Investigation and Research on College Students ' Cognition and Behavior of Old Things Donation - - Taking College Students in Guilin, Guangxi as an Example

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Abstract: People 's daily necessities update faster, but because of the old donation consciousness is not strong and don 't understand the donation channels, lead to the accumulation of old things and directly discard the problem is more and more serious, aggravate environmental pollution. This study takes college students in Guilin as the research object, and puts forward four hypotheses. Based on the statistical analysis method, a binary logistic regression model and a structural equation model are established to analyze the differences in the cognition status and willingness of college students in Guilin to donate old things, and put forward reasonable suggestions for the development of the old things donation industry.

A**Keywords:**   Old Things Donation; College student; Donation attitude; Donation intention

1. Introduction

According to the statistics of China Circular Economy Association in 2022, about 26 million tons of old clothes are discarded every year on average, and more than 90 % of the waste clothes are directly landfilled or burned, resulting in great waste of resources and environmental problems. Therefore, promoting the donation and reuse of waste is an effective means to alleviate the pressure of waste disposal.

2. Theoretical Basis and Research Hypothesis

Liu(2018) found that the quality of the website, such as security and transaction convenience, is a key factor affecting individuals ' empathy for charitable crowdfunding projects. Wu(2022) verified that excellent entrepreneurial platform construction can effectively improve the enthusiasm of college students' entrepreneurs, and explained that platform attributes have an impact on people's behavioral intentions. [1]

Hypothesis 1: channel attributes have a significant positive impact on the attitude of donation;

Li(2011) believed that the motivation of college students ' donation is influenced by self-satisfaction, social responsibility and the exemplary role of others around them[2]. Deng (2020) believed that college students agree to fulfill their social responsibilities and have a strong motivation for social donation[3]. Wu (2022) pointed out that students hope to get some benefits from donations, including prestige, self-esteem and other benefits[4].

Hypothesis 2: Donation motivation has a significant positive impact on donation attitude.

Zeithaml (1988) believed that customer perceived value (CPV) is formed by customers ' perception of the gains and losses brought by product attributes. Sweeney (2001) proposed the PERVAL model, which includes four dimensions: quality value, emotional value, price value and social value.[5]

Hypothesis 3: Perceived value mediates the influence of donation motivation on donation attitude;

Brookshire(2009) pointed out that college students donate reasons to deal with their unwanted clothes and respond to the appeal of charities. Westaby(2005)proposed that values indirectly affect attitudes through motivation.[6]

Hypothesis 4: Donation attitude has a significant positive impact on donation intention.

Based on the above theory, a model is proposed as Figure 1.
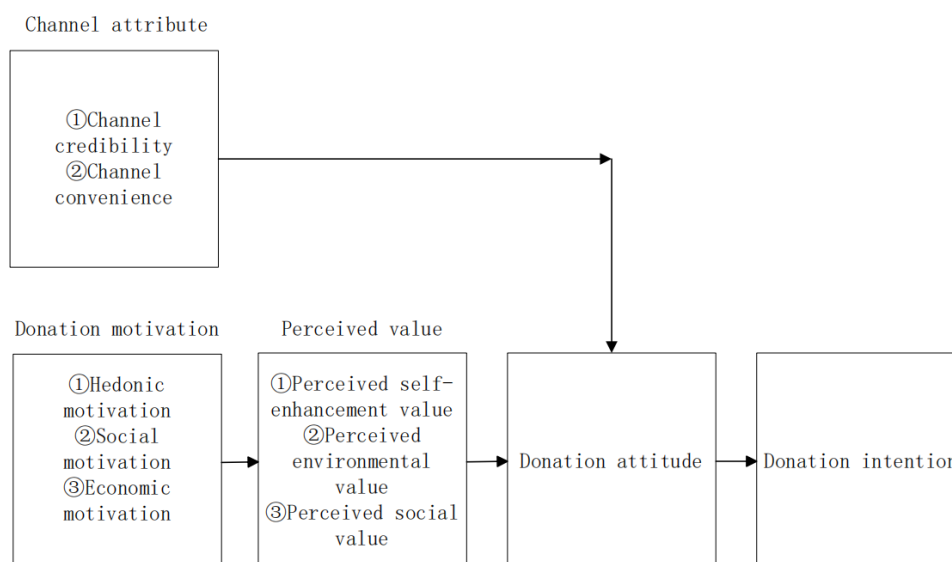
3. Research design

Combined with literature research, We used five-level Likert scale to establish variables and corresponding items[7]: Channel credibility(Authentic, Trustworthy, Warranted), Channel convenience(Convenient, Public, Unrestricted), Hedonic motivation(Reduce accumulation, Pleasant, Interesting, Become a member of the charity), Social motivation(Responsibility, Promote the development of philanthropy, Reduce waste, Drive others), Economic motivation(Save, Benefit, Improve the economic situation), Perceived self-enhancement value(Reduce pollution, Protect the environment, Recycle), Perceived environmental value(Reduce pollution, Protect the environment, Recycle), Perceived social value(Helpful, Important to me, Important to others), Donation attitude(Positive, Profitable ,Promoting) ,Donation intention(I would like to donate, In school, Through internet, Through the recycling box, Recommend to others, Bring others along)

In the pre-survey, 50 questionnaires were sent out, 41 valid questionnaires, and the effective rate of the questionnaire was 82.00 %. We take Guilin college students (254438) as the sampling frame, and use the non-repetitive sampling formula $n_0 = \frac{t^2NP\ (1-P)}{N\Delta_{\bar{X}}^2+t^2P(1-P)}$ to calculate the sample size. Let the sample ratio P value is 0.5, the confidence level is 95 %, the allowable error value is 0.05, and the calculated initial sample size is: $n_0 = \frac{t^2NP\ (1-P)}{N\Delta_{\bar{X}}^2+t^2P(1-P)} = 384$. According to the efficiency of the pre-survey questionnaire, the sample size was adjusted to: $n_1 = \frac{n_0}{82\%} = \frac{384}{82\%} = 468$. This survey takes deff = 2.0, and the final sample size is adjusted to: $n_2 = n_1 \times 2 = 468 \times 2 = 936$.

In the first stage, six universities were selected from twelve universities in Guilin. In the second stage, the number of samples was allocated according to the total number of schools in the first-level sampling unit. In the third stage, simple random sampling was carried out according to the quota of the second-level sampling unit. Finally, the team issued 1050 questionnaires, 967 questionnaires were valid, and the effective rate was 93.61 %.

4. Data testing and analysis

The sample indicators of this study are evenly distributed in gender, school distribution, grade and students' actual monthly consumption level. In this study, Cronbach's α reliability coefficient method was used to test the reliability of the data. The Cronbach 's α values of each variable were all greater than 0.8, indicating that the data reliability was high. In this study, KMO and Bartlett tests were used to test the validity. The KMO value was 0.994 > 0.8, and the Bartlett sphericity test was approximately chi-squared at 25186.391, p < 0.01, indicating that the validity of the questionnaire data was very good.

5. Demographic difference test

Chi-square test showed that gender(χ^2=1.150,p>0.01) and grade (χ^2=7.674, p>0.01) had no significant effect on the donation frequency of college students, while consumption level (χ^2=115.432, p<0.01) had a significant effect on the donation frequency of college students.

Analysis of variance showed that gender (F=0.080,p>0.01), grade (F=0.104,p>0.01) and consumption level (F=1.130,p>0.01) had no significant effect on donation attitude. The results of one-way analysis of variance showed that gender (p=0.354>0.05), grade (p= 0.354>0.05), and consumption level (p=0.060>0.05), indicating that there was no significant difference in the willingness of college students of different genders, grades and consumption levels.

6. Model calibration

We conducted a binary Logistic regression analysis directly between all relevant factors and donation intention. The significance of channel credibility (p=0.035), channel convenience (p=0.006), economic motivation (p=0.004) and donation attitude (p=0.001) were all less than 0.05, indicating that these four variables had a significant impact on donation intention. Gender (p=0.577), grade (p=0.116), consumption level (p=0.652), donation frequency (p=0.831), hedonic motivation (p=0.442), social motivation (p=0.055), perceived self-enhancement value (p=0.286), perceived environmental value (p=0.181), perceived social value (p=0.082) the significances were all greater than 0.05, indicating that these nine variables had no significant effect on donation intention. The probability model of receiving college students' willingness to donate old items:

$$P_y = \frac{e^{-26.174+0.954+1.191+1.327+1.474}}{1 + e^{-26.174+0.954+1.191+1.327+1.474}}$$

The data were tested by confirmatory factor analysis, and the factor loads of potential variables were all greater than 0.7, CR values were all greater than 0.6, and AVE values were all greater than 0.5, indicating good validity of the data in this study. The multivariate correlation square standardized estimates of the model path in this study (0.807, 0.806, 0.812, 0.815, and 0.768, respectively) were all greater than 0.67, indicating that mediating variables and latent variables had a significant impact on donation intention. All indexes of the goodness of fit of the model met the fitting standard values (GFI=0.937, RMSEA=0.042, NFI=0.927, CFI=0.928), and the model was established. The path coefficients are all positive, and the significance is strong, indicating that the influence of each path in the model is significant.

7. Conclusions and implications

This study takes Guilin university students as the research object to explore the mechanism of donation channel attributes, donation motivation, perceived value and donation attitude, and the influence of donation attitude on donation intention. The results showed that channel attribute and donation motivation had a significant positive impact on donation attitude, perceived value played an intermediary role in the impact of donation motivation on donation attitude, and donation attitude had a significant positive impact on donation intention.

The state can improve the mechanism of establishing a platform for the donation of old materials, and the donated old materials must flow to the recipient areas through formal channels, and the specific subsequent distribution and use of old materials should be disclosed to the public. Strengthen the construction of the environment for the donation of social old materials, encourage individuals to donate old materials through formal platforms, offer love for public welfare, and reduce the environmental pollution caused by the disposal of old materials. The school will strengthen the construction of old materials donation channels, increase the publicity of donation activities, and add lectures on environmental protection knowledge and the popularization of old materials recycling and disposal methods.

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