FINM3123 Introduction to Econometrics

Chapter 06

Class exercises

Multiple Choice Questions

1. Which of the following correctly identifies a limitation of logarithmic transformation of variables?

   a. Taking log of variables make OLS estimates more sensitive to extreme values in comparison to variables taken in level.

   b. Logarithmic transformations cannot be used if a variable takes on zero or negative values.

   c. Logarithmic transformations of variables are likely to lead to heteroskedasticity.

   d. Taking log of a variable often expands its range which can cause inefficient estimates.

2. Which of the following correctly represents the equation for adjusted R^2?

   a. $\overline{R}^2 = 1 - [SSR/(n-1)]/[SST/(n+1)]$

   b. $\overline{R}^2 = 1 - [SSR/(n-k-1)]/[SST/(n+1)]$

   c. $\overline{R}^2 = 1 - [SSR/(n-k-1)]/[SST/(n-1)]$

   d. $\overline{R}^2 = 1 - [SSR]/[SST/(n-1)]$

3. Two equations form a nonnested model when:

   a. one is logarithmic and the other is quadratic.

   b. neither equation is a special case of the other.

   c. each equation has the same independent variables.

   d. there is only one independent variable in both equations.

4. Which of the following models is used quite often to capture decreasing or increasing marginal effects of a variable?

   a. Models with logarithmic functions

   b. Models with quadratic functions

   c. Models with variables in level

   d. Models with interaction terms

5. In the following equation, gdp refers to gross domestic product, and FDI refers to foreign direct investment.

$\log(gdp) = 2.65 + 0.527\log(bankcredit) + 0.222FDI$

    (0.13) (0.022)   (0.017)

Which of the following statements is then true?

a. If FDI increases by 1, gdp increases by approximately 22.2%, the amount of bank credit remaining constant.

b. If FDI increases by 1, gdp increases by approximately 26.5%, the amount of bank credit remaining constant.

c. If FDI increases by 1, gdp increases by approximately 24.8%, the amount of bank credit remaining constant.

d. If FDI increases by 1, gdp increases by approximately 52.7%, the amount of bank credit remaining constant.

True or False

6. F statistic can be used to test nonnested models.