**Final Take-Home Assessment**

**MARKETNG 7001 – Analytics for Marketers**

**Trimester 2, 2023**

***Rules and Guidelines***

* Using the SPSS dataset named “*Final – MacDonalds*” (.sav), conduct data analysis and interpret your results to address the questions shown in the following pages.
* You are expected to write a research report which should (1) answer the research questions outlined in the following pages through the outcomes of your data analysis and (2) provide recommendations to the company (in this case, MacDonald’s).
* The main body of the assignment should be 3,000 words maximum, not including metadata (i.e., cover page, title, table of contents, etc.), tables, and headings. Overall, the report should be a maximum of 20 pages, and shorter reports will be accepted.
* Use a 1.5-point line spacing and Times New Roman as a font. The main text should be 12 points, while headings can be bigger (13 or 14 points). In addition, you can use styles to make your report look more professional.
* Ensure you use the SPSS manuals provided during the course to carry out data analysis and interpret the results.
* You should include the main SPSS output (i.e., the SPSS tables) in the main text of your report.
* Please submit your report as a pdf or word-document on MyUni under **Assignments > Take-Home Assessment**. Late submissions will not be accepted.

***Rubrics***

This assignment is worth **30 points** (30% of your final mark for the subject).

There are 4 questions you are required to address, each carrying a different number of points based on their difficulty, for a total of **30 points**. You will be awarded a percentage of the points for each research question based on the following:

1. Your choice and justification of analysis method based on your variables and research question (20%);
2. Your hypotheses – when/if needed (20%; in case the hypotheses are not required for your method, then this percentage is going to be divided equally between points 3 and 4 below);
3. The correctness of the procedure to analyse and interpret the output (40%);
4. The correctness of your interpretation of the results (20%).

 Another **5 points** will be awarded for:

1. The quality, soundness, and viability of your marketing recommendations (**3 points**)
2. The quality of writing, reporting, and presentation of the document (**2 points**)

***Assignment Brief:***

You are a data analyst for MacDonald’s, and you have recently carried out some research to find out how the brand is doing in the fast-food market. You have collected data through a questionnaire (see Appendix 1 and Appendix 2 located at the end of this document for the **coding booklet** and the **questionnaire text,** respectively) covering consumers’ perceptions and attitudes towards the brand, demographics, psychographics and behavioural characteristics. You have targeted a convenience sample of 194 students at the University of Adelaide as it was deemed representative of the Australian market.

Your supervisor has asked you to put together a 3,000-word report where you address the following research questions:

**Research Question 1** (**5 points**)

Provide an overview of your sample’s socio-demographic variables through descriptive statistics/summary measures (central tendency and dispersion) and their frequency distributions. Moreover, calculate the Net Promoter Score (NPS) for MacDonald’s and provide an interpretation of it (**Q14**).

Note: you can use graphs and charts to answer the first part of this question.

**Research Question 2** (**10 points**)

Conduct a hierarchical cluster analysis using the **brand attachment scale**, **the perception of sustainability scale**, and **the healthy eating tendency scale** (refer to Appendix 1 for conceptualisation and operationalisation). After providing an interpretation of the agglomeration coefficients and dendogram, explain how many segments you have identified and describe their differences using the following descriptor variables:

* Brand attachment
* Perception of sustainability
* Healthy Eating
* Frequency of Fast-food Consumption
* Monthly Fast-food Expenditures
* Enrolment type
* Veganism

**Research Question 3** (**5 points**)

Using all the variables from **Q12\_1\_A** to **Q12\_5\_E,** create a positioning map and explain how each brand in the Australian fast-food market is perceived.

**Research Question 4** (**5 points**)

Through a regression model, answer the following research question: how do students’ **age** (**Q3**), **enrolment type** (**Q6**), **healthy-eating tendencies**, **self-control**, **brand attachment towards MacDonald’s**, and **perception of MacDonald’s sustainability** predict the **likelihood of purchasing MacDonald’s in the next month** (**Q16**)?

Note: in your answer, ensure (1) you explain what type of regression you used and why; (2) whether multicollinearity is likely for the model and, if it is, explain what you did to address the issue; and (3) you provide an overview of the main indicators of goodness-of-fit and what they mean for your model.

***Assignment Structure:***

Because this is a report, structure it in the following way:

1. **Executive summary** (1 page) – an overview of the study conducted, your main findings, and the recommendations based on your findings in a standalone page.
2. **Analyses for research questions 1-4** (2-3 pages for each approximately) – for each question, please explain how you addressed it, including:
	1. The type of variables (scales) included in your analysis;
	2. Justification for the analysis method utilised (i.e., explain why you used a specific analysis method based on the operationalisation of your variables);
	3. State your null and alternative hypotheses when/if needed for the type of analysis you are doing;
	4. Tables or graphs showing the outcome (if applicable);
	5. Interpretation of the findings

Note: in order to limit the plagiarism score of your assignment, please do not copy and paste the wording of each question as written in the assignment brief in your report. Instead, you can provide several section headings “Research Question 1: Description of Sample”, or “Section 1: Sample Characteristics”.

1. **Recommendations** **and Conclusions** (2-4 pages) – based on your results for Research Questions 1-5, provides some recommendations to MacDonald’s marketing department to improve on their current tactics and strategies. Note: ensure these recommendations are linked to your actual findings and are marketing-relevant!

Good Luck!

**Appendix 1:** Coding Booklet

This is the coding of the dataset “*Final – MacDonalds*”. Before you conduct any analyses, make sure you prepare and transform the data in the dataset to make it usable for the different types of analysis required.

|  |  |  |  |
| --- | --- | --- | --- |
| **Variable Name** | **Label** | **Conceptualisation** | **Operationalisation and Coding** |
| ResponseID | Response ID | This variable indicates the respondent number | Categorical |
| Q3 | Age | Respondent’s Age | Number in years |
| Q4 | Gender | Respondent’s Gender | 1 = Male2 = Female3 = Non-binary4 = Prefer not to say5 = Other, please specify |
| Q5 | Annual Gross Income | Respondent’s Gross Annual Income | 1 = $0 to $9,8752 = $9,876 to $40,1253 = $40,126 to $85,5254 = $85,526 to $163,3005 = $163,301 |
| Q6 | Enrolment Type | Respondent’s Enrolment Type | 1 = International2 = Local |
| Q7 | Ethnicity | Respondent’s Ethnicity | 1 = White/Caucasian2 = Hispanic or Latino3 = Black or African American4 = Indigenous Australian5 = Asian/Indian6 = Middle eastern7 = Pacific Islander8 = Other |
| Q8 | Country of Birth | Respondent’s Country of Birth | 1 = Australia2 = China3 = Malaysia4 = India5 = Other |
| Q9 | Veganism | Respondent’s Veganism (whether they are vegan or not) | 1 = No2 = Yes |
| Q10 | Location | Respondent’s Current Location | 1 = in Australia2 = Overseas |
| Q11 | Frequency of Fast-food Consumption | Respondent’s frequency of fast-food consumption | 5-point Likert Scale:1 = Never5 = Every Day |
| Q13 | Monthly Fast-food Expenditure | Amount of money a respondent usually spends on fast-food on a monthly basis | Slider Scale up to $200 |
| Q12\_1\_A through toQ12\_5\_E | Association between Brands and Attributes | Perception of association between fast-food brand and attribute. | Each variable is a binary categorical variable (1 = ticked; 0=not ticked).Brands:1. MacDonald’s
2. Hungry Jack’s
3. Kentucky Fried Chicken
4. Oporto’s
5. Guzman y Gomez

Attributes:1. Healthy
2. Quality food
3. Good value for money
4. Environmentally friendly
5. Caring
 |
| Q14 | MacDonald’s Net Promoter Score Scale | The Net Promoter Score Scale for MacDonald’s | 10-point Likert Scale:0 = Not likely to recommend at all10 = Highly likely to recommend |
| Q15 | Hungry Jack’s/Burger King’s Net Promoter Score Scale | The Net Promoter Score Scale for Hungry Jack’s/Burger King. | 10-point Likert Scale:0 = Not likely to recommend at all10 = Highly likely to recommend |
| Q16 | Likelihood to purchase MacDonald’s in the next month | The respondent’s likelihood to purchase MacDonald’s in the next month. | 1 = No2 = Yes |
| Q18Q19Q20 | Brand Attachment Scale (for MacDonald’s) | The respondent’s feeling of attachment and belonging to the brand. | 3-item construct measured on a 7-Point Likert Scale:1 = Strongly Disagree7 = Strongly AgreeThe items included in the scale are:1. *I feel bonded with the MacDonald’s brand.* (Q18)
2. *I feel connected with the MacDonald’s brand.* (Q19)
3. *I feel attached to the MacDonald’s brand.* (Q20)
 |
| Q21\_1Q21\_2Q21\_3 | Perception of Sustainability Scale (for MacDonald’s) | The respondent’s perception of MacDonald’s as a sustainable brand. | 3-item construct measured on a 7-Point Likert Scale:1 = Strongly Disagree7 = Strongly AgreeThe items included in the scale are:1. *MacDonald’s is a socially responsible company.*
2. *MacDonald’s is concerned to improve the well-being of society.*
3. *MacDonald’s follows high ethical standards.*
 |
| Q23\_1Q23\_2Q23\_3Q23\_4Q23\_5 | Healthy Eating Tendency Scale | The respondent’s tendency of eating healthy food. | 5-item construct measured on a 7-Point Likert Scale:1 = Strongly Disagree7 = Strongly AgreeThe items included in the scale are:1. *I like to find new ways to create meals that are good for my health.*
2. *It is fun to create meals that are good for my health.*
3. *I am interested in eating healthy.*
4. *I take pleasure in fixing healthy meals.*
5. *I am satisfied with eating healthy.*
 |
| Q24\_1Q24\_2Q24\_3Q24\_4Q24\_5Q24\_6Q24\_7Q24\_8Q24\_9Q24\_10Q24\_11Q24\_12Q24\_13 | Self-Control Scale | The respondent’s capacity to override or change one’s inner responses, as well as to interrupt undesired behavioural tendencies and to refrain from acting on them | 13-item construct measured on a 7-Point Likert Scale:1 = Strongly Disagree7 = Strongly AgreeThe items included in the scale are:1. *I’m good at resisting temptation.*
2. *I have a hard time breaking bad habits.* (R)
3. *I am lazy.* (R)
4. *I say inappropriate things.* (R)
5. *I do certain things that are bad for me, if they are fun.* (R)
6. *I wish I had more self-discipline.* (R)
7. *Pleasure and fun sometimes keep me from getting work done.* (R)
8. *I have trouble concentrating.* (R)
9. *I am able to work effectively toward long-term goals.*
10. *Sometimes I can’t stop myself from doing something, even if I know it is wrong*. (R)
11. *I often act without thinking through all the alternatives.* (R)
12. *I refuse things that are bad for me.*
13. *People would say that I have iron self- discipline.*
 |
| Con1 | Experimental Condition | Variable indicating whether the respondent was assigned to either the $8.00 ad or the $7.99 ad. | 0 = $8.00 ad (control condition)1 = $7.99 ad (odd-even price condition) |
| Q28 | Ad credibility | The respondent’s perceived credibility of the ad shown in the experiment. | 1-item construct measured on a 5-Point Likert Scale:1 = Extremely not credible5 = Extremely credible |
| Q29 | Likelihood to Try Product | The respondent’s likelihood to try the new product advertised in the ad shown in the experiment. | 1-item construct measured on a 5-Point Likert Scale:1 = Extremely unlikely5 = Extremely likely |
| Q30 | Interestingness of the Product | The respondent’s perceived interestingness of the product in the ad shown in the experiment. | 1-item construct measured on a 5-Point Likert Scale:1 = Extremely uninteresting5 = Extremely interesting |

**Note:** R indicates the items that are negatively worded and need to be reverse-coded.

**Appendix 2:** Questionnaire

Q1

Dear student,

My name is Dr. Alex Belli and I’m a lecturer at The University of Adelaide, Australia.

The purpose of this research is to find out about people’s attitudes and perceptions of the fast-food industry in Australia. Your task will simply be to answer a series of questions truthfully by ticking a box or by selecting an option on a scale. Please note that there are no right or wrong answers, I am interested in your own personal opinion.

This study is only going to be used for educational purposes for the subject MARKETNG2002 - Marketing Analytics delivered at The University of Adelaide, and you will not be identified by the data collected.

If you agree to be part of our survey, please continue with answering the survey questions. If you have concerns about the research that you think I can help you with, please feel free to contact me on the following email address: alex.belli@adelaide.edu.au.

**Socio-demographic questions**

Q2 In the following section of the survey, you’ll be asked a series of standard **socio-demographic questions**. Please respond truthfully. There are no right or wrong answers and your response will be completely confidential.

Q3 What is your age?

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | 18 | 26 | 34 | 43 | 51 | 59 | 67 | 75 | 84 | 92 | 100 |

|  |  |
| --- | --- |
| Age |  |

Q4 What is your gender?

* Male
* Female
* Non-binary
* Prefer not to say
* Other, please specify: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Q5 What is your annual gross income in Australian dollars?

* $0 to $9,875
* $9,876 to $40,125
* $40,126 to $85,525
* $85,526 to $163,300
* $163,301 or more

Q6 Are you an international or local student based on your enrollment at The University of Adelaide?

* International
* Local

Q7 Please specify your ethnicity:

* White/Caucasian
* Hispanic or Latino
* Black or African American
* Indiginous Australian
* Asian/Indian
* Middle-eastern
* Pacific Islander
* Other, please specify: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Q8 What is your country of birth?

* Australia
* China
* Malaysia
* India
* Other, please specify: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Q10 Where are you currently located?

* In Australia
* Overseas

Q22 Do you consider yourself vegan?

* No
* Yes

**Fast-food Market Perceptions**

Q9 In the following section of the survey, you’ll be asked a series of questions related to your **attitudes and perceptions about the fast-food market in Australia**. Please respond truthfully. There are no right or wrong answers.

Q11 How often do you have fast-food?

* Never
* Once a fortnight or once a month
* Once a week
* Every 2 or 3 days
* Every day

|  |  |
| --- | --- |
| Page Break |  |

Q13 How much do you usually spend on fast food on a monthly basis (in Australian dollars)? If you spend more than $200, just move the slider to $200.

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | 0 | 20 | 40 | 60 | 80 | 100 | 120 | 140 | 160 | 180 | 200 |

|  |  |
| --- | --- |
| $$$ |  |

Q12 Now, I am interested in discovering what your perceptions are of the following fast-food brands. For each brand option below (in the rows), click all the adjectives or concepts (in the columns) you associate with them. You can tick more than one adjective or concept per brand.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | Healthy | Quality food | Good value for money | Environmentally Friendly | Caring |
| MacDonald’s  |  |  |  |  |  |
| Hungry Jack’s/Burger King  |  |  |  |  |  |
| Kentucky Fried Chicken  |  |  |  |  |  |
| Oporto’s  |  |  |  |  |  |
| Guzman y Gomez  |  |  |  |  |  |

Q14 How likely are you to recommend MacDonald’s to a friend or colleague?

* 0
* 1
* 2
* 3
* 4
* 5
* 6
* 7
* 8
* 9
* 10

Q15 How likely are you to recommend Hungry Jack’s/Burger King to a friend or colleague?

* 0
* 1
* 2
* 3
* 4
* 5
* 6
* 7
* 8
* 9
* 10

Q16 Are you likely to purchase any products at MacDonald’s in the next month?

* No
* Yes

**Psychographic Traits and Brand Attitudes**

Q17 In the following section of the survey, you’ll be asked a series of questions related to **your attitudes about MacDonald’s**. Please respond truthfully. There are no right or wrong answers.

|  |  |
| --- | --- |
| Page Break |  |

Q18 I feel bonded with the MacDonald’s brand.

* Strongly disagree
* Disagree
* Somewhat disagree
* Neither agree nor disagree
* Somewhat agree
* Agree
* Strongly agree

Q19 I feel connected with the MacDonald’s brand.

* Strongly disagree
* Disagree
* Somewhat disagree
* Neither agree nor disagree
* Somewhat agree
* Agree
* Strongly agree

Q20 I feel attached to the MacDonald’s brand.

* Strongly disagree
* Disagree
* Somewhat disagree
* Neither agree nor disagree
* Somewhat agree
* Agree
* Strongly agree

Q21 Please rate the degree to which you agree or disagree with the following statements.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | Strongly disagree | Somewhat disagree | Neither agree nor disagree | Somewhat agree | Strongly agree |
| MacDonald’s is a socially responsible company.  |  |  |  |  |  |
| MacDonald’s is concerned to improve the well-being of society.  |  |  |  |  |  |
| MacDonald’s follows high ethical standards.  |  |  |  |  |  |

Q23 Please rate the degree to which you agree or disagree with the following statements.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | Strongly disagree | Somewhat disagree | Neither agree nor disagree | Somewhat agree | Strongly agree |
| I like to find new ways to create meals that are good for my health.  |  |  |  |  |  |
| It is fun to create meals that are good for my health.  |  |  |  |  |  |
| I am interested in eating healthy.  |  |  |  |  |  |
| I take pleasure in fixing healthy meals.  |  |  |  |  |  |
| I am satisfied with eating healthy.  |  |  |  |  |  |

Q24 Please rate the degree to which you agree or disagree with the following statements.

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  | Strongly disagree | Disagree | Somewhat disagree | Neither agree nor disagree | Somewhat agree | Agree | Strongly agree |
| I’m good at resisting temptation.  |  |  |  |  |  |  |  |
| I have a hard time breaking bad habits.  |  |  |  |  |  |  |  |
| I am lazy.  |  |  |  |  |  |  |  |
| I say inappropriate things.  |  |  |  |  |  |  |  |
| I do certain things that are bad for me if they are fun.  |  |  |  |  |  |  |  |
| I wish I had more self-discipline.  |  |  |  |  |  |  |  |
| Pleasure and fun sometimes keep me from getting work done.  |  |  |  |  |  |  |  |
| I have trouble concentrating.  |  |  |  |  |  |  |  |
| I am able to work effectively toward long-term goals.  |  |  |  |  |  |  |  |
| Sometimes I can’t stop myself from doing something, even if I know it is wrong.  |  |  |  |  |  |  |  |
| I often act without thinking through all the alternatives.  |  |  |  |  |  |  |  |
| I refuse things that are bad for me.  |  |  |  |  |  |  |  |
| People would say that I have iron self-discipline.  |  |  |  |  |  |  |  |

Q25 In the next and final section of the questionnaire, you will be shown an advertisement for a **new product offered at MacDonald’s**. After observing and analysing it, answer a few questions based on your **perceptions and attitudes towards the ad**.

**Start of Block: Condition 1: $ 7.99**

Q26

**End of Block: Condition 1: $ 7.99**

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**Start of Block: Condition 2: $ 8**

Q27

**End of Block: Condition 2: $ 8**

****

**Start of Block: Responses to the ad**

Q28 How credible did the ad look to you?

* Extremely not credible
* Somewhat not credible
* Neither credible nor not credible
* Somewhat credible
* Extremely credible

Q29 How likely are you to try this new product?

* Extremely unlikely
* Somewhat unlikely
* Neither likely nor unlikely
* Somewhat likely
* Extremely likely

Q30 How interesting do you find this new product?

* Extremely uninteresting
* Somewhat uninteresting
* Neither interesting nor uninteresting
* Somewhat interesting
* Extremely interesting