# E-Commerce Customer Churn

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# Main Question and Our Goal

❖ **MAIN QUESTION**

Why customers churn from our ecommerce site?

❖ **OUR GOAL OF TODAY**

Identify what factors influence on customer's churn and find action items to prevent churn in the future
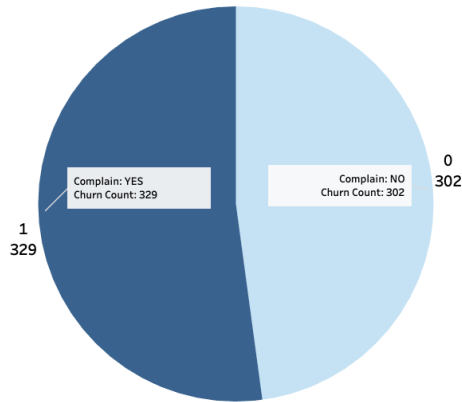
# The 8 Main Questions

| No. | Questions |
|-----|-----------|
| 1 | The relationship between **Churn and complain / satisfaction level** |
| 2 | The relationship between **tenure & Churn status** |
| 3 | The relationship between **tenure & customer satisfaction** |
| 4 | The relationship between **preferred order category and Churn** |
| 5 | The relationship between **Marital status and churn** |
| 6 | The relationship between **Marital status&product category and churn** |
| 7 | The relationship of **Churn and DaySinceLastOrder** |
| 8 | The relationship of **Churn and warehouse to house?** |

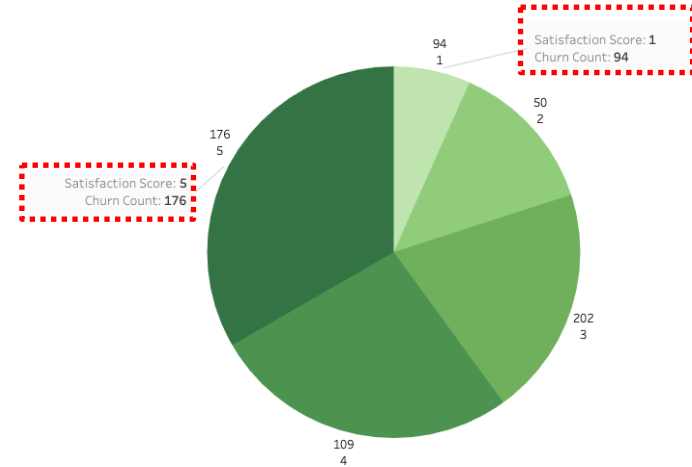# Q1. The relationship between complain / satisfaction level and Churn

## 1) Complain & churn

- There is almost not a big difference in complain and churn



## 2) Satisfaction level & churn

- There are more churn from the high satisfaction level
- Lowest satisfaction has less churn customer than mid



❖ Insight : there is no relationship between complain and satisfactory level and churn
❖ Action item : more research on if the satisfactory is about the product or user interaction

# Q2. The relationship between tenure & churn status

- Customer less than 5yr tenure accounts 37% of total customer, however; this range accounts more than 80% of total churn (37% within its range)
- As tenure increases, churn rate rapidly decreases

| Tenure_Range | Cust_Portion | Churn_Portion | Churn_Rate |
|---|---|---|---|
| Less than 5yr | 37.0% | 81.6% | 36.9% |
| 5-10yr | 28.0% | 7.3% | 4.4% |
| 10-20yr | 26.6% | 10.5% | 6.6% |
| Over 20yr | 8.5% | 0.6% | 1.2% |

| Tenure | Cust_Portion | Churn_Portion | Churn_Rate |
|---|---|---|---|
| 0 | 8.0% | 25.4% | 52.8% |
| 1 | 17.0% | 50.9% | 50.0% |
| 2 | 3.6% | 1.6% | 7.4% |
| 3 | 4.3% | 2.2% | 8.7% |
| 4 | 4.1% | 1.6% | 6.5% |

*- Especially out of less than 5yr range, customers of 0~1year tenure take 76% of the 82% of total tenure*
*- It is also half of its range*

❖ Insight : Less than 5years of tenure customers are 37% of total customer
this is the biggest portion out of all the tenure range.
Although less royalty means high churn,
there must be some action to prevent high churn rate from customers with early tenure

# Q3. The relationship between tenure & customer satisfaction

- There are more customers in less than 5 year range, and in each range, satisfaction score 3 are the most common score.
- Even with high tenure such as more than 20 years, satisfaction score is well distributed
- <mark>Royalty relates churn but it does not directly mean high customer satisfaction</mark>
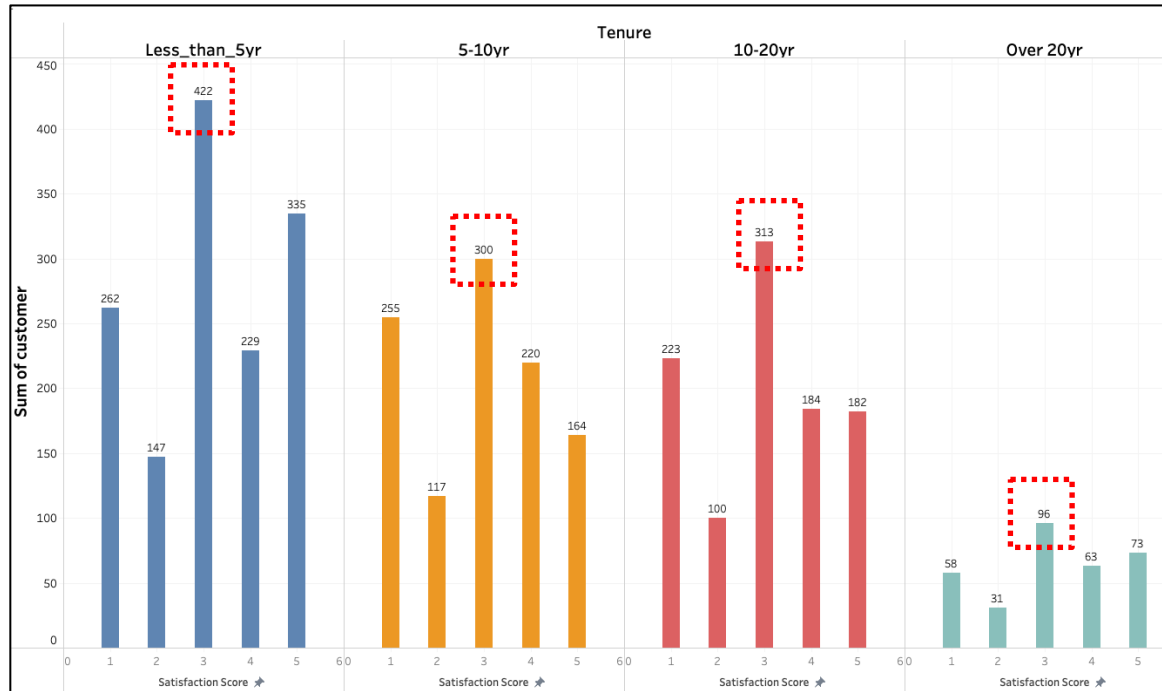
# Q4. The relationship between preferred order category and Churn

- Most of churn customer bought Mobile Phone and laptop & accessory follows
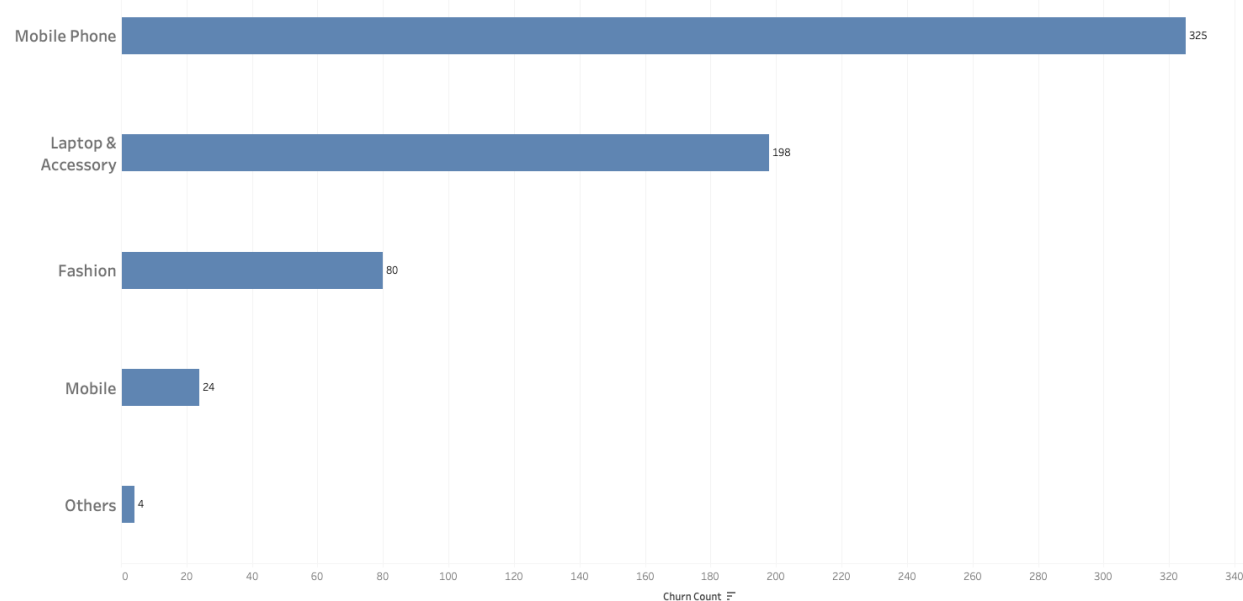


❖ Action item : more than half of churn is from mobile phone category, there needs to be more research on mobile phone product related services or product quality etc

# Q5. The relationship between Marital status and churn

- The number of Single churn is more than 300 people which is more than 50% of total churn, and 26% of total single

| MaritalStatus | TotalCustomers | ChurnCount | ChurnPercentage |
|---|---|---|---|
| Single | 1245 | 327 | 26.3% |
| Married | 1982 | 219 | 11.0% |
| Divorced | 547 | 85 | 15.5% |

❖ Insight : single has the highest churn rate and married next, however churn percentage is for married people is lower than divorced

# Q6. Marital status&product category and churn

- Single mobile churn percentage is 28.7% highest



| Marital .. | Fashion | Laptop & Accessory | Mobile | Mobile Phone | Others |
|---|---|---|---|---|---|
| Divorced | 2.4% | 4.9% | 0.3% | 5.5% | 0.3% |
| Married | 5.5% | 10.6% | 1.0% | 17.3% | 0.3% |
| Single | 4.8% | 15.8% | 2.5% | 28.7% | |

❖ Insight : single has the highest churn rate but combining with the product, single/ mobile and following married/mobile has highest churn rate

❖ Action item : company need to research on mobile product and need to do some promotions for singles

# Q7. The relationship Churn and DaySinceLastOrder?

- There are more churn from the recent customers
- 20% of order from less than 5days churned

| last_order_days | TotalCustomers | ChurnCount | ChurnPercentage |
|---|---|---|---|
| Less than 5days | 2289 | 457 | 20.0% |
| 5-10days | 1334 | 167 | 12.5% |
| more than 10days | 151 | 7 | 4.6% |

❖ Insight : there is a relationship between the last day since last order and churn
❖ Action item : need to check if recently there has been any problems, or in general, the company focuses on regular customers than new customers

# Q8. The relationship Churn and warehouse to house?

- 9mile from ware house to home has the highest churn rate and it goes up at 15
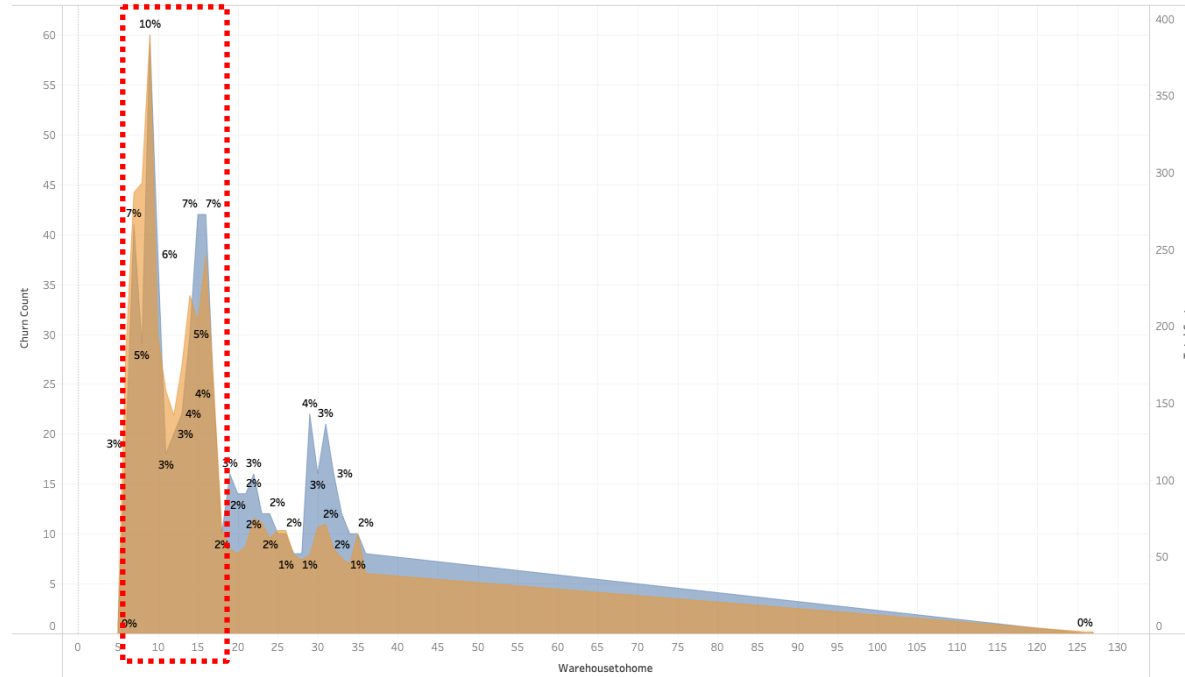


- ❖ Insight : at 9~15mile, it has very high churn rate
- ❖ Action item : Need to check if there is any delivery issues or if warehouse can be built within 5 miles

# Insights and action items

| Category | Relationship with churn | Action Item |
|---|---|---|
| Tenure | People with 0~5 year tenure accounts 80% of churn (to be specific, 0~1year tenure takes approx. 57% of TTL) | There must be some action to take to prevent high churn rate from customers with early tenure<br>Royalty relates churn but it does not directly mean high customer satisfaction |
| Product | More than 50% of churn is from mobile phone category | There needs to be more research on mobile phone about related services or product quality etc |
| Marrige status | Single has the highest churn rate, especially who bought mobile products | Need to reseach more on mobile phone and do more |
| Order status Order status | Customers with recent order has more churn rate as 72% of total | Need to check if recently there has been any problems, or in general, the company focuses on regular customers than new customers |
| Location | At 9~15mile, it has very high churn rate | Need to check if there is any delivery issues or if warehouse can be built within 5 miles |

# Thank you