

ETC1000 Business and Economic Statistics

Group Project

Semester 2 2017

A. How it works

- This project will be undertaken in small groups, involving analysis of a set of data using the techniques you will learn in this unit.
- The final product will be a short group presentation during your Computer Lab class in Week 10.
- Groups will be allocated in the Computer Lab class in Week 4 of semester. All group members will be enrolled in the same Computer Lab class. There will be 3-4 members to each group.
- The Live Lectures in Weeks 4 and 8 will involve some explanation of the tasks we expect you to undertake.
- The project is worth 15.5% of your final mark.
- The project is assessed based on the quality and content of your presentation slides (PowerPoint or equivalent) and your oral presentation.
- All group members must contribute to the oral presentation. There will also be opportunity to give feedback on the contributions of other members of your group, and this feedback will be taken into account when allocating the final mark for this assessment.

B. The Topic

You are to undertake a small investigation of some data from households in Zimbabwe, to learn something about the health of children in these households. The data set is taken from the Zimbabwe Demographic and Health Survey conducted in 2005. This survey comprises a random sample across the whole country, and looks at many aspects of people's lives, with a particular focus on health.

There are 3 choices for an indicator to study, all under the broad theme of child nutrition and growth. As background for all 3 indicators, we recommend you look at the following website:

<http://www.who.int/nutgrowthdb/about/introduction/en/>

Here you read about the indicators we use here, especially details of the z-scores for height and weight-for-height, as well as other useful background information about measuring child growth and nutrition.

Indicator 1: Child height

Height is a useful indicator of long term development of a child. A well-nourished child who has over their lifetime suffered few illnesses will, on average be taller than another child of the same age, but with poor nutrition and / or frequent illnesses.

The z-score calculation allows heights to be standardised by comparing with the median and standard deviation of heights for healthy children of the same sex and age. This allows all children in the sample to be compared, regardless of sex or age. A child with a bigger z-score will be doing better in this indicator of long term health.

Indicator 2: Child Weight-for-height

Weight is a useful indicator of the current health status of a child. A child who is not eating sufficient food or is suffering from an illness such as diarrhoea could well be underweight for their height. Similarly, a child who is overweight for their height may also be seen as unhealthy.

The z-score calculation allows weight-for-height to be standardised by comparing with the median and standard deviation of weights for healthy children of the same sex and age. This allows all children in the sample to be compared, regardless of sex or age.

Indicator 3: Consumption of protein (meat, eggs)

In developing countries and poorer households, often the greatest deficiency in diets is the lack of protein – meat, eggs, tofu, etc. Protein is essential to long term child development. It is thus valuable to understand whether children are eating protein-rich foods.

C. What to do?

- Choose one of the three indicators.
- Download the spreadsheet file with the data. Use a random number generator in Excel to randomly select 3,000 households as the sample to use in your analysis (NB Do not enter a seed number into the random number generator).
- Looking at the list of variables in the data set, choose some variables that describe the general characteristics of the households and the health of children generally. Prepare a brief summary using a range of methods, such as percentages, summary measures, histograms, pie charts etc.
- Given your topic, identify the relevant “outcome” variable(s). Describe the characteristics of this variable in this sample.
- Perform some cross-tabulations or correlations of this variable with some of the other variables that you think might be related to this outcome.
- Estimate a multiple linear regression model with your outcome variable as the dependent variable. Choose the explanatory variables from the set of variables given in the spreadsheet file. Choose those variables that you might expect to cause or explain the outcome variable.
- After interpreting results, draw brief implications of your analysis for development programs.

D. The Final Product

- A 10-minute group presentation showing the results of your analysis. You will do this presentation during your scheduled Computer Lab class in Week 10 of semester.
- This presentation will need to be accompanied by a set of presentation slides (PowerPoint or equivalent). Have your slides ready to use in your presentation.
- In addition to your group presentation, each person will be asked to assess the quality of the other presentations that take place in your Lab Class using the Assessment Criteria below.
- One member of your group should upload the completed slides to the Assignment section of Moodle on the day of your presentation.
- ALL group members will also need to click the "Submit assignment" button and accept the University's submission statement on their Moodle submission.

E. Assessment Criteria

There are three components to how we will assess your presentation, with specific criteria under each.

1. Content

- 1.1 A reasonable range and balance of descriptive, diagnostic and prescriptive techniques are used (not too many or too few)
- 1.2 The techniques used are fit for the purpose to which they are put (i.e. the most appropriate techniques are used to illustrate the points being made)
- 1.3 The techniques used are correctly implemented and explained
- 1.4 The techniques used positively contribute to the overall conclusion/theme/question of the presentation

2. Presentation

- 2.1 The presentation follows a logical flow
- 2.2 The results are interpreted correctly and conclusions are well justified
- 2.3 A clear and logical conclusion/theme/main-point is evident
- 2.4 The presentation is tightly constructed and not overly long, detailed or verbose

3. Participation

- 3.1 In the opinion of your peers you contributed equally to the group project
- 3.2 In the opinion of your peers you were a good team person.

Each member of your group will need to give feedback on each of the other group members using these criteria.

N.B. If your group experiences major difficulties working together on the project, please contact one of the lecturers to discuss the situation. Do not leave it too late to deal with problems.

F. Attending the Presentation

- If you cannot attend your scheduled Computer Lab class in Week 10, you need to contact us by the end of Week 8, indicating all days and times your group is available during Week 10, and we will reallocate your group to another time slot in Week 10. You must provide evidence to show why you cannot attend your allocated class.
- If you have a problem in the days leading up to your presentation that prevents you from attending your class, you must provide evidence and notify us as soon as possible. We will not reschedule if you do not notify us before the day of your class.
- If you do not attend and contribute to your group presentation, you will receive zero marks for this assessment.

For any issues regarding attending your presentation:

- Contact us via etc1000.clayton-x@monash.edu.
- One person should contact us on behalf of your whole group and keep the rest of your group informed about arrangements.