UNIVERSITY EXAMINATIONS: 2013/2014

EXAMINATION FOR THE MASTERS OF BUSINESS ADMINISTRATION (MBA)

BUSINESS RESEARCH METHODS (KITENGELA)

DATE: APRIL, 2014 **TIME: 3 HOURS**

INSTRUCTIONS: Answer Question One and Any Other Three Questions

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QUESTION ONE

Team performance in Bafko Industries varies considerably across teams and from month to month. The senior VP in charge of team development thought that a team training program could improve the performance of these teams. A consultant convinced him that his firm's training program, which lasted only one week and cost only $25,000 per team could raise the performance of Bafko's teams. The VP, however, wanted to experimentally test the efficacy of this training program before he adopted it widely throughout the firm. So the consultant suggested the following experimental test:

There were 48 teams in Bafko that showed significant variation from month to month in their level of performance. The consultant chose the 24 worst performing teams based on last month's data and assigned them to the training group. "After all," he argued, "these were the ones who most needed it." The other teams were assigned to the control group. The training group received the training program (lasting one week) at the beginning of the next month while the control group teams did their normal routine. Performance scores were gathered at the end of the month. The results showed that the training group teams had a significantly larger rise and were statistically significant in their performance than did the control group teams (who, as a group, did not improve at all). The consultant proudly displayed

these results and argued that they convincingly demonstrated the efficacy of his program.

Required

a) Based on the case study, answer the following questions

i) Identify the research designed adopted. Describe this research design in terms of its objectives, characteristics, methods, outcome and benefits.

ii) Explain the type of statistical test that can be performed in this study

iii) The VP does not understand these findings and more so the conclusion drawn by the consultant. Using your understanding of ecological validity, explain to the VP whether the results were valid or not.

[18 Marks]

b) Describe the positivist research philosophy along its elements of ontology, epistemology and methodology [7 Marks]

c) Explain the nature of scientific research. [6 Marks]

QUESTION TWO

a) Describe the threats to internal validity likely to arise from experimentation method.

[10 Marks]

b) Moderation and mediation provide different ways to model third variable effects.

i) Please define both of these terms.

ii) Sketch a conceptual model to show how each relates to main effects.

iii) Using variables of your choice, please write hypotheses to reflect both.

[13 Marks]

QUESTION THREE

a) Kenya Tourism Board has commissioned an external research firm to investigate the tourist perception of destination Kenya. Kenya Tourism Board has hired you as an independent consultant to assess and validate the business research report presented to them by the research firm. Describe the validity tests that you would subject the report to, for successful completion this task. [13 Marks]

b) Kenya Revenue Authority has approximately100,000 employees in job categories like state agencies, commissioners and county officers. Assume that you wanted to draw a representative

sample of 1000 employees. Describe one way that you could draw such a sample and briefly describe the advantages and disadvantages of this sampling approach. [10 Marks]

QUESTION FOUR

a) Write short notes on the indirect procedures used in qualitative data collection. [10 Marks]

b) Describe four types of measurement scale applicable to business researchers and identify the appropriate statistical test associated with each. [13 Marks]

QUESTION FIVE

In a study of the moderating effect of firm characteristics on the relationship between board composition and firm performance by Nyaoke and Owino (2013), a predicted model was proposed as;

$$FP = \alpha_5 + \beta_5 BC + \beta_6 FC + \varepsilon_5$$

In this equation, $\alpha_5$was the estimate of the intercept and ε_5 was the regression error termn associated with this equation. $\beta_5$was the beta coefficient of board composition (BC) $\beta_6$was the beta coefficient of firm characteristics (FC) and FP stood for firm performance. Preliminary analyses indicated no violation of the assumptions of normality, linearity, multicollinearity and homoscedasticity. Hence the study proceeded with the test of moderating effect using regression analysis resulting in the output displayed in the table below.

Table 4.1: ANOVA Test of Firm Characteristic as a Moderator

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	11.077	1	11.077	13.604	.001[b]
	Residual	38.270	47	.814		
	Total	49.347	48			
2	Regression	37.504	2	18.752	72.833	.000[c]
	Residual	11.843	46	.257		
	Total	49.347	48			

a. Dependent Variable: ROA

b. Predictors: (Constant), Board Composition

c. Predictors: (Constant), Board Composition, Firm size -sale

Table 4.2: Moderated Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	.474[a]	.224	.208	.90236	.224	13.604	1	47	.001	
2	.872[b]	.760	.750	.50741	.536	102.643	1	46	.000	1.925

a. Predictors: (Constant), Board Composition

b. Predictors: (Constant), Board Composition, Firm size -sale

c. Dependent Variable: ROA

Table 4.3: Coefficients of the Moderated Model

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95.0% Confidence Interval for B		Correlations		
		B	Std. Error	Beta			Lower Bound	Upper Bound	Zero-order	Partial	Part
1	(Constant)	.474	.481		.985	.330	-.494	1.442			
	Board Composition	.649	.176	.474	3.688	.001	.295	1.004	.474	.474	.474
2	(Constant)	.128	.273		.469	.641	-.421	.677			
	Board Composition	.170	.110	.124	1.546	.013	-.051	.391	.474	.222	.112
	Firm size -sales	.744	.073	.811	10.131	.000	.596	.892	.865	.831	.732

Required

i) Describe the meaning of the following assumptions in regression analysis: normality, linearity, multicollinearity and homoscedasticity. [8 Marks]

ii) Explain three uses of regression analysis. [6 Marks]

iii) Interpret Table 4.1 [2 Marks]

iv) In reference to Table 4.2 comment on the goodness of fit of models 1and 2. [2 Marks]

v) In reference to Table 4.3, and model 2 specifically, write down the fitted regression equation and interpret the equation. [5 Marks]

QUESTION SIX

A study entitled Antecedents of Customer Perceived Value: Evidence of Mobile Phone Customers in Kenya was undertaken by Muturia, Wadawi and Owino (2014). A factor analysis of the data resulted in the rotated component matrix in Table 4.1.

Table 4.1: Rotated Component Matrix

Variable	Component			Factor	Cronbach's Alpha
	1	2	3		
Value-added service are convenient	0.856			Value Added Services	0.808
Value-added service are up to date	0.802				
Value -Added service-internet	0.703				
Variety of value added service to choose from	0.621				
Value -added service-Money transfer	0.585				
Customer support (Ease of reporting complaint)		0.816		Customer Support	0.688
Customer supports(speed of complaint processing)		0.763			
Customer support (friendliness when reporting complaint)		0.691			
Network call clarity		0.593			
Price structure(reasonability)			0.803	Perceived Price	0.777
Pricing structure -possibility of free choosing from			0.799		

Required

a) Factor analysis is a multivariate analysis technique. Describe objectives of factor analysis in business research. [6 Marks]

b) Interpret Table 4.1. [10 Marks]

c) Table 4.2 shows the results of a correlation analysis between a set of variables.

Table 4.1: Correlations Analysis

		Income Level	Gender	Consider counterfeit purchase a crime	Why buy counterfeit cables	Consumption of counterfeits	Agree that there are counterfeit cables	Ever bought a counterfeit cable
Income Level	Pearson Correlation	1						
	Sig. (2-tailed)							
Gender	Pearson Correlation	0.064	1					
	Sig. (2-tailed)	0.371						
Consider counterfeit purchase a crime	Pearson Correlation	0.044	-0.049	1				
	Sig. (2-tailed)	0.534	0.491					
Why buy counterfeit cables	Pearson Correlation	-0.016	-0.09	0.099	1			
	Sig. (2-tailed)	0.82	0.204	0.163				
Consume counterfeits	Pearson Correlation	0.053	.148*	-0.032	-.213**	1		
	Sig. (2-tailed)	0.458	0.037	0.654	0.002			
Agree that there are counterfeit cables	Pearson Correlation	.126*	-0.057	.739**	-0.032	-0.027	1	
	Sig. (2-tailed)	0.045	0.424	0.000	0.657	0.705		
Ever bought a counterfeit cable	Pearson Correlation	0.053	-.122*	-0.023	0.028	0.081	0.011	1
	Sig. (2-tailed)	0.459	0.086	0.75	0.695	0.252	0.88	
Performance of counterfeit cables	Pearson Correlation	0.005	-0.01	0.089	-.563**	.211**	0.076	-0.046
	Sig. (2-tailed)	0.947	0.883	0.212	0.000	0.003	0.284	0.517

Required

a) When would a researcher prefer to use correlation analysis? [2 Marks]

b) Interpret the factors likely to significantly influence consumption of counterfeits based on the results shown in 4.1. [4 Marks]

c) The researcher decided to examine the relationship between gender and decision to consume counterfeits further, resulting in the output shown in table 4.2.

*Table 4.2: Chi-Square Tests Gender * Consumption of Counterfeits*

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	4.766[a]	3	.190
Likelihood Ratio	5.867	3	.118
Linear-by-Linear Association	4.346	1	.037
N of Valid Cases	200		

0 cells (.0%) have expected count less than 5. The minimum expected count is .43.

i) Explain the use of Chi-Square test in business research.

ii) Interpret the results in Table 4.4

[4 Marks]