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A Study of the Impact of Personal Information Collection Boundaries on the Willingness to Disclose Information of Chinese Youth Groups

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Abstract: The development of modern digital technology has created opportunities for online retailing. In order to fully develop the online market, increase consumer satisfaction by providing personalised products and services, and thus increase customer stickiness and develop potential markets, online retailers often collect personal information of their customers through online questionnaires and other means. However, it is unavoidable that this marketing method raises questions about consumers' personal privacy. For this reason, this study examined the correlation between the parameters governing corporations' acquisition of customers' personally identifiable information and customers' proclivity for divulging such personal data, using the Chinese youth population as an example. The data for this research was gathered through an online questionnaire administered to a sample of 159 respondents, and subsequently subjected to correlation and regression analyses for testing. The study's findings demonstrate a significant positive impact of merchants' boundaries regarding the collection of personal information from users on the willingness of the Chinese youth demographic to disclose their personal information, and there is a partial mediation effect of this effect. On the one hand, merchants' personal information collection boundaries on users will directly affect Chinese youth groups' willingness to disclose personal information; on the other hand, the limitations imposed by merchants on the collection of users' personal information can influence the perceived trust levels within the Chinese youth demographic. This, in turn, affects the willingness of these youth groups to share their personal information. Drawing from the study's outcomes, this paper drew some insights into online information collection by businesses and propose directions for further research in the future.

Keywords: Digital technology, personal information, mediation effect

1. Introduction

With the advent of the Internet and the proliferation of e-commerce, consumers' shopping behaviors have grown progressively diverse and personalized. Enterprises need to understand consumers' shopping behaviour and preferences by collecting customer information and through data analytics to provide more personalized product pushes and services [1]. It can be found that more and more enterprises or businesses in order to better implement the personalised marketing strategy, through

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interviews, questionnaires, telephone surveys and other methods to collect the personal data and preferences of existing customers and potential customers, in order to optimise their products or services, improve customer adhesion and develop potential markets [2].

The breadth and depth of the collection of personal privacy by merchants and businesses can have an impact on customers' willingness to disclose information and their behaviour. Appropriate collection of personal privacy information facilitates a better understanding of customer needs and the provision of more targeted and personalised goods and services [3]. According to the "privacy paradox", most users attach great importance to the protection of personal privacy. However, in order to enjoy the convenience of products or services in daily life, users often tend to choose to disclose part of their personal privacy. Moreover, users disclose more private information than they think [4]. Thus, it seems that users' privacy information disclosure decisions vary from one situation to another. Merchants' collection strategies and collection boundaries for customer information can directly affect users' disclosure choices. For example, merchants' disclosure of the advantages and risks of information collection will in increase customers' willingness to share personal information. When customers perceive specific privacy risks of disclosing personal information, they are less willing to disclose [5]. In addition, users' perceived customer care from the merchant can also have a significant impact on users' disclosure decisions, as perceived customer care directly affects users' perceived control and trust, diminishing customers' privacy concerns and increasing their propensity to divulge information [6].

From the perspective of the content and scope of users' private information collected by merchants, to bolster user trust and foster their willingness to share information, merchants should focus on the content boundaries of users' personal privacy collection. Excessive collection of personal privacy information can lead to distrust and psychological resistance from customers. For example, the personal privacy data collected by some merchants and enterprises may be too diffuse and not linked to the real-life scenarios of their own products and services, resulting in customers' hesitancy to provide or reveal their personal information due to a perception that their privacy has been compromised. This is likely to result in a negative brand image and the loss of a significant portion of potential and existing customers. In the current research on the factors influencing customers' disclosure decisions, relatively few studies have specifically addressed the influence of merchants' privacy information collection policies on customers' inclination to share information. Therefore, this research seeks to make a valuable contribution to the examination of the association between merchants' information collection boundaries and users' willingness to disclose information. This will be accomplished through a questionnaire survey and the development of a research model that incorporates these variables. Since the youth group is the main force of online consumption and has great potential and prospects for online consumption, this study thus identified the research population as the Chinese youth group (aged 18 to 25).

The second part of the article presents the theoretical background and hypotheses, the third part delineates the research methodology, and the fourth part presents the results of the analyses. Finally, the fifth part focuses on the findings of the study.

2. Theoretical Background and Hypotheses

2.1. Personalized Marketing, Information Collection and Data Privacy

At a conceptual level, personalization is understood differently in different fields and by different people. In the field of marketing, personalization refers to the act of merchants designing, producing, as well as selling by accurately grasping customers' preferences. By offering products or services based on customers' preferences, merchants can significantly reduce their search costs, including the burden of effort and time spent, and improve their shopping experience. For merchants, personalized

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marketing not only improves customer loyalty and perceived quality, but also leverages big data analytics to improve the efficiency of business operations [7, 8]. In conclusion, personalized marketing has become the best choice for enterprises in the era of e-commerce.

Personalized marketing must have personalized information about the user, which in turn accurately portrays the user profile. Psychologically speaking, user personalized information has high utilization value and helps to build personalized system [9]. User personalized information contains three dimensions: user attributes, user interests and user behaviors [10]. User attributes refer to the user's ID, age, gender, occupation, income, phone number, address, marital status, etc., which are the basic elements for constructing user profiles. User interest refers to the user's preference, which can be obtained in the form of questionnaires filled in by users and user behavior feedback. User behavior is the purposeful action of users when using web pages or terminals, such as product clicking, page staying, adding shopping cart, payment, bookmarking, sharing, etc. [11].

Both users' basic information and interests, as well as their online activity trails and behaviors, are considered as personal data privacy in China. The collection or using of private information by e-tailers in avoidance of regulation can be considered as a violation of the right to privacy in the Tort Liability Law of the People's Republic of China [12]. To the individual user, privacy is the right of the individual to decide about himself/herself rather than the public or the society, which means that there is a boundary between the individual and the society. When a retailer crosses this border, or collects too much information about its users, it can cause a sense of "violation". At the same time, users may encounter problems such as "phishing", fraud, malicious marketing, and cyber-attacks, which may affect their daily lives and work, and even cause financial losses. Accordingly, web-user’s privacy has become a key element in personalized data mining [13].

For customers, they only want a recommendation approach that does not cross boundaries, provides real value, and is highly relevant [14]. This approach not only helps them to obtain useful information, but also ensures to a certain extent that their privacy is not leaked or overexposed. Therefore, this study hypothesize:

H1. Merchants' personal information collection boundaries on users have a positive influence on the willingness of young web-user groups to disclose private information.

2.2. Perceived Trust

Perception refers to a bodily function that derives awareness from sensation [15] and helps individuals to better understand the world, while trust refers to a sense of security and a willingness to rely on someone/something [16]. In the credit attribution model, Joshua R. Knapp et al. found that perception plays a vital role in the course of generating trust ground, and it is one of the sources of trust [17]. The behavior of merchants in collecting information is one of the main components of users' perceptions and determines whether they generate perceived trust. After studying the online purchasing behavior of tourism services and products in Korea, Kim et al. found that the boundaries of merchant's information gathering affects the perceived security of customers, and the perceived security positively influences the perception of trust [18]. Therefore, this study propose the 2nd hypothesis:

H2. The boundary of merchants' personal information collection from users has a positive effect on perceived trust among young user groups.

For different dimensions of information disclosure, user groups have different levels of tolerance. Schomakers et al. found that not only do different types of data disclosure create differences in willingness, but the intensity of willingness to disclose varies among people with different levels of privacy sensitivity [19]. Sensitivity to privacy largely depends on the subject of disclosure and perceived trust in the subject of disclosure; the higher the perceived trust, the less concern about privacy leakage and the more inclined to disclose personal information to merchants. Users also

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weigh the disclosure of private information against the value gained from the benefit when considering merchant information collection [20]. Adam N. Joinson et al. found that privacy is mediated by trust, and that privacy and trust interact at contextual level, with higher trust compensating for lower privacy [21]. In addition, perceived privacy risk has a momentous effect on users' disclosure of personalized information [22]. Once users perceive the existence of high risk, they will inevitably reduce their faith in the merchant and thus reduce their eagerness to disclose personalized information. Users perceive risk generally consider the importance and privacy of information, and if the merchant crosses the boundary of information collection, users have the feeling of facing high risk. Therefore, this study propose the 3rd and 4th hypotheses:

H3. Perceived trust affects the willingness to disclose information among young customer groups

H4. The boundaries of merchants' personal information collection from users will affect the willingness of young customer groups to disclose information by influencing the perceived trust of young user groups.

Personal information categories are rich, George R. Milne et al. categorized 52 types of information into four categories: physical, psychological, monetary and social, and made a comparison with respect to sensitivity and personal willingness to disclose, and found that basic information and personal preferences are the information that users are more willing to disclose voluntarily [23]. Since there are considerations in users' choice of information disclosure, where exactly is the boundary of Chinese youth groups' tolerance for the collection of personal privacy data in personalized marketing, and they will show different levels of tolerance for different types of data, are questions that this paper focuses on.

3. Methodology

3.1. Data Collection

The main research focus of this paper is the Chinese youth demographic, frequent users of online trading platforms. In accordance with the specific attributes of the primary research subject in this paper, the online platform is adopted to release the questionnaire, mainly using computers and mobile phones as the carrier, distributing the questionnaires and collecting data through Questionnaire Star, and finally 159 questionnaires were returned.

3.2. Measures

In this study, it has totally collected 159 valid samples, and the fundamental sample demographics are presented in Table 1. In terms of gender distribution, males comprised 52.8% of the sample, while females constituted 47.2%, with a slight male predominance. Regarding age distribution, as depicted in the table, individuals aged 18-20 represented 44% of the sample, and those aged 21-25 constituted 56%, signifying that the majority of respondents fell within the 21-25 age bracket. According to education, the largest number of college and undergraduate, a total of 78 people, accounting for 49.1%, followed by high school and the following education, accounting for 44%; from the table: according to the monthly income, the income of 5001-8000 yuan accounted for 47.8% of the largest number of people, followed by 3,000-5,000 yuan, accounting for 43.4%; according to marital status, the number of unmarried people as high as 147 people, accounting for 92.5%; by experience, 142 young people, accounting for 89.3%, have encountered merchants collecting information, indicating that most of the people surveyed have had encounters with merchants collecting information.

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Table 1: Basic personal information.

Information item		Numbers	Percentage	Effective percentage	Cumulative percentage
genders	male	84	52.8	52.8	52.8
	female	75	47.2	47.2	100
	total	159	100	100	
ages	18-20 years	70	44	44	44
	21-25 years	89	56	56	100
	total	159	100	100	
education level	High school and below	70	44	44	44
	College and undergraduate	78	49.1	49.1	93.1
	Masters and above	11	6.9	6.9	100
	total	159	100	100	
monthly salary	3000-5000	69	43.4	43.4	43.4
	5001-8000	76	47.8	47.8	91.2
	8000 or more	14	8.8	8.8	100
	total	159	100	100	
marital status	married	12	7.5	7.5	7.5
	unmarried	147	92.5	92.5	100
	total	159	100	100	
encountered merchants collecting info	yes	142	89.3	89.3	89.3
	no	17	10.7	10.7	100
	total	159	100	100	

Source: From questionnaire results.

3.3. Data Analysis

As depicted in Table 2, the mean values for each item fall within the range of 3.497 to 3.893, indicating a relatively balanced distribution. The standard deviation for each item ranges from 1.210 to 1.377, suggesting a low degree of data dispersion. Following Klein's guidelines [24], when the absolute skewness value of sample data is less than 3, and the absolute kurtosis value is less than 10, the observed variables are considered to be largely consistent with a normal distribution. In light of the statistical results above, the absolute skewness values for all items are less than 3, and the absolute kurtosis values are less than 10, significantly lower than Klein's reference criteria. Therefore, it can be inferred that the large-sample data pattern substantially conforms to a normal distribution, meeting the foundational prerequisites for data analysis in this study.

Table 2: Statistical analysis of samples.

	N	Min	Max	Mean	St.	Skewness	Kurtosis
ICB1	159	1.00	5.00	3.704	1.357	-.771	-.665
ICB2	159	1.00	5.00	3.748	1.331	-.865	-.430
ICB3	159	1.00	5.00	3.648	1.298	-.655	-.645
ICB4	159	1.00	5.00	3.730	1.210	-.724	-.421
ICB5	159	1.00	5.00	3.748	1.232	-.926	-.132

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Table 2: (continued).

ICB6	159	1.00	5.00	3.654	1.302	-.796	-.478
ICB7	159	1.00	5.00	3.818	1.335	-.920	-.367
ICB8	159	1.00	5.00	3.660	1.262	-.846	-.297
ICB9	159	1.00	5.00	3.610	1.282	-.713	-.487
PT1	159	1.00	5.00	3.597	1.332	-.644	-.760
PT2	159	1.00	5.00	3.660	1.354	-.787	-.610
PT3	159	1.00	5.00	3.597	1.298	-.692	-.592
PT4	159	1.00	5.00	3.704	1.334	-.852	-.413
BI1	159	1.00	5.00	3.786	1.314	-.852	-.474
BI2	159	1.00	5.00	3.673	1.280	-.758	-.535
BI3	159	1.00	5.00	3.730	1.306	-.798	-.602
BI4	159	1.00	5.00	3.497	1.377	-.597	-.894
BI5	159	1.00	5.00	3.893	1.325	-.960	-.360
Sample size	159						

Table 3 reveals that each variable's mean value falls within the range of 3.640 to 3.716, indicating a relatively even distribution. The standard deviation for each variable ranges from 1.037 to 1.111, suggesting minimal data dispersion. As per Klein's criteria, where the absolute skewness value of sample data is less than 3 and the absolute kurtosis value is less than 10, the observed variables can be considered to roughly adhere to a normal distribution. Consequently, the statistical outcomes presented above indicate that the absolute skewness values for all variables are less than 3, and the absolute kurtosis values are less than 10, aligning with Klein's reference criteria. This substantiates that the pattern of the large-sample data largely conforms to a normal distribution, thereby meeting the fundamental prerequisites for the data analysis underlying the hypotheses in this study.

Table 3: Statistical description of variables.

	N	Min	Max	Mean	St.	Skewness	Kurtosis
Information collection boundaries	159	1.220	4.780	3.701	1.037	-1.240	.056
Perceived trust	159	1.000	5.000	3.640	1.111	-1.115	-.223
Willingness to disclose information	159	1.200	5.000	3.716	1.098	-1.042	-.385
Sample size	159						

4. Results

4.1. Reliability Analysis

Reliability analysis serves a useful purpose for confirming the internal consistency of a measurement scale and assessing the extent to which identical content or concepts can be independently measured across distinct survey questions. This study primarily employs Cronbach's alpha coefficient test, comprising both reliability statistics and item-total statistics.

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Table 4: Reliability Statistics.

Cronbach's Alpha	Items
.927	18

Table 5: Totals Statistics.

	Mean value of the scale after deletion of entries	Scaled variance after deleting terms	Correlation of corrected entries to totals	Cronbach's Alpha after deletion of items	Variable Cronbach's Alpha
ICB1	29.6164	68.934	.730	.925	.932
ICB2	29.5723	68.689	.760	.923	
ICB3	29.6730	69.361	.749	.923	
ICB4	29.5912	71.117	.718	.925	
ICB5	29.5723	70.183	.752	.923	
ICB6	29.6667	69.198	.754	.923	
ICB7	29.5031	68.619	.761	.923	
ICB8	29.6604	69.188	.784	.921	
ICB9	29.7107	70.333	.709	.926	
PT1	10.9623	11.923	.657	.834	.856
PT2	10.8994	11.167	.745	.796	
PT3	10.9623	12.024	.670	.828	
PT4	10.8553	11.441	.723	.806	
BI1	14.7925	19.900	.726	.865	.888
BI2	14.9057	20.213	.719	.866	
BI3	14.8491	19.901	.732	.863	
BI4	15.0818	19.443	.724	.865	
BI5	14.6855	19.660	.742	.861	

The study scale totaled 18 items in 3 dimensions, and Table 4 shows that the overall reliability is 0.927, indicating that study scale has high reliability and the items have high internal consistency.

Table 5 indicates that the one-dimensional reliability coefficients for the three primary dimensions, namely information search boundary, perceived trust, and behavioral willingness, are 0.932, 0.856, and 0.888, respectively. These values demonstrate a high level of stability and consistency. Additionally, corrected overall project correlation coefficient falls within the range of 0.657 to 0.784, underscoring the strong correlations among the questionnaire items.

4.2. Validity Analysis

In the present study, it employed Exploratory Factor Analysis (EFA) to assess the questionnaire's validity. Initially, this research conducted KMO and Bartlett's tests to assess suitability of each item in the questionnaire for factor analytic.

Table 6: KMO and Bartlett's test.

KMO Quantity of Sample Suitability		.919
Bartlett's test of sphericity	approximate chi-square	1760.392
	degrees of freedom	153
	significance	.000

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Table 6 displays a KMO value of 0.9319, signifying that the data satisfies the prerequisites for factor analytic. Bartlett's test of sphericity generates chi-square value that it is 1760.392 with $p<0.01$, affirming the presence of correlations among the questionnaire items, thereby allowing for factor analysis.

Table 7: Common factor variances.

	starting	extraction
ICB1	1.000	.626
ICB2	1.000	.698
ICB3	1.000	.650
ICB4	1.000	.621
ICB5	1.000	.660
ICB6	1.000	.655
ICB7	1.000	.668
ICB8	1.000	.698
ICB9	1.000	.595
PT1	1.000	.636
PT2	1.000	.774
PT3	1.000	.657
PT4	1.000	.754
BI1	1.000	.686
BI2	1.000	.679
BI3	1.000	.675
BI4	1.000	.726
BI5	1.000	.701

Extraction method: principal component analysis

As depicted in Table 7, it is evident that the common factor variance exceeds 0.5 for all variables, demonstrating a substantial level of shared characteristics among the variables. Each variable can be effectively represented by a common factor, effectively capturing its essence.

Table 8: Explanation of total variance.

Ingredient	Initial eigenvalue			Extract the sum of the squares of the loads			Rotational load sum of squares		
	total	Percentage of variance	accumulative %	total	Percentage of variance	accumulative %	total	Percentage of variance	accumulative %
1	8.127	45.152	45.152	8.127	45.152	45.152	5.699	31.660	31.660
2	2.386	13.257	58.409	2.386	13.257	58.409	3.587	19.927	51.586
3	1.644	9.136	67.545	1.644	9.136	67.545	2.873	15.959	67.545
4	.645	3.583	71.128						
5	.545	3.030	74.158						
6	.534	2.968	77.127						
7	.523	2.908	80.035						
8	.496	2.758	82.793						
9	.439	2.438	85.231						
10	.412	2.288	87.520						

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Table 8: (continued).

11	.380	2.113	89.633						
12	.345	1.914	91.547						
13	.308	1.709	93.256						
14	.287	1.595	94.851						
15	.274	1.522	96.373						
16	.267	1.482	97.855						
17	.215	1.197	99.052						
18	.171	.948	100.000						

Extraction method: principal component analysis

Each of the individual variables can be succinctly represented by a common factor, effectively conveying their essence.

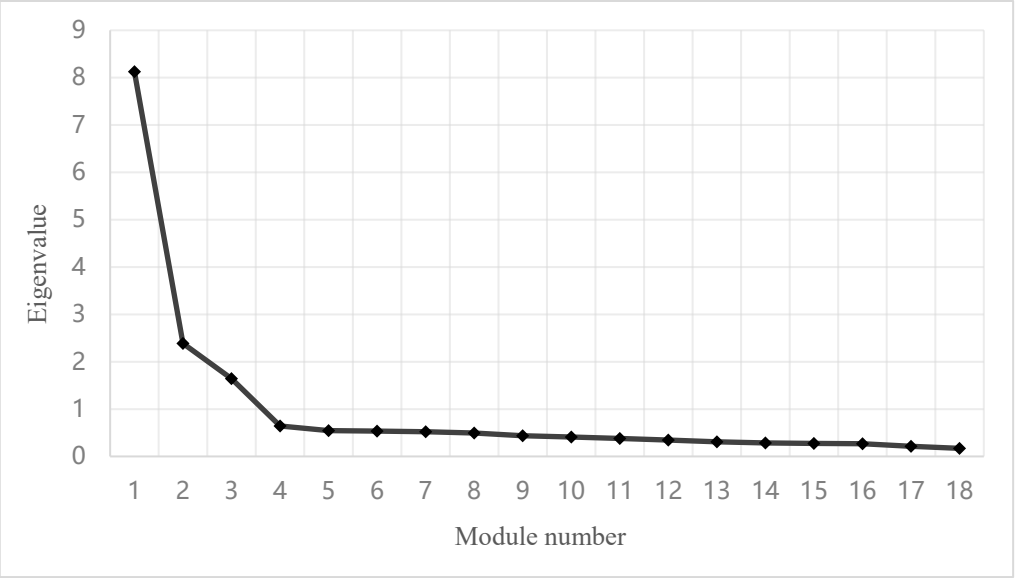

Figure 1: Diagram of debris.

It can be seen from Table 8: the initial eigenvalues of the first three factors are all greater than 1, and the cumulative proportion of total variance explained reaches 67.545%, which has a high degree of contribution to variable explanation. Combined with the gravel plot, it can be found in figure 1 that the eigenvalues begin to stabilize from the fourth component, and the role is gradually weakened. Therefore, three dimensions were selected as the common factors of the scale.

Table 9: Component matrix after rotation[a].

	Ingredient		
	1	2	3
ICB1	.729		
ICB2	.817		
ICB3	.763		
ICB4	.770		
ICB5	.784		

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Table 9: (continued).

ICB6	.759		
ICB7	.774		
ICB8	.786		
ICB9	.739		
PT1			.715
PT2			.827
PT3			.755
PT4			.843
BI1		.780	
BI2		.761	
BI3		.765	
BI4		.839	
BI5		.794	

Extraction method: Principal Components Analysis (PCA)
Rotation method: Kaiser's normalized maximum variance method
a. After 4 iterations the rotation has converged.

Following rotation using Kaiser's normalized maximum variance method, Table 9 shows the matrix of components. This matrix comprises 3 dimensions encompassing 15 topics, with factor loadings for each topic exceeding 0.5. Specifically, the first 9 topics are attributed to factor 1, termed "information search boundary" in this study. The subsequent 4 topics belong to factor 2, referred to as "perceived trust" in this research. Lastly, the remaining 5 topics are associated with factor 3, designated as "behavioral willingness" in this investigation. Notably, each topic is distinctly aligned with its originally defined dimension, demonstrating the absence of variable confusion and affirming the model's robust structural validity.

4.3. Correlation Analysis

In the analytic of correlations among numeric variables, the widely employed statistical method is the Pearson correlation coefficient. This metric primarily quantifies the relationships between variables or entities, expressing the strength of these associations in numerical terms.

Table 10: Pearson correlation analysis.

		Information collection boundaries	Perceived trust	Willingness to disclose information
Information collection boundaries	Pearson Correlation	1	.471**	.468**
	Sig.(two-tailed)		.000	.000
	Sample size	159	159	159
Perceived trust	Pearson Correlation	.471**	1	.469**
	Sig.(two-tailed)	.000		.000
	Sample size	159	159	159
Willingness to disclose information	Pearson Correlation	.468**	.469**	1
	Sig.(two-tailed)	.000	.000	
	Sample size	159	159	159

**. At the 0.01 level (two-tailed), the correlation is significant.

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This study employed the Pearson correlation analysis method for empirical testing, and the results are summarized in Table 10. From the findings in Table 10, it is evident that merchants' personal information collection boundaries for users exhibit a significant correlation with users' perceived trust and their willingness to disclose information ($p<0.05$). Specifically, the correlation coefficient between merchants' personal information collection boundaries for users and users' willingness to disclose information is 0.471 ($p = .00$), thus confirming H1. Similarly, the correlation coefficient between merchants' personal information collection boundaries for users and users' perceived trust is 0.468 ($p = .00$), supporting H2. Furthermore, there is a notable correlation between users' perceived trust and their willingness to disclose information ($p<0.05$). As per the correlation analysis results, the correlation coefficient between users' perceived trust and their willingness to disclose information is 0.469 ($p = .00$), substantiating H3.

4.4. Analysis of Intermediation Effects

To examine the proposed mediation effect outlined in the preceding theoretical analyses, this study adopts the two-step test method introduced by Zhao et al. [25]. The first step involves testing for the presence of a mediation effect, while the second step determines the nature of this mediation effect. When the p-value associated with the indirect effect is less than 0.05, it signifies the presence of an indirect effect. Conversely, when the p-value associated with the direct effect is less than 0.05, it suggests the existence of a direct effect. In cases where both the indirect and direct effects are present, the model is considered a partial mediation model, whereas if the indirect effect exists but the direct effect does not, it signifies a full mediation model. Table 11 presents the results of the mediation effect tests conducted in this study. The data in Table 11 indicate that the indirect effect of merchants' personal information collection boundaries on users' willingness to disclose information is statistically significant ($p<0.05$) for the young user group. As indicated by the results of model 1, R2 stands at 0.222, implying that merchants' personal information collection boundaries account for 22.2% of the variance in perceived trust among the youth group. However, there remains an unexplained portion of variance, and with an F-value of 44.661 (significant at the 0.001 level), it is evident that at least one of the independent variables is statistically significant, thus rendering the model acceptable.

Based on the test results, it is evident that merchants' personal information collection boundaries have a significant positive impact on perceived trust among the youth group ($P<0.05$), with a regression coefficient of 0.504. This implies that as merchants' control over personal information collection boundaries improves, the youth group is more likely to perceive trust in these merchants, all other factors held constant.

Moving on to the findings of model 2, the R2 value is 0.299, indicating that merchants' personal information collection boundaries and perceived trust among youth groups collectively account for 29.9% of the variance in youth groups' willingness to disclose personal information. However, there remains an unexplained portion of the variance, and with an F-value of 33.215 (significant at the 0.001 level), it is clear that at least one of the independent variables is statistically significant, rendering the model valid. Further examination of the results reveals that merchants' personal information collection boundaries and youth groups' perceived trust both have a significant positive effect on youth groups' willingness to disclose personal information ($P<0.05$), with regression coefficients of 0.336 and 0.316, respectively. This suggests that, under unchanged conditions, better control of merchants' personal information collection boundaries leads to higher levels of perceived trust among youth groups, which, in turn, has a positive impact on their willingness to disclose personal information. Lastly, in model 3, the R2 value stands at 0.219, indicating that merchants' personal information collection boundaries explain 21.9% of the variance in youth groups' willingness to disclose personal information. Despite this, there remains an unexplained portion of

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the variance, and with an F-value of 44.074 (significant at the 0.001 level), it is evident that at least one of the independent variables is statistically significant, validating the model. The analysis reveals that merchants' personal information collection boundaries have a significant positive influence on the youth group's willingness to disclose information ($P<0.05$), with a regression coefficient of 0.496. This implies that improved control over merchants' personal information collection boundaries leads to a higher likelihood of the youth group disclosing personal information, under otherwise constant conditions.

Table 11: Analysis of intermediation effects - step 1.

	Implicit variable	Independent variable	B	se	t	p	R2	F
Model 1	Perceived trust	constant	1.775	0.290	6.124	0.000	0.222	44.661
		Information collection boundaries	0.504	0.075	6.683	0.000		
Model 2	Willingness to disclose information	constant	1.321	0.304	4.353	0.000	0.299	33.215
		Information collection boundaries	0.336	0.080	4.183	0.000		
		Perceived trust	0.316	0.075	4.204	0.000		
Model 3	Willingness to disclose information	constant	1.882	0.287	6.560	0.000	0.219	44.074
		Information collection boundaries	0.496	0.075	6.639	0.000		

Table 12 presents the outcomes of the second step in the assessment of the mediating effect. From the data in Table 12, several key observations can be made:

(1) The total effect of merchants' personal information collection boundaries on the youth group's willingness to disclose information is 0.496, with a 95% confidence interval of (0.348, 0.643). Importantly, this interval does not encompass 0, signifying the presence of an overall effect.

(2) The direct effect of merchants' personal information collection boundaries on the youth group's willingness to disclose information is 0.336, with a 95% confidence interval of (0.178, 0.491). Once again, this interval excludes 0, indicating the existence of a direct effect.

(3) The indirect effect of merchants' personal information collection boundaries on youth groups' willingness to disclose information is 0.159, with a 95% confidence interval of (0.054, 0.292). Similar to the previous findings, this interval does not contain 0, confirming the presence of an indirect effect. This, in turn, validates H4.

In summary, the influence of merchants' personal information collection boundaries on the youth group's willingness to disclose information exhibits both a direct and an indirect effect simultaneously. Consequently, the mediating effect can be categorized as partial mediation.

Table 12: Analysis of intermediation effects - step 2.

	Effect	BootSE	BootLLCI	BootULCI
Aggregate effect	0.496	0.075	0.348	0.643
Direct effect	0.336	0.080	0.178	0.495
Indirect effect	0.159	0.060	0.054	0.292

5. Conclusions

This paper investigates the impact of merchants' boundaries on the collection of users' personal information on the willingness of youth groups to disclose their personal information. Through an extensive literature review and theoretical analysis, this study explores the underlying mechanisms by which merchants' personal information collection boundaries influence young people's willingness to disclose personal information and proposes corresponding research hypotheses. Building upon this

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foundation, a survey was conducted to investigate information disclosure preferences and influencing factors among Chinese youth groups. Subsequently, correlation and empirical regression analyses were performed on the acquired research data.

The study results reveal a significant positive influence of merchants' personal information collection boundaries on the willingness of Chinese youth groups to disclose their personal information, with this influence exhibiting a partial mediating effect. Specifically, merchants' personal information collection boundaries directly impact the willingness of Chinese youth groups to disclose personal information. Additionally, these boundaries also influence the perceived trust of Chinese youth groups, which subsequently affects their willingness to disclose personal information.

This research contributes to a deeper theoretical and practical understanding of the role played by merchants' personal information collection boundaries in shaping the decision-making process of youth groups regarding the disclosure of personal information. It provides valuable insights for businesses to formulate more effective personal information collection strategies and define collection scopes. This, in turn, enables them to build trust among youth groups and facilitate the acquisition of customer data necessary for enhancing product and service offerings. Ultimately, this benefits both the growth of businesses and the satisfaction of customer groups.

However, it's important to note that due to constraints related to research time and methodology, this paper did not explore other business-related factors that might influence consumers' willingness to disclose personal information. This represents an avenue for further research that this study intends to explore more comprehensively in the future.

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