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Real and spurious sustainable consumption behavior in Turkey: a field research

Abstract¹

Like people inhabiting other countries, Turkey's citizens damage the natural resources and cause environmental pollution by consuming unsustainably natural resources. Hence, sustainable consumption behaviors (SCB) have played an important role in reducing the effects of climate change or other environmental problems and saving the planet. Although there is an increasing search for SCB, it has received no significant attention. The study aims to analyze frequency of SCB and conceive the real and spurious SCB. For this purpose, a questionnaire was applied to 512 students studying at Dumlupinar University in Kutahya, Turkey. At the end of this study, it was found that frequency of SCB was mid-level and some of SCB (e.g., energy conservation, product repairing) were spurious SCB. The results of this research have significant implications for both the practice of strategic plans of business and action plans of public institutions.

Keywords: sustainability, sustainable development, sustainable consumption, consumption behavior, sustainable consumption behavior, Turkey.

Introduction

In the last decade, some negative emerging developments both in our county and around the world pertaining to the issue of the environment (global warming, scarcity, starvation, etc...) indicate the importance of the sustainable consumption behavior. The increase in frequency of sustainable consumption and its wide spread within the different levels and segments of society necessitates an effective solution. In order to develop such a solution, it is necessary to elaborate and analyze the topic with the detailed dimensions.

SC is a consumption style that is based on limited use of world's resources and that looks for the best ways which do not damage or cause a least damage to natural living. In this sense, SCB is an approach based on finding radical solutions. For example, SCB has to find a solution for not using water and detergent for less damages to natural environment.

It is possible to pose the sustainable consumption behavior by transforming the behavior of the individual to much more sustainable one and using fewer amounts of resources. But, sometimes, shifts from current consumption patterns to SCB may happen on a compulsory basis. In fact, the idea of the sustainable consumption behavior desires that the individuals should decrease their levels of consumption by focusing the ecological concern and changing their behaviors towards the sustainable consumption behavior voluntarily.

In regard to the sustainable consumption behavior, it can be observed that some behaviors provide the

individual with some economic benefits and some of them do not. For instance, the using energy saving bulbs and water saving during the brushing the teeth provide the benefit but the recycling; also buying organic products and not demanding receipt do not provide any economic benefit for the individual directly. Within the sustainable consumption behavior, the precautions by which some behaviors provide the individual with some economic benefits can be called "spurious sustainable consumption behavior (SSCB)" and the other is called "real sustainable consumption behavior (RSCB)". Some of SCBs provide direct economic benefits to people while others do not. For example, using paper towel thrifty at home provides direct economic benefit, but using paper towel thrifty in restaurant, cafe, dormitory or hotel doesn't provide economic benefit to people exhibiting that behavior. In this context, using own bag when shopping, putting dead batteries, used papers and bottles in recycling bin, preferring feeding fresh vegetables and leguminous seeds rather than meat and fowl, buying organic vegetables and fruits and not demanding receipt when transacting by ATM behaviors are real behaviors; and walking instead of taking the bus or driving a car, preferring using the mobile phone for 3-5 years rather than renew it annually or biennially, using high efficiency bulbs, preferring to share the books rather than buy them and using cleaning agent slightly when cleaning home behaviors are spurious behaviors.

1. Materials and method

The main purpose of the study is to analyze differences between RSCB and SSCB by comparing and contrasting the means of the two behavior styles. At the same time, the study has also investigated whether means of RSCBs and SSCBs

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change in respect to demographic factors of the sample. Students of Dumlupinar University Faculty of Economics and Administrative Sciences (6238 student) were considered as a population of the study. 512 students were selected by utilizing the stratified sampling method, composed of a questionnaire form by searching various studies (Kaiser et al., 2003; Barr and Gilg, 2003; Thogersen, 2002; Karalar et al., 2008). The respondents were asked to fill in the forms.

There are two quantitative scales in questionnaire form. One of them includes RSCBs and the other includes SSCBs. In both scales, behaviors about sustainable consumption were measured with 14-item scale by using a 5-point scale with labels “never”, “rarely”, “half of times”, “often” and always/every time”. Before implementing these scales on the sample of the study, a preliminary study was conducted on 40 students to examine statistical reliability of scales and these scales were found in reliability limits. As to implementing those scales, Cronbach’s alpha coefficient was used to determine the internal consistency reliability of each scale used in this study and it was determined that alpha value for RSC scale was 0,63 and for SSC scale it was 0,62. Both scales do not have high alpha values and so these scales could be improved in future research.

Descriptive analysis was utilized in most parts of the study. However, T-test was used to analyze differences between means of RSCBs and SSCBs and ANOVA was also used to analyze mean

differences according to demographic factors to test the hypotheses of the study. These hypotheses are:

- H₁: There are meaningful differences between the levels of mean of RSCBs and SSCBs of the students.*
- H₂: According to students’ gender, there are meaningful differences in RSCB mean.*
- H₃: According to students’ pocket money amount, there are meaningful differences in RSCB mean.*
- H₄: According to students’ situation of membership of environmental institutes, there are meaningful differences in RSCB mean.*
- H₅: According to students’ place where he/she grows up, there are meaningful differences in RSCB mean.*
- H₆: According to students’ staying type in Kutahya, there are meaningful differences in RSCB mean.*
- H₇: According to students’ gender, there are meaningful differences in SSCB mean.*
- H₈: According to students’ pocket money amount, there are meaningful differences in SSCB mean*
- H₉: According to students’ situation of membership of environmental institutes, there are meaningful differences in SSCB mean.*
- H₁₀: According to students’ place where he/she grows up, there are meaningful differences in SSCB mean.*
- H₁₁: According to students’ staying type in Kutahya, there are meaningful differences in SSCB mean.*

2. Results

Sample characteristics of the study are presented in Table 1. It was found that most of participants were female students and large majority of participants were not members of any environmental institute.

Table 1. Sample characteristics

Gender	F	%	Pocket money amount (TL)	F	%	Staying style	F	%
Male	221	43,2	0-250	168	32,8	Dormitory	277	54,1
Female	291	56,8	251-500	239	46,7	At home with fam.	13	2,5
Total	512	100	501-750	86	16,8	At home with frie.	215	42,0
			751-1000	16	3,1	At home-lonely	7	1,4
Membership	F	%	1001-	3	0,6	Total	512	100
Yes	23	4,5	Total	512	100	Place where he/she grows up	F	%
No	489	95,5				Urban	301	58,8
Total	512	100				Township	170	33,2
						Village	41	8,0
						Total	512	100

Means of SCBs of participants can be examined in Table 2. As can be seen in the table, means of SCB vary from 4,30 to 1,66. The highest mean was recorded for turning lights off in unused rooms, whereas the lowest mean was for changing towel per

diem when staying in a hotel. Considering the whole sustainable behaviors, mean of SCB has been seen as mid-level. As this scale is a mixed one which has RSCBs and SSCBs, more significant findings can be found if RSCBs and SSCBs are analyzed separately.

Table 2. Means of SCBs

No	Behavior	Mean	S.D.
1	I turn lights off in unused rooms at home.	4,30	1,14
2	When electrical appliance like iron, vacuum cleaner, blow-dryer, toaster break down, I prefer to have someone to repair them rather than buy new ones.	4,16	1,13
3	I keep open tap when cleaning teeth, soaping up. (-)	3,91	1,25
4	As technologies have been developing swiftly, I prefer to renew my cell phone annually or biennially rather than use for years although it has not broken down. (-)	3,89	1,27
5	I walk instead of driving the car or taking the bus in the city.	3,65	1,38
6	I use high efficiency bulbs.	3,59	1,28
7	I use paper towel thrifty when I go to wash-hand basin in places like restaurant, cafe, dormitory and hotel.	3,52	1,27
8	I buy domestic banana instead of imported banana.	3,49	1,25
9	I especially buy products of an environmentally approved companies although there are cheaper alternative products in market-place.	3,48	1,16
10	I buy energy saving white goods (B, A, A+ energy label).	3,41	1,33
11	I prefer hiring movie DVD rather than buying it.	3,39	1,39
12	I buy locally produced products (for example, Bozuyuk Milk, Besler Yogurt).	3,34	1,27
13	I buy clothes made by fully natural materials like cotton, silk, wool and linen.	3,18	1,15
14	I use rechargeable batteries instead of disposable ones.	3,04	1,35
15	I prefer to shower rather than to take a bath at home.	3,02	1,26
16	I buy organic vegetables and fruits.	3,01	1,23
17	I prefer to take share the books with my friends rather than buy them.	2,98	1,41
18	I use cleaning agent slightly when cleaning my home (one cover instead of two or more).	2,96	1,26
19	I prefer to feed fresh vegetables and leguminous seeds rather than meat and fowl.	2,95	1,21
20	I buy products which have recycling package.	2,90	1,18
21	I use cosmetics (make-up, perfume, deodorant, cologne) slightly.	2,89	1,34
22	I put dead batteries, used paper and bottles in recycling bin.	2,86	1,35
23	I prefer to use cardboard packages, cans and bottles for products I have bought for different purposes rather than throw them into the garbage.	2,72	1,25
24	I prefer paper bags to plastic ones when shopping.	2,44	1,28
25	I demand receipt when I transact by ATM. (-)	2,42	1,49
26	I flush the toilet at a low frequency.	2,33	1,36
27	I use my bag when shopping.	2,08	1,27
28	I demand to be changed towel per diem when I stay in a hotel. (-)	1,66	1,11
Whole SCB		3,13	0,44

Note: (-) signs denote unsustainable behaviors.

Real sustainable consumption behaviors can be examined in Table 3. As seen in the table, means of RSCBs vary from 3,52 to 1,66. The highest mean is for using paper towel thrifty when going to wash-hand basin in place like restaurant, cafe, dormitory

and hotel, whereas the lowest mean is for changing towel per diem when staying in a hotel. Besides, mean of whole RSCBs is 2,82. As for SSCBs (see Table 4), means of SSCBs vary from 4,30 to 2,33 and mean of whole SSCBs is 3,44.

Table 3. Means of RSCBs

No	Behavior	Mean	S.D.
1	I use paper towel thrifty when I go to wash-hand basin in place like restaurant, cafe, dormitory and hotel.	3,52	1,27
2	I especially buy products of an environmentally approved companies although there are cheaper alternative products in market-place.	3,48	1,16
3	I buy locally produced products (for example, Bozuyuk Milk, Besler Yogurt).	3,34	1,27
4	I buy clothes made by fully natural materials like cotton, silk, wool, linen.	3,18	1,15
5	I buy organic vegetables and fruits.	3,01	1,23
6	I prefer to feed fresh vegetables and leguminous seeds rather than meat and fowl.	2,95	1,21
7	I buy products which have recycling package.	2,90	1,18
8	I use cosmetics (make-up, perfume, deodorant, cologne) slightly.	2,89	1,34
9	I put dead batteries, used paper and bottles in recycling bin.	2,86	1,35
10	I prefer to use cardboard packages, cans and bottles for products I have bought to different purposes rather than throw them into the garbage.	2,72	1,25
11	I prefer paper bags to plastic ones when shopping.	2,44	1,28

Table 3 (cont.). Means of RSCBs

12	I demand receipt when I transact by ATM. (-)	2,42	1,49
13	I use my bag when shopping.	2,08	1,27
14	I demand to change towel per diem when I stay in a hotel. (-)	1,66	1,11
Whole RSCB		2,82	0,49

Table. 4. Means of SSCBs

No	Behavior	Mean	S.D.
1	I turn lights off in unused rooms at home.	4,30	1,14
2	When electrical appliances like iron, vacuum cleaner, blowdryer, toaster break down, I prefer to have someone to repair them rather than buy new ones.	4,16	1,13
3	I keep open tap when cleaning teeth, soaping up. (-)	3,91	1,25
4	As technologies have been developing swiftly, I prefer to renew my cell phone annually or biennially rather than use for years although it has not broken down. (-)	3,89	1,27
5	I walk instead of driving the car or taking the bus in the city.	3,65	1,38
6	I use high efficiency bulbs.	3,59	1,28
7	I buy domestic banana instead of imported banana.	3,49	1,25
8	I buy energy saving white goods (B, A, A+ energy label).	3,41	1,33
9	I prefer hiring movie DVD rather than buying it.	3,39	1,39
10	I use rechargeable batteries instead of disposable ones.	3,04	1,35
11	I prefer to take a shower rather than to take a bath at home.	3,02	1,26
12	I prefer to share the books with my friends rather than buy them.	2,98	1,41
13	I use cleaning agent slightly when cleaning my home (one cover instead of two or more).	2,96	1,26
14	I flush the toilet at a low frequency.	2,33	1,36
Whole SSCB		3,44	0,53

To know whether there are meaningful differences between levels of mean of RSCBs and SSCBs of students it is necessary to make paired-sample t test. The findings of this test can be examined in Table 5. According to Table 5, there are meaningful

differences between levels of mean of RSCBs and SSCBs. It can be said that participants of the study exhibited SSCBs more frequently any more. In other words, H₁ has been approved.

Table. 5. Paired-sample t-test (RSCB-SSCB)

	Paired differences			t	df	p
	Mean	Std. deviation	Std. error mean			
RSCB-SSCB	0,617	0,522	0,023	26,701	511	0,000
Behavior	Mean	Std. deviation	Std. error mean			
RSCB	2,823	0,533	0,023			
SSCB	3,440	0,491	0,021			

After analyzing the differences between means of RSCBs and SSCBs, it is essential to analyze mean differences according to demographic factors in order to test other hypotheses of the study. As we know, the research has eleven hypotheses. Four of them have been approved. There is no need for touching on the result of H₁ as we touched on before. H₅, H₇ and H₈ have been approved in addition to H₁.

It was found that there was meaningful difference in means of RSCB according to students' place where he/she grows up. The result of Post Hoc Multiple Comparisons Test (Turkey) showed meaningful differences between village, township and city groups. Namely, RSCBs is exhibited more frequently by the students who grew up in a village (p<0,05).

The other hypothesis which has been approved is H₇. According to the result of the test, means of SSCBs of female students are higher than those of male students. This finding is consistent with the existing literature because most of previous studies found the same result.

The last hypothesis which has been approved is H₈. According to the test results, there are meaningful differences in means of SSCBs of groups with regard to pocket money amount (p<0,01). The result of Post Hoc Multiple Comparisons Test (Turkey) showed there were meaningful differences between whole groups (not included between 251-500 and 501-750). Namely, mean of SSCBs is higher in low-income strata.

Discussion

As a result of the study, the level of students to exhibit the sustainable consumption behavior was not high. This indicates that the level of the SCB is not within the ideal degree. Nevertheless, the frequency of “turning off all lights while getting out the room”, “repairing of the distorted tool instead of renewing” behaviors are at high level.

The researches made in the field of sustainable consumption (Mont and Pleypys, 2008; Holst et al., 2007; Barr and Gilg, 2006; Oosterveer, 2006; Moll et al., 2005; Hirschl et al., 2003; Kaiser et al., 2003; Tanner and Kast, 2003; Thøgersen and Ölander, 2002; Lorek and Spangenberg, 2001; Jackson and Marks, 1999; Lee and Holden, 1999; Hansen and Schrader, 1997) examined SCBs holistically rather than by distinguishing behaviors which provide direct economic benefits (spurious behaviors) and behaviors which don't provide direct economic benefits (real behaviors). In this study, SCBs were examined separately and according to the results of the study it can be said that spurious behaviors were exhibited more frequently than real behaviors. However, “spurious sustainable consumption behavior” was observed in low-income strata frequently for the sake of the economic motives.

These findings reflect the advantage of “economic benefits” over “ecological benefits” in action plan of the civil society organizations, non-governmental organizations, and public institutions which try to widespread the SCB into all segments of society. Also, “real sustainable consumption behavior” has been observed frequently in the students who grew up in rural areas and in places where the traditional life depends upon the less consumption. The other finding shows that women demonstrate higher level of RSCB than men depending on the category of gender. These findings are coherent with the literature.

In this study, sustainable consumption has been analyzed within two categories, namely RSCB and SSCB. In this way, “spurious sustainable consumption behavior” with economic motives is differentiated and separated and new opening up has been realized within the subject-matter of sustainable consumption behavior. However, this study with narrow window can be detailed and covered with huge and different segments of society and prove its findings because this study is a preliminary one. At the same time, sustainable consumption behavior can be analyzed within the different perspectives besides its economic dimensions.

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