Report for statisticians

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Introduction

This is the overall report for the analysis on the European Value Study (EVS) from 2017 which is a survey research program on how Europeans think about family, work, religion, politics, and society. We are mainly interested in Enropeans thoughts on two questions:

- 1. When a mother works for pay, do Europeans think the children suffer?
- 2. When jobs are scarce, do Europeans think employers should give priority to local people over immigrants?

```
library(haven)
EVS = read_sav("../data/EVS_data_cleaned.sav")
```

Descriptives of variables

In the following table, the variables are:

- 1. v72 represents the first question of interest (1-strongly agree, 2-agree, 3-disagree, or 4-strongly disagree)
- 2. v80 represents the second question of interest (1-strongly agree, 2-agree, 3-neither agree nor disagree, 4-disagree, or 5-strongly disagree)
- 3. sex (1-male or 2-female)
- 4. age (years)
- 5. education (1-lower, 2-medium, or 3-higher)

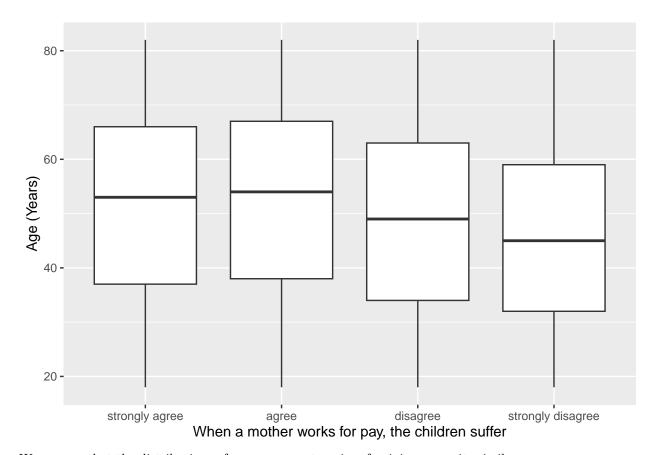
```
library(memisc)
library(pander)
pander(summary(EVS[,-which(names(EVS)=="country")]))
```

v72	v80	sex	age	education
Min. :1.000	Min. :1.000	Min. :1.000	Min. :18.00	Min. :1.000
1st Qu.:2.000	1st Qu.:1.000	1st Qu.:1.000	1st Qu.:35.00	1st Qu.:2.000
Median $:3.000$	Median $:2.000$	Median $:2.000$	Median $:50.00$	Median $:2.000$
Mean $:2.713$	Mean $:2.313$	Mean $:1.558$	Mean $:49.57$	Mean $:2.139$
3rd Qu.:3.000	3rd Qu.:3.000	3rd Qu.:2.000	3rd Qu.:64.00	3rd Qu.:3.000
Max. $:4.000$	Max. $:5.000$	Max. $:2.000$	Max. :82.00	Max. $:3.000$

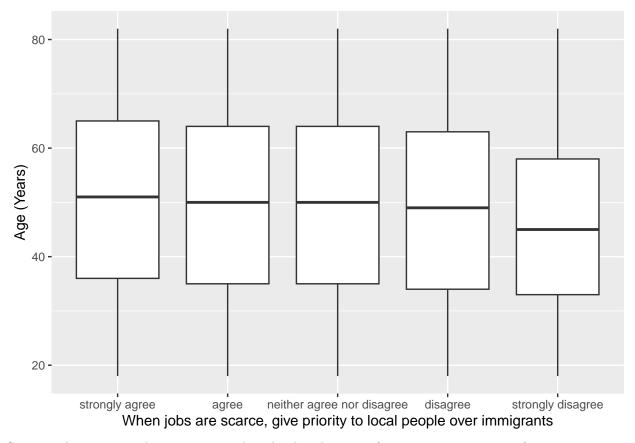
Graphs

```
library(ggplot2)

ggplot(EVS, aes(as.factor(v72), age)) +
   geom_boxplot() +
   labs(x = "When a mother works for pay, the children suffer", y = "Age (Years)") +
   scale_x_discrete(labels = c("strongly agree", "agree", "disagree", "strongly disagree"))
```



We can see that the distributions of age among categories of opinion are quite similar.



Same as the previous plot, we can see that the distributions of age among categories of opinion are quite similar.

Regression models

```
model_v72 = lm(v72 ~ age + sqrt(age) + sex + as.factor(education), data = EVS)
model_v80 = lm(v80 ~ age + sqrt(age) + sex + as.factor(education), data = EVS)
pander(summary(model_v72))
```

	Estimate	Std. Error	t value	$\Pr(> t)$
(Intercept)	2.664	0.09775	27.25	1.897e-162
age	-0.004774	0.002203	-2.167	0.03023
$\operatorname{sqrt}(\operatorname{age})$	-0.001149	0.02976	-0.03861	0.9692
\mathbf{sex}	0.06448	0.007257	8.886	6.537e-19
${f as.factor(education)2}$	0.1233	0.009852	12.51	7.325e-36
as.factor(education)3	0.4012	0.01046	38.36	7.574e-318

Table 3: Fitting linear model: v72 ~ age + sqrt(age) + sex + as.factor(education)

Observations	Residual Std. Error	R^2	Adjusted \mathbb{R}^2
56755	0.8576	0.04769	0.04761

pander(summary(model_v80))

	Estimate	Std. Error	t value	$\Pr(> t)$
(Intercept)	2.375	0.1434	16.56	1.878e-61
age	-0.003823	0.003232	-1.183	0.2369
$\operatorname{sqrt}(\operatorname{age})$	0.006788	0.04367	0.1554	0.8765
\mathbf{sex}	-0.03151	0.01065	-2.959	0.003084
as.factor(education)2	-0.03504	0.01446	-2.424	0.01536
as.factor(education)3	0.4238	0.01535	27.61	9.812e-167

Table 5: Fitting linear model: v80 ~ age + sqrt(age) + sex + as.factor(education)

Observations	Residual Std. Error	R^2	Adjusted \mathbb{R}^2
56755	1.258	0.03124	0.03115