

# Research on the Impact of Loyalty Program Information Transparency on Customer Participation Intention with Digital Information: The Moderating Role of Reward Redemption Channels

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## ABSTRACT

As market competition intensifies, companies recognize the value of attracting customers to participate in activities and loyalty programs (LPs) that encourage repeat purchases and maintain customer loyalty. Literature on LP design explores the positive impact of program structure and rewards on the acquisition of customers. However, research is lacking on the role of LP information transparency on customer participation intention. This study uses 280 college students in China as the survey object to explore the influence of LP information transparency on willingness to participate in such programs. Using experimental design methods, the authors verify whether the type of merchant and channel customers select affect willingness to participate when customers redeem rewards. This study also explains the internal psychological mechanism of information transparency, merchant and channel types, and customer participation intention from the perspective of perceptual psychological distance in construal level theory (CLT) and the elaboration likelihood model (ELM). Both information visibility and accessibility have a positive impact on customer intention to participate in LPs. When a customer redeems a reward from a LP operator, information visibility has a more positive impact on willingness to participate than redeeming a reward from an alliance partner. Moreover, when a customer redeems a reward from online channels, the positive impact of information accessibility on willingness to participate is greater than redeeming from offline channels. Under the influence of multiple psychological distance effects, the synergistic effect of merchant type and channel type is not significant in the relationship between information transparency and willingness to participate in LPs. This article will provide design strategies and management suggestions for retail managers to attract customers to participate in LPs.

## KEYWORDS

Customer Involvement, Information Accessibility, Information Transparency, Information Visibility, Loyalty Program, Psychological Distance

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## INTRODUCTION

Offline companies use loyalty programs (LPs) to promote repeat purchases. With the rapid development of e-commerce, many businesses have also begun to implement online LPs. The rapid development of omnichannel customer service (with cross channels and touchpoints) allows customers to experience a consistent, seamless shopping experience (Melero et al., 2016). However, the omnichannel context complicates the assimilation and coordination of LPs across online and offline channels.

Organizations often introduce and implement LPs to provide customers with interactive rewards to increase customer participation intention. The benefits of these rewards are especially important when acquiring customers (Bruneau et al., 2018). New customers tend to measure the value of a LP by evaluating its contents and rewards strength before participating in the program (Kim et al., 2021). Customers often base their value assessment on information received, which is simplified through the transparency of information (Mol, 2015). Information transparency has already become the most important business rule in markets where information flows freely (Halter et al., 2009). Today, customers have real-time access to online information through mobile devices. They expect accurate information. Organizations should, therefore, develop their marketing strategies around providing more transparent information (Tapscott & Ticoll, 2003).

Information transparency is a prominent customer demand (Kim et al., 2020). Finance and accounting also link customer and business transparency in marketing. From the customer's perspective, information transparency is the subjective perception of the information provided by an enterprise (Eggert & Helm, 2003). It also includes the subjective assessment of the availability and comprehensibility of company information (Peschel & Aschemann-Witzel, 2020). When customers decide to purchase a product or service, they search many sources for information. Typically, the customer information inquiry process is made up of an internal query and an external search. To a certain extent, information transparency will consolidate internal search information, which will reduce the customer's external search costs. This can eliminate the customer's uncertainty and enhance their confidence. Transparent information reduces perceived risk (Liu et al., 2015). In turn, the customer will be more willing to respond in a positive manner to a company's marketing activities. Insufficient information about LP rewards will complicate an organization's ability to meet the customer's value expectations, hindering their decision to participate. Therefore, organizations should focus on enhancing the customer participation intention of LPs through effective design and information transparency. These efforts will optimize and promote customer perception and recognition of value.

Four stages within a LP help to build customer relationships: (1) acquiring customers; (2) onboarding new customers; (3) expanding customer involvement; and (4) retaining high-value customers (Kim et al., 2021). The literature on each phase focuses on customer psychological mechanisms triggered by LP design and operation (Arbore & Estes, 2013; Bagchi & Li, 2011; Bolton et al., 2000; Dorotic et al., 2012). Existing LP-related studies explore the customer acquisition stage by focusing on factors within the program design's structure like partnerships, customer status, alliance, and points or reward factors like redemptions, value, fitness, and customer behavior (Breugelmans & Liu-Thompkins, 2017; Bruneau et al., 2018; Danaher et al., 2016; Gómez et al., 2012). These studies indicate that greater customer expectations and perceived value of LPs impact the likelihood to join or participate (Kim et al., 2021). In general, when organizations design LPs, they focus on participation requirements, program structure, and the point and reward structure (Breugelmans et al., 2015). However, information is lacking on the influence of information transparency on customers' willingness to participate in LPs. Customer expectations and perceived value require information as their reference and support. Therefore, companies should provide customers with transparent information about LPs through relevant media channels (online or offline), simplifying customers' ability to identify the organization's intention to implement the LP (Turilli & Floridi, 2009). In turn, customers can use the information to make their decision to participate.

Customers who join the LP can redeem rewards from different merchants, including the program's operator or alliance partners. Studies have found that alliance partners offer more effective means of increasing customer loyalty than LP operators (Lee & Kim, 2005). Due to advancements in technology, many traditional companies have adopted a combination of online and offline sales strategies to address competition, changes in customer behavior, and advantages of online channels (Kollmann & Hasel, 2008). These tactics are then incorporated into LPs.

Online and offline channels have significant differences in customer perception and behavior when buying online vs. offline (Rajamma et al., 2007). Differences in customer perception and purchasing behavior will arise as customer LPs become digitalized (for example, mobile app-based LPs). Therefore, companies must explore the psychological root cause of behavioral differences to formulate corresponding strategies. Scholars have conducted research on the effects and roles of merchant types and channel types in LP implementations (Bombaij & Dekimpe, 2020; Frisou & Yildiz, 2011); However, limited studies address whether types of reward-redemption merchants and channels have a moderating effect on customer participation intention.

In addition to external factors like information transparency and reward-redemption channels, customers' internal psychological factors can affect participation behavior. Scholars have found that the fit between information characteristics and construal levels can produce a stronger matching effect, which, in turn, has a higher degree of influence on customer behavior. The essence of the construal level is the degree of abstraction of the mental representation of people processing information. The information itself also has a degree of abstraction. The elaboration likelihood model (ELM) can explain the reasons for the formation or change in customer attitudes upon receipt of the information (Chang et al., 2020).

In recent years, fields like marketing and customer behavior have started to utilize the construal level theory (CLT) and ELM. Under the condition of high-level construal, people pay more attention to an object's essence, core, and overall characteristics. They will process the information in a top-down approach, linking near-end information with distant goals and perceiving psychological distance as more distant. On the contrary, under low-level construal conditions, people pay more attention to an object's details, local characteristics, and the use of bottom-up thinking to process information (Liberian et al., 2002; Nussbaum et al., 2003; Trope & Liberman, 2010). The perceived psychological distance is closer. From this point of view, the perceived psychological distance will differ when customers choose to redeem rewards online, offline, or from the focal organization of the LP or partner organizations. The willingness to participate in the LP will also change. Accordingly, this study uses the CLT and ELM to explain, from a psychological perspective, why customer cognition and behavior vary. This will depend on the type of vendor (operator organization vs. partner organization) and reward-redemption channel (online vs. offline) when redeeming a reward.

Information transparency is a key factor that influences customer decision-making behaviors. The underlying mechanisms by which information transparency influences customers' willingness to participate remain unknown. As a result, organizations have no practical guidance on how they should engage customers or expand customer willingness to participate in LPs through increased transparency. This study discusses the influence and role of LPs' information transparency on customers' willingness to participate. It introduces a new perspective on LP design to compensate for the shortcomings of existing research on program-design elements. Regarding the perspective of the CLT and ELM, this study examines customers' choice to redeem rewards from focal or partner organizations. It studies whether online or offline rewards redemption can regulate the relationship between information transparency and customers' willingness to participate in such programs. This work expands and complements the research context of information transparency. It also provides an interpretive perspective from which to study customer LPs in the field of marketing behavior. Marketing managers can, therefore, find practical advice on LP-design strategy.

## LITERATURE REVIEW

### LP

LPs are an important part of the customer relationship management (CRM) strategy. This type of marketing strategy is used to retain loyal customers, expand customer suppliers, retain switched customers, or activate inactive customers (Alshurideh, 2017). Organizations know that customer acquisition costs more than retention. An organization's LP offers various incentives to increase customer satisfaction, enhance loyalty behavior toward a brand, cultivate strong customer relationships, and build overall profitability (Sharp & Sharp, 1997). Incentives may include monetary or non-monetary benefits, such as coupons, gifts, premiums, discounts, rebates, or mileage points. The most common incentive is points earned by purchasing an organization's products or services (Lemon & Wangenheim, 2009). LPs are often used in today's business environment, with most people joining at least one.

LPs (or customer reward programs) are created by companies to give customers a variety of ways to accumulate redeemable program currency like points or miles. Customers can accumulate certain rewards through repeat purchases (Sukmaningsih et al., 2019). A merchant's marketing strategy is oriented toward long-term interests based on the behavioral reward plan. Its fundamental purpose is to improve member services, giving customers a stronger sense of identity with the enterprise. Increasingly, customers are familiar with and participate in LPs in the financial industry, telecommunications, aviation, hospitality, retail, and e-commerce (in the form of clubs or loyalty cards). Companies can implement LPs to increase profits and market share by enhancing customer loyalty, winning customers, creating communication opportunities, and building a robust database to support the overall company.

Most of the literature on this subject focuses on marketing-oriented management issues, including the following: LP design and implementation; factors that impact customer attitude, purchase behavior, purchase intention, and decision making; influences to an organization's market competition; and operational issues in LP management (Alshurideh et al., 2020; Bijmolt et al., 2010; Bombajj & Dekimpe, 2020; Breugelmans et al., 2015; Dorotic et al., 2014; Esmark et al., 2016; Gandomi & Zolfaghari, 2011; Liu, 2007; Mimouni-Chaabane & Volle, 2010; Rehnen, 2016; Taylor & Neslin, 2005).

Early LPs were mostly independent (ILPs), with one company that handled operations and controls. ILPs aimed to increase the loyalty of the company's most important customers to its own products or services. This, in turn, limited benefits that customers could obtain through ILPs. New marketing technology provided LPs differentiation from their competitors, facilitating the evolution of LPs. Yi and Hwa (2018) discussed the evolution of LPs from ILPs to coalition (CLPs). These multi-partner or multi-merchant LPs combine three or more organizations that share the operational costs, marketing expense, branding, and data ownership of common loyalty currency (Capizzi & Ferguson, 2005).

There are several motivating factors for alliances between organizations (Vandaie & Zaheer, 2015). CLPs attract organizations because they can offer strategic networking benefits and cost advantages compared to establishing and running a sole-proprietary LP. Potential spillover is another reason companies join a CLP. For example, organizations can take advantage of their partner's valuable resources (Das & Teng, 2000), allowing them to cross-sell (Lemon & Wangenheim, 2009), reducing operating and infrastructure costs (Ferguson & Hlavinka, 2006), and differentiating their value-added services to increase customer trust, loyalty, and market expansion (Steinfeld, 2004). CLPs offer customers more convenience, faster point accumulation, and more redemption options compared to ILPs (Dorotic, 2010). Accumulating rewards points lets customers choose the vendor to approach for point redemption or service rewards. Therefore, purchasing from multiple partners brings customers more economic benefits.

Recent developments in big data and database technology support the screening of loyal customers and provide targeted offers. This, in turn, increasing LP effectiveness (Bolton et al., 2000). The use

of smartphones has ushered in a change from LP based on plastic cards. Organizations can improve LP effectiveness by leveraging mobile technology, delivering various offers and driving customer participation intention through marketing campaigns.

### **Reward Redemption**

From the customer's perspective, reward redemption is the most tangible component of their LP membership. This makes it an important benefit to the customer. Rewarding customer behavior is instrumental in creating an enduring intention to participate in the LP. Reward redemption is central to organizations expending considerable effort and money on developing and operating LPs. The programs' data is valuable. Rewards encourage customers' attitudinal loyalty toward an organization or brand, contributing to long-term relationships and customer value. From a management perspective, redemption rates can measure and reflect LP success and customer engagement (Taylor & Neslin, 2005). Research on LP reward redemptions focuses on whether or how organizations can influence customers' reward redemption behavior (Dorotic et al., 2014; Haisley & Loewenstein, 2011). It also looks at how reward redemption can create stronger attitudinal or behavioral response to LPs (Stourm et al., 2015). However, the impact of information transparency and reward redemption interaction on customer behavior requires additional study.

Products and services provide benefits and/or solutions to functional, economic, and psychological problems faced by customers. This constitutes the main source of customer value. Through LPs, organizations can add their own or their partners' products or services to the rewards. Dowling and Uncles (1997) called this direct reward and indirect reward. The organization can use its own products or services if they satisfy customer needs. Conversely, if the organization believes that its products or services are not enough to attract customers, it can increase LP attractiveness by adding the advantages of partners' products or services. Direct rewards are more advantageous than indirect rewards because they increase loyalty to the program and the products or services. However, alliances between enterprises can offer valuable partner resources and capabilities (Das & Teng, 2000). It can also integrate advantages, such as cost reduction, differentiation through value-added services, increased customer trust and loyalty, and market expansion (Steinfeld, 2004a). Indirect rewards, therefore, complement LPs by allowing organizations to deliver value to customers and markets more effectively.

The strength of a LP depends on direct or indirect rewards. It must also focus on the timing of rewards. Rothchild and Gaidis (1981) argued that delayed LP rewards result in poor outcomes. Providing immediate rewards can change customer behavior. Dowling and Uncles (1997) found that immediate rewards improve customer value perception and loyalty. Organizations are adopting online and offline omnichannel business models to reach a wider market, requiring innovation in marketing offline and online LPs. Recently, the interaction interface between customers and organizations changed as LPs shifted from non-digital formats (e.g., paper or plastic cards) to mobile app-based systems (Son et al., 2020). Enterprises hope to utilize existing resources through online and offline channels to achieve online and offline synergies.

Many organizations have implemented omnichannel sales to allow customers to redeem rewards in offline stores or through convenient mobile apps. Offline redemption allows the customer to better judge the reliability of a product (or service). It reduces perceived shopping risk, provides a positive store environment, and enhances quality of service. These factors are not easily achieved in an online environment (Hult et al., 2019). However, customers can seamlessly switch vendors through a cost-effective online environment. Consumers can calculate and compare points at any time before they redeem their rewards. Perceived value and willingness to participate may increase if customers receive rewards through different channels (online and offline) and LPs.

### **Information Transparency**

The development of Internet and mobile technologies has reduced information asymmetry between marketers and buyers. The market has entered a utopian era of perfect information. The proliferation

of Internet-based markets has created a sea of product, price, transaction, and competitor information. This, in turn, has increased transparency.

Many studies have addressed the importance of information transparency (Bhaduri & Ha-Brookshire, 2011; Vandaie & Zaheer, 2015). The concept of transparency stems from finance-related research, especially in stock-market regulation and banking policies. Information transparency is, however, a newer concept in the field of marketing research (Zhu, 2002). Vishwanath and Kaufmann (2001) argued that information transparency should include the following five attributes: (1) availability; (2) comprehensiveness; (3) relevance; (4) quality; and (5) reliability. Hofstede (2003) pointed out that transparency of information should feature the following six attributes: (1) relevance; (2) accuracy; (3) authenticity; (4) quantity; (5) reliability; and (6) timeliness. According to Zhu (2002), information transparency is the degree of information visibility and accessibility. Visibility includes the adequacy and easy identification of information (greater visibility equals greater transparency). Accessibility includes the ease of understanding and increasing transparency. Granados et al. (2008) defined transparency as the level at which product and price information is available. Walther (2004) argued that information transparency is an attribute of information comprehensibility, an important criterion for customer evaluations of a website. Michener and Bersch (2013) argued that information transparency refers to the degree to which a company provides information about a product, making it easy for customers to find and understand the information. For this study (product-based information), the authors refer to visibility and/or accessibility through the elimination or reduction of barriers that can impact customers' ability to make decisions. Here, visibility is the adequacy of the LP information content. Accessibility is the ease of understanding the content.

Customers have shared beliefs that increased transparency of information is desirable and improved quality of information can enhance customers' purchasing decisions. The transparency of information depends on availability, conditions of accessibility, and method of transparency. These factors may support a user's practical or cognitive decision-making process (Turilli & Floridi, 2009). This study argues that information transparency is the degree to which information is comprehensive, reliable, visible, and accessible. Customers want a minimum amount of information when they find themselves struggling to make a purchase decision (due to doubts about information transparency). They do not care about other attributes of the product (Pan et al., 2013). For example, when dealing with complex options on a travel website, customers can set a maximum and minimum price to filter products, regardless of the other attributes (Pan et al., 2013). Seeking a minimum amount of information leads to the failure of the company's marketing efforts. Thus, it is important to understand how information transparency affects customer perception and behavioral intentions.

Customers rely on limited information cues to selectively process messages. Transparency in the decision-making process more likely refers to one's ability to make quick judgments through a short cognitive process (Kester et al., 2011). Defining information transparency varies with the research perspective, social background, and company environment. No matter the definition, its importance is evident. Van Riel et al. (2001) noted that transparency has become an important tool for companies to maintain and ensure service quality.

## **Participation Intention**

Customer participation is a key component of LP success. This refers to customer input, including effort, time, knowledge, or other resources related to the production and delivery of services. Customer participation may affect the company's efficiency and productivity, service processes, results, customer satisfaction, and relationships (Mustak et al., 2016). An organization can use customer participation to assess the degree to which the customer believes that the enterprise's product or service is relevant and they are willing to participate. This, in turn, influences service production and delivery.

Stimuli or situations prompt customer participation intention or the customer's perception of the relevance of an object based on needs, interests, values, or external stimuli. Studying the aspects of intensity, direction, and continuity impacts the customer information search process and purchase

decisions. In the context of customer LPs, participation intention often concerns the customer's belief that the use of a LP relates to their purchases (Söderlund, 2019). Therefore, to better attract LP participants, organizations must understand previous purchasing behavior and buying habits to develop customized customer LPs. Today, the application of big data facilitates this customization.

Research has investigated how to evaluate customer participation intention in LPs. For example, Evanschitzky et al. (2012) adopted the frequency of customer membership card use as an indicator of loyalty. Some studies have used customer reward redemption behavior as a loyalty measurement (Dorotic et al., 2012). Steinhoff and Palmatier (2016) used whether LPs rewarded them to rate customers' LP participation. Steinhoff and Palmatier (2016) used whether to receive loyalty program rewards to rate the degree of customer loyalty program participation. Bruneau et al. (2018) measured participation behavior based on loyalty card usage records, redeemed points, earned rewards, shared LP information, LP attention, and active searches for LP content. Berman (2006) suggested that paying to participate in LPs is more likely to increase sales or profits.

The level of customer participation intention can regulate the perceived value-satisfaction-loyalty-intent linkage. Customers with high-level participation intention show a high level of interest and knowledge of or service experience with LPs. Accordingly, they respond in a positive manner. Conversely, customers with low-level participation intention in LPs show little interest and/or may be in the process of learning about the program (Winters & Ha, 2012). Customer reactions to LPs vary based on their involvement. On the one hand, under conditions of low-level involvement in activating peripheral information processing, customers may pay more attention to peripheral routes (diversity and richness of information) when evaluating LPs. On the other hand, core routes (clarity of the messaging) appeal to those in high-level involvement conditions who support customers' thinking hard about LP advantages.

## CLT and ELM

In the past 20 years, deepening research on CLT has shifted its focus from excavating underlying psychological mechanisms to interdisciplinary, cross-field applied research. Many studies have explored the effects of CLT in the fields of negotiation, advertising, proposal adoption, self-control, entrepreneurship, and marketing and customer behavior (Behrens & Ernst, 2014; Chen et al. 2018; Henderson et al., 2006; Kim et al., 2019; Septianto et al., 2019; Yi et al., 2017). These studies detail the differences in individual behaviors and the impact of mental representations on individual behaviors. Interdisciplinary integration provides a new distance perspective on interpreting customer attitudes and behaviors. Psychological distance, a universal feature of customers' psychological states, has a meaningful impact on customer judgment and decision making (Dhar & Kim, 2007; Trope et al., 2007).

According to CLT, different mental representations affect individual responses (Liberman et al., 2002; Nussbaum et al., 2003). A higher degree of psychological representation causes more attention to be paid to core characteristics. Individuals tend to function at a highly interpretive level, such as "locked doors ensure safety." Conversely, a lower degree of psychological representation causes more attention to be paid to surface features. A lower level example is "insert key into keyhole to characterize locking doors" (Liviatan et al., 2008; Trope & Liberman, 2010).

Researchers found that the same principles can apply to temporal distance, spatial distance, social distance, and probability (Liberman et al., 2002; Liviatan et al., 2008; Trope et al., 2007; Wakslak et al., 2006). In 2007, many scholars proposed the term "psychological distance" to summarize the dimensions of CLT from a more abstract and superior concept. They believed that it was a two-way relationship between psychological distance and level of interpretation (Bar-Anan et al., 2007). Psychological distance affects the mental representation of cognitive objects, changing the level of interpretation and impacting an individual's mental representation and mental distance (Bar-Anan et al., 2006; Liberman & Förster, 2009).

The level of customer cognitive elaboration can implement various LP attributes. According to the ELM (Petty & Cacioppo, 1986), an individual's motivation and ability to consider information

or its advantages will have a strong ability to persuade. In addition, people process persuasive information through central and peripheral routes (Chen & Ku, 2012). The central route is cognitive thinking, which forms judgment. The peripheral route is experience-based noncognitive thinking, which consists of simple cues (Bhattacharjee & Sanford, 2006; Cacioppo et al., 2018). Central route processing is activated when an individual is motivated and can process the information. Individual participation is highly elaborated. Conversely, peripheral route processing ensues under the condition of low-level elaboration. This allows an individual to judge information and form attitudes from the shallow processing of clues or reliance on simple rules. Cognitive elaboration affects how much a person thinks about information and, thus, affects the formation of attitudes. For example, product information in advertising is abstract (the central route). Advertising models or music are empirical and concrete (peripheral routes). Therefore, a high level of elaboration will form when individuals are psychologically distant from the object of interpretation. The information is processed through the central route. Low-level elaboration forms when individuals are psychologically close to the object. Peripheral routes process the information.

## HYPOTHESIS

### Information Transparency and Participation Intention

With the market environment's complex, volatile, and fierce competition, the business cycle continues to accelerate. Organizations are able to compete on bases like cost, rapid response, and ability to meet changing customer needs. Today's customers are increasingly aware of protecting their rights. Whether they buy products online or offline, they demand transparent product information to assess if a product brings them value and benefits. According to the theory of reasoned action (TRA), an individual's behavioral intention is a function of their attitude and subjective norms. In addition, attitude is a function of behavioral beliefs. An individual who believes that executing an action will have a positive outcome is more likely to perform the action. These beliefs may form through direct observation, indirect reception of information, and/or self-determination (Bhaduri & Ha-Brookshire, 2011). Therefore, TRA and customer-perceived value perspectives may help to explain the relationship between information transparency and participation intention.

Customers tend to rely on external cues like product attributes to evaluate products and assess the potential benefits (Dodds et al., 1991; Zeithaml, 1988). Zhu (2002) pointed out that the transparency of information in electronic markets (business-to-business [B2B], business-to-customer [B2C]) makes the matching of buyers and sellers more effective and efficient. In this sense, relevant information helps customers make more rational decisions. In addition, accessible information impacts the level of customer satisfaction in the shopping process (Shankar et al., 2003). Informed customers believe they can save cost and time in searching, which makes their decision-making process easier and faster (Broekhuizen & Jager, 2004). That is, more transparent information equates to less effort spent by customers to find the best product or save time and money.

Disclosed information about a company can improve customer relationships and increase corporate attractiveness and customer affection (Laurenceau et al., 1998; Mohan et al., 2022). The greater the price of transparency, the greater the customer's willingness to pay (Miao & Mattila, 2007). In other words, transparency has a positive impact on purchase intention (Zhou et al., 2018). Therefore, this study argues that high transparency of information through LPs equates to adequate and understandable content. In turn, customers' willingness to participate in the LP will increase. Thus, we hypothesize:

**H1-1:** LP information visibility has a positive impact on customer participation intention.

**H1-2:** LP information accessibility has a positive impact on customer participation intention.



## Moderating Effect of Reward Redemption Merchant Type

Organizations that partner with LPs can influence the popularity of the program (Dekay et al., 2009). These alliance organizations or brands may offer similar products or services, increasing customer satisfaction and cross-buying behaviors (Bolton et al., 2004; Lemon & Wangenheim, 2009). Receiving rewards from LP operators or brands (direct reward redemption) compared to alliance partner merchants or brands (indirect reward redemption) causes customer elaboration. The reward directly relates to the product; the valuation of the reward is quick and objective. Customers prefer immediate rewards to delayed rewards (Rothschild & Gaidis, 1981); therefore, they want to receive easily evaluated rewards as soon as possible. In the case of direct compensation, an immediate evaluation of the reward will be more positive than an evaluation of the delayed reward. On the other hand, if the customer receives a reward from a partner, the customer self-elaborates less because the reward is less relevant to the product. Rewards that customers receive directly from LP operators are evaluated as a product-based bonus. However, rewards received indirectly from partners differ because consumers perceive the reward as a separate product (Strahilevitz & Loewenstein, 1998). Therefore, customers who choose to redeem rewards from operators or alliance partners will have a different perception and evaluation.

From a customer perspective, a high degree of similarity and correlation exists between the reward operator's offers. Thus, when customers redeem rewards from the operators, they provide a higher LP rating (Colliander et al., 2016). People are more inclined to use abstract language to describe those who do not resemble them; therefore, interpersonal similarity is a manifestation of psychological distance (Liviatan et al., 2008). That is to say, the more similar, the closer the psychological distance. The less similar, the greater the psychological distance. Redeeming rewards from LP operators creates a closer psychological distance for customers. Redeeming rewards from alliance partners creates a greater psychological distance.

According to CLT and ELM, a high-level explanation will form and information will be processed along the central path when people are psychologically far from the object. Conversely, people who are psychologically close to an interpreted object will form a low-level interpretation and process information according to the surrounding path. Therefore, when the LP operator redeems the reward, the customer pays more attention to the central path. They focus on the surrounding path when redeeming the reward from the alliance partner operator.

The degree of information processing is high when customers process information through the central route. In addition, the role of information accessibility (the possibility of understanding information) will be more significant. Customers who process information through the peripheral route have a low degree of information processing. Thus, the role of information visibility (evident information) is more significant. The authors propose the following hypotheses:

**H2-1:** Information visibility more positively impacts customer participation intention when redeeming a reward from a LP operator than from an alliance partner.

**H2-2:** Information accessibility more positively impacts customer participation intention when redeeming a reward from an alliance partner than from a LP operator.

## Moderating Effect of Reward Redemption Channel Type

According to Wirtz et al. (2019a, 2019b), customer perceptions of LPs vary by program characteristics and whether the reward is offered online (delayed reward) or offline (timely reward). Collections of information drive decisions on offline and online channels (Shankar et al., 2003). Online channels offer access to more information than offline channels. More information allows the customer more time to make decisions as they compare the benefits. Therefore, customers who use online channels require more awareness and effort than offline channels (Shankar et al., 2003).

Shorter time to make choices and a lack of alternatives reduce the customer's self-elaboration (Carmon & Ariely, 2000). Dhar and Wertenbroch (2000) asserted that different choices impact the length of customers' decision-making process. Customers lose their preference for unrealistic things when the selection time is short. Instead, they prefer realistic alternatives. They do not consider potential benefits due to the inability to imagine alternatives (Dhar & Wertenbroch, 2000). Consumers often visit a brick-and-mortar store to obtain timely rewards when redeeming through offline channels. Online reward redemption requires that customers submit their reward choice and wait for the reward.

Regarding reward timing, instant rewards (offline) shorten the time customers spend investigating and engaging with rewards. They consider the actual rather than potential benefits (S. M. Lee et al., 2019). Therefore, if customers have less voluntary elaboration, they will value and prefer the direct reward (offline) compared to the indirect (online rewards). From the perspective of temporal distance, an immediate reward is "closer" and a delayed reward is "far away." That is, customers experience offline channel reward redemption as a closer psychological distance. The online channel reward redemption is a greater psychological distance.

According to CLT and ELM, when customers perceive the psychological distance of the explanatory object to be far, they will form a high explanatory level and process the information according to central routes. Conversely, when people perceive the object of interpretation as closer, they will develop a low-level interpretation and process information along peripheral routes (Trope & Liberman, 2010). The authors believe that customers pay more attention to the central path when they redeem rewards through online channels. When redeeming rewards through offline channels, customers pay more attention to the surrounding paths. That is, when customers process information by the central routes, the degree of information refinement is higher and the role of information accessibility (the possibility of understanding information) is more significant. When customers process information through the peripheral routes, the degree of information refinement is lower and the role of information visibility (how much information the customer can see) is more significant. Therefore, the authors propose the following hypotheses:

**H3-1:** Offline channel reward redemption entails information visibility that more positively impacts customers' willingness to participate in LPs than online channel reward redemption.

**H3-2:** Online channel reward redemption entails information accessibility that more positively impacts customers' willingness to participate in LPs than offline channel reward redemption.

### **Synergy Effect of Reward Redemption Channels**

The multiple psychological distance effect refers to the interaction of temporal distance and social distance (Petty et al., 1983). For example, in the case of a future with a long temporal distance and a closer social distance or one with a closer temporal distance and a longer social distance, the two psychological distances work at the same time (interact), leading to high- or low-level explanations (Andrews & Shimp, 1990). The proximity of both psychological distances prompts a low level of interpretation (realistic, concrete). Conversely, when the two psychological distances of interaction are long, a high level of interpretation (conceptual, abstract) affects customer evaluations (Kim et al., 2008).

Therefore, the interaction of redeeming rewards through offline channels (near mental distance) and LP operators (near mental distance) results in a low level of interpretation. That is, customers will use low-level interpretation to process LP-related information. However, the interaction between offline channel redemption (close psychological distance) and alliance redemption (long psychological distance), online channel redemption (long psychological distance) and LP operator redemption (close psychological distance), or online channel redemption (long psychological distance) and alliance partner redemption (long psychological distance) will form a high-level explanation. Whether customers redeem rewards from an offline alliance partner, an online LP operator, or an

online alliance partner, they process the provided LP information with a high level of interpretation. Kim and Park (2019) found no difference in product evaluations in the three cases of psychological distance interaction (long social distance and long time distance, long social distance and close time distance, or near social distance and long time distance).

Accordingly, the authors suggest that when customers' perception of the object of interpretation is far away, a high level of interpretation will form. The information processing will follow the central path, with a high degree of finely processing information. Thus, the role of information accessibility (the possibility of understanding information) will be more significant. When perception of the object of interpretation is close, a low level of interpretation will form. The information processing will take the surrounding path, with a low degree of finely processing information. Thus, the role of information visibility (the amount of information evident) will be more significant. The authors propose the following hypotheses:

- H4-1-1:** When a customer chooses to redeem a reward through an offline LP operator, information visibility will have a more positive impact on the customer's willingness to participate in the LP than if the choice were to redeem the reward through an offline alliance partner channel.
- H4-1-2:** When a customer chooses to redeem a reward through an offline LP operator, information visibility will have a more positive impact on the customer's willingness to participate in the LP than if the choice were to redeem the reward through an online LP operator channel.
- H4-1-3:** When a customer chooses to redeem a reward through an offline LP operator, information visibility will have a more positive impact on the customer's willingness to participate in the LP than if the choice were to redeem the reward through an online alliance partner channel.
- H4-2:** The positive impact of information visibility on the customer's willingness to participate in the LP does not differ whether they choose to redeem a reward through an offline alliance partner, an online LP operator, or an online alliance partner channel.
- H4-3-1:** When a customer chooses to redeem a reward through an offline LP operator, information accessibility will have a less positive impact on the customer's willingness to participate in the LP than if the choice were to redeem a reward through an offline alliance partner channel.
- H4-3-2:** When a customer chooses to redeem a reward through an offline LP operator, information accessibility will have a less positive impact on the customer's willingness to participate in the LP than if the choice were to redeem a reward through an online LP operator channel.
- H4-3-3:** When a customer chooses to redeem a reward through an offline channel LP operator, information accessibility will have a less positive impact on the customer's willingness to participate in the LP than if the choice were to redeem a reward through an online alliance partner channel.
- H4-4:** The positive impact of information accessibility on a customer's willingness to participate in the LP will not differ whether they choose to redeem the reward through an offline alliance partner, an online LP operator, or an online alliance partner channel.

## METHOD

### Experiment Design

The current study used the FamilyMart LP operator. The stimuli for this experiment were merchant types (i.e., FamilyMart, operator, and alliance partner [Wanda Cinema]) and reward redemption channel types. The offline FamilyMart store and online FamilyMart app served as the respective offline and online operator channels. The offline Wanda Cinema and online Wanda Cinema app served as the respective offline and online channels of the alliance partner. The study adopted the between-group experimental design, using 2x2 experimental conditions. These were the reward redemption merchant types (operator vs. alliance partner) × reward redemption channel types

(online vs. offline). The authors randomly and evenly assigned participants to the four groups. They designed four FamilyMart LP leaflets to serve the research purpose, showing only one to the participants in each group (see Appendix). The authors asked each group to read and think about the membership instructions for joining. They distributed the questionnaire and collected questionnaires upon completion. See Figure 1.

### Questionnaire Design

The authors placed the described experimental stimuli on the front page of the questionnaire. The content of the questionnaire covered the participant’s demographic characteristics and questions relating to information transparency and participation intention. A study by Miao and Mattila (2007) was used as the source of the information transparency measurement. The relevant measurement items were modified to support the study. The authors also adopted three items that Sharma and Verma (2014) used for measuring participation intention. All scales used a seven-point Likert scale, with choices ranging from “completely disagree” (1 point) to “strongly agree” (7 points). The authors explained the precautions for filling out the questionnaire before participants started the survey. It took six minutes to complete the questionnaire. The 70 participants (college students in Hangzhou, China) were randomly arranged in the experiment groups. Only nine of the collected questionnaires were invalid. A total of 271 questionnaires (113 males [41.7%] and 158 females [58.3%]) were used for analysis. Participants between the age of 19 and 22 years accounted for most of the analysis (82.6%). The authors analyzed the data with SPSS25.0 and AMOS 24.0 statistical software.

## RESULT

### EFA Analysis

To extract the factors, the authors carried out an exploratory factor analysis (EFA) by the maximum imitation method and direct oblimin rotation method. The analysis results appear in Table 1, with a Kaiser Meyer Olkin (KMO) result of 0.864 and  $p < 0.000$  from the Bartlett sphericity test. Among them, the index with a factor loading value of less than 0.5 was judged to have low reliability. Therefore, except for indicator 1 of information accessibility with a load value below 0.50, the remaining eight measurement indicators were used for analysis.

Figure 1. Conceptual research model

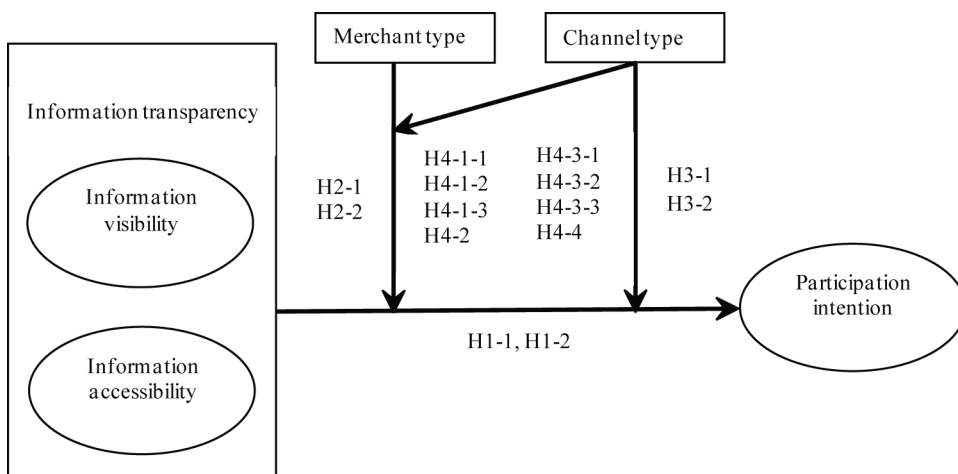


Table 1. Results of EFA

Observed Variables	Factor 1	Factor2	Factor3
information visibility1	<b>.795</b>	-.055	-.116
information visibility2	<b>.966</b>	-.020	.041
information visibility3	<b>.675</b>	.130	-.005
information accessibility2	-.051	-.023	<b>-.928</b>
information accessibility3	.073	.096	<b>-.704</b>
participation intention 1	-.072	<b>.701</b>	-.156
participation intention 2	.078	<b>.796</b>	.020
participation intention 3	.013	<b>.834</b>	.061
explanatory power of cumulative variance (%)	53.828	67.773	77.198

### Reliability and Validity Analysis

The study used conorganizationary factor analysis (CFA) to further test the reliability and validity of the variables. The results appear in Table 2, where  $\chi^2/DF = 1.450$  indicates the model's acceptable goodness of fit (Hu & Bentler, 1999). The fitting index criteria often used in structural equation models are  $GFI \geq 0.9$ ,  $AGFI \geq 0.85$  (Hong, 2000).

In addition, when the number of samples is greater than 250 and the observed variables are fewer than 12, the criteria for judging the fitting index are  $TLI \geq 0.95$ ,  $CFI \geq 0.97$ ,  $RMSEA \leq 0.07$  (Hair, 2009). In Table 2,  $GFI = 0.977$ ,  $AGFI = 0.952$ ,  $TLI = 0.989$ ,  $CFI = 0.993$ ,  $RMSEA = 0.041$ , indicating that the research model meets the fitting criteria. The loading values in Table 2 are all greater than 0.60 and the p-value is less than 0.000 (Hair et al., 2006). All measurement items have CR values greater than 0.6 and AVE values greater than 0.5 (Bagozzi & Yi, 1988). Cronbach's  $\alpha \geq 0.70$  (Nunnally, 1994). Therefore, all measurement items have good convergence validity and reliability. Table 3 shows that the correlation coefficients between variables are all smaller than the

Table 2. Results of confirmatory factor analysis

Latent Variable	Measurement items	Loading Value	AVE	CR	Cronbach's $\alpha$
Information visibility	Reward content is sufficient.	0.844	0.598	0.816	0.868
	Reward content is appropriate.	0.922			
	There are many types of reward content.	0.745			
Information accessibility	Reward content is easy to value judgement.	0.808	0.570	0.726	0.830
	Reward content can be easily compared with other suppliers.	0.877			
Participation intention	Do you intend to enroll in a reward program?		0.524	0.767	0.836
	Unlikely - Likely	0.763			
	Improbable - Probable	0.831			
	Impossible - Possible	0.786			

a. \*\*\* p < 0.001

b. Goodness of fit:  $\chi^2 = 24.652$ ,  $df = 17$ ,  $p = 0.103$ ,  $\chi^2/df = 1.450$ ,  $GFI = 0.977$ ,  $AGFI = 0.952$ ,  $TLI = 0.989$ ,  $CFI = 0.993$ ,  $RMSEA = 0.041$

Table 3. Correlation analysis between variables

Latent Variable	AVE	The square value of the correlation coefficient between variables		
		Information visibility	Information accessibility	Participation intention
Information visibility	0.598	1.000		
Information accessibility	0.570	0.424	1.000	
Participation intention	0.524	0.285	0.396	1.000

AVE values. The AVE values of all variables are greater than the squared correlation coefficients between variables. Thus, differences between the variables have good distinction validity.

### Results of Hypotheses Test

#### Results of Path Analysis

Table 4 shows the verification results of the impact of information transparency on customer involvement intention. The fit of the structural equation model in this study is as follows:  $\chi^2 = 24.652$ ,  $DF = 17$ ,  $\chi^2/df = 1.450$ ,  $GFI = 0.977$ ,  $AGFI = 0.952$ ,  $TLI = 0.989$ ,  $CFI = 0.993$ ,  $RMSEA = 0.041$ ; therefore, the fit of the structural model meets acceptable standards.

The results show that information visibility had a positive impact on customers' willingness to participate in LPs. The path coefficient was 0.216 ( $t = 2.521$ ,  $p = 0.012$ ). Information accessibility had a positive impact on customer participation intention. Its path coefficient is 0.489 ( $t = 5.153$ ,  $p = 0.000$ ). That is, both information visibility and information accessibility had a positive (+) impact on customer willingness to participate in the LP. Accordingly, H1-1 and H1-2 were accepted.

#### Results of the Moderating Effect of Reward Redemption Channel

Table 5 shows the results of the reward redemption merchant type moderating the impact of information transparency on customers' willingness to participate in LPs. When a customer chooses to redeem a reward from the LP operator, the path coefficient of information visibility to their willingness to participate is 0.449. This is greater than if they choose to redeem the reward from the alliance partner, with the path coefficient of 0.095. The difference between path coefficients validation results shows that z-value = -1.973 ( $p = 0.048$ ). Thus, H2-1 was accepted.

When customers choose to redeem rewards from LP operators, the path coefficient of information accessibility to customers' willingness to participate is 0.306. This is less than when they choose to redeem rewards from alliance partners, with the path coefficient of 0.561. However, the difference between the path coefficients verified that z-value = 1.296 ( $p = 0.195$ ). This was not significantly different; therefore, H2-2 was rejected. Table 6 shows the moderating effect of reward redemption channel types on the influence of information transparency on customers' willingness to participate

Table 4. Results of path analysis

Path	Standardize coefficient	Unstandardized coefficient	Standard deviation	t-value	p-value
IV → PI	0.216	0.188	0.075	2.521*	0.012
IA → PI	0.489	0.380	0.074	5.153***	0.000

a. \* $p < 0.05$ , \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$

b. IV (information visibility), IA (information accessibility), PI (participation intention)

c. Goodness of fit:  $\chi^2 = 24.652$ ,  $df = 17$ ,  $p = 0.103$ ,  $\chi^2/df = 1.450$ ,  $GFI = 0.977$ ,  $AGFI = 0.952$ ,  $TLI = 0.989$ ,  $CFI = 0.993$ ,  $RMSEA = 0.041$

**Table 5. Moderating effect of reward redemption merchant types**

Path	Merchant types	Standardize coefficient	Unstandardized coefficient	Standard deviation	t-value	p-value	Pairwise Parameter Comparison	
							z-value	p-value
IV → PI	Operator (n = 136)	0.449	0.391	0.128	3.052**	0.002	-1.973*	0.048
	Partner (n = 135)	0.095	0.082	0.09	0.914	0.361		
IA → PI	Operator (n = 136)	0.306	0.236	0.115	2.06*	0.039	1.296	0.195
	Partner (n = 135)	0.561	0.427	0.092	4.616***	0.000		

- a. \*p < 0.05, \*\*p < 0.01, \*\*\*p < 0.001
- b. IV (information visibility), IA (information accessibility), PI (participation intention)
- c. Goodness of fit:  $\chi^2 = 38.661$ ,  $df = 34$ ,  $p = 0.267$ ,  $\chi^2/df = 1.137$ ,  $GFI = 0.966$ ,  $AGFI = 0.927$ ,  $TLI = 0.993$ ,  $CFI = 0.996$ ,  $RMSEA = 0.023$

**Table 6. Moderating effect of reward redemption channel types**

Path	Channel types	Standardize coefficient	Unstandardized coefficient	Standard deviation	t-value	p-value	Pairwise Parameter Comparison	
							z-value	p-value
IV → PI	Offline (n = 132)	0.302	0.240	0.100	2.394*	0.017	-1.054	0.292
	Online (n = 139)	0.094	0.084	0.109	0.775	0.439		
IA → PI	Offline (n = 132)	0.285	0.195	0.091	2.147**	0.002	2.592**	0.010
	Online (n = 139)	0.678	0.577	0.116	4.967***	0.000		

- a. \*p < 0.05, \*\*p < 0.01, \*\*\*p < 0.001
- b. IV (information visibility), IA (information accessibility), PI (participation intention)
- c. Goodness of fit:  $\chi^2 = 43.290$ ,  $df = 34$ ,  $p = 0.132$ ,  $\chi^2/df = 1.273$ ,  $GFI = 0.963$ ,  $AGFI = 0.922$ ,  $TLI = 0.987$ ,  $CFI = 0.992$ ,  $RMSEA = 0.032$

in LPs. When customers choose to redeem rewards from offline channels, the path coefficient of information visibility on customers’ willingness to participate is 0.302. This is greater than when they redeem rewards from online channels, with the path coefficient of 0.094. However, the verification results of the difference between the path coefficients showed that the z-value = -1.054 (p = 0.292), with no significant difference. Therefore, H3-1 was rejected.

When customers choose to redeem rewards from offline channels, the path coefficient of the influence of information accessibility on customers’ willingness to participate is 0.285. This is less than 0.678 (when redeeming rewards from online channels). The verification results of the difference between the path coefficients show that the z-value = 2.592 (p = 0.010). This is a significant difference. Hence, H3-2 was accepted.

**Results of Multiple Psychological Distance Effects**

Table 7 provides the test results of multiple psychological distance effects. When the customer chooses to redeem their reward from the offline operator, the path coefficient of information visibility to the customer’s willingness to participate is 0.705. The path coefficient is 0.062 when redeeming their reward from the offline partner. When redeeming the reward from the online operator, the path coefficient is 0.193. When redeeming the reward from the online partner, the path coefficient is -0.013.

When customers redeem rewards from the offline operator, the path coefficient of information visibility on customers’ willingness to participate is greater than the path coefficient when they choose to redeem rewards from the offline partner. Moreover, the verification results of the difference between the path coefficients showed that z = -2.468 (p = 0.013), which was statistically significant. Hence, H4-1-1 was accepted.

Table 7. Results of the interaction of reward redemption channels

Path	Standardize coefficient	Unstandardized coefficient	Standard deviation	t-value	Moderator variables	Pairwise parameter comparison			
						Offline x operator (n=66)	Offline x partner (n=66)	Online x operator (n=70)	Online x partner (n=69)
IV → PI	0.705	0.601	0.157	3.823***	Offline x operator	0	-	-	-
	0.062	0.054	0.155	0.347	Offline x partner	-2.468* (0.013)	0	-	-
	0.193	0.216	0.157	1.378	Online x operator	-1.737 (0.082)	0.744 (0.456)	0	-
	-0.013	-0.012	0.154	-0.080	Online x partner	-2.758** (0.006)	-0.306 (0.759)	-1.053 (0.292)	0
IA → PI	-0.156	-0.119	0.141	-0.842	Offline x operator	0	-	-	-
	0.590	0.457	0.145	3.153**	Offline x partner	2.807** (0.005)	0	-	-
	0.657	0.655	0.149	4.399***	Online x operator	3.706*** (0.000)	1.000 (0.317)	0	-
	0.715	0.606	0.147	4.135***	Online x partner	3.498*** (0.000)	0.758 (0.448)	-0.250 (0.802)	0

When customers redeem rewards from the offline operator, the path coefficient of information visibility on customer's willingness to participate is greater than the path coefficient when they choose to redeem rewards from the online operator. However, the verification results of the difference between the path coefficients showed that  $z = -1.737$  ( $p = 0.082$ ). There was no statistically significant difference. Therefore, H4-1-2 was rejected.

When customers redeem rewards from the offline operator, the path coefficient of the impact of information visibility on customers' willingness to participate is greater than the path coefficient when they choose to redeem rewards from an online partner. Moreover, the verification results of the difference between the path coefficients show that  $z = -2.758$  ( $p = 0.006$ ), which is statistically significant. Hence, H4-1-3 was accepted.

When customers redeem rewards from offline partners and redeem rewards from online operators, the difference in the path coefficient of the influence of information visibility on customer participation intention shows that  $z = 0.744$  ( $p = 0.456$ ). There is no statistically significant difference. When customers redeem rewards from offline partners or online partners, the verification results of the path coefficient difference in the impact of information visibility on customers' willingness to participate show that  $z = -0.306$  ( $p = 0.759$ ). There is no statistically significant difference. Also, when customers redeem rewards from an online partner or an online operator, the verification results of the path coefficient difference in the impact of information visibility on customers' willingness to participate show that  $z = -1.053$  ( $p = 0.292$ ). This is not statistically significant. Based on these results, H4-2 was established.

When customers redeem the reward from the offline operator, the path coefficient of information accessibility to the customers' willingness to participate is -0.156 (0.590 when redeeming the reward from the offline partner, 0.657 when redeeming the reward from the online operator, and 0.715 when redeeming the reward from the online partner). The path coefficient when the customer redeems the reward from the offline operator is lower than the path coefficient when redeeming the reward from the offline partner. Moreover, the verification results of the difference between the path coefficients showed that  $z = 2.807$  ( $p = 0.005$ ), which was statistically significant. Hence, H4-3-1 was accepted.

The path coefficient when the customer redeems the reward from the offline operator is lower than the path coefficient when redeeming the reward from the online operator. The verification results of the difference between the path coefficients showed that  $z = 3.706$  ( $p = 0.000$ ), which was statistically significant. Hence, H4-3-2 was accepted.



The path coefficient when the customer redeems the reward from an offline operator is lower than the path coefficient when redeeming the reward from an online partner. Moreover, the verification results of the difference between the path coefficients showed that z-value = 3.498 (p = 0.000), which is statistically significant. Hence, H4-3-3 was accepted.

However, the verification results of the path coefficient difference between customers who redeem rewards from the offline partner and online operator showed that z = 1.000 (p = 0.317). This means there is no statistically significant difference. The verification results of the path coefficient difference between redeeming rewards from the offline partner and online partner showed that z = 0.758 (p = 0.448), which is not a statistically significant difference. The verification results of the path coefficient difference between the reward redemption from the online partner and online operator showed that z = -0.250 (p = 0.802). There was no statistically significant difference. Based on these results, H4-4 was accepted.

## DISCUSSION AND CONTRIBUTIONS

### Research Conclusions and Discussion

Customers have benefited from the rapid development of the Internet and mobile technology. These tools facilitate users' search for product information and improves the quality of online purchasing decisions (Pavlou, 2003; Pavlou et al., 2007). However, there is evidence that a lack of information can have a deterrent effect on customers' purchasing decisions. The information provided by organizations does not always meet customers' information needs. Information may not available. In some cases, organizations do not provide the information, resulting in a lack of transparency.

This study investigated the influence of LP information transparency on customer participation intention by experimental design. From the perspective of CLT and ELM, the authors analyzed whether the channel of customer choice to redeem rewards can regulate the relationship between information transparency and customer participation intention in the context of customer psychology. The hypothesis test results appear in Table 8. The results show that LP information visibility and

Table 8. Hypothesis test results

Hypothesis	Path			Moderator variable	Results
H1-1	IV	→	PI	-	Accepted
H1-2	IA	→	PI		Accepted
H2-1	IV	→	PI	Merchant types (operator, alliance partner)	Accepted
H2-2	IA	→	PI		Rejected
H3-1	IV	→	PI	Channel types (online, offline)	Rejected
H3-2	IA	→	PI		Accepted
H4-1-1	IV	→	PI	Offline x operator, offline x partner	Accepted
H4-1-2	IV	→	PI	Offline x operator, online x operator	Rejected
H4-1-3	IV	→	PI	Offline x operator, online x partner	Accepted
H4-2	IV	→	PI	Offline x partner, online x operator, online x partner	Accepted
H4-3-1	IA	→	PI	Offline x operator, offline x partner	Accepted
H4-3-2	IA	→	PI	Offline x operator, online x operator	Accepted
H4-3-3	IA	→	PI	Offline x operator, online x partner	Accepted
H4-4	IA	→	PI	Offline x partner, online x operator, online x partner	Accepted

IV (information visibility), IA (information accessibility), PI (participation intention)

accessibility positively impact customer participation intention (H1-1, H1-2). That is, if customers can easily obtain LP information, they can understand and evaluate the value of the LP. The more transparent the information (e.g., membership rules, points rules, point-redemption rules, personal privacy, and security policies), the more willing the customers are to join and participate in the LP.

Products are experience- and service-oriented. Therefore, market research should investigate how information transparency influences purchasing decisions (Grant et al., 2007). Customers tend to make purchasing decisions after evaluating monetary and non-monetary benefits, basing the source of the evaluation on the product information supplied by the company (Dianati Deilami et al., 2018). Manganari et al. (2011) pointed out that online customers rely on digital information before making their purchase decision. Information transparency has become a very important criterion in this type of purchase. Websites should provide external stimuli like product images, descriptions of amenities, and customer reviews. These factors could have a significant impact on online customers' perception and purchase intention (Manganari et al., 2011). Similarly, Zhou et al. (2018) conducted in-depth research to understand how information transparency affects customers' perceived benefits in B2C transactions. This, in turn, impacts customers' final purchase decisions. Their study pointed out that greater perceived information transparency equates to stronger customer willingness to buy. In other words, the more transparent the information, the more customers will react positively to organizations' marketing.

When a customer redeems a reward from an LP program operator, information visibility has a more positive impact on customer participation intention than redemption from an alliance partner (H2-1). When customers choose to redeem rewards from LP operators or brands, they believe they know more about the products or services the operator provides than when the alliance partner provides the products or services. Customers perceive frequent similarities and correlations between the rewards that operators provide. There was no significant difference in the effect of information accessibility on customers' willingness to participate in the LP when they redeem rewards from operators or alliance partners (H2-2). This may be because the participants are familiar with and understand the content of the reward information given by the experimental stimulus. As a result, they do not need to invest high levels of information cognition and effort. Information accessibility has no significant impact when customers choose the type of merchants to redeem their rewards.

Similarly, when customers choose to redeem their rewards online or offline, there is no significant difference in the impact of information visibility on their willingness to participate in the LP (H3-1). Customers must compare the products and services to redeem or purchase when deciding to redeem their rewards. Therefore, they need to make a greater effort to search, collect, and compare information by exploring and consider the clues behind it. Customers will process the information through a central route, resulting in a high degree of information processing. In this case, the accessibility of information is more conducive to information processing. Information visibility has a relatively low impact on information processing, resulting in no influence. When customers redeem rewards online or offline, the influence of information visibility has no significant moderating effect. When customers redeem rewards from online channels, the positive impact of information accessibility on their willingness to participate in LPs is greater than that for offline channel reward redemption (H3-2). Zhu (2002) indicated that information transparency in electronic markets, such as B2B and B2C electronic marketplaces, enables more efficient buyer-seller matchmaking. Customers benefit from information transparency information, spending less effort to find the most time- or money-saving products and speeding up their decision-making process. Therefore, when customers redeem rewards online, they can search, collect, and compare information related to LP operators online. The easier it is to understand, compare, and calculate the information provided by LP operators, the stronger customer willingness to join the LP.

The current analysis found that information visibility has a more positive impact on the customer's willingness to participate in the LP when a customer redeems a reward through an offline LP operator than an offline alliance partner channel (H4-1-1). From the perspective of customer psychological distance, customers tend to think that the products or services offered by the LP operators are like (or consistent with)

their purchasing habits. Therefore, the richness and diversity of information about LP reward content (e.g., images and lists) are more likely to attract and motivate customers to join the LP. However, no significant difference appeared between rewards redemption from offline operators and online operators (H4-1-2).

In the experimental design, the LP operator is the FamilyMart store. The brand effect may enhance the customer's choice to redeem the reward from the operator. In other words, if the customer redeems the reward from the operator, whether through online (long psychological distance) or offline (close psychological distance) channels, there is no role for information visibility as an experience clue.

The authors observed no significant difference in the impact of information visibility on customers' willingness to engage with offline or online operators when redeeming rewards. However, the impact of information visibility on customers' willingness to participate is significantly greater when customers redeem rewards from offline operators than online affiliates (4-1-3). This proves that if customers perceive a close psychological distance, peripheral routes will affect their decision making. Enterprises should, therefore, pay more attention to the richness and diversity of information content.

Also, the authors found that the positive impact of information transparency on customers' willingness to participate in LPs does not differ whether the customer redeems a reward through an offline alliance partner, online LP operator, or online alliance partner channel (H4-2, H4-4). This shows that the synergy effect between merchant type and channel type when customers choose to redeem rewards is not obvious. That may be because, in the context of the omnichannel market, companies actively promote online and offline homogenization and consistency.

Long psychological distance influences customers to pay more attention to the central path clues when processing information. When customers choose to redeem rewards from offline affiliates, online operators, and online affiliates, they care more about whether they can easily obtain LP information or calculate and compare benefits and losses. This is consistent with the study's test results (H4-3-1, H4-3-2, H4-3-3).

## Theoretical and Practical Contributions

By reviewing a large amount of literature, the authors found that most of the research on customer LPs occurs at the enterprise level and customer level (with the relationship between enterprises and customers). It is also relative to the service interaction between enterprises and customers. These studies focus on measures to improve customer LPs. However, few studies specifically discuss and analyze the information-design aspects of customer LPs.

The current study addresses the impact of information visibility and accessibility on customers' willingness to participate in LPs. In the context of redeeming rewards, the study discusses whether the merchant type and channel type can regulate the relationship between information transparency and customers' willingness to participate. This also supplements the relevant literature of previous LPs. Most of the existing literature on information transparency research studies stock market supervision and banking policy, accounting, and auditing in the financial field. In some cases, companies provide various types of information broadly or in limited portions to markets, value chains, or competitors. Scholars who study information transparency tend to focus on the inventory transparency of competitors that leads to the formulation and adjustment of dynamic pricing strategies (Dewan et al., 2007). They also look at the effect of cost transparency on organization pricing, organization profits, customer surplus and purchasing time, and new product innovation (Jiang et al., 2021). Information transparency can increase the multi-homing behavior of complementors and customers because competitors' platforms can use this information to selectively mine high-performance complementarity. Customers are encouraged to adopt their own platforms (Li & Zhu, 2021). Online retailers disclose product availability to influence customer decision making as a form of pressure selling, to force customers to rush to buy. Low product-availability disclosure drives company sales and profitability (Calvo et al., 2020), and some scholars also focus on the ethical issue of information transparency (Turilli & Floridi, 2009). In marketing, exploring the research of information transparency as a source of enterprise competitive advantage has great potential. This helps to expand and enrich the research on information transparency in marketing as well as in this research scenario.

The authors also analyze and explain the influence mechanism between information transparency, merchant types and channel types, and customer participation intention from the perspective of CLT and ELM. This deepens the internal mechanism of information visibility and accessibility on customer participation intention when customers decide to participate in LPs. It also enriches the theoretical system of customer LP research.

This study aimed to provide practical guidance on how organizations should engage customers to increase their willingness to participate in LPs through increased transparency. First, companies that design LPs must develop diverse, rich reward content that makes customers feel they are getting value for their money. Second, improving legibility and simple information prompts enhances the ease of understanding information content. In particular, the influence of information visibility is more significant under the conditions of close psychological distance, such as customers who redeem rewards in offline physical stores from operators and online operators. Under the condition of psychological distance, individuals will rely more on heuristics for decision making. In addition, under the condition of close psychological distance, customers' tendency to avoid cognitive efforts requires balancing the problem of information overload in designing information visibility with the effective use of more pictures and text to explain or present.

When customers redeem rewards from online LP channels or alliance partners (online or offline), their perceived psychological distance is greater. The impact of information accessibility on their willingness to participate in LPs is more significant. That is, in these scenarios, customers will put more effort into identifying and recognizing the information and benefits provided by the LPs. Therefore, when designing LP reward content under the condition of long psychological distance, enterprises can understand the real needs of customers sufficient market research. They should also use the products in which customers are interested to increase the effectiveness of the rewards.

## **Limitation and Suggestions for Future Research**

This study examines the intrinsic psychological mechanisms of information transparency, merchant type, and channel type on customers' willingness to participate in LPs. It is studies from the perspective of CLT and ELM. The authors verified the hypotheses by designing experiments and obtaining desirable results. However, the research has some shortcomings. The authors hope that scholars will continue to supplement and improve research on information transparency and LPs.

First, this study targeted college students as experimental subjects. The sample is, however, relatively narrow. Controlling factors like gender, product price, and customer shopping experience may have been ignored. Future studies should, therefore, consider such factors. They should also vary the sample size to improve the experimental data. External factors may not have been controlled during the experiment due to experimental site limitations. This, in turn, could impact the data.

Second, the current study's experimental design used stimuli that was limited to convenience stores. This did not reflect the situation in other types of retail enterprises.

Third, although the authors selected the most representative stimulus category, it is relatively singular. Selecting a variety of categories could better verify the hypotheses. In addition, reward products comprise practical rewards and hedonistic rewards, tangible rewards and intangible rewards, and cash and non-cash rewards. These require more in-depth explorations.

Fourth, in addition to the moderating effect of reward channels and reward types, future research should obtain more theoretical and management enlightenment. It should include organization size, product characteristics, and customer characteristics as moderating variables.

Finally, future research should explore customer responses to information transparency related to the role of price fairness and price sensitivity.

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## APPENDIX

Leaflets 1

Membership Card	Type A (RMB 100 yuan/year)
Member Benefits	<ol style="list-style-type: none"> <li>1. Basic points: All offline stores, spend 1 yuan to accumulate 1 point</li> <li>2. Spend 1 yuan to accumulate 10 points on your birthday</li> <li>3. Points validity period: Points are not cleared (do not expire) during the membership period</li> <li>4. Points can be used at <b>FamilyMart Stores</b>, 100 points = 1 yuan</li> <li>5. Join the membership and get a package worth RMB100: <ul style="list-style-type: none"> <li>• Complimentary thermos cup worth RMB 50 yuan (collect it at the designated FamilyMart)</li> <li>• Complimentary egg yolk crisp gift box worth RMB 30 yuan (collect it at the designated FamilyMart)</li> <li>• Complimentary gift box of fries worth 20 RMB (collect it at the designated FamilyMart)</li> </ul> </li> </ol>

Leaflets 2

Membership Card	Type B (RMB 100 yuan/year)
Member Benefits	<ol style="list-style-type: none"> <li>1. Basic points: All offline stores, spend 1 yuan to accumulate 1 point</li> <li>2. Spend 1 yuan to accumulate 10 points on your birthday</li> <li>3. Points validity period: Points are not cleared (do not expire) during the membership period</li> <li>4. Points can be used at <b>FamilyMart app</b>, 100 points = 1 yuan</li> <li>5. Join the membership and get a package worth RMB100: <ul style="list-style-type: none"> <li>• Complimentary thermos cup worth RMB 50 yuan (shipped online by FaMijia app)</li> <li>• Complimentary egg yolk crisp gift box worth RMB 30 yuan (shipped online by FaMijia app)</li> <li>• Complimentary gift box of fries worth 20 RMB (shipped online by FaMijia app)</li> </ul> </li> </ol>

Leaflets 3

Membership Card	Type C (RMB 100 yuan/year)
Member Benefits	<ol style="list-style-type: none"> <li>1. Basic points: All offline stores, spend 1 yuan to accumulate 1 point</li> <li>2. Spend 1 yuan to accumulate 10 points on your birthday</li> <li>3. Points validity period: Points are not cleared (do not expire) during the membership period</li> <li>4. Points can be used at <b>Wanda Cinema</b>, 100 points = 1 yuan</li> <li>5. Join the membership and get a package worth RMB100: <ul style="list-style-type: none"> <li>• Complimentary thermos cup worth RMB 50 yuan (collect it at Wanda Cinema)</li> <li>• Complimentary egg yolk crisp gift box worth RMB 30 yuan (collect it at Wanda Cinema)</li> <li>• Complimentary gift box of fries worth 20 RMB (collect it at Wanda Cinema)</li> </ul> </li> </ol>

Leaflets 4

Membership Card	Type D (RMB 100 yuan/year)
Member Benefits	<ol style="list-style-type: none"> <li>1. Basic points: All offline stores, spend 1 yuan to accumulate 1 point</li> <li>2. Spend 1 yuan to accumulate 10 points on your birthday</li> <li>3. Points validity period: Points are not cleared (do not expire) during the membership period</li> <li>4. Points can be used at <b>Wanda Cinema app</b>, 100 points = 1 yuan</li> <li>5. Join the membership and get a package worth RMB100: <ul style="list-style-type: none"> <li>• Complimentary thermos cup worth RMB 50 yuan (shipped online by Wanda Cinema app)</li> <li>• Complimentary egg yolk crisp gift box worth RMB 30 yuan (shipped online by Wanda Cinema app)</li> <li>• Complimentary gift box of fries worth 20 RMB (shipped online by Wanda Cinema app)</li> </ul> </li> </ol>