Professor: Rob Wassmer, Ph.D.

E-Mail: rwassme@csus.edu

Home Page: http://www.csus.edu/indiv/w/wassmerr

Class Times and Dates: All students will meet from 8 am to 5 pm on Saturday, January 31 and February 7. I will then assign each student into either Cohort One or Cohort Two. These cohorts will meet independently on every other Monday from February 9 to May 18 according to the schedule below. To make up 6 hours of unscheduled class time, I intend that you spend two of the Monday class periods you have off during the semester in the Sacramento State Library gathering and reading empirical research related to the literature review you will write for this course.

<table>
<thead>
<tr>
<th>Cohort One</th>
<th>Cohort Two</th>
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Class Location: Saturday classes meet in 2007 Mendocino. Monday classes meet in 1011 Mariposa.

Office: Room 3037, Tahoe Hall

Office Phone: (916) 278 - 6304

Office Hours: Monday, 3:30 - 5:30 p.m., at lunch during Saturday classes, and by appointment if necessary.
Texts:

Please purchase all texts and review them before our first meeting. I expect you to do the assigned reading before class. Bring the appropriate text(s) to class on the dates covered.

(1) An SPSS Companion to Political Analysis, Third Edition, Philip H. Pollock, CQ Press (labeled as POL); available for purchase at CSUS Bookstore or click to buy on web at Amazon.com (click on the previous link to purchase);

(2) Using Econometrics: A Practical Guide, 5th Edition, A.H. Studenmund; Addison, Wesley, Longman (labeled as STUD); available for purchase at CSUS Bookstore or click to buy on web at Amazon.com (click on the previous link to purchase);

(3) SPSS Base 16.0 (Graduate Pack): Applications Guide and CD-ROM; available at the Sacramento State Bookstore in their computer department for installation on your personal computer. If you chose to use computers in university labs that have it installed, you will not need to purchase it.

(4) Writing Literature Reviews; Any Edition, Jose Galvin, Pyrczak Publishing; purchase any edition of this book used from Amazon.com (click on the previous link to purchase) if you do not have access to a copy of it;

Supplement:

The companion web site http://www.aw-bc.com/studenmund for the Studenmund book provides study resources and data sets used as examples throughout the text.

Prerequisites:

You must have taken PPA 220A and an undergraduate statistics course prior to enrolling in this course. If you took the statistics course awhile back, please review the material in Studenmund’s Chapter 16 before our first meeting. I will not specifically review this material in class. You will also need some familiarity with the use of an Excel spreadsheet. If you are weak in this area, I offer two tutorial web links under the reading assignments for meeting one.

Data Sources:

The primary product that you will produce from this class is a regression-based research paper. Such a paper requires a data set with 100 or more observations on a dependent variable and the various explanatory variables that you expect to cause variation in the dependent variable. I will provide two data sets of this type to you. One uses the academic performance index (API) scores for California public K-12 schools (available in raw form at http://www.cde.ca.gov/ta/ac/ap/apidatafiles.asp) and the other the sales price and characteristics of homes sold in the Sacramento Area. The Pollock book also comes with a CD that contains various data sets you could use in your paper. The table below includes other sources of data to consider. You should chose the data
set based upon what you want to research. Now is a good time to try and tie this into a thesis topic.

<table>
<thead>
<tr>
<th>Data Type</th>
<th>Web Link/Source</th>
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<tbody>
<tr>
<td>California Field Polls</td>
<td><a href="http://gort.ucsd.edu/calpol/">http://gort.ucsd.edu/calpol/</a></td>
</tr>
<tr>
<td>Various California Data</td>
<td><a href="http://countingcalifornia.cdlib.org/title/castat.html">http://countingcalifornia.cdlib.org/title/castat.html</a></td>
</tr>
<tr>
<td>Public Policy Institute of California Data</td>
<td><a href="http://www.ppic.org/main/datadepot.asp">http://www.ppic.org/main/datadepot.asp</a></td>
</tr>
<tr>
<td>Places to Find Economic Data</td>
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<tr>
<td></td>
<td><a href="http://www.nber.org/data/">http://www.nber.org/data/</a></td>
</tr>
<tr>
<td>Data on the Net</td>
<td><a href="http://3stages.org/idata/">http://3stages.org/idata/</a></td>
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</tbody>
</table>

**WebCT:**

You must have an account that allows access to the World Wide Web and SacCT. On SacCT I will post an outline of material covered in each meeting and a description of the homework that is due at the following meeting. These will be available, at the latest, the Friday before the class meets. All your grades will be accessible through WebCT. Information on SacCT is at https://online.csus.edu/.

**Learning Objectives:**

At the end of PPA 207, a student attending all meetings will:

(1) Have a working knowledge of where to begin to gather data for policy analysis.

(2) Possess the ability to accumulate data and do basic descriptive analysis of it using the Excel spreadsheet program and a more advanced statistical program (SPSS).

(3) Understand the importance of causal modeling before undertaking a statistical analysis.

(4) Understand the appropriate use of bivariate and multivariate statistical techniques to identify causal relationships between variables.

(5) Have a working knowledge of regression analysis and the value it offers to answer policy questions.

(6) Be able to put together a research paper that describes a policy problem and undertakes a regression based research study to help offer a solution.
The purpose of this course is to expose the Master’s student of public policy and urban
land development to some of the empirical methods used in the analysis and
formulation of government policies. These include descriptive statistics, types and
sources of data, distributions of data, regression analysis and interpretation, and some
of the basic issues/problems that can arise in regression analysis. My goal is not to turn
you into an expert on statistics and regression analysis, but I do wish to provide you
with a working knowledge of the most basic applied techniques in these areas. Even if
you never expect to apply these techniques directly in your anticipated career path, it is
very likely you will be required to interpret and comment on reports that contain policy
analyses based on these techniques.

**Method:**

Pedagogy includes in-class meetings and discussions, required assignments out of the
Studenmund and Pollock books, and assignments using SPSS and the provided data
sets. Each week (except for the first Saturday meeting) students will be required to
complete written answers to HW questions. We will go over assignments at the meeting
that they are due.

Each class meeting will begin with discussion and then collection of the previous week’s
HW assignment. Only the student who completed the assignment can turn it in (my
method of attendance). After every 90 minutes of class time, we will take a 15-minute
break. During the two Saturday meetings, we will break from around noon until 1 p.m.
for lunch. I will eat lunch in the Union Food Court and encourage others to join me and
ask class related questions.

In-class time will be devoted to covering the use of the Excel and SPSS computer
packages using classroom computers. It is also most important that you have access to
these packages outside of the classroom so you get hands-on experience with the
empirical methods discussed in this class. Computer assignments and statistical
exercises will be due every class period except the first. If possible, the optimal situation
is to install Excel the purchased SPSS software on a home or work Windows
compatible personal computer. If this is not possible, you should use the computers
provided at the Sacramento State labs.

**Schedule:**

Each student will attend two Saturday meetings and seven Monday meetings. By
3/16/2009, each of you will also need to visit my office or call me for a private 15 minute
discussion of the plan for your paper and the progress you have made on it.

There will be no midterm exam. Instead, I ask that you turn in by 3/23/2009 a polished
draft of the 5 – 6 page literature review that is part of your paper. Some details on this
are below, more will be forthcoming in class. I will also use the homework exercises
that are due at the start of each class meeting (except the first) to judge your progress
throughout the semester. The final is a paper that is due at the latest on 5/18/2009.

The readings out of Studenmund (STUD) and Pollock (POL), and others are below.
Meeting 1 – Saturday, January 31 (All Must Attend)

POL Getting Started

Learning Excel (review if you feel weak in using a spreadsheet) - http://www.usd.edu/trio/tut/excel or http://www.baycongroup.com/el0.htm

POL 1 – Introduction to SPSS
POL 2 – Descriptive Statistics
POL 3 – Transforming Variables
POL 4 – Making Comparisons

Meeting 2 - February 7 (All Must Attend)

POL 5 – Making Controlled Comparisons
POL 6 – Making Inferences about Sample Means
POL 7 – Chi-Square and Measures of Association
STUD 1 – An Overview of Regression Analysis

Meeting 3 - February 9 or 16

STUD 2 – Ordinary Least Squares
Review of the Galvin technique of writing a literature review and for searching literature databases at Sacramento State – http://db.lib.csus.edu/databases.

Meeting 4 – February 23 or March 2

STUD 3 – Learning to Use Regression Analysis
POL 8 – Correlation and Linear Regression

Meeting 5 – March 9 or March 16

STUD 4 – The Classical Model


Meeting 6 – March 23 or April 6

STUD 5 – Hypothesis Testing


Meeting 7 – April 13 or April 20
STUD 6 – Choosing the Independent Variables
STUD 11 – Choosing a Functional Form

Meeting 8 – April 27 or May 4
STUD 8 – Multicolinearity
STUD 9 – Serial Correlation

Meeting 9 – April 27 or May 4
STUD 10 - Heteroskedasticity
STUD 11 - Regression User's Handbook

Meeting 10 – May 11 or May 18
STUD 13 – Dummy Dependent Variables
POL 9 – Dummy Dependent Variable Techniques

Paper:

In order to receive a grade in this course, each student is required to complete a regression-based paper on the topic of his/her choosing (subject to my approval). Unless you use one of the two datasets provided, you will need to gather data for this paper on your own. Below I offer details on what needs to be included in the paper.

Grades:
You are required to participate in class discussions and complete the homework assigned. Nine homework assignments are required – there is none due the first meeting. I will assign a grade to each of your written answers to homework and an overall average derived.

The polished draft of your literature review accounts for 20 percent of your grade, the final paper accounts for 30 percent, the average of all homework assignments for 40 percent, and your participation in class is the remaining 10 percent. You must complete the final paper to pass the class.

Scoring for Homework:

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<thead>
<tr>
<th>Percent Correct</th>
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<th>Number Grade</th>
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<tbody>
<tr>
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<tr>
<td>93-89</td>
<td>A</td>
<td>4.0</td>
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<tr>
<td>88-84</td>
<td>A-</td>
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<td>83-79</td>
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<td>78-74</td>
<td>B</td>
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<tr>
<td>73-69</td>
<td>B-</td>
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<tr>
<td>68-64</td>
<td>C+</td>
<td>2.3</td>
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<tr>
<td>63-59</td>
<td>C</td>
<td>2.0</td>
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<tr>
<td>58-54</td>
<td>C-</td>
<td>1.7</td>
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<tr>
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</tbody>
</table>
PPA 207 CHECKLIST FOR FINAL PAPER

Professor Rob Wassmer, Public Policy and Administration, Sacramento State

Your grade on the final paper comes from how well you satisfy the items on this list. You must turn in paper by May 18. Each day after this date it is late and will result in a one lower grade deduction.

OVERALL

• There is a cover page with title, your name, and date handed in. ___
• The seven major sections in your paper are marked by roman numerals and heading titles. ___
• The first paragraph of each major section contains an introductory paragraph that briefly describes what is in it. ___
• Sub-sections within your paper contain headings. ___
• There are no spelling errors. ___
• There are no grammatical errors. ___
• Transitions between paragraphs are smooth. ___
• One inch margins, 11 font, and double-spaced. ___
• Includes a list of references at end of paper in APA style. ___
• For all style issues use the APA style given in Hacker’s A Pocket Style Manual. APA style is also described at http://owl.english.purdue.edu/handouts/research/r_apa.html . ___
• The audience for your paper is an educated layperson who works in public policy and explanations are appropriate. ___

I. EXECUTIVE SUMMARY (1 – 2 pages)

• Follows the suggestions offered in “Executive Summaries Complete the Report,” http://www.csun.edu/~vcecn006/summary.html ___

II. INTRODUCTION (2 - 3 pages)

• The first paragraph clearly contains your research question. What are you trying to discover through regression analysis? What is the dependent variable? What is (are) the key explanatory variable(s)? ___
• The remainder of your introduction motivates the reader to continue by placing your question in the context of current events, and public policy and studies. ___
• Cite at least two newspaper or magazine articles that point out the populist importance of determining the impact of your key explanatory variable(s) on the dependent variable. Use search engines like http://www.sacbee.com/ , http://www.latimes.com/ , and/or http://www.sfgate.com/ . ___
• The last paragraph contains a description of what is contained in the remaining five sections. A one-sentence description for each section is appropriate. ___
III. LITERATURE REVIEW (5 - 6 pages)

- It must contain a description of at least at least seven other regression-based research in the area of your policy topic. You can find this research by searching the Sacramento State’s Library’s Web Page of literature bases – http://library.csus.edu/databases. I would suggest using ECONLIT and EBSCOhost as two literature sources that will have regression studies in them. Search using keywords that include "regression" and your topic.
- Divide your literature review into at least three themes (or subsections).

IV. MODEL (2 - 3 pages)

- Offer a motivation for your choice of a dependent variable. How does it relate to your research question?
- Include a description of the factors expected to cause variation in your dependent variable. The factors should first be listed as broad causes (say causes A, B, C, etc.) and the specific variables which represent broad causes {A = f(x1, x2, x3), B = f(x4, x5), C = f (x6, x7, x8), etc.}
- What variables do you use to specifically proxy for each of the broad causes? Justify your choices.
- Write the regression model to be estimated as: Y = f(x1, x2, x3, .......); substituting your specifics for Y, x1, etc.
- Do not use acronyms to describe x1, x2, etc., instead write out a short 3 to 5 word description.
- What is the expected direction of effect for each of the specific causes (positive, negative, uncertain)? Justify with a verbal cause and effect description.

V. DATA (2 - 3 pages)

- Create a Table 1 that provides description and source for each variable used. (No direct SPSS results allowed for any tables. Create tables in your own form and be consistent throughout. Place title on all tables.)
- Create a Table 2 that provides variable name, mean, standard deviation, maximum, and minimum.
- Create a Table 3 that provides simple correlation coefficients between all independent variables.
- Describe in paragraph form what is in Tables 1 – 3.

VI. REGRESSION ANALYSIS (3 - 4 pages)

- List your regression results in table form. (No direct SPSS results allowed.)
- First, give your starting OLS results with no corrections. If possible, this should begin with the log-log form. If not possible, begin with log-linear, or as a last choice the linear-linear form.
- If possible, try running log-linear and linear-linear specifications. If fit better than your first choice, report it and use it in remaining corrections.
Discuss how you checked for multicollinearity. Was it an issue, and if it was, how you corrected for it? Be sure to include VIF values. 

Did you try including location or other dummies where appropriate? Is it appropriate to try any interaction terms? Discuss your findings.

Check for heteroskedasticity in your regression by presenting and describing the Park Test. If heteroskedasticity is present in your regression analysis, provide the appropriately corrected results.

If your dependent variable is dichotomous (0 or 1), report both OLS and Logit regression results. Describe what both mean and which of the two is more appropriate.

Is endogeneity an issue for any of your casual variables? If not justify why you believe so. If it is, tell why and describe how you would correct using 2SLS. Report these results. (Extra Credit)

VII. CONCLUSION (2-3 pages)

Considering your final regression result (with all the appropriate corrections), turn regression coefficients into 90% confidence intervals and equivalent elasticities and report them. (Or the appropriate measure if using logit.)

Discuss which of your coefficients are significant at 90 and 99 percent confidence interval.

For your significant coefficients, how do they compare to the expected signs you described in model section? If findings are different, give a reason why it may be the case.

For your significant coefficients, describe the relevance of variable based upon the magnitude of its elasticity.

Interpret the R-Squared.

Evaluate your research question. What does your regression results indicate as an answer to it?

What are the specific policy lessons learned from your results? Revisit the policy questions you raised in your introduction.

Suggest improvements that you would undertake if you had the time. Is there potential here for a Master’s thesis?