ESM 204 Assignment 3

Jeremy Knox, Sara Orofino

5/15/2019

1. Linear Probability Model

Create a linear probility model that predicts a respondent's probability of voting "yes" on the ballot based on their age, income, NEP score, the program's risk reduction, and cost of the program to that respondent.

Regression Model:
$Logodds(Voting\ Yes) = 0.1197 + 0.0204(Age\ to\ 30) - 0.0201(Age\ to\ 40) + 0.01(Age\ to\ 50) - 0.0162(Age\ to\ 60) + 0.0088(Income\ One\ Percent) + 0.0027(Income\ Poor) + 0.0075(Income\ Rich) + 0.0468(Income\ Very\ Rich) + 0.0159(NEP) - 0.0011(Bid) + 7 \times 10^{-4}(Risk\ Reduction)$

Coefficient Interpretation:
Age:
- to 30:
- to 40:
- to 50:
- to 60:

Income:
- One Percent:
- Poor:
- Rich:
- Very Rich:

NEP:
Bid:
Risk:

2. Value of Prevented Whale Deaths

3. Estimated Willingness to Pay for a Vessel Speed Reduction Program

a.Choose three participants at random

Using a random number generator select three participants from the 500 total participants.
- 383
- 451
- 498

```
# Randomly select three integers between 1 and 500 without replacement

sample(1:500, 3, replace = FALSE)
```

```
## [1] 389  36 437
```

```
# Outcome - 451, 498, 383
```