

CHUKA



UNIVERSITY

UNIVERSITY EXAMINATIONS

SECOND YEAR EXAMINATION FOR THE AWARD OF MASTR
OF SCIENCE IN ECONOMICS

MSEC 803: RESEARCH METHODS

STREAMS: MSEC (Y2S1)

TIME: 3 HOURS

DAY/DATE: TUESDAY 06/04/2021

2.30 P.M. – 4.30 P.M.

INSTRUCTIONS: Answer ALL questions

QUESTION ONE

Case Study

A study by Valentine (2018) sought to determine the effect of audit committee characteristics on fraud reduction in state ministries in Kenya. Guided by a positivist paradigm, a descriptive research design was employed in examining a population of 20 government ministries in Kenya. Secondary data sources were used to enhance objectiveness of the findings and the quantitative data was used to test the research hypothesis. Panel data was obtained from; Treasury, transparency international and the ministries whereby data on the specific variables under investigation was extracted from annual reports, financial statements and records. A document analysis guide was prepared to guide the researcher in collection of data on audit committee characteristics and number of fraud incidences in all the 20 state ministries in Kenya. Data was analyzed using Stata data analysis and statistical software. Preceding the data analysis, the raw data collected was prepared for analysis. Descriptive statistics were used to profile the unit analysis. To test the research hypothesis on the effect of audit committee characteristics on fraud reduction, the study adopted fixed effects panel data model. Post and pre estimation tests for any regression model were performed. The results indicate that number of audit committee meetings ($\beta = -0.4385$; $p < 0.05$) had negative and significant effect on the incidences of fraud and expertise of the

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audit committees ($\beta = -0.4593$; $p < 0.05$) had negative and significant effect on the incidences of fraud in the state ministries. The study also established that tenure of the audit committees had a significant positive effect on incidences of fraud in the state ministries in Kenya ($\beta = 0.3601$; $p < 0.05$). size of the audit committee ($\beta = 15284$; $p < 0.05$) and independence of audit committees. ($\beta = -0.1546$; $p < 0.05$) did not have a significant effect on fraud incidences in the ministries. Following the findings from the study, recommendations were made.

Required

Based on the case study, answer the following questions

- (a) Describe the uses of the research design adopted in the study [4 marks]
- (b) Explain why the researcher could have preferred a positivist paradigm [4 marks]
- (c) State the hypothesis that guided this study [4 marks]
- (d) Describe 'data preparation' as applied in the case above [5 marks]
- (e) Based on the results presented in the case, what recommendations can you make [3 marks]

QUESTION TWO

A study was done of a sample of 645 university students. The students in the study were all 1st semester graduate students. Students were randomly distributed into 3 groups. Over the first 5 weeks of a semester, group I was given easy problem assignments, group 2 received moderately difficult problem assignments, and group 3 received very difficult assignments. The groups were then compared on their self-ratings of the usefulness of statistics. No attempt was made to assess or control for student differences in maths background. Some students received special statistics tutoring during the 1st week of the semester, but this was unknown to the researcher. The results were then generalized for the entire university.

- (a) Explain the potential threats to internal validity posed by this study [5 marks]
- (b) Explain the potential threats to external validity posed by this study [5 marks]
- (c) Explain why the researchers could have preferred an experimental research design [10 marks]

QUESTION THREE

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- (a) Explain the ethical issues that a researcher has to consider while carrying out research relating to:
- (i) The respondents [5 marks]
 - (ii) The client [5 marks]
- (b) In reference to the following cases, identify and explain the most appropriate data analysis technique in each case [10 marks]
- (i) A study seeks to examine the relationship between investment and economic development
 - (ii) A study seeks to determine the existence of a significant difference between the income of urban dwellers and rural dwellers in developing countries
 - (iii) A researcher seeks to determine the effect of savings, income levels, consumption pattern and investment on a countries Gross National Product between 2000-2010
 - (iv) A study seeks to describe the factors that influence the performance of firms listed in the NSE
 - (v) A study seeks to determine the most frequent age group that engage in economic activities

QUESTION FOUR

- (a) Describe the five factors that must be considered when constructing the questions to be used in the survey instrument [10 marks]
- (b) Explain the options a researcher can choose from if they decide they are using a survey approach in doing research. [10 marks]

QUESTION FIVE

A study adopted panel data regression model in testing the research hypothesis and in determining the effect of audit committee characteristics on fraud reduction, the study adopted panel data model. The

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random effects (RE) or the fixed effects (FE) model was to be applied. A Hausman test was used to select the best suited model for the data. The fixed effects model was of the form:
$$Y_{it} = b_1 X_1 + b_2 X_2 + b_3 X_3 + b_4 X_4 + b_5 X_5 + u_{it} \dots \dots \dots (i)$$

Where; Y=Fraud Reduction (FR) (dependent variable), $a_{it} = constant$, $b_1 \dots \dots b_5 = \hat{\beta}$ coefficients, $X_1 = \hat{\beta}$ Frequency of audit committee, $X_2 = \hat{\beta}$ independence of audit committee, $X_3 = \hat{\beta}$ Expertise of audit committee, $X_4 = \hat{\beta}$ Tenure of audit committee, $X_5 = \hat{\beta}$ size of audit committee and $u_{it} = \hat{\beta}$ error term.

As a pre-test analysis, the study subjected that dataset to assumptions of regression analysis, with no major violation reported. The relationship between audit committee characteristics and fraud reduction was examined by testing the research hypothesis and the output presented in the table below;

Required:

- (i) Interpret the goodness of fit of the model [4 marks]

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- (ii) Write down the fitted regression equation and interpret it [4 marks]
 - (iii) Explain the pre-test analysis the researcher could have performed [8 marks]
 - (iv) Explain why the researcher could have had preference for this type of analysis [4 marks]
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