# STA 431s13 Quiz 9

1. (2 points) How many covariance structure equations are there in the Farm Manager Data? Your answer is a single number.

   45

2. (2 points) Your list file for the Farm Manager Data has a test of whether your model fits the data adequately.

   (a) Give the value of the test statistic. It is a number on your printout.

   26.9046

   (b) Give the degrees of freedom. It is a number on your printout.

   22

   (c) Give the $p$-value of the test. It is a number (or range of numbers) on your printout.

   0.2149

   (d) Based on the $\alpha = 0.05$ significance level, is this an acceptable model for the data? Answer Yes or No

   Yes

3. (3 points) You did a Wald chi-squared test of all the regression coefficients at once.

   (a) Give the value of the test statistic. It is a number on your printout.

   62.62778

   (b) Give the degrees of freedom. It is a number on your printout.

   4

   (c) Give the $p$-value of the test. It is a number (or range of numbers) on your printout.

   $p < 0.0001$

   (d) Do you reject $H_0$ at $\alpha = 0.05$? Answer Yes or No.

   Yes.

4. (3 points) Controlling for knowledge, profit-loss orientation and formal education, is there evidence that job satisfaction is related to job performance?

   (a) Based on the $\alpha = 0.05$ significance level, Answer the question Yes or No.

   *No*

   (b) Give the value of the test statistic. It is a number on your printout.

   $t \ (\text{or } z) = 0.9838$

   (c) Give the maximum likelihood estimate of the regression coefficient relating true job satisfaction to true job performance. It is a number on your printout.

   $0.0498$

   (d) *If* you found evidence of a relationship between job satisfaction and performance controlling for the other variables (and *only* if you did), briefly describe the connection in plain, non-statistical language.

   *$H_0$ is not rejected. No conclusion.*

Please attach your log file and your list file to the quiz paper. Make sure your name is written on both printouts.

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