Week 8:Assignment 8

The due date for submitting this assignment has passed.

Due on 2021-09-22, 23:59 IST.

As per our records you have not submitted this assignment.

1) *1 point*

Which of the following statements are TRUE regarding Heteroscedasticity?

a. The variance of dependent variable is not constant

b. The variance of the error terms is not constant

c. Errors have non-zero mean

d. Errors are not linearly dependent on one another

a
b
c
d

No, the answer is incorrect.
Score: 0
Accepted Answers:
b

2) *1 point*

An estimated regression model is represented by the following expression:

Salary = -1.23 – 1.5 female + 0.6 education + 0.05experience

where Salary is measured in Rs/ Hour.

Which of the following is the correct interpretation of coefficient of gender dummy?

a) The coefficient measures the difference in salary between female and male, given the level of education and experience is different.

b) The coefficient measures the difference in salary between female and male, given the same level of education and experience

c) if a female and a male have the same level of education and experience, the female earns, on average, 1.5 rupees less per hour than the male.

d) if female and a male have different level of education and experience, the female earns, on average, 1.5 rupees less per hour than the male.

a
b
c
d

No, the answer is incorrect.
Score: 0
Accepted Answers:
b
c

3) *1 point*

If heteroscedasticity is present in a regression model but it is ignored, then the OLS estimator will be

a. Biased
b. Inconsistent
c. Inefficient
d. All of the above

a
b
c
d

No, the answer is incorrect.
Score: 0
Accepted Answers:
c

4) *1 point*

Which of the following can also be a reason for Heteroscedasticity problem?

a) Inclusion of variables which are uncorrelated with the X and Y variables in the model

b) Variables are perfectly multicollinear

c) Presence of outliers

d) No correlation

a
b
c
d

No, the answer is incorrect.
Score: 0
Accepted Answers:
c

5) *1 point*

Which of the following are tests for heteroscedasticity?

(a) Durbin Watson test
(b) White's Test
(c) Breush Pagan Godfrey test
(d) Goldfeld quandt test

a
b
c
d

No, the answer is incorrect.
Score: 0
Accepted Answers:
b
c
d

6) *1 point*

A student is assigned the task to conduct White's test for heteroscedasticity using the estimation from the following regression model:

$$y = b_1 + b_2{}^*X_{2i} + b_3{}^*X_{3i} + u_i$$

Which of the following equations best represents the form of the auxiliary regression?

a) $u_i = a_1 + a_2{}^* u_{i-1} + v_i$

b) $u_i^2 = a_1 + a_2X_{2i} + a_3X_{3i} + a_4X_{2i}^2 + a_5X_{3i}^2 + a_6X_{2i}X_{3i} + v_i$

c) $u_i^2 = a_1 + a_2{}^* u_{i-1} + v_i$

d) $u_i = a_1 + a_2X_{2i} + a_3X_{3i} + a_4X_{2i}^2 + a_5X_{3i}^2 + a_6X_{2i}X_{3i} + v_i$

a
b
c
d

No, the answer is incorrect.
Score: 0
Accepted Answers:
b

7) *1 point*

Which of the following statements are TRUE regarding heteroscedasticity?

a) The least square estimator remains linear and unbiased, but is no longer the best

b) Standard errors computed for the least square estimator are usually incorrect

c) A problem commonly found in cross-sectional data

d) None of the above

a
b
c
d

No, the answer is incorrect.
Score: 0
Accepted Answers:
a
b
c

8) *1 point*

The following statements are given

Statement 1: Regardless of the results of the residual heteroscedasticity and normality tests, the model with a larger R-squared or smaller Akaike Information Criterion should always be preferred.

Statement 2: If the errors in a regression model are heteroscedastic, the OLS estimator remains efficient in the Gauss-Markov sense, but is no longer unbiased.

Please choose the correct option regarding the above statements.

a. Statement 1 is TRUE, Statement 2 is FALSE
b. Statement 1 is FALSE, Statement 2 is TRUE
c. Both statements are TRUE
d. Both Statements are FALSE

a
b
c
d

No, the answer is incorrect.
Score: 0
Accepted Answers:
d

9) *1 point*

The difference between White test and Breusch Pagan test is

a. The White test can be used to detect non-linear form of heteroskedasticity, whereas Breusch-Pagan test checks for linear form of heteroscedasticity

b. In a linear regression model, the White test is used to detect heteroscedasticity, whereas the Breusch-Pagan test is used to detect autocorrelation.

c. The number of regressors employed in the White test is more than that used in the Breusch-Pagan test.

d. The number of regressors employed in the Breusch-Pagan test is more than that used in the White test.

a
b
c
d

No, the answer is incorrect.
Score: 0
Accepted Answers:
a
c

10) *1 point*

Which of the following is the simplest way to get some idea regarding heteroskedasticity?

a. Construct a histogram

b. Calculate variance of the sample

c. Examine the residual plot

d. All of the above

a
b
c
d

No, the answer is incorrect.
Score: 0
Accepted Answers:
c