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ORIGINAL ARTICLE

Characteristics of e-commerce platforms that favor online sales

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Abstract

Purpose – To analyze how e-commerce platform characteristics influence online sales, focusing specifically on Mercado Libre and the fourth-generation Echo Dot (Alexa).

Theoretical framework – The study is grounded in e-commerce and online consumer behavior theories and examines variables such as seller reputation, price, electronic word-of-mouth (eWOM), discounts, product description, and availability.

Design/methodology/approach – An explanatory research design was employed using mixed methods and a retrospective approach. A total of 128 product listings were analyzed using a robust Poisson regression model.

Findings – Product price, textual description, and available units have a significant impact on online sales. Conversely, seller reputation, eWOM volume, and discounts did not demonstrate a significant relationship within this specific context.

Practical & social implications of research – This study contributes to the literature on e-commerce in Latin America, a historically under-researched region. It provides a perspective based on observable variables, thereby complementing previous studies. Practical implications include actionable strategies for optimizing product presentation, pricing, and inventory management in emerging markets such as Colombia.

Originality/value – The research provides empirical evidence regarding the relative importance of distinct e-commerce platform characteristics within a Latin American context. The methodological focus on directly observable variables offers a novel perspective in the field. These findings are highly valuable for sellers and e-commerce platform managers operating in emerging markets.

Keywords: online sales, e-commerce, digital marketing, Mercado Libre.

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1 Introduction

E-commerce has revolutionized commercial transactions, evolving from an alternative channel into the backbone of modern retail. Advances in technology and growing internet penetration have established online sales as a new paradigm of total digital integration (Dai et al., 2022). Customers can use these sales to purchase goods and services directly from sellers through various digital platforms, which eliminates traditional geographical and temporal barriers (Daabseh & Aljarah, 2021).

Online sales are undeniably relevant in the global economy, and recent figures confirm an unprecedented market concentration driven by logistical efficiency. According to eMarketer, Amazon maintained its dominant leadership in 2025, capturing an estimated 40.4% of all U.S. e-commerce retail sales. This figure significantly outpaces competitors such as Walmart (6.4%) and eBay, whose market share has stabilized at around 3.0% (SellersCommerce, 2025). These results reflect a clear trend: consumers are migrating toward the convenience and immediacy of digital shopping. This has led to a structural decline in foot traffic at physical stores (Devi, 2023).

It is important to note that online sales growth is not limited to developed countries. In fact, emerging markets demonstrate greater vitality. In Latin America, for example, Mercado Libre has evolved from a simple auction site to become the fifth most valuable e-commerce company in the world (CompaniesMarketCap, 2024). The platform reached historic milestones in 2024, surpassing 100 million unique annual buyers and recording 57 transactions per second – nearly doubling its 2020 figures (Mercado Libre, 2024). This rapid growth has forced SMEs in the region to go digital. It is no longer just an option for expansion, but a requirement for survival in the face of crises and structural changes in demand (Ortiz-Chávez et al., 2024).

However, the current literature is divided on what actually drives these transactions. Previous studies, including recent research in the Latin American context, have primarily examined latent perception variables such as trust (Vijayan & Venkatesh, 2022), perceived brand ethics (Peña-García & ter Horst, 2025), customer experience (Saha et al., 2022), and perceived risk (Surjandy et al., 2023). These variables are typically assessed using questionnaires. Peña-García and ter Horst (2025) correctly demonstrate that ethics and trust are vital precursors to long-term loyalty on platforms such as Mercado Libre and Rappi. However, in an ecosystem where 57 purchases are processed per second, consumers make decisions almost instantaneously. These decisions depend less on deep ethical introspection at the moment of purchase and more on immediate heuristic cues. This is why perception studies often fail to explain immediate variance in transactional sales volume in high-frequency environments. Therefore, there is a substantial gap in the research on how observable and "hard" platform characteristics – such as price, visible inventory, and information density – act as triggers for immediate conversion beyond brand building. This is consistent with the findings of Dallocchio et al. (2024), who suggest that a presence on established marketplaces is more effective for sales than on proprietary sites due to the standardization of these observable variables.

The academic and practical relevance of this study is justified by the need to understand the "physics of conversion" on established platforms. The study aims to analyze how observable e-commerce platform characteristics influence actual online sales by contrasting classical theories with current operational reality. Specifically, the study examines the effects of six variables: seller reputation, product price, volume of electronic word-of-mouth (eWOM), discounts, textual descriptions, and available units.

This study is important for several reasons. First, by focusing on directly observable variables, it provides a complementary perspective to existing studies based on perceived variables assessed through measurement instruments. Second, by focusing on Mercado Libre, the most important e-commerce platform in the region, it offers valuable insights into the specific dynamics of the Latin American market. Third, the results of this research have practical implications for sellers and e-commerce platform managers. Understanding how e-commerce platform characteristics influence sales can help optimize online sales strategies by improving product presentation and adjusting variables such as price and discounts.

Accordingly, this document is structured as follows. The first section is the introduction. The second section develops the theoretical framework. The third section details the methodology employed in the study, including data collection, analyzed variables, and statistical methods. The fourth section presents the results obtained from the data analysis. The fifth section offers the conclusions of the study, discusses its theoretical and practical implications, acknowledges its limitations, and proposes directions for future studies in this field.

2 Theoretical framework

2.1 E-commerce and the evolution toward platformization

E-commerce has emerged as a fundamental transformation in the way commercial transactions are conducted. It has moved beyond the traditional definition of digital buying and selling, as proposed by Laudon and Guerico (2013). Recent literature, such as Mak (2025), describes a shift toward complex omnichannel strategies where logistics and platforms are inextricably linked. Mak argues that operational innovations such as crowdshipping demonstrate that current success depends on seamless integration across channels. This redefines commerce as an ecosystem where competition for consumer attention and absolute fulfillment efficiency is intense. In this context of high operational demands, Dallocchio et al. (2024) reveal a significant finding for the evolving business landscape: SMEs adopting established third-party platforms (e.g., Amazon or Mercado Libre) achieve notably higher performance than developing proprietary websites. This advantage lies in leveraging a trusted, integrated logistics infrastructure, which allows smaller companies to overcome technological and credibility barriers. Thus, the platform becomes an essential enabler that democratizes access to markets, shifting the focus from channel ownership to intermediation efficiency.

2.2 Seller reputation and its effect on online sales

In the context of e-commerce, where physical interaction between buyer and seller is absent and uncertainty is high, seller reputation plays a fundamental role. Traditionally, research has associated reputation with perceived honesty and customer-centricity (Kas et al., 2023), as well as transaction history, which serves as an indicator of quality for consumers (Agostini et al., 2021). Current platforms allow buyers to easily access this information before making a purchase, thus reinforcing its role in the decision-making process (Dogan & Karacan, 2023).

However, recent research suggests a paradigm shift in the meaning of reputation (Anifowose, 2025). Faruk Görçün et al. (2025) note that security and operational reliability have become the most relevant criteria on modern platforms, surpassing mere popularity. In environments where platforms frequently manage logistics – for instance, through services like Mercado Envíos – seller reputation may shift from signaling "moral honesty" to signaling "technical efficiency," which is associated with shipping times, cancellation rates, and fulfillment of promises.

Signaling theory, proposed by Spence (1978), continues to provide a solid framework for understanding this phenomenon. In situations of information asymmetry, such as in e-commerce, credible signals reduce uncertainty and facilitate transactions. In this context, reputation acts as a signal that buyers use to evaluate sellers' reliability and product quality (Jiao et al., 2022; Yao & Mo, 2022). Resnick et al. (2006) argue that transparency in reputational information has made reputation a determining factor in online purchasing decisions.

From a more recent perspective, Peña-García and ter Horst (2025) argue that consumers trust and have a positive experience with brands that are perceived as ethical. However, it remains unclear whether this ethical perception directly translates into an immediate increase in sales volume or if it merely prevents a loss of trust without generating substantial increases on its own. Meanwhile, empirical evidence suggests that reputable sellers can charge higher prices, achieve higher sales volumes (Jiao et al., 2022), and foster consumer loyalty by increasing satisfaction and trust (Ton & Ton, 2023; Jo, 2023). Taken together, these theoretical and empirical findings suggest that although the nature of the reputational signal is evolving, its impact on business performance remains significant. Reputation continues to function as a key signal of quality, reliability, and efficiency in an environment characterized by high uncertainty.

Therefore, the following hypothesis is proposed: *H1: Higher seller reputation is positively associated with higher online sales volume.*

2.3 Product price and its effect on online sales

In digital environments, product price is a crucial factor and likely the most sensitive variable. Faritzal et al. (2021) define it as the amount of money consumers are willing to pay for the benefits of owning or using a product. This definition is particularly relevant in e-commerce due to the transparency and ease of comparing multiple offers. In this context, price informs the economic value of the product and acts as a signal that directly influences consumer perception and willingness to buy.

Ajzen's (1991) theory of planned behavior provides a useful framework for understanding this effect.

According to this theory, purchasing behavior is determined by intention, which depends on attitude toward the behavior, subjective norms, and perceived behavioral control. In the online environment, price particularly influences consumer attitude, i.e., whether it is perceived as fair or unfair, and perceived behavioral control, i.e., the sense of being able to afford the purchase. Kim et al. (2012) confirm that price is a key predictor of online purchasing decisions; a favorable price improves attitude and increases perceived control, thereby raising the probability of purchase. Reibstein (2002) adds that price is particularly decisive in initial sales, though its influence may diminish in repeat purchases.

Today, however, price dynamics are more complex due to the role of algorithmic recommendation systems. Wan et al. (2025) introduce the concept of "price acceptance latitude," demonstrating that recommending products with significantly different prices than the focal product reduces the probability of purchase. This suggests that price does not operate in isolation but rather in relation to a reference price constructed by the algorithm of the platform. Mao et al. (2025) build on this idea, demonstrating that in dual-channel environments, pricing strategies interact with service policies such as return insurance. This indicates that consumers evaluate prices based on perceived financial risk.

Therefore, pricing on e-commerce platforms becomes a critical and complex task. Hustic and Gregurec (2015) consider it one of the primary business activities, and Victor et al. (2018) emphasize the difficulty of setting the right price in highly transparent contexts. Furthermore, the impact of price varies according to the socioeconomic context. Warganegara and Babolian Hendijani (2022) demonstrate that price is a central determinant of purchase decisions in developing countries. Additionally, Hermiyenti and Wardi (2019) observe that price influences satisfaction and repurchase intentions. Taken together, theoretical and empirical evidence suggests that higher prices tend to generate less favorable attitudes and a lower perception of behavioral control, reducing purchase intention. Therefore, the following hypothesis is proposed: *H2: Higher product prices decrease online sales*.

2.4 Volume of eWOM and its effect on online sales

Electronic word-of-mouth (eWOM) has evolved from a basic feedback mechanism into a significant social validator and indicator of commercial vitality in modern digital ecosystems (Mensah & Mwakapesa, 2022). On high-speed platforms like Mercado Libre, where consumer attention is scarce, the volume of interactions, including reviews and Q&A, serves as a key "social proof" indicator. According to Bandura's social cognition theory (Bandura, 1986), in the face of uncertainty, individuals model their purchasing behavior by observing the aggregate behavior of the crowd. A high volume of activity indicates that the product has been examined and validated by others, thereby reducing perceived risk.

Recent research delves deeper into this transactional dynamic. For example, Chen et al. (2024) analyzed social exchanges within e-commerce communities and demonstrated that interactions involving knowledge sharing or tangible assistance between sellers and buyers have a direct and positive impact on sales performance. This suggests that the volume of eWOM is a visible representation of active customer service and a vibrant community, not merely "noise." Similarly, Peña-García and ter Horst (2025) link these interactions to brand engagement on Latin American platforms. A high volume of eWOM can be interpreted as an observable manifestation of the user base's emotional and behavioral commitment. According to their findings, this level of commitment is a critical precursor to loyalty. Therefore, a post with hundreds or thousands of interactions signals not only popularity but also a brand image capable of sustaining an active relationship with consumers. Finally, Tiutiu et al. (2025) reinforce this technological perspective, noting that interaction characteristics within the online store directly influence purchase intent. In the absence of physical interaction, the density of eWOM substitutes for the "atmosphere" of a busy store and validates the purchase decision through collective confirmation. *H3: The volume of eWOM positively impacts online sales.*

2.5 Discounts and their effect on online sales

Today's digital platforms have evolved to incorporate discounts as strategic tools for visual and algorithmic signaling (Sutherland et al., 2025). Recent literature suggests that their primary function is to make products stand out in a saturated search environment. Ellison and Ellison (2025) argue that although search technologies have reduced transaction costs for consumers, they have paradoxically increased price dispersion and competition. In this context, the discount label acts as a beacon that improves "match quality," enabling consumers to swiftly identify offers that maximize their utility amidst dense listings and facilitating split-second decision-making.

From a technical perspective, Wan et al. (2025) offer valuable insights into how algorithms mediate this relationship. They propose that recommendation systems function within a "price acceptance range." A well-applied discount can reposition a product within the optimal range of an algorithm, thereby increasing its likelihood of appearing in the "recommended" or "similar" sections. This is essential for achieving organic visibility.

However, beyond algorithmic mechanics, the visible discount serves as a simplified heuristic signal. In a study focused on observable variables, the presence of a discount eliminates the need for consumers to calculate the relative value of a product compared to competing products. Faruk Görçün et al. (2025) identify price and promotion factors as essential competitive determinants in e-commerce. The explicit presence of a discount acts as a cognitive shortcut signaling "opportunity," reducing the user's deliberation time and accelerating conversion regardless of the seller's underlying pricing strategy. Considering the evidence presented on the influence of discounts on consumer behavior and their particular relevance in the context of e-commerce, the following hypothesis is proposed: *H4: The application of a discount increases online sales.*

2.6 Product description and its effect on online sales

In transactional e-commerce environments, textual product descriptions constitute much more than a simple listing of technical specifications. They serve as a functional substitute for physical interaction with the seller and the item. Without tactile sensory cues, the informational richness of the text becomes the main way to reduce the information asymmetry that comes with digital purchasing. According to Media Richness Theory (Daft & Lengel, 1986), plain text is traditionally considered a "poor" medium. However, in a standardized marketplace, dense, well-structured descriptions enhance the ability of the channel to reduce ambiguity. These descriptions act as a proxy for the seller's diligence and professionalism.

Recent research, such as that by Yang et al. (2023), has delved into this phenomenon by questioning whether "more information is always better." Their findings suggest that for products with complex or functional attributes, such as the technological device analyzed in this study, the comprehensiveness of textual information directly correlates with purchase intent. This is because detailed text enables consumers to perform a "mental simulation" of the product's use, answering specific questions about compatibility and functionality that images alone cannot address. Thus, the description acts as an ex ante risk management tool. Similarly, Ellison and Ellison (2025) offer an important economic perspective based on "match quality." In markets where searching is inexpensive but evaluating products is time-consuming, textual descriptions drastically reduce cognitive friction costs. They allow buyers to instantly verify whether products meet their specific needs, such as "compatibility with smart plugs" or "software version," thereby preventing future returns. Text not only sells products, but also ensures that sales are appropriate, thereby increasing market efficiency by aligning expectations with reality. Finally, Tiutiu et al. (2025) argue that, from a digital atmosphere perspective, product presentation, where textual narrative is central, contributes to the "atmosphere" of the online store. A carefully crafted, error-free, detail-rich description signals competence and commitment to customer service, which translates into trust in the transaction. On platforms such as Mercado Libre, where multiple sellers offer the same commodity, the quality and depth of the text become observable competitive differentiators that signal a superior level of service. This validates the hypothesis that investment in written content directly drives sales conversion. Therefore, it is proposed that: *H5: The presence of a textual description in product listings has a positive impact on sales.*

2.7 Available units and their effect on online sales

The number of available units is a critical observable signal that consumers use to determine the urgency of a purchase. According to Scarcity Theory, the limited availability of a product increases its perceived value and desirability, acting as a powerful catalyst for decision-making (Cialdini, 2007). In the digital environment, this signal is made even more explicit through stock counters or "limited stock" labels, which are designed to trigger heuristic responses in buyers.

Recent literature supports the validity of this psychological mechanism in modern consumer environments. Avci (2025), in his research on mass-market consumer goods, demonstrates that perceived scarcity directly triggers hoarding behavior and impulsive purchase intent. His findings suggest that the perception of limited supply intensifies loss aversion, overriding rational thought and accelerating the decision-making process.

Although Avci's study focuses on basic goods, the cognitive mechanism is transferable because the fear of missing out (FOMO) drives immediate action to secure the product. Similarly, Chang et al. (2024) validate this phenomenon at the opposite end of the product spectrum with unique digital assets (NFTs). Their results confirm that perceived scarcity significantly drives purchase intent by elevating the value of exclusivity and uniqueness. These results suggest that the principle of scarcity is universal because it applies to securing a basic good before it runs out (necessity) and acquiring a unique good (exclusivity). On the Mercado Libre platform, a visible countdown timer could trigger these same psychological mechanisms by signaling to buyers that the transaction window is closing. Theoretically, this should increase the probability of a sale compared to products with abundant inventory that do not generate a sense of urgency. Therefore, in line with classical theory and the most recent empirical evidence confirming scarcity as a driver of transactional acceleration, the following is proposed: *H6: Online sales will decrease as the number of available product units increases.*

Figure 1 below shows the evaluated research model.

3 Methodology

An explanatory study using a mixed-methods research approach with a retrospective design was elaborated to analyze the effects of platform characteristics on online sales. This design allows for the examination of causal relationships between the variables of interest and online sales.

3.1 Population and sample

The reference population for the study was a specific technological product: the 4th-generation Alexa. This product was chosen because all listings have the same specifications and are from the same brand, allowing for control of external variables related to product characteristics. Convenience sampling was used to select 128 4th-generation Alexa listings on Mercado Libre Colombia (Supplementary Material, Supplementary Data 1 – Dataset).

3.2 Data collection

Content analysis, a research technique that allows for the objective, systematic, and quantitative description of product listing content (Vespestad & Clancy, 2020), was used for data collection. This analysis enabled the categorization and coding of the variables included in the study. Table 1 below summarizes the variable coding (Supplementary Data 3 – Code Book).

3.3 Empirical analysis

After coding the variables included in the research model, an empirical model was applied to test the proposed relationships. First, the independent variables were assessed for collinearity issues. For this purpose, the variance inflation factor (VIF) was calculated, as shown in Table 2.

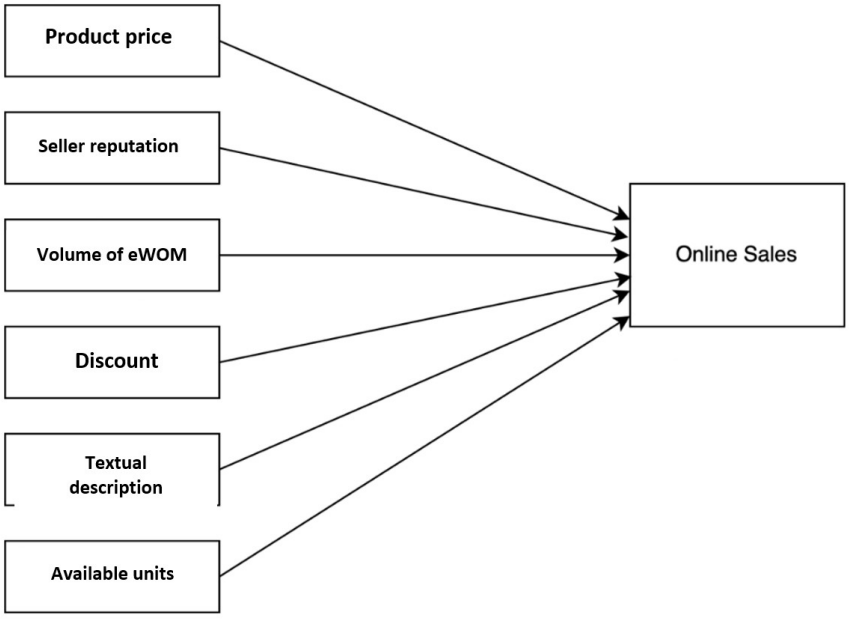

Figure 1. Research Model

As shown in Table 2, all variables fall within the range recommended by Hair et al. (2018).

Table 1
Variable Coding

Variable	Coding
Online sales	Number of units sold of the product reported by the platform.
Seller reputation	Continuous scale: 0 = no visible rating; values from 1 to 5 correspond to the reputation scale reported by the platform.
Product price	Price of the product in its listing (value before applying any discount).
eWOM volume	Number of comments available about the product in its listing.
Discount	Dichotomous variable (1 if the post includes a discount, 0 otherwise).
Textual description	Dichotomous variable (1 if the post includes a description, 0 otherwise).
Available units	Number of units available for sale.

Table 2
Multicollinearity Test

Variable	VIF
Volume of eWOM	1.13
Product price	1.11
Seller reputation	1.08
Discount	1.04
Available units	1.04
Product description	1.04

Therefore, issues of perfect multicollinearity are rejected and the variables are retained in the model. The analysis was conducted using Stata software (Supplementary Data 2 – Stata Script).

The normality assumption was then tested for the dependent variable (online sales), revealing that its distribution completely violated normality. This is to be expected, as it is a count variable. Two good alternatives for estimating models with count variables are: (1) standardizing the variables via logarithmic transformation (De Vries et al., 2012) or (2) applying Poisson regression models, which are ideal for handling count data (Cameron & Trivedi, 2013). In this case, a Poisson regression model was applied, and a robust model was chosen to control for overdispersion issues. Thus, the Equation 1 was set up:

$$ln\left(Y_j\right) = \alpha + \beta_1 Pri + \beta_2 Rep + \beta_3 VolW + \beta_4 Disc + \beta_5 TxDe + \beta_6 AvU \quad (1)$$

where *ln(Yj)* represents the dependent variable "Online Sales." α corresponds to the intercept. *Pri* is the price variable, *Rep* is the seller's reputation, *VolW* is the volume of eWOM, *Disc* is the discount, *TxDe* is the textual description, and *AvU* is the number of available units.

4 Results

We reviewed 128 listings for the Alexa 4th-generation product on Mercado Libre. Tables 3 and 4 present the descriptive statistics for the quantitative and

Table 3
Quantitative Descriptive Statistics

Variable	Mean	SD	Min.	Max.
Online sales	130	630.26	0	5,760
Product price	311,935	129,292.	169,000	750,900
Volume of eWOM	3.765625	9.206	0	58
Seller reputation	3.968	1.756	0	5
Available units	6,375	7.3	1	50

Table 4
Descriptive statistics for categorical variables

Variable	Scale	Frequency	Absolute frequency
Discount	Yes (1)	6	4.7%
	No (0)	122	95.3%
Full product description	Yes (1)	121	94.5%
	No (0)	7	5.5%

Table 5
Model Estimate

Independent variables	Coefficient	Z	P-value
Product price	-0.000386	-3.21	0.001***
Seller reputation	0.097	0.55	0.579
Volume of eWOM	-0.033	-1.01	0.311
Discount	0.599	0.55	0.577
Textual description	3.413	3.25	0.001***
Available units	0.083	5.42	0.000***
Note		128	
Wald Chi-square (6)		91.38	
Prob > Chi^2		0.0000	
Pseudo R^2		56%	

***p < 0.01.

Table 6
Summary of Hypotheses

Hypothesis	Relationship	Observation
H1	Seller reputation → Online sales (+)	Rejected
H2	Product price → Online sales (–)	Accepted
H3	Volume eWOM → Online sales (+)	Rejected
H4	Discount → Online sales (+)	Rejected
H5	Text description → Online sales (+)	Accepted
H6	Available units → Online sales (–)	Rejected

categorical variables, respectively. Regarding the quantitative variables, the average number of units sold per listing was 130, with a standard deviation of 630. The average product price was 311,935 Colombian pesos (SD = 129,292). On average, each listing received 3.7 reviews (SD = 9.2), and the average seller rating was 3.9 (SD = 1.7). Regarding available units, each product listing reported an average of 6.3 units in stock (SD = 7.3).

Regarding the categorical variables, 4.7% of the total listings offer a discount on the product price, and 94.5% provide a complete textual description of the product, in addition to the technical specifications required by Mercado Libre.

After analyzing the descriptive results, we applied the empirical Robust Poisson Regression Model. Its results are reported in Table 5.

According to these results, the model is significant overall, as the Wald statistic, which follows a Chi-square distribution of 91.38, is less than 0.01. Therefore, the model is considered jointly significant. The pseudo R^2 is 56%. However, it is a mistake to interpret this statistic in nonlinear regression models the same way as in linear models (Street et al., 1988); that is, it should not be interpreted as the percentage of variance explained by the model.

The variables seller reputation, volume of eWOM, and discount are not significant since the p-values exceeded the 0.1 threshold, thus rejecting H1, H3, and H4. However, product price was significant at 99% statistical confidence ($p < 0.01$) with a negative sign (-0.0003), supporting H2. Meanwhile, the textual product description and available units were found to be highly significant with a 99% confidence level ($p < 0.01$), and both exhibited positive signs: 3.41 and 0.08, respectively. These findings support H5 and reject H6.

Table 6 summarizes the testing of the proposed hypotheses based on the results of the estimated model. It indicates the expected direction of each relationship and whether it was accepted or rejected according to the empirical evidence obtained.

5 Discussion

The results of this study clearly demonstrate the impact of various e-commerce platform characteristics on online sales, particularly in Latin American contexts, as well as on the marketing of technological products such as Alexa. The analysis focused on six key variables: seller reputation, product price, volume of eWOM, discounts, textual descriptions, and available units.

Contrary to Hypothesis H1, seller reputation was not significantly associated with online sales volume. This finding contradicts previous studies, such as that by Jiao et al. (2022), which found that sellers with high reputations achieved higher sales volumes. One possible explanation for this discrepancy is the nature of the product analyzed, the 4th-generation Alexa. Being a well-known brand, it may lead consumers to trust the manufacturer's reputation more than that of the individual seller on the platform.

This suggests an important refinement to the application of signaling theory (Spence, 1978) to mature platforms. In ecosystems offering robust "buyer protection" guarantees, such as Mercado Libre, the individual seller's reputation loses weight as a critical decision variable, with trust shifting toward the platform and product brand.

On the other hand, product price was found to have a significant negative impact on online sales, thus confirming Hypothesis H2. This finding aligns with Ajzen's (1991) theory of planned behavior and Kim et al.'s (2012) research, which identified price as a key predictor of purchase decisions. The negative relationship between price and sales indicates that consumers on Mercado Libre are price-sensitive. This finding aligns with Warganegara and Babolian Hendijani's (2022) observations about the significance of price in purchasing decisions in developing countries. Beyond basic price sensitivity, this finding underscores the role of the platform's algorithmic transparency (Wan et al., 2025). In the presence of a standardized product, where there is no quality differentiation between units, price ceases to act as a signal of quality, as classical theory suggests, and becomes exclusively a barrier to entry. In this environment of perfect information facilitated by the platform, demand elasticity is maximized. This severely penalizes any deviation above the market price, as Ellison and Ellison (2025) observe regarding the reduction of search friction costs.

The volume of eWOM, however, did not show a significant relationship with online sales, thus rejecting hypothesis H3. This result contrasts with previous studies, such as that by Fan et al. (2021), which found that the volume of eWOM directly influences customers' purchasing decisions. One possible explanation for this discrepancy lies in the nature of the product studied. Since Alexa is a technological commodity, consumers may seek technical validation from sources outside of Mercado Libre. This aligns with Peña-García and ter Horst's (2025) findings that social interaction on the platform primarily fosters long-term brand loyalty and engagement, but does not necessarily trigger immediate transactional conversion for low-risk products. Similarly, Liu et al. (2022a, 2022b) note that the impact of eWOM is not uniform, and the volume of reviews loses predictive power if the depth of the content is not considered. In this case, the global brand (Amazon) already provides social and quality validation, rendering superficial reviews on the reseller's platform redundant for the final decision.

The discount variable did not show a significant relationship with online sales either, which contradicts Hypothesis H4. Although Sutherland et al. (2025) claim that discounts serve as potent visual cues in saturated environments, our data suggest that this signaling alone does not ensure conversion. This result differs from the expected outcome but reinforces the findings of Ren et al. (2022) regarding modern consumer coping strategies. Faced with the proliferation of promotions, consumers become skeptical. As Crespo-Almendros and Del Barrio-García (2016) suggest, discounts only generate satisfaction and sales when the final price is perceived as competitive compared to an internal reference price. This suggests sophistication among Latin American consumers, who, in line with the logic of "price acceptance latitude" (Wan et al., 2025), distinguish between real discounts and manipulations of base prices (cosmetic discounts). This diminishes the effectiveness of the simple "offer" label if it does not entail a verifiable economic advantage.

The textual product description emerged as a highly significant and positive factor for online sales, confirming Hypothesis H5. This finding fully validates Daft and Lengel's (1986) media richness theory, demonstrating that, even in the visual era, dense text reduces ex ante ambiguity. The magnitude of this effect is best explained by the concept of "match quality," proposed by Ellison and Ellison (2025). This concept confirms that a detailed description drastically reduces cognitive friction costs by assuring buyers that specific products meet their technical needs, which images alone cannot communicate. Tiutiu et al. (2025) also noted that the quality of the description contributes to the "atmosphere" of the online store. In other words, a complete and well-written product listing signals the seller's competence and professionalism (Yang et al., 2023), replacing interpersonal trust with informational trust.

Finally, the number of available units was significantly and positively related to online sales, which contradicts Hypothesis H6, which is based on the scarcity principle. This result offers a new perspective on Scarcity Theory in the context of e-commerce in the region. While classical theory suggests that scarcity induces urgency, our findings are more similar to those observed by Cui et al. (2019) on Amazon. Consumers interpret low inventory as a risk of cancellation or delay rather than as exclusivity. In an environment where logistics efficiency is the new competitive advantage, the abundance of visible stock signals operational reliability. Unlike the FOMO effect,

our data suggest the predominance of a supply-guarantee effect: consumers prioritize the certainty that a product will be shipped immediately over the exclusivity of owning a scarce good. This is consistent with Calvo et al.'s (2018) findings regarding utilitarian products.

6 Conclusions and recommendations

This study reveals the key factors that influence the online sales of technology products, such as the 4th-generation Alexa, in Latin America. While these findings offer important insights, they must be interpreted in the context of this specific product type. Price and product description are confirmed as classic determinants; however, the findings related to stock availability and the apparent irrelevance of seller reputation offer new perspectives on consumer behavior on mature, highly competitive digital platforms.

For managers of official stores and sellers operating on platforms like Mercado Libre, the results suggest a substantial shift in operational and strategic approaches. Rather than resorting to traditional tactics of artificial scarcity, such as messages like "only 2 units left," it is recommended that they emphasize inventory depth. Maintaining and displaying high stock levels – for example, more than 50 units – serves as a signal of business strength, operational stability, and the ability to respond immediately to demand. For products with continuous demand, visibility of availability can function as a substitute for trust, reducing the consumer's perception of risk.

Similarly, since the volume of eWOM or reviews did not directly impact immediate conversion for this type of tech product, resources currently allocated to review solicitation campaigns could be reallocated more efficiently to optimize product listings. The focus should be on creating comprehensive, clear, and structured technical descriptions that include specifications, compatibility, uses, and application scenarios. These descriptions act as silent salespeople by reducing cognitive friction, informational ambiguity, and the user's need for additional research during the decision-making process.

Regarding price management, the study shows that consumers primarily respond to the final price rather than the "discount" label. Consequently, dynamic pricing strategies involving small, frequent, and competitive adjustments are more effective than "high-low" schemes characterized by artificially high prices followed by eye-catching discounts. Rather than relying on cosmetic promotions that do not generate real perceived value, managers are advised to use automated price monitoring and adjustment tools to ensure that the base offer remains consistently competitive.

Finally, e-commerce platforms are advised to reconsider and adjust the criteria of their internal visibility and search engine ranking algorithms. Currently, variables such as the seller's historical reputation and click-through rate (CTR) are prioritized. However, the results indicate that it would be more appropriate to place greater weight on the completeness, quality, and clarity of the information presented, as well as the depth of available inventory. This is because these variables show a more direct and consistent correlation with effective conversion in this category of technology products.

7 Limitations and future research directions

This research has limitations that affect the interpretation of the results and suggest future lines of study. Focusing on a single product (the 4th-generation Alexa) and platform (Mercado Libre Colombia) enables control of variables but limits generalizability. Future studies could examine how factors influencing online sales vary by including various products and platforms.

While the sample size of 128 listings allowed for meaningful statistical analysis, a larger sample size could yield more robust results. This limitation stemmed from the difficulty of finding a consistent product across all listings, which is a crucial factor for isolating the effect of the variables of interest without interference from differences in product characteristics. Selecting the 4th-generation Alexa ensured the homogeneity necessary for the internal validity of the study, but it restricted the sample size. Most products on Mercado Libre feature variations that limit the number of listings that meet the homogeneity criterion. Future studies could benefit from larger, more diverse samples to capture a broader range of sales behaviors.

Finally, it is important to note a limitation in the operationalization of the textual description variable. In this study, the variable was coded dichotomously (0 = no description; 1 = description present), which does not capture intermediate nuances or basic descriptions. This simplification may lead to a loss of relevant information. Therefore, future research is advised to use an ordinal scale that more accurately captures the degree of detail and depth of the information provided in the listings.

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SUPPLEMENTARY MATERIAL

This article is accompanied by supplementary material.
Supplementary Data 1 – Dataset
Supplementary Data 2 – Stata Script
Supplementary Data 3 – Codebook

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