



## INCOME AND ITS RELATIONSHIP WITH CONSCIOUS CONSUMPTION: A STUDY WITH YOUNG UNIVERSITY STUDENTS IN RIO

**\*Leonardo Jacques Gammal Zeitune, Veranise Jacobowski Correia Dubeux and Daniel Kamlot**

Department of Creative Business Management at ESPM-Rio, Rio de Janeiro, RJ. 20041-002

### ARTICLE INFO

#### Article History:

Received 29<sup>th</sup> November, 2018  
Received in revised form  
27<sup>th</sup> December, 2018  
Accepted 30<sup>th</sup> January, 2019  
Published online 27<sup>th</sup> February, 2019

#### Key Words:

Household income. Young.  
Conscious consumption.  
Social responsibility.

### ABSTRACT

The present study identifies ideas, perceptions, attitudes and opinions of young university students residing in the city of Rio de Janeiro, concerning their sustainable consumption practices. In order to achieve this goal, a quantitative exploratory research model was used with a structured questionnaire derived from the scale developed by Antil and Bennett (1979), composed of 40 statements, covering ideas, beliefs and attitudes related to socially responsible consumption. The data was treated by means of descriptive statistics in order to evaluate the respondents' profile, and then statistical inference was used to evaluate the results, raising hypotheses about the influence of the variable income on the statements that made up the scale. The tests used were Chi-square, F-test (ANOVA) and Duncan test. Thus, it was possible to verify the few statements depending on the income variable, i.e. young people's conscious consumption decision, often, does not depend on the socio-demographic median household income variable.

Copyright © 2019, Leonardo Jacques Gammal Zeitune et al. This is an open access article distributed under the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.

Citation: Leonardo Jacques Gammal Zeitune, Veranise Jacobowski Correia Dubeux and Daniel Kamlot 2019. "Income and its relationship with conscious consumption: a study with young university students in rio", *International Journal of Development Research*, 09, (02), 25771-25779.

### INTRODUCTION

In recent decades, several terms related to social responsibility became part of the vocabulary of the most varied markets players. Expressions such as "conscious consumption", "responsibility" and "sustainability", among others, have been profuse, though consumers did not have a full sense of its meaning or value related to them. It is true that without a rational handling of the resources available, these will tend to disappear, or become rarer, leading to losses for society as a whole; therefore, without a full consciousness on how to use the existing resources and on how to respect the natural environment, society will require sustainable and responsible behavior towards the planet. The indiscriminate use of natural resources is an example that exposes clearly that, without an act of deference to the proper maintenance of the environment, increased climatic disorders, barometric, rainfall and others can become imminent. Analyzing the youngest individuals, they are the group with the least concerns about consuming in a responsible or conscious way, with 46.3% of them considered with little or no conscious at all, against 31.2% of the total Brazilian population (SPC 2016).

\*Corresponding author: Leonardo Jacques Gammal Zeitune, Department of Creative Business Management at ESPM-Rio, Rio de Janeiro, RJ. 20041-002

This might be explained by this period IN life when people are more individualistic, concerned with meeting their own needs. It is true that, to a full service of those requirements, it would be indispensable to have financial availability, able to allow the obtaining of any products or services, consciously or not. Concerning this situation, the present work focuses mainly on exploring how a specific social segment, the youth, understands and translates the concept and issues involving the practices related to conscious consumption. Therefore, the goal is to assess the socially responsible consumption of university students in Rio, identifying if the decision of conscious consumption of students residing in the city of Rio de Janeiro depends on the socio-demographic median household income variable.

### Conscious or socially responsible consumption

Various published works have focused on the themes "conscious consumption" and "socially responsible consumption". Although these themes often appear linked in the literature, it is important they be defined properly in order to position the reader as to the main aspects of the definitions and possible meanings to be understood. Webster, regarded as the pioneer in the definition of socially responsible consumer, states that this is understood as the consumer who "considers

the social consequences of his private consumption or that cares for the use of his purchasing power in order to promote social change" (Webster 1975, p.188). That is to say, a concern about the implications of individual acts towards the rest of society to which all individuals belong – be they consumers or mere citizens. The author also mentions that socioeconomic variables, attitude and personality can identify socially conscious consumers. For Webster (1975), however, economic or demographic variables would not be as suitable as those related to the personality of individuals to identify them as conscious consumers. In this work, the consumer will be considered as citizen actor in society, given the implications of his conduct towards it, as mentioned above, and his responsibilities arising from the practice of socially consumption, understood as equivalent to socially responsible consumption (Vieira 2010). The process of considering the public consequences of private choices is at the heart of the socially responsible consumption, whose study is of vast importance. The very definition of consumption implies understanding the exhaustion, wasting or destroying. In addition, the conscious consumption may promote social causes which consumers consider important, although it has been neglected for some time the importance of such consumption under the marketing researchers (François-Lecompte and Roberts 2006). Despite the apparent importance of this type of consumption, note that polls tend to fall on topics such as "green" consumer behavior or environmentally conscious or consumer boycotts. The broader concept of conscious consumption, or socially responsible, has rarely been considered (François-Lecompte and Roberts 2006).

**The young and the conscious consumption:** In examining the conduct of young consumers in terms of awareness and social responsibility, one must pay attention to certain details, starting with the definition of "young". For the purposes of the International Labour Organization (ILO) and the National Youth Council as defined in the UN General Assembly of 1985, there are three tracks that comprise the youth: young adolescents, from 15 to 18 years old; young people, ranging from 19 to 24 years old; and young adults, from 25 to 29 years of age (Froes 2011). In this study, youth will be any of these age groups. The conscious consumption does not appear to be a priority for Brazilian consumers. The number of those who are classified as conscious reaches 32.0%, considered "far from ideal" (SPC 2016, p. 18). However, the young people of legal age are 39.4% of total conscious consumers, although they represent 27.5% of the total Brazilian population. One fact to be highlighted refers to the image young people as a whole have of themselves: 70.9% of them consider themselves conscious consumers, which is not confirmed empirically, since only 39.7% are, in fact, conscious in their consumption practices (SPC 2016). In terms of age and social class, it is noticed the engagement to the conscious consumption is greater above thirty-five-year-old people and in the wealthiest classes, being the younger and lower classes less indicated to engage in such consumption. In particular, when analyzing the social class, this seems to be "little discriminatory to set standards of adherence to conscious consumption", since there are noticeable similarity between the values and behaviors of all classes (Akatu 2007). In relation to income, it also seems to be a fact.

**Measurement scales and the importance of income:** The conscious consumption would have started by the meeting of three relevant factors: public environmentalism, initiated in the

mid-1970; the environmental concern, emerged and expanded business sector in the years 1980; and the subsequent apprehension of individuals with the social impact of lifestyles and consumption, which began in the 1990s (Portilho 2005). However, there were no adequate measures to examine the dimensions involved in a process of conscious consumption, i.e., it was not possible to measure whether, in fact, a specific situation constituted consumption involving social responsibility or whether it would be a pure and simple consumption occurrence. In order to define measures and scales to allow for the evaluation of the component elements of the dimensions of the conscious consumption, in a peremptory way, several works were developed (eg Antil and Bennett 1979; François-Lecompte and Roberts 2006; Webb, Mohr, and Harris 2008), but the results cannot be considered convergent in all cases or circumstances.

Considering demographic variables, Antil (1978) developed a scale in which, when there were ten variables considered, no significant relationships were observed. The only variable pointed by the author as significantly related to conscious consumption was the population density. In a study conducted in India, Singh (2009) identified a negative correlation between income and socially responsible consumption. In the Indian context, people with above-average incomes are less likely to engage in socially responsible consumption because they are more interested in enjoying the pleasure of self-directed consumption than one who follows the precepts of conscious consumption (Gandhi and Kaushik, 2016). For Gandhi and Kaushik (2016), people with lower incomes would be more engaged in terms of conscious consumption, in the context they studied – in other words, the contemporary Indian market. Antil and Bennett (1979) developed a scale considered the most complete for the measurement of socially responsible consumption. Containing 40 statements that address ideas, beliefs and attitudes related to socially responsible consumption and providing response options through the Likert interval scale, the authors propose the measurement of socially responsible consumption should be based on the average sum of the scores obtained in the 40 items make up the scale. This will be adapted in the section "Methodology", in the present study, to suit the context studied. Different from the scale proposed by Antil and Bennett (1979), which focused in young high school students, the present study has its focus in university students, from public and private institutions, investigating aspects related to income, which was not considered in the original study.

Analyzing the Brazilian context, Silva et al. (2011) evaluated the profile of conscious consumption of Recife's population, concluding household income does not show a statistically significant correlation with the 25 variables studied. Similarly, Silva, Santos and Souza (2014), in a study at the same conjuncture, identified that variations in consumer income do not significantly influence on the option to buy sustainable products. Webster (1975), in his classic work, had already indicated the socially conscious consumer has good position in terms of income, education and occupation, which would allow it to contribute to the community while his self-concept would favor taking an active role in terms of acting altruistically. In the author's opinion, the socially conscious consumer would have high household income, as measured by the "Socially Conscious Consumption Index", which pointed out the income as statistically significant at the 0.05 level.

In research by the Akatu Institute (2007) social class is a relevant factor in segmenting consumers and analyzing them, since individuals of classes A and B are much more likely to be part of the conscious segment (class A = 8 %, classes D and E = 3%). The components of class A acquiesce on average with 7.0 of the 13 behaviors used to evaluate the consumer's awareness of the impacts of their consumption practices on themselves and on social relations, the economy and the environment; in classes D and E, the average adherence is 5.9 behaviors, or 15.4% lower. Thus, based on the uncertainties regarding a relationship between socially responsible consumption and income, it is considered relevant to analyze whether this variable impacts the conscious consumption decision, in particular with the young Brazilian public.

#### Methods, collection procedures and analyzing study data:

The research carried out in this study is an exploratory, quantitative approach, aimed at university students living in the city of Rio de Janeiro, belonging to classes A, B1, B2, C1, C2, D (ABEP, 2016). The research technique used was conducted through a questionnaire with closed questions. For the analysis of the socially responsible behavior of the students, the Socially Responsible Consumption Behavior (SRCB) scale (Antil and Bennett 1979) was used because it was an adequate instrument for the initial targets related to the investigation of the issues. In general terms, the original scale is composed of 40 statements that address ideas, beliefs and attitudes related to socially responsible consumption. As response options, it uses the five-point Likert interval scale, ranging from "totally disagree" to "totally agree". Antil and Bennett (1979) propose that the measurement of the socially responsible consumption be made based on the average sum of the scores obtained in the 40 items which make up the scale. For a better understanding of the questions, some were modified, with words being eliminated or added, in order to facilitate the comprehension of the respondents, keeping the original meaning of the sentences.

In addition to the 40 statements of the scale, the following socio-demographic variables were included in the data collection instrument: gender, age group, monthly income range, student's course and university. The questionnaire was applied to universities in Rio de Janeiro, from April to October 2016. The answers were tabulated and analyzed with the SPSS statistical program. Initially, in order to identify the profile of the sample, the technique of descriptive statistics was used. In addition, the chi-square test, analysis of variance (ANOVA) and the Duncan test were performed, a post hoc method of multiple comparison of averages. The chi-square test is used to test the significance of the observed association between categories in a cross-table or contingency table (Malhotra 2001). The test helps determine if there is an association between two categorical variables. In this case, the goal was to verify if there was a statistically significant association (level of significance of 0.05) between the affirmatives of the socially responsible consumer behavior scale (SRCB) and the socio-demographic median household income variable. Analysis of variance (ANOVA) was used to verify the variance of averages of two or more different statistical groups for the same variable (Hair 2005), that is, the difference of opinion of individuals from different socio-demographic classes for all the affirmatives of the SRCB behavior scale.

**Presentation and analysis of results:** The questionnaire was answered by a sample of 234 respondents (margin of error of

0.06, 95% NC,  $p = 50\%$ ), with 56% female and 44% male. The mean age of the sample is 22.2 years, with a standard deviation of 4.25 years. Regarding composition, students from 26 different courses participated in the research, with similar participation of each group. The socio-demographic variable median household income was included in the research to determine which social class groups have significant participation in this study. Each option of the question corresponds to an income range referring to a social class, according to the Brazilian criterion proposed by ABEP (2016).

**Table 1. Percentage distribution of respondents by median household income**

Income bracket (monthly)	Percentage	Stratum
More than \$6.195	20,1%,1%	A
Between \$2.826 and \$6.195	26,5%	B1
Between \$1.482 and \$2.826	12,0%	B2
Between \$826 and \$1.482	19,7%	C1
Between \$235 and \$496	20,1%	C2 / D
Less than \$235	1,6%	E

Table 1 shows the largest share of respondents is in class B1, followed by classes A and C2 / D. Nevertheless, a certain balance in the composition of the sample is noted. Table 2 indicates the acceptance profile of the respondents about the affirmatives which make up the scale of socially responsible consumer behavior (TD = totally disagree; D = disagree; I = indifferent; A = agree; TA = totally agree). It can be concluded there is a tendency for respondents to agree (57%) rather than disagree (23%), which is, young people seem to be aware of the environmental problems and impacts irresponsible consumption entails and practices which help minimize them.

**Description and analysis of chi-square test results:** The chi-square test was performed to find out if there is a relationship of dependence between the affirmatives which make up the SRCB scale and the socio-demographic median household income variable. For this, the null ( $H_0$ ) and alternative ( $H_1$ ) hypotheses were established. The null hypothesis states there is no relation of significant dependence between the affirmatives and the income variable. In contrast, the alternative hypothesis suggests there is such a relationship. Analyzing the results obtained, it was possible to observe only two affirmatives have an association with the average family income, with  $p\text{-value} \leq 0.05$ . In this case, the null hypothesis is rejected and the dependence is confirmed. The following are the statements which were statistically dependent on the variable income.

Question 16 made the respondent think about the alternative of cycling or taking a bus to work in order to reduce air pollution. According to Table 3, there is a significant dependence relationship between the affirmative and the income variable, since the  $p\text{-value}$  equal to 0.059 is a result slightly above the level of significance (0.05), and therefore has some relation with the variable income.

Question 31 of the questionnaire referred to wage income, as it sought to assess whether respondents would be willing to pay one dollar more each month for electricity if it meant cleaner air. In view of this, it can be easily noticed the average family income influences the answer of the question, since according to the data in Table 4, the  $p\text{-value}$  is lower than the level of significance ( $p = 0.001 < 0.05$ ).

Table 2. Percentage of agreement and disagreement by affirmative

AFFIRMATIVES	TD	D	I	A	TA
Q1 People should be more concerned about reducing or limiting the noise in our society.	2%	3%	24%	50%	23%
	4%			72%	
Q2 Every person should stop increasing their consumption of products so that our resources will last longer.	4%	17%	26%	36%	17%
	21%			53%	
Q3 The benefits of modern consumer products are more important than the pollution, which results from their production and use.	40%	38%	11%	7%	3%
	78%			11%	
Q4 Pollution is presently one of the most critical problems facing this nation.	4%	17%	11%	41%	26%
	21%			68%	
Q5 I do not think we are doing enough to encourage manufacturers to use recyclable packages.	3%	9%	18%	50%	21%
	12%			70%	
Q6 I think we are just not doing enough to save scarce natural resources from being used up.	1%	2%	7%	44%	47%
	3%			91%	
Q7 Natural resources must be preserved even if people must do without some products.	0%	9%	25%	43%	23%
	9%			66%	
Q8 All consumers should be aware in the environmental consequences of the products they purchase	0%	2%	11%	43%	44%
	2%			87%	
Q9 Pollution is not personally affecting my life.	34%	43%	9%	12%	2%
	76%			14%	
Q10 Consumers should be pay higher prices for products which pollute the environment.	6%	14%	22%	35%	24%
	20%			59%	
Q11 It genuinely infuriates me to think that the government does not do more to help control pollution of the environment.	0%	1%	10%	43%	46%
	1%			89%	
Q12 Nonreturnable bottles and cans for soft drinks and beer should be banned by law.	8%	23%	24%	29%	16%
	31%			45%	
Q13 I would be willing to sign a petition or demonstrate it for an environmental cause.	2%	5%	13%	42%	38%
	9%			80%	
Q14 I have often thought that if we could just get by with a little less there would be more left for future generations.	3%	9%	20%	44%	24%
	12%			68%	
Q15 The Federal government should subsidize research on technology for recycling waste products.	0%	4%	8%	41%	47%
	4%			88%	
Q16 I would be willing to ride a bicycle or take a bus to work in order to reduce air pollution.	5%	9%	14%	38%	35%
	14%			73%	
Q17 I would probably never join a group or club, which is concerned solely with ecological issues.	29%	32%	27%	7%	4%
	62%			11%	
Q18 I feel people worrying too much about pesticides on food products.	18%	36%	24%	18%	5%
	54%			23%	
Q19 The whole pollution issue has never upset me too much since I feel it is somewhat overrated.	19%	35%	18%	21%	8%
	53%			28%	
Q20 If I were working, I would donate a day's pay to a foundation to help improve the environment.	10%	22%	31%	29%	9%
	32%			37%	
Q21 I would be willing to have my laundry less white or bright in order to be sure that I was using a nonpolluting laundry product.	5%	14%	25%	41%	15%
	19%			56%	
Q22 Manufacturers should be forced to use recycled materials in their manufacturing and processing operations.	2%	6%	13%	45%	34%
	8%			79%	
Q23 I think that a person should urge his/her friends not to use products that pollute or harm the environment.	1%	5%	17%	53%	24%
	6%			77%	
Q24 Commercial advertising should be forced to mention the ecological disadvantages of products.	2%	8%	17%	44%	29%
	10%			74%	
Q25 Much more fuss is being made about air and water pollution than is really justified.	20%	29%	22%	21%	7%
	50%			29%	
Q26 The government should provide each citizen with a list of agencies and organizations to which citizens could report grievances concerning pollution.	1%	4%	14%	46%	35%
	5%			81%	
Q27 I would be willing to pay a 5% increase in my taxes to support greater governmental control of pollution.	32%	22%	25%	13%	8%
	53%			21%	
Q28 Trying to control water pollution is more trouble than it is worth.	18%	32%	28%	17%	5%
	50%			22%	
Q29 I become incensed when I think about the harm being done to plant and animal life by pollution.	0%	6%	21%	47%	25%
	7%			72%	
Q30 People should urge their friends to limit their use of products made from scarce resources.	1%	4%	24%	48%	22%
	5%			71%	
Q31 I would be willing to pay one dollar more each month for electricity if it meant cleaner air.	7%	9%	16%	39%	29%
	16%			68%	
Q32 It would be wise for the government to devote much more money in supporting a great conservation program.	1%	4%	18%	52%	26%
	5%			77%	
Q33 I would be willing to accept an increase in my family's total expenses of \$120 next year to promote the wise use of natural resources.	6%	12%	24%	38%	20%
	18%			58%	
Q34 Products, which during their manufacturing pollute the environment, should be heavily taxed by the government.	2%	7%	21%	39%	32%
	9%			67%	
Q35 People should be willing to accept smog in exchange for the convenience of automobiles.	26%	29%	31%	9%	4%
	56%			13%	
Q36 When I think of the ways industries are polluting I get frustrated and angry.	1%	5%	21%	49%	24%
	6%			73%	
Q37 Our schools and universities should require all students to take a course dealing with environmental and conservation problems.	3%	5%	25%	44%	24%
	9%			68%	
Q38 I would be willing to stop buying products from companies guilty of polluting the environment even though it might be inconvenient.	3%	12%	36%	33%	16%
	15%			49%	
Q39 I would be willing to make personal sacrifices for the sake of slowing down pollution even though the immediate results may not seem significant.	3%	6%	26%	50%	15%
	9%			65%	
Q40 I rarely worry about the effects of smog on my family and myself.	31%	32%	21%	13%	3%
	63%			16%	

Source: Scale adapted from Antil and Bennett (1979).

**Table 3. Result of Chi-square Test of Question # 16**

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	14,986 <sup>a</sup>	8	,059
LikelihoodRatio	16,833	8	,032
Linear-by-Linear Association	11,147	1	,001
N ofValid Cases	230		

**Table 4. Result of Chi-square Test of Question # 31**

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	27,456 <sup>a</sup>	8	,001
LikelihoodRatio	28,150	8	,000
Linear-by-Linear Association	8,482	1	,004
N ofValid Cases	230		

**Table 5. F Test Result (ANOVA)**

ANOVA		Sum ofSquares	df	Mean Square	F	Sig.
Q1	BetweenGroups	,630	4	,157	,512	,727
	WithinGroups	69,201	225	,308		
	Total	69,830	229			
Q2	BetweenGroups	4,586	4	1,147	1,801	,130
	WithinGroups	143,244	225	,637		
	Total	147,830	229			
Q3	BetweenGroups	1,973	4	,493	1,126	,345
	WithinGroups	98,571	225	,438		
	Total	100,543	229			
Q4	BetweenGroups	1,761	4	,440	,662	,619
	WithinGroups	149,630	225	,665		
	Total	151,391	229			
Q5	BetweenGroups	,442	4	,110	,206	,935
	WithinGroups	120,432	225	,535		
	Total	120,874	229			
Q6	BetweenGroups	,486	4	,121	,756	,555
	WithinGroups	36,106	225	,160		
	Total	36,591	229			
Q7	BetweenGroups	1,148	4	,287	,650	,627
	WithinGroups	99,373	225	,442		
	Total	100,522	229			
Q8	BetweenGroups	,603	4	,151	,853	,493
	WithinGroups	39,762	225	,177		
	Total	40,365	229			
Q9	BetweenGroups	4,251	4	1,063	2,060	,087
	WithinGroups	116,079	225	,516		
	Total	120,330	229			
Q10	BetweenGroups	2,374	4	,593	,939	,442
	WithinGroups	142,187	225	,632		
	Total	144,561	229			
Q11	BetweenGroups	,620	4	,155	1,281	,278
	WithinGroups	27,211	225	,121		
	Total	27,830	229			
Q12	BetweenGroups	1,106	4	,276	,369	,830
	WithinGroups	168,442	225	,749		
	Total	169,548	229			
Q13	BetweenGroups	1,583	4	,396	1,267	,284
	WithinGroups	70,282	225	,312		
	Total	71,865	229			
Q14	BetweenGroups	,848	4	,212	,426	,789
	WithinGroups	111,800	225	,497		
	Total	112,648	229			
Q15	BetweenGroups	,987	4	,247	1,109	,353
	WithinGroups	50,061	225	,222		
	Total	51,048	229			
Q16	BetweenGroups	7,459	4	1,865	3,816	,005
	WithinGroups	109,937	225	,489		
	Total	117,396	229			
Q17	BetweenGroups	2,434	4	,609	1,303	,270
	WithinGroups	105,062	225	,467		
	Total	107,496	229			
Q18	BetweenGroups	2,308	4	,577	,866	,485
	WithinGroups	149,884	225	,666		
	Total	152,191	229			
Q19	BetweenGroups	,883	4	,221	,291	,883
	WithinGroups	170,404	225	,757		
	Total	171,287	229			

.....Continue

Q20	BetweenGroups	3,173	4	,793	1,164	,327
	WithinGroups	153,301	225	,681		
	Total	156,474	229			
Q21	BetweenGroups	2,016	4	,504	,814	,517
	WithinGroups	139,306	225	,619		
	Total	141,322	229			
Q22	BetweenGroups	2,098	4	,525	1,450	,218
	WithinGroups	81,384	225	,362		
	Total	83,483	229			
Q23	BetweenGroups	1,657	4	,414	1,262	,286
	WithinGroups	73,826	225	,328		
	Total	75,483	229			
Q24	BetweenGroups	1,925	4	,481	1,112	,352
	WithinGroups	97,397	225	,433		
	Total	99,322	229			
Q25	BetweenGroups	7,212	4	1,803	2,505	,043
	WithinGroups	161,919	225	,720		
	Total	169,130	229			
Q26	BetweenGroups	,102	4	,025	,088	,986
	WithinGroups	65,220	225	,290		
	Total	65,322	229			
Q27	BetweenGroups	4,078	4	1,020	1,606	,174
	WithinGroups	142,809	225	,635		
	Total	146,887	229			
Q28	BetweenGroups	5,573	4	1,393	2,222	,067
	WithinGroups	141,057	225	,627		
	Total	146,630	229			
Q29	BetweenGroups	1,366	4	,342	,928	,448
	WithinGroups	82,808	225	,368		
	Total	84,174	229			
Q30	BetweenGroups	,762	4	,191	,568	,686
	WithinGroups	75,412	225	,335		
	Total	76,174	229			
Q31	BetweenGroups	7,621	4	1,905	3,406	,010
	WithinGroups	125,861	225	,559		
	Total	133,483	229			
Q32	BetweenGroups	,289	4	,072	,240	,916
	WithinGroups	67,902	225	,302		
	Total	68,191	229			
Q33	BetweenGroups	1,167	4	,292	,471	,757
	WithinGroups	139,394	225	,620		
	Total	140,561	229			
Q34	BetweenGroups	1,709	4	,427	1,038	,388
	WithinGroups	92,621	225	,412		
	Total	94,330	229			
Q35	BetweenGroups	,815	4	,204	,403	,806
	WithinGroups	113,707	225	,505		
	Total	114,522	229			
Q36	BetweenGroups	1,928	4	,482	1,403	,234
	WithinGroups	77,294	225	,344		
	Total	79,222	229			
Q37	BetweenGroups	3,862	4	,966	2,546	,040
	WithinGroups	85,338	225	,379		
	Total	89,200	229			
Q38	BetweenGroups	4,755	4	1,189	2,310	,059
	WithinGroups	115,789	225	,515		
	Total	120,543	229			
Q39	BetweenGroups	,760	4	,190	,445	,776
	WithinGroups	96,005	225	,427		
	Total	96,765	229			
Q40	BetweenGroups	3,052	4	,763	1,319	,264
	WithinGroups	130,170	225	,579		
	Total	133,222	229			

**Description and analysis of F test results (ANOVA):** The F test was performed to verify if there is a significant relationship between the socio-demographic median household income variable and the affirmatives of the SRCB scale. Assuming the samples are random and independent and the populations have regular distribution, the null hypothesis were established, which assumes there is no significant difference for the different income ranges, and the alternative hypothesis, which suggests a significant difference. Analyzing the results, it is noticed only four affirmatives of the scale (16, 25, 31 and 37) have an association with the median household income, that is,  $p\text{-value} \leq 0.05$ . In this case, the null hypothesis is rejected, accepting the existence of a significant difference

between the different income brackets for the affirmative of the SRCB scale. Thus, it can be affirmed a low percentage of affirmatives showed some relation with the income variable. Affirmatives 9, 28 and 38 had some relation with the income variable only after the Duncan test.

Question 16 asked the respondent if he "would be willing to ride a bicycle or take a bus to work in order to reduce air pollution." In order to verify if there is a significant difference between the income brackets, the Table 5 was analyzed. It was noticed the median household income variable influences the answer of the question, since the  $p\text{-value}$  is equal to 0.005 ( $<0.05$ ).

Question 25 of the questionnaire sought the respondent's opinion on the following statement: "Much more fuss is being made about air and water pollution than is really justified." Therefore, it can be easily noticed there is some relationship between the variables, since Table 5 shows that the p-value of question 25 is 0.043, smaller than the level of significance adopted (0.05).

Question 31 made the respondent assess his financial condition so he could "pay one dollar more each month for electricity if it meant cleaner air". This statement was shown to be dependent on the income variable when the F test (ANOVA) was performed, since, as shown in Table 5, its p-value was 0.01 (<0.05).

Question 37 sought the respondent's opinion about the following statement: "Our schools and universities should require all students to take a course dealing with environmental problems." Table 5 indicates the p-value of the question is 0.04, a result below the level of significance (0.05), so this question becomes dependent on the income variable, rejecting the null hypothesis of independence.

**Description and analysis of Duncan test results:** The first question to have some relation with the socio-demographic variable average family income was question 9, which made the respondent reflect if the pollution is affecting his personal life. According to Table 5, the p-value of this affirmative is equal to 0.087, above the level of significance (0.05). However, the Duncan test, whose method is the multiple comparison of averages, this affirmative was indicated as having relation with the income variable. This relationship is evidenced by the difference between the averages of classes C1 (2,152) and A (2,532), showing the respondents who are part of class A feel more the effect of pollution on their lives than the respondents of class C1 (Table 6).

**Table 6. Duncan Test Result of Question # 9**

MedianHouseholdIncome	N	Subset for alpha = 0.05	
		1	2
Between \$826 and \$1.482(C1)	46	2,152	
Between \$1.482 and \$2.826 (B2)	28	2,321	2,321
Between \$235and \$496 (C2 / D)	47	2,362	2,362
Between \$2.826 and \$6.195(B1)	62	2,484	2,484
More than \$6.195(A)	47		2,532
Sig.		,050	,220

Question 16 asked the respondent if he "would be willing to ride a bicycle or take a bus to work in order to reduce air pollution." In order to verify if there is a significant difference between the averages of the treatments, the Table 7 was analyzed. It was concluded the median household income influences the answer of the question, since the average of class A (3,362) is statistically different from the average of class C1 (3,870), being class C1 more willing to use more economical and less polluting means of transportation to work.

**Table 7. Duncan Test Result of Question # 16**

MedianHouseholdIncome	N	Subset for alpha = 0.05		
		1	2	3
More than \$6.195(A)	47	3,362		
Between \$2.826 and \$6.195(B1)	62	3,500	3,500	
Between \$1.482 and \$2.826 (B2)	28	3,536	3,536	
Between \$235and \$496 (C2/D)	47		3,723	3,723
Between \$826 and \$1.482(C1)	46			3,870
Sig.		,280	,164	,333

Question 25 sought the respondent's opinion on the following statement: "Much more fuss is being made about air and water pollution than is really justified." By the analysis of Table 8, it can be seen there is a significant difference between the averages of the treatments, being evidenced by classes C1 (2,522) and C2-D (3,043).

**Table 8. Duncan Test Result of Question # 25**

MedianHouseholdIncome	N	Subset for alpha = 0.05	
		1	2
Between \$826 and \$1.482(C1)	46	2,522	
More than \$6.195(A)	47	2,702	2,702
Between \$2.826 and \$6.195(B1)	62	2,774	2,774
Between \$1.482 and \$2.826 (B2)	28		2,929
Between \$235and \$496 (C2 / D)	47		3,043
Sig.		,195	,090

Question 28 was whether the respondent felt that "Trying to control water pollution is more problematic than it is worth it." In order to verify if there is a dependence on the affirmative in relation to the median household income, Table 5 was analyzed and it was observed the value is slightly higher than the level of significance of 0.05, being this value of 0.067. However, by the Duncan test, Table 9 shows class A (2,426) has a different average of classes C2/D (2,851), that is, classes C2/D have an effective participation in the affirmative.

**Table 9. Duncan Test Result of Question # 28**

MedianHouseholdIncome	N	Subset for alpha = 0.05	
		1	2
More than \$6.195(A)	47	2,426	
Between \$1.482 and \$2.826 (B2)	28	2,679	2,679
Between \$826 and \$1.482(C1)	46		2,783
Between \$2.826 and \$6.195(B1)	62		2,806
Between \$235and \$496 (C2 / D)	47		2,851
Sig.		,140	,364

Question 31 made the respondent assess his financial condition so he could "pay one dollar more each month for electricity if it meant cleaner air." According to Table 10, there is a statistically significant difference between class averages, class C1 (3,239) being different from classes A and B2 (3,702 and 3,714 respectively). According these results it is possible to conclude the lower classes (C1 and C2/D) have the lowest averages in comparison with the other classes.

**Table 10. Duncan Test Result of Question # 31**

MedianHouseholdIncome	N	Subset for alpha = 0.05		
		1	2	3
Between \$826 and \$1.482(C1)	46	3,239		
Between \$235and \$496 (C2 / D)	47	3,362	3,362	
Between \$2.826 and \$6.195(B1)	62		3,581	3,581
More than \$6.195(A)	47			3,702
Between \$1.482 and \$2.826 (B2)	28			3,714
Sig.		,448	,176	,439

Question 37 sought the respondent's opinion about the following statement: "Our schools and universities should require all students to take a course dealing with environmental problems." By analyzing the Duncan Test in Table 11, it can be concluded there is a significant difference of opinion between classes B2 (3,286) and C1 (3,717).

Question 38 assessed whether the respondent "would be willing to stop buying products from companies responsible for polluting the environment, even if it could be

inconvenient." So as to verify if there is a dependence on the affirmative with respect to the average family income, Table 5 was analyzed, observing the value  $p$  is 0,059, slightly higher than the level of significance of 0,05. However, by the Duncan test (Table 12), there is a difference between the means of classes B2 (3,179) and C1 (3,587) with regard to the willingness of stop purchasing products from companies that pollute the environment."

**Table 11. Duncan Test Result of Question # 37**

MedianHouseholdIncome	N	Subset for alpha = 0.05	
		1	2
Between \$1.482 and \$2.826 (B2)	28	3,286	
More than \$6.195(A)	47		3,553
Between \$2.826 and \$6.195(B1)	62		3,629
Between \$235 and \$496 (C2 / D)	47		3,681
Between \$826 and \$1.482(C1)	46		3,717
Sig.		1,000	,266

**Table 12. Duncan Test Result of Question # 38**

MedianHouseholdIncome	N	Subset for alpha = 0.05	
		1	2
Between \$1.482 and \$2.826 (B2)	28	3,179	
Between \$2.826 and \$6.195(B1)	62	3,210	
More than \$6.195(A)	47	3,277	3,277
Between \$235 and \$496 (C2 / D)	47	3,362	3,362
Between \$826 and \$1.482 (C1)	46		3,587
Sig.		,287	,058

The results presented by the Duncan Test show young people from the lower classes are more impacted by affirmatives when it comes to money. It can be easily noticed in 16 and 31, the average of the respondents of classes C1 and C2/D is statistically different from the others. This issue can be explained by the significant effect income has on young people's opinion. Question 16 has a higher incidence of C1 and C2-D respondents, since taking buses or cycling is a cheaper practice in terms of cost. Question 31 also influences the income of the respondent and allows to conclude that families feel the impact of the difference of one dollar or more in the electricity bill. Unlike the questions above, the affirmative 9 shows the class A feels more the effects of pollution in personal terms (Table 6), indicating young people of these classes are more conscious when it comes to the impact of pollution on their lives.

## Conclusion

The purpose of this paper was to investigate young consumers' ideas, attitudes and perceptions regarding socially responsible consumption practices. The focus of the study was on university students from Rio de Janeiro in classes A, B1, B2, C1, C2 and D. Having studied the concepts of socially responsible consumption, it was observed the socially responsible consumer is represented by a weighted individual, who intends to balance his own individual needs with the wellbeing of society in the long run. In order to achieve the desired goals, an exploratory research, with a quantitative approach was carried out, based on the scale developed by Antil and Bennett (1979), which measures the behavior of the socially responsible consumer. The instrument had 45 questions and a random sample of 234 students - young - from several universities in the city of Rio de Janeiro, aiming to measure the awareness of young people about conscious consumption.

After the descriptive analysis, the statistical inference technique was used in the evaluation of the results, in which hypotheses were raised about the influence of the income variable on the affirmatives which make up the SRCB scale. In this case, the hypothesis tests used were the chi-square test and F (ANOVA), in addition to the Duncan test. In the chi-square test, the goal was to find out if there is a relationship of dependence between the affirmatives of the CCSR scale and the socio-demographic median household income variable. As the null hypothesis of independence was rejected, it was possible to verify the dependence of the affirmative with the variable income. Thus, two affirmatives had some dependence relationship with the socio-demographic median household income variable. Due to the small significance of the results presented in the chi-square test, the ANOVA was performed in order to verify if there is a significant relationship between the socio-demographic median household income variable and the affirmatives from the scale of the SRCB. Duncan's test was then used to evaluate the results of the research in order to find income-dependent statements by means of a multiple comparison of averages (in this case, represented by income brackets). Thus, the results obtained revealed a difference from the previous test, since seven affirmatives showed to be dependent on the income variable. From the evaluation of the results through different hypotheses tests, it could be verified that few affirmatives have no relation with the income variable, which means the median household income is not a factor which shapes the behavior of conscious consumption of the young. Regardless of the variable, young people are sometimes aware that achieving responsible and sustainable consumption brings countless benefits to the environment and to society as a whole.

Among the implications of the findings presented here, it is important to highlight the fact that the public surveyed shows an interest in spending some more dollars to collaborate for a positive impact on the air they breathe - a fact which could be used by companies whose positioning is based on respect for the environment, for example. Another important item indicates the components of class A - of higher income - feel more the effect of the pollution on their lives, implying in potential opportunities to highlight this effect when offering to that class some product or service related to a conscious consumer appeal. Moreover, class C1 has a greater disposition to use more economical and less polluting means of transport for its locomotion - a fact which is impacted by the income factor, as shown. An observed implication refers to the opportunity of companies who aim at the aforementioned class in terms of offering and enhancing the use of alternative means of transportation, such as the bicycle itself, whose use in recent times has been increasing considerably in Rio de Janeiro. As a recommendation for future research, the line of study presented here can be developed through research on the consumer's lifestyle, which is the variable to be evaluated. The proposal would be to conduct a whole study about the lifestyle, which was not the proposal of this article. However, prior to conducting a quantitative study, it is suggested to obtain qualitative data, through focus groups, in-depth interviews or ethnography, and among other research methods to lead to the understanding of whether lifestyle influences the individual's socially responsible behavior.



## REFERENCES

- ABEP. 2016. *Critério Padrão de Classificação Econômica Brasil/2016*. Retrieved from <http://www.abep.org/criterio-brasil>. Accessed 10 Jan 2018.
- Akatu Instituto. 2007. *Pesquisa n.º. 7 - 2006: Como e por que os brasileiros praticam o consumo consciente?* São Paulo: Instituto Akatu.
- Antil, J.H. 1978. *The Construction and Validation of an Instrument to Measure Socially Responsible Consumer Behavior: A Study of the Socially Responsible Consumer*. Doctoral dissertation, Department of Marketing, The Pennsylvania State University.
- Antil, J.H. 1984. Socially Responsible Consumers: Profile and Implications for Public Policy. *Journal of Macromarketing*, 4, pp.18-39.
- Antil, J.H., & Bennett P.D. 1979. Construction and Validation of a Scale to Measure Socially Responsible Consumption Behavior. In *The Conserver Society*, (p.51-68). Chicago: American Marketing Association.
- François-Lecompte, A., & Roberts, J.A. 2006. Developing a measure of socially responsible consumption in France. *Marketing Management Journal*, 16(2), pp.50-66.
- Frões, D.M. 2011. *Planejamento estratégico 2011/2012 da Secretaria Adjunta da Juventude*. Montes Claros: Secretaria da Juventude, Esporte Lazer - Prefeitura Municipal de Montes Claros.
- Gandhi, M., & Kaushik, N. 2016. Socially responsive consumption behavior – an Indian perspective. *Social Responsibility Journal*, 12(1), pp.85-102.
- Hair Jr., J.F. et al. 2005. *Análise multivariada de dados*, 5.ed. Porto Alegre: Bookman.
- Malhotra, N. K. 2001. *Pesquisa de Marketing: uma orientação aplicada*. Porto Alegre: Bookman.
- Portilho, F. 2005. *Sustentabilidade ambiental, consumo e cidadania*. São Paulo: Cortez.
- Silva, M.E. et al. 2011. Definindo o perfil de consumo consciente da população recifense: A identificação do papel do indivíduo por meio de suas atitudes e comportamentos. In *XXI Encontro Nacional de Engenharia de Produção*. Belo Horizonte.
- Silva, M.E., Santos, J.G., & Souza, N.M.O. 2014. Ser, ter ou estar? A análise do comportamento do recifense quanto à prática do consumo consciente. In *XVI Encontro Internacional sobre Gestão Ambiental e Meio Ambiente – ENGEMA*. São Paulo.
- Singh, N. 2009. Exploring socially responsible behavior of Indian consumers: an empirical investigation. *Social Responsibility Journal*, 5(2), pp.200-211.
- SPC. *Consumo consciente 2016*. 2016. Retrieved from <https://www.spcbrasil.org.br/wpimpressao/wp-content/uploads/2016/07/An%C3%A1lise-Consumo-Consciente-2016.pdf>. Accessed 10 Jan 2018.
- Vieira, D. M. 2010. O consumo socialmente irresponsável. In *IV Encontro de Marketing da ANPAD*. Florianópolis.
- Webb, D.J., Mohr, L.A., & Harris, K.E. 2008. A re-examination of socially responsible consumption and its measurement. *Journal of Business Research*, 61(2), pp.91-98.
- Webster, F. E. 1975. Determining the characteristics of the socially conscious consumer. *Journal of Consumer Research*, 2(3), pp.188-196.

\*\*\*\*\*