

THE UNIVERSITY OF MICHIGAN

Department of Economics

ECONOMICS 495-02 Prof. Frank P. Stafford [fstaffor@umich.edu](mailto:fstaffor@umich.edu)

Fall 2009/10 Tu-Th 10:00 - 11:30

LOCATION: Room 171 Lorch and Room 3269 ISR

(Institute for Social Research – 426 Thompson St. and 6<sup>th</sup> floor, Top of the I @ ISR)

Economic Analysis of Relational Panel Data

This seminar is open to all Junior and Senior Economics majors. The course carries credit for the writing requirement. The theme of the course is applying economic theory or exploratory hypotheses to the empirical study of economic and social behavior of individuals and the families in which they reside. The course will utilize data from the world's most comprehensive archive ever collected on a human population. This archive is on the web and is based on the Panel Study of Income Dynamics (PSID), a national, on-going, longitudinal study covering the years 1968-2009, with a Child Development Supplement in 1997 and again in 2002 and 2007/08. In 2005 and 2007/08 CDS children who had turned 18-19 were followed as they transitioned to adulthood (TA). The main study is sponsored by the National Science Foundation\* and the National Institutes of Health and is extensively documented at the website: <http://psidonline.isr.umich.edu/>

You can get an overview of the PSID by exploring 'Studies' <http://psidonline.isr.umich.edu/Studies.aspx>, 'Instructional Resources' <http://psidonline.isr.umich.edu/Guide/Tutorials/Default.aspx> - which includes several tutorials on how to create various types of analysis files from the Data Center, <http://psidonline/Data/>, and 'Data and Documentation' - click on 'Packaged Core Data, Documentation and Questionnaires' and then click on '2005' or '2007' and [HTML] for the most recent year. (Data collection and processing for 2007 is now complete and will be available this semester.) This latter on-line or pdf portrayal of the data collection application can be scrolled through to review the various topical contents of the PSID as of 2009. There are sections: A - housing, B/C and D/E - employment, G - income, W - wealth, P - pensions, H - health and health behavior, V - vehicle ownership, T - Philanthropy, .... There is also separate documentation of the 1997, 2002/03 and 2007/08 Child Development Supplement and Transition to Adulthood for 2005 and 2007 (TA) at <http://psidonline.isr.umich.edu/Guide/documents.aspx>. In the previous offerings many of the students found the CDS to be of special interest and learned a lot about what data folks refer to as relational files.

Recently we have finished some additional tutorials on how to study relationships across two and three generations - are the children with low birth weight more likely to have a mother or a grandmother who reported health problems in *prior or subsequent* years of

the PSID? Do those who grew up in owner occupied housing have a much greater chance of owning rather than renting when they are young adults? Or for young adults, how highly correlated is their income with that of their parents in 2007? Another theme is the inclusion of health measures and psychological measures in recent waves. Which young people are making their way through college? Did the housing market of their parents play a role?

Course materials will be handed out as we progress through the semester. Most resources will be provided electronically.

\* In 2000, PSID was designated as one of the 'Nifty Fifty', the 50 most interesting research projects in NSF history, 1950-2000.

The assignments for the course are:

#1. Preliminary work with and test exploration of a Tutorial based on a topic, 1-4. (10%)

#2. Initial project on a topic of your choice. (30%)

#3. Larger research paper. This may be an extension of #2 or a new theme depending on how the pilot project went. (40%)

#4. Seminar participation. (20%)

### WEEK Seminar Topic/Computer Activity/Your Work Assignment

WEEK 0: Sept. 7 - 10

Overview of the PSID and 495\_02; NEW ANALYSIS FILES for 2010

WEEK 1: Sept. 13 - 17

Test run of PSID resources Show up, think, discuss, + try data. Explore on-line resources and tutorials.

WEEK 2: Sept. 20 – 24

Relational data concepts Use of Data Center Start your analysis for #1

WEEK 3: Sept. 27 – Oct. 1

Relational data continued Review of computer – basic use of Excel and Stata

Work completing project #1

WEEK 4: Oct. 4 – 8

Discussion of Project #2 themes Data file strategies, e-mail proposed topics for #2

Start on identifying variables/subsets Complete a variable selection list and subsetting plan

Assignment #1 Turn in by 5:00 on Friday Oct. 8

WEEK 5: Oct. 11 – 15

Continue discussion of Project #1 Testing hypotheses Start work on #2

WEEK 6: Oct. – 18 – 22 (Fall Break Oct. 18-19) Meet Oct. 21

Continue discussion of Project #2 *TOPICS/OUTLINE*, Turn in by 5:00 on Friday Oct. 23

Writing interpretations Draft 1 of #2 *OUTLINES*

WEEK 7: Oct. 25 – 29

Work on Project #2 Discussion of #2 topics Outline of #2.

Continued comments on #2 methods or outlines.

WEEK 8: Nov. 1 - 5

Discussion of Project #2 Sharing ideas for developing #2 Partial drafts of #2

Individual review on the balance of the week (or all week).

WEEK 9: Nov. 8 - 12

Discussion of #2, *DRAFT* 1 of #2 Due Friday November 12 by 5:00.

WEEK 10: Nov. 15 - 19

Review of ideas in #2 and ideas for finalizing Project #3

WEEK 11: Nov. 23 - Thanksgiving Break starts Wednesday Nov. 24

Discussion of Project #2 results

WEEK 12: Nov. 29 – Dec. 3

Continued discussion of #2

WEEK 13: Dec. 9

Discussion of Research Methods, A Review and Reassessment

Individualized work and DRAFT of #3 due if feedback desired by the 13<sup>th</sup>.

WEEK 14: Classes end December 13

Individualized work, class meeting optional complete #3

**Turn in #3 on or before Thursday, December 16 at 5:00 P.M.**

TWENTY-SOMETHING SUGGESTIONS FOR #2 and #3

(Note for ideas you may just type in a keyword such as 'health insurance' [or 'medical insurance'] in the search box at this site: <http://psidonline.isr.umich.edu/Search/GoogleSearch.aspx> and get the places on the PSID website where 'health insurance' is mentioned. Or suppose you are wondering if the PSID ever collected information on religious denomination or on religious participation. Then you could go to <http://simba.isr.umich.edu/VS/s.aspx> and then type in 'relig' as the entry for the 'Search Text' box. If you choose data type such as 'PSID Individual', 'PSID Family' and 'CDS' the search will identify variables within those broad domains which have 'relig' in their label or code. If 'CDS and TA' is selected, this command will return a list of 182 variables, ranging from whether the child as of 1997 had ever attended a religious or other private school (instead of a public school) to many others. To see the codes and the nature of these variables simply click on the info image next to the variable name. In the case of the first item of the 182 you will see a code box with codes of whether the child ever attended a private or **religious** school: 1 = yes; 5 = no; 8 = DK (don't know); 9 = NA ('not ascertained' or refused to answer), and 0 = Inapplicable, the child was under school age as of 1997.

- Who gives to charity and for what purposes? Who volunteers? If one spouse does is the other more inclined to volunteer? [2001 is illustrated since it is in html later years are only in pdf's]. Is there a life cycle pattern to giving?

<ftp://ftp.isr.umich.edu/pub/src/psid/questionnaires/q2001.pdf#page=201>

- Does low income impact children's behavior? Tutorial #4 and #2.  
<http://psidonline.isr.umich.edu/Guide/tutorials/Default.aspx>

- Wealth dynamics, 1999-2007.  
<http://psidonline.isr.umich.edu/Publications/Papers/wealthcomp.pdf>
- Who owns SUV's?? Who shifted away from SUV ownership, 2003-2007?  
<ftp://ftp.isr.umich.edu/pub/src/psid/questionnaires/q2001.pdf#page=8>
- Economic costs (such as a lower wage rate) of health and personal appearance. Who are the smokers? How big the costs? Who drinks and smokes too much? Do tall men earn more? Tall women? Who has health insurance? Do smokers has lower coverage rates? Question H13 and on in  
<ftp://ftp.isr.umich.edu/pub/src/psid/questionnaires/q2001.pdf#page=136>
- Pensions and earnings. Do those with better pay also have better pensions? How likely are husbands and wives to both have pensions?  
<ftp://ftp.isr.umich.edu/pub/src/psid/questionnaires/q2001.pdf#page=136>
- Do unions get better pensions or health coverage for their members? See union membership in <ftp://ftp.isr.umich.edu/pub/src/psid/questionnaires/q2001.pdf#page=13>
- Who controls family spending for different purposes? Question W139 in  
<ftp://ftp.isr.umich.edu/pub/src/psid/questionnaires/q1999.pdf#page=132>
- Does work by moms lead to behavioral problems in young kids? Excessive TV time? Extension of work with Tutorial 4  
<http://psidonline.isr.umich.edu/Guide/tutorials/Default.aspx>
- Weighty matters. Health of parents/smoking by moms and children's birth weight. Tutorial 5B <http://psidonline.isr.umich.edu/Guide/tutorials/Default.aspx>
- Which men do their 'fair share' of routine housework? Extension of Tutorial #1 at <http://psidonline.isr.umich.edu/Guide/tutorials/Default.aspx>
- Who gained in real estate 1994 – 1999 and 1999 –2003, and who lost 2005-2007 in real estate or other asset categories? Who was 'under water' or behind in payments as of 2009/10?  
<http://psidonline.isr.umich.edu/Publications/Papers/FiveYearsOlder.pdf>
- Business value growth (family-owned) 1994-2007. [**S803** – VBUS(2007\$)]. Question W11 in Section W.
- Who holds a pension invested in stocks? Effects of risk tolerance. Click on Estimating Risk Tolerance at <http://psidonline.isr.umich.edu/data/Documentation/Cbks/Supp/rt.html>

- Over-borrowing and ‘chasing returns’ in housing, 2001-2005 and the crash in 2007-2009. Where did the refi money go? Shopping for a mortgage. Who looks where? Question A27f in <ftp://ftp.isr.umich.edu/pub/src/psid/questionnaires/q96.pdf#page=3>
- Work for extra hours at overtime rates or low marginal rates? Effects of asset holding? Select ‘Wage’ and ‘total annual work hours’ in the search feature – for, say, 2007 at the family level.
- Who are the health conscious? Nutritional knowledge at H51-53 at <ftp://ftp.isr.umich.edu/pub/src/psid/questionnaires/q1999.pdf#page=140>
- Wage cuts (or other adverse life events) and psychological distress. Wage rate growth 1999-2003 and 2003-2007. 1994-1999 Hours of work and Wages. Use ‘K-6’ and ‘Wage’ in the search option.
- Intergenerational well being goals/bequests. W129 – W144 in 2007 family level data.
- Idle time and behavior problems of American kids <http://psidonline.isr.umich.edu/Guide/tutorials/Default.aspx> and an overview of cool stuff in the Child Development Supplement. <http://psidonline.isr.umich.edu/Studies.aspx>
- Time diary codes for kids in CDS. <http://psidonline.isr.umich.edu/Guide/documents.aspx>

**COURSE GOALS:** The goals of the course are to teach critical analysis and interpretation of relational microeconomic panel data. As junior and senior Economics majors you have been well-trained in economic reasoning and hypothesis formulation. In this course you extend these skills in an active learning environment by formulating your own hypotheses about economic and social behavior. You will have guidance in using on-line access to the most comprehensive archive ever collected on a human population, the Panel Study of Income Dynamics.

The American economy can be understood by observing the families living in it, and over the last 41 years, 1968-2009, the Panel Study of Income Dynamics (PSID) has done just that. Originally designed to measure transitions into and out of poverty by following a national sample of 5,000 families, the study grew to about 8,500 families by the mid 1990’s. The research has broadened from the original focus on income, employment, and family living arrangements. Regular topics now include wealth, pension holdings, health and health care expenditures and charitable giving. Comprehensive information on young children age 0-12 living in the families was added in 1997. Recently (2007/08) we re-interviewed these families in the special child supplement to assess the family, school and neighborhood factors shaping their cognitive and emotional development. It is this ability to inform a wide range of topics which has led to PSID to have been designated one of the National Science Foundation’s ‘Nifty Fifty’, the 50 most interesting research projects in NSF’s 50<sup>th</sup> anniversary celebration in 2000.

**WRITING ASSIGNMENTS:** As you learn to use the PSID archive to formulate and test economic hypotheses, you will be required to develop writing skills. The approach will be to write a series of drafts. The first draft is in the form of a preliminary research statement. This is expanded and revised into a draft statement of the research progress. The final product is a further revised statement of motivation, hypotheses, data and methods used to test the hypotheses. This final draft is to include an interpretation with a conclusion and qualifications. There are three main writing assignments in this format. A shorter paper, a longer or main paper, and an extension of the longer paper or taking the earlier work in a somewhat different research direction.

Some of the more complex issues of relational data can be understood by reviewing Tutorial 4.

<http://psidonline.isr.umich.edu/Guide/tutorials/Default.aspx>

All writing assignments will be reviewed on the basis of both the economic content and the expositional quality of the draft.

**WRITING INSTRUCTION AND FACULTY ROLE:** In class we will examine examples of good writing both in the literature and by individual students. Students will be asked to circulate sections of the text they have written. Written comments will be provided on successive drafts. The professor will be able to do this and can have added office hours since the class is a seminar. Students can explore creating power points to summarize their research results.