BUS501 - Business Analytics and Statistics
Research Report

You are creating a business report for the CEO of Harvest Kitchen. It must be professional in presentation and contain insightful content for them to make business decisions.

Both data sets are from a small health food shop on the Sunshine Coast. The business is divided into a number of areas including retail, wholesale a box delivery system (not included in the data), and Harvest Kitchen.

The data is inclusive of a whole year of trading. This is the second year of business and the business is still in a start-up phase. The reported high Cost of Goods (COGS) is reportedly consistent with the Organic industry.

The main challenges in the business are revenue (i.e. lead generation/new business), Cost of Goods (COGS margins) and average sales.

The business has a 6 person team, 1 delivery van, a retail outlet and a cold store warehouse.

Task instructions:
1) Ensure the dataset is appropriately scaled (each measure in SPSS must be set correctly). Report on what you changed.
2) Produce descriptive statistics (see lecture 1) for the most appropriate variables to give an overview of how the business and its products are performing
3) Use the statistical analyses you have learned to answer all of the questions below

As guide - answer these main research questions:
1. What are the top/worst selling products in terms of sales?
   a. Is there a difference in payments methods?
2. Are the differences in sales performance based on where the product is located in the shop? How does this effect both profits and revenue?
3. Is there a difference in sales and gross profits between different months of the year?
4. Are their differences in sales performance between different seasons?
   a. How does this relate to rainfall and profits?

There might be other research questions you should consider considering the business challenges (you will get higher marks for identifying other issues the CEO should be aware of)

Report structure:

- **Cover page/Title Page –** Name, student number, tutor information, word count
- **Table of contents** (could also include a list of figures / diagrams / tables)
- **Introduction (2 marks) –** Introduce the business and its problems (see website link above for more information)
- **Problem definition and business intelligence required (2 marks) –** Outline the research questions and list what analytics methods you have chosen to answer each one and why
- **Visualise the descriptive statistics (5 marks)** – using what you have learned show the relevant descriptive statistics through data visualization/ graphical displays (Tables, graphs, pie charts etc.).
- **Results of the selected analytics methods and technical analysis (20 marks)** – use each research question as a heading then present the analysis findings and explain them. Higher marks for including extra research questions not defined here and creating nice tables/displays opposed to copy and pasting directly from SPSS output.
- **Discussion of the results and recommendations (5 marks)** – Based on the analyses what conclusions about the business can be summarized/drawn and what recommendations can be offered to the CEO.
- **References** – list of references in either Harvard or APA formatting (<u>you must reference the business website</u> – include other references in your answers)

Report formatting (5 marks):
Font size 12 Times New roman, double spacing, word count 1,500-2,000. *Note.* The word count does not include headings, tables, graphs/figures or the reference list.

See below for the marking criteria sheet

	Levels of Achievement				
Criteria	**High Distinction**	**Distinction**	**Credit**	**Pass**	**Fail**
Criteria 1: Introduction (2 marks)	**85 to 100 %** Demonstrates comprehensive and insightful knowledge of the business with an in-depth introduction and the problems clearly outlined in terms of where the business is in regard to its industry.	**75 to 84 %** Demonstrates mostly comprehensive and insightful knowledge of the business. The website is well referenced.	**65 to 74 %** Demonstrates some knowledge of the business with the problems mostly outlined.	**50 to 64 %** Basic knowledge of the business demonstrated with the assignment information given but no extra information included.	**0 to 49 %** Little or no knowledge of the business with the website not referred to or consulted. Does not introduce the business or fails to explain the business and its problems.
Criteria 2: Problem definition and business intelligence required (2 marks)	**85 to 100 %** Each problem and the business intelligence/statistics required are described and explained with references where appropriate to literature.	**75 to 84 %** Each problem and the business intelligence/statistics required are mostly explained with some references where appropriate to literature.	**65 to 74 %** Demonstrates some knowledge of the problems and the business intelligence/statistics required. With minimal references to literature.	**50 to 64 %** Basic knowledge of the business questions and the statistics used are outlined with some explanation as to why these were used.	**0 to 49 %** Little information concerning the report questions and the statistics used to answer them. The analyses are outlined but no explanations given.
Criteria 3: Visualisations of the descriptive statistics (5 marks)	**85 to 100 %** Demonstrates comprehensive and insightful knowledge of data visualizations with each type being appropriate for the type of data.	**75 to 84 %** Demonstrates mostly comprehensive and insightful knowledge of data visualizations with minimal errors or some variables missing.	**65 to 74 %** Demonstrates some knowledge of data visualizations with several errors or variables missing.	**50 to 64 %** Basic knowledge of data visualizations shown, what is shown is not appropriate or here are errors or variables missing.	**0 to 49 %** Little or no knowledge of data visualizations. If anything is shown it has errors, is inappropriate or is missing information or variables.
Criteria 4: Results	Demonstrates	Demonstrates mostly	Demonstrates some	Basic knowledge of the	Little or no knowledge

	Levels of Achievement				
Criteria	**High Distinction**	**Distinction**	**Credit**	**Pass**	**Fail**
of the selected analytics methods and technical analysis (20 marks)	comprehensive and insightful knowledge of the use of business analytic tools to answer the report questions and others identified in the data set. Use of statistical terminology is extensive and correct. The level of interpretation of the statistics meets professional standards of the discipline with no errors in interpretation and/or presentation.	comprehensive and insightful knowledge of the use of business analytic tools to answer the report questions and others identified in the data set. Use of statistical terminology is extensive and largely correct. The level of interpretation of the statistics mostly meets professional standards of the discipline with little errors in interpretation and/or presentation.	knowledge of the use of business analytic tools to answer the report questions. Use of statistical terminology mostly correct. The level of interpretation of the statistics meets standards but some errors in interpretation or presentation.	use of business analytic tools to answer the report questions. Use of statistical terminology fairly correct. The level of interpretation of the statistics meets standards but some errors in interpretation or presentation.	of the use of business analytic tools to answer the report questions. Use of statistical terminology inconsistent and not correct. The level of interpretation of the statistics fails in terms of presentation and interpretation.
Criteria 5: Discussion of the results and recommendations (5 marks)	The recommendations are highly appropriate, integrated with the results, and supported by results/literature. The entire report is presented as a consistent whole.	The recommendations are appropriate, integrated with the results, and supported.	The recommendations are fairly appropriate and fairly supported. With some instances missing.	The recommendations are appropriate, however lacking some instances and needing more. Or inappropriate suggestions are made.	The recommendations are lacking and are not supported. Inappropriate suggestions are made or there are no suggestions at all.
Criteria 6: Report formatting (5 marks)	The meaning is consistently clear. Use of discipline terminology is	The meaning is clear. Use of discipline terminology is extensive and largely	Overall meaning is clear though there are minor instances of awkward/ambiguous	The intended meaning can be discerned but lacks clarity and/or examples of	Use of language fails to make meaning clear; many errors of grammar, syntax and

| Criteria | Levels of Achievement | | | | |
	High Distinction	Distinction	Credit	Pass	Fail
	confident and assured. The level of presentation meets professional standards of the discipline, and there is a high level of attention to detail regarding the results tables and graphics (not just cut and paste from SPSS output. Little/no errors in grammar, syntax and spelling. Referencing and citations are appropriate and integrated.	correct. The level of presentation meets professional standards of the discipline, and there is attention to detail. SPSS output has not been copied and pasted into the results. The grammar, syntax and spelling are near perfect. Referencing and citations are appropriate.	expression. Use of discipline terminology is adequate. The level of presentation mostly meets professional standards of the discipline, with some lapses in detail in e.g. SPSS output not used, grammar, syntax and spelling good. Referencing and/or citation errors.	awkward/ambiguous expression. Limited discipline terminology with minor inaccuracies. Some use of SPSS output in the report. Some professionalism but significant lapses in grammar syntax and spelling. Referencing and/or citation errors.	spelling, range of mistakes indicating lack of editing and proofreading. Limited or incorrect use of discipline terminology. Poor referencing and citation errors.