

Name _____

Psychology 516
Applied Multivariate Analysis
Homework 12
Due November 27, 2018

The file, Set_10.csv, contains the following data from the job search study: number of publications while in graduate school, length of time to complete the Ph.D. (in years), sex of candidate (1 = men, 2 = women), quality of the degree-granting institution (1 = top-tier research institution, 2 = middle-tier research institution, and 3 = lower-tier research institution), and the outcome of the job search (1 = no interviews, 2 = interviewed but not hired, 3 = hired).

Conduct a multinomial logistic regression on these data, predicting job search outcome from the other variables. Use the “no interviews” outcome as the reference for the dependent variable. Use the lower-tier category as the reference for the quality of the degree-granting institution predictor. Use women as the reference for the sex of candidate predictor.

Answer the following questions.

1. When the “interviewed but not hired” outcome is compared to the reference outcome:
 - a. What are the significant predictors?
 - b. How should the significant predictors be interpreted?
2. When the “hired” outcome is compared to the reference outcome:
 - a. What are the significant predictors?
 - b. How should the significant predictors be interpreted?
3. What is the probability that a man will be hired if he completes his degree in 5 years at a third-tier institution and enters the job market with 5 publications?
4. How do his odds of getting hired change if he gets 2 more publications but takes a year longer to finish?