Technology Assessment

Ignatius Menzies

5 June 2019

```
mean(boot_slopes_06_13$p_value)
```

```
## [1] 1.321209e-06
```

```
mean(boot_slopes_06_13$adj_r_square)
```

```
## [1] 0.04404138
```

```
mean(boot_slopes_06_13$slope)
```

```
## [1] -0.004113458
```

```
mean(boot_slopes_06_13$intercept)
```

```
## [1] 0.001744715
```

```
summary(boot_slopes_06_13)
```

```
##     p_value           adj_r_square         slope          
##  Min.   :5.000e-11   Min.   :0.02280   Min.   :-0.005328  
##  1st Qu.:3.076e-08   1st Qu.:0.03859   1st Qu.:-0.004365  
##  Median :1.473e-07   Median :0.04370   Median :-0.004106  
##  Mean   :1.321e-06   Mean   :0.04404   Mean   :-0.004113  
##  3rd Qu.:6.324e-07   3rd Qu.:0.04927   3rd Qu.:-0.003861  
##  Max.   :1.798e-04   Max.   :0.07248   Max.   :-0.002940  
##    intercept        
##  Min.   :0.001174   
##  1st Qu.:0.001629   
##  Median :0.001743   
##  Mean   :0.001745   
##  3rd Qu.:0.001862   
##  Max.   :0.002324
```

```
# plot(census_prob$probability, census_prob$perc_difference_06_13)

# census_prob[order(-perc_difference_06_13),]

# outlier_values <- boxplot.stats(census_prob$perc_difference_06_13)$out  # outlier values.
# boxplot(census_prob$perc_difference_06_13, main="Percent difference between censuses", boxwex=0.1)
# mtext(paste("Outliers: ", paste(outlier_values, collapse=", ")), cex=0.6)

mean(boot_slopes_13_18$p_value)
```

```
## [1] 0.02678061
```

```r
mean(boot_slopes_13_18$adj_r_square)
```

```
## [1] 0.007525663
```

```r
mean(boot_slopes_13_18$slope)
```

```
## [1] -0.001507014
```

```r
mean(boot_slopes_13_18$intercept)
```

```
## [1] 0.0004689579
```

```r
summary(boot_slopes_13_18)
```

```
##     p_value           adj_r_square           slope
##  Min.   :0.0001106   Min.   :-5.399e-05   Min.   :-0.002419
##  1st Qu.:0.0053984   1st Qu.: 5.200e-03   1st Qu.:-0.001708
##  Median :0.0136151   Median : 7.267e-03   Median :-0.001514
##  Mean   :0.0267806   Mean   : 7.526e-03   Mean   :-0.001507
##  3rd Qu.:0.0317581   3rd Qu.: 9.612e-03   3rd Qu.:-0.001308
##  Max.   :0.3869852   Max.   : 2.030e-02   Max.   :-0.000537
##    intercept
##  Min.   :0.0000104
##  1st Qu.:0.0003773
##  Median :0.0004713
##  Mean   :0.0004690
##  3rd Qu.:0.0005641
##  Max.   :0.0008864
```

mean(boot_slopes_06_13rho)[1] − 0.253688$mean(boot_slopes_13_18$rho) [1] -0.08786565

sd(boot_slopes_06_13rho)[1]0.01707973$sd(boot_slopes_13_18$rho) [1] 0.0169028

summary(boot_slopes_06_13) p_value rho
Min. :0.000e+00 Min. :-0.3036
1st Qu.:0.000e+00 1st Qu.:-0.2652
Median :1.000e-14 Median :-0.2532
Mean :4.814e-11 Mean :-0.2537
3rd Qu.:1.600e-13 3rd Qu.:-0.2420
Max. :8.855e-08 Max. :-0.1767 summary(boot_slopes_13_18) p_value rho
Min. :0.0000078 Min. :-0.14655
1st Qu.:0.0025279 1st Qu.:-0.09929
Median :0.0078174 Median :-0.08750
Mean :0.0169185 Mean :-0.08787
3rd Qu.:0.0210387 3rd Qu.:-0.07594
Max. :0.3657425 Max. :-0.02981

2001 and 1996 census use different occupation classification (NZSCO99), plus 1996 data tables download links point to the wrong file :(