



A Statistical Analysis of Coimbatore City Consumer preference of Online Shopping

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Abstract: The statistical study of consumer behaviour when making purchases online is discussed in the article. Coimbatore city served as the basis for the Statistics. We concentrated on testing statistical hypotheses rather than just descriptive statistics. The chi-square test for independence was used the most frequently to determine if the responses within each group were statistically significant. These findings can be useful for internet marketing campaign targeting.

Keywords: Consumer behaviour, online purchases, coimbatore city, internet marketing.

Introduction

The practice or action of purchasing goods or services online is known as online shopping. It entails using the internet to find a seller's website, choosing what you want, and deciding for delivery. A credit or debit card can be used to make an online purchase, or payment can be made in person at the time of delivery. When customers choose to purchase online, that is the beginning of the online purchasing process. According to Hollensen (2004), the internet has turned into the "new" distribution route. Along with looking for items and learning more about them, shopping online has emerged as one of the main motivations for using the Internet (Joines et al., 2003). The following examples illustrate how internet buying works: 1. Open an online store's website after connecting to the internet. 2. Browse the website and select what you want to buy. 3. Place the product in your shopping basket. 4. Go shopping again. 5. Finish shopping and send orders. 6. Sign up or log in to the website. 7. Select the delivery mode and pace. 8. Select a payment method. 9. Type in personal information like your mailing address, phone number, and email address...10. Verify the order or orders and make the payment. 11. Successful shopping and logout.

Andrej Trnka (2015) has conducted a statistical analysis of students' online shopping habits. The article offers information on the statistical study of students' online shopping activity. Students from the University of Saints Cyril and Methodius in Trnava utilised statistical units (Slovak Republic). We concentrated on testing statistical hypotheses rather than just descriptive statistics. The chi-square test for independence was used the most frequently to determine if the responses within each group were statistically significant. These findings can be useful for internet marketing campaign targeting. In 2015, Aishwarya Goyal was studied by India's rising

internet penetration promotes online shopping. Customers are increasingly purchasing things through electronic means these days. India's online retailers are gaining from the younger generation's increasing Internet usage. This study provides views into customer preferences and behaviours as well as a theoretical contribution to understanding the current status of online shopping. This study will contribute to the dissemination of information regarding the possibilities for improving online retailer websites and the challenges faced by them in the Indian market. Sivanesan (2017) The enormous Indian market is evolving quickly. Professionals are increasingly using the internet, and mobile usage is growing. With digital channels continually increasing in number and power, change is still happening at a breakneck rate. Every year, more people in India spend more time online, and the apps and websites they use have a bigger and bigger impact on their lives. Marketing professionals that are on top of change make sure that their contact points and tactics reflect where consumers are spending their time.

Muthumani, Lavanya, and Mahalakshmi (2017) Even though online buying is one of the most used methods, not everyone feels comfortable using it. Online shopping is getting more and more popular, including all product categories and customer types. Online buyers are both men and women, of all ages, and from a variety of backgrounds. Carefully weigh the benefits and drawbacks so that the researcher may decide what is best for the consumer. In this essay, an effort is made to identify the things people buy from online retailers and the sorts of issues they encounter while making purchases. The key data used in this investigation, the primary information was acquired by the major information was gathered using an interview schedule. The practical sampling method was used to get information from respondents. This essay offers recommendations for resolving the issues that internet shoppers encounter.

This article tries to provide an online shopping experience for users that makes it simple to purchase our favourite products from the vast array of online retailers that are accessible over the internet. This allows us to purchase online from the comfort of our own home. During holiday seasons, there is no compelling need to visit the crowded stores or shopping malls. To purchase online, all you need is a computer or laptop and one key payment sending method. All users of our online shopping system will require an email address and password in order to log in and start shopping. The login information for an online purchasing system is highly secure, and nobody will be able to access it. This essay tries to create an online store for consumers with the intention of making it simple to use. After successfully logging in, users can order a variety of items from the online shopping system, including mobiles, books, clothing, jewellery, baby care, presents, and tools. Not only this, but we can also make purchases from other countries with a few mouse clicks. Naturally, we will receive the products we have asked and ordered at our door. With this, we won't need to visit actual stores, giving us more time to spend with our family. It only requires a computer and a method of payment, such as net banking, a credit card, a debit card, or PayPal, etc.

Purpose of the Study

- 1. To determine the average age at which consumers purchase online.
- 2. To determine if demographic factors and customer perceptions of internet purchasing are related.
(Example: Demographic factors like Age, Education, Gender, and Occupation)
- 3. To determine which sexes and what levels of education are most interested in internet purchasing.

Restrictions to the study

- 1. The research only included persons in the Coimbatore area.
- 2. The research is only open to 124 persons in Coimbatore.
- 3. The structured questionnaire was used to obtain data.
- 4. The study is restricted to the gathering of primary data and does not address the secondary information
- 5. The convenience sampling approach is used.

Analysis of Interpretation

Chi - Square Analysis for determining the relationship between demographic factors and customer attitudes toward online purchasing. (Demographic characteristics such as age, gender, occupation, and education)

- 1. What is the frequency of Internet usage for online shopping each day? (Frequency)
- 2. What is the maximum amount a buyer may spend on a single purchase? (While making a purchase)
- 3. What is the greatest amount of money a consumer would spend on online shopping in a year?
(Within a year)
- 4. What is the maximum shipment time with free shipping? (free shipping)

Age Group and consumer opinion in online shopping: Chi-square test

| Description | (X) ² | df | Significant value | Association/No Association |
|-----------------------------------|------------------|----|-------------------|----------------------------|
| age group and Frequency | 142.671 | 20 | .000 | Association |
| age group and spend on a purchase | 142.110 | 20 | .000 | Association |
| age group and spend in a year | 137.428 | 20 | .000 | Association |
| age group and free shipping | 134.701 | 20 | .000 | Association |

According to the above data, there is a relationship between age and frequency, expenditure on a purchase, spend in a year, and free delivery.

Chi-square test for Gender and Consumer Perception in Online Shopping

| Description | (X) ² | df | Significant value | Association/No Association |
|--------------------------------|------------------|----|-------------------|----------------------------|
| gender and frequency | 128.056 | 10 | .000 | Association |
| gender and spend on a purchase | 128.426 | 10 | .000 | Association |
| gender and spend in a year | 128.152 | 10 | .000 | Association |
| gender and free shipping | 127.728 | 10 | .000 | Association |

According to the above data, there is a correlation between gender and frequency, expenditure on a purchase, spend in a year, and free delivery.

Chi-square test for education qualification and consumer perception in online buying

| Description | (X) ² | df | Significant value | Association/No Association |
|-----------------------------|------------------|----|-------------------|----------------------------|
| education and frequency | 140.483 | 20 | .000 | Association |
| education and on a purchase | 139.770 | 20 | .000 | Association |
| education and in a year | 135.923 | 20 | .000 | Association |
| education and free shipping | 138.472 | 20 | .000 | Association |

According to the above data, there is a relationship between education and frequency, expenditure on a purchase, spend in a year, and free delivery.

Chi - Square test for Occupation and consumer’s opinion in online shopping

| Description | (X) ² | df | Significant value | Association/No Association |
|------------------------------|------------------|----|-------------------|----------------------------|
| occupation and frequency | 135.816 | 20 | .000 | Association |
| occupation and on a purchase | 132.922 | 20 | .000 | Association |
| occupation and in a year | 134.852 | 20 | .000 | Association |
| occupation and free shipping | 140.973 | 20 | .000 | Association |

According to the above data, there is a relationship between Occupation and Frequency, on a purchase, in a year, free shipping.

t-test for Gender and total persons scores

At df 122, the t value is 0.306. 0.760 is the p value. If the p-value is more than.05 (i.e., p is greater than 0.05), we pronounce the result not statistically significant, failing to reject the null hypothesis and rejecting the alternative hypothesis.

One-way ANOVA

ANOVA for Age Group and total number of people

| | Sum of Squares | df | Mean Square | F | Sig. |
|----------------|----------------|-----|-------------|------|------|
| Between Groups | 205.923 | 3 | 68.641 | .287 | .835 |
| Within Groups | 28683.198 | 120 | 239.027 | | |
| Total | 28889.121 | 123 | | | |

F is 0.287, and the p-value of 0.835 is bigger than the 0.05 alpha limit. This signifies that there is no statistically significant difference between the averages of the various levels of age and total scores of people.

Wilcoxon Method for Education and total persons scores.

| Hypothesis Test Summary | | | |
|-------------------------|--|---|---------------------|
| | Null Hypothesis | Test | Sig. ^{a,b} |
| 1 | The median of differences between Totalscore and education equals 0. | Related-Samples Wilcoxon Signed Rank Test | .000 |

| Hypothesis Test Summary | |
|-------------------------|-----------------------------|
| | Decision |
| 1 | Reject the null hypothesis. |

p-value is 0.000 (p is less than 0.001) and conclude that there is a significant difference between the total score of persons and occupation.

Conclusion

The maximum shipping time with free shipping, the approximate maximum amount a consumer may spend on a purchase, and the approximate maximum amount a consumer would spend in a year are all related to age, gender, education, occupation, and frequency of Internet usage timing per day for online shopping. Most of the participants in this study are between the ages of 20 and 30, and they tend to purchase more online. Most of the participants are female university students, who are more interested in online shopping than men. We declare the result to be not statistically significant, failing to reject the null hypothesis and rejecting the alternative hypothesis as well by utilizing One-way ANOVA for Age and Total Persons Score and Independent T-test for Gender and Total Persons Score. We conclude that there is no statistically significant difference between the means of the various levels of the age and total scores of persons variable. However, we do find a statistically significant difference between the education, occupation, and total scores of persons when we use the Wilcoxon signed ranked test. Therefore, I personally advise everyone to consider the product's quality, whether they need it or not, and whether the price is reasonable.

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