



Study on the Influencing Factors of Environmental Tableware Consumption Behavior of Urban Youth in Chongqing

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Abstract

This study takes the consumption scenario of environment-friendly tableware as the research object and combines the environmental motivation theory, theory of planned behavior, and perceived value theory to explore the factors that affect the consumption of environment-friendly tableware by urban youth. It also examines the impact of perceived threat, perceived value, and perceived efficacy on subjective norms, behavior attitudes, and behavior intentions. Among them, it perceived threats consist of two dimensions: perceived severity and perceived vulnerability; Perceived efficacy consists of two dimensions: self-efficacy and reactive efficacy; Perceived value consists of four dimensions: Environmental Values, social value, spiritual value, and cost value. This research has found that: (1) Perceived threats positively affect behavioral intentions; (2) Perceived value positively affects behavioral intention; (3) Perceived efficacy positively affects behavioral intention; (4) Subjective norms have a partial mediating effect on perceived efficacy, perceived value, behavioral attitude, and behavioral intention; (5) Behavioral attitudes have a partial mediating effect on perceived threat, perceived efficacy, perceived value, and behavioral intention.

Keywords

Urban Youth, Environmental Tableware, Consumption Behavior

1. Introduction

The Global Risk Report points out that the global ecological and environmental problems caused by excessive consumption and unreasonable utilization of resources are becoming increasingly serious. In response to the world's environmental problems, many countries have set carbon neutrality targets to guide green and low-carbon economic development. At present, the scale of China's environmental protection industry is becoming mature, but the scale of the environmental tableware market is relatively small. By 2022, China's environment-friendly tableware market will reach 57.5 billion yuan, the future development trend of the environment-friendly tableware industry is good.

At present, some scholars have studied the use and design of tableware for children (Wenming Liu & Wanqi Yan, 2020), while others have studied the use of tableware for the elderly (Wang Chingyi, 2022). In order to explore the pollution of disposable tableware under different influencing factors and increase the use of environmentally friendly tableware, the planned behavior theory was used to explain consumers' behavior in using environmentally friendly tableware (Jui-Che Tu et al., 2020) when investigating the use of environmental tableware. However, the research on the intention of environmental tableware consumption of urban youth by using protection motivation is relatively insufficient, so it is necessary to discuss it.

2. Literature review and Research hypotheses

2.1 Correlation Theory

2.1.1 Protective motivation theory

The four elements of the protective motivation theory can be divided into two parts (Witte, 1992): threat vulnerability and threat severity, which state that perceived threat severity and perceived threat likelihood, were known as perceived threats; Response Efficacy and self-efficacy state the perceived value of a response to avoid a threat, including an individual's assessment of the effectiveness of the response in reducing the threat and an individual's expectation of the ability to implement the response measures, which is called perceptual efficacy.

2.1.2 Perceived value theory

Based on Zeithaml's research on perceived value, the hypothesis and conjecture in the study were validated by studying the mechanism of the impact of tourists' perceived value on behavioral intention in ecotourism (Zhang, 2021). He believes that Environmental Values, social values, cost values, and spiritual values will have a positive impact on subjective norms, behavioral attitudes, and behavioral intentions.

2.2 Variable Relationship

2.2.1 Perceived value and subjective norms, behavioral attitudes, behavioral intentions

When Jae Jang Yang and Sun Choung Ahn studied the Korean traditional market, they believed that the perceived value of consumers would affect their subjective norms, thus directly or indirectly changing their consumption intention (Jae Jang Yang & Sun Choung Ahn, 2020). Nguyen et al. explained the role of Vietnamese consumers' attitudes and intention to adopt mobile commerce through perceived value (Nguyen Huu Khoi, Ho Huy Tuu, & Svein Ottar Olsen, 2018). At the same time, it is found that perceived value will positively affect consumers' subjective norms in the context of mobile commerce. When Arora Nupur and Manchanda Parul studied sustainable clothing, they confirmed that there was a significant relationship between perceived value, positive attitude towards sustainable clothing, and intention to purchase sustainable clothing (Arora Nupur & Manchanda Parul, 2022).

H1: The perceived value of environment-friendly tableware for young consumers has a positive impact on their subjective norm.

H2: The perceived value of environment-friendly tableware for young consumers has a positive impact on their behavior and attitude.

H3: The perceived value of environment-friendly tableware for young consumers has a positive impact on their behavior intention.

2.2.2 Perceived threat, perceived efficacy and subjective norms, behavioral attitudes, behavioral intentions

Masser Barbara M showed in their research on the willingness of Australian community members to donate that members' coping evaluation (self-efficacy and response efficacy) had a positive predictive effect on their subjective norms and donation attitudes (Masser Barbara M, Hyde Melissa K, & Ferguson Eamonn, 2020). Bord et al. found a positive correlation between perceived threat and subjective norms and attitudes in the study of negative emotions in the elderly in the context of the new crown (Bord Shiran et al., 2021). Callens MS et al. through attitudes towards migrant integration (multiculturalism and assimilation) and perceptions of threats related to immigrants, the study found that immigrants who have more contact with local people and support cultural assimilation among immigrants with similar cultures are more likely to be threatened by immigrants with longer cultural distances (Marie-Sophie Callens, Bart Meuleman, & Valentová Marie, 2019).

H4: The perceived threat of environment-friendly tableware of young consumers has a positive impact on its subjective norm.

H5: The perceived efficacy of environment-friendly tableware for young consumers has a positive impact on its subjective norm.

H6: The perceived threat of environment-friendly tableware to young consumers has a positive impact on their behavior and attitude.

H7: The perceived efficacy of environment-friendly tableware of young consumers has a positive impact on their behavior and attitude.

Gebrehiwot Tagel who studied farmers' drought experiences, found that perceived vulnerability and severity, self-

efficacy, and coping effectiveness were positively and significantly associated with the number of drought risk reduction measures implemented, drought conditions significantly increased farmers' behavioral intention to implement drought risk adaptation measures (Gebrehiwot Tage & Veen, 2021). Roberto Anthony J's meta-analysis also confirmed that increases in perceived susceptibility, perceived severity, and self-efficacy facilitated adaptive intentions or behaviors (Roberto Anthony J, Zhou Xin, & Lu Anya Hommadova, 2021). When both perceived threat and perceived efficacy are high, a person should experience greater protection motivation (i.e., intention) and ultimately adaptive changes (i.e., behavior).

H8: The perceived threat of environment-friendly tableware to young consumers has a positive impact on their behavior intention.

H9: The perceived efficacy of environment-friendly tableware of young consumers has a positive impact on their behavior intention.

2.2.3 Subjective norms and behavioral attitudes, behavioral intentions

Aziz et al. found that media, word-of-mouth, and subjective norms play a positive role in determining consumers' purchasing attitudes and intentions when studying Family Takāful Schemes (Aziz et al., 2020). Cheng Li-keng et al. studied consumer attitudes towards 5G and concluded that attitudes are positively influenced by subjective norms (Cheng Li-Keng, Huang Hsien-Long, & Yang Shou-Yu, 2021). An empirical analysis by Li Liang et al. shows that subjective norms have a positive impact on behavioral intentions and behaviors in purchasing EFA foods (Li Liang et al., 2020). In this study, the users of environmental tableware will foster their own attitude and intention to use it after being influenced by their relatives, friends, and the general public. This leads to the following assumptions:

H10: Subjective norms of environment-friendly tableware of young consumers have a positive impact on their behavior and attitude.

H11: Subjective norms of environment-friendly tableware of young consumers have a positive impact on their behavior intention.

2.2.4 Behavioral attitudes and behavioral intentions

According to the theory of planned behavior, the users of environment-friendly tableware have a positive attitude toward protecting the environment, which will enhance their intention to participate in the use of environment-friendly tableware. This study therefore proposes:

H12: Behavioral attitudes toward environment-friendly tableware of young consumers have a positive impact on their behavior intention.

3. Data analysis

3.1 Research Design

Taking into account the regional differences in China, this study selected a more representative southwest region, whose urban consumers are in the middle level in terms of economic income and living standards. A total of 1436 questionnaires were distributed in this survey. After data screening, the sample size of the questionnaire was 1116.

3.2 Measurement

In this study, Partial Least Squares (PLS) is used to study the model to verify the stability of the model and test the model hypothesis. In order to study the causal relationship between variables, reduce measurement error and avoid collinearity. This study tested the measurement model from reliability, aggregate validity, and discriminant validity.

3.3 Reliability Analysis and Convergent Validity

According to the requirements of reliability and aggregation standards, the optimal load for standardization factors should be greater than 0.70 (Chin, 1998), and the composite reliability should be greater than 0.60. If the extracted average variance is higher than 0.50, it indicates that the measurement model has good aggregation effectiveness (Hair et al., 2014). Therefore, as shown in Table 1, these six dimensions have good reliability and aggregation effectiveness.

Table 1. New reliability and validity table

| Variables | Cronbach's α | Factor Loading | Composite | Average Variance Extraction (AVE) |
|-----------|---------------------|----------------|-----------|-----------------------------------|
| ATT | 0.884 | 0.864 | 0.920 | 0.743 |
| | | 0.862 | | |
| | | 0.837 | | |
| | | 0.884 | | |
| BI | 0.898 | 0.881 | 0.929 | 0.767 |
| | | 0.863 | | |
| | | 0.886 | | |
| | | 0.872 | | |
| CV | 0.882 | 0.896 | 0.927 | 0.809 |
| | | 0.887 | | |
| | | 0.914 | | |
| | | 0.855 | | |
| EV | 0.884 | 0.865 | 0.920 | 0.743 |
| | | 0.866 | | |
| | | 0.861 | | |
| | | 0.887 | | |
| SN | 0.885 | 0.857 | 0.921 | 0.744 |
| | | 0.872 | | |
| | | 0.833 | | |
| | | 0.898 | | |
| PS | 0.912 | 0.889 | 0.938 | 0.792 |
| | | 0.864 | | |
| | | 0.908 | | |
| | | 0.888 | | |
| PV | 0.915 | 0.876 | 0.940 | 0.797 |
| | | 0.907 | | |
| | | 0.900 | | |
| | | 0.876 | | |
| RE | 0.906 | 0.872 | 0.934 | 0.780 |
| | | 0.897 | | |
| | | 0.887 | | |
| | | 0.886 | | |
| SE | 0.863 | 0.868 | 0.916 | 0.785 |
| | | 0.904 | | |
| | | 0.834 | | |
| | | 0.854 | | |
| SV | 0.874 | 0.862 | 0.914 | 0.726 |
| | | 0.858 | | |
| | | 0.874 | | |
| | | 0.855 | | |
| SPV | 0.847 | 0.855 | 0.908 | 0.766 |
| | | 0.896 | | |

3.4 Inner Model and Hypotheses Testing

The path coefficient represents the strength and direction of the variable relationship to show the causal relationship between the observed variable and the latent variable. The statistic of each path coefficient was calculated by the bootstrapping method to test the significance level of the path coefficient estimation. In the bootstrapping test, the t statistic of the structural equation model shows that all the path coefficients have high T statistic, which indicates that each path coefficient has passed the corresponding significance level test, and further indicates that the stability of the model structure is good. As shown in the Table 2.

Table 2. Model Path Analysis

| Variable relationship | Initial sample (O) | Sample mean (M) | Standardized path coefficient (STDEV) | T Statistics | P value | Accept/Reject |
|-----------------------|--------------------|-----------------|---------------------------------------|--------------|---------|---------------|
| ATT -> BI | 0.470 | 0.469 | 0.044 | 10.705*** | 0.000 | Accept |
| PE -> ATT | 0.408 | 0.406 | 0.044 | 9.178*** | 0.000 | Accept |
| PE -> BI | 0.130 | 0.13 | 0.047 | 2.766** | 0.006 | Accept |
| PE -> SN | 0.409 | 0.406 | 0.061 | 6.687*** | 0.000 | Accept |
| PT -> ATT | 0.219 | 0.22 | 0.033 | 6.659*** | 0.000 | Accept |
| PT -> BI | 0.198 | 0.198 | 0.038 | 5.143*** | 0.000 | Accept |
| PT -> SN | 0.086 | 0.087 | 0.043 | 1.978* | 0.048 | Accept |
| PVPV -> ATT | 0.116 | 0.116 | 0.028 | 4.139*** | 0.000 | Accept |
| PVPV -> BI | 0.098 | 0.097 | 0.034 | 2.869** | 0.004 | Accept |
| PVPV -> SN | 0.393 | 0.394 | 0.047 | 8.309*** | 0.000 | Accept |
| SN -> ATT | 0.239 | 0.238 | 0.037 | 6.442*** | 0.000 | Accept |
| SN -> BI | 0.097 | 0.098 | 0.041 | 2.376* | 0.000 | Accept |

Notes:

1. *p-value < 0.05; ** p-value < 0.01; *** p-value < 0.001.

2. PT=Perceived Threat; PVPV=Perceived Value; PE=Perceived Efficacy; SN=Subjective Norm; ATT=Behavioral Attitude; BI=Behavioral Intention.

4. Discussion

This study can be used by researchers and marketing practitioners in the context of environmentally friendly tableware. This study operates a deeper environmental protection scenario to test whether and how young people, driven by a perceived threat, perceived value, and perceived efficiency, affect their consumption intention of environmentally friendly tableware, and proves the hypothesis with data. These dimensions can be used as important predictors of the impact on the consumption intention of young consumers of environmentally friendly tableware. In addition, the two-stage model has important value for the validity evaluation of potential variables. This study found and confirmed that incentives such as perceived severity, perceived vulnerability, reaction efficiency, self-efficacy, environmental value, spiritual value, cost value, and social value can enhance the consumption intention of environmental protection tableware consumers.

5. Conclusion

It can be concluded that perceived threat, perceived efficacy, perceived value, subjective norms, and behavioral attitudes have a significant impact on behavioral intention. Subjective norms are the mediators of perceived efficacy, perceived value, and behavioral intention; Behavior attitude is the intermediary of perceived value, perceived efficacy, subjective norms, and behavior intention.

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