

IMPACT OF SHARING ECONOMY IN SACRIFICE IN THE COLLABORATIVE TOURISM EVALUATED THROUGH A MULTIPLE REGRESSION MODEL

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Abstract

The sharing economy is considered to be a current trend, predominantly in the collaborative tourism sector by facilitating interactions via the Internet and allow improving tourist relationship with the community. Consumers sacrifice as much money as other resources (time, energy, effort) for goods and services. Sacrifice is influenced by monetary factors, temporal, psychological and behavioral. It is proposed that the perceived sacrifice in the context of tourism tends to decrease when one engages in collaborative consumer services. In this context, this paper aims to analyze the impact of sharing economy in perceived sacrifice. The literature review consisted of sacrifice and sharing economy studies, mainly in the field of tourism. Then, analyzing these papers with a text mining approach using the software NVivo Pro 11. To achieve the goals, we built a survey and analyzed with a quantitative research approach using methods of multivariate analysis model, specifically a multiple regression model with the software IBM SPSS 25. The results showed that people when using collaborative tourism, although they spare monetary resources, they sacrifice themselves more by obtaining services with less comfort and more expenditure of time, these being the two most relevant factors for the perception of sacrifice.

Keywords: Sharing economy. sacrifice. collaborative tourism. regression.

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1. INTRODUCTION

Although several researchers have begun to explore the trend of the shared economy by various aspects, there has been little theoretical discussion and the sociocultural aspect of sharing is still largely absent in the literature (Heo, 2016).

Nowadays many people, especially the youth, are arranging everything for their own trip in a way that they get to spend money as minimum as possible. So, they use collaborative tourism services to save money, but in doing so they spend a lot of time and energy, sacrificing time before the trip in exchange for saving that money.

Several studies have used AirBnb as the focus of shared economy research in the context of tourism (Ert, Fleischer, & Magen, 2016; Gutiérrez, García-Palomares, Romanillos, & Salas-Olmedo, 2017; Horn & Merante, 2017), yet there are still many other platforms that need in-depth study, including whether shared tourism is being used as a means of cultural exchange and experimentation or only as an artifice for monetary economy in a capitalist system. In any case, it is believed that the sacrificing aspects expended by consumers would tend to be minor in a context of collaborative tourism. It is such an issue that will be tested in the course of this work, with the following hypothesis: *H₀: The perceived sacrifice in the context of tourism tends to decrease when one engages in collaborative consumer services.*

In order to answer this hypothesis, we did a text mining analysis for the literature review with 30 papers about sacrifice and sharing economy using the software NVivo Pro 11. And then we applied a survey to ask people whom uses collaborative tourism services how they feel about it, if they consider spending more or less money, getting more or less comfort, spending more or less energy.

This survey was uploaded via Google Forms and we had 141 respondents. From those, 106 used collaborative tourism services before and were able to answer the questions. After the collection of the data from the survey we analyzed it in a descriptive approach and then we used a multivariate statistic to get a model that best suited this reality in study.

For the statistical analysis for the survey was used the software IBM SPSS 25.

The paper is structured as: first, is this introduction where the problem in question was contextualized, then the motivation for this paper. The second section is the literature review for the topics in study.

In the third section is going to be presented the descriptive analysis of the data and in sequence the multivariate analysis, a multiple regression model. In the fourth section is presented the conclusions of the paper and to finalize, all the references used.

2. LITERATURE REVIEW

The literature review in this paper is divided in two parts. First is presented a quantitative analysis for the papers referenced, a text mining analysis using the NVivo Pro 11 and then we talk about sharing economy, in specific about comfort and time and then about sacrifice, in specific about energy.

Figure 2. Graph comparing nodes Hierarchically



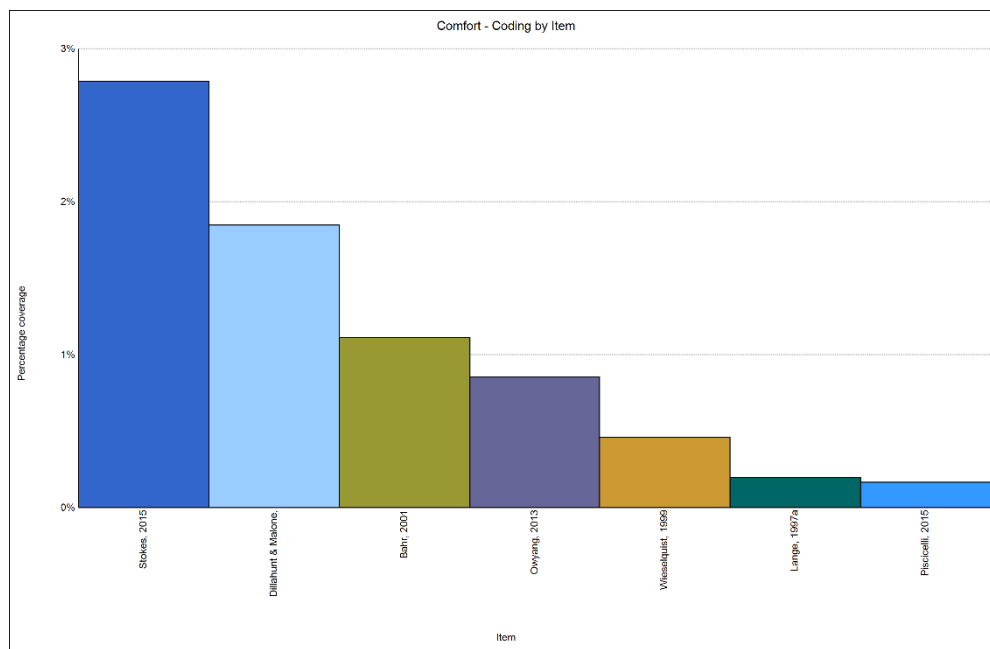
Source: The authors.

In the Figure 2 is presented the Graph comparing the Nodes Hierarchically, where we can observe how the 2 most important categories are “Sacrifice” and “Sharing Economy”. We can also point out how some types of popular collaborative tourism services as “Airbnb-Couchsurfing” and “Uber-Blablacar” also present importance for the authors studied.

We mark out the fact that after the survey the significant variables for the model were captured also in the categories “Energy”, “Comfort” and these categories are in the right side of the chart. That happens because these two variables are also included in “Experience”, “Perceived Quality”, for comfort and “Perceived Sacrifice” and “Sacrifice” for the category Energy (the expenditure of energy).

In the Figure 3 we observe the Node Coding Chart of the category “Comfort”, where we can point out the authors that matters the most for this category and these are: Stokes (2015); Dillahunt & Malone (2015); Bahr & Bahr (2001); Owyang (2013); Wieselquist, Rusbult, Foster & Agnew (1999); Van Lange, Rusbult, Drigotas, Arriaga, Witcher & Cox (1997); Piscicelli, Cooper & Fisher (2015), in this order. It shows in percentage the coverage of the category “Comfort” in that paper.

Figure 3. Chart Node Coding for the category “Comfort”



Source: The authors.

2.1 Sharing Economy

The act of sharing itself is old as time, but with the advent of the age of the Internet, online platforms have allowed the exchange or offer of Consumer to Consumer goods and services, facilitating the emergence of shared economy. However, although there are some exceptions, historically people tended not to share with strangers or those outside their social networks, but today, services and goods are shared among people who do not know each other, and who lack friends or connections in common (Koen Frenken & Schor, 2017).

Since the beginning of sharing economy, tourism and hospitality have emerged as one of the pioneering sectors for its growth, as the sharing economy allows tourists and residents to share their homes, cars, four-course meals and specialized local knowledge (Cheng, 2016). In what is called sharing economy, collaborative consumption, or peer economy, individuals participate in rent-sharing, lending, exchange of goods, services, transportation, space, or money activities (Möhlmann, 2015). Frenken, Meelen, Arets and Van de Glind (2015) defined sharing economy as “consumers granting each other temporary access to under-utilized physical assets (“idle capacity”), possibly for money”.

The rise of profit-based online platforms for Point-to-Point (P2P) sharing such as Airbnb, 9flats, Housetrip, HomeAway, Uber and shared hitch-hiking system has changed the way people travel and is of great importance to the traditional tourism industry (Heo, 2016). Shared economy sites have flourished particularly within the area of travel and tourism, where residents provide services to tourists (Ert et al., 2016). In this way, tourists can benefit from cheaper services close to local society and culture, as well as receiving support and companionship when traveling alone. They are platforms like Blablacar, Couchsurfing, Free

Walking Tours, among others, that provide services and support to the tourists, promoting an integration of the cybernetic culture (Richardson, 2015).

2.2 Sacrifice

Zeithaml (1988) presents the term sacrifice in the context of perceived value by the consumer. For the author, the components of sacrifice in perceived value include monetary costs and non-monetary costs. Consumers sacrifice as much money as other resources (time, energy, effort) to get products and services. Churchill Junior and Peter (2012) argue that there are at least four categories of costs that can influence the perceived value of clients, such as monetary costs, time costs, psychological costs, and behavioral costs.

Monetary costs relate to the amount of money customers pay to receive products and services. The time costs are similar to Zeithaml's time costs. Psychological costs, however, involve the mental energy and tension present in the buying process, while behavioral costs relate to the physical energy customers spend to buy products and services, similar to Zeithaml's concept of effort. It is thus perceived that the money spent is only one of the factors that consumers must sacrifice, other aspects can influence their perception of sacrifice in the purchase.

Shukla synthesized effort as “the amount of money, time, and energy the buyer is willing to expend to acquire a given product or service while risk reflects a condition wherein the product will not offer the benefit sought after purchase” (Shukla, 2010, p. 468).

Agarwal and Teas (2001) pointed out that consumers infer value based on their evaluation of product quality and monetary sacrifice, which is influenced by extrinsic quality and sacrifice cues. In other words, the sacrifice involved in a purchase will directly influence the consumer's perception of value. At the same time, Dodds and Monroe (1985) presented that the higher price represents a measure of what must be sacrificed to purchase the good and leads to a lesser willingness to buy. Perceived value represents a tradeoff between the two variables, perceived quality and sacrifice.

It is possible to infer that monetary aspects are closely related to the perception of sacrifice, as it is so for the analysis of touristic aspects. Consumers' understandings of money are integral to the ways in which tourists seek to engage with destinations (Desforges, 2001). Therefore, the way in which tourists deal with money will also determine their susceptibility to sacrifice and, consequently, to engage or not in shared economy platforms.

3. SURVEY ANALYSIS

In this section is going to be presented the descriptive statistical analysis and the multiple regression model for the survey. The population consisted of Brazilians above 18 years of age. It was taken into account that the age of majority in the country (18 years) should be considered so that the individual could travel alone and could enroll in shared economy platforms.

The survey was launched online via Google Forms and was responded by 141 people, from those, 106 respondents used collaborative tourism services. It was a nonprobabilistic sampling procedure.

The sample consisted of 51 men and 90 women. Respondents age ranged from 18 to 67 years, with an average of 28 years (± 9). The average family income was R\$ 4698.63. Part of the respondents live abroad.

3.1 Descriptive Analysis

In the Table 1 is presented the descriptive statistics for the three variables used in the final multiple regression model. The first column shows the variables, the second one the number of respondents for that question in the survey, then mean, median and standard deviation.

Table 1: Descriptive Statistics analysis

	N	Mean	Median	Std Deviation
Decrease in Personal Energy Consumption (<i>E</i>)	106	5.12	5.00	1.405
Comfort Provided (<i>C</i>)	108	5.24	5.00	1.452
Time Enjoyed (<i>T</i>)	109	5.61	6.00	1.347

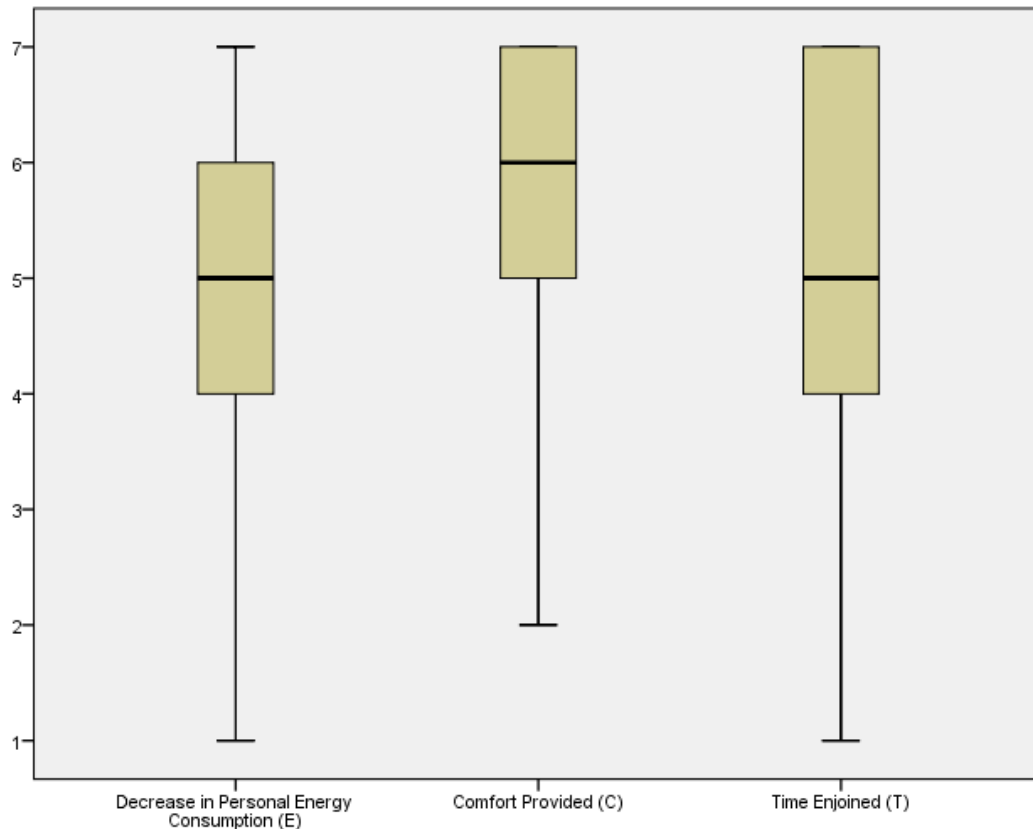
Source: The authors.

The first variable, “Decrease in personal energy consumption”, is the perception that the respondent has regarding the amount of energy that he wasted to be able to get access to the collaborative tourism. The following variables are “Comfort provided” and “Time enjoyed” and represent the respondents’ perception of the service provided by the collaborative tourism.

It is important to point out that from these three variables being analyzed, the one with the higher mean is *T*, which shows that people that used sharing economy considers that their time was better enjoyed because of these services.

Additionally, considering that the scale comprehended the range from 1 to 7, all variables presented a high mean, which means that the respondents acknowledge the collaborative tourism as something that decreased their personal energy consumption, their sacrifice, increase their comfort and their time enjoined.

Figure 4. Boxplots



Source: The authors.

In the Figure 4 is presented the boxplot for all three variables, we can observe that as mention in base with the kurtosis and skewness coefficients, the variable *E*, that is, decrease in personal energy consumption to be able to get access to the collaborative Tourism, is more concentrated in the middle, that is, between the values 4 and 6.

The variable *C*, the collaborative tourism provided less comfort / more comfort, is more spread on the half range that is from 4 and 7 and the variable *T*, Waste Time / Enjoy more of your time at your destination, is the most asymmetrical variable from these three. Also, none of the variables presents outliers.

We can conclude that on average people consider that the effort is worth it, that is that they don't perceive spending so much energy because that effort pays off, because with that preparation before the trip they can travel and get more comfortable services and they can enjoy the time at the tourist destination.

3.2 Multiple Regression Model

To analyze the surveys, we used multiple regression model. First, we can observe in the output that N (the number of cases used) is equal to 98 because not all respondents had used any collaborative tourism before and for the multiple regression model, since the model is for the collaborative tourism, we only use data from the respondents that had used it before and answered about the dependent variable.

To model, we checked the VIFs to check for multicollinearity and started with all the numeric variables and using the stepwise approach removed the variables necessary to get the model that best suited the reality studied.

The final model has as response variable E and as independent variables T and C . The determination coefficient, R^2 , is equal to 0.296, which means that approximated 30% from the variance from the dependent variable, "Decrease in Personal Energy Consumption (E)", can be explained by our model ($R^2_a = 0.281$).

The combination of the variables in this model significantly predicts the dependent variable ($F(2) = 19.999$; $p\text{-value} < 0.01$). The p -value of the t -test is 0.004 for both coefficients T and C . The model is presented below:

$$E = 1.793 + 0.317T + 0.292C + e$$

With this result we can conclude that the people perceive more sacrifice, that is, consider spending more personal energy to use a collaborative tourism service when they consider that they wasted time at their destination and also when consider that the service provided less comfort than expected.

When increasing in 1 the grade given to T , that is, when enjoying more their time at their destination, the respondents increase in 0.317 their grade to E and when T keep constant and C increases in 1, E will increase in 0.292, considering that they spent less energy to get the service, that happens because the perceived value increases when the value of these 2 variables increase. Concluding that when the perceived value increases the perceived sacrifice will decrease for that collaborative tourist service.

4. CONCLUSIONS

This paper intended to analyze the impact of sharing economy in sacrifice in tourism experience evaluating through a multivariate analysis. We concluded the people perceive more sacrifice, that is, consider spending more energy to use a collaborative tourism service when they consider that they wasted time at their destination and also when consider that the service provided less comfort than expected.

This can happen because modalities of shared economy (such as airbnb, couchsurfing or blablacar) are usually cheaper than B2C options, but they do not offer the same comfort, as well as the person tends to spend more time searching for someone who offers the service.

Accordingly to our results from the survey, considering Zeithaml's concept of effort, more specifically the psychological costs, involving mental energy and tension were significantly important while the monetary cost was not significant to the final model of perceived sacrifice.

In other words, people when using collaborative tourism, although they spare monetary resources, they sacrifice themselves more by obtaining services with less comfort and more expenditure of time, these being the two most relevant factors for the perception of sacrifice.

To finalize, we can say that H_0 is valid when the consumer considers that the service was worth it. Otherwise the perceived sacrifice increases.

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