

# Exploratory Data Analysis

## G2M Case

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# Agenda

Executive Summary

Problem Statement

Approach

EDA

EDA Summary

Recommendations

# Executive Summary

- Our client XYZ is a private equity firm in US. Due to remarkable growth in the Cab Industry in last few years and multiple key players in the market, it is planning for an investment in Cab industry.

By evaluating

- transaction amounts
- pricing strategies
- cost and profit metrics
- demographic segments
- city-wise profit generation
- the impact of payment methods

we will identify the most promising company for XYZ's investment.

# Problem of Statement

- The challenge is to analyze the market and identify which of the two cab companies, Yellow Cab and Pink Cab, presents a better investment opportunity based on various financial and operational metrics from 2016 to 2018.

# Approach

## Explore Available Data

Cab\_Data.csv  
Customer\_ID.csv  
Transaction\_ID.csv  
City.csv

01

## Formulate Hypotheses Within Categories For Two Companies

- Compare the financial performance
- Segment customer demographics analysis
- Assess the impact of payment methods on transaction

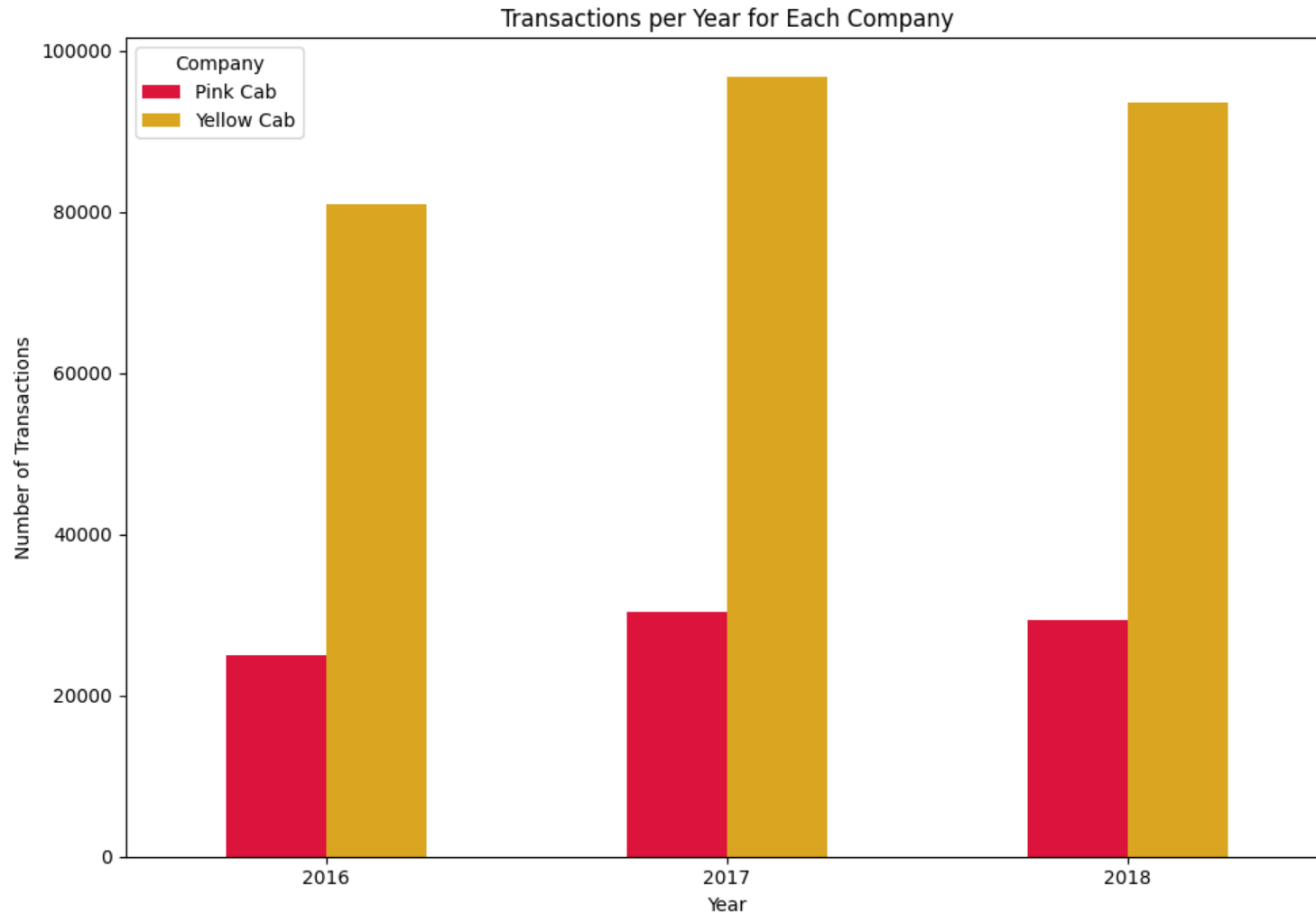
02

## Collect and Analyze Data

- Merge Data
- Data Cleaning
- Data Visualization

03

# Transaction Analysis



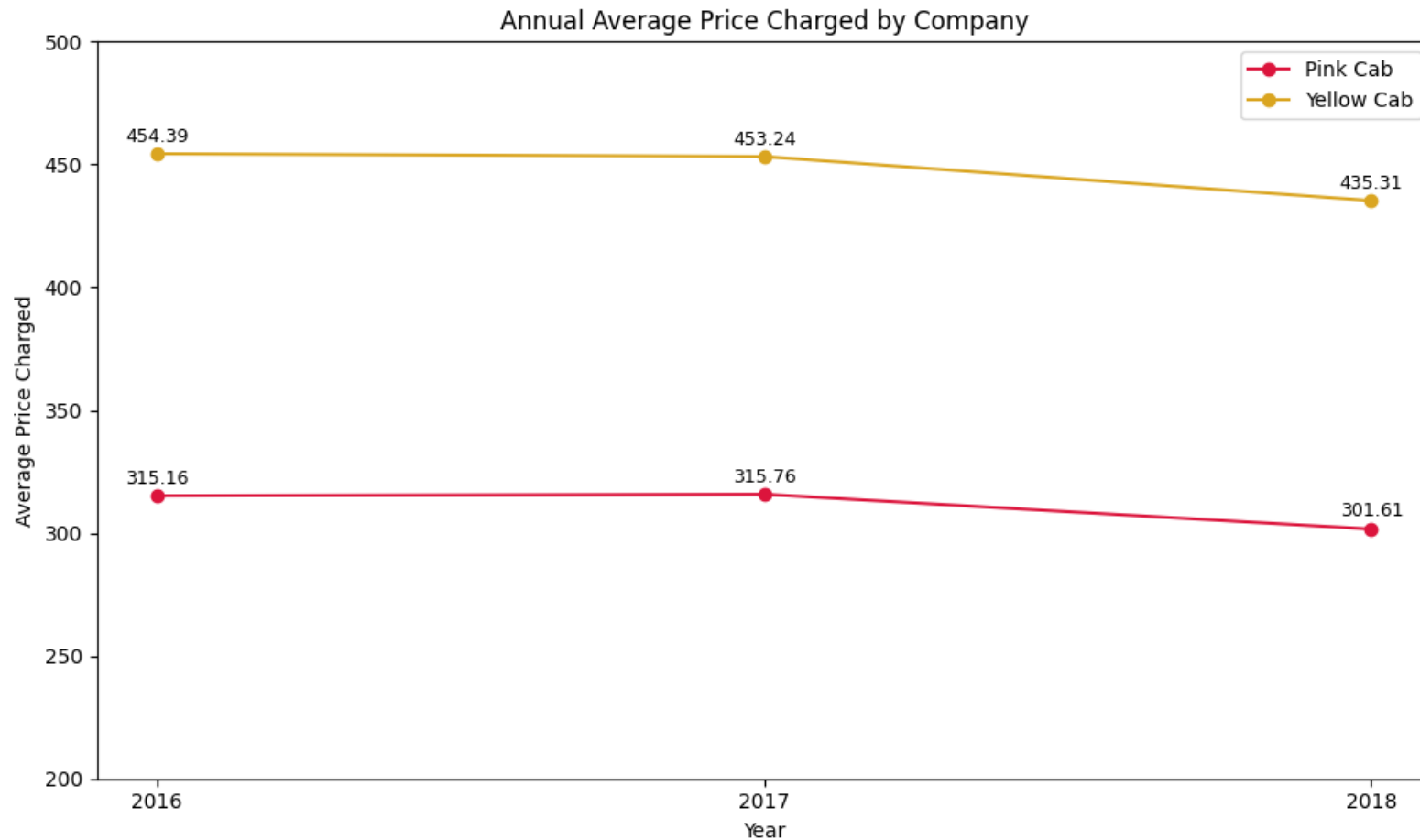
**Yellow Cab** had approximately 60,000 more transaction amounts on average than Pink Cab annually

Stronger market leadership

Potentially higher customer trust or preference

Potential for sustained revenue growth

# Pricing Analysis



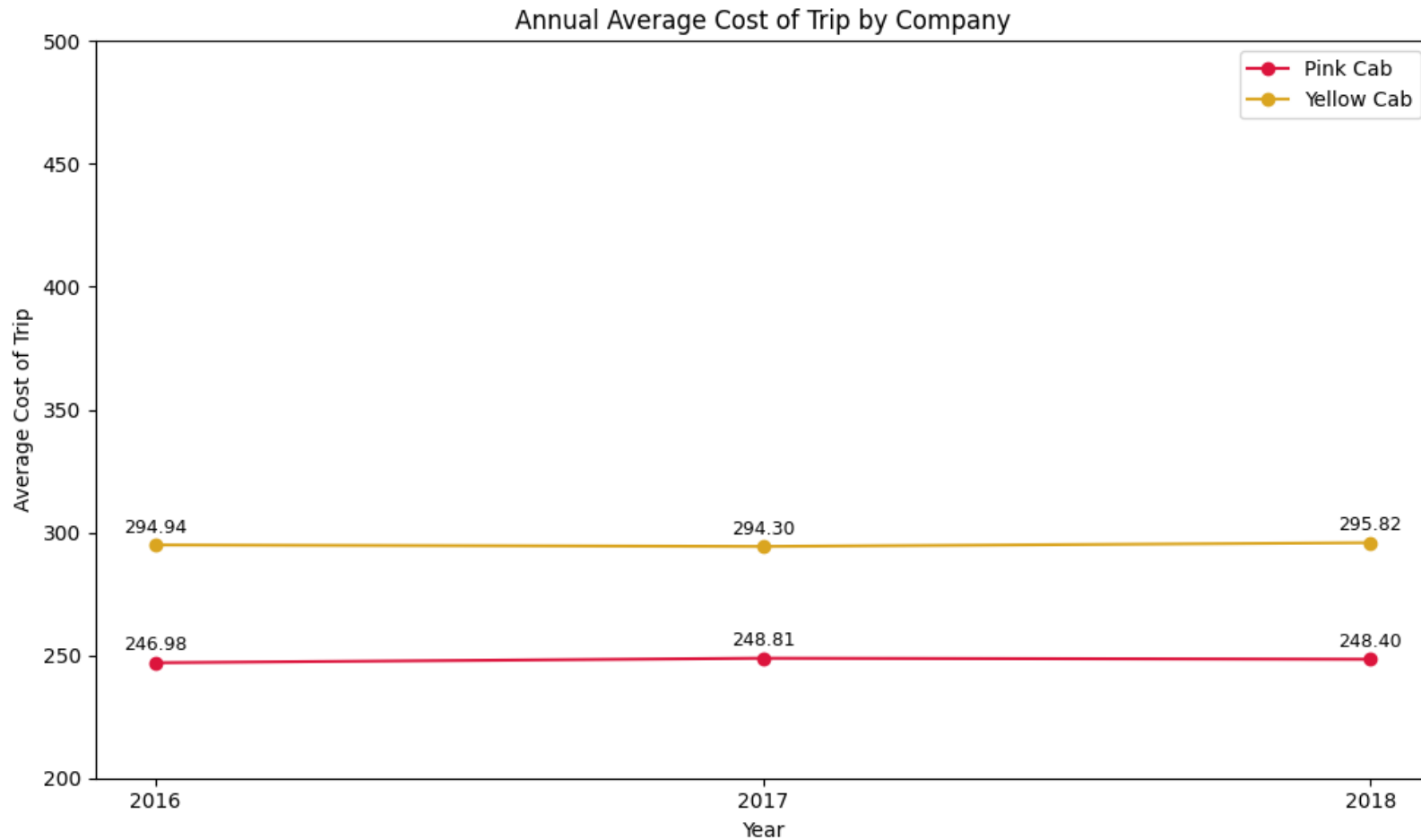
On average, **Yellow Cab** charged about \$140 more per trip than Pink Cab each year over the same period

Offer premium services

Higher pricing power and brand value

Stronger revenue generation capabilities

# Cost Analysis



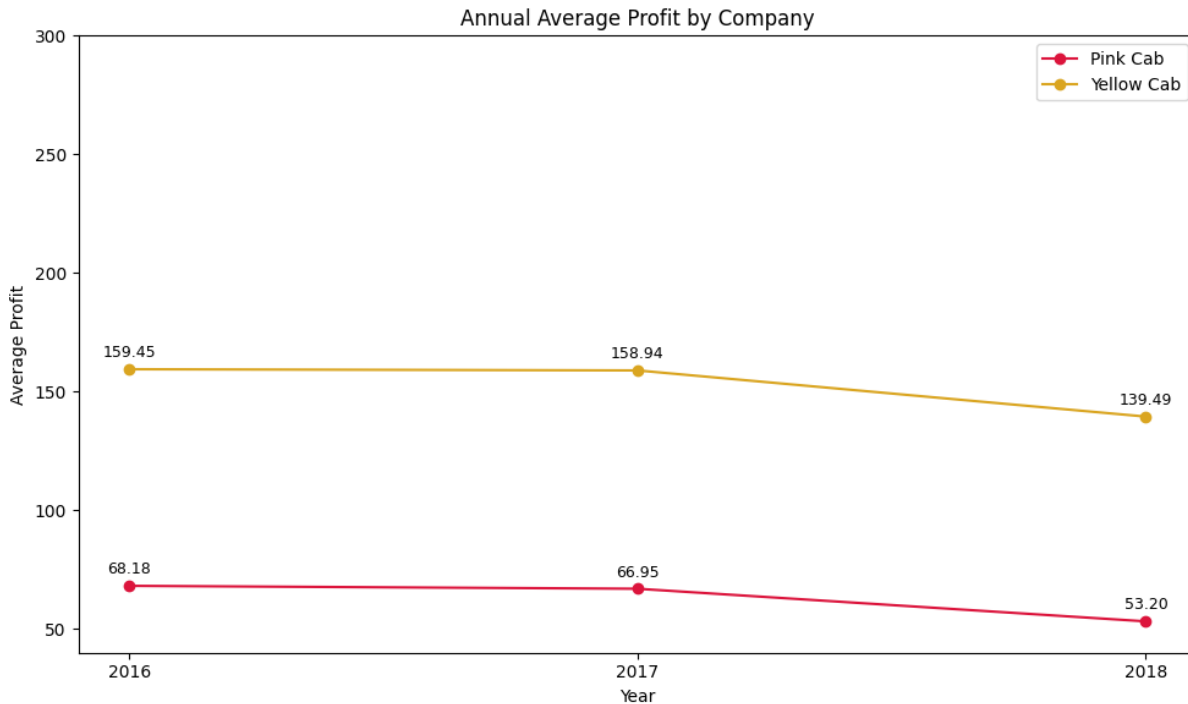
Annually, **Yellow Cab's** average cost per trip was about \$50 higher than that of Pink Cab over the three years

Higher quality services

Need to manage costs effectively

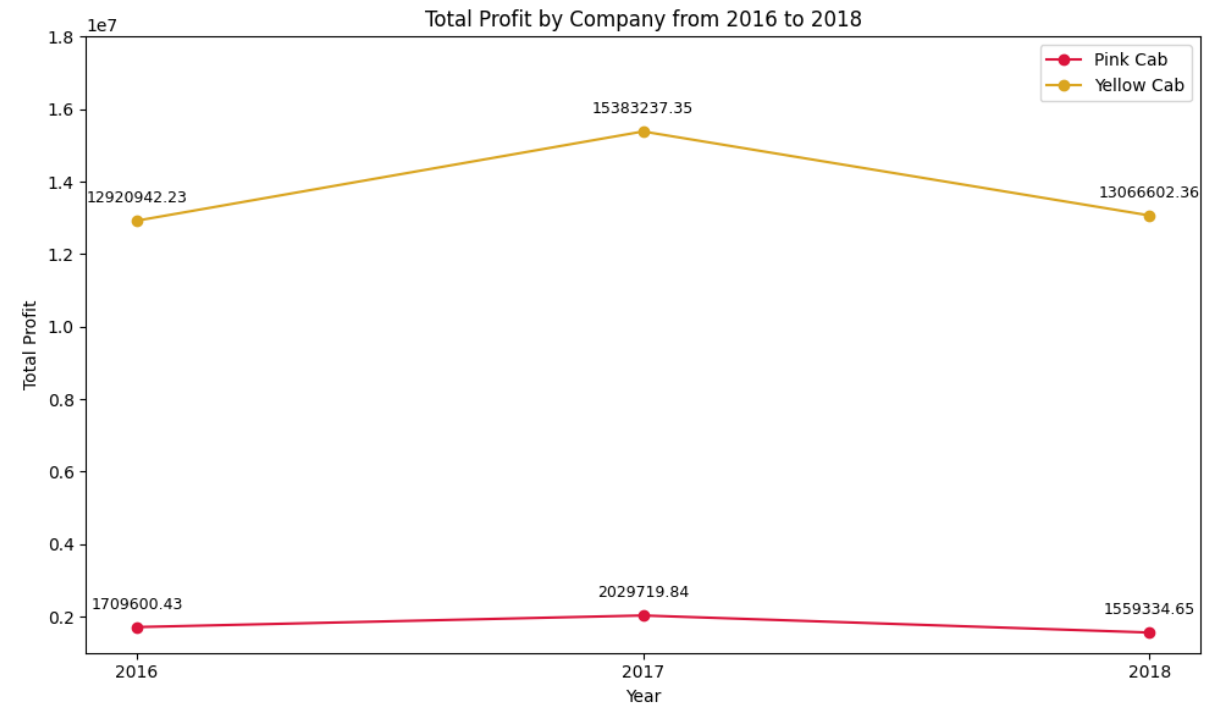


# Profit Analysis



**Yellow Cab's** average profit per trip exceeded Pink Cab's by roughly \$90 annually

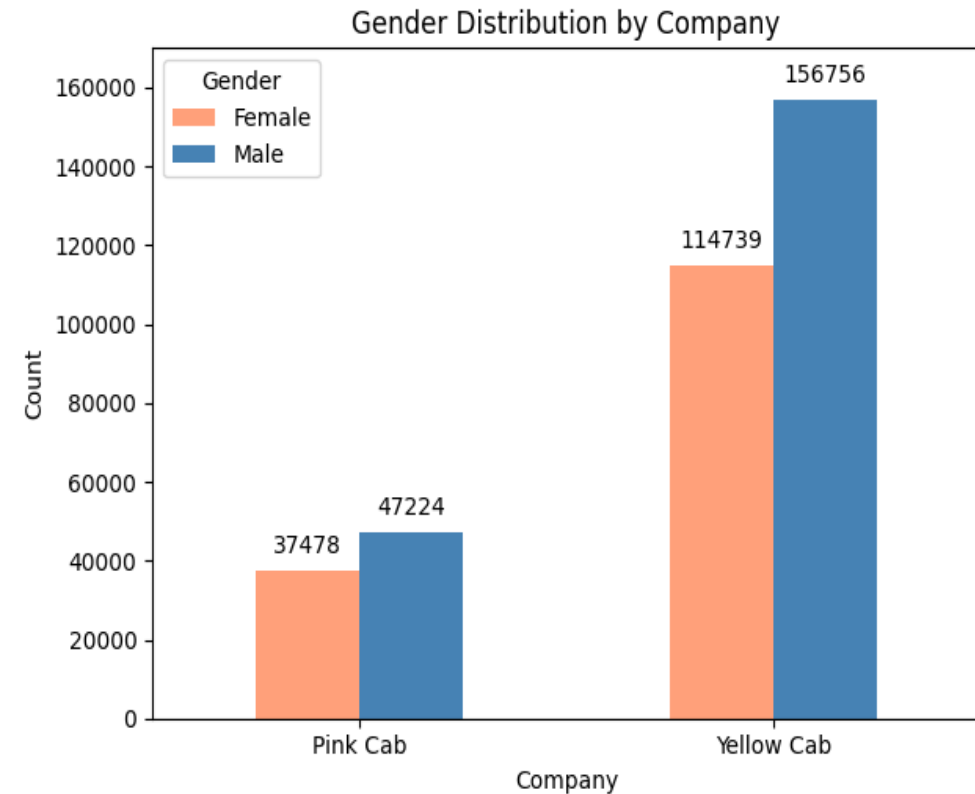
Better profitability per transaction  
(likely due to its pricing strategy and market positioning)



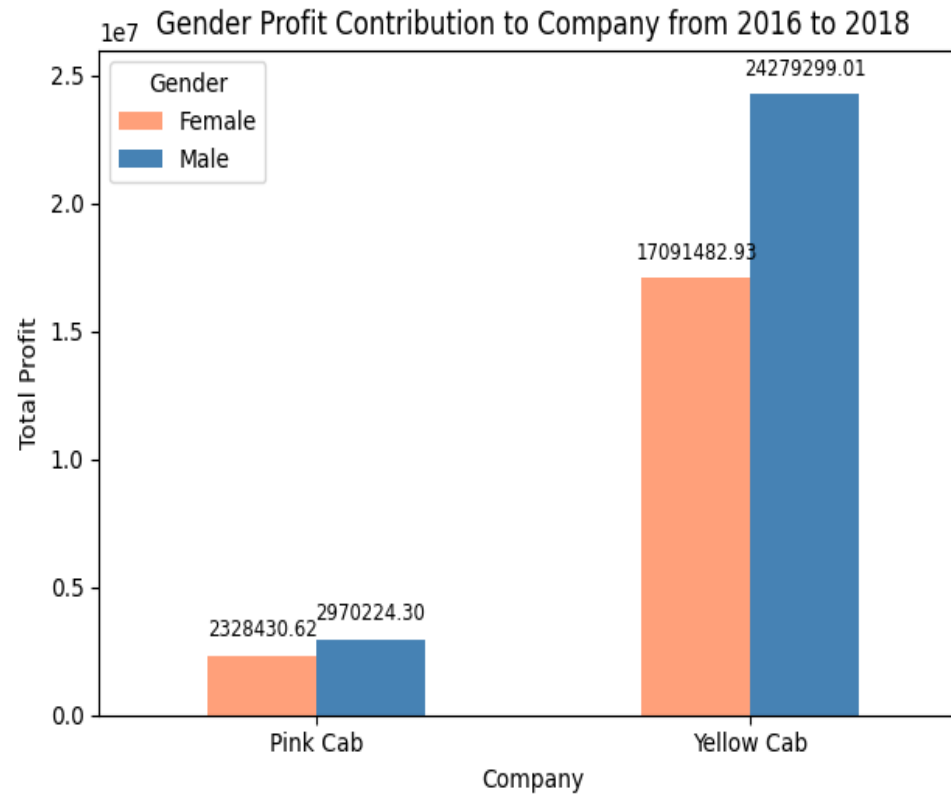
**Yellow Cab** accumulated a total of \$36 million more in profit than Pink Cab from 2016 to 2018

Reinforcing its financial strength  
Supporting a promising investment opportunity.

# Customer Segments Analysis - Gender



**Yellow Cab** served 77,000 more female and 110,000 more male customers than Pink Cab

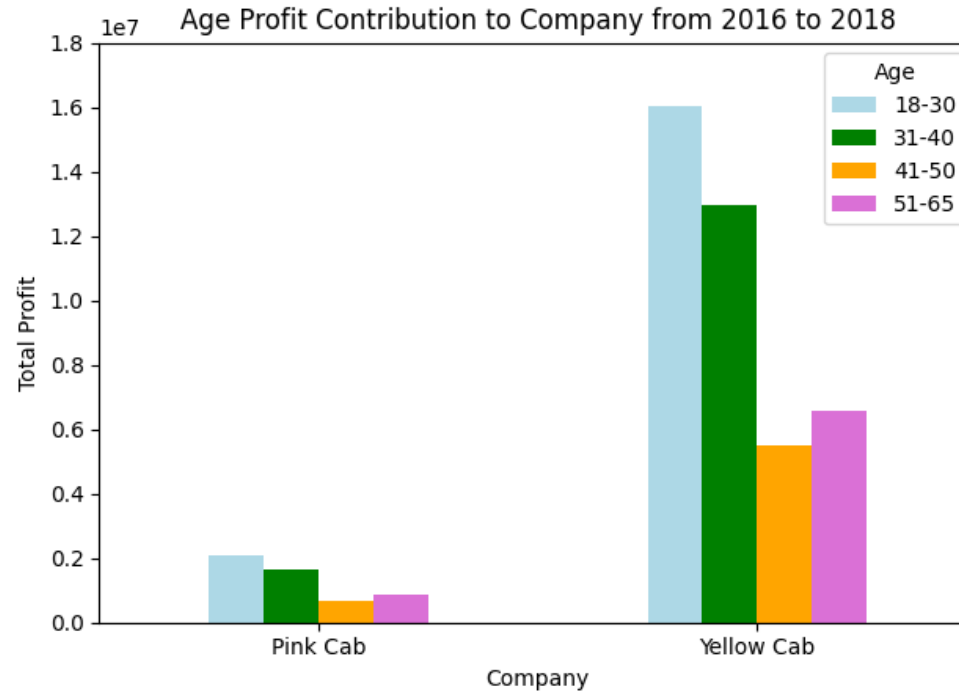
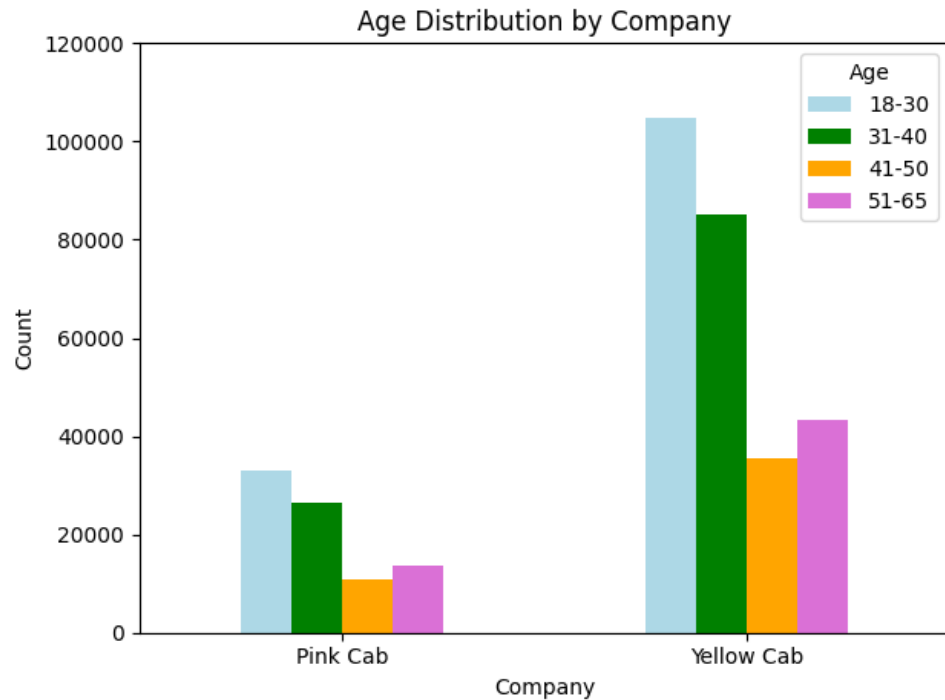


**Yellow Cab** generated \$14 million more from female customers and \$21 million more from male customers compared to Pink Cab.

Men: possibly more  
reliant on cab services for  
commuting or have a  
higher preference for the  
convenience of cabs

Women: may value safety,  
reliability, and cleanliness  
more highly in their  
transportation options

# Customer Segments Analysis - Age

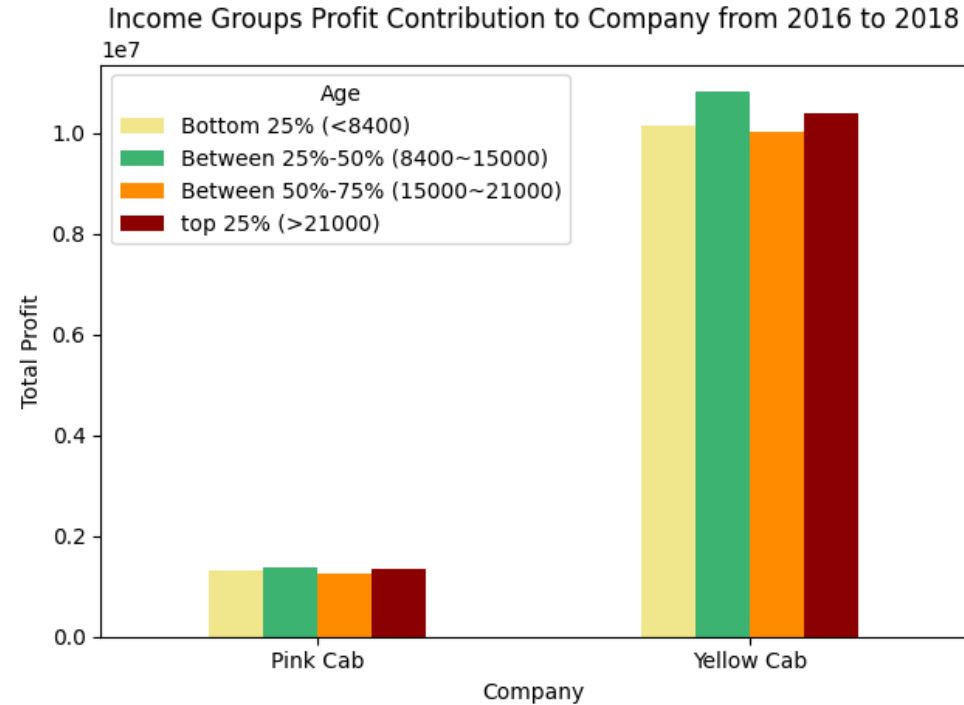
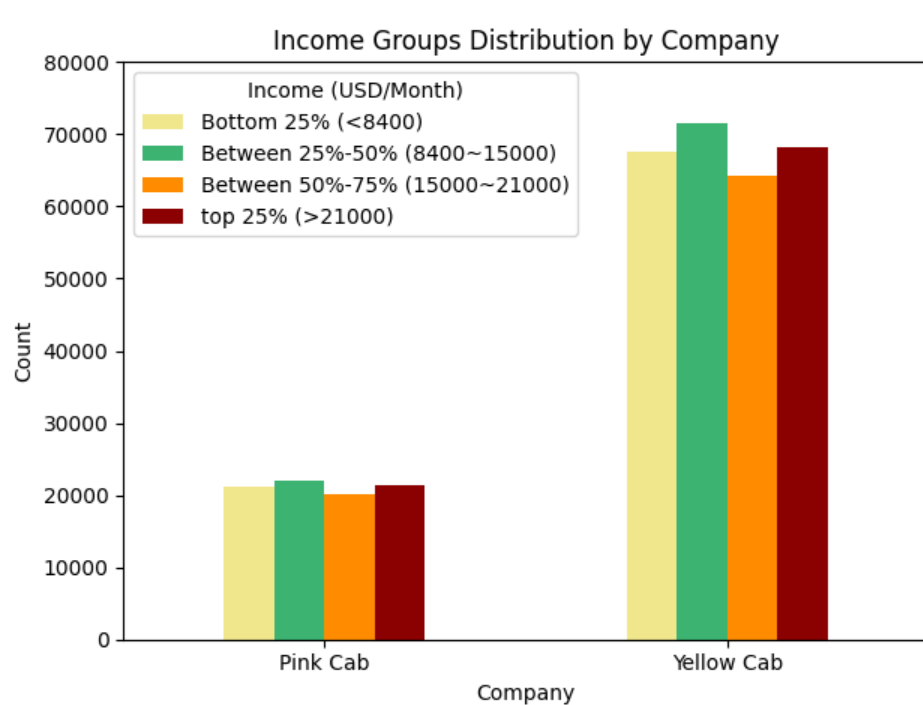


Younger adults: might have higher mobility needs and openness to ride-sharing services

Opportunity for expanding the middle-aged and older customer groups

**Yellow Cab** dominates in customer base and profits across all age groups, especially among those aged 18-30, followed by the 31-40, 51-65, and then 41-50 age groups

# Customer Segments Analysis – Income Groups



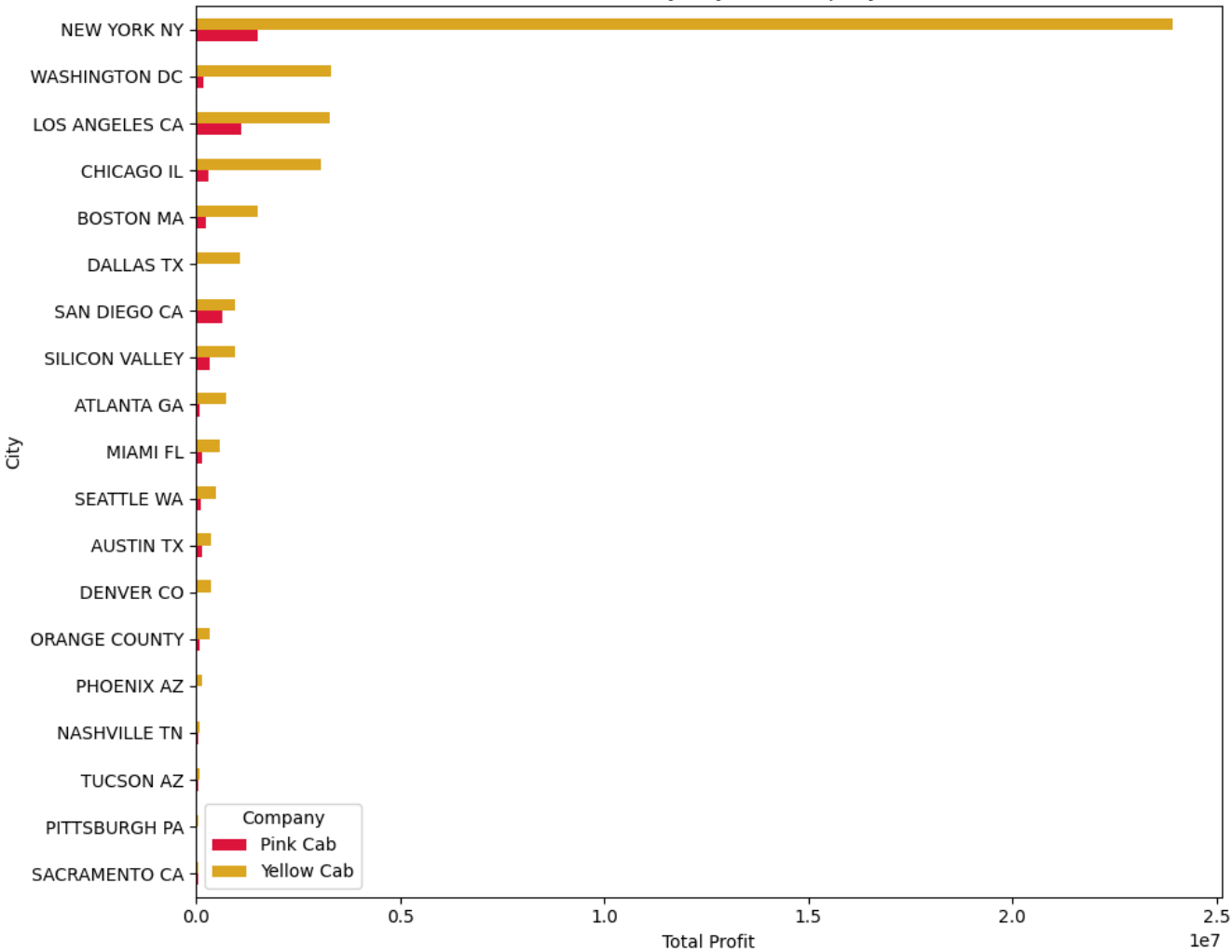
For the 25%-50% bracket, competitive pricing and subscription models could ensure loyalty and frequent use.

Introduce or expand premium service options targeting high-income users

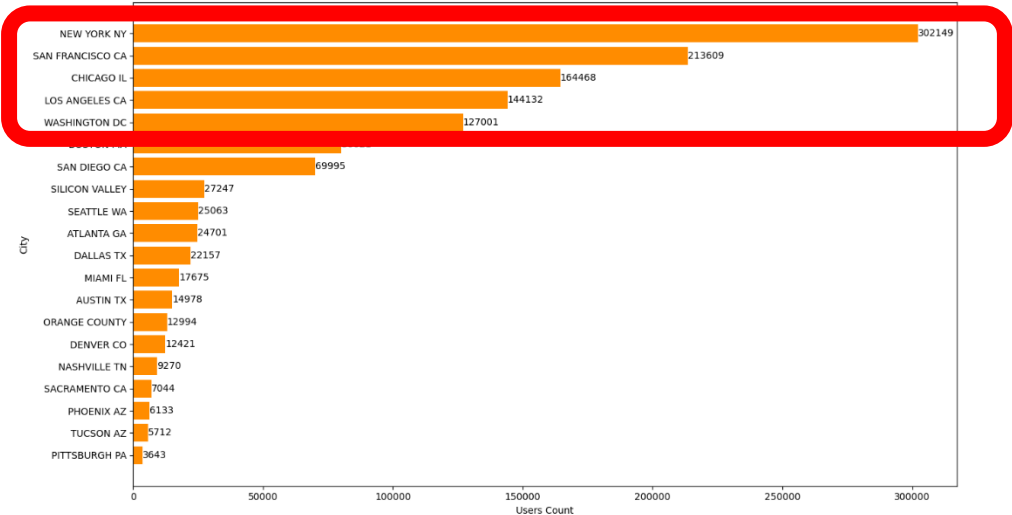
**Yellow Cab** dominates in customer base and profits across all income groups. The majority of its customers are in the middle-income group, with profit contribution mirroring this distribution.

# City Wise Cab Users Analysis

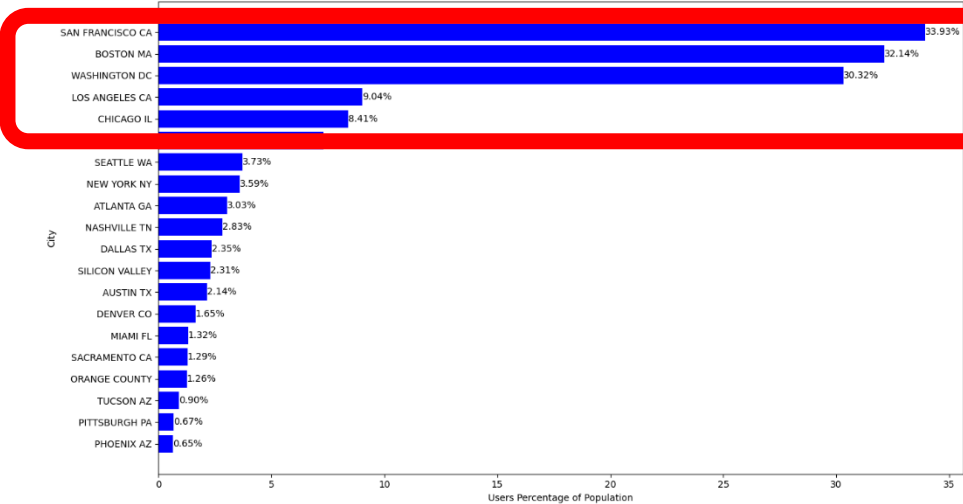
Total Profit by City and Company



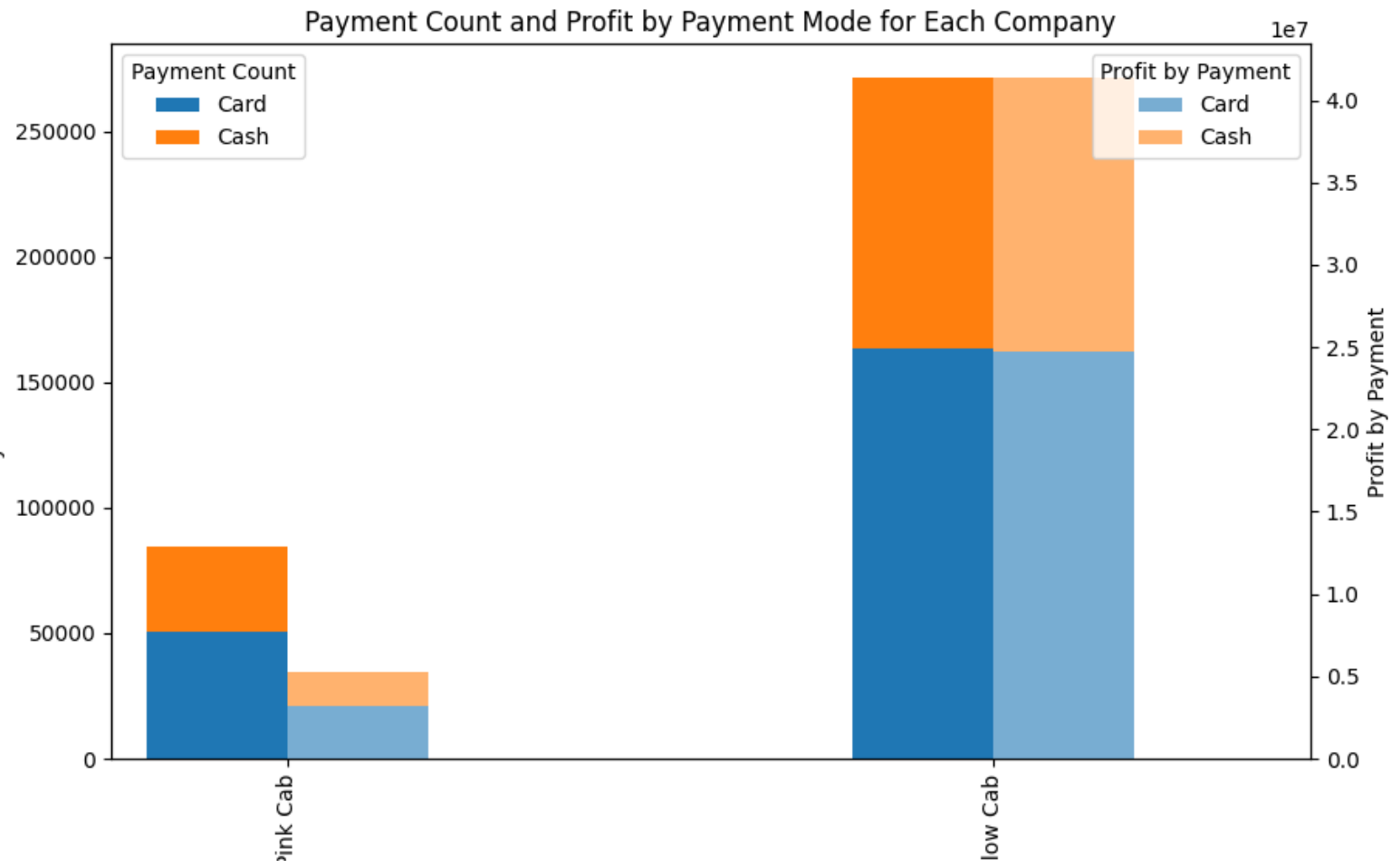
Users Count by City



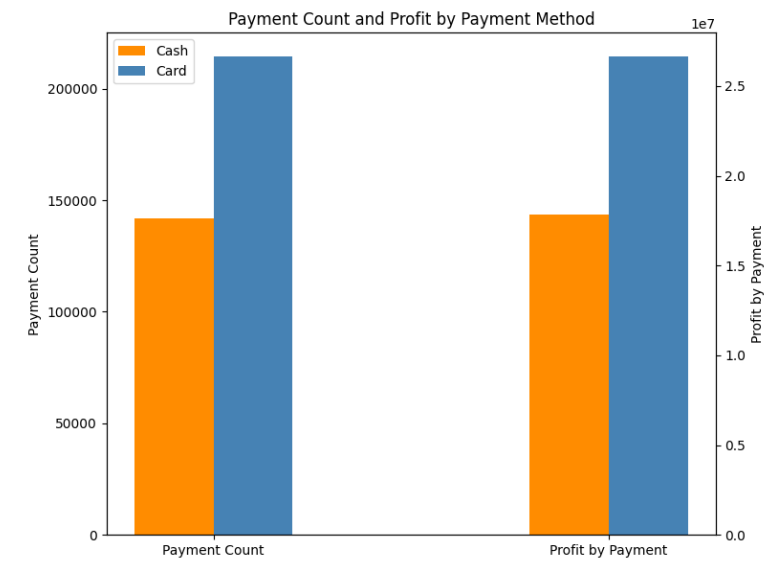
Users Percentage of Each City Population



# Payment Method Analysis



Payment method is not a major differentiator but offering card payment options is essential



# Recommendation

- **Market Leadership:** Yellow Cab has higher transaction amounts from 2016 to 2018, demonstrating strong market presence and customer preference.
- **Financial Performance:** Yellow Cab has a higher average profit per trip and overall profitability, suggesting a solid financial foundation and effective pricing strategy.
- **Broad Customer Base:** Yellow Cab appeals to a wide demographic, indicating versatile service offerings that cater to diverse customer needs.
- **Strong Urban Presence:** Yellow Cab's significant profit generation in major cities shows its successful penetration in high-demand urban markets, promising for future growth.
- **Payment Flexibility:** The non-significant impact of payment method on profits suggests operational efficiency in handling transactions, appealing to customer convenience.

**On the basis of above points, we recommend Yellow Cab for investment**

Thank You