Florida State University College of Criminology and Criminal Justice
PhD. Comprehensive Examination in Research Methods and Statistics, Fall 2016
Day Two of the Exam, November 3, 2016 – 8:30am to 12:45pm

INSTRUCTIONS

There are two sections (III and IV) to this first of two sessions of this exam. Answer one question from each of the two sections. Please notify the proctor when you are finished. Please note: Once a student takes possession of the examination at the start of the exam period, this constitutes an attempt at taking the exam, regardless of whether the student completes the exam, hands in the any answers, or remains for the full exam period.

III. STATISTICS

1. Four of the most important assumptions of the OLS regression model are concerned with the disturbance or error term. For each of these assumptions, (a) explain the assumption, (b) identify the consequences of violating it, (c) describe how we can detect its violation, and (d) provide some suggestions for how we might avoid or remedy the problem?

2. Criminologists are increasingly dealing with the issue of "selection effects," or what is sometimes referred to as unobserved heterogeneity. Explain the selection effect issue, and describe several different methodological approaches that researchers have used to tackle it, using examples from empirical literature. Discuss the benefits and limitations of these different approaches. Finally, indicate which you would ultimately use to address selection bias in your own research, and why.

IV. DATA INTERPRETATION

3. Interpret the findings of the attached article by Piquero, Bouffard, Piquero, and Craig. This means that you should tell what the results mean with respect to the goals of the researchers and what they were trying to find out, just as if you were writing the Results and Discussion/Conclusion sections of the journal article. Do not merely repeat in words what is already shown in numbers in the tables. What conclusions would follow from the results? What problems with the methods might undermine or weaken these conclusions?

4. Interpret the findings of the attached article by Watkins and Taylor. This means that you should tell what the results mean with respect to the goals of the researchers and what they were trying to find out, just as if you were writing the Results and Discussion/Conclusion sections of the journal article. Do not merely repeat in words what is already shown in numbers in the tables. What conclusions would follow from the results? What problems with the methods might undermine or weaken these conclusions?