

POLS 500c: Problem Set # 3

The dataset `Obama.dta` is a subset of the 2008 American National Election Survey. We will use it to examine attitudes toward Barack Obama, using the feeling thermometer `obama`.

```
> # Setup
> require(foreign)
> obama <- read.dta("Obama.dta")
> var.labels <- attr(obama,"var.labels")
> data.key <- data.frame(var.name=names(obama),var.labels)
> data.key
```

	var.name	var.labels
1	obama	Obama feeling thermometer
2	age	Years of age
3	income	Household income, \$000s
4	educ	Years of education
5	female	Female
6	black	R self-identifies as black
7	dem	R self-identifies as Democrat
8	rep	R self-identifies as Republican

1. Suppose we hypothesize that a respondent's income affects her or his attitudes toward Obama, that those with higher incomes will express cooler feelings toward him. Controlling for age, education, gender, race, and partisanship, is this hypothesis supported? How do you know?

```
> m1 <- lm(obama ~ income + age + educ + female + black + dem, data=obama)
> summary(m1)
```

Call:

```
lm(formula = obama ~ income + age + educ + female + black + dem,
    data = obama)
```

Residuals:

	Min	1Q	Median	3Q	Max
	-75.753	-10.723	2.022	13.417	60.959

Coefficients:

	Estimate	Std. Error	t value	Pr(> t)
(Intercept)	59.88812	3.36830	17.780	< 2e-16 ***
income	-0.05560	0.01064	-5.224	1.95e-07 ***
age	-0.07801	0.03102	-2.515	0.012 *
educ	-0.10574	0.21809	-0.485	0.628

```
female      4.19919    1.03235    4.068 4.95e-05 ***
black      17.96267    1.26724   14.175 < 2e-16 ***
dem       18.87175    1.10102   17.140 < 2e-16 ***
---
```

```
Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
```

```
Residual standard error: 21.8 on 1851 degrees of freedom
(465 observations deleted due to missingness)
```

```
Multiple R-squared:  0.3306,      Adjusted R-squared:  0.3284
```

```
F-statistic: 152.3 on 6 and 1851 DF,  p-value: < 2.2e-16
```

2. Suppose we think Democrats' feelings toward Obama will be less influenced by their incomes than others' feelings are. Is there support for this conditional hypothesis? How do you know?

>

I am thinking that we are supposed to interact Dem*Income and use the same control variables as answer 2. What do you guys think about this?

3. Does income have a statistically significant effect on the feelings toward Obama of those who aren't Democrats? On the feelings of Democrats? Report the estimated effect and p -value for each.

>

4. Suppose we were really more interested in how being a Democrat affects feelings towards Obama. What effect does income have on this effect? Graph your answer and insert the graph in your L^AT_EX file.

>