

KEY CHURN FACTORS IN **E-COMMERCE**

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General Information



“Shopshop” is a national e-commerce company that sells various daily necessities through its application and website. Currently, Shopshop has thousands of active customers with diverse characteristics.

Problem Statement:

In the highly competitive e-commerce landscape, **Shopshop faces a rising churn rate**, especially in certain segments. **Understanding the drivers of churn is key to building stronger retention strategies and boosting customer loyalty.**

Data Understanding

What's in the Dataset?

Customer Identifier

- Customer ID

Demographic

- Gender
- City Tier
- Marital Status

Customer Engagement

- Tenure
- Preferred Login Device
- Hour Spend on App
- Number of Device Registered
- Preferred Order Category
- Satisfaction Score
- Complain

Churn Status

- Churn
- Day Since Last Order

Additional Customer Information

- Number of Address
- Preferred Payment Mode

Transaction Data

- Warehouse To Home
- Order Amount Hike From Last Year
- Coupon Used
- Order Count
- Day Since last Order
- Cashback Amount

Data Cleaning

Identify pattern

Some columns in the dataset contain missing values. **Further analysis was conducted using a heatmap to identify hidden patterns and potential relationships among the columns** with missing value



Data Cleaning

Handling missing values

Columns with missing values were **imputed based on their most likely values**

Data Groups	Column	Method	Reason
Customer Engagement	Tenure	Fillna with 0	Possibly a new customer
	Hour Spend on App	Fillna with Median	Distance is unlikely to be zero
Transaction Data	Warehouse To Home	Fillna with Median	Possibly an error, hence not recorded
	Order Amount Hike From Last Year	Fillna with 0	They may not have ordered in both years / possibly a new customer
	Coupon Used	Fillna with 0	Possibly never used a coupon at all
	Order Count	Fillna with 0	Possibly never placed an order at all
Churn Status	Day Since Last Order	Fillna with 0	Possibly never made a purchase (hence no last order)

Exploratory Data Analysis

Churn Proportion by Segment

Churn is dominated by **single male** customers in **metro cities**, especially **mobile phone users** — surprisingly, **even very satisfied customers are leaving**

Demographic

- **63.3%** of churned customers are **male**
- Based on city tier, the highest churn (**56.1%**) comes from City Tier 1 → **Metropole City**
- **50.6%** of churned customers are **single**

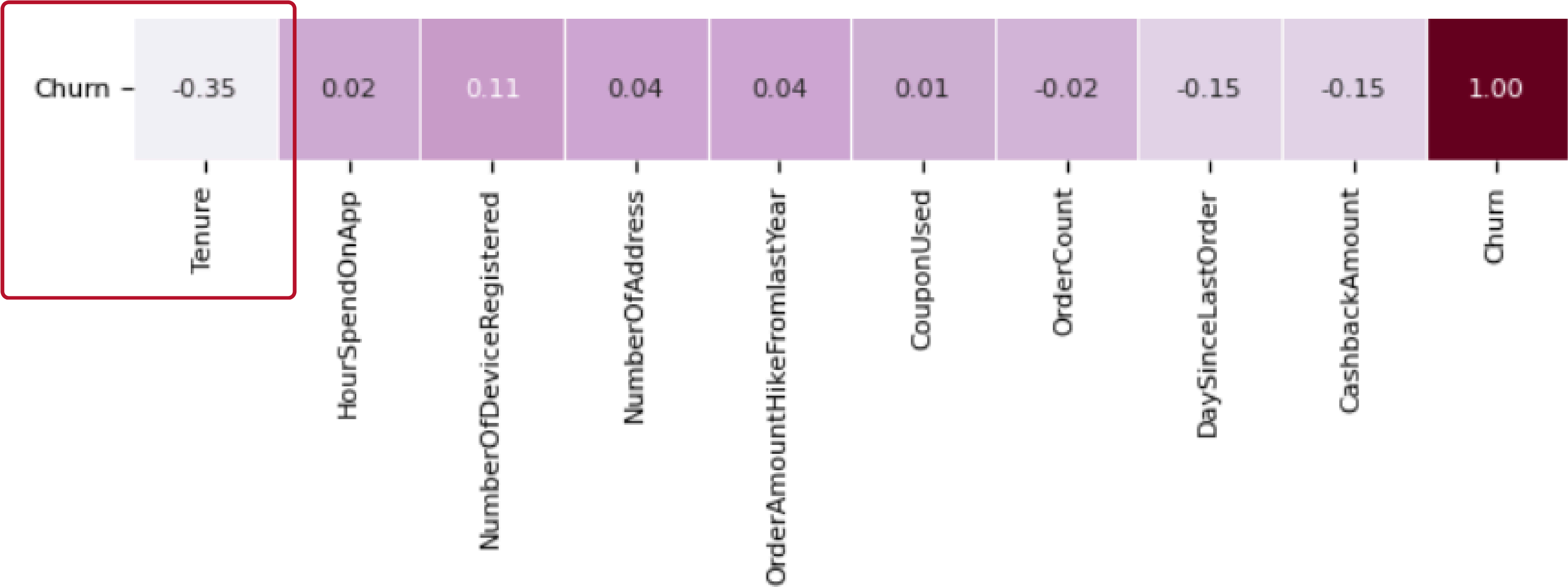
Customer Profile

- **65.8%** of churned customers **used Mobile Phones**
- The largest proportion of churn (**30.8%**) comes from **customers with a satisfaction score of 5** (very satisfied).
- **37.5%** of customers who **used debit cards** ended up churning

Key Factor Behind Churn

Churn correlation with numerical variables

Churn is moderately linked to tenure, meaning **customers with shorter lifetimes are more likely to leave.**



Key Factor Behind Churn

Churn correlation with categorical variables

The factors that most influence churn are **complaints, order category, and marital status**, while **coupon usage does not have a significant** effect on churn



The product category with the highest churn is **Mobile Phones (60.1%)**

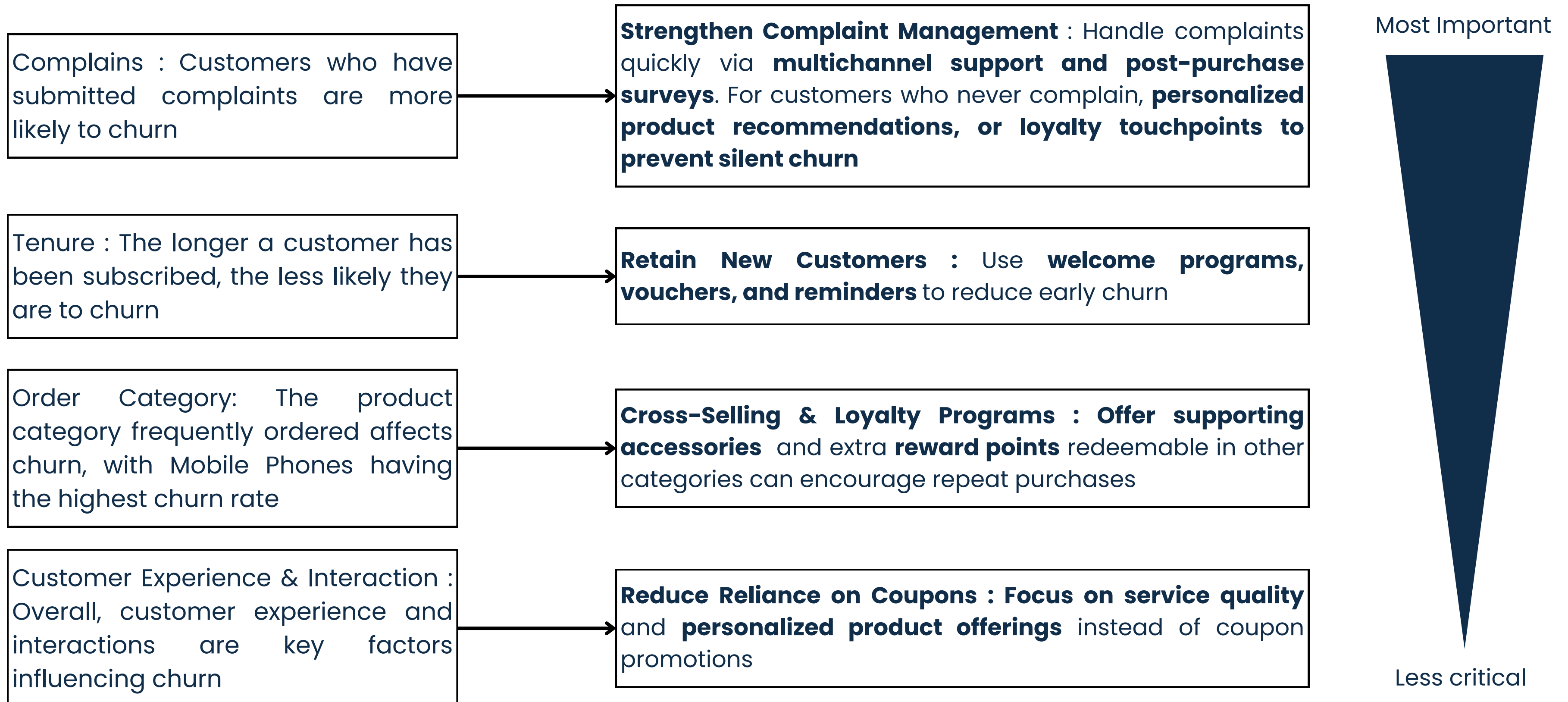


53.6% of churned customers had **previously submitted a complaint**



Marital status, with single customers is one of the biggest factors influencing churn.

Summary and Recommendation



THANK YOU