METHODOLOGY AND ANALYSIS FRAMEWORK:

This analysis explores key factors influencing Netflix users' subscription plan selection, focusing on three primary parameters:

1. Subscription duration
2. Preferred streaming devices
3. Geographical location

The analysis follows a systematic approach including:

- Data preparation and cleaning
- Exploratory data analysis
- Statistical analysis
- Data visualization and interpretation

Each section presents key findings supported by visualizations and statistical evidence, providing insights into Netflix users' subscription plan selection

Part 1: Subscription Duration

Data Cleaning Steps

- The csv file is not missing any values, allowing us to proceed with the analysis without the need for data imputation or row removal.
- While this dataset offers valuable insights, its limited scope of 2,500 records across only 10 countries may not fully represent Netflix's global user base, which spans over 190 countries and more than 230 million subscribers as of 2023.
- Additionally, the subscription data begins in 2021, despite Netflix's streaming service operating since 2007 and its founding in 1997, suggesting findings should be interpreted with appropriate caution.

### Data Exploration and Organization:
Python script:

To analyze potential correlations between subscription types and duration, I calculated each user's subscription length using Python and visualized the relationships through statistical plots.

While the bar graph provides an initial overview, a scatter plot or box plot

would better illustrate the statistical relationship between subscription type and duration, allowing for more precise correlation analysis.

Subscription Type Distribution by Month Length
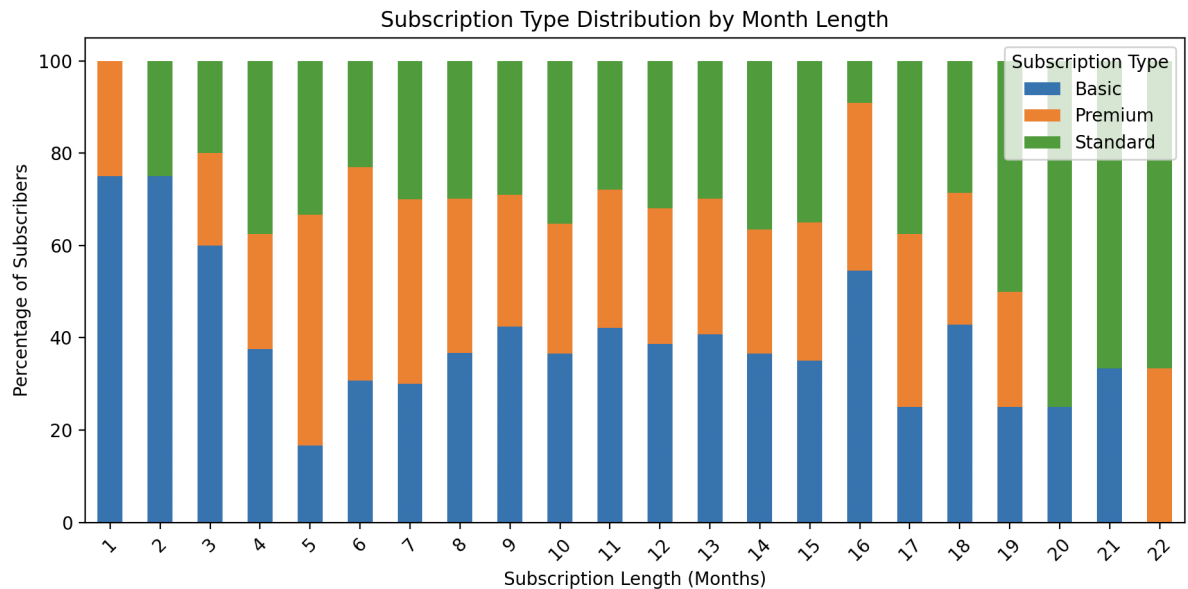
I changed the script so that python would generate a box plot.

Distribution of Subscription Length by Subscription Type
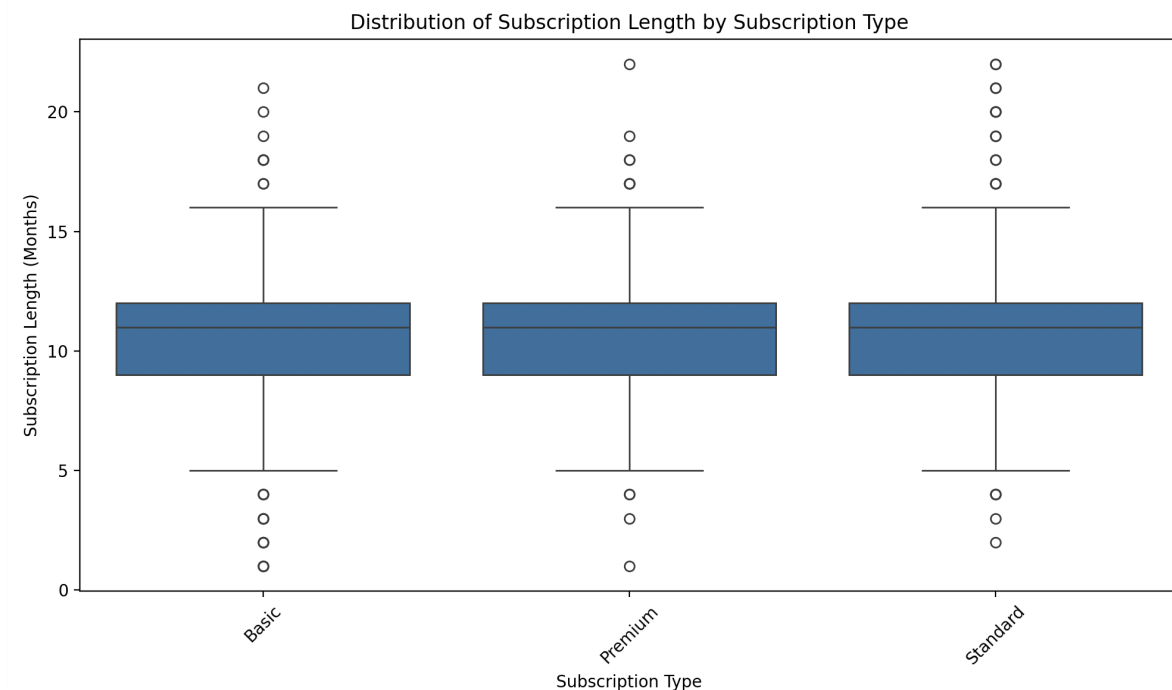
The data suggests that the subscription type (Basic, Premium, or Standard) has little to no correlation with how long customers maintain their subscriptions.

User Distribution:

- Basic subscription has the most subscribers with 999 users, while Premium and Standard subscriptions have similar numbers 733 users and 768 users respectively.
- The median subscription duration appears to be around 10-11 months for all types.
- The pattern of outliers is consistent across subscription types. Upper outliers extend to about 22 months. Lower outliers go down to around 1-2 months

Part 2: Preferred Streaming Device

To analyze potential relationships between subscription length, device type, and subscription tier, I visualized the data using a box plot. This visualization helps determine whether the device used for streaming Netflix influences how long users maintain their subscriptions across different subscription types.
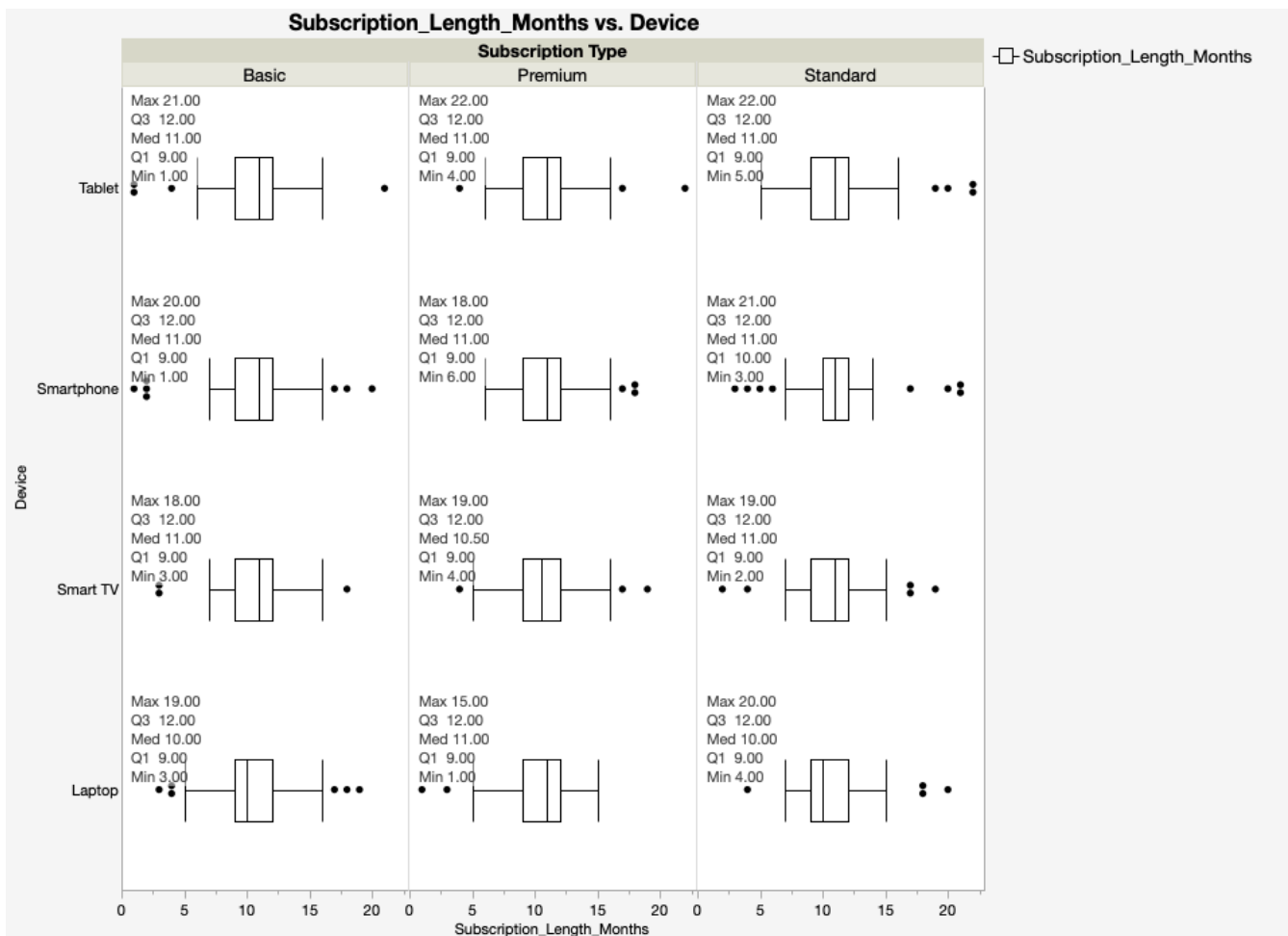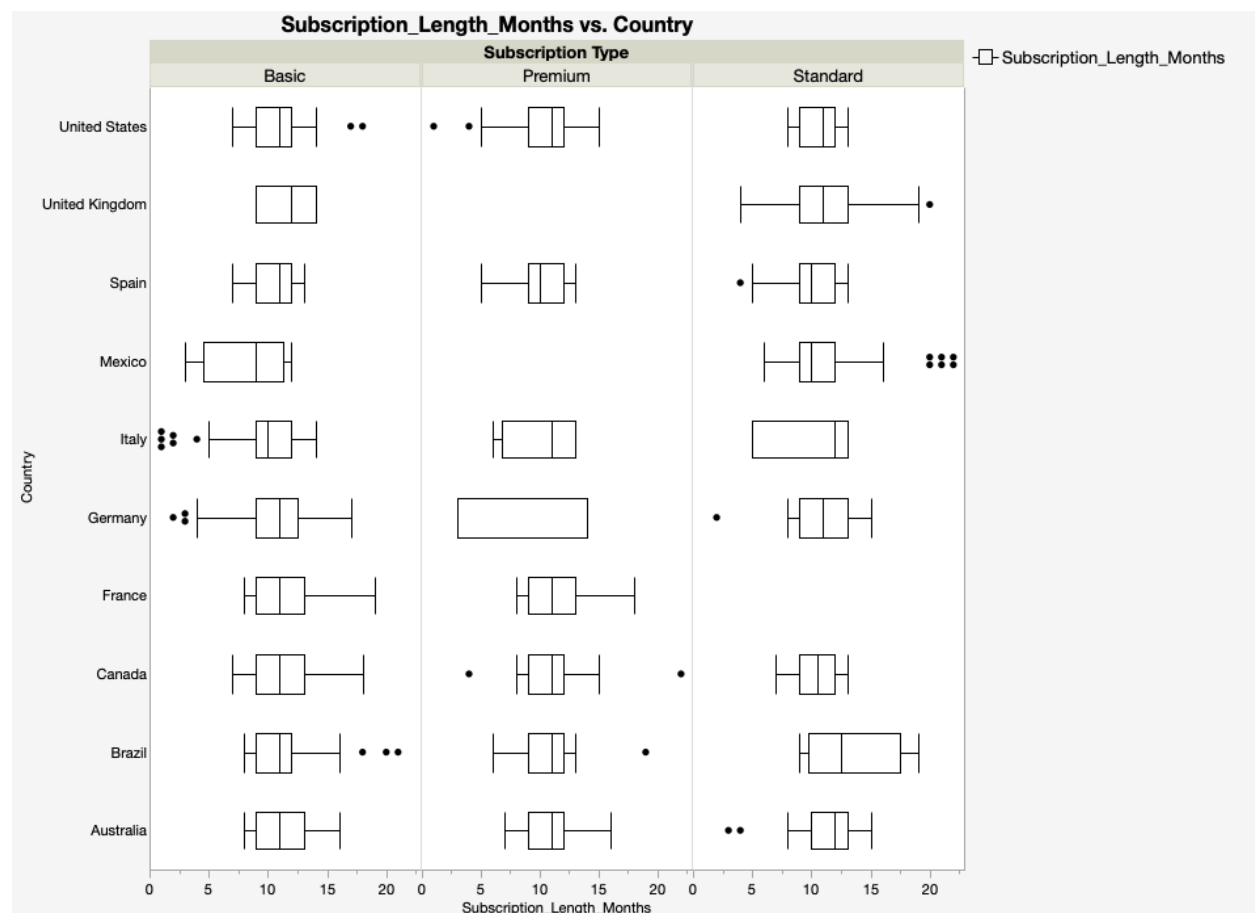
There is no significant difference in how long users maintain their Netflix subscriptions based on their preferred streaming device, as shown by the similar distributions across all device types.

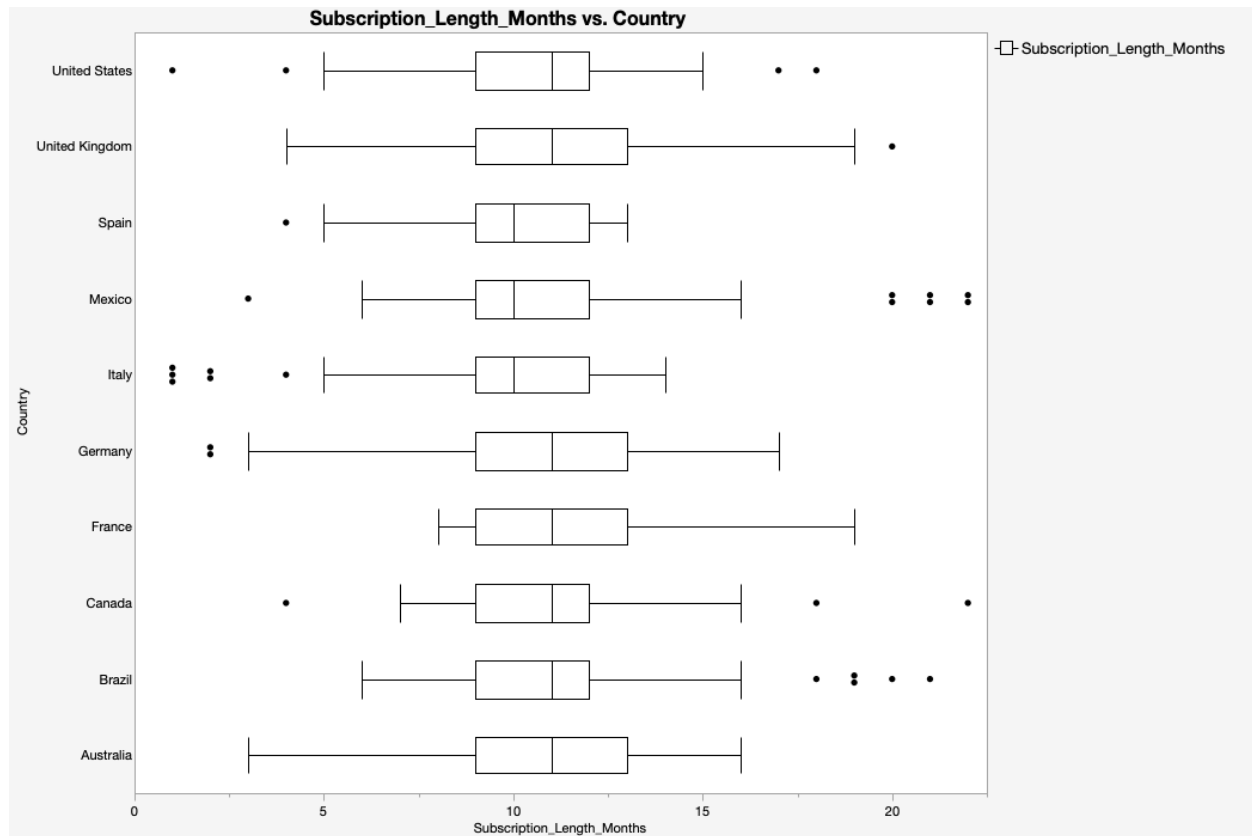## Part 3: Geographical Location

To analyze potential relationships between subscription length, user location, and subscription tier, I visualized the data using a box plot. This visualization helps determine whether geographical location from which the user streams Netflix influences how long users maintain their subscriptions across different subscription types.

From a simple glance, it looks like subscription length patterns vary more by country than by subscription type. Hence I removed the subscription type from the analysis.
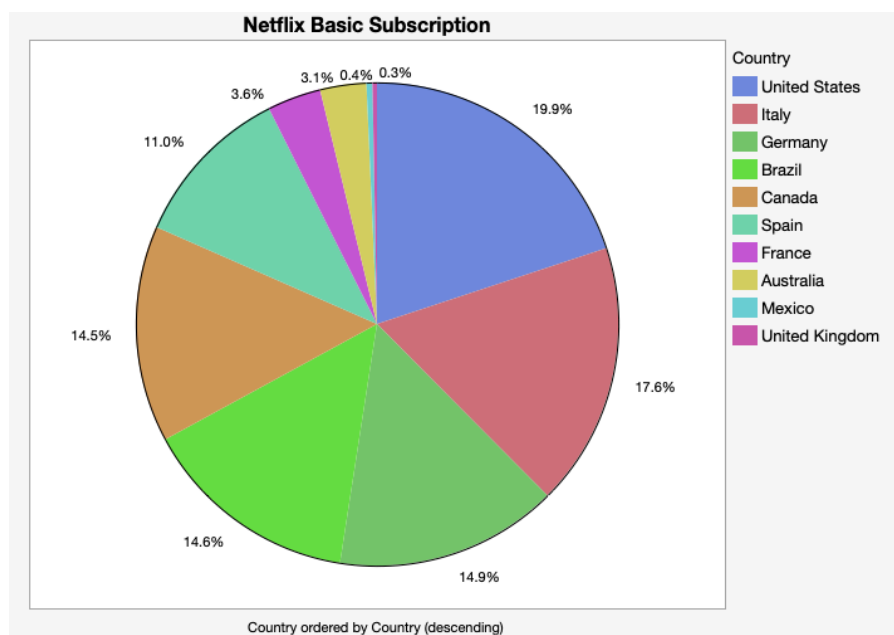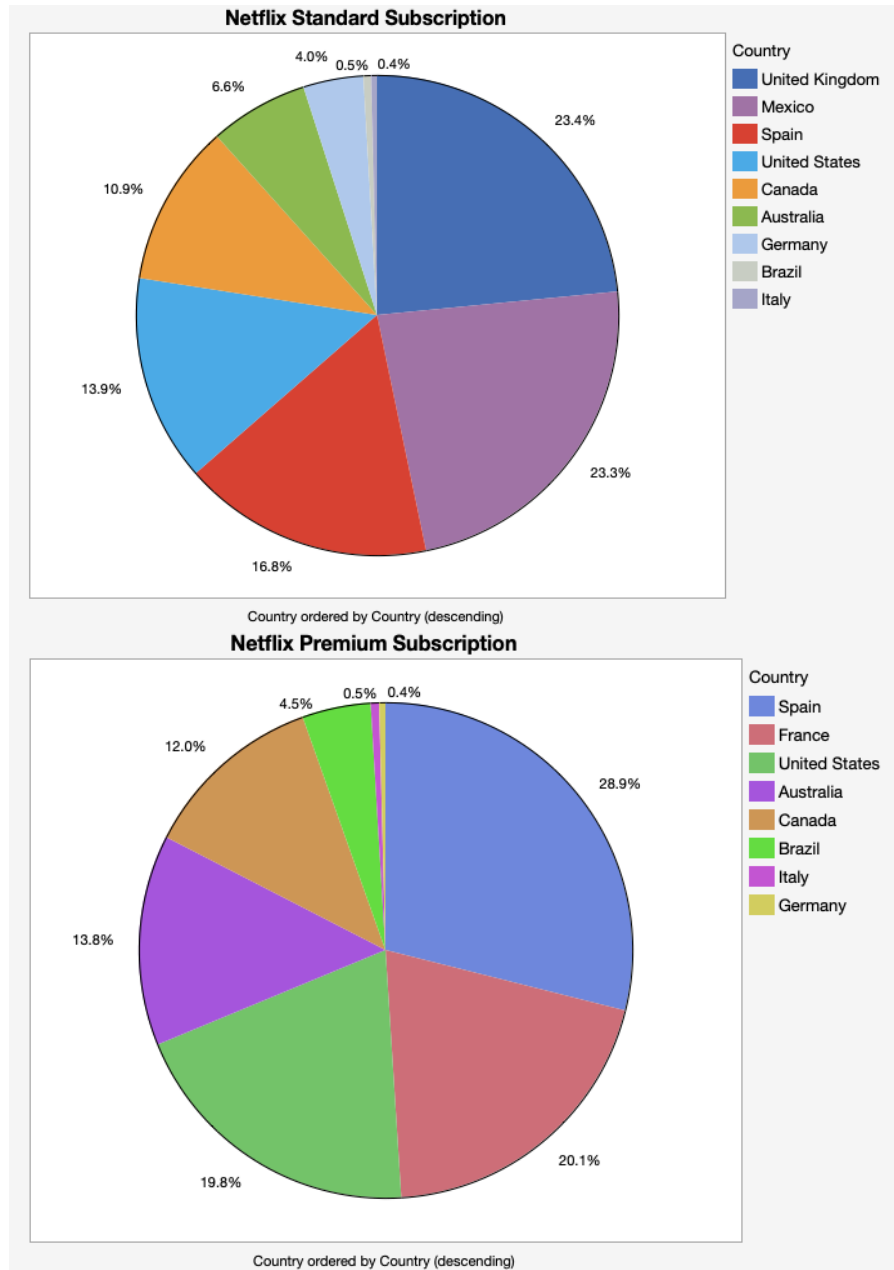
The graph above shows that there is no significant difference between the subscription length and the geographical location. Let's see if there is a preference for subscription type depending on geographical location.

Netflix Standard Subscription

Country
- United Kingdom
- Mexico
- Spain
- United States
- Canada
- Australia
- Germany
- Brazil
- Italy

23.4%
23.3%
16.8%
13.9%
10.9%
6.6%
4.0%
0.5%
0.4%

Country ordered by Country (descending)

Netflix Premium Subscription

Country
- Spain
- France
- United States
- Australia
- Canada
- Brazil
- Italy
- Germany

28.9%
20.1%
19.8%
13.8%
12.0%
4.5%
0.5%
0.4%

Country ordered by Country (descending)

An analysis of Netflix subscription preferences across 10 countries reveals distinct geographical patterns:

1. Australia: Strong preference for Premium subscriptions
2. Brazil: Predominantly Basic subscription users
3. Canada: Even distribution across all subscription tiers
4. France: Premium subscription dominates the market

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5. Germany: Basic subscription is the most popular choice

6. Italy: Basic subscription leads user preferences

7. Mexico: Strong preference for Standard subscriptions

8. Spain: Highest market presence among sampled countries

    ○ Premium: 30% of total Premium subscriptions

    ○ Standard: 16% of total Standard subscriptions

    ○ Basic: 11% of total Basic subscriptions

9. UK: Strong preference for Standard subscriptions

10. USA: Highest market presence among sampled countries. Even distribution across all subscription tiers

    ○ Premium: 20% of total Premium subscriptions

    ○ Standard: 14% of total Standard subscriptions

    ○ Basic: 20% of total Basic subscriptions