Data Analytics Bootcamp Capstone Project

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January 2024

Problem Statement

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A third-party travel insurance servicing company based in Singapore is looking to identify patterns in insurance purchases and claim statuses to provide insights into customer behavior.

This study will look at what types of insurance products are popular amongst customers (high sales volume) so that travel insurance companies can focus on these products and target customers to generate more net sales moving forward.

Dataset

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- Dataset is retrieved from this link in the csv format:
  https://www.kaggle.com/datasets/mhdzahier/travel-insurance/data
- In the dataset, there are 11 columns as shown below:
  - Target (Claim Status)
  - Name of Agency
  - Type of travel insurance agencies
  - Distribution channel of travel insurance agencies
  - Name of the travel insurance products
  - Duration of travel
  - Destination of travel
  - Amount of sales of travel insurance policies
  - Commission received for travel insurance agency
  - Gender of insured
  - Age of insured

Tableau Storyboard #1

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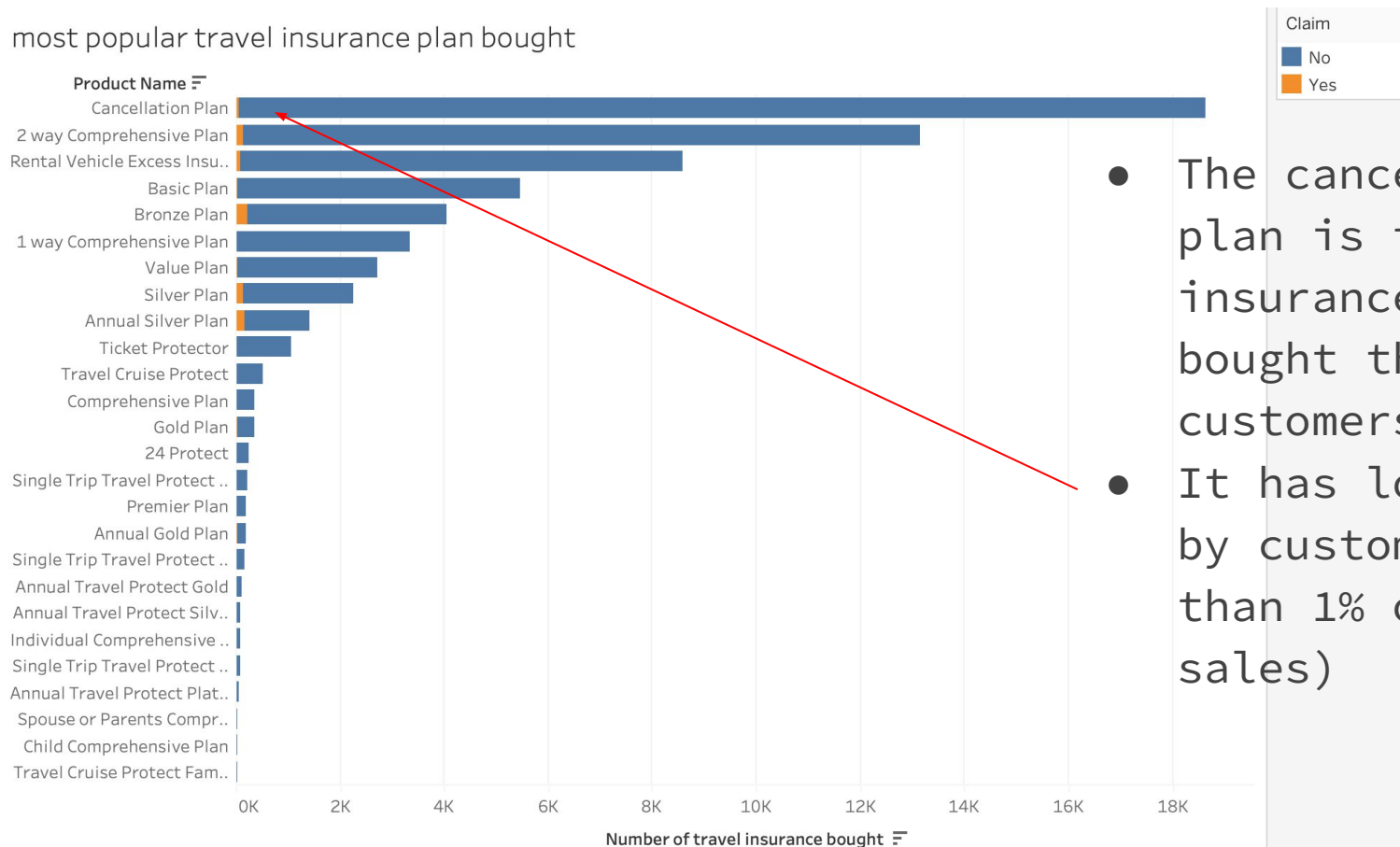
Storyboard #1 contains graphs illustrating the sales volume of the insurance products being sold and the travel agencies that sold them.

(https://public.tableau.com/app/profile/zoey.toh/viz/Travelinsurancecapstone/Dashboard1?publish=yes)

Findings #1

most popular travel insurance plan bought

Claim
- No
- Yes

- The cancellation plan is the travel insurance that is bought the most by customers
- It has low claims by customers (less than 1% of all sales)

Recommendation #1

- The travel agency EPX monopolises the industry when it comes to the top 2 most popular insurances bought by customers (Cancellation plan and 2 Way Comprehensive plan)
  - EPX should continue to focus on these two products and retain customer base.
  - Other travel agencies will have to offer more attractive cancellation plan/2 way comprehensive plan if they want to draw away existing customers from EPX.

- Low claims by customers vis-a-vis sales volume for these two travel insurance products
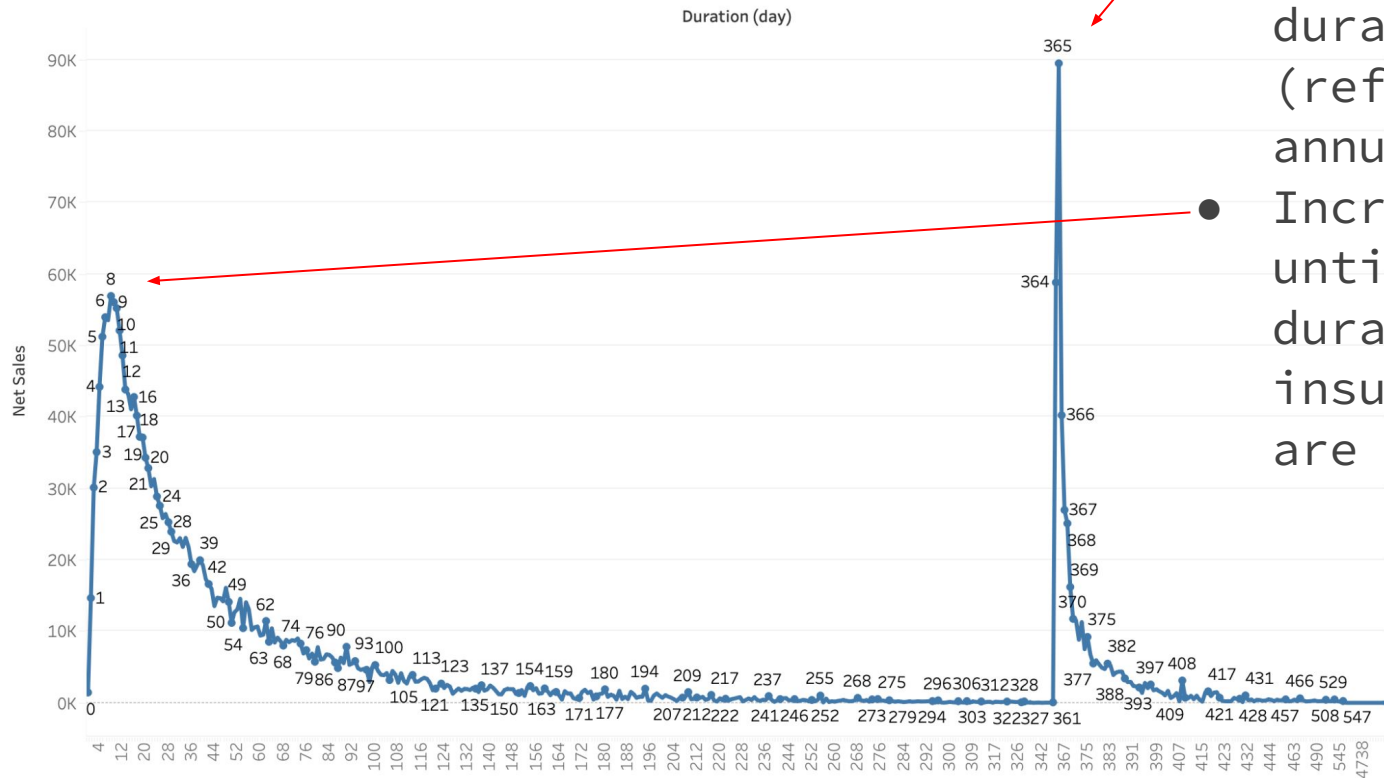 - Good for the travel agencies to sell these two products

Storyboard #2

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Storyboard #2 contains graphs illustrating the sales volume for the various travel duration and the travel agencies that sold them

(https://public.tableau.com/app/profile/zoey.toh/viz/Travelinsurancecapstone/Dashboard2?publish=yes)

Findings #2

travel duration and insurance sales

- Most sales for 365 days of travel duration (referring to annual plan)
- Increasing trend until day 8 (short duration trips insurance coverage are also popular)

Recommendation #2

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- The airlines travel agency C2B and travel agency LWC are the only two companies that have annual travel insurance plans bought by customers
    - C2B and LWC should continue to focus on these annual products and retain their current customer base. They can consider having annual auto-renewal plans for these types of annual insurance plans for existing customers.
    - Other travel agencies will have to offer more attractive annual travel insurance plan if they want to draw away existing customers from C2B/LWC.

- For all travel agencies, they can consider developing attractive/improving current short trips insurance plans (8 days and less). These types of insurance products can potentially also be sales generating.

Storyboard #3
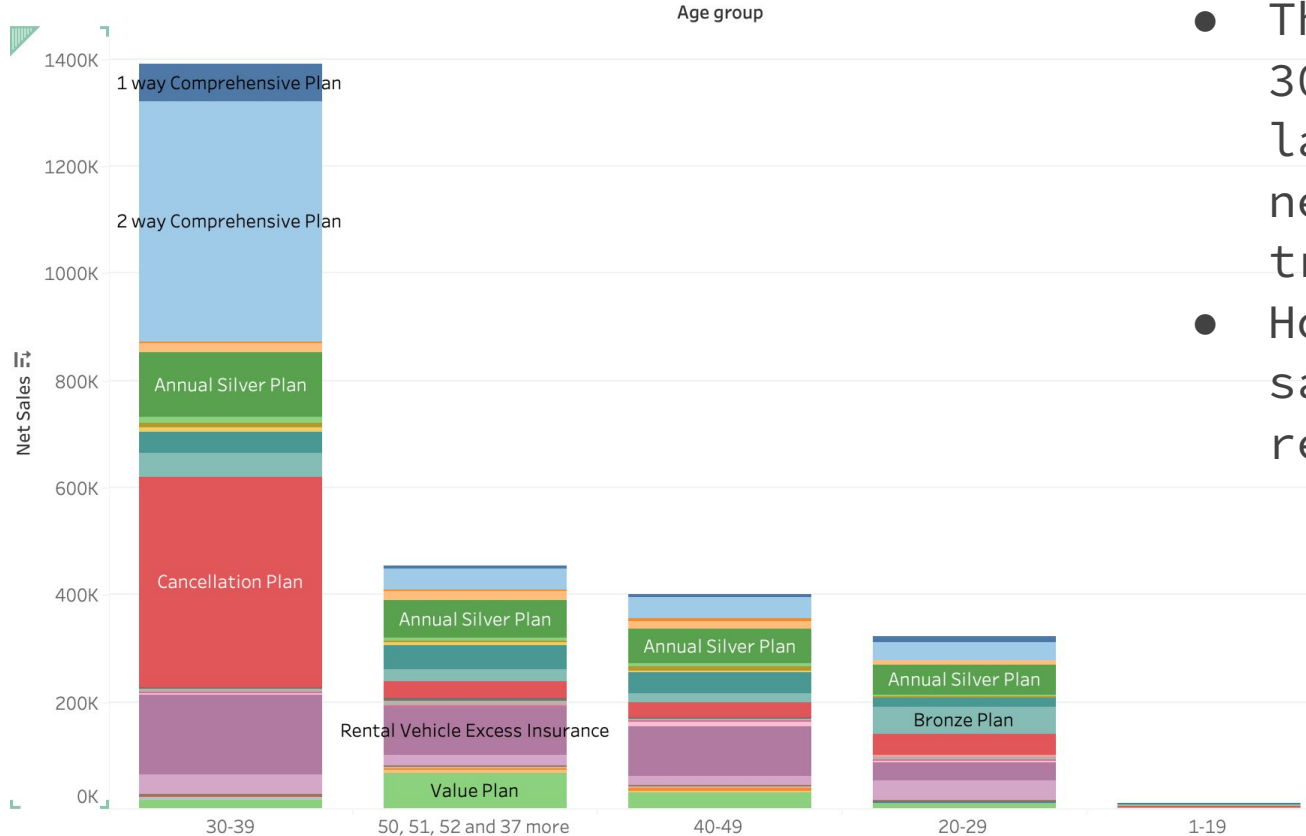
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Storyboard #3 contains graphs illustrating the sales volume of different types of insurance products by age groups of the customers and their claim status.

(https://public.tableau.com/app/profile/zoey.toh/viz/Travelinsurancecapstone/Dashboard3?publish=yes)

Findings #3

age group and insurance sales

- The age group 30-39 occupies a large portion of net sales for travel insurance
- However, not much sales for family related plans

Recommendation #3

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- Travel agencies can consider developing/improving travel insurance products targeting the age group 30-39.
- Low percentage of claims for this age group with respect to amount of sales.
- Look at ways to market existing family/spouse/bundle travel insurance plans for ages 30 and above.
  - This will mean there is a need to collect more data on the marital and family statuses for all customers (single/married/how many children etc.)

Thank you!