

CUSTOMER RETENTION (EDA)

Submitted by:

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**INTRODUCTION**

[**E-retail factors for customer activation and retention: A case study from Indian e-commerce customers**](https://www.researchgate.net/publication/346412647_E-retail_factors_for_customer_activation_and_retention_An_empirical_study_from_Indian_e-commerce_customers)

Customer satisfaction has emerged as one of the most important factors that guarantee the success of online store; it has been posited as a key stimulant of purchase, repurchase intentions and customer loyalty. A comprehensive review of the literature, theories and models have been carried out to propose the models for customer activation and customer retention. Five major factors that contributed to the success of an e-commerce store have been identified as: service quality, system quality, information quality, trust and net benefit. The research furthermore investigated the factors that influence the online customers repeat purchase intention. The combination of both utilitarian value and hedonistic values are needed to affect the repeat purchase intention (loyalty) positively. The data is collected from the Indian online shoppers. Results indicate the e-retail success factors, which are very much critical for customer satisfaction.

**Objective**

Data Scientists have to apply their analytical skills to give findings and conclusions in detailed data analysis written in jupyter notebook. Only data analysis is required.

Need not to create machine learning models

**Exploratory Data Analysis**

* Data Pre-processing and Visualizations

The dataset has 269 rows and 71 columns out of which only one column has integer value while data type of rest of the columns is object. From this info we can infer that most of the columns has categorical values.

Some of the column names are numbered so initially these numbers are removed from column names. Some of the column names have tab spaces, hence, these were removed in the next stage of pre-processing.

There are no null values in the dataset.

**Univariate Analysis**

The following conclusions can be derived from the analysis of personal info:

1. The number of women who were a part of this survey is more than double the number of men.
2. Around 30% of the population are in the age group 31-40 years, 30% population from 21-30 years followed by people in the age group 41 - 50 years. The percentage of population is least from the age group below 20 (teenagers) and 51-years with 7% each.
3. Majority of the population are from metro cities like Delhi, Greater Noida, Noida and Bengaluru.

Ambiguity – There are two values in the column ‘ Which city do you shop online from?’ which belong to same category but nomenclature is different. (Greater Noida and Noida). Hence, ‘Greater Noida’ is replaced with Noida.

The following conclusions can be derived from the analysis of shopping experience:

1. Majority of the population have shopping experience of more than 4 years
2. Majority of the population ordered online less than 10 times in the past year which only a few ordered online more than 42 times.

Ambiguity – In the column ‘How many times you have made an online purchase in the past year?’ the values two categories '41 times and above' and '42 times and above' fall under same category. Hence, the latter is replaced with earlier in the dataset.

The following conclusions can be drawn from the browser experience:

1. Around 85% of the population use the search engine to reach the online store, while around 7% reach the online store through 'Content Marketing' and 'Display Adverts'. This tells that the reach of the advertisement is close to 15%.
2. 52% of the population prefer to access online store using their smartphones.
3. After first visit 32% of the population prefer to access the store using the application while 26% access the store directly through URL.
4. Majority of the population spend more than 15 minutes before making a purchase decision, while less than 11 percent of population take less than 5 minutes to finalize the purchase.

The following conclusion can be drawn from payment experience:

1. Majority of the user prefer payment through Credit Cards or Debit Cards.
2. 16.7% of population prefer to use E-wallets for payments.
3. 63.6% of population sometime abandon the cart without payment.
4. 17.8% of population never abandon the cart without payment.
5. Around 50% of population abandon the bag because they get better offer in other stores.
6. Around 20% of population abandon the bag because the promo code do not apply.
7. 11.5 % abandon the bag due to lack of trust.
8. Around 5% of population abandon because they don't have options for their preferred payment mode.

**Bivariate and Multivariate Analysis**

1. Females have more tendency of shopping as compared to males.
2. The age group ‘Below 20 years’ and ’above 51 years’ do not shop as frequently as other age groups.
3. Usually those who have been shopping for more than 4 years order online more frequently.
4. Most of the online purchase was done through Amazon followed by Flipkart.
5. The users who are recommending Amazon, Myntra and Paytm strongly agree that online shopping gives monetary benefits and discounts.
6. Some of the Flipkart user feel that shopping online is neither convenient nor flexible.
7. Most of the user feel that in almost all the online store they get value for money spent.
8. Most of the user saved money though online purchase.

**Analysis of Good Remarks**

1. Majority of the user voted amazon and flipkart as 'Easy to use website or application'
2. Majority of the user voted amazon and flipkart as 'Visually appealing web-page layout'
3. Majority of the user voted that both amazon and flipkart offer wide variety of product on offer as compared to others.
4. Majority of the user voted Amazon and flipkart have complete, relevant description and information of products.
5. In most of categories Amazon and Flipkart have given good remarks as compared to other online stores.

**Analysis of Bad Remarks**

1. During promotion or sale more than 46% of the user experience longer time to get logged into Amazon.
2. During promotion or sale more than 36% of the user experience longer time in displaying graphics and photos in Amazon.
3. During promotion or sale majority of user reported late declaration of price in Myntra followed by Paytm
4. During promotion or sale majority of the user experienced longer page loading time in Myntra and Paytm.
5. During promotion or sale majority of the user have limited mode of payment in Snapdeal followed by Amazon.
6. Majority of the user experienced longer delivery period in Paytm followed by Snapdeal.
7. Majority of the user experienced frequent disruption when moving from one page to another in Amazon, Myntra and Snapdeal.

**Conclusion**

The users are loyal to the online shopping platform which have user friendly interface, smooth navigation as well as have visually appealing layout and application. While ordering the users look for variety of products and have complete relevant descriptions and information about products. During promotion and sale the websites take longer time for log in, page loading and to display graphics and images, late declaration of price and limited payment modes and. These factors can be a huge setback for customer retention. Under normal days the user do not prefer the shopping platform if they have slow delivery speed and they encounter frequent disruption while moving from one page to another.