

## ***Task 1: Data Modeling and Cleaning***

***The objective of Task 1 is to prepare clean, structured, and analysis-ready data for customer retention analytics. The Following Steps has been mentioned below:***

- *Multiple datasets related to customers, transactions, stores, loyalty programs, and churn were loaded into Power BI using the Power Query Editor.*
- *Duplicate records were removed to avoid double counting and ensure data accuracy.*
- *All date columns were converted to proper Date data types, and numeric columns such as transaction amount and loyalty points were standardized.*
- *Missing and null values were handled appropriately to maintain data consistency.*
- *Calculated columns were created using DAX to compute membership duration and extract year and month from transaction dates.*
- *Proper one-to-many and many-to-one relationships were established in the data model.*

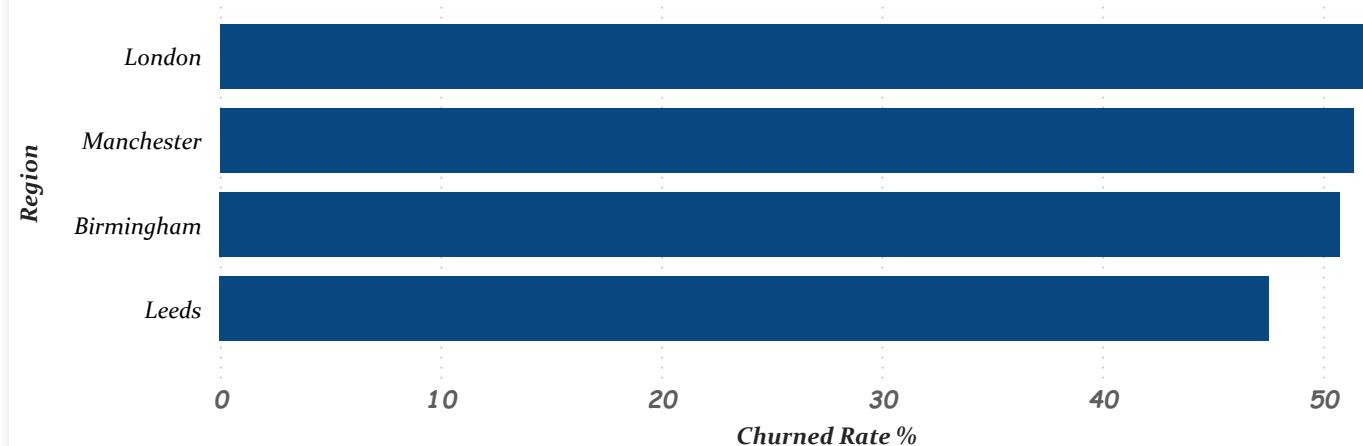
## Task 2: Churn and Retention Metrics

Churned Rate %

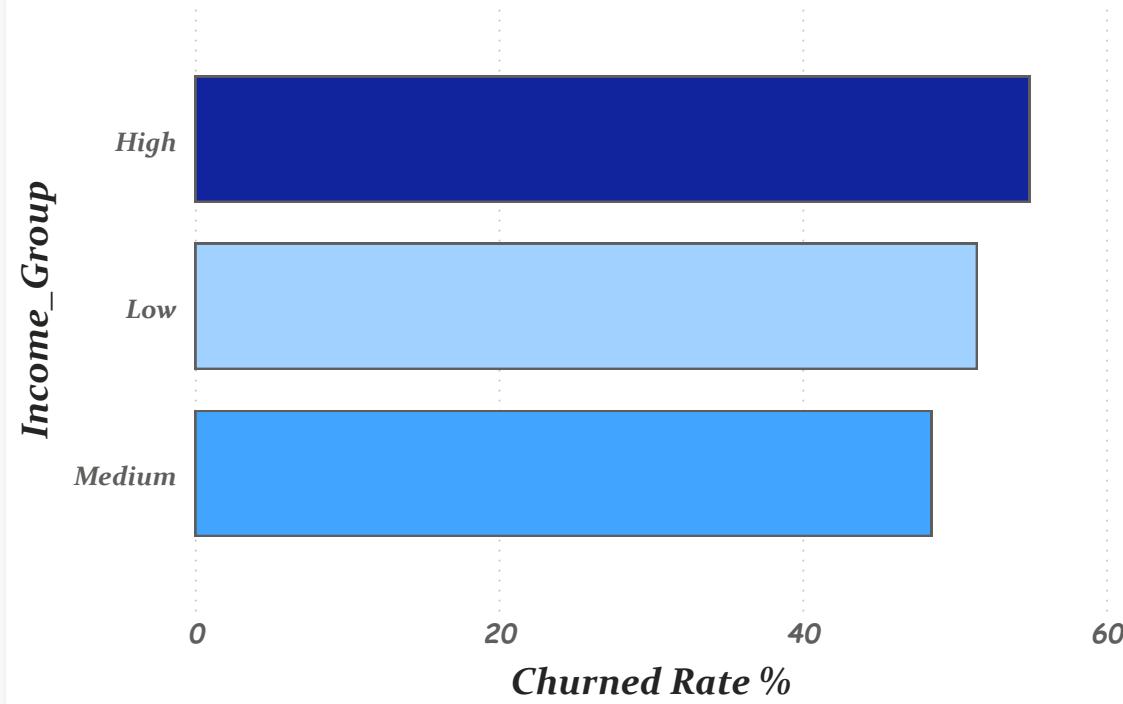
**51.67**

Churned Rate %

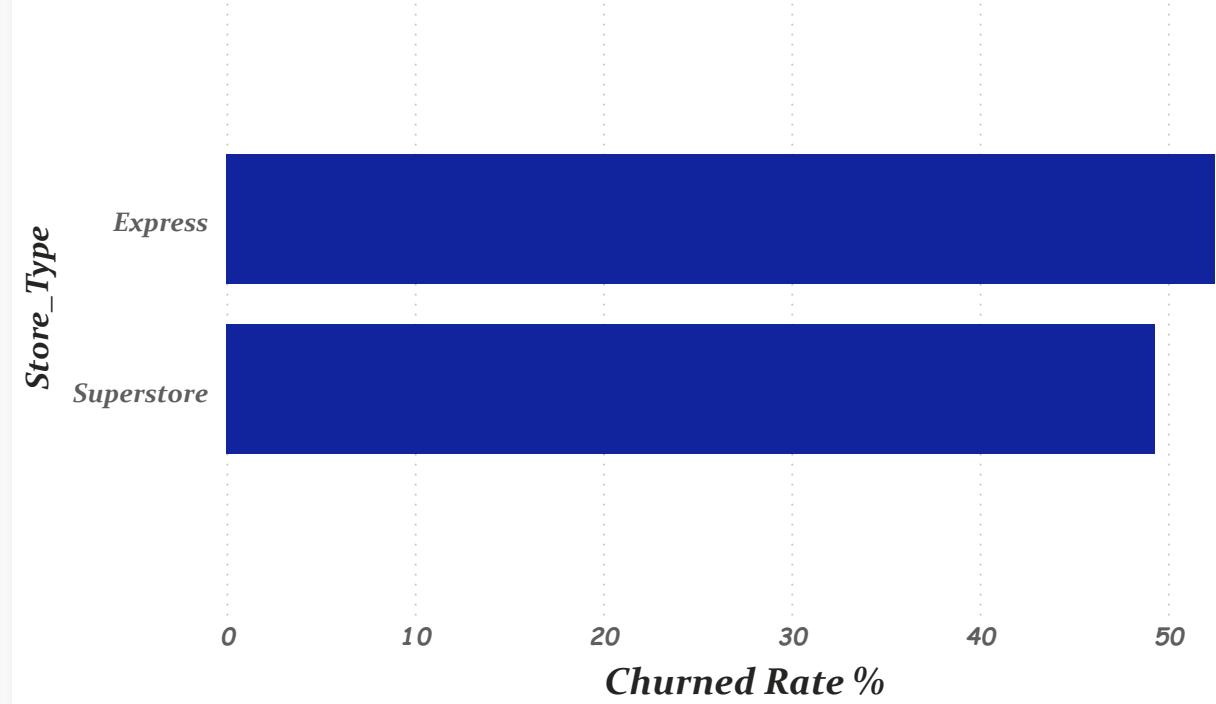
Churned Rate % by Region



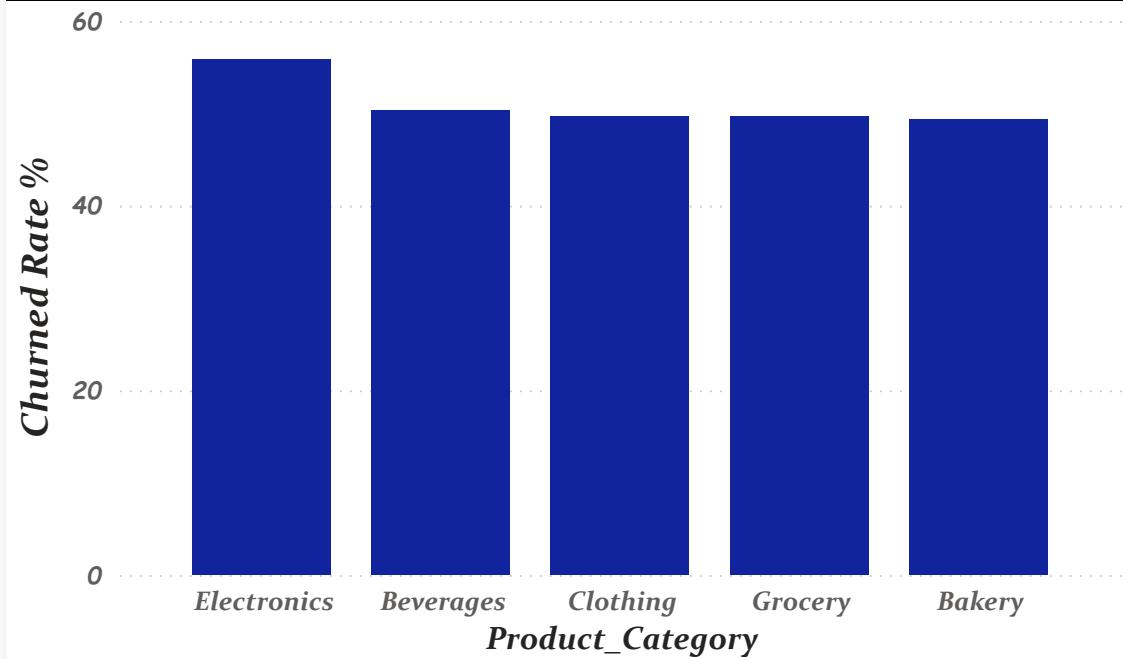
Churned Rate % by Income\_Group



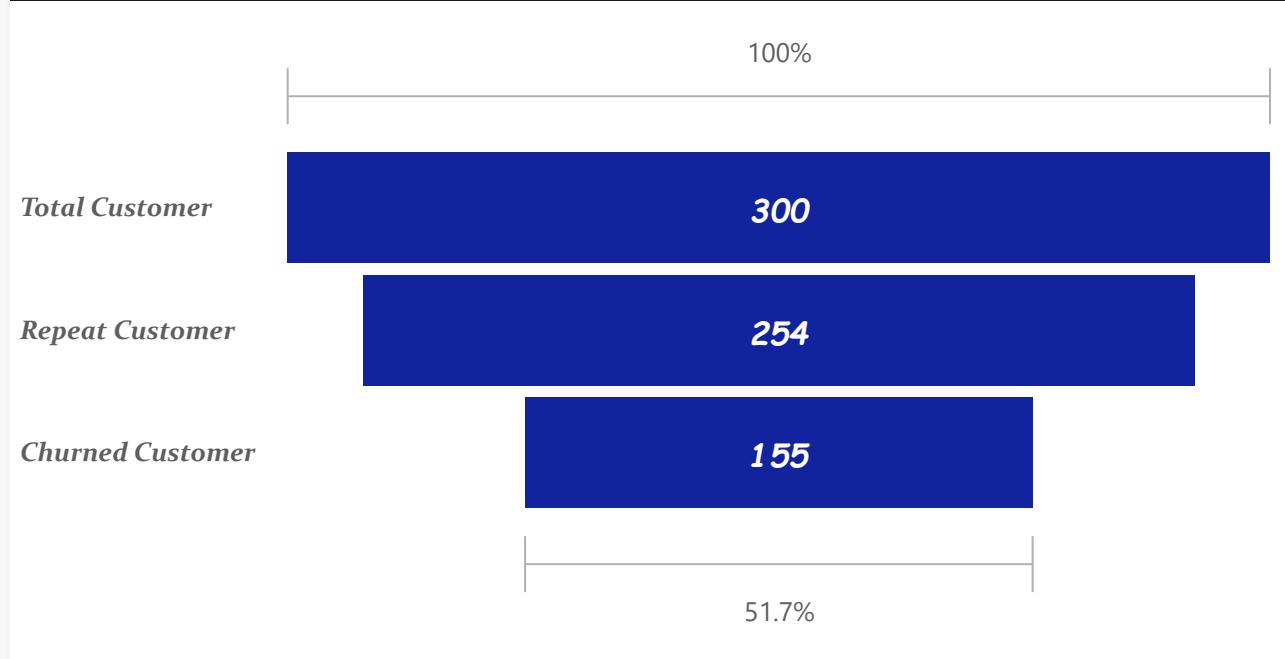
Churned Rate % by Store\_Type



Churned Rate % by Product\_Category

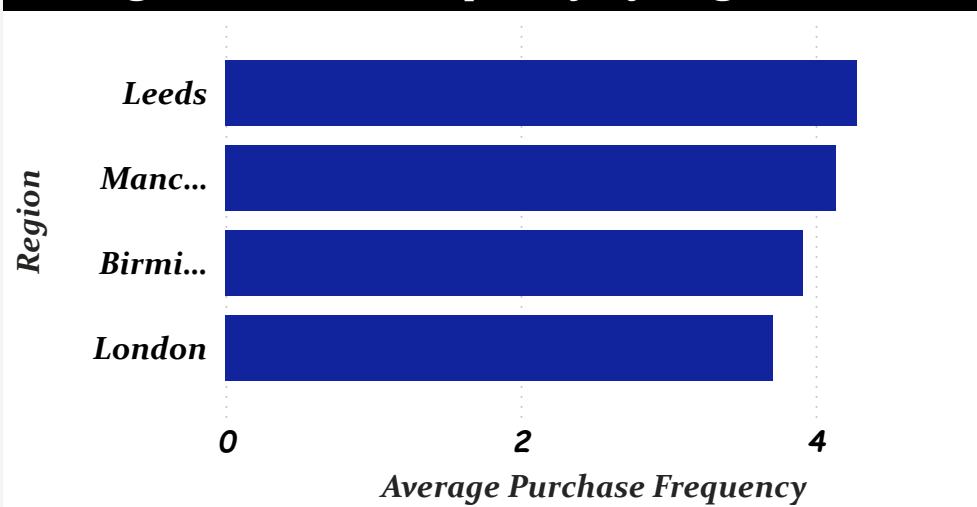


Funnel Chart: Total Customers → Repeat → Churned

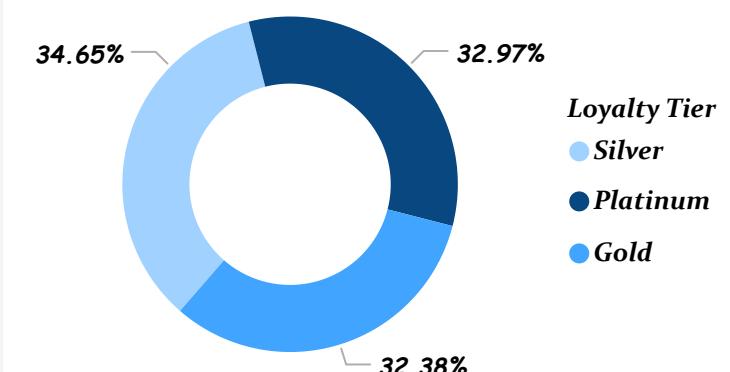


# Task 3: Repeat Purchase Analysis

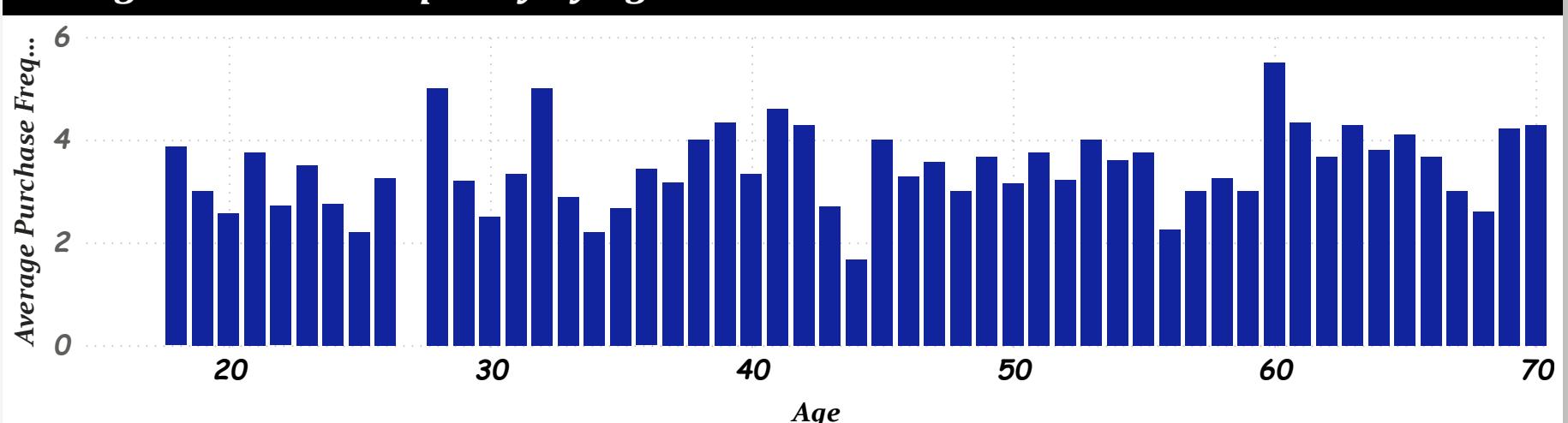
Average Purchase Frequency by Region



Average Purchase Frequency by Loyalty\_Tier



Average Purchase Frequency by Age



Category Purchase Count and Repeat Customer by Product\_Category

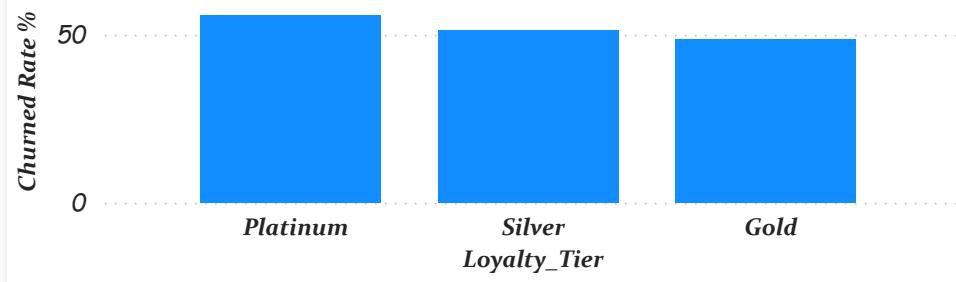


Identify product categories most frequently bought by loyal customers

Loyal customers most frequently purchase **Grocery, Clothing, and Bakery products**. These categories show strong repeat behavior and stable customer engagement, while Electronics shows lower loyalty and requires improvement strategies.

# Task 4: Promotion & Loyalty Impact

Churned Rate % by Loyalty\_Tier



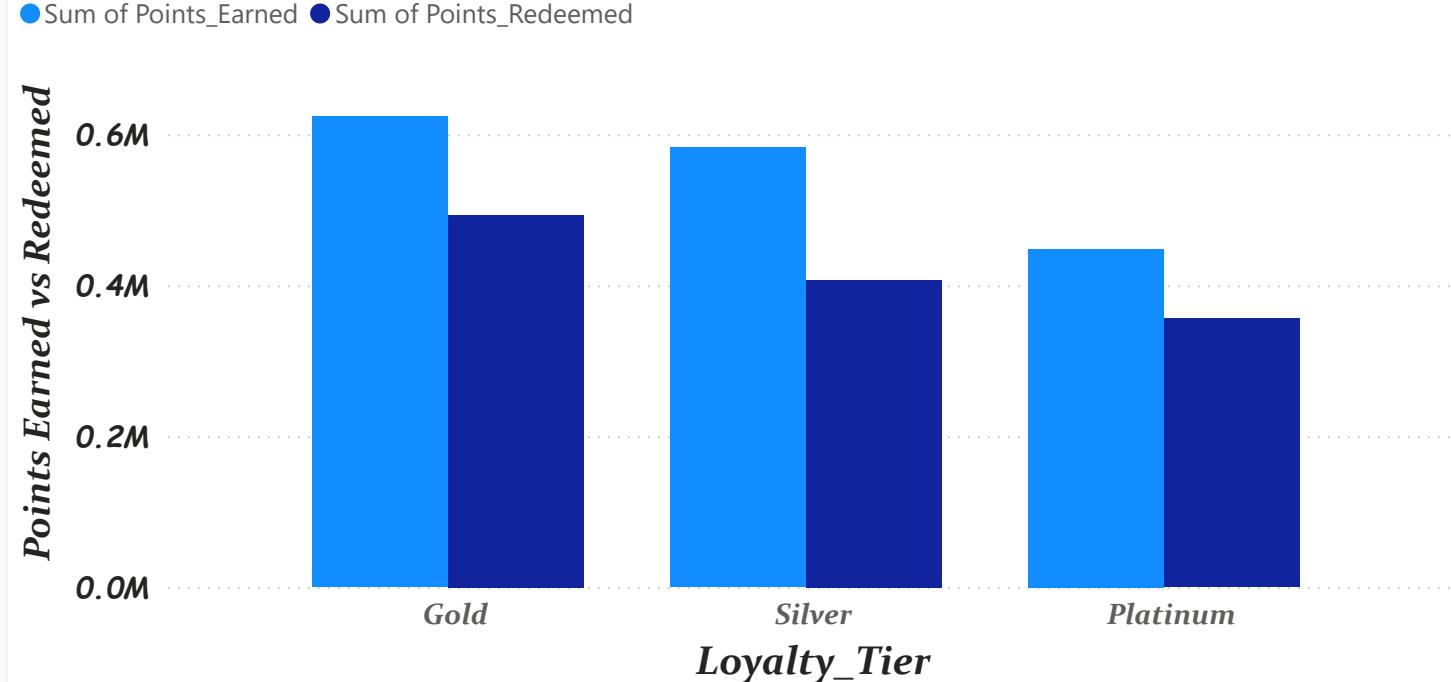
## Silver Tier (Low Engagement / High Churn)

- Simplify redemption by offering low minimum points rewards
- Provide frequent, small-value promotions to encourage repeat visits
- Send reminder notifications for unused or expiring points
- Introduce welcome-back offers after inactivity

## Gold Tier (Moderate Loyalty / High Potential)

- Offer bonus points on repeat purchases
- Enable faster redemption options on popular products
- Provide personalized offers based on purchase history
- Introduce tier upgrade incentives

Points Earned vs Redeemed by Tier

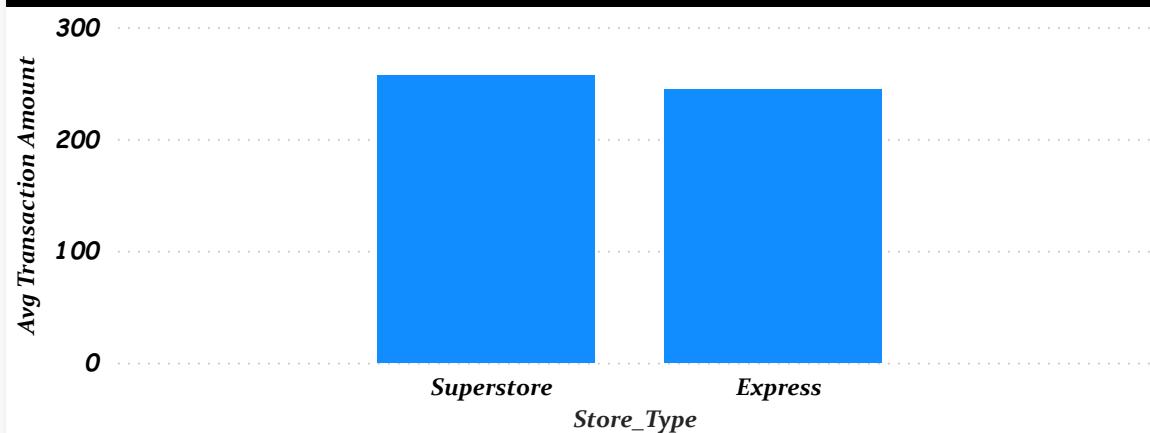


## Platinum Tier (High Loyalty / Low Churn)

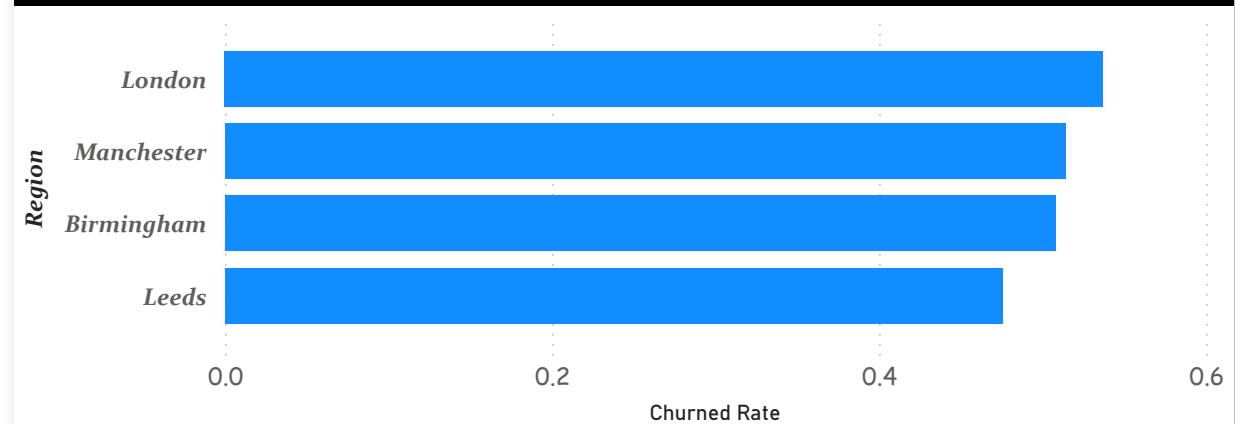
- Provide exclusive, non-discount rewards (VIP access, priority service)
- Offer premium redemption options instead of frequent discounts
- Recognize loyalty through status benefits and appreciation rewards
- Avoid over-promotion to protect customer experience and margins

# Task:5 Store Performance vs Retention

Avg Transaction Amount by Store\_Type

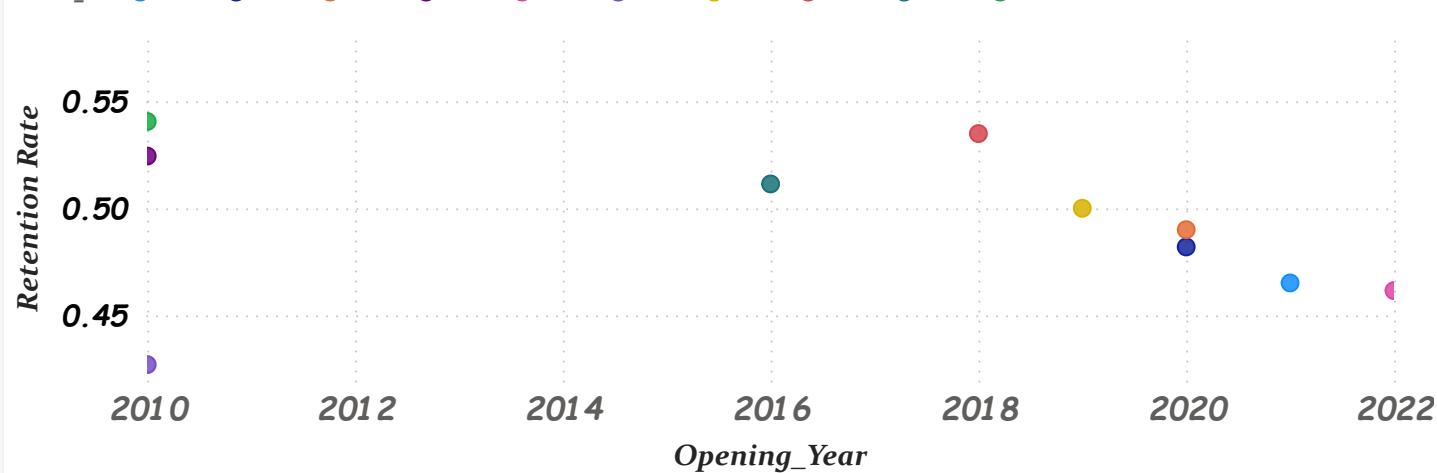


Churned Rate by Region



Correlation: Store Opening Year vs Retention

Store\_ID ● S101 ● S102 ● S103 ● S104 ● S105 ● S106 ● S107 ● S108 ● S109 ● S110

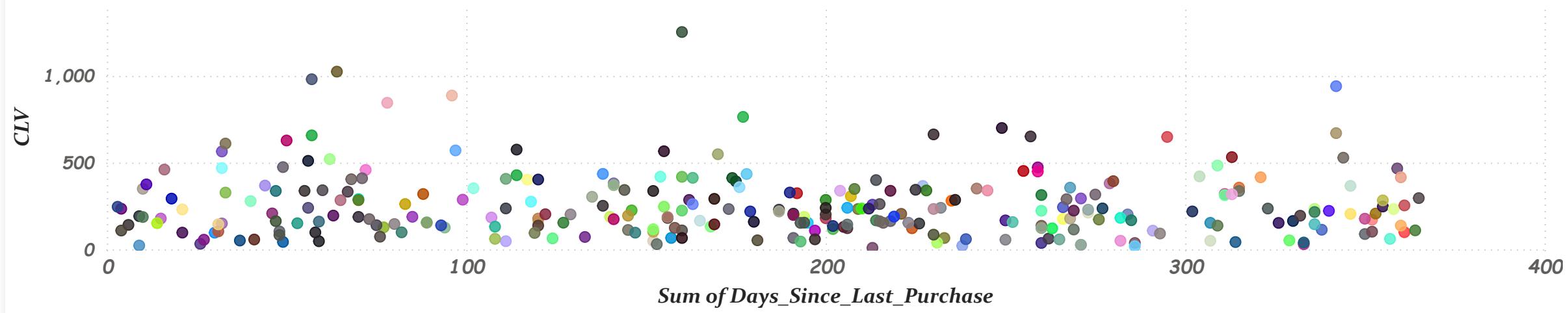


Recommendation where Store run there Campaign.

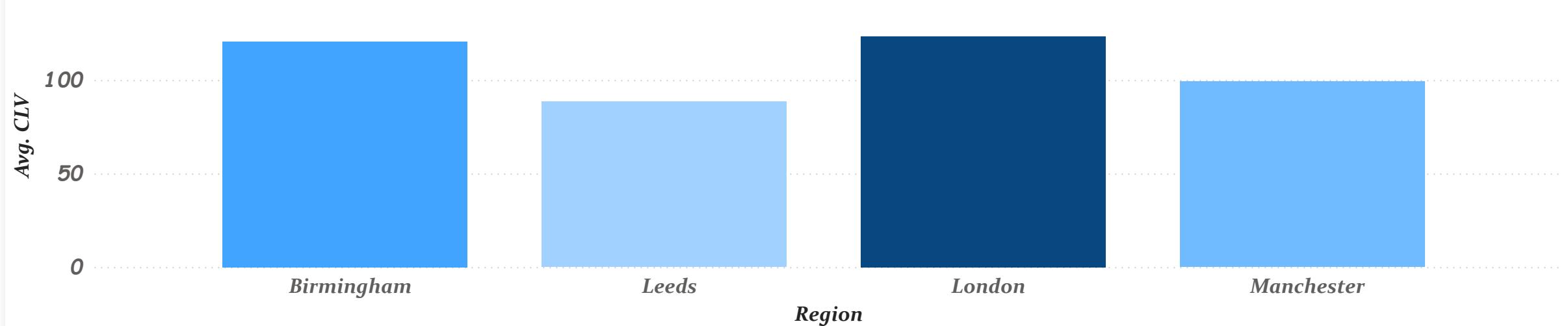
- Run the Campaigns with the **region like London & Manchester** due to the high churn Customer.
- Improve Service quality** in all over the region.
- Introduce the use of **Loyalty bonus on higher bill amount**.
- Introduce the offers and trained the staff **help customer for the cross-selling**.
- Provide more points** for the first purchases in the newly opened stores.
- Add region based discounts in the **express stores**.

# Task 6: Customer Value (CLV) Analysis

## *Sum of Days\_Since\_Last\_Purchase and CLV*



## *Avg. CLV by Region*



# Overview KPIs (Churn, CLV, Repeat Rate)

300

Total Customer

249.35K

Total Amount Spent

51.67

Churned Rate %

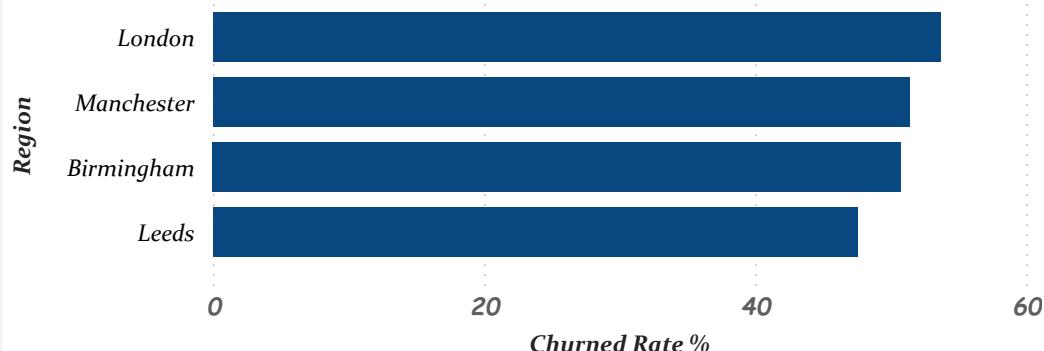
254

Repeat Customer

250.35

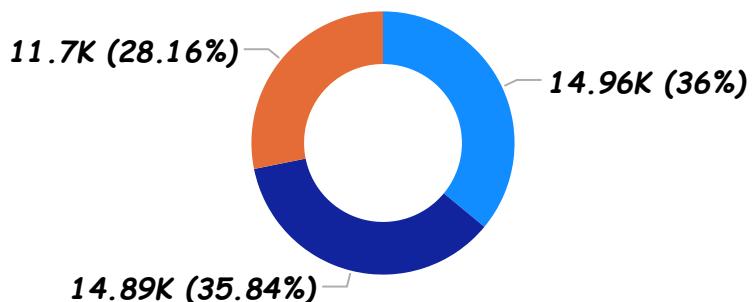
Avg. CLV

## Churned Rate % by Region

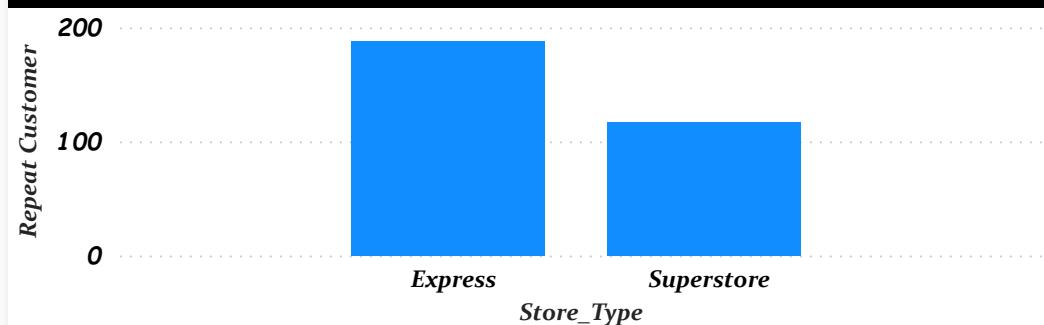


## Customer Distribution by Loyalty Tier

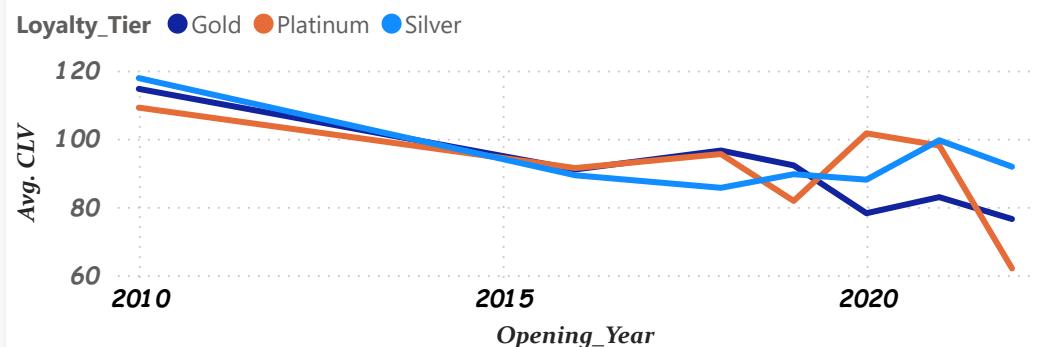
● Silver ● Gold ● Platinum



## Repeat Customer by Store\_Type



## Avg. CLV by Opening\_Year and Loyalty\_Tier



## Where should they focus next?

- Focus on customers with declining purchase frequency to **improve retention**.
- Prioritize low-sales locations by implementing targeted **local marketing strategies**.
- Enhance **reward redemption, engagement strategies**, and personalized incentives.

## What Should Tesco Do to Retain More Customers?

- Enhance loyalty benefits to increase **retention and repeat purchases**.
- Deliver **targeted discounts** based on customer behavior and preferences.
- Implement localized strategies to **boost sales in underperforming regions**.

### Region

- Birmingham
- Leeds
- London
- Manchester

### Loyalty\_Tier

- Gold
- Platinum
- Silver

### Income\_Group

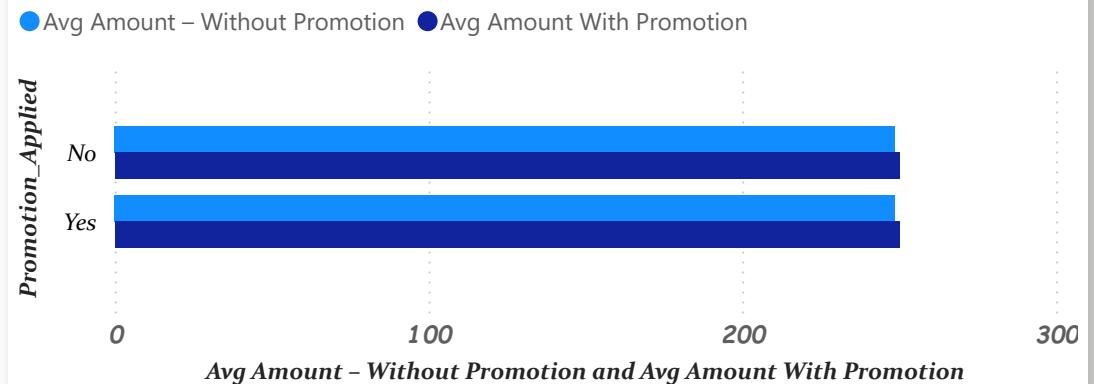
- High
- Low
- Medium

### Store\_Type

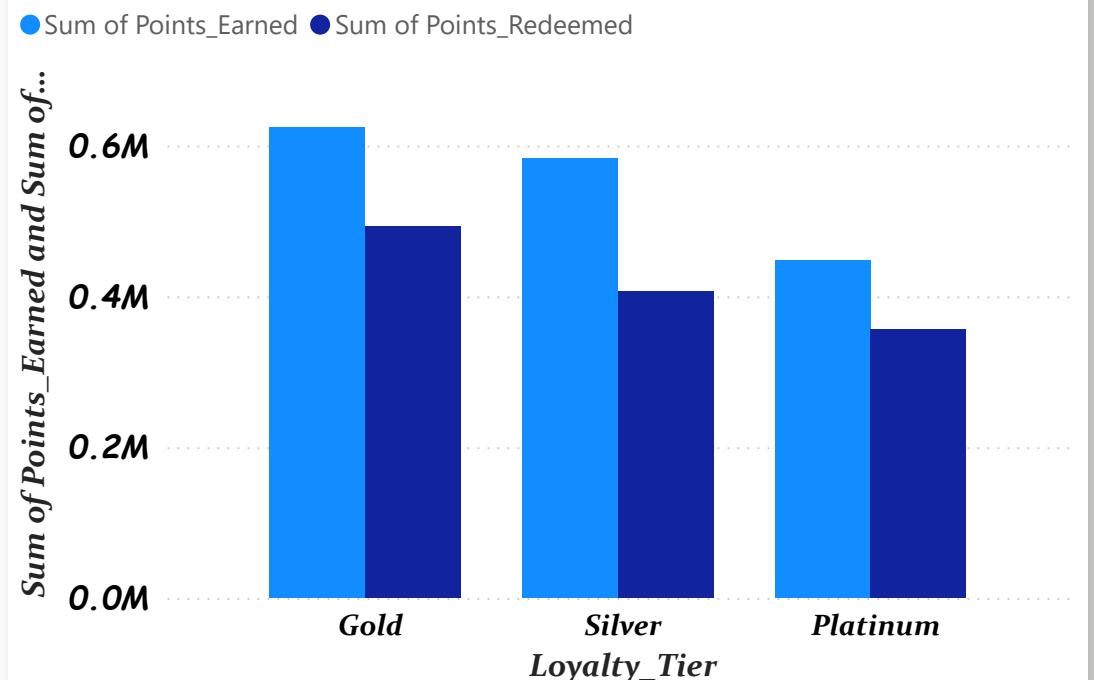
- Express
- Superstore

# Loyalty & Promotion Impact

## Average Purchase Amount: With vs Without Promotion



## Point earned by Loyalty Tier



## What Should Tesco Do to Retain More Customers?

- Enhance **reward structure** to increase engagement and customer retention.
- Target **inactive customers** with personalized offers and incentives.
- Offer **higher reward points** to encourage repeat purchases.

51.67

Churned Rate %

0.51

% Promotion Usage

51.00

% Promotion Trans...

254

Repeat Customer

## Region

- Birmingham
- Leeds
- London
- Manchester

## Loyalty\_Tier

- Gold
- Platinum
- Silver

## Income\_Group

- High
- Low
- Medium

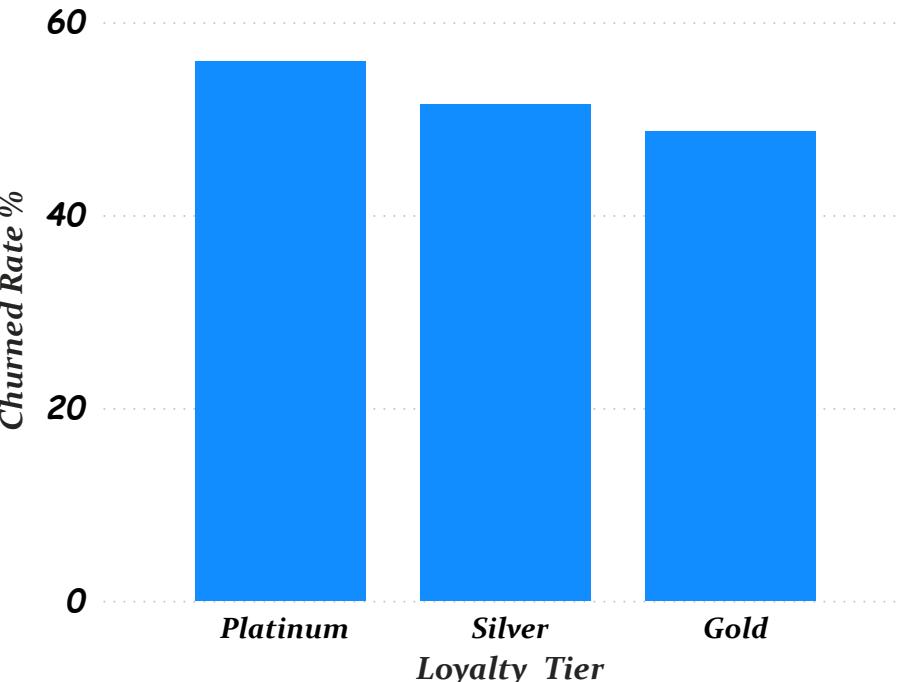
## Store\_Type

- Express
- Superstore

## Product\_Categ...

- Bakery
- Beverages
- Clothing
- Electronics
- Grocery

## Churned Rate % by Loyalty\_Tier



## Where should they focus next?

- Focus marketing efforts where **churn % is high**.
- Focus on customer redeemed points for the use of the points in every purchase.
- Identify **product categories** with low repeat customers.

# Store and Region Insights

249.35K

Total Revenue

300

Total Customer

254

Repeat Customer

51.67

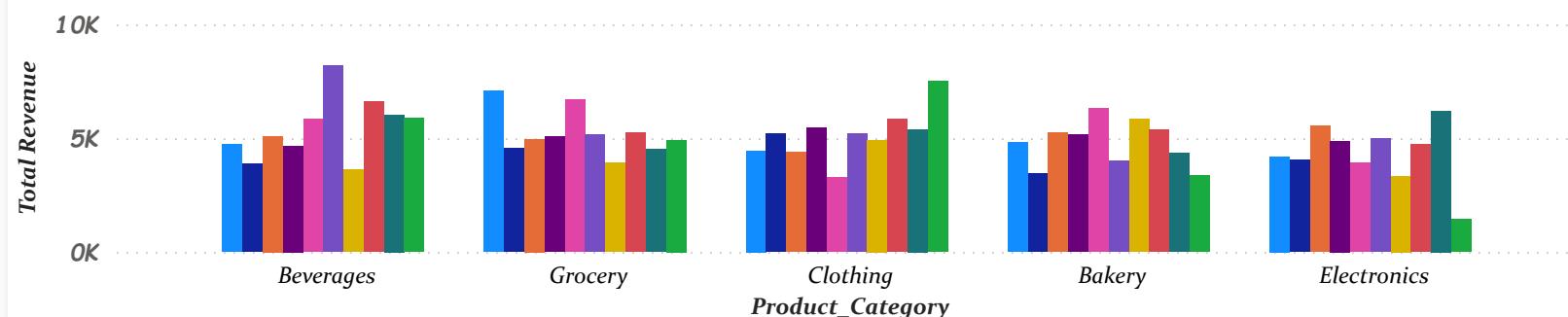
Churned Rate %

10

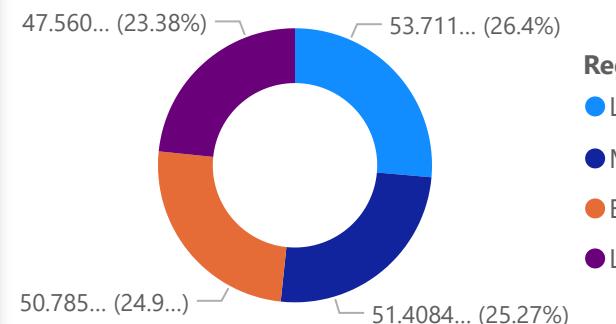
Total Store

## Total Revenue by Product\_Category and Store\_ID

Store\_ID ● S101 ● S102 ● S103 ● S104 ● S105 ● S106 ● S107 ● S108 ● S109 ● S110



## Churned Rate % by Region



## Total Revenue by Store\_ID



## Avg Transaction Amt. by Store\_Type



## What Should Tesco Do to Retain More Customers?

- Focus on **product categories generating high revenue** with the stores.
- TESCO should improve **service quality, product availability** and so on.
- TESCO should **run region-specific offers** and promotions help to reduce regional customers.

**Store\_Type**

 Express  
 Superstore

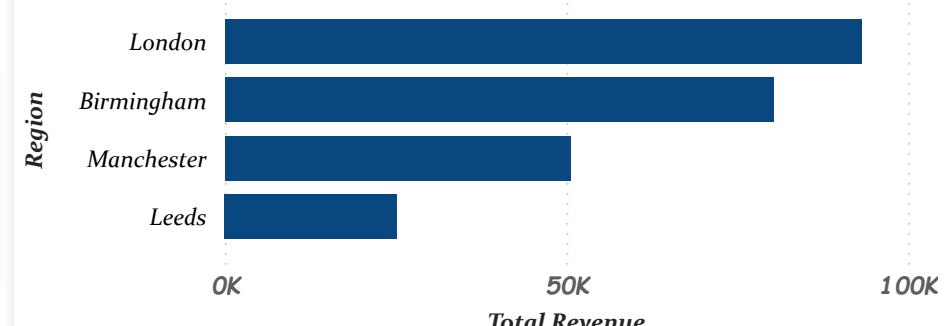
## Where should they focus next?

- Focus marketing on **categories that generate the most revenue**.
- Analyze regions with moderate revenue but **strong customer base**.
- Expand **inventory and promotional activities** in those locations.

**Region**

 Birmingham  
 Leeds  
 London  
 Manchester

## Total Revenue by Region



**Income\_Group**

 High  
 Low  
 Medium

**Loyalty\_Tier**

 Gold  
 Platinum  
 Silver

# Customer Segmentation

155

Churned Customer

300

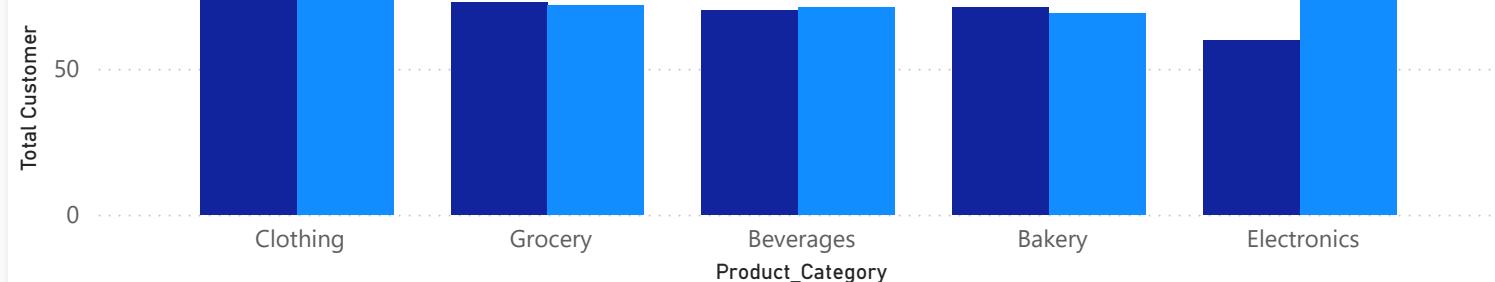
Total Customer

254

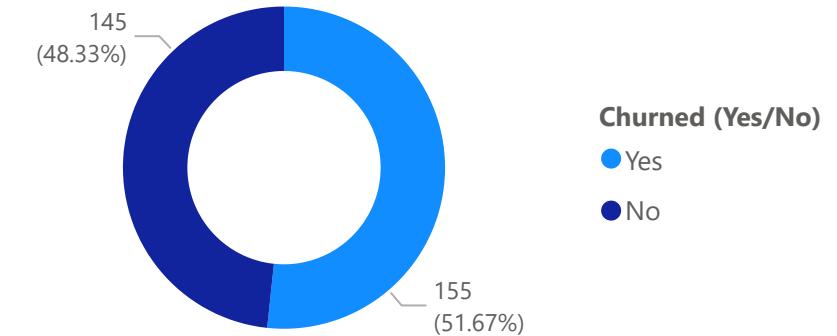
Repeat Customer

## Total Customer by Product\_Category and Churned (Yes/No)

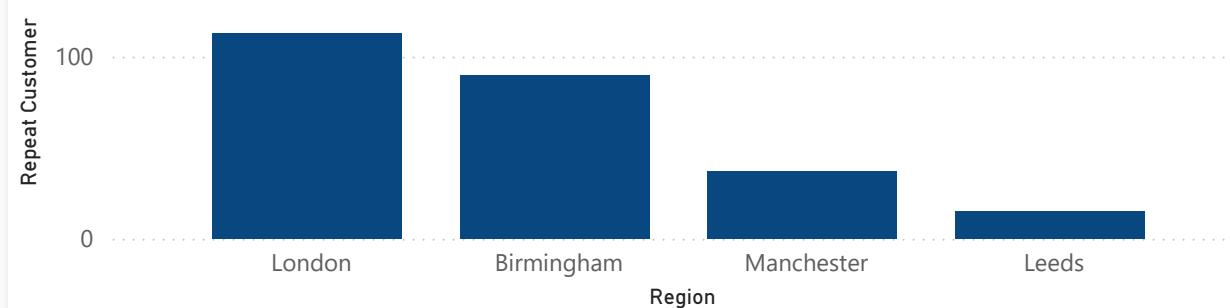
Churned (Yes/No) ● No ● Yes



## Total Customer by Churned (Yes/No)



## Repeat Customer by Region



## Store\_Type

- Express
- Superstore

## Loyalty\_Tier

- Gold
- Platinum
- Silver

## Income\_Group

- High
- Low
- Medium

## What Should Tesco Do to Retain More Customers?

- Increase customer interaction through improved rewards.
- Enhance service quality and product availability in express

## Where should they focus next?

- Boost sales through **promotions and strategic pricing** in electronics.
- Implement targeted campaigns to improve retention in **Leeds and Manchester**.
- Develop **retention strategies** to minimize overall customer attrition.

## Region

- Birmingham
- Leeds

## **Project Explanation Video**

*Can Copy and paste to see either.*

[https://drive.google.com/file/d/1zuCGfsKqCLGQsWB46rtHmNY3gZBBova/view?  
usp=sharing](https://drive.google.com/file/d/1zuCGfsKqCLGQsWB46rtHmNY3gZBBova/view?usp=sharing)