

# Visit Scotland

Aboubakar Hameed– D12

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# Brief

- VisitScotland, formerly the Scottish Tourist Board, is a national tourism organisation for Scotland. It is an executive non-departmental public body of the Scottish Government, with offices around Scotland.
- VisitScotland's primary aim is to market Scotland as a tourism destination, which it does through advertising and promotion as well as encouraging press articles on Scotland and what it has to offer the business or consumer visitor.
- The organisation also seeks to work with the tourism industry in Scotland to maintain standards in visitor attractions and accommodation provision.

# MVP: Data and Business Question

## Data Sets

- activities
- transport
- location

## Business Question

- What kind of tourism activity generates the highest income for Scotland?
- Which kind of activity generates the most visits to sites?
- What type of locations receive the most visits? What kinds of locations do people spend the most in?
- Is there a particular method of travel our visitors arrive by? Some of our locations are remote and not easily accessible by public transport, so this would be good information to have.
- How have general tourism rates changed over time?
- Is there any way to predict spending and visits for Visit Scotland?

# Extensions: Data and Question

## Data Sets

- demographics
- accomodation
- regional domestic

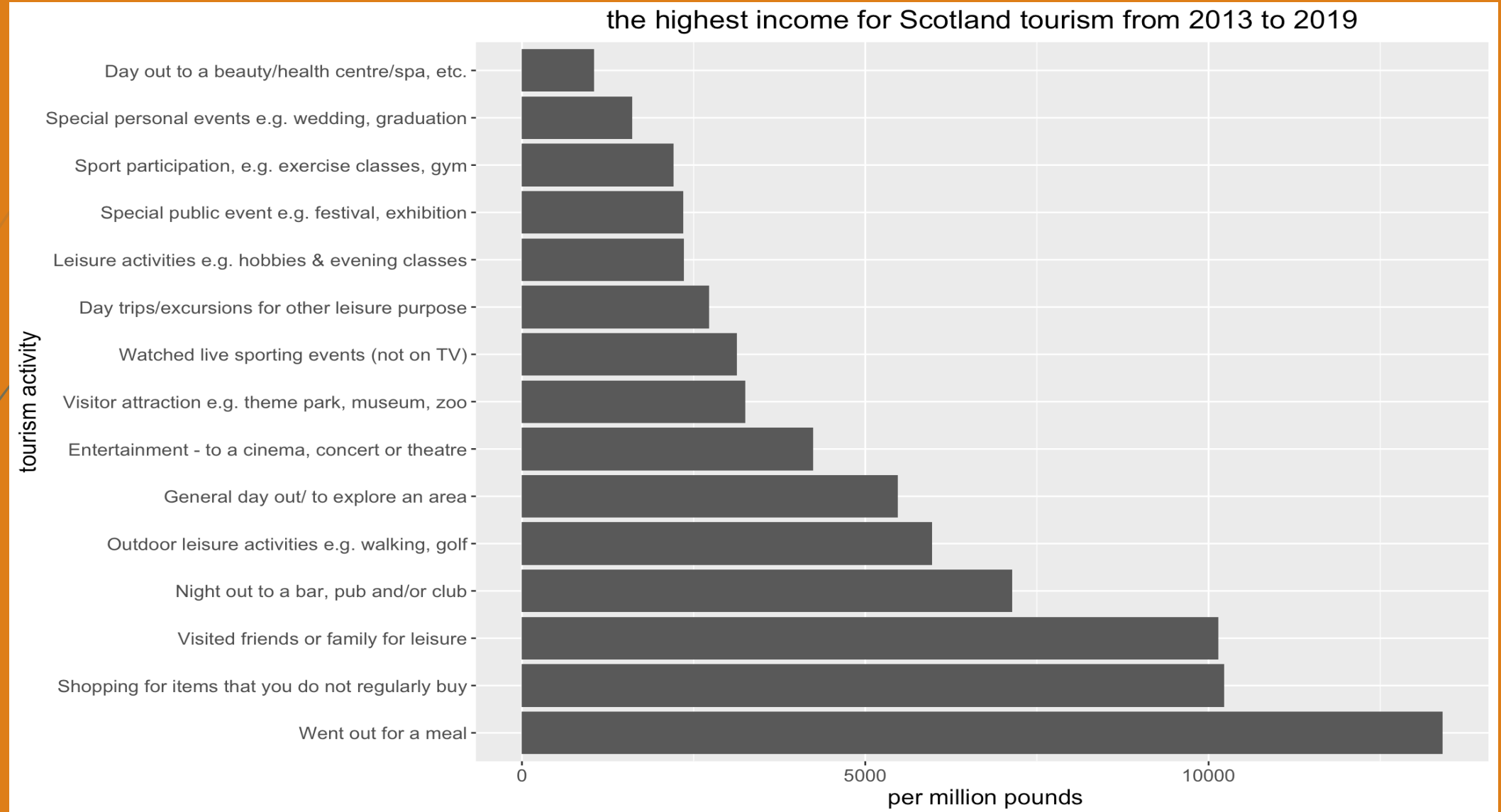
## Business Question

- Is there a particular key demographic of visitors we should be focusing on? Who spends the most? Who visits the most?
- When looking at regional tourism, what insights can we gain? Where are our visitors from? How do they differ in the money they spend, nights they spend in Scotland, or number of visits they do?
- What type of accomodation is most popular? Is there a difference by location?

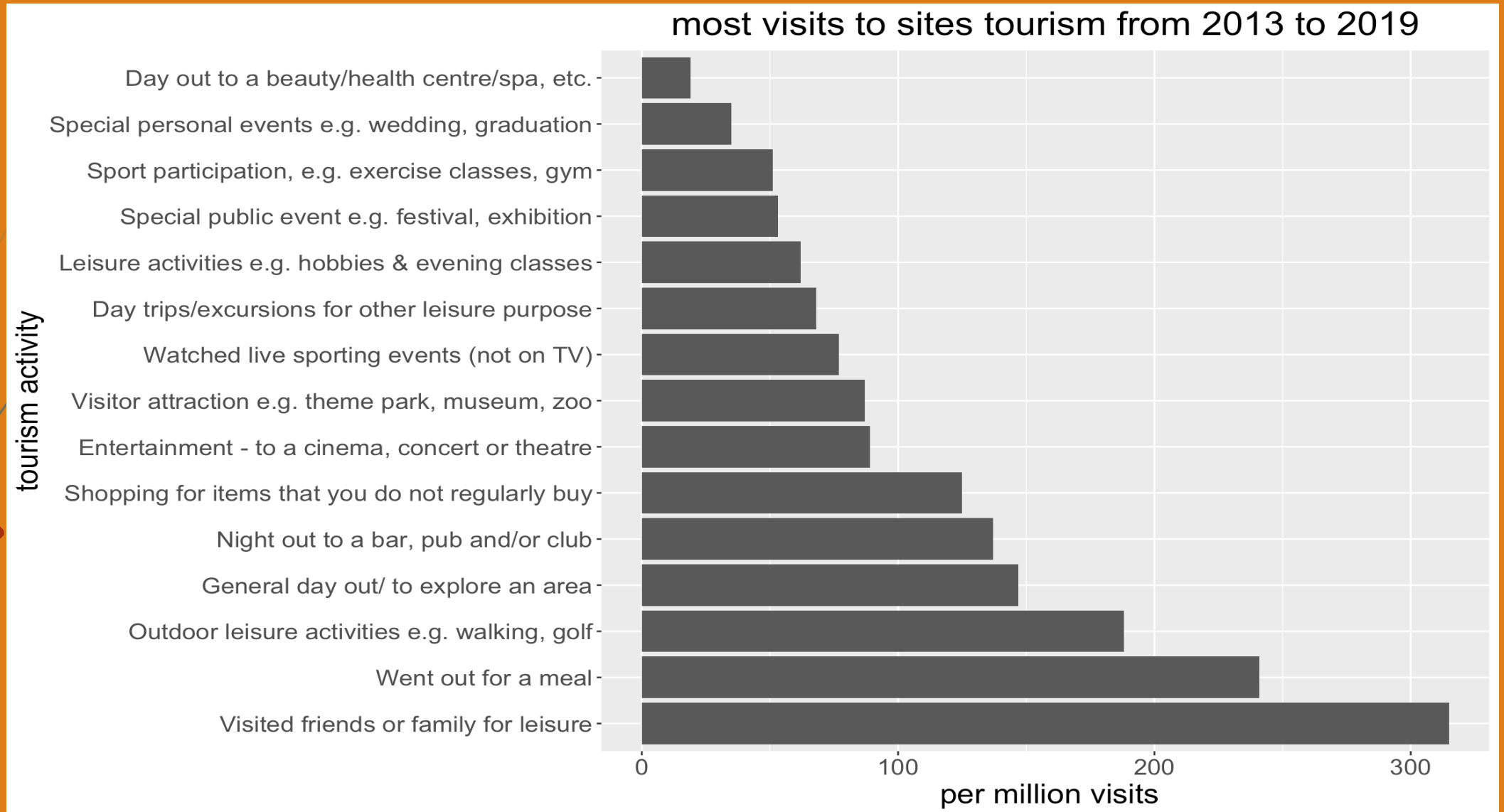
# Notes on data cleaning

- On all datasets, feature\_code has been removed since it's the only code for Scotland.
- Datacode column's name has been changed on all dataset into year.
- Measurement column also been removed from each dataset since we know its counting each visitor to represent these numbers.
- Check if any Na on all dataset.
- On all plots, I removed the "All" response. Since it does not give any insight to my plots and analysis.

# Q1 What kind of tourism activity generates the highest income for Scotland?

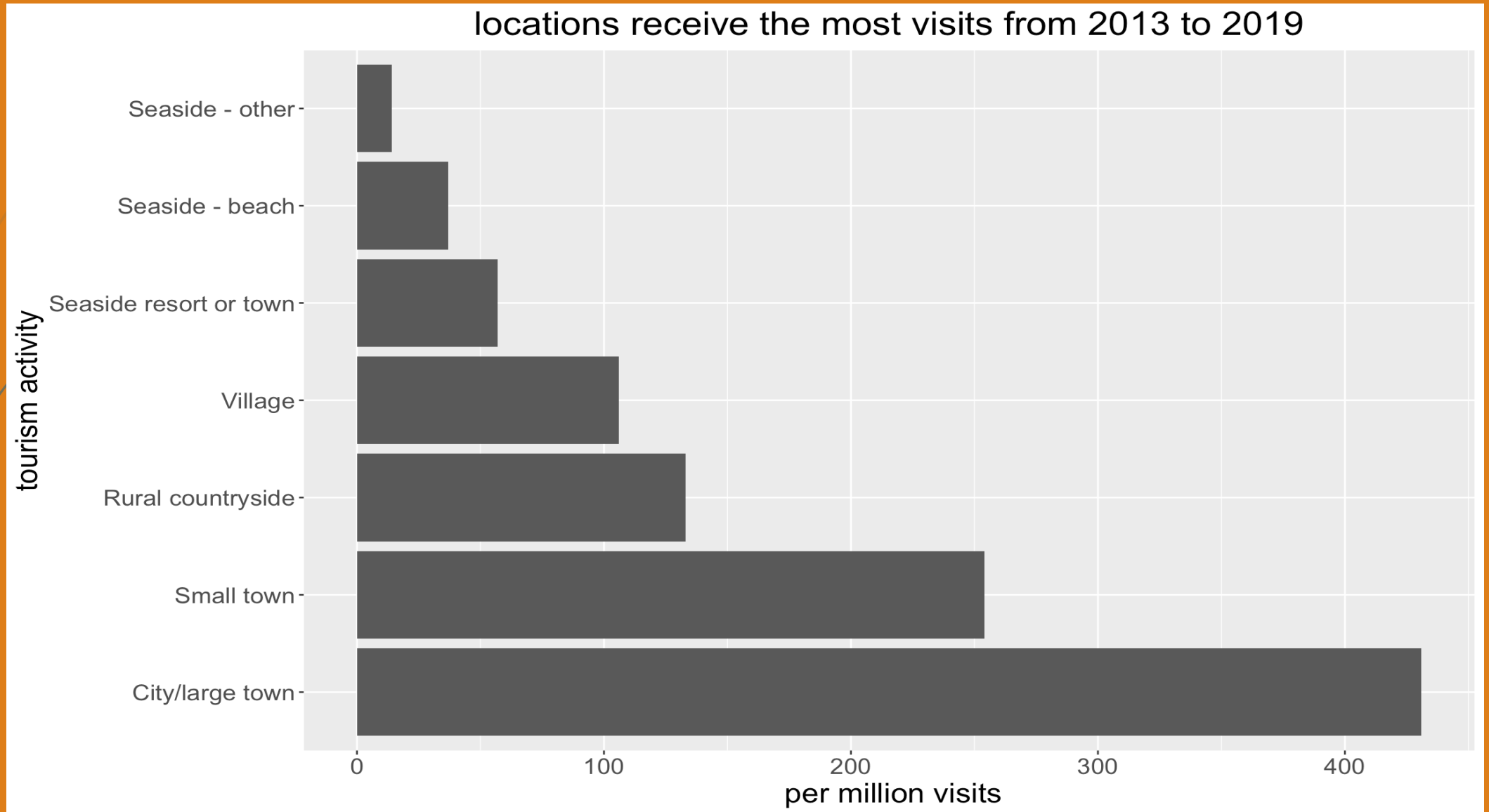


## Q2 Which kind of activity generates the most visits to sites?

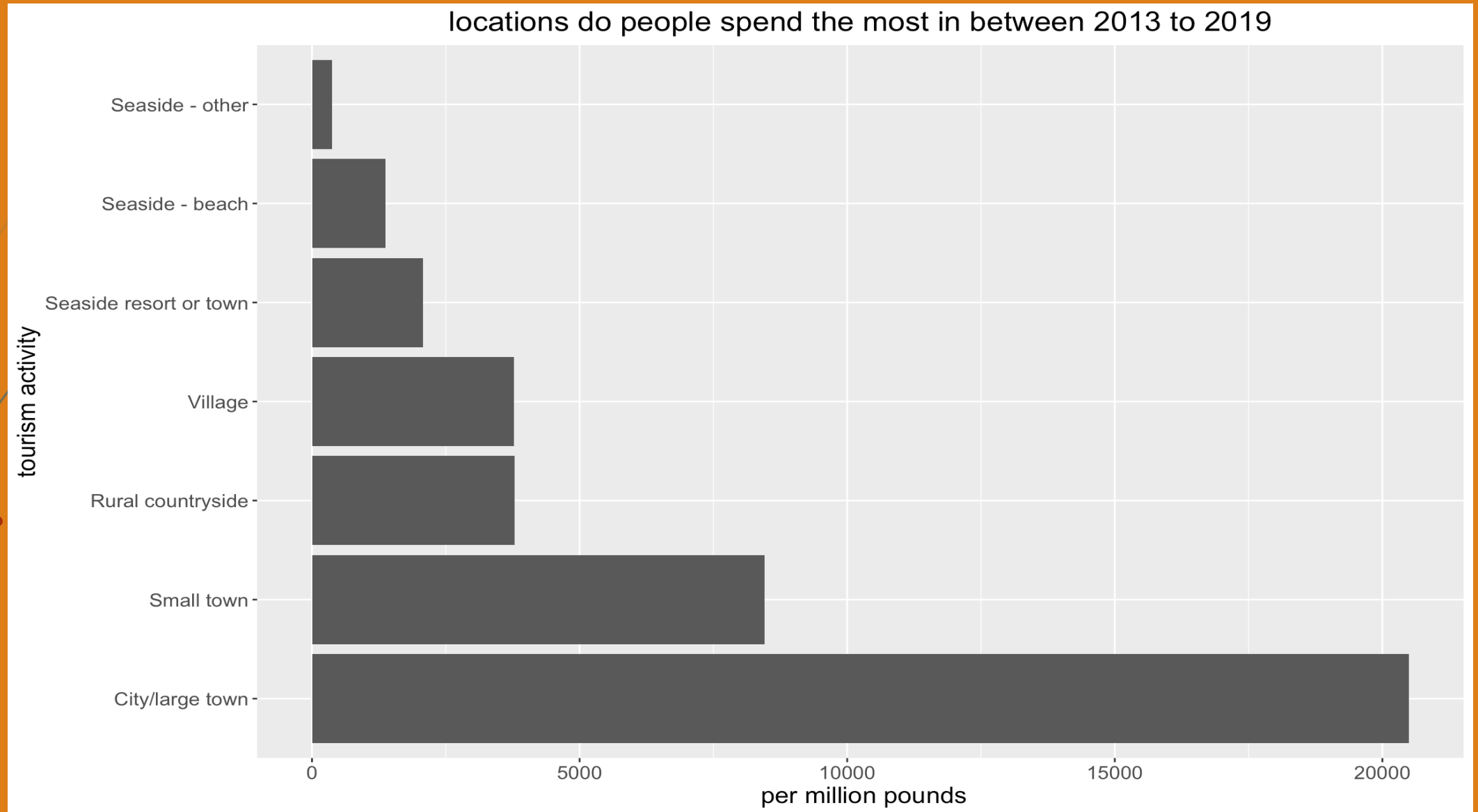




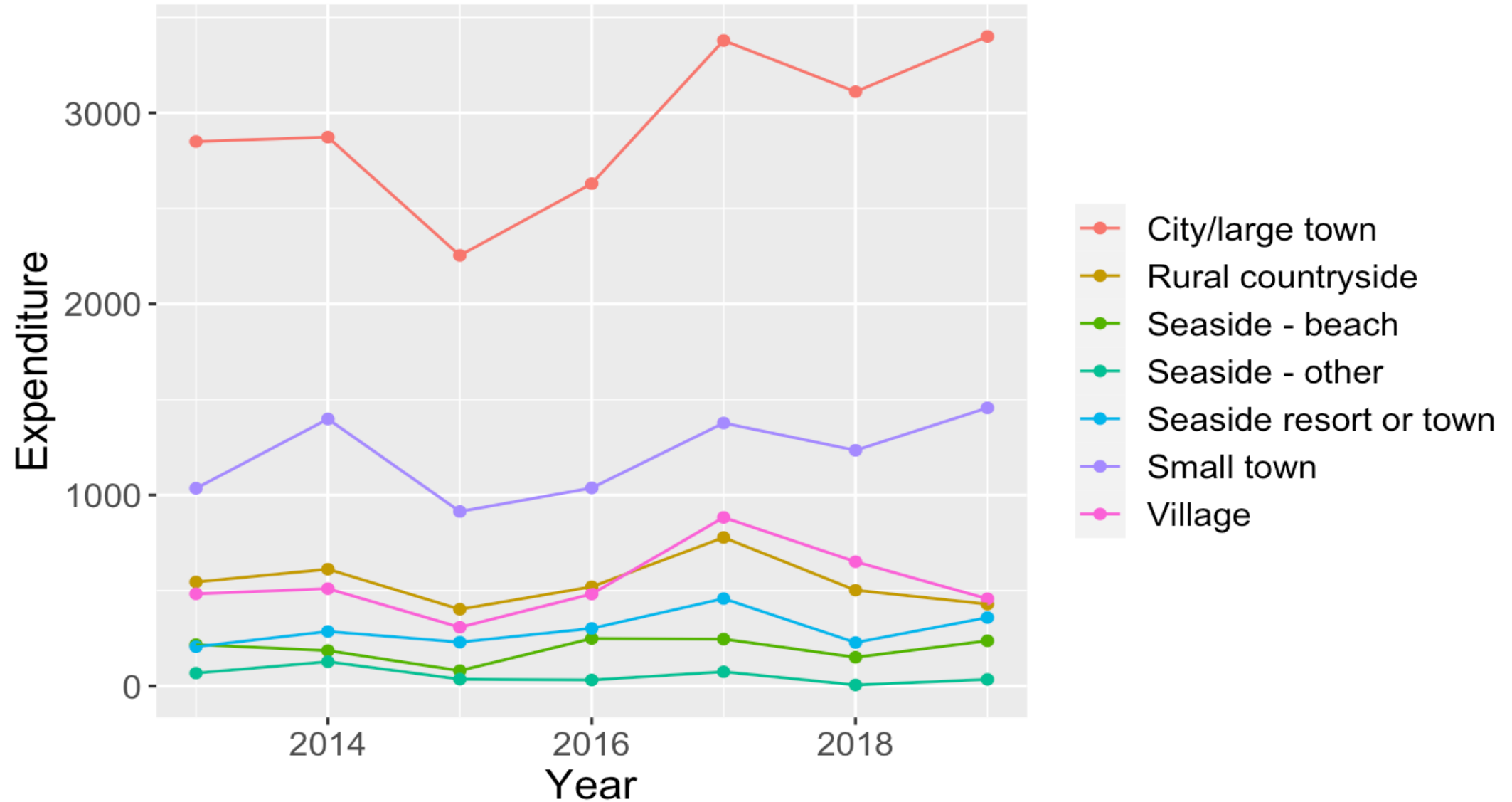
# Q3.1 What type of locations receive the most visits?



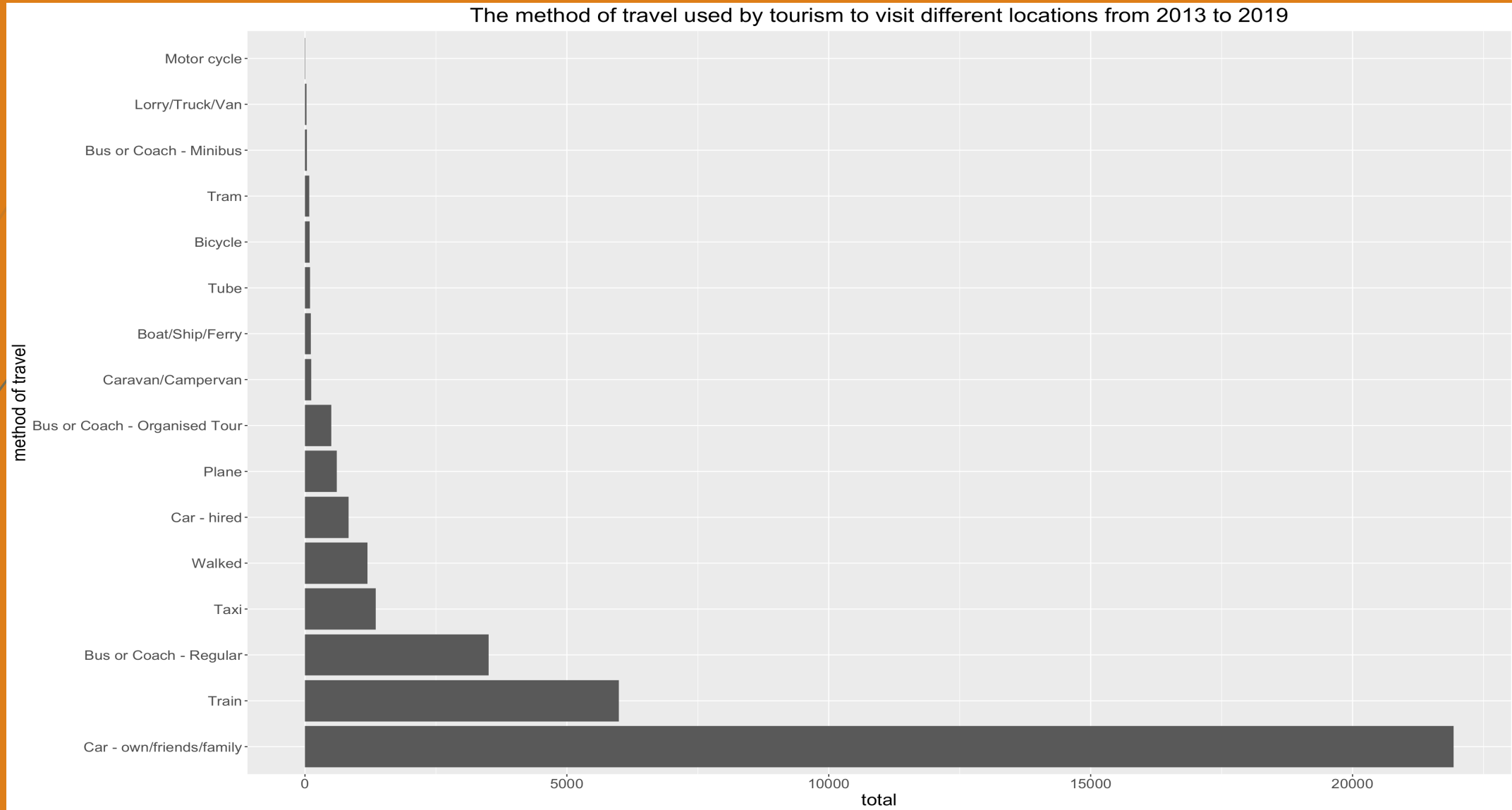
## Q3.2 What kinds of locations do people spend the most in?



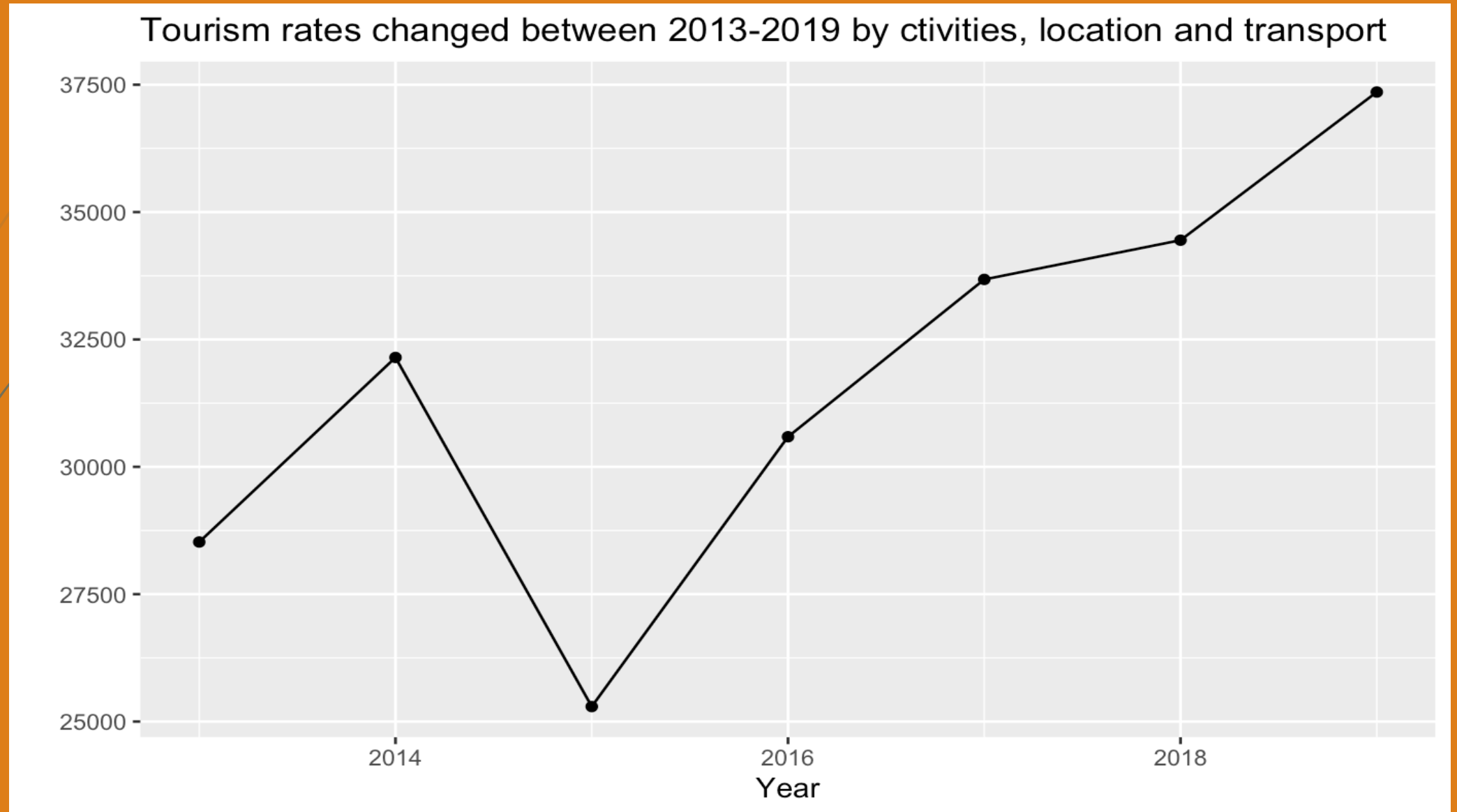
## Most spend on locations visited from 2013 to 2019



# Q4 Is there a particular method of travel our visitors arrive by?



# Q5 How have general tourism rates changed over time?



# Q6 Is there any way to predict spending and visits for Visit Scotland?

```
Call:
lm(formula = value ~ year + type_of_location_visited, data = model_location)

Residuals:
    Min       1Q   Median       3Q      Max
-845.14 -106.39   18.29  110.71  597.36

Coefficients:
              Estimate Std. Error t value Pr(>|t|)
(Intercept)    5005.14     126.93   39.432 < 2e-16 ***
year2014         120.25     126.93    0.947  0.34887
year2015        -238.00     126.93   -1.875  0.06775 .
year2016         14.62     126.93    0.115  0.90882
year2017         392.50     126.93    3.092  0.00352 **
year2018         163.25     126.93    1.286  0.20544
year2019         262.37     126.93    2.067  0.04493 *
type_of_location_visitedCity/large town  -2179.14     135.69  -16.059 < 2e-16 ***
type_of_location_visitedRural countryside -4566.14     135.69  -33.650 < 2e-16 ***
type_of_location_visitedSeaside - beach   -4912.00     135.69  -36.199 < 2e-16 ***
type_of_location_visitedSeaside - other   -5053.00     135.69  -37.238 < 2e-16 ***
type_of_location_visitedSeaside resort or town -4811.71     135.69  -35.460 < 2e-16 ***
type_of_location_visitedSmall town        -3900.00     135.69  -28.741 < 2e-16 ***
type_of_location_visitedVillage          -4568.14     135.69  -33.665 < 2e-16 ***
---
Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

Residual standard error: 253.9 on 42 degrees of freedom
Multiple R-squared:  0.983,    Adjusted R-squared:  0.9777
F-statistic: 186.7 on 13 and 42 DF,  p-value: < 2.2e-16
```

```
Call:
lm(formula = value ~ type_of_location_visited, data = model_location)

Residuals:
    Min       1Q   Median       3Q      Max
-1185.29  -83.43  -18.79   71.57   887.71

Coefficients:
              Estimate Std. Error t value Pr(>|t|)
(Intercept)    5107.3     118.1   43.23 <2e-16 ***
type_of_location_visitedCity/large town  -2179.1     167.1  -13.04 <2e-16 ***
type_of_location_visitedRural countryside -4566.1     167.1  -27.33 <2e-16 ***
type_of_location_visitedSeaside - beach   -4912.0     167.1  -29.40 <2e-16 ***
type_of_location_visitedSeaside - other   -5053.0     167.1  -30.25 <2e-16 ***
type_of_location_visitedSeaside resort or town -4811.7     167.1  -28.80 <2e-16 ***
type_of_location_visitedSmall town        -3900.0     167.1  -23.34 <2e-16 ***
type_of_location_visitedVillage          -4568.1     167.1  -27.34 <2e-16 ***
---
Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

Residual standard error: 312.6 on 48 degrees of freedom
Multiple R-squared:  0.9705,    Adjusted R-squared:  0.9662
F-statistic: 225.8 on 7 and 48 DF,  p-value: < 2.2e-16
```

# Conclusions

## Conclusions and insights

- The most common activities for tourists in Scotland are eating out and visiting family and friends using the car as the most method of travel between different location. City and large town are the most spend and visited locations by tourism from 2013 to 2019.
- Regarding to the general tourism rates over years, we can see a sharp decline in 2015. However, since then, its increased until 2019.
- Since the majority of tourism about 62% is traveling by cars, VisitScotland can be confident that any remote locations visitors can plan and go to these places.
- I advise VisitScotland that when they collect the data it would be great to have the months during the year this allow us to see the tourism activities during the year and which month is the busiest.

Any Question?

