**Module:** Advanced Research Methods FORE70338

**Assessment Title:** **Portfolio of quantitative data analysis**

**Assessment Type:** Portfolio

**Purpose:**

This portfolio of work will showcase statistical analysis using a variety of software to demonstrate knowledge and skills of quantitative research methods for analysis.

**Linked Learning Outcomes:**

LO1. Demonstrate a systematic understanding of professional level research planning skills.

LO2. Demonstrate advanced skills in data handling using standard statistical software analysis.

**Skills:**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Problem Solving** | **Communication** | **Creativity** | **Teamwork** | **Technical / Analytical** |
| X | X | X |  | X |
| **Leadership / Project Management** | **Organisation / Self-motivation** | **Resilience** | **Adaptability / Reflective Practice** | **Global Awareness** |
| X | X | X | X |  |

**Length:**  no word limit

**Weighting:** 60%

**Submission date:** 4pm – 13th January 2023

**Instructions:**

Pre-determined scenarios with associated raw data sets will be provided. Students must carry out statistical analysis through at least two different platforms (for example, Excel, SPSS or RStudio), demonstrating their understanding of the software, how to manipulate and analyse data, whilst justifying their reasoning for each stage of analysis

The sections of the portfolio are detailed as follows;

1. Data input/code (weighted at 20% of the overall assignment mark).
   1. Screen shots, illustrating the following;
      1. How the data has been set up ready for analysis in each software system used.
      2. Any steps taken to tidy up the data/adjust for outliers etc.
2. Results of analysis (weighted at 40% of the overall assignment mark). Must include.
   1. Graphs or charts appropriate to data being analysed.
   2. Descriptive statistics relevant to data being analysed.
   3. Statistical testing; the tests used are to be determined by you, individually. The marking criteria outlines the levels of potential analysis.
3. Justification of the graphs and statistical tests used (weighted at 40% of the overall assignment mark).
   1. Each decision made must be appropriate to the data set.
   2. Every step must be justified and supported by relevant literature.
   3. This section should focus on the steps taken and decisions made throughout the analysis process; not the interpretation/conclusion of what the data may be showing.
   4. Should be 1-2 A4 pages, minimum font size 11, line spacing 1.15.

**Adjustments or Alternative Provision:**

Students with the appropriate Learning Support Statements (LSSs) will only be marked on knowledge and understanding. Negotiated deadlines will also be applied to those with LSSs if necessary.

**Marking Arrangements**

The essay will be marked by primary lead for this aspect of the module (Megan Needham) in accordance with the following criteria. A sample of 10 or 10% of submissions, whichever is greater, will be second marked and sent to the external examiner.

***All submissions will be checked in accordance with academic conduct policies.***

**Marking Criteria**

**Marks >70% (Distinction)**

All elements of the assignment are present. The assignment contains a high standard of data input, results of data analysis (appropriate graphs, relevant descriptive statistics and, statistical analysis) and, an excellent justification of choices has been made. At Distinction level it is expected that, Principle Component Analysis is applied to find areas of interest within the larger data set; this is then be followed by further statistical testing of the student’s choice. At Distinction level, more than one area of interest will have been statistically investigated further. Where appropriate, it is expected that Post Hoc testing will have been included. At least two different platforms have been used to create the graphs and/or carry out data analysis. The assignment demonstrates critical engagement with published literature. At least five literature sources have been used in the submission – evidence of wider reading is essential to achieve a Distinction. The submission is well-structured and contains the following, clearly defined sections: data input, results and, justification. All in-text citations and references (in the reference list) must be formatted correctly (adhering to the standards outlined on the RefZone website).

**Marks 60-69% (Merit)**

All elements of the assignment are present. The assignment contains a good standard of data input, results of data analysis (appropriate graphs, descriptive statistics and, statistical analysis) and, justification of choices made. At Merit level it is expected that, Principle Component Analysis is applied to find areas of interest within the larger data set; this is then be followed by further statistical testing of the student’s choice. At Merit level, one area of interest will have been statistically investigated further. Where appropriate, it is expected that Post Hoc testing will have been included. At least two different platforms have been used to create the graphs and/or carry out data analysis. The assignment demonstrates some critical engagement with published literature. At least three literature sources have been used in the submission. The submission is well-structured and contains the following, clearly defined sections: data input, results and, justification. All in-text citations and references (in the reference list) must be formatted correctly (adhering to the standards outlined on the RefZone website).

**Marks 50-59% (Pass)**

Some elements of the assignment may be missing from this submission. The assignment contains evidence of data input, results of data analysis (graphs, descriptive statistics and, statistical analysis) and, justification of choices made. At Pass level it is expected that, some statistical analysis has been carried out and, an attempt has been made to justify the analysis; although, some details may be incorrect, or omissions may have been made. At least two different platforms have been used to create the graphs and/or carry out data analysis. The assignment demonstrates little evidence (if any) of critical engagement with published literature. Less than three literature sources have been used in the submission. The submission is poorly structured and may miss out some of the following sections: data input, results and, justification. All in-text citations and references (in the reference list) should be formatted correctly (adhering to the standards outlined on the RefZone website).

**Marks 40-49% (Compensatable fail)**

Most elements of the assignment are missing from this submission. The assignment contains poor evidence of data input, results of data analysis (graphs, descriptive statistics and, statistical analysis) and, justification of choices made; omissions are evident. At this level it is expected that, an attempt of some statistical analysis has been carried out; an attempt may have been made to justify the analysis although, details may be incorrect, and/or omissions have been made. Two different platforms have not been used to create the graphs and/or carry out data analysis. The assignment demonstrates little evidence (if any) of critical engagement with published literature. Less than three literature sources have been used in the submission. The submission is poorly structured and will not be structured in the following manner: data input, results and, justification. All in-text citations and references (in the reference list) are poorly formatted (adhering to the standards outlined on the RefZone website).

**Marks < 40% (Non-compensatable Fail)**

Such a mark should be awarded when a student has made insufficient effort or has failed to apply a sufficient amount of data analysis. The assignment will show no/limited evidence of engagement with the literature. Elements of the assignment may be missing. No structure to the assignment and incorrect referencing evident throughout.