

## School of Business

Master of Business Administration MBA Dual Specialization  
Semester End Examination - Jun 2024

Duration : 180 Minutes  
Max Marks : 100

### Sem II - D1PK204T - MBDS5027 - Business Research Method

General Instructions

Answer to the specific question asked

Draw neat, labelled diagrams wherever necessary

Approved data hand books are allowed subject to verification by the Invigilator

- 1) Processing of data involves editing, coding, classifying and tabulating. Explain each of these steps by taking an appropriate research example K5(5)
- 2) 'Even though exploratory research designs are lowest in terms of accuracy of findings, it is recommended that no research must be carried out without them'. Examine the above statement and justify with examples why you agree/disagree with it. K3(6)
- 3) Imagine you're conducting observational data collection at a grocery store to understand consumer behavior. How would you design your observation protocol to record factors such as shopping patterns, product selection, and interactions with store staff? K4(8)
- 4) You're investigating consumer preferences for a new smartphone model. How would you decide between using quantitative methods (such as online surveys or sales data analysis) and qualitative methods (such as focus groups or in-depth interviews) to collect data on features, pricing, and brand perceptions influencing consumers' purchasing decisions? K4(8)
- 5) Suppose Auchan, a hypermarket chain based out of France, was considering opening three hypermarkets in the midwestern United States. What role would theory play in designing a research study to track the differences in shopping habits of consumers in United States, France and Japan? What kind of hypothesis might be examined in a study of this topic? Formulate the hypothesis along with objectives. K3(9)
- 6) You're interested in studying the effects of exercise on stress levels. How would you select participants for your research? Identify the sampling method. Would you select individuals with K3(9)

varying fitness levels and activity preferences? How might you ensure that your sample represents a diverse range of ages and backgrounds?

7) A business researcher gives a presentation to a music industry executive. After considering the results of a test-market examining whether or not lowering the price of in-store CDs will lower the number of illicit downloads of the same music, the executive claims: "The test-market was conducted in eight cities. In two of the cities, lowering the price did not decrease illicit downloading. Therefore, lowering the price does not decrease this behavior, and we should not decide to lower prices based on this research." Comment on the executive's conclusion. What type of inference is being made? Will the decision not to lower prices be a good one? K5(10)

8) You're analyzing employee performance data to understand factors influencing sales performance in a retail environment. The regression analysis examines variables such as sales training, motivation, work schedule flexibility, and team collaboration. K4(12)

Variable	Coefficient ( $\beta$ )	p-value	Model Summary Value
Intercept ( $\beta_0$ )	\$12,000	0.005	$R^2$ : 0.65
Sales Training ( $\beta_1$ )	\$500 per session	<0.001	Adjusted $R^2$ : 0.62
Motivation ( $\beta_2$ )	\$400 per unit	0.012	F-statistic: 28.56 ( $p < 0.001$ )
Work Schedule Flexibility ( $\beta_3$ )	\$300 per level	0.007	AIC: 1150.34
Team Collaboration ( $\beta_4$ )	\$250 per unit	0.015	BIC: 1168.56

On the basis of information given in the Table Answer the questions given below:

**Questions:**

1. Identify the Regression Equation from the Summary Table.
2. Based on the multiple regression results with p-values, interpret the findings and provide insights into the factors influencing sales performance in retail environment. Additionally, discuss the significance of each predictor variable in predicting sales performance and its potential implications for strategic decision-making.
3. Discuss the overall model fit and significance using the  $R^2$ , adjusted  $R^2$ , and F-statistic.

9) The management of a local restaurant wants to determine the average monthly amount spent by the households in restaurants. Some households in the target market do not spend anything at all, whereas other households spend as much as \$ 300 per month. Management wants to be 95 per cent confident of the findings and does not want an error to exceed plus or minus \$5. K5(15)

- (a) What sample size should be used to determine the average monthly household expenditure?
- (b) Estimate the sample size if population is 5000.
- (c) How would the required sample size change if the desired level

of confidence were decreased to 90%? (Table value at 90% = 1.645 and at 95% =  $\pm 1.96$ ).

10)

ABC Manufacturing Company had produced a herbal tooth powder five years back and was marketing the same in rural Punjab. The company is about 20 years old and is producing various toiletry products in Punjab. It had a name in the rural markets of Punjab. The herbal powder was launched only five years back and had shown a compound annual growth rate of 18 per cent. The CEO of the company, Mr Avtar Singh, was thinking of introducing the herbal tooth powder in the urban areas of Punjab. Mr Singh got a preliminary research done with regard to the tooth powder market. The results of this research indicated that generally, people in urban areas preferred toothpaste instead of tooth powder. This was more so in case of young people below the age of 20 years. Mr Singh had a meeting with senior officials of the company and decided to get a research study conducted from a marketing research company with the following objectives: 1. To estimate the proportion of population that used tooth powder. 2. To understand the demographic and psychographic profile of people who used tooth powder. 3. To understand the reasons for not using tooth powder. 4. To get an understanding of the media habits of both the users and non-users of tooth powder. The research team in the marketing research company defined the users of tooth powder as those who had bought tooth powder in the last six months. In order to select the users of tooth powder they conducted a preliminary study. A sample of 500 respondents was taken from Amritsar, Jalandhar, Ludhiana and Patiala. The results of the study indicated that out of the 500 respondents selected randomly, 20 per cent were below the age of 20. Out of the remaining 400 respondents, 30 per cent refused to participate in the study. Out of the remaining sample 60 per cent did not use tooth powder, 30 per cent bought it only once in a year or two and only 10 per cent of the respondents bought it at least once in six months. The cost of sampling 500 respondents was ₹40,000/-. The company wanted to select 200 users from both Amritsar and Ludhiana, whereas 100 respondents were to be selected from Jalandhar and Patiala each. The remaining 300 users were to be selected from the remaining urban/semi-urban towns of Punjab. In brief, the marketing research company wanted a total sample of 900. It was argued that a large sample should be taken from larger cities. A total budget of ₹4,00,000/- was allocated for the research, out of which ₹2,50,000/- was for the purpose of field work. One of the members of the research team indicated that the total budget for the field work would not be sufficient to get the desired number of users of tooth powder. He suggested that chemist shops and 'General Kirana Stores' could be contacted for identifying the users.

K6(18)

QUESTIONS

1. Will the money allocated for the fieldwork be sufficient to get the desired size of the sample from various towns of Punjab as mentioned in the case?Elaborate
2. If the amount is not sufficient, how many users can be contacted with the given budget?
3. How would you define the population and the sampling frame in this case?
4. Do you agree with the statement that a large sample should be taken from towns with a large population?
5. Would it be advisable to contact general kirana stores and chemist shops for identifying the users?