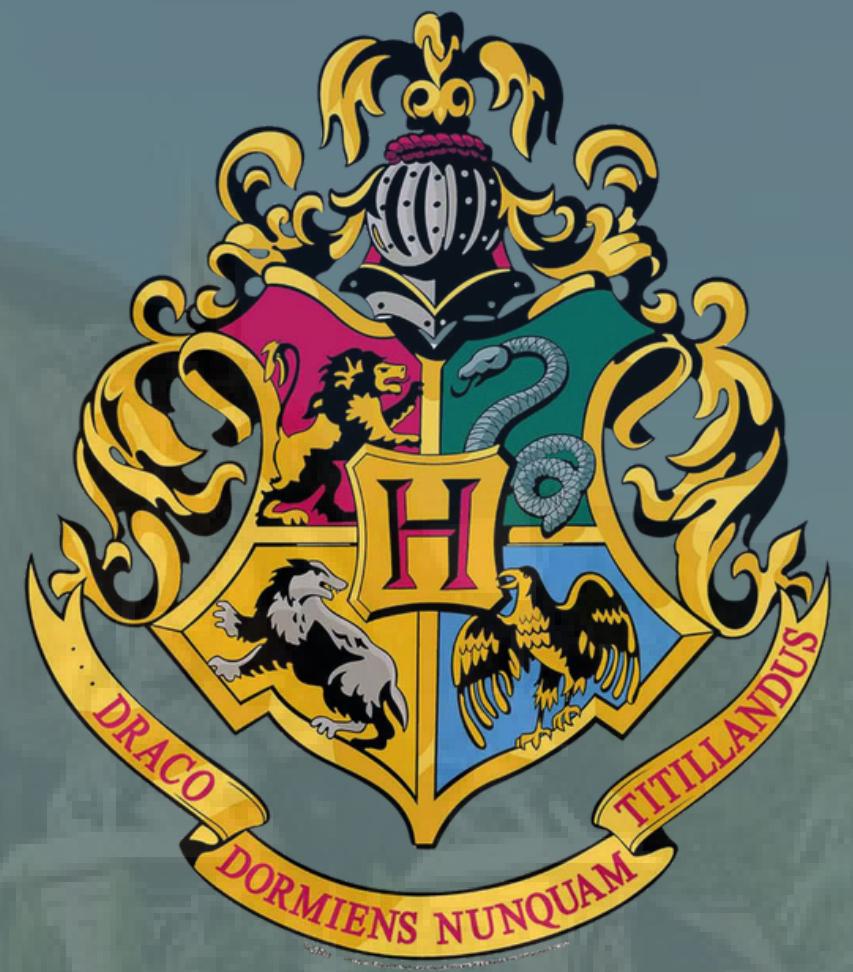


Team

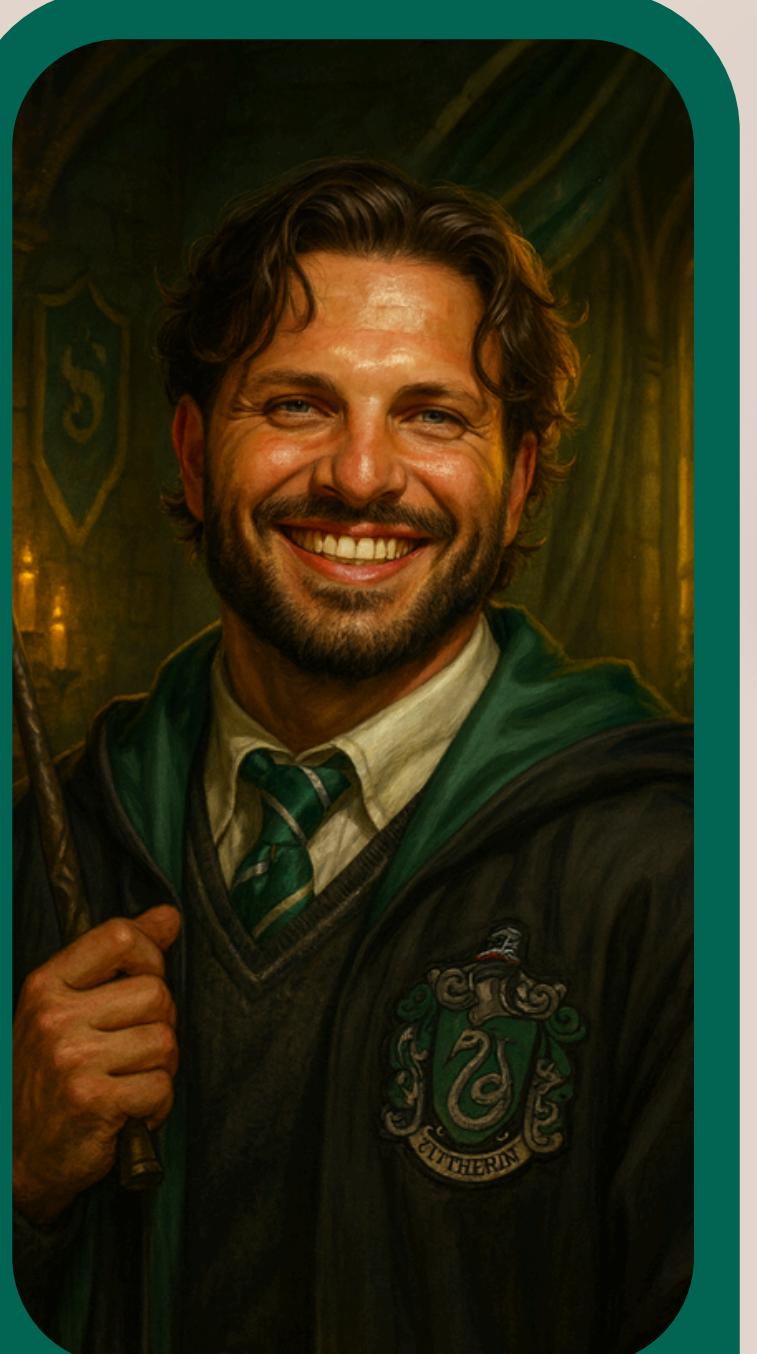
# Hogwarts

A travel consulting agency.



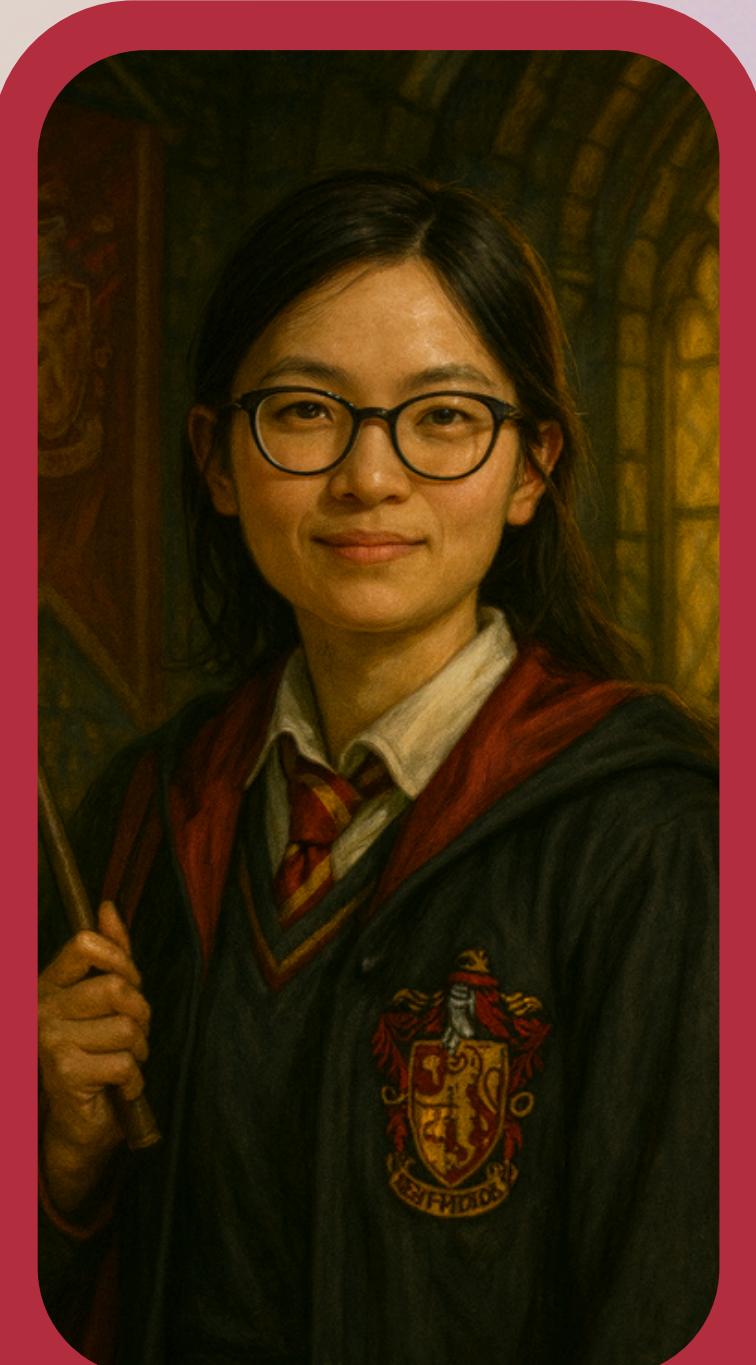


# Meet Our Team



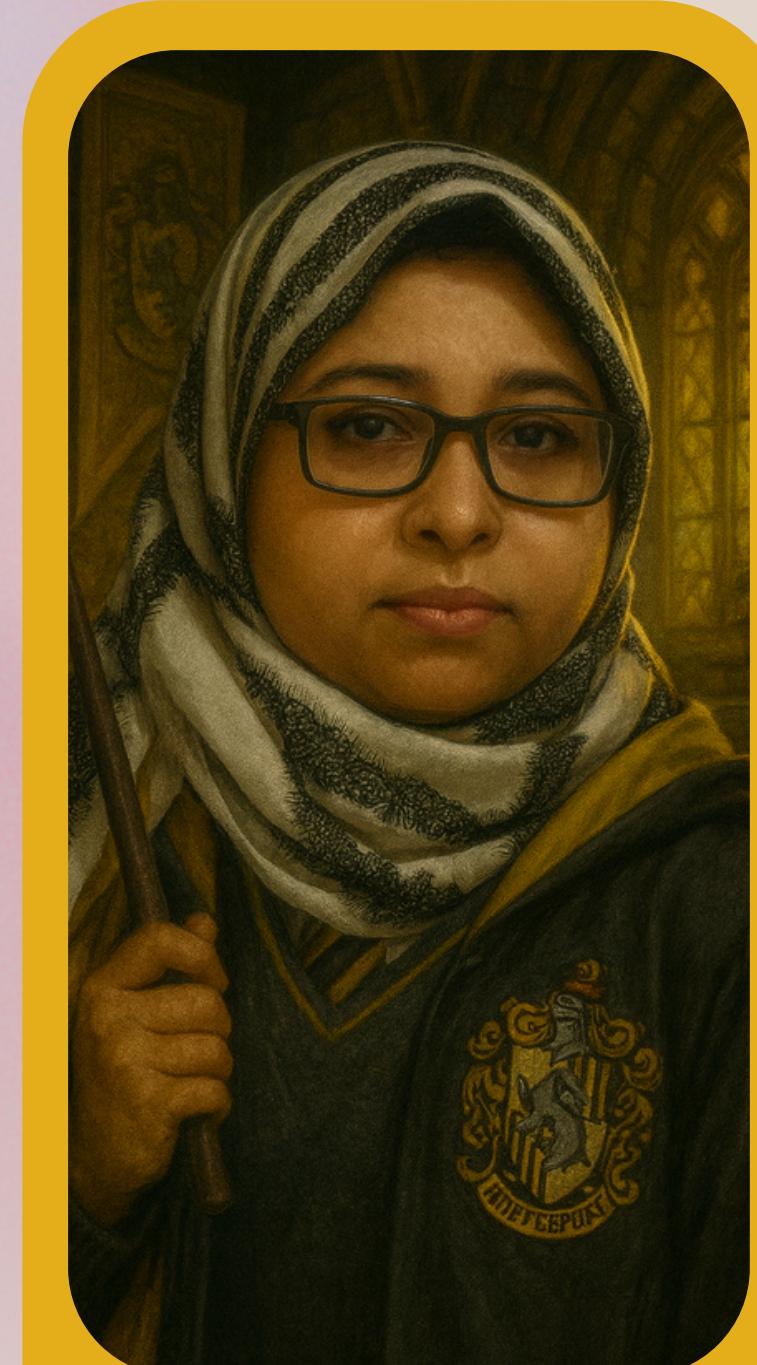
**CHRISTOS**

SLITHERIN



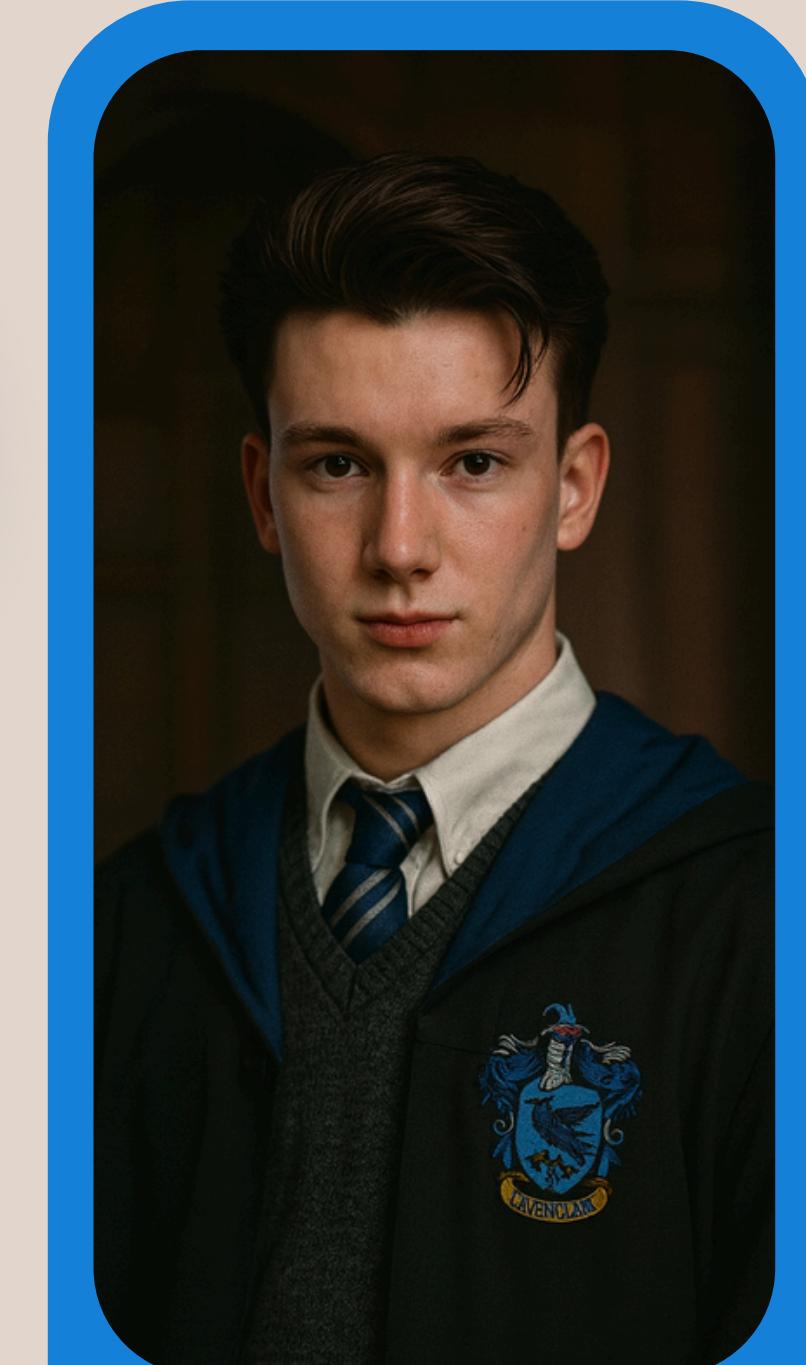
**HOAI THUONG**

GRIFFYNDOR



**SAFINA**

HUFFLEPUFF



**SULAIMAN**

RAVENCLAW



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# Today's Agenda

- 01** Introduction
- 02** Problem Statement
- 03** Our Innovative Solutions
- 04** Data Analysis
- 05** Reccommendations



# Introduction

Turning a “blind” travel  
business policy into a  
data-driven one.



# Problem Statement

Many travel agencies / tourism service providers struggle to use their historical booking/trip data effectively.

**Without structured insight into when, where, and for how long travelers go**, companies lack evidence to:

**01**

Optimize marketing and promotions by season / region.

**02**

Forecast demand to negotiate with accommodation or transport providers.

**03**

Tailor travel packages to traveler behavior (e.g. trip duration, popular destinations).

**04**

Detect under-served / emerging travel destinations that might deserve new offerings.



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# Our Innovative Solutions



**Demand forecasting & capacity planning:** by anticipating high-season destinations and months.



**Marketing & promotions optimization:** align campaigns with seasons, demographics, destinations.



**New product/offer development:** design destination-specific travel packages (city-break, long trip, destination-bundle) based on observed traveler behavior.



**Cost & supplier negotiation leverage:** if you know high-traffic destinations ahead of time, you can negotiate better deals with hotels, transport providers, or local vendors.



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# The market in numbers

Tourism is a major economic sector globally, with GDP and employment stakes — hence patterns identified in the dataset relate to a broad economic phenomenon, not just niche hobby.





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**Don't let the market slip  
away from your fingers.**

Use the power of  
analytics and unlock  
**revenue.**

# Our hypothesis

## 01 Hypothesis 1

Different traveler demographics (age, nationality) show different destination and duration preferences.

## 02 Hypothesis 2

Travelers choose different accommodation types for different trip durations.

## 03 Hypothesis 3

Transportation type preferences differ by traveler age.

## 04 Hypothesis 4

Seasonality patterns vary between continents Europe and Asia

## 05 Hypothesis 5

Accommodation and transportation prices in Europe and Asia follow seasonality patterns.



# And our limitations

01

Data set shows only trips that have been taken by travellers, therefore, we observe only realized choices, not the choice set or the rejected alternatives. The practical implications:

- No visibility into demand that did not convert
- No information about pricing elasticity
- Survivorship bias

02

We have no control variables such as satisfaction scores, budget constraints, etc.  
This prevents us from:

- the ability to model causal drivers of choice



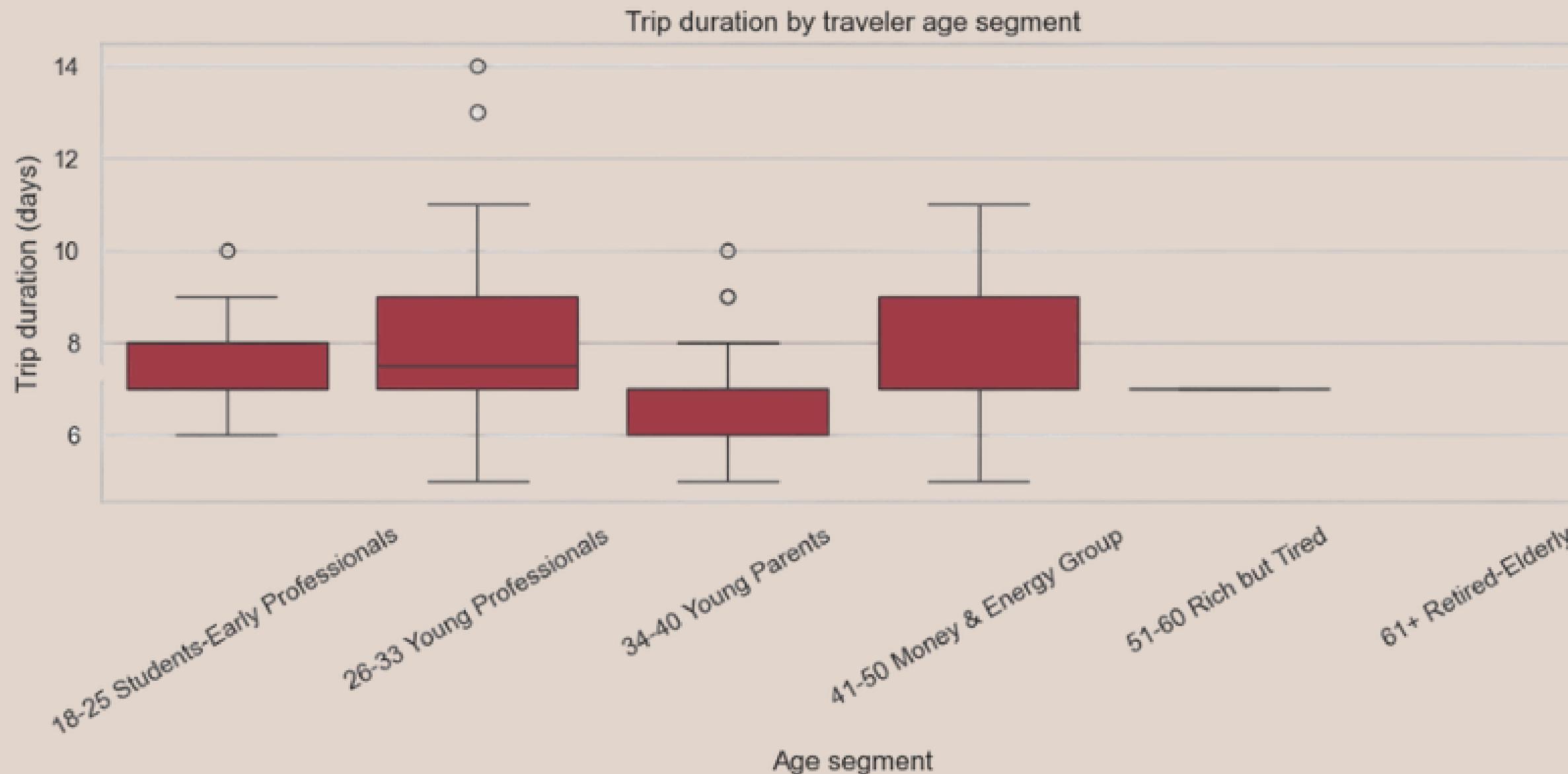
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# Hypothesis 1

# Hypothesis 2 - part 1

Different traveler demographics (age, nationality) show different destination and trip duration preferences.

**Checking age segment and trip duration.**



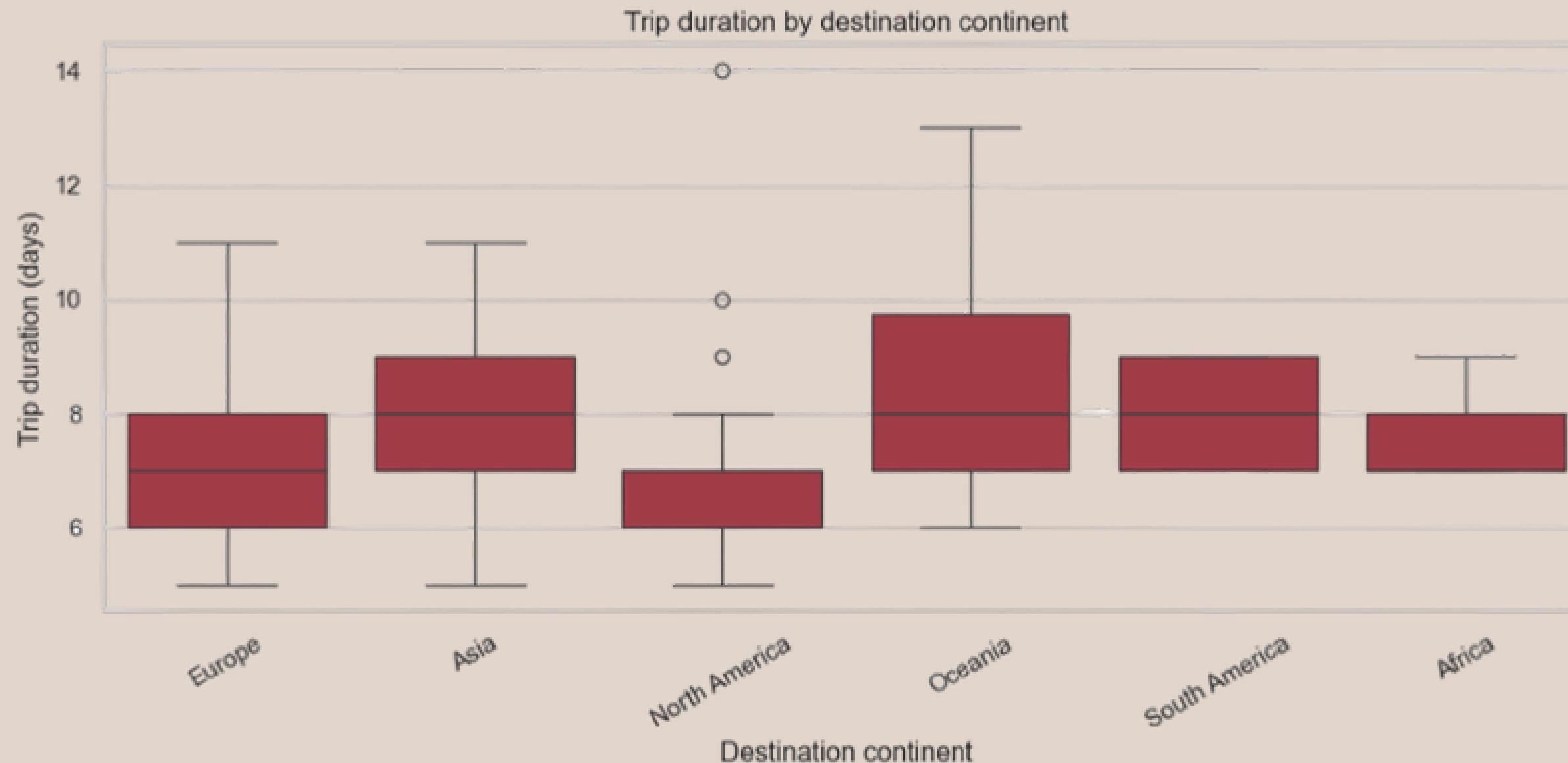
## Insights:

- Young parents (33-40) seem to take trips with the shortest duration, followed by Students-Early professionals
- On the contrary, Young Professionals (26-33) and Money & Energy (41-50) groups tend to take longer trips.
- We don't have much observations for older groups.

# Hypothesis 2 - part 2

Different traveler demographics (age, nationality) show different destination and duration preferences.

**Checking trip duration by destination continent.**



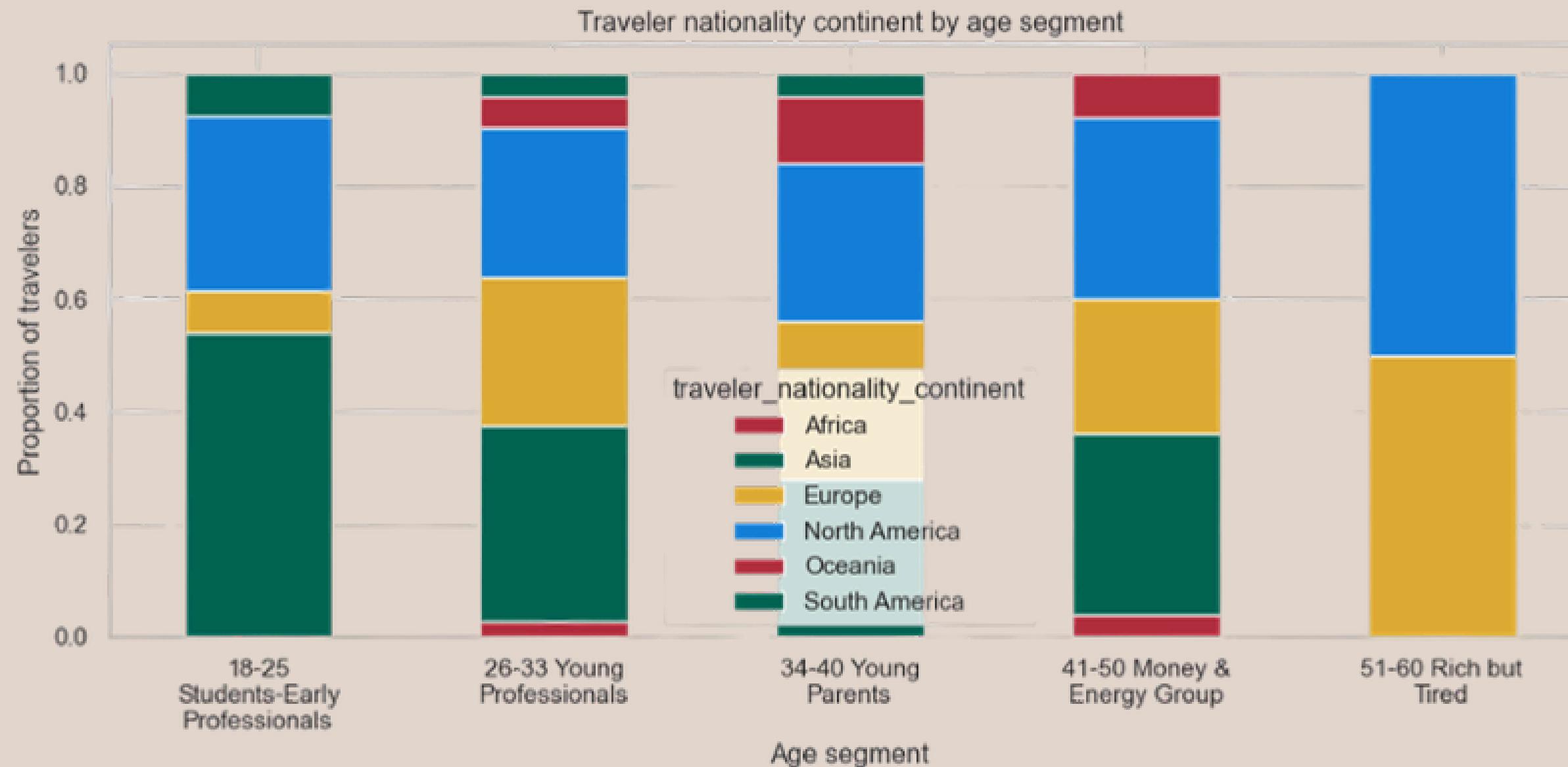
## Insights:

- Europe and North America seem to receive tourists for the least amount of days.
- Asia and South America have an average trip duration of 8 days.
- Oceania comes first in trip duration, which makes sense, if you think of the time investment needed for someone to make this trip.

# Hypothesis 2 - part 3

Different traveler demographics (age, nationality) show different destination and duration preferences.

Get a first idea of the continent of travelers nationality in our dataset.



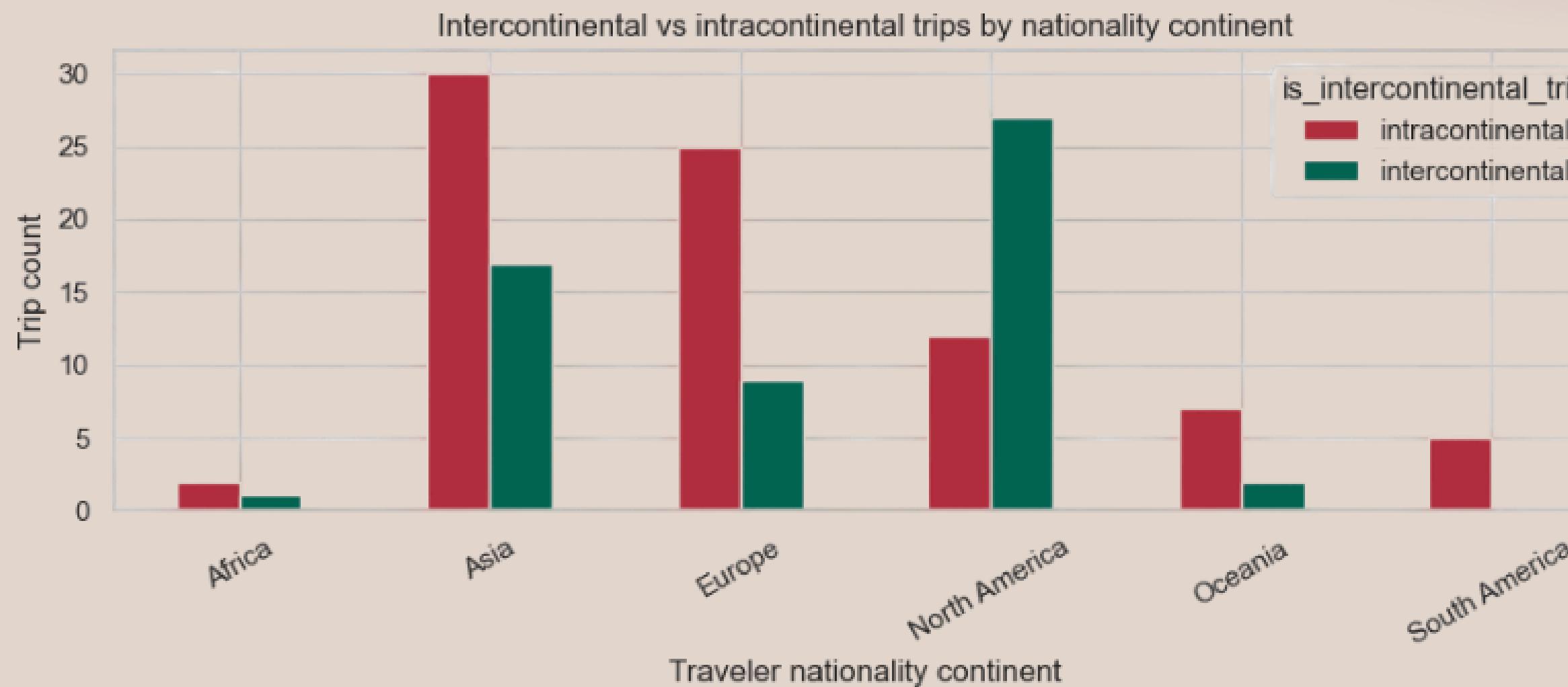
## Insights:

- Students-Early Professionals (18-25) comes mostly from Asia, with North America second
- Young Professionals, Young Parents, and Money & Energy groups follow a balanced split between Asia, Europe, and North America.
- Young parents and Money & Energy groups bring a decent amount of travelers from Oceania.

# Hypothesis 2 - part 4

Different traveler demographics (age, nationality) show different destination and duration preferences.

**Inter vs Intra continental trip preferences by travelers continent of origin.**



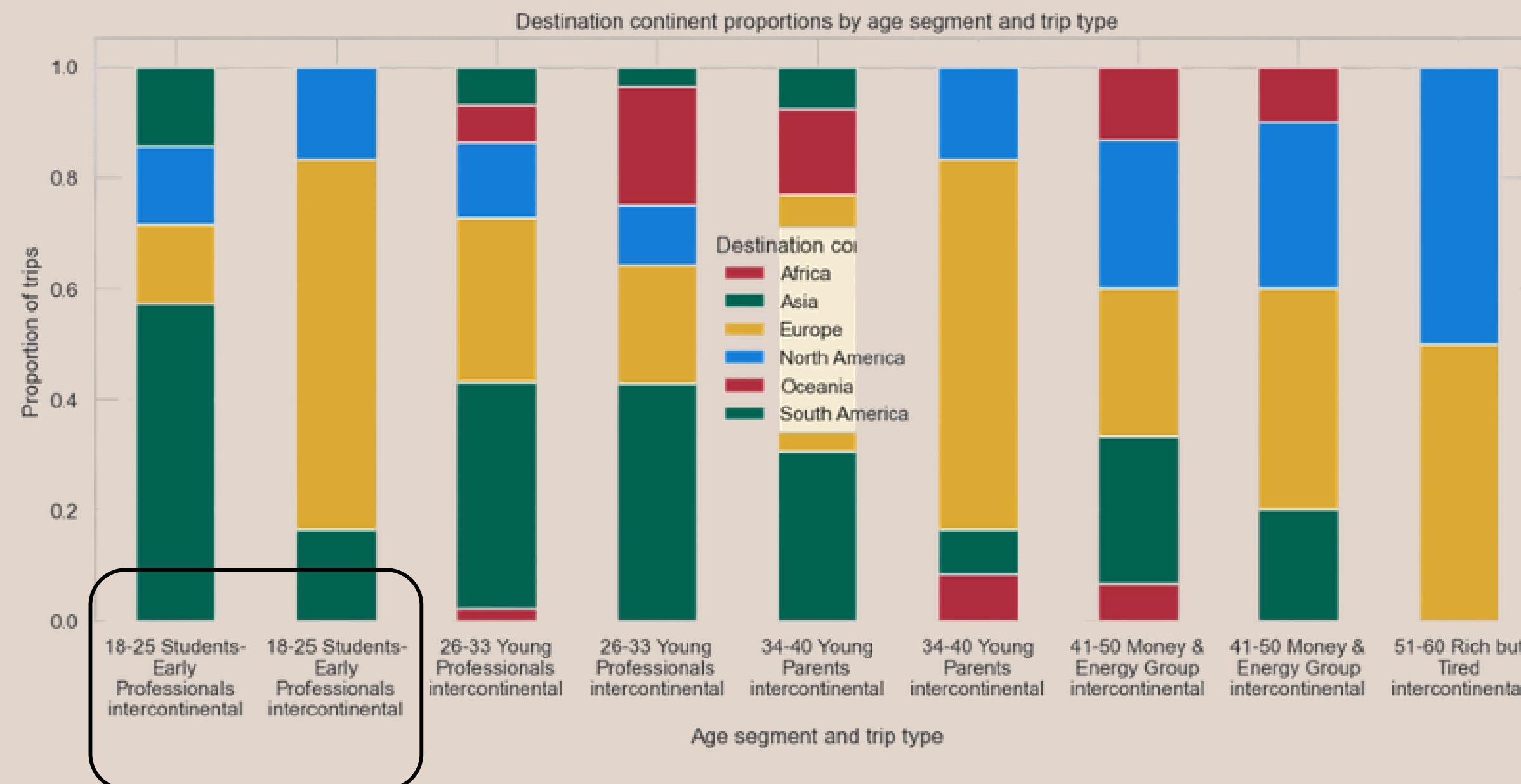
## Insights:

- Asian travelers seem to prefer to travel within their continent, surprisingly.
- The same we can say about Europeans.
- On the contrary, North Americans seem to be willing to explore more what's out there.
- For our South American amigos, we don't have much data to come to a conclusion.

# Hypothesis 2 - part 5

Different traveler demographics (age, nationality) show different destination and duration preferences.

**Checking age segment and proportions of trips per continent, for Intra or Intercontinental trips.**



## Insights:

- Students-Early Professionals and Young Professionals prefer Europe or Asia
- The segment 26-33, is the moment when people decide that they want to visit the Oceania region.
- Young parents show a strong preference to Europe, but also, short trips to North America and Africa.
- We don't have much observations for older groups.



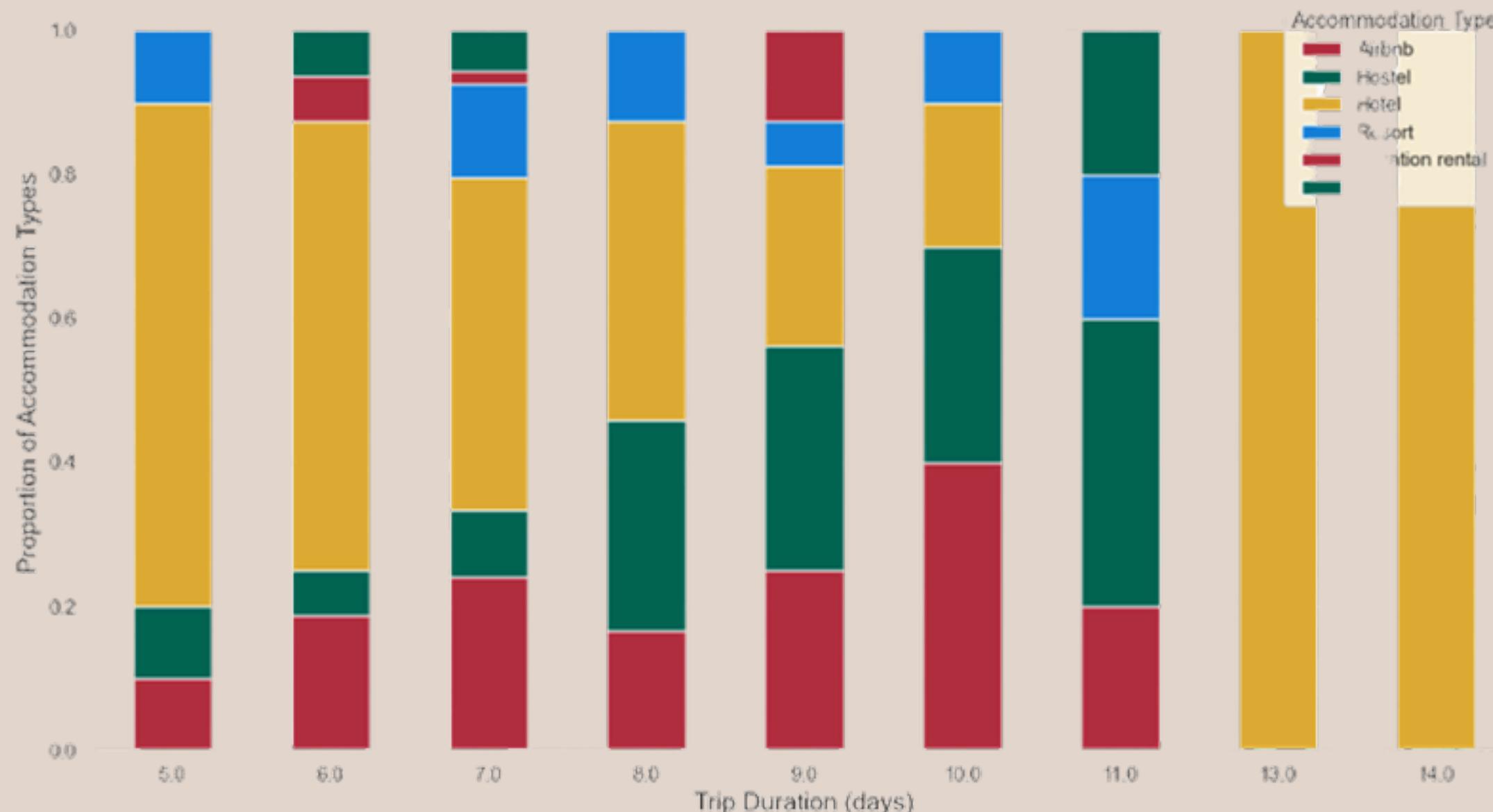
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# Hypothesis 2

# Hypothesis 3 - part 1

Travelers choose different accommodation types for different trip durations, or based on their age.

**Checking first for trip duration.**



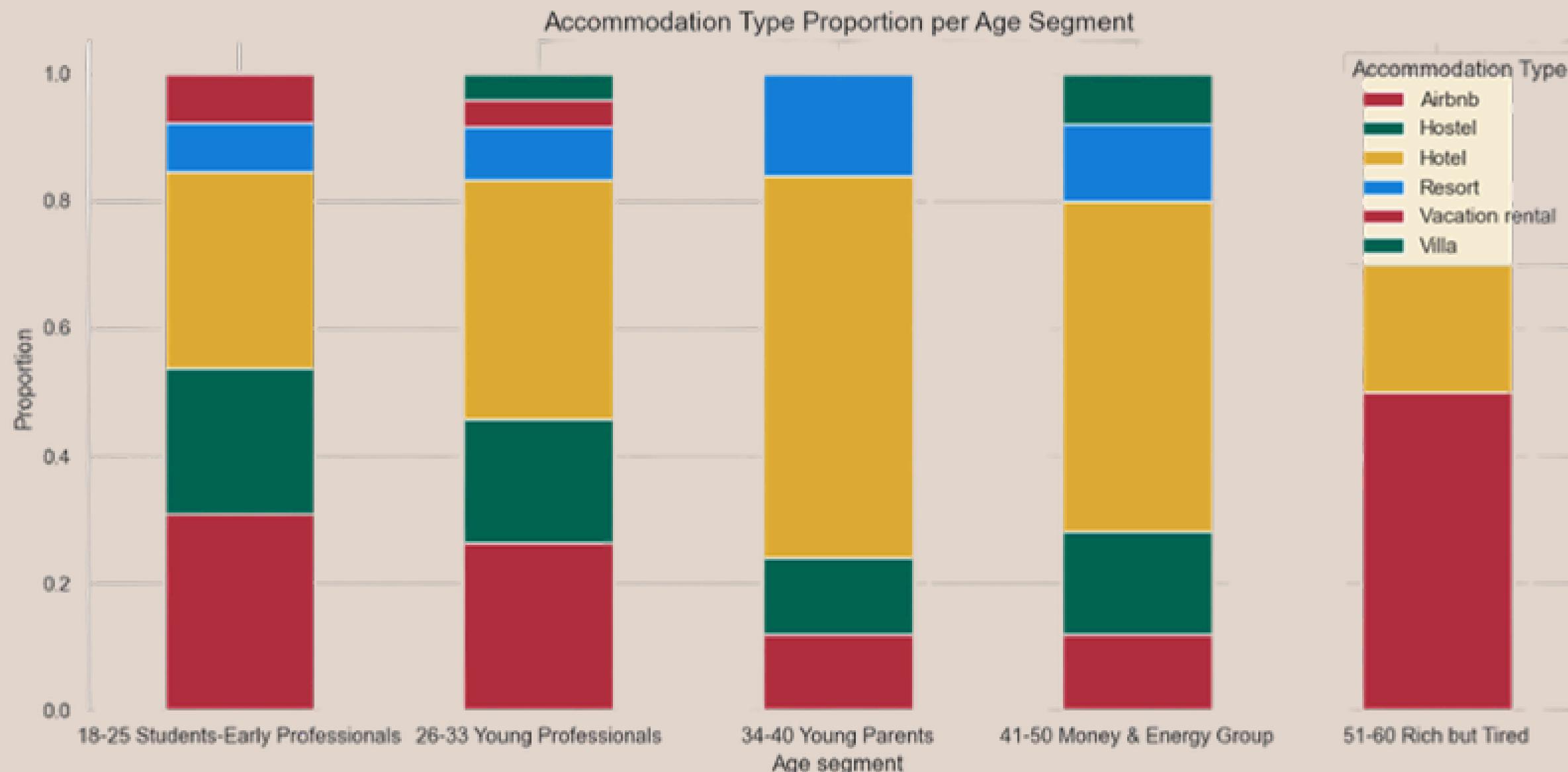
## Insights:

- Hotels seem to be the primary option for short terms trips, with the popularity decreasing as the trip gets longer (13, and 14 night stay can be discarded from the analysis as they contain very little data points).
- Trip duration seems to be an irrelevant factor to whether a traveler chooses an Airbnb as their accommodation.
- The more the days, the more popular the Hostels are as an option.

# Hypothesis 3 - part 2

Travelers choose different accommodation types for different trip durations, or based on their age.

And now for age.



## Insights:

- When young and easy to feel comfortable, travelers choose Airbnbs and Hostels more, compared to Hotels.
- However, when the lower back starts hurting, travelers above 33 years old, tend to look out for hotels to stay.
- The group “Rich but Tired” has only 2 observations to offer, therefore we don’t regard those results.

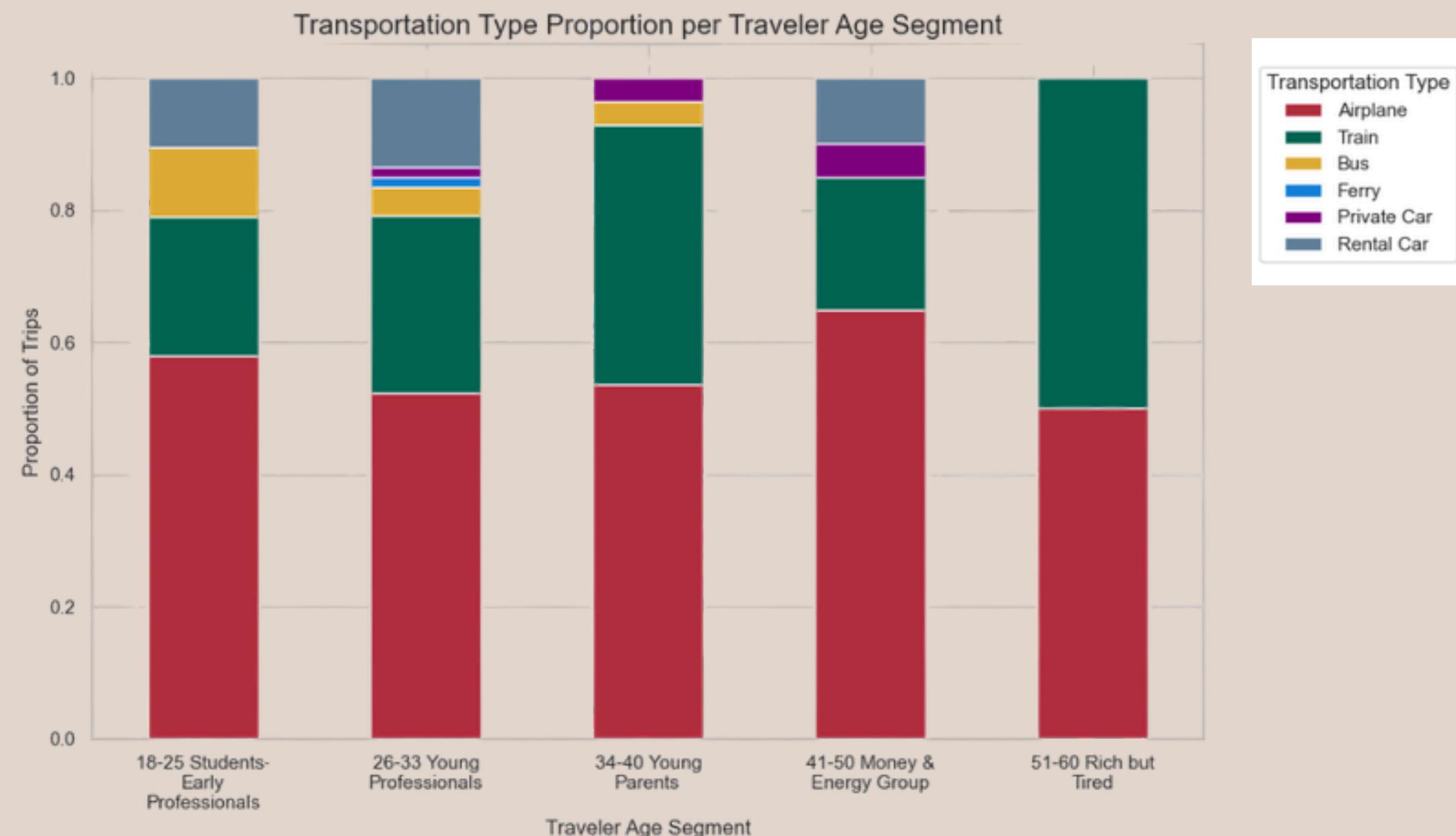


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# Hypothesis 3

# Hypothesis 4

Transportation type preferences differ by traveler age.



## Insights:

- The airplane is the preferred transportation type from travelers across ages.
- The train is the second most popular, peaking for “Young parents”. Probably it is more convenient to carry toddlers this way.
- Younger people will generally rent more cars than own, whereas, as people grow older we see them using their own cars to destination.

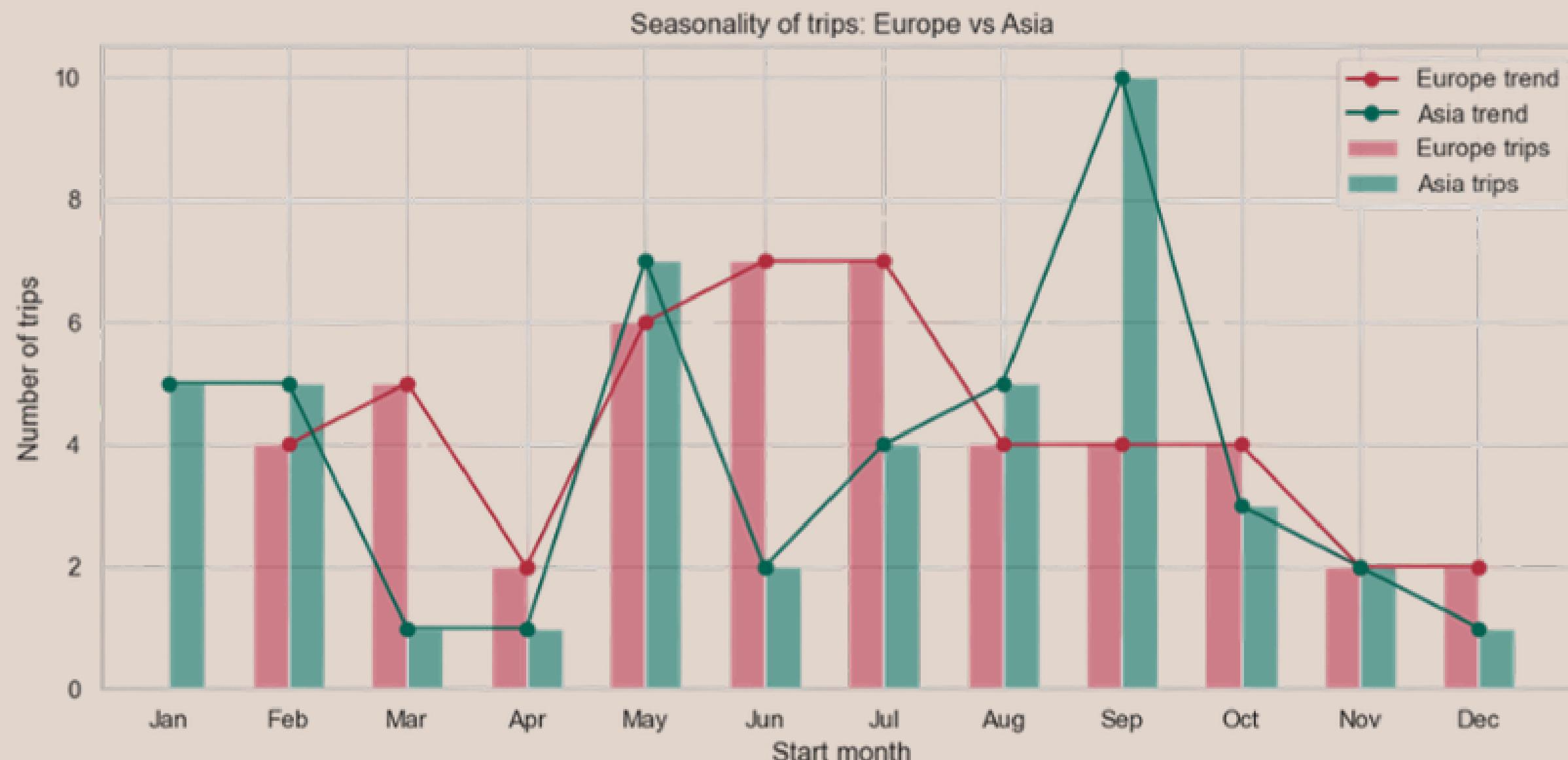


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# Hypothesis 4

# Hypothesis 1

Seasonality patterns vary between continents  
Europe and Asia



## Insights:

- Trips to Europe seem to be more popular during the late spring, mid summer months
- Travelers choose Asia as their destination mostly at the beginning of the year (dry season), May & September.



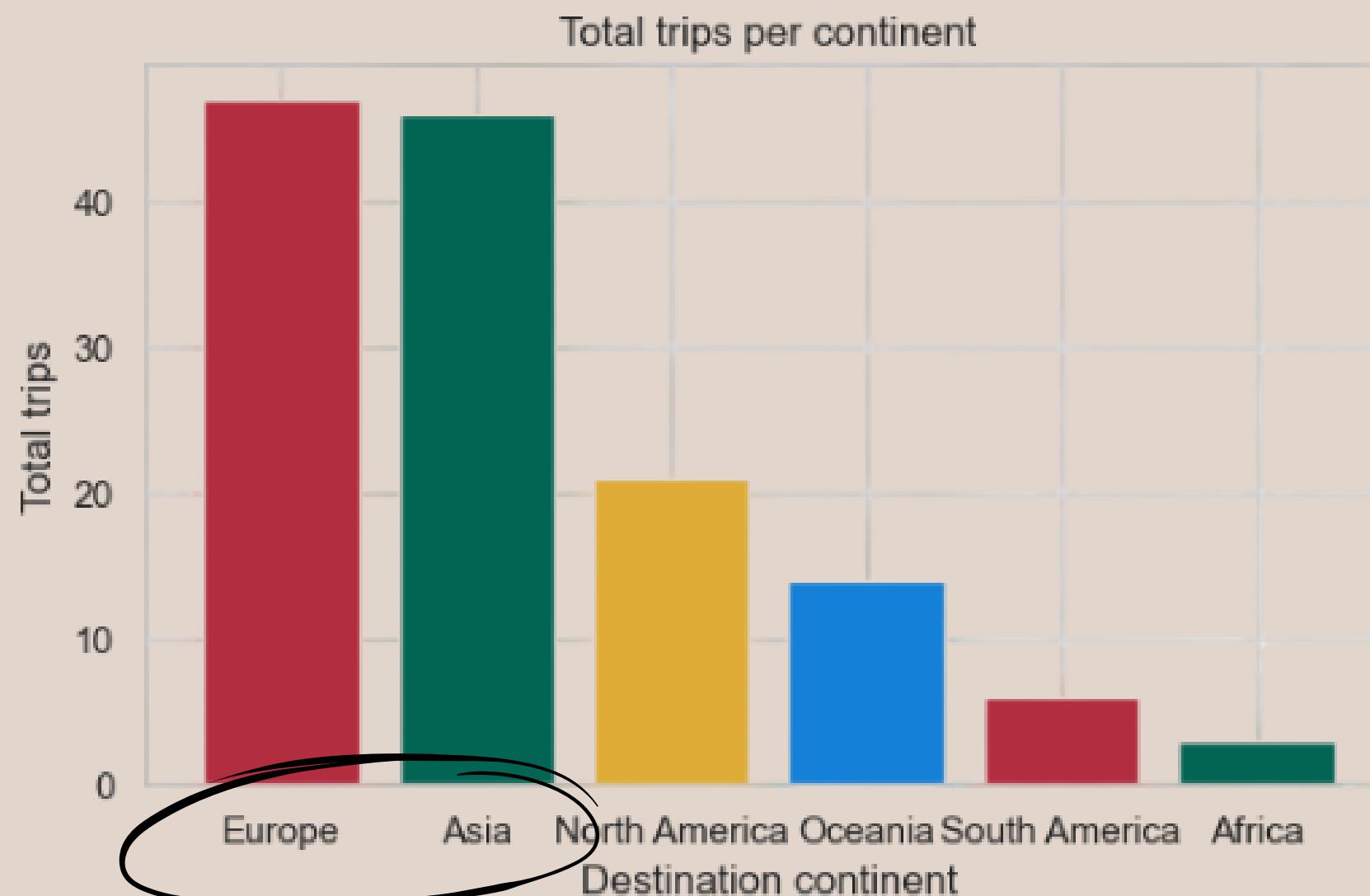
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# Hypothesis 5

# Hypothesis 5 - *intro*

Accommodation and transportation prices in high demand continents follow seasonality patterns.

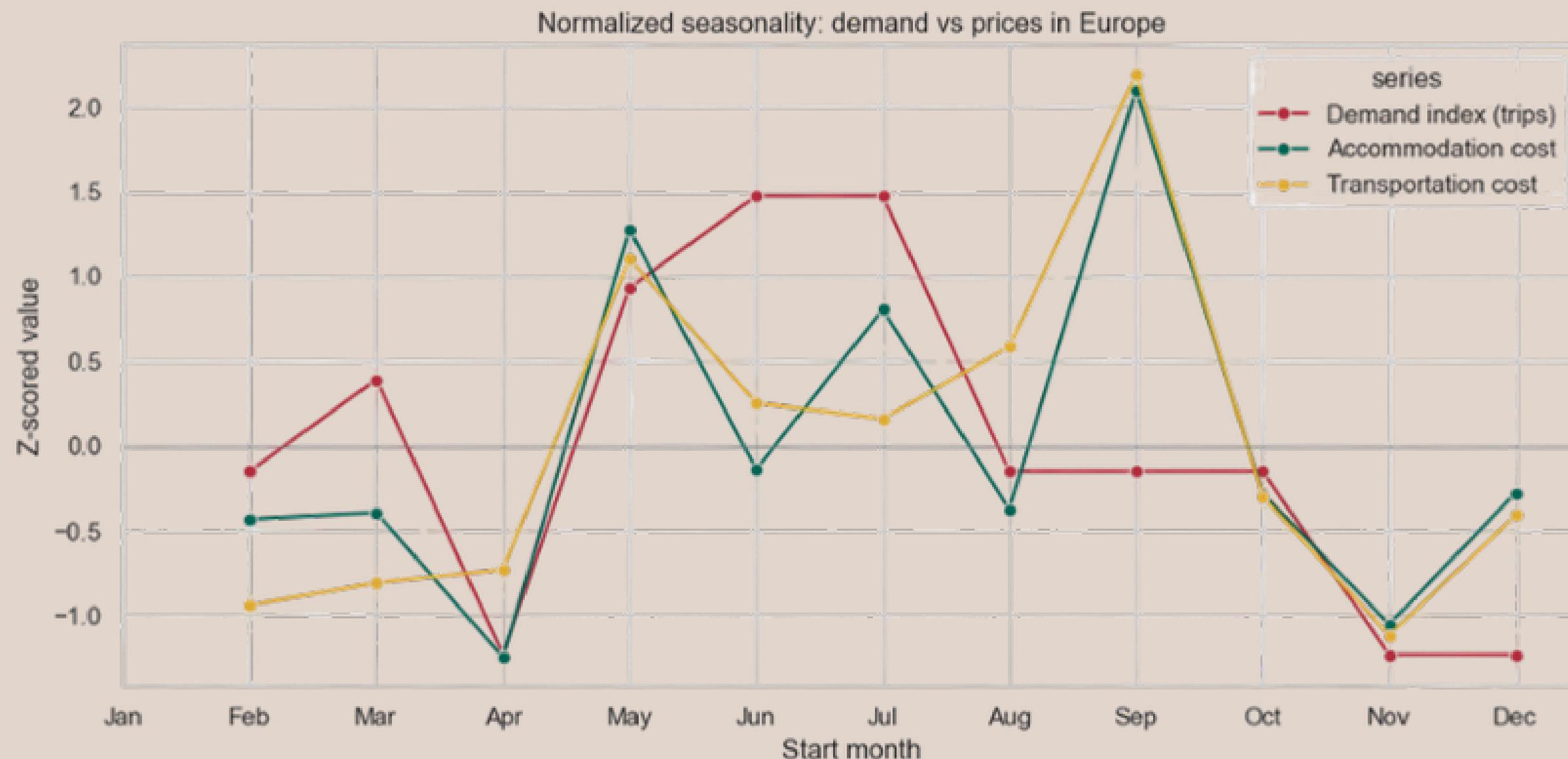
**Which are the high demands continents though?**



# Hypothesis 5 - Europe

Accommodation and transportation prices in high demand continents follow seasonality patterns.

Starting with Europe.



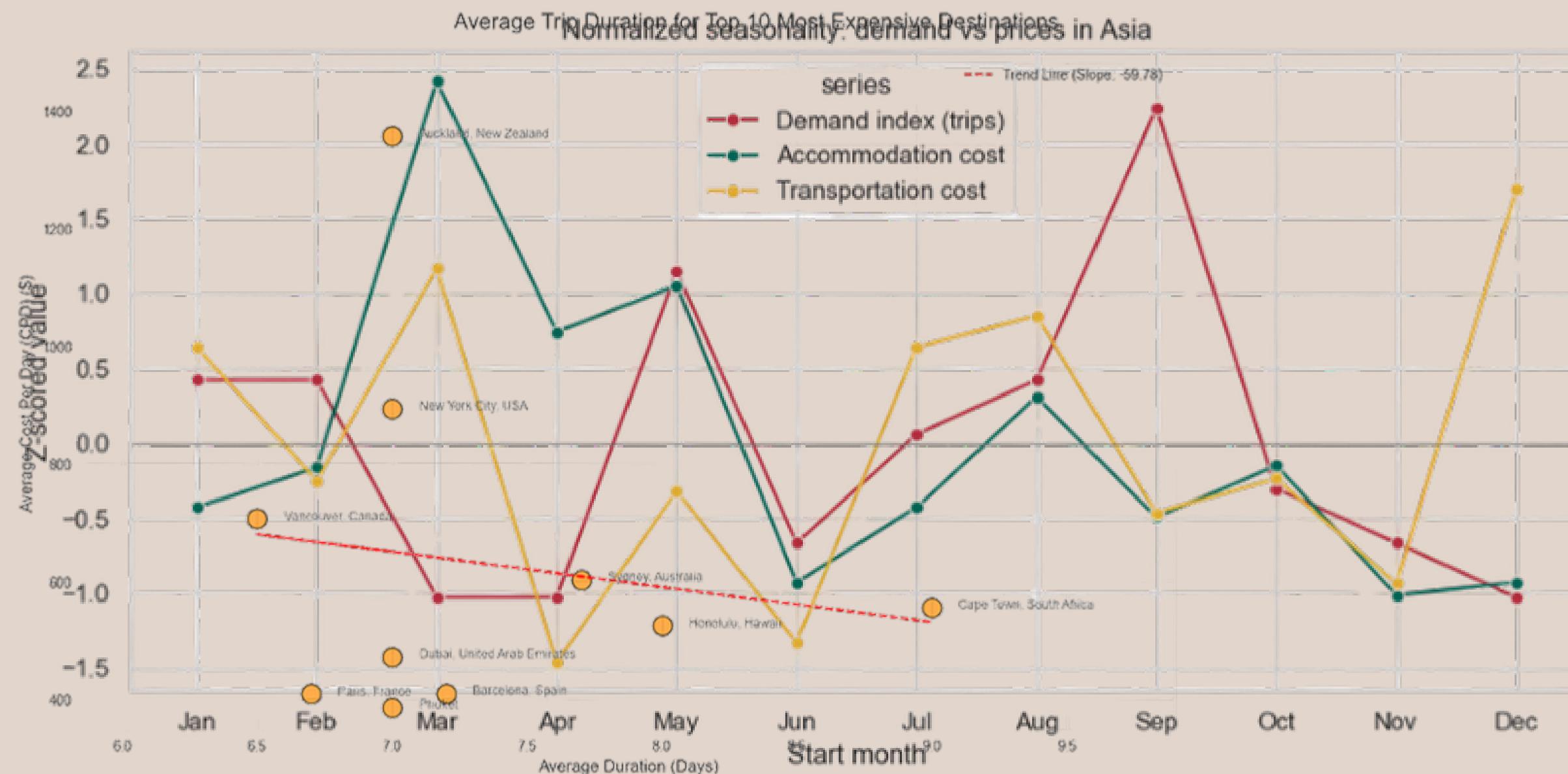
## Insights:

- Though we see prices follow at some extend the demand, there are still points of discrepancy.
- For example, both accommodation and transportation costs in September skyrocket, when demand is not that big. Considering lowering the prices for that period would motivate more travelers to book a trip.
- On the other side, it seems like businesses are leaving money on the table during the summer months.

# Hypothesis 5 - Asia

Accommodation and transportation prices in high demand continents follow seasonality patterns.

Looking at Asia.



## Insights:

- Interestingly, here we see more points of discrepancy.
- For example, both there seems to be a big distance between demand and accommodation prices for February and March.
- On the other side, it seems like businesses are leaving money on the table during the summer months.
- Asia's business owners seem to be leaving money on the table with their prices on September, a month of high demand for Asia, and low for Europe.

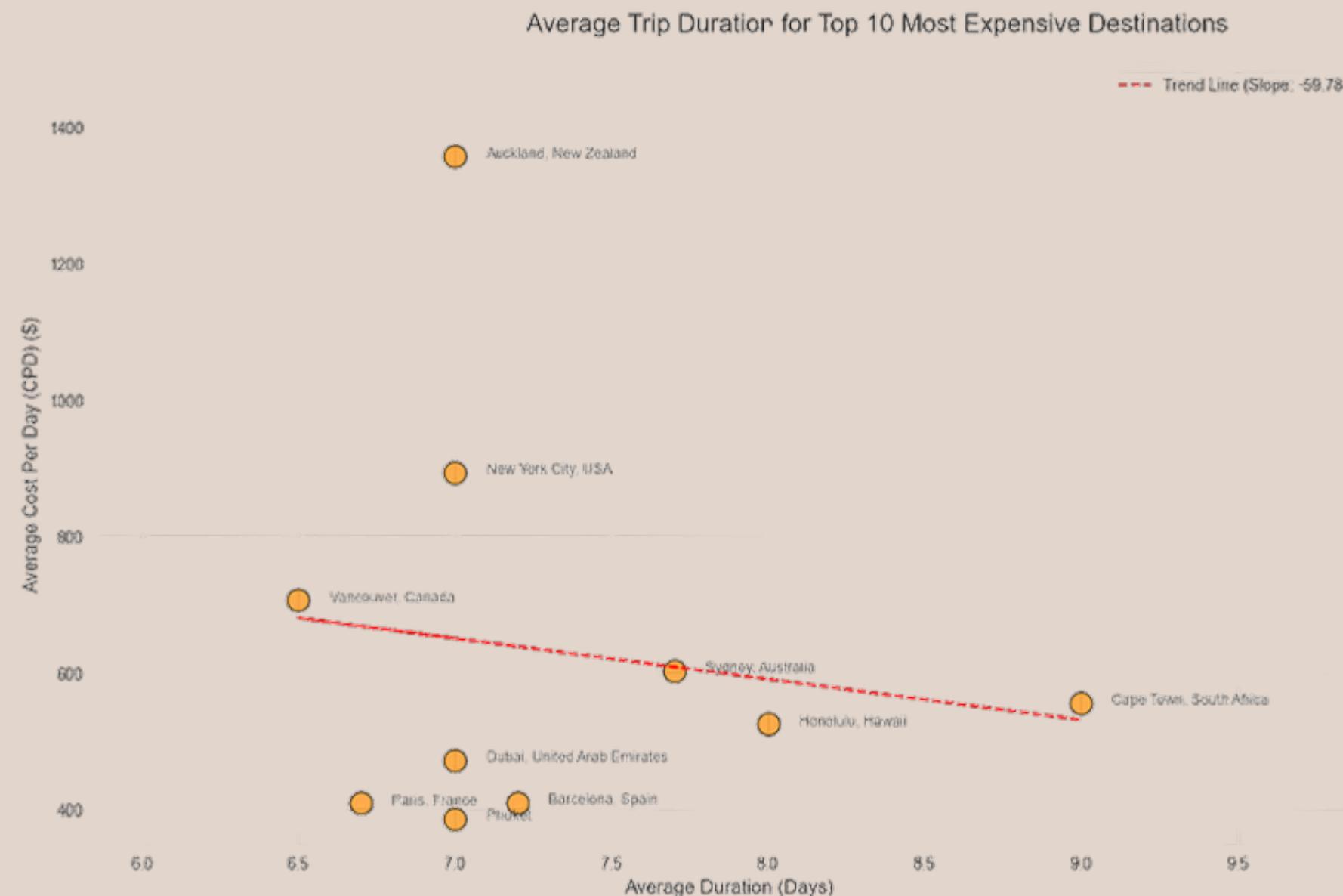


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Lastly

# Mini extra analysis

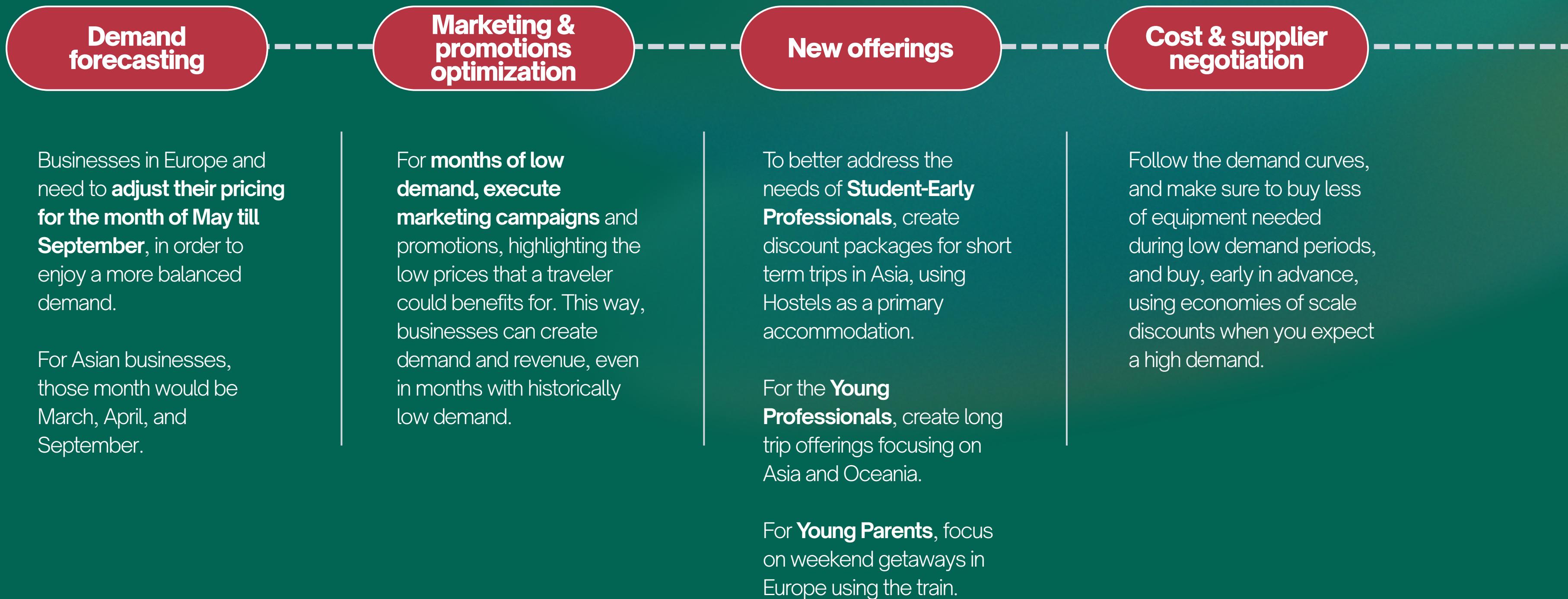
Does average cost per day per city (for top 10) affect the trip duration of the traveler?



## Insights:

- Not really, it seems that the duration of days is irrelevant to the average cost per day per destination city.
- However, it is worthy to mention that with a larger dataset that view might differ.

# Recommendations



# What demographics to prioritize?

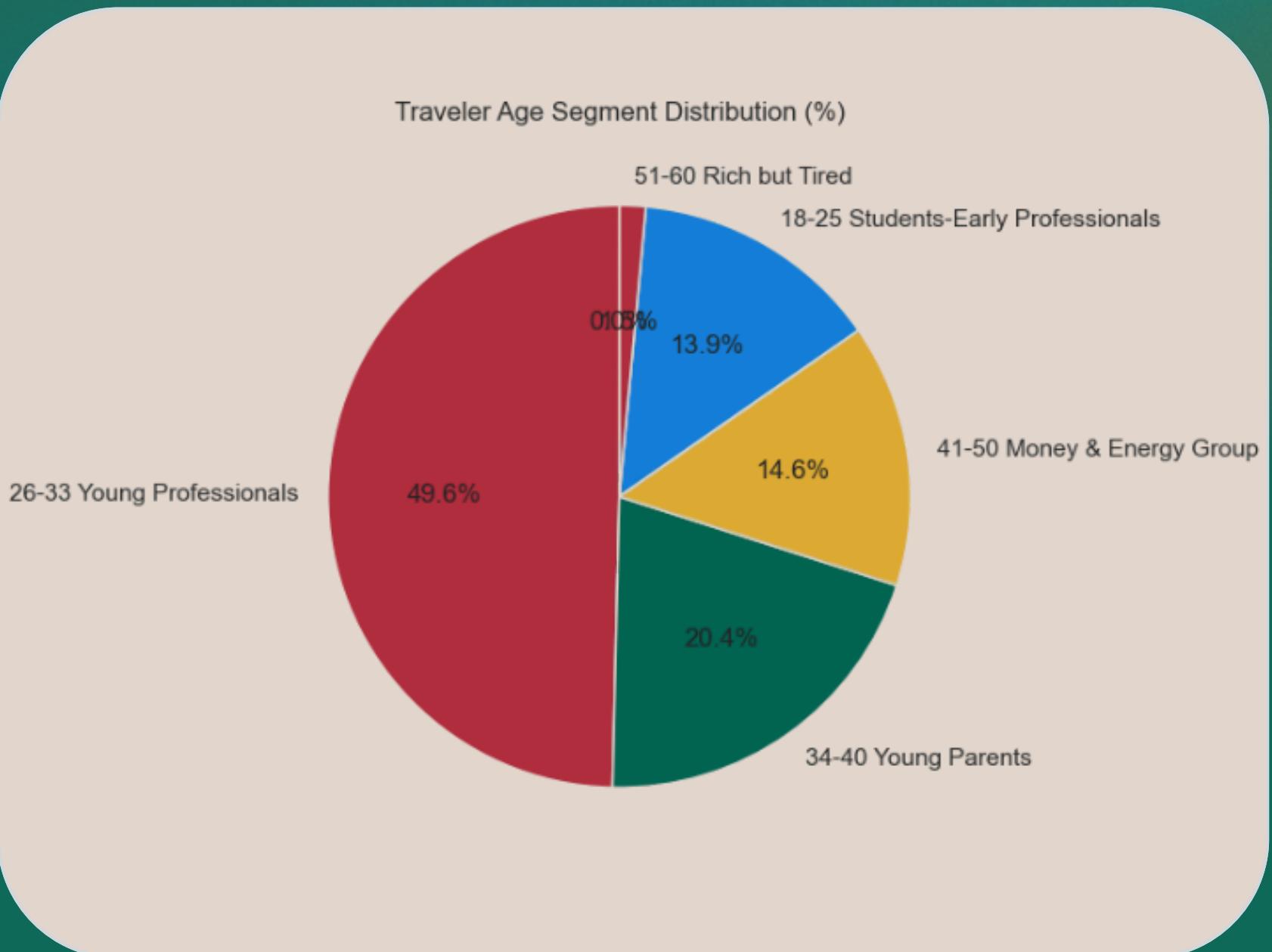
It's clear that the highest percentage of people travelling, is for the age groups from **33 years old and below**, with an ashtonishing **63.5%**.

Those travelers use various channels of inspiration:

- instagram/facebook/google
- chatGPT
- word of mouth

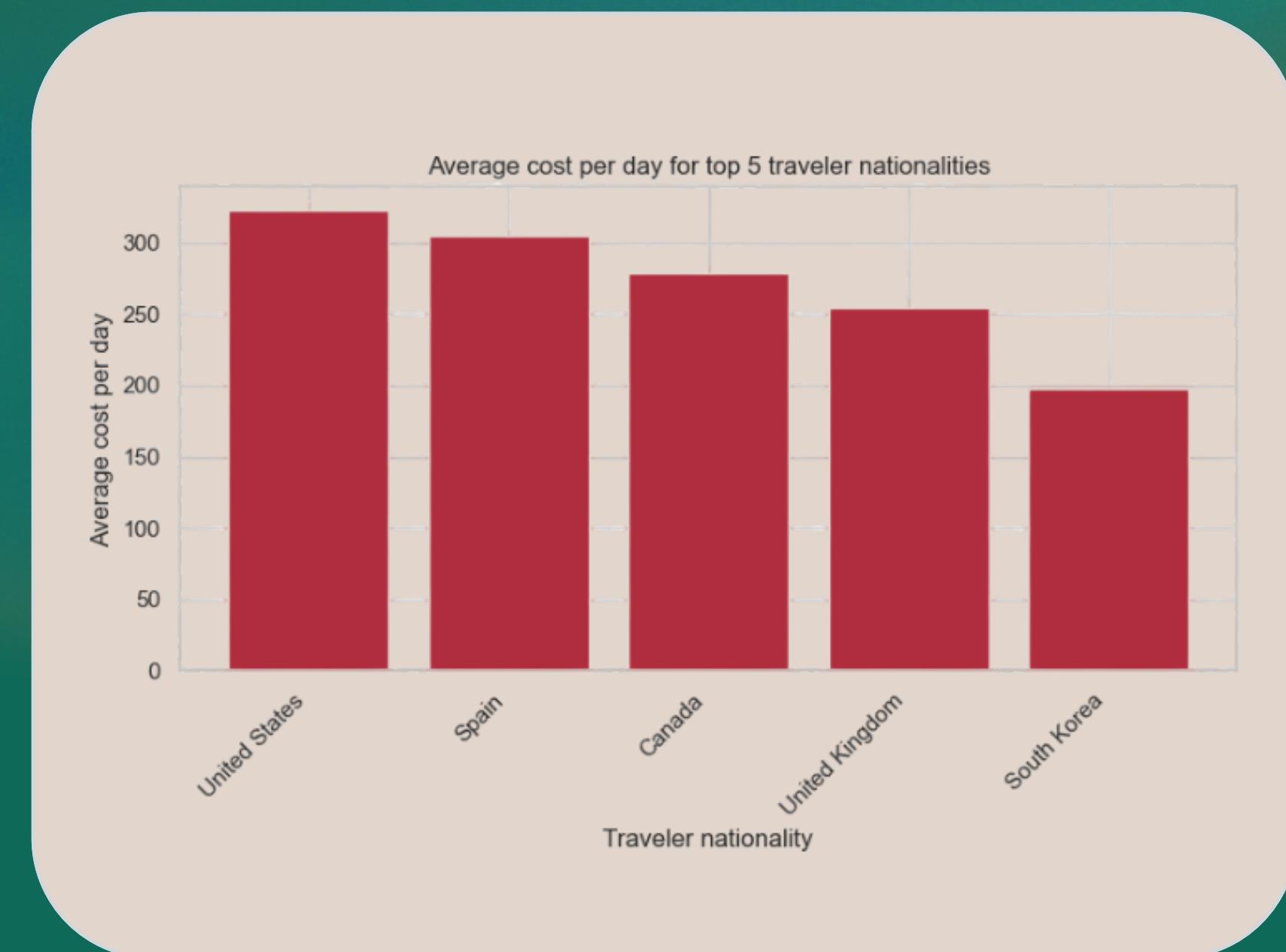
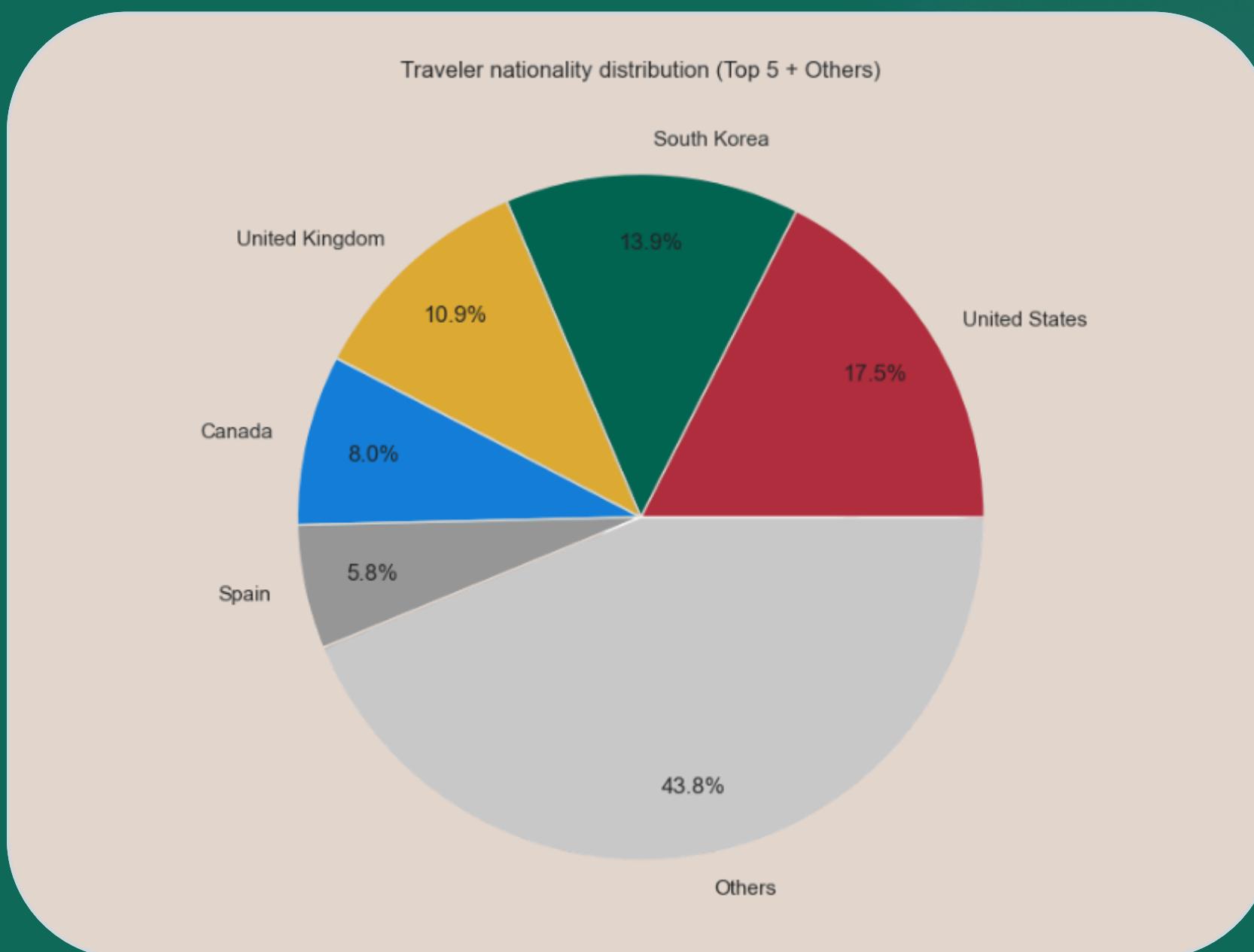
Therefore, make sure:

- you use digital marketing channels for promotional campaigns
- gather good reviews to rank high on organic search
- offer a pleasant experience, reputation matters



# And what geolocation?

Are you running targeted geolocation digital adds, and you don't know where to spend your budget? What type of packages should you offer, luxurious vs. budget?





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Thank  
You