

## 5 Data Statistics and Analysis

### 5.1 Sample composition and characteristics

From the data presented in Tables 5.1 and 5.2, it is evident that the female participants constitute a majority, comprising 67.5% of the total sample size, whereas the male participants represent 32.5%. Furthermore, a significant proportion of the surveyed individuals, amounting to 86.7%, are aged 21 and above, constituting the predominant age group. Geographically, participants are distributed across various regions, with the central region hosting the highest percentage at 49.8%, followed by the eastern region at 33.5% and the western region at 16.7%. Regarding product preferences, experiential products are favored by 73% of the participants, with clothing emerging as the most preferred category, comprising 48.3% of the sample selection.

Table 5.1 Sample Information

Information	Characteristic	Number of People	Percentage	Cumulative Percentage
Gender	Male	66	32.5	32.5
	Female	137	67.5	100
Age	18 years	4	2	2
	19 years	5	2.5	4.5
	20 years	18	8.9	13.4
	21 years	49	24.1	37.5
	22years	80	39.4	76.9
Area	Eastern	68	33.5	33.5
	Central	101	49.8	83.3
	Western	34	16.7	100

Table 5.2 Product Type

Product Type		Number of People	Percentage	Cumulative percentage
Search Oriented	Virtual Products	6	2.9	2.9
	Book Products	21	10.3	13.2
	Electronic Products	28	13.8	27
Experience Oriented	Daily Necessities	22	10.9	37.9
	Food Products	28	13.8	51.7
	Clothing Products	98	48.3	100

## 5.2 Reliability and Validity

### 5.2.1 Reliability

This article combines SPSS software to test the reliability of the survey questionnaire and measurement scale items, and the results are shown in Table 5.3.

Table 5.3 Measurement Table Reliability

Items	Question	Corrected Item Total Correlation	Cronbach's Alpha	Number of Questions
Number of online comments	Q1	0.796	0.886	2
	Q2	0.796		
quality of Online comment	Q3	0.889	0.954	4
	Q4	0.895		
	Q5	0.888		
	Q6	0.877		
emotional direction of Online comment	Q7	0.881	0.937	2
	Q8	0.881		
expertise level of Recipients	Q9	0.917	0.958	3
	Q10	0.909		
	Q11	0.906		
involvement of Receivers	Q12	0.918	0.965	4
	Q13	0.898		
	Q14	0.926		
	Q15	0.905		
Intention of purchasing	Q16	0.906	0.959	4
	Q17	0.879		
	Q18	0.913		
	Q19	0.865		

The outcomes of the reliability analysis reveal that the Cronbach's alpha coefficients for each variable surpass 0.8, indicating high internal consistency. Moreover, the total correlation coefficient of the corrected items for each measurement variable exceeds 0.5. Notably, upon the removal of specific items within the variables, there is no significant enhancement observed in the overall correlation coefficient, reinforcing the robustness of the questionnaire's reliability. Hence, the scale successfully passes the reliability test <sup>[11]</sup>.

### 5.2.2 Validity

The present study employs exploratory factor analysis to ascertain the reasonableness of the questionnaire's dimensions and to evaluate the structural validity of the scale.

1. Validity of the scale

As per the data presented in Table 5.4, Table 5.5 and Table 5.6, the Kaiser-Meyer-Olkin (KMO) coefficient for the overall table stands at 0.980, surpassing the threshold of 0.7. Additionally, the significance level of the sphericity test registers below 0.05. These results collectively signify a high degree of correlation among measurement items, rendering them highly suitable for factor analysis.

Table 5.4 KMO and Bartlett's Test Results of The Total Scale

Kaiser-Meyer-Olkin		.980
Approximate chi square		6157.863
Bartlett's sphericity test	degree of freedom	171
Sig		.000

Table 5.5 Total Variance of Explanation

Ingredi ents	initial eigenvalue			Extract sum of squares loading			Rotational sum of squares loading		
	Total	Variance (%)	Cumulation (%)	Total	Variance (%)	Cumulation (%)	Total	Variance (%)	Cumulation (%)
1	12.32	82.184	82.184	12.328	82.184	82.184	3.770	25.131	25.131
2	.451	3.006	85.190	.451	3.006	85.190	3.409	22.729	47.860
3	.378	2.518	87.708	.378	2.518	87.708	2.988	19.919	67.779
4	.296	1.971	89.679	.296	1.971	89.679	2.388	15.918	83.697
5	.258	1.721	91.400	.258	1.721	91.400	1.155	7.703	91.400
6	.198	1.318	92.718	.198	1.318				
7	.191	1.270	93.989	.191	1.270				
8	.146	.974	94.963	.146	.974				
9	.142	.948	95.910	.142	.948				
10	.131	.874	96.784	.131	.874				
11	.117	.781	97.565	.117	.781				
12	.101	.673	98.238	.101	.673				
13	.094	.629	98.866	.094	.629				
14	.089	.595	99.461	.089	.595				
15	.081	.539	100.000	.081	.539				
16	.198	1.318	92.718	.198	1.318				
17	.191	1.270	93.989	.191	1.270				

Extraction method: Principal component analysis.

Table 5.6 Matrix of Factor Loading

	Ingredients				
	1	2	3	4	5
1	.709	.386	.348	.222	.291
2	.702	.309	.362	.405	.148
3	.688	.337	.364	.376	.227
4	.647	.365	.446	.339	.212
5	.359	.728	.317	.227	.335
6	.371	.706	.356	.325	.182
7	.507	.598	.412	.362	-.011
8	.549	.561	.272	.348	.268
9	.352	.417	.721	.288	.182
10	.444	.338	.692	.293	.211
11	.427	.337	.649	.323	.325
12	.410	.368	.318	.695	.207
13	.441	.363	.336	.661	.220
14	.363	.415	.389	.324	.623
15	.246	.268	.385	.461	.613

Extraction method: Principal component analysis.

Rotation method: Orthogonal rotation method with Kaiser standardization.

a. The rotation converges after 8 iterations.

## 2. Validity of online comments

As per the data provided in Table 5.7, the Kaiser-Meyer-Olkin (KMO) coefficient for online comments is calculated as 0.949, exceeding the recommended threshold of 0.7. Furthermore, the significance level of the sphericity test registers below 0.05, affirming the suitability of the variable data regarding "online comments" for factor analysis.

Based on the findings from Table 5.8, three factors exhibit eigenvalues surpassing 1, specifically the number of online comments, the quality of online comments, and the emotional orientation of online comments. Each item demonstrates automatic aggregation without any instances of cross-loading, thereby attesting to the structural validity of the scale. Consequently, the division of online comments into three dimensions is deemed rational<sup>[12]</sup>.

Table 5.7 KMO and Bartlett's Test Results for Online Comments

Kaiser-Meyer-Olkin		.949
Approximate chi square		2105.835
Bartlett's sphericity test	degree of freedom	28
Sig		.000

Table 5.8 The Factor Load Matrix of Online Comments

Question	Ingredients		
	1	2	3
Q1	.545	.453	.578
Q2	.379	.427	.786
Q3	.746	.540	.246
Q4	.740	.432	.400
Q5	.729	.306	.541
Q6	.633	.522	.436
Q7	.396	.803	.366
Q8	.418	.780	.382

### 3. Validity of receiver professionalism

As per the data presented in Table 5.9, the Kaiser-Meyer-Olkin (KMO) coefficient for receiver professionalism stands at 0.779, surpassing the accepted threshold of 0.7. Additionally, the significance level of the sphericity test is below 0.05, affirming the suitability of the variable data pertaining to receiver professionalism for factor analysis.

Table 5.9 KMO and Bartlett's Test Results for Receiver Professionalism

Kaiser-Meyer-Olkin		.779
Approximate chi square		688.425
Bartlett's sphericity test	degree of freedom	3
Sig		.000

Due to the unipolar nature of the scale concerning receiver professionalism, rotational adjustments are precluded. Upon extracting its component matrix, it was discerned that the factor loadings of all three items associated with receiver professionalism exceed 0.9, contributing to a cumulative variance of 92.251%. Consequently, no items necessitate exclusion. The construct of receiver professionalism is effectively expounded by the aforementioned items, thus ensuring

scale validity.

#### 4. Validity of receiver involvement

According to the findings in Table 5.10, the Kaiser-Meyer-Olkin (KMO) coefficient for receiver involvement is computed as 0.866, surpassing the recommended threshold of 0.7. Furthermore, the significance level of the sphericity test falls below 0.05, signifying the suitability of the dataset concerning receiver involvement for factor analysis.

Table 5.10 KMO and Bartlett's Test Results for Receiver Involvement

Kaiser-Meyer-Olkin		.866
Bartlett's sphericity test	Approximate chi square	1038.371
	degree of freedom	6
	Sig	.000

Given the unipolar nature of the scale concerning receiver involvement, rotational adjustments are unfeasible. Upon extracting its component matrix, it was revealed that the factor loadings of all four items pertaining to receiver involvement stand at 0.9, resulting in a cumulative variance contribution rate of 90.433%. Consequently, no items necessitate removal. The construct of receiver involvement is sufficiently explicated by the aforementioned items, thus ensuring the validity of the scale.

#### 5. Validity of purchase intention

According to the data provided in Table 5.11, the Kaiser-Meyer-Olkin (KMO) value for purchase intention is calculated to be 0.874, exceeding the threshold of 0.7. Additionally, the significance level of the sphericity test is below 0.05, indicating the adequacy of the "purchase intention" variable dataset for factor analysis.

Since the scale related to purchase intention consists of only one factor, it cannot undergo rotation. Upon extracting its component moments, it was observed that the factor loadings of all four items pertaining to purchase intention exceed 0.9, resulting in a cumulative variance contribution rate of 88.994%. Consequently, there is no need to remove any items. The construct of purchase intention can be effectively elucidated

by the aforementioned items, thus meeting the criteria for scale validity.

Table 5.11 KMO and Bartlett's Test Results for Purchase Intention

Kaiser-Meyer-Olkin		.874
Approximate chi square		947.7.9
Bartlett's sphericity test	degree of freedom	6
Sig		.000

Based on the aforementioned analysis, the KMO value test for the overall scale, as well as the KMO value test and factor analysis for the dependent, independent, and moderating variables, all yield satisfactory results, meeting the predefined criteria. Thus, the questionnaire developed in this study is deemed effective.