



# Is Choice A Boon or Bane in The Online Shopping of Electronic Devices?

Haritha S<sup>1</sup>  
Dr. Bijuna C Mohan<sup>2</sup>

## Abstract

Online shopping is in the sunshine phase in India, recording an exponential growth rate. E-tailers are vying for customers by listing products from all the categories on their online shopping portals, from branded products to private labels to products sourced from local vendors. This has led to a plethora of choices for the consumers. Even though consumers are attracted towards the huge product catalogue, making a decision out of these choices can be overwhelming and can lead to negative consequences like cognitive dissonance and eventually lead to dissatisfaction. The study attempts to identify the nature of relationship between choice difficulty and cognitive dissonance within the context of online shopping in India. Within the framework of cognitive dissonance, an attempt is being made to identify if choice is a boon or bane for online shoppers and E-tailers. Based on the responses of 250 online shoppers of Electronic devices from select metropolitan cities in India, the findings reveal that there is a statistically significant and positive relationship between choice difficulty and cognitive dissonance with demographics moderating this relationship to a very small extent.

**Keywords:** Cognitive Dissonance, Choice difficulty, Online shopping, Electronic devices.

## 1. Introduction

Indian e-tailing sector is witnessing a never-before transition with top global E-tailing companies vying for leadership in India. With increasing competition, retaining customers and ensuring they are satisfied is gargantuan task for E-tailers. Higher perceived risks, excessive choice, lack of trust can lead to cognitive dissonance among consumers. Researchers have already studied most of these variables, however studies concerning choice difficulty and cognitive dissonance in the E-tailing context is sparse. In this paper an attempt is being made to identify and establish the nature of relationship between choice difficulty & cognitive dissonance. This paper also addresses the research gap of studying these variables within the Indian E-tailing sector. Electronics is the category chosen for the study as it contributes to the highest sales across all the categories in E-tailing (IBEF, 2020). Within electronics, the paper focuses on devices as these products are high involvement purchases.

## 2. Literature Review & Propositions

### 2.1 Cognitive Dissonance

Theory of cognitive dissonance was developed by Festinger (1957), which states that if a person holds two cognitions that are inconsistent with one another, he will experience dissonance and try to reduce it. As per Cummings & Venkatesan (1978) and Oliver (1997) there are three well known conditions for cognitive dissonance to arise, the purchase decision needs to be a) important; b) irrevocable and c) voluntary. Menasco & Hawkins (1978) and Oliver (1997) further added that these conditions most apparent in extended-problem solving decisions, such as purchasing major durables or appliances, which vary in terms of features across price and brands. Pei (2013) stated that the degree of cognitive dissonance depends heavily on the importance of decision, the attractiveness and the number of the available alternatives, and also similarities

<sup>1</sup> Research Scholar, School of Management, National Institute of Technology Karnataka [Haritha.sm16p01@nitk.edu.in](mailto:Haritha.sm16p01@nitk.edu.in)

<sup>2</sup> Assistant Professor, School of Management, National Institute of Technology Karnataka [bijuna@nitk.edu.in](mailto:bijuna@nitk.edu.in)

between the alternatives. Cognitive Dissonance in retailing is most commonly measured with a scale of 22 items devised by Sweeney et al., (2000), which is composed of three dimensions i.e. Emotions, Wisdom of Purchase and Concern over the deal.

## 2.2 Choice Difficulty

Choice in the context of retail setting refers to purchase from a specific store after some information search and evaluation of alternative stores (Spiggle and Sewal, 1987). Decision making becomes difficult when a consumer has to choose between alternatives which are very similar. As similarities increases, magnitude of dissonance also increases (Ivy et al. 1978; Menasco and Hawkins, 1978). Online shopping's biggest advantage is the ubiquity of choice it can provide with product catalogue of millions of products; however, this can prove to be overwhelming for customers due to their limited processing capability (Haubl & Murray, 2003). According to Festinger (1957), after a choice is made, the conflicting cognitions arising due to the negative aspects of the chosen alternatives and positive aspects of the unchosen alternatives can eventually lead to cognitive dissonance. This relationship has never been examined within the online shopping context in India. Based on the literature review, the following hypotheses are proposed:

**H1:** There is a significant relationship between cognitive dissonance and choice difficulty in the online purchase of electronic devices

**H1a:** There is a significant relationship between choice difficulty and individual dimensions of cognitive dissonance in the online purchase of electronic devices

**H2:** Choice difficulty positively impacts cognitive dissonance

**H3:** Demographics moderate the relationship between cognitive dissonance and choice difficulty.

## 3. Methodology

The research tool used for the study is a questionnaire survey. A mix of random sampling and convenience sampling is used to finalise the sample for the study. Sample size estimated to 250 using Slovin's formula. Data was collected from Delhi, Mumbai, Bangalore, Hyderabad and Kolkata, as these cities contribute to highest sales across the online shopping portals.

### 3.1 Data Analysis & Results

Descriptive statistics indicate that 52.8 percent of the respondents were from the age group of 25-34, male respondents formed 52.4 percent of the sample. 57.3 percent were post graduates. The measurements were reliable with a Cronbach's alpha for cognitive dissonance at 0.897 indicating good internal consistency and Cronbach's alpha for choice difficulty was 0.6, indicating moderate reliability and is acceptable (Darren & Mallery, 2003; Hinton et al., 2004). KMO values were above 0.5 indicating sample adequacy (Field, 2000). Cognitive dissonance loaded to two factors one factor comprised of emotional dimension and the second factor was a combination of wisdom of purchase and concern over the deal. The two factors had an Eigen value of 5.977 and explained a variance of 66.407 percent. Choice difficulty loaded to two components with Eigen values of 2.801 and explaining 70.059 percent of the variance. The relationship between cognitive dissonance and choice difficulty was analysed using bivariate correlation. Even though the relationship between cognitive dissonance and choice difficulty was significant, the *r* (Pearson's correlation) value was 0.246 indicating a low positive correlation. The *r* value varied as 0.222, 0.207 and 0.206 between individual dimensions of cognitive dissonance and choice difficulty. To assess if the demographics moderated the relationship between choice difficulty and cognitive dissonance hierarchical linear regression was used. The *r* square values were very low, but it did show minor improvement with addition of demographic variables.

Table 1: Summary of Hierarchical Regression

Model	R	R square	R square change	Sig F change
Model 1 (Choice difficulty)	0.246	0.060	0.057	0.000
Model 2 (Choice difficulty, Family monthly income)	0.254	0.065	0.057	0.000
Model 3 (Choice difficulty, Family monthly income, Highest educational qualification)	0.274	0.075	0.064	0.000

Source: Data analysis

#### 4. Discussions & Implications

Based on the analysis it is evident that even though the positive correlation between choice difficulty and cognitive dissonance is statistically significant, the association is weak. Demographics is moderating the relationship only marginally. In conclusion, choice difficulty can cause cognitive dissonance, but may not be the only factor. This leaves a scope for further research on impact of variables like other demographic variables and variables like involvement, product categories etc. on cognitive dissonance beyond choice difficulty. Implication of this study for E-tailers would be to exercise caution and find a sweet spot in the size of selection they offer and not obsess on the principle of more is merrier.

#### 5. References

1. Cummings, H., W. and Venkatesan, M. (1976). Cognitive dissonance and consumer behaviour: a review of the evidence. *Journal of marketing research*.13(3), 303-308.
2. Darren, G., & Mallery, P. (2003). *SPSS for Windows step by step: A simple guide and Reference* (Fourth ed.). Retrieved from <https://wps.ablongman.com/wps/media/objects/385/394732/george4answers.pdf>
3. Festinger, L. (1957). *A theory of Cognitive Dissonance*. Evanston, IL: Row, Peterson.
4. Field, A. (2000). *Discovering Statistics using IBM SPSS Statistics*. Sage Publications.
5. Haubl, G. & Murray, B., K. (2003). Preference construction and persistence in digital marketplaces. *Journal of consumer psychology*. 13(1-2), 75-91.
6. Hinton, P. R., Charlotte, B., Isabella, M., & Bob, C. (2004). *SPSS Explained*. London and New York: Routledge.
7. IBEF. (2020, January). *Growth of Ecommerce Industry in India - Infographic*. Retrieved from Indian Brand Equity Foundation: <https://www.ibef.org/industry/ecommerce/infographic>
8. Ivy, T., Virginia, S., H. & Robert, S., E. (1978). Dissonance theory: a managerial perspective. *Business & society*. 19(1), 17-25.
9. Menasco, M., & Hawkins, D., I. (1978). A Field Test of the Relationship between Cognitive Dissonance and State Anxiety. *Journal of Marketing Research*, 15(4), 650-655.
10. Oliver, R. L. (1997). *Satisfaction: A behavioral perspective on the consumer*. New York: McGraw-Hill.
11. Pei, Z. (2013). Rational decision making models with incomplete weight information for production line assessment. *Information Science*. 222(10), 696-716.
12. Sweeney, J., C., Hausknecht, D., & Soutar, N., G. (2000). Cognitive Dissonance after Purchase: A Multidimensional Scale. *Psychology & Marketing*. 17(5),369-385.
13. Spiggle, S., & Sewall, M., A (1987). A choice sets Model of Retail Selection. *Journal of Marketing*. 51(2), 97-111.