


<p style="text-align: center;">DEAKIN BUSINESS SCHOOL</p> <p style="text-align: center;">DEPARTMENT OF INFORMATION SYSTEMS AND BUSINESS ANALYTICS</p> <p style="text-align: center;">MIS784 Marketing Analytics</p>	
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Assignment Two

Background

This is an individual assignment, which requires you to analyse a given data set, interpret, draw conclusions from your analysis, and then convey your conclusions in a written report

Percentage of final grade	30%
Due date	Monday 9 th September 2019 11:59pm

The assignment **must be submitted by the due date electronically in CloudDeakin**. When submitting electronically, you must check that you have submitted the work correctly by following the instructions provided in CloudDeakin. Please note that we will NOT accept any hard copies or part of the assignment submitted after the deadline or via Email.

Extensions of time are not permitted. 5% will be deducted from the 30 marks allocated to this assessment task for each day or part of the day that the assessment is late, up to five days. Penalties include weekend days. Where work is submitted more than five days after the due date, the task will not be marked and the student will receive 0% for the task.

The assignment uses the ***SONY_Data.xlsx*** file, which can be downloaded from CloudDeakin.

Assurance of Learning

This assignment assesses following Graduate Learning Outcomes and related Unit Learning Outcomes:

Graduate Learning Outcome (GLO)	Unit Learning Outcome (ULO)
GLO1: Discipline-specific knowledge and capabilities: appropriate to the level of study related to a discipline or profession. GLO3: Digital literacy: using technologies to find, use and disseminate information GLO5: Problem Solving: creating solutions to authentic (real world and ill define) problems.	ULO1: To apply analytics models to a wide range of marketing activities ULO2: Use computer software to analyse consumers' data and understand the strength and limitations of each software ULO3: Analyse and interpret the output of a range of Customer analytics models in order to improve the decision making process ULO4: Demonstrate comprehensive understanding of Customer analytics models

Feedback

Prior to submission

Students can seek assistance from the teaching staff to ascertain whether the assignment conforms to submission guidelines:

Cloud

1 - Mondays 6:30-7:30pm (moderator: Shadi)

2 - Wednesdays 8-9pm (moderator: Shadi)

On-Campus

1 - Tuesdays 3:30-4:30pm room EA2.24 (moderator: Shadi)

2 - Thursdays 6-7pm room EA2.25 (moderator: Hedieh)

3 - Fridays 4:30-5:30pm room EA2.25 (moderator: Zoleikha)

After submission

Your assignment feedback will be returned in a rubric via CloudDeakin with an overall mark together with comments. In order to understand any areas of improvement, students are expected to refer, and compare, their answers to the suggested solutions.

Case Study

The latest development in the home entertainment industry is Curved TVs. Though the market for Curved TV's is a small portion of the overall TV market, it is growing at a healthy rate. The product is still in early stages of its lifecycle and Samsung and LG are the current dominant players in Australian Curved TV market. SONY is planning to introduce its brand in the coming months, to get a share of this promising market.

As a first step, SONY has conducted a conjoint analysis to identify the product profile which is most likely to succeed in the market. In a pre-test conducted among 20 participants, brand name, screen size, refresh rate, resolution, and price were identified as the main attributes that consumers look for when buying a Curved TV. Following are the possible levels that each of these attributes can have.

Attribute	Levels
Brand	Samsung / SONY / LG
Screen size	65/75/85 inches
Refresh rate	120/240 Hz
Resolution	2160/4000 pixels
Price	\$4000/\$6000/\$9000

Assume that, other than price, higher levels of any of these attributes doesn't necessarily mean that it is superior to a lower level (i.e. 240 Hz is not necessarily preferred over 120 Hz). This is because better attribute comes up with some other form of limitation (higher weight, higher power usage, higher heat generation etc.). After identifying the attributes and their levels, SONY collected purchase intentions for different product profiles using fractional factorial design among 20 participants who are representative of the population of Australia. Respondents were given 18 different product profiles and asked to indicate how likely they will buy the product on a 1-7 scale where 7 represents 'Most likely' and 1 'Least likely' (purchase likelihood is equivalent to preference rating). The product profiles used for data collection are given below and the purchase likelihood data is given in the case excel file.

Profile	Description
1	LG 75in 120HZ 4000 pixels \$4000
2	LG 85in 120HZ 4000 pixels \$4000
3	SONY 65in 120HZ 2160 pixels \$6000
4	LG 85in 120HZ 2160 pixels \$6000
5	Samsung 85in 120HZ 4000 pixels \$9000
6	LG 75in 240HZ 2160 pixels \$9000
7	SONY 65in 120HZ 4000 pixels \$9000
8	LG 65in 120HZ 4000 pixels \$6000
9	SONY 85in 240HZ 4000 pixels \$6000
10	Samsung 75in 120HZ 4000 pixels \$6000
11	SONY 85in 240HZ 4000 pixels \$4000
12	SONY 75in 120HZ 4000 pixels \$9000
13	LG 65in 240HZ 4000 pixels \$9000
14	Samsung 65in 120HZ 4000 pixels \$4000
15	SONY 75in 120HZ 2160 pixels \$4000
16	Samsung 65in 240HZ 2160 pixels \$4000
17	Samsung 75in 240HZ 4000 pixels \$6000
18	Samsung 85in 120HZ 2160 pixels \$9000

There are only two existing products in the market place and their profiles are as follows.

1. LG 65in 120HZ 4000 pixels at \$4000
2. Samsung 85in 120HZ 4000 pixels at \$9000

SONY's objective in this conjoint analysis is to identify the product profile which is likely to give highest profit. SONY has decided that it can offer only 4000 pixels TVs at a refresh rate of 120HZ; but is flexible in terms of TV size and price. Your tasks are as follows:

1. Discuss the importance of different TV attributes in determining consumers' preferences.

2. Identify the product profile for SONY which is likely to get the highest market share. How much market share can that product obtain?

(Hint:

- a. For each respondent, first calculate the part-worths of attributes using regression.*
- b. Construct all possible product profiles that SONY can offer (Note that SONY can offer only 4000 pixels and 120 HZ)*
- c. Calculate the purchase probabilities of each new product with respect to two existing products in the market. Estimate market share of each product profile).*

3. SONY has estimated that potential size of its market in Australia is 100,000 consumers and each consumer buys one unit on average. Fixed cost for starting production is \$2,000,000. SONY has a base variable cost of \$800 per TV; the additional variable cost for a 75in size is \$600 per TV and 85in size is \$1000 per TV. Under this scenario, evaluate which of the products will give the highest profit. Present your recommendation on which product SONY should offer.

*(Hint: Profit = Sales * (Price – total variable cost) – fixed cost.*

*Sales = Market share * Market size*

Total variable cost = Base variable cost + additional variable cost (if required for the product)).

Submission

The assignment consists of **two** parts: Analysis and Report.

You are required to submit both your written report (approx. 2000 words) and analysis files (conducted in MS-Excel).

- **Analysis**

Students are expected to complete the analysis task in MS-Excel. The analysis file is expected to be a part of your submission.

Before submitting your analysis make sure it is logically organised and any incorrect or unnecessary output has been removed. In your Excel file all calculated figures are expected to be tied to appropriate Excel functions.

Note: Give your analysis files an appropriate name such as **MIS784_A2_studentID.xlsx**.

- **Report**

The report should be written based on your analysis output. As a general guide, you are expected to start your report with your methodology and after interpreting your analysis findings, conclude the report by a recommendations section.

Note: Name the report with an appropriate file name such as **MIS784_A2_studentID.docx**.

Criteria	Unsatisfactory	Satisfactory	Good	Very Good	Excellent
Analysis: Analytical results (Marks: 4) GLO1 and GLO 3	1 No analysis is presented or irrelevant/inappropriate techniques have been used to analyse the data with many errors in the analysis 0-1.9	2.1 Consistently, independently and skilfully uses appropriate data analysis techniques, demonstrating some expertise and specialised skills 2-2.3	2.6 Consistently, independently and skilfully uses appropriate data analysis techniques, demonstrating good expertise and specialised skills 2.4-2.7	3 Uses appropriate data analysis techniques independently, efficiently and effectively, and demonstrating a consistently high levels of expertise and specialised skills. 2.8-3.1	4 Uses most suitable data analysis techniques independently, efficiently and effectively, and demonstrating a consistently high levels of expertise and specialised skills. 3.2-4
Report: Selection of analytical techniques and evaluation of the methodology for improving marketing decision-making (Marks: 6) GLO1 and GLO5	1.5 Proposes no or inadequate solutions to existing and/or new situations in professional practice and/or further learning that indicate comprehension of a complex problem. Solutions do not consistently reflect any intellectual independence, adaptability and integrity. 0-2.9	3.3 Proposes acceptable creative solutions to existing and/or new situations in professional practice and/or further learning that indicates satisfactory comprehension of a complex problem and reflects proficient judgement of the pros and cons of the proposed solution. 3-3.5	3.9 Proposes a good creative solution to existing and/or new situations in professional practice and/or further learning that indicates comprehension of a complex problem and reflects expert judgement of the pros and cons of the proposed solution. The proposed solution reflect a high level of intellectual independence and autonomy. 3.6-4.1	4.5 Proposes a very good creative, novel solution to existing and/or new situations in professional practice and/or further learning that indicates a comprehension of a complex problem and reflects an authoritative judgement of the pros and cons of the solution The proposed solution reflect a very high level of intellectual independence. 4.2-4.7	6 Proposes an exemplary creative, novel solution to existing and/or new situations in professional practice and/or further learning that indicates a deep comprehension of a complex problem and reflects an expert and authoritative judgement of the pros and cons of the proposed solution Solutions reflect an exceedingly high level of intellectual independence. 4.8-6
Report: Interpretation of analysis output from a marketing perspective (Marks: 8) GLO1 and GLO5	2 Provides no or a limited interpretation of the analysis output and no logical interpretations from a marketing stand point 0-3.9	4.4 Provides an acceptable interpretation of the analysis output and satisfactory interpretations from a marketing stand point 4-4.7	5.2 Provides a good interpretation of the analysis output and reasonable interpretations from a marketing stand point 4.8-5.5	6 Provides a very well interpretation of the analysis output and thorough interpretations from a marketing stand point 5.6-6.3	8 Provides an excellent interpretation of the analysis output and insightful interpretations from a marketing stand point 6.4-8
Report: Develop management recommendations (Marks: 8) GLO5	2 Provides no or limited guidance as to how solutions might be skilfully and creatively implemented in a manner that addresses multiple contextual factors of the problem. 0-3.9	4.4 Provides satisfactory guidance as to how solutions might be skilfully and creatively implemented in a manner that satisfactorily addresses multiple contextual factors of the problem. 4-4.7	5.2 Provides expert guidance as to how solutions might be skilfully and creatively implemented in a manner that adequately addresses multiple contextual factors of the problem. 4.8-5.5	6 Provides very good authoritative and expert guidance as to how novel solutions might be skilfully and creatively implemented in a manner that addresses sufficiently multiple contextual factors of the problem. 5.6-6.3	8 Provides outstandingly authoritative and expert guidance as to how novel solutions might be skilfully and creatively implemented in a manner that excellently addresses multiple contextual factors of the problem. 6.4-8

Report: Quality of writing, Report formatting & Table & Figures to support conclusions (Marks: 4) GLO1	<p>1</p> <p>Always or mostly uses inappropriate and/or irrelevant content to develop and explore basic ideas and presents an unacceptable exposition of complex knowledge and ideas.</p> <p>0-1.9</p>	<p>2.2</p> <p>Moderately uses appropriate, relevant, and compelling content to illustrate mastery of the subject or topic and presents a clear, coherent, independent and professional exposition of complex knowledge and ideas</p> <p>2-2.3</p>	<p>2.6</p> <p>Mostly uses appropriate, relevant, and compelling content to illustrate mastery of the subject or topic and presents a clear, coherent, independent and professional exposition of complex knowledge and ideas</p> <p>2.4-2.7</p>	<p>3</p> <p>Consistently uses appropriate, relevant, and compelling content to illustrate a mastery of the subject or topic and generates original knowledge, making a substantial contribution to a discipline or area of professional practice.</p> <p>2.8-3.1</p>	<p>4</p> <p>Consistently and effectively uses appropriate, relevant, and compelling content to illustrate a mastery of the subject or topic and generates original knowledge, making a very substantial contribution to a discipline or area of professional practice.</p> <p>3.2-4</p>
Overall Score	Fail (N) 0 – 14.5	Pass (P) 15-17.5	Credit (C) 18-20.5	Distinction (D) 21-23.5	High Distinction (HD) 24 - 30