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Influence of Perceived Value on Customer Loyalty of the Telecommunication Industry in China: Mediating Role of Psychological Contract

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Abstract

This study examines the influence of customer-perceived value on the loyalty of customers who have suspended services, with a focus on the mediating role of the psychological contract within China's telecommunications industry. It distinguishes itself from prior research through its novel emphasis on the telecom sector, particularly China Broadnet, a late-market entrant facing unique competitive pressures. Unlike earlier studies that primarily explore general associations among product quality, customer satisfaction, perceived value, and loyalty, this research highlights the psychological contract as a key mechanism shaping loyalty, especially among customers at the brink of service suspension. Utilizing purposive sampling, data were collected via online surveys from 490 Chinese consumers who had interacted with telecom service providers regarding service suspension within the past year. This sampling approach ensured the inclusion of participants with direct and relevant experiences, aligning with the study's objective of investigating the interplay between psychological contracts and customer loyalty. The sample effectively reflects the customer dynamics in China's telecom industry, focusing on individuals who had visited broadcaster business halls for service-related concerns. Survey distribution was facilitated by broadcaster sales personnel who engaged directly with customers, providing online survey links via email, SMS, or QR codes at critical touchpoints, such as service suspension or follow-up communications. Structural Equation Modeling (SEM) was conducted by AMOS 28 to analyze the data, yielding robust insights into the relationships among perceived value, psychological contracts, and loyalty. The findings reveal several key insights: 1) Customer perceived value directly and positively influences both dimensions of customer loyalty, attitudinal and behavioral; 2) There is a positive relationship between customer perceived value and both transactional and relational psychological contracts; 3) Each dimension of the psychological contract significantly affects attitudinal and behavioral loyalty; and 4) The influence of perceived value on customer loyalty is partially mediated by the psychological contract, encompassing both transactional and relational aspects. These results

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underscore the critical role of perceived value and the psychological contracts in fostering customer loyalty within the telecommunications sector. They offer practical implications for service providers seeking to improve customer retention. For instance, China Broadnet could implement personalized retention strategies targeting customers nearing service suspension, such as tailored service bundles or loyalty rewards that address perceived value gaps. Additionally, establishing clear communication channels and consistently fulfilling customer service commitments can reinforce psychological contracts, thereby reducing churn and enhancing customer retention. These measures align with the study's findings and may help providers maintain a competitive edge in a highly dynamic market.

Introduction

In 2020, China Broadnet was granted a 5G commercial license, joining China's telecommunications giants China Mobile, China Telecom, and China Unicom and transforming the market from a tripartite to a competitive quadripartite landscape. This expansion intensified competition and shifted strategic priorities from a technology-centric model to a more customer- and market-oriented approach. Concurrently, regulatory actions against mandatory bundling and service homogenization have empowered consumers with greater freedom of choice, thereby emphasizing the strategic importance of customer retention and loyalty.

By the end of 2022, China Mobile led the market with 975 million mobile and 272 million broadband subscribers, followed by China Telecom and China Unicom, each maintaining substantial but comparatively smaller subscriber bases (China Mobile Limited, 2023). The industry also witnessed significant growth in Internet Protocol Television (IPTV) services, reaching 401 million users by 2023 (Statista, 2024). Meanwhile, China Broadnet, a relatively new entrant to the mobile telecommunications market, launched its 5G network services in June 2022 and had reached approximately 8.7 million 5G users by April 2023 (Communication World, 2023). Operating in a "triple play" environment, telecom providers are increasingly venturing into broadband and internet-based video distribution, competing for dominance in the digital TV market, a cornerstone of China's broadcasting sector (Li, 2023). Amid challenges such as a shortening customer lifecycle and rising attrition rates, China Broadnet's emphasis on cultivating customer loyalty has become increasingly critical.

Developing, sustaining, and enhancing customer loyalty is widely recognized as a foundational marketing strategy for competitive differentiation (Reichheld, 1993). Extensive research has examined the relationships among product quality, customer satisfaction, perceived value, and loyalty (Chinomona et al., 2014; Fornell, 1992; Khawaja et al., 2021; Yang & Peterson, 2004). In the telecom sector, satisfaction is often cited as a primary driver of loyalty; however, studies also suggest that satisfaction and loyalty are not always causally linked. Loyalty is fundamentally a psychological construct, reflecting a customer's sense of allegiance and reliance on a company, shaped through product or service experiences, and expressed as a commitment to repurchase (Luo, 2006). This commitment fosters a perceived obligation, forming a psychological contract (Robinson, 1996), which may exert a deeper and more enduring influence on loyalty.

Customer-perceived value defined as the consumer's overall assessment of a product's utility based on received benefits relative to given costs (Zeithaml, 1988) is essential for customer retention and competitive advantage. However, the interplay among perceived value, psychological contracts, and customer loyalty received limited attention, particularly in a simultaneous framework. Existing literature presents divergent views: Luo (2006) identifies psychological contracts as mediating the relationship between perceived value and loyalty in certain industries, whereas Yu (2011) suggests that perceived value mediates the effect of psychological contracts on loyalty in the skincare sector. This theoretical divergence highlights the need for further investigation, especially within the telecommunications domain, where state-owned enterprises dominate and competitive dynamics are distinct.

This study addresses this gap by examining the influence of customer-perceived value and psychological contracts on loyalty within the telecom industry, an area not yet fully explored by service providers. By focusing on China Broadnet and customers at the brink of service suspension, the research aims to uncover the psychological mechanisms underlying customer churn and propose strategies to enhance loyalty and reduce attrition. This targeted focus is essential for addressing immediate retention challenges, strengthening competitive positioning, and deepening understanding of loyalty formation. Ultimately, the study contributes valuable insights to both academic discourse and industry practice on managing customer churn in competitive and late-entry markets.

Objectives

1. To examine the influence of customer perceived value on customer loyalty in China's telecom industry.
2. To investigate how transactional and relational psychological contracts affect both attitudinal and behavioral loyalty.
3. To analyze the mediating effect of psychological contracts on the relationship between customer-perceived value and customer loyalty in China's telecom industry.

Literature Review

Customer Loyalty

Fostering robust customer loyalty is a paramount objective for organizational success (Zeithaml et al., 1996). A loyal customer base is instrumental not only in securing repeat purchases but also in generating positive word-of-mouth and brand advocacy (Russell-Bennett et al., 2007). The development of customer loyalty progresses through four stages cognitive, affective, and conative ultimately distilled into two primary dimensions: attitudinal and behavioral loyalty (Oliver, 1997; Ryu & Han, 2010).

Behavioral loyalty reflects observable consumer actions, such as repeat purchases and brand recommendations, while attitudinal loyalty encompasses psychological dispositions, including emotional attachment and brand preferences (Bowen & Chen, 2001; Rai & Medha, 2013). Luo (2006) further delineates customer loyalty into these two dimensions: attitudinal loyalty is assessed through indicators such as preference ranking, price tolerance, and resistance to switching, while behavioral loyalty is measured by the frequency of repeat purchases, cross-buying intentions, and the likelihood of recommending the brand to others. Given the continuous service nature of broadcasting and television enterprises within the service sector, this study adopts Luo's (2006) framework to evaluate both attitudinal and behavioral loyalty. This dual-dimensional approach provides a comprehensive analysis of loyalty constructs relevant to service-oriented industries.

Customer Perceived Value

Customer perceived value plays a pivotal role in consumer behavior research, serving as a critical antecedent to various decision-making processes (Chen & Dubinsky, 2003). As defined by Zeithaml (1988), it represents the consumer's overall evaluation of a product or service's utility, based on expectations and perceptions of what is received relative to what is given. This concept extends beyond transactional exchanges, encompassing

the emotional connections formed between consumers and companies, which enrich the consumption experience and impart additional value (Butz & Goodstein, 1996).

Experiential elements particularly those associated with hedonistic consumption are widely acknowledged as essential in shaping perceived value (Sweeney & Soutar, 2001). Accordingly, customer perceived value emerges as a distinguishing factor, balancing the benefits accrued against the sacrifices made. This perception spans the entire customer journey, encompassing pre-purchase expectations, transactional interactions, and post-purchase evaluations (Woodruff, 1997), thereby highlighting its comprehensive influence on customer satisfaction and loyalty.

Psychological Contract

Psychological contracts can be classified in various ways, with a widely accepted distinction being between transactional and relational contracts (Sels et al., 2004; Rousseau, 1995; Rousseau & Tijoriwala, 1998; Pavlou & Gefen, 2005). Transactional psychological contracts emphasize short-term gains and benefits, while relational psychological contracts prioritize enduring relationships, characterized by social and emotional bonds. The latter reflects a deeper level of emotional investment and trust between the individual and the organization, extending beyond the immediate, benefit-oriented nature of transactional contracts.

Within the telecommunication industry recognized for its distinct service attributes, this study delineates transactional psychological contracts as encompassing competitive pricing, prompt service delivery, and customized product offerings. In contrast, relational psychological contracts, as conceptualized by Luo (2006), involve organizational commitments to proactively assume responsibility during uncertain circumstances, consistently deliver high-quality services, uphold long-term reputation and service standards, demonstrate genuine concern for customer well-being, and cultivate lasting customer relationships.

This distinction underscores the diverse expectations and obligations between customers and service providers, highlighting the importance of understanding psychological contracts as a foundation for fostering trust and loyalty in the telecommunication sector.

The Relationship Between the Customer Perceived Value and Customer Loyalty

Customer-perceived value plays a significant role in shaping customer loyalty, as demonstrated across various industries. Suhartanto et al. (2013) identified a

positive relationship between perceived value and loyalty within the tourism and hospitality sector. This finding is further supported by Hapsari et al. (2017), who emphasized the importance of perceived value in driving loyalty across diverse contexts. In the telecommunications sector, Lai et al. (2009) confirmed a direct and positive relationship between customer-perceived value and loyalty in China.

Collectively, these studies suggest that an enhanced perception of value among customers is likely to foster stronger loyalty. Building on this empirical foundation, the following hypotheses are proposed:

H1: The perceived value derived from the suspension of services by broadcasting companies has a positive impact on customer loyalty, encompassing: 1a) Attitudinal loyalty and 1b) Behavioral loyalty.

The Relationship Between Customer Perceived Value and Psychological Contract

Through repeated purchase cycles, consumers develop stable consumption habits and enduring memories associated with their experiences. Xie et al. (2021) emphasize that preserving and reinforcing these consumer memories is essential for fostering customer loyalty. Perceived value, as defined by Holbrook (1994), refers to a customer's overall subjective assessment and response to environmental stimuli, representing a balance between perceived benefits and costs that shapes individual cognition. This cognitive evaluation is not immediately fixed but evolves through accumulated perceptions and attitudes toward a company, guided by learning theories.

When consumers perceive that the value they received meets or exceeds their expectations, they are more likely to form stable, long-term emotional connections, thereby establishing a psychological contract (Li, 2023). Conversely, when perceived value falls short of expectations, consumers may experience cognitive dissonance, resulting in discomfort and a shift in motivational state, an indication of a psychological contract breach.

Based on these insights, the following hypotheses are proposed:

H2: The perceived value resulting from the suspension of services by broadcasting companies positively affects the psychological contract, encompassing: 2a) Transactional psychological contract and 2b) Relational psychological contract.

The Relationship Between Psychological Contract and Customer Loyalty

Luo (2006) explored the interplay between the two dimensions of customer loyalty, attitudinal and behavioral, and the dual aspects of psychological contracts: transactional and relational. The study revealed that transactional psychological contracts, in which companies commit to specific benefits for the customer, help reduce perceived purchasing risks and promote repeat purchases, a key indicator of behavioral loyalty. Thus, a direct link is established between transactional psychological contracts and behavioral loyalty.

Conversely, relational psychological contracts encompass not only tangible benefits but also emotional connections fostered by the enterprise, thereby deepening the emotional bond between customers and the company (Li, 2023). This stronger attachment leads customers to experience psychological discomfort when switching to a competitor's products or services, reflecting the essence of attitudinal loyalty.

Through empirical research in the beauty and repair industries, Luo (2006) substantiated the significant positive correlation between both dimensions of customer loyalty and both types of psychological contracts. Building upon these findings, this study posits the following hypotheses:

H3: The psychological contract has a positive effect on customer loyalty.

H3a: A transactional psychological contract has a positive effect on attitudinal loyalty.

H3b: A relational psychological contract has a positive effect on attitudinal loyalty.

H3c: A transactional psychological contract has a positive effect on behavioral loyalty.

H3d: A relational psychological contract has a positive effect on behavioral loyalty.

The Mediating Role of Psychological Contract

The relationship between enterprises and their customers fundamentally rooted in a mutual exchange of benefits, wherein customers often hold psychological expectations regarding their consumption experiences (Li, 2023). When the benefits or value delivered by an enterprise meet or exceed these expectations, customers are likely to develop long-term commitment and trust. This commitment fosters a stable attitudinal orientation toward the enterprise, forming the basis of a harmonious psychological contract. In turn, such psychological alignment encourages repurchase behavior, and contributes to the development of customer loyalty (Luo, 2006).

Conversely, a decline in perceived value can undermine customers' confidence and result in a breach of the psychological contract, thereby negatively affecting loyalty. These dynamics suggest that customer-perceived value influences loyalty through the mediating role of the psychological contract.

Based on this premise, the following hypotheses are proposed:

H4: Customer-perceived value resulting from the suspension of services by broadcasters positively influences customer loyalty, with the psychological contract serving as a mediating factor.

H4a: The transactional psychological contract mediates the relationship between customer-perceived value and attitudinal loyalty.

H4b: The relational psychological contract mediates the relationship between customer-perceived value and attitudinal loyalty.

H4c: The transactional psychological contract mediates the relationship between customer-perceived value and behavioral loyalty.

H4d: The relational psychological contract mediates the relationship between customer-perceived value and behavioral loyalty.

Conceptual Framework

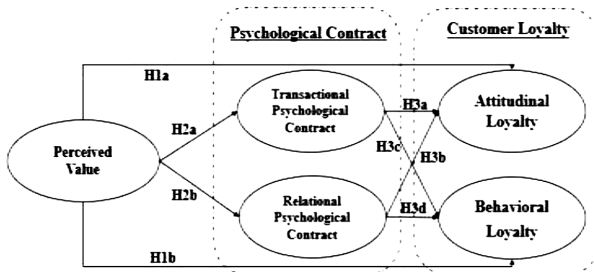


Figure 1 Conceptual framework illustrating the relationships among customer-perceived value, psychological contract (transactional and relational), and customer loyalty (attitudinal and behavioral).

Research Methodology

1. Population and Sample

This study employed a quantitative survey method, targeting Chinese adults aged 18 and above who had visited broadcaster business halls within the past year to suspend their services. Purposive sampling was used to ensure the inclusion of participants with direct experience relevant to the research objectives. Data were collected using an online questionnaire developed via Google Forms, designed to measure customer-perceived

value, psychological contracts, and customer loyalty, along with demographic information. The questionnaire was distributed by broadcaster sales personnel through direct interaction with eligible participants, using email, SMS, or QR codes at the point of service suspension or during follow-up communications.

Efforts were made to ensure the survey's user-friendliness to maximize response rates and minimize drop-offs. Responses were screened for completeness and validity, and the final dataset comprised 490 valid responses collected between December 2023 and February 2024. This sample size meets the requirements for structural equation modeling (SEM), as recommended by Hair et al. (1998). This methodologically rigorous approach ensured the reliability and relevance of the data for examining the relationships between perceived value, psychological contracts, and customer loyalty.

2. Research Instrument

The survey was structured into three sections. The first section included a screening question to confirm respondents' experience with the broadcaster's services within the past year, ensuring participant relevance. The second section collected demographic information, including age, gender, education level, occupation, and average monthly income. The final section employed a 7-point Likert scale (1 = Strongly Disagree to 7 = Strongly Agree) to evaluate constructs within the study's conceptual framework.

Measurement of customer-perceived value was based on the scale developed by Kim et al. (2007), comprising five indicators. Psychological contract assessment followed Rousseau (2004), using 12 items evenly divided between transactional (six items) and relational (six items) psychological contracts. Customer loyalty, both behavioral and attitudinal, was measured using scales adapted from Sirdeshmukh et al. (2002).

3. Data Analysis

Structural equation modeling (SEM) was conducted using AMOS 28 to test the proposed hypotheses and examine the interrelationships among variables. Prior to the SEM analysis, the reliability and validity of the survey instrument were evaluated through assessment of the measurement model, including factor loadings, composite reliability (CR), Cronbach's alpha, average variance extracted (AVE), and discriminant validity.

The mediating role of the psychological contract was examined by analyzing the indirect effects

of customer-perceived value on customer loyalty. SEM in AMOS 28 provided insights into the strength and significance of these mediated pathways, complementing the analysis of direct effects.

Results

Descriptive Statistics

Utilizing SPSS 25 for data analysis, the demographic profile of the 490 respondents was examined. A majority of participants were male, comprising 63.3% of the sample. In terms of age distribution, 53% fell within the 26–40-year age bracket. Educational attainment varied: the largest group (35.51%) had completed high school or less, followed by those with college diplomas (31.62%) and bachelor's degrees (27.61%).

Regarding employment status, workers represented the largest group at 19.43%, followed by public officials (16.18%) and freelancers (14.32%). In terms of income, over half of the respondents (53.5%) reported an average monthly salary below 5,000 Chinese yuan.

The Measurement Model

To assess the validity of the variable items and the measurement model, Confirmatory Factor Analysis (CFA) was conducted. Construct validity was evaluated through both convergent and discriminant validity assessments. Convergent validity, which examines the degree to which items within a construct are correlated (Carlson & Herdman, 2012), was established by meeting the following criteria: Cronbach's alpha values above 0.7 (Cronbach, 1951), factor loadings exceeding 0.6 (Chen & Tsai, 2007), composite reliability (CR) above 0.7, and average variance extracted (AVE) greater than 0.5 (Fornell & Larcker, 1981), as shown in Table 1.

Discriminant validity, essential for confirming that constructs are empirically distinct, was assessed using the method proposed by Fornell and Larcker's (1981). This involved comparing the square root of AVE for each construct with its corresponding inter-construct correlation coefficients. Discriminant validity is supported

Table 1 Convergent validity indicators including factor loadings, squared multiple correlations (SMC), composite reliability (CR), average variance extracted (AVE), and Cronbach's alpha for each construct

Factor	Item	Factor loading	SMC	CR	AVE	alpha
Perceived value (PV)	PV1	.816	.666	.919	.695	.920
	PV2	.839	.704			
	PV3	.817	.667			
	PV4	.841	.707			
	PV5	.856	.733			
Transactional Psychological Contract (TPC)	TPC1	.852	.726	.929	.723	.929
	TPC2	.855	.731			
	TPC3	.844	.712			
	TPC4	.864	.746			
	TPC5	.836	.699			
Relational Psychological Contract (RPC)	RPC1	.857	.734	.933	.737	.935
	RPC2	.855	.731			
	RPC3	.865	.748			
	RPC4	.852	.726			
	RPC5	.862	.743			
Attitudinal Loyalty (AL)	AL1	.866	.750	.940	.758	.943
	AL2	.872	.760			
	AL3	.872	.760			
	AL4	.867	.752			
	AL5	.877	.769			
Behavioral Loyalty (BL)	BL1	.846	.716	.913	.724	.913
	BL2	.853	.728			
	BL3	.856	.733			
	BL4	.849	.721			

when the square root of AVE exceeds the related correlations, as illustrated in Table 2.

These results confirm the adequacy of discriminant validity (Gefen et al., 2000), indicating a well-structured and reliable measurement model.

Table 2 Discriminant validity results based on Fornell and Larcker's criterion for perceived value, psychological contract, and customer loyalty constructs

	AVE	1	2	3	4	5
1 PV	.695	.834				
2 TPC	.723	.445	.850			
3 RPC	.737	.359	.355	.858		
4 AL	.758	.416	.489	.410	.871	
5 BL	.722	.439	.477	.465	.371	.851

Structural Model

Goodness-of-fit (GoF) metrics are essential for evaluating the alignment between a structural model and the empirical data it seeks to represent (Schermerle-Engel et al., 2003). Model adequacy was assessed by comparing empirical fit indices with established thresholds from prior research.

As shown in Table 3, all key indices, CMIN/DF, GFI, AGFI, NFI, CFI, TLI, and RMSEA, exceeded their respective benchmarks for acceptability. These results indicate that the proposed conceptual model demonstrates a strong fit with the observed data, providing empirical support for its validity and effectiveness in capturing the underlying relationships among constructs.

Table 3 Goodness-of-fit indices for the structural model compared with recommended thresholds

Goodness-of-Fit Indices	Acceptable Values	Reference	Empirical Value
CMIN/DF	< 3.00	Kline (1998)	1.179
GFI	≥ 0.90	Byrne (1994)	0.941
AGFI	≥ 0.90	Byrne (1994)	0.929
NFI	≥ 0.90	Bentler & Bonett (1980)	0.963
CFI	≥ 0.90	Byrne (1994)	0.994
TLI	≥ 0.90	Byrne (1994)	0.993
RMSEA	< 0.08	Browne & Cudeck (1993)	0.021

Hypothesis Testing

The results presented in Table 4 indicate that customer-perceived value significantly influences both attitudinal and behavioral loyalty. Specifically, perceived value has a direct positive effect on attitudinal loyalty ($\beta = .358, p < .001$) and behavioral loyalty ($\beta = .344, p < .001$), underscoring its pivotal role in fostering customer commitment.

Additionally, perceived value positively affects both transactional and relational psychological contracts,

with standardized coefficients of $\beta = .249 (p < .001)$ and $\beta = .414, (p < .001)$, respectively, thereby supporting Hypotheses H2a and H2b. The analysis further reveals that both dimensions of psychological contracts are positively linked to attitudinal loyalty: $\beta = .310, (p < .001)$ for transactional and $\beta = .362, (p < .001)$ for relational contracts, confirming Hypotheses H3a and H3b.

Regarding behavioral loyalty, both the transactional and relational dimensions of psychological contracts exhibit significant positive relationships, with $\beta = .163, (p < .01)$ and $\beta = .301, (p < .001)$, respectively, lending support to Hypotheses H3c and H3d.

Table 4 Hypothesis testing results including standardized estimates, unstandardized estimates (B), standard errors (S.E.), critical ratios (CR), and significance levels

Hypothesis	Standardized Estimate (β)	B	S. E.	C. R.	Results
H1a: PV→AL	.358	.381	.057	6.732***	Accepted
H1b: PV→BL	.344	.374	.058	6.450***	Accepted
H2a: PV→TPC	.249	.255	.052	4.933***	Accepted
H2b: PV→RPC	.414	.438	.051	8.631***	Accepted
H3a: TPC→AL	.310	.310	.051	6.056***	Accepted
H3b: RPC→AL	.362	.392	.051	7.674***	Accepted
H3c: TPC→BL	.163	.178	.061	2.916**	Accepted
H3d: RPC→BL	.301	.349	.058	6.013***	Accepted

Note: * $p < .05$; ** $p < .01$; *** $p < .001$

Mediating Effects

To further investigate the mediation mechanisms within the proposed theoretical framework, a bootstrap analysis was conducted using 5,000 resamples to assess the mediating roles of transactional and relational psychological contracts.

As shown in Table 5, customer-perceived value exerted a positive indirect effect on attitudinal loyalty through both transactional and relational psychological contracts, with coefficients of 0.266 and 0.064, and confidence intervals (CI) of [.126, .397] and [.005, .129], respectively. As both intervals exclude zero, these findings affirm the validity of Hypotheses H4a and H4b. Similarly, customer-perceived value demonstrated significant indirect effects on behavioral loyalty via transactional and relational psychological contracts, with coefficients of 0.257 and 0.062, and confidence intervals of [.120, .385] and [.005, .124], respectively. Again, the exclusion of zero from both intervals confirms the significance of these effects, thereby supporting Hypotheses H4c and H4d.

Overall, the bootstrap mediation analysis substantiates Hypotheses H4a through H4d, highlighting the significant mediating role of both transactional and

relational psychological contracts in the relationship between customer-perceived value and customer loyalty, both attitudinal and behavioral.

Table 5 Bootstrapped mediation effects of transactional and relational psychological contracts between perceived value and customer loyalty

Mediating Effects	Indirect Effect	Standard Error (SE)	LLCI (95%)	ULCI (95%)	Degree of Mediation
H4a: PV→TPC→AL	.266	.067	.126	.397	Partial
H4b: PV→RPC→AL	.064	.033	.005	.129	Partial
H4c: PV→TPC→BL	.257	.065	.120	.385	Partial
H4d: PV→RPC→BL	.062	.031	.005	.124	Partial

Note: LLCI and ULCI refer to the lower and upper bounds of the 95% bootstrapped confidence interval, respectively. $p < .05$; $p < .01$; $p < .001$

Discussion

Within the context of China's telecommunications sector, where user growth has plateaued, enhancing customer loyalty, and minimizing churn have become critical priorities for service providers. This study, situated within the telecom industry, investigates the interplay between perceived value, psychological contracts, and customer loyalty among individuals who have suspended services.

The findings reveal several key insights. Firstly, customer-perceived value exerts a direct and positive influence on both attitudinal and behavioral loyalty. This result aligns with prior research by Suhartanto et al. (2013), Hapsari et al. (2017), and Lai et al. (2009) reinforcing the fundamental role of perceived value as a driver of loyalty. Enhancing customer perceptions of value can therefore serve as a strategic lever for strengthening loyalty.

Second, the analysis demonstrates that perceived value significantly shapes both transactional and relational psychological contracts, echoing findings from Xie et al. (2021) and Li (2023). The exchange of benefits between firms and customers is shaped by psychological expectations. When the value delivered meets or exceeds these expectations, it fosters an enduring trust and commitment, resulting in a robust psychological contract.

Third, the study confirms that both transactional and relational psychological contracts positively influence attitudinal and behavioral loyalty. These findings are consistent with the work of Luo (2006) and Li (2023), suggesting that cultivating a sense of belonging and favorable perception of the company strengthens customer relationships and enhances loyalty outcomes.

Finally, the research establishes that perceived value indirectly affects loyalty through psychological

contracts. This mediation effect indicates that customers' long-term trust, rooted in fulfilled expectations, nurtures stable psychological contracts, which in turn promote repurchase intentions and sustained loyalty. Consistent with Luo (2006) and Li (2023), this insight highlights a strategic gap: while telecom operators often emphasize perceived value in their marketing efforts, they may neglect the importance of fostering psychological contracts, particularly relational ones. Given the extensive customer bases of China's major telecom providers and the operational challenges across the customer lifecycle, this study advocates a dual focus on enhancing perceived value and cultivating psychological contracts to effectively mitigate churn.

Conclusion

The study confirms that customer-perceived value exerts a significant and positive influence on customer loyalty, reinforcing its critical role in cultivating both attitudinal and behavioral loyalty within China's telecommunications sector. In addressing Objective 2, the findings reveal that both transactional and relational psychological contracts significantly affect customer loyalty. Relational contracts demonstrate a stronger impact on attitudinal loyalty, while transactional contracts primarily influence behavioral loyalty, highlighting the differentiated roles these constructs play in shaping customer commitment.

Regarding Objective 3, the results establish that psychological contracts mediate the relationship between perceived value and customer loyalty. This underscores their function as a critical mechanism that enhances the effect of perceived value on loyalty outcomes.

Collectively, these conclusions offer strategic insights for telecom service providers, emphasizing the dual importance of elevating perceived value and cultivating robust psychological contracts to strengthen customer retention and loyalty.

Suggestions

Current academic discourse on customer-perceived value, psychological contract, and loyalty predominantly examines these constructs through marketing and management perspectives, often overlooking the psychological mechanisms that shape their interactions. This study contributes to the literature by exploring the psychological dynamics of customer churn, specifically through the lens of perceived value and psychological contracts within a marketing context.

By introducing the concept of the "hidden" psychological contract as a mediating variable and focusing on customers at a specific life cycle stage in the telecommunications sector, this research enriches the theoretical landscape of customer loyalty with greater nuance and depth.

Beyond theoretical contributions, the findings offer practical implications for the telecommunications industry and related sectors. To enhance customer perception, businesses should prioritize increasing customer benefits, such as product and service quality and brand image, while simultaneously reducing both monetary and non-monetary costs. For example, offering price reductions or complimentary products during service suspension interactions can retain customers, as can streamlining online service channels to reduce effort and time.

Additionally, customer perception can be elevated through the holistic development of innovative 5G services. The telecommunications sector currently faces a gap in delivering fresh value to customers. Strategically bundling 5G offerings with existing cable TV and broadband services such as providing these as complimentary additions can significantly enhance perceived value. This approach not only enriches the customer experience but also positions the enterprise as a value-driven provider, potentially increasing customer satisfaction and loyalty through the convenience and utility of integrated service packages.

Enterprises can further reinforce customer loyalty by implementing a membership operation system, thereby facilitating the formation of transactional psychological contracts. From the moment customers engage with the network, companies can encourage enrollment in membership programs that offer exclusive rights, benefits, and targeted activities. Such systems foster a sense of belonging and deepen customer relationships, while also increasing the cost of switching, thereby enhancing retention. Over time, these interactions may evolve from transactional exchanges into enduring relational bonds.

Marketing effectiveness can also be strengthened through a seamless presence across both digital platforms and physical locations. Leveraging big data analytics enables behavioral segmentation and the deployment of tailored strategies. Companies should extend engagement beyond traditional service centers and hotlines by utilizing digital platforms such as enterprise versions of WeChat and other online tools to deliver precise, real-time

services that reflect individual preferences and entitlements. This continuous, personalized interaction nurtures emotionally rich psychological contracts, laying the foundation for long-term loyalty and trust.

Finally, businesses can proactively manage retention by implementing an off-network churn early warning and analysis system. In the telecommunications sector, where services are typically uninterrupted, customer disengagement often follows a gradual decline in usage such as reduced engagement with TV or broadband services rather than immediate departure. By applying big data analytics to detect early signs of dissatisfaction, companies can develop intelligent care systems for high-risk customers. These systems enable targeted interventions when engagement begins to wane, serving as a strategic mechanism to retain crucial customer segments and prevent churn through timely, customized solutions.

Limitation and Direction for Future Study

While this study offers valuable insights into customer loyalty within the telecommunications industry, several limitations warrant consideration and suggest avenues for future research. First, although the questionnaire was administered anonymously, having respondents complete it within business halls may have influenced the authenticity of their psychological responses. The bustling environment, coupled with the presence of other customers, may have prompted hurried or less reflective answers. Additionally, the detailed structure of the questionnaire, juxtaposed with the typically brief duration of customer visits, may have led to superficial engagement. These factors collectively pose a risk to the precision of the findings, potentially limiting the depth and accuracy with which customer attitudes and perceptions were captured.

Second, the study relied primarily on quantitative methods, with survey items derived from existing literature. While this approach facilitated statistical analysis, it may not fully illuminate the underlying motivation behind customers' decisions to suspend services. Future research could benefit from incorporating qualitative methods such as focus groups or in-depth interviews to gain richer, more nuanced insights into customer experiences and decision-making processes. Lastly, the research was geographically confined to Chinese users residing in mainland China. Given the potential for cultural and service expectation differences across regions, future studies could broaden their scope

to include users from other countries. Such comparative research would enable cross-cultural analysis of customer loyalty dynamics, offering a more comprehensive understanding of how psychological contracts and perceived value operate across telecommunications landscapes.

Declaration of Generative AI and AI-Assisted Technologies in the Writing Process

In preparing this manuscript, the authors utilized ChatGPT as a supportive tool for improving linguistic accuracy, grammatical quality, and textual clarity. The use of AI was limited to language-related assistance and did not involve data generation, data analysis, interpretation of results, or formulation of conclusions. The final manuscript was carefully reviewed, revised, and approved by the author, who takes full responsibility for the accuracy, originality, and integrity of the published work.

Conflict of interests

The authors declare no conflict of interests.

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