

# Factors that influence Consumer Purchase Inclination at Online Shops or Retail Outlets Summary

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## **To Evaluate the Factors Influencing Consumer Purchase Inclination at Online Shops or Retail Outlets Using Normal Variant of Normal Distribution Function**

The study highlights the decision making factors that guide consumers to whether to buy from retail outlets or online shops. The factors were distinguished based on a survey of 20 questions with respect to 10 selected components based on previous findings.

The study is conducted by taking the feedback of consumers on the selected components. Each questionnaire is given 3 options – agree, disagree and neutral associated with positive, negative and zero value respectively. From the feedback, the weight of each component is analyzed by taking the ratio of the highest count of an option and the total number of consumers, which was 15. The weights are fed to a function which calculates the **acceptance** of online shopping by a consumer for each component. A corresponding function for the **rejection** of online shopping is given the same data. A null hypothesis can be established for the acceptance function - whether majority of consumers are interested to accept online shopping and for the rejection function – whether majority of consumers want to reject online shopping.

The major conclusion from the study was prioritizing the factors for consumer purchase preference and offering suggestions for online shops and retail outlets for better marketing strategy. The study suggested prioritizing factors such as customer trust, switching cost and online services for online retailers to attract more consumers while also highlighting the importance of branding of retail outlets in gaining consumer trust and hence, gaining market share.

The study dealt with e-commerce business strategies and statistically outlined the key factors in developing the marketing strategy. The probability model used here was the standard

normal distribution. There can be as much as 10 factors affecting the outcome and every factor is equally important. The normal distribution is popular for representing such independent random variables whose distribution is unknown. It is widely used to represent factors such as human height, IQ curve and so on. The standardized form of normal distribution is written as

$$Z = \frac{X - \mu}{\sigma}$$

Hypothesis testing was also carried out using the Standard Normal Distribution. Here the hypothesis for discriminant functions are compared at 5% significance levels. The level is sufficient as to increasing the level might result in lower accuracy. Using the significance levels, the hypothesis testing is performed which results in rejecting or not rejecting the null hypothesis for both cases.

I think the paper was successfully able to point out the problems faced by online retailers and how particular factors play a more significant role. The methodology was reasonable with a coherent statistical inference. The use case was suitable for selecting standard normal distribution. However comparison with other probabilistic models could have been provided. The only significant flaw with the paper is that the amount of consumers for the study was far too low. No information regarding the nature of consumers was given which might play a role in the randomness of the experiment. More components and questions can be introduced for better and more accurate conclusions.

## References

To Evaluate the Factors Influencing Consumer Purchase Inclination at Online Shops or Retail Outlets Using Normal Variant of Normal Distribution Function Mohamed, Sheik; Mohaseena, S; Sreekanth, S; Ramakrishna from  
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**Abstract**—Among people, who often use the Internet, some make purchases at online shops and others do not. What decision-making factors affect their behavior? A questionnaire survey regarding the purchase was conducted and analyzed the survey responses. As a result of a Principal Component Analysis on 20 questionnaires, 10 factors were extracted. Furthermore, a Discriminant Analysis showed that the factors strengthening the trend of making purchases at an Retail outlet were switching costs, real information, first-hand examination, trust and distrust of online shops and that those strengthening the trend of making purchases at online shops were net information, time saving and price. The resultant of Discriminant Analysis of online store and retail outlet are applied in normal variant of Normal distribution function to test the Null Hypothesis which gives acceptance or rejection of either one.

**Keywords**—Dispersion, Retail Outlet, Normal Distribution, Principal Component Analysis, Discriminant Analysis.

### I. INTRODUCTION

Along with the prevalence of the Internet, electronic commerce for general consumers has been expanding. Various goods, including books, CDs, DVDs, hobby-related goods, clothing items, electronic goods, and even food items are being sold at online shops. However, some people regularly make purchases at online shops, but some others do not, even if they regularly use the Internet. Some consumers do not purchase goods at online shops even when prices are low and orders are easy to submit. What are the factors of consumers' thinking and feeling that guides their decision-making processing deciding whether to buy goods at either retail outlet or online shops? In order to answer this question, It is planned for consumers' purchasing factor model and sought to verify it by analysis of a questionnaire survey. This model will contribute to the development of marketing strategies for online shops and stores.

The term "outlet" means a retail site with a physical location. The term "online shop" means a retail site established on the Internet, without a corresponding physical location. The term "shop" on its own is used to indicate either a physical store or an online store[2].

### II. RELATED WORK

#### A. Frictionless Commerce:

Internet represents a new nearly "frictionless market." The research empirically analyzes the characteristics of the Internet as a channel for two categories of homogeneous products—books and CDs. We find that levels of price dispersion depend importantly on the measures employed. When we compared the prices posted by different Internet retailers we find substantial dispersion. Internet retailer

prices differ by an average of 33% for books and 25% for CDs[1].

However, when we weight these prices by proxies for market share, we find dispersion is lower in Internet channels than in conventional channels, reflecting the dominance of certain heavily branded retailers. Unique characteristics of the Internet will bring about a nearly perfect market. In the extreme version of this "Internet efficiency" view, the characteristics of the Internet will lead to a market where retailer "location" is irrelevant, consumers are fully informed of prices and product offerings, and all retailers make zero economic profit. At the same time, there is anecdotal evidence that the Internet may not be completely efficient [1].

The methodology tracks two types of retailers: those that sell over the Internet and those that sell through conventional outlets. For each product category, we selected eight Internet and eight conventional retailers. Half of these retailers (four Internet retailers and a matched set of four conventional retailers) are "hybrid" retailers. They maintain operations both on the Internet and in conventional outlets. Our finding of lower prices on the Internet would be unambiguously strengthened if a "complete" selection of books and CDs could have been tracked and priced. By examining price levels, price changes over time, and price dispersion across stores[1].

With regard to price levels and price changes, our goal is to compare the characteristics of Internet channels for books and CDs to the characteristics of existing conventional channels for the same products. In conventional outlets, menu costs are driven by the cost of physically relabeling the prices of goods on store shelves. On the Internet, we hypothesize that menu costs should be much lower—comprised primarily of the cost to change a single entry (per