

Understanding Customer Purchase Behavior on an E-Commerce Site

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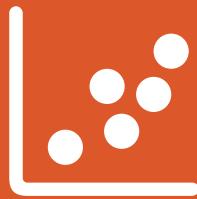




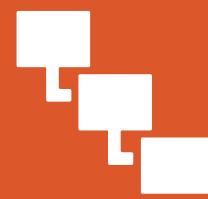
Presentation Overview



Introduction



Exploratory Data Analysis



Methodology



Results



Limitations



Recommendations and
Conclusion



Introduction

Our objective is to gain valuable insights into how customers behave and make purchasing decisions on the site. We will address important business-related questions raised by management, such as the influence of different types of reviews and the customer journey between reviews and products.

Brief Overview of the Data

Clickstream events

270k

Users

16k

Products

5

States

75

Countries

19

Cities

3.4k

Users Demographics

23%



Female

25%



Male

11%



Unidentified

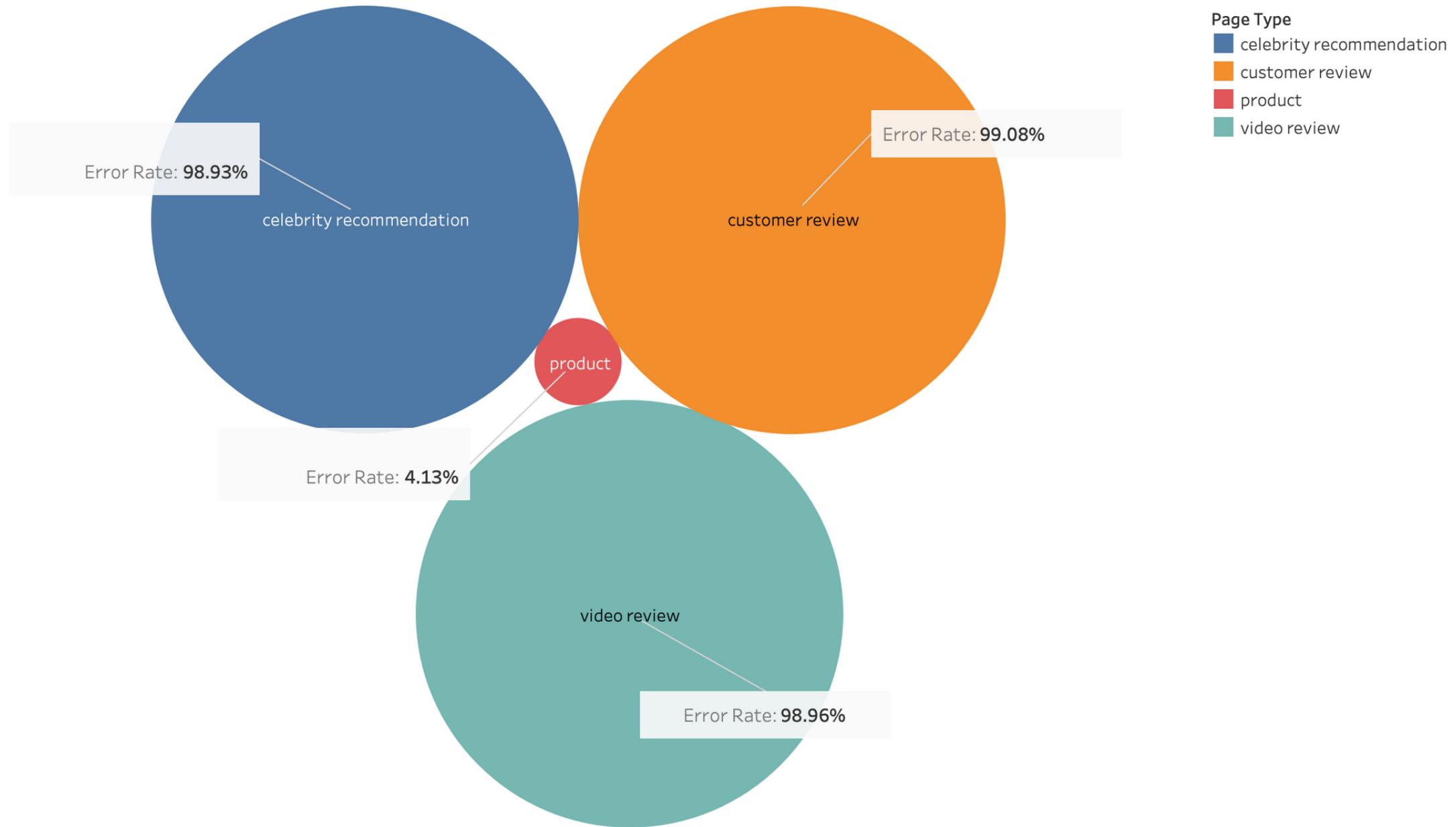
The remaining 41% of the users are not registered with the site



Bounce Rate
9.02%

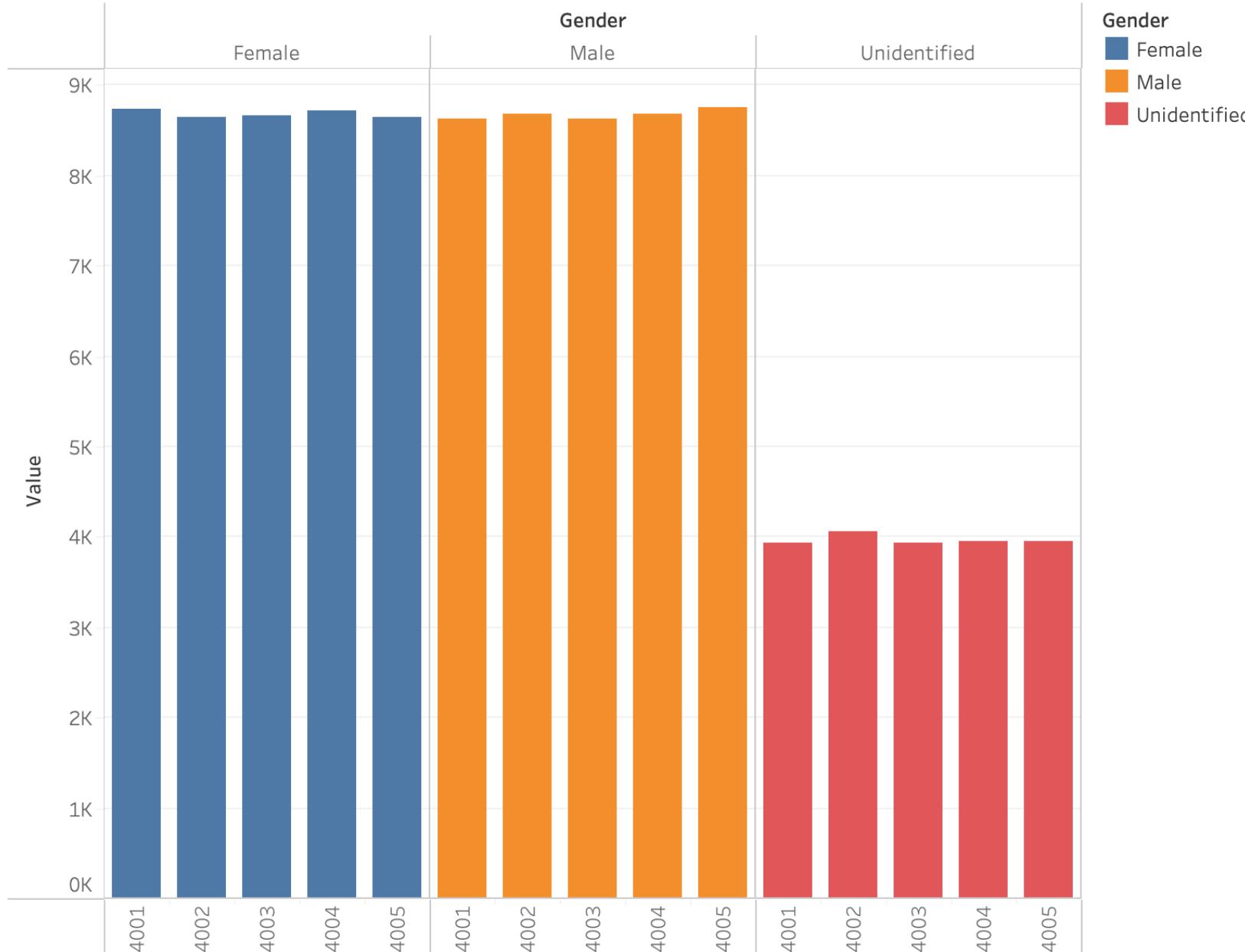
Exploratory Data Analysis

Distribution of Error Rates for the Different Pages



Exploratory Data Analysis

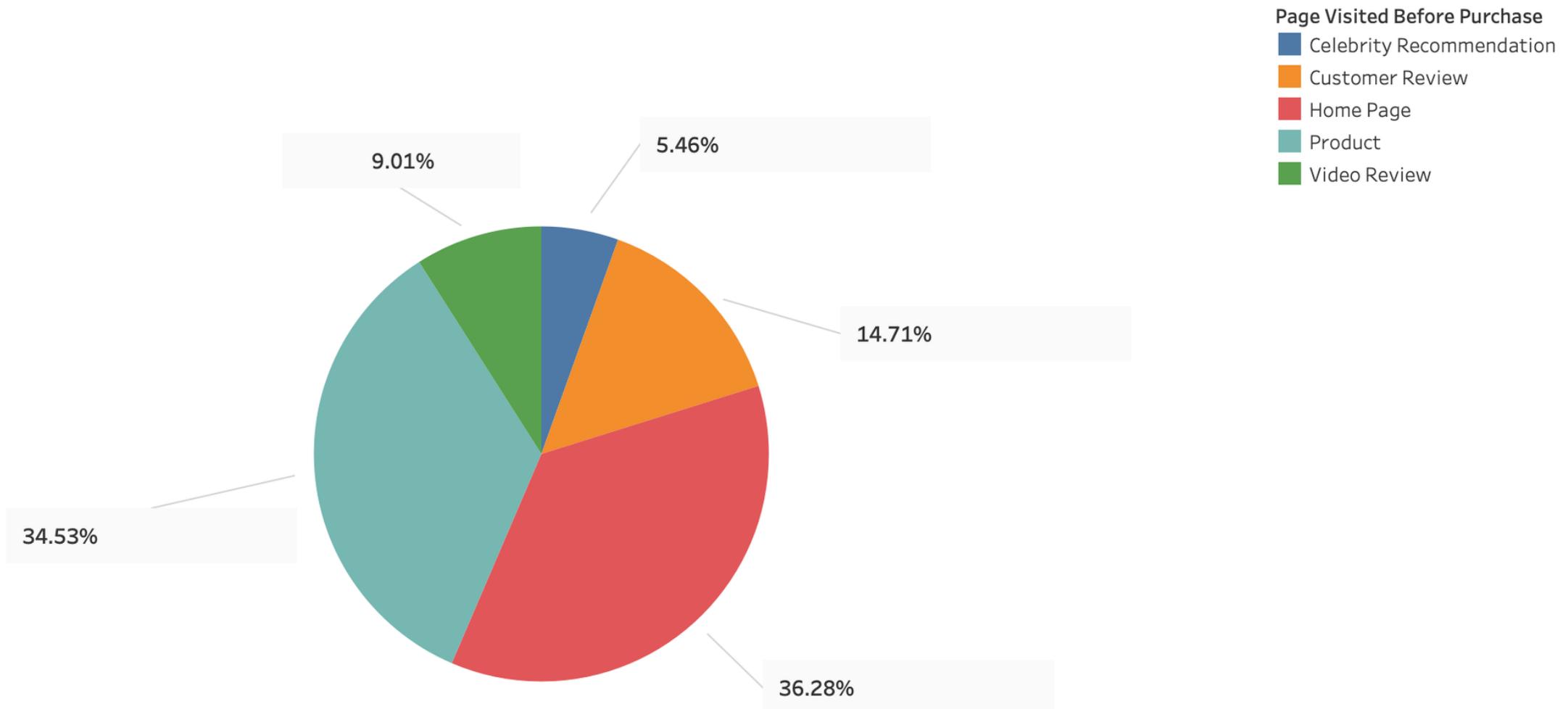
Product Distribution with Gender



Methodology- Estimating the Effect of Reviews on Customer Purchasing Behaviour

- | | | | |
|---|---|---|---|
| 1 | The data is grouped based on user sessions and sorted by the timestamp to ensure chronological order. | 2 | Identify the last page visited before a purchase for each user session. |
| 3 | Count the occurrences of each review category in the last page before purchase | 4 | Examine review counts |
| 5 | Count occurrences of each review type in the entire dataset | 6 | Divide the review counts that led to purchase by the total occurrences of that particular review type in the dataset. |

Proportion of Last Pages Visited Before a Purchase Was Done



Conversion Rates for Different Reviews



Customer Reviews

3.52%

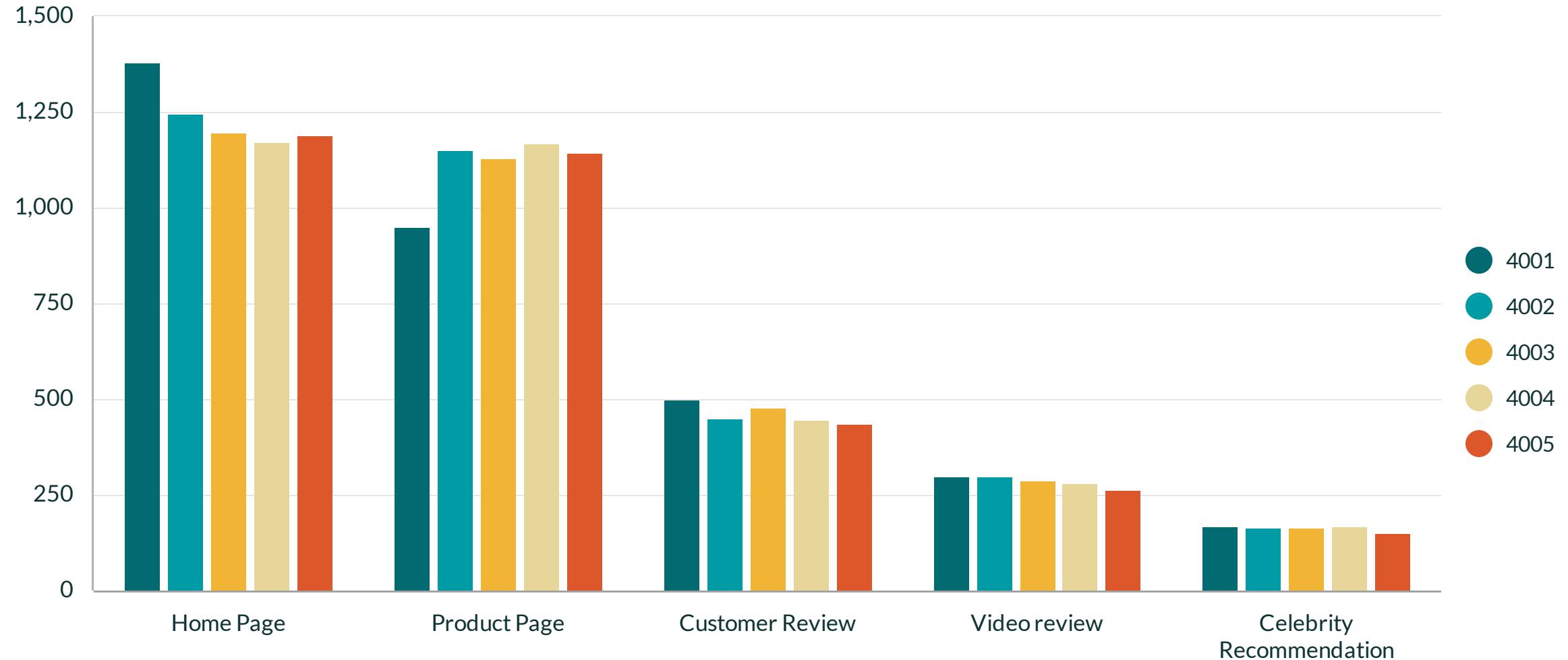
Video Reviews

3.50%

Celebrity Recommendations

3.22%

Product-Specific Last Page Views Prior to Purchase



Methodology- Capturing the Impact on Revenue: Celebrity and Video Reviews vs. Customer Reviews



Assume a \$5 price for each product that the e-commerce site sells.

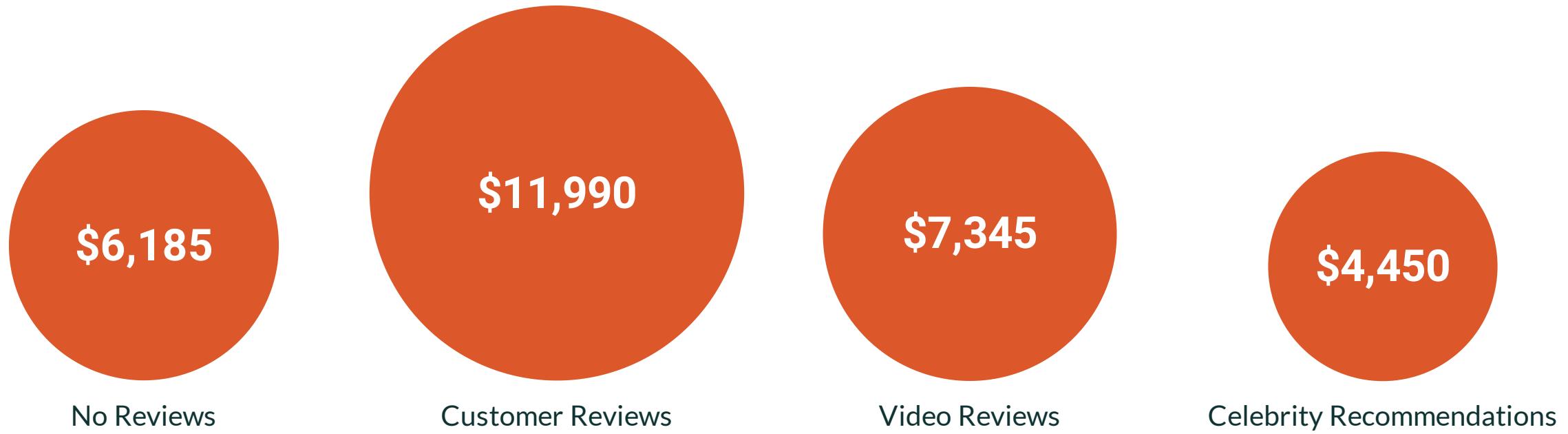


Calculate the total number of purchases resulting from the reviews.



Calculate revenue from reviews ($\$5 \times$ no of purchases from reviews).

Revenue Generated from Different Reviews



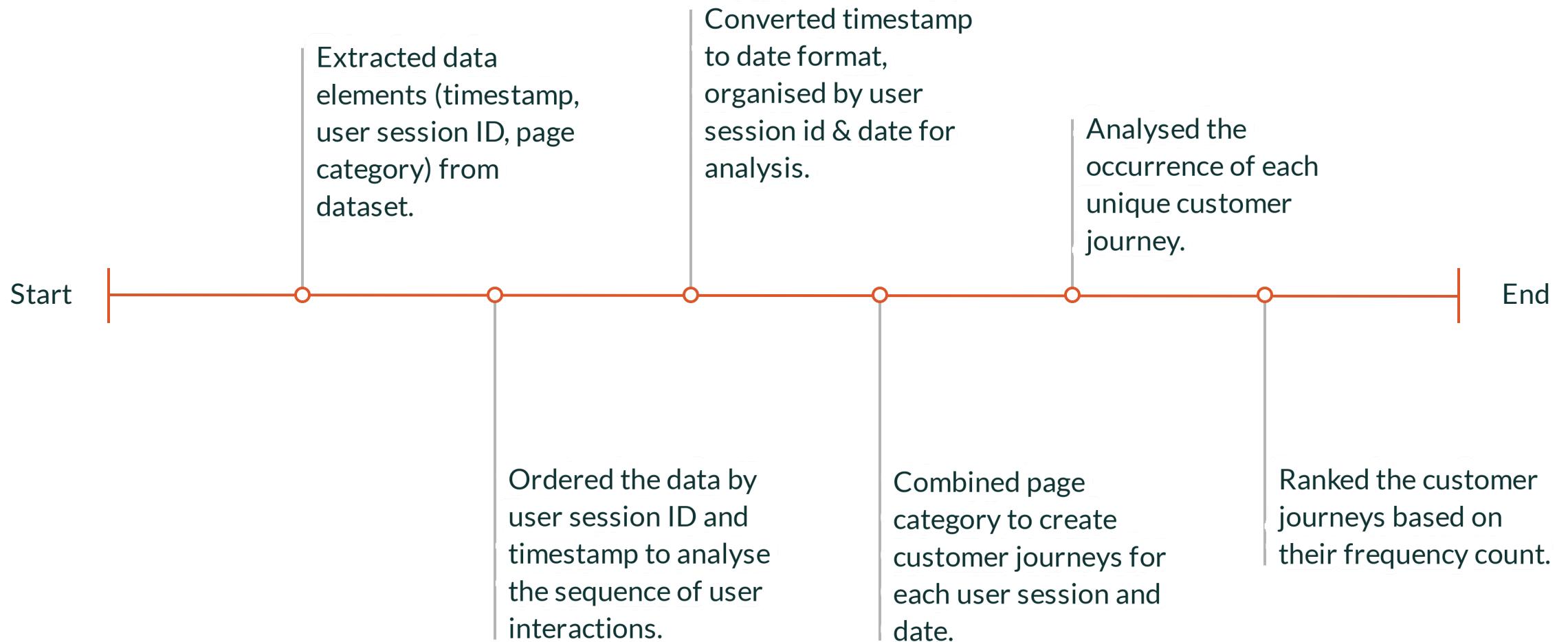
Customer reviews have the highest revenue impact.

“Mapping customer journeys is the key to understanding purchase behavior on e-commerce sites.”

The Ideal Customer Journey



Capturing Customer Journey



Top 15 customer journey pathways

No	Customer Journey	Popularity
1	product	869
2	customer review	491
3	video review	251
4	product -> product	217
5	celebrity recommendation	170
6	customer review -> product	121
7	product -> customer review	115
8	product -> product-> product	111
9	video review -> product	93
10	product -> video review	68
11	customer review -> customer review	60
12	product-> customer review -> product	54
13	customer review -> product -> product	53
14	product -> product -> customer review	53
15	product -> product -> product -> product	51

Insights



Most frequently, customers begin their journey at the product page, indicating a direct engagement with the product.



Customer reviews are an important factor in consumer journeys, playing a significant role in user decision making.



Repeatedly revisiting product/customer review in one journey indicates thorough assessment.



Video reviews appear to have less impact on customer journeys than traditional customer reviews.



Customers transition between elements, displaying explorative behaviors in their journey between "product" and "customer review".



Identifying common patterns in customer journeys can optimise the user experience.

Limitations



The dataset used for analysis may not fully represent actual customer behaviour due to limited variability



Presence of errors in over half of the pages may introduce biases and compromise the accuracy of the analysis results.



The analysis focused only on clickstream data and ignored external factors such as market trends, competitor activities, and economic conditions.

Recommendations



Leverage power of
customer reviews



Strengthen influencer
partnerships



Implement review based
rewards program.



Enhance product page
experience



Enhance website
performance



Optimise user experience
for informed decisions



Conclusion

The analysis of the clickstream data revealed valuable insights into customer behavior and purchasing patterns, highlighting the significance of customer reviews, the impact of different review types, and the importance of optimising the customer journey for better conversions and revenue.