large textual database in "naturalistic" digital settings, without having to worry about subjects distorting responses because of the measurement instrument (Nam et al., 2020). Having this amount of data available makes it easier to measure customer satisfaction using proxies that can be extracted from texts. Using both automatized and manual methods, several studies have analyzed the sentiment of online conversations, considering texts as an indicator of the degree of user complaints/positive

feedback and thus of dissatisfaction/satisfaction (Aakash & Gupta Aggarwal, 2020; Gerdt et al., 2019).

Following Holloway and Beatty (2003)'s classification of service failure issues, six main areas can be identified when consumer complaints are expressed online, namely delivery/shipping, website design, customer service, payment, product quality, and security problems. Rosenmayer et al. (2018) extended this framework to include "new" types of complaints emerging from the omnichannel context, such as "bricks-and-mortar" shopping experiences (e.g. customer dissatisfaction with in-store staff), and marketing activities including communications and pricing (i.e., complaints related to advertising campaigns and sales promotions). Rosenmayer et al. (2018)'s classification was used as a starting point in our categorization of comments on the social media pages of consumer electronics retailers. Different areas of service failures/consumer complaints are thus considered as specific triggers of the Amazon effect. We thus aim to disentangle service attributes directly or indirectly by referring to Amazon and their impact on consumer satisfaction.

4 | METHODOLOGY

Content analysis uses systematic procedures to draw significant and replicable inferences from texts (Krippendorff, 2004). This method tends to reduce textual, verbal, or multimedia communication to data that can be also treated from a quantitative point of view (Riffe et al., 2014). Content analysis of "natural conversations" on social media in the retail industry was thus deemed as an appropriate method to reveal Amazon-related retailing attributes and associated consumer expectations.

We used text comments on the social media pages of e-retailers. In particular, we focused on the sentiments expressed by the comments, assuming that this would adequately reflect customer satisfaction (Aakash & Gupta Aggarwal, 2020; Gerdt et al., 2019).

4.1 | Units of analysis and research context

The units of analysis are the comments left by Internet users on the official Facebook pages of Trony, Mediaworld and Unieuro (2016–2018), three large retail groups specialized in consumer electronics in Italy. These three Facebook pages were selected for two reasons. First, they are among the top five specialized retailers in Italy with a market share of around 50% of the total market. Second, a preliminary analysis was conducted to determine the most important electronic retailer chains in Italy in terms of social media presence. During this phase, the Facebook pages of Euronics and Expert (the other two major consumer electronics retailers in Italy) were excluded from the analysis because they were relatively insignificant from a quantitative point of view. Expert has a Facebook presence in single local stores and a national page that is not followed very much by consumers (less than 50 K followers in 2018). In addition, some stores affiliated to

Euronics were also bought by Unieuro in 2017. Appendix reports the main data on these three retailer chains and their social media presence on Facebook.

Large datasets of user-generated content (UGC) on corporate Facebook pages can be used to analyze company-consumer interactions, where users freely express their opinions, discontent, and request help and support (Kawaf & Istanbulluoglu, 2019; Smith et al., 2012; Weitzl & Einwiller, 2020). This matches the cognitive aim of our research by analyzing Amazon's influence on the consumer complaints and in their relationship with other retailers.

The focus on the electronics sector is justified by the fact that it is one of the industries most severely affected by Amazonification in Europe, and particularly in Italy. In 2019 Amazon accounted for 75% of total sales of the online market (1.8€ billion) for consumer electronics, and in Europe around 150,000 jobs are estimated to have been lost in the whole industry due to physical store closures (Gabanelli & Savelli, 2020).

4.2 | NLP procedures

Following procedures in computational linguistics/Natural Language Processing (Bhogal et al., 2007; Jackson & Moulinier, 2007), user-generated content was analyzed in two phases:

1. Extraction of conversations from the whole corpus (92,861 messages) that specifically refer to Amazon, and manual tagging of topics in each message. This phase enabled us to identify specific Amazon's service factors that are not fully met by other retailers and generate consumer complaints. For the classification scheme in this phase 1 (i.e., manual tagging and subsequent keyword extraction), we implemented both data-driven and theoretically-driven approaches. First, we examined a sub-sample of the comments, to identify a starting list of topics and sub-topics. We compared this list with categories identified in the literature on service failures and consumer complaints about omni-channel retailers (Holloway and Beatty, 2003; Jiang et al., 2013; Rosenmayer et al., 2018) in order to decide about the final categories;

2. Identification of relevant keywords for each topic/service attribute identified in Phase 1 and definition of specific associated queries, excluding explicit references to Amazon. In other words, in the subset of comments extracted in Phase 1, we manually labeled the service attributes that customers are unsatisfied with. By combining these keywords through wildcards and Boolean operators, we created specific queries. We then used these queries to inspect the remaining part of the whole initial corpus, excluding the subset of comments mentioning Amazon. We thus generated a second subset of the initial corpus made up of 2763 comments. This procedure followed a manual ontology-based query expansion technique (Bhogal et al., 2007), thus the comments not directly citing Amazon are logically derived from those that cited Amazon. The rationale is to reveal how service

attributes on which Amazon frequently serves as a benchmark also spread to online consumer-generated conversations that do not explicitly mention Amazon as the basis for comparison. In addition, by separating comments based on whether they openly mention Amazon or not enabled us to compare the two corpora and to show their similarities/differences in terms of the sentiment expressed by consumers.

The sentiment of each comment was computed using an algorithm that specifically focuses on the Italian language (Pelosi, 2015). To perform the sentiment analysis, NooJ, a NLP environment, was used (Silberztein, 2015). The main difference between NooJ and other NLP environments is its linguistic engine based on Atomic Linguistic Units, as opposed to simple word forms (Monti et al., 2014). This is particularly interesting for sentiment analysis as it analyzes a text based on predetermined grammar which is made flexible by creating/modifying user-defined queries. The choice of automatic processing with Nooj thus enables the sentiment analysis to be fine-tuned to the specific context (in our case, consumer electronics retailing) and to enhance the replicability of the results (Donabédian et al., 2013). Based on a specific algorithm for sentiment analysis in Italian (Pelosi, 2015), polarized words and their syntactic contexts were isolated within the comments and a score was then assigned to each comment ranging from -3 (extremely negative) to 3 (extremely positive). Following Vitale et al. (2020), we then computed the overall sentiment score of texts by adding the polarity scores of the words/phrases in each comment.

Finally, an additional dataset of consumer reviews was extracted from the Italian version of the Amazon website (Amazon.it), to compare the sentiment scores between Amazon and non-Amazon customers. This corpus was obtained through a web scraper created with R, which firstly randomly collected ASINs (Amazon Standard Identification Numbers) of the products in the first 25 pages of results from the consumer electronics category, and then collected all the textual reviews associated with these products. The search was limited to reviews published between 2016 and 2018, and a total of 4259 reviews was finally obtained.

5 | FINDINGS

The aim of the first step was to identify all the conversations in the entire dataset with a specific reference to Amazon and to classify them by topic. Twenty-one topics were identified with at least one tag per comment (see Table 1).

Not surprisingly, price was the most cited theme with specific reference to Amazon: it represents the main attribute on which consumers' expectations in electronics are focused. Several users point out the convenience of buying on Amazon even when other retailers are offering a promotion or price discounts[1].

Many comments (50) contained evaluations about the customer service, mostly complaining about issues related to response timeliness, difficulties in reaching out to operators, no responses to calls for

TABLE 1 Topics related to the "Amazon effect," number of conversations, excerpts

Topics	N# of comments	Examples of excerpts
Price (marketing activities related to promotions)	74	You could get it one week ago on Amazon for 50€
Customer service	50	Ahahahah I cannot help laughing …they do not know Amazon customer service… forget it…
Shipping/delivery	42	Get better with shipping … otherwise Amazon beats you 1–0
In-store staff (assistance) and shopping experience	19	I will buy it on Amazon so I do not waste 10 hours waiting for one of your sales assistants
Product availability	14	I do not have this problem, if I had wanted the game on Day One, I would have bought it on Amazon (always infallible). If you wanted to get the game on Day One, you should get it elsewhere, not on the Mediaworld website
Return	13	With Amazon's return service, I do not even bother going to see the products in person
Warranty	11	Buy from Amazon. 2 year full guarantee. If you do not want it anymore, they will refund you
Refund	11	Amazon would have already credited you with the total order amount
Online customer experience (website design and usability, payment problems)	8	The most frozen website in the world! Amazon are light years ahead

Note: Only 9 categories with frequencies >10 are reported.

help, impoliteness, and flawed procedures. The other prevalent topic in the corpus of comments citing Amazon concerned shipping/delivery issues. As expected, users buying online are very concerned about the speed with which the products they buy are delivered. Many users of omnichannel retailers, when complaining about delivery issues, tend to directly mention the speed and flawlessness of Amazon's shipping service.

It is also worth noting that in the conversations linked to "in-store staff" and "physical store shopping experience," Amazon was also cited. In most cases, the inadequacy of the sales assistants was linked to better remote customer assistance by Amazon.

TABLE 2 Frequency distribution of polarized expressions

Label	Value	Frequency	Percentage
Very positive	3	173	4.89
Positive	2	1289	36.44
Slightly positive	1	29	0.82
Slightly negative	−1	299	8.45
Negative	−2	1287	36.39
Very negative	−3	460	13.01
Total		3537	100

Other topics mentioned within the corpus of comments citing Amazon were related to the availability of products (especially very new products), the post-purchase service (returns, warranty and refund policies), and the usability of the website. Consumers complained about the retailer's poor website design or payment problems during the check-out process. In all these areas, Amazon is deemed to perform better than other retailers.

In the second phase of analysis, Boolean queries were used to develop ontologies of the topics from the total corpus of 92,861 messages, excluding explicit mentions to Amazon. A manual ontology-based query expansion technique was used to iterate queries and refine the results (Bhogal et al., 2007).[2] This enabled similar topics to be identified in addition to specific references to the e-commerce website. In this second step, topics were further aggregated if they had notable similarities and had a minimum number of comments for each topic (11 topics with a minimum of 40 comments).

The three main macro-categories in which an Amazon-related effect seemed relevant were:

- Customer service (1207 comments), considered as ineffective and slow when implicitly compared to Amazon standards;
- Online customer experience (443 comments) in which consumers identified the low usability of the e-commerce platforms of electronic retailers, obstacles in completing their purchases (payment problems), missing information (or confirmation) regarding their orders, etc., as elements of dissatisfaction;
- Shipping/delivery (229 comments), in which consumers complained about shipping times taking longer than 2 days, considering that Amazon can deliver in 24 h or less.

Further matching related to the Amazon effect was also found in other topics, that is, consumer expectations involving returns & refunds (171 comments), prices (133), in-store staff assistance (68), and product availability (53).

After identifying a corpus of comments on the same topics as the corpus that directly referred to Amazon, we compared the two corpora (i.e., the comments directly citing Amazon and those not citing Amazon) with respect to the per comment sentiment. About half of the expressions were negative in the dataset (Table 2) and nearly 500 expressions were classified as very negative (about 13% of the total), showing the marked dissatisfaction of numerous customers.

We then aggregated the scores related to each single comment to calculate the overall sentiment score. There was no significant difference between the sentiments of comments directly referring to Amazon and the sentiments of those not mentioning Amazon. On average both groups of comments were slightly negative.

Also, the percentages of positive, negative and neutral comments within the two groups (Table 3) were very similar. In general, negative comments were more prevalent than positive ones. This picture was practically the same within the two sub-corpora, highlighting the fact that there was very little difference between the two in terms of sentiment distribution. Confirming this trend, Pearson's Chi-squared test performed on the contingency table was not significant ($\chi^2 = 3.4922$, df = 2, $p > .10$).

The fact that users manifest the same amount of dissatisfaction in comments in which they explicitly refer to Amazon as a benchmark, and in comments where Amazon is not explicitly mentioned, is consistent with our prediction that the service quality of Amazon has raised customer expectations overall and, as a consequence, has made them more dissatisfied with the current quality level of other service providers. In order to directly assess whether the satisfaction toward the e-retailers in our sample is lower than the satisfaction toward Amazon (and thus to verify that Amazon is a positive benchmark), we compared the sentiment of the corpus of Facebook comments with a corpus of Amazon reviews about consumer electronics products in the same time span (2016–2018) to obviate any product category and time effects.

We computed the sentiment score using the same procedure described for the other corpora. We then compared the average sentiment scores of the corpus of FB comments and the corpus of reviews on Amazon's website. The t-test was highly significant (t = 53.283, df = 6973.7, p-value <.001), with 7.42 being the mean sentiment of the Amazon reviews and − 0.7 being the mean sentiment of the comments on e-retailer FB pages. It seems that customers of electronic retailers in our sample were generally dissatisfied with the service they received, especially compared with the satisfaction expressed by Amazon customers.

An additional analysis was carried out to assess which service aspects customers were most dissatisfied with. A one-way ANOVA was performed with per comment sentiment as the dependent variable and the comment topic as the explanatory variable. Statistically significant differences were shown across the comment topics (F [96170] = 8.3687, p-value <.001). The service areas that customers were most dissatisfied with were 'in-store staff assistance," 'returns' and 'replacements', while the areas that received the least negative evaluations (close to 0) were 'online user experience' and 'warranty' (Figure 1). Several users were frustrated by the fact that they were unable to return products physically if they bought them online, or because replacements (or reimbursements) took a very long time.

TABLE 3 Percentages of comments by sentiment category

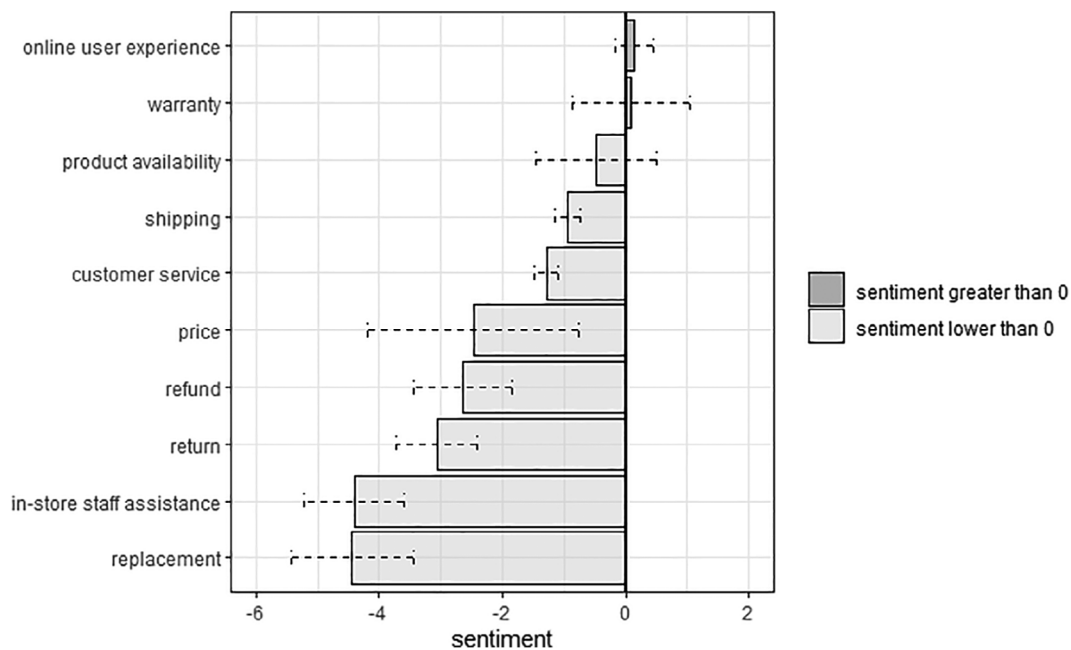|	Negative	Neutral	Positive	Total
Comments citing Amazon	63 (28.4%)	86 (50.0%)	50 (21.6%)	199 (100%)
Comments not citing Amazon	785 (31.7%)	1382 (43.2%)	596 (25.1%)	2763 (100%)
Total	848 (28.6%)	1468 (49.6%)	646 (21.8%)	2962 (100%)

FIGURE 1 Sentiment score of different service aspects

The post-hoc analysis was conducted with the Tukey method for pairwise comparisons which revealed significant differences between comments concerning 'replacement', on the one hand, and, on the other, 'online user experience' ($t = -4.430$, $p < .001$), 'warranty' ($t = -3.302$, $p = .033$) and 'shipping' ($t = -3.467$, $p = .019$). The sentiment of comments in the category 'in-store staff assistance' was significantly different from that of comments in the 'online user experience' ($t = -5.247$, $p < .001$), 'warranty' ($t = -3.594$, $p = .0123$), 'shipping' ($t = -4.140$, $p = .001$) and 'customer service' ($t = -3.732$, $p = .007$). In addition, there were significant differences between 'online user experience', on the one hand, and 'returns' ($t = 4.42$, $p < .001$), 'refunds' ($t = 3.278$, $p = .035$) and 'customer service' ($t = 3.958$, $p = .003$), on the other.

6 | DISCUSSION

This study provides first-hand evidence of the Amazon effect in consumer electronics retailing, in terms of the increasing customer expectations regarding service attributes with an impact on their satisfaction level regarding other retailers.

The identification of various Amazon-related topics in conversations and complaints regarding consumer electronics retailers sheds light on which features make customers prefer Amazon over the competitors. The main attributes are in line with other research that indicates price, customer service and shipping as the main reasons driving consumers to choose Amazon (Epsilon, 2018).

Extending the analysis to conversations not directly citing Amazon (but derived from the Amazon's service attributes), it seems that these same attributes also play a central role when customers compare their experience with Amazon's competitors. In fact, in the Facebook comments that mention Amazon, consumers explicitly state that the quality of service of other e-retailers is considerably lower than Amazon's. Therefore, in these comments, Amazon is clearly considered as a benchmark against which the service should be compared. As a result of this explicit comparison, general dissatisfaction with consumer electronics retailers is expressed. Our analysis reveals that also the group of comments not directly citing Amazon expresses the same level of dissatisfaction. This is consistent with our thesis that Amazon is taken as an implicit benchmark when evaluating other retailers, even when Amazon is not explicitly mentioned.

On a more general level, this evidence consistently fits with the statement that Amazon has increased customers' expectations regarding retailing and therefore has decreased customer satisfaction towards other retailers. In addition, customers that buy through Amazon are generally more satisfied than those that buy through other channels. In fact, the sentiments of Amazon reviews regarding a sample of electronics products were substantially higher than the comments of customers of other retailers selling the same type of products. This is consistent with the fact that, irrespective of the products purchased, the service provided by retailers greatly contributes to the customer satisfaction. The direct comparison of the satisfaction enjoyed by Amazon and by other retailers rules out the possibility that the dissatisfaction is generalized towards retailing in general and it also reinforces the assumption that Amazon is used as a basis for comparison by customers.

However, given the increasing expectations, the service attributes elicited by the comparison with Amazon mostly seem to be dissatisfiers (i.e., attributes more likely to cause customer dissatisfaction) rather than satisfiers (i.e., eliciting customer satisfaction). The items most prone to becoming dissatisfiers are those that are perceived as being essential to the service being evaluated. In other words, dissatisfiers constitute the core of the service experience and are considered by customers as necessary but not sufficient conditions of product performance (Cadotte & Turgeon, 1988; Johnston, 1995). Dissatisfiers engender dissatisfaction when they are perceived as being inferior to expectations, but, in contrast, when higher than expected, they are not likely to result in satisfaction (Bilgihan et al., 2018). Therefore, the Amazon effect may also accelerate the fact that optional attributes of retailing (Dholakia & Zhao, 2010) are increasingly becoming the key attributes of the service offering, since customers consider them as the minimum requirements to be met by all players in the market.

Interestingly, the increase in customers' expectations also seems to spill over from online channels to offline players. In other words, even in dealing with physical shops, customers seem to use Amazon as a benchmark of the shops' customer service. When bricks-and-mortar customers perceive the quality level of employee assistance to be lower than they expected, they are likely to be negative online, and to evaluate services using the set of features they were impressed with in their previous experiences with Amazon. This is in line with the fact that customer expectations tend to increase not only in relation to online retailing services, but also offline stores. This is apparent when customers directly compare offline and online customer services in relation to the various dimensions of the shopping experience (Izogo & Jayawardhena, 2018).

The comparison of the sentiment of comments about Italian retailers across topics shows that the online-specific attributes of retailing do not trigger the highest levels of dissatisfaction. When commenting on attributes such as the online user experience, product availability (which is usually a 'plus' of online stores) and shipping, customers are generally not highly dissatisfied. In fact, they are highly disappointed with other aspects of the service (e.g., product replacements, returns, refunds) that are common to both online and offline channels, and even with aspects that are specific to bricks-and-mortar stores, i.e. in-store staff assistance. These results resonate with Rosenmayer et al. (2018)'s study on the complaints on the Facebook pages of department stores' in which rude/inattentive in-store staff were the primary complaint trigger.

Customers are becoming increasingly accustomed to cross-channel comparisons and tend to expect a minimum level of specific attributes, irrespectively of the channel they use (Flavián et al., 2020). Common practices such as showrooming (i.e., examining a product in an offline store before buying it online) and webrooming (i.e., assessing product information online prior to deciding whether to visit a traditional store; Jing, 2018), show that customers compare

prices across retail channels. In line with these practices, the analysis of service failures drawn from the FB pages of electronic retailers through the sentiments of users suggests that problem-free and rapid replacement or return of products has become the norm, probably influenced by the conditions offered by Amazon. When omnichannel retailers do not meet customers' expectations regarding these aspects, they show frustration.

7 | IMPLICATIONS, LIMITATIONS, AND FURTHER RESEARCH

Today consumers' daily lives—study, work, consumption, and interactions with other people—are highly digitalized (Jackson & Ahuja, 2016). Consumers are buying less from physical stores and more from e-commerce websites, and they are experiencing shopping via multiple channels (Beck & Rygl, 2015).

The results of this study seem to confirm the broad impact of the Amazon effect on consumer expectations in the consumer electronics industry. This can be probably explained as the precise strategy of Amazon to raise the level of different services, thus becoming the standard for all retailers. The result is to make consumers increasingly demanding. Amazon, in fact, has been described as a "global private consumer protection regulator" (Winn, 2016), by setting the minimum requirements that are considered viable in a specific industry, beyond the mere compliance with consumer rights. In this scenario, click-and-mortar retailers must also address the needs of consumers who are completely accustomed to an omni-channel environment where all touchpoints can be used to ask for information and receive assistance. These retailers are struggling to reach the service levels set by Amazon which leads to customer complaints and frustration, thus reducing their overall satisfaction. From a practical standpoint, the study suggests that retail managers need to pay more attention to social media as a primary and dynamic platform for consumer complaints in order to anticipate consumers' expectations, often associated with the standards dictated by Amazon, as well as the design strategies used to deal with their complaints (Istanbulluoglu, 2017; Mei et al., 2019).

The scope of this study is limited by the narrow time span of the data, which prevented us from studying variations in the influence of Amazon on consumer expectations over the long term. Similarly, the focus on one specific retailing sector (i.e., consumer electronics) prevents a more comprehensive understanding of the phenomenon, especially considering the one-stop-shop approach of Amazon's business model.

Further studies are thus needed to confirm and clarify the Amazon effect in all its facets. The dynamics of proximity of different Amazon-related topics also show how consumer preferences cannot simply be associated with one of the categories in isolation, but rather are the result of a set of closely connected services, which enrich the customers experience and generate satisfaction. The importance of the "bricks-and-mortar" shopping attributes could advance the discussion on the Amazon effect, which is usually focused on the price and logistics issues. Future research should investigate the interplay of the different services on the basis of their affinity and the subsequent impact on the satisfaction/dissatisfaction of consumers. This could also pave the way for exploring possible countermeasures for traditional and online retailers.

Lastly, Amazon's strategies in traditional retailing, namely the launch of seven different store formats (e.g., Amazon Go, Amazon 4-star[3]) that leverage on the strengths of its online presence (e.g., dynamic pricing, users' ratings, free return) are likely to further demonstrate that Amazonification is only at the beginning. Its effects are still to be felt and the changes in the retailing environment and in consumer expectations have not yet been fully ascertained.

ENDNOTES

[1] "Price" can be included in the general category of "Marketing activities including communications and pricing" identified in Rosenmayer et al. (2018). We prefer to maintain the label "price" as it was the prevalent theme in this category.

[2] Ex. Query for "Product availability": (((product OR products OR goods) AND ("unavailable" OR out of stock OR sold out OR urgent)) ~ 5) OR ("limited availability" OR "urgent purchase"). An ontology is intended hereby as specification of the conceptualization and corresponding vocabulary used to describe a domain/specific theme.

[3] Amazon Go is a convenience store format in which the check-out process is automated, with customers able to purchase products without using a self-checkout station or being served by a cashier. Amazon 4-star is a store format launched in by Amazon in 2018 which offers on sale only 4-star and above rated products; each product presents online-review cards and electronic shelf labels (ESLs) drawn in real time from Amazon website (Fox Rubin, 2020).

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APPENDIX A.: Consumer electronics retailers' profiles

Company name	N# of points of sale (2018)	N# employees (2018)	Turnover (2018)	FB page URL	Page creation date	Number of followers (2016–18)
Mediaworld Italia (Metro AG group)	≃ 117	5000	2 Mld €	@mediaworlditalia	20 Sep 2010	1.2–1.3 Mil
Trony	≃ 200	3500	1,2 Mld €	@trony	19 Jan 2011	2–300 k
Unieuro	≃ 230	5000	2,1 Mld €	@unieuro	30 May 2011	6–700 k