SEMINARS IN APPLIED RESEARCH METHODS

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INTRODUCTORY ESSAY

This 4th year undergraduate course, in the Economics Department, is required for all graduating students majoring in Economics. The course provides students with an opportunity to undertake a major research project and to present the findings as an oral presentation and in a written paper. Fundamentally, students learn how to present an effective economic argument, through researching a topic related to gender, population, or health, and are required to write individual research papers. The course emphasizes conceptualization, modeling, and empirical skills that are widely used in economic analyses, and which must be applied to research data. Most students who take this course go on to pursue graduate programs or enter the work force, as the skills they learn will be assets in a future career, and the research papers can serve as writing samples for applications to graduate programs.

The prerequisite for this course ensures that they have a good understanding of statistical and econometric methods and are apt at using statistical software for data analysis. Thus, the course is focused on helping students develop further research skills for (1) their learned techniques of data analysis, (2) expanding their knowledge of issues related to development and poverty, (3) using econometric modeling, and (4) conducting a literature search on different topics. Since some students may need to review some of the topics, YouTube review videos will be available for students to use on their own time, covering statistical programs and software, data analysis, and resources for finding literature (Trier, 2006).

Most students come into the course excited about applying their skills learned from four years of undergraduate work to a real issue, through forming a research question and answering it by analyzing data. After choosing a topic of interest and learning various research methods, students can access publicly available databases (i.e., demographic health surveys (DHS) and secondary datasets) that deal with policies and a host of socioeconomic variables. The primary survey questions are also available to make use of the data. Students will also have access to other data sources from the World Health Organization and UNICEF to complement the DHS data. Although a list of databases from other organizations and information for accessing them is provided, because the primary focus is on research methods, no time is lost in students having to find their own data.

The course is 16 weeks, and the class meets 3 times a week for 45 minutes. Only a few of the beginning sessions are in lecture format, where students learn recent theory and empirical evidence related to various topics. Subsequently, a few of the sessions use an interactive class setting, where students use STATA (econometric software) to formalize their research question. At the end of the term, students make their final class presentations.
From the beginning, interactions between the professor and other classmates are encouraged. To research social issues, students must have an understanding of human behavior, culture, and socioeconomic foundations. Peer discussions, which often generate positive externalities, can lead to a greater understanding of the costs and benefits of various policies and behaviors (Van Den Berg, Admiraal, & Pilot, 2006). While the interaction between the professor and students is mostly at the individual level, peer discussions is at the individual level, in small group settings, or in large groups.

The class also has a Facebook page for students from previous semesters and from the current sessions, to interact and offer assistance. Use of social media that students have previously been using and accustomed to provides a cost and free effective medium for discussion and interaction (Lockyer, Dawson, & Heathcote, 2010). I visit the Facebook page weekly to answer questions, post new research articles, and highlight events that might be helpful (e.g., writing classes, offers of free proofreading at the English institute, and scholarly presentations in different departments, etc.).

With the aim of keeping students motivated and on track, ongoing feedback will be provided to students as they carry out their research projects. Thus, each step in the research will be assessed and relevant advice will be offered. All of the assignments and submissions build on each other, and will be used for compiling a final report, which creates a trajectory for the final research paper at the end of the semester. Rubrics for assessment are indicated at the beginning of the course, so that students will have a good understanding of the expectations for their research analyses.

Given a constraint on time, a choice had to be made between allocating time to in-class lectures, and individual meetings with the students. My past experience reveals that unless students are required to use the learned material within a short span of time - lectures are quickly forgotten or at times ignored. This thought is also reinforced by the viewing statistics from my YouTube channel: YouTube STATA tutorials were viewed only 1 to 5 days prior to proposals due dates regardless of when these videos were posted or announced in class. Therefore, YouTube videos of required material were posted (STATA and Econometrics), which allowed students to view the lectures whenever they needed the material, and this allowed me to allocate a greater number of office hours dealing with individual questions.

Another decision I struggled with was the assessment of class participation/discussion: how to grade students anxious about public speaking or who are in general quieter and shy. Having a place to post comments and participate without the public eye - should be helpful and encourage involvement from the shy student (Larson, B.E. & Keiper, T.A., 2002). Thus, student led interaction on the class Facebook page has been assigned a grade, resolving to some extent my concern with assessing participation. The idea of a Facebook page came from my students in the first year undergraduate class - who after having created a Facebook group for the class invited me to join the group to help them with some of the problems that they could not figure out themselves.
SYLLABUS: GENDER, POPULATION AND HEALTH

Facebook page

GOALS

My goal is to help you develop the skills to carry out an original research paper. You will acquire these skills through learning by doing. During the course of the year you will write a substantial, original research paper on a topic chosen and researched by you in consultation with the instructor.

You will be expected to take a very active role: students have to choose a research topic, analyze the appropriate data, present the results, and give constructive comments on classmates’ presentations. In your research paper you would be required to carry out regression analysis to answer your testable hypothesis. This course emphasizes conceptual, modeling, and empirical skills widely used in economic analysis and its application to the data from developing world. I would appreciate hearing your goals for the course.

COURSE RELEVANCE – HOW COULD YOU NOT BE INTERESTED?

There is hardly any form of learning that is more satisfying than researching, debating a topic and then corroborating your hypothesis with empirical evidence.

COURSE/CLASS STRUCTURE

The first 3 sessions would be in a lecture format learning the recent theory and empirical evidence related to various topics in the field. The next few sessions would be in an interactive class setting where students will discuss and formalize their research proposal; you will be responsible for presenting material and for leading class discussions. The instructor will act as moderator, organizer, guide, and inquisitor.

Research involves the following steps:

1. Finding a topic
2. Reviewing the literature
3. Understanding your data - available variables, limitations, etc.
4. Developing a research strategy-developing the regression model (Proposal)
5. Preparing the final research paper.

I will provide guidance and direction through all the above steps, but this shall be your research project. It is up to you to take charge, set your directions, and finish the paper in time. Your success will solely depend on effort and skill that you devote to your project.

PREREQUISITES FOR THIS COURSE

Econ 325 (Probability and Statistics for Economics) and Econ 326 (Methods of Empirical Research in Economics) must be successfully completed. Econ 490 is restricted to Economics majors and combined majors in Economics, in their final academic session.
WHAT YOU NEED TO DO TO LEARN SUCCESSFULLY

• Research is a collective enterprise. I will encourage you to interact formally and informally with your classmates so as to generate positive externalities. In the first class you’ll be assigned to a group – this will form your support system for the semester.
• Don’t hesitate to approach your instructor for help. By far, the most important and least utilized resource available to students is the course instructor. Use office hours. Come prepared with questions or thoughts written down.

THE DATA

National family health survey will be used for this stream. Please print it out.

You will also need to read the following survey questions to understand the data.

THEME AND TOPICS

The course would require you to form a researchable question from topics like gender differences in decision-making, division of labor within the family, and public policies that affect the status and health of women and children. We will draw from various development and health literature from Africa, Asia and Latin America.

DHS SURVEY TOPICS

Information is available for the following topics, among others:

1. Anemia - prevalence of anemia, iron supplementation
2. Child Health - vaccinations, childhood illness, newborn care
3. Domestic Violence (module) - prevalence of domestic violence and consequences of violence
4. Education - literacy, attendance, highest level achieved
5. Environmental Health - water, sanitation, cooking fuel
6. Family Planning - knowledge and use of contraceptives
7. Female Genital Cutting (module) - prevalence of and attitudes about female genital cutting
8. Fertility and Fertility Preferences - total fertility rate, desired family size, marriage and sexual activity
9. Gender/Domestic Violence - history of domestic violence, frequency and consequences of violence
10. HIV/AIDS Knowledge, Attitudes, and Behavior - knowledge of HIV prevention, misconceptions, stigma, higher-risk sexual behavior, previous HIV testing
11. HIV Prevalence - Prevalence of HIV by demographic and behavioral characteristics
12. Household and Respondent Characteristics - electricity, housing quality, possessions, education and school attendance, age, sex, employment
13. Infant and Child Mortality - infant and child mortality rates
14. Malaria - ownership and use of mosquito nets, prevalence and treatment of fever, indoor residual spraying for mosquitoes
15. Maternal Health - antenatal, delivery and postnatal care
16. Maternal Mortality (module) - maternal mortality ratio
17. Nutrition - child feeding practices, vitamin supplementation, anthropometry, anemia, salt iodization
18. Tobacco Use - tobacco use, exposure to second-hand smoke
19. Wealth - division of households into 5 wealth quintiles to show relationship between wealth, population and health indicators
20. Women's Empowerment - gender attitudes, women’s decision making power, education and employment of men vs. women

ASSESSMENT: GRADING AND ASSIGNMENTS

<table>
<thead>
<tr>
<th>GRADING</th>
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<tr>
<td>5%</td>
<td>Topic proposal and oral description of research interest</td>
</tr>
<tr>
<td>10%</td>
<td>Brief literature survey and work plan (Assignment 1)</td>
</tr>
<tr>
<td>15%</td>
<td>(5%) Class participation + (10%) Contribution on discussion board/pages.</td>
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WEBSITES

<table>
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<tr>
<th>Class related and Topics related</th>
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<tbody>
<tr>
<td>10%</td>
<td>Final proposals</td>
</tr>
<tr>
<td>25%</td>
<td>Presentations: Discussion of the draft paper (10% Peer review (by groups)+ 15% Instructor review)</td>
</tr>
<tr>
<td>35%</td>
<td>Final paper</td>
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- Late submissions will automatically receive a mark of zero, no exceptions.
- Class participation, measured both through attendance and quality of in-class contributions, will be an important part of the final evaluation. Therefore, adequate preparation for class is essential. Assigned material must be read before coming to class in order to be prepared adequately.

CLASS ANNOUNCEMENTS & PLAGIARISM

Turnitin will be used to provide important information about quizzes, teaching assistants and discussion sections. Please read the UBC’S plagiarism policy and understand the consequences before submission of your final paper.

Reminders for Deadlines will be emailed to your university emails 2 days prior to a deadline.

CLASSROOM PROCEDURES

ATTENDANCE

Attendance and class participation are a necessity. More than two (2) unexcused absences will result in a lowered grade for each future absence. Excused absences must be discussed with the professor prior to the absence, and all work must be made up immediately. I will reserve the right to lower a student’s grade because of excessive absences and/or lack of preparation. If you miss more than two meetings in a semester – you will be penalized up to 10% of your final grade. (Over and above – class participation)
Syllabus 2/2 (2013)  

LAPTOPS/ IPODS/IPADS ETC

Most welcome - only for class-related activities

PHONE DISTURBANCES

You should turn your cell phones, text massagers, etc. off and participate.

PARTICIPATION

Active learning is important for you to keep up with the material and for you to better understand the subject. Classes will be a combination of discussions and presentations.

The University accommodates students with disabilities who have registered with the Disability Resource Centre. The University also accommodates students whose religious obligations conflict with attendance or scheduled tests or exams. Please let the instructor know in advance if you will require any accommodation on these grounds. Other absences for varsity athletics, family obligations or other similar commitments are not part of University policy and students should not assume that they would be accommodated. If you have a pressing issue that conflict with an exam, you should discuss this with your instructor as soon as possible. Refer to the UBC calendar for details of academic concession.

COURSE MATERIAL / TEXTS

REQUIRED

1. The software package, STATA, will be used in this course. STATA is found on computers in the B111 and C160 computer labs.
2. Youtube videos on STATA, data analysis, UBC library resources, and DHS data
3. The most Important video

OPTIONAL


Getting Started with STATA for Windows. (This is a Stata Manual), available on Stata Websites

STATA: To purchase, go to www.stata.com and click on “order stata”. Under “new purchase” select “educational purchases”. Under “grad plans” select “Canada”.

TENTATIVE SCHEDULE

<table>
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<tr>
<th>Date</th>
<th>Class</th>
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<tbody>
<tr>
<td>January 4th</td>
<td>Introductory Lecture.</td>
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<tr>
<td>January 9th</td>
<td>How to get started/ What is research?</td>
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<tr>
<td>January 11th</td>
<td>Methods - Literature search/Review.</td>
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<tr>
<td>Date</td>
<td>Class</td>
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<tr>
<td>January 13th, 2012</td>
<td>Discussion of relevant topics.</td>
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<tr>
<td>January 18th, 2011</td>
<td>Discussion of the database in class.</td>
</tr>
<tr>
<td>January 25th, 27th and 29th</td>
<td>Assignment #1 due in class and oral presentation.</td>
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<tr>
<td>February 10th - 14th</td>
<td>1 to 1 meetings in my office.</td>
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<tr>
<td>February 18th</td>
<td>Research proposals due for everyone.</td>
</tr>
<tr>
<td>February 8 - February 29th</td>
<td>Commence and engage in independent research and prepare necessary content for later presentation to class.</td>
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<tr>
<td>February 20th – February 24th</td>
<td>Midterm break – Research activities ongoing.</td>
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<tr>
<td>February 21st-March 14</td>
<td>Students, prepare for presentation of their work; synthesize, design, and write content.</td>
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<tr>
<td>March 19-April 4th</td>
<td>Presentations to the class.</td>
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<tr>
<td>April 4th</td>
<td>Last day of class. Research essays are due.</td>
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**STEP 1: UNDERSTANDING THE SURVEY/DATA**

This will form the [database for your paper](http://www.measuredhs.com/) for your paper. Gives you information on the data (survey) and a summary of the various topics. See also [Survey types](#).

- Anemia - prevalence of anemia, iron supplementation
- Child Health - vaccinations, childhood illness, newborn care
- Domestic Violence (module) - prevalence of domestic violence and consequences of violence
- Education - literacy, attendance, highest level achieved
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- Malaria - ownership and use of mosquito nets, prevalence and treatment of fever, indoor residual spraying for mosquitoes
Syllabus


Maternal Health - antenatal, delivery and postnatal care
Maternal Mortality (module)- maternal mortality ratio
Nutrition - child feeding practices, vitamin supplementation, anthropometry, anemia, salt iodization
Tobacco Use - tobacco use, exposure to second-hand smoke
Wealth - division of households into 5 wealth quintiles to show relationship between wealth, population and health indicators
Women's Empowerment - gender attitudes, women’s decision making power, education and employment of men vs. women

This assignment will help familiarize you with the topics for this course.

Pick a topic that interests you from journal articles

STATISTICS AND GRAPHS

StatCompiler on the DHS website

STEP 2 - LITERATURE SURVEY. ASSIGNMENT 1

(Total Points-63)

This assignment will help familiarize you with the topics for this course.

Pick a topic that interests you from journal articles

Look through all the articles within the topic and choose one article.

Carry out a literature search on the topic and find one article each from the following 3 sources (on your chosen topic that is similar in focus to the above article.) Sources: Scholar Google and Social Science index;

Write a report that consists of a Literature Review, 3 questions that you would want to answer given access to the data, and a conclusion.

1. Literature Review. Discuss the articles (One paragraph and no more than 150 words.)
   - What is the major policy or question analyzed by the paper?
   - What is the major result found by the author(s)?
2. Conclusion – Discuss the topic in general (from the information you gathered from all of the 4 papers that you discuss).
   - One paragraph and no more than 150 words.
3. Write down briefly – 3 questions that you would like to answer. (No more than150 words)
4. Reference List: Write down the title of the article, author/authors, name of the journal and year of publication (all references must be in the same format)

You need to create a PDF file and submit the paper at: www.turnitin.com

Format: The paper must be in 11 point Times New Roman font with 1-inch margins and 1.5 line space.

1. Your name, student id, Turnitin id, and section. (2 points)
2. Title. (topic name) (1 point)
3. Literature review/introduction. (4 paragraphs) (40 points)
4. Conclusion. (one paragraph) (10 points)
5. Questions. (3 questions) (6 points)
6. References. (4 points)

**STEP 3 - ASSIGNMENT 2**

Each answer is worth one point. (Total Points -15)

(2 points) - Data used ______________

- Follow the steps [shown in this video](#)
  1. Generate a variable called `age` for respondent’s (person who was interviewed, in this case it was a woman) current age. Generate a variable called `age_h` for respondent’s husband or partner’s current age.
  2. Generate a variable `edu` for respondent’s educational attainment
  3. Generate a variable `edu_h` for respondent’s husband’s educational attainment. Follow the steps [shown in this video](#)
  4. Generate a variable `wlth` for the wealth index.
  5. Generate a variable `say_hlth` that takes the value “1” if the respondent has a say in her own health (accessing health care for herself) and “0” if she has no say in her own health.
  6. Generate a variable work that takes the value “1” if the respondent is currently working or has worked and “0” if she has never worked.
  7. Generate a binary variable `anemia` that measures the severity of anemia in the respondent. Binary variables take only two values.
  8. Generate a binary variable `anemic` that takes the value “0” if the respondent’s haemoglobin levels are greater than or equal to 7.0g/dl and “1” if the respondent’s levels are less than 7.0g/dl

1. How many observations are there in the database ______________

2. Age characteristic of your sample
   a. Mean age of the sample group ________
   b. Maximum age ________

3. What percentage of respondents live in the urban area ___________

4. What percentage of women has a say in accessing health care for them ________.

5. What are the correlations between the following variables?
   a. Correlation: `wlth` & `edu` ______________
   b. Correlation: `say_hlth` & `edu` ______________
   c. Correlation: `say_hlth` & `edu_h` ______________

6. Is the correlation between `wlth` and `edu` significant at 5percent significance level? Yes/No

*Use the following command in STATA to run a regression*

For woman’s autonomy: ‘`say_hlth`’ is the dependent variable and the others are independent variables.
reg say_hlth age edu edu_h wth urban work

For child’s health
reg birthweight age edu edu_h wth urban work anemia

7. Regression Results:
   a. The R square for your regression ____________
   b. What is the impact of husband’s education on woman’s autonomy?
      Positive / negative
   c. What is the coefficient on urban ____________?
   d. Which variables are significant at (5%) in determining child’s health?
      i. None
      ii. List____________________________

30 % points deducted for using the wrong database.

STEP 4- GUIDELINES FOR DISCUSSION OF RESEARCH PROPOSAL.

ASSIGNMENT 3

(Total Points - 50)

Submission: Only hard copy - to the Econ department - 9th floor office. Please write your instructor’s name

Format: 10 Times New Roman, single line space, 1-inch margin all around, Length - 3-4 pages.

Proposal should only have the following 6 parts and in that order please

1. Student Name ______Student ID _____ section____ Instructor Name____
2. Title
3. Introduction: The one Question you are asking and why it is important (max: 300 words)
4. Regression equation of the form:
   • Women Empowerment=f(education, age, wealth, number of children…….)
   • Where:
   • Women empowerment is measured as a binary variable – if she has the right to access health care
   • Education is a category variable – primary, secondary...
   • Wealth is an index
   • Total number of children

Important: (Make sure all the above variables exist in the database – check in the questionnaire/survey that you have access to)

5. Review of your bibliography paper.
6. You have to show at least one table of statistics for your outcome variable (dependent - Left hand side variable) you have to use the data given to you. Also explain how you created the outcome variable.
STEP 5 - FINAL PAPER. ASSIGNMENT 4 - FINAL PAPER

(Total Points - 100)

MAKE THE DHS PAPER– YOUR BASE.

The final paper must be in the range of 12 to 15 pages long, including references, tables and figures. The paper must be in 11 point Times New Roman font with 1-inch margins and 1.5-line space.

Parts:

(5 point) Title of the paper

(25 points) Introduction (Your question and why is it interesting + literature review)

State your question in the introduction. You can use graphs, charts or tables to discuss why your question is interesting- to motivate the reader, and make the topic more interesting. Graphs should be from your data.

(30 points) Data and Methodology

• Which data are you using?
• Example: Women Empowerment=f(education, age, wealth…….)
• Explain all the variables – what they represent, how you created them, why are they important.

(10 points) Results (regression results)

(10 points) Presentation of Results (table that is sufficient to understand the variables)

(10 points) Discussion: A brief discussion of your results.

(5 points) Conclusions (just 4 to 5 sentences)

(5 points) References: Well-written and alphabetically arranged (by author’s name) reference list.

Submission: Final Paper needs to be submitted ON turn tin (website)

You need to submit the following in the econ main office (Buch 9th floor)

1. Hard copy of the paper
2. Do file with your commands
3. Hard copy of the DHS article that you have used.

SUGGESTIONS

• You will need to create a “Do file” in STATA with all the commands that you use. (no results or tables just the commands you used to create variables)

• Excessive errors in basic composition will result in a lowered grade. So, please proof read your paper for accuracy and readability. Your ideas should be supported with accurate and reliable evidence. The readers of your papers should walk away feeling as though they have learned something.
REFERENCES


