Online Store Attribute Preferences:  
A Gender Based Perspective and MCDM Approach  

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ABSTRACT 

This article describes how purchasing from an online store depends on various attributes of the online store. The relative importance given to a particular factor may vary across gender. Thus, it generates a scope of inquiry for understanding the consumer behavior while making an online purchase. Hence, this article tries to understand the relative importance of the factors affecting consumers buying behaviors while shopping online. This article utilizes Fuzzy AHP and TOPSIS for finding relative weights of criteria and ranking of the alternatives available respectively. The results were analyzed for finding the relative importance of factors across gender. The article finds that security of transactions is the topmost priority for both males and females, but they put a different level of importance on rest of the factors. The results provide valuable insights which can help the online stores in prioritizing the important factors for future improvements. 

KEYWORDS 

AHP (Analytic Hierarchy Process), Fuzzy AHP, MADM (Multi Attribute Decision Making), MCDM (Multi Criteria Decision Making), TOPSIS (Technique for Order Preference by Similarity to Ideal Solution) 

1. INTRODUCTION 

In the internet based commerce or shopping, the consumers are in direct contact with the online store but cannot experience the products directly unlike the brick and mortar shop. This lack of experiencing or touching the product creates various barriers in the minds of consumers towards purchasing online. Therefore, the online stores have to improve various aspects of their services to attract or retain the customers. In other words, the online store cannot provide the direct experience of the product, but it can work on other concerned aspects affecting the purchase intentions of customers. 

Currently in India, with the increasing penetration of internet services, the number of consumers buying online is growing at a remarkable pace. According to Forrester report on online retail forecast 2016-2021, Indian e-commerce market is set to grow at the fastest pace in the Asia Pacific region. As reported by IBEF, Indian retail industry is expected to increase at CAGR of 16.7% over 2015-2020. The size of the retail market is projected to be US$1.3 billion by 2020. With the penetration of internet
and changes taking place in lifestyle of people, more people are going for an online purchase. Indian online retail sector is projected to grow from US$6 billion to the US $70 billion during FY15- FY20 (www.ibef.org, 2017). These numbers show the potential of this vast market. Therefore, it becomes necessary to study various aspects related to online shopping because of its growing importance.

There are diverse factors which affect the behavior of consumers in a market. The existence of diverse and large number of factors makes it difficult for the online shopping stores to focus their attention on all of them. Therefore, there is need to understand the most important factors which are highly relevant for the consumers. Final decision made by a consumer is based on more than one factor, and this makes it a multi-criteria decision-making (MCDM) problem. AHP is one of the extensively used MCDM methods for decision making, but it is deterministic. As the store attributes like product information quality, security of transactions, etc. are subjective, and it becomes difficult for the consumer to quantitatively allocate a number to these factors. To circumvent with this problem, this paper makes use of the fuzzy AHP approach.

This paper discusses the use of fuzzy AHP to understand the relative significance of various store attributes for a consumer buying online. This is done by computing the weights of some relevant factors affecting the consumer behavior. Weighing the factors helps in prioritizing them for business improvement and make better business decisions (Cheng & Li, 2001). Hence, the main aim of this study is to find relative importance of store attributes for shoppers (males and females).

The paper is structured as follows. The first section gives a brief introduction about the online buyer behavior with special reference to India. The second section reviews the relevant literature on store attributes, consumer behavior in online shopping and their relationships. It also involves the review of studies focusing on studying the effect of gender in shopping behavior. The third section describes the design of study and method used to prioritize the factors. The fourth and fifth sections present the analysis of data. The last section concludes and discusses the implications of findings for online stores or e-commerce websites.

2. LITERATURE REVIEW

2.1. Online Shopping Behavior

The growing importance of online shopping has led the researchers to increasing study and analyse this aspect. There are many studies which focus on understanding the factors which affect the behavior and purchase intentions of the shopper or consumers. These studies help the online shopping websites to improve upon various aspects related to their services. One of the factors which play an important role in consumer response is the experience gained by the customer. This is because of the fact that shopping is not only a mechanical process, but also an enjoyable experience for many customers. This experience of the customer gets affected by many other factors (Won Jeong, Fiore, Niehm, & Lorenz, 2009). Jeong et al. (2009) studied the impact of website features like product presentation on the responses of the consumers. The experiential value gained by the consumer changes with the types of product presentations on apparel websites.

The business model of e-commerce players is such that they aim to create an online shopping habit which they could encash in the future. This industry is still at nascent stage, and it is emerging. The present study proposes to study the impact of gender on various factors affecting the purchase behaviors. This type of study is relevant because as the consumers gain experience in online shopping then their socioeconomic characteristics like age, gender and income do not moderate the perceptions of e-commerce (Hernández, Jiménez, & José Martín, 2011). However, as the industry is at the nascent stage now, it becomes imperative to study the effect of gender or other socioeconomic factors on their intentions.

The content and the way of presentation of products on website impacts the consumers’ willingness to go to a particular online store (Park & Kim, 2003). As the number of players in online shopping
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