

INTRODUCTION

INSURANCE INDUSTRY

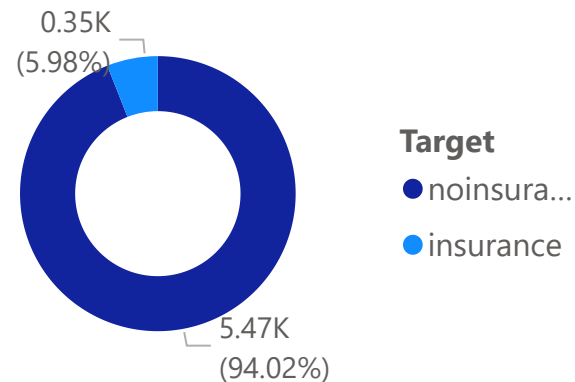
- Insurance industry is made up of companies that offer risk management in the form of insurance contracts. There are many types of insurance companies that provide some specific types of insurance products (insurance contracts) including life insurance, education insurance, health insurance, auto/home/business/boat/caravan insurance. Each of insurance policies cover the loss from risk of each types of accident/bad event occurs.
- car accident: At least 1/20 years, probability a fatal car crash is 1/3972.
- A fire breaking out on a certain night: 0.05%
- an American women: Risk of developing colon and rectal cancer - 4%.

EFFECT ON ECONOMY

- \$73.6 billion to the New York gross state product (GSP) in 2021
- Insurance coupled with banking accounted for 4.73% of Vietnam's total GDP (2021)
- Personal accident and health (PA&H) insurance (32.2% - GWP) (2021)
- Motor insurance and property insurance (30.5 & 24.8% - GWP) (2021)

CARAVAN INSURANCE POLICIES

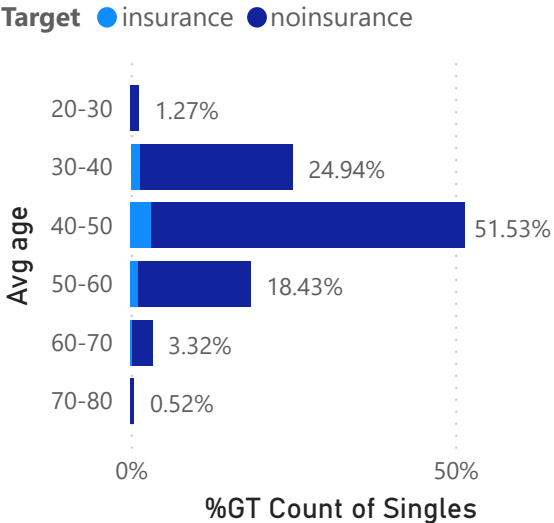
- Caravan is a type of mobile home, inside this people can decorate, design everything like the mini home to live in. The convenience of the product is it has wheels like a vehicle, so that people can simultaneously tow it to everywhere.
- Caravan insurance policy is a product of insurance that protect your caravan against accidental damage, theft, storm, fire and flood.



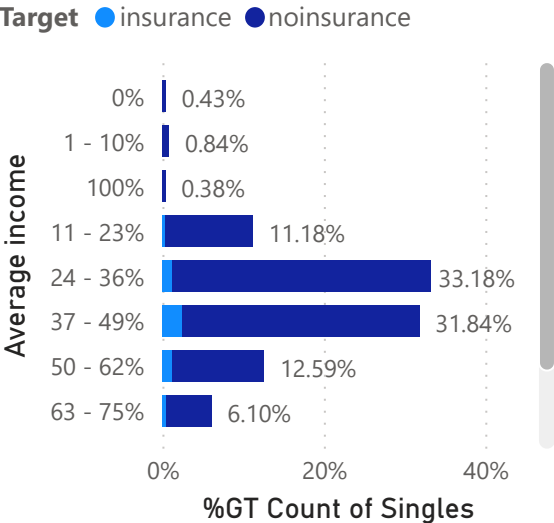
Among 5822 customers included in train dataset, only **5.98% (349 customers) got caravan insurance** policy. This proportion is significantly imbalanced with those who did **not buy the products (94% - 5473)**

GENERAL INFO

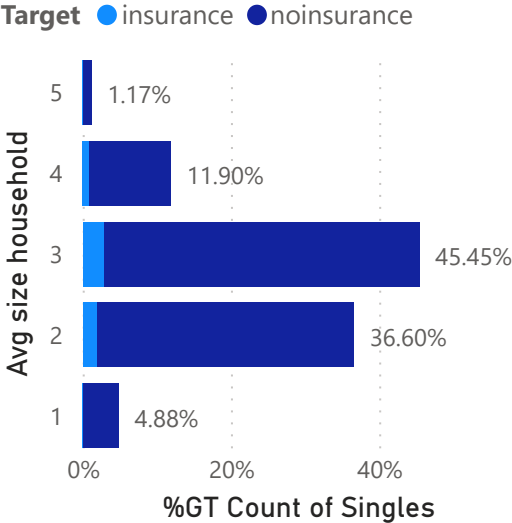
Average Age



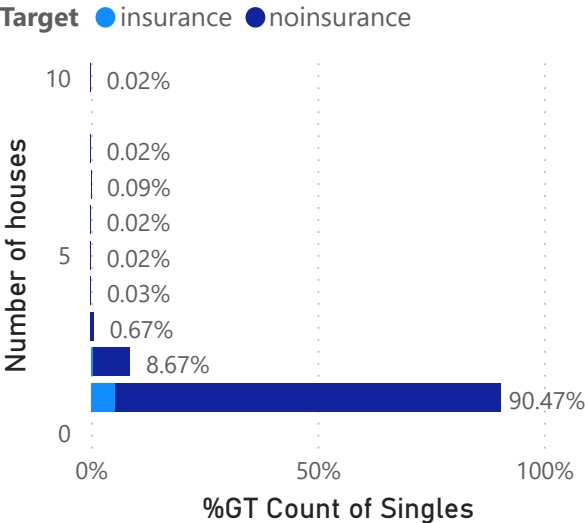
Average Income



Average Household Size



Number of houses



Most of caravan buyers have average between 30 to 60

Customers with Medium Income prefer to buy caravan compared to Low income and High income people.

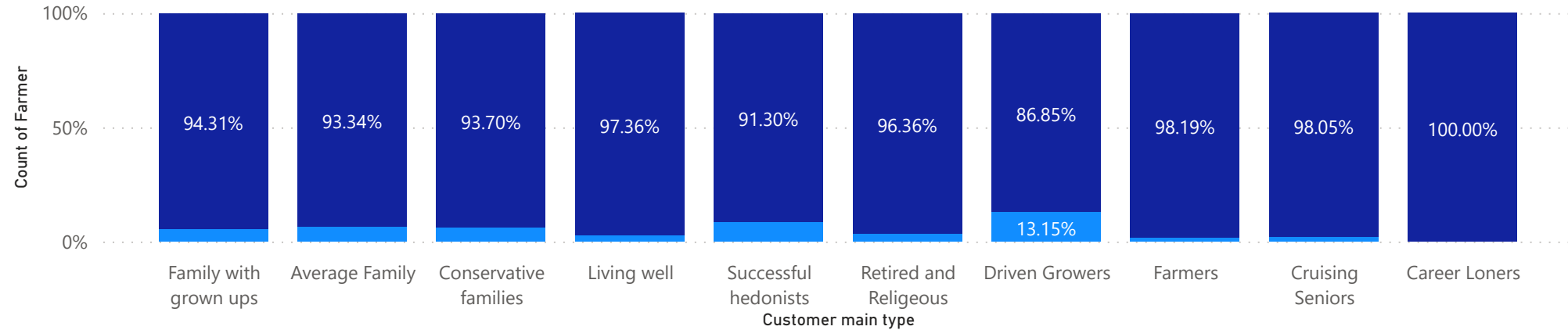
Most of household have 2-4 members (about 95%), The large size of household, the more ability customers buy caravan insurance.

More than 99% of customers owned 1-2 houses. 100% caravan buyers owned 1-2 houses.

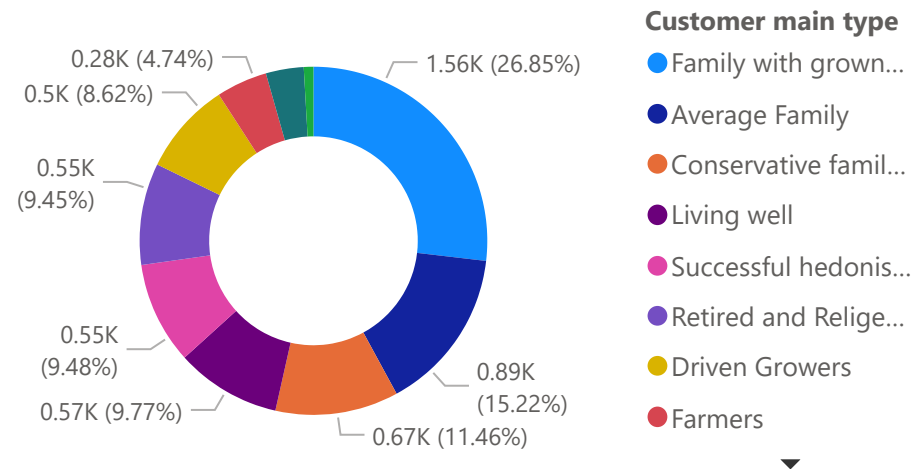
TYPE OF CUSTOMERS' COMPONENT

Customer main type and Target

Target ● insurance ● noinsurance



Customer main type



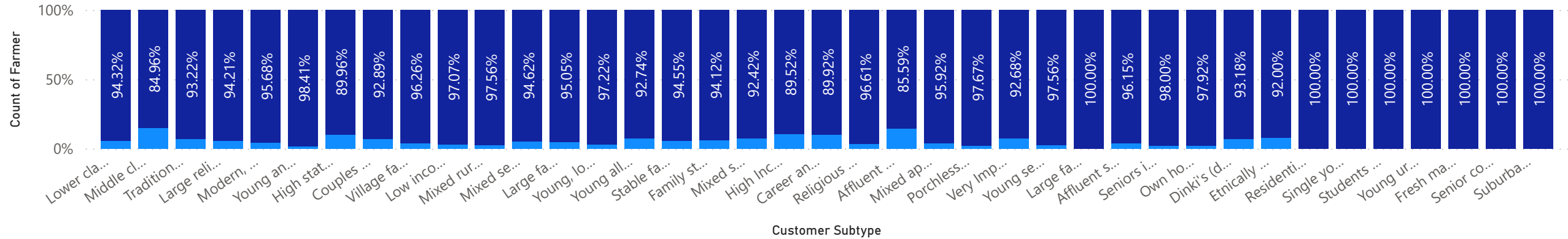
•Approximately 53.5% Customers are Family with grown ups/Average or Conservative. Customers whose families are **Living well/ Successful hedonists/ Driven Growers/ Retired and Religious** buy caravan insurance with proportion of **8 to 9%**.

•Among these customers, **Driven Growers** and **Successful hedonists** are the 2 groups that **bought caravan insurance** with the highest rate (**13.15% and 8.7%, respectively**). Growers invest caravan storage for storing their products.

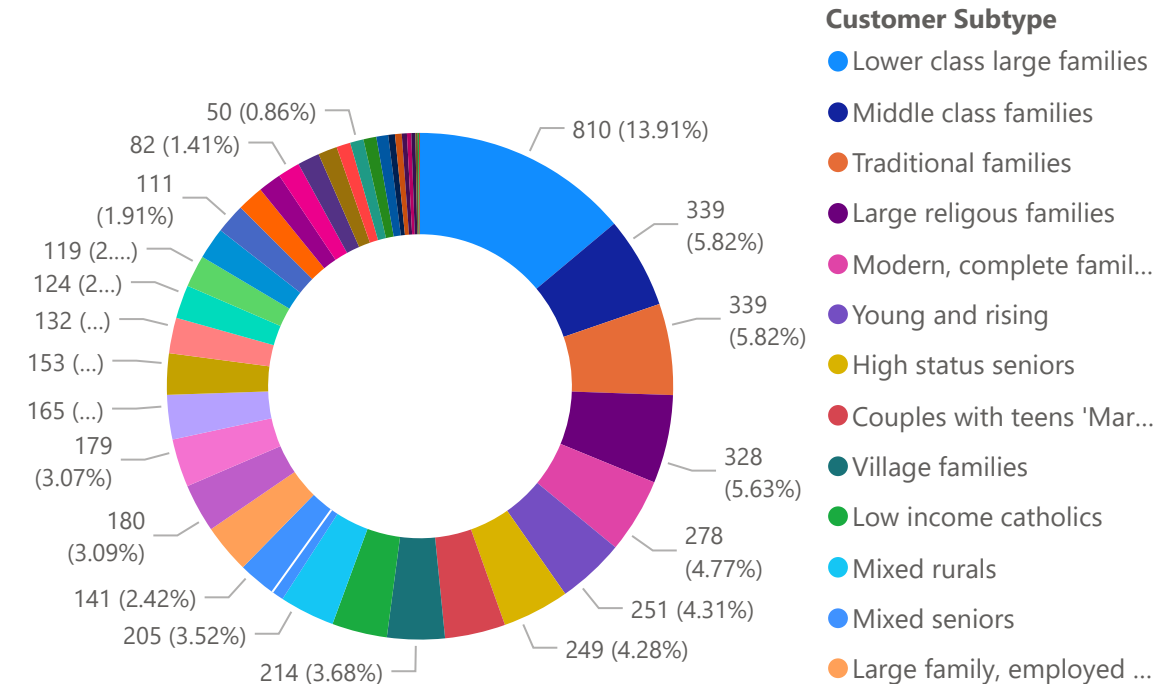
TYPE OF CUSTOMERS' COMPONENT

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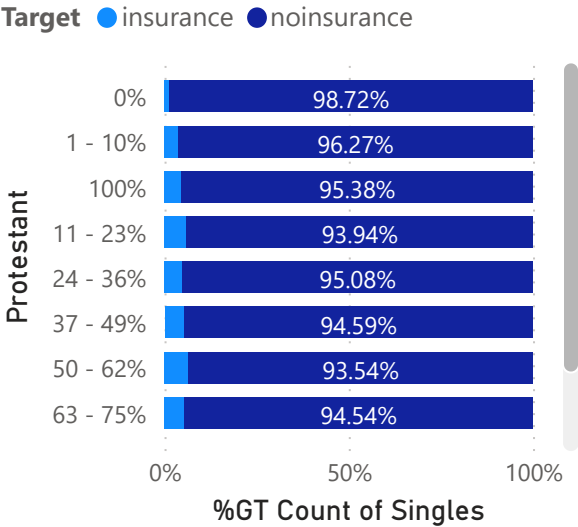
Customer main type



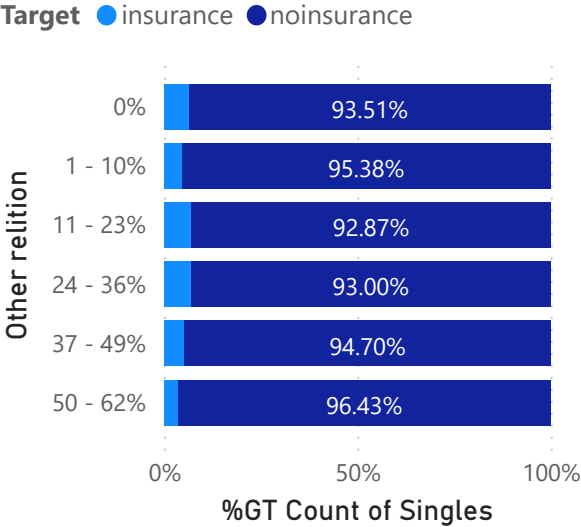
- Among these subtypes, **Middle class** and **Affluent young families** are the two subtypes have the **highest caravan buyers** proportion (>14%)
- **High status seniors; High income expensive child; Career and childcare** are the three subtype have the **percentage of buyers more than 10%**.
- **Career Loners** group (who live and work alone) includes *Single youth; Students in apartments; Young urban have-nots; Fresh masters in the city; Senior cosmopolitan and Suburban youth* are 6 subtypes did **not buy caravan policies**. Common feature of these group are **young and poor** (because of **low income or no income**).
- All **other groups** have percentage of **5-8%** customers **bought caravan insurance** products.

RELIGION AND MARITAL STATUS

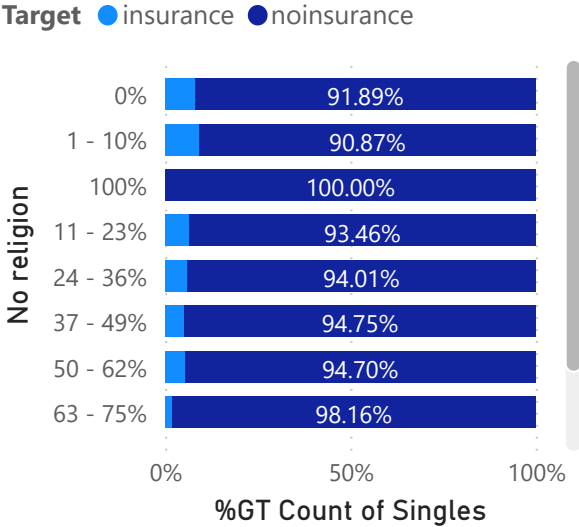
Protestant



Other relition

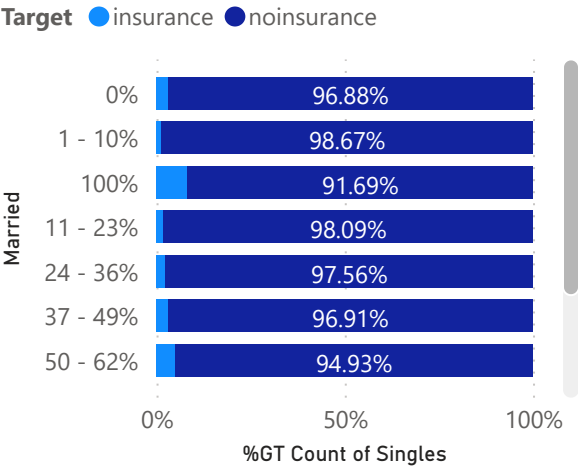


No religion

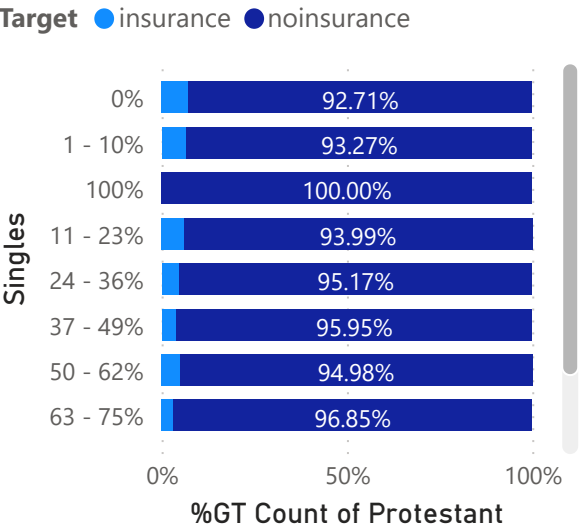


Protestant was dominant compared to no religion, few customers followed other religion. People are Protestant or following other religion tend to bought caravan with higher proportion than ones following no religion.

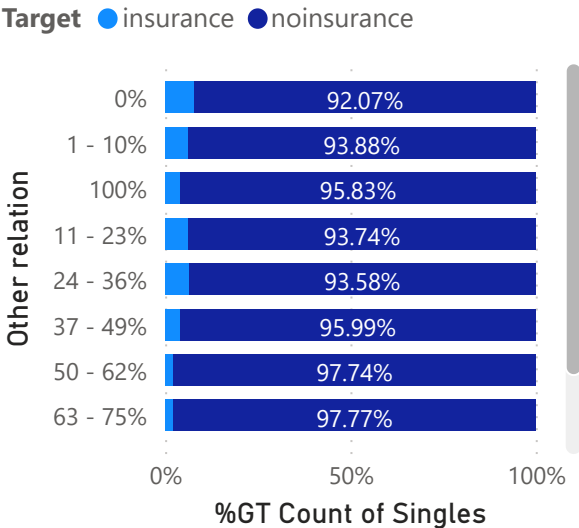
Married



Singles



Other Relation

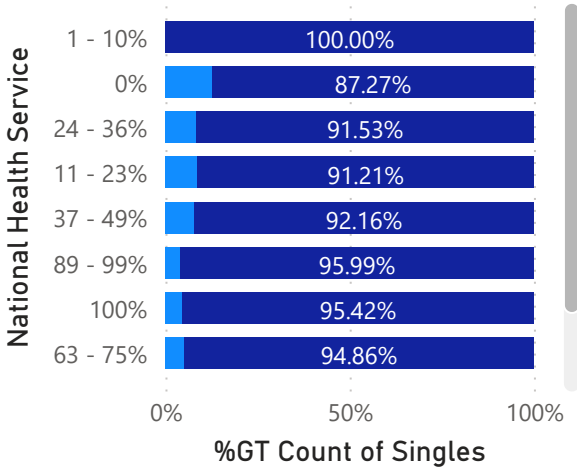


Married customers are crucial part of caravan campaign. Those who married tend to buy caravan with higher percentage than those in other relation or single.

OCCUPATION AND SOCIAL CLASS

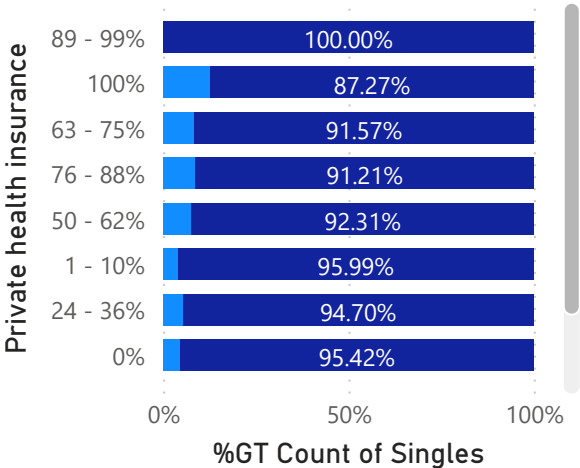
National Health Service

Target ● insurance ● noinsurance



Private Health Service

Target ● insurance ● noinsurance

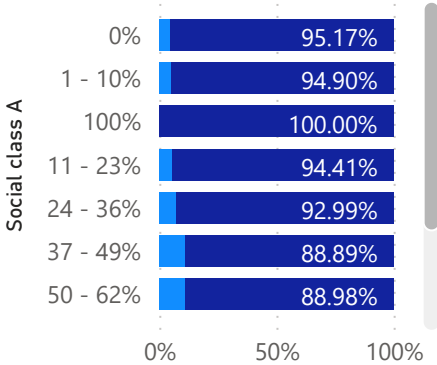


People used Private Health Service buy caravan insurance with higher proportion than those used National Health Service.

Number of customers in class A and B are larger than those in class C and D. Those in Class A tend to prefer buy caravan

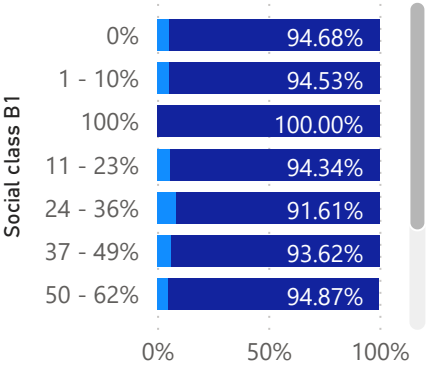
Social Class A

Target ● insurance ● noinsurance



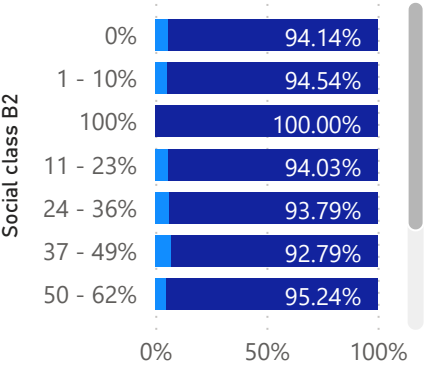
Social Class B1

Target ● insurance ● noinsurance



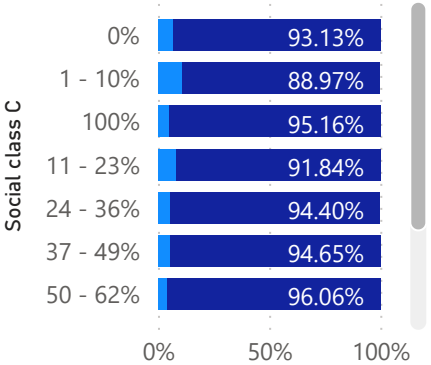
Social Class B2

Target ● insurance ● noinsurance



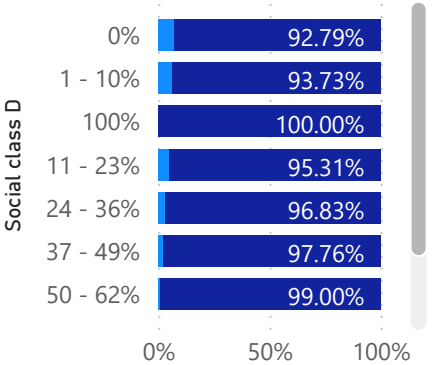
Social Class C

Target ● insurance ● noinsurance



Social Class D

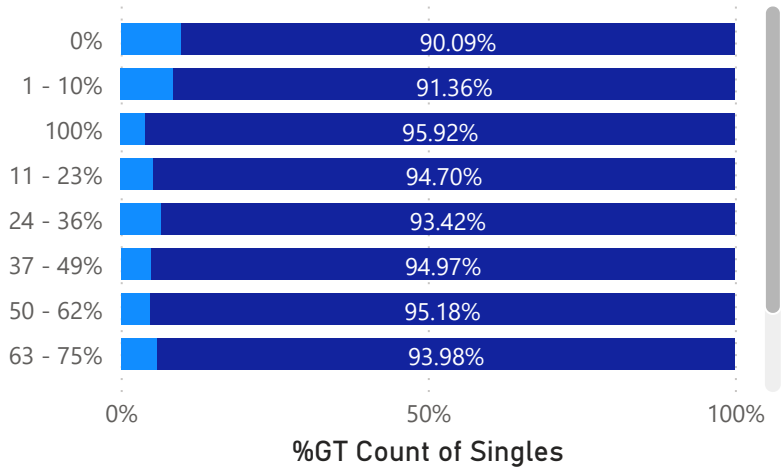
Target ● insurance ● noinsurance



HOME AND CAR

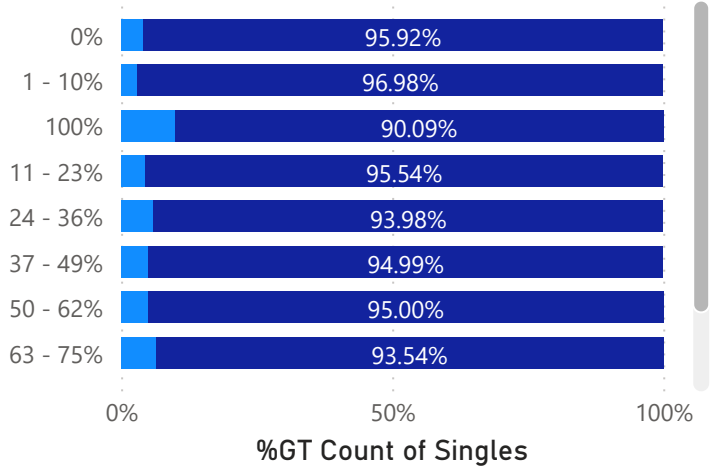
Rented Houses

Target ● insurance ● noinsurance



Home Owner

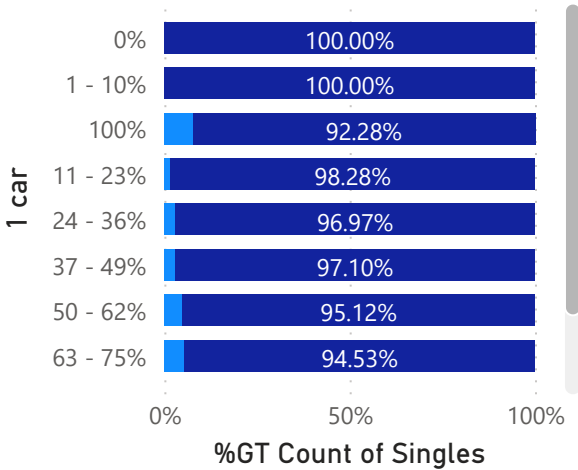
Target ● insurance ● noinsurance



Home Owner customers have higher ability to buy caravan insurance compared to Rent Houses customers

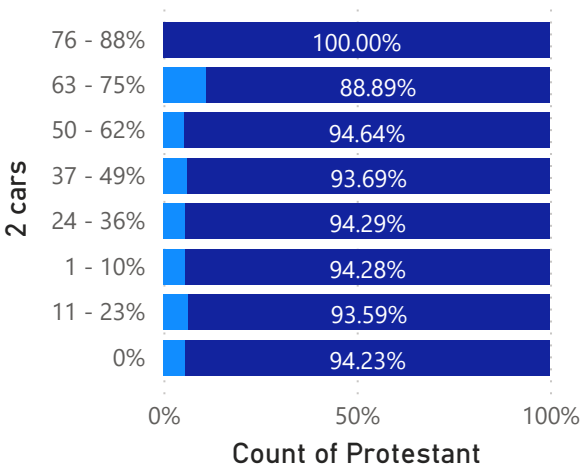
1 Car

Target ● insurance ● noinsurance



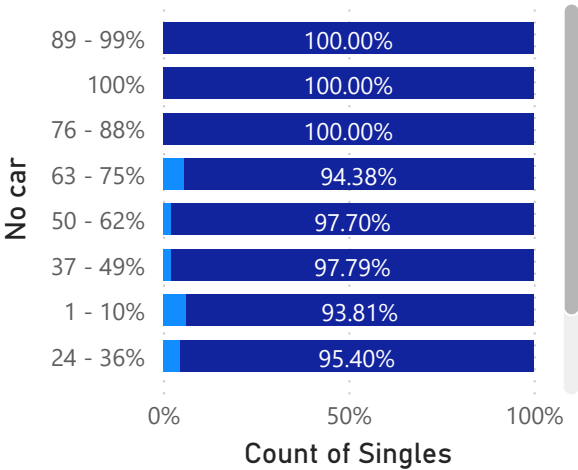
2 Cars

Target ● insurance ● noinsurance



No Car

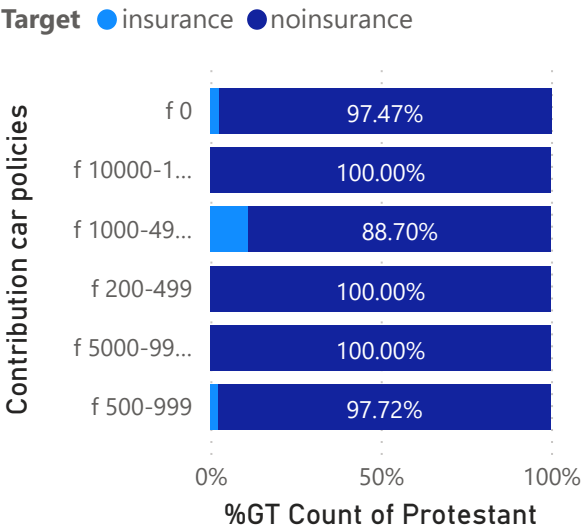
Target ● insurance ● noinsurance



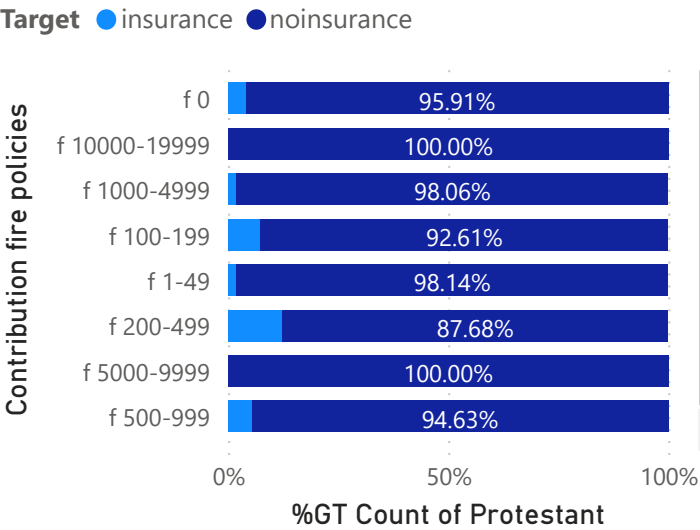
Customers who owned at least a car have higher ability to buy caravan insurance compared to those who are not.

PRODUCT OWNERSHIP

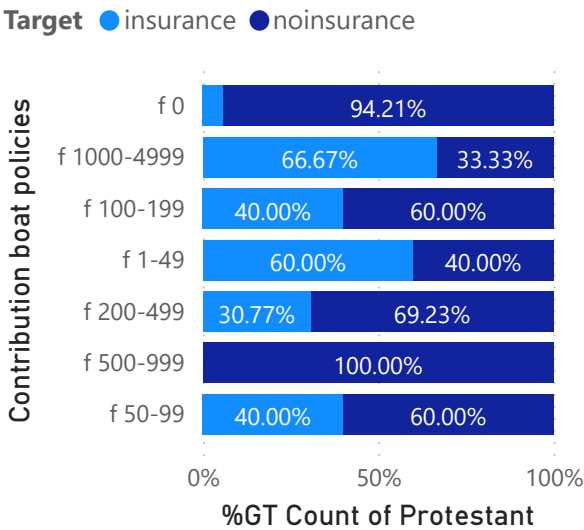
Contribution car policies



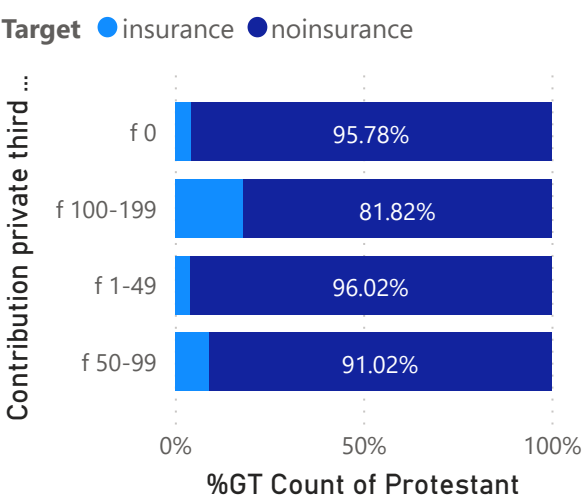
Contribution fire policies



Contribution boat policies



Contribution Private third party insurance



Majority of customers contributed amount of 0, 500-999 or 1000-4999 dollars in car policies. And only these three groups of customers bought the caravan insurance product: 1000-4999 (11.3%), 0 (2.53%) and 500-999 (2.28%).

More than 45% of customers contributed 0 dollars on fire insurance. Smaller percentage of customers contributed to fire insurance with group of 50-99, 100-199, 200-499 dollars with 9.19%, 15.8%, 21.6% respectively. Of these groups, 200-499 group has the highest proportion of buying caravan products (12.32%), following by 100-199, 500-999 and 0 dollars with percentage of 7.39%, 5.37% and 4.09%.

About 40% of customers have contribution to private third party insurance. Most of private third party insurance contributors, 90.9% customers contribute amount of 50-99 dollars. The more consumers contribute to private third party insurance, the higher percentage of them bought caravan insurance.

Less than 0.6% of customers buy boat insurance. To explain the scarcity of consumers, we must consider more factors such as the ratio of boat owners among the population. The boat is only used along the coastal area and by someone who owns a large ship for far and long trips on the sea. Because of scarcity of boat insurance consumers (less than 35 customers), we can not explore the affect of boat insurance consumers on caravan insurance.

Other insurance products: Majority Contribution \$0

OTHER INSIGHTS

Customers with lower level education are more than those with medium level education. customers with high level education are fewer than other groups. The higher of education (high level of education) the higher percentage of caravan insurance buyers.

While customers used National Health Service present with higher percentage than those used Private Health Service, Private Health Service consumers have higher percentage of caravan insurance buyers.

Number of customers who income about 30.000-45.000 or 45.000-75.000 is higher than other income levels. The higher income customer gain, the higher ability to buy caravan insurance.

In term of Buyers' purchasing power, Most of consumers (>50% of 5822) has the ratio of purchasing power of 24-36% (26.28%), 37-49% and 63-75% (> 15.4%). The higher level of purchasing power, the more percentage consumers bought caravan insurance policies.

The higher average income the higher rate of caravan buyers.

Some of features are correlated:

- Low level of education and Customer subtype/main type, Social Class C, National Health Service and Skilled laborers are related to each other.
- Middle Management and Social Class B1
- High level of education and High status/Social Class A/Private Health Insurance
- Single customers, other relation and No car
- Married and 1 car
- Income 30.000 (low income) and National Health Service and Rented Houses
- Income 45.000-75.000 and Social Class A.
- Average income and Purchasing Power Class
- Private third party insurance and Fire Policy
- Contribution and Number of car/fire policies/other products

CONCLUSION

After analysis the given data, we can draw something important:

A. About customer features

1. Customers in Social Class C are those usually use National Health Service, are low level of education and related to some type of customers.
2. Customers' Average income related to Customer purchasing power class. Those have income in average level tend to buy more than lower income and higher income level.
3. Customers in Social Class A are those tend to use Private Health Insurance and are high level of education with High Status of occupation
4. Customers who own at least 1 car usually married, People in other relation are usually Single and those often own no car.

B. About factors influent on target outcome (buy caravan insurance)

1. Customer's income related to ability buying caravan products (whose has average income level).
2. The higher level of education the more percentage of buying the product.
3. Customer who owned at least 1 car tend to buy caravan insurance with higher proportion.
4. Customers with high level of Social Class, Higher income and higher education and Owned a home are the potential customers.
5. Customers buy car and fire policies tend to buy more caravan product. Other insurance products do not impact on the probability of caravan insurance purchase.

C. Caution

- Product's unique feature impact on their target customers.
- For example, Caravan is the product used for from 2 or more than 2 people (family) live in with limited space. So that singles customers are not target customers but married ones.
- Caravan storage can use for farm product storage, this lead to high proportion of Driven Growers in buyers.
- Large family and the rich ones are not the target customers because these customers usually do not buy caravan to live.

