

# Capstone Project – Author Analysis



# Publications

Author Analysis

**Valuable Insights:** The Power BI dashboard using the Sample Publication Database provides valuable insights into the publishing company's performance and operations. It presents data-driven analytics on book sales, popular genres, and author contributions. Stakeholders can gain a deeper understanding of customer preferences, bestselling titles, and effective marketing strategies.

Publishers Analysis

**Improvement Focus:** The dashboard helps the publishing company focus on areas that require improvement. By analyzing sales trends, store distribution, and discount effectiveness, the dashboard identifies opportunities to optimize sales and increase revenue. It enables the company to refine its marketing and distribution strategies to better cater to customer demands.

Title Analysis

**Evaluation of Effectiveness:** The dashboard facilitates the evaluation of various aspects of the publishing business. It assesses the effectiveness of discounts on sales, the impact of different bookstores on revenue, and the success of marketing campaigns. With this evaluation, the company can make data-driven decisions to enhance its overall effectiveness and profitability.

Sales Analysis

**Trend Identification:** Using historical sales data and author royalties, the dashboard identifies trends in book sales over time. It helps identify seasonal patterns, bestselling genres in specific periods, and the success of certain authors or book titles. This trend identification empowers the company to plan for future publications and marketing efforts more effectively.

Stores Analysis

**Comprehensive Understanding:** The Power BI dashboard offers a comprehensive understanding of the publishing company's operations. By presenting data on book sales, author royalties, and store distribution in one centralized platform, stakeholders can have a holistic view of the business. This comprehensive understanding enables better decision-making and a more cohesive strategy across all aspects of the publishing process.



**Objective:** The objective of this project is to create a comprehensive Power BI dashboard utilizing the Sample Publication Database. The dashboard aims to provide valuable insights into the publishing company's book sales performance, author royalties, and store distribution, enabling data-driven decision-making and strategic planning.



**Analysis Scope:** The analysis will focus on various aspects of the publication process, including book sales, author contributions, store performance, and the impact of discounts. It will encompass historical sales data, author royalties based on royalty schedules, and distribution data from multiple bookstores.



**Goal:** The primary goal of this Power BI dashboard is to offer a holistic view of the publishing company's operations. It will provide actionable insights to optimize book sales, enhance author collaboration, improve store distribution strategies, and identify opportunities for growth and efficiency.



**Insights & Recommendations:** The Power BI dashboard will generate valuable insights into the top-selling book titles, bestselling genres, and sales trends over time. It will analyze the performance of different bookstores, identify bestselling authors, and calculate author royalties based on royalty schedules. Additionally, it will recommend effective discount strategies to boost book sales and customer engagement.



**Report & Presentation:** The final deliverable will consist of a detailed report describing the data sources, data modeling methodologies, and data cleansing processes used in creating the Power BI dashboard. The report will also include a step-by-step guide on how to interpret the insights and use the dashboard for decision-making. The presentation will showcase the key findings, visualizations, and actionable recommendations derived from the dashboard's analysis.

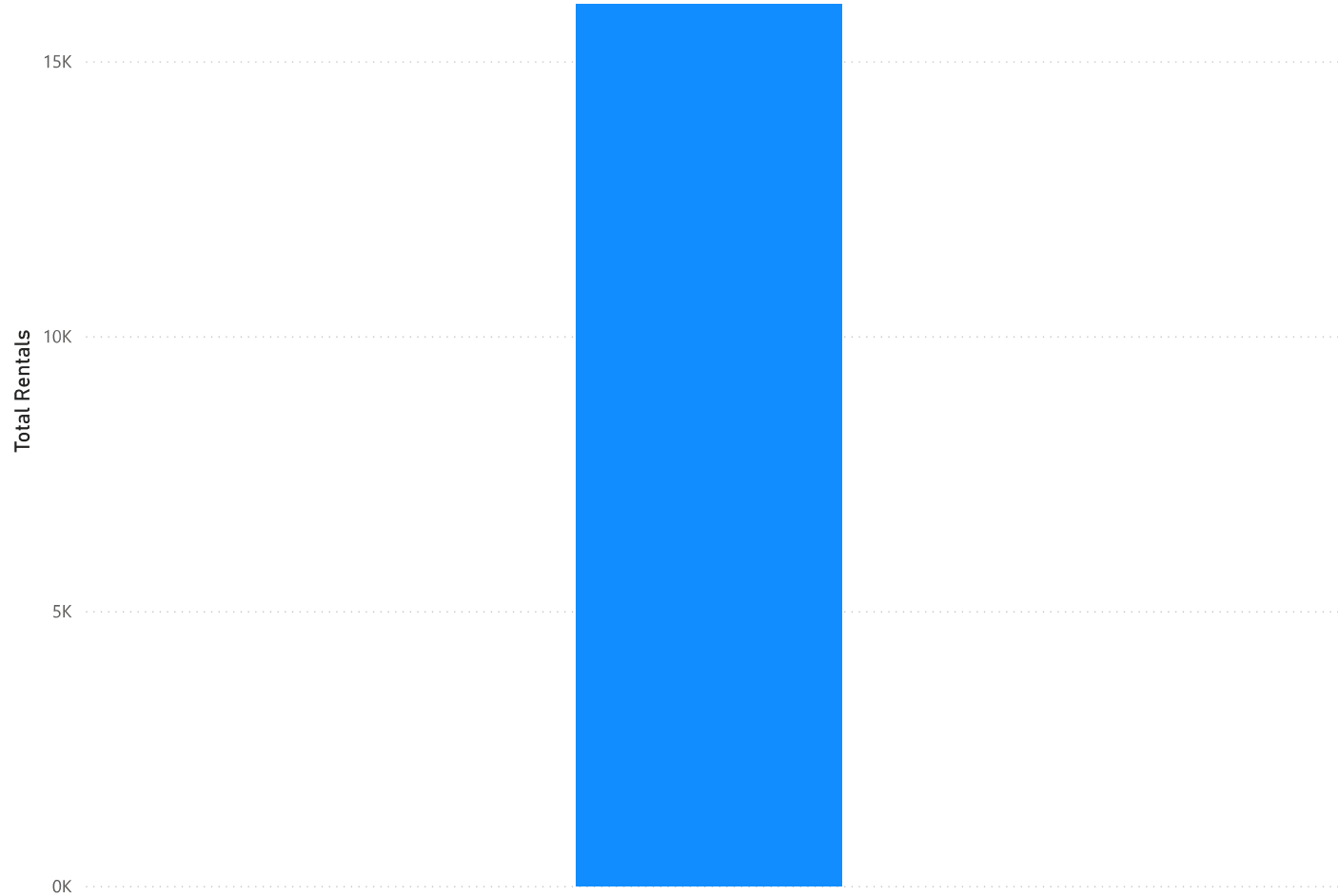


The Power BI dashboard, along with the report and presentation, will serve as a powerful tool for the publishing company's stakeholders. It will empower them to make informed decisions, optimize book sales strategies, foster author collaborations, and enhance the overall business performance in the competitive publishing landscape.



# EDA Problem Statements

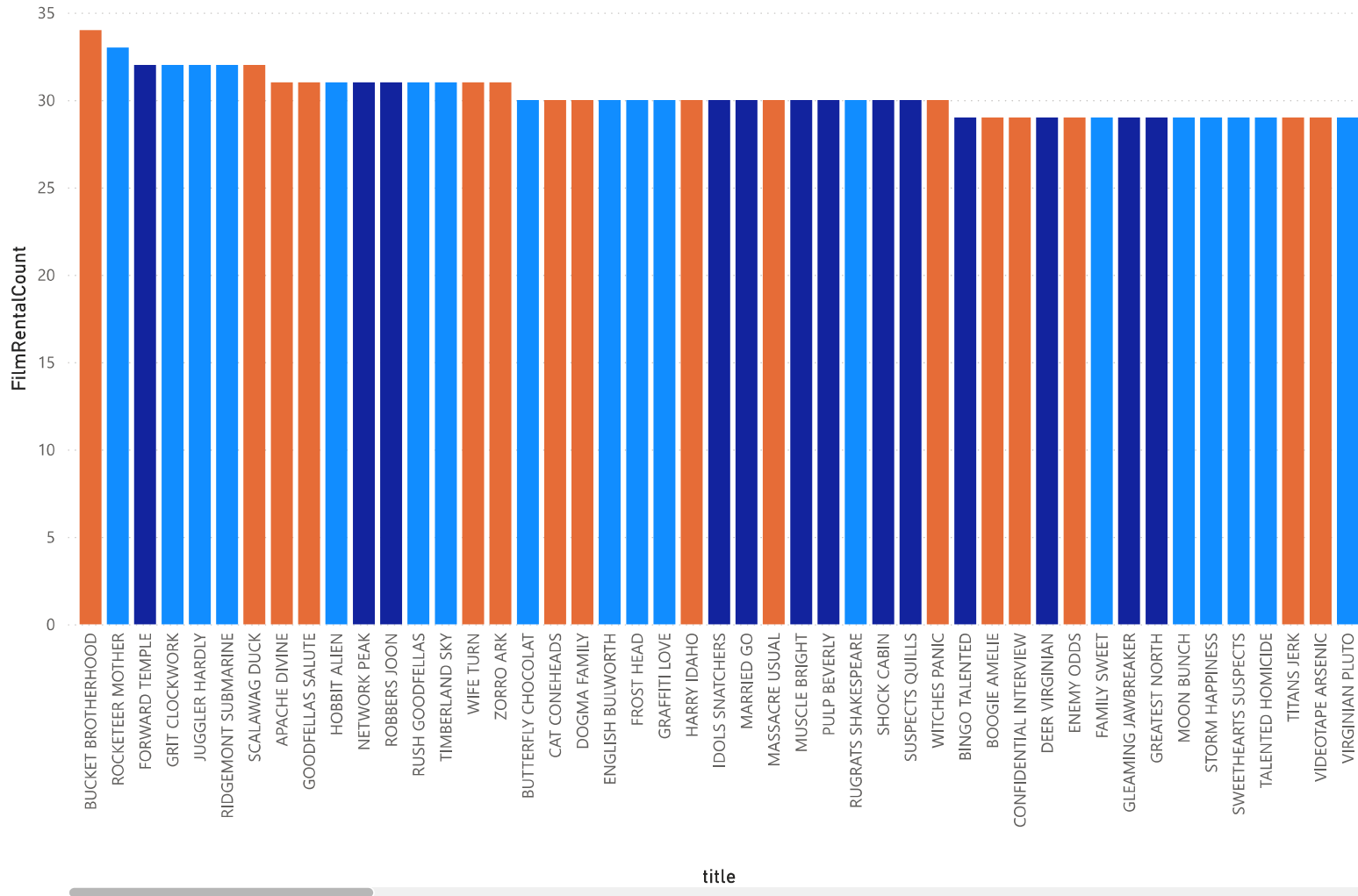
Total Rentals



# Purchasing Patterns: New vs. Repeat Customers

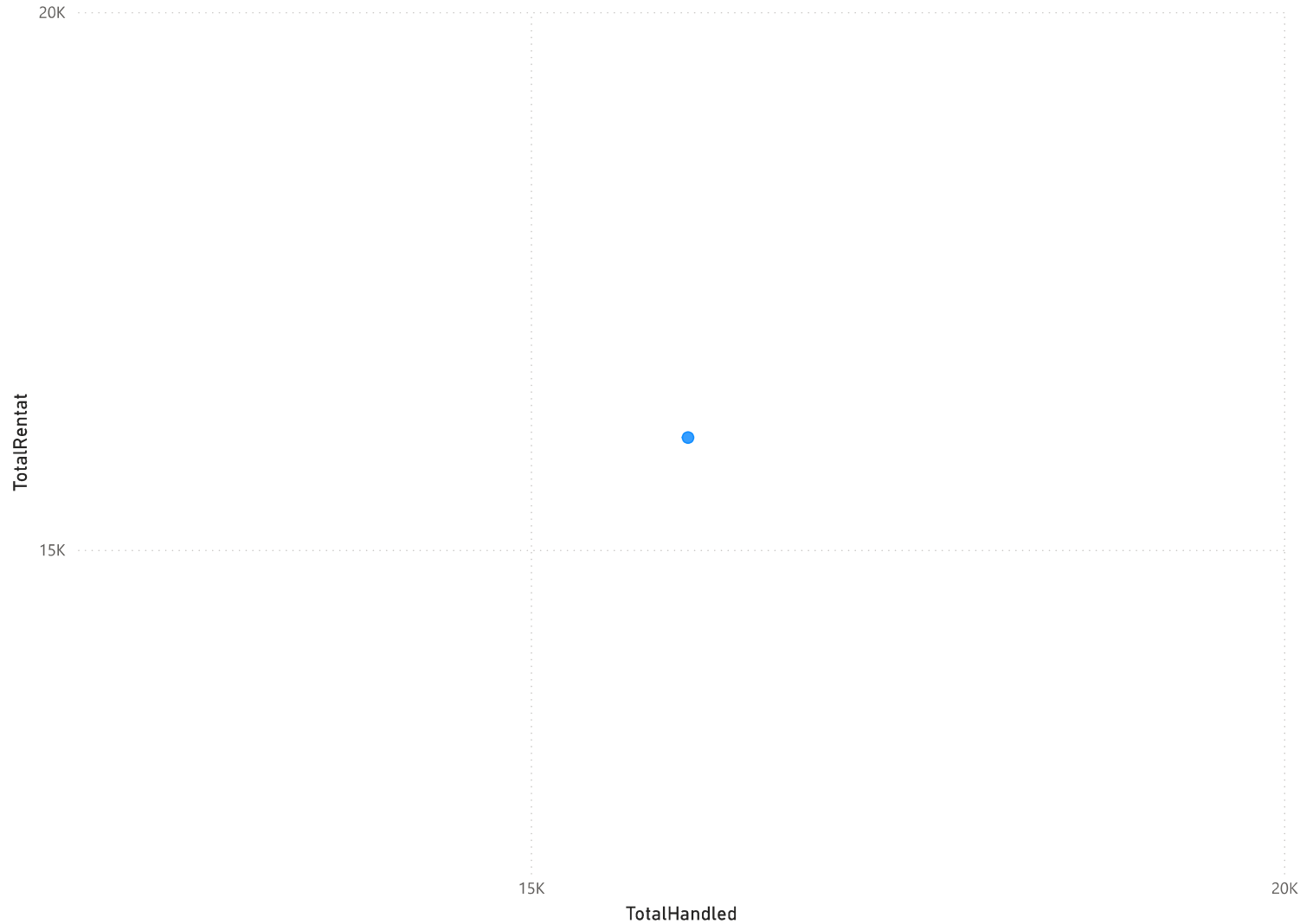
FilmRentalCount by title and rental\_rate

rental\_rate ● 0.99 ● 2.99 ● 4.99



# Highest Rental Rates & Most In-Demand Films

TotalHandled and TotalRentat

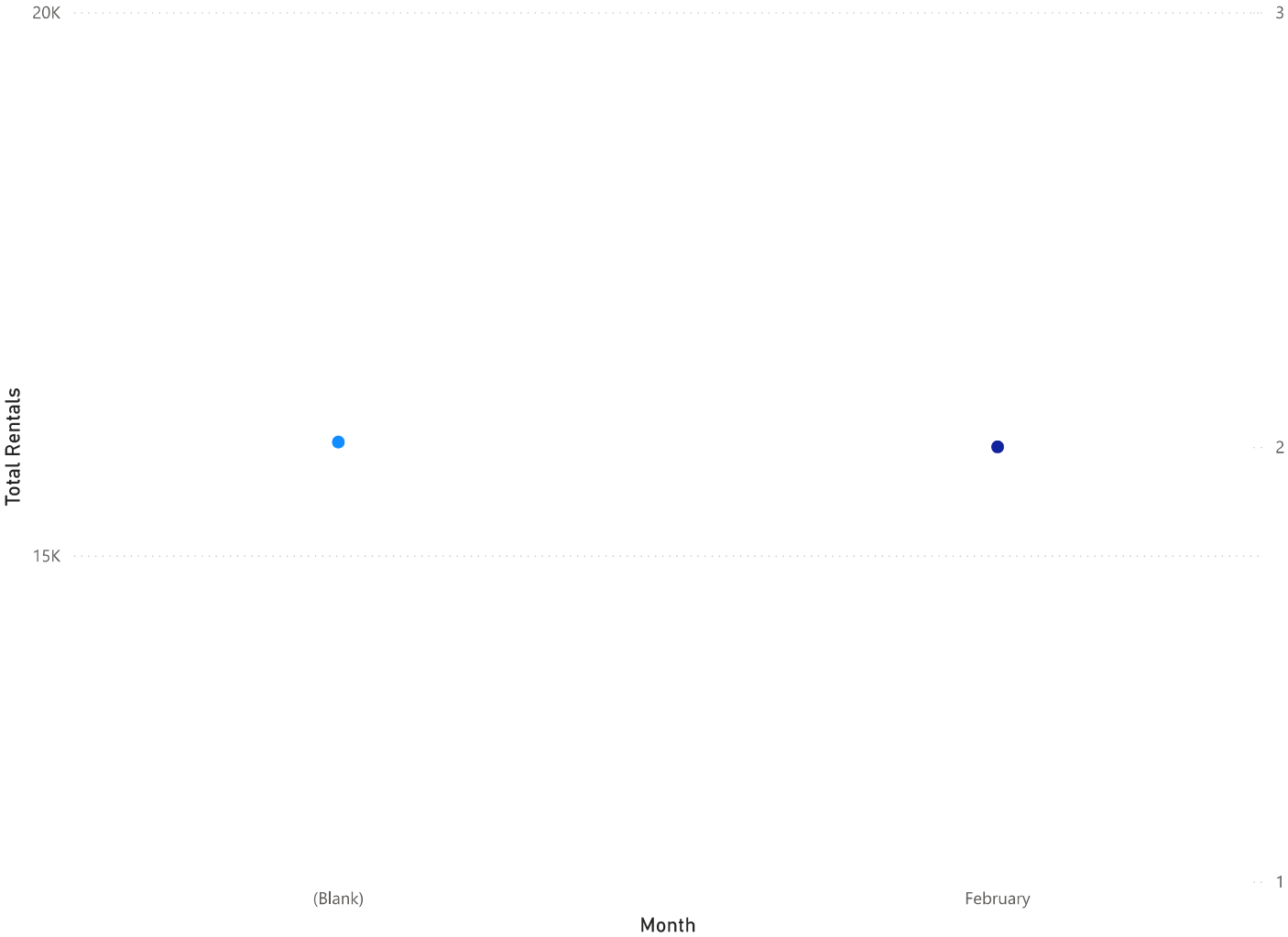


# Staff Performanc e vs Customer Satisfaction



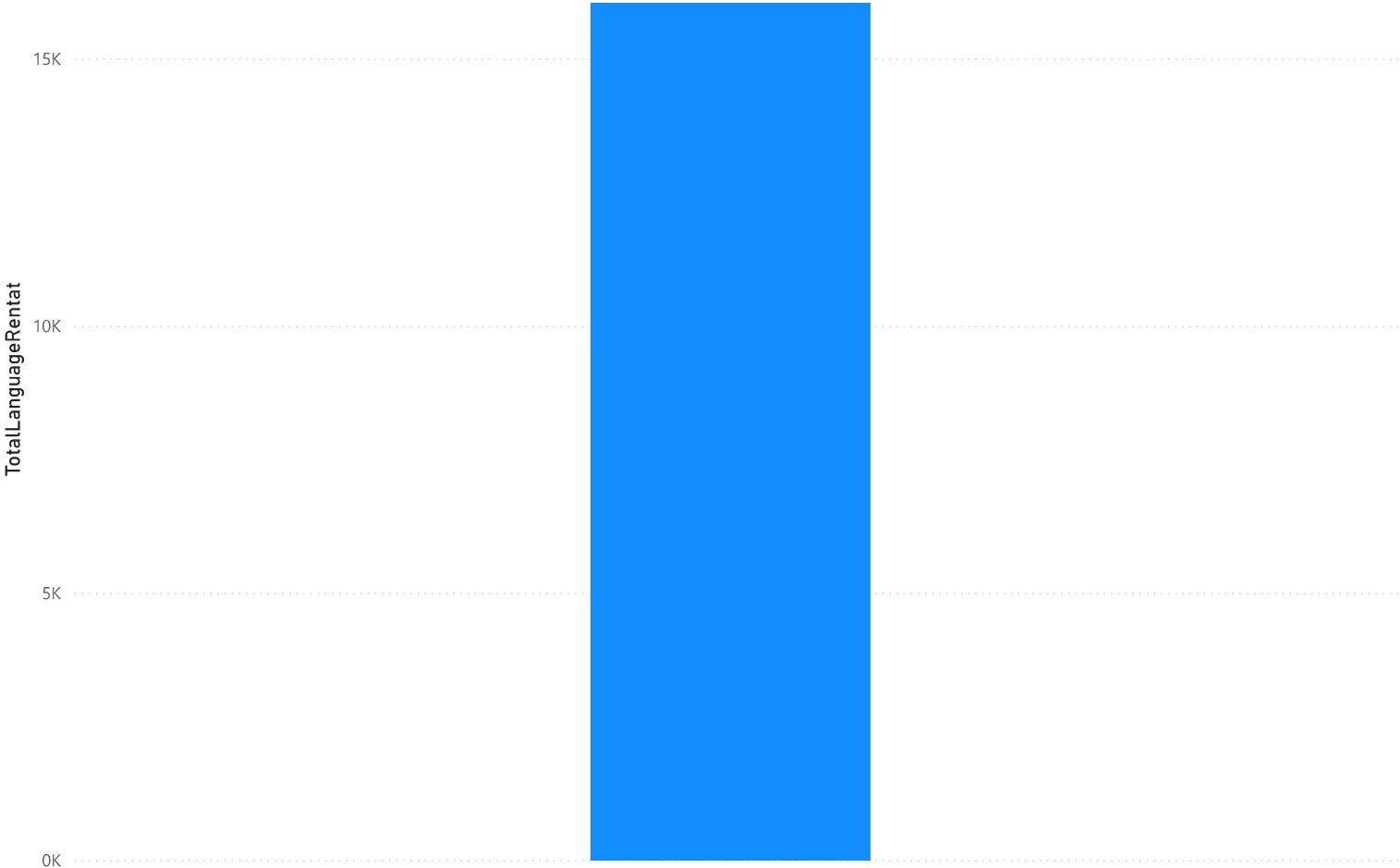
Total Rentals and Count of store\_id by Month

Total Rentals Count of store\_id



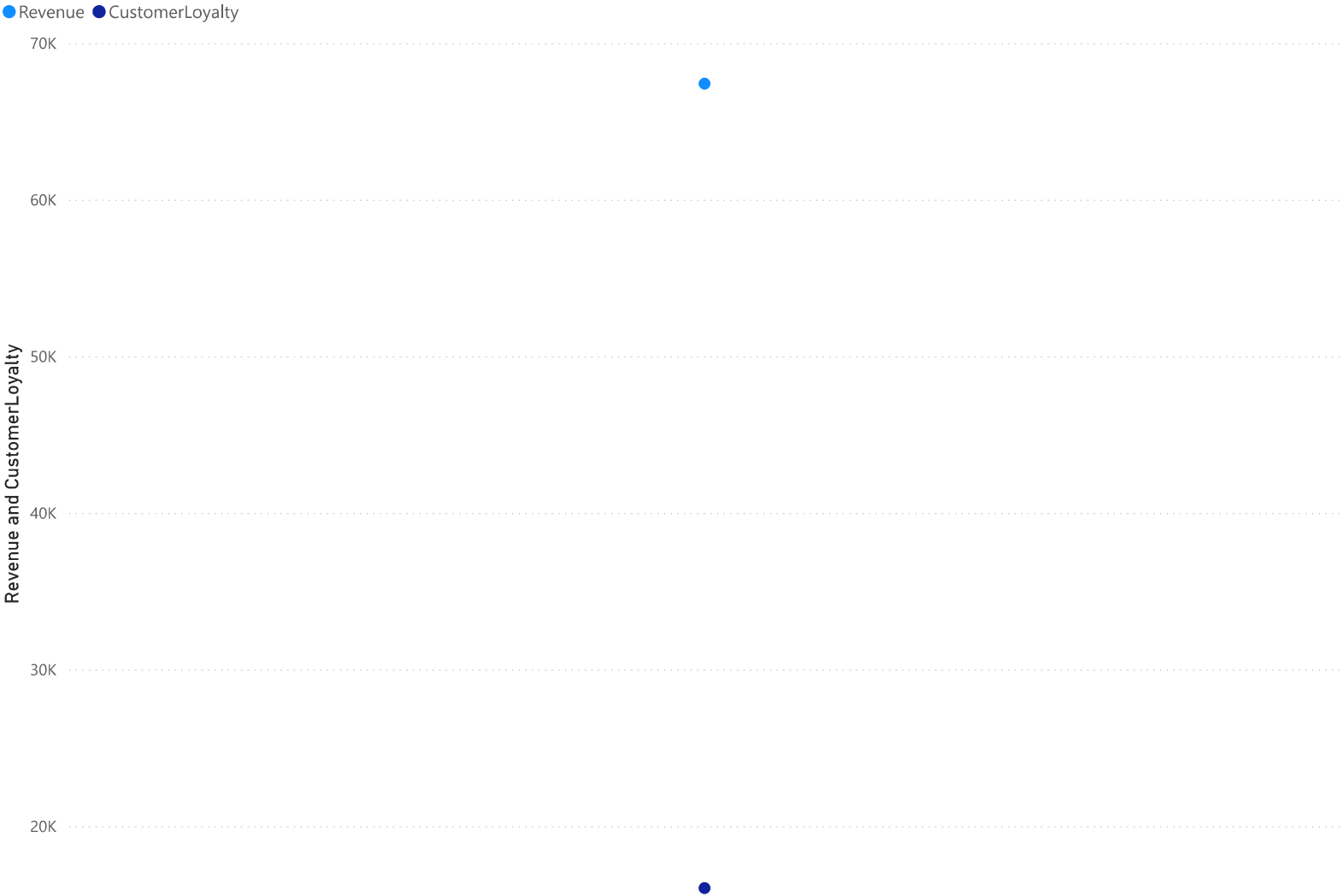
Seasonal Trends Across Locations  
Seasonal Trends Across Locations

TotalLanguageRentat



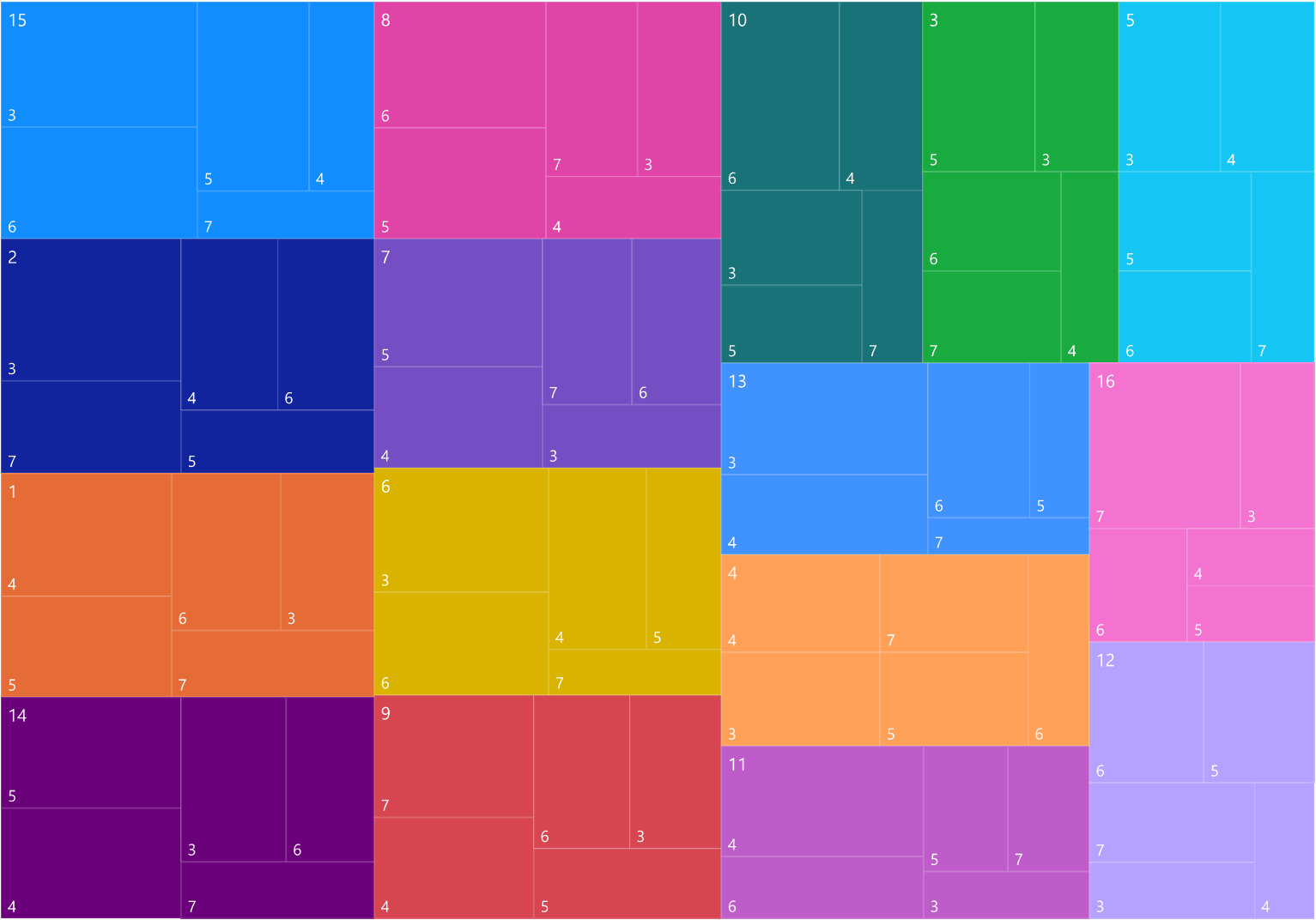
# Language Popularit y by Segment

Revenue and CustomerLoyalty



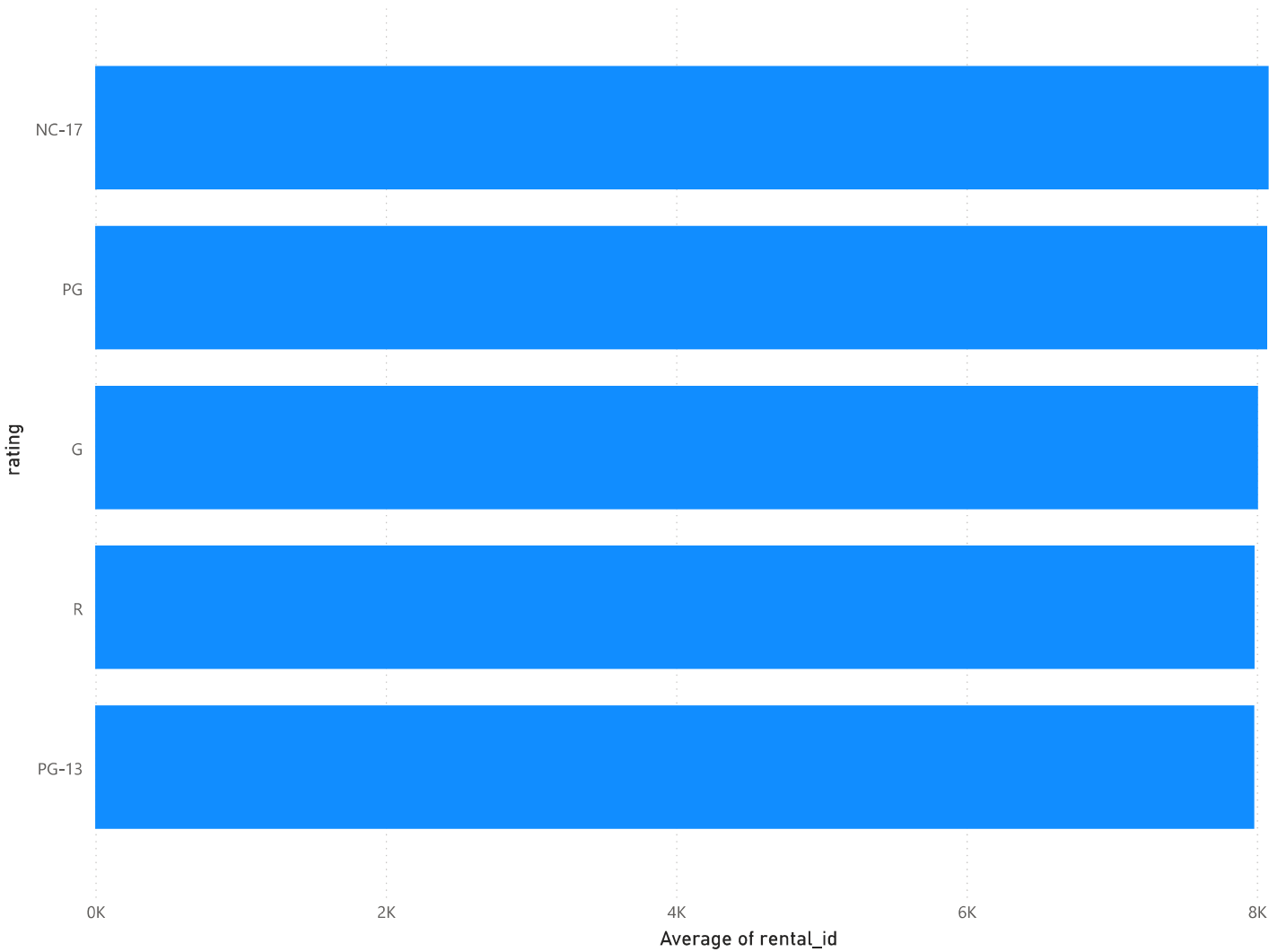
# Customer Loyalty and Revenue Over Time

Total Rentals by popularity and category



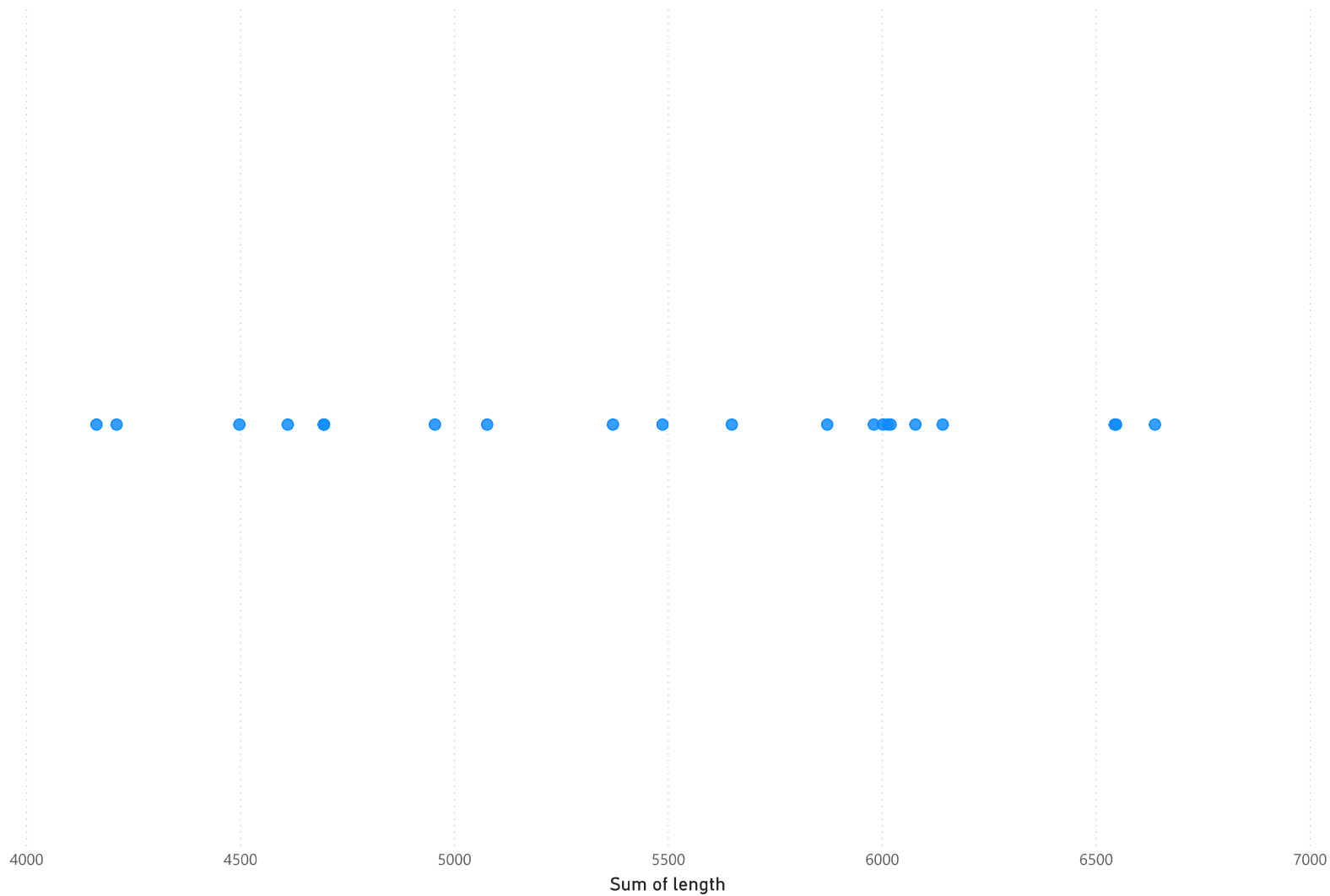
# Category Popularity by Location

Average of rental\_id by rating



# Staff Knowledge and Customer Ratings

Sum of length by replacement\_cost



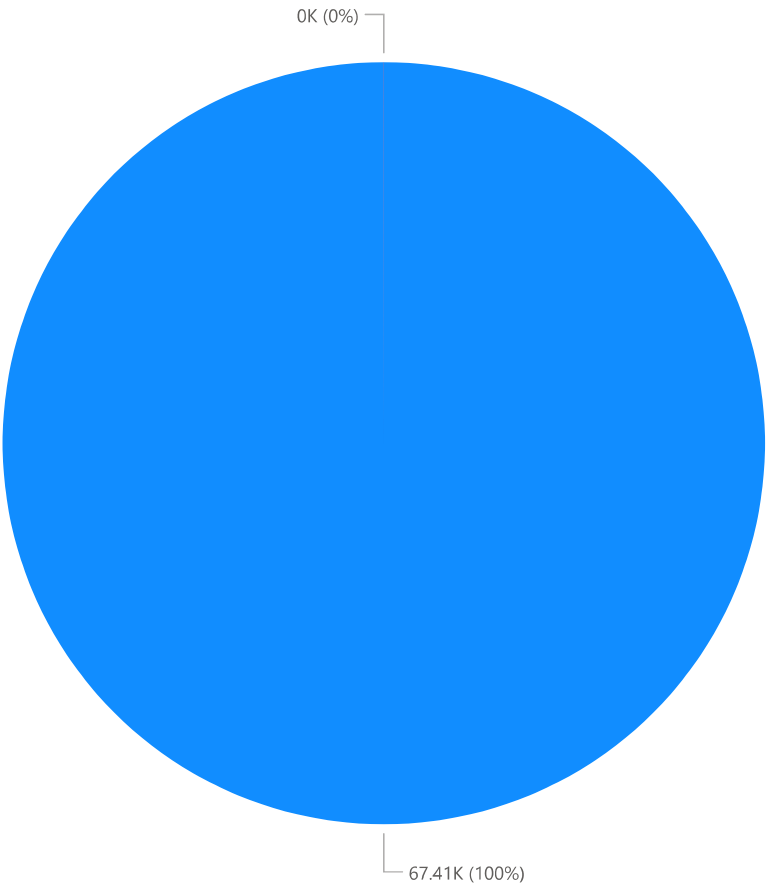
**Store  
Proximi  
ty vs  
Rental  
Freque  
ncy**

Total Rentals by city\_id and country\_id



## Categories and Customer Age Groups

CustomerSpend and HighSpendersFlag

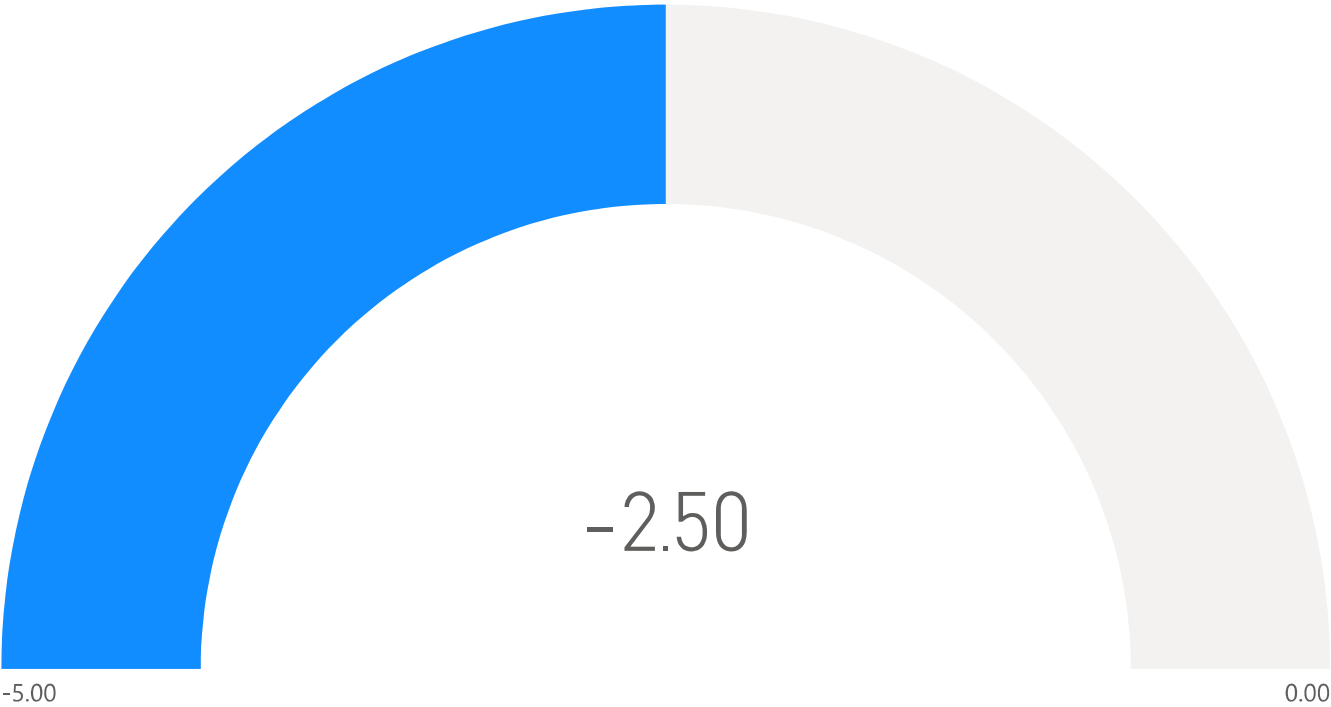


- CustomerSpend
- HighSpendersFlag

# Demographics of High-Spending Customers

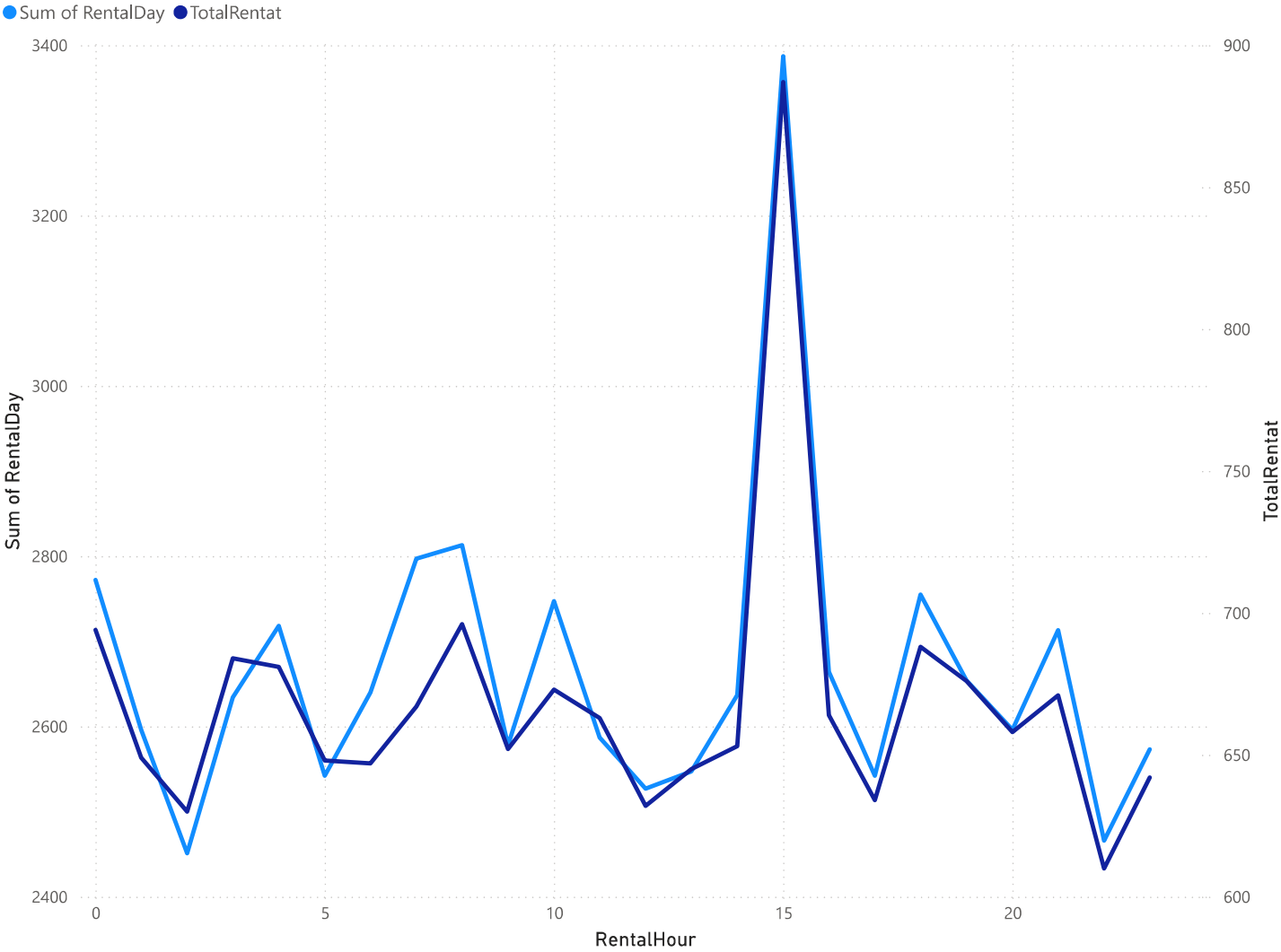


ServiceLevel



# Inventory Availability and Satisfaction

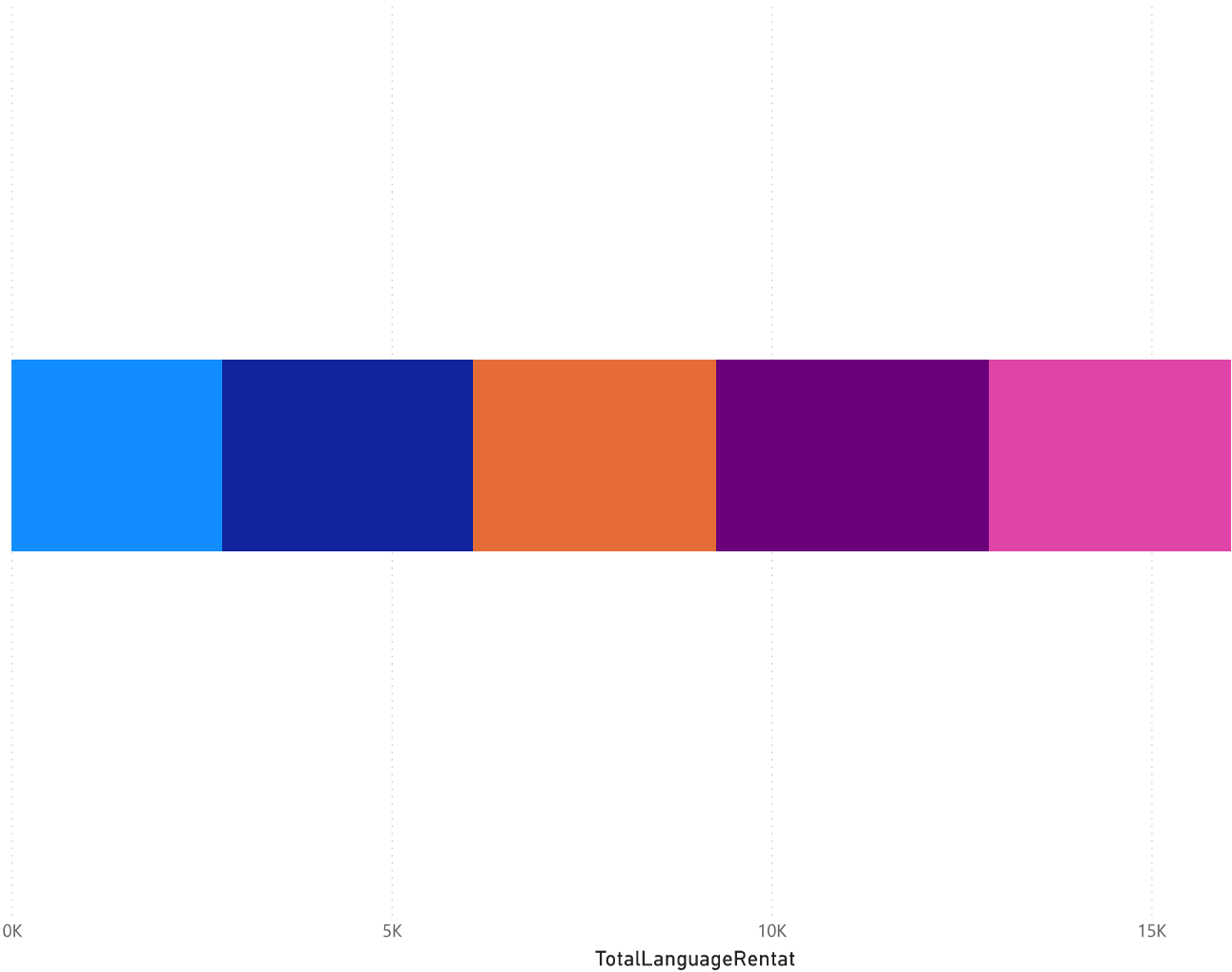
Sum of RentalDay and TotalRentat by RentalHour



**Busiest  
Hours/Days  
per Store**

TotalLanguageRentat by rating

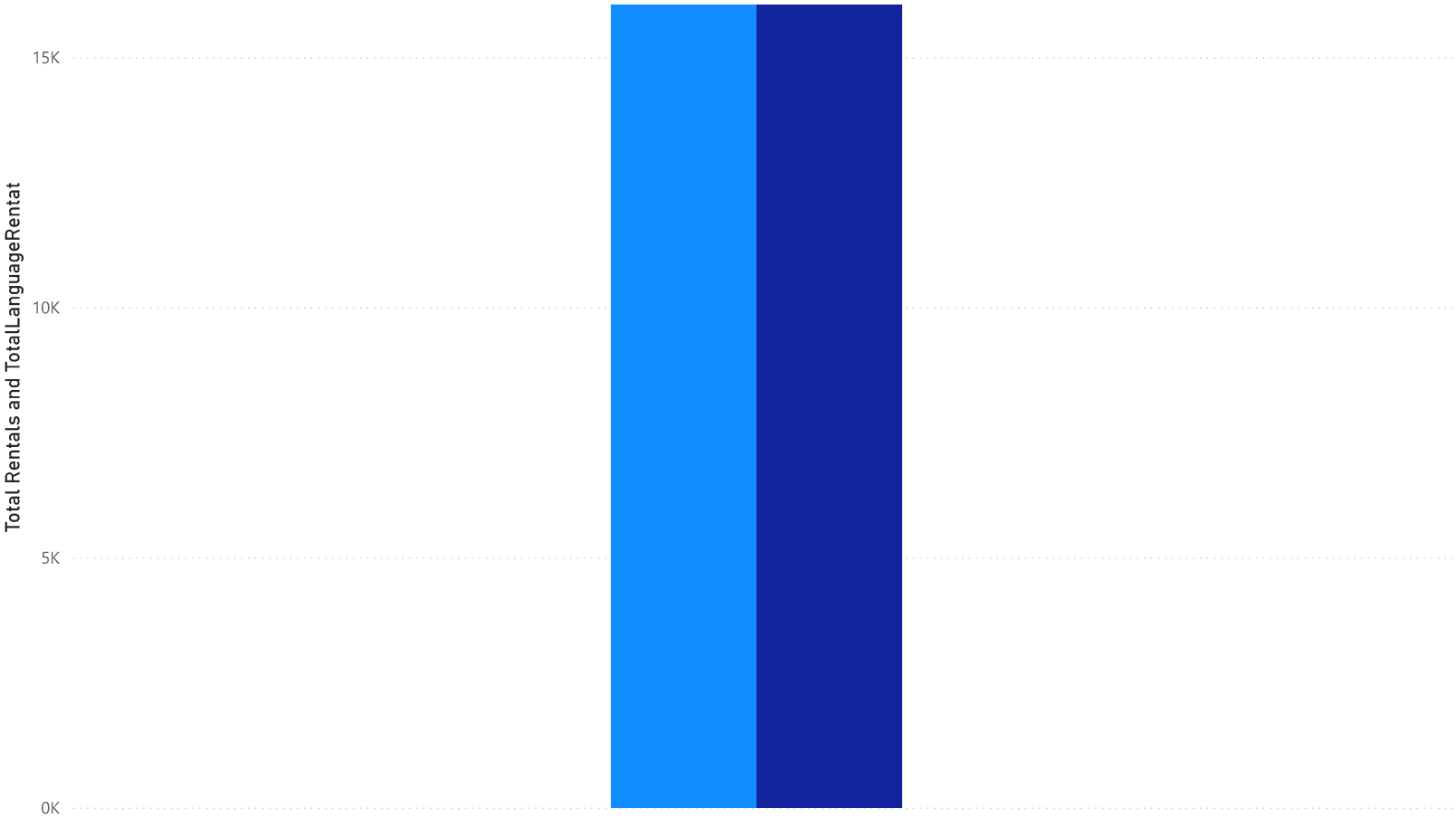
rating ● G ● NC-17 ● PG ● PG-13 ● R



# Language Availability vs Satisfaction

Total Rentals and TotalLanguageRentat

Total Rentals TotalLanguageRentat

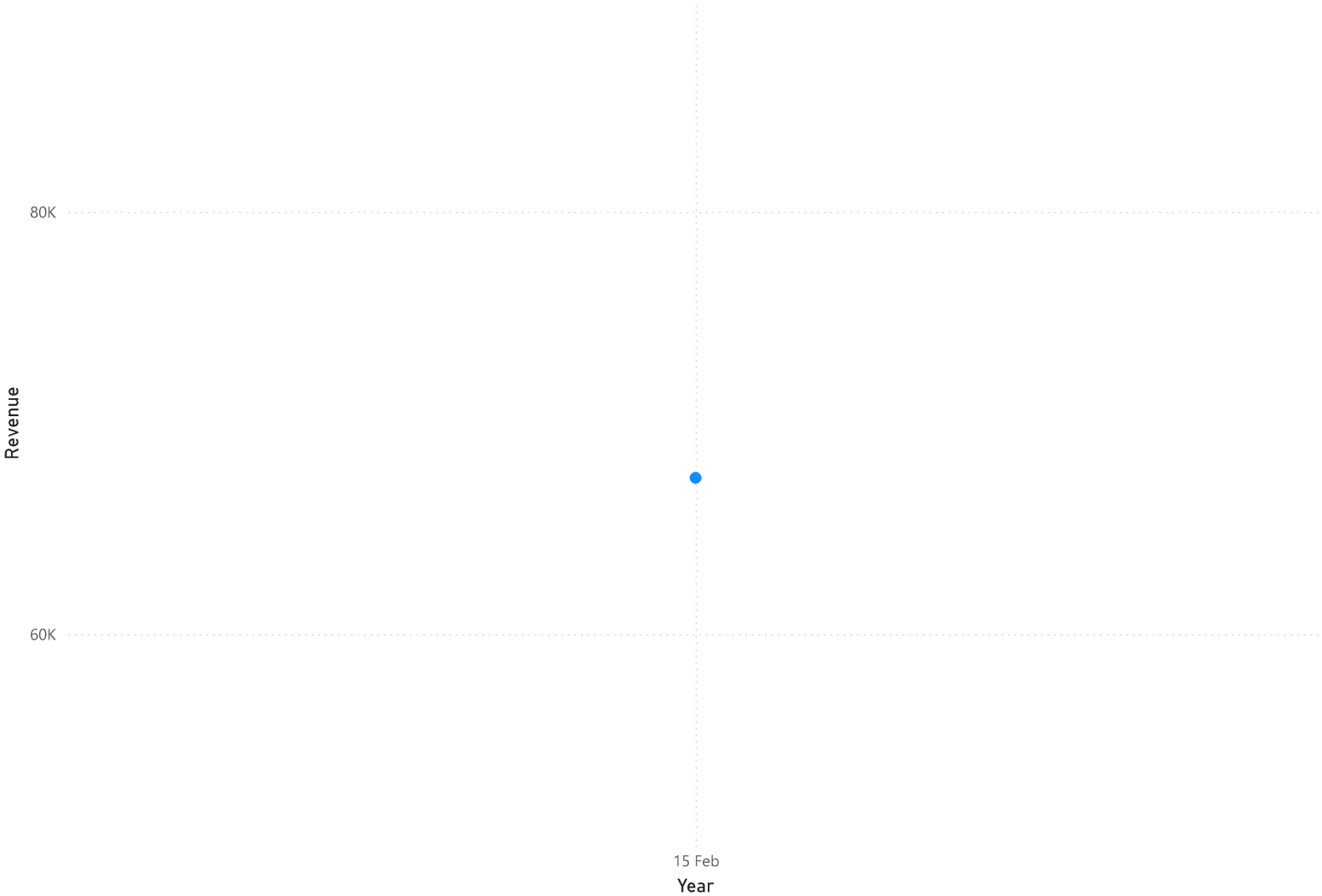


Cultural/Demographic Influence on Preferences



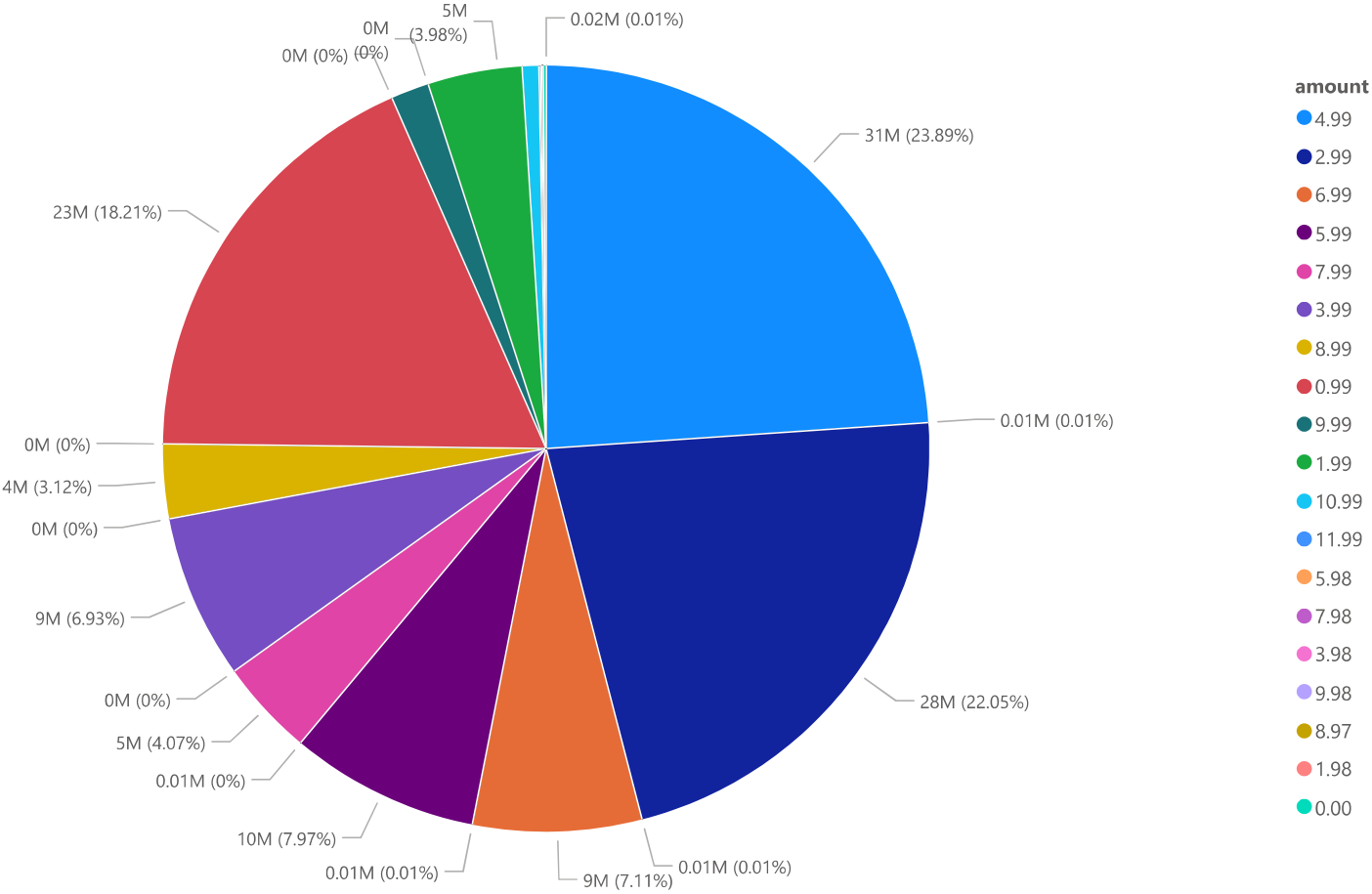
# Power BI Problem Statements

Revenue by Year, Quarter, Month and Day



How does  
the sales  
revenue  
vary by  
month?

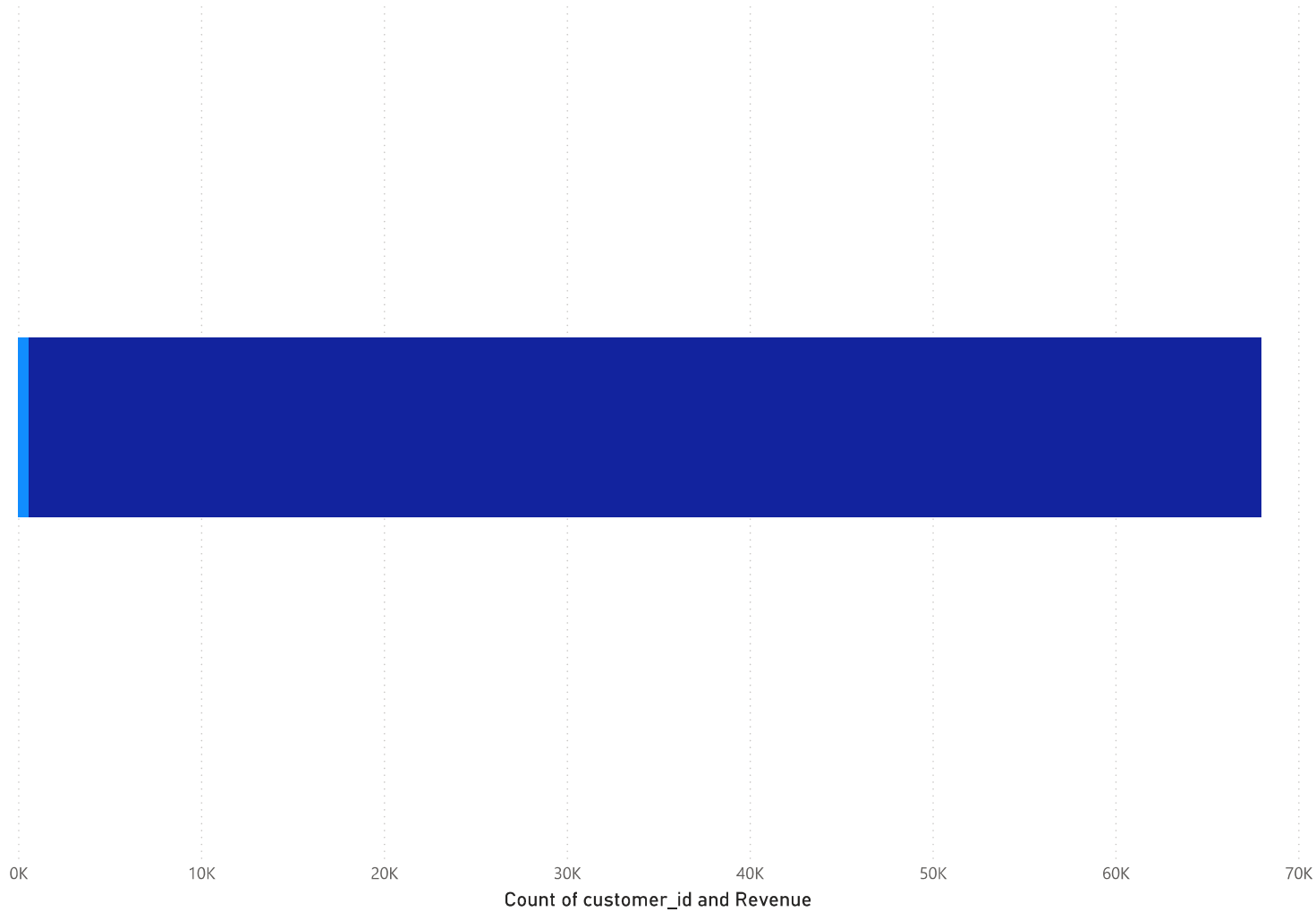
Revenue and Sum of payment\_id by amount



What is the distribution of sales by payment method?

Count of customer\_id and Revenue

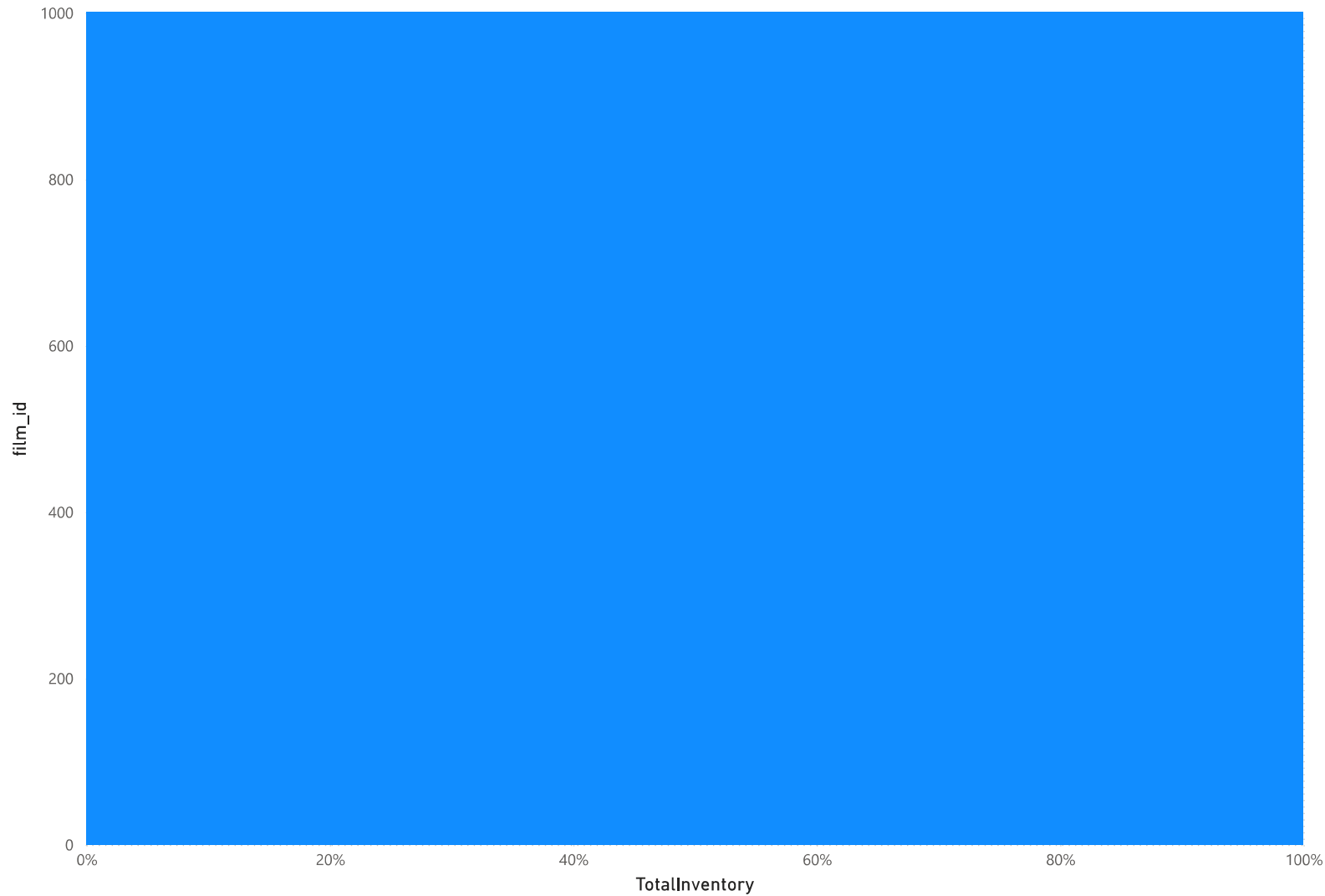
● Count of customer\_id ● Revenue



**Which customer segments generate the highest sales?**

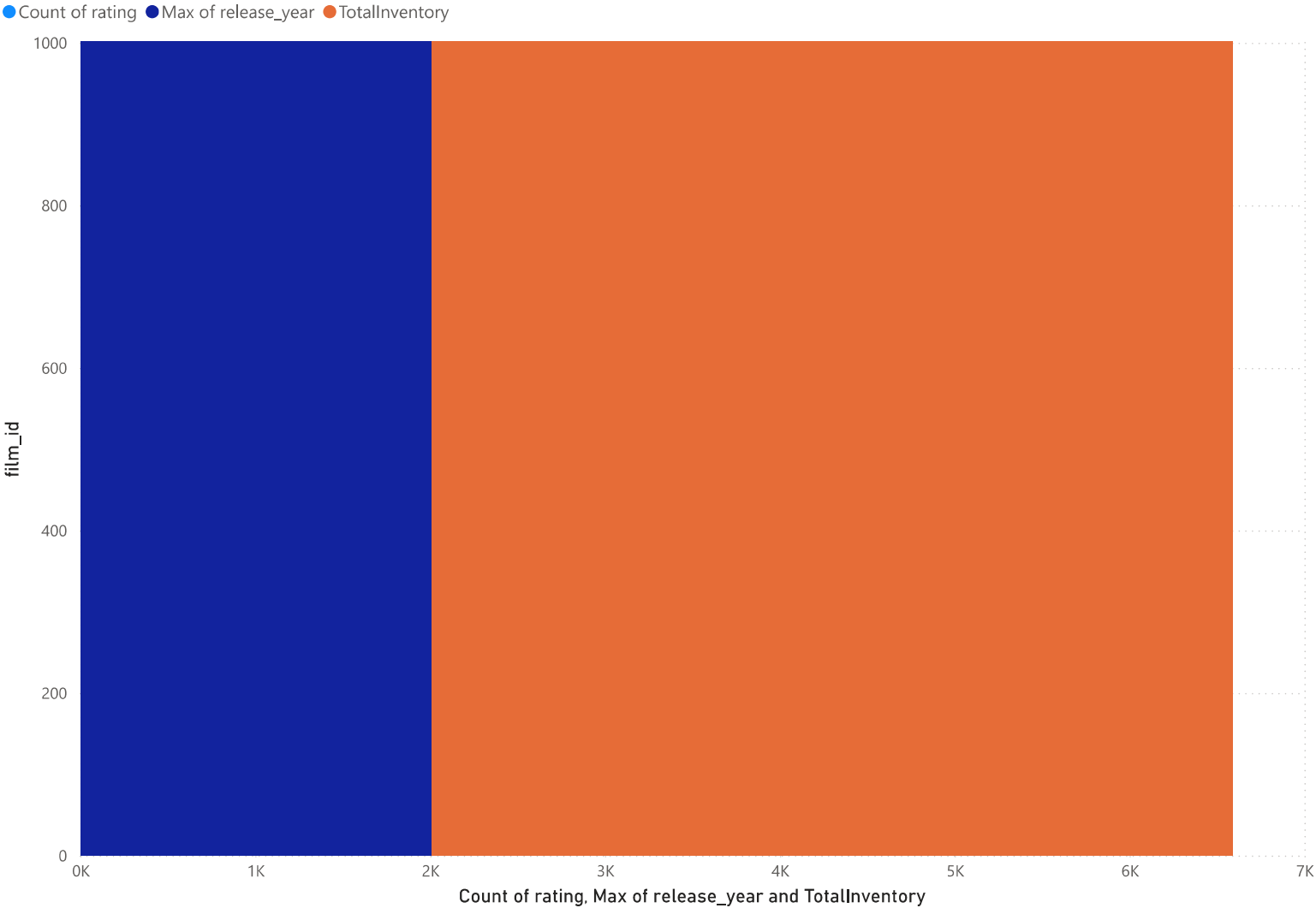


TotalInventory by film\_id



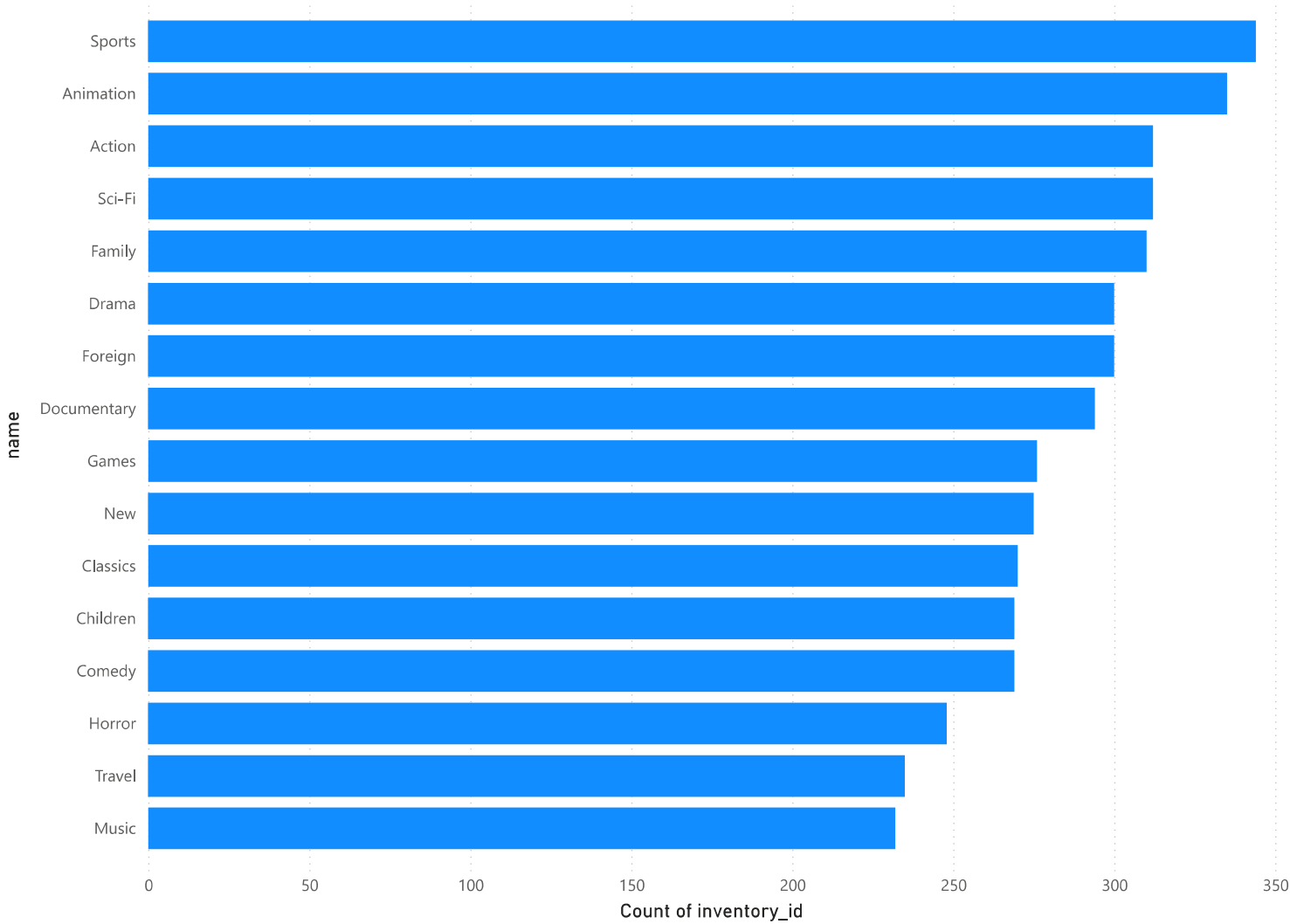
**What is  
the  
distributio  
n of films  
by rental  
duration?**

Count of rating, Max of release\_year and TotalInventory by film\_id



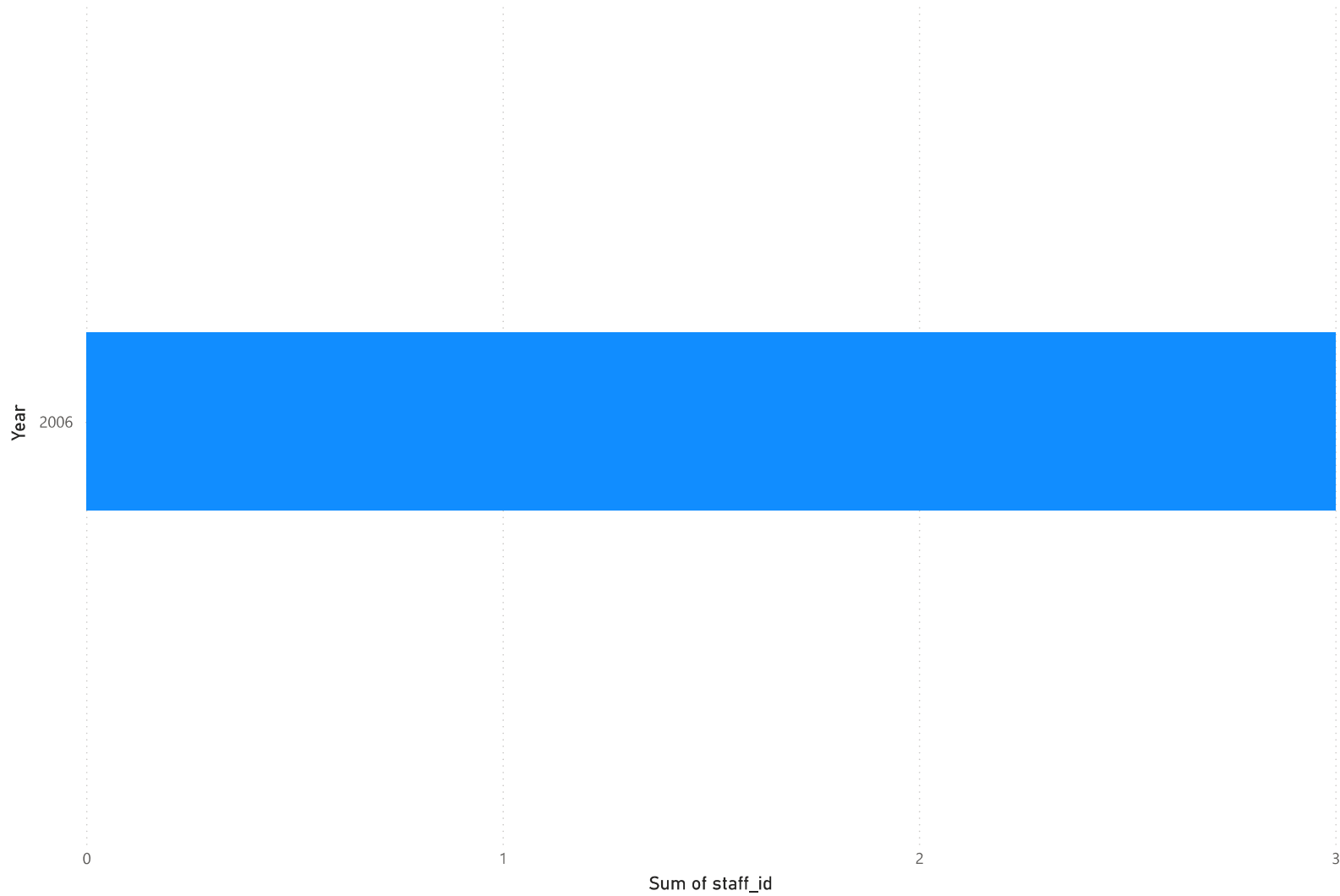
How does  
the  
inventory  
vary by  
film  
rating?

Count of inventory\_id by name



What is the breakdown of film categories in the inventory?

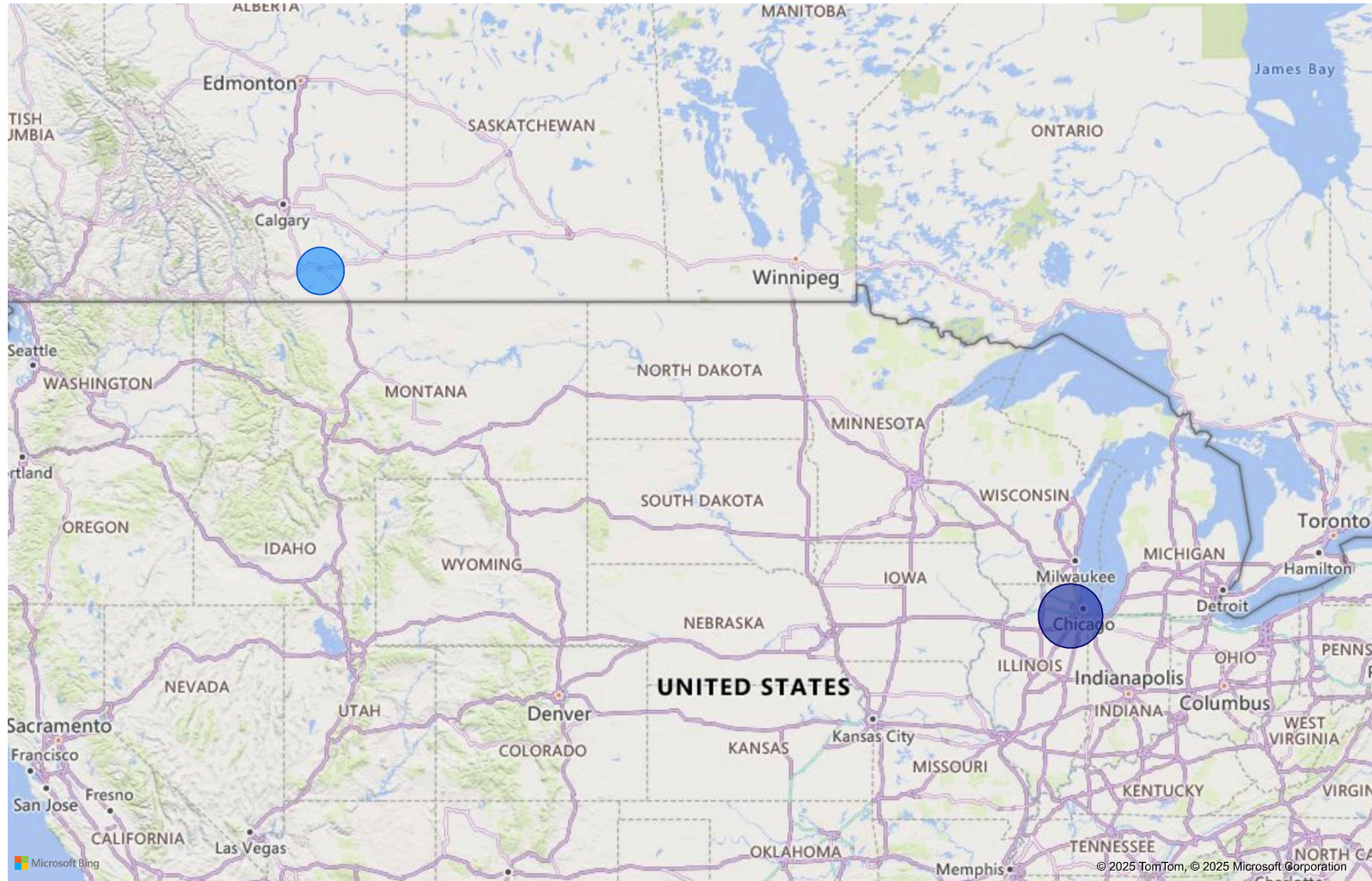
Sum of staff\_id by Year



**What is  
the  
distributi  
on of  
staff by  
employm  
ent  
duration?**

Sum of store\_id and Revenue by city and address\_id

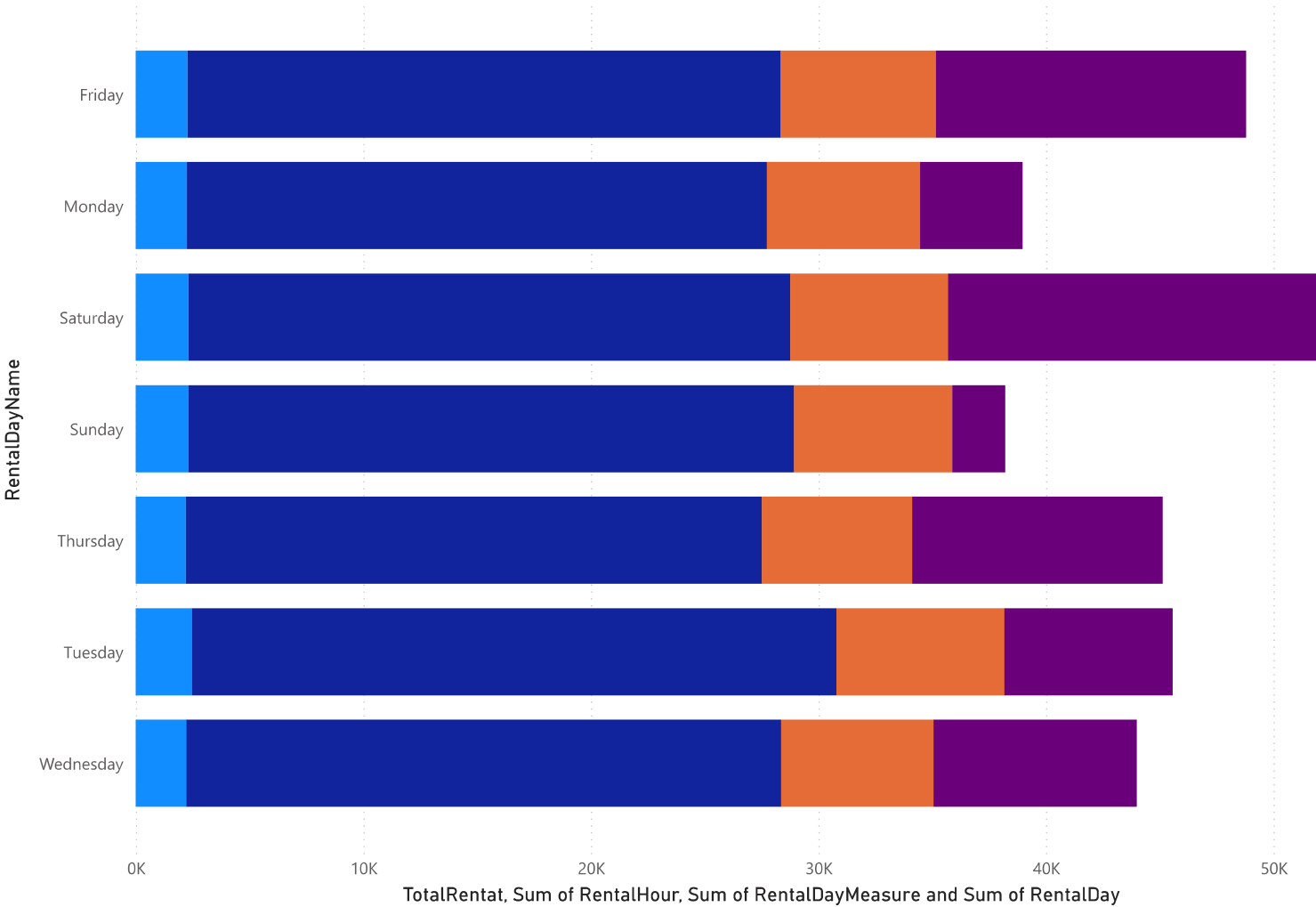
address\_id ● 1 ● 2



**How does  
the store  
performance vary  
by  
location?**

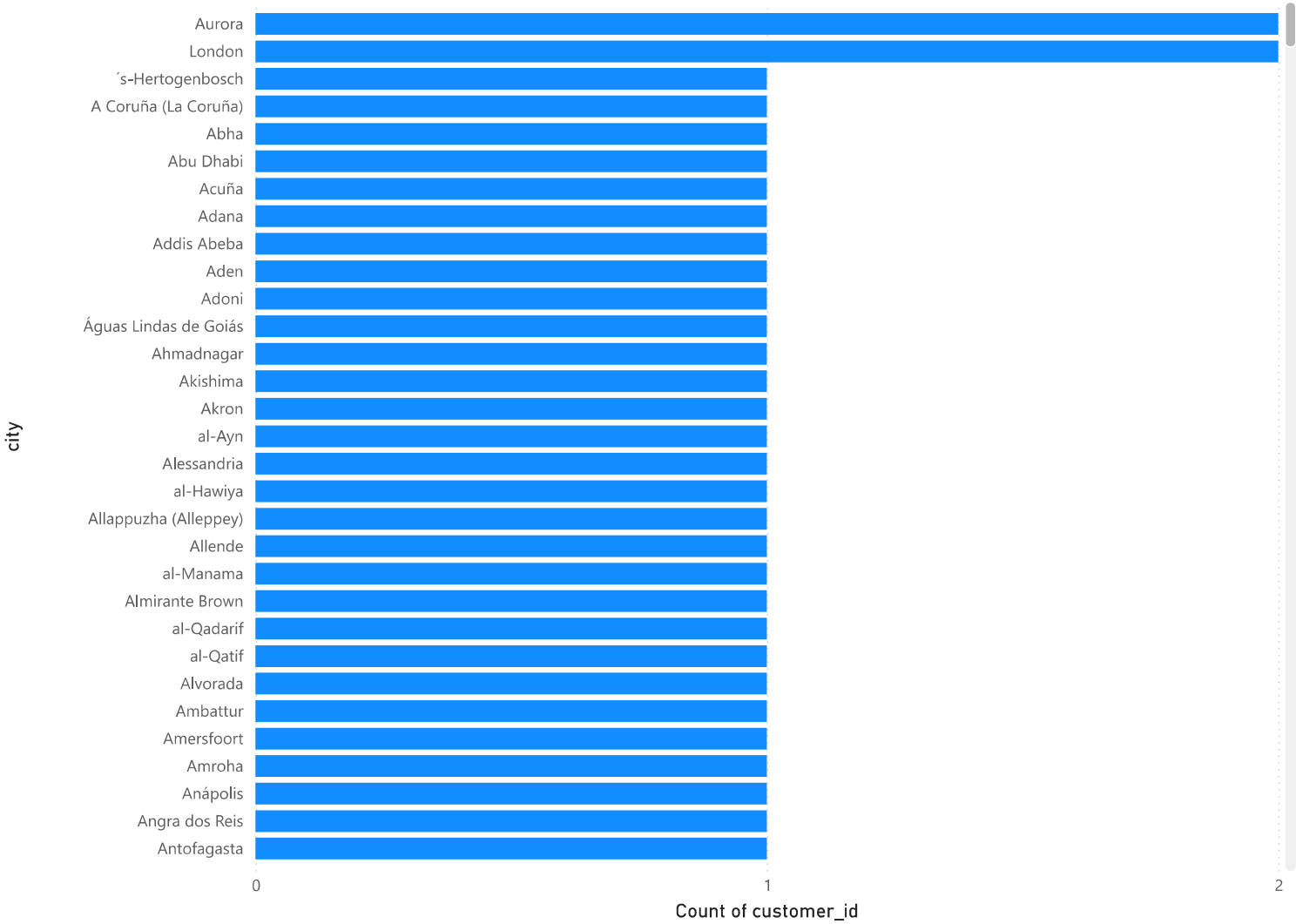
TotalRentat, Sum of RentalHour, Sum of RentalDayMeasure and Sum of RentalDay by RentalDayName

TotalRentat Sum of RentalHour Sum of RentalDayMeasure Sum of RentalDay



What is the average rental duration by staff member?

Count of customer\_id by city



What is the distribution of customers across different cities?

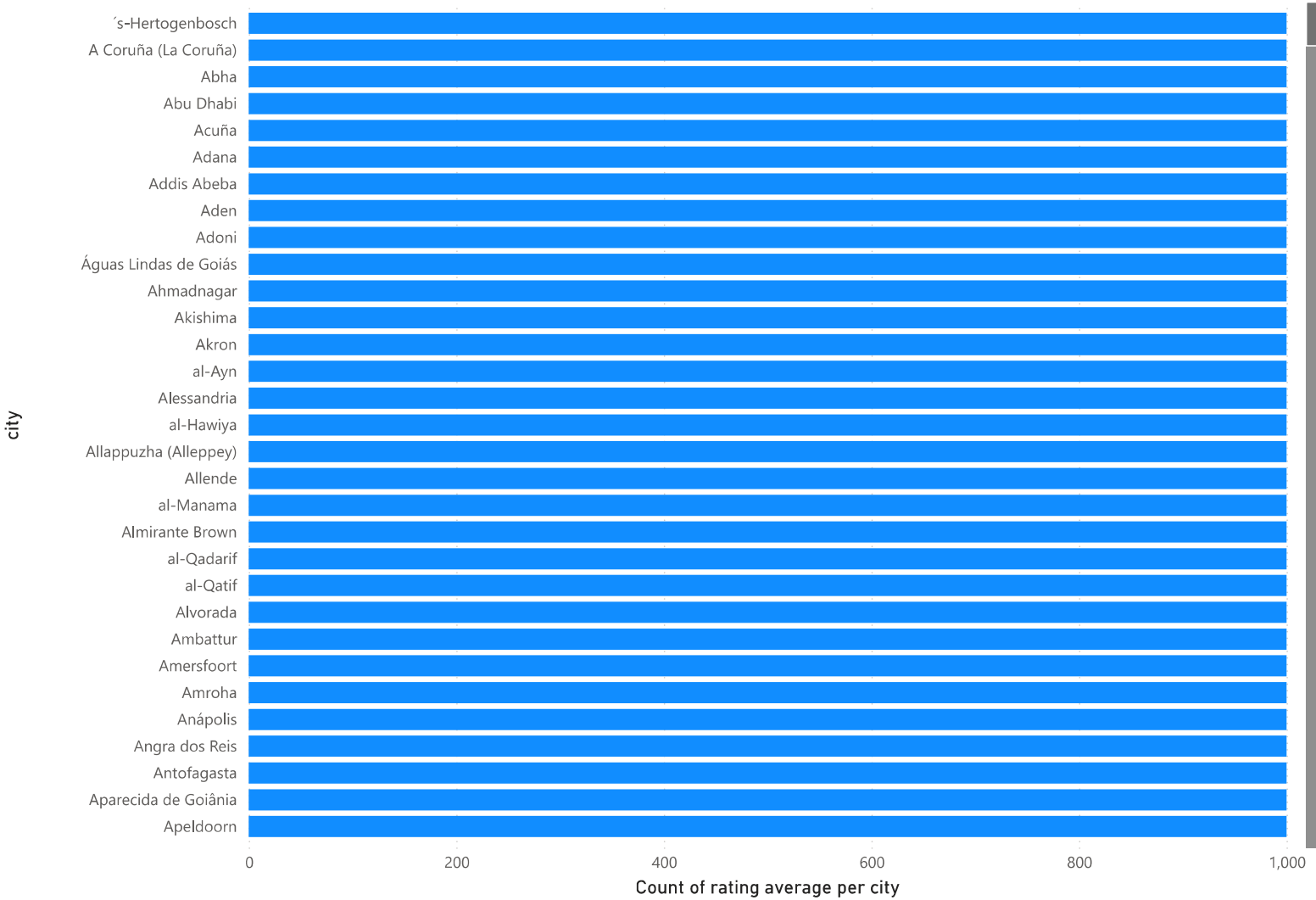
Revenue by country



**How does  
the rental  
revenue  
vary by  
country?**

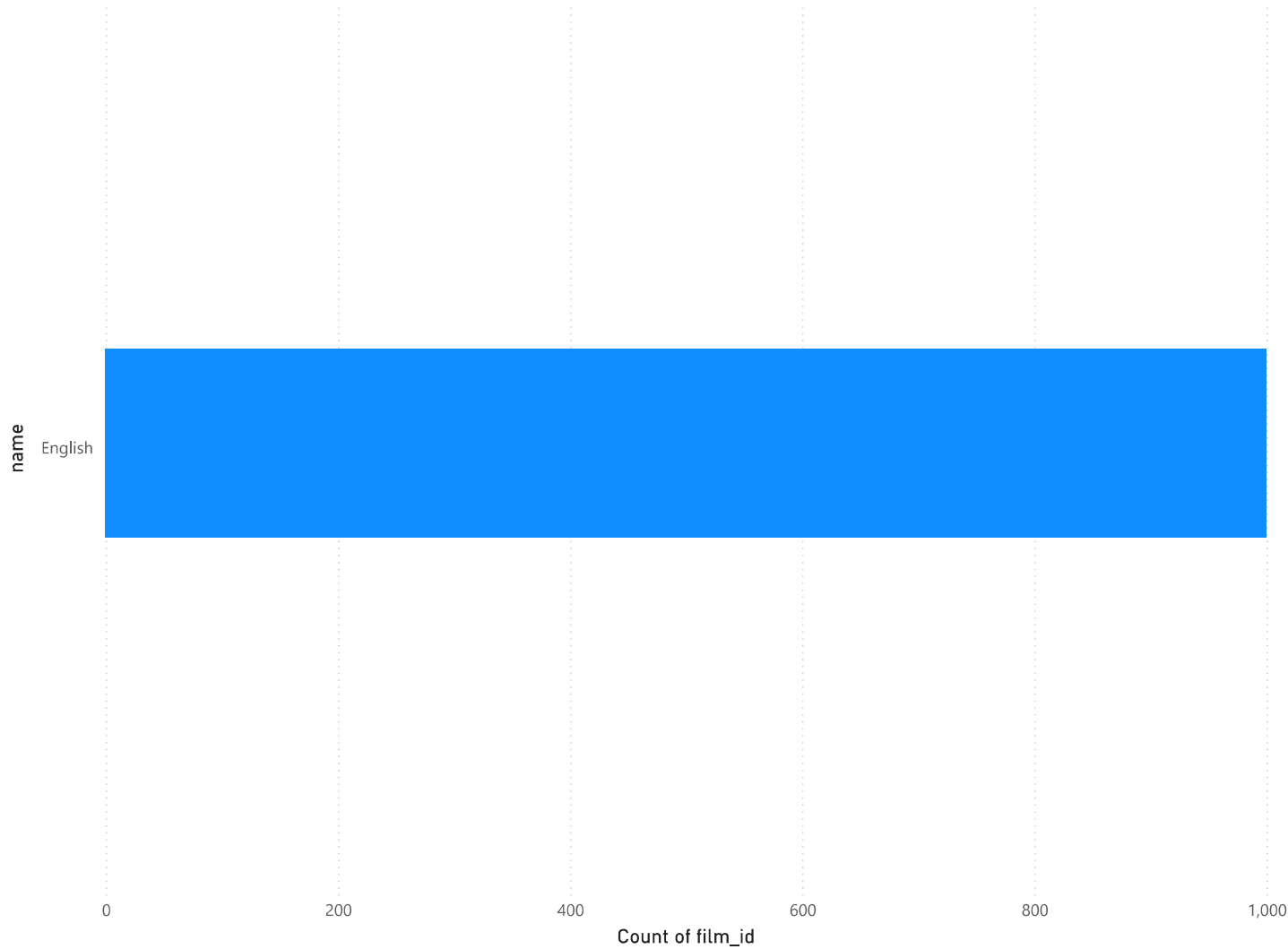


Count of rating average per city by city



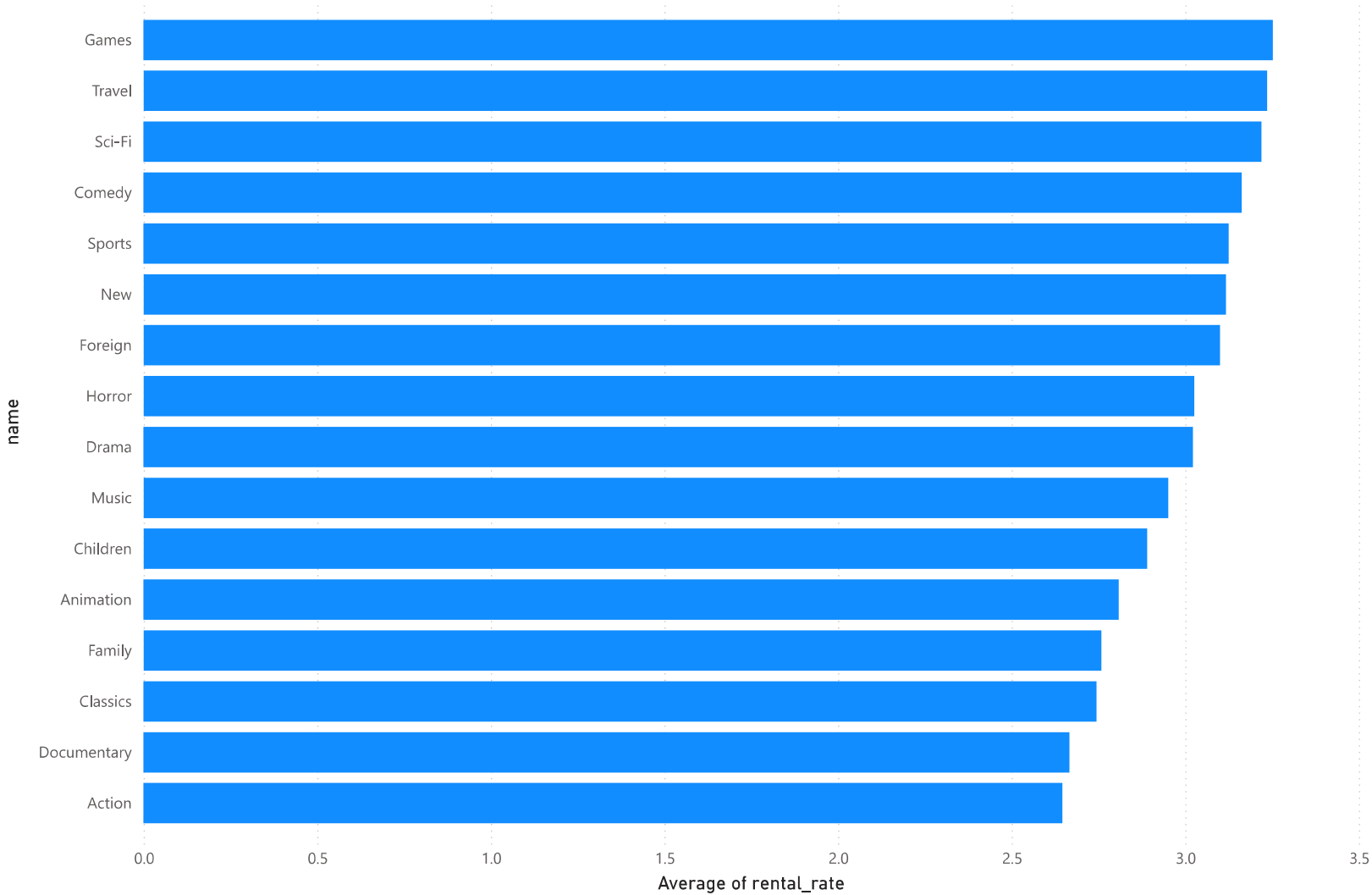
**Which locations have the highest and lowest customer ratings?**

Count of film\_id by name



**What is the  
distribution  
of films by  
language?**

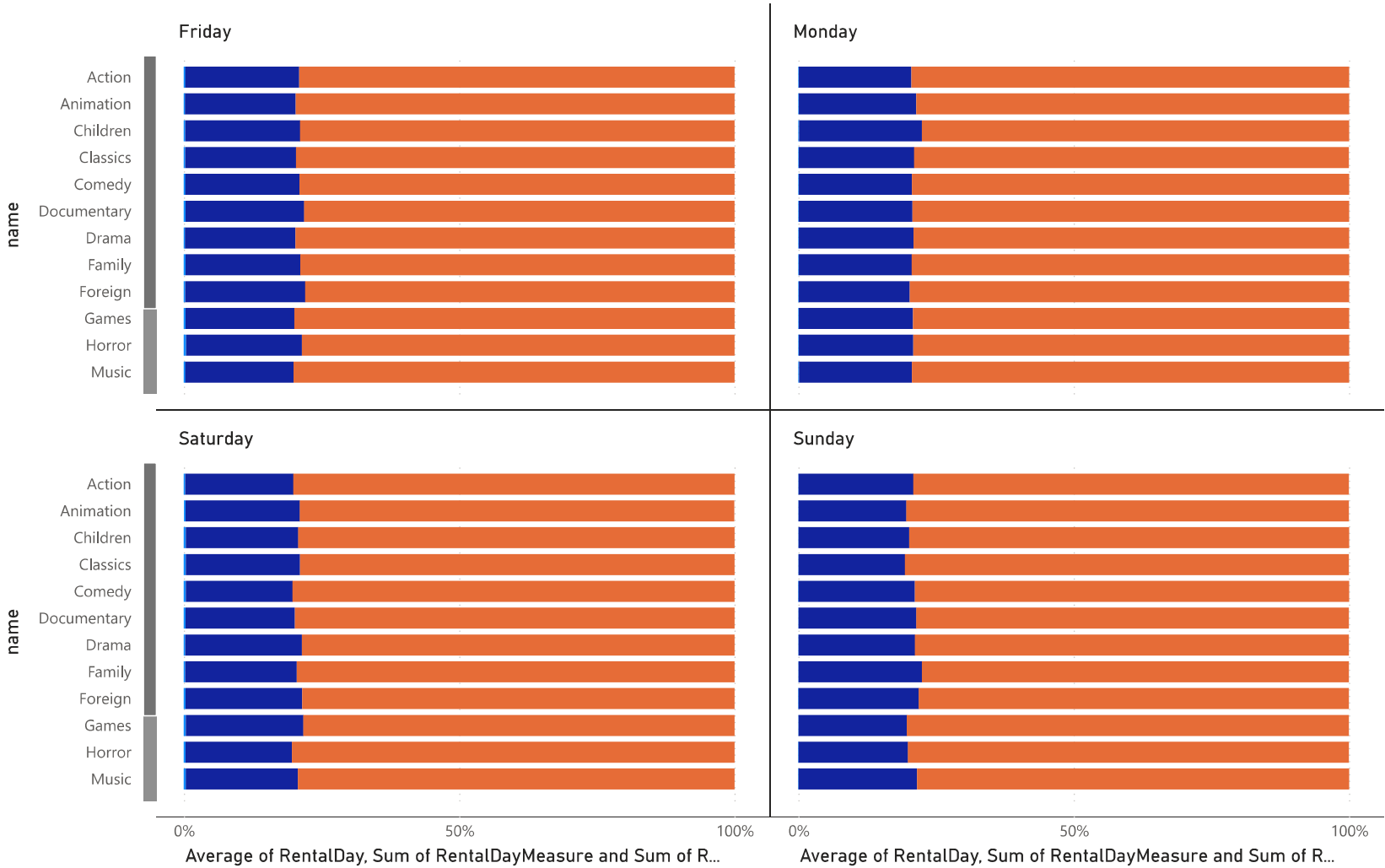
Average of rental\_rate by name



**Which  
film  
categories  
have  
the  
highest  
rental  
rates?**

Average of RentalDay, Sum of RentalDayMeasure and Sum of RentalHour by name and RentalDayName

● Average of RentalDay ● Sum of RentalDayMeasure ● Sum of RentalHour



How does the average rental duration vary by film category ?