Due on 2021-09-15, 23:59 IST.

1 point

1 point

1 point

1 point

NPTEL » Applied Econometrics Course outline How does an NPTEL online course work? Week 0: Week 01 Week 02 Week 03 Week 04 Week 05: Week 06 Week 07 Lecture 52: Multicollinearity Lecture 53: Multicollinearity (Contd.) Lecture 54: Multicollinearity (Contd.) Lecture 55: Multicollinearity (Contd.) Lecture 56: Multicollinearity (Contd.) Lecture 57: Dummy Variable Lecture 58: Dummy variable (Contd.) Lecture 59: Dummy variable (Contd.) Quiz: Week 7 : Assignment Feedback for Week 7 Week 08 Week 09 Week 10 Week 11 Week 12

Course Material

Download Videos

Assignment Solution

Week 7: Assignment 7 The due date for submitting this assignment has passed.

As per our records you have not submitted this assignment.

Which of the following statements are TRUE? High multicollinearity is likely to lead to a high value of the t-statistic corresponding

- to the concerned coefficient for the explanatory variable
- High multicollinearity is likely to lead to a low value of the t-statistic corresponding to the concerned coefficient for the explanatory variable
- ∑ Partial Correlation Coefficient < ∑ Semi-Partial Correlation Coefficient ∑ Partial Correlation Coefficient > ∑ Semi-Partial Correlation Coefficient
- a □ b
- d No, the answer is incorrect. Score: 0
- Accepted Answers:
 - b) A continuous dependent variable and categorical independent variable

a) A continuous dependent variable and continuous independent variable

A continuous dependent variable and dichotomous independent variable.

The Dummy variable regression model is used for examining the relationship between

- d) A categorical dependent variable and continuous independent variable

Accepted Answers:

The relationship between two variables partialling out the effect that a third variable has on one of those variables can be expressed using a:

No, the answer is incorrect.

_ c

d

a

□ b

С

_ d

O a

○ b

0 c

 \bigcirc d

4)

O a

○ b

0 c

 \bigcirc d

5)

O a

 \bigcirc b

0 c

 \bigcirc d

Score: 0

6)

No, the answer is incorrect.

Accepted Answers:

b С

Perfect Correlation

a) 1

d) 0.5

No, the answer is incorrect.

Accepted Answers:

b. Partial Correlation.

c. Semi-partial correlation Pairwise correlation

No, the answer is incorrect. Accepted Answers:

b) 2 c) 4

In a regression model if $R_j^2 = 0.5$, then what is the value of VIF

to represent the dummy variables with 2 as the value of the reference category. Which of the following is TRUE?

a. The outcome of the regression equation will remain same.

The outcome of the regression equation will improve.

- The outcome of the regression equation will deteriorate. d. None of the above

1 0.50 Х 0.50 -0.47 1 Z -0.30 -0.47 1

Χ

partial correlation of Y and X, controlling for Z.

Υ

A regression model is given as Y = a + bX + cZ + u; the F-test is significant at 5% level of

significance, but b and c are statistically not significant. This means that

No, the answer is incorrect.

Accepted Answers:

a) -0.43

b) 0.43

c) 0.34

d) -0.34

O a

b

Ос

 \bigcirc d

0 c

 \bigcirc d

a

 \Box b

С

d

С

 \Box d

d

O a

0 b

Accepted Answers:

(d) None of the above O a ○ b

(a) b and c coefficients are highly correlated

(b) X and Z variables are highly correlated

(c) X and Z variables are not correlated

No, the answer is incorrect. Score: 0

asked to write down valid regression equations

Workout

200 210

180

170

Pressure

Blood

130 40 0 350 30 0 0 1 270 50 0 1

We have the following dataset with Rahul. Mistakenly, Rahul missed to copy the name of the

X2

0

0

1

1

X3

1

1

0

0

X4

0

0

0

four dummy variables. Instead, he just replanned them with X1, X2, X3 and X4. Rahul is

X1

110

100

110

80

Which of the following equations will have dummy variable trap problem?

a) BP = b1 + b2*Workout + d1*X1b) BP = b1 + b2*Workout + d1*X1 + d2*X2c) BP = b1 + b2*Workout + d1*X1 + d3*X3

No, the answer is incorrect. Accepted Answers:

Which of the following statements are TRUE?

d) BP = b1 + b2*Workout + d2*X2 + d3*X3 + d4*X4

b) Presence of Multicollinearity violates Gauss Markov Assumptions Presence of Multicollinearity would mean the Standard Error of concerned the variable is high

concerned explanatory variables is high a □ b

a) Multicollinearity and perfect collinearity are synonymous

No, the answer is incorrect.

Presence of Multicollinearity would mean the correlation coefficient between the

Accepted Answers:

We are selecting athletes for 100-meter Olympic run. We have a sample of S athletes. We derived a regression model to explain the performance of the athletes. One selector who

separate regressions for these subsamples. We can expect that RSS(s1) + RSS(s2) > RSS(S)Choose the correct answer: a) TRUE

170 cm height (s1) and for those with less or equal to 170 cm height (s2). He decided to run

No, the answer is incorrect. Accepted Answers:

b) FALSE

1 point In a regression equation, the dummy variables are represented as 0 and 1 where 0 is the value for the reference category. In the same regression equation, we can also use the value 2 and 3 From the following bivariate correlations table between X, Y and Z, calculate the 1 point Z -0.30

1 point

1 point

0 0

0

1

0

0

1 point

1 point happen to be an Econometrician, have found an interesting pattern for those with more than