```
library(ggplot2)
library(foreign)
library(Hmisc)
```

```
## Loading required package: lattice
```

```
## Loading required package: survival
```

```
## Loading required package: Formula
```

```
##
## Attaching package: 'Hmisc'
```

```
## The following objects are masked from 'package:base':
##
##     format.pval, round.POSIXt, trunc.POSIXt, units
```

```
library(reshape2)
library(dplyr)
```

```
##
## Attaching package: 'dplyr'
```

```
## The following objects are masked from 'package:Hmisc':
##
##     combine, src, summarize
```

```
## The following objects are masked from 'package:stats':
##
##     filter, lag
```

```
## The following objects are masked from 'package:base':
##
##     intersect, setdiff, setequal, union
```

```
library(tidyr)
```

```
##
## Attaching package: 'tidyr'
```

```
## The following object is masked from 'package:reshape2':
##
##     smiths
```

```
file456 <- spss.get("/Users/AbuDavid/school/census/f456/f456ind.por", use.value.labels=TRUE)
```

```
## Warning in `levels<-`(`*tmp*`, value = if (nl == nL) as.character(labels)
## else paste0(labels, : duplicated levels in factors are deprecated
```

Begin with data from Public Use File 2014, file f456.

```
                                        #
subSetInd2014<-dplyr::select(file456, YEARSUR, WPLDIST,INCSAL)
head(subSetInd2014)
```

```
##   YEARSUR  WPLDIST INCSAL
## 1    2014     <NA>      0
## 2    2014     <NA>      0
## 3    2014   Center   5555
## 4    2014 Gush Dan   8081
## 5    2014 Tel-Aviv   6446
## 6    2014 Tel-Aviv   3473
```

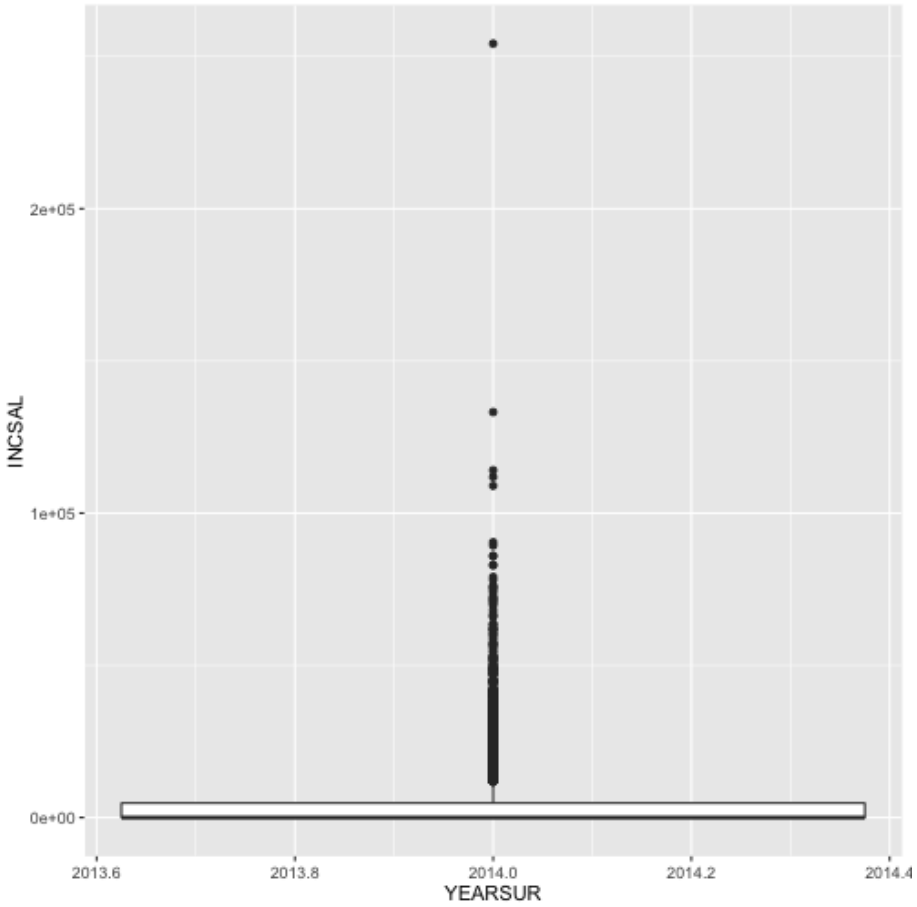
```
summary(subSetInd2014)
```

```
##     YEARSUR         WPLDIST          INCSAL
##  Min.   :2014   Center  : 3010   Min.   :     0
##  1st Qu.:2014   Tel-Aviv: 2551   1st Qu.:     0
##  Median :2014   North   : 1766   Median :     0
##  Mean   :2014   Haifa   : 1522   Mean   :  3403
##  3rd Qu.:2014   Gush Dan: 1468   3rd Qu.:  4749
##  Max.   :2014   (Other) : 1516   Max.   :254219
##                 NA's    :16117
```

```
names(subSetInd2014)
```

```
## [1] "YEARSUR" "WPLDIST" "INCSAL"
```

```
ggplot(aes(y=INCSAL,
           x=YEARSUR
            ),
data=subSetInd2014)+geom_boxplot()
```



Plot is stretched by very few individuals with extremely high incomes.

Remove these to see the normal salaries more clearly.

```r
richRemoved <- subSetInd2014
  # richRemoved[richRemoved$INCSAL > 1200,] #testSyntax
count(richRemoved[richRemoved$INCSAL > 40000,]) # > $10k USD/month
```

```
## # A tibble: 1 × 1
##       n
##   <int>
## 1   130
```

```r
  # remove the 130 richest, regraph
richRemoved<-richRemoved[richRemoved$INCSAL<40000,]
# ggplot(aes(y=INCSAL,x=YEARSUR),
#       data=richRemoved)+geom_boxplot()
naRemoved <-richRemoved %>% filter(complete.cases(richRemoved))
 # ggplot(aes(y=INCSAL,  x=YEARSUR  ),
 #                                    data=naRemoved)+geom_boxplot()
```
Here we look at the non-wealthy in the entire country, defined as those who make less than 4
In shekels, their mean income is 7,488. The middle 50% of them have incomes lying between 2,

```r
  haifaData2014<-  naRemoved %>% filter(WPLDIST == "Haifa")
## ggplot(aes(y=INCSAL,
##            x=YEARSUR,
##            col="green"
##                                                    ),
##        data=haifaData)+geom_boxplot()
##   summary(haifaData)

  centerData2014 <-naRemoved %>% filter(WPLDIST == "Center")
  ## ggplot(aes(y=INCSAL,
  ##            x=YEARSUR,
  ##            col="blue"),
  ##        data=centerData)+geom_boxplot()
  ## summary(centerData)
```
When looking at Haifa, the mean income falls by around 500 NIS to 6944,
50% of incomes are between 2084 and 9448 NIS.
Mean income in the Center is around 500 NIS more than the national mean, and more than 1000
50% of the non-wealthy in Center earn between 2582 and 11,000 NIS. The first quartile is 500
Open new dataSet, Household Expenditure Survey 2013, in file f457.

```r
judeaData2014<-  naRemoved %>% filter(WPLDIST == "Judea / Samaria")
## ggplot(aes(y=INCSAL,
##            x=YEARSUR,
##            col="orange"
##                                                    ),
##        data=judeaData)+geom_boxplot()
  summary(judeaData)
```

```
```

```
## Error in summary(judeaData): object 'judeaData' not found
```

```r
areas <- c("Haifa","Center","Judea / Samaria")
file457 <- spss.get("/Users/AbuDavid/school/census/f457/f457ind.por", use.value.labels=TRUE)
```

```
## Warning in `levels<-`(`*tmp*`, value = if (nl == nL) as.character(labels)
## else paste0(labels, : duplicated levels in factors are deprecated
```

```r
subSetInd2013<-dplyr::select(file457, YEARSUR, WPLDIST,INCSAL)
 richRemoved2013<-subSetInd2013[subSetInd2013$INCSAL<40000,]
naRemoved2013 <-richRemoved2013 %>% filter(complete.cases(richRemoved2013))
judeaData2013<-  naRemoved2013%>% filter(WPLDIST == "Judea / Samaria")
haifaData2013<-  naRemoved2013 %>% filter(WPLDIST == "Haifa")
centerData2013<- naRemoved2013 %>% filter(WPLDIST == "Center")
national2013<-naRemoved2013
summary(national2013)
```

```
##     YEARSUR                WPLDIST         INCSAL
##  Min.   :2013   Jerusalem      :1300   Min.   :    0
##  1st Qu.:2013   North          :1857   1st Qu.: 2468
##  Median :2013   Haifa          :1668   Median : 5690
##  Mean   :2013   Center         :3335   Mean   : 7319
##  3rd Qu.:2013   Tel-Aviv       :2987   3rd Qu.: 9837
##  Max.   :2013   Gush Dan       :1582   Max.   :39967
##                 Judea / Samaria: 315
```

```r
summary(judeaData2013)
```

```
##     YEARSUR                WPLDIST        INCSAL
##  Min.   :2013   Jerusalem      :  0   Min.   :    0
##  1st Qu.:2013   North          :  0   1st Qu.:  725
##  Median :2013   Haifa          :  0   Median : 4899
##  Mean   :2013   Center         :  0   Mean   : 5977
##  3rd Qu.:2013   Tel-Aviv       :  0   3rd Qu.: 8425
```

```
##  Max.   :2013   Gush Dan       :  0   Max.   :35162
##                 Judea / Samaria:315
```

```r
summary(haifaData2013)
```

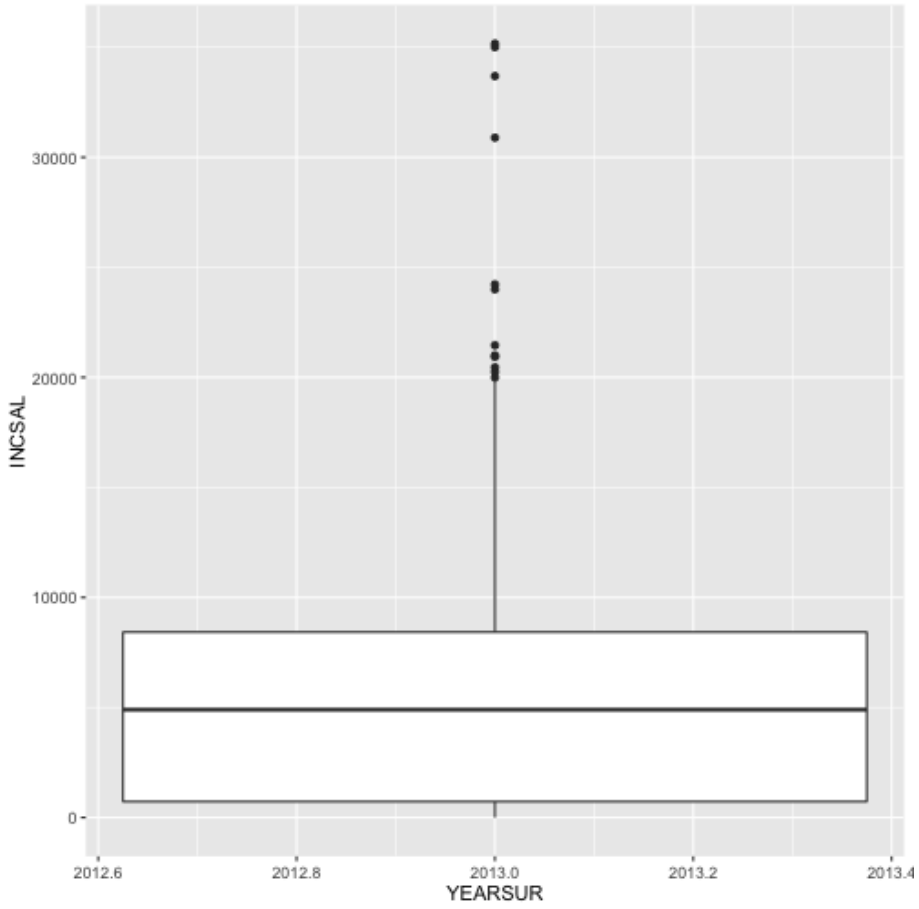
```
##     YEARSUR                WPLDIST         INCSAL
##  Min.   :2013   Jerusalem      :   0   Min.   :    0
##  1st Qu.:2013   North          :   0   1st Qu.: 2086
##  Median :2013   Haifa          :1668   Median : 5584
##  Mean   :2013   Center         :   0   Mean   : 7129
##  3rd Qu.:2013   Tel-Aviv       :   0   3rd Qu.: 9496
##  Max.   :2013   Gush Dan       :   0   Max.   :39938
##                 Judea / Samaria:   0
```

```r
summary(centerData2013)
```

```
##     YEARSUR                WPLDIST         INCSAL
##  Min.   :2013   Jerusalem      :   0   Min.   :    0
##  1st Qu.:2013   North          :   0   1st Qu.: 2500
##  Median :2013   Haifa          :   0   Median : 6024
##  Mean   :2013   Center         :3335   Mean   : 8040
##  3rd Qu.:2013   Tel-Aviv       :   0   3rd Qu.:11368
##  Max.   :2013   Gush Dan       :   0   Max.   :39967
##                 Judea / Samaria:   0
```

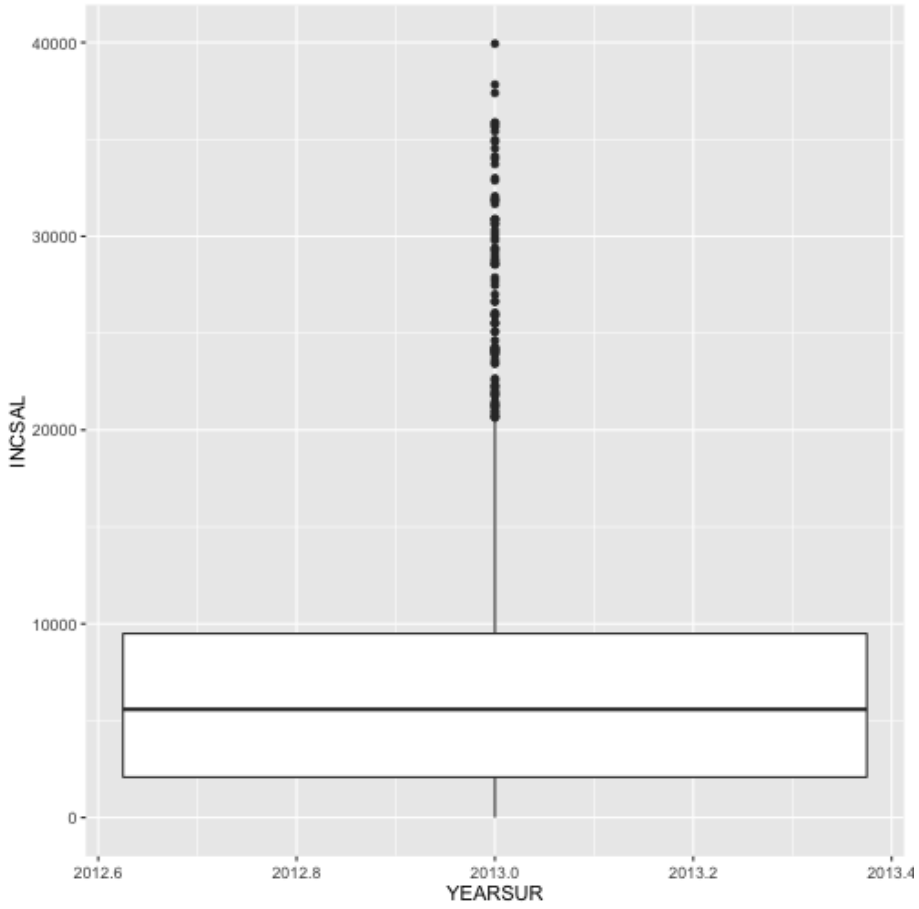
```
ggplot(aes(y=INCSAL,
           x=YEARSUR),
  data=judeaData2013)+geom_boxplot()
```

```
## Don't know how to automatically pick scale for object of type labelled/integer. Defaultin
## Don't know how to automatically pick scale for object of type labelled/integer. Defaultin
```



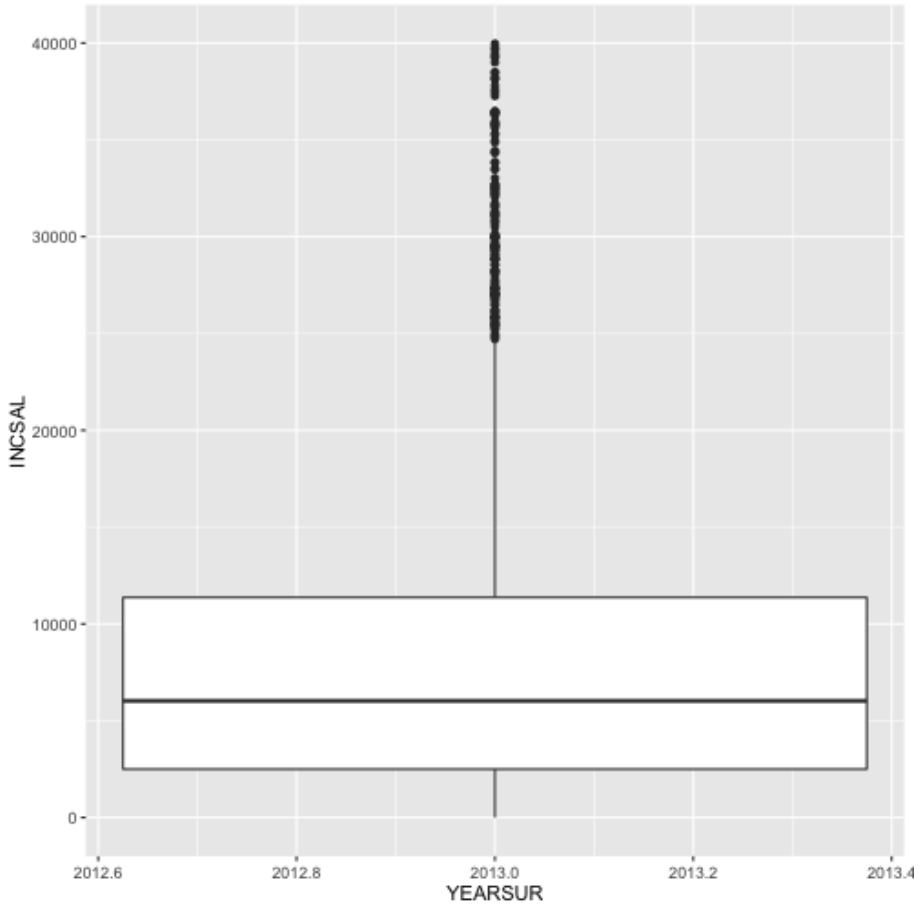

```
ggplot(aes(y=INCSAL,
           x=YEARSUR
                      ),
       data=haifaData2013)+geom_boxplot()
```

```
## Don't know how to automatically pick scale for object of type labelled/integer. Defaultin
## Don't know how to automatically pick scale for object of type labelled/integer. Defaultin
```




```
ggplot(aes(y=INCSAL,
           x=YEARSUR
                      ),
       data=centerData2013)+geom_boxplot()
```

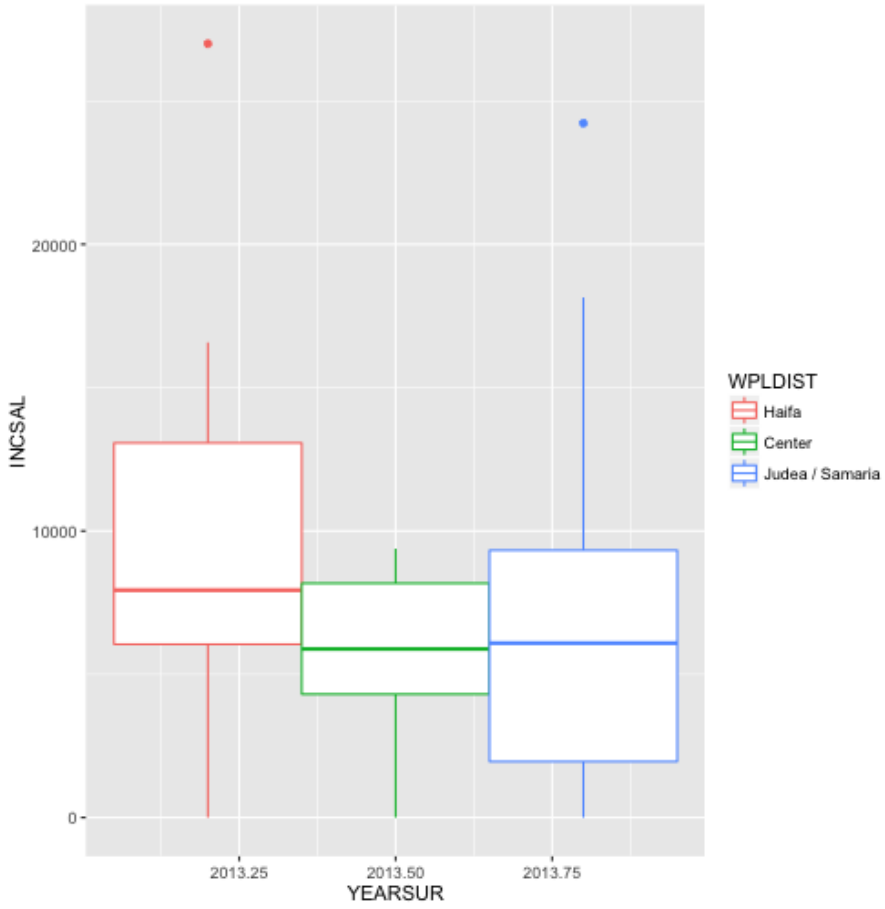
```
## Don't know how to automatically pick scale for object of type labelled/integer. Defaultin
## Don't know how to automatically pick scale for object of type labelled/integer. Defaultin
```




```
test1 <- head(centerData2013)
test2 <- head(haifaData2013)
test3 <- head(judeaData2013)
test6 <- head(centerData2014)
test4 <- head(haifaData2014)
test5 <- head(judeaData2014)
test <- rbind(test1, test2, test3, test4, test5, test6)

ggplot(aes(y=INCSAL,
           x=YEARSUR,
           col=WPLDIST
                      ),
       data=test)+geom_boxplot()
```

```
## Don't know how to automatically pick scale for object of type labelled/integer. Defaultin
## Don't know how to automatically pick scale for object of type labelled/integer. Defaultin
```




```
#
# summary(test$INCSAL)
#
# mean(test1$YEARSUR)
# mean(test6$YEARSUR)
#
#
```