Special Exam XEQ402CEC402 Introduction to Econometrics II

Economics (University of Nairobi)

UNIVERSITY OF NAIROBI

UNIVERSITY EXAMINATIONS 2022

SUPPLEMENTARY/SPECIAL EXAMINATION

XEQ 402: INTRODUCTORY ECONOMETRICS II
29th July 2022
Time: 2.00- 4.30PM

INSTRUCTIONS

ANSWER QUESTION ONE AND ANY OTHER TWO QUESTIONS.

QUESTION ONE: 30 MARKS

i. Briefly discuss the components of time series data (8mks)
ii. Explain the main problem of using non stationary time series data and elaborate how to transform non stationary time series (4mks)
iii. Outline how you would test for autocorrelation using Durbin Watson Test (3mks)
iv. Illustrate clearly how you would estimate OLS parameters from the following linear regression model (10mks)
$Y = \beta_0 + \beta_1 X + u$
v. Briefly discuss any two assumptions of multiple linear regression (5mks)

QUESTION TWO: 20 MARKS

i. Discuss the difference between logit and probit models (5mks)
ii. You estimated a regression model and obtained the following results. (SE denotes standard errors)
$Returns = 1200 - 300Inflation + 500LendingRate$

SE (100) (150) (1000)

a) State the null hypothesis (4mks)
b) Show how you calculated the test statistic (6mks)
c) State the decision rule you use (3mks)

d) What would you conclude from the results of the test? (2mks)

QUESTION THREE: 20 MARKS

i. Using an example explain the dummy trap (10mks)

ii. Briefly explain the causes of autocorrelation (10mks)

QUESTION FOUR: 20 MARKS

i. Discuss reasons for lags (6mks)

ii. Given the following system of equations depicting demand and supply

$Q = \alpha_1 P + \alpha_2 X + \varepsilon_d$

$Q = \beta_1 P + \varepsilon_s$

a) Identify and explain the endogenous and exogenous variables (4mks)

b) Present the reduced form of the structural system of equations (10mks)

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