Does strategic management of digital technologies influence electronic word-of-mouth (eWOM) and customer loyalty? Empirical insights from B2B platform economy

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ABSTRACT

In a volatile environment with huge opportunities for implementing digital technologies the concept of customer loyalty needs further exploration. This paper examines the effects of strategic management of digital technologies on the effectiveness of electronic word-of-mouth (eWOM) and customer loyalty in the B2B sharing economy context. We draw from research on digital adoption and eWOM alongside the theory of planned behavior (TBP) to develop a dedicated model that encompasses novel constructs depicting strategic management of digital technologies, eWOM, and customer loyalty. We test our model using a unique data set comprising information on customers' digital adoption status, eWOM usage, and repurchasing behavior. Our study reveals interesting and innovative findings demonstrating how adopting digital technologies decreases customer loyalty in the B2B sharing platform. The results of this study further explain this outcome by the decrease in the eWoM value that directs the repurchasing behavior of customer firm's representatives. Building on these outcomes, managerial implications are provided for strategic management of digital technologies to maximize the trust in eWOM and enhance value for B2B customers.

1. Introduction

During the last decades, the concept of sharing economy has received increased attention in the literature due to its rapid growth and dramatic impact on different aspects of the social and economic system (Cheng, 2016). Sharing economy platforms are widely adopted, especially during the COVID-19 outbreak (Chen et al., 2022). Schor and Fitzmaurice (2015) define sharing economy as "peer-to-peer sharing of access to underutilized goods and services, which prioritizes utilization and accessibility over ownership." Stephany (2015) argued that sharing economy is organized by "the value in taking under-utilized assets and making them accessible online to a community, leading to a reduced need for ownership." On the other hand, Belk (2014) considers consumers as collaborators. The emerging online sharing platforms have reshaped traditional business by allowing buyers and sellers to interact

and trade innovatively (Kim & Jin, 2020). The benefits of sharing economy include the optimization of business-to-business (B2B) interactions by reducing transaction costs, inefficiency, and searching costs, in addition to the payment facilities (Gonget al., 2020). These platforms have influenced various fields, such as marketing (Zervas, Davide Proserpio, & John, 2017), financing (Gong et al., 2020), transportation (Kamble et al., 2021), and computer science (Arvind & Alstyne, 2014). Sharing economy represents a network of consumers to increase social connections and deliver durable social ties. It is also arguable that sharing is less resource intensive, reducing environmental impacts (Hossain 2020).

However, one relevant strategic challenge in sharing economy platforms, especially in B2B context, is developing customer loyalty in a volatile environment (Akhmedova et al., 2020). Recent advances in digital technologies have expedited the pace of service innovation that

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nurtures the fierce competition in the digital service market (Hagberg et al. 2016). The literature in the business-to-customer (B2C) sharing context argues that new technologies such as Big Data Analytics (BDA), Artificial Intelligence (AI), and Blockchain Technology (BT) allow sharing platforms to offer innovative services that are of superior quality, wide variety, and highly personalized resulting in customer acquisition and profits (Garud et al., 2022; Bai & Velamuri, 2021).

However, due to some considerations, these conclusions could not be enough to shape the relationship between digital technologies and customer loyalty in the context of B2B sharing platforms. First, the unit cost of new customer acquisition is relatively lower than customer retention. Hence, the proven customer base expansion is insufficient to enjoy a competitive advantage by maintaining and enlarging a loyal customer base (Adam, et al., 2020). Further, managing customer loyalty in the B2B context is argued to be substantially different from the B2C context as other attitudinal and behavioral drives arise that need to be meticulously explored (Nyadzayo, et al., 2018). Therefore, there is a pressing need for sharing economy platforms to understand the inter-play between digital technologies adoption and customer loyalty in the B2B context.

An important mechanism shaping the connection between digital technologies adoption and customer loyalty relates to the driving of a new age of word-of-mouth called eWOM. eWOM is defined as digitally driven communication between customers on the features of a product or service (Barreto, & Margarida, 2014). In the B2B sharing context, customers are business representatives driven by various agency behavioral patterns. Moreover, as the digital platform in the B2B context is not integrated into customers' social and personal fabric, the effect of advanced digital technologies will be different for individual customers (Tóth, et al., 2022). Therefore, digital technologies can potentially lead to more subtle patterns of impacts on both eWOM and customer loyalty in the B2B sharing context. The B2B customer is more concerned with the strategic way of adopting digital technologies than the individual customer who focuses mainly on emotional aspects (Xu, James, & Vis-wanath, 2014). The management of digital technology should include a certain number of strategies whose effect goes beyond the individual customer's satisfaction and cover the whole customer organization.

Despite these differences between the B2C and B2B sharing platforms, there is limited empirical research that examines this relationship in B2B sharing platforms. Against this backdrop, the current study explores these new patterns of effects between strategic management of digital technologies and eWOM that affect customer loyalty. Hence, we aim to:

1. Investigate the impact of strategic management of digital technologies on the effectiveness of electronic word-of-mouth (eWOM) and customer loyalty, and
2. Develop a model to explain the interrelationship and test it empirically in the B2B sharing platform.

To fulfill these research objectives, we used panel data of 9162 randomly selected customers from a B2B sharing platform that provides an on-demand manufacturing workplace connecting many highly specialized machine shops with international firms. We followed the Difference-In-Difference (DID) estimation approach to test our empirical research model.

The present research makes several contributions. First, we extend the current literature on sharing economy by exploring actual customer behavior in the B2B context and with the interplay of strategic management of digital technologies adoption. Second, we apply several new methodological approaches to study sharing economy, including a comprehensive measure of eWOM and customer loyalty, developing an analysis framework suitable to evaluate digital adoption in B2B sharing context, and DID matching estimators to better control for customer heterogeneity when assessing outcomes. These methods potentially reduce bias owing to customer self-selection and reverse causality.

2. Background literature

2.1. eWOM in B2B platform economy

According to Arndt (1967), WOM can be any oral and personal communication, positive or negative, about a brand, product, service, or organization in which the receiver of the message perceives the sender to have a non-commercial intention. Barreto, & Margarida (2014) defined WOM as an "oral or written communication process, between a sender and an individual or group of receivers, regardless of whether they share the same social network, to share and acquire information, on an informal basis." WOM is a crucial marketing communication tool that influences consumer purchasing decisions and permits companies to be in touch with customers' needs and desires (Verma, et al., 2021).

With the emergence of the internet, consumers use online platforms to share their reviews, opinions, and recommendations concerning products, services, and companies. Gupta et al. (2014) refer to websites as "coffee shops," where people with common interests can meet and electronically communicate (Weisfeld-Spolter, Sussan, & Gould, 2014). These communications, referred to as the Electronic Word of Mouth (eWoM), have allowed for an innovative platform that emboldens both providers and consumers to communicate in Business to Consumer (B2C) and from consumer-to-consumer (C2C) environments (Jalilvand et al., 2011). In the context of B2B, there is an increasing number of customers who share their supplier's reviews through digital platforms like Alibaba.com, Tecreviewer, Sortlist, Clutch.co, and G2.com (Mai and Liao, 2021). Most B2B customers fall into the young millennial industrial buyers who count on eWoM to choose their potential suppliers (Pandey and Pal, 2020).

B2B review platforms routinely collect and host verified reviews of B2B service providers, which helps organizations and professionals to find reliable and reputable suppliers (such as consultants, advertisers, marketers, web developers, and wholesalers) (Verma & Neha Yadav, 2021). Previous literature reveals that instead of lengthy supplier eval-uations on the various dimensions, B2B buyers are more likely to draw on the experience of other buyers for the supplier selection (Bigné et al., 2016). Through these online communities, buyers could meet and interact with other buyers with similar interests, get supplier informa-tion, and establish a "ready-made setting" about a specific supplier, especially without purchasing history. In the bargain, B2B professionals can access reviews internally through online vendor scorecards or vendor intelligence systems available in their proprietary company in-tranets (Steward, Michelle, James, & Michelle, 2018).

2.2. eWoM and customer loyalty in the B2B context

There is a mutual agreement in the literature that eWoM is influ-enced by various factors such as perceived value, product/service quality, customer satisfaction, trust, loyalty, and supplier engagement with the customer (Seo and Park, 2018).

According to Jalilvand et al. (2017), perceived value refers to the earlier experience of different services and imagined experiences that impact customers' present and future value-in-context experiences. It assesses the utility of a product/service based on expectations v/s reality and evaluates the associated gains and sacrifices that the supplier offers. Therefore, B2B suppliers must maximize customer value creation and convenience in the customer buying journey (Rogers and Clark, 2016). Andreassen and Lindestad (1998) suggest that the quality of the prod-uct/service influences the customer's evaluation and WoM; the higher the quality is, the more likely the customer would leave a positive re-view, and vice versa, the better the quality is, the more likely the customer will repurchase. The interpersonal interaction between the seller and the buyers plays a crucial role in determining the direction of the eWoM and building customer loyalty in B2B. Customer loyalty is defined as "a deeply held commitment to rebuy or re-patronize a preferred product or service consistently in the future, despite

situational influences and marketing efforts having the potential to cause switching behavior" (Oliver, 1999).

Those B2B suppliers who remain connected with their customers, communicate efficiently and address their concerns, enhancing customer satisfaction and mutual trust and easing their collaboration risk (Gössling et al., 2021). B2B firms search for motivated suppliers for quality service, loyalty, and long-lasting relationships. Modern B2B customers expect an e-commerce experience; therefore, they are influenced by their online buying experience (Mai and Liao, 2021). The same can be explained through the lenses of the theory of planned behavior (TPB), a well-known and established theory of social psychology that asserts that specific salient beliefs influence given behavioral perceptions and subsequent actual behavior (Ajzen, 1991). As per TPB, three types of beliefs impact three perceptual constructs: behavioral beliefs that influence attitudes, normative beliefs that affect subjective norms, and control beliefs that shape perceived behavioral control. According to Ajzen (1991), an attitude toward a behavior is a positive or negative evaluation of performing that behavior.

In the B2B context, the attitude toward repurchase is determined by the overall evaluation of a previous transaction with the supplier. Attitude is a comprehensive assessment of a B2B supplier's service characteristics; hence, it will likely influence the B2B customer's repurchasing behavior. Therefore, a favorable attitude is expected to ease customer loyalty and influence the direction of the customer's review. Perceived behavioral control is the customer's perception of control over a potential transaction. Perception of control would facilitate customer engagement since the customer has the resources to manage such behavioral activities in reviewing a sense of control over how a supplier's product/service will likely encourage such behavior. A subjective norm is a B2B customer's normative belief that the behavior is accepted, motivated, and promoted by their circle of influence.

Customer loyalty has evolved from a behavioral definition to a more psychological one based on the attitude, behavior, and cognition affect cognition framework (Suhartanto et al., 2021). In the literature, three main phases of customer loyalty have been identified: cognitive loyalty, affective loyalty, and conative loyalty (Xu et al., 2014). In the context of B2B and TPB, cognitive loyalty is the B2B customer's preference for one supplier over others based on information sharing, proximity, lead time, positive reviews, and price sensitivity. A B2B supplier feedback is regarded as a crucial mechanism that facilitates trust between B2B sellers and buyers. eWoM, in this case, is used to gauge sellers' credibility. Therefore, the B2B customer will develop a sense of control and mastery that justifies doing a purchasing transaction once again with a specific supplier (Gligor, Bozkurt, Gölgeci, & Maloni, 2020). Affective loyalty is the B2B customer's attitude toward a supplier based on a previous buying experience, which positively affects its likelihood of re-engaging in a future transaction (behavioral beliefs). Finally, conative loyalty is the B2B customer's behavioral intention to continue dealing with a particular supplier, which can be further influenced by the reviews shared by other customers sharing similar beliefs or experiences with a specific service provider (normative beliefs) (Xu et al., 2014).

2.3. Strategic management of digital technologies adoption

In our paper, we examine the adoption of digital technologies and their strategies in the B2B environments, namely, digital leadership, service leadership, and the service customization provided by the platform to develop and deliver new services to its consumers (Xu et al., 2014).

In the literature, there is a mutual agreement about the competitive advantage that firms could gain after adopting digital technologies (Koch & Windsperger, 2017). Being a digital leader in a highly competitive environment improves business performance and value creation (Kagermann, & Henning, 2015). With intense competition, being a technology leader is not sufficient. Service leadership adds value and complements the role already being played by technology

leadership (Xu et al., 2014). In the bargain, satisfying customers' needs has always been a pivot objective that firms aspire to reach; therefore, meeting and exceeding customers' expectations through customization is another ingredient that differentiates a B2B vendor from another (Tam, Kar Yan, & Shuk, 2006).

In the context of B2B, Service leadership is the strategy of introducing upgraded services regularly and being a leader in terms of service variety. Hence, customers are aware of the service innovation by the B2B suppliers and form their beliefs based on suppliers' efforts to innovate their services continuously. For example, B2B platforms could make use of the internet of things to leverage features like self-service, where customers could engage with retailers and suppliers using touchpoints like online chat, smart speakers, mobile apps, and intuitive websites that give customers everything they need (Hagberg et al., 2016). As a result, the customer experience is improved, which increases the possibility of dropping a positive review based on the service quality, enhancing trust and customer loyalty.

Digital leadership is defined as the B2B suppliers' development and presentation of innovative industry 4.0 technologies, such as big data analytics (BDA), artificial intelligence (AI), machine learning, the internet of things, etc. (Rudito and Sinaga, 2017). For example, blockchain technology (BT) can enable connectivity and trusted data exchange between business ecosystems by leveraging intelligent automation and process optimization to store and trace data in a distributed, verified, and secure way (Lahkani et al., 2020). As a result, trust, risk mitigation, and traceability are assured; therefore, customers will have an improved and reliable experience (positive eWoM), further enhancing the likelihood of engaging again with the supplier.

Finally, customization represents the strategy that allows customers to tailor products and services according to their preferences (Gilmore and Joseph Pine, 1997). The B2B customer journey is complex; for example, a B2B supplier could use augmented reality to improve the customer's experience, where this latter would appreciate the effort made by the supplier and have a real visualization of the product/service, hence establishing an emotional connection, enhancing the purchasing experience (Chylinski et al., 2020). The customer can also ask for specific visual requirements, guaranteeing a unique and customized purchasing experience.

The fit between the three strategies could be related to the field of Microeconomics. Goods or services complement each other if they increase consumer utility only when consumed together (Xu et al., 2014). Service leadership provides a direct value to the customer; for example, touchpoints, chat, smart speakers, mobile apps, and intuitive websites are services that enhance the customer experience when they navigate a B2B platform; however, customers are not directly perceiving the value of the technology that supports the service (Xu, Su, Meng Cheng, & George, 2015). According to Xu et al. (2014), platform technologies provide a supporting and enabling role in the service provider's service. On the other hand, to ensure customization, both technology and service leaders need to be present (Xu et al., 2014). For example, augmented reality is the technology that enables the service of product/service visualization where the customer can customize and tailor his own product/ service.

Based on the above, we suggest that when technology leadership and customization complement service leadership, eWoM, and customer loyalty are positively affected.

3. Theoretical predictions and model development

3.1. Effect of strategic adoption of digital technologies on customer loyalty in B2B platform economy

According to Balci & Gökcay (2021) and Adam et al. (2020), digitized operations in a B2B industry affect customer loyalty. Using digital channels to build stronger customer loyalty is no longer a luxury but a necessity, especially in today's turbulent and aggressive business market

(Khan and Islam, 2017). Digital technologies can influence the customer with various tools and innovations that allow them to turn into regular users of products (services), brands (brands), or the company itself (Mintz et al., 2021).

With the inclusion of BDA, retailers intend to understand customer requirements, buying patterns, and preferences, which can help have a better picture of what B2B customers are looking for (Ying, et al., 2021). Customers are more likely to re-engage in future transactions with suppliers and service providers who understand their needs and go the extra mile to improve their services (behavioral beliefs /Affective loyalty) (Wang, Gunasekaran, Ngai, & Papadopoulos, 2016).

On the other hand, the evolution of technologies like the internet of things provides smart services that include identification, locating, sensing, networking, data processing, and billing (Lee et al., 2018). These developments increase customer satisfaction (Jie et al., 2015), resulting in an improved buying journey, which can, in return, increase the chances of selecting one supplier over another (Cognitive loyalty).

Another exciting technology is augmented reality which offers visualization features that help the customer visualize the product/services in three dimensions, which can support them in making purchasing decisions, recommending the product/service to others, and continuing with a particular supplier (Normative beliefs/ conative loyalty) (Poushneh and Vasquez-Parraga, 2017).

Based on the above discussion, we hypothesize that:

H1.a. Strategic management of digital technologies is positively associated with cognitive loyalty.

H1.b. Strategic management of digital technologies is positively associated with affective loyalty.

H1.c. Strategic management of digital technologies is positively associated with conative loyalty.

3.2. Effect of strategic digital technologies adoption on eWOM

As defined in section 1.3, service leadership is the strategy of introducing upgraded services regularly and being a leader in terms of service variety. Therefore, customers have a better chance of meeting their expectations and experiencing a satisfying buying journey (Zolkiewski et al., 2017). A satisfied customer is likelier to leave a positive review than a customer who has gone through a bad buying experience. According to (Li et al., 2020), customers who "have strongly dissatisfying or satisfying experiences tend to post online reviews.

In the context of B2B, engaging with a supplier is not an easy task; customers seldom feel unsure, suspicious, and at risk (Song, Yan, & Zhang, 2019). Orders may be placed with a supplier without a prior contract increasing the risk of fraud; technologies like blockchain could leverage customer experience by guaranteeing intelligent automation, process optimization, security, and risk mitigation (Lahkani et al., 2020). This will make a trusting customer more likely to express his positive feedback on an online platform.

According to Westerlund & Mika (2019), innovative digital technologies make it increasingly hard to distinguish between real and fake media. Therefore, B2B service providers could use their digital leadership to generate fake reviews and fake testimonials that are hard to distinguish from actual content written by a genuine customer (Caldwell et al., 2020).

Hence, we assume that:

H2.a. Strategic management of digital technologies is positively associated with eWOM positive direction

B2B customers seek unique, unexpected, and tailor-made experiences and services (Lemy et al., 2019). For example, chat point is a feature in several B2B platforms (Hagberg et al., 2016) where customers have the possibility of engaging with suppliers in real time and getting answers to all their questions and concerns. The supplier can also use this unique interaction to build an emotional connection with customers and provide them with the special attention they crave to receive (Jones & Lewin, 1996). This will result in a satisfying and leveraged experience

that will influence the customer's likelihood to recommend the supplier's services to other B2B customers (Lemon et al., 2016).

Based on the above, we hypothesize that:

H2.b. Strategic management of digital technologies is positively associated with eWOM sharing intention

Those B2B service providers who understand the customer's need and design a personalized customer journey are more likely to succeed (Lemke et al., 2011). In a highly competitive environment where the product/service is one click away, it is essential to tailor a personalized experience that enables B2B businesses to differentiate themselves and gain a sustainable competitive advantage (Coelho & Hensele, 2012).

Using data to build surveys, offering recommendations based on past purchases and customer preferences, and using geolocation technology to suggest products/services based on location are examples of customization practices that leverage the customer experience and make them feel special (Lee & Thomas, 2007). Artificial intelligence and data mining can help B2B service providers design a customized experience. For example, in the hotel industry B2B business, the agency (customer) will communicate its client's needs to the hotel (service provider). The latter could use the data to design a personalized stay; examples include "smart mirror" features that are used in several hotels, "Robots" that handle and store customer's luggage, and "Bolts" that deliver towels, snacks and toiletries to the customer (Kabadayi et al., 2019). Another example is artificial intelligence-powered applications that offer individualized real-time price reductions based on different options, which provide customers with real-time supply and demand information and transparent pricing for their transactions (Kabadayi et al., 2019). This customization aims to meet customers' individual needs and maximize customer-perceived value, thus improving their buying experience (Du et al., 2006).

Digital technologies have transformed how B2B firms act in business markets regarding value propositions and demonstrations (Gandhi et al., 2018). Efforts are underway to integrate the literature streams on technology and mindset in B2B innovation (Ringberg et al. 2019). New technologies such as the internet of things, augmented reality, virtual reality, virtual assistants, and artificial intelligence are dramatically transforming the B2B business model and influencing the customer buying journey (Hoyer et al., 2020). According to Ritter and Pedersen (2020), customers can enhance the digitalization of a supplier's business model by demanding data and digital solutions, or they can hinder digital transformation by rejecting new, data-enabled ways of doing business.

Based on the above discussion, we hypothesize that:

H2.c. Strategic management of digital technologies is positively associated with eWOM perceived value

3.3. The interplay of strategic adoption of digital technologies and eWOM on customer loyalty in B2B platform economy

Customer loyalty has gained increasing attention in e-commerce (Ramanathan, & Ramakrishnan 2010). Several studies have stressed the importance of various factors in determining customer retention and loyalty. eWoM is one of the most critical factors impacting a customer's final purchase decision. According to Tran and Strutton (2020), reviews serve as a marketing instrument and are helpful for gaining new – and retaining existing – customers. This is especially important for retailers in the competitive e-commerce context, as customer loyalty is an economic necessity for profitability and long-term success.

On the other hand, the use of digital technologies is found to be positively correlated with the eWoM. Blockchain technology, for example, could help customers mitigate their feeling of uncertainty, distrust, and risk perception, which will highly give incentives to leave a positive eWoM (Lahkani et al., 2020). This further supports the claim that the customer reduces the ambiguity and confusion in choosing and trusting a potential service provider. In this vein, eWoM can influence a customer's preference for one supplier over other alternative suppliers

(cognitive loyalty) (Bone, & Fitzgerald, 1995).

According to Park, & Tiwa (2020), credibility, quality, usefulness and adoption of information, the need for information, and attitude towards information are the critical factors influencing eWOM in social media and consumer loyalty. eWoM has greater credibility and relevance and is likelier to evoke empathy with customers than information on marketer-designed websites (Tran & Strutton, 2020). Therefore, we put forwards that:

H3.a. eWOM moderates the effect of strategic management of digital technologies with cognitive loyalty.

According to Lee & Thomas (2007), suppliers who use databases to build surveys offer recommendations based on past purchases and customer preferences and use geolocation technology to suggest products/services formed on location are suppliers that leverage the customer experience and make them feel special. These suppliers often have many reviews (Hu & Yang, 2020). The higher the number of customer reviews, the greater the relevant information available to the company to continuously improve and innovate its product/service offerings. Therefore, the B2B service provider could use this information to improve the customer's experience and satisfaction, which will positively impact the customer's loyalty and perception of the service provider (Liu et al., 2020).

Besides, if reviews are positive, they positively affect the company's reputation. A B2B supplier with a good reputation is likely to be perceived by customers as more trustworthy and credible than one with a poor reputation. B2B service providers with a good reputation are likely to attract more customers and retain their current ones, reducing perceived risk (normative beliefs) (Tran & Strutton, 2020). Hence, we assume that:

H3.b. eWOM moderates the effect of strategic management of digital technologies with conative loyalty.

As highlighted previously, intelligence artificial-powered applications that offer individualized real-time price reductions based on different options provide customers with a unique, transparent, and well-tailored experience, enhancing the eWoM (Hoyer et al., 2020). These experiences drive eWOM. Delighted consumers develop positive repurchasing intentions. Likewise, once customers' expectations are confirmed and trust in an e-commerce website is created, customers are keen to repurchase from the website (behavioral beliefs) (Özkan et al., 2019). Based on the above considerations, we hypothesize that:

H3.b. eWOM moderates the effect of strategic management of digital technologies with affective loyalty.

The research model based on the above hypothesis is proposed in Fig. 1.

4. Empirical setting

We create our data set straightforwardly from a large B2B sharing platform on conditions of anonymity and nondisclosure. The platform provides an on-demand manufacturing workplace that connects a large number of highly specialized machine shops with international firms. The platform has shown remarkable expansion during the COVID-19 outbreak as it fostered the small manufacturers to maintain their factories fully utilized despite the global downturn. Since launching in 2018, the platform has used an early mobile website version. This version provides a simple, user-friendly interface, high findability, and shareability.

However, the website does not enable customers to get on the platform in a personalized fashion or to enjoy a customized experience. Moreover, the website does not allow collecting customers' data (localization, browsing history …etc.) or manipulating data and performing complex calculations. Therefore, after reaching a high customer base, the steering board of the company decided to engage in a digital strategic management approach to upgrade the customer experience and ensure high profitability during the COVID-19 period. The process is built around three pillars, i.e., service leadership, digital leadership, and customization control. In 2021, the sharing company rolled out its new advanced digital application providing several advanced features to its customers. The app collects a large volume of data from the customer through BDA and applies AI to understand customers' patterns and provide the most personalized and suitable offering to the customer.

Moreover, the app provides a secure mobile money exchange based on BT. The app provides an extra feature of an interactive reviews toolbar based on AI enabling customers to get other customers' feedback on products' quality. Customers could choose (or not) to activate this feature. Our empirical data set comprises individual consumer-level panel data (9162 consumers) on several attributes related to customer loyalty and demographic profiles from March 2021 to December 2021 (10 months) on a monthly basis. The unit of analysis is the business. The other variables and statistics are described in Table 1.
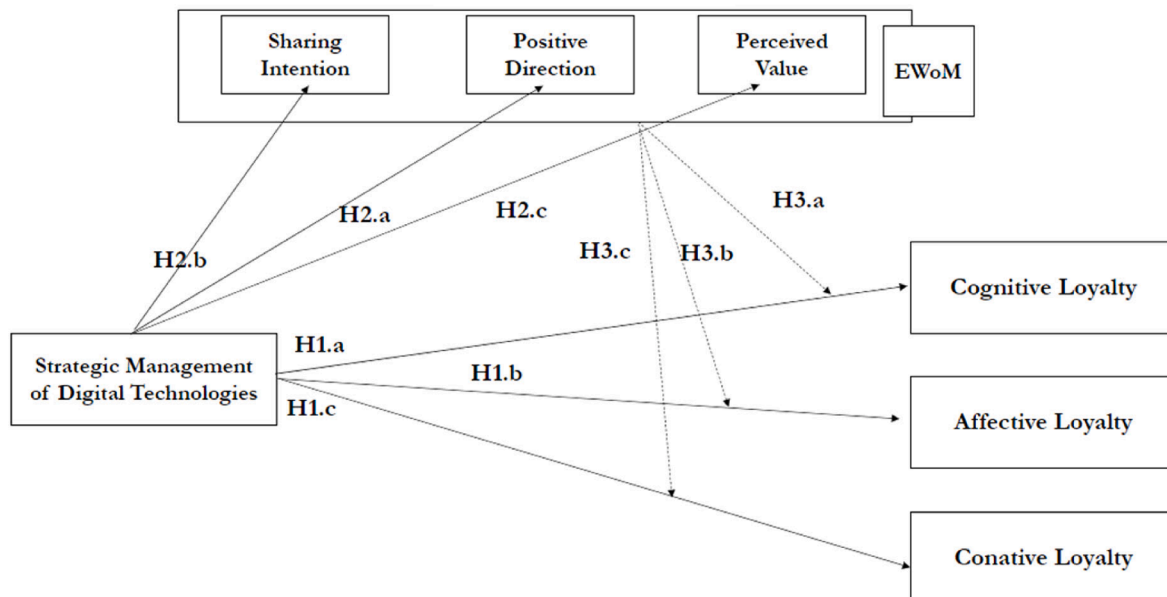

Fig. 1. The research model.

Table 1
Summary of variable description and statistics.

Categories and variables	Description	Mean	Standard deviation
Customer loyalty			
Perceived value for money	Perceived utility derived from every purchase expressed by percentage	0,58	0,12
Satisfaction rate	Expressed satisfaction of the customer expressed on a five-point scale	2,84	1,26
Number of repurchasing	Number of repurchasing by a customer for the same product/ service from the same manufacturer	10,79	3,64
eWOM			
eWOM sharing intention	Number of reviews and/or evaluations provided by the same customer	159,94	28,15
eWOM positive direction	Number of positive reviews and/or evaluations provided by the same customer	78,62	16,29
eWOM perceived value	Perceived reliability of reviews or evaluations for a customer expressed on a five-point scale	3,11	1,62
Demographics			
Experience	Number of years of experience of companies representatives	5,72	3,84
Age	Age of companies representatives	32,07	5,73
Gender	1 if the company's representative is male; 0 otherwise	0,61	0,12
Activity sector	1 if the company operates in manufacturing; 0 otherwise.	0,59	0,17

5. Methodology and main results

The analysis was based on propensity score matching (PSM), a statistical matching technique that attempts to estimate the effect of treatment X by accounting for the covariates that predict getting X (Morrish, Mujica-Mota, & Medina-Lara, 2022). The data used for PSM is not produced through a controlled field experiment. Thus, the self-selection bias could constitute a potential threat to the reliability of the results. We follow previous studies (e.g. Chen et al., 2021; Qian & Xie, 2022) to leverage the PSM method to generate a matched control group for each customer in the treatment group. Afterward, we use the matched pair of customer datasets to feed DID estimations to evaluate the effect of digital technologies adoption strategies on eWOM and then the combined interplay with the different components of customer loyalty.

5.1. Matching pair of control and treatment groups using PSM

PSM matches control and treatment groups of customers based on a propensity score derived from observable customers' characteristics (Rosenbaum and Rubin, 1983). The purpose of using PSM is to reduce the differences in the matching characteristics (i.e., "covariate balancing"), thereby mitigating the effects of these differences on customers' loyalty. In our study, the main distinctness between the control and treatment groups of customers is that the customers of the control group have adopted the advanced digital app (resulting from the strategic management program of digital technologies). Further, our sample considers customers who registered in the application before the beginning of our data-collection campaign and performed a minimum of three purchases during the preadoption period of our analysis. Accordingly, we collected data six months before the company's digital adoption and transformation program to form a control group equivalent to the treatment group in the preadoption period to reflect a randomized experimental setting using PSM.

Consequently, the treatment group is built based on data in month seven or after. Finally, we gathered 4581 pairs of customers. Considering the periods before digital adoption, the group mean covariates

before and after the matching are compared in order to validate the effectiveness of the PSM. We used a logistic regression model in line with one-to-one matching without replacement under a caliper size that is 0.20 times the standard deviation of the propensity scores (Morrish et al., 2022). In addition, Kolmogorov Smirnov (KS) test was performed to evaluate the matching outcome. Accordingly, the p-value of the KS-test is 0.002 before the matching compared to 0.919 after the matching. The group comparison t-tests results in Table 2 indicate that all the variables are insignificant at the 5 % level after matching, even though the two groups notably vary in most of the variables before matching.

5.2. Effect of strategic digital technologies adoption on customer loyalty

The literature emphasizes the significant role of digital technologies in enhancing customer loyalty in sharing platforms in the B2C context (Balci, & Gökcay, 2021; Adam et al., 2020).

To evaluate this direct link in the context of the B2B platform that has implemented strategic management of digital technologies through the proposition of an advanced digital application. We rely on DID estimation considering the sample adopting the advanced digital app on the B2B sharing platform as a treatment while using the preadoption customers as the control group. The DID strategy estimates the variation in customer loyalty (at all three levels) between the treatment and the control groups, which differentiates the veritable effect of the strategic management of digital technologies on customer loyalty. To that end, we calculated three indicators related to loyalty components, i.e., the perceived value for money (cognitive loyalty), satisfaction rate (affective loyalty), and the number of repurchases (conative loyalty). These indicators have been used as dependent variables. Then, we employ the following model:

$$\ln(DV_{ijt}) = \alpha_1 Digi\_Adopt_{ijt} + \alpha_2 Digi\_Adopt_{ijt} \times Treatment_i + \beta_t + \tau_i + \varepsilon_{it}$$

(1)

Where i and j denote a matched pair of customers and t refers to months. DV_{ijt} is the dependent variable. $Treatment_i$ refers to a treatment binary variable with the value of 1 if the customer belongs to the treatment group and 0 otherwise. $Digi\_Adopt_{ijt}$ is an adoption binary variable with the value of 1 in months, on and after the month of the advanced digital app adoption, and 0 before that month for each customer pair ij. Personal (τ_i) and monthly (β_t) are binary control variables that control for customer heterogeneity and systematic longitudinal changes common across all customers. Finally, α_1 and α_2 represent the coefficients of concern that measure the effects of strategic adoption of digital technologies on the three main dependent variables for advanced digital app users after adoption compared with non-users.

Table 2
Significance of difference and reduction in bias after matching.

Category of variables	Variables	t-stat	
		Before matching	After matching
Customer loyalty	Perceived value for money	12,44	1,1
	Satisfaction rate	14,15	0,07
	Number of repurchasing	9,6	0,69
eWOM	eWOM sharing intention	8,26	1,29
	eWOM positive direction	12,93	0,26
	eWOM perceived value	8,93	0,62
Demographics	Experience	12,68	0,98
	Age	4,35	1,27
	Gender	8,93	0,41
	Activity sector	9,32	0,76

Table 3 illustrates model (1) output applied to the matched sample of customers using different dependent variables of customer loyalty. Results indicate that even though customers are more satisfied with the platform's service after adoption (increased affective loyalty); they perceive less performance for the same amount of money they pay after the adoption of the advanced digital app resulting in decreased cognitive loyalty. Moreover, customers show less repurchasing behavior with the same vendor on the platform, suggesting decreased conative loyalty.

These findings stipulate that the strategic management of digital technologies in B2B sharing platforms is associated with an increased level of affective customer loyalty and a decreased level of cognitive and conative customer loyalty in the sharing B2B platform. This supports Hypothesis 1.b, while disproving Hypotheses 1.a and 1.c ($p < 0.01$).

5.3. Effect of strategic digital technologies adoption on eWOM

To delve into the negative relationship between the strategic management of digital technologies adoption and the cognitive and conative customer loyalty in the sharing B2B platforms, we explore the effect of the adoption of the advanced digital app on eWOM on the sharing platform. To that end, we consider two dependent variables, i.e., eWOM sharing intention and eWOM positive direction. For both variables, we calculated two indicators, i.e., the number of written reviews referred to as "Reviews" and the number of evaluations noted as "Evaluations." Afterward, we calculated a complementary indicator linked to eWOM, i. e., the perceived value of the review/ evaluation. This indicator translates how the customer will perceive the indicator and consider it in his repurchasing decision. In other words, how much a review or an evaluation of the B2B sharing platform is likely to affect the repurchasing attitude and behavior.

Based on DID estimation, we use the considered dependent variables to feed the model (1) to compare the relative variation in the eWOM behaviors before and after the adoption of strategic digital technologies. The output of the model (1) applied to our matched sample is depicted in Table 4. The estimates of α_2 suggest that the intention of customers to share their reviews and evaluations on the platforms increases. Moreover, the positive direction of reviews and evaluations increased significantly after adopting the advanced digital app. However, the perceived value of reviews and evaluations decreases significantly after adopting the advanced digital app. These findings support Hypotheses 2. a and 2.b and disprove Hypothesis 2.c ($p < 0.01$).

5.4. The interplay between strategic adoption of digital technologies, eWOM, and customer loyalty

So far, our findings have indicated a negative relationship between the strategic adoption of digital technologies and customer loyalty. Given the proven positive effect of eWOM on customer loyalty (Chen et al., 2021), we expected a negative relationship between the adoption of strategic digital technologies and eWOM. However, tests on Hypotheses 2a and 2b did not provide such results despite the negative effect of strategic adoption of digital technologies on the perceived value of reviews (Hypothesis 3c). Therefore, diving deeply into the interplay

of strategic adoption of digital technologies, the perceived value of eWOM and customer loyalty in the B2B sharing context is mandatory.

Through analyzing the studied B2B sharing platform, we found that usually, customers who block the reviews' toolbar on the app are those who distrust the reliability of reviews and evaluations. Therefore, we explore strategic digital adoption and eWOM effects by comparing the treatment effects of these subgroups of reviews users and non-users review. We reproduce our key identification strategies to control selection bias by carrying out PSM among 29,659 users of the reviews' toolbar and 2614 non-users of the reviews' toolbar, leading to the generation of a sample of 2614 pairs of matched users and non-users of the reviews' toolbar. Then, we conducted PSM among the matched 2614 advanced digital app adopters and non-adopters who were not initially included in our sample. Finally, our model comprises 5228 advanced digital app adopters (2614 users matched with reviews' toolbar users and 2614 users matched with reviews' toolbar non-users) and 5228 advanced digital app adopters (2614 reviews' toolbar users and 2614 reviews' toolbar non-users). Afterward, we interact with the indicator variable (Review_use) that takes the value of 1 if the customer uses the reviews' toolbar for the repurchasing decision and 0 otherwise with the interaction effect to generate a three-way interaction term and accomplish the following specification:

$$\ln(DV_{ijt}) = \alpha_1 Digi\_Adopt_{ijt} + \alpha_2 Digi\_Adopt_{ijt} \times Treatment_i + \alpha_3 Digi\_Adopt_{ijt} \\ \times Treatment_i \times Review\_use_i + \beta_t + \tau_i + \varepsilon_{it}$$

(2)

The principal coefficients of concern are α_2 and α_3, representing the effect of the advanced digital app and their combined effect with eWOM use on customer loyalty components, respectively. The three-way interaction term values the moderating effect of eWOM value (whether the customers use the reviews in their decision) to explain the negative relationship between strategic management of digital adoption and customer loyalty. Indeed, blocking the reviews' toolbar is available in both the anterior and the advanced digital app. The objective is to compare the level of reviews use (as opposed to reviews' toolbar inactivation) in repurchasing decisions by customers before and after advanced digital app adoption. The results of the application of model (2) on the new sample are shown in Table 5. The calculus of α_2 and α_3 suggests that strategic management of digital adoption and eWOM value have a different effect on each dependent variable of customer loyalty. Importantly, we notice a significant difference in the perceived value for money and the number of repurchases between review users and non-users, indicating a significant moderating impact of the perceived value of eWOM on cognitive and conative loyalty. However, the review use does not affect the satisfaction rate indicating no moderating effect of the perceived value of eWOM on affective loyalty. These results provide partial support to Hypothesis 3.

To confirm the reliability of our results, we conducted two sensitivity analyses, i.e., the relative correlation restriction analysis (Krauth, & Brian, 2016) and Rosenbaum bounds analysis (Rosenbaum and Rubin, 1983). First, to estimate the magnitude of the selection of unobservable vis-à-vis the treatment influence, we follow the approach of Krauth, & Brian (2016), assuming significant restrictions on the correlation between the treatment variable and both observable and unobservable control. In doing so, we calculated the relative correlation parameter λ and conducted a sensitivity analysis for several values of this parameter. Our results are significant up to $\lambda = 5.7$, mainly exceeding the values in concern according to previous literature (Son et al., 2020), indicating that our treatment is not biased by unobservable. Second, we measure the analysis (Rosenbaum and Rubin, 1983) odds ratio (Γ), extracting the ratio of the odds that a pair of customers from each group will represent the same unobserved characteristics analysis (Rosenbaum & Rubin, 1983). Lower values of ($\Gamma < 1$) indicate the presence of 'hidden bias,' meaning that a pair of customers (from control and treatment groups) will have a different likelihood of adopting the advanced digital app because of the unobservable, although they present the same observable

Table 3
The effect of strategic adoption of digital technologies on customer loyalty.

Dependent Variable	The interaction term (α_2)	R2	No. of Observations	No. of users
(1) The perceived value for money	−0.082*** (0.0076)	0.584	64,134	9162
(2) The satisfaction rate	0.059*** (0.0098)	0.541	64,134	9162
(3) The number of repurchasing	−0.068*** (0.0041)	0.483	64,134	9162

Notes. Robust standard errors are in parentheses (clustered on individual firms). ***$p < 0.01$.

Table 4
Effects of advanced digital app adoption on eWOM behaviors.

Hypothesis 2	eWOM sharing intention		eWOM positive direction		eWOM perceived value
	Reviews	Evaluations	Reviews	Evaluations	
Digi_Adopt (α_1)	0,212***	0,287***	0,113***	0,289***	−0,0429
	(0,009)	(0,012)	(0,0270)	(0,0288)	(0,0195)
Digi_Adopt × Treatment (α_2)	1,279***	1,206***	1,466***	1,395***	0,108*** (0,0253)
	(0,007)	(0,010)	(0,0211)	(0,0249)	
R^2	0,294	0,299	0,089	0,146	0,162
Number of observations	64,134	64,134	64,134	64,134	64,134
Number of users	9162	9162	9162	9162	9162

Notes: The robust standard errors are presented in parentheses (clustered on individual firms).
***$p < 0.01$.

Table 5
Customer loyalty Difference-in-Differences Estimation Results with strategic management of digital adoption and eWOM combined Effects.

Hypothesis 3	(1) The perceived value for money	(2) The satisfaction rate	(3) The number of repurchasing
Digi_Adopt × Treatment (α_2)	0,012***	0,302***	0,018***
	(0,009)	(0,008)	(0,016)
Digi_Adopt × Treatment × Review_use (α_3)	3,118***	0,331***	2,961***
	(0,028)	(0,017)	(0,019)
R^2	0,595	0,441	0,511
Number of observations	36 596	36 596	36 596
Number of users	5228	5228	5228

Robust standard errors in parentheses (clustered on individual firms), *** $p < 0.01$, * $p > 0.1$.

features. Our sensitivity analysis indicates that model (1) findings in different dependent variables are significant up to $\Gamma = 2.00$, disproving the existence of hidden bias.

6. Discussion

Our results provide evidence that strategic management of digital adoption presents some patterns of effects on eWOM and customer loyalty in the context of B2B sharing economy platforms.

Past literature has argued that eWoM and customer loyalty are influenced by various factors, including digitalization (Seo and Park, 2018). Being a digital leader in a highly competitive environment was found to improve business performance and value creation (Kagermann, & Henning, 2015). As competition is becoming cut-throat, the role of a leader in technology alone is being challenged. Service leadership adds value and complements the role already being played by technology leadership (Xu et al., 2014). However, we surprisingly found a negative relationship between strategic management of digital adoption and customer loyalty, especially at the cognitive and conative levels. Several studies conducted in the B2C context (Kabadayi et al., 2019) have uncovered opposite results. For example, Balci, & Gökcay. (2021) argued that digitized operations in B2B positively affect overall customer loyalty. In addition, Adam et al. (2020) investigated digital technologies in supporting small and medium enterprises in their supply chain management strategies to show that digital marketing platforms significantly increase customer loyalty and indirectly affect a community's economic growth.

While exploring this relationship more deeply, we found that adopting strategic management adoption of digital technology by the B2B sharing platform might enhance the customers' willingness to share their eWOM alongside their tendency to provide positive reviews.

This is specifically true when customers feel unsure and suspicious. The use of digital technologies like blockchain, for example, could leverage their experience and provide a sense of reassurance, which will result in a trusting customer who is more likely to express positive feedback on an online platform (Song et al., 2019).

However, our results suggest that the value of the digital-driven eWOM is decreasing in the B2B, and firms' representatives are reluctant to consider the reviews in their purchasing decision. This is in line with several previous studies (Bigné, et al., 2016; Chen, et al., 2021). This could be explained by the fact that some B2B suppliers could misuse digital technologies like artificial intelligence to generate fake reviews and testimonials that are hard to distinguish from actual content written by a genuine person (Caldwell et al., 2020).

In a more advanced way, we found that firms' representatives avoid using eWOM on a sharing platform while purchasing if they know that the platform uses advanced digital technology. This is because strategic management digital adoption enhances their satisfaction and promotes loyalty from affective perspective. One explication of our results could derive from the theory of reasoned action, which stipulates that customer loyalty in the B2B context is a function of the quality of the relationship between supplier and customers acting as an organization (the outcome) as well as the evaluation of the customer to this outcome (Ajzen & Fishbein, 1975). However, with the adoption of digital technologies, the perceived quality of the relationship can be affected, which may reduce the trust in eWOM and its effect on customer loyalty.

7. Research implications

7.1. Theoretical implications

Our analysis builds on and extends several theoretical frameworks about digital adoption management and eWOM alongside the theory of planned behavior to develop a dedicated model that encompasses novel constructs depicting strategic management of digital technologies, eWOM, and customer loyalty. Our paper improves upon current research on sharing economy platforms by exploring actual customer behavior in a specific context of B2B and with the interplay of strategic management of digital technologies adoption.

We highlighted the synergistic impacts of service leadership, customization-personalization control, and technology leadership on eWoM, which influences customer loyalty based on the existing literature. We also theorized how eWoM relates to the three phases of customer loyalty and how service leadership, digital leadership, and customization-personalization control are hypothesized to affect eWoM directly. Then, we utilized a comprehensive measure of eWOM and customer loyalty, developing an analysis framework suitable to evaluate digital adoption in B2B sharing context, and using difference-in-difference (DID) matching estimators to control customer heterogeneity better when assessing outcomes. These methods potentially reduce bias owing to customer self-selection and reverse causality. Our research thus contributes to the customer loyalty and digitalization literature by studying how eWoM under rapid technology evolution influences customer loyalty.

7.2. Managerial implications

In light of our findings, sharing platforms' managers need to understand that in a B2B context, the unique characteristics of the customers acting as organizations require a high level of customization either in the service or product proposed or in the eWOM provided by the platform. Our study suggests that the strategic management of digital adoption should be directed toward maximizing trust and relationship quality by enhancing the perceived value of the eWOM provided by the platform. Moreover, sharing platform managers should not manage customer loyalty as a whole. Indeed, they should direct effort to influence its components (i.e., cognitive, affective, and conative) through the right level of digital adoption. We believe digital technologies are a must in today's sharing economy platforms.

Further, their use in the context notably affects customers' loyalty in the B2C setting. Our research suggests that B2B service providers should pay attention to the impacts of technology evolution on their brands and utilize its power to gain a competitive advantage, such as maintaining customer loyalty. However, more attention should be paid to adopting these technologies at an excessive level, even with strategic management planning could lead to negative results. Indeed, our results show that non-controlled levels of digital technologies adoption decrease their value in the eyes of buyers who distrust their veracity. However, in the B2B context, suppliers need to coordinate resources on technology innovation to achieve optimal business outcomes from service innovation and enable a greater variety of services and more possibilities for customization and personalization. This can improve eWoM, improve business performance, and increase customer loyalty. Finally, we encourage managers in this particular environment to carefully evaluate the trajectory of technology evolution and make forward-looking plans for technology innovation.

8. Conclusion and limitations

Using large-scale transaction data obtained from a sizeable B2B sharing platform, we assessed how the strategic management of digital adoption impacts eWOM and customer loyalty in the unique context of B2B sharing economy platforms. The findings indicate a negative relationship between strategic management of digital adoption and customer loyalty, especially at the cognitive and conative levels. On the other hand, adopting strategic management of digital technologies by the B2B sharing platform enhances the customers' willingness to share their eWOM alongside their tendency to provide positive reviews. Therefore, B2B organizations are called to use the strategic management of digital adoption in the quest for maximizing the trust and the quality of the relationship with customers through enhancing the perceived value of the eWOM provided by the platform.

Like other research, our study has some limitations. Panel data that cover nine months were used in our analysis. Although this duration should be sufficient to confirm our results, we acknowledge that longer time horizons may provide more comprehensive insights. In addition, the data for our study are not produced through a controlled field experiment. Thus, the self-selection bias could constitute a potential threat to the reliability of the results. Therefore, future studies are encouraged to use varying time windows to verify the consistency of our results through a controlled field experiment.

In addition, we did not include the fourth phase of customer loyalty (action loyalty). Although the first three phases complete the cognition-affect-conation framework suggested by Oliver (1980) in addition to the conative loyalty that is directly associated with action loyalty, the components of behavior control and action inertia implied by action loyalty were not captured in our model.

Future works may also extend the theoretical contribution and explore other customer behavior in the context of B2B with the interplay of digital adoption. In the bargain, we encourage applying different and innovative methodologies like hybrid machine learning approaches to

control customer heterogeneity better when assessing outcomes and potentially reduce bias owing to customer self-selection and reverse causality. We also encourage collecting data about customer loyalty based on objective behavioral measures.

CRediT authorship contribution statement

Amine Belhadi: Writing – review & editing, Writing – original draft, Visualization, Validation, Software, Methodology, Investigation, Formal analysis, Data curation, Conceptualization. **Sachin Kamble:** Conceptualization, Writing – original draft, Writing – review & editing, Supervision, Project administration. **Imane Benkhati:** Writing – original draft, Visualization, Validation, Methodology, Investigation. **Shivam Gupta:** Validation, Methodology, Supervision, Project administration. **Sachin Kumar Mangla:** Validation, Supervision, Project administration, Investigation, Conceptualization, Writing – review & editing.

Declaration of Competing Interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

Data availability

Data will be made available on request.

References

Adam, Muhammad, Mahdani Ibrahim, I. Ikramuddin, & H. Syahputra. (2020). The role of digital marketing platforms on supply chain management for customer satisfaction and loyalty in small and medium enterprises (SMEs) at Indonesia. International Journal of Supply Chain Management, 9(3), 1210-1220.

Ajzen. (1991). The theory of planned behavior. Organizational behavior and human decision processes, 50(2), 179-211.

Akhmedova, A., Marimon, F., & Mas-Machuca, M. (2020). Winning strategies for customer loyalty in the sharing economy: A mixedmethods study. *Journal of Business Research, 112*, 33–44.

Andreassen, T. W., & Lindestad, B. (1998). The impact of corporate image on quality, customer satisfaction and loyalty for customers with varying degrees of service expertise. *International journal of service Industry Management, 9*(1), 7–23.

Arndt. (1967). Role of product-related conversations in the diffusion of a new product. *Journal of Marketing Research, 4*(3), 291–295.

Arvind, M., & Alstyne, M. V. (2014). The dark side of the sharing economy… and how to lighten it. *Communications of the ACM, 57*(11), 24–27.

Bai, G., & Velamuri, S. R. (2021). Contextualizing the sharing economy. *Journal of Management Studies, 58*(4), 977–1001.

Balci, & Gökcay. (2021). Digitalization in container shipping: Do perception and satisfaction regarding digital products in a non-technology industry affect overall customer loyalty? *Technological Forecasting and Social Change, 172*. doi:10.1016/j.techfore.2021.121016.

Barreto, & Margarida. (2014). The word-of-mouth phenomenon in the social media era. *International Journal of Market Research, 5*(5), 631–654.

Belk, R. (2014). You are what you can access: Sharing and collaborative consumption online. *Journal of Business Research, 67*(8), 1595–1600.

Bigné, E., Caplliure, E.-M., & Miquel, M.-J. (2016). eWOM on travel agency selection: Specialized versus private label. *Psychology & Marketing, 33*(12), 1046–1053.

Bone, & Fitzgerald, P. (1995). Word-of-mouth effects on short-term and long-term product judgments. *Journal of business research, 32*(3), 213–223.

Caldwell, M., Andrews, J. T., Tanay, T., & Griffin, L. D. (2020). AI-enabled future crime. Crime. *Science, 9*(14). https://doi.org/10.1186/s40163-020-00123-8

Chen, G., Cheng, M., Edwards, D., & Xu, L. (2022). COVID-19 pandemic exposes the vulnerability of the sharing economy: A novel accounting framework. *Journal of Sustainable Tourism, 30*(5), 1141–1158.

Chen, N., Li, A., & Talluri, K. (2021). Reviews and Self-Selection Bias with Operational Implications. *Management Science, 67*(12), 7291–7950.

Cheng, M. (2016). Sharing economy: A review and agenda for future research. *International Journal of Hospitality Management, 57*, 60–70. https://doi.org/10.1016/j.ijhm.2016.06.003

Chylinski, M., Heller, J., Hilken, T., Keeling, D. I., Mahr, D., & de Ruyter, K.o. (2020). Augmented reality marketing: A technology-enabled approach to situated customer experience. *Australasian Marketing Journal, 28*(4), 374–384.

Coelho, S, P., & Hensele, J. (2012). Creating customer loyalty through service customization. *European Journal of Marketing, 46*(3/4), 331–356.

Du, X., Jiao, J., & Tseng, M. M. (2006). Understanding customer satisfaction in product customization. *The International Journal of Advanced Manufacturing Technology, 31*(3), 396–406.

Gandhi, S., Thota, B., Kuchembuck, R., & Swart, J. (2018). Demystifying data monetization. *MIT Sloan Management Review*.

Garud, R., Kumaraswamy, A., Roberts, A., & Xu, L. (2022). Liminal movement by digital platform- based sharing economy ventures: The case of Uber Technologies. *Strategic Management Journal, 43*(3), 447–475.

Gilmore, J. H., & Joseph Pine, B. (1997). The four faces of mass customization. *Harvard business review, 75*(1), 91–102.

Gligor, D., Bozkurt, S., Gölgeci, I., & Maloni, M. J. (2020). Does supply chain agility create customer value and satisfaction for loyal B2B business and B2C end-customers? *International Journal of Physical Distribution & Logistics Management, 50*(7/8), 721–743.

Gong, D., Liu, S., Liu, J., & Ren, L. (2020). Who benefits from online financing? A sharing economy E-tailing platform perspective. *International Journal of Production Economics, 222*. https://doi.org/10.1016/j.ijpe.2019.09.011

Gössling, S., Fernandez, S., Martin-Rios, C., Reyes, S. P., Fointiat, V., & Lunde, M. (2021). Restaurant tipping in Europe: A comparative assessment. *Current Issues in Tourism, 24*(6), 811–823.

Gupta, V., Khanna, S., & Kim, I. (2014). Personal financial aggregation and social media mining: A new framework for actionable financial business intelligence. *International Journal of Business Intelligence Research, 5*(4), 14–25.

Hagberg, J., Sundstrom, M., & Egels-Zandén, N. (2016). The digitalization of retailing: An exploratory framework. *International Journal of Retail & Distribution Management, 44*(7), 694–712.

Hossain, M. (2020). Sharing economy: A comprehensive literature review. *International Journal of Hospitality Management, 87*, Article 102470.

Hoyer, D., W., Kroschke, M., Schmitt, B., Kraume, K., & Shankar, V. (2020). Transforming the Customer Experience Through New Technologies. *Journal of Interactive Marketing, 51*(1), 57–71.

Hu, X. S., & Yang, Y. (2020). Determinants of consumers' choices in hotel online searches: A comparison of consideration and booking stages. *International Journal of Hospitality Management, 86*.

Jalilvand, M. R., Esfahani, S., & Samiei, N. (2011). Electronic word- of-mouth: Challenges and opportunities. *Procedia Computer Science, 3*, 42–46.

Jalilvand, M. R., Salimipour, S., Elyasi, M., & Mohammadi, M. (2017). Factors influencing word of mouth behaviour in the restaurant industry. *Marketing Intelligence & Planning, 35*(1), 81–110.

Jie, U., Y., Subramanian, N., Ning, K., & Edwards, D. (2015). Product delivery service provider selection and customer satisfaction in the era of internet of things: A Chinese e-retailers' perspective. *International Journal of Production Economics, 159*, 104–116.

Jones, B, S., & Lewin, M. E. (1996). What Information Do Consumers Want and Need? National Academies Press.

Kabadayi, S., Ali, F., Choi, H., Joosten, H., & Lu, C. (2019). Smart service experience in hospitality and tourism services A conceptualization and future research agenda. *Journal of Service Management, 30*(3), 326–348.

Kagermann, & Henning. (2015). Change through digitization—Value creation in the age of Industry 4.0. In management of permanent change. Springer Gabler.

Kamble, S., Belhadi, A., Gunasekaran, A., Ganapathy, L., & Verma, S. (2021). A large multi-group decision-making technique for prioritizing the big data-driven circular economy practices in the automobile component manufacturing industry. *Technological Forecasting & Social Change*.

Khan, A., & Islam, M.d. (2017). The impact of digital marketing on increasing customer loyalty: A study on Dhaka city, Bangladesh. *International Journal of Economics, Commerce and Management, 5*(4), 1–8.

Kim, N. L., & Jin, B. E. (2020). Why buy new when one can share? Exploring collaborative consumption motivations for consumer goods. *International Journal of Consumer Studies, 44*(2), 122–130.

Koch, T., & Windsperger, J. (2017). Seeing through the network: Competitive advantage in the digital economy. *Journal of Organization Design, 6*(1), 1–30.

Krauth, & Brian. (2016). Bounding a linear causal effect using relative correlation restrictions. *Journal of Econometric Methods, 5*(1), 117-141.

Lahkani, M. J., Wang, S., Urbański, M., & Egorova, M. (2020). Sustainable B2B E-commerce and blockchain-based supply chain finance. *Sustainability, 12*(10), 3968.

Lee, & Y, T. (2007). Needs-Based Analysis of Online Customer Reviews. The ninth international conference on Electronic commerce.

Lee, C. K., Lv, Y., K. K. H. Ng, W. H., & Choy, K. L. (2018). Design and application of internet of things-based warehouse management system for smart logistics. *International Journal of Production Research, 56*(8), 2753–2768.

Lemke, F., Clark, M., & Wilson, H. (2011). Customer experience quality: An exploration in business and consumer contexts using repertory grid technique. *Journal of the academy of marketing science, 39*(6), 846–869.

Lemon, Katherine N, Peter C, & Verhoef. (2016). Understanding customer experience throughout the customer journey. *Journal of marketing, 80*(6), 69–96.

Lemy, D., Goh, E., & Ferry, J. (2019). Moving out of the silo: How service quality innovations can develop customer loyalty in Indonesia's hotels. *Journal of Vacation Marketing, 25*(4), 462–479.

Li, H., Xie, K. L., & Zhang, Z. (2020). The effects of consumer experience and disconfirmation on the timing of online review: Field evidence from the restaurant business. *International Journal of Hospitality Management, 84*. https://doi.org/10.1016/j.ijhm.2019.102344

Liu, J., Zhou, Y., Jiang, X., & Zhang, W. (2020). Consumers' satisfaction factors mining and sentiment analysis of B2C online pharmacy reviews. *BMC Medical Informatics and Decision Making, 20*(1), 1–13.

Mai, E. S., & Liao, Y. (2021). The interplay of word-of-mouth and customer value on B2B sales performance in a digital platform: An expectancy value theory perspective. *Journal of Business & Industrial Marketing, 37*(7), 1389–1401.

Mintz, O., Timothy, J., Gilbride, P. L., & Currim, I. S. (2021). The right metrics for marketing-mix decisions. *International Journal of Research in Marketing, 38*(1), 32–49.

Morrish, N., Mujica-Mota, R., & Medina-Lara, A. (2022). Understanding the effect of loneliness on unemployment: propensity score matching. *BMC Public Health, 22*(1), 1–15.

Nyadzayo, M. W., Matanda, M. J., & Rajaguru, R. (2018). The determinants of franchise brand loyalty in B2B markets: An emerging market perspective. *Journal of Business Research, 86*, 435–445.

Oliver, R. L. (1999). Whence consumer loyalty. *Journal of marketing, 63*(4), 33–44.

Özkan, P., Süer, S., Keser, İ. K., & Kocakoç, İ. D. (2019). The effect of service quality and customer satisfaction on customer loyalty: The mediation of perceived value of services, corporate image, and corporate reputation. *International Journal of Bank Marketing, 38*(2), 384–405.

Pandey, N., & Pal, A. (2020). Impact of digital surge during Covid-19 pandemic: A viewpoint on research and practice. *International Journal of Information Management*.

Park, & Tiwa. (2020). How does the information acceptance model predict customer loyalty? A study from the perspective of eWOM information. *The Bottom Line, 33*(1), 60–73.

Poushneh, A., & Vasquez-Parraga, A. Z. (2017). Discernible impact of augmented reality on retail customer's experience, satisfaction and willingness to buy. *Journal of Retailing and Consumer Services, 34*, 229–234.

Qian, Y., & Xie, H. (2022). Simplifying bias correction for selective sampling: A unified distribution-free approach to handling endogenously selected samples. *Marketing Science, 41*(2), 336–360.

Ramanathan, & Ramakrishnan. (2010). The moderating roles of risk and efficiency on the relationship between logistics performance and customer loyalty in e-commerce. *Transportation Research Part E: Logistics and Transportation Review, 46*(6), 950–962.

Ringberg, T., Reihlen, M., & Rydén, P. (2019). The technology-mindset interactions: Leading to incremental, radical or revolutionary innovations. *Industrial Marketing Management, 79*, 102–113.

Ritter, T., & Pedersen, C. L. (2020). Digitization capability and the digitalization of business models in business-to-business firms: Past, present, and future. *Industrial Marketing Management, 86*, 180–190.

Rogers, B., & Clark, L. (2016). CABS: A conceptual model for context-aware B2B sales applications. *Journal of Interactive Marketing, 10*(1), 50–66.

Rosenbaum, P. R., & Rubin, D. B. (1983). The central role of the propensity score in observational studies for causal effects. *Biometrika, 70*(1), 41–55.

Rosenbaum, P. R., & Rubin, D. B. (1983). The central role of the propensity score in observational studies for causal effects. *Biometrika, 70*(1), 41–55.

Rudito, Priyantono, & Mardi FN Sinaga. (2017). Digital mastery. Gramedia Pustaka Utama.

Schor, J. B., & Fitzmaurice, C. J. (2015). Collaborating and connecting: the emergence of the sharing economy. In Handbook of research on sustainable consumption (pp. 410–425). Edward Elgar Publishing.

Seo, E.-J., & Park, J.-W. (2018). A study on the effects of social media marketing activities on brand equity and customer response in the airline industry. *Journal of Air Transport Management, 66*, 36–41.

Song, B., Yan, W., & Zhang, T. (2019). Cross-border e-commerce commodity risk assessment using text mining and fuzzy rule-based reasoning. *Advanced Engineering Informatics, 40*, 69–80.

Stephany, Alex. (2015). *The business of sharing: Making it in the new sharing economy*. Springer.

Steward, Michelle D., Narus, James A., & Roehm, Michelle L. (2018). An exploratory study of business-to-business online customer reviews: External online professional communities and internal vendor scorecards. *Journal of the Academy of Marketing Science, 46*(2), 173–189.

Suhartanto, D., Dean, D., Sarah, I. S., Hapsari, R., Amalia, F. A., & Suhaeni, T. (2021). Does religiosity matter for customer loyalty? Evidence from halal cosmetics. *Journal of Islamic Marketing, 12*(8), 1521–1534.

Tam, Kar Yan, & Shuk, Ting Ho. (2006). Understanding the impact of web personalization on user information processing and decision outcomes. *MIS quarterly, 30*(4), 865–890.

Tran, G. A., & Strutton, D. (2020). Comparing email and SNS users: Investigating e-servicescape, customer reviews, trust, loyalty and E-WOM. *Journal of Retailing and Consumer Services, 53*, 101782.

Verma, Sanjeev, & Neha Yadav. (2021). Past, present, and future of electronic word of mouth (EWOM). *Journal of Interactive Marketing*, 111–128.

Wang, G., Gunasekaran, A., Ngai, E. W., & Papadopoulos, T. (2016). Big data analytics in logistics and supply chain management: Certain investigations for research and applications. *International journal of production economics, 176*, 98–110.

Weisfeld-Spolter, S., Sussan, F., & Gould, S. (2014). An integrative approach to eWOM and marketing communications. *Corporate Communications: An International Journal, 19*(3), 260–274.

Xu, Xin, Thong, James Y. L., & Venkatesh, Viswanath (2014). Effects of ICT service innovation and complementary strategies on brand equity and customer loyalty in a consumer technology market. *Information Systems Research, 25*(4), 710–729.

Xu, Su, Xiu, Meng Cheng, & George, Q. Huang (2015). Efficient intermodal transportation auctions for B2B e-commerce logistics with transaction costs. *Transportation Research Part B: Methodological, 80*, 322–337.

Zervas, Georgios, Davide Proserpio, & John, W. Byers (2017). The rise of the sharing economy: Estimating the impact of Airbnb on the hotel industry. *Journal of marketing research 54, 5*, 687–705.

Zolkiewski, J., Story, V., Burton, J., Chan, P., Gomes, A., Hunter-Jones, P., … Robinson, W. (2017). Strategic B2B customer experience management: the importance of outcomes-based measures. *Journal of Services Marketing, 31*(2), 172–184.

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