An Empirical Analysis on the Influencing Factors in Online Consumption of College Students

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Abstract: With the continuous development of Internet technology and the popularization of e-commerce, network consumption has gradually penetrated into people's daily life, and changed people's traditional consumption habits and lifestyle, which gradually become an indispensable part of people's life with its unique advantages. As a major group of online consumption, college students' online consumption is influenced by many aspects. In this paper, through the investigation and research of some college students' online consumption behaviors, and the use of SPSS software to conduct one-way ANOVA and build regression model on the data obtained from the questionnaire survey, the main influencing factors of college students' online consumption are finally obtained, and appropriate suggestions are put forward. [1]

1. Introduction

At present, with the rapid development of Internet technology, online consumption has emerged at the right moment, and more and more people begin to use this fast way of consumption. College students are the most concerned consumer group in the Internet industry [1]. From this point of view, it is of great theoretical and practical significance to study college students' online consumption behavior and determine the actual influencing factors.This paper takes some college students as the survey objects and conducts qualitative and quantitative analysis on the data. Besides, empirical analysis on the basis of statistical theory is conducted to put forward hypotheses, and SPSS software is used to study the influence degree and correlation of various influencing factors on the online consumption of college students, so as to provide theoretical reference.If the specific factors affecting college students' online consumption are determined through empirical analysis, brand operators can make certain improvements to their online operation based on this to win the favor of the public, and college students can obtain higher shopping satisfaction during online consumption, presenting a win-win situation. [2]

2. Empirical Analysis on Influencing Factors of College Students' Online Consumption

2.1 Data Sources

First, the questionnaire will be released online and offline.In this study, 113 questionnaires were issued with an effective recovery rate of 83.2%.The number of people living on a monthly living cost between 1000 yuan to 1500 yuan have the most share, accounting for 38.3%, while the number of people living on a monthly living cost between 800 yuan to 1000 yuan is the lowest, accounting for 6.38%.The average monthly online consumption cost is between 100 to 500 yuan have the most share, accounting for 50%, and the number of people with expenditure of 100 yuan is least proportioned with the share of 7.45%. [3]

2.2 Analysis Procedure

In this paper, single-factor variance and linear regression analysis are adopted in SPSS25.0 to study and analyze the survey data. Firstly, SPSS25.0 is used for single-factor variance

analysis.According to the analysis results, there are significant differences between different monthly living expenses, different average monthly online time, different degree of influence of different quality of goods, and different degree of influence of purchasers on the evaluation of selected goods for the average monthly online consumption cost.However, there was no significant difference between different genders and different grades in the average monthly Internet consumption expenses. [4]

In order to further analyze the influence of various factors on college students' online consumption, regression analysis is needed.Firstly, the significance test of correlation coefficient is carried out. [6]

The hypotheses are as follows:

H1: There is a significant linear relationship between gender and the average monthly consumption in Internet of college students

H2: There is a significant linear relationship between the grade and the average monthly Internet consumption of college students

H3: There is a significant linear relationship between the monthly living expenses and the average monthly consumption in Internet of college students

H4: There is a significant linear relationship between the daily average time on Internet and the average monthly Internet consumption cost of college students

H5: There is a significant linear relationship between the influence degree of commodity quality and the average monthly Internet consumption cost of college students

H6: There is a significant relationship between the influence of purchasers on the evaluation of selected commodities and the average monthly online consumption expenses of college students [6]

The significance test of correlation coefficients was carried out on the data obtained from the questionnaire. According to the analysis structure, H1 and H2 hypotheses prove to be unfeasible. The hypothesis of H3, H4, H5 and H6 is valid and has significant positive correlation. Then, through the significance test of the correlation coefficient, it is concluded that there is a significant linear relationship between the monthly living expense, the average daily online time, the degree of influence of the quality of goods, the degree of influence of the buyers on the evaluation of the selected goods and the average monthly online consumption cost. Therefore, multiple regression analysis is carried out to study the impact of these four indicators on network consumption. [6] The multiple regression model is established as follows:

$$Y=\beta_0+\beta_1x_1+\beta_2x_2+\beta_3x_3+\beta_4x_4 \qquad (1)$$

Among them, X1 represents the monthly living expense (yuan), X2 represents the average daily online time (hour/day), X3 represents the degree of influence of the quality of goods, and X4 represents the degree of influence of buyers on the evaluation of selected goods. Y represents the average monthly Internet consumption expense of college students (yuan/month).[6]

The obtained data were analyzed by multiple regression, and the analysis results were shown in Table 5 and 6. [5]

Table 1. ANOVA[a]

Model		Square sum	DOF	Mean square	F	Significance
1	Regression	33.152	4	8.288	19.284	.000b
	Residual error	38.252	89	.430		
	Total	71.404	93			
a. Dependent variable: The average monthly amount spent on Internet						
b. Predictive variables :(Constant), the degree of influence of purchasers on the evaluation of selected commodities, the average daily online time, monthly living expenses, and the degree of influence on the quality of commodities						

Table 2. Coefficient

Model	Unstandardized coefficient		Standardized coefficient	t	Significance	Multicollinearity	
	B	Standard error	Beta			Tolerance	VIF
(Constant)	.362	.525		.691	.492		
Monthly cost of living	.634	.088	.635	7.197	.000	.773	1.294
Average time spent online in daily basis	.121	.091	.110	1.332	.186	.878	1.139
The degree of influence of the quality of goods	-.100	.169	-.065	-.590	.557	.493	2.029
The degree of influence of the buyer on the evaluation of the selected goods	.122	.156	.083	.782	.436	.532	1.881

a. Dependent variable: 13. Average monthly expenditure on Internet

According to the results in Table 2, the multiple linear regression equation is obtained as follows:

$$Y=0.362+0.634x_1+0.121x_2-0.100x_3+0.122x_4 \text{ [5]} \qquad (2)$$

According to Table 1, the regression model shows that there is a significant linear relationship between the average monthly network consumption expense and the four indicators, while the T-test shows that only β_1 shows significance, so it is suspected that the regression model has multicollinearity. The multicollinearity is then identified by tolerance and variance amplification factor (VIF).The results are shown in Table 2. From the analysis results, multicollinearity is not serious in the established regression model.[5]

Generally speaking, regression coefficients 2, 3 and 4 were not significant, all P values were greater than 0.05, failed the T-test, and 1 was significant, indicating that monthly living expenses had a significant positive relationship with the average monthly Internet consumption expense. The regression equation obtained was:

$$Y=0.362+0.634x_1 \text{ [6]} \qquad (3)$$

2.3 Conclusion by Empirical Analysis

Based on the obtained data and the theoretical basis of statistics, SPSS25.0 software was used to conduct single-factor ANOVA and regression analysis on the data. Then, through single-factor ANOVA, the significance test of correlation coefficients was further carried out, and a multiple regression model was constructed to determine which factors had significant linear relationship to network consumption. [6]

3. Suggestions on the Development of College Students' Online Consumption

3.1 Establishing a Sound Legal Guarantee System for Online Consumption

Establishing a sound legal guarantee system for online consumption and reducing the risks of online consumption for Chinese residents to ensure the privacy and security of Chinese Internet users [7]. At the same time, Internet users should regulate their own behavior and abide by standards in a scientific and rational manner in online consumption.

3.2 Optimizing Goods and Services

Brand merchants should pay more attention to the quality of the goods they sell and optimize the quality of the goods sold online. At the same time, the online and after-sales services should be improved in a timely and thoughtful manner to improve the customer satisfaction of college students, so as to promote online consumption.[8]

3.3 Improving Online Payment Security

In the context of e-commerce, the uncertainty of online payment security increases certain risks. Therefore, the state should strengthen the supervision of online consumption, and create a secure online payment environment to avoid cyber-crimes to the maximum extent, and punish online fraud and other behaviors severely [9].

3.4 Rational Consumption

For college students, they should be rational in consumption and develop correct consumption concept without blind consumption. At the same time, we should also make plans on consumption to avoid extravagance and waste, and take into account our own economic situation and choose reasonable prices of goods.[9]

4. Conclusion

The 21st century is an informationized century, the development of science and technology network has changed human business activities. E-commerce, a new business operation model is developing step by step, especially has an important impact on people's lifestyle consumption. With the continuous development of network information technology, online shopping has become a popular way of shopping for contemporary college students. College students are the most valuable group, so it is of great significance to study their online consumption satisfaction. Through the study and analysis of their consumption psychology and the influencing factors of their satisfaction, it serves as the enlightenment with reference significance for the future development of online shopping.[10]

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