

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.



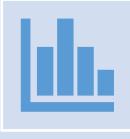
Analysis Scope: The analysis will focus on various aspects of the publication process, including book sales, author contributions, store performance, and the impact of discounts. It will encompass historical sales data, author royalties based on royalty schedules, and distribution data from multiple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

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Quick measure

Total Rentals

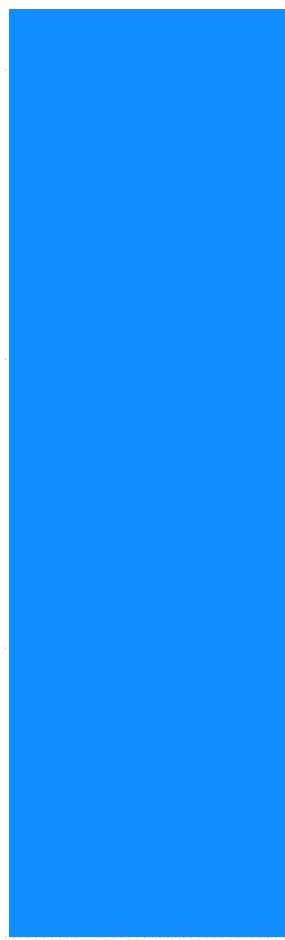
15K

Total Rentals

10K

5K

0K

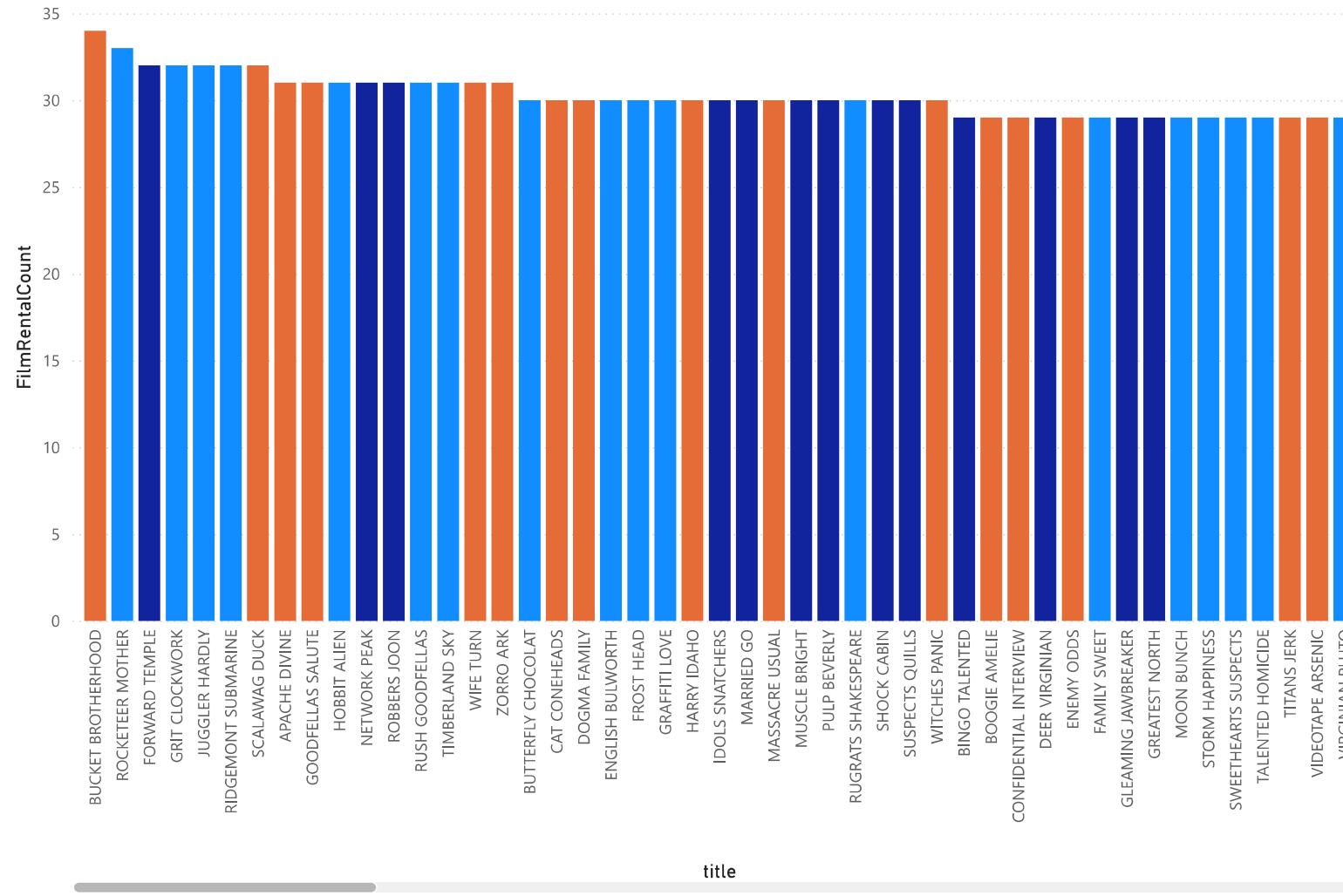


Purchasing Patterns: New vs. Repeat Customers

Highest Rental Rates & Most In-Demand Films

FilmRentalCount by title and rental_rate

rental_rate ● 0.99 ● 2.99 ● 4.99



Staff Performance vs Customer Satisfaction

« Quick measure

TotalHandled and TotalRentalat

20K

TotalRentalat

15K

15K

TotalHandled

20K



Total Rentals and Count of store_id by Month

● Total Rentals ● Count of store_id

20K

Seasonal Trends Across Locations

Seasonal Trends Across Locations

Total Rentals

15K

(Blank)

Month

February

3

Count of store_id

2

1

Language Popularit y by Segment

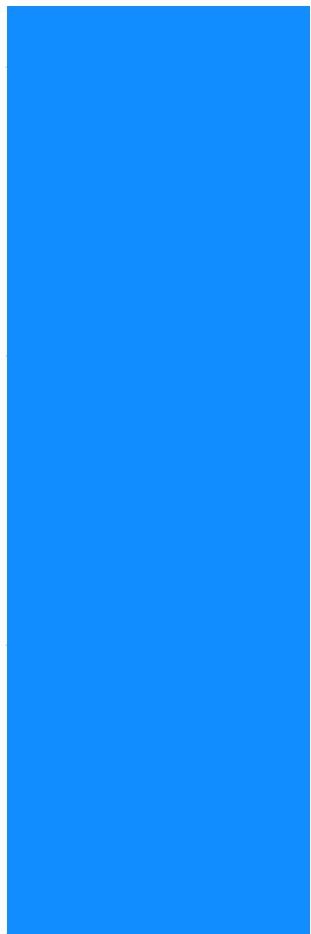
TotalLanguageRentat

15K

10K

5K

0K



«

Quick measure

Customer Loyalty and Revenue Over Time

Revenue and CustomerLoyalty

● Revenue ● CustomerLoyalty

70K



60K

Revenue and CustomerLoyalty

50K

40K

30K

20K

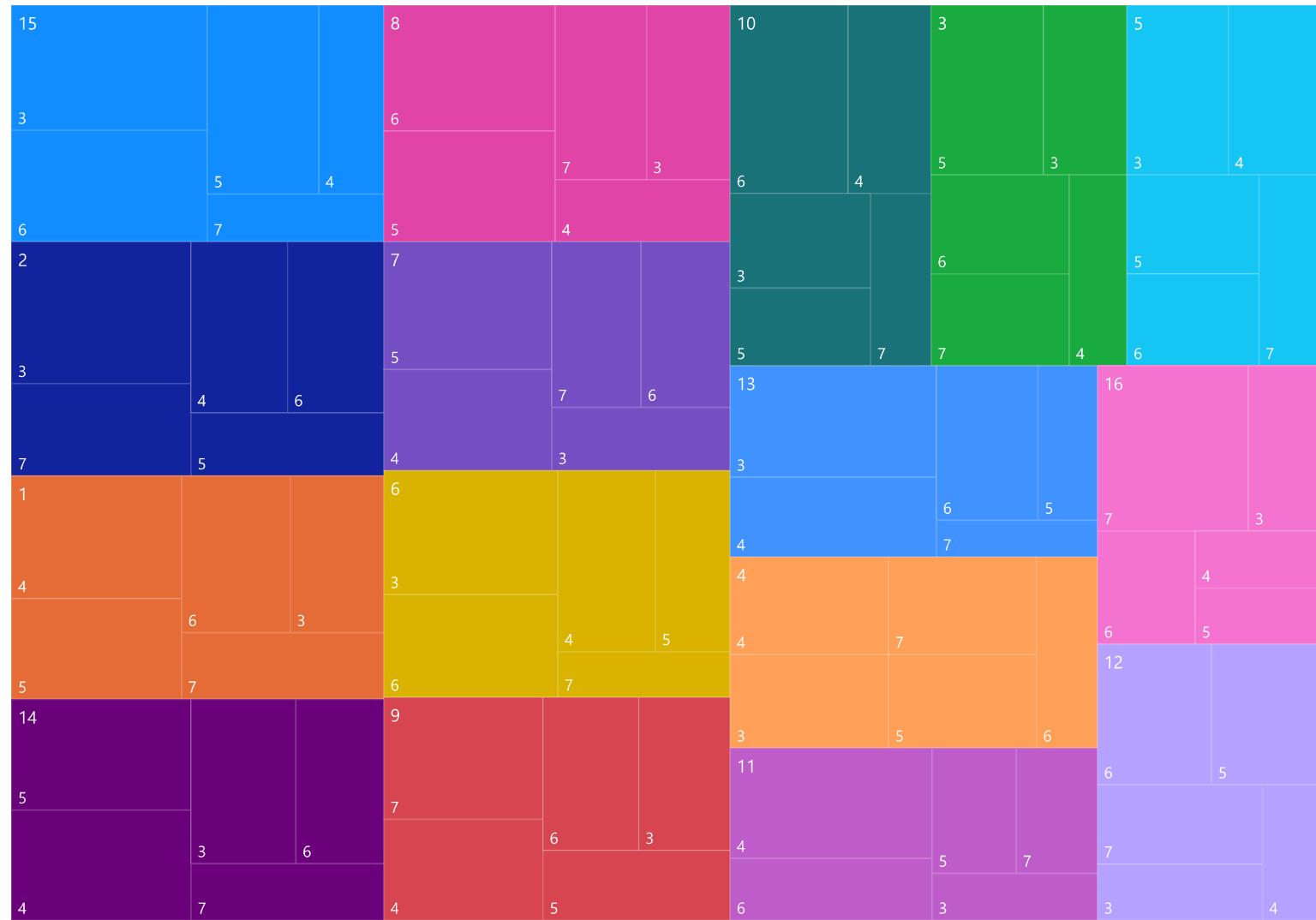


«

Quick measure

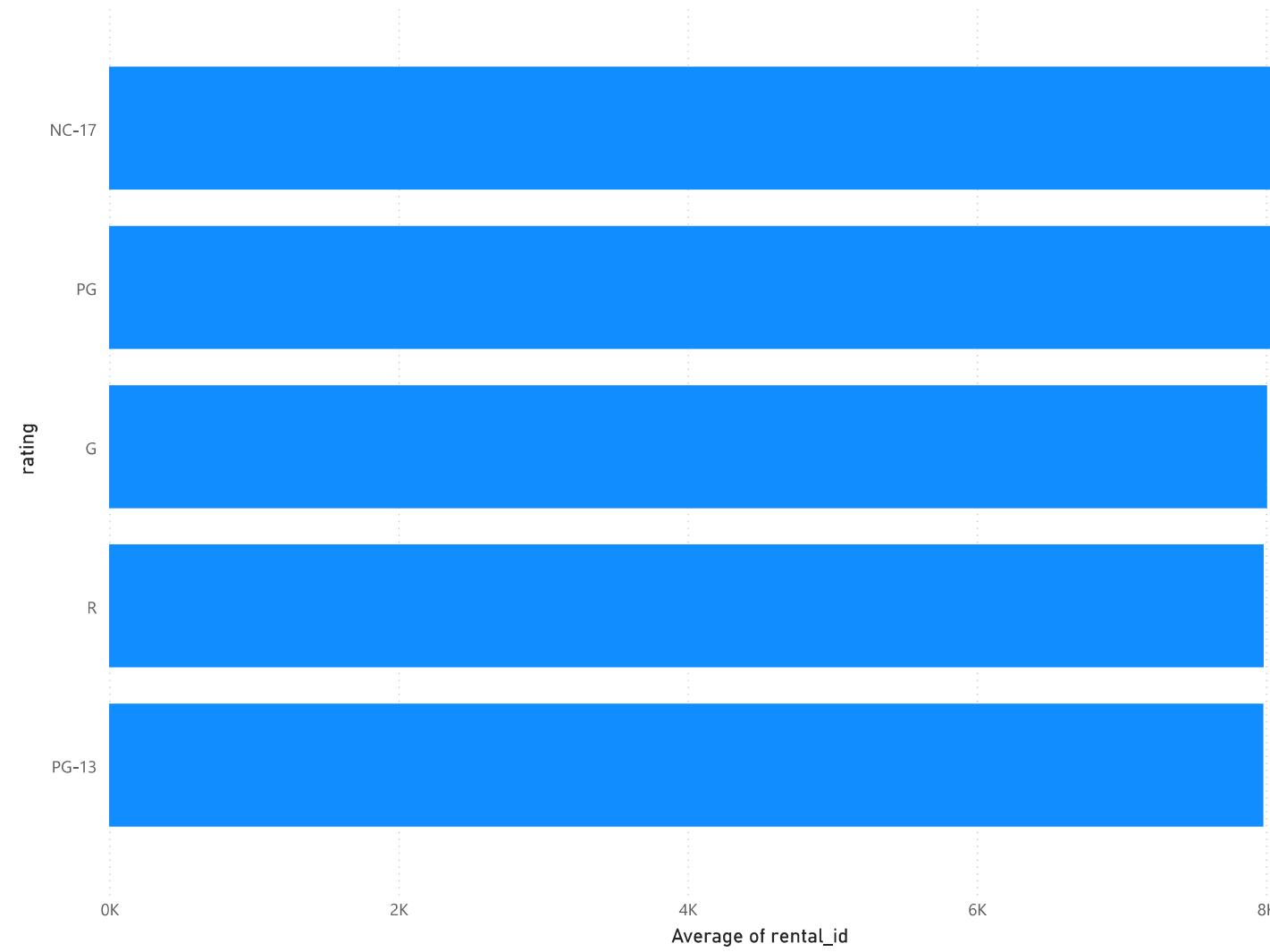
Category Popularit y by Location

Total Rentals by popularity and category



Staff Knowle dge and Custom er Ratings

Average of rental_id by rating



«

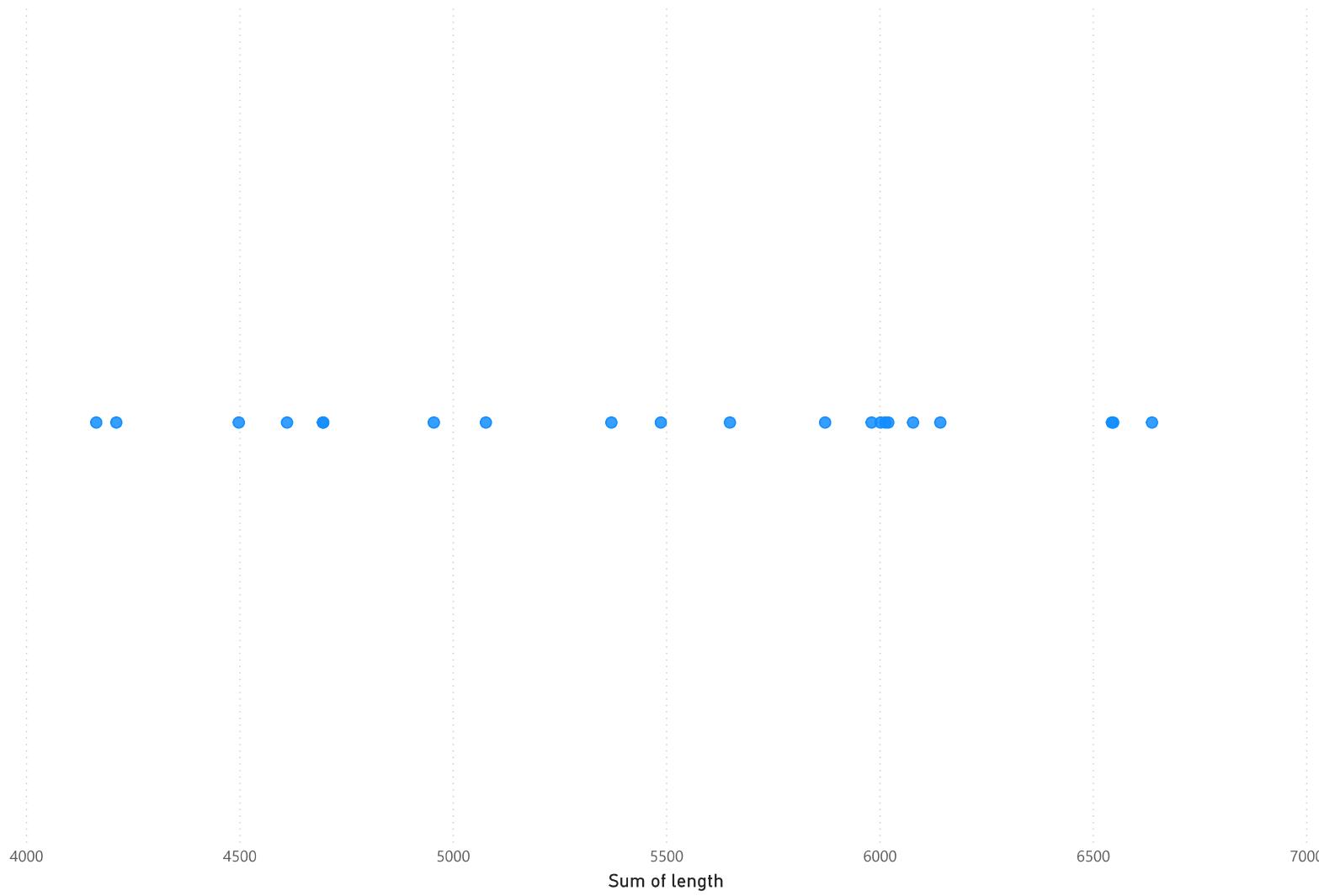
Quick measure

Store Proximity vs Rental Frequency

«

Quick measure

Sum of length by replacement_cost



«

Quick measure

Categories and Customer Age Groups

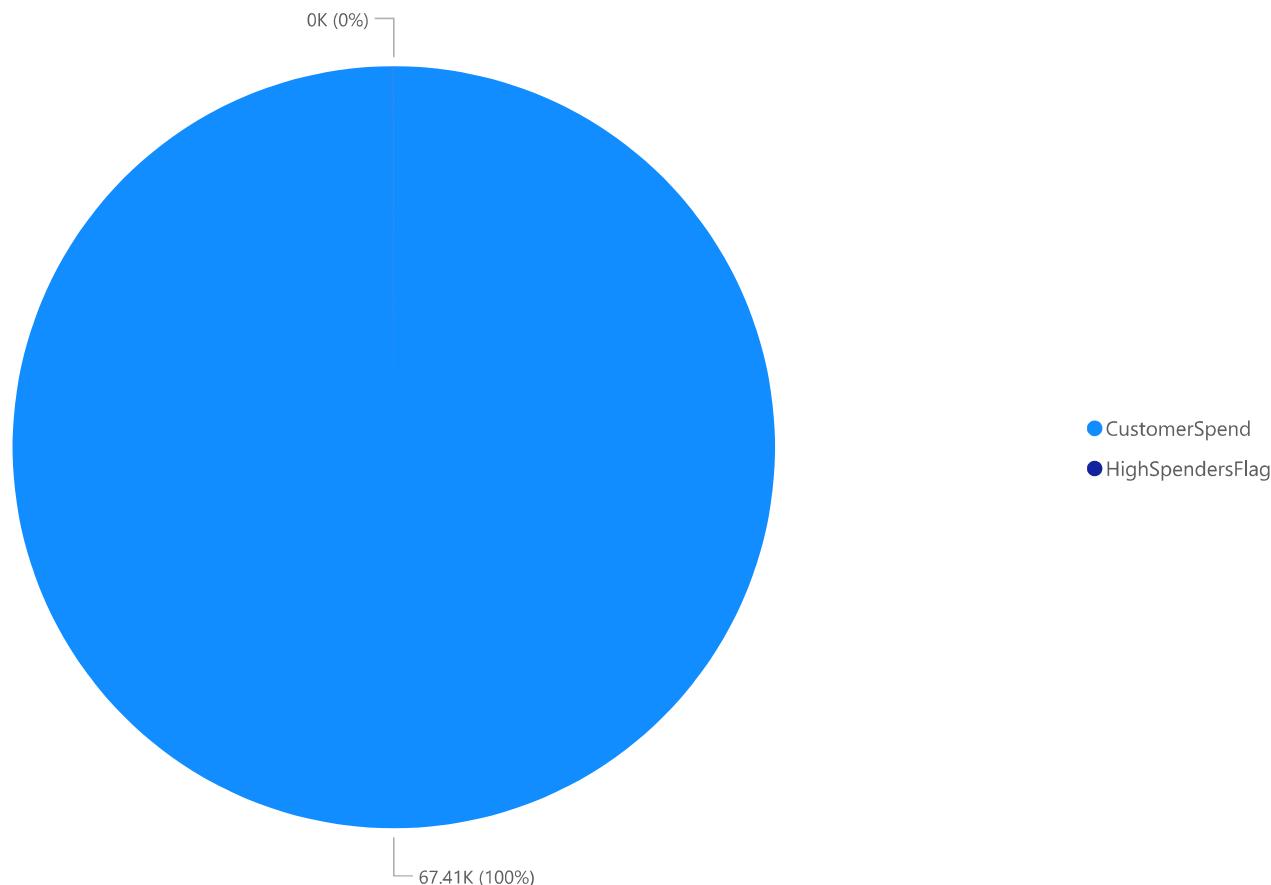
Total Rentals by city_id and country_id

city_id ● 1 ● 2 ● 3 ● 4 ● 5 ● 6 ● 7 ● 8 ● 9 ● 10 ● 11 ● 12 ● 13 ● 14 ● 15 ● 16 ● 17 ● 18 ● 19 ● 20 ● 21 ● 22 ● 23 ● 24 ● 25 ● 26 ● 27 ● 28 ● 29 ● 30



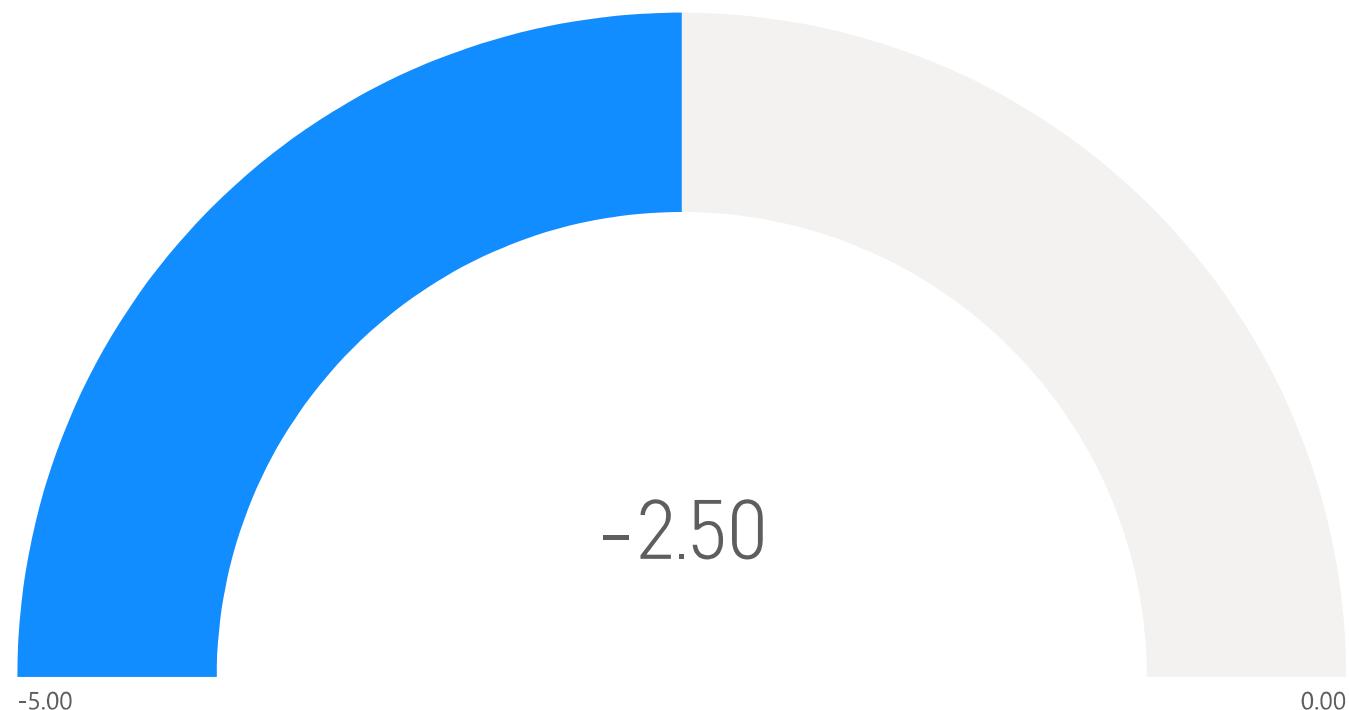
Demographics of High-Spending Customers

CustomerSpend and HighSpendersFlag



Inventory Availability and Satisfaction

ServiceLevel



«

Quick measure

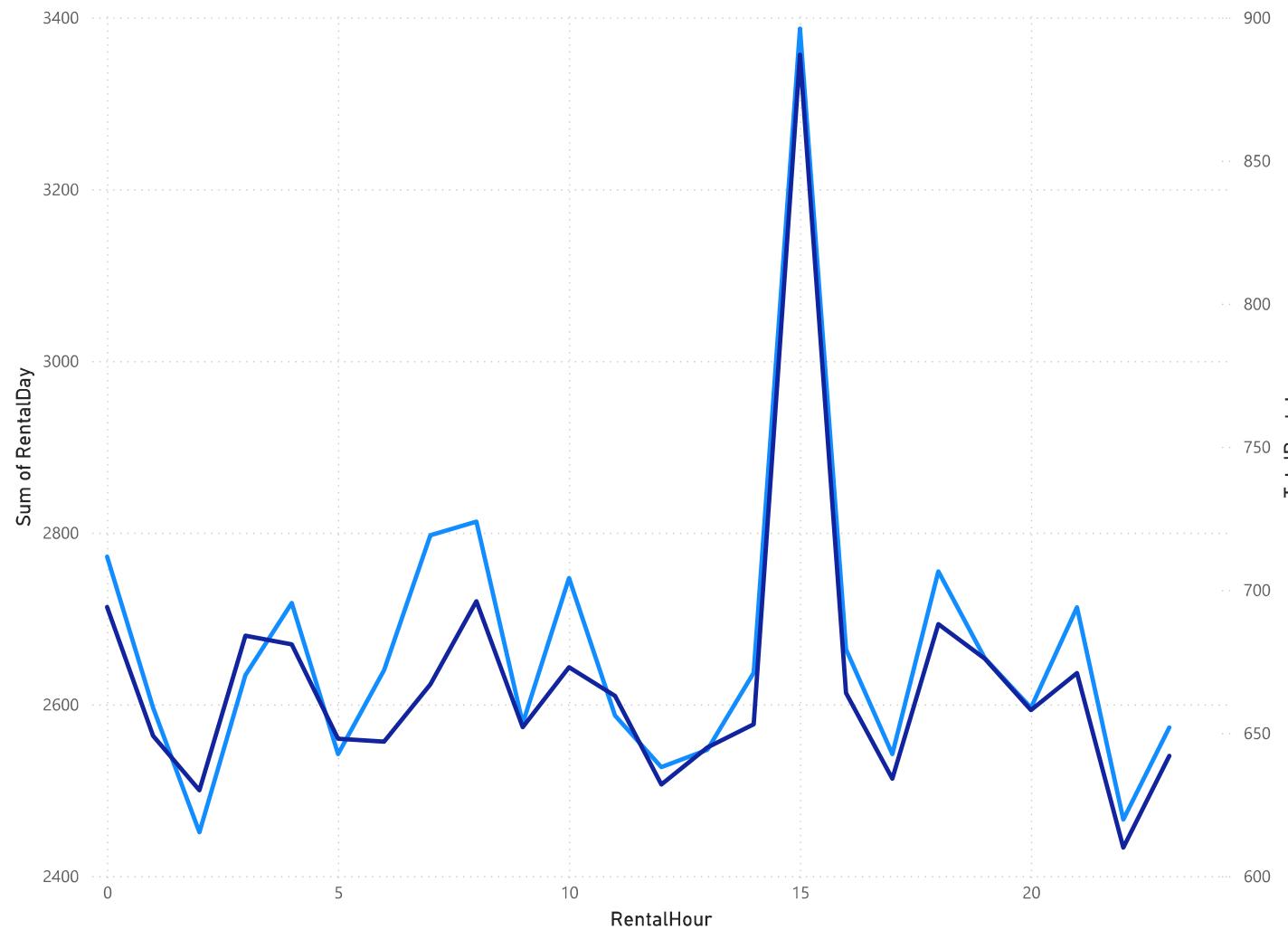
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Quick measure

Busiest Hours/Days per Store

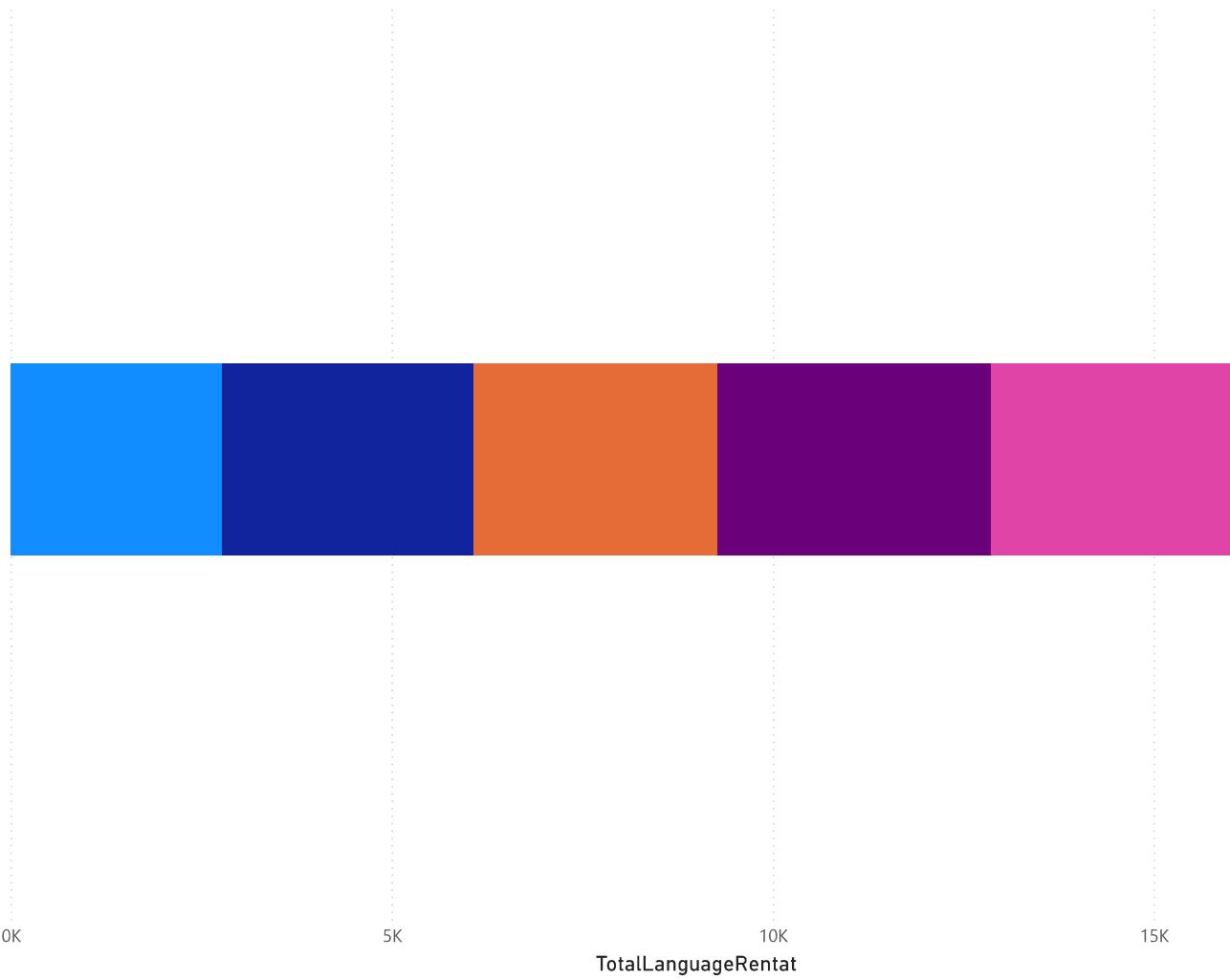
Sum of RentalDay and TotalRentat by RentalHour

● Sum of RentalDay ● TotalRentat



TotalLanguageRentat by rating

rating ● G ● NC-17 ● PG ● PG-13 ● R

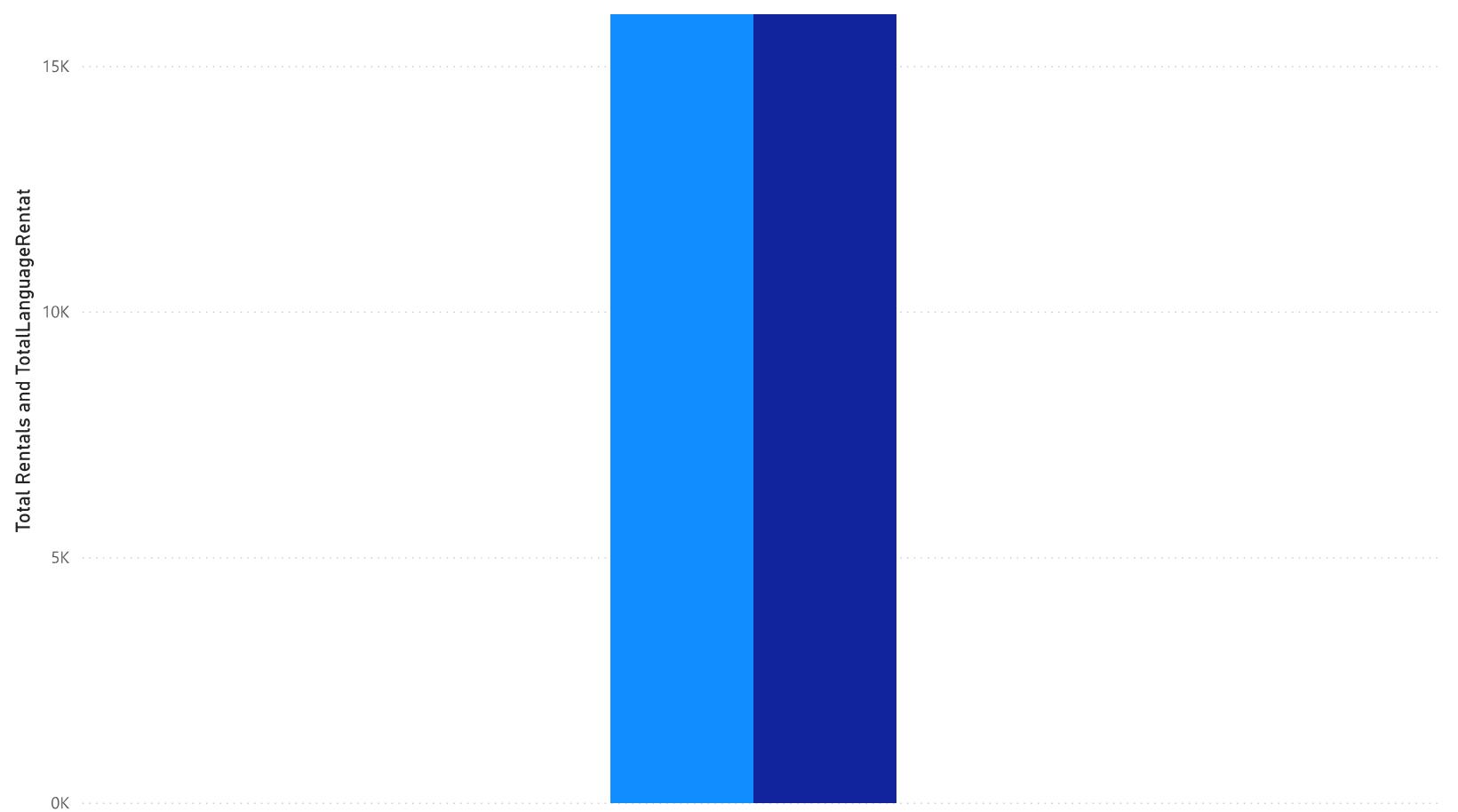


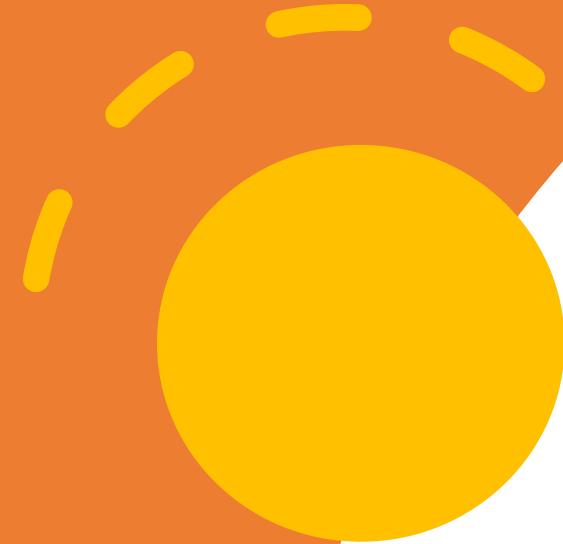
Language Availability vs Satisfaction

Cultural/Demographic Influence on Preferences

Total Rentals and TotalLanguageRental

● Total Rentals ● TotalLanguageRental





Power BI Problem Statements

Revenue by Year, Quarter, Month and Day

80K

Revenue

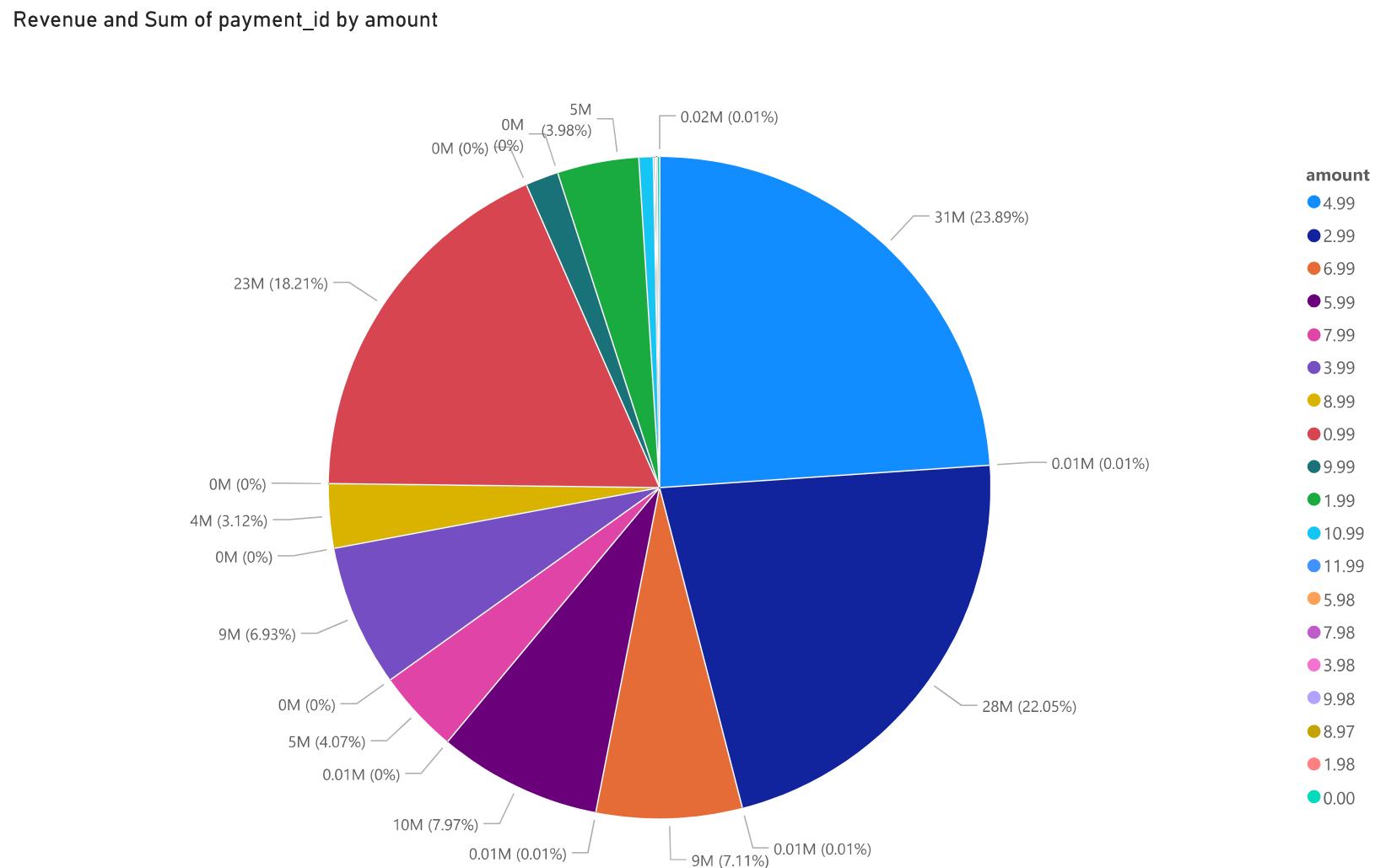
60K

15 Feb
Year

**How does
the sales
revenue
vary by
month?**

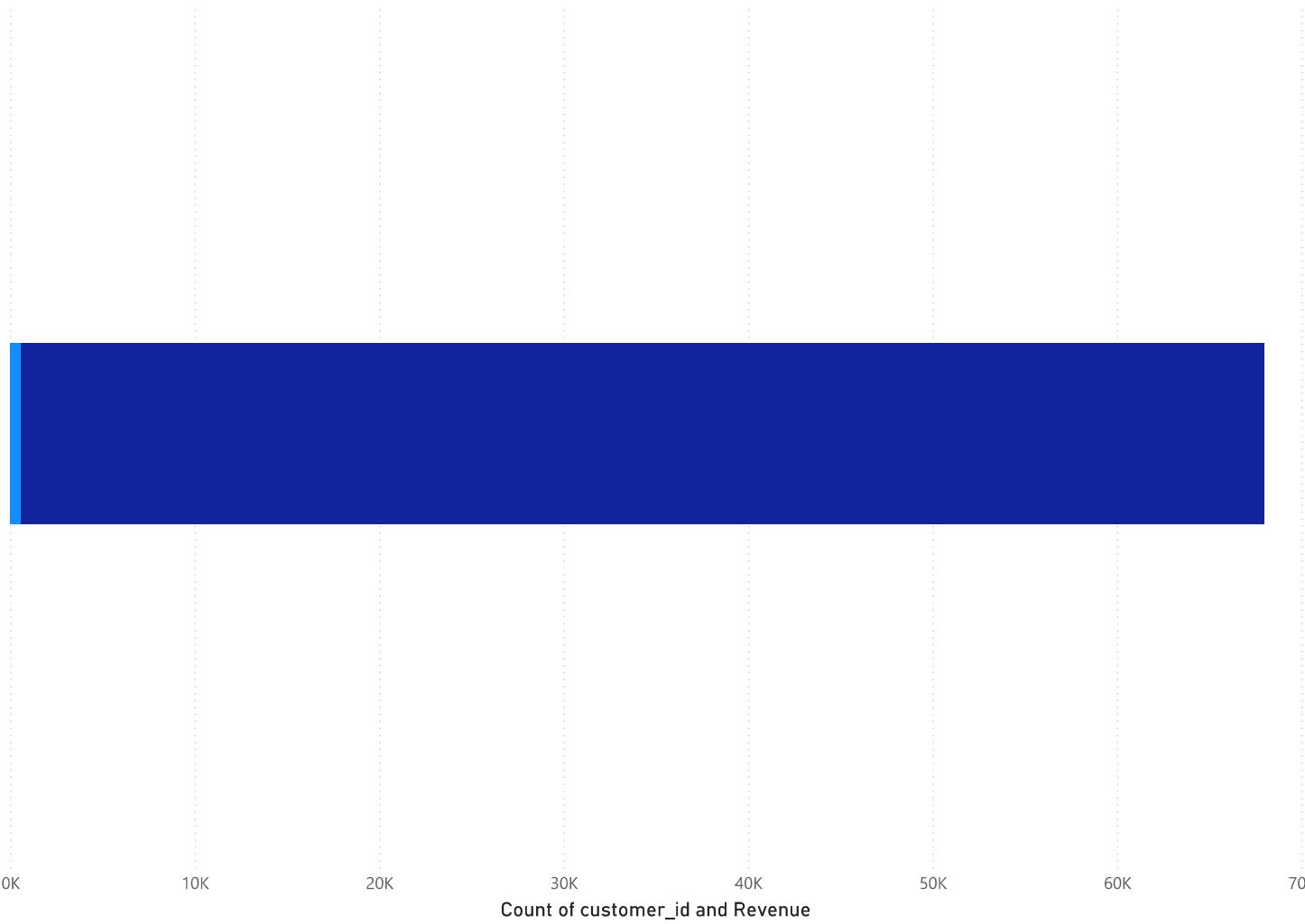
Quick measure

What is the distribution of sales by payment method?



Count of customer_id and Revenue

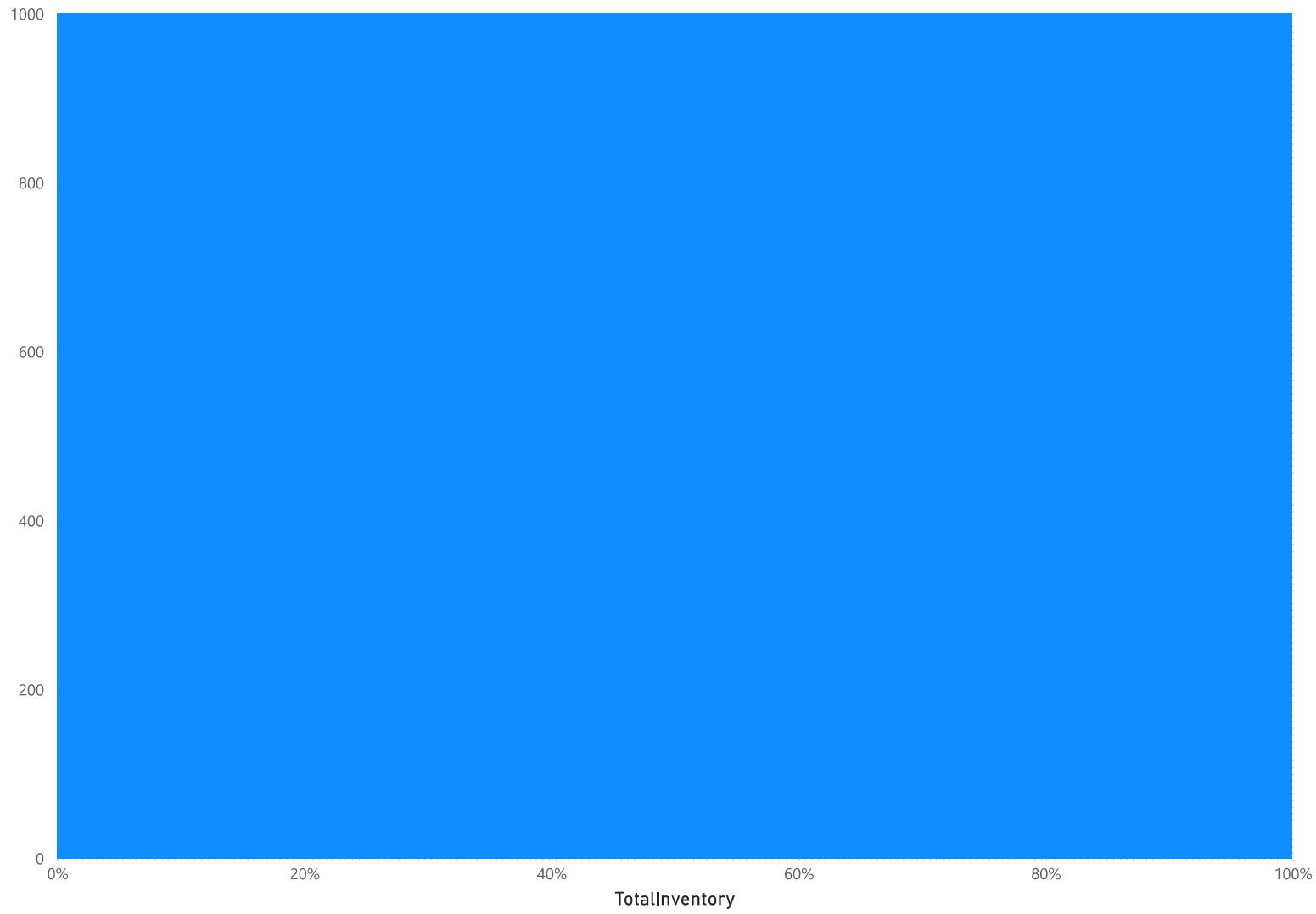
● Count of customer_id ● Revenue



Which customer segments generate the highest sales?

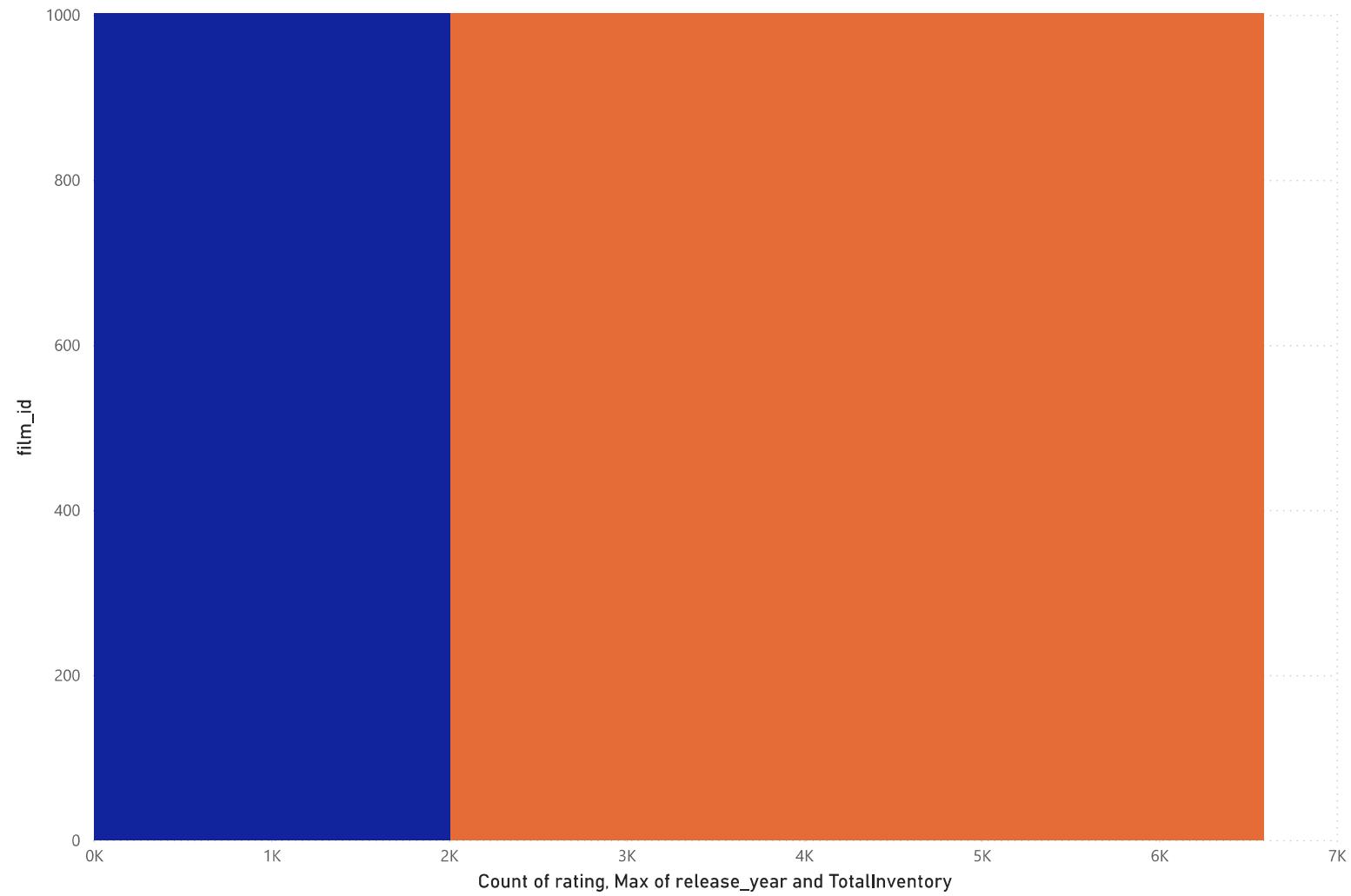
**What is
the
distribution
of films
by rental
duration?**

TotalInventory by film_id



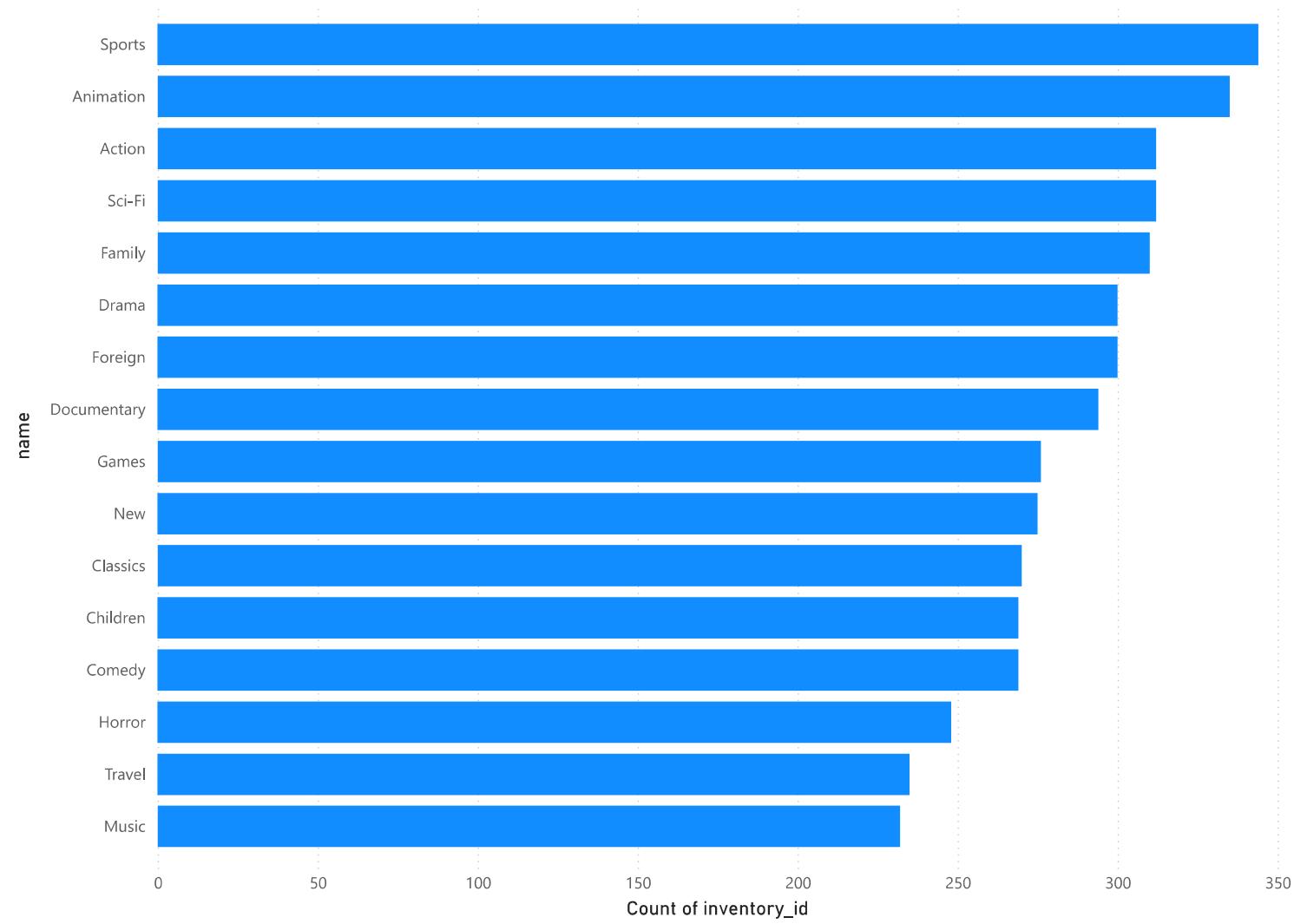
Count of rating, Max of release_year and TotalInventory by film_id

● Count of rating ● Max of release_year ● TotalInventory



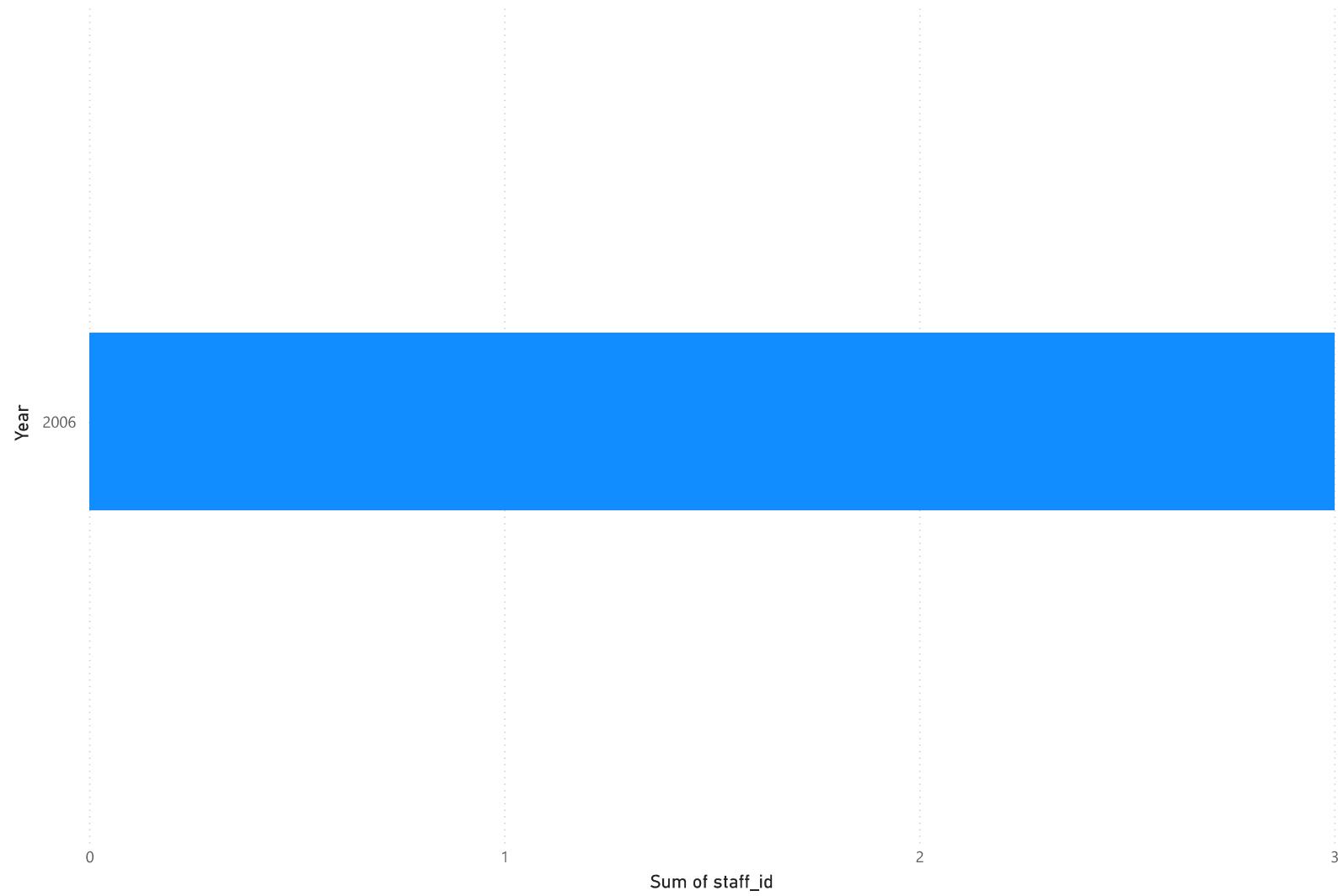
**How does
the
inventory
vary by
film
rating?**

Count of inventory_id by name



What is the breakdown of film categories in the inventory?

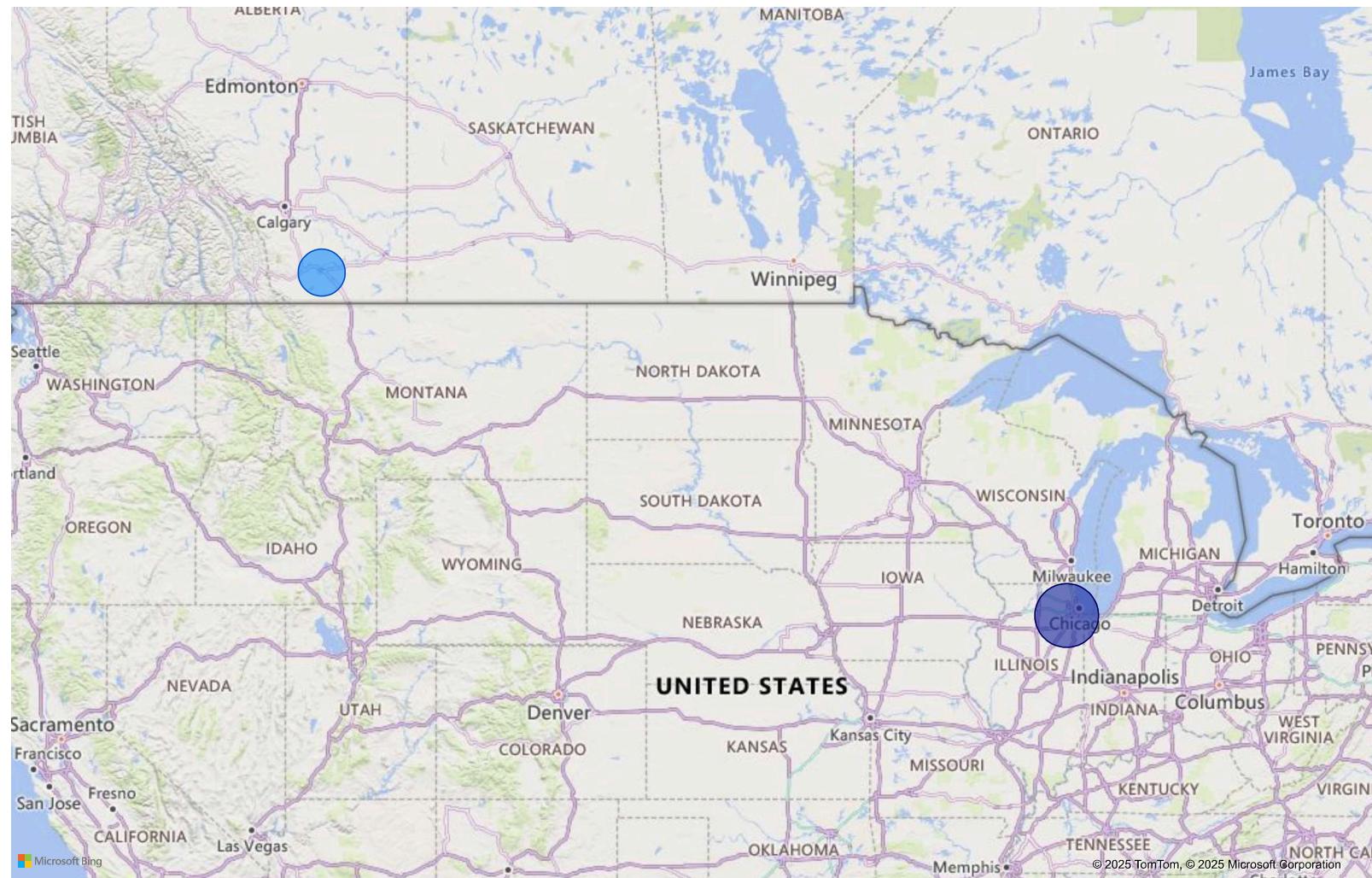
Sum of staff_id by Year



**What is
the
distribution
of staff by
employment
duration?**

Sum of store_id and Revenue by city and address_id

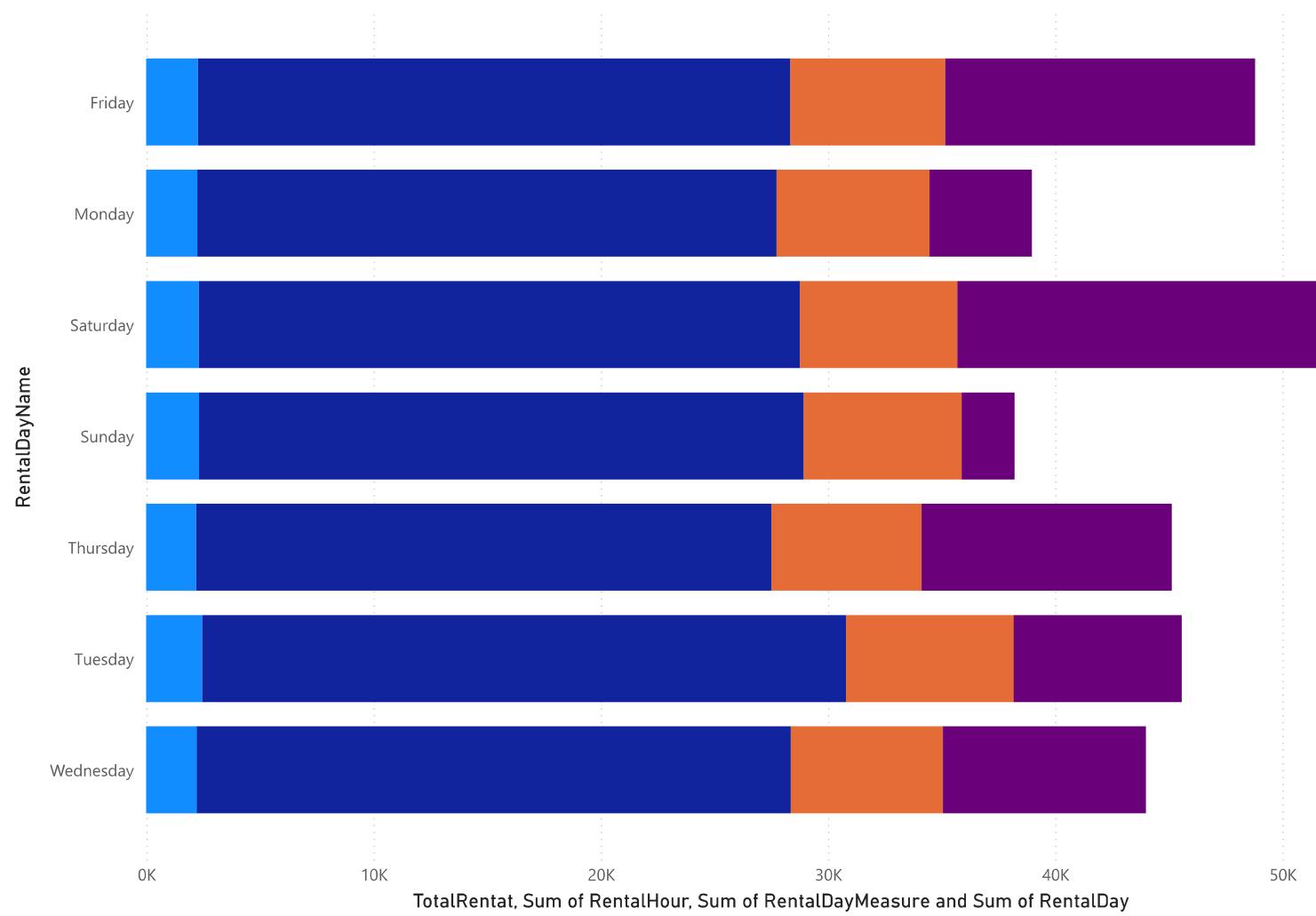
address_id ● 1 ● 2



How does
the store
performa
nce vary
by
location?

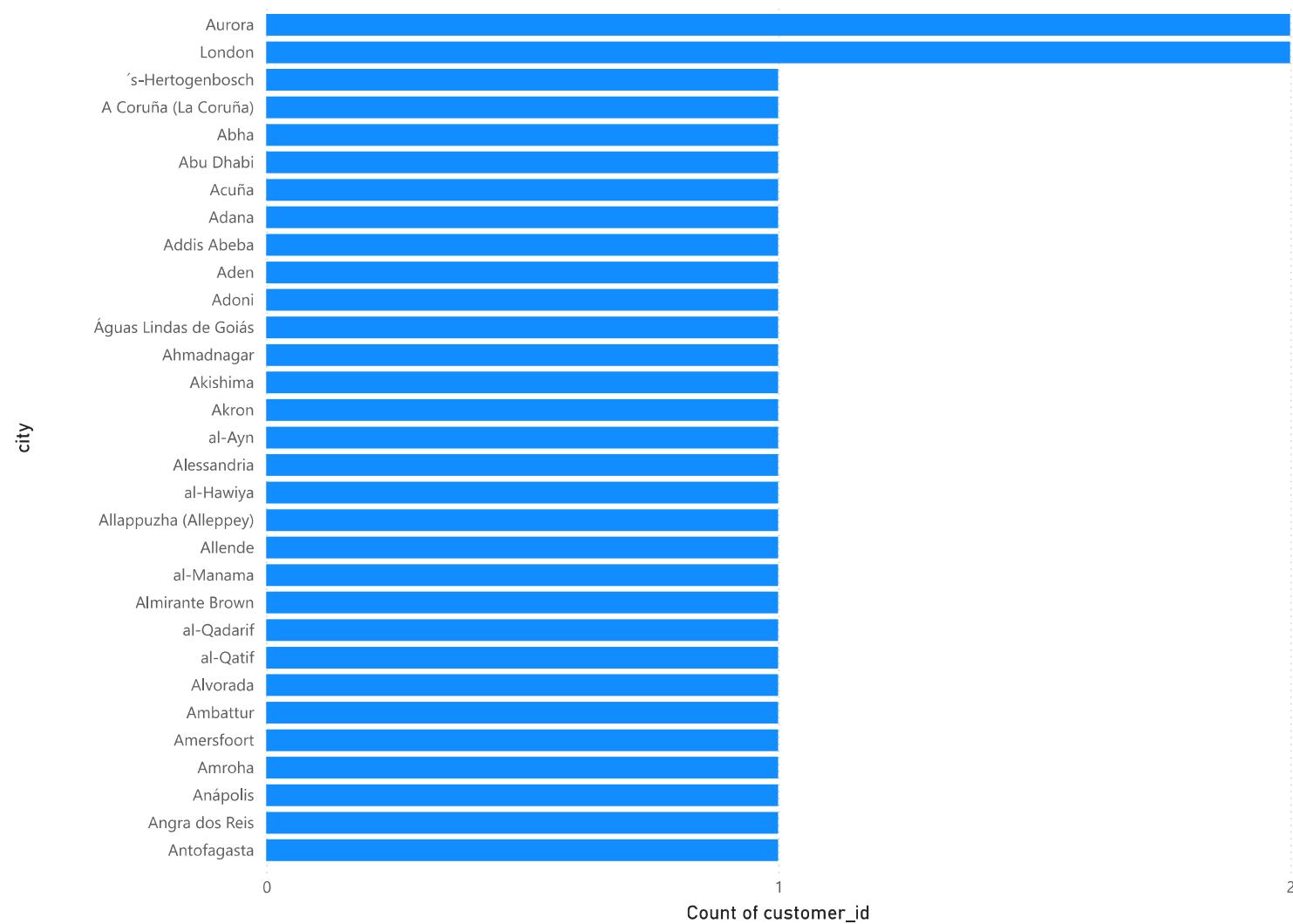
TotalRental, Sum of RentalHour, Sum of RentalDayMeasure and Sum of RentalDay by RentalDayName

● TotalRental ● Sum of RentalHour ● Sum of RentalDayMeasure ● Sum of RentalDay



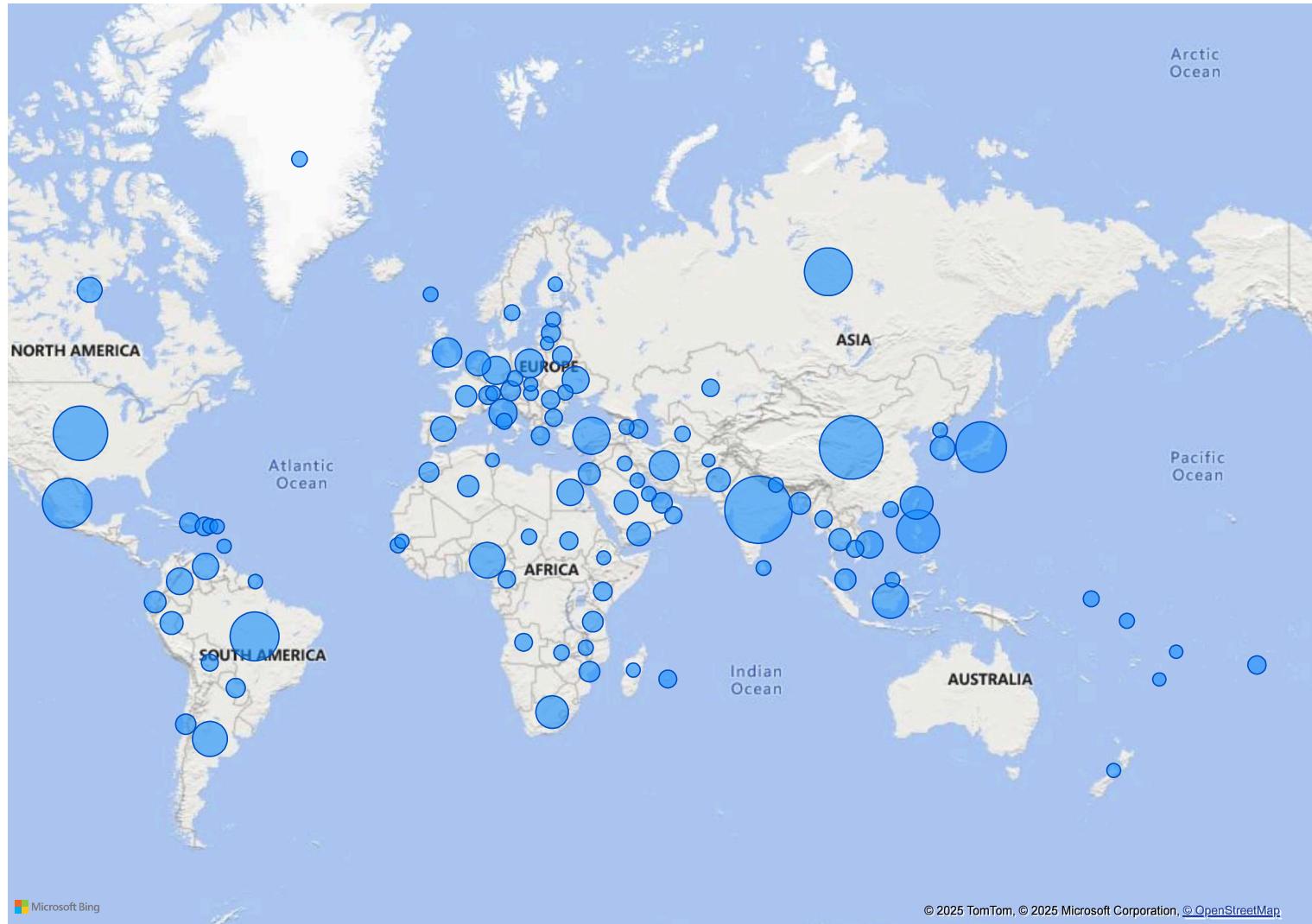
**What is
the
average
rental
duration
by staff
member?**

Count of customer_id by city



What is the distribution of customers across different cities?

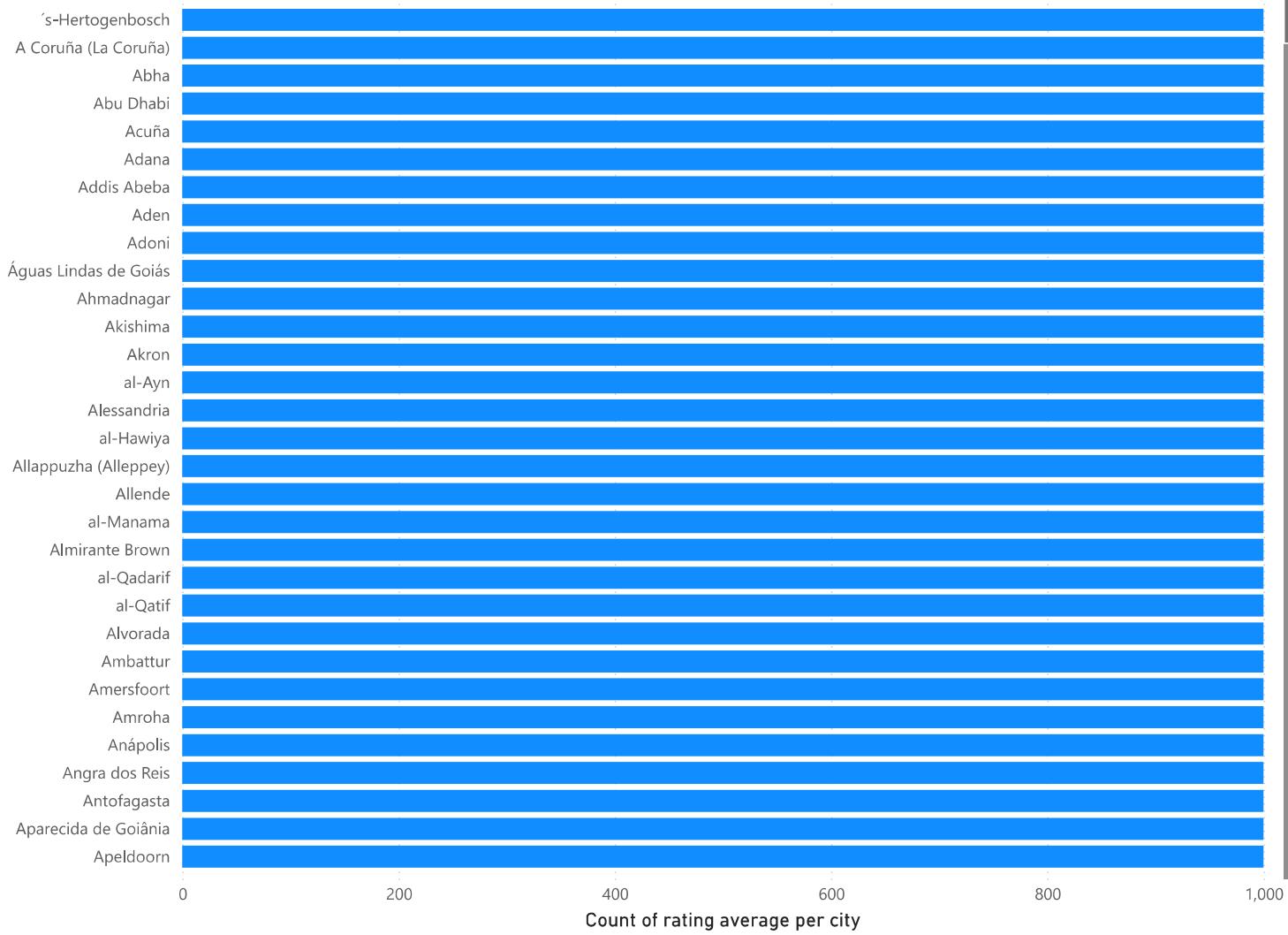
Revenue by country



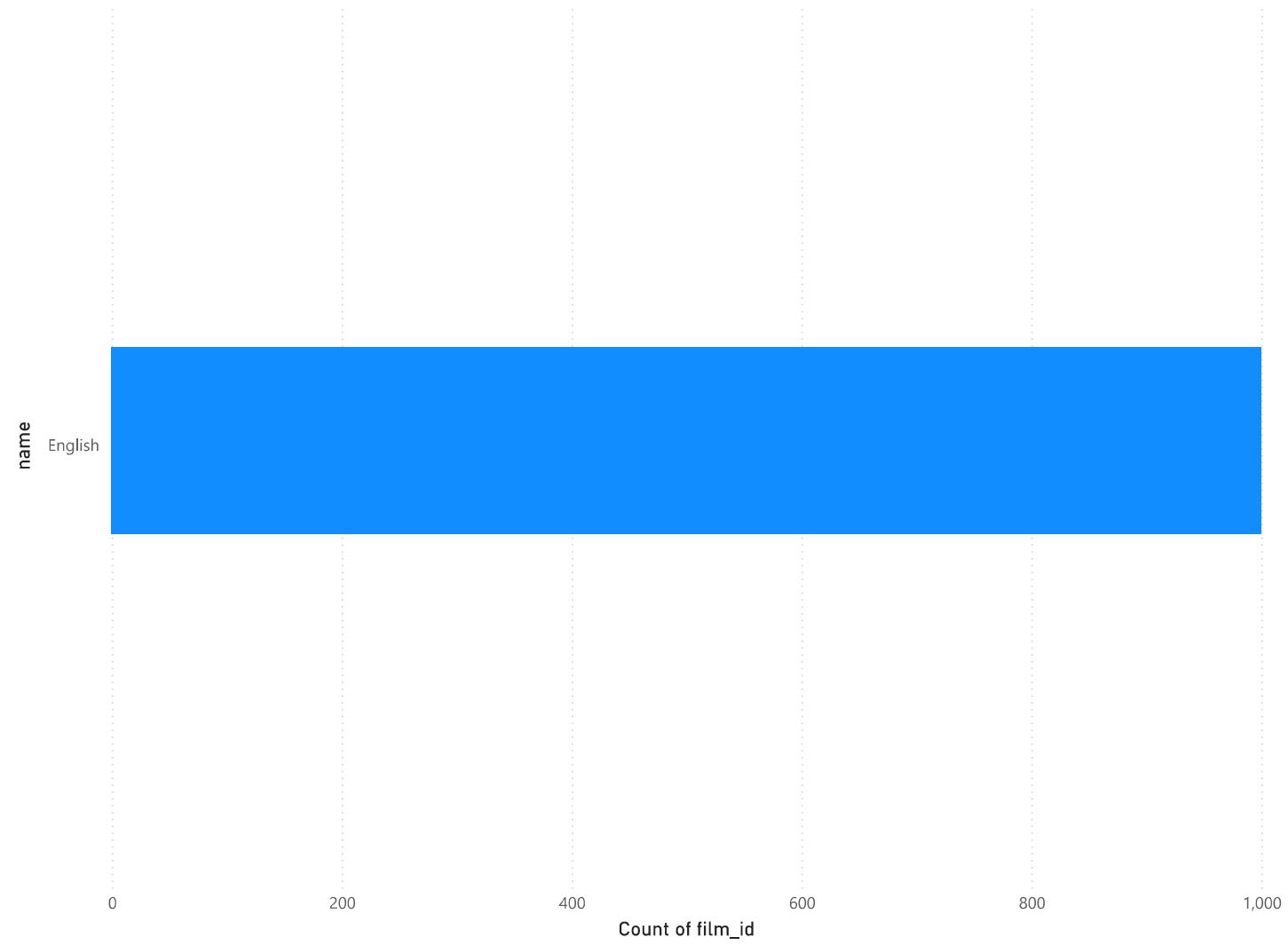
**How does
the rental
revenue
vary by
country?**

Which locations have the highest and lowest customer ratings?

Count of rating average per city by city



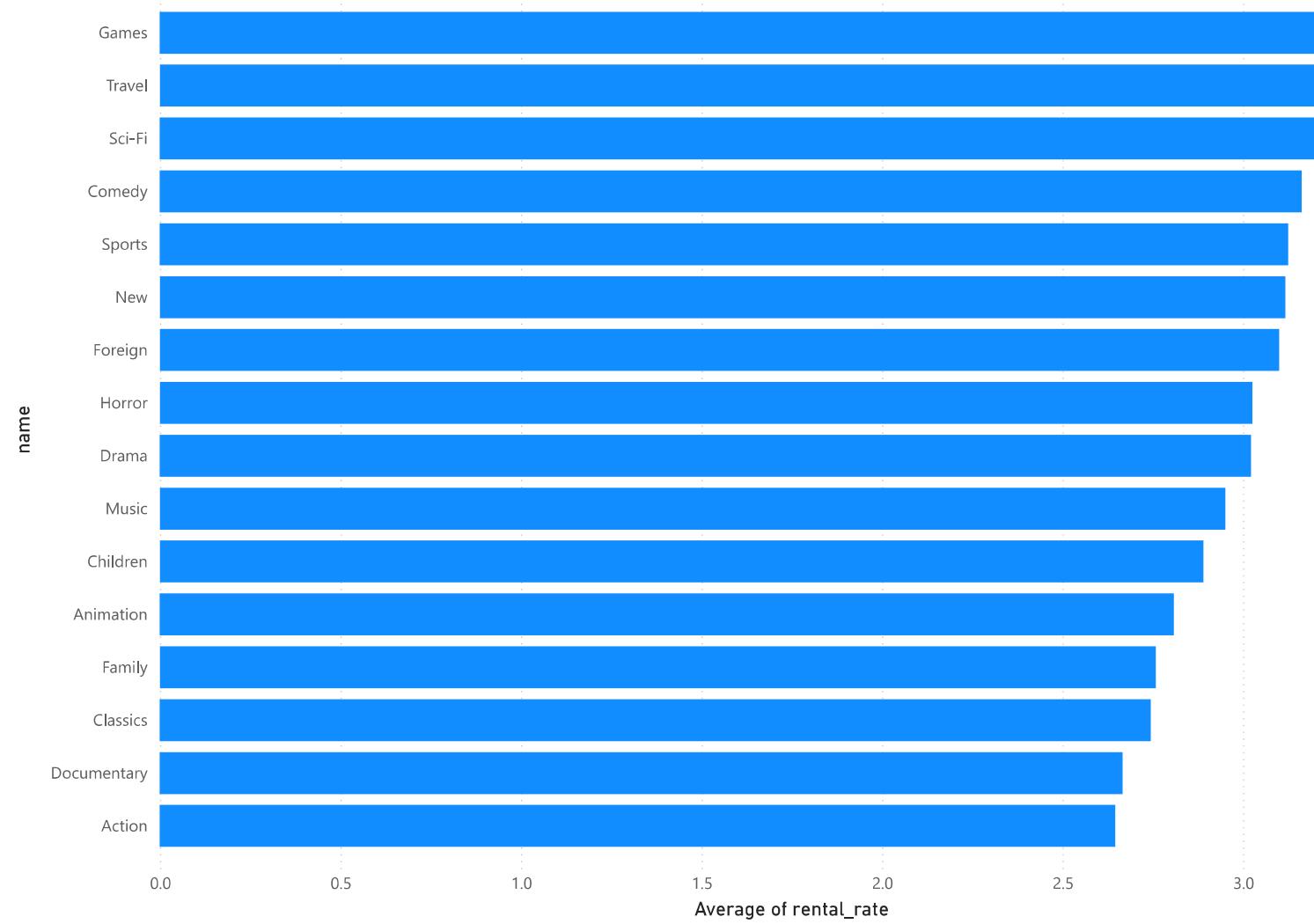
Count of film_id by name



What is the distribution of films by language?

Which
film
categor
ies
have
the
highest
rental
rates?

Average of rental_rate by name

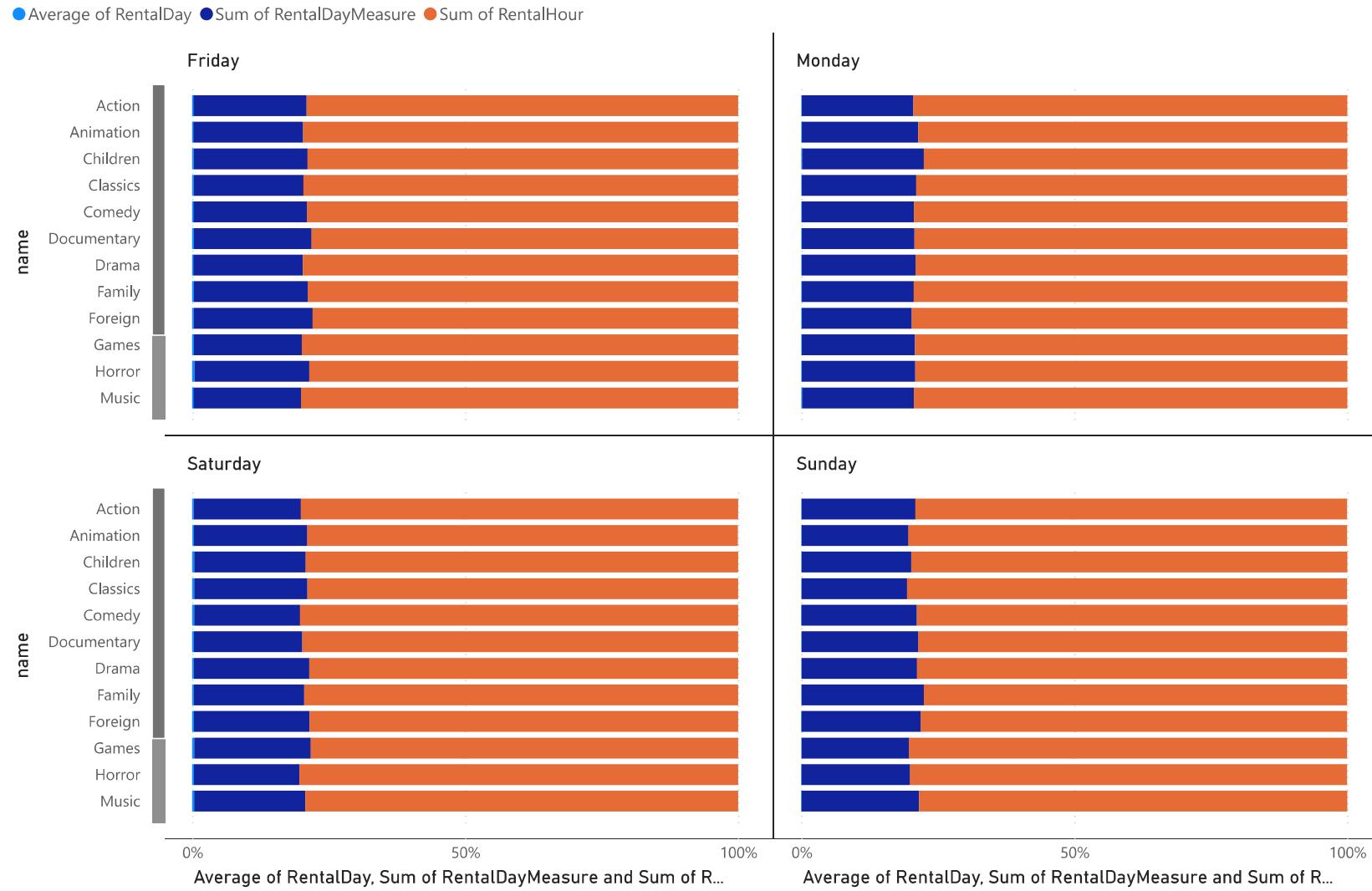


How does the average rental duration vary by film category

x

Quick measure

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

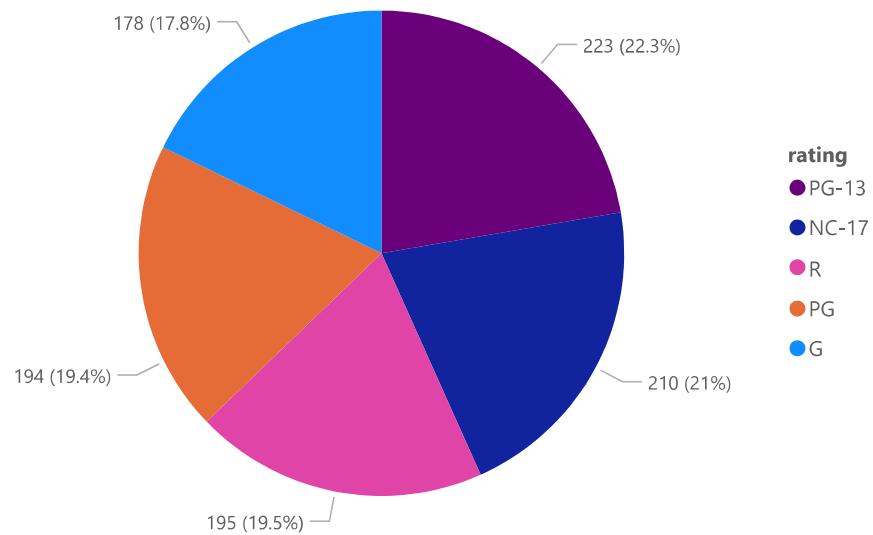


Total Rentals

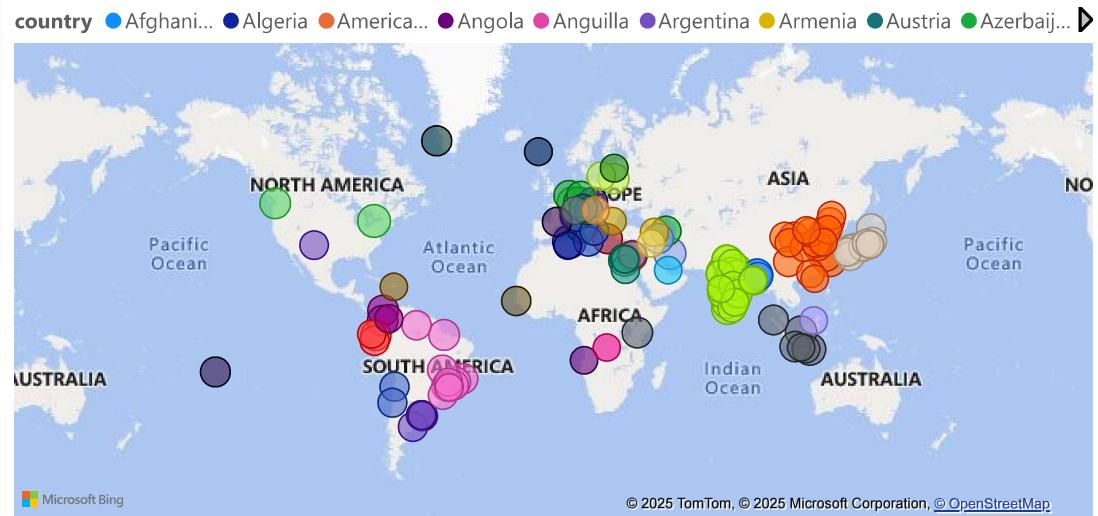
16K

Revenue
67.41K

Count of title by rating and release_year



Revenue by city and country



RentalDayName Count of amount Count of RentalHour Count of RentalDayMeasure Count of RentalDay

Friday	19	2272	1	2272
Monday	19	2247	1	2247
Saturday	19	2311	1	2311
Sunday	19	2320	1	2320
Thursday	19	2200	1	2200
Tuesday	19	2463	1	2463
Wednesday	19	2231	1	2231
Total	19	16044	1	16044

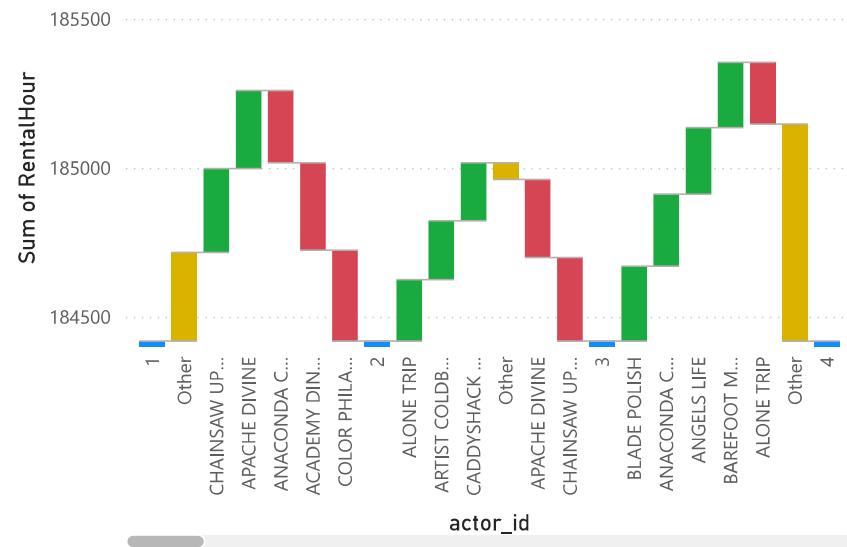
Revenue by city

100.75

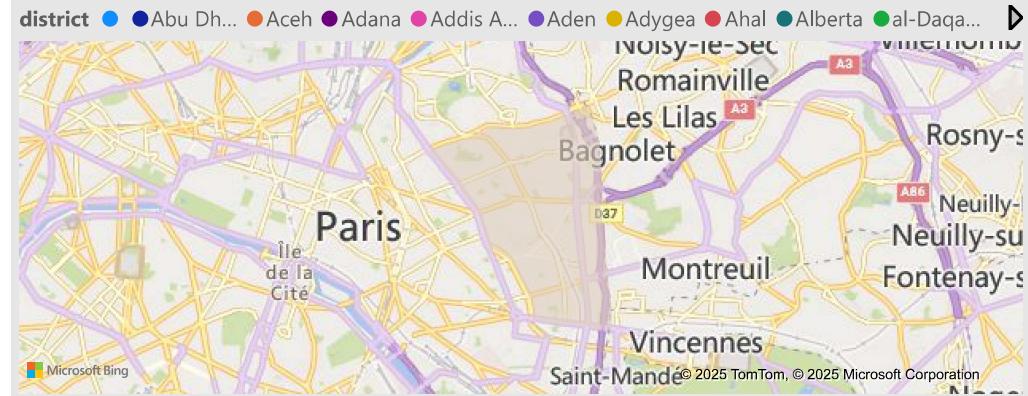
rating	film_id	actor_id	Sum of rental_du
G	2	19	
G	2	85	
G	2	90	
G	2	160	
G	4	41	
G	4	81	
G	4	88	
G	4	147	
G	4	162	
G	5	51	
Total			

Sum of RentalHour by actor_id and title

● Increase ● Decrease ● Total ● Other



Count of rental_rate by city_id and district



CustomerSpend by country

