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RECEIVED 02 April 2025

ACCEPTED 15 May 2025

PUBLISHED 30 May 2025

## CITATION

Peña-García N and ter Horst E (2025) Loyalty beyond transactions: the role of perceived brand ethics in e-commerce.  
*Front. Commun.* 10:1605171.  
doi: 10.3389/fcomm.2025.1605171

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# Loyalty beyond transactions: the role of perceived brand ethics in e-commerce

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**Introduction:** As digital platforms increasingly shape consumer behavior, understanding the factors that drive customer loyalty has become a critical area of research. This study examines the role of Perceived Brand Ethics (PBE), Trust, and Customer Experience (CX) in fostering Brand Engagement (BE) and their subsequent effect on Loyalty within the e-commerce, food delivery, and transportation sectors.

**Methods:** Using a cross-sectional survey of 1,032 users of Mercado Libre, Rappi, and Uber in Colombia, an emerging economy, data was analyzed through Partial Least Squares Structural Equation Modeling (PLS-SEM) and Multigroup Analysis (PLS-MGA) to test the proposed hypotheses.

**Results:** Results confirm that PBE significantly influences Trust and CX, enhancing consumer perceptions and impacting BE through different pathways. While CX strongly predicts BE, Trust does not directly affect engagement. Additionally, BE demonstrates a robust effect on Loyalty, underscoring the importance of emotional connections in digital consumer relationships. Platform-specific differences highlight variations in these relationships across service categories.

**Discussion:** This study contributes to the literature by integrating ethical perceptions into engagement and loyalty models while offering managerial implications for digital platforms seeking to strengthen customer relationships through ethical transparency, experience optimization, and engagement strategies. These findings provide actionable insights for enhancing and sustaining competitive advantage in digital platforms.

## KEYWORDS

perceived brand ethics, e-commerce platforms, loyalty, trust, customer experience, brand engagement

## 1 Introduction

As e-commerce platforms become ubiquitous, they change where we shop and reshape the entire consumer experience with a simple swipe or click. Platforms such as Mercado Libre®, Rappi®, and Uber® have become integral components of daily life in the Latin American market, enabling users to shop, order food, purchase medications, request favors, or schedule transportation services through a mobile application. This shift toward digital commerce has garnered significant academic interest in understanding the factors influencing customer loyalty within ecosystems (Felix and Rembulan, 2023).

The global e-commerce market is projected to reach \$6.4 trillion by 2025 (Statista, 2023). Mercado Libre, Rappi, and Uber are particularly influential in Latin America, as they have tailored their offerings to regional needs while promoting convenience and accessibility for diverse audiences (Statista, 2024b, 2024a). As these platforms grow and new players enter the market, cultivating and sustaining customer loyalty has become increasingly pertinent.

Customer loyalty has consistently been linked to increased corporate profitability, as loyal customers make repeat purchases and recommend brands to their close networks (Peña García et al., 2018). These recommendations are exponentially more effective in driving sales than any form of communication directly managed by the company (Algamash et al., 2022).

Understanding customer loyalty in the digital age requires examining key antecedents such as customer experience (Ertemel et al., 2021) and brand engagement (Khan et al., 2019). However, contemporary evidence highlights the growing need for consumers to perceive an alignment between their values and those of the brand (Voorn et al., 2020). In this context, customer loyalty has evolved beyond traditional factors such as service quality and convenience. Today's digital customers expect more from the brands they interact with, seeking functional and symbolic benefits. This shift has elevated factors such as transparency, social responsibility, and ethical practices to critical areas for investigation in consumer behavior science (Kailai and Bustami, 2024). Consequently, brands must demonstrate their commitment to ethical values to build long-term commercial customer relationships (Markovic et al., 2018).

The rise of e-commerce platforms has profoundly transformed consumer behaviors, embedding digital services into daily routines across the globe. In Latin America, dominant platforms such as Mercado Libre®, Rappi®, and Uber® have not only reshaped traditional markets but have also integrated themselves deeply into consumers' lives by offering services ranging from online shopping and food delivery to transportation and financial solutions. Mercado Libre leads the region's e-commerce landscape with approximately 668 million monthly visits, surpassing competitors like Amazon in market dominance (Statista, 2024a). Similarly, Rappi, hailed as Latin America's "super app," operates in nine countries, including its origin market of Colombia, where its valuation exceeds \$5.4 billion (Statista, 2024b). With operations in 10 Colombian cities and over 400 million rides completed, Uber has fundamentally altered urban mobility while providing economic opportunities to thousands of families (La República, 2023).

However, despite widespread adoption, these platforms have been subject to persistent and increasingly visible ethical criticisms that directly challenge consumer trust and perceptions of corporate integrity. Rappi, for instance, has been at the center of labor-related controversies across Latin America, particularly in Colombia, where delivery workers have protested the lack of formal labor protections, wage instability, and algorithmic control over work conditions (Elicabide et al., 2024). This precariousness undermines the company's image as a responsible employer and raises concerns about fair treatment and worker welfare—two elements consumers frequently associate with ethical business conduct (Edelman Trust Barometer, 2023).

Uber has similarly been criticized for its handling of labor rights. Investigations have highlighted how drivers face limited protections, with classifications as independent contractors rather than employees, resulting in lower benefits, no paid leave, and no social security contributions (The Guardian, 2022). Additionally, in the Colombian context, Uber has faced increasing scrutiny not only for labor-related controversies common to other regions but also due to its operational practices' growing informality and opacity. Uber no longer enforces technical or legal minimum standards for vehicles or drivers, unlike its early implementation phase. The platform allows vehicles to operate without requiring the driver to be the registered owner. As a

result, many individuals acquire low-cost vehicles—often with inadequate mechanical conditions—and lease them to others, creating a secondary labor market with minimal oversight. These third-party drivers are usually hired without thorough background checks or verification of criminal records, raising serious concerns about passenger safety and traceability.

This decline in quality and accountability has coincided with increasing competition from newer ride-hailing apps offering lower fares and more transparent terms for users and drivers. While Uber maintains relatively high pricing, it has not adapted its service standards to justify this premium in a more competitive market. This declining service quality, operational informality, and safety concerns undermine consumer trust. It challenges the platform's ethical credibility in the eyes of its Colombian users—particularly in a market where labor fairness and user protection issues are gaining prominence (2024 Edelman Trust Barometer Colombia, n.d.; Edelman Trust Barometer, 2023).

On the other hand, Mercado Libre, while dominant in the regional e-commerce landscape, has been subject to criticism for the proliferation of counterfeit and unauthorized products on its marketplace, as well as complaints regarding dispute resolution inefficiencies and opaque seller accountability (ANDI, 2022). These issues weaken consumer confidence in the platform's integrity and its ability to ensure fairness in commercial interactions. Regulatory bodies in several countries have called for greater content moderation and stronger compliance mechanisms, particularly to protect consumer rights and intellectual property.

Taken together, these criticisms go beyond isolated reputational risks. They reflect systematic tensions between platform business models and societal expectations of ethical conduct, especially in Latin America, where labor informality, inequity, and regulatory gaps heighten public sensitivity to corporate responsibility (Gezahegn et al., 2024). Addressing these concerns is not only a matter of public image but a strategic imperative for securing long-term customer loyalty. Consumers are increasingly inclined to penalize brands they perceive as unethical by disengaging or turning to competitors (Blanco-González et al., 2021), reinforcing the relevance of perceived brand ethics as a determinant of trust, engagement, and retention.

The critical issue these platforms face is balancing rapid growth with evolving consumer expectations for ethical conduct. In the digital economy, loyalty is no longer defined solely by service quality and satisfaction; it increasingly hinges on whether a company aligns with the values of its users (Islam et al., 2021). Reports reveal that Latin American consumers expect companies to take clear stances on issues such as employee welfare (90%), climate change (86%), and economic inequality (77%), highlighting the region's heightened sensitivity to corporate social responsibility (CSR) (Edelman Trust Barometer, 2023). CSR is a company's voluntary commitment to integrate ethical, social, and environmental considerations into its operations and relationships with stakeholders beyond what is legally required (Fatma et al., 2020).

Despite their market dominance, these platforms have yet to fully address the gap in integrating ethical considerations into their business strategies. Existing research on customer loyalty in e-commerce often focuses on conventional factors like service quality and user experience (Gallarza et al., 2011). However, little attention has been paid to how perceived ethical behavior influences loyalty in digital platforms, where transparency, fair treatment of workers, and data privacy are paramount

(Toukabri, 2023). This gap is particularly significant in Latin America, where platforms face unique social and economic pressures to operate responsibly while fostering customer trust (Gezahegn et al., 2024).

Moreover, existing literature on CSR and ethical marketing often centers on their impact within traditional industries, leaving a significant gap in understanding how these dynamics operate in the digital economy (Islam et al., 2021). For example, while studies highlight the positive impact of CSR initiatives on brand reputation and financial performance (Tanveer et al., 2021), they do not adequately explore how these initiatives translate into consumer loyalty in the unique context of digital platforms. These ecosystems' dynamic and rapidly evolving nature demands a reassessment of loyalty frameworks to incorporate ethical considerations as a central component. Specifically, the role of Perceived Brand Ethics (PBE) in shaping key consumer outcomes—such as trust, customer experience, and engagement—remains underexplored in platform-mediated environments, where consumer interactions are often algorithm-driven, anonymized and occur without direct human contact. Existing studies focus on the traditional retail or corporate context (De Kerviler et al., 2022; Oh et al., 2023; Amani, 2024), overlooking the complex ways ethical perceptions operate in B2C and C2C digital models.

In Latin America, this gap is particularly pronounced. The region presents a unique context where socio-economic disparities, heightened consumer activism, and increasing awareness of corporate accountability converge to shape consumer expectations (Edelman Trust Barometer, 2023). Recent surveys reveal that 61% of Latin American consumers believe companies are not doing enough to address social issues such as climate change and economic inequality. In comparison, over 90% expect business leaders to address employee welfare publicly (Edelman Trust Barometer, 2023). These findings underscore the growing demand for businesses to align their operations with broader social and environmental values.

Despite this pressing need, few studies have examined how perceived ethical behavior impacts customer loyalty, specifically within the context of Latin American digital platforms. This omission is significant, as consumers' ethical expectations in this region are likely shaped by its unique cultural, economic, and social dynamics (Toukabri, 2023). Furthermore, the competitive pressure faced by platforms like Mercado Libre, Rappi, and Uber amplifies the importance of addressing this gap. As these companies expand their services and integrate deeper into consumers' daily lives, failing to meet ethical expectations risks alienating their customer base and diminishing their market share.

This study seeks to bridge this gap by examining how the perception of ethical behavior impacts consumer loyalty in digital ecosystems. As consumers increasingly demand more than just functional benefits, platforms must innovate technologically and ethically to sustain competitive advantage. By incorporating ethics as a central variable in loyalty models, this research aims to provide a comprehensive framework for understanding and addressing the evolving expectations of today's digital consumers (Chen et al., 2023). This framework is particularly relevant for platforms like Mercado Libre, Rappi, and Uber, which must balance operational efficiency and ethical accountability to maintain leadership in Latin America's dynamic market landscape.

## 2 Theoretical background and research hypotheses

Ethical considerations are emerging as pivotal in shaping consumer perceptions and decisions, particularly in platform-based

industries where trust, experience, and engagement play critical roles. This section outlines the theoretical underpinnings of the variables central to this study—perceived brand ethics, trust, customer experience, brand engagement, and loyalty—and proposes hypotheses based on their interrelationships.

### 2.1 Perceived brand ethics (PBE)

Perceived Brand Ethics (PBE) has become a key construct in understanding consumer-brand relationships in an era of heightened ethical awareness among customers. This concept encompasses customers' evaluations of a brand's moral conduct, transparency, and alignment with societal values (Khan and Fatma, 2023). Its relevance has grown with increased consumer awareness of ethical practices, especially in digital markets and platform-based businesses. As brands navigate the challenges of maintaining consumer trust and loyalty, PBE emerges as a cornerstone in these relationships, playing a pivotal role in shaping engagement and fostering long-term commitment (Kumar et al., 2023).

PBE, also called Consumer Perceived Ethicality (CPE), emerged from the need to understand how consumers evaluate the ethicality of companies and brands. Rooted in empirical studies, this concept was developed to capture the multifaceted and complex nature of consumer ethical judgments, which are influenced by both consequentialist and non-consequentialist principles (Brunk, 2012). Early research on CPE identified six domains shaping consumer perceptions: the impact on consumers, employees, the environment, overseas communities, local economies, and the broader business community. These findings highlighted that consumer ethical evaluations extend beyond traditional definitions of ethics, reflecting a rich tapestry of interrelated factors that influence how ethicality is perceived across different contexts (Brunk, 2010).

The relationship between PBE and consumer loyalty is deeply rooted in emotional constructs such as brand identification and love. Khan and Fatma (2023) demonstrate that CPE significantly influences brand identification, which acts as a mediator in strengthening brand commitment. This finding underscores the strategic importance of integrating ethical principles into brand narratives to build emotional alignment and deepen consumer trust.

In digital contexts, PBE has a transformative effect on consumer engagement. Kumar et al. (2023) highlight that ethical brand communication enhances perceptions of brand integrity, thereby increasing participation in online brand communities. This dynamic suggests that ethical branding facilitates transactional interactions and cultivates a sense of belonging, critical for sustaining active consumer engagement in virtual environments.

CSR initiatives are another critical avenue through which PBE is operationalized. Dangaiso et al. (2024) explore how economic and social dimensions of CSR enhance brand credibility, particularly in emerging economies. Their research illustrates that PBE amplifies the impact of CSR efforts, aligning brand actions with consumer values to foster positive attitudes and stronger brand preference. Similarly, Wei et al. (2024) emphasize the interplay between morality and ethics, suggesting that these dimensions contribute to a robust framework for brand value. Morality, characterized by cooperation and prudence, complements ethics, focusing on compliance, fairness, and honesty, enhancing consumer perceptions and brand equity.

The risks of failing to uphold ethical standards are equally profound. Nichols et al. (2023) demonstrate that lapses in sustainability practices damage brand ethics and diminish product quality perceptions and purchase intent. This finding highlights the critical stakes of maintaining ethical branding, particularly in high-visibility markets with intense consumer scrutiny. PBE also plays a strategic role in fostering brand engagement through constructs such as brand love and loyalty. Khan et al. (2024) reveal that perceived ethics drive brand love, an emotional attachment that enhances consumer trust and satisfaction, ultimately leading to loyalty. These findings position PBE as a central mechanism for retaining consumers in competitive, technology-mediated ecosystems.

Despite its importance, gaps remain in understanding PBE across different cultural and economic contexts. Much of the existing research focuses on established markets, leaving the implications of PBE in emerging economies and digital ecosystems underexplored.

## 2.2 Trust

Trust is fundamental to building and sustaining customer loyalty, especially when repeated interactions and long-term relationships are pivotal. In marketing, trust reduces perceived risk and fosters emotional connections between consumers and brands, creating a pathway to loyalty. Research consistently highlights trust as a mediator between consumer satisfaction and loyalty, reinforcing its importance in relationship marketing and customer retention strategies (Hameed et al., 2024).

Conceptually, trust in the context of branding is rooted in Aaker's brand equity theory, which posits that substantial brand equity is built on dimensions such as brand loyalty, perceived quality, and brand associations, including trust (Aaker, 1991). Trust is defined as the willingness of consumers to rely on a brand's competence, integrity, and reliability, particularly under conditions of vulnerability or uncertainty (Cowles, 1997). Aaker's framework highlights trust as a central construct in creating and sustaining consumer-brand relationships by fostering confidence and reducing skepticism in transactional and non-transactional interactions (Seo and Roh, 2025).

The theoretical foundation of trust is further supported by its integration into broader frameworks like the Technology Acceptance Model (TAM) and the Stimulus-Organism-Response (SOR) model (Mehrabian and Russell, 1974; Davis, 1989). These theories highlight trust as a mediator that connects consumer perceptions to behavioral responses, such as loyalty or purchase intention. For example, in e-commerce, trust in a platform mitigates perceived risks and enhances purchase intentions, as seen in the adoption of blockchain-based systems for food traceability (Duong et al., 2024). This underscores trust's critical role in bridging the gap between consumer expectations and brand performance.

The relevance of trust remains unwavering in contemporary marketing research, particularly in digital and collaborative platforms. As brands increasingly operate in environments mediated by technology, trust becomes vital for fostering consumer loyalty and engagement. Studies on consumer interactions with artificial intelligence (AI) systems and online platforms reveal that trust significantly affects adoption intentions and long-term usage, particularly in settings where perceived risks are high (Ding and Najaf, 2024; Ma et al., 2025). This aligns with the focus of this research,

where trust is examined as a driver of loyalty in digital collaborative economy platforms.

The enduring importance of trust in marketing research is evident in its capacity to evolve with emerging consumer needs and technological advancements. Researchers can uncover nuanced insights into how trust mechanisms operate in complex ecosystems by integrating trust into consumer behavior studies on digital platforms. These positions trust as a central construct for understanding and enhancing brand engagement and loyalty in contemporary markets.

According to existing literature, PBE plays a fundamental role in shaping consumer trust, a cornerstone of long-term customer-brand relationships. The literature consistently demonstrates a significant positive relationship between PBE and trust, supported by findings across various sectors and cultural contexts.

Consumers are more likely to trust brands they perceive as ethical because ethicality signals alignment with societal values, transparency, and moral integrity (Yang et al., 2009). Empirical evidence indicates that PBE positively impacts trust in fast-moving consumer goods, services, and online shopping platforms (Fatma and Rahman, 2017; Kanwal and Siddiqui, 2021). For instance, Kanwal and Siddiqui (2021) found that perceived ethicality significantly enhances trust in service sectors such as banking, restaurants, and telecom, emphasizing the generalizability of this relationship.

The mechanisms underlying this relationship often involve mediating factors such as brand love and affective commitment. Markovic et al. (2018) highlight that affective commitment, driven by positive perceptions of ethicality, strengthens consumer trust and, consequently, loyalty. These mediators emphasize the emotional bonds formed between consumers and ethically perceived brands, further solidifying trust as a precursor to loyalty. Thus, we present the first research hypothesis.

*H1. PBE in digital platforms has a direct and positive effect on customer trust.*

## 2.3 Customer experience (CX)

Customer experience (CX) has emerged as a critical determinant of customer loyalty and satisfaction in modern marketing strategies. It is a multidimensional construct encompassing every customer interaction with a brand, from pre-purchase considerations to post-purchase evaluations. As businesses increasingly compete on experiential value, understanding and managing CX is crucial for fostering long-term customer relationships and sustainable brand success.

The significance of CX in building customer loyalty is well-documented. CX bridges customer perceptions and behavioral outcomes, influencing satisfaction, repeat purchase intentions, and advocacy. Studies have shown that CX quality directly impacts customer retention, with higher-quality experiences leading to stronger emotional connections and brand commitment (Eskiler and Safak, 2022). Furthermore, CX contributes to loyalty through its effects on brand trust, satisfaction, and emotional engagement (Guan et al., 2021; Ahmad et al., 2022).

The conceptualization of CX originates from experiential marketing theories, which emphasize the importance of creating memorable and immersive experiences. Schmitt's strategic experiential



modules, encompassing sensory, affective, cognitive, physical, and relational dimensions, provide a foundational framework for understanding CX. This theoretical basis has been adapted across industries, highlighting the universality of CX as a construct while accommodating sector-specific variations (Chahal et al., 2022; Felix and Rembulan, 2023).

The relevance of CX continues to evolve with advancements in technology and changing consumer expectations. CX is pivotal in shaping consumer engagement and satisfaction in digital ecosystems. Factors such as user interface design, personalization, and seamless omnichannel integration are increasingly recognized as critical drivers of positive CX. Studies in e-commerce and digital wallets highlight the transformative impact of CX on fostering customer trust and loyalty in technology-mediated environments (Ahmad et al., 2022; Vatsa et al., 2023).

Perceived Brand Ethics (PBE) may significantly contribute to developing positive customer experiences (CX) in digital ecosystems by fostering trust and emotional engagement. Ethical practices, such as transparent communication, fair pricing, and responsible data handling, reduce perceived risks and enhance customer satisfaction, particularly in e-commerce platforms (Yang et al., 2009). Fatma et al. (2016) emphasize that consumers are likelier to associate ethical brands with reliability and value alignment, which leads to higher satisfaction and trust. This is especially critical in B2C and C2C platforms, where ethicality becomes a differentiator in highly competitive digital marketplaces.

In addition to trust, PBE enhances CX by evoking positive emotional responses and strengthening consumers' perceptions of value during their interactions with a brand. Research highlights that ethical brands create a sense of security and fairness, which amplifies consumers' emotional connection to the brand. These findings underscore PBE's pivotal role in shaping favorable experiences, particularly as digital platforms evolve to meet growing consumer expectations (Wang et al., 2025). Thus, we propose the research hypothesis 2.

*H2. PBE in digital platforms has a direct and positive effect on CX.*

## 2.4 Brand engagement

Brand engagement (BE) is a central construct in contemporary marketing, representing the cognitive, emotional, and behavioral connections consumers form with brands. As businesses increasingly compete in dynamic and technologically mediated environments, brand engagement has become crucial for fostering customer loyalty, brand equity, and long-term relationships.

Research supports the significance of brand engagement in building loyalty. Engagement strengthens the emotional connection between consumers and brands, creating a pathway to behaviors such as repeat purchases and positive word-of-mouth. For instance, Farhat et al. (2020) demonstrate that brand engagement mediates the relationship between brand experience and customer-based brand equity, highlighting its centrality in loyalty-building frameworks. Engagement influences critical outcomes such as positive word-of-mouth and brand attachment, further solidifying its role in sustaining long-term consumer relationships (Bahri-Ammari et al., 2021).

The importance of BE extends to its influence on brand loyalty, with empirical studies consistently showing that higher engagement levels result in stronger customer retention and advocacy. For instance, Wang et al. (2025) illustrate that consumer engagement through interactive digital environments, like live commerce platforms, significantly impacts purchase intentions and sales performance. This highlights the construct's capacity to drive both emotional and transactional loyalty.

In e-commerce, BE has emerged as a vital factor for success, particularly in B2C and C2C platforms (Brodie et al., 2013). The dynamic nature of these platforms, where consumers seek personalized, interactive, and trust-driven experiences, underscores the need to examine engagement as a determinant of loyalty and purchase behavior (Choirisa et al., 2025). Found that gamification significantly enhances emotional and social engagement, improving loyalty in online travel agent platforms and reflecting the applicability of BE in digital ecosystems.

Despite its extensive application, significant opportunities remain to deepen the understanding of BE in e-commerce platforms. For B2C platforms like Amazon and Mercado Libre and C2C platforms like Rappi and Uber, BE can serve as a strategic lever for cultivating consumer trust, reducing perceived risks, and enhancing long-term loyalty. Research in these areas is fundamental, given the increasing reliance on digital platforms for everyday transactions and the competitive landscape of online marketplaces.

While brand engagement has been extensively studied, its role in digital commerce platforms, particularly in B2C and C2C environments, remains an active area of research. The increasing reliance on e-commerce platforms for everyday transactions highlights the need to examine how perceived brand ethics, trust, and CX influence engagement. Ethical brand practices, strong consumer trust, and positive experiences contribute to deeper emotional and behavioral connections with brands, ultimately fostering long-term loyalty. Understanding these relationships in digital marketplaces can provide valuable insights into strengthening consumer-brand interactions and enhancing competitive positioning.

### 2.4.1 PBE and BE

PBE plays a fundamental role in shaping consumer attitudes and behaviors, particularly in digital commerce, where ethical considerations influence brand trust and emotional connections. Ethical brand practices, such as transparency, fairness, and responsible data handling, strengthen consumer-brand relationships by fostering positive perceptions and reducing skepticism (Yang et al., 2009). Studies indicate that when customers perceive a brand as ethical, they are more likely to engage with it at cognitive, emotional, and behavioral levels, leading to increased interaction and advocacy (Khan and Fatma, 2023). In e-commerce settings, where consumer trust is crucial due to the lack of direct physical interactions, ethical brand conduct drives brand engagement by reinforcing a sense of reliability and value alignment (Wang et al., 2022). Thus, we propose the following research hypothesis.

*H3. PBE in digital platforms has a direct and positive effect on BE.*

### 2.4.2 Trust and BE

Trust is a key determinant of brand engagement, particularly in digital commerce, where perceived risk is often higher. When

consumers trust a brand, they are more likely to engage with its content, participate in brand communities, and exhibit long-term commitment (Kumar et al., 2023). Research in live commerce and online retailing suggests trust enhances engagement by reducing perceived uncertainty and increasing consumers' willingness to interact with brands (Wang et al., 2025). Moreover, trust fosters a deeper emotional connection with the brand, increasing advocacy and loyalty in B2C and C2C platforms (Zeng et al., 2025). Given the nature of digital marketplaces, where brand interactions are mediated by technology, trust becomes a crucial factor in driving engagement and sustaining consumer relationships.

H4. Trust in digital platforms directly and positively affects BE.

### 2.4.3 CX and BE

Customer experience (CX) is widely recognized as a critical factor influencing brand engagement, as positive experiences enhance consumer satisfaction and brand interaction. Digital platforms rely on seamless user experiences, personalization, and omnichannel integration to strengthen engagement (Al-Hattami et al., 2023). Research indicates that consumers with positive experiences with a brand are more likely to engage with its digital content, recommend it to others, and exhibit higher brand loyalty (Pires et al., 2024). Additionally, Wang et al. (2025) found that in e-commerce, a well-designed CX, supported by ethical brand practices and trust-building mechanisms, fosters deeper engagement by enhancing perceived value and emotional connections.

H5. CX has a direct and positive effect on BE.

## 2.5 Loyalty

Loyalty has emerged as a cornerstone of modern marketing, evolving from traditional consumer retention strategies to a multifaceted construct essential for long-term business success, particularly within e-commerce. Defined as a consumer's commitment to consistently choose and advocate for a brand, loyalty encompasses both behavioral and attitudinal dimensions (Khoá and Huynh, 2022). Behavioral loyalty manifests through repeated purchases, while attitudinal loyalty reflects an emotional connection and a sense of trust and satisfaction toward the brand (Ghali, 2021; Monoarfa et al., 2024). These dimensions are increasingly interwoven as digital platforms reshape consumer experiences and redefine the pathways through which loyalty is cultivated and sustained.

The conceptual origins of loyalty can be traced to relationship marketing theories that emphasize long-term consumer engagement to secure competitive advantage (Elbeltagi and Agag, 2016). Over time, the construct has evolved to encompass digital interactions, leading to e-loyalty, defined as consumers' commitment to an online platform despite the absence of physical interactions (Farmania et al., 2021). This evolution has been particularly significant in e-commerce, where trust, perceived value, and seamless customer experiences are paramount in fostering long-term consumer relationships (Wu et al., 2024). E-loyalty is influenced by transactional factors such as product quality and service reliability and the emotional and psychological benefits consumers derive from their interactions with online platforms (Moriuchi, 2019).

In the context of digital commerce, loyalty is shaped by unique factors that differentiate it from traditional retail settings. E-commerce platforms like Amazon, Mercado Libre, and Rappi leverage personalized recommendations, user reviews, and interactive customer service to enhance consumer engagement and foster loyalty (Dong et al., 2025). These platforms create ecosystems where consumers' repeated interactions build familiarity and trust, reinforcing their long-term commitment to the brand (Chen et al., 2022). Moreover, loyalty programs, such as point-based reward systems and subscription services, further incentivize repeat purchases by offering tangible benefits that enhance the perceived value of continued engagement (Jin et al., 2024).

The significance of loyalty within e-commerce extends beyond individual transactions to encompass broader consumer behaviors, including word-of-mouth recommendations and brand advocacy (Zhang and Li, 2024). This is particularly evident in social commerce, where consumers' online interactions and shared experiences influence their peers' purchasing decisions (Sajjad and Zaman, 2020). Technological advancements such as artificial intelligence (AI) and voice assistants have transformed loyalty by enabling personalized customer interactions that foster deeper emotional connections with brands (Ranjan and Upadhyay, 2025).

Despite its well-established theoretical foundations, loyalty remains a dynamic and evolving construct, particularly in the context of digital platforms. The shift from transactional to experiential loyalty reflects the growing importance of customer experience (CX) in shaping long-term consumer relationships (Dirsehan and Cankat, 2021; Taheri et al., 2024). Positive CX enhances consumer satisfaction and strengthens emotional bonds with brands, leading to higher engagement and repeat purchases (Do et al., 2023). Moreover, trust and perceived brand ethics (PBE) are pivotal in fostering loyalty, especially in e-commerce environments where consumers rely on digital cues to assess a brand's reliability and integrity (Agag and El-Masry, 2016; Ghali, 2021).

Given the increasing competition in digital marketplaces, understanding the mechanisms that drive loyalty is crucial for sustaining long-term consumer relationships. Future research should explore the interplay between trust, CX, and engagement within the context of B2C and C2C platforms, where consumers' interactions are shaped by both platform design and peer influence. Additionally, examining the role of emerging technologies such as blockchain and augmented reality (AR) in enhancing transparency and personalization can provide valuable insights into the future of loyalty in digital commerce. By advancing the theoretical understanding of loyalty within this evolving landscape, scholars can offer practical recommendations for businesses seeking to build enduring consumer relationships in an increasingly omnichannel world.

Brand engagement (BE) has been widely recognized as a key determinant of customer loyalty, particularly in digital commerce. This engagement enhances consumers' sense of belonging and identification with the brand, strengthening their commitment and intention to continue using its products or services (Khan and Fatma, 2023; Liu et al., 2023). Research in e-commerce platforms indicates that higher levels of brand engagement lead to increased repeat purchases, positive word-of-mouth, and long-term loyalty, as consumers perceive more excellent value and emotional connection through their interactions (Monoarfa et al., 2024; Wang et al., 2025). Furthermore, digital environments such as social media and online communities amplify this relationship by enabling consumers to interact with the brand and other users, fostering a sense of

community that reinforces loyalty (Sajjad and Zaman, 2020; Zhang and Li, 2024). Consequently, BE serves as a critical antecedent of loyalty, as engaged consumers are more likely to exhibit both attitudinal and behavioral loyalty, sustaining their long-term commitment to the brand.

H6. BE has a direct and positive effect on loyalty.

Figure 1 presents the research model.

3 Materials and methods

To test the research model and evaluate the proposed hypotheses, we suggest conducting a cross-sectional quantitative study on customers of three digital platforms: Uber, Mercado Libre, and Rappi. This approach will allow us to analyze consumers’ perceptions and behaviors across different service categories, including transportation, e-commerce, and food delivery, providing a comprehensive understanding of the factors influencing brand engagement, trust, customer experience, and loyalty within digital collaborative platforms.

We used the PLS-SEM approach to contrast the hypotheses since it is particularly appropriate for exploratory studies, complex models with multiple constructs and predictive research objectives. It performs well with small to medium sample sizes and does not require multivariate normality, making it suitable for social science data (Hair et al., 2019). Moreover, PLS-SEM enables simultaneous assessment of measurement and structural models, which is essential when evaluating latent variables such as trust, engagement, and loyalty. This approach is also widely recommended when the primary goal is maximizing endogenous constructs’ explained variance (Sarstedt et al., 2024).

3.1 Samples and procedure

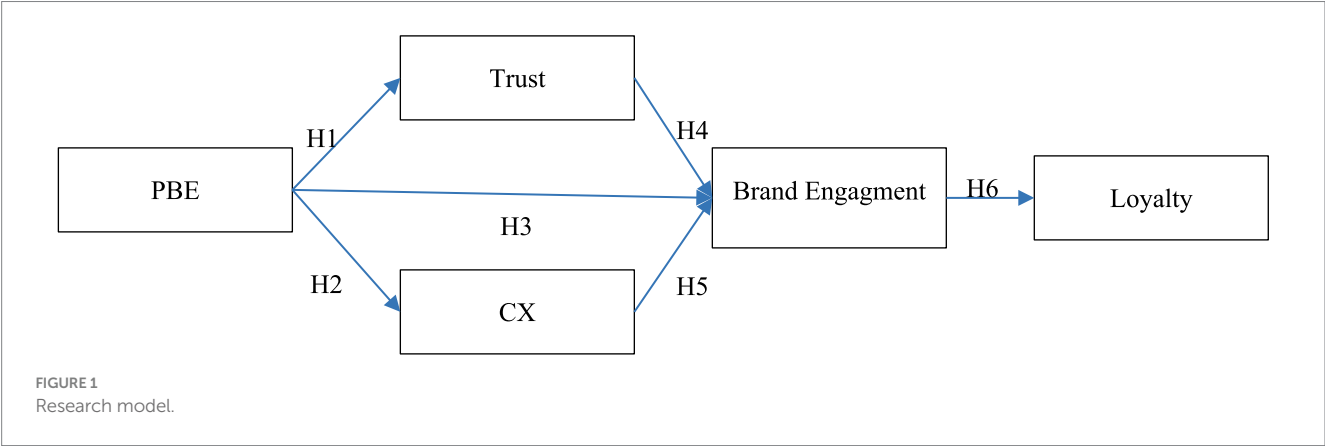
Data was collected through a structured questionnaire to capture key constructs relevant to the research model. Specific inclusion criteria guided the selection of participants: respondents had to be active users of at least one of the three platforms, with a minimum of one purchase or service use within the last 3 months. This criterion ensured that participants had recent and relevant interactions with the platforms, enhancing the reliability of their responses.

In total, 1,032 structured questionnaires were collected and distributed as follows: 322 from Mercado Libre users, 382 from Rappi users, and 328 from Uber users. The survey targeted individuals aged 18 and older, ensuring a diverse sample representative of each platform’s user base. All participants were informed of the study’s objectives, and their anonymity and data confidentiality were strictly maintained. No personally identifiable information was collected, and all respondents provided informed consent before participating. The study adhered to ethical research guidelines and received approval from the Ethics Committee of CESA Business School.

While the study followed rigorous procedures to ensure methodological soundness, we acknowledge that cross-sectional surveys are inherently susceptible to certain biases, such as self-selection and social desirability. To help mitigate these risks, the survey was anonymous, neutrally worded, and did not request sensitive or identifying information. Participants were also instructed to answer based on their most recent interaction with the evaluated platform, which helped reduce recall bias and anchor responses in concrete experiences.

A Confirmatory Factor Analysis (CFA) was conducted to validate the proposed research model using the PLS Algorithm in SmartPLS 3.0. The CFA assessed the reliability and validity of the measurement model, ensuring that the constructs were appropriately measured. A bootstrapping procedure was performed to test the research hypotheses, providing robust estimates of the relationships between variables within the structural model. A multigroup analysis (PLS-MGA) was also conducted to evaluate the research model separately for each brand—Mercado Libre, Rappi, and Uber. This approach allowed us to explore potential differences in the relationships between constructs across platforms, offering insights into brand-specific variations in consumer behavior.

The decision to apply Partial Least Squares Multigroup Analysis (PLS-MGA) was motivated by the need to conduct comparative analyses across three distinct user groups. This methodological choice is particularly relevant given the study’s objective of examining variations in brand engagement, trust, customer experience, and loyalty across different digital platforms. SmartPLS 3.0 was selected for its advanced capabilities in Partial Least Squares Structural Equation Modeling (PLS-SEM) and PLS-MGA, enabling comprehensive analysis and interpretation of complex relationships within and between groups. Recent studies have demonstrated the effectiveness of PLS-SEM and PLS-MGA in exploring consumer



behavior across various contexts, supporting the methodological rigor of this study (Cheah et al., 2023; Tran Xuan et al., 2023; Xuan et al., 2023).

Although the hypotheses proposed in this study are grounded in well-established theoretical relationships, the digital platforms analyzed—Mercado Libre, Rappi, and Uber—differ significantly in their service offerings, user interactions, and market positioning. Mercado Libre is primarily an e-commerce marketplace, Rappi functions as a multi-service delivery app, and Uber provides urban mobility solutions. These structural and functional distinctions may shape how users experience and respond to brand ethics, trust, and engagement. To explore these contextual variations, a multigroup analysis (PLS-MGA) is developed to evaluate the proposed model separately for each platform. This approach enhances the robustness of the findings and supports the development of more targeted managerial implications for each platform.

This methodological approach ensures the validity and reliability of the research findings, allowing for a nuanced understanding of the factors driving brand engagement, trust, customer experience, and loyalty in digital collaborative platforms (Table 1).

## 3.2 Measurements

We utilized measurement scales previously validated in the literature to ensure the reliability and validity of the constructs analyzed. Each scale was selected to capture the key dimensions of brand engagement, trust, customer experience, and loyalty within digital platforms. Items were measured using a Likert scale ranging from 1 (strongly disagree) to 7 (strongly agree), allowing for a comprehensive assessment of participants' perceptions. The specific items used for each construct are presented in table.

Participants were asked to indicate their level of agreement with each statement, ensuring a comprehensive assessment of brand engagement, trust, perceived brand ethics, customer experience, and loyalty. This approach aligns with previous research on consumer behavior, facilitating the comparability and reliability of the results.

We followed a rigorous translation and adaptation process to ensure semantic consistency across languages. First, all items were translated from English into Spanish using a back-translation method, in which bilingual translators independently translated the items into Spanish and then back to English to verify that the original meaning was preserved. The translations were then reviewed by two professors who are native speakers of both English and Spanish to confirm linguistic and conceptual equivalence. Following this, we conducted three pilot tests with 15 participants ( $n = 45$ ), corresponding to the three data collection platforms used. These pilots were carried out to assess clarity, comprehension, and the overall functionality of the questionnaire, ensuring that the items were appropriate and well-understood before full deployment.

## 4 Results

### 4.1 Sample

Table 2 presents the demographic profile of the study sample, disaggregated by platform—Mercado Libre, Rappi, and Uber—based on gender, age, income, and education.

As shown in table, most users across all three platforms are women and individuals between 18 and 25 years old, reflecting the growing dominance of younger digital consumers in the Latin American market. While Mercado Libre and Rappi show a relatively balanced gender distribution, Uber has more male users. Educational attainment is notably high across the sample, with most respondents having completed at least some higher education. Income levels vary, with Rappi and Uber's users showing slightly higher representation in the upper-income brackets than Mercado Libre. These patterns suggest demographic distinctions across platforms that may influence consumer perceptions and behaviors (Tables 3–7).

### 4.2 Model validation

To ensure the reliability and validity of the measurement instrument, a Confirmatory Factor Analysis (CFA) was conducted using the PLS Algorithm in SmartPLS 3.0. This analysis assessed the constructs' internal consistency, convergent validity, and discriminant validity, verifying that the measurement items accurately captured the underlying theoretical concepts. The PLS Algorithm is particularly suitable for this study due to its effectiveness in handling complex models with latent variables. The results of the CFA are presented in the following sections, providing evidence of the instrument's robustness and suitability for testing the proposed research model.

The reliability and validity of the measurement instrument were assessed through Cronbach's alpha ( $\alpha$ ), Composite Reliability (CR), and Average Variance Extracted (AVE). All constructs demonstrated strong internal consistency, with Cronbach's alpha and CR values exceeding the recommended threshold of 0.7 (Hair et al., 2019). Convergent validity was confirmed as AVE values for all constructs were above the suggested minimum of 0.5 (Fornell and Larcker, 1981). Standardized loadings ( $\beta$ ) for each item were greater than 0.7, indicating satisfactory item reliability. The model fit indices were acceptable, with the Normed Fit Index (NFI) at 0.901, surpassing the recommended threshold of 0.9, and the Standardized Root Mean Square Residual (SRMR) at 0.057, below the maximum acceptable limit of 0.08 (Hu and Bentler, 1999). These results confirm that the measurement model is reliable and valid for testing the proposed hypotheses.

The Fornell-Larcker criterion and the Heterotrait-Monotrait ratio of correlations (HTMT) were applied to evaluate discriminant validity. According to the Fornell-Larcker criterion, the square root of each construct's Average Variance Extracted (AVE), shown in bold diagonal, should exceed the construct's correlations with any other latent variable (reported in the lower-left triangle). In this study, all constructs meet this condition, indicating satisfactory discriminant validity (Fornell and Larcker, 1981). Additionally, the HTMT ratio, displayed in the upper-right triangle, provides a more stringent assessment by estimating the ratio of between-construct correlations to within-construct correlations. All HTMT values are below the conservative threshold of 0.85 (Henseler et al., 2015), further supporting the distinctiveness of the constructs. Together, these results confirm that the measurement model demonstrates adequate discriminant validity.

Following the discriminant validity assessment, we examined multicollinearity by calculating the Variance Inflation Factor (VIF). This test allows us to determine whether any predictor variables are highly correlated, which could compromise the reliability of the



TABLE 1 Items for the measurement instrument.

Construct	Items	Adapted from
PBE	_____ respects moral laws.	Siqueira Junior et al. (2023)
	_____ always adheres to the law.	
	_____ is socially responsible.	
	_____ avoids harmful behaviors at all costs.	
	_____ is a quality brand.	
	_____ makes decisions only after carefully considering the potential positive or negative consequences for all involved.	
	_____ cares about improving society's well-being.	
	_____ follows high ethical standards.	
Trust	I feel that I can completely trust _____.	Shukla et al. (2016)
	_____ is honest and sincere with me about its products and services.	
	_____ is honest and sincere in its promises.	
CX	I would say that the experience with Mercado Libre is excellent.	Siqueira et al. (2025)
	I believe that we have superior experience at Mercado Libre.	
	I think that the total experience procedure at Mercado Libre is excellent.	
BE	I feel very positive when using _____.	Khan et al. (2019)
	Browsing the _____ app makes me happy.	
	I feel good when using _____.	
	I feel proud to use _____.	
Loyalty	I very rarely think about using a different delivery app than _____.	Fatma et al. (2016)
	As long as they continue providing the service, I doubt I will switch from _____.	
	I try to use _____ whenever I need a delivery service.	
	When I need a delivery service, _____ is my first choice.	
	I like using _____.	
	For me, _____ is the best option.	
	I think it is my favorite app.	

TABLE 2 Demographic profile by brand.

Brand	Gender	Age	Income	Education
Mercado Libre	Female: 51.3%; Male: 48.7%	18–25: 33.2%; 26–35: 18.3%; 56+: 16.8%; 36–45: 16.5%; 46–55: 15.2%	\$1,501–\$2,000: 41.0%; \$1,001–\$1,500: 20.8%; More than \$2,000: 19.9%; \$500–\$1,000: 15.5%; Less than \$500: 2.8%	Undergraduate: 63.4%; Postgraduate: 18.0%; Technical/Technological: 17.4%; High school: 1.2%
Rappi	Male: 59.7%; Female: 40.3%	18–25: 34.0%; 46–55: 33.8%; 26–35: 17.8%; 36–45: 14.4%	\$1,001–\$1,500: 37.4%; \$500–\$1,000: 33.2%; \$1,501–\$2,000: 12.8%; More than \$2,000: 10.7%; Less than \$500: 5.8%	Undergraduate: 52.6%; Postgraduate: 32.2%; Technical/Technological: 15.2%
Uber	Male: 74.5%; Female: 25.5%	18–25: 63.1%; 26–35: 22.0%; 36–45: 7.9%; 46–55: 7.0%	\$1,001–\$1,500: 26.8%; \$1,501–\$2,000: 25.3%; \$500–\$1,000: 24.1%; More than \$2,000: 22.3%; Less than \$500: 1.5%	Undergraduate: 67.1%; Postgraduate: 17.4%; Technical/Technological: 15.5%

All incomes are in U.S. dollars (USD).

regression results. Table presents the VIF values, ensuring that collinearity does not pose a significant issue in the analysis.

A VIF value below five is generally considered acceptable, indicating that multicollinearity is not a significant concern (Hair et al., 2019). Most indicators in our model fall within the acceptable range, though LOY3 (5.028), PBE8 (4.936), and BE3 (3.979) approach the upper threshold. While these values are slightly elevated, they remain within an acceptable range, suggesting that multicollinearity is unlikely to bias the regression estimates significantly. Therefore, the

structural model maintains an appropriate level of independence among predictor variables, supporting the reliability of the findings.

### 4.3 Research model test

A bootstrapping procedure was performed using SmartPLS 3.0 to test the proposed hypotheses. This non-parametric resampling technique, recommended by Hair et al. (2019), generates standard

TABLE 3 Confirmatory factor analysis.

Construct	Item	$\beta$	Cr $\alpha$	CR	AVE
PBE	PBE1	0.846	0.952	0.953	0.749
	PBE2	0.785			
	PBE3	0.867			
	PBE4	0.846			
	PBE5	0.776			
	PBE6	0.838			
	PBE7	0.832			
	PBE8	0.845			
Trust	TRS1	0.915	0.899	0.902	0.831
	TRS2	0.917			
	TRS3	0.922			
CX	CX1	0.927	0.916	0.917	0.857
	CX2	0.938			
	CX3	0.951			
BE	BE1	0.886	0.934	0.935	0.834
	BE2	0.925			
	BE3	0.901			
	BE4	0.902			
Loyalty	LOY1	0.910	0.938	0.942	0.730
	LOY2	0.894			
	LOY3	0.940			
	LOY4	0.923			
	LOY5	0.778			
	LOY6	0.937			
	LOY7	0.911			

NFI = 0.901; SRMR = 0.057.

B, Beta;  $\alpha$  de Cr, Cronbach's alpha; CR, compost reliability; AVE, Average Variance Extracted.

TABLE 4 Discriminant validity—Fornell-Larcker criteria and Heterotrait-Monotrait ratio (HTMT).

	PBE	TRS	CX	BE	LOY
PBE	<b>0.866</b>	0.774	0.785	0.770	0.613
TRS	0.718	<b>0.912</b>	0.822	0.685	0.582
CX	0.735	0.746	<b>0.926</b>	0.778	0.739
BE	0.729	0.631	0.722	<b>0.913</b>	0.783
LOY	0.590	0.543	0.691	0.742	<b>0.855</b>

The diagonal values in bold indicate the square root of the AVE for each construct, following the Fornell-Larcker criterion. The values in the upper right portion of table are the Heterotrait-Monotrait ratio (HTMT), which assesses discriminant validity by measuring the correlation between constructs. The values in the lower left portion of table correspond to the correlation between the factors, as indicated by the Fornell-Larcker criterion.

errors and confidence intervals to evaluate the significance of path coefficients. The analysis was conducted with 5,000 resamples, providing robust estimates of the relationships within the structural model. The results are presented in table.

The bootstrapping results obtained using SmartPLS 3.0 confirmed the significance of most hypothesized relationships within the research

TABLE 5 Variance inflation factor (VIF).

	VIF
BE1	3.227
BE2	3.328
BE3	3.979
BE4	3.581
CX1	3.153
CX2	3.466
CX3	3.129
LOY1	2.344
LOY2	2.937
LOY3	5.028
LOY4	4.681
LOY5	2.473
LOY6	4.437
LOY7	2.202
PBE1	3.122
PBE2	2.914
PBE3	4.417
PBE4	3.690
PBE5	2.430
PBE6	3.181
PBE7	4.076
PBE8	4.936
TRS1	2.344
TRS2	3.073
TRS3	3.441

TABLE 6 Bootstrapping results.

H	Description	$\beta$	T-Value	p-value
H1	PBE $\rightarrow$ Trust	0.718*	29.688	0.000
H2	PBE $\rightarrow$ CX	0.735*	35.079	0.000
H3	PBE $\rightarrow$ Brand engagement	0.412*	10.422	0.000
H4	Trust $\rightarrow$ Brand engagement	0.051	1.399	0.162
H5	CX $\rightarrow$ Brand engagement	0.381*	9.286	0.000
H6	Brand engagement $\rightarrow$ Loyalty	0.742*	44.528	0.000

CX:  $R^2 = 0.540$ ,  $Q^2 = 0.538$ ; BE:  $R^2 = 0.607$ ,  $Q^2 = 0.530$ ; LOY:  $R^2 = 0.551$ ,  $Q^2 = 0.344$ ; TRS:  $R^2 = 0.516$ ,  $Q^2 = 0.514$ .

\* $p < 0.05$ .

model. Perceived Brand Ethics (PBE) demonstrated a strong positive effect on Trust ( $\beta = 0.718$ ,  $p < 0.001$ ) and Customer Experience (CX) ( $\beta = 0.735$ ,  $p < 0.001$ ), as well as a moderate effect on Brand Engagement (BE) ( $\beta = 0.412$ ,  $p < 0.001$ ). Trust did not significantly affect BE ( $\beta = 0.051$ ,  $p = 0.162$ ). However, CX had a significant positive effect on BE ( $\beta = 0.381$ ,  $p < 0.001$ ), and BE exhibited a strong positive impact on Loyalty ( $\beta = 0.742$ ,  $p < 0.001$ ). The explained variance for

TABLE 7 PLS-MGA for Rappi, Uber and Mercado Libre.

H	Description	Rappi			Uber			Mercado Libre		
		$\beta$	T-Value	p-value	$\beta$	T-Value	p-value	$\beta$	T-Value	p-value
H1	PBE → Trust	0.724	19.966	0.000	0.708	16.364	0.000	0.660	11.981	0.000
H2	PBE → CX	0.752	28.264	0.000	0.713	17.980	0.000	0.700	16.105	0.000
H3	PBE → BE	0.348	5.713	0.000	0.432	7.119	0.000	0.368	4.495	0.000
H4	Trust → BE	0.032	0.674	0.501	0.132	1.934	0.053	−0.051	0.658	0.510
H5	CX → BE	0.517	8.671	0.000	0.258	4.058	0.000	0.426	4.440	0.000
H6	BE → Loyalty	0.827	38.152	0.000	0.676	21.384	0.000	0.756	26.025	0.000

each dependent variable was as follows: CX ( $R^2 = 0.540$ ), BE ( $R^2 = 0.607$ ), Loyalty ( $R^2 = 0.551$ ), and Trust ( $R^2 = 0.516$ ), with  $Q^2$  values indicating predictive relevance for each construct.

To further analyze the model's robustness, a Partial Least Squares Multigroup Analysis (PLS-MGA) was conducted to examine potential differences in the relationships among constructs across the three platforms studied: Mercado Libre, Rappi, and Uber. The results of this analysis are presented in table.

The PLS-MGA results reveal differences in the strength of relationships within the research model across platforms Rappi, Uber, and Mercado Libre. For H1 (PBE → Trust), the relationship was significant for all platforms, with the most substantial effect observed in Rappi ( $\beta = 0.724$ ,  $p < 0.001$ ), followed by Uber ( $\beta = 0.708$ ,  $p < 0.001$ ) and Mercado Libre ( $\beta = 0.660$ ,  $p < 0.001$ ). Similarly, H2 (PBE → CX) was significant across all three platforms, with Rappi showing the highest effect size ( $\beta = 0.752$ ,  $p < 0.001$ ), followed by Uber ( $\beta = 0.713$ ,  $p < 0.001$ ) and Mercado Libre ( $\beta = 0.700$ ,  $p < 0.001$ ).

For H3 (PBE → BE), Uber had the strongest effect ( $\beta = 0.432$ ,  $p < 0.001$ ), followed by Rappi ( $\beta = 0.348$ ,  $p < 0.001$ ) and Mercado Libre ( $\beta = 0.368$ ,  $p < 0.001$ ). The relationship between Trust and BE (H4) was not significant for Rappi ( $\beta = 0.032$ ,  $p = 0.501$ ) and Mercado Libre ( $\beta = -0.051$ ,  $p = 0.510$ ), but approached significance for Uber ( $\beta = 0.132$ ,  $p = 0.053$ ). H5 (CX → BE) was significant across all platforms, with Rappi demonstrating the most substantial effect ( $\beta = 0.517$ ,  $p < 0.001$ ), followed by Mercado Libre ( $\beta = 0.426$ ,  $p < 0.001$ ) and Uber ( $\beta = 0.258$ ,  $p < 0.001$ ). Lastly, H6 (BE → Loyalty) was significant for all platforms, with the strongest effect in Rappi ( $\beta = 0.827$ ,  $p < 0.001$ ), followed by Mercado Libre ( $\beta = 0.756$ ,  $p < 0.001$ ) and Uber ( $\beta = 0.676$ ,  $p < 0.001$ ).

These results highlight platform-specific variations in the strength of relationships among Perceived Brand Ethics, Trust, Customer Experience, Brand Engagement, and Loyalty, suggesting that the proposed model performs differently depending on the platform under consideration. The following section discusses these differences in more detail.

## 5 Discussion

The results of this study provide robust evidence supporting the proposed research model, confirming the significant influence of Perceived Brand Ethics (PBE), Trust, and Customer Experience (CX) on Brand Engagement (BE), as well as the subsequent effect of BE on Loyalty. The bootstrapping analysis demonstrated that most hypothesized relationships were significant, except for Trust's direct

impact on BE, which was not statistically significant in the overall sample. The PLS-MGA further revealed platform-specific variations in the strength of these relationships, highlighting the importance of contextual factors in digital consumer behavior.

The strong positive effects of PBE on both Trust (H1) and CX (H2) across all platforms reinforce the critical role of ethical perceptions in shaping consumer attitudes. This finding aligns with previous studies emphasizing that ethical brand behavior fosters trust and enhances customer experiences, particularly in digital environments where direct interactions are limited (Khan and Fatma, 2023; Wang et al., 2025). Additionally, the significant impact of PBE on BE (H3) underscores the importance of ethical conduct in strengthening consumers' emotional and behavioral engagement with brands, supporting prior research (Hollebeek et al., 2014). The non-significant effect of Trust on BE (H4) contrasts with traditional models emphasizing trust as a key antecedent of engagement, suggesting that in digital platforms, other factors such as CX may play a more dominant role in driving engagement. This is evident in the significant positive effect of CX on BE (H5), which highlights the importance of delivering seamless and satisfying digital experiences to foster consumer engagement. Finally, the strong relationship between BE and Loyalty (H6) across all platforms reinforces the central role of engagement in building long-term consumer relationships, consistent with findings from (Brodie et al., 2013) and (Liu et al., 2023).

## 5.1 Theoretical implications

From a theoretical perspective, this study contributes to the literature by addressing several key gaps identified in the review of prior research. First, it extends the understanding of PBE's influence on cognitive and emotional outcomes, demonstrating its dual role in enhancing Trust and CX while driving BE. This highlights the broader impact of ethical perceptions beyond trust alone, expanding previous models that focused primarily on trust as the primary mediator (Fatma et al., 2020; Wang et al., 2025). Second, the study provides empirical evidence of the mediating role of BE in the relationship between CX and Loyalty, supporting recent calls for a more comprehensive examination of engagement as a key mechanism linking customer experiences to long-term behavioral outcomes (Hollebeek et al., 2014; Monoarfa et al., 2024). Third, the platform-specific differences revealed through the PLS-MGA underscore the importance of contextual factors in shaping consumer behavior,

addressing the gap in cross-platform comparisons that have been largely overlooked in previous research. By demonstrating that the strength of relationships varies across Mercado Libre, Rappi, and Uber, this study provides new insights into how platform characteristics and service contexts influence consumer perceptions and behaviors, contributing to the growing body of literature on digital consumer engagement (Sajjad and Zaman, 2020; Zhang and Li, 2024).

Moreover, this study contributes to the theoretical advancement of consumer behavior research in digital platforms by emphasizing the role of Perceived Brand Ethics (PBE), Trust, and Customer Experience (CX) as key antecedents of Brand Engagement (BE) and Loyalty. The findings highlight that BE, conceptualized as a unidimensional construct reflecting consumers' positive emotional connection with a brand, is a critical mechanism through which CX and PBE influence Loyalty. This aligns with previous research indicating that emotional responses, such as feeling good or proud when using a brand, are pivotal drivers of consumer engagement (Khan et al., 2019).

Furthermore, the study demonstrates that while Trust plays an essential role in building consumer confidence, its direct impact on BE was not significant. This finding suggests that trust may function more as a prerequisite or background condition that enables engagement rather than a direct emotional driver in digital platforms. Given the nature of algorithm-mediated interactions in e-commerce, consumers may take trust for granted once a baseline level of platform reliability is established and instead engage more strongly with brands that deliver consistently positive experiences and uphold ethical standards. This challenges traditional assumptions about the centrality of trust in engagement models and calls for further exploration of how trust operates in digitally mediated, low-touch service environments. By examining these relationships across different platforms—(Mercado Libre), food delivery (Rappi), and transportation (Uber)—, the study provides valuable insights into how industry-specific factors shape engagement and loyalty, advancing the literature on digital consumer behavior and offering a foundation for future research in platform-based marketing.

## 5.2 Managerial implications

The findings of this study offer valuable insights for digital platforms such as Mercado Libre, Rappi, and Uber, highlighting actionable strategies to enhance customer loyalty by addressing key antecedents like Perceived Brand Ethics (PBE), Trust, Customer Experience (CX), and Brand Engagement (BE). Given the increasingly competitive landscape of Latin America's digital economy and consumers' growing demand for ethical practices, these platforms must prioritize aligning their operational models with evolving consumer expectations to foster long-term loyalty.

First, enhancing perceived brand ethics should be a core component of business strategy across all platforms. The results demonstrate that PBE significantly influences Trust and CX, both critical drivers of BE and Loyalty. Platforms should prioritize transparency in their operations, including clear communication about service policies, fair treatment of workers, and responsible data management. For example, Mercado Libre can improve its reputation by strengthening quality control measures to prevent the sale of counterfeit goods and enhancing customer service

responsiveness. Similarly, Rappi and Uber must address labor-related concerns by ensuring fair compensation and better working conditions for delivery riders and drivers. In Uber's case, this includes implementing stronger accountability mechanisms for drivers and vehicles and increasing safety and service standards in response to the growing number of third-party drivers and declining service quality. Publicizing CSR initiatives related to environmental sustainability and social welfare can further enhance consumers' ethical perceptions, aligning the platforms with the values of their user base.

Second, optimizing customer experience is essential for fostering stronger engagement and loyalty, as evidenced by the significant relationship between CX and BE across all platforms. Enhancing the digital interface to provide seamless navigation, personalized recommendations, and responsive customer support can improve user satisfaction and encourage repeat interactions. For example, Rappi should focus on streamlining its app interface to minimize order errors and delivery delays. At the same time, Uber can enhance its ride-booking experience by reducing wait times and ensuring driver reliability. Mercado Libre can personalize the shopping experience through AI-driven product suggestions and faster delivery options, creating a competitive advantage in the e-commerce sector. These recommendations also apply to other regional digital platforms, particularly those in highly competitive categories such as on-demand services, fintech, or last-mile delivery. By focusing on customer-centric design, responsiveness, and consistency, they can replicate the conditions under which CX improves BE and loyalty.

Third, strengthening brand engagement is crucial for building long-term customer relationships, with BE showing the most substantial direct effect on Loyalty across all platforms. Given that engagement reflects consumers' emotional connection to a brand, platforms should invest in creating interactive and immersive experiences that foster a sense of belonging. For example, loyalty programs that reward frequent users with exclusive discounts, priority services, and personalized offers can deepen consumers' attachment to the platform. Additionally, gamification elements such as achievement badges, referral bonuses, and milestone rewards can enhance engagement by making interactions more enjoyable and rewarding. Social media campaigns highlighting positive customer stories and showcasing the platform's ethical commitments can strengthen emotional connections, encouraging users to advocate for the brand within their social networks. Other platforms can also adopt these tactics by analyzing customer behavior data to identify moments of emotional connection and reinforcing them through digital touchpoints that build attachment.

The platform-specific differences identified through the PLS-MGA provide further guidance for tailoring strategies to each platform's unique context. For Rappi, where BE has the strongest impact on Loyalty, enhancing engagement should be a priority. This can be achieved through personalized promotions, faster delivery services, and transparent communication about delivery fees and worker welfare. For Uber, where CX plays a relatively stronger role in driving BE, optimizing the user experience should be the focus. This includes improving app functionality, ensuring driver reliability, and maintaining competitive pricing to enhance customer satisfaction. For Mercado Libre, where PBE and CX significantly influence BE, the platform should reinforce its ethical commitments and enhance the online shopping experience. Implementing transparent seller ratings,



verifying product authenticity, and offering responsive customer support can build trust and improve user engagement.

Finally, platforms should continuously monitor consumer perceptions through regular feedback surveys and social media listening tools to identify emerging concerns and adapt their strategies accordingly. By aligning their operations with consumers' ethical expectations and delivering superior digital experiences, Mercado Libre, Rappi, and Uber can strengthen consumer engagement and foster long-term loyalty, securing their competitive advantage in the rapidly evolving digital economy of Latin America. Likewise, these insights can serve as a blueprint for other applications in emerging markets, helping them translate ethics, experience, and engagement into sustained customer relationships.

## 6 Conclusions, limitations, and future research

This study aimed to examine the influence of Perceived Brand Ethics (PBE), Trust, and Customer Experience (CX) on Brand Engagement (BE) and their subsequent effect on Loyalty within digital platforms in Colombia, an emerging economy. The research validated the proposed model by analyzing data from Mercado Libre, Rappi, and Uber users. It provided new insights into the mechanisms that drive customer loyalty in e-commerce, food delivery, and transportation services. The results confirmed that PBE plays a pivotal role in shaping both Trust and CX, enhancing BE and ultimately leading to greater customer loyalty. Notably, CX emerged as a stronger predictor of BE than Trust, suggesting that the quality of the digital experience has a more direct impact on consumers' emotional connection with brands. Additionally, BE demonstrated a robust effect on Loyalty, reinforcing the importance of fostering emotional engagement to sustain long-term consumer relationships. The platform-specific differences revealed through the PLS-MGA further highlight the need for tailored strategies that address each platform's unique characteristics and service contexts.

Despite its contributions, this study has several limitations that should be acknowledged. First, the cross-sectional design limits the ability to infer causal relationships, as the data captures consumer perceptions simultaneously. Future research could adopt a longitudinal approach to explore how these relationships evolve. Second, the sample was limited to users in Colombia, which may limit the generalizability of the findings to other regions, particularly those with different cultural, economic, and regulatory contexts. Comparative studies across diverse geographical markets, especially within Latin America, could provide additional insights into how regional factors influence the relationships examined. Third, while the study focused on three leading platforms, including other emerging platforms could offer a more comprehensive understanding of the digital ecosystem. Additionally, the study did not account for potential moderating variables such as brand familiarity, frequency of platform use, or consumers' ethical awareness, which could further refine the proposed model.

Building on these limitations, several avenues for future research are proposed. First, future studies could explore the moderating effects of consumer demographics, such as age, gender, and digital literacy, to determine how these factors influence the relationships between PBE, Trust, CX, BE, and Loyalty. Second, given the rapid evolution of

digital technologies, future research could investigate how innovations such as artificial intelligence, blockchain, and augmented reality impact customer engagement and loyalty in digital platforms. Third, examining the role of social media and online communities in shaping consumers' perceptions of brand ethics and engagement could provide valuable insights into the growing importance of digital word-of-mouth and brand advocacy. Finally, expanding the research to include other countries within Latin America and beyond would help assess the extent to which cultural and economic differences influence the observed relationships. By addressing these areas, future studies can further advance the theoretical understanding of customer loyalty in digital ecosystems while offering practical insights for businesses seeking to enhance their competitive advantage in an increasingly digital world.

## Data availability statement

The datasets presented in this study can be found in online repositories. The names of the repository/repositories and accession number(s) can be found in the article/supplementary material.

## Ethics statement

The studies involving humans were approved by Comité de Ética del CESA - Proyecto 34002. The studies were conducted in accordance with the local legislation and institutional requirements. The participants provided their written informed consent to participate in this study. Written informed consent was obtained from the individual(s) for the publication of any potentially identifiable images or data included in this article.

## Author contributions

NP-G: Conceptualization, Formal analysis, Project administration, Supervision, Writing – original draft. EH: Data curation, Investigation, Methodology, Resources, Writing – original draft.

## Funding

The author(s) declare that no financial support was received for the research and/or publication of this article.

## Conflict of interest

The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

## Generative AI statement

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