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Service Quality Perceptions in Omnichannel Retailing: Exploring the Case of "Click-and-collect" in Mexico*

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Abstract: Buy Online Pick up in Store (BOPS), or "click and collect," has gained acceptance as a profitable omnichannel model that integrates online and offline channels, reduces delivery times, and increases the convenience of purchasers who collect their orders at a suitable location. This research aimed to confirm the well-established relationship between service quality and behavioral intentions mediated by customer satisfaction in the BOPS context. A simplified scale is proposed to assess the integrated service quality of BOPS using service quality frameworks developed in marketing. BOPS service quality was conceptualized as a second-order formative construct comprising three dimensions: in-store service, online service, and pick-up service. Customers of a leading Mexican retailer were surveyed when they picked up their orders during a special promotion. Exploratory factor analysis was performed to assess the multidimensionality of the proposed scale, and statistical and judgmental criteria were applied to purify it. Findings reveal that BOPS service quality comprises three dimensions: online and offline technical services and functional services. The PLS-SEM analytical results support the validity of the proposed scale and the role of satisfaction as a mediator of the influence of BOPS service quality on repurchase intentions and positive recommendations. The findings of this study are limited to BOPS users at stores of a single Mexican retailer; however, they provide relevant information for omnichannel retailing strategy.

Keywords: Buy-online-pick-up-in-store (BOPS), consumer behavior, omnichannel, retailers, satisfaction, service quality.

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Percepciones sobre la calidad del servicio en el comercio minorista omnicanal: análisis del caso del «click and collect» en México

Resumen: La compra online con recogida en tienda (BOPS), o «click and collect», se ha impuesto como un modelo omnicanal rentable que integra los canales online y offline, reduce los plazos de entrega y aumenta la comodidad de los compradores, que recogen sus pedidos en un lugar adecuado. El objetivo de esta investigación era confirmar la relación bien establecida entre la calidad del servicio y las intenciones de comportamiento mediadas por la satisfacción del cliente en el contexto de BOPS. Se propone una escala simplificada para evaluar la calidad del servicio integrado de BOPS utilizando marcos de calidad del servicio desarrollados en marketing. La calidad del servicio BOPS se conceptualizó como un constructo formativo de segundo orden que comprende tres dimensiones: servicio en tienda, servicio online y servicio de recogida. Se encuestó a los clientes de un minorista líder mexicano cuando recogieron sus pedidos durante una promoción especial. Se realizó un análisis factorial exploratorio para evaluar la multidimensionalidad de la escala propuesta y se aplicaron criterios estadísticos y de juicio para purificarla. Los resultados revelan que la calidad del servicio BOPS comprende tres dimensiones: servicios técnicos en línea y fuera de línea y servicios funcionales. Los resultados analíticos del PLS-SEM respaldan la validez de la escala propuesta y el papel de la satisfacción como mediadora de la influencia de la calidad del servicio BOPS en las intenciones de recompra y las recomendaciones positivas. Los resultados de este estudio se limitan a los usuarios de BOPS en las tiendas de un único minorista mexicano; sin embargo, proporcionan información relevante para la estrategia de venta minorista omnicanal.

Palabras clave: Compra online y recogida en tienda (BOPS), comportamiento del consumidor, omnicanal, minoristas, satisfacción, calidad del servicio.

Percepções sobre a qualidade do serviço no varejo omnicanal: explorando o caso do "clique e retire" no México

Resumo: O serviço «Compre online, recolha na loja» (BOPS), ou «clique e recolha», ganhou aceitação como um modelo omnicanal lucrativo que integra canais online e offline, reduz os prazos de entrega e aumenta a conveniência dos compradores que recolhem as suas encomendas num local adequado. Esta investigação teve como objetivo confirmar a relação bem estabelecida entre a qualidade do serviço e as intenções comportamentais mediadas pela satisfação do cliente no contexto do BOPS. É proposta uma escala simplificada para avaliar a qualidade integrada do serviço BOPS utilizando estruturas de qualidade de serviço desenvolvidas em marketing. A qualidade do serviço BOPS foi concebida como uma construção formativa de segunda ordem composta por três dimensões: serviço na loja, serviço online e serviço de recolha. Os clientes de um retalhista mexicano líder foram inquiridos quando recolheram as suas encomendas durante uma promoção especial. Foi realizada uma análise fatorial exploratória para avaliar a multidimensionalidade da escala proposta, e critérios estatísticos e de julgamento foram aplicados para purificá-la. Os resultados revelam que a qualidade do serviço BOPS compreende três dimensões: serviços técnicos online e offline e serviços funcionais. Os resultados analíticos do PLS-SEM apoiam a validade da escala proposta e o papel da satisfação como mediadora da influência da qualidade do serviço BOPS nas intenções de recompra e recomendações positivas. As conclusões deste estudo limitam-se aos utilizadores de BOPS em lojas de um único retalhista mexicano; no entanto, fornecem informações relevantes para a estratégia de retalho omnicanal.

Palavras-chave: Compra online e recolha na loja (BOPS), comportamento do consumidor, omnicanal, retalhistas, satisfação, qualidade do serviço.

Introduction

Online shopping has experienced significant growth since 2010, with convenience as one of the main reasons for its expansion. According to the Global Survey of Consumer Perspectives 2021, seven in ten consumers continue purchasing online despite returning to physical stores after the COVID-19 pandemic (Béjar-Tinoco *et al.*, 2022). Because of this trend, online sales reached around USD 6.17 trillion in 2023 (Chevalier, 2021). In Mexico, digital transactions increased notably during the pandemic (Béjar-Tinoco *et al.*, 2022). E-commerce accounted for USD 21 billion in sales in 2020 (Asociación de Internet, 2020), positioning the country second in Latin American online retail sales revenue. Concerns such as online fraud, inconsistency between expected and actual product quality, and the management of returns have been gradually reduced as consumers become familiar with online shopping (Gera *et al.*, 2021).

The transformation of the retail industry driven by advances in information technology and long-run changes in consumer behavior compels retailers not only to consolidate their online channels but also to integrate physical and online channels to serve omni shoppers, that is, consumers with access to extensive information on the Internet (Halibas *et al.*, 2023). Omnichannel retailing refers to "the synergetic management of the numerous available channels and customer touchpoints, in such a way that the customer experience across channels and the performance over channels is optimized" (Verhoef *et al.*, 2015, p. 176). According to McKinsey (2022), more than half of B2C customers engage with three to five channels (e.g., online search, visits to physical stores, buy-online-and-pick-up-in-store [BOPS], or buy-online-return-in-store [BORS]) each time they purchase a product or need to solve a service issue. Omnichannel is a step forward from the multichannel approach, where channels are not linked and customers may have different experiences depending on each channel.

Parallel to online shopping, omnichannel retailing increased in popularity during the COVID-19 pandemic. Many brick-and-mortar consumers moved toward BOPS; for example, 67% of shoppers in the USA have used BOPS and 75% are likely to repurchase (Ross, 2021). Similarly, many Mexican customers switched to BOPS, and although some have progressively returned to the store, others—especially Millennials and Centennials—prefer to continue using this omnichannel option (eSemanal, 2021; Juárez, 2021). Nevertheless, the competitive advantage of traditional physical stores cannot be easily replaced. Factors such as store design, layout, and ambiance can influence customer behavior by providing an immersive, engaging, and gratifying shopping experience (Faria *et al.*, 2022). Therefore, there is growing emphasis on developing a retail model that combines the strengths of both online and offline channels.

BOPS is acknowledged as the best omnichannel option for certain customer segments, as it offers many online shopping advantages without the downsides of other digital shopping modes (Ketzenberg & Akturk, 2021). This is particularly true for some product categories, such as beauty

and electronics (Gao & Su, 2017), and has even been acknowledged as a potential option for traditional sectors such as automotive retailing (Kim *et al.*, 2022). BOPS attracts customers due to its information and convenience, offering real-time information about store inventory and allowing customers to pick up items at the most convenient physical store, thus streamlining the checkout process (Gao & Su, 2017; Lee *et al.*, 2020). In addition, BOPS creates relational and experiential value through the interactions between customers and service employees, the website interface, and service marketing policies (Jara *et al.*, 2018).

Extant research on omnichannel retailing has evolved along five lines (Sharma et al., 2025; Asmare & Zewdie, 2022; Salvietti *et al.*, 2022): customer behavior; channel integration involving several factors (pricing, product information, service, and order fulfillment); technological innovations providing convenience, automation of operations, and cross-channel integration; supply chain and operations focusing on the evolution of supply chains to support omnichannel fulfillment; and omnichannel strategy concentrating on the conditions and retailers' capabilities to support omnichannel performance and increase profit margins. These themes overlap with several works. For example, logistics service quality and availability enabled by an efficient supply chain significantly influence BOPS customer loyalty (Cotarelo *et al.*, 2021). Balbín-Buckley and Marquina-Feldman (2024) show that channel integration has a crucial effect on customers' affective and cognitive experiences, and Zhang *et al.* (2021) conclude, based on mathematical models, that the

implementation of BOPS is more advantageous under conditions of high consumer service sensitivity and a high proportion of online consumers.

This work is positioned in the first omnichannel research theme. Although the extant literature has explored many of the omnichannel factors affecting customer behavior, Sharma and Dutta (2023) argue that the generalizability of results is limited because of heterogeneity in the rate of technology adoption, culture, and macro- and micro-environmental factors across countries. Asmare and Zewdie (2022) state that omnichannel is a relevant emerging theme that still requires theory-driven research and cross-cultural studies. Specifically, the impact of BOPS service quality (BOPS-SQ) on customer behavior in emerging economies requires further research (Gerea *et al.*, 2021; Lee *et al.*, 2020). Moreover, as noted by Lee *et al.* (2020), BOPS research has focused mostly on online service quality, giving marginal importance to offline service quality, which embodies one of the key touchpoints that enhances the retailer-customer relationship (Jara *et al.*, 2018) and whose attributes and ambiance add to the enjoyment of the shopping experience (Faria *et al.*, 2023).

Under the premise that omnichannel strategy aims to improve the purchasing customer experience, this work adopts a service quality approach to validate the relationship between integrated, seamless BOPS service and two customer behavioral intentions (repurchase intention and positive recommendations) in the context of an emerging economy. A multidimensional scale to assess BOPS service quality in the Mexican omnichannel retailing context is developed to fulfill this objective, and the mediation effect of customer satisfaction is considered.

This work is organized as follows. The next section reviews the conceptual background of BOPS service quality and its relationship with satisfaction and customer behavior, states research hypotheses, and proposes a theoretical model. The third section describes the methodology applied to collect data from customers of a large Mexican retailer that introduced online-offline integration as part of its pre-pandemic expansion strategy and strengthened BOPS during the pandemic. The fourth section discusses the analysis of the survey results using PLS-SEM. The final section presents conclusions, theoretical contributions, managerial recommendations, and extensions to this work.

Literature review

Omnichannel retail service is more complex than dual- or multi-channel service because it requires a broader conceptualization of virtual, physical, and integration quality, as well as the seamlessness or fluidity of the customer experience across channels (Zhang *et al.*, 2019). As noted by Akter *et al.* (2018), the virtual and physical service offered independently by a retailer may be good; however, the overall perceived service and consequent satisfaction with the omnichannel can be low because of poor consistency of the service across the channels used simultaneously by customers. Therefore, the service experience in omnichannel settings should be considered a process

in which pre-purchase, during-purchase, and post-purchase experiences contribute to the overall service quality perceived by customers.

The literature review performed by Akter *et al*. (2018) during the emergent period of the omnichannel (2006-2016) concludes that traditional service quality models have played a significant role in assessing in-store quality and developing service quality scales in the digital context (e-quality). However, e-quality models do not properly address the unique characteristics of mobile platforms (e.g., website quality) or are restricted to measuring web-related services. In a pioneering work, Sousa and Voss (2006, p. 359) defined omnichannel service quality as "the quality of the overall service experienced by a customer, encompassing all the existing physical and virtual components." This definition is a key starting point for developing multidimensional scales that merge physical and digital quality dimensions.

Previous service models, empirically supported across several settings, set the basis for operationalizing omnichannel service quality. The two major streams to assess service quality in the traditional physical setting are Grönroos's model (Grönroos, 1984) and the SERVQUAL model proposed by Parasuraman *et al*. (1988). Grönroos (2001) acknowledges that service is a process that leads to an outcome through the technical and functional features of the service. Technical quality refers to the resources used to produce service outcomes (e.g., technical solutions), whereas functional quality denotes how the overall service process is carried out (e.g., customer interaction). Grönroos's service quality model highlights that functional and technical service qualities are closely related to the firm's image. Recent studies confirm that service quality significantly influences corporate image and customer satisfaction, concepts that in turn affect revisit intention and word of mouth (Khoo, 2022).

Parasuraman *et al*. (1988) argued that service quality can be assessed through five functional quality components (tangibility, reliability, responsiveness, assurance, and empathy). The initial model measured service quality as the difference between service expectations and actual service delivery. Later, Cronin and Taylor (1992) developed a performance-only model (SERVPERF) that was claimed to be more suitable, simpler (fewer items), and more accurate than SERVQUAL. The argument in favor of SERVPERF is that the SERVQUAL conceptual definition has a weak theoretical justification when comparing expectations with actual service, because satisfaction— which is the direct consequence of service quality—is what entails disconfirmation.

The accelerated growth of online shopping increased research aimed at conceptualizing and measuring the quality of digital services. E-service quality is defined as "consumers' perceptions about responsiveness, empathy, and assurance" offered on a website that enables shopping and purchasing (Agag & El-Masry, 2017, p. 6). The marketing service literature has advanced online quality research along two perspectives: technology acceptance models (TAM) and service quality models (Vatolkina *et al*., 2020). TAM describes the online experience mainly based on website attributes (e.g., design and functionality) and the user's perceived usefulness (Castro-Lopez *et al*.,

2019). Meanwhile, service quality models conceptualize quality as customers' perceptions of the service delivery process (Blut *et al.*, 2015).

Duque-Oliva *et al.* (2006) noted that researchers have used the perceived service quality concept in the traditional setting—particularly the paradigm of the disconfirmation of expectations—as a starting point to operationalize the perceived Internet service quality construct and have proposed several models to properly separate online service from service in the physical context. Several studies have focused on uncovering the critical dimensions comprising e-service quality. For example, Parasuraman *et al.* (2005) developed the E-S-QUAL scale to assess the service quality dimensionality of websites. The dimensions include ease of use and accessibility of the online shopping platform, reliable and prompt response, attention or contact quality online, security of the online transaction, and credibility of the service provider.

The meta-analysis performed by Blut *et al.* (2015) concludes that four dimensions underlie e-service quality. They are: i) website design, which covers aspects of ease of use, information, order processing, shipment tracking, product price and availability, appeal, and system availability; ii) fulfillment, which refers to all activities that ensure customers receive perfect orders; iii) customer service, denoting responsiveness; and iv) security of payments and privacy of shared information during and after the sale. Lin and Sun (2009) also report four dimensions with similar content and meaning: ease of use of the website, information usefulness, responsiveness, and transaction security in Internet shopping. Duque-Oliva and Rodríguez-Romero (2011) developed a scale to measure the service quality perceptions of Colombian Internet purchasers based on Parasuraman *et al.*'s e-quality scale (2005) and complemented it with other previous scales. The resulting scale comprised five dimensions: efficiency (effectiveness of the service), fulfillment, privacy, systems (ease of use and security), and variety (of offers on the Internet). The last three dimensions were the most important for improving service quality perceptions among Latin American consumers.

Since omnichannel integrated service combines service perceptions in the physical and online channels, scales have been proposed based on physical service quality and e-quality frameworks. In the BOPS case, Le *et al.* (2019) examined the service quality factors influencing the decision to use BOPS at mobile stores in Ho Chi Minh City. The service factors correspond to the adjusted five dimensions comprising the SERVQUAL model, which a previous study in the same setting grouped as Virtual service (reliability and tangibility) and Physical service (assurance, responsiveness, and empathy). The five components had a direct and significant influence on the emotional state of consumers—a concept highlighting satisfaction and excitement—which acts as a mediator of the relationship between click-and-collect service and the decision to continue using this omnichannel option. Lee *et al.* (2020) focused on the pick-up stage of BOPS to develop a scale (BOPS-PU-QUAL) that conceptualizes overall BOPS service quality as a second-order construct comprising four dimensions. Service effectiveness in-store during order collection is the dimension with the strongest influence on overall quality perceptions, followed by problem handling, ease of access to the pick-up area, and item quality. These findings indicate that consumer interaction with service staff during pick-

up can outweigh the quality of the online service. Thus, assuring the e-quality of BOPS is not enough because consumers who return to physical stores look for new experiences beyond a positive service experience in the pick-up area.

Moreover, the simultaneous exploration of the effect of online and offline services on consumer purchase decisions helps companies capitalize on the cross-channel behavior of contemporary customers (Flavián *et al.*, 2020). For instance, Viejo-Fernández *et al.* (2020) argue that showrooming (search in-store, buy online) may benefit retailers because consumers are willing to pay a premium price for their online purchases. Likewise, webrooming (search online, buy in-store) can aid retailers in designing better online stores (e.g., use of 3-dimensional and audio videos) and augmenting consumers' shopping value through immediate possession of goods or faster delivery services (Halibas *et al.*, 2023). Note that all cited propositions refer to improving the most important factors creating customer value: website appeal, in-store service interactions, and pick-up suitability (Jara *et al.*, 2018).

Based on the previous literature review, this work assumes that BOPS requires designing a seamless omnichannel journey at human touchpoints (Salvietti *et al.*, 2022). Therefore, BOPS perceived service quality comprises not only a well-designed service in the pick-up area, as acknowledged by Lee *et al.* (2020), but also the seamless integration of the online and complete in-store service experience. Accordingly, the following hypothesis is stated:

> H1: BOPS integrated service quality is a formative construct comprising three dimensions: in-store service quality, pick-up service quality, and online service quality.

Existent service marketing research widely supports the relationships between the quality of electronic services, customer satisfaction, and behavior (Le *et al.*, 2019). The effects of online quality on satisfaction (Del Águila-Obra *et al.*, 2013; Kim *et al.*, 2009; Lin & Sun, 2009), perceived value (Zehir *et al.*, 2014), website use (Sharma & Lijuan, 2015), loyalty (Kim *et al.*, 2009; Vatolkina *et al.*, 2020; Zehir *et al.*, 2014), and behavioral intentions (Rita *et al.*, 2019) have been confirmed. More recent studies have shown that customers who experience a consistent and positive shopping experience—either when they buy online using multiple devices or in the physical store—develop more favorable attitudes toward online shopping (Mosquera *et al.*, 2017; Gerea *et al.*, 2021).

Castro-López *et al.* (2019) distinguished between the utilitarian and hedonic quality of the online shopping experience of Spanish users of fashion sale platforms. Utilitarian quality—comprising website quality, service effectiveness and response, and security—had a more significant effect on word of mouth (WOM) and price tolerance through the full mediation of satisfaction than hedonic quality. Rodríguez *et al.* (2020) also explored the relationship between e-service quality, e-satisfaction, and e-loyalty among Spaniards. The study confirms that utilitarian service quality features have the largest effect on customers' online satisfaction and online loyalty.

Rita *et al*. (2019) found that website design, site security/privacy, and fulfillment significantly affect customer behavior through the mediation of satisfaction. Meng and Sego (2020) studied the effect of the utilitarian dimensions of online service quality on consumer satisfaction and behavior. Fulfillment and efficiency were the best predictors of consumer satisfaction. Repurchasing intentions, positive WOM, and price sensitivity were indirectly affected through the mediation of satisfaction. Handayani *et al*. (2020) found that repurchase intention and trust in the shopping website were indirectly affected by website quality through the mediation of satisfaction. The study also showed that if the website fails to fulfill expectations, customer satisfaction decreases, causing regret, which in turn reduces repurchase intentions. Ginting *et al*. (2023) confirm the mediating role of customer satisfaction in the relationship between e-service quality, e-word of mouth (e-WOM), and customer trust in the repurchase intentions of Indonesian consumers.

Compared with studies that have examined the effect of pure online service quality on customer satisfaction and behavior, the number of studies exploring the influence of omnichannel service quality (OSQ) is limited. For example, Zhang *et al*. (2019) found that OSQ perceptions positively affect customers' behavioral intentions through the full mediation of satisfaction. Of the eight dimensions of OSQ, integration had the strongest influence, thus confirming the importance of providing a unified service experience. Park and Kim (2022) state that building brand loyalty in omnichannel service may require retailers to integrate multiple platforms into a single-choice environment and consider the influence of offline service quality on consumers' brand loyalty for the overall omnichannel experience. The PLS-SEM results show that the offline tangible and empathy service dimensions directly affect Korean customers' satisfaction, attitudes, and repurchase intention toward the omnichannel service. This finding confirms that the tangible features and understanding of customers' needs in the physical store are key elements to customize the omnichannel service and increase satisfaction.

In the specific case of the BOPS omnichannel, Lee *et al*. (2020) found that BOPS service quality has a significant effect on BOPS reuse, fully mediated by satisfaction. Similarly, Xie *et al*. (2023) analyzed the impact of BORS channel integration on customer behavioral intentions, considering the mediating effect of customer satisfaction and the moderating effect of offline store characteristics. The results confirm that the total effect of integrated channel service on repurchase intention is stronger in the pre-purchase stage; nonetheless, the return service is critical in the post-purchase stage because it gives retailers a chance to recover from bad experiences and satisfy customers. The significant mediating role of customer satisfaction and the moderating effect of physical store attributes were confirmed.

Accordingly, the next set of hypotheses is proposed:

H2: BOPS integrated service quality has a direct positive effect on customer satisfaction.

H3: BOPS integrated service quality has an indirect effect on word-of-mouth, mediated by customer satisfaction.

H4: BOPS integrated service quality has an indirect effect on customer repurchase intention, mediated by customer satisfaction.

WOM is an important mode of sharing information about a product or service (Mahapatra & Mishra, 2017). Sweeney *et al.* (2012) proposed that WOM is a multidimensional construct comprising the richness and cognitive features of the message, and the strength of its delivery. The findings of their study indicate that when consumers experience excellent service, they are more satisfied, more prone to share their consumption experience with other consumers, and more aware of the perceived value of their purchase. Liu and Lee (2016) found that service quality is positively related to the price perception of service and the WOM of low-cost airline passengers. Moreover, WOM increases revisit intention, and its relationship with service quality is mediated by the perceived value of monetary price. Talwar *et al.* (2021) found that enablers (perceived information quality, perceived ability, and perceived benefit) of mobile wallets motivate positive WOM, while inhibitors (perceived cost, perceived risk, and perceived uncertainty) result in negative WOM. Based on these results, the final research hypothesis is proposed:

H5: BOPS integrated service quality has a positive direct effect on word of mouth.

Figure 1 presents an extended BOPS service quality model that proposes integrated service quality may be more appropriately conceptualized as a formative construct caused by in-store service, online service, and service perceptions at the pick-up area (Handayani *et al.*, 2020; Rita *et al.*, 2019).

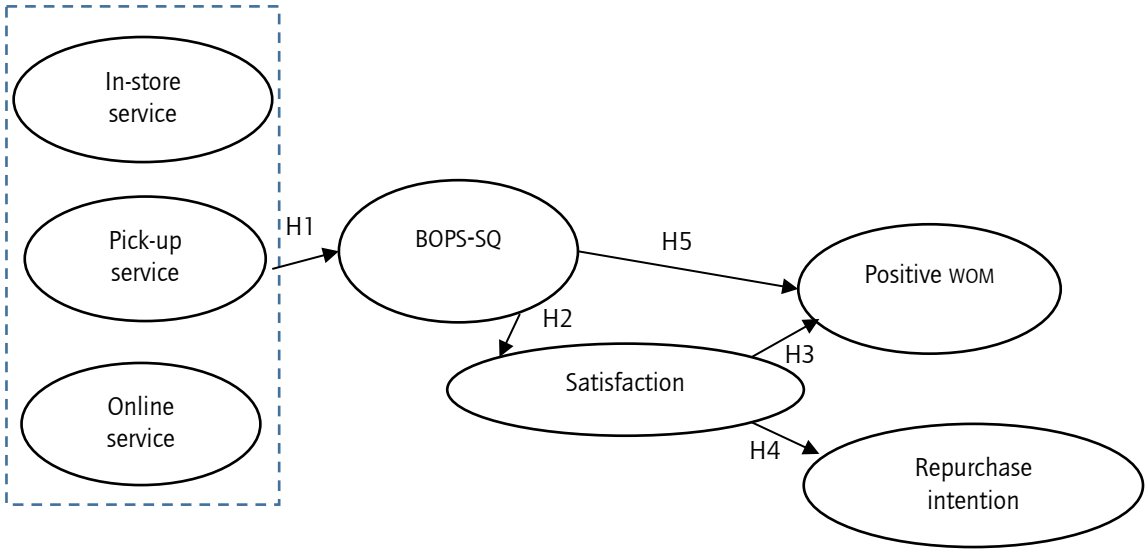

Figure 1. Conceptual model of BOPS service quality. Source: authors.

Methodology

Sample and data

Research hypotheses were tested using survey data from consumers who used to buy at the physical stores of a large Mexican retailer but, because of the COVID-19 pandemic, switched to BOPS. A convenience sample of participants—a non-probability, cost-effective, and time-saving sampling method that offers flexibility, quick response, and effective follow-ups—was selected (Etikan *et al.*, 2016). BOPS customers who arrived at the pick-up area located at the entrance of each of the three largest stores in the main cities of Guanajuato during a special promotion weekend were chosen through a systematic random procedure that ensures the researcher has no control over who is selected, thus removing the risk of clustering or involuntary manipulation.

The sample size (n) was calculated using the formula $n = (1.96^2\ pq))/(e^2)$ for a 95% confidence level ($Z_{1-\alpha/2}$=1.96) of estimating the true proportion (p) of satisfied consumers, which according to company management is over 90%, and a margin of error of 5% (e = 0.05). Assuming a large enough number of BOPS purchasers (N), given the retailer's market participation, the actual population size had a negligible effect on the sample size. Consumers were expected to arrive following a Poisson random process; therefore, the systematic selection of consumers who made a BOPS purchase during the "Good Weekend" promotion carried out in the third week of November 2020 is equivalent to random selection, thus justifying the use of the previous formula to compute the sample size (Scheaffer *et al.*, 1996).

The random starting point (j =7) within the range 1 to k (k =n/N) was computed. Then, each 7th customer who arrived at the pick-up area was selected—that is, customer numbers 7, 18 (7 + 11), 25 (18 + 7), and so on—until the required sample size of $n = 140$ was completed (Scheaffer *et al.*, 1996). This process is straightforward and easier than simple random selection. The systematic selection of respondents during the promotion period only required an estimate of N= total number of online orders placed for pick-up during the sampling period. Even if not all consumers who placed an order showed up, selecting a shorter interval (e.g., if k = N/n = 12.1, defining k = 11 instead of 12) and continuing the selection at regular intervals would almost surely yield the desired sample size.

The total sample size was distributed evenly among the three stores, with 47 customers per store. The retailer offered a 10% discount coupon on the next purchase above USD 50 to consumers who responded to the survey. A total of 131 usable questionnaires were available for analysis. The demographics of the participants are shown in table 1. According to these data, the sample corresponds to young males with a medium-low to medium socioeconomic level, evenly distributed across different educational levels. The high percentage of respondents with a C- and C socioeconomic level aligns with the socioeconomic profile of the retailer's main customer segment.

Table 1. Demographic characteristics of survey participants.

Demographic characteristic	% of participants per demographic category
Gender	Female = 31.3% Male = 59.5% Non-response = 9.2%
Age range (years)	20-29 = 40.3% 30-39 = 18.5% 40-49 = 14.3% 50-59 = 16.8% 60 or more = 10.1%
Educational level	Elementary school = 22.7% High school = 22.7% University degree = 24.4% Graduate studies = 22. 7% Non-response = 7.6%
Socioeconomic level* A-B = > USD 2,600 C+ = USD 2,100 to 2,600 C = USD 1,600 to 2,099 C- = USD 460 to 1,599 D = USD 240 to 459	Low-high (D) = 5.0% Medium-low (C-) = 41.1% Medium (C) = 43.7% Medium-high (C+) = 3.4% High (B and A) = 1% Non-response = 6%

*The classification of socioeconomic levels is based on the Mexican Association of Market Intelligence and Opinion Agencies (AMAI) criteria. An index derived from a statistical model allows for the grouping and classification of Mexican households into seven levels according to their ability to meet family needs (AMAI, 2024). Each level corresponds to the income range shown in the table.

Source: authors, based on the demographic profile of participants.

Design of the measurement instrument

Established valid measures were used to assess the four constructs of the model depicted in figure 1. All questionnaire items were on a 5-point Likert scale ranging from 1 = totally agree to 5 = totally disagree. The structured questionnaire was organized into five sections. The first section comprises the SERVPERF multi-scale developed by Cronin and Taylor (1992), which evaluates the overall in-store quality of services. Three items were modified to specifically capture the perceived pick-up service according to the BOPS-PU-QUAL model proposed by Lee *et al.* (2020): service problem-handling in the pick-up area (item 2), promptness of the collection service (item 7), and ease of access to the collection area (item 21). The product quality dimension, also recognized as important by Lee *et al*. (2020), was already included in item 20 of SERVPERF. Four additional items that summarize the critical dimensions of online service quality identified by Blut *et al*. (2015)—fulfillment (item 1), responsiveness (item 2), website design (item 19), and security of online transactions (item 25)—were added to the BOPS-SQ scale. The variety dimension, identified by Duque-Oliva *et al*. (2011) as a key element for Colombian consumers, was considered in item 20 of the in-store service quality component.

Only the in-store quality dimension was conceptualized as a higher-order reflective construct according to SERVPERF. Based on the literature review and judgmental criteria, the other two BOPS-SQ dimensions were hypothesized as zero-order constructs. Judgmental criteria relate to content and face validity and are based on the qualitative assessment of the items' qualities (Wieland *et al.*, 2017). A single item that captures the essence of the construct dimensions under consideration is generally sufficient as an alternative measure, despite limitations regarding criterion validity (Sarstedt *et al.*, 2016). Thus, after discussion with two academic experts in service quality and the retailer's regional and store managers, simplified versions of the e-quality and BOPS-PU-QUAL multi-scales were recommended to produce a short and user-friendly questionnaire that customers could answer within 10-15 minutes—the typical time required to collect their orders— In addition to the scale's reliability and validity, parsimony—designing a measurement based on the smallest number of items—was relevant for the scale purification and the increase of the response rate (Wieland *et al.*, 2017). Therefore, measuring online and pick-up service quality with a single global item per dimension recognized by previous studies was judged sufficient to capture each construct's meaning and to clearly differentiate the three constructs that determine the overall service quality of the BOPS omnichannel (figure 1).

The second section includes five items that measure customer satisfaction (Chen *et al.*, 2008). The first four items directly link satisfaction with dispatch time in the pick-up area, accurate and complete online information about product availability in the store, service conditions, and pricing (Vasić *et al.*, 2019). The fifth item asks whether the overall BOPS shopping experience was satisfactory.

WOM was assessed in the third section of the questionnaire using the scale developed by Sweeney *et al.* (2012) as a reference. Three items related to message richness, cognitive content, and delivery strength were developed: "Comment with others on the positive details of my BOPS purchasing experience," "endorse the online service and product offer of the retailer," and "enthusiastically invite others to use the click-and-collect option of this retailer."

The fourth section assessed repurchase intention with three items adapted from the e-loyalty scale proposed by Lin and Sun (2009): "I first think about this retailer's click-and-collect choice when shopping," "I can hardly consider changing to another retailer," and "I will purchase from this retailer in the future." Because the fourth item referred to WOM (promoting the shopping website to others), it was discarded. The final section of the questionnaire recorded the respondent's sex, age, purchase amount, last four digits of the store card number (if available), and zip code. The retailer used this data to characterize BOPS customers and issue the 10% discount coupon.

Validation of the BOPS-service quality scale

The first step was to perform an exploratory factor analysis to confirm the multidimensionality of the BOPS service quality scale and purify it. A three-factor solution was explored because H1 proposes that BOPS service quality is formed by three dimensions. The three-factor solution was appropriate based on the scree plot, eigenvalues (> 1), and percentage of variance explained (70.9%). Table 2 reports the basic results of the analysis after a Varimax rotation. Items marked as "dropped" were eliminated either because their communalities were very low (< 0.3) (items 4, 6, and 8) or because they were highly intercorrelated with other items. For example, items 10 and 11, and items 17 and 25, had correlations over 0.9, indicating redundancy or a lack of parsimony among items; therefore, only the item judged most representative was retained. The purified scale consisted of twenty-one items after applying statistical and judgmental criteria. The deletion of items from the initial BOPS-SQ multiscale did not affect the initial conceptualizations or definitions of the construct (Wieland *et al*., 2017).

Table 2. Results of the exploratory factor analysis.

Variable	*Technical* offline quality	*Functional* offline quality	*Service online*	Communality
1. Trustworthiness in the handling of customer orders when shopping online	0.240	-0.179	**-0.849**	0.811
2. Proper management of customer service problems during the pick-up	0.383	**-0.627**	-0.377	0.682
3. Dependability in delivering my online purchases to the nearest store	0.296	-0.326	**-0.760**	0.771
4. Keeping customers informed about when services will be provided	DROPPED			
5. Providing a suitable service to enhance the convenience of shopping online and picking up at the store	0.343	**-0.654**	-0.237	0.602
6. Performing services right from the first time	DROPPED			
7. Services provided, including the pick-up of online orders, in the promised time	DROPPED			
8. Maintaining error-free records in the orders	DROPPED			
9. Readiness to respond to customer's inquiries	0.145	**-0.759**	-0.269	0.669
10. Employees put the customers' best interest in first place	DROPPED			
11. Employees who are sympathetic and care for the customer	0.210	**-0.693**	-0.413	0.695

Variable	*Technical* offline quality	*Functional* offline quality	*Service online*	Communality
12. Employees who have the knowledge to service customers	0.210	**-0.693**	-0.413	0.695
13. Employees who instill confidence in customers	DROPPED			
14. Consistently courteous employees	0.280	**-0.757**	-0.210	0.696
15. Employees in-store and online who understand and respond to customer needs	0.175	**-0.848**	0.026	0.751
16. Sufficient staff to provide personalized attention in the store and online	0.327	**-0.747**	-0.019	0.666
17. Flexibility and security in my shopping payments	**0.775**	-0.134	-0.132	0.636
18. Convenient store hours	**0.691**	-0.200	-0.173	0.548
19. The retailer's website facilitates shopping online	0.280	-0.079	**-0.831**	0.776
20. The retailer offers an appropriate variety of products of good quality	**0.703**	-0.200	-0.386	0.683
21. Good accessibility to the store pick-up area	**0.795**	-0.366	-0.052	0.768
22. Visually appealing facilities	**0.799**	-0.234	-0.148	0.714
23. Employees who have a neat and professional appearance	**0.817**	-0.187	-0.280	0.781
24. Modern equipment to provide the service	**0.784**	0.225	0.364	0.797
25. Security in my online transactions	DROPPED			
26. Products are conveniently organized in the store to facilitate planned and unplanned purchases	**0.675**	-0.252	-0.438	0.712
% of variance explained	31.4%	22.2%	17.2%	70.9%

Source: authors, based on the analysis of the exploratory factor analysis.

All items referring to online service quality were grouped, while the remaining items were categorized into two factors that resemble the bidimensional structure suggested by the Grönroos SQ model (1984). The first factor comprises items related to the functional dimension of service quality, such as the overall responsiveness and dependability of the service, both in the store and at the pick-up area. The second factor includes items related to the technical service elements (e.g., accessibility of the pick-up area) that enable the service outcomes (e.g., promptness of collection).

The third factor includes three of the four items designed to measure online service quality. The security of online transactions—the fourth item designed to assess online SQ—was deleted because of its low communality and multiple cross-loadings (statistical criterion), and because online payment security, according to managers' experience (judgmental criterion), is already ensured by the reputation of the retailer and consumers' confidence in its ability to secure all financial transactions online. This explanation is supported by previous research in the Latin American context (Sánchez-Alzate *et al.*, 2017), which concludes that a seller's reputation mitigates the perceived risk of online purchases and contributes to creating trust in the retailer's ability to assure data privacy and transaction security.

Results and discussion

The model was empirically tested in Mexico, where the COVID-19 pandemic forced retailers to implement click-and-collect, previously almost nonexistent but projected to become an omnichannel strategy strongly supported by retailers after the pandemic (Cortés, 2021). Partial least squares structural equation modelling (PLS-SEM) using SmartPLS was selected as the analytic technique because of the exploratory nature of the data (a single retailer was included) and the predictive research objective stated by the model in figure 1, namely predicting intentional behavior based on the BOPS-SQ dimensions (Hair *et al.*, 2011, 2017, 2019a). Additionally, PLS-SEM is a flexible non-parametric approach suitable for relatively small sample sizes and is better suited than regression for evaluating the mediation of satisfaction because it considers the entire structural model in the estimation process (Hair *et al.*, 2019b). PLS-SEM also reduces the ambiguity of incorrect solutions for models where some relationships are based on limited theoretical information (e.g., the three-dimensional structure of the BOPS service quality construct) and others rely on well-established theories (e.g., the effect of service quality on satisfaction) (Becker *et al.*, 2012).

Because reflective-formative constructs of higher and zero order are included in the model in figure 1, the disjoint two-stage approach is suitable for analysis. First, the measurement model is built by treating the lower-order components of the higher-order construct in the path model as subdimensions. These are associated with all other constructs theoretically linked to the higher-order construct. Then, the path model is run using the PLS algorithm. From the results, the latent variable matrix is saved separately, and its values are used to measure the lower-order components corresponding to the in-store quality dimensions, while the zero-order constructs (pick-up and online services) are estimated using their standard multi-item measures. Second, the scores are used to measure the higher-order construct (Sarstedt *et al.*, 2019).

Following the assessment process of the measurement model suggested by Hair *et al.* (2019a), the loadings of the indicators comprising the reflective constructs (online, offline functional, and technical service quality) were examined. Only one factor loading was non-significant, resulting in the removal of the second item of the repurchase scale (2. "Proper

management of customer service problems during pick-up," which is implicit in item 5: "Providing a suitable service to enhance the convenience of click-and-collect"). Loadings above 0.708 are recommended because they imply that the construct explains more than 50% of the indicator's variance. Five factor loadings were below the recommended limit (0.643 to 0.668), but all were highly significant. The second step was to assess the reliability of the scales. The Cronbach's alpha values ranged between 0.821 and 0.947; thus, they were judged satisfactory to good.

Alternative reliability measures to Cronbach's alpha were also computed—composite reliability and ρA. Values approaching 0.95, considered problematic, were obtained in the "functional offline service" dimension. Therefore, individual items were revised to identify redundancies that might reduce the overall reliability of the measurement scale. Items "11. Employees who are sympathetic and care for the customer" and "12. Employees who have the knowledge to serve customers" were highly correlated. This correlation is explainable because both contribute to perceptions of employees' dependability. Consequently, item 11 was eliminated through the simultaneous application of statistical and judgmental criteria. Its removal resulted in reliability indexes (table 3) below the problematic threshold of 0.95.

Table 3. Reliability coefficients of the multi-scales.

Construct	Cronbach's alpha	Composite reliability	ρ_A	AVE
Technical offline service	0.927	0.943	0.940	0.705
Functional offline service	0.915	0.946	0.938	0.664
Online service	0.899	0.922	0.920	0.855
Satisfaction	0.867	0.904	0.877	0.656
Positive WOM	0.896	0.935	0.898	0.828
Repurchase intentions	0.821	0.917	0.856	0.846

Source: authors, based on the measurement model results.

To assess the convergent validity of each construct, the average variance extracted (AVE) was computed (table 3). All values were above the recommended lower bound of 0.5. The fourth step was to assess the discriminant validity of the constructs in the measurement model using the Fornell and Larcker criterion and the heterotrait–monotrait (HTMT) ratio of correlations (Hair *et al.*, 2019). All AVE square roots exceeded the inter-construct correlations of the same construct and all other model constructs. Additionally, bootstrapping (set to 5,000 samples) was applied to test whether the HTMT values were below the threshold value of 0.9. The upper bound of all 95% confidence intervals of HTMT was below 0.90, thus providing additional support for discriminant validity.

Note that the direction of causality flows from each dimension defining the formative latent construct of "BOPS service quality." The multicollinearity measures (VIF) ranged between 1.507 and

2.156; therefore, multicollinearity was not a problem. According to the magnitude and sign of the weights, the contribution of each BOPS service quality dimension to the overall BOPS SQ is: Technical offline service > Functional offline service > Online service. These results suggest that the offline or in-store customer experience of the BOPS omnichannel dominates Mexican consumers' service quality perceptions. However, the pandemic has changed the habits and preferences of many consumers who chose BOPS shopping as the best option (Deloitte, 2020). Consequently, online service quality—encompassing the retailer's web attractiveness and user-friendliness, order fulfillment dependability, and online responsiveness (Blut *et al.*, 2015; Meng & Sego, 2020; Rita *et al.*, 2019)—emerges as a new constituent of this popular omnichannel retail initiative, as proposed in H1.

However, hypothesis H1 is only partially supported because the other two dimensions comprising the BOPS-SQ construct do not correspond to those suggested a priori but rather to functional and technical offline (in-store) service quality. Therefore, BOPS-SQ is operationalized as a multidimensional formative construct comprising 17 items associated with three dimensions: technical offline service (8 items), functional offline service (6 items), and online service (3 items). A 5-point Likert scale is proposed to collect responses from respondents (table 4).

Table 4. Service quality scale of the BOPS omnichannel strategy.

Dimensions of BOPS service quality
Technical offline quality
Flexibility and security in my shopping payments
Convenient store hours
The retailer offers an appropriate variety of products with good quality
Good accessibility to the store pick-up area
Visually appealing facilities
Employees who have a neat and professional appearance
Modern equipment to provide the service
Products are conveniently organized in the store to facilitate planned and unplanned purchases
Functional offline quality
Providing a suitable service to enhance the convenience of shopping online and picking up at the store
Readiness to respond to customer's inquiries
Employees who have the knowledge to service customers
Consistently courteous employees
Employees in-store and online who understand and respond to customer needs
Sufficient staff to provide personalized attention in the store and online
Service online

Dimensions of BOPS service quality
Trustworthiness in the handling of customer orders when shopping online
Dependability in delivering my online purchases to the nearest store
The retailer's website facilitates shopping online

Source: authors, based on the measurement model results.

The beta coefficients indicate that Mexican BOPS buyers—particularly those who perform impulsive complementary purchases or require service assistance—focus on the utilitarian features of the service and take for granted that they will receive the promised service in the pick-up area, given their previous in-store experience and trust in the retailer. These results suggest that Mexican consumers incorporate the ease and convenience of the pick-up service with the retailer's ability to provide appropriate service in the physical channel. Similarly, consumers merge the responsiveness and courtesy of dedicated BOPS employees with the functional quality of the overall offline service process. That is, consumers seem to perceive the BOPS omnichannel as a complementary service that reinforces their commitment to the retailer (Vyt *et al.*, 2017).

Therefore, the service model proposed by Grönroos (1984) appears more appropriate for conceptualizing the offline component of BOPS-SQ because SERVPERF focuses on how the service is provided but not on the key outcome of the click-and-collect service—namely, the collection of the perfect order. Moreover, recent research explores the impact of BOPS on customers' perceptions, from their digital to their physical trips (Vyt *et al.*, 2022), using Service-Dominant Logic, a theoretical framework that advances service quality models. Results indicate that functional convenience, enabled by interaction with knowledgeable employees, is the most important element. Digital convenience, equivalent to the online service component in this work, differentiates among BOPS types, thus supporting this study's conceptualization of BOPS-SQ as a second-order construct comprising functional and technical offline service, and online service.

Regarding the PLS-SEM structural model proposed in figure 1, the coefficient of determination (R^2 = 59.87%) indicates that the model has satisfactory explanatory and predictive ability. The blindfolding-based cross-validated redundancy measure (Q^2) for the key endogenous constructs—positive WOM and BOPS repurchase intention—were 0.3047 (large) and 0.1702 (medium), respectively, thus supporting the model's predictive ability. The standardized mean square residual (SMSR = 0.042) is below the recommended threshold of 0.05, indicating a good fit. Finally, the significance of the coefficients was determined using bootstrapping (n = 5000 samples). Results are reported in table 5. All path coefficients were highly significant except for the direct effect of BOPS-integrated service quality on WOM.

Table 5. Hypotheses testing results.

Relationship	Path coefficient	t-value	*P*-value
H1: BOPS Service Quality ← Technical offline service	0.929	42.087	0.000

Relationship	Path coefficient	t-value	*P*-value
H1: BOPS Service Quality ← Functional offline service	0.850	26.828	0.000
H1: BOPS Service Quality ← Online service	0.747	12.172	0.000
H2: BOPS Service Quality → Satisfaction	0.730	11.685	0.000
H3: Satisfaction → (+) WOM	0.763	9.194	0.000
H4: Satisfaction → Repurchase	0.673	12.692	0.000
H5: BOPS Service Quality → (+) WOM	0.017	0.258	0.796

Source: authors, after PLS-SEM analytic results.

The direct effect of BOPS-integrated service quality on satisfaction was positive (β = 0.730) and highly significant (P = 0.000), as proposed in H2. According to table 5, the indirect effect of BOPS-SQ on positive WOM was positive (β = 0.557 = 0.73 * 0.763) and highly significant (t = 6.909, P = 0.000), thus supporting H3. Because the direct effect of BOPS-SQ on positive WOM is non-significant (P = 0.796), H5 is unsupported, and we conclude that the effect of BOPS-SQ on WOM is fully mediated by satisfaction. The total effect of BOPS-SQ on positive WOM approximates the indirect effect estimate (β = 0.574, t = 6.761, P = 0.000), confirming that satisfaction is the immediate antecedent of WOM.

Regarding the other intentional behavior, repurchase intention (RI), the indirect effect of BOPS-SQ on RI was highly significant (β = 0.491 = 0.730 * 0.673, t = 7.473, P = 0.000), thus supporting H4. Because the direct effect of BOPS-SQ on the intention to repurchase in the BOPS omnichannel is highly significant (β = 0.353, t = 6.665, P = 0.000) and the product of direct and indirect effects is positive, the influence of BOPS-SQ on repurchase (total effect = 0.844) is only partially mediated by satisfaction. The mediating effect of satisfaction on the relationship between service quality and consumer responses has been widely recognized in the service marketing literature, and our results support the nomological validity of the simplified BOPS-SQ scale proposed in this work (Lee *et al.*, 2020).

The findings of the study suggest the need to develop more specific items to assess the technical quality of the BOPS service, given the difficulty consumers may have in judging this component and the risk of them inferring technical quality from attributes such as employee responsiveness—which may also be supported by, for example, automation of the pick-up area or the retailer's logistics capabilities. However, for Mexican consumers, how the service process is performed and its outcomes appear to be directly associated with their in-store experience. Thus, refining the proposed BOPS-SQ scale requires additional efforts to separate the retailer's technical capabilities—resulting in on-time, correctly packaged, and accurate orders—from consumers' perceptions that staff empathy, friendliness, and skills are sufficient to provide good service in the BOPS omnichannel (Sumrit & Sowijit, 2023).

As physical channel strategies transition to a combination of multichannel and omnichannel approaches, companies are using interactive technologies in the store to implement click-and-collect services. Therefore, online service quality is acknowledged as the third component of BOPS-SQ because the omnichannel must provide customers with a seamless experience that uses technology to enable product search and selection, order placement and tracking, and confidence that products purchased online will be delivered as promised (Castro-López *et al.*, 2019). The integration of offline (functional and technical) and online service quality constitutes the BOPS integrated service, which induces satisfaction leading to key behaviors such as BOPS repurchases and recommendations of the omnichannel (Chai & Wang, 2022).

Conclusions, recommendations, and limitations

Omnichannel retailing has revolutionized the industry and attracted the interest of professionals and researchers. However, as Asmare and Zewdie (2022), Salvietti *et al.* (2022), and Mishra (2021) conclude in their literature reviews, the theme still requires theory-based research. This work uses well-established service quality frameworks in marketing to develop a multiscale to assess BOPS-SQ and confirm that service quality significantly influences consumer satisfaction and subsequent behaviors in the new retail environment driven by technology and digitalization. Therefore, the research contributes to the service quality and omnichannel literature by increasing understanding of the critical components that form BOPS-SQ and how they influence consumers' repurchase intentions and positive WOM through the partial and full mediation of satisfaction (Castro-López *et al.*, 2019; Lee *et al.*, 2020; Kim *et al.*, 2009).

Large Mexican retailers have increased their efforts to advance their omnichannel strategies, as every touchpoint in the customer journey is becoming more digitized and consumers are changing their shopping habits after the COVID-19 pandemic (Béjar-Tinoco *et al.*, 2022; Rodríguez, 2024). The core goal of omnichannel is to provide customers with a consistent service experience across online and offline channels. Therefore, this research focuses on the components of service quality in the buy-online-pick-up-in-store omnichannel that contribute to overall perceptions of integrated service quality (Balbín-Buckley & Marquina-Feldman, 2024). Contrary to online purchasing, which involves minimal human interaction, the BOPS service experience involves interactions with service employees and the appeal of the retailer's facilities, products, and ambiance throughout the physical store—not only in the pick-up area.

As expected, proper fulfillment of online orders, responsiveness to problems with online orders during pick-up, and website design (online service quality) positively influence intentions to continue using BOPS and positive WOM. Nonetheless, in-store service quality contributed more to BOPS-SQ than the online part of the omnichannel. Contrary to previous research in developing countries (Lee *et al.*, 2019), the service quality of the offline channel was found to comprise only two dimensions: technical and functional quality. Thus, the service quality framework suggested by

Grönroos (1984, 2001) was more appropriate for describing the entire in-store service quality of the BOPS omnichannel.

The analytical results support the nomological validity of the proposed service quality multiscale because the theoretical relationships proposed (BOPS-SQ → satisfaction → behavior) were empirically confirmed (Lee *et al.*, 2020). Therefore, this study adds to empirical work exploring how integrated omnichannel service influences consumer behavior in developing economies (Gerea *et al.*, 2021; Salvietti *et al.*, 2022). The results also confirm the generally accepted role of satisfaction as a mediator in the relationship between service quality and behavioral intentions in the BOPS context, reinforcing that satisfaction is a key factor for the continued use and endorsement of BOPS (Lee *et al.*, 2020).

Several practical implications derive from this research. First, the study provides retailers with a multiscale instrument that can be used to assess and improve the quality of the BOPS omnichannel by considering three dimensions: offline technical quality, offline functional quality, and online quality. Thus, the first recommendation is for retailers to effectively manage their omnichannel strategy by providing omni-shoppers with seamless and consistent service at crucial touchpoints: the online platform, where consumers interact with digital devices, and the physical store, particularly the pick-up area.

Secondly, retailers are advised to strengthen their online strategy to meet the needs of increasingly demanding customers. For example: a) developing complete customer profiles (demographics, interests, and buying habits) to create targeted offers, personalized websites, and tailored marketing messages; b) understanding how users interact with website or app content to improve attractiveness and user-friendliness, thereby supporting online search and purchase experiences for different consumer segments (Sharma & Lijuan, 2015).

Thirdly, findings indicate that the in-store experience dominates omnichannel service perceptions among Mexican consumers. Therefore, the BOPS strategy for Mexican retailers should focus on providing a positive service experience in physical stores, for example by: a) modifying store layout to enhance the ambiance of the pick-up area and parking; b) training pick-up area employees to perform efficient deliveries and handle service problems such as returns (Xie *et al.*, 2023); c) directing customer traffic toward physical stores by offering extra information and premium service in the pick-up area and introducing technological innovations such as virtual fitting rooms and retail apps to improve the shopping experience (Mosquera *et al.*, 2017); d) encouraging satisfied customers to post rich and cogent comments about their BOPS experience, as positive WOM and e-WOM appear more persuasive than traditional marketing strategies (Béjar-Tinoco *et al.*, 2022).

BOPS is expected to remain a suitable omnichannel because of the functional and relational benefits it provides to customers (Gao & Su, 2017). According to the Nielsen IQ e-commerce report,

83% of Mexican consumers declare that they combine physical and digital channels, and 60% prefer the click-and-collect option (Rodríguez, 2024). BOPS also benefits retailers by generating store traffic, spurring impulsive in-store purchases, reducing delivery costs, improving inventory management, increasing delivery flexibility, allowing consolidation of orders, and reducing failed deliveries (Lin *et al.*, 2021).

The main limitation of this research is the use of a non-probabilistic sample of customers from stores located in one state and belonging to a single Mexican retailer. A survey of randomly selected BOPS consumers purchasing from several retailers would support the generalizability of the BOPS-SQ scale and the empirical validity of the model in figure 1. A second extension is to assess and compare perceived service quality for other omnichannels (e.g., curbside pick-up and BORO). Another limitation is that the individual profiles of customers were not considered. Therefore, a third extension would be to fit different models depending on consumers' demographics (e.g., Generations X, Y, and Z), lifestyles, frequency of channel use, and the perceived value assigned to each BOPS-SQ dimension. For example, Millennials may value the functional dimension more, while Centennials—who prefer the online channel—may assign greater importance to the online service dimension. Another possibility is to explore what personalized experiences throughout the omnichannel journey are preferred by different generations and which friction points (e.g., returns, delivery times) affect service perceptions and satisfaction.

A fourth limitation is that a deeper examination of the hierarchical structure of the pick-up and online service quality scales was not performed. Contrasting the predictive validity of the multidimensional BOPS-PU-QUAL scale (Lee *et al.*, 2020) and the two-dimensional electronic service scale developed in the Latin American context by Del Águila-Obra *et al.* (2013) against the simplified scales used in this work is recommended to address this limitation. Finally, another avenue for research is the application of other techniques—such as qualitative methods, field experiments, and data analytics—to better understand how consumer behavior is influenced by omnichannel integration and what factors besides service quality motivate consumers to select and switch among different channels.

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