

## Consumer Self-determination and Psychological Well-being in Sustainable Consumption

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### Introduction

As the importance of sustainable consumption is emphasized, policy approaches that specifically promote sustainable consumption are being actively attempted. The Korean government has implemented policies to promote consumers' participation in sustainable consumption. For example, the local government of Seoul is implementing the Eco-Mileage system, which provides incentives to consumers when they save a certain amount of energy. Korea Electric Power Corporation (KEPCO), a public corporation, is also promoting a project to subsidize 10% of the cost of purchasing high-efficiency home appliances. These systems are considered successful cases that have contributed to expanding consumer participation in sustainable consumption. However, given that these policy approaches provide certain incentives to induce consumers to make sustainable choices, further discussion on the voluntary sustainability of these behaviors will be needed. From this perspective, this study examines the autonomy of the sustainable consumption experienced by consumers and their psychological well-being by expanding from the previous research that has focused on factors influencing sustainable consumption behavior (Dobson, 2007; Finney, 2014; Young et al., 2010). In particular, this study investigates how the measures that restrict free choice in consumers' sustainable consumption are associated with their autonomy and their psychological well-being experienced in the consumption process.

### Methods

This study designed an experimental survey that presented two different conditions of self-determination of sustainable consumption: 1) an external stimulus that induced a positive perception of community-oriented sustainable consumption and 2) an online shopping environment that limited their ability to make sustainable choices. We examined how these external conditions to promote sustainable consumption affected consumers' autonomy and self-esteem. The experimental survey was conducted with participants recruited from a professional research firm. Participants aged 20–39 years were sampled according to gender and age quotas. To induce participants' perceptions, half of the participants were presented with one article emphasizing the importance of community-oriented sustainable consumption, while the other half were presented with an article emphasizing self-oriented cost-effective consumption (sustainable consumption vs. cost-effective consumption). Then, participants were given the opportunity to purchase seven products among various products with similar prices. To limit participants' ability to make sustainable choices, half of participants were able to choose products based on their preferences, while the others were forced to purchase a certain number of sustainable consumption products distinguished by a campaign mark for sustainable consumption (voluntary vs. involuntary). The number of products that the involuntary group had to choose was assigned by matching the number of products selected by each participant in the voluntary group. Participants were randomly assigned to one of four groups (2 x 2) of 40 participants divided based on article type and voluntary choice. Autonomy and self-esteem were measured after the product selection using the revised and translated Basic Psychological Need Satisfaction Scale (Deci & Ryan, 2000; Gagné, 2003) and Rosenberg's Self-Esteem Scale (Rosenberg, 1965), respectively, both of which are 5-point Likert scales.

### Results

Table 1 shows the effect of the two frame conditions on self-determination of product selection on consumer autonomy. The result shows that the level of consumer autonomy satisfaction in the voluntary group without restrictions on product selection was higher than that in the involuntary group,

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regardless of the framing type of the external stimulus (community-oriented sustainable consumption framing:  $\beta = 0.313$ ,  $p < 0.05$ ; self-oriented cost-effective consumption framing:  $\beta = 0.288$ ,  $p < 0.05$ ). The impact of framing types on autonomy, however, was not significant.

**Table 1**  
*Impact of self-determination on autonomy*

<b>Community-oriented sustainable consumption framing group</b>					
Variable	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	3.512	0.109		32.126***	0.000
Voluntary	0.313	0.155	0.223	2.021*	0.047
R = 0.223, R <sup>2</sup> = 0.050, F = 4.085, Std. Error of the Estimate = 0.691					
<b>Self-oriented cost-effective consumption framing group</b>					
Variable	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	3.658	0.097		37.646***	0.000
Voluntary	0.288	0.137	0.230	2.092*	0.040
R = 0.230, R <sup>2</sup> = 0.053, F = 4.376, Std. Error of the Estimate = 0.615					

Notes. \* $p < .05$ , \*\* $p < .01$ , \*\*\* $p < .001$   
 Dependent variable: Autonomy  
 Voluntary: Voluntary product selection = 1

A one-way ANOVA was conducted to compare the mean outcomes of the autonomy in groups divided according to framing and self-determination conditions (Table 2). There was a significant difference in the level of autonomy need satisfaction ( $p < 0.05$ ). In Scheffe's post hoc test, the group under the cost-effective consumption framing and voluntary condition showed a significantly higher level of autonomy need satisfaction than the group under the sustainable consumption framing and involuntary condition ( $p < 0.05$ ). There were no other significant differences for the other groups. In addition, the effect of voluntariness on consumers' self-esteem was analyzed using a regression analysis, but no significant effect was found.

**Table 2**  
*Autonomy of consumers according to conditions*

Conditions	M	SD	Scheffe	F	P
Cost-effective consumption framing & Voluntary product selection (a)	3.946	0.568			
Sustainable consumption framing & Voluntary product selection (b)	3.825	0.582			
Cost-effective consumption framing & Involuntary product selection (c)	3.658	0.658	a > d	3.363	0.020
Sustainable consumption framing & Involuntary product selection (d)	3.513	0.786			

The mediating effect of autonomy need satisfaction on the relation between voluntariness and self-esteem was tested using SPSS Process Macro (Table 3). We conducted bootstrapping to test the mediation effect on 1000 bootstrapping samples with a 95% confidence interval. The result revealed that voluntariness was positively related to autonomy need satisfaction ( $\beta = 0.300$ ,  $p < 0.01$ ) and

autonomy need satisfaction was positively associated with self-esteem ( $\beta = 0.204, p < 0.05$ ). Further, the findings showed the significant mediation effect of autonomy need satisfaction between voluntariness and self-esteem ( $\beta = 0.061$ ).

**Table 3**  
*Mediating effect of autonomy on relation between voluntariness and self-esteem*

Independent variables	Dependent variables					
	Autonomy			Self-esteem		
	B	S.E.	t	B	S.E.	t
(Constant)	-0.150	0.073	-2.053	-0.033	0.073	-0.457
Voluntary	0.300	0.103	2.903***	0.066	0.104	0.638
Autonomy				0.204	0.078	2.609**
	R <sup>2</sup> = .051**			R <sup>2</sup> = .051*		
Variable	Indirect effect	Boot SE	95% confidence interval			
			LLCI	ULCI		
Autonomy	0.061	0.032	.005	.128		

Notes. \* $p < .05$ , \*\* $p < .01$ , \*\*\* $p < .001$   
Voluntary: Voluntary product selection = 1

**Discussion**

This study revealed that non-self-determining systems that limit consumer behavior interfere with consumer autonomy. The results confirmed the different effects of two conditions that can undermine a consumer’s self-determination system on consumer autonomy and self-esteem. Even if consumers perceive sustainable consumption as desirable, forcing them to do so undermines their autonomy, which, in turn, negatively affects their self-esteem. These results suggest that the approach of forcing consumers to make desirable choices through policy may temporarily induce incentive-oriented consumer choices but may be limited in maintaining consumers’ autonomous practice. In addition, this study found that satisfaction of consumers’ autonomy need mediates the relationship between voluntariness and self-esteem. This implies that sustainable consumption based on voluntariness increases consumers’ autonomy need satisfaction, which is meaningful as a mechanism to increase consumer self-esteem. These results show that there is a psychological link between consumers’ socially responsible behaviors and their psychological well-being. Therefore, policy systems that can increase consumers’ voluntariness for socially responsible behavior should be considered. Future research should investigate whether satisfaction of consumer autonomy and improvement of self-esteem continuously promote sustainable consumption practices, leading to a virtuous cycle between consumer well-being and sustainable society.

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