

Exploration des données

```
library(tidyverse)
library(spdep)
```

- **nc_hhi_ts** contient l'évolution du revenu médian des ménages
- **county_pop_tax** semble contenir des infos au niveau des comtés (pas nécessaire ?)

```
county_pop_tax <- read.csv("data/CountyPopTaxNum.csv")
municipal_info <- read.csv("data/NCMunicipalInfoNewVar2.csv")
nc_hhi_ts <- read.csv("data/NChhits.csv")
municipal_info |> summary()
```

```
##      city              mghi      revtotal      exputility
## Length:506      Min.   : 11750      Min.   :4.281e+03      Min.   :      0
## Class :character 1st Qu.: 30214      1st Qu.:5.411e+05      1st Qu.:    16236
## Mode  :character Median : 37717      Median :2.226e+06      Median :   389060
##                Mean  : 42092      Mean  :1.988e+07      Mean  :   7001968
##                3rd Qu.: 50694      3rd Qu.:7.977e+06      3rd Qu.:   2112289
##                Max.   :157297      Max.   :1.649e+09      Max.   :280106412
##
## expdebt service      exptransportation      expgov
## Min.   :   -221839      Min.   :      0      Min.   :    2691
## 1st Qu.:    1290      1st Qu.:   30931      1st Qu.:   114176
## Median :    89987      Median :   171039      Median :   311570
## Mean   :   2346194      Mean   :   2238376      Mean   :   1553911
## 3rd Qu.:   486069      3rd Qu.:   583501      3rd Qu.:   914938
## Max.   : 350216000      Max.   :448858000      Max.   :110478000
##
## exppubsafety      expother      exptotal      pcrevtotal
## Min.   :      0      Min.   : -1450283      Min.   :5.657e+03      Min.   :   40.0
## 1st Qu.:   42561      1st Qu.:   39303      1st Qu.:5.131e+05      1st Qu.:   720.2
## Median :   462831      Median :   208960      Median :2.118e+06      Median :  1284.0
## Mean   :   4002662      Mean   :   2941171      Mean   :2.008e+07      Mean   :  1926.1
## 3rd Qu.:  1855718      3rd Qu.:  1241169      3rd Qu.:7.742e+06      3rd Qu.:  2003.5
## Max.   : 357671000      Max.   :178493396      Max.   :1.710e+09      Max.   :92980.0
##
## pcexputility      pcexpdebt      pcexptransportation      pcexpgov
## Min.   :      0.0      Min.   :  -65.0      Min.   :      0.0      Min.   :   18.0
## 1st Qu.:      8.0      1st Qu.:    2.5      1st Qu.:   46.0      1st Qu.:  116.0
## Median :   321.5      Median :   51.5      Median :  103.5      Median :  175.0
## Mean   :   609.5      Mean   :  170.5      Mean   :  145.1      Mean   :  260.7
## 3rd Qu.:   637.0      3rd Qu.:  134.0      3rd Qu.:  166.0      3rd Qu.:  253.8
## Max.   :13729.0      Max.   :22292.0      Max.   :4185.0      Max.   :8031.0
##
## pcexppubsafety      pcexpother      pcexptotal      citypop
## Min.   :      0.0      Min.   : -355.00      Min.   :    32      Min.   :   25.0
## 1st Qu.:   54.5      1st Qu.:   58.25      1st Qu.:   676      1st Qu.:  567.5
## Median :   264.5      Median :  131.50      Median :  1195      Median : 1636.0
```

```

## Mean      : 356.2    Mean      : 315.64    Mean      : 1858    Mean      : 10284.2
## 3rd Qu.: 409.8    3rd Qu.: 265.00    3rd Qu.: 1847    3rd Qu.: 4853.8
## Max.      :12692.0    Max.      :28465.00    Max.      :80688    Max.      :751999.0
##
## latitude      longitude      pop11      pop12
## Min.      :33.86    Min.      :-84.03    Min.      : 41    Min.      : 41
## 1st Qu.:35.09    1st Qu.: -80.68    1st Qu.: 625    1st Qu.: 616
## Median :35.51    Median : -79.18    Median : 1724    Median : 1750
## Mean      :35.49    Mean      :-79.35    Mean      :10007    Mean      :10179
## 3rd Qu.:35.96    3rd Qu.: -77.92    3rd Qu.: 4840    3rd Qu.: 4807
## Max.      :37.48    Max.      :-75.62    Max.      :722234    Max.      :740931
##
## tarea      popden10      mhhi12      poverty12
## Min.      : 0.120    Min.      : 16.9    Min.      :13505    Min.      : 0.00
## 1st Qu.: 1.163    1st Qu.: 400.1    1st Qu.: 29964    1st Qu.:10.30
## Median : 2.740    Median : 774.9    Median : 38054    Median :18.95
## Mean      : 7.642    Mean      : 852.5    Mean      : 42206    Mean      :19.76
## 3rd Qu.: 6.565    3rd Qu.:1170.8    3rd Qu.: 49850    3rd Qu.:28.07
## Max.      :299.670    Max.      :4371.2    Max.      :160093    Max.      :62.50
##
## hs12      crinc11      crinc12      mage12
## Min.      : 45.70    Min.      : 4.0    Min.      : 12.00    Min.      :20.20
## 1st Qu.: 75.53    1st Qu.: 86.0    1st Qu.: 86.25    1st Qu.:35.62
## Median : 81.90    Median : 212.0    Median : 209.00    Median :40.35
## Mean      : 81.82    Mean      : 928.5    Mean      : 987.13    Mean      :40.95
## 3rd Qu.: 89.20    3rd Qu.: 608.8    3rd Qu.: 588.75    3rd Qu.:45.12
## Max.      :100.00    Max.      :36795.0    Max.      :37825.00    Max.      :69.00
##
## NA's      :272    NA's      :276

```

- Les variables qui commencent par “exp” semblent être la ventilation des dépenses municipales
- Les variables qui commencent par “p” ?
- city: Ville
- mhhi: median house hold income ?
- citypop: population de la ville ?
- latitude: ok
- longitude: ok
- De nombreuses variables existent en plusieurs versions ex:pop11 et pop12