

What influence residents' willingness towards "Internet+" recycling behaviour

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"Internet +" recyclable resources recycling mode integrates Internet thinking, Internet technology into the recycling process of renewable resources. It is a reform of the traditional recycling mode which has developed rapidly in China over the past few years (Zhou, 2016). Despite the strong support from Chinese government, the development of this new recycling mode still goes unsmooth (Liu, 2018). Residents' participation rate is one of the key issues affecting the sustainable development of this new mode. However, up to now, there are still few studies focusing on residents' willingness towards "Internet+" recycling behaviour and the influencing factors. Therefore, we take the residents in Beijing as examples to explore this question.

We carried out random sampling surveys on households in Beijing through internet questionnaires to explore the influencing factors of residents' "internet+" recycling behaviours in 2018. The questionnaire included 26 questions grouped into 3 sections; they are 1) the background and demographics characteristics of respondents, and 2) information about the recyclable resources households produced, and 3) impact factors of participating in internet recycling platform. The Unified Theory of Acceptance and Use of Technology (UTAUT) model is a comprehensive model with 8 models integrated. With quite high explanation degree on individual behaviours but few applications focusing on recycling behaviours (Rahman, 2017), we chose it to study the third part in our questionnaire. A five-point Likert's scale ranging was used to measure the seven items in the third part. They are effort expectancy (EE), social Influence (SI), performance expectancy (PE), perceived risk (PR), facilitating condition (FC), behaviour intention (BI), and use behaviour (UB). We used variance analysis and structural equation model to verify the two hypotheses we made respectively.

On the basis of above analysis, we pose two hypotheses:

H1: EE, SI, PE, PR, FC, BI and UB have influences on residents' willingness towards "Internet+" recycling behaviours.

H2: Age, gender, education level, income and family size have regulating effects on the seven items.

Results show that gender, age, income and education level have some partial regulating effects on the influencing factors referred above. Young people with considerable income level and high education level are the main participants in "Internet+" recycling mode. Table 1 shows the results of one-way analysis of variance for age. Age has moderation effects on EE, BI and UB, but not for other factors.

Table 1. One-way analysis of variance for age

		Sum of squares	df	Mean square	F	Sig.
EE	Between Groups	3.183	4	0.796	2.693	0.030
	Within Groups	145.365	492	0.295		
	Total	148.547	496			
SI	Between Groups	1.874	4	0.469	2.036	0.088
	Within Groups	113.222	492	0.230		
	Total	115.096	496			
PE	Between Groups	1.281	4	0.320	1.175	0.321
	Within Groups	134.150	492	0.273		
	Total	135.431	496			
PR	Between Groups	.862	4	0.215	.852	0.493
	Within Groups	124.430	492	0.253		
	Total	125.291	496			
FC	Between Groups	2.646	4	0.662	2.295	0.058
	Within Groups	141.829	492	0.288		
	Total	144.475	496			
BI	Between Groups	15.742	4	3.936	5.437	0.000
	Within Groups	356.162	492	0.724		
	Total	371.904	496			

	Between Groups	4.270	4	1.068	2.707	0.030
UB	Within Groups	194.036	492	0.394		
	Total	198.307	496			

Fig.1 shows that effort expectancy (EE), social Influence (SI), performance expectancy(PE) and perceived risk(PR) are critical to residents' behaviour intention. Residents' usage behaviour are greatly influenced by behaviour intention. Also, residents' effort expectancy (EE), performance expectancy (PE) and social Influence (SI) have interaction effects with each other.

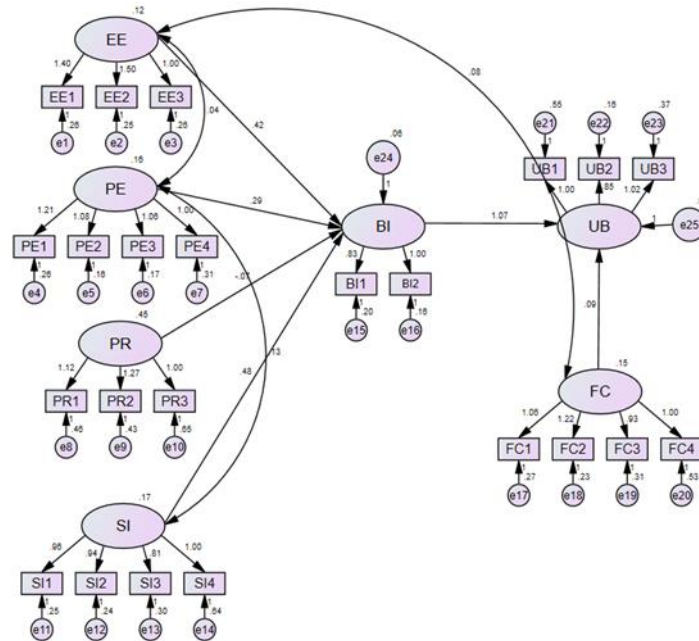


Fig. 1 Research model result

In addition, based on these results, we put forward some suggestions targeted for the government, Internet recycling enterprises and residents separately: 1) the government should provide policy support and secure good internet environment; 2) the internet recycling enterprises should reduce operation difficulty, control operational risk and enhance propaganda; 3) the residents should improve environmental awareness.

Reference

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