

12 - Nominal and Ordinal Regression

Note Title

11/8/2011

Today - Homework & Next homework
- Quiz & Next quiz

Chapter 9
p 281-304

- Nominal Dependent Variables
- Ordinal Dependent Variables

Homework

* Focus on the dependent variable
Then look @ indep variables

① t-test

- log transform

Other options:

- GLM Gaussian Log link
- GLM Gamma inverse link

2 Style A interpretation

- GLM Gaussian log link
- GLM Gamma inverse link

Style B interpretation

- GLM Gaussian identity link

3

GLM Gaussian log link

GLM Gamma inverse link

4

GLM Binomial logit link

other links? do them & compare AIC

Multinomial Regression

- a.k.a. nominal variable regression

def nominal variable: A variable that can take on values where the values are discrete and have no intrinsic order to them.

Example

Vote

Rep Dem Indep Abstain

$$\frac{\text{Prob Republican Vote}}{\text{Prob Not Repub Vote}} \quad ; \quad \frac{P[\text{Dem Vote}]}{P[\text{Not Dem Vote}]}$$

Note that the denominators are different

⇒ results not directly comparable

— Logit regression answers a question different from nominal regression.

Logit: What is the probability Bob voted Republican?

Nominal: Which party is Bob most likely to vote for?

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