

Problem Set 3

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1. Download and install a latex distribution onto your home computer. You will need a different distribution depending on whether you have a mac or a pc. Using it will be optional in this problem set, but we will you start using it next week.
2. Complete your problem set in markdown. Have different section headings to make it look nicer, as below:

Immigrant attitudes

Values

In the data folder on the course website there is a file called `immigrantattitudes.RData`, which is a survey of immigrants and native Dutch residents on various issues. The codebook is also in that folder.

- Recode the variable that indicates the respondents country of origin with country names. Maybe with `car::recode`.

```
load("../data/immigrantattitudes.RData")
immdat$herkomstland <- car::recode(immdat$herkomstland,
                                   "0='Netherlands';1='Turkey';2='Morocco';
                                   3='Netherlands Antilles';4='Suriname';
                                   5='Indonesia';6='Other Western origin';
                                   7='Other non-Western origin'")
```

- Recode `ka13a109` with the value labels listed in the code book.

```
immdat$ka13a109 <- car::recode(immdat$ka13a109,
                               "1='maintaining law and order in the country';
                               2='increasing citizens political say';
                               3='preventing price increases';
                               4='protecting the freedom of speech'")
```

- Create a barplot that is faceted by country of origin, and plot the percentage that chose each value as their first choice. Make sure that there are no NAs. The following code will help, but make sure you understand what it is doing.

Also, rotate the x-labels so that they're not on top of each other. Change the theme using `ggthemes` or `ggthemr`. Give it a title and print it into your file. Have it echo your code as well.

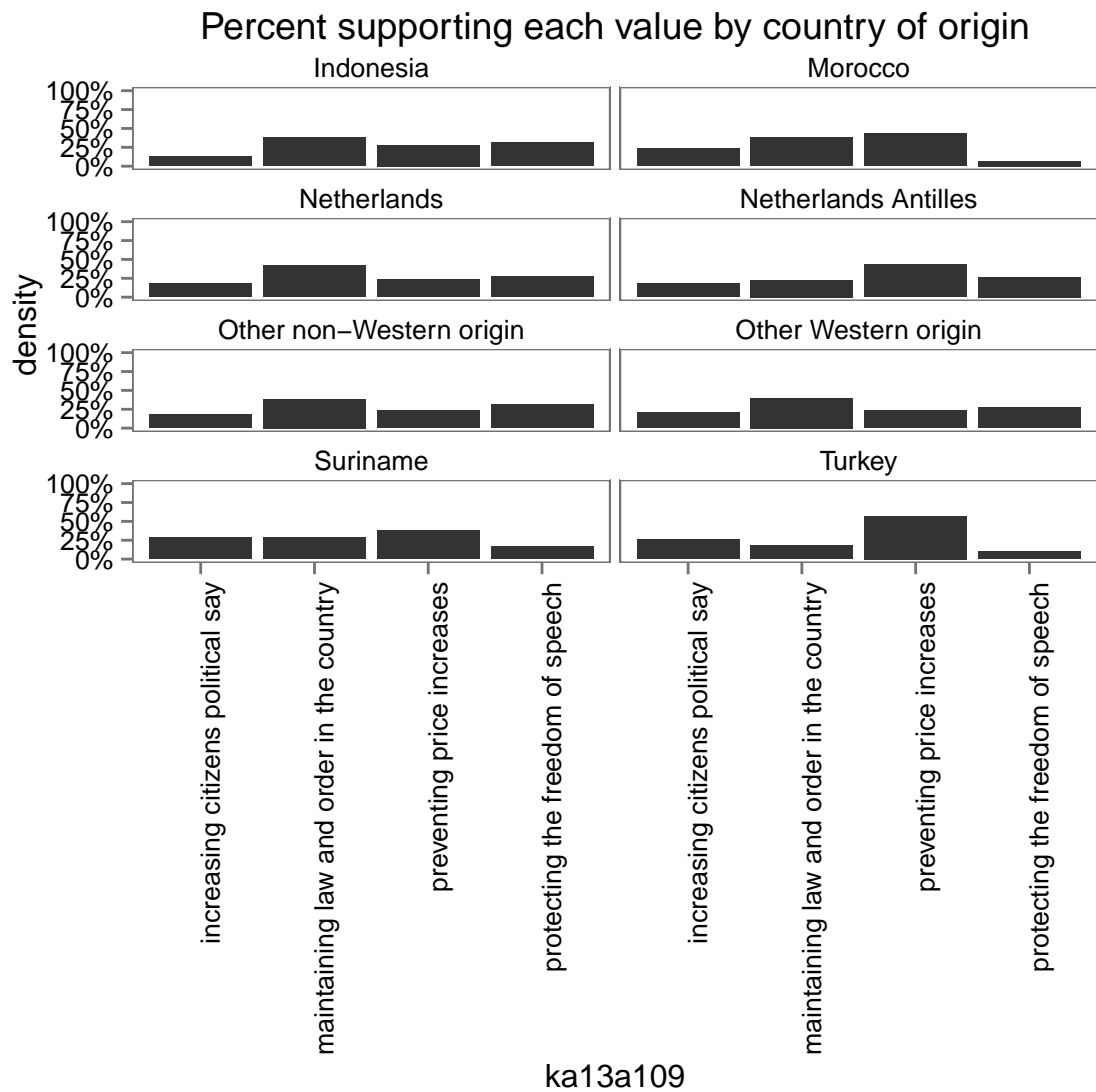
```
library(ggplot2)
```

```
## Warning: package 'ggplot2' was built under R version 3.1.3
```

```
library(scales)
nonas <- subset(immdat,!is.na(ka13a109) & !is.na(herkomstland))
library(ggthemes)
```

```
## Warning: package 'ggthemes' was built under R version 3.1.3
```

```
ggplot(nonas,aes(x=ka13a109))+geom_bar(aes(y = ..density..,group = herkomstland)) + scale_y_continuous
```



```
ggsave("immvalues.pdf")
```

```
## Saving 6 x 6 in image
```

Let's create some scales from some of the items about attitudes about the proper role of men and women using items: ka13a112 - ka13a118. Use rowMeans to create a scale that averages these items into one scale

that ranges from 1=Traditional values (woman at home) to 5 (Man at home). Therefore some of the items will need to be recoded.

- Let's look at the reliability of the scale with `psych::alpha`.
- Create an object that holds the results of that function.

```
relvals <- psych::alpha(immdat[,146:152])
```

- First take a look at `objectname$key` to see if anything needs to be reversed.

```
relvals$keys
```

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

```
immdat$values <- rowMeans(immdat[,146:152])
```

- Next, write up the results from `objectname$total`. In regular prose with inline R code, report the `std.alpha`, mean, and sd. Use the `round` function to limit the number of digits to two.

The standardized alpha of the scale was 0.75. The mean of this scale was 2.47 and the standard deviation was 0.65.

- Regress that attitude scale on immigrant group, i.e., *traditionalvalues* = *Turkish* + *Moroccan* + ... and create a new object

```
reg1 <- lm(values~herkomstland,immdat)
```

- Next regress net household income on demographic groups and create a new object

```
reg2 <- lm(nettohh_f~herkomstland,immdat)
```

- Next regress on feelings towards Geert Wilders, again create a new object.

```
reg3 <- lm(ka13a085~herkomstland,immdat)
```

- Finally, with a logit model, regress a variable that is coded 1 if a person voted in 2012, 0 otherwise on immigrant group, this time include a few other demographics, e.g., education, age.

```
immdat$voted <- car::recode(immdat$ka13a056,"1=1;else=0")
reg4 <- glm(voted~herkomstland+as.factor(oplzon)+leeftijd,immdat,family="binomial")
```

- Put all these regression objects into an `texreg::htmlreg` table. Label all the model names and covariate names, add a table.

```
library(texreg)
```

```
## Warning: package 'texreg' was built under R version 3.1.3
```

```
## Version: 1.35
## Date: 2015-04-25
## Author: Philip Leifeld (University of Konstanz)
##
## Please cite the JSS article in your publications -- see citation("texreg").
```

```
htmlreg(l = list(reg1,reg2,reg3,reg4),custom.coef.names = c("Intercept",levels(as.factor(immdat$herkoms
```

Statistical models

Model 1

Model 2

Model 3

Model 4

Intercept

2.39***

3584.18***

2.57***

-2.08***

(0.06)

(276.79)

(0.26)

(0.53)

Morocco

0.49***

-1966.07***

-1.84***

0.05

(0.10)

(450.64)

(0.44)

(0.38)

Netherlands

0.02

-329.29

0.16

0.42

(0.07)

(312.82)

(0.29)

(0.29)

Netherlands Antilles

0.02

-1188.43*

0.28

-0.42

(0.11)

(492.54)

(0.46)

(0.39)

Other non-Western origin

0.12

-707.00

-0.05

-0.15

(0.08)

(365.41)

(0.34)

(0.32)

Other Western origin

0.04

-517.10

0.06

-0.76**

(0.07)

(320.39)

(0.30)

(0.28)

Suriname

-0.09

-1262.15**

-0.68

-0.14

(0.10)

(473.45)

(0.44)

(0.39)
 Turkey
 0.44***
 -1673.55***
 -1.57***
 -0.52
 (0.10)
 (470.61)
 (0.42)
 (0.37)
 vmbo
 0.79*
 (0.39)
 havo
 0.77
 (0.41)
 mbo
 1.29***
 (0.39)
 hbo
 1.65***
 (0.39)
 wo
 1.91***
 (0.40)
 other
 0.67
 (0.52)
 none
 -0.23
 (0.72)
 Age
 0.04***
 (0.00)
 R2
 0.05

0.03
0.04
Adj. R2
0.04
0.02
0.04
Num. obs.
1277
1145
1172
1280
RMSE
0.64
2822.67
2.61
AIC
1371.26
BIC
1453.73
Log Likelihood
-669.63
Deviance
1339.26
$p < 0.001, p < 0.01, p < 0.05$

- Finally, write up the results of the table as you would in an article. Use inline r code to extract coefficients, standard errors, and p-values.