ASSIGNMENT: ESTIMATING AND INTERPRETING A RECURSIVE MODEL

Due: Thursday May 1 5:30pm

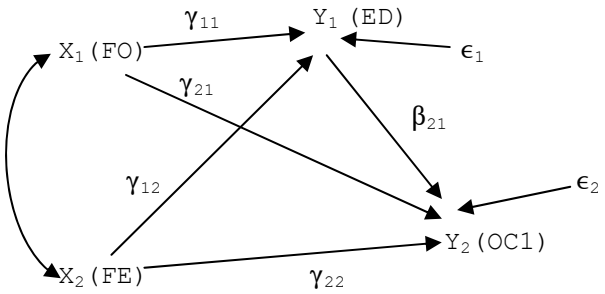
Consider the following observed sample moments (correlations, standard deviations, and means) for a random sample of 573 nonblack males in the U.S. between the ages of 20 and 65:

	FO X_1	FE X_2	ED Y_1	OC1 Y_2	
	1.000				23.73 SEI
	.599	1.000			4.14 YRS
ρ =	.443	.492	1.000		SD = 2.93 YRS
4 x 4	.409	.322	.642	1.000	4x1 24.15 SEI

FO = Father's Occupation; FE = Father's Education; ED = Son's Education; OC1 = Son's First Occupation (in Duncan SEI points). Use these sample moments to estimate the parameters of the following status attainment model in two equations:

$$Y_1 = \gamma_{11} X_1 + \gamma_{12} X_2 + \epsilon_1$$

$$Y_2 = \gamma_{21} X_1 + \gamma_{22} X_2 + \beta_{21} Y_1 + \epsilon_2$$



Complete the following tasks. Be concise!

1. Begin with a very brief conceptual discussion of the model, justifying its specification, and outlining briefly what the various effects can show.

2. Use LISREL 8 to estimate the parameters of the two equations in reduced and structural forms. This will be done in LAB on Mon-Tue. Place the results in a table (like the one shown at the end of Lecture 3 notes, page 11, including unstandardized and standardized coefficients). (Rather than reporting standard errors, simply place asterisks on coefficients to indicate the following: *p < .05, **p < .01, ***p < .001.)

3. Discuss the results, keeping substantive issues in mind. Try to present an overall story supported by specific coefficients. Be sure to discuss total, direct, and indirect effects of each predictor variable, and again give general substantive interpretations. (You might discuss each equation in turn.) Discuss the extent to which the effects of variables are mediated, and present tests of such mediation. Give substantive interpretations to these tests.

4. Draw some general substantive conclusions based on these results.

5. Complete Lab Assignment #2 to be assigned on April 22nd and turn it in with this assignment.