

PGDM (IB), 2020-22
Business Research Methods
IB-301

Trimester – III, End-Term Examination: April 2021

Time allowed: 2 hrs 30 min

Max Marks: 50

Roll No: _____

Instruction: Students are required to write Roll No on every page of the Answer Sheet. All other instructions on the question paper / notifications should be followed meticulously.

Sections	No. of Questions to attempt	Marks	Marks
A	3 questions with internal choices and CILO covered	10 Marks each	3*10 = 30
B	Compulsory Case Study	20 Marks	20
		Total Marks	50

SECTION A

A1.

(CILO 1)

I. Explain the different type of research design. "Research design in exploratory studies must be flexible but in descriptive studies, it must minimize bias and maximize reliability."

Discuss.

(marks 10)

OR

II. You have been approached by the brand manager for a brand of ready to eat food products. He wishes to conduct a research to find out the current perception of consumers about your brand vis-à-vis other brands (competitors). He also wants to assess buying behavior and whether he should reposition his brand or launch line. Write a research proposal for this study, including a general idea of the methodology, sampling plan, budget, timeline and application of statistical tools. Mention suitable assumptions wherever applicable. (marks 10)

Question A2 and A3 are based on the following case study.

A study was conducted to explore the prevalence and impact of sleep problems on various aspects of people's lives. Staff from a university in Melbourne, Australia were invited to complete a questionnaire containing questions about their sleep behavior, sleep problems and the impact that these problems have on aspects of their lives (work, driving, and relationships). The sample consisted of 537 respondents (55% female, 45% male) ranging in age from 18 to 84 years (mean=44yrs). Data fields (variables), description and there coding instruction are given below:

<i>Sl.</i>	<i>Variable</i>	<i>Description</i>	<i>Coding instruction</i>
1	id	Identification Number	
2	Gender	Gender	0=female, 1=male
3	Age	Age	In years
4	marital	Marital status	1=single, 2=married, 3=divorced, 4=widowed
5	height	Height (cm)	In cms
6	healthrate	Rate your general health	1=very poor 10=very good
7	fitrate	Rate your physical fitness	1=very poor 10=very good
8	weightrate	Rate your current weight	1=very poor 10=very good
9	smoke	Do you smoke	1=yes 2=no

A2.

(CILO 2)

- I. You have to decide which inferential statistics will be used on the collected data.
 - a) To test if the age, physical fitness and current weight impacts the general health, which statistical test you will recommend. Mention three assumptions/pre-requisite for applying the test, also mention the statistical techniques used to validate these assumptions. (5 marks)
 - b) To test if the general health depends on gender, which statistical test you will recommend. Mention two conditions/pre-requisite for applying the test and the statistical techniques used to validate these assumptions. (5 marks)

OR

- II. For the following SPSS output table

Group Statistics

	Gender	N	Mean	Std. Deviation	Std. Error Mean
Rate current weight	Male	301	41441.78	19499.214	1213.968
	Female	236	26031.92	7558.021	514.258

Independent Samples Test

	Levene's Test for Equality of Variances		t-test for Equality of Means						
	F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
								Lower	Upper
Rate current weight	119.669	.000	10.945	472	.000	15409.862	1407.906	12643.322	18176.401
			11.688	344.262	.000	15409.862	1318.400	12816.728	18002.996

- State and interpret the hypothesis for homogeneity of variances. (4 marks)
- State and interpret the hypothesis for independent sample t test. (4 marks)
- What is the relevance of Levene's Test in t-test and F-test (2 marks)

A3.

(CILO 2)

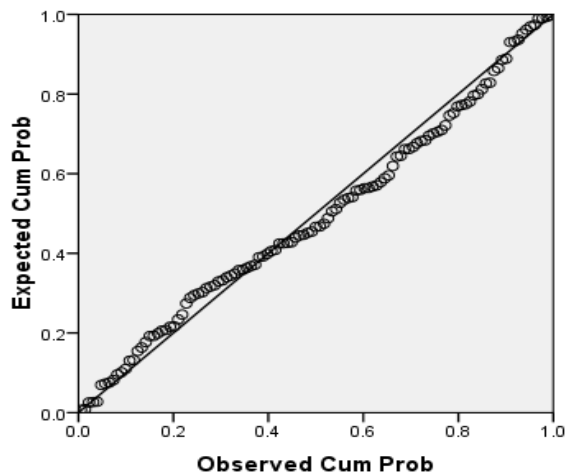
Following are the SPSS regression outputs, comment on the regression model.

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.891 ^a	.793	.793	7776.652	1.833

- Predictors: (Constant), Weight (kg), Height (cm)
- Dependent Variable: Rate general health

Chart- Normal P-P Plot of Regression Standardized Residual



ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	109432147156.685	2	54716073578.343	904.752	.000 ^a
	Residual	28484348279.654	471	60476323.311		
	Total	137916495436.340	473			

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Correlations			Collinearity Statistics	
		B	Std. Error	Beta			Zero-order	Partial	Part	Tolerance	VIF
1	(Constant)	3850.718	900.633		4.276	.000					
	Height (cm)	1.923	.045	.886	42.283	.000	.880	.890	.885	.998	1.002
	Weight (kg)	-22.445	3.422	-.137	-6.558	.060	-.097	-.289	-.137	.998	1.002

a. Dependent Variable: Rate general health

- Is the model statistically significant, comment with proper explanation? (2.5 marks)
- Interpret R, R Square and Adjusted R Square. (2.5 marks)
- Interpret P-P Plot of Regression Standardized Residual. (2.5 marks)
- Would you expect multicollinearity among the independents? Why or why not? What does the "Tolerance" score in the collinearity statistics indicate? (2.5 marks)

OR

II. For the given SPSS output table

Marital status * Gender Crosstabulation				
		Gender		
		Male	Female	Total
Marital status	Single	132	87	219
	Married	142	131	273
	Divorced	12	13	25
	Widowed	15	5	20
Total		301	236	537

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	26.172a	2	.000
Likelihood Ratio	29.436	2	.000
Linear-by-Linear Association	9.778	1	.002
N of Valid Cases	474		

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 5.92.

- a) Formulate the appropriate hypothesis and interpret the result (5 marks)
- b) Mention four conditions/pre-requisite for applying the test (5 marks)

SECTION B

(CILO 3)

Case Study- BigBasket: Market place for Online grocery

BigBasket is India's biggest online store for grocery shopping. It was founded in 2011 by a group of people named Mr. V S Sudhakar, Mr. Hari Menon, Mr. Vipul Parekh, Mr. Abhinay Choudhari and Mr. V S Ramesh. BigBasket currently operates from Bangalore,

Mumbai, and Hyderabad and providing their services in 22 different cities in India. With more than 1800 grocery products and 1000 brands featuring on BigBasket.

The founders of BigBasket first time got together is 1999 and started one of the first online business in India with the name of fabmart. As a part of fabmart they started online grocery business as Fabmart.com. This business did exceedingly well in the market and company went to set up various physical supermarkets in South India. In 2006 FabMart was acquired by Aditya Birla Group and renamed the brand to More Supermarket. However, the same team got back in 2011 and launched BigBasket.

Today BigBasket is India's biggest and most used online grocery store in India. They deliver 35000 orders per day with the average price of the order is 1500. BigBasket has products of their own and allows other companies to showcase their product on the portal. With more than 40% of orders coming from their own brands and remaining on other brands. BigBasket operates at the margin of 35% on the sale of their own product and 25% on the sale of third party products.

Over time BigBasket has proven to be an innovator and understanding consumers by making extensive use of marketing research. The marketers at Bigbasket undertake marketing research to determine a brand's equity and then make sure everyone understands it, because that drives every decision made about the brand. They have always thought about the consumers and why the product would be relevant to the consumers. They believe in catering to the experience of the consumer. Their principles of marketing haven't changed, but their methods of targeting and identifying consumers have changed to meet the increasingly complicated consumer base. They have changed their key strategy from mass marketing to consumer targeting. Marketing research has revealed targeting as the future of brand marketing and brand management. BigBasket believes this takes much more than a focus group, and they want to spend time with consumers and understand their behaviours.

Pleasing the consumers has become more difficult today because the consumer has less time and more expectation. Packaging is also important in conveying a message to the consumer. It is a key challenge because labelling has become more complex and consumers are demanding more. BigBasket marketing has been innovative and pioneering over the years and one would expect the same from them in the future. They are constantly using marketing research to solve the problems of today and to build brands that will continue to be leader's tomorrow. BigBasket is considering further increasing its market share. They have approached you to plan a research for them:

Questions:

- a) Design a suitable research design to analyse how the company can increase its market share. (10 marks)
- b) Before conducting the field research, the company would like you to prepare a blueprint/synopsis. Draft a brief synopsis with all its important components with not more than 250 words. (10 marks)